KS TOOLS®



12 V

SPECIAL TOOLS FOR PASSENGER CARS & LIGHT COMMERCIAL VEHICLES

1 BODYWORK AND INTERIOR

2 ENGINE - ENGINE COOLING SYSTEM

3 ENGINE - HOSE CLAMP PLIERS

4 ENGINE - FUEL SYSTEM

5 ENGINE - CYLINDER HEAD / ENGINE BLOCK

6 ENGINE - TURBOCHARGER

7 ENGINE - FUEL INJECTION SYSTEM

8 ENGINE - SPARK PLUGS

9 ENGINE - GLOW PLUGS

10 ENGINE - AUXILIARY DRIVE BELT / ALTERNATOR

11 ENGINE TIMING TOOLS

12 EXHAUST SYSTEM / CATALYSERS

13 AIR CONDITIONING

14 BATTERY SERVICE

15 ELECTRICAL / ELECTRONIC TOOLS

16 HYBRID / HIGH-VOLTAGE TOOLS

17 GEARBOX

18 CLUTCH

19 SPRINGS / SHOCK ABSORBERS

20 STEERING AND AXLE

21 AUTO GLASS

22 BRAKE SERVICE

23 OIL SERVICE

24 WHEEL / TYRE FITTING

25 GENERAL WORKSHOP REQUIREMENTS

i INDEX


PAGE 4 - 139 1


PAGE 140 - 161 2


PAGE 162 - 171 3


PAGE 172 - 191 4


PAGE 192 - 223 5


PAGE 224 - 237 6


PAGE 238 - 255 7


PAGE 256 - 267 8


PAGE 268 - 279 9


PAGE 280 - 291 10

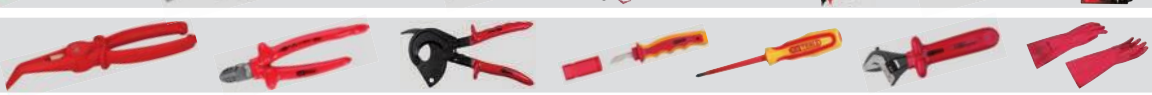

PAGE 292 - 389 11


PAGE 390 - 397 12


PAGE 398 - 407 13


PAGE 408 - 419 14


PAGE 420 - 451 15


PAGE 452 - 493 16


PAGE 494 - 513 17


PAGE 514 - 525 18


PAGE 526 - 539 19


PAGE 540 - 599 20

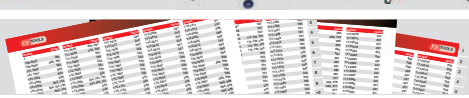

PAGE 600 - 625 21


PAGE 626 - 659 22


PAGE 660 - 707 23

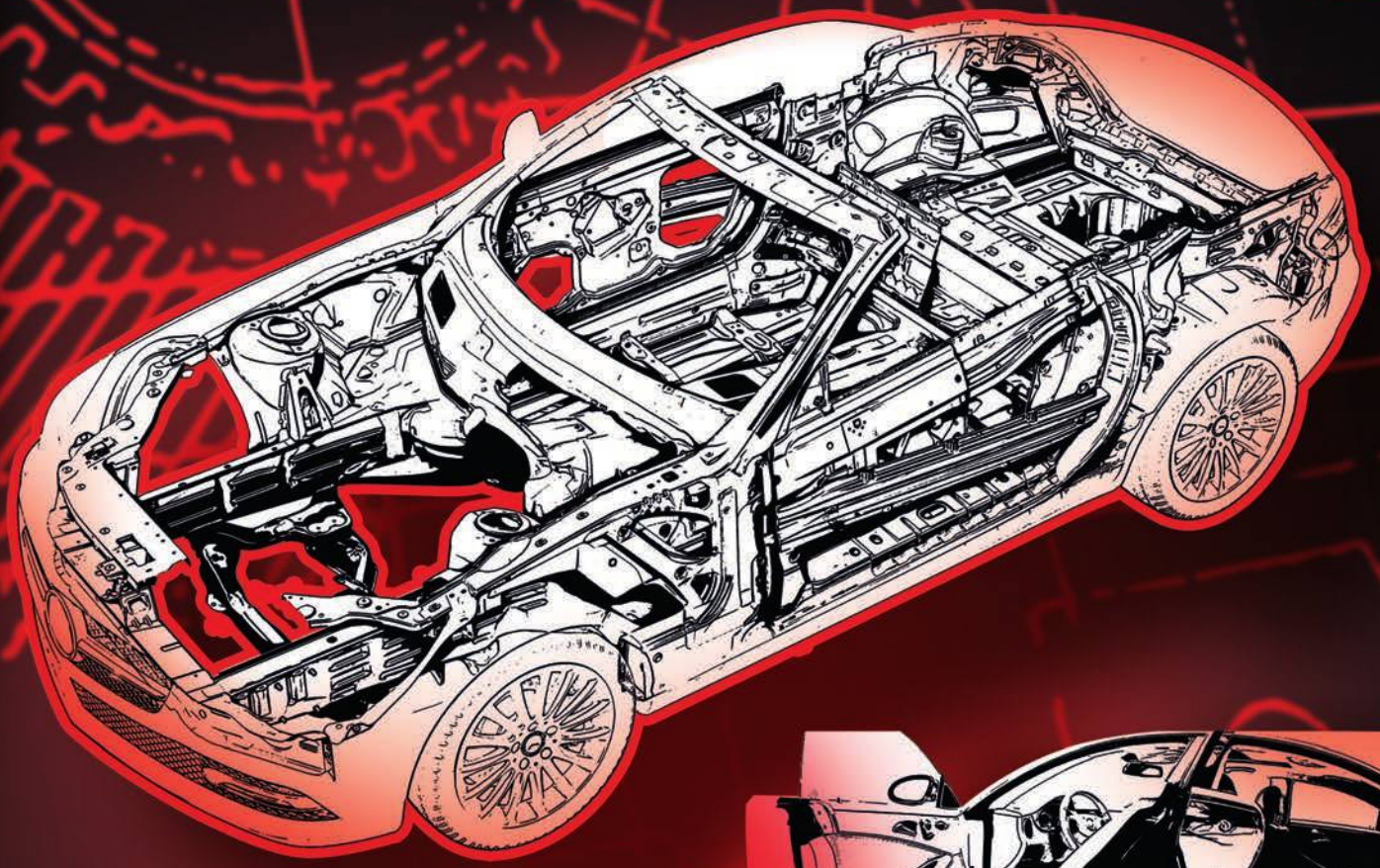

PAGE 708 - 741 24


PAGE 742 - 774 25


PAGE 775 - 804 i

1

BODYWORK AND INTERIOR







KS TOOLS®

Innovation is our mission!

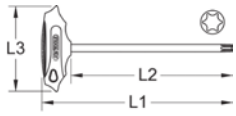
	FROM PAGE
VEHICLE LIGHTING AND BUMPERS	7
WING	7
PLASTIC REPAIR	8
ALUMINIUM REPAIR	9
PARKING SENSOR TOOLS	9
TRIM	14
DOOR HINGES AND HANDLES	14
DOOR OPENER	16
EXTERIOR MIRROR	16
LEVER AND SEPARATING TOOLS	17
BODY BORING TOOLS	20
COOLANT	21
SPOT WELD DRILLS	21
BENDING AND PULLING TOOLS	22
HAMMERING TOOLS	27
WING BRAKE PIPE FLARING	35
BODYWORK FILES	35
HOLE, SETTING, AND SEAM PLIERS	36
SHEET METAL NIBBLER AND SNIPS	37
PANEL SAWS	39
LOCKING PLIERS	40
RIVET TOOLS	45
WELDING	48
SURFACE TREATMENT	51
INTERNAL CLEANING	58
WIRE BRUSHES	59
STEERING WHEEL AND FITTING	61
VENTILATION	62
AIRBAG	62
LOCKING CYLINDER	64
RADIO AND NAVIGATION SYSTEM	65
CLIP, RIVET AND EXTRACTION TOOLS	68
FASTENING CLIPS FOR ALFA ROMEO	71
FASTENING CLIPS FOR AUDI	71
UNIVERSAL FASTENING CLIPS ALSO FOR AUDI	73
FASTENING CLIPS FOR BMW	74
UNIVERSAL FASTENING CLIPS ALSO FOR BMW	76
FASTENING CLIPS FOR CHRYSLER	76
FASTENING CLIPS FOR CITROËN/PEUGEOT	79
UNIVERSAL FASTENING CLIPS ALSO FOR CITROËN/PEUGEOT	80

	FROM PAGE
FASTENING CLIPS FOR FIAT	81
UNIVERSAL FASTENING CLIPS ALSO FOR FIAT	82
FASTENING CLIPS FOR FORD	82
UNIVERSAL FASTENING CLIPS ALSO FOR FORD	86
FASTENING CLIPS FOR HONDA	86
UNIVERSAL FASTENING CLIPS ALSO FOR HONDA	89
FASTENING CLIPS FOR ISUZU	89
FASTENING CLIPS FOR KIA	89
FASTENING CLIPS FOR MAZDA	90
UNIVERSAL FASTENING CLIPS ALSO FOR MAZDA	92
FASTENING CLIPS FOR MERCEDES	92
UNIVERSAL FASTENING CLIPS ALSO FOR MERCEDES	94
FASTENING CLIPS FOR MITSUBISHI	94
UNIVERSAL FASTENING CLIPS ALSO FOR MITSUBISHI	95
FASTENING CLIPS FOR NISSAN	96
UNIVERSAL FASTENING CLIPS ALSO FOR NISSAN	98
FASTENING CLIPS FOR OPEL	99
UNIVERSAL FASTENING CLIPS ALSO FOR OPEL	100
FASTENING CLIPS FOR RENAULT	103
UNIVERSAL FASTENING CLIPS ALSO FOR RENAULT	104
FASTENING CLIPS FOR SEAT	104
FASTENING CLIPS FOR ŠKODA	105
FASTENING CLIPS FOR SUBARU	105
FASTENING CLIPS FOR TOYOTA/LEXUS	105
UNIVERSAL FASTENING CLIPS ALSO FOR TOYOTA/LEXUS	109
FASTENING CLIPS FOR VOLKSWAGEN	109
UNIVERSAL FASTENING CLIPS ALSO FOR VOLKSWAGEN	112
FASTENING CLIPS FOR VOLVO	113
FASTENING CLIPS - CABLE HARNESSES	114
FASTENING CLIPS - PLASTIC RIVETS	116
FASTENING CLIPS - QUICK-RELEASE FASTENER	117
FASTENING CLIPS - PUSH-IN RIVETS	118
FASTENING CLIPS - PLASTIC NUTS	120
FASTENING CLIPS - SCREW-IN RIVETS	121
FASTENING CLIPS FOR GENERAL VEHICLE APPLICATION	122
FASTENING CLIP SETS	123
INTERIOR TRIM AND LINER	129
STORAGE COMPARTMENTS	134
GENERAL TOOLS	137

VEHICLE LIGHTING AND BUMPERS

T-handle Torx key wrench, long

- Extra long execution
- Two component handle
- Continuous hardened
- Matt chrome
- Special tool steel



		L1 mm	L2 mm	L3 mm	g	
158.8051	T10	403,0	373,0	80,0	30	
158.8052	T15	403,0	373,0	80,0	30	
158.8053	T20	403,0	373,0	100,0	40	
158.8054	T25	408,0	373,0	100,0	40	
158.8055	T27	408,0	373,0	100,0	40	
158.8056	T30	408,0	373,0	100,0	45	

T-handle Torx key wrench set

- Extra long execution
- Two component handle
- Continuous hardened
- Matt chrome
- Special tool steel




			g	
158.8050	6 pcs	T10 - T15 - T20 - T25 - T27 - T30	375	



Headlamp adjusting key Audi / Volkswagen

- Suitable for the adjustment of the headlights and for the bonnet and headlight gap adjustment
- Extra long execution
- With T-handle
- With hanging hole
- Continuous hardened
- Multi-tooth head with centring pin, bronzed
- Chrome plated
- Chrome vanadium

Application range: Audi A4 (8K), A6 (4G), A5 (8T); **Volkswagen** Passat (B8), Touareg (II)




	Total length mm	g	
150.8105	345,0	170	

Headlamp adjusting key Mercedes

- Suitable for the adjustment of the headlights and for the bonnet and headlight gap adjustment
- Ideal for confined spaces
- Extra long execution
- Hexagon head
- For manual operation
- Chrome plated
- Chrome vanadium

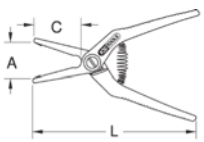
Application range: Mercedes C-class (205) from MY 2014




	mm	Total length mm	g	
150.8110	14,0	195,0	170	

Incandescent bulbs pliers

- With protecting foam material
- For the removal and replacement of incandescent bulbs
- With internal spring
- Plier jaws with foam protection material
- Suited for glass socket lamps of 4,0 mm until 6,0 mm
- Special plastic



	A mm	C mm	L mm	g	
115.1054	0-32	45,0	160,0	70	

Hexagonal tube socket for bumper screw

- 6 point
- For actuating the bumper screw at the rear
- Internal square
- Extra-long design for actuating the screw via the threaded rod
- Allows controlled tightening of the screw to the torque specified by the manufacturer
- For manual operation
- Matt finish
- Chrome vanadium

Application range: Mercedes type 204, **Audi** A3 from 2004, A4 from 2001, A6 from 2005, TT from 2007




	mm	Ø mm	L mm	g	
917.1423	10,0	13,0	160,0	60	

Brake Light Disassembly Fork Set for Mercedes

- Suitable for disassembling the brake light from the tail gate
- Allows the correct unlocking of the retaining clamps
- High accuracy of fit
- For manual operation
- With PVC dipped handle
- Matt finish
- Chrome vanadium

Application range: Mercedes E Class (W210) T model




		L mm	g	
150.1691	4 pcs	135,0	260	

WING

12-sided wrench for mudguard fittings for Ford

- To actuate the hard-to-reach wing screws
- Extra-long and extra-thin design for actuating the screws
- Serviceable from both sides
- With plastic protector
- For manual operation
- Matt finish
- Chrome vanadium




	mm	L mm	g	
150.1601	10	470,0	264	

Torx and hexagon socket screw extractor set

- Ideal for loosening and opening screws and bolts whose head is damaged or worn off
- Special left-hand cutting thread with tapered cutting edges for Torx screws and specially shaped extractors for hexagon socket screws
- Including TORSIONpower bits for Torx and hexagon socket screws
- Bits with torsion zone for cushioning of the torque peak
- Includes magnetic quick release bit holder and 1/2" socket adapter
- Colour-coded bits
- For manual operation
- Longer service life
- Nickel plated
- Special tool steel
- In durable plastic case





1/4" 10 mm

			g	
150.7060	34 pcs	Torx and hexagon socket screw extractor set	520	

consists of:

		g	
918.3505	1/4" TORSIONpower Bit Torx, 25mm, T10	4	
918.3510	1/4" TORSIONpower Bit Torx, 25mm, T15	4	
918.3515	1/4" TORSIONpower Bit Torx, 25mm, T20	4	
918.3520	1/4" TORSIONpower Bit Torx, 25mm, T25	4	
918.3525	1/4" TORSIONpower Bit Torx, 25mm, T27	5	
918.3530	1/4" TORSIONpower Bit Torx, 25mm, T30	5	
918.3535	1/4" TORSIONpower Bit Torx, 25mm, T40	6	
918.1271	1/2" Bit adaptor socket, for bits 10mm	40	
514.1113	1/4" Auto slimlock magnetic quick release bit holder, 65mm	30	
150.7016	1/4" Special Torx Screw Extractor Bit, TE10	45	
150.7017	1/4" Special Torx Screw Extractor Bit, TE15	45	
150.7018	1/4" Special Torx Screw Extractor Bit, TE20	45	
150.7019	1/4" Special Torx Screw Extractor Bit, TE25	45	
150.7021	1/4" Special Torx Screw Extractor Bit, TE27	45	
150.7022	1/4" Special Torx Screw Extractor Bit, TE30	45	
150.7023	1/4" Special Torx Screw Extractor Bit, TE40	55	
150.7024	10 mm special Torx Screw Extractor Bit, TE50	65	
150.7026	10 mm special Torx Screw Extractor Bit, TE55	65	
150.7061	1/4" special hexagonal screw extractor bit, HE 1.5	12	
150.7062	1/4" special hexagonal screw extractor bit, HE 2	12	
150.7063	1/4" special hexagonal screw extractor bit, HE 2.5	14	
150.7064	1/4" special hexagonal screw extractor bit, HE 3	16	
150.7065	1/4" special hexagonal screw extractor bit, HE 4	16	
150.7066	1/4" special hexagonal screw extractor bit, HE 5	16	
150.7067	1/4" special hexagonal screw extractor bit, HE 6	16	
150.7068	10 mm special hexagonal screw extractor bit, HE 8	20	
150.7069	10 mm special hexagonal screw extractor bit, HE 10	24	

consists of:

		g	
918.3401	1/4" TORSIONpower Bit hexagonal, 25mm, 1,5mm	6	
918.3403	1/4" TORSIONpower Bit hexagonal, 25mm, 1,5mm	6	
918.3407	1/4" TORSIONpower Bit hexagonal, 25mm, 1,5mm	6	
918.3405	1/4" TORSIONpower Bit hexagonal, 25mm, 3mm	10	
918.3410	1/4" TORSIONpower Bit hexagonal, 25mm, 4mm	4	
918.3415	1/4" TORSIONpower Bit hexagonal, 25mm, 5mm	6	
918.3420	1/4" TORSIONpower Bit hexagonal, 25mm, 6mm	6	

PLASTIC REPAIR

Hot stapler set for plastic repair (cordless)

- Suitable for the repair of cracks or similar damage to plastic parts (from 1 mm thick)
- Also for plastics with a glass fibre content of max. 40%
- Battery operated, mains independent working
- Can also be used directly connected to the power supply
- Heating rod holder for different repair clamps with Ø 0.6 and 0.8 mm
- Heats the clamps with approx. 100-200 °C
- Folding and with stand foot
- One battery charge lasts for approx. 150 repair clamps
- With 100 different clips per type
- Repair clamps are pressed into the break and give the plastic body its permanent stability back
- Includes operating, battery status and charge display
- Do not use on pure fibre-glass reinforced plastic or carbon

Application range: Bumpers, panels, covers etc.





Technical data:

Input current:	DC 5 V 2 A
Output current:	DC 3.7 V max. 8A
Battery charger:	100-240V / 50/60Hz
Charging time:	3-4 hours

			kg	
150.1035	302 pcs	Hot stapler set for plastic repair (cordless)	1,30	

consists of:

		g	
150.1036	Plastic repair device	400	
150.1037	Power supply 12 V, 100-240 V, 50-60 Hz	93	
150.1051	Repair staple U-format Ø 0,6 mm, pack of 100	20	
150.1057	Repair staple U-format Ø 0,8 mm, pack of 100	20	
150.1052	Repair staple V-format Ø 0,6 mm, pack of 100	20	



Repair staples

- Suitable for repairing breaks on headlamps, bumpers etc.
- The clamps are fused into the breaks
- Rust-proof
- Stainless steel



	Form	Ø mm	Content	g	
150.1051	U-form	0,6	100	20	
150.1057	U-form	0,8	100	20	

Repair staples

- Suitable for repairing breaks on headlamps, bumpers etc.
- The clamps are fused into the breaks
- Rust-proof
- Stainless steel



	Form	Ø mm	Content	g	
150.1053	W shaped	0,6	100	20	
150.1059	W shaped	0,8	100	20	

Repair staples

- Suitable for repairing breaks on headlamps, bumpers etc.
- The clamps are fused into the breaks
- Rust-proof
- Stainless steel



	Form	Ø mm	Content	g	
150.1052	V-form	0,6	100	20	
150.1058	V-form	0,8	100	20	

Repair staples

- Suitable for repairing breaks on headlamps, bumpers etc.
- The clamps are fused into the breaks
- Rust-proof
- Stainless steel



	Form	Ø mm	Content	g	
150.1055	U-form	0,6	100	20	
150.1061	U-form	0,8	100	20	

Plastic soldering iron

- Ideal for small plastic repairs, e.g. cracks in the bumper, wings, engine panels etc.
- Electrically-operated micro soldering device
- Includes holder



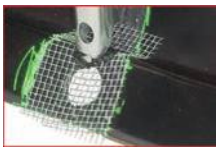


Capacity:	60 Watt
Voltage range:	120, 220V / 230V / 240 V - 50Hz / 60Hz
Working temperature:	0-400 °C
Cable length:	1,35 m
Heating blade:	15 x 26 mm

	Length mm	g	
960.1120	260,0	960	

Reinforcement mat

- Suitable for plastic repairs
- Gives the plastic a secure hold
- For use alongside standard plastic soldering irons





	Size mm	Content	g	
960.1126	150 x 110 mm	5	25	

Plastic soldering iron set

- Ideal for small plastic repairs, e.g. cracks in the bumper, wings, engine panels etc.
- Gas-operated micro soldering device
- With piezo ignition
- Adjustable gas supply
- With various repair sticks and reinforce mats
- Filled with standard lighter gas / ISO butan gas
- In durable plastic storage case





			g	
960.1115	33 pcs	Plastic soldering iron set	960	

consists of:

		g	
960.1116	Plastic soldering iron	110	
960.1117	Soldering iron add-on, Ø 9.0 mm	7	
960.1118	Soldering iron add-on, Ø 12.0 mm	11	
500.7111	Precision screwdriver, slot, 3mm	20	
201.2316	Brass wire spark plug wire brush 2 rowed, 170mm	20	
960.1119	Cleaning file, round	6	
960.1121	Reinforcement mats set, 3 pcs, 100 x 55 mm	9	
960.1122	PE (Polyethylene) repair sticks set, 6 pcs, black	15	
960.1123	PP (Polypropylen) repair sticks set, 6 pcs, black	15	
960.1124	PS (Polystyrene) repair stick set, 6 pcs, black	15	
960.1125	ABS (Acrylnitril-Butadien-Styrol) repair stick set, 6 pcs, black	15	

ALUMINIUM REPAIR

Aluminium repair kit

- ideally suited for repairing minor damage to aluminium parts
- applicable on all aluminium alloys, zinc, magnesium, pot metal and aluminium casting
- without flux or chemicals
- can only be used in conjunction with a micro soldering device
- including tin brush and 5 aluminium repair sticks





			g	
140.2600	6 pcs	Aluminium repair kit	144	

consists of:

		g	
140.2601	Tin brush	27	
140.2602	Repair stick set, 5 pcs.	117	

PARKING SENSOR TOOLS

Parking sensors pin wrench

- Suitable for assembly and removal of parking sensors, which are integrated into the front and rear bumpers
- Allows professional tightening to the prescribed torque
- Internal square drive to DIN 3121 / ISO 1174
- High accuracy of fit
- For manual operation
- Matt finish
- Chrome vanadium

Application range: Mercedes S Class (W140) and E Class (W210)



3/8"

	Length mm	g	
917.1424	106,0	360	

Drill for PDC punches Ø 10 mm

- Ideal for drilling the holes into the bumper for punches
- Right hand cutting
- High performance steel





	Ø mm	Length mm	g	
140.2554	10	130,0	40	

Knob with ball bearing

- ideal fro driving the punches for the PDC and PLA sensors
- guarantees optimal centring
- ball-bearing



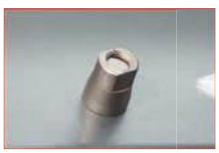


	Length mm	g	
140.2542	165,0	360	

Punch set with pin, Ø 18.0 mm

- Ideal for punching holes into the bumper for parking sensors
- Allows the optimum diameter for parking sensors
- No damage to the paint when cutting out the holes
- Repainting is not necessary
- Parking sensors must be inserted to the exact millimetre due to their sensitivity
- Includes mandrels with which the parking sensors can be attached precisely to the bumper

recommended accessories: drill 140.2554 and locking handle 140.2542





	Ø mm	g	
140.2556	18,0	180	

Punch set with pin, Ø 18.2 mm

- Ideal for punching holes into the bumper for parking sensors
- Allows the optimum diameter for parking sensors
- No damage to the paint when cutting out the holes
- Repainting is not necessary
- Parking sensors must be inserted to the exact millimetre due to their sensitivity
- Includes mandrels with which the parking sensors can be attached precisely to the bumper

recommended accessories: drill 140.2554 and locking handle 140.2542





	Ø mm	g	
140.2543	18,2	140	

Punch set with pin, Ø 18.4 mm

- Ideal for punching holes into the bumper for parking sensors
- Allows the optimum diameter for parking sensors
- No damage to the paint when cutting out the holes
- Repainting is not necessary
- Parking sensors must be inserted to the exact millimetre due to their sensitivity
- Includes mandrels with which the parking sensors can be attached precisely to the bumper

recommended accessories: drill 140.2554 and locking handle 140.2542





	Ø mm	g	
140.2578	18,4	147	

Punch set with pin, Ø 24.0 mm

- Ideal for punching holes into the bumper for parking sensors
- Allows the optimum diameter for parking sensors
- No damage to the paint when cutting out the holes
- Repainting is not necessary
- Parking sensors must be inserted to the exact millimetre due to their sensitivity
- Includes mandrels with which the parking sensors can be attached precisely to the bumper

recommended accessories: drill 140.2554 and locking handle 140.2542





	Ø mm	g	
140.2546	24,0	240	

Punch set with pin, Ø 26.0 mm

- Ideal for punching holes into the bumper for parking sensors
- Allows the optimum diameter for parking sensors
- No damage to the paint when cutting out the holes
- Repainting is not necessary
- Parking sensors must be inserted to the exact millimetre due to their sensitivity
- Includes mandrels with which the parking sensors can be attached precisely to the bumper

recommended accessories: drill 140.2554 and locking handle 140.2542





	Ø mm	g	
140.2548	26,0	280	

Punch set with pin, Ø 26.7 mm

- Ideal for punching holes into the bumper for parking sensors
- Allows the optimum diameter for parking sensors
- No damage to the paint when cutting out the holes
- Repainting is not necessary
- Parking sensors must be inserted to the exact millimetre due to their sensitivity
- Includes mandrels with which the parking sensors can be attached precisely to the bumper

recommended accessories: drill 140.2554 and locking handle 140.2542





	Ø mm	g	
140.2558	26,7	340	

Punch set with pin, Ø 27.4 mm

- Ideal for punching holes into the bumper for parking sensors
- Allows the optimum diameter for parking sensors
- No damage to the paint when cutting out the holes
- Repainting is not necessary
- Parking sensors must be inserted to the exact millimetre due to their sensitivity
- Includes mandrels with which the parking sensors can be attached precisely to the bumper

recommended accessories: drill 140.2554 and locking handle 140.2542





	Ø mm	g	
140.2553	27,4	270	

Punch set with pin, Ø 28.1 mm

- Ideal for punching holes into the bumper for parking sensors
- Allows the optimum diameter for parking sensors
- No damage to the paint when cutting out the holes
- Repainting is not necessary
- Parking sensors must be inserted to the exact millimetre due to their sensitivity
- Includes mandrels with which the parking sensors can be attached precisely to the bumper

recommended accessories: drill 140.2554 and locking handle 140.2542



	Ø mm	g	
140.2557	28,1	270	

Punch set with pin, Ø 32.0 mm

- Ideal for punching holes into the bumper for parking sensors
- Allows the optimum diameter for parking sensors
- No damage to the paint when cutting out the holes
- Repainting is not necessary
- Parking sensors must be inserted to the exact millimetre due to their sensitivity
- Includes mandrels with which the parking sensors can be attached precisely to the bumper

recommended accessories: drill 140.2554 and locking handle 140.2542



	Ø mm	g	
140.2552	32,0	380	

Punch set Ø 26.5 mm

- Ideal for punching holes into the bumper for parking sensors
- Allows the optimum diameter for parking sensors
- No damage to the paint when cutting out the holes
- Repainting is not necessary
- Parking sensors must be inserted to the exact millimetre due to their sensitivity

recommended accessories: drill 140.2554 and locking handle 140.2542



	Ø mm	g	
140.2579	26,5	100	

Punch set Ø 29.3 mm

- Ideal for punching holes into the bumper for parking sensors
- Allows the optimum diameter for parking sensors
- No damage to the paint when cutting out the holes
- Repainting is not necessary
- Parking sensors must be inserted to the exact millimetre due to their sensitivity

recommended accessories: drill 140.2554 and locking handle 140.2542

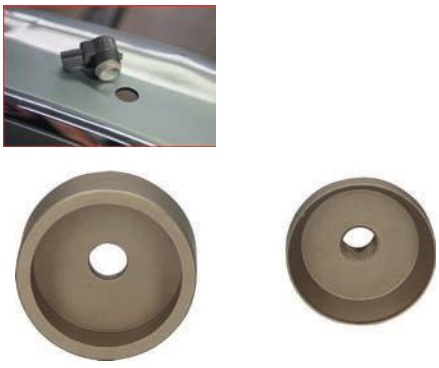


	Ø mm	g	
140.2582	29,3	125	

Punch set Ø 38.9 mm

- ideal for punching holes for parking assistant sensors into the bumper
- enables optimum diameter for the parking assistant sensors
- No damage to the paint when cutting out the holes
- Repainting is not necessary
- Parking assistant sensors must be used with millimetre precision due to their sensitivity.
- allows an exact fit for the parking sensors
- in combination with the optimal paint protection 140.2577 damage is avoided

recommended accessories: drill 140.2554 and locking handle 140.2542



	Ø mm	g	
140.2559	38,9	185	



Hole punch set for parking sensors (PDC)

- Ideal for punching holes into the bumper for parking sensors
- Allows the optimum diameter for parking sensors
- With various punches in varying sizes
- No damage to the paint when cutting out the holes
- Repainting is not necessary
- Parking sensors must be inserted to the exact millimetre due to their sensitivity
- Includes mandrels with which the parking sensors can be attached precisely to the bumper
- In durable plastic storage case





			kg	
140.2550	20 pcs	Hole punch set for parking sensors (PDC)	2,79	

consists of:

		g	
140.2542	Knob with ball bearing	360	
140.2543	Punch set with pin, 3 pcs., Ø 18.2 mm (VW, BMW)	140	
140.2546	Punch set with pin, 3 pcs., Ø 24.0 mm (Opel)	240	
140.2548	Punch set with pin, 3 pcs., Ø 26.0 mm (VW)	280	
140.2552	Punch set with pin, 3 pcs., Ø 32.0 mm (BMW)	380	
140.2554	Drill, 10 mm	40	
140.2556	Punch set with pin, 3 pcs., Ø 18.0 mm (Škoda)	180	
140.2558	Punch set with pin, 3 pcs., Ø 26.7 mm (Škoda)	340	

Drill for PDC punches Ø 18 mm

- Ideal for drilling the holes into the bumper for punches
- Right hand cutting
- High performance steel





	Ø mm	Length mm	g	
140.2576	18	180,0	206	

Knob with ball bearing

- ideal fro driving the punches for the PDC and PLA sensors
- guarantees optimal centring
- ball-bearing





	Length mm	g	
140.2542	165,0	360	

Paint protection set Ø 38 / 60 mm

- No damage to the paint when cutting out the holes
- Repainting is not necessary
- two different diameters: 4x 38 mm / 4x 60 mm
- only suitable for Ford punches





		g	
140.2577	Paint protection set Ø 38 / 60 mm	6	

Punch set type 01

- Ideal for punching holes into the bumper for parking sensors
- allows an exact fit for the parking sensors
- in combination with the optimal paint protection 140.2577 damage is avoided
- Repainting is not necessary
- Parking sensors must be inserted to the exact millimetre due to their sensitivity

Application range: Ford Fiesta 05/2012 (model no.: 2013.00), Focus 07/2010 (model no.: 2011.25), Focus Turnier 07/2010 (model no.: 2011.25), S-Max 02/2006 (model no.: 2006.5), Galaxy 02/2006 (model no.: 2006.5) and Mondeo 10/2014 (model no.: 2014.75)

recommended accessories: drill 140.2576 and locking handle 140.2542





		g	
140.2562	Punch set type 01	336	

Punch set type 02

- Ideal for punching holes into the bumper for parking sensors
- allows an exact fit for the parking sensors
- in combination with the optimal paint protection 140.2577 damage is avoided
- Repainting is not necessary
- Parking sensors must be inserted to the exact millimetre due to their sensitivity

Application range: Ford Fiesta 05/2012 (Model no.: 2013.00), Focus 07/2010 (Model no.: 2011.25), Focus Turnier 07/2010 (Model No: 2011.25), C-Max 04/2010 (Model no.: 2011.0) and Kuga 02/2008 (Model No: 2008.50)

recommended accessories: Drill 140.2576 and T-handle 140.2542





		g	
140.2563	Punch set type 02	148	

Punch set type 04

- Ideal for punching holes into the bumper for parking sensors
- allows an exact fit for the parking sensors
- in combination with the optimal paint protection 140.2577 damage is avoided
- Repainting is not necessary
- Parking sensors must be inserted to the exact millimetre due to their sensitivity

Application range: Ford Fiesta 05/2012 (Model no.: 2013.00)

recommended accessories: Drill 140.2576 and T-handle 140.2542





		g	
140.2564	Punch set type 04	333	

Punch set type 05

- Ideal for punching holes into the bumper for parking sensors
- allows an exact fit for the parking sensors
- in combination with the optimal paint protection 140.2577 damage is avoided
- Repainting is not necessary
- Parking sensors must be inserted to the exact millimetre due to their sensitivity

Application range: Ford Fiesta 05/2012 (Model no.: 2013.00)

recommended accessories: Drill 140.2576 and T-handle 140.2542





		g	
140.2566	Punch set type 05	330	

Punch set type 08

- Ideal for punching holes into the bumper for parking sensors
- allows an exact fit for the parking sensors
- in combination with the optimal paint protection 140.2577 damage is avoided
- Repainting is not necessary
- Parking sensors must be inserted to the exact millimetre due to their sensitivity

Application range: Ford B-Max 01/2012 (Model no.: 2012.75) and Kuga 02/2008 (Model No: 2008.50)

recommended accessories: Drill 140.2576 and T-handle 140.2542





		g	
140.2567	Punch set type 08	151	

Punch set type 09

- Ideal for punching holes into the bumper for parking sensors
- allows an exact fit for the parking sensors
- in combination with the optimal paint protection 140.2577 damage is avoided
- Repainting is not necessary
- Parking sensors must be inserted to the exact millimetre due to their sensitivity

Application range: Ford Mondeo 02/2007 (Model no.: 2007.5)

recommended accessories: Drill 140.2576 and T-handle 140.2542





140.2568	Punch set type 09	327	

Punch set type 11

- Ideal for punching holes into the bumper for parking sensors
- allows an exact fit for the parking sensors
- in combination with the optimal paint protection 140.2577 damage is avoided
- Repainting is not necessary
- Parking sensors must be inserted to the exact millimetre due to their sensitivity

Application range: Ford Focus 07/2010 (Model no.: 2011.25), Focus Turnier 07/2010 (Model No: 2011.25) and C-Max 04/2010 (model no.: 2011.0)

recommended accessories: Drill 140.2576 and T-handle 140.2542





140.2572	Punch set type 11	518	

Punch set type 15

- Ideal for punching holes into the bumper for parking sensors
- allows an exact fit for the parking sensors
- in combination with the optimal paint protection 140.2577 damage is avoided
- Repainting is not necessary
- Parking sensors must be inserted to the exact millimetre due to their sensitivity

Application range: Ford Focus Tournament 07/2010 (Model no.: 2011.25)

recommended accessories: Drill 140.2576 and T-handle 140.2542





140.2574	Punch set type 15	511	

Punch set type 10

- Ideal for punching holes into the bumper for parking sensors
- allows an exact fit for the parking sensors
- in combination with the optimal paint protection 140.2577 damage is avoided
- Repainting is not necessary
- Parking sensors must be inserted to the exact millimetre due to their sensitivity

Application range: Ford C-Max 04/2010 (Model no.: 2011.0)

recommended accessories: Drill 140.2576 and T-handle 140.2542





140.2569	Punch set type 10	333	

Punch set type 12

- Ideal for punching holes into the bumper for parking sensors
- allows an exact fit for the parking sensors
- in combination with the optimal paint protection 140.2577 damage is avoided
- Repainting is not necessary
- Parking sensors must be inserted to the exact millimetre due to their sensitivity

Application range: Ford Focus 07/2010 (Model no.: 2011.25), Focus Turnier 07/2010 (Model No: 2011.25) and C-Max 04/2010 (model no.: 2011.0)

recommended accessories: Drill 140.2576 and T-handle 140.2542





140.2573	Punch set type 12	519	

Hole punch set for Ford parking sensors (PDC)

- Ideal for punching holes into the bumper for parking sensors
- Allows the optimum diameter for parking sensors
- With various punches in varying sizes
- No damage to the paint when cutting out the holes
- Repainting is not necessary
- Parking sensors must be inserted to the exact millimetre due to their sensitivity
- In durable plastic storage case





140.2560	30 pcs	Hole punch set for Ford parking sensors (PDC)	4,95	

consists of:

		g
140.2542	Knob with ball bearing	360
140.2562	Punch set, Ford Fiesta, Focus, S-Max, Galaxy, Mondeo, 2 pcs. #01	336
140.2563	Punch set, Ford Fiesta, Focus, C-Max, Kuga, 2 pcs. #02	148
140.2564	Punch set, Ford Fiesta, 2 pcs. #04	333
140.2566	Punch set, Ford Fiesta, 2 pcs. #05	330
140.2567	Punch set, Ford B-Max, Kuga, 2 pcs. #08	151
140.2568	Punch set, Ford Mondeo, 2 pcs. #09	327
140.2569	Punch set, Ford C-Max, 2 pcs. #10	333
140.2572	Punch set, Ford Focus, C-Max, 2 pcs. #11	518
140.2573	Punch set, Ford Focus, C-Max, 2 pcs. #12	519
140.2574	Punch set, Ford Focus, 2 pcs. #15	511
140.2576	Drill for PDC punches Ø 18 mm	206
140.2577	Paint protection set, 8 pcs.	6

TRIM

MASTER Induction Heat Gun Set

- For loosening rusted and seized connections
- For loosening "insoluble" glued connections
- Induction principle
- Pinpoint heating in seconds
- Heating of components to max. 780°C (red hot)

Application range: Screws, nuts and bolts, exhaust clamps and pipes, lambda probes, running gear, stuck bearings, ball joints, steering (e.g. tracking adjustment screws), chemically micro-encapsulated threaded connections (bonded), warming of bearing housings during dismantling and assembly





Technical data:

Capacity: 1500 Watt

			g
500.8415	12 pcs	MASTER Induction Heat Gun Set	3,88

consists of:

		g
500.8420-1	Induction heat gun	1830
500.8431	Induction coils 15mm, standard	48
500.8432	Induction coils 19mm, standard	53
500.8433	Induction coils 22mm, standard	54
500.8434	Induction coils 26mm, standard	54
500.8435	Induction coils 32mm, standard	64
500.8436	Induction coils 38mm, standard	70
500.8423	Induction coils 22mm, extra long	76
500.8424	Induction coils 26mm, extra long	81
500.8450	Induction coil, cable, fully flexible, standard	62
500.8445	Induction coil, semi-rigid, deformable, universal	42
500.8440	Induction pad	175

Induction pad

- Heat-resistant material
- Gentle on painted surfaces
- Flat and flexible surface
- Simple handling
- Can be used together with induction heat pistol 500.8420-1

Application range: Removal of stickers, type plates, emblems, decorative strips, self-adhesive films and small trims on painted surfaces





	mm	Length mm	g
500.8440	100 x 100	260,0	175

Trim and window mounting set

- For fixing and holding trims, emblems and windscreen mountings
- Wide side can also be used as a scraper or lever
- With suction cup
- Quick and easy mounting
- Simple to remove by lifting the tab
- Dosing of the contact pressure with the wing nut





		Length mm	Suction cup Ø mm	g
140.1020	6 pcs	180,0	85,0	250

consists of:

	x		g
140.1021	6	Suction holder for trim mounting, Ø 85mm	40



DOOR HINGES AND HANDLES

Door lock screwdriver

- Spline (XZN®)
- Suitable for the assembly and disassembly of the door lock screws
- Also suitable for the external door handle
- One component handle
- Blade made of chrome vanadium



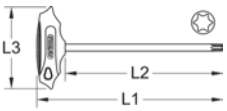


		L1 mm	L2 mm	g
911.1117	M4	215,0	125,0	50

T-handle Torx key wrench, long

- Extra long execution
- Two component handle
- Continuous hardened
- Matt chrome
- Special tool steel







		L1 mm	L2 mm	L3 mm	g
158.8051	T10	403,0	373,0	80,0	30
158.8052	T15	403,0	373,0	80,0	30
158.8053	T20	403,0	373,0	100,0	40
158.8054	T25	408,0	373,0	100,0	40
158.8055	T27	408,0	373,0	100,0	40
158.8056	T30	408,0	373,0	100,0	45

T-handle Torx key wrench set

- Extra long execution
- Two component handle
- Continuous hardened
- Matt chrome
- Special tool steel





			g
158.8050	6 pcs	T10 - T15 - T20 - T25 - T27 - T30	375

Torx E socket, deep

- Torx E
- Ideal for the assembly and disassembly of the deep-seated door hinge holding screws on the rear hinged door and sliding door
- For loosening and tightening Torx-E cylinder head screws
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Long execution
- For manual operation
- Matt finish
- Chrome vanadium



1/2"

		L mm	g	
911.4451	E10	150,0	260	

Central cable plug - grooved nut key

- 3-stage adjustable groove nut key
- For the disassembly and assembly of difficult to access central cable connectors on the A-pillar (installed in door frame)
- Easy to use
- Sturdy design

Application range: Ford (Galaxy), **Seat** (Alhambra), **Škoda** and **Volkswagen** (Polo, Sharan)



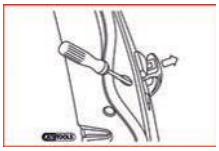


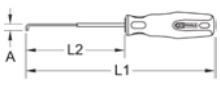
		g	
115.1306	Central cable plug - grooved nut key	240	

Door handle release tool

- With special hook profile
- For removing the cover cap on door handles without locking cylinder
- Required to remove the door handle
- For loosening the locking hook which is difficult to access
- With hanging hole
- Two component handle
- Chrome vanadium

Application range: Volkswagen Golf 6 from MY 08 / Fox from MY 05 / Passat B6 (3C) from MY / Tiguan from MY





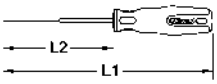


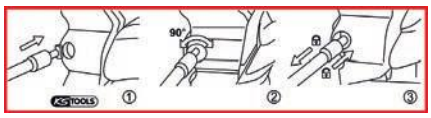
	L1 mm	L2 mm	A mm	g	
150.1609	260,0	150,0	10,0	140	

Door handle removal tool for VAG

- with special profile
- for loosening the locking hook which is difficult to access with door handles without a closing cylinder
- Required to remove the door handle
- Two component handle
- Chrome vanadium

Application range: Volkswagen Arteon >2017, Caddy >2016, Golf Sportsvan >2015, Passat >2015, Tiguan >2016, Touran >2016 and **Audi** Q2 >2016



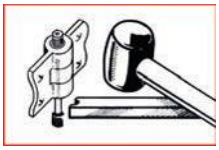




	L1 mm	L2 mm	g	
150.1628	217,0	110,0	100	

Door hinge roll pin drift set

- For the dismantlement of instep cases in door hinges
- For all passenger car and transporter doors
- Surface zinc-plated
- Special tool steel





		g	
140.2190	4 pcs Door hinge roll pin drift set	450	

consists of:

		g	
140.2191	Door hinge pin tool, 290mm	366	
140.2192	Pull out pin,115mm,Ø 3.5mm	12	
140.2193	Pull out pin,115mm,Ø 4.5mm	19	
140.2194	Pull out pin,115mm,Ø 5.5mm	25	



Special door hinge and alignment wrench set

- For the assembly and disassembly of door hinges
- Ideally suitable for door alignment
- Extra short bits with ball locking
- Includes ratchet with bit adaptor
- In durable plastic storage case





			g	
140.2180	9 pcs	Special door hinge and alignment wrench set	940	

consists of:

		g	
140.2181	Double ended dual offset wrench, 300mm	410	
140.2182	5/16" bit ratchet, 140mm	110	
140.2183	5/16" Special bit, XZN, M8	10	
140.2184	5/16" Special bit, XZN, M10	10	
140.2185	5/16" Special bit, XZN, M12	20	
140.2186	5/16" Special bit, Torx, T30	10	
140.2187	5/16" Special bit, Torx, T40	10	
140.2188	5/16" Special bit, Torx, T45	10	
140.2189	5/16" Special bit, Torx, T50	10	

Universal straightening iron

- For alignment of passenger car and van doors
- Also suitable for car boot and hatchbacks
- Double-walled execution
- Includes 3 different interchangeable special bolts
- Storage of the 3 special bolts covenient in the pipe grip magazine
- Mirror polished
- Special tool steel





	L mm	Replacement bolt set 3 pcs	kg	
150.1605	700,0	150.1606	1,30	

Door hinge alignment tool

- Ideally suited for adjustment of welded door hinges
- The adjustment mechanism allows a zero clearance
- Directing the hinge is possible in all directions
- No removal necessary
- Special tool steel





	L mm	Operation range mm	kg	
150.1761	565,0	0-42	3,24	

DOOR OPENER

Panel bag with hand pump

- Universal usage for positioning, fixing and separating body parts
- Ideal for the damage-free opening of car doors
- Levelling tool for the installation of door and window frames
- Extremely high pressure power
- Easy to pump with the hand pump
- Robust panel bag





	L mm	B mm	g	
116.1035	200,0	150,0	190	



Panel bag set with hand pump

- Universal usage for positioning, fixing and separating body parts
- Ideal for the damage-free opening of vehicle doors
- Levelling tool for the installation of door and window frames
- For separating interior trim
- Pumping via a hand pump with valve connector
- Release valve on the bellows
- Extremely high pressure power





			g	
150.1685	4 pcs	Panel bag set with hand pump	300	

consists of:

		g	
150.1686	Hand bellows	84	
150.1687	Panel bag 180 x 40mm	23	
150.1688	Panel bag 190 x 60mm	27	
150.1689	Panel bag 160 x 160mm	47	

Automobile car door lock opener set

- Wide range of round and flat steel tools, nylon wedge and universal gas cap key
- For opening locked car doors from outside
- Ideal for towing service
- Can be used on most common vehicle models
- In durable leather case

Note: Does not work with modern vehicles with electronically controlled locking systems





			kg	
150.1630	16 pcs	Automobile car door lock opener set	2,55	

consists of:

		g	
150.1611	Door opening wire, button and auxiliary hook	90	
150.1612	Door opening wire, double slide hook	70	
150.1613	Door opening wire, Toyota Camry/Chrysler tool	10	
150.1614	Door opening wire, Mercedes/Volvo tool	60	
150.1615	Door opening wire, dual tool	30	
150.1616	Door opening wire, Japanese/button hook	90	
150.1617	Door opening wire, Porsche tool	20	
150.1618	Door opening wire, Chevrolet Astro/ Camaro tool	60	
150.1619	Door opening wire, double curve	20	
150.1620	Door opening wire, button pull	20	
150.1621	Door opening wire, wonder tool	140	
150.1622	Strip type catches small	60	
150.1623	Strip type catches wide	120	
150.1624	Plastic strip	10	
150.1625	Nylon window wedge	40	
150.1626	Double ended fuel cap key	10	

EXTERIOR MIRROR

Double ended mirror screwdriver

- Clip for the breast pocket
- Knurled grip
- Aluminium



	D	L mm	g	
140.2216	T15 x PH0	120,0	50	
140.2217	2,0 mm x 3/32"	120,0	50	
140.2218	T15 x T20	120,0	50	

ERGOTORQUE*plus*® screwdriver for Torx screws, tamperproof

- Perfectly suited to assembly and disassembly of wing mirrors
- Two component handle
- Optimal power transmission
- Hardened blade
- Chrome finish with burnished tips
- Blade made of chrome vanadium

Application range: Mercedes W203 (C Class) and W204 (E Class)





		L1 mm	L2 mm	L3 mm	g	
159.1054	TB20	205,0	100,0	105,0	50	

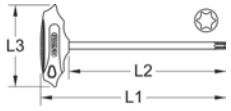




T-handle Torx key wrench, long

- Extra long execution
- Two component handle
- Continuous hardened
- Matt chrome
- Special tool steel







		L1 mm	L2 mm	L3 mm	g	
158.8051	T10	403,0	373,0	80,0	30	
158.8052	T15	403,0	373,0	80,0	30	
158.8053	T20	403,0	373,0	100,0	40	
158.8054	T25	408,0	373,0	100,0	40	
158.8055	T27	408,0	373,0	100,0	40	
158.8056	T30	408,0	373,0	100,0	45	

T-handle Torx key wrench set

- Extra long execution
- Two component handle
- Continuous hardened
- Matt chrome
- Special tool steel





			g	
158.8050	6 pcs	T10 - T15 - T20 - T25 - T27 - T30	375	

Exterior mirror pliers for BMW

- Perfectly suited to assembly and disassembly of wing mirrors
- Locking jaw opening
- Adjusting screw and spring
- With PVC dipped handle
- Special tool steel

Application range: Wing mirrors for **BMW** E12, E21, E24, E28, E30, E31, E32, E34, E36, E38 and E39





	Length mm	g	
115.1305	165,0	180	

LEVER AND SEPARATING TOOLS

Bending iron/pry bar

- 6 point
- Quenched and tempered
- Forged
- Cone polished
- Special tool steel





	D1 mm	D2 mm	L mm	S mm	g	
129.2222	22,0	5,0	405,0	16,0	650	

Pry bar

- Best suited for and breakdown and installation work
- For pressure testing securely-fitted parts
- Ergonomic single component handle
- Hardened through the whole length
- Chrome molybdenum







	D mm	L1 mm	L2 mm	g	
911.8101	11,0	200,0	115,0	130	
911.8102	15,0	300,0	185,0	220	
911.8103	18,0	450,0	320,0	420	
911.8104	18,0	600,0	470,0	560	

Pry bar sets

- Best suited for and breakdown and installation work
- For pressure testing securely-fitted parts
- Ergonomic single component handle
- Hardened through the whole length
- Chrome molybdenum





			kg	
911.8100	4 pcs	11 x 115 mm - 15 x 185 mm - 18 x 320 mm - 18 x 470 mm	1,33	

Pry bar

- Angular lever end guarantees non slip surface
- Ideally suited for and breakdown and installation work
- Go through blade and hammer cap
- Suitable for the testing of defective bearings
- Two component handle
- Special tool steel
- In durable plastic storage case





	Bend radius	Length mm	kg	
911.8411	0°	900,0	1,70	
911.8412	45°	900,0	1,75	
911.8413	75°	600,0	1,17	
911.8414	90°	600,0	1,20	

Pry bar

- Angular lever end guarantees non slip surface
- Ideally suited for and breakdown and installation work
- Go through blade and hammer cap
- Suitable for the testing of defective bearings
- Two component handle
- Special tool steel
- In durable plastic storage case





	Bend radius	Length mm	kg	
911.8415	45°	1150,0	4,75	

Pry bar sets

- Angular lever end guarantees non slip surface
- Ideally suited for and breakdown and installation work
- Go through blade and hammer cap
- Suitable for the testing of defective bearings
- Two component handle
- Special tool steel
- In durable plastic storage case





			kg
911.8410	4 pcs	Pry bar sets	8,70

consists of:

		kg
911.8411	Pry bar, 0°, 900mm	1,70
911.8412	Pry bar, 45°, 900mm	1,75
911.8413	Pry bar, 75°, 600mm	1,17
911.8414	Pry bar, 90°, 600mm	1,20

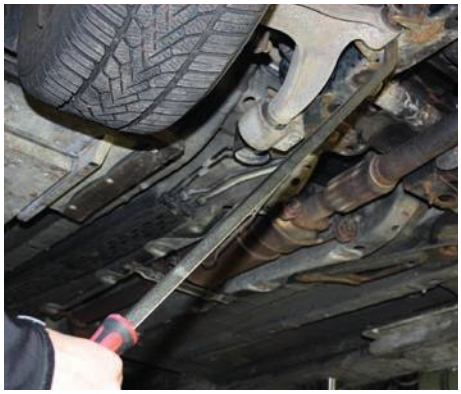
Flexible roll head pry bar

- Extremely versitile and robust execution
- Varible adjustable roll head
- Maximum power transmission in the narrowest area
- Optimal leverage in minimal work area
- Special tool steel





	Length mm	Assembly levels	g
911.8176	250,0	5	385
911.8177	300,0	5	455
911.8178	400,0	5	565



Flexible roll head pry bar set

- Extremely versitile and robust execution
- Varible adjustable roll head
- Maximum power transmission in the narrowest area
- Optimal leverage in minimal work area
- Special tool steel





			kg
911.8175	3 pcs	Flexible roll head pry bar set	1,50

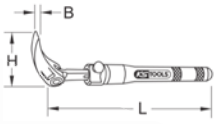
consists of:

		g
911.8176	Flexible roll head pry bar, 250 mm	385
911.8177	Flexible roll head pry bar, 300 mm	455
911.8178	Flexible roll head pry bar, 400 mm	565

Telescopic flexible roll head pry bar

- Lever extension with push-button in steps
- Roller head adjustable in steps
- Extra narrow, with recessed push button
- Maximum power transmission in the narrowest area
- Optimal leverage in minimal work area
- Special tool steel







	L mm	H mm	B mm	g
911.8186	325-460	90,0	12,0	780
911.8187	600-915	120,0	20,0	1900
911.8188	865-1350	145,0	24,0	4260

Telescopic flexible roll head pry bar set

- Lever extension with push-button in steps
- Roller head adjustable in steps
- Extra narrow, with recessed push button
- Maximum power transmission in the narrowest area
- Optimal leverage in minimal work area
- Special tool steel

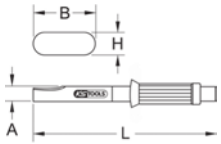


			kg
911.8185	3 pcs	325-460 - 600-915 - 865-1350 mm	6,94

Bodywork slitting chisel

- Suitable for separating welds
- With re-grindable cutters
- Continuous blade
- Two component handle
- Special tool steel





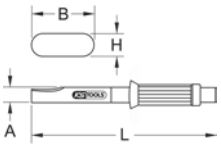


	L mm	A mm	B mm	H mm	g
162.0216	300,0	25,0	19,0	6,0	330

Bodywork slitting chisel

- Suitable for separating welds
- With re-grindable cutters
- Continuous blade
- Two component handle
- Special tool steel





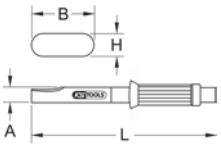


	L mm	A mm	B mm	H mm	g
162.0217	300,0	25,0	19,0	6,0	330

Bodywork slitting chisel

- Suitable for separating welds
- With re-grindable cutters
- Continuous blade
- Two component handle
- Special tool steel







	L mm	A mm	B mm	H mm	g
162.0218	240,0	25,0	19,0	6,0	330

Bodywork slitting chisel set

- Suitable for separating welds
- With re-grindable cutters
- Continuous blade
- Two component handle
- Special tool steel





			kg
162.0215	3 pcs	Bodywork slitting chisel set	1,00

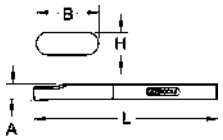
consists of:

		g
162.0216	Bodywork separating chisel, straight	330
162.0217	Bodywork separating chisel, 15° angled	330
162.0218	Bodywork separating chisel, 90° angled	330

Bodywork slitting chisel

- DIN 7255
- Flat oval form
- Blade can be resharpened
- Extra flat
- Burnished
- Chrome vanadium







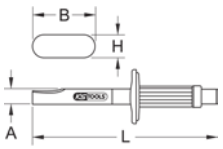
	L mm	A mm	B mm	H mm	Handle number	g
140.2162	300,0	21,0	25,0	6,0	-	310



Bodywork slitting chisel with hand grip

- DIN 7255
- Flat oval form
- Blade can be resharpened
- Extra flat
- Burnished
- Chrome vanadium



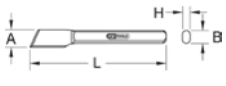




	L mm	A mm	B mm	H mm	g
140.2165	300,0	21,0	25,0	6,0	550

Bodywork slitting chisel

- Flat oval form
- Quenched and tempered
- Blade can be resharpened
- Shaft with gold coated lacquer
- Highly polished
- Chrome molybdenum

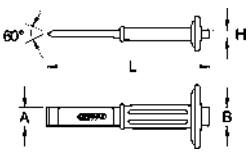




	L mm	A mm	B mm	H mm	Handle number	g
162.0271	250,0	30,0	23,0	13,0	162.0442	460

Slitting chisel with hand grip

- Flat oval form
- Extra thin
- Blade can be resharpened
- Quenched and tempered
- Shaft with gold coated lacquer
- Highly polished
- Chrome molybdenum





	L mm	A mm	B mm	H mm	g
162.0471	240,0	26,0	26,0	7,0	370

Bodywork spade chisel

- Extra wide execution
- With protective handgrip
- Quenched and tempered
- For cutting metal sheet and spot welds
- Shaft with powder coated lacquer
- Special tool steel



	B mm	L mm	g
156.0330	60,0	240,0	600

Bodywork slitting chisel set

- Flat oval form
- Extensive range
- With re-grindable cutters
- Extra flat
- Bronzed, chrome vanadium
- Highly polished/chrome molybdenum





			kg
140.2145	4 pcs	Bodywork slitting chisel set	2,00

consists of:

		g
156.0330	Bodywork chisel, 240mm	600
140.2162	Bodywork slitting chisel, 300mm	310
140.2165	Bodywork slitting chisel with hand grip, 300mm	550
162.0471	Slitting chisel, hand grip, 240mm	370

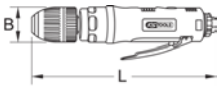


BODY BORING TOOLS

SlimPOWER mini-pneumatic straight drill

- Straight design
- Air exhaust through the handle rear end
- For one handed operation with ergonomic design
- Not reversible
- With quick-action drill chuck clamping width 0,6 - 6.0mm
- For hard to reach places
- Ideally suited for car bodywork and industrial working
- Stepless speed regulation
- Vibration dampened through double bearing guides
- Very compact construction
- Includes 1/4” coupling connector
- Robust housing







3/8”

Technical data:

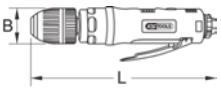
Chuck capacity:	0,6 - 6
Chuck thread reception:	3/8” x 24 UNF
Capacity:	186 Watt
No load current:	7000 r.p.m.
Vibration acceleration:	< 3,3 m/s²
Noise performance level:	97,4 dbA
Noise pressure level:	86,4 dbA
Air consumption:	240 l/min
Min. tube diameter:	3/8” - 10 mm
Operating pressure:	max. 6,3 bar (90 psi)
Connection thread:	1/4”NPT

	B mm	L mm	g	
515.5520	35,5	145,0	400	

Pneumatic straight drill

- Straight design
- Air exhaust through the handle rear end
- For one handed operation with ergonomic design
- Not reversible
- With quick release chuck capacity 0 - 10 mm
- For hard to reach places
- Ideally suited for car bodywork and industrial working
- Stepless speed regulation
- Number of revolutions adjustable through regulating screw
- Vibration dampened through double bearing guides
- Cold insulated handle
- Includes 1/4” coupling connector
- Ultra light robust housing special plastic







Technical data:

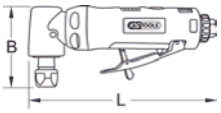
Capacity:	370 Watt
No load current:	4000 r.p.m.
Vibration acceleration:	< 2,8 m/s²
Noise performance level:	101,7 dbA
Noise pressure level:	90,7 dbA
Air consumption:	350 l/min
Operating pressure:	max. 6,3 bar (90 psi)
Min. tube diameter:	3/8” - 10 mm
Connection thread:	1/4”NPT

	B mm	L mm	g	
515.5435	46,0	225,0	900	

SlimPOWER mini-pneumatic angled die grinder

- Angled design
- Air exhaust through the handle rear end
- For one handed operation with ergonomic design
- For HM mills, mini cutting discs and grinding heads with a 6 mm shaft
- Ideal for grinding, polishing and engraving work
- For working in hard to access areas
- Secure operation lever with locking device
- Stepless speed regulation
- Vibration dampened
- Very compact construction
- Includes 1/4” coupling connector
- Robust housing







Technical data:

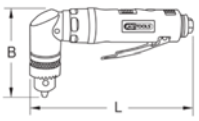
No load current:	19000 r.p.m.
Vibration acceleration:	< 3,5 m/s²
Noise performance level:	97,9 dbA
Noise pressure level:	86,9 dbA
Air consumption:	283 l/min
Min. tube diameter:	3/8” - 10 mm
Operating pressure:	max. 6,3 bar (90 psi)
Connection thread:	1/4”NPT

	B mm	L mm	g	
515.5535	75,0	123,0	300	

Pneumatic angle drill

- Angled design
- With planetary gearing
- Air exhaust through the handle rear end
- For one handed operation with ergonomic design
- Not reversible
- With gear rim drill chuck width 0 - 10 mm
- For hard to reach places
- Ideally suited for car body work
- Stepless speed regulation
- Number of revolutions adjustable through regulating screw
- Vibration dampened through double bearing guides
- Cold insulated handle
- Includes 1/4” coupling connector
- Ultra light robust housing special plastic







Technical data:

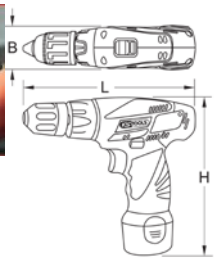
Chuck capacity:	1 - 10
Chuck thread reception:	3/8” x 24 UNF
Capacity:	370 Watt
No load current:	1900 r.p.m.
Vibration acceleration:	< 3,5 m/s²
Noise performance level:	101,9 dbA
Noise pressure level:	90,9 dbA
Air consumption:	350 l/min
Min. tube diameter:	3/8” - 10 mm
Operating pressure:	max. 6,3 bar (90 psi)
Connection thread:	1/4”NPT

	B mm	L mm	kg	
515.5465	115,0	205,0	1,07	

Cordless drill machine

- Lightweight
- Handy and ergonomic dual component housing
- Universal use through robust quick release chuck
- With practical clockwise and anticlockwise reversing function
- Stepless controllable motor speed through electronic switch
- With torque control
- Carbon brushes interchangeable
- High performance lithium-ion battery
- Longer running time through higher load capacity
- Fast charging function (1 hour)
- Automatic turn off charging station
- Blow mould plastic housing
- In durable plastic storage case







Technical data:

Chuck capacity:	1 - 10 mm
Electrical Voltage:	10,8 V
Speed:	0 - 1870 rpm
Torque max.	24 Nm
No load current:	3,5 A
Charging time:	1 hour
Rechargeable battery:	10,8 V - 2,0 Ah

	L mm	B mm	H mm	Spare carbon brushes set	Battery pack	Number of Charger batteries		kg	
515.3534	190,0	55,0	200,0	515.3595	515.3592	0	0	1,60	
515.3535	190,0	55,0	200,0	515.3595	515.3592	1	1	2,50	
515.3536	190,0	55,0	200,0	515.3595	515.3592	2	1	2,70	



Fastdrill pneumatic spot weld drill set

- Special drive for high torque
- With non slip soft grip handle
- Air exhaust through the handle
- Suitable for continuous duty
- Ideally suited for internal and external spot welds
- For carbide spot weld drills
- Detailed guide
- Revolving and removable frame to the fixation on the object
- Feed achievement through pneumatic-cylinder
- Stepless speed regulation
- Cold insulated handle
- Includes 1/4" coupling connector
- Robust machined housing





Technical data:

Drive in mm	8 mm
Capacity:	280 Watt
No load current:	1000 r.p.m.
Vibration acceleration:	< 0,72 m/s²
Noise performance level:	95,4 dbA
Noise pressure level:	82,4 dbA
Air consumption:	340 l/min
Operating pressure:	6 bar
Min. tube diameter:	3/8" - 10 mm
Connection thread:	1/4"PT

			kg
515.1310	3 pcs	Fastdrill pneumatic spot weld drill set	2,40

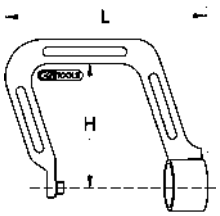
consists of:

		kg
515.1311	Fastdrill pneumatic spot weld drill	1.85
515.1312	Bracket, small, for Fastdrill	0.55
515.1314	T-handle wrench	0.04

Bracket, big, for Fastdrill

- As complement to Fastdrill 515.1310
- Large reach of the bracket for deeper welding point
- Bracket can be replaced without the use of tools
- Can be rotated on the machine shaft







	H mm	L mm	g	
515.1313	130,0	206,0	800	

COOLANT

Cooling lubricant stick

- Suitable for working with centre bits, countersinks and stepped drills
- Contents 18g
- To prolong the service life



	Volume g	g	
390.0190	18	44	

SPOT WELD DRILLS

HSS Spot weld cutter

- Right hand cutting
- Interchangeable crowns
- Milling machine depth adjustable
- For efficient and fast working
- For loosening of spot welds
- No deformation of the sheet metal
- Special high performance steel

Ideally suitable with pneumatic drill, electric drill and rechargeable battery drill.





	D mm	D	L mm	Replacement crowns	Center point	Content	g	
332.0951	8,0	5/16	72,0	332.0952	332.0955	1	30	
332.0953	10,0	3/8	72,0	332.0954	332.0955	1	30	

HSS Spot weld cutter set

- Right hand cutting
- Interchangeable crowns
- Milling machine depth adjustable
- For efficient and fast working
- For loosening of spot welds
- No deformation of the sheet metal
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Ideally suitable with pneumatic drill, electric drill and rechargeable battery drill.

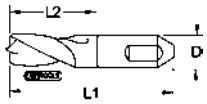


			g	
332.0950	2 pcs	8 - 10 mm	100	

HSSE Spot weld drill

- Right hand cutting
- Centre tip has a ground point
- Accurate polished
- For burr free drilling without using a centre punch
- For the drilling of welding points
- Surface without discolouration
- High performance steel

Ideally suited in a hand drilling machine.
For drilling of plastic sheet, copper, zinc, aluminum, brass and steel sheet.



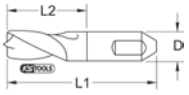


	D mm	L1 mm	L2 mm	Content	g	
332.0106	6,0	70,0	25,0	1	10	
332.0108	8,0	80,0	30,0	1	20	
332.0110	10,0	90,0	35,0	1	40	

HSSE TIN Spot weld drill

- Right hand cutting
- Centre tip has a ground point
- Accurate polished
- For burr free drilling without using a centre punch
- For the drilling of welding points
- TIN coated surface
- High performance steel

Ideally suited in a hand drilling machine.
For drilling of plastic sheet, copper, zinc, aluminum, brass and steel sheet.



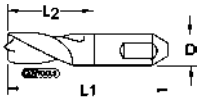


	D mm	L1 mm	L2 mm	Content	g	
332.0206	6,0	70,0	25,0	1	10	
332.0208	8,0	80,0	30,0	1	20	
332.0210	10,0	90,0	35,0	1	40	

HSSE TICN Spot weld drill

- Right hand cutting
- Centre tip has a ground point
- Accurate polished
- For burr free drilling without using a centre punch
- For the drilling of welding points
- TICN coated surface
- High performance steel

Ideally suited in a hand drilling machine.
For drilling of plastic sheet, copper, zinc, aluminum, brass and steel sheet.



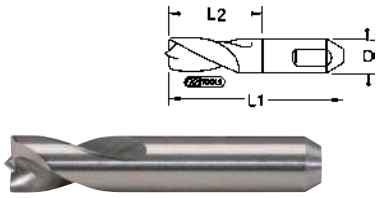


	D mm	L1 mm	L2 mm	Content	g	
332.0308	8,0	80,0	30,0	1	20	
332.0310	10,0	90,0	35,0	1	40	

HSS Spot weld drill

- Right hand cutting
- Centre tip has a ground point
- Accurate polished
- For burr free drilling without using a centre punch
- For the drilling of welding points
- TICN coated surface
- High performance steel

Ideally suited in a pneumatic drill and vario milling machine.

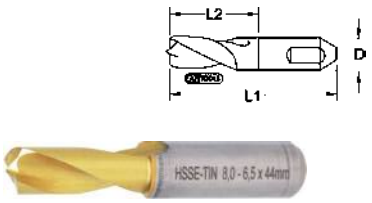


	D mm	L1 mm	L2 mm	Content	g
332.0408	6,5	44,0	15,0	1	10
332.0708	8,0	44,0	15,0	1	10

HSSE TiN Spot weld drill

- Right hand cutting
- Centre tip has a ground point
- Accurate polished
- For burr free drilling without using a centre punch
- For the drilling of welding points
- TIN coated surface
- High performance steel

Ideally suited in a pneumatic drill and vario milling machine.



	D mm	L1 mm	L2 mm	Content	g
332.0508	6,5	44,0	15,0	1	10
332.0808	8,0	44,0	15,0	1	10

HSSE TiN Spot weld drill

- Right hand cutting
- Centre tip has a ground point
- Accurate polished
- For burr free drilling without using a centre punch
- For the drilling of welding points
- TIN coated surface
- High performance steel

Ideally suited in a pneumatic drill and vario milling machine

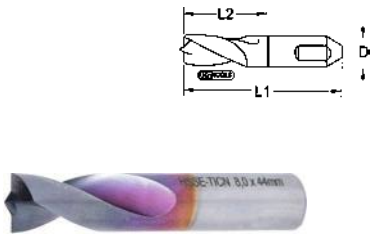


	D mm	L1 mm	L2 mm	Content	g
332.0809	8,0	44,0	23,0	10	134

HSSE TiCN Spot weld drill

- Right hand cutting
- Centre tip has a ground point
- Accurate polished
- For burr free drilling without using a centre punch
- For the drilling of welding points
- TICN coated surface
- High performance steel

Ideally suited in a pneumatic drill and vario milling machine.



	D mm	L1 mm	L2 mm	Content	g
332.0608	8,0	44,0	15,0	1	10

HSSE Double ended spot weld drill

- Right hand cutting
- Relieved cone has a ground point
- Cutting edge has thinning point
- 135° pointed angle
- Dual-sided adjustment
- Extra short and durable
- For thin walled materials
- Surface without discolouration
- High performance steel

Ideally suitable in steel, cast steel and high and low alloyed steel up to 900 N/mm² tensile, bronze, brass, brushed aluminum alloy, graphite, nickel silver, sintered iron, pressure-, malleable- and cast iron



	D mm	L1 mm	L2 mm	Content	g
332.0908	8,0	70,0	16,3	1	20

HSS Double ended spot weld drill set

- Right hand cutting
- Relieved cone has a ground point
- Cutting edge has thinning point
- 135° pointed angle
- Dual-sided adjustment
- Extra short and durable
- For thin walled materials
- Surface without discolouration
- High performance steel

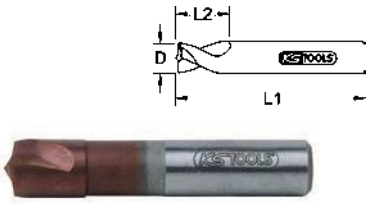
Ideally suitable in steel, cast steel and high and low alloyed steel up to 900 N/mm² tensile, bronze, brass, brushed aluminum alloy, graphite, nickel silver, sintered iron, pressure-, malleable- and cast iron



			g
332.0938	3 pcs	3 x 332.0908	70

Carbide spot weld drill

- Right hand cutting
- Highest stability under load
- Double edged
- Welded carbide head
- Especially temperature resistance up to max. 1100°C
- High performance carbide
- Suitable for high strength car body panels



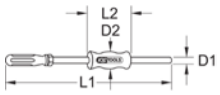
	D mm	L1 mm	L2 mm	Content	g
515.1305	8,0	44,0	11,0	1	22
515.1308	10,0	44,0	11,0	1	25

BENDING AND PULLING TOOLS

Slide hammer

- Flexible removal tool
- Internal thread for holding various pullers, bolts and hooks
- Ideal for removing ball bearings, wheel hubs etc.
- Ideal for limited access areas
- Special tool steel







	L1 mm	L2 mm	D1 mm	D2 mm		kg
660.0501	170	40,0	10,0	30,0	M10	0,40
660.0502	170	80,0	10,0	50,0	M10	0,90
660.0503	250	100,0	16,0	45,0	M10	1,30
660.0504	250	100,0	16,0	45,0	M10+G3/8"	1,40
660.0505	250	100,0	16,0	60,0	G3/8"	2,60



Universal slide hammer

- Extra heavy and solid execution
- For universal use for automobiles + trucks
- Enormous impact delivery of up to 11 tonnes
- With 6 kg impact weight
- Includes 3 kg additional weight
- With M 20 x 1.5 mm connection thread
- Additional weights can be screwed together
- Special tool steel





	L mm	kg	
700.1415	850,0	12,00	

accessories:

		kg	
700.1421	Adaptor, Ext. UN 1.1/2" x Int. M20 x 1,5	0,72	
700.1423	Adaptor, p.e. double hook /pull hook	0,27	
700.1424	Universal hook, M20x1,5 for ball joints	2,40	
700.1425	Double hook	0,75	
700.1428	Adaptor, Ext. M20x1,5xInt. M16x2	0,72	
700.1430	Adaptor, Ext. M20x1,5xInt. M18x1,5	0,72	
152.1056	Adaptor, M17	0,24	
700.1411	Wheel hub puller without spindle	2,55	

Universal slide hammer with puller hook, 6+3 kg

- Suitable for use with tensioning clamps
- Extra heavy and solid execution
- For universal use for automobiles + trucks
- Enormous impact delivery of up to 11 tonnes
- With 6 kg impact weight
- Includes 3 kg additional weight
- With M 20 x 1.5 mm connection thread
- Weights variably attachable and removable
- Special tool steel





			kg	
700.1475	3 pcs	Universal slide hammer with puller hook, 6+3 kg	13,24	

consists of:

		kg	
140.2455	Universa pull hook, incl. adator, 2 pcs	1,00	
700.1415	Universal slide hammer 6+3kg, 850mm	12,00	



Edge hammering iron

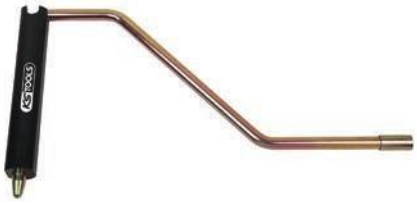
- Suitable for professional hammering out edges and beads
- Also suitable for hard-to-reach areas
- Does not destroy the edges
- 4-edge handle for controlling the tool position in hollows
- Can be folded together
- Special tool steel



	Width mm	Length mm	kg	
140.2456	148,0	450,0	1,02	

Universal clamping yoke

- Suitable for bodywork repairs
- Ideal for hammering our extremely deep lying areas
- Can be used with slide hammer (M20 x 1.5)
- Adjustable plastic slider for aluminium
- Sturdy design
- Special tool steel



	Width mm		kg	
140.2198	600,0	M20x1,5	5,70	

Super spotter - Welding gun 220V - 50/60 Hz

- Handy workshop tool
- For the repair of bodywork damage
- For hammering out body panels
- Plastic housing

Technical data:
Attention idle cut-out: 200 Ampere
Attention light cut-out: 200 Ampere





	Length mm	kg	
500.8551	285,0	5,46	

Slide hammer puller 1.5 kg

- For problem free hammerring out of car bodywork panels
- With 1.5 kg slide weight
- Usable in connection with the super spotter
- Special tool steel





	Length mm	Height mm	Replacement span head	kg	
500.8559	475,0	80,0	500.8561	2,08	

Super spotter - Welding gun set

- Handy workshop tool
- For the repair of bodywork damage
- For hammering out body panels
- By means of special electrodes nails or washers are welded on the sheet metal so the dents can be removed with an impact hammer using accurate blows
- With a heat electrode placed hot points can be set on the sheet metal
- Also contains an electrode for welding copper-plated dome head screws for the reinforcement of housings, parts etc. directly on the bodywork
- In durable plastic storage case

Technical data:
Attention idle cut-out: 200 Ampere
Attention light cut-out: 200 Ampere





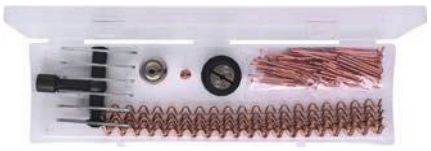
			kg	
500.8550	12 pcs	Super spotter - Welding gun set	10,39	

consists of:

		g	
500.8551	Welding gun, 220V, 50/60 Hz	5460	
500.8554	Electrode f.welding nails, copper	10	
500.8556	Electrode f.rivets, magnetic, copper	10	
500.8557	Electrode f.washers, brass	10	
500.8558	Heating electrode f.hot spots, brass	10	
500.8559	Slide hammer, 1.5kg	2080	
500.8560	Electrode extension, brass	10	
500.8571	Nails 2.0 x 50.0 mm copper coated, pack of 500	660	
500.8572	Nails 2.5 x 50.0 mm copper coated, pack of 100	210	
500.8574	Rivets 3.0 x 3.2 mm copper coated, pack of 100	30	
500.8579	Screws M4 x 16.0 mm copper coated, pack of 100	140	
500.8592	Washers 8.0 x 16.0 mm copper coated, pack of 100	160	

Super spotter addditional kit

- For removing of car body damage
- Includes the adaptor for the slide hammer puller
- The flexible and strong steel wire profile is used so the processing of securing car body panels
- The movable pull hooks situated can be pulled by the claw fastener straightening the carbody and/or the bump on
- It can be hooked on 1-9 pull hooks, at what point exact or extensive enabling the removal of dents



			kg	
500.8530	15 pcs	Super spotter addditional kit	1,04	

consists of:

		g	
500.8531	Welding electrode for corrugated wire	23	
500.8532	Corrugated wire, pack of 10, 2x310mm	122	
500.8533	Corrugated wire magnetic positioner	34	
500.8534	Multi hook head, 6 claw connection, IG M14x1,5	315	
500.8536	System adaptor side hammer	86	
500.8572	Nails 2.5 x 50.0 mm copper coated, pack of 100	210	

Super spotter electrodes

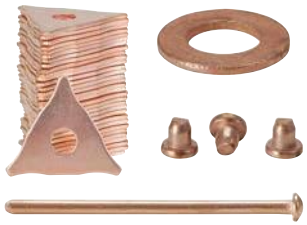
- Usable in connection with the super spotter
- Copper and/or brass



		g	
500.8554	Electrode for welding nails, Copper	10	
500.8556	Electrode for rivets, magnetic, Copper	10	
500.8562	Electrode for screws, Copper	20	
500.8557	Electrode for washers, Brass	10	
500.8558	Heating electrode for hot spots, Brass	10	
500.8560	Electrode extension, brass	10	

Super spotter consumables

- Usable in connection with the super spotter
- For the reinforcement of the car body
- Copper coated



		g	
500.8570	Nails 2.0 x 50.0 mm copper coated, pack of 100	140	
500.8571	Nails 2.0 x 50.0 mm copper coated, pack of 500	660	
500.8572	Nails 2.5 x 50.0 mm copper coated, pack of 100	210	
500.8573	Nails 2.5 x 50.0 mm copper coated, pack of 500	1150	
500.8592	Washers 8.0 x 16.0 mm copper coated, pack of 100	160	
500.8595	Triangular-washer 2.5 x 50.0 mm copper coated, pack of 100	500	
500.8574	Rivets 3.0 x 3.2 mm copper coated, pack of 100	30	
500.8575	Rivets 3.0 x 4.5 mm copper coated, pack of 100	40	
500.8576	Rivets 5.0 x 8.2 mm copper coated, pack of 100	40	
500.8579	Screws M4 x 16.0 mm copper coated, pack of 100	140	

Hydraulic vehicle alignment tool kit, 4 t

- For pressing, clamps and spreading of car body parts
- Simple handling due to plug in connection
- Includes hydraulic hand pump/ high pressure cylinder 4 t, detachable handle, pressure plate and various attachments
- Special tool steel
- In durable plastic storage case with handle





			kg	
160.0445	15 pcs	Hydraulic vehicle alignment tool kit, 4 t	17,50	

consists of:

		kg	
160.0446	Hydraulic-Pump for bodywork alignment tool, 4 t	5,20	
160.0447	Hydraulic-piston for bodywork alignment tool, 4 t	1,80	
160.0448	Extension tube for bodywork alignment tool, 400 mm	1,20	
160.0449	Extension tube for bodywork alignment tool, 300 mm	0,96	
160.0451	Extension tube for bodywork alignment tool, 200 mm	0,70	
160.0452	Extension tube for bodywork alignment tool, 100 mm	0,45	
160.0453	Adaptor extension	0,20	
160.0454	Pressure plate 110 x 65 mm	0,75	
160.0455	Pressure plate, V form, 52 mm	0,13	
160.0456	Piston attachment (laterally offset)	0,34	
160.0457	Wedge adaptor (notched)	0,21	
160.0458	Rubber ball, Ø 67 mm	0,26	
160.0459	Adaptor head, Cylinder serrated Ø 35 mm	0,20	
160.0461	Pressure plate (laterally offset)	0,31	
160.0462	Adaptor for bodywork alignment tool, 4 t	1,73	

Hydraulic alignment tool kit, 10 t

- For pressing, clamps and spreading of car body parts
- Simple handling due to plug in connection
- Includes hydraulic hand pump/ high pressure cylinder 10 t, detachable handle simple handling due to plug in connection
- Special tool steel
- In durable wheeled storage case





			kg	
160.0175	17 pcs	Hydraulic alignment tool kit, 10 t	41,00	

consists of:

		kg	
160.0176	Hydraulic pump f.body repair kit, 10 t	7.00	
160.0177	Hydraulic piston f.body repair kit	5.55	
160.0178	Adaptor f.bodywork aligement tool	1.93	
160.0179	Extension tube f.body repair kit, 530mm	3.34	
160.0180	Extension tube f.body repair kit, 400mm	1.66	
160.0181	Extension tube f.body repair kit, 300mm	1.70	
160.0182	Extension tube f.body repair kit, 175mm	1.70	
160.0183	Adaptor f.body repair kit, MxM	1.66	
160.0184	Pressure plate, 150x95mm	1.14	
160.0185	Pressure plate, V form	0.66	
160.0186	Wedge adaptor (notched)	0.66	
160.0187	Pressure plate (laterally offset)	0.86	
160.0188	Piston attachment (laterally offset)	0.86	
160.0189	Rubber ball, Ø 80 mm	0.66	
160.0190	Adaptor head, cylinder serrated Ø 50 mm	1.14	

Clamp for preparation working

- Ideally suited to avoiding deformations during preparation working
- Central tube can be rotated to short or lengthen the spanner
- With two adjustable jaws
- Sturdy design
- Special tool steel

Application range: Boot, engine compartment etc.



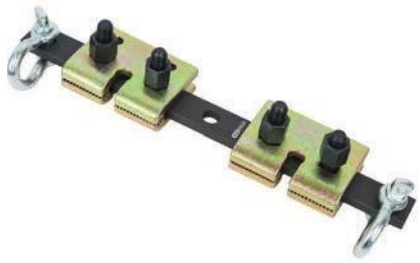


Opening of jaws min:	1000,0 mm
Jaw width max:	1200,0 mm
Width replacement jaws:	100,0 mm

	Replacement jaws	kg	
700.1445	700.1446	5,00	

Universal tensioning clamp straightening iron

- Suitable for bodywork repairs and pulling
- 2 adjustable jaws for secure attachment
- Includes 2 blades
- Maximum load 5 tonnes
- Universal application by adjusting the adjustable jaws
- Sturdy design
- Special tool steel



	Claw width mm	Clamping depth mm	Length mm	Drawbar eye opening mm	kg	
700.1457	120,0	20,0	540,0	30 x 32	6,26	

Mini pull clamp

- Two directions of pull
- Eyelet can be mounted to the left and right
- Ideal for car body repairs
- Extremly versatile
- Special tool steel



	Claw width mm	Clamping depth mm	Length mm	Drawbar eye opening mm	Fixing bolt	g
140.2400	36,0	27,0	150,0	25 x 25	M12x1,75	930

Small pull clamp

- One direction of pull
- No distorting due to the security device
- Ideal for car body repairs
- Extremly versatile
- Special tool steel



	Claw width mm	Clamping depth mm	Length mm	Fixing bolt	kg
140.2415	32,0	70,0	255,0	M14x85	1,65

Box pull clamp with 2 pull directions

- Two directions of pull
- Ideal for car body repairs
- Extremly versatile
- Special tool steel



	Claw width mm	Clamping depth mm	Length mm	Drawbar eye opening mm	Fixing bolt	kg
140.2430	38,0	64,0	245,0	35 x 41	M14x130	2,21

Standard pull clamp

- One direction of pull
- Ideal for car body repairs
- Extremly versatile
- Special tool steel



	Claw width mm	Clamping depth mm	Length mm	Drawbar eye opening mm	Fixing bolt	kg
140.2405	44,0	32,0	215,0	35 x 41	M17x90	1,95

Box pull clamp

- One direction of pull
- Extra instep
- Ideal for car body repairs
- Extremly versatile
- Special tool steel



	Claw width mm	Clamping depth mm	Length mm	Drawbar eye opening mm	Fixing bolt	kg
140.2420	38,0	64,0	245,0	35 x 41	M14x130	2,04

Maxi pull clamp

- One direction of pull
- With extra large mouth
- Ideal for car body repairs
- Extremly versatile
- Special tool steel



	Claw width mm	Clamping depth mm	Length mm	Drawbar eye opening mm	Fixing bolt	kg
140.2435	46,0	42,0	240,0	35 x 41	M19x150	3,00

Standard pull clamp with 2 pull directions

- Two directions of pull
- Ideal for car body repairs
- Extremly versatile
- Special tool steel



	Claw width mm	Clamping depth mm	Length mm	Drawbar eye opening mm	Fixing bolt	kg
140.2410	44,0	32,0	235,0	35 x 41	M17x90	2,13

Box pull clamp with adaptable jaws

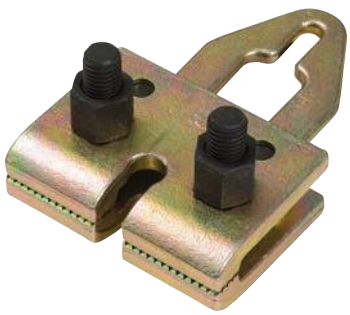
- One direction of pull
- Extra instep
- Ideal for car body repairs
- Extremly versatile
- Special tool steel



	Claw width mm	Clamping depth mm	Length mm	Drawbar eye opening mm	Fixing bolt	kg
140.2425	38,0	64,0	225,0	35 x 41	M14x130	2,01

Double jaw pull clamp

- One direction of pull
- No distorting due to the security device
- Ideal for car body repairs
- Extremly versatile
- Special tool steel



	Claw width mm	Clamping depth mm	Length mm	Fixing bolt	kg
140.2440	120,0	32,0	175,0	M17x90	2,49

Single-ended tensioning clamp

- One direction of pull
- With extra large mouth
- Ideal for car body repairs
- Extremly versatile
- Special tool steel



	Claw width mm	Clamping depth mm	Length mm	Drawbar eye opening mm	Fixing bolt	kg
140.2404	40,0	32,0	170,0	30 x 50	M14x90	1,20

V tensioning clamp

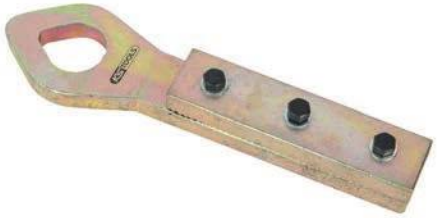
- One direction of pull
- Ideal for car body repairs
- Extremly versatile
- For use alongside the universal slide hammer (700.1415), adaptor (700.1421), and double hook (700.1425)
- Special tool steel



	Claw width mm	Clamping depth mm	Length mm	Fixing bolt	kg
140.2436	35,0	29,0	135,0	M12x70	0,67

Universal bodywork tensioning clamp

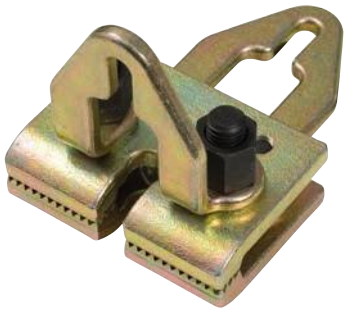
- Ideal for car body repairs
- One direction of pull
- For narrow spaces
- Extremly versatile
- Special tool steel



	Length mm	Width mm	Height mm	kg
140.2469	260,0	35,0	30,0	1,85

Double jaw pull clamp with 2 pull directions

- Two directions of pull
- No distorting due to the security device
- Ideal for car body repairs
- Extremly versatile
- Special tool steel



	Claw width mm	Clamping depth mm	Length mm	Fixing bolt	kg
140.2445	120,0	32,0	175,0	M17x90	2,86

Universal pull hook

- Universal car bodywork pull hooks
- Ideally suited for all ring eyelet tools
- High quality and compensated alloy steel
- Special tool steel





			kg
140.2455	2 pcs	Universal pull hook	1,00

Universal tension plate

- Universal bodywork tensioning plate
- A variety of holes for aligning any standard frame and many module chassis
- Ideal for car body repairs
- Extremly versatile
- Special tool steel



	Length mm	Width mm	Height mm	kg
140.2460	300,0	75,0	12,0	1,00

Double jaw pull clamp with 3 pull directions

- Three directions of pull
- No distorting due to the security device
- Ideal for car body repairs
- Extremly versatile
- Special tool steel



	Claw width mm	Clamping depth mm	Length mm	Fixing bolt	kg
140.2450	120,0	32,0	175,0	M17x90	3,40

Pulling chain connector

- Ideal for connecting or shortening pulling chains
- Suitable for 3/8” and 5/16” chains
- Maximum load 10 tonnes
- Secure and easy to use
- Special tool steel



	Total length mm	kg
140.2462	255,0	1,22

Wing puller, small

- Ideal for removing the wings
- Suitable for universal use thanks to the different arches
- Also suitable for adjusting headlamp openings and door pillars
- Tensile force is distributed when pulling
- Special tool steel





	Length mm	Width mm	Height mm	kg
140.2465	160,0	220,0	80,0	1,50

Wing puller, large

- Ideal for removing the wings
- Suitable for universal use thanks to the different arches
- Also suitable for adjusting headlamp openings and door pillars
- Tensile force is distributed when pulling
- Special tool steel





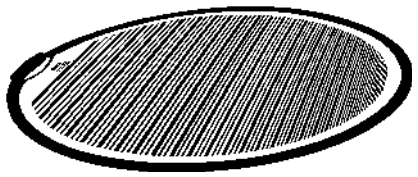
	Length mm	Width mm	Height mm	kg	
140.2470	320,0	235,0	80,0	1,80	

HAMMERING TOOLS

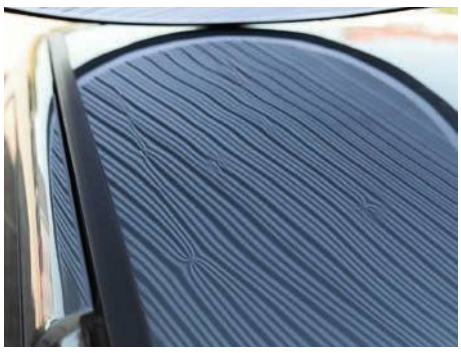
Dent mirror

- Ideal for better identification of dents and bumps, e.g. hail damage
- Ideal for the documentation of parking damage, leasing redemptions, traffic accidents, quality of repair etc.
- Also suitable for the quality control of surfaces in the industry
- With alternating lines for detecting exactly minor deformations
- Also suitable for mobile use
- Foldable in few seconds
- With non rotating plastic handle
- In practical storage pouch Ø 300 mm





	Ø mm	g	
140.2599	800,0	320	



Dent mirror

- Ideal for better identification of dents and bumps, e.g. hail damage
- Also suitable for mobile use
- With suction foot for straightforward use in the vehicle
- Freely adjustable using a gooseneck arm
- Arm can be easily separated from the screen with a snap lock for better transport
- Plastic





	Length mm	Width mm	g	
140.2597	240,0	200,0	370	

Dent mirror with light

- Ideal for better identification of dents and bumps, e.g. hail damage
- Also suitable for mobile use
- Stripes are projected on to the paint by penetration
- With suction foot for straightforward use in the vehicle
- Freely adjustable using a gooseneck arm
- Arm can be easily separated from the screen with a snap lock for better transport
- 230 V cable connector
- Closed plastic housing





	Length mm	Width mm	kg	
140.2598	360,0	203,0	1,48	

Heel dolly set

- Ideal for removing dents
- Ideal for hail damage
- Various head forms
- Simple handling
- Plastic handles
- With practical carrying bag
- Special tool steel





			kg	
140.2490	11 pcs	Heel dolly set	3,80	

consists of:

		g	
140.2491	Semi-circular iron, 260 mm	100	
140.2492	Semi-circular iron, 230 mm	100	
140.2493	Round iron, 470 mm	150	
140.2494	Semi-circular pointed iron, 970 mm	120	
140.2495	Ball head iron, angled 500 mm	400	
140.2496	Ball head iron, angled, 1000 mm	120	
140.2497	Special iron with hook, 670 mm	300	
140.2498	Ball head iron, twice angled, 600 mm	500	
140.2499	Set of plastic tips, 3 pcs	240	

Professional slide hammer set

- Suitable for repairing small dents or bumps
- No filling or painting work
- Allows the flexible removal of the dent and provides the best results
- Includes small slide hammer
- With 10 different beating pads





			g	
140.2510	11 pcs	Professional slide hammer set	896	

consists of:

		g	
914.0066	Slide hammer	860	
140.2501	Self-adhesive sheets, round, flat, Ø 40 mm	5	
140.2511	Self-adhesive sheets, round, flat, Ø 35 mm	4	
140.2521	Self-adhesive sheets, round, flat, Ø 32 mm	4	
140.2531	Self-adhesive sheets, round / spherically Ø 25 mm	3	
140.2541	Self-adhesive sheets, round / spherically Ø 20 mm	3	
140.2551	Self-adhesive sheets, round / spherically Ø 15 mm	2	
140.2561	Self-adhesive sheets, elliptical, flat, 48 x 33 mm	5	
140.2571	Self-adhesive sheets, elliptical, flat, 40 x 27 mm	4	
140.2581	Self-adhesive sheets, elliptical, flat, 33 x 22 mm	3	
140.2591	Self-adhesive sheets, rectangular, 32 x 17 mm	3	

Professional smart-repair dent puller set

- Suitable for repairing small dents or bumps
- No filling or painting work
- Allows the flexible removal of the dent and provides the best results
- Includes dent-pulling unit with rubber support feet
- With 10 different beating pads





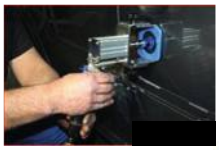
			g	
914.0065	11 pcs	Professional smart-repair dent puller set	316	

consists of:

		g	
914.0067	Dent-pulling unit with rubber support feet	280	
140.2501	Self-adhesive sheets, round, flat, Ø 40 mm	5	
140.2511	Self-adhesive sheets, round, flat, Ø 35 mm	4	
140.2521	Self-adhesive sheets, round, flat, Ø 32 mm	4	
140.2531	Self-adhesive sheets, round / spherically Ø 25 mm	3	
140.2541	Self-adhesive sheets, round / spherically Ø 20 mm	3	
140.2551	Self-adhesive sheets, round / spherically Ø 15 mm	2	
140.2561	Self-adhesive sheets, elliptical, flat, 48 x 33 mm	5	
140.2571	Self-adhesive sheets, elliptical, flat, 40 x 27 mm	4	
140.2581	Self-adhesive sheets, elliptical, flat, 33 x 22 mm	3	
140.2591	Self-adhesive sheets, rectangular, 32 x 17 mm	3	

Pneumatic smart-repair dent puller set

- Suitable for repairing small dents or bumps
- No filling or painting work
- Allows the flexible removal of the dent and provides the best results
- Includes pneumatic dent puller
- With 10 different beating pads





			kg	
140.2520	12 pcs	Pneumatic smart-repair dent puller set	1,48	

consists of:

		g	
140.2522	Pneumatic hammering puller	1440	
140.2501	Self-adhesive sheets, round, flat, Ø 40 mm	5	
140.2511	Self-adhesive sheets, round, flat, Ø 35 mm	4	
140.2521	Self-adhesive sheets, round, flat, Ø 32 mm	4	
140.2531	Self-adhesive sheets, round / spherically Ø 25 mm	3	
140.2541	Self-adhesive sheets, round / spherically Ø 20 mm	3	
140.2551	Self-adhesive sheets, round / spherically Ø 15 mm	2	
140.2561	Self-adhesive sheets, elliptical, flat, 48 x 33 mm	5	
140.2571	Self-adhesive sheets, elliptical, flat, 40 x 27 mm	4	
140.2581	Self-adhesive sheets, elliptical, flat, 33 x 22 mm	3	
140.2591	Self-adhesive sheets, rectangular, 32 x 17 mm	3	
140.2523	Extension adaptor	37	

Self-adhesive sheets for hammering tools

- Suitable for repairing small dents or bumps
- No filling or painting work
- Allows the flexible removal of the dent and provides the best results
- For use alongside a planishing tool



	Content		g	
140.2505	5	Self-adhesive sheets, round, flat, Ø 40 mm, 5 pcs	25	
140.2515	5	Self-adhesive sheets, round, flat, Ø 35 mm, 5 pcs	20	
140.2525	5	Self-adhesive sheets, round, flat, Ø 32 mm, 5 pcs	20	
140.2535	5	Self-adhesive sheets, spherical, round, Ø 25 mm, 5 pcs	15	
140.2545	5	Self-adhesive sheets, spherical, round, Ø 20 mm, 5 pcs	15	
140.2555	5	Self-adhesive sheets, spherical, round, Ø 15 mm, 5 pcs	10	
140.2565	5	Self-adhesive sheets, elliptical, flat, 48 x 33 mm, 5 pcs	25	
140.2575	5	Self-adhesive sheets, elliptical, flat, 40 x 22 mm, 5 pcs	20	
140.2585	5	Self-adhesive sheets, elliptical, flat, 33 x 22 mm, 5 pcs	15	
140.2595	5	Self-adhesive sheets, rectangular, 32 x 17 mm, 5 pcs.	15	

Pneumatic vacuum dent puller set

- Ideal for processing bumps in bodywork
- A vacuum creates an underpressure and the suction disks stick to the bodywork allowing dents to be easily pulled out
- Pneumatic regulation via ball valve
- Includes 3 exchangeable suction discs and 1 pull hook
- Special tool steel
- In durable plastic storage case





Technical data:

Operating pressure:	6 - 8 bar
Min. tube diameter:	1/4" - 6,35 mm
Connection thread:	1/4"
Slide hammer weight:	1,2 kg
Removal power:	bis zu 100 Kg

			kg	
140.2080	5 pcs	Pneumatic vacuum dent puller set	4,50	

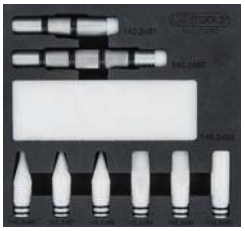
consists of:

		g	
140.2083	Panel beating hammer with impact weight	2400	
140.2084	Suction disk Ø 75 mm	126	
140.2085	Suction disk Ø 100 mm	170	
140.2086	Suction disk Ø 125 mm	260	
140.2087	Pull hook	100	

Kit of teflon wedges for varnished surface

- Ideal for reforming an over-compressed dent
- Hammering out without damage to paint
- Ridges are hammered out with targeted use of the hammer on the dents
- Also ideal for releasing tensioning in the sheet metal
- With interchangeable attachments
- Includes 2 handles
- Very rugged plastic





			g	
140.2480	10 pcs	Kit of teflon wedges for varnished surface	280	

consists of:

		g	
140.2481	Handle, short, 90 mm	32	
140.2482	Handle, long, 130 mm	50	
140.2483	Cylinder-shaped impact head	16	
140.2484	Impact head, wedge-shaped, round	13	
140.2485	Impact head, wedge-shaped, square	12	
140.2486	Impact head, cone-shaped, tip	10	
140.2487	Impact head, cone-shaped, round	11	
140.2488	Cylinder-shaped impact head with cone	10	
140.2489	Set of strike plates, 2 pcs, 155 mm	120	

Corrosion testing tool

- ideally suited for testing the body, frame, brake lines, etc.
- Plastic hammer
- including scraper and small crowbar end



	Ø mm	Length mm	Head length mm	g	
140.2129	16,0	157,0	90,0	74	

Aluminium panel beating hammer set

- For hammering out the car body
- Ideal for small dents and stone chips
- Replaceable plastic heads
- For gentle sheet metal working
- Insulated handle



			g	
140.5290	5 pcs	Aluminium panel beating hammer set	375	

consists of:

		g	
140.5291	Panel beating hammer	333	
140.5292	Plastic head, flat	13	
140.5293	Plastic head, cone-shaped/long	9	
140.5294	Plastic head, cone-shaped/short	8	
140.5295	Plastic head, cylindrical, 38 mm	13	

Mini precision hammer set

- For hammering out the car body
- Ideal for small dents and stone chips
- Flexible handle in cone form
- Metal and plastic head for gentle sheet metal working



		g	Hammer Ø mm	head length mm	Total length mm	g	
140.5296	3 pcs	63	24,0	43,0	180,0	75	

consists of:

		g	
140.1246	Mini precision hammer, 180 mm	53	
140.1247	Metal head, curved	15	
140.1253	Plastic head, curved	7	

Mini precision hammer set

- In durable plastic storage case
- For hammering out the car body
- Ideal for small dents and stone chips
- Various metal and plastic heads for gentle sheet metal working
- Flexible handle in cone form



			g	
140.1245	7 pcs	Mini precision hammer set	242	

consists of:

		g	
140.1246	Mini precision hammer, 180 mm	53	
140.1247	Metal head, curved	15	
140.1248	Aluminium head, curved	6	
140.1249	Copper head, curved	18	
140.1251	Copper head, cylindrical	25	
140.1252	Plastic head, cylindrical, Ø 24 mm	4	
140.1253	Plastic head, curved	7	

Universal panel beating hammer set

- For hammering out the car body
- Practical configuration
- For stretching and forming of car body sheet panels
- Hammer with 9 different attachments
- Special tool steel
- In durable plastic storage case



			kg	
140.5245	14 pcs	Universal panel beating hammer set	1,00	

consists of:

		g	
140.5246	Universal hammer	190	
140.5247	Corrugated attachment, coarse	66	
140.5248	Corrugated attachment, fine	68	
140.5249	Hammering attachment, smooth	74	
140.5250	Hammering attachment, aluminium	32	
140.5251	Hammer attachment, copper	82	
140.5253	Hammer attachment, plastic	12	
140.5261	Tip attachment, conical/flat	64	
140.5262	Tip attachment, cone-shaped/tip	40	
140.5263	Wedge adaptor	67	
140.5264	Set of headless screws, 4 pcs	4	
140.5265	Burr arbour	15	
151.2602	Hexagon key wrench phosphate finish, short, 2mm	10	

Aluminium hammer

- With hickory handle
- Aluminium head
- Protective material



	g	Ø mm	Length mm	head length mm	Handle number		g	
140.2121	280	30,0	310,0	145,0	140.2122	140.2123	380	

Aluminium bodywork hammering set

- For hammering out aluminium car body panels
- Practical configuration
- For stretching and forming of aluminium car body sheet panels
- In durable plastic storage case





			kg	
140.2475	7 pcs	Aluminium bodywork hammering set	3,50	

consists of:

		g	
140.2476	Aluminium bodywork recess heel dolly	186	
140.2477	Aluminium bodywork comma heel dolly	350	
140.2478	Aluminium bodywork universal heel dolly	210	
140.2479	Aluminium bodywork toe heel dolly	265	
700.1489	Aluminium bodywork pick hammer curved head, round/tip	110	
700.1490	Aluminium bodywork flat pick hammer curved head, round/flat tip	140	
700.1491	Aluminium bodywork standard hammer curved head, round/square	148	

Panel beater's serrated hammer, round/tip

- For reworking repaired areas, distortion-free
- Stresses are removed from the plate using a special profile in the impact area
- For tightening with a round, rough serrated head
- Fine face curved for accurate hammering out
- Special tool steel

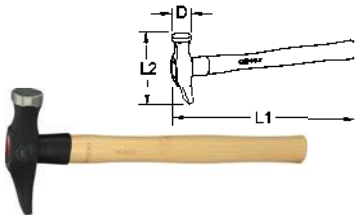




	Length mm	head length mm	Ø round side mm	Tip width mm	g	
140.2109	280,0	120,0	40,0	20,0	460	

Panel beaters hammer

- With ash handle
- Forged execution
- Impact area surfaces inductively hardened
- Head and edge areas polished ground
- Rounded edges
- Head coating made from structured powder baked lacquer
- Hammer head made out of high quality special steel



	g	D mm	L1 mm	L2 mm	Handle number		g	
140.4003	400	30,0	310,0	118,0	140.5304	140.5404	560	

Panel beaters hammer, small round/square

- Simple hammer with a flat, angular face and a round, slightly arched face
- Work areas ground
- Special tool steel



	Length mm	head length mm	Ø round side mm	square dim.mm	g	
140.2138	325,0	100,0	30,0	28 x 28 mm	390	

Panel beaters standard hammer, large round/square

- Planishing hammer with a square and round, flat face
- Work areas ground
- Special tool steel



	Length mm	head length mm	Ø round side mm	square dim.mm	g	
140.2133	325,0	100,0	40,0	39 x 39 mm	420	

Panel beaters serrated hammer fine, round/square

- For forming with an square, rough serrated face
- For streching with a round, slightly domed face
- Round work surfaces ground
- Special tool steel



	Length mm	head length mm	Ø round side mm	square dim.mm	g
140.2139	325,0	100,0	40,0	38 x 38 mm	490

Panel beaters serrated hammer, round/square

- For forming with an square, finely serrated face
- For streching with a round, slightly domed face
- Round work surfaces ground
- Special tool steel



	Length mm	head length mm	Ø round side mm	square dim.mm	g
140.2132	325,0	100,0	40,0	38 x 38 mm	490

Panel beaters hammer, round/square

- Bumping hammer with strong arched faces
- Work areas ground
- Special tool steel



	Length mm	head length mm	Ø round side mm	square dim.mm	g
140.2130	325,0	105,0	30,0	26 x 26 mm	390

Panel beaters hammer rounded head, small round/square

- Simple hammer with a flat, angular face and a round, slightly arched face
- Work areas ground
- Special tool steel



	Length mm	head length mm	Ø round side mm	square dim.mm	g
140.2135	325,0	100,0	30,0	27 x 27 mm	390

Aluminium bodywork pick hammer curved head, round/tip

- For hammering out aluminium car body panels
- Planishing hammer with a round, slightly domed face
- Fine conical face for accurate hammering out
- Polished surface
- Aluminium



	Length mm	head length mm	Ø round side mm	g
700.1489	300,0	140,0	40,0	110

Panel beaters pick hammer straight head, round/pointed

- Planishing hammer with a round, slightly domed face
- Fine conical face for accurate hammering out
- Work areas ground
- Special tool steel



	Length mm	head length mm	Ø round side mm	g
140.2137	325,0	140,0	40,0	460

Aluminium bodywork flat pick hammer curved head, round/flat tip

- For hammering out aluminium car body panels
- Planishing hammer with a round, slightly domed face
- Fine face for accurate hammering out
- Polished surface
- Aluminium



	Length mm	head length mm	Ø round side mm	Tip width mm	g
700.1490	300,0	140,0	40,0	20,0	140

Panel beaters pick hammer straigh head, round/flat point

- Planishing hammer with a round, slightly domed face
- Fine face for accurate hammering out
- Work areas ground
- Special tool steel



	Length mm	head length mm	Ø round side mm	Tip width mm	g
140.2136	325,0	140,0	40,0	19,0	460

Panel beaters pick hammer straight head, flat/pointed

- Planishing hammer with a round, slightly domed face
- Fine face curved for accurate hammering out
- Work areas ground
- Special tool steel



	Length mm	head length mm	Ø round side mm	Tip width mm	g
140.2131	325,0	140,0	40,0	19,0	460

Aluminium bodywork standard hammer curved head, round/square

- For hammering out aluminium car body panels
- Simple hammer with a flat, angular face and a round, slightly arched face
- Polished surface
- Aluminium



	Length mm	head length mm	Ø round side mm	square dim.mm	g
700.1491	300,0	100,0	40,0	38 x 38 mm	148

Panel beaters standard hammer curved head, large round/square

- Simple hammer with a flat, angular face and a round, slightly arched face
- Work areas ground
- Special tool steel



	Length mm	head length mm	Ø round side mm	square dim.mm	g
140.2134	325,0	100,0	40,0	38 x 38 mm	490

Wing dinging hammer

- Ideal for hammering out the wings
- Extra heavy execution
- Fine face curved for accurate hammering out
- Safe and easy use
- Work areas ground
- With hickory handle
- Special tool steel



	Length mm	head length mm	square dim.mm	Tip width mm	kg
140.2461	380,0	220	30 x 38 mm	35	1,31

Bodywork serrated hammer

- For hammering out the bodywork area
- High-quality design
- Work area coarse
- Special tool steel



	Length mm	head length mm	square dim.mm	g
140.2204	325,0	60,0	30 x 45 mm	330

Bodywork standard hammer, slightly curved

- For hammering out the bodywork area
- High-quality design
- Work area ground and lightly arched
- Special tool steel



	Length mm	head length mm	square dim.mm	g
140.2209	325,0	60,0	30 x 45 mm	330

Bodywork standard hammer, sharply curved

- For hammering out the bodywork area
- High-quality design
- Work area ground and strongly arched
- Special tool steel



	Length mm	head length mm	square dim.mm	g
140.2319	325,0	60,0	30 x 45 mm	360

Bodywork dinging hammer set

- For hammering out the car body
- High-quality design
- Optimum composition of rough and curved faces
- Work areas ground
- Special tool steel
- In durable plastic storage case



			kg	
140.2200	3 pcs	Bodywork dinging hammer set	1,02	

consists of:

		g	
140.2204	Bodywork serrated hammer, 30x45mm	330	
140.2209	Bodywork standard hammer, slightly curved, 30x45mm	330	
140.2319	Bodywork standard hammer, sharply curved, 30x45mm	360	

Car body panel beating set

- For hammering out the car body
- High-quality design
- Includes clamping and simple tools
- Special tool steel





			kg	
140.2125	3 pcs	Car body panel beating set	2,04	

consists of:

		g	
140.2112	Bodywork grid toe dolly, 120mm	1130	
140.2132	Panel beaters serrated hammer, round/ square, 325mm	490	
140.2133	Panel beaters standard hammer, large round/square, 325mm	420	



Car body panel beating set

- For hammering out the car body
- Practical configuration
- For stretching and forming of car body sheet panels
- In durable plastic storage case



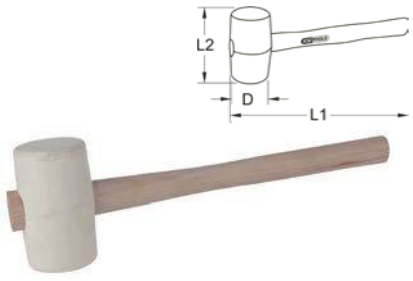
			kg	
140.2100	7 pcs	Car body panel beating set	7,50	

consists of:

		g	
140.2114	Bodywork universal heel dolly, 70mm	1380	
140.2115	Bodywork curved heel dolly, 130mm	1630	
140.2116	Bodywork heel dolly, 60mm	1130	
140.2119	Bodywork toe dolly, large, 120mm	1400	
140.2133	Panel beaters standard hammer, large round/square, 325mm	420	
140.2137	Panel beaters pick hammer straight head, round/pointed, 325mm	460	
140.2139	Panel beaters serrated hammer fine, round/ square, 325mm	490	

Rubber hammer

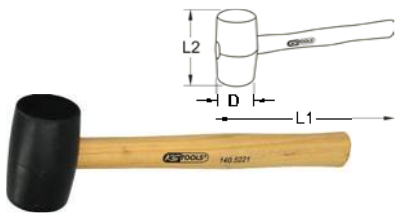
- DIN 5128
- With tapered ash inserted handle
- Hammer head made out of hard rubber
- With white rubber head



	g	D mm	L1 mm	L2 mm	g	
140.1234	270	55,0	300,0	115,0	300	
140.1235	500	60,0	340,0	115,0	595	
140.1236	735	65,0	380,0	130,0	855	

Rubber hammer

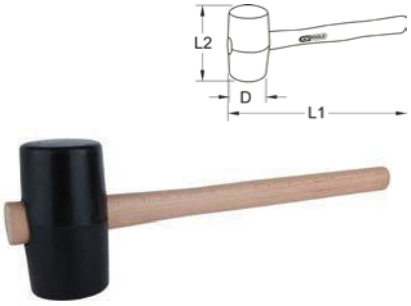
- DIN 5128
- With ash handle
- Hammer head made out of hard rubber



	g	D mm	L1 mm	L2 mm	Handle number		g	
140.5221	300	45,0	300,0	80,0	140.5304	140.5404	340	
140.5222	500	58,0	310,0	95,0	140.5305	140.5405	560	
140.5223	700	63,0	345,0	112,0	140.5306	140.5405	780	

Rubber hammer

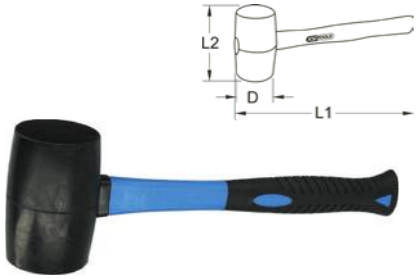
- DIN 5128
- With tapered ash inserted handle
- Hammer head made out of hard rubber



	g	D mm	L1 mm	L2 mm	g	
140.1230	425	60,0	340,0	110,0	525	

Rubber hammer

- DIN 5128
- With fibreglass handle
- Hammer head made out of hard rubber

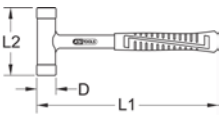


	g	D mm	L1 mm	L2 mm	g	
140.1237	500	56,0	325,0	100,0	520	

Recoil free soft faced hammer

- With hickory handle
- Shock absorbing effect through steel shot in the head
- Up to 100% higher impact effect than normal Soft head hammers
- Shatterproof and wear resistant
- Polyamid heads interchangeable
- For safer working with less recoil





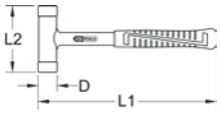


	g	D mm	L1 mm	L2 mm	g	
140.1215	350	32,0	330,0	120,0	480	

Recoil free soft faced hammer

- With steel tube handle and plastic handle
- Shock absorbing effect through steel shot in the head
- Up to 100% higher impact effect than normal Soft head hammers
- Shatterproof and wear resistant
- Polyamid heads interchangeable
- For safer working with less recoil



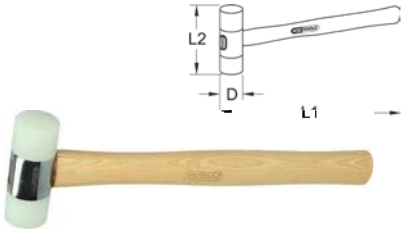




	g	D mm	L1 mm	L2 mm	head,spare	g
140.5270	360	25,0	270,0	105,0	140.5280	360
140.5271	480	30,0	290,0	105,0	140.5281	480
140.5272	590	35,0	295,0	110,0	140.5282	590
140.5273	850	40,0	300,0	120,0	140.5283	850
140.5274	990	45,0	305,0	120,0	140.5284	990
140.5275	1110	50,0	310,0	125,0	140.5285	1110
140.5276	1290	55,0	325,0	135,0	140.5286	1290
140.5277	1670	60,0	335,0	140,0	140.5287	1670

Nylon hammer

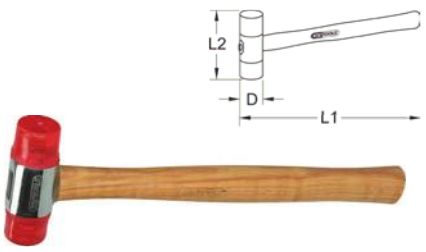
- With impact heads made out of impact resistant nylon
- shatterproof, break and wear-resistant
- With ash handle
- Ideal for hammering out and gentle sheet metal working



	g	D mm	L1 mm	L2 mm	Handle number		g
140.5211	200	28,0	260,0	82,0	140.5301	140.5401	230
140.5212	340	35,0	300,0	95,0	140.5304	140.5404	450

Plastic hammer

- With transparent head made from impact resistant cellulose acetate
- Impact heads are exchangeable (screw thread)
- With ash handle
- Ideal for hammering out and gentle sheet metal working

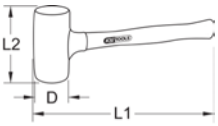


	g	D mm	L1 mm	L2 mm	Handle number		g
140.5201	200	28,0	260,0	82,0	140.5301	140.5401	210
140.5202	340	35,0	300,0	95,0	140.5304	140.5404	350

Recoil free soft faced hammer

- Polyurethane fiberglass composite
- Serrated surface for secure grip
- Free of sparks due to rubber cover
- Special absorbing effect through steel shot in the hammer head
- Substantially higher blow effect than in conventional hammering
- For safer working with less recoil





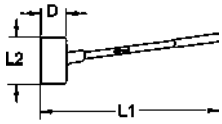


	g	D mm	L1 mm	L2 mm	kg
140.5252	400	40,0	270,0	81,0	0,48
140.5254	560	40,0	305,0	100,0	0,64
140.5255	645	42,0	325,0	100,0	0,73
140.5256	860	50,0	342,0	118,0	0,86
140.5257	1270	56,0	355,0	118,0	1,35
140.5258	1720	65,0	370,0	135,0	1,80

Recoil free soft faced hammer, extra large

- Polyurethane fiberglass composite
- Rubber handle for better grip
- Special absorbing effect through steel shot in the hammer head
- Substantially higher blow effect than in conventional hammering
- For safer working with less recoil







	g	D mm	L1 mm	L2 mm	kg
140.5259	5500	105,0	890,0	180,0	5,76

3 in 1 Heel dolly

- With a round form, a tip and anvil form
- Ideal for beating out bumps and dents
- With arched and ground work surfaces
- Polished surface
- Steel





	Width mm	Height mm	Length mm	g
140.2105	37,0	74,0	61,5	285
140.2106	37,0	86,5	39,5	394
140.2107	42,0	74,0	95,5	590

3 in 1 Heel dolly set

- Each tool with 1 x round form, 1 x tip and 1 x anvil form
- Ideal for beating out bumps and dents
- With arched and ground work surfaces
- Each form provided in different sizes
- For working in hard to access areas
- Steel





			kg
140.2108	3 pcs	3 in 1 Heel dolly set	1,37

consists of:

		g
140.2105	3in1 heel dolly,37x74mm	285
140.2106	3in1 heel dolly,37x86,5mm	394
140.2107	3in1 heel dolly,42x98,5mm	590

Bodywork drip moulding spoon

- With blue lacquered handle
- Work areas ground and polished
- Special tool steel



	Length mm	Width mm	kg
140.2151	240,0	45,0	1,07



Bodywork slapping spoon

- With blue lacquered handle
- Work areas ground and polished
- Light execution
- Special tool steel



	Length mm	Width mm	g
140.2150	250,0	50,0	290

Dent tool

- Suitable for bodywork work
- Wide shape
- Sturdy design
- Special tool steel



	Length mm	Width mm	kg
156.0507	420,0	60,0	1,82

Panel beating pry bar

- Suitable for bodywork work
- Wide, cranked form
- Sturdy design
- Special tool steel



	Length mm	Width mm	kg
156.0506	520,0	60,0	2,24

Dent tool, narrow

- Suitable for bodywork work
- Narrow form
- Sturdy design
- Special tool steel



	Length mm	Width mm	g
156.0519	270,0	30,0	620

Dent tool, wide

- Suitable for bodywork work
- Wide shape
- Sturdy design
- Special tool steel



	Length mm	Width mm	g
156.0520	290,0	50,0	840

Dent tool, long

- Suitable for bodywork work
- Wide and long form
- Sturdy design
- Special tool steel



	Length mm	Width mm	kg
156.0529	390,0	55,0	1,26

Bodywork slapping heel dolly

- With flat, arched and ground work areas
- Polished surface



	Length mm	Width mm	g
140.2110	105,0	60,0	670

Bodywork toe dolly, small

- With flat, arched and ground work areas
- Polished surface
- Narrow execution



	Length mm	Width mm	g
140.2111	115,0	55,0	960

Bodywork grid toe dolly

- Arched work area
- For streching with grooved surface
- Grooved surface has red lacquer
- Polished surface



	Length mm	Width mm	kg
140.2112	120,0	58,0	1,13

Aluminium bodywork comma heel dolly

- For hammering out aluminium car body panels
- Upper areas arched and ground on all sides
- Universal usage
- Polished surface
- Aluminium



	Length mm	Width mm	g
140.2477	135,0	60,0	350

Bodywork curved heel dolly

- Upper areas on all sides arched and ground
- Polished surface



	Length mm	Width mm	kg
140.2115	130,0	59,0	1,63

Aluminium bodywork recess heel dolly

- For hammering out aluminium car body panels
- Upper areas arched and ground on all sides
- Universal usage
- Polished surface
- Aluminium



	Length mm	Width mm	g
140.2476	75,0	30,0	186

Bodywork heel dolly

- Upper areas on all sides arched and ground



	Length mm	Width mm	kg
140.2116	60,0	80,0	1,13

Bodywork dome dolly with handle

- With slightly arched and ground work areas
- Polished surface



	Length mm	Width mm	kg
140.2118	60,0	80,0	1,47

Bodywork double dolly

- In anvil form
- With arched and ground work surfaces
- Polished surface



	Length mm	Width mm	kg
140.2113	59,5	53,0	1,38

Bodywork ambos heel dolly

- Work areas arched and ground
- Polished surface



	Length mm	Width mm	Handle mm	kg
140.2117	130,0	65,0	120,0	3,66

Aluminium bodywork toe heel dolly

- For hammering out aluminium car body panels
- Upper areas arched and ground on all sides
- Universal usage
- Polished surface
- Aluminium



	Length mm	Width mm	g
140.2479	102,0	58,0	265

Aluminium bodywork universal heel dolly

- For hammering out aluminium car body panels
- In hand fist form
- With arched and ground work surfaces
- Universal usage
- Polished surface
- Aluminium



	Length mm	Height mm	g
140.2478	70,0	65,0	210

Bodywork small anvil heel dolly

- Work areas arched and ground
- Polished surface



	Length mm	Head Ø mm	g
140.2103	125,0	54,0	750

Bodywork toe dolly, large

- With flat, arched and ground work areas
- Polished surface



	Length mm	Width mm	kg
140.2119	120,0	58,0	1,40

Bodywork universal heel dolly

- In hand fist form
- With arched and ground work surfaces
- Universal usage
- Polished surface



	Length mm	Height mm	kg
140.2114	70,0	85,0	1,38

Body work large anvil heel dolly

- Work areas arched and ground
- Polished surface



	Length mm	kg
140.2104	125,0	1,20

Bodywork outline dolly

- With flat, arched and ground work areas
- Polished surface



	Length mm	Width mm	kg
140.2120	120,0	58,0	1,63

Bodywork anvil dolly

- Diabolo-shaped
- Polished surface



	Ø mm	Height mm	g
140.2101	55,0	55,0	740

Bodywork anvil dolly wedge

- Wedge-shaped
- Polished surface



	Length mm	Width mm	Height mm	g
140.2102	111,0	62,0	27,0	840

Fold alignment tool

- Suitable for aligning bodywork panels
- Important registering tool
- Groove for lateral alignment
- Extremely durable
- Special plastic





	Length mm	Width mm	g
140.2141	270,0	40,0	180

Handling tool, semi-circular

- Suitable for aligning bodywork panels
- Precise handling of profile panels
- Aligning curves
- Extremely durable
- Special plastic



	Length mm	Width mm	g
140.2142	280,0	90,0	220

Round anvil

- Ideal for aligning bodywork panels
- Stable tip
- Simple handling
- Sturdy design
- Extremely durable
- Special plastic





	Length mm	kg
140.2146	180,0	1,60

Anvil dolly, flat and curved

- Suitable for aligning bodywork panels
- Ideal for counter-holding
- Sturdy design
- Extremely durable
- Special plastic



	Length mm	Width mm	g
140.2163	190,0	50,0	320

Edge alignment tool

- Suitable for aligning bodywork panels
- Used for aligning edges
- Sturdy design
- Extremely durable
- Special plastic





	Length mm	Width mm	g
140.2149	280,0	100,0	200

Profile alignment block

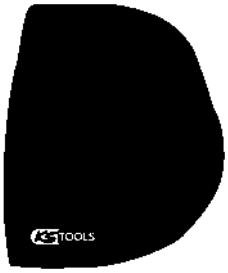
- Suitable for aligning bodywork panels
- For angled contours
- For large areas
- Extremely durable
- Special plastic



	Length mm	Width mm	kg
140.2144	360,0	60,0	1,28

Plastic guide wedge, small

- Suitable for aligning bodywork panels
- Optimal resistance
- For narrow sites
- Sturdy design
- Special plastic



	Length mm	Width mm	Height mm	g
140.2164	65,0	75,0	40,0	400

Plastic guide wedge, large

- Suitable for aligning bodywork panels
- Optimal resistance
- Sturdy design
- Special plastic



	Length mm	Width mm	Height mm	g
140.2167	120,0	75,0	40,0	700

WING BRAKE PIPE FLARING

Universal wing flange tool

- Ideal for expanding the wing
- Suitable for 4 and 5-hole wheel hubs
- Extremely gentle on paintwork
- Telescopic arm jib with 180° pivoting flange roller
- Suitable for cars with a 95 to 120mm hole





	Length mm	Width mm	Height mm	kg
140.2096	440,0	150,0	260,0	6,88

BODYWORK FILES

Bodywork file

- With a handle for safe one handed usage
- For flat applications
- Double sided blade
- Includes a blade
- Two component handle
- Special tool steel





		Cut	Length mm	Width mm	File blade	g
140.3010	1	Single cut	490,0	35,0	140.3013	640
140.3011	1	Cross cut	490,0	35,0	140.3014	640
140.3012	3	Cross cut	490,0	35,0	140.3015	640

Bodywork file blade holder

- With a handle and knob for safe two handed usage
- For flat applications
- Suitable for file blade; radial and helical toothing
- Made out of wood





	Length mm	Width mm	g	
140.3016	525,0	25,0	350	

Bodywork file blade

- DIN 7264 Form A
- sides
- Milled, helical toothing
- Suitable for bodywork file blade holder 140.3016



		Length mm	Width mm	g	
161.0017	1	350,0	35,0	250	
161.0018	2	350,0	35,0	250	
161.0019	3	350,0	35,0	250	

Bodywork file blade

- DIN 7264 Form A
- sides
- Milled, radial toothing
- Suitable for bodywork file blade holder 140.3016



		Length mm	Width mm	g	
161.0021	1	350,0	35,0	262	
161.0022	2	350,0	35,0	262	

Bodywork file blade holder

- With a handle and knob for safe two handed usage
- For semi-circular applications
- Suitable for file blade; semi-circular (hollow)
- Made out of wood





	Length mm	Width mm	g	
140.3017	525,0	25,0	277	

Bodywork file blade

- DIN 7264 Form F
- Semi-circular (hollow)
- Semi-circular, radial toothing
- Suitable for bodywork file blade holder 140.3017

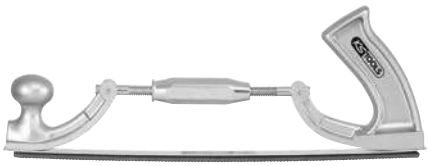


		Length mm	Width mm	g	
161.0023	1	350,0	30,0	250	

Bodywork file, adjustable

- With a handle and knob for safe two handed usage
- For flat and curved applications
- Double sided blade
- Includes one blade - radius 10 teeth
- Aluminium





	Length mm	Width mm	Replacement holder	Replacement blade	g	
140.3090	350,0	34,0	140.3091	140.3092	770	

Flexible sanding paper holder with rubber mat

- With quick clamping system for holding the sanding paper
- Rubber mat ensures a firm seating of the sanding paper
- Extremely flexible
- Adapts itself to the bodywork
- Ergonomic wooden handles





	Length mm	Width mm	g	
140.3019	400,0	70,0	440	

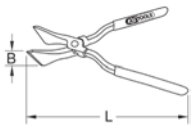


HOLE, SETTING, AND SEAM PLIERS

Seaming pliers

- For folding of sheet metal
- Straight design
- Insulated handle
- Cast iron





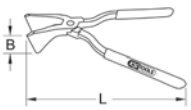


	L mm	B mm	g	
222.1601	280,0	52,0	660	

Seaming pliers

- For folding of sheet metal
- 45° angled jaws
- Insulated handle
- Cast iron







	L mm	B mm	g	
222.1602	260,0	52,0	670	

Seaming pliers

- For folding of sheet metal
- 90° angled jaws
- Insulated handle
- Cast iron



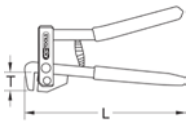




	L mm	B mm	g	
222.1603	260,0	52,0	760	

Mini joggler pliers

- Self opening
- For the flanging of sheet metal and body parts
- Up to 1 mm thickness
- Particularly suitable for thin sheet metal edges, curves and arches
- Lower power usage
- Hardened flanging jaws
- Special tool steel

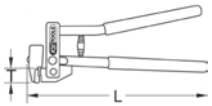




	L mm	T mm	g	
118.0056	220,0	13,0	900	

Joggler pliers

- Self opening
- For the flanging of sheet metal and body parts
- Up to 1 mm thickness
- Lower power usage
- Hardened flanging jaws
- Special tool steel

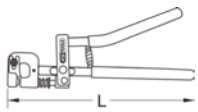




	L mm	T mm	kg	
118.0058	280,0	13,0	1,00	

Joggler pliers

- Self opening
- For punching straight and bent sheet metal
- Up to 1.25 mm thickness
- Radius to 40,0 mm
- Hole diameter 5 mm
- Lower power usage
- Special tool steel



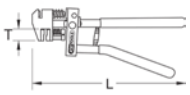


	L mm	hole diameter	kg	
118.0057	300,0	max. 5 mm	1,00	

Punched hole and joggler pliers

- Self opening
- Fast conversion by simply turning the head
- For the flanging and punching sheet metal and body parts
- Punching up to 1,25 mm thickness
- Hole diameter 5 mm
- Lower power usage
- Special tool steel







	L mm	T mm	hole diameter	kg	
118.0055	285,0	13,0	max. 5 mm	1,23	

Punch pliers set

- Ideal for use in all sheet-metal processing areas
- Enormous punch force due to lever mechanism
- Work depth adjustable up to 47 mm
- 7 different punches with counter tool (2.38 mm-7.14 mm)
- Easy reconstruction
- Insulated handle
- Plier body from die-cast metal
- In durable plastic storage case





		kg	
118.0105	16 pcs Punch pliers set	1,33	

consists of:

		g	
118.0106	Joggler pliers	1020	
118.0107	Punch, 2.38 mm	10	
118.0108	Punch, 3.18 mm	10	
118.0109	Punch, 3.97 mm	10	
118.0110	Punch, 4.76 mm	10	
118.0111	Punch, 5.56 mm	10	
118.0112	Punch, 6.35 mm	10	
118.0113	Punch, 7.14 mm	10	
118.0114	Counter holder, 2.38 mm	5	
118.0115	Counter holder, 3.18 mm	5	
118.0116	Counter holder, 3.97 mm	5	
118.0117	Counter holder, 4.76 mm	5	
118.0121	Counter holder, 5.56 mm	5	
118.0122	Counter holder, 6.35 mm	5	
118.0123	Counter holder, 7.14 mm	5	
118.0126	Assembly tool	11	

Pneumatic hole and joggler pliers

- Self opening
- For the flanging and punching sheet metal and body parts
- Flanging and punching up to a maximum material thickness of 1.5 mm
- Hole diameter 5 mm
- Lower power usage
- Rubber handle
- Special tool steel





Technical data:

Rebate width:	22 mm
Rebate depth:	12 mm
Air consumption:	113 l/min
Operating pressure:	6,3 bar (90 psi)
Min. tube diameter:	3/8" - 10 mm
Connection thread:	1/4"

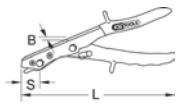
	Length mm	Ø mm	kg	
515.1295	250,0	55,0	1,30	

SHEET METAL NIBBLER AND SNIPS

Sheet steel nibbler

- Burr-free cut
- No deformation of the sheet metal
- Clean cutting edges
- With easy locking action
- With PVC dipped handle
- Cuts sheets up to 1.2mm
- Also ideal for aluminium, copper and plastic
- Special tool steel





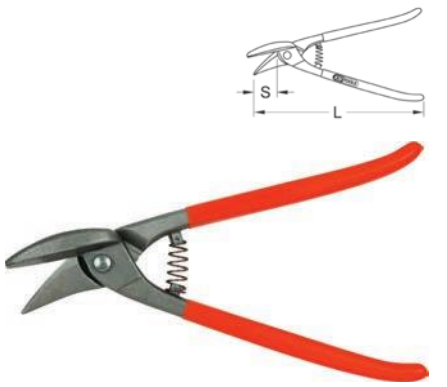


	Ø mm	B mm	L mm	S mm	Replacement blades	g	
140.2175	1,2	14,0	265,0	3,0	140.2175-1	460	



Ideal shears, right handed cut

- Right hand cutting
- With spring
- Induction-hardened precision cutting
- With PVC dipped handle
- Cuts steel sheet up to 1,2 mm, stainless steel up to 0,7 mm
- Special tool steel



	Ø mm	L mm	S mm	g
118.0145	1,2 (0,7)	280,0	38,0	630

Ideal shears, left handed cut

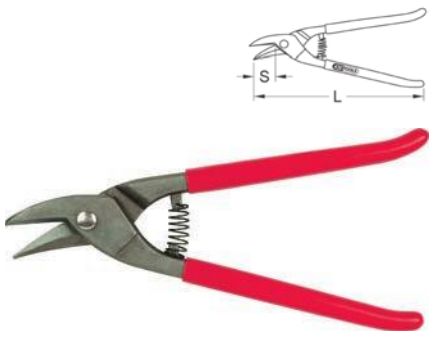
- Left handed cut
- With spring
- Induction-hardened precision cutting
- With PVC dipped handle
- Cuts steel sheet up to 1,2 mm, stainless steel up to 0,7 mm
- Special tool steel



	Ø mm	L mm	S mm	g
118.0146	1,2 (0,7)	280,0	38,0	540

Punching shears, right handed cut

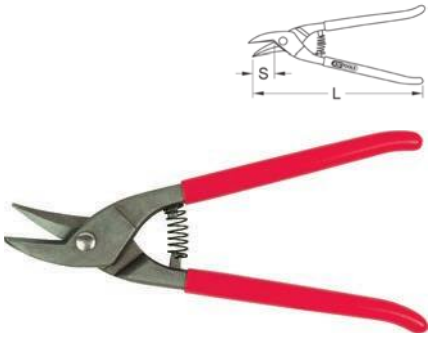
- Right hand cutting
- Induction-hardened precision cutting
- With PVC dipped handle
- Cuts steel sheet up to 1,2 mm, stainless steel up to 0,7 mm
- Special tool steel



	Ø mm	L mm	S mm	g
118.0147	1,2 (0,7)	250,0	42	455

Punching shears, left handed cut

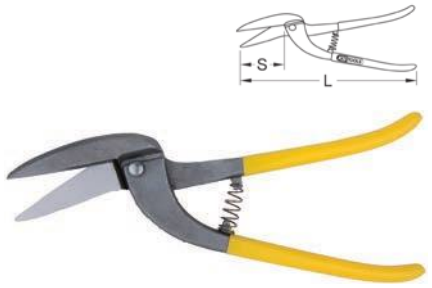
- Left handed cut
- Induction-hardened precision cutting
- With PVC dipped handle
- Cuts steel sheet up to 1,2 mm, stainless steel up to 0,7 mm
- Special tool steel



	Ø mm	L mm	S mm	g
118.0148	1,2 (0,7)	250,0	42	455

Pelican straight cut shears

- Right hand cutting
- With spring
- Induction-hardened precision cutting
- With PVC dipped handle
- Cuts steel sheet up to 1,2 mm, stainless steel up to 0,7 mm
- Special tool steel



	Ø mm	L mm	S mm	g
118.0149	1,2 (0,7)	305,0	73,5	465

Mini metal shears, straight cut

- Straight cut
- Optimal for fine working
- Self opening handle
- With internal spring
- With easy locking action
- Induction-hardened precision cutting
- Two component handle
- Cuts sheet metal up to 1.2 mm
- Special tool steel



	Ø mm	A mm	D mm	L mm	S mm	g
118.0152	1,2	10,0	20,0	180,0	20,0	300

Mini metal shears, right handed cut

- Right hand cutting
- Optimal for fine working
- Self opening handle
- With internal spring
- With easy locking action
- Induction-hardened precision cutting
- Two component handle
- Cuts sheet metal up to 1.2 mm
- Special tool steel



	Ø mm	A mm	D mm	L mm	S mm	g
118.0151	1,2	17,0	33,0	180,0	20,0	300

Mini metal shears, left handed cut

- Left handed cut
- Optimal for fine working
- Self opening handle
- With internal spring
- With easy locking action
- Induction-hardened precision cutting
- Two component handle
- Cuts sheet metal up to 1.2 mm
- Special tool steel



	Ø mm	A mm	D mm	L mm	S mm	g
118.0153	1,2	20,0	25,0	180,0	20,0	300

Mini straight and shape cutting snip set

- Self opening handle
- With internal spring
- With easy locking action
- Two component handle
- 25% power savings
- Left, right hand cutting & straight
- Smooth blades
- Induction-hardened precision cutting
- Cuts sheet metal up to 1.2 mm
- Chrome molybdenum



			g
118.0150	3 pcs	Mini straight and shape cutting snip set	800

Tin snips sheet metal shear, self opening, straight cut

- Straight cut
- Self opening handle
- Serrated blades
- With internal spring
- With easy locking action
- Includes hanging loop
- Induction-hardened precision cutting
- Two component handle
- Cuts steel sheet up to 1,2 mm, stainless steel up to 0,7 mm
- Special tool steel



	Ø mm	A mm	D mm	L mm	S mm	g
118.0051	1,2 (0,7)	20,0	19,0	250,0	45,0	400

Tin snips sheet metal shear, self opening, right handed cut

- Right hand cutting
- Self opening handle
- Serrated blades
- With internal spring
- With easy locking action
- Includes hanging loop
- Induction-hardened precision cutting
- Two component handle
- Cuts steel sheet up to 1,2 mm, stainless steel up to 0,7 mm
- Special tool steel



	Ø mm	A mm	D mm	L mm	S mm	g
118.0052	1,2 (0,7)	18,0	21,0	240,0	42,0	400

Tin snips sheet metal shear, self opening, left handed cut

- Left handed cut
- Self opening handle
- Serrated blades
- With internal spring
- With easy locking action
- Includes hanging loop
- Induction-hardened precision cutting
- Two component handle
- Cuts steel sheet up to 1,2 mm, stainless steel up to 0,7 mm
- Special tool steel



	Ø mm	A mm	D mm	L mm	S mm	g
118.0053	1,2 (0,7)	17,0	26,0	240,0	44,0	400

Tin snips sheet metal shear set

- Self opening handle
- Serrated blades
- With internal spring
- With easy locking action
- Includes hanging loop
- Induction-hardened precision cutting
- Two component handle
- Cuts steel sheet up to 1,2 mm, stainless steel up to 0,7 mm
- Special tool steel



			kg
118.0050	3 pcs	Tin snips sheet metal shear set	1,20

Template cutting shear with lever gearing, right handed cut

- Right hand cutting
- Self opening handle
- Serrated blades
- With internal spring
- With easy locking action
- Includes hanging loop
- Induction-hardened precision cutting
- Two component handle
- Cuts steel sheet up to 1.5 mm, stainless steel up to 1.0 mm
- Special tool steel





		Ø mm	A mm	D mm	L mm	S mm	g
118.0045	right	1,5 (1,0)	30,0	50,0	260,0	40,0	380

Template cutting shear with lever gearing, left handed cut

- Left handed cut
- Self opening handle
- Serrated blades
- With internal spring
- With easy locking action
- Includes hanging loop
- Induction-hardened precision cutting
- Two component handle
- Cuts steel sheet up to 1.5 mm, stainless steel up to 1.0 mm
- Special tool steel





		Ø mm	A mm	D mm	L mm	S mm	g
118.0046	left	1,5 (1,0)	30,0	50,0	260,0	40,0	380

Manual guillotine shears

- Ideal for all straight and round cuts
- Cuts practically all materials up to 1.5 mm
- Easy cutting of external and internal radii, contours, curves, angles etc.
- No deformation of the material
- Simple cutting of long, straight work pieces
- approx. 190 mm cutting lengths
- Self-sharpening due to special blade, no regrinding necessary
- Includes a mount for a workbench

Application range: Steel, copper, aluminium, brass, stainless steel etc.





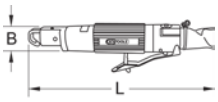
	Cutting width mm	max. material strength mm	kg
118.0144	250,0	1,5	4,50

PANEL SAWS

SlimPOWER mini-pneumatic reciprocating bodywork key hole saw

- Air exhaust through the used air tube to the rear
- For one hand operation
- For works in car body panels, beams and profile
- Secure operation lever with locking device
- Suitable for small sawing radius
- Stepless speed regulation
- Vibration dampened
- Very compact construction
- Includes 1/4" coupling connector
- Robust housing







Technical data:

Stroke:	7,9 mm
Cutting strokes:	5760 strokes/min
Capacity:	186 Watt
Vibration acceleration:	< 28,8 m/s²
Noise pressure level:	90,3 dbA
Noise performance level:	101,3 dbA
Air consumption:	240 l/min
Operating pressure:	max. 6,3 bar (90 psi)
Min. tube diameter:	3/8" - 10 mm
Connection thread:	1/4"NPT

	B mm	L mm		g
515.5545	36,0	170,0	129.3740-129.3746	500

Jigsaw blades

- Flexible and shatter proof
- ideal for non-ferrous metal, stainless steel, sheet steel, car body sheet, pressed materials and resopal

Suitable for: Ober, KS, Pneutec, CP, KS 515.3000 und 515.3200



	No. teeth	TPI	D mm	L mm	Content	g
129.3740	80	32	1,0	100,0	5	30
129.3742	60	24	1,0	100,0	5	30
129.3744	45	18	1,0	100,0	5	30
129.3746	35	14	2,0	100,0	5	30

Jigsaw blades

- Flexible and shatter proof
- ideal for non-ferrous metal, stainless steel, sheet steel, car body sheet, pressed materials and resopal

Suitable for: SIG und Flex



	No. teeth	TPI	D mm	L mm	Content	g
129.3750	80	32	0,7	100,0	5	20
129.3752	60	24	1,0	100,0	5	20
129.3754	45	18	1,4	100,0	5	20
129.3756	35	14	1,8	100,0	5	20

LOCKING PLIERS

Mini welding clamp set

- Ideal for preparing bodywork welding work
- Adjustable clamping range for various panel thicknesses
- Can be used in the narrowest of spaces, e.g. wheel arches, window apertures, engine compartment etc.
- With tiltable clamp jaws
- Contact pressure adjustable via wing nut
- Span width 0 – 7 mm
- Allows for precise adjusting and positioning





			g
115.1105	4 pcs	Mini welding clamp set	315

consists of:

	X		g
115.1106	4	Mini welding clamp	78



Micro grip pliers

- Ideal for confined areas
- Straight linear design of the movable jaw
- With brass screw for fine adjustment
- With loosening lever for lever lock clamping
- Suitable for aluminium repairs
- resistant to welding spatter
- One hand operation
- Aluminium alloy





	Clamping range mm	Length mm	g
115.1026	0 - 12,0	92,0	120

Body Fixing Clamp Set

- for quick and easy fixing of sheet metal or body parts
- quick fastening and releasing of the clamps
- Can be used in the narrowest of spaces
- Span width 0 – 5 mm
- fixation pliers included
- Spring steel clamps
- In durable plastic storage case



			g
118.0095	11 pcs	Body Fixing Clamp Set	706

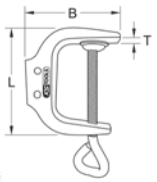
consists of:

		g
118.0096	Fixing clamp set Ø -2.5 mm, 5 pcs.	41
118.0097	Fixing clamp set, 2.5-5 mm, 5 pcs.	41
118.0098	Fixing pliers	392

Locking pliers holder

- Alternative for a vice
- For light work
- For screwing onto workbenches, worktables etc.





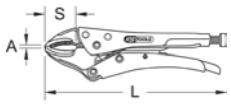


	L mm	B mm	T mm	g
115.2072	91,0	84,0	24,3	300

Locking pliers

- Forged gripping jaws
- Serrated execution
- Size adjustment using the adjustment wheel
- With loosening lever
- With easy locking action
- For round and flat material
- To hold when welding
- No flaring under the strongest loads
- Loosening under continuous pressure of a national
- Nickel plated
- Chrome molybdenum







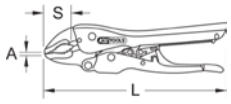
	A mm	L mm	S mm	g
115.1031	0-50	140,0	19,3	180
115.1032	0-55	175,0	24,0	340
115.1033	0-60	220,0	27,5	520



Power locking pliers

- Forged gripping jaws
- Prevents slipping even at high forces
- Well thought through jaw teeth
- Size adjustment using the adjustment wheel
- With loosening lever
- With easy locking action
- For round and flat material
- To hold when welding
- No flaring under the strongest loads
- Loosening under continuous pressure of a national
- Nickel plated
- Chrome molybdenum



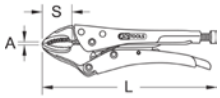




	A mm	L mm	S mm	g
115.1196	0-40	175,0	30,0	400
115.1197	0-50	220,0	37,0	600

Locking pliers with quick-release lever

- Forged gripping jaws
- Serrated execution
- Size adjustment using the adjustment wheel
- With easy locking action
- For round and flat material
- To hold when welding
- Quick-release lever
- No flaring under the strongest loads
- Loosening under continuous pressure of a national
- Nickel plated
- Chrome molybdenum
- Two component handle

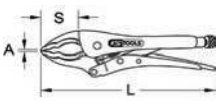





	A mm	L mm	S mm	g
115.2031	0-30	125,0	21,0	300
115.2032	0-40	175,0	27,0	390
115.2033	0-55	225,0	30,0	600

Wide jaw locking pliers

- Forged gripping jaws
- Serrated execution
- Size adjustment using the adjustment wheel
- With loosening lever
- With easy locking action
- For round and flat material
- To hold when welding
- No flaring under the strongest loads
- Loosening under continuous pressure of a national
- Nickel plated
- Chrome molybdenum

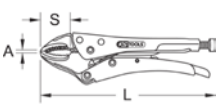





	A mm	L mm	S mm	g
115.1506	0-64	235,0	50,0	600

Wide jaw locking pliers with quick-release lever

- Forged gripping jaws
- Serrated execution
- Size adjustment using the adjustment wheel
- With easy locking action
- For round and flat material
- To hold when welding
- Quick-release lever
- No flaring under the strongest loads
- Loosening under continuous pressure of a national
- Nickel plated
- Chrome molybdenum
- Two component handle

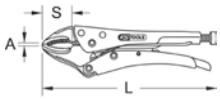





	A mm	L mm	S mm	g
115.2006	0-65	230,0	51,0	620

Locking pliers, straight jaws

- Forged gripping jaws
- Serrated execution
- Size adjustment using the adjustment wheel
- With loosening lever
- With easy locking action
- For round and flat material
- To hold when welding
- No flaring under the strongest loads
- Loosening under continuous pressure of a national

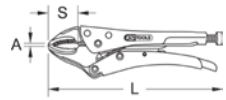





	A mm	L mm	S mm	g
115.1501	0-28,5	175,0	27,0	370
115.1502	0-45,5	225,0	30,0	600

Locking pliers with quick-release lever, straight jaws

- Forged gripping jaws
- Serrated execution
- Size adjustment using the adjustment wheel
- With easy locking action
- For round and flat material
- To hold when welding
- Quick-release lever
- No flaring under the strongest loads
- Loosening under continuous pressure of a national
- Nickel plated
- Chrome molybdenum
- Two component handle

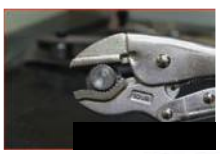
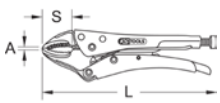





	A mm	L mm	S mm	g
115.3011	0-40	175,0	25,0	400
115.3012	0-50	250,0	30,0	600

Locking pliers, V jaws

- Forged gripping jaws
- Serrated execution
- Size adjustment using the adjustment wheel
- With loosening lever
- With easy locking action
- For round and flat material
- To hold when welding
- No flaring under the strongest loads
- Loosening under continuous pressure of a national
- Nickel plated
- Chrome molybdenum

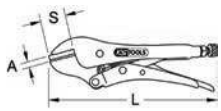





	A mm	L mm	S mm	g
115.1151	0-25	185,0	24,0	400
115.1152	0-32	225,0	27,5	600

Clamping pliers for pipes

- Forged gripping jaws
- Size adjustment using the adjustment wheel
- With loosening lever
- With easy locking action
- With hexagonal nut for safe fastening
- For clamping pipes
- No flaring under the strongest loads
- Loosening under continuous pressure of a national
- Nickel plated
- Chrome molybdenum

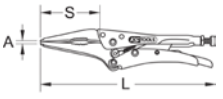





	A mm	L mm	S mm	g
115.1504	0-30,5	175,0	29,5	360

Clamping pliers for pipes

- Forged gripping jaws
- Serrated execution
- Size adjustment using the adjustment wheel
- With loosening lever
- With easy locking action
- For clamping pipes
- No flaring under the strongest loads
- Loosening under continuous pressure of a national
- Nickel plated
- Chrome molybdenum



	A mm	L mm	S mm	g
115.1505	0-86	255,0	118,0	500

Round jaw locking pliers with wire cutter

- For safe gripping of nuts and screw heads
- 3 level points prevents slipping and rounding
- With loosening lever
- With easy locking action
- Size adjustment using the adjustment wheel
- Good adaptation to existing surfaces
- With wire cutting function
- No flaring under the strongest loads
- Loosening under continuous pressure of a national
- Nickel plated
- Chrome molybdenum




	mm	L mm	g
115.1175	11-19	175,0	370
115.1176	16-27	240,0	700

Chain grip pliers

- For fastening and clamping of different profiles
- With loosening lever
- With easy locking action
- Size adjustment using the adjustment wheel
- Ideal for confined spaces
- Good adaptation to existing surfaces
- No flaring under the strongest loads
- Loosening under continuous pressure of a national
- Nickel plated
- Chrome molybdenum



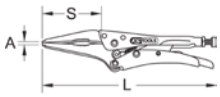


	Ø mm	Length mm	Replacement chain	g	
115.1171	150,0	220,0	115.1172	755	

Long nose locking pliers

- Forged gripping jaws
- Serrated execution
- Size adjustment using the adjustment wheel
- With loosening lever
- With easy locking action
- For round and flat material
- To hold when welding
- No flaring under the strongest loads
- Loosening under continuous pressure of a national
- Nickel plated
- Chrome molybdenum







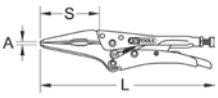
	A mm	L mm	S mm	g	
115.1177	0-25	125,0	35	110	
115.1034	0-35	150,0	45,0	180	
115.1035	0-45	210,0	65,0	340	



Long-nose locking pliers with quick-release lever

- Forged gripping jaws
- Serrated execution
- Size adjustment using the adjustment wheel
- With easy locking action
- For round and flat material
- To hold when welding
- Quick-release lever
- No flaring under the strongest loads
- Loosening under continuous pressure of a national
- Nickel plated
- Chrome molybdenum
- Two component handle





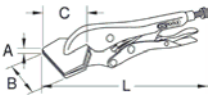


	A mm	L mm	S mm	g	
115.2034	0-45	170,0	45,0	300	
115.2035	0-60	205,0	53,0	500	

Wide and flat jaw locking pliers

- Forged gripping jaws
- With loosening lever
- With easy locking action
- Size adjustment using the adjustment wheel
- For clamping of flat or bended metal sheets
- No flaring under the strongest loads
- Loosening under continuous pressure of a national
- Nickel plated
- Chrome molybdenum





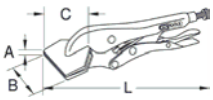


	A mm	B mm	C mm	L mm	g	
115.1076	0-50	80,0	40,0	210,0	465	
115.1077	0-55	80,0	45,0	250,0	675	

Wide jaw flat die locking pliers with quick-release lever

- Forged gripping jaws
- With easy locking action
- Size adjustment using the adjustment wheel
- For clamping of flat or bended metal sheets
- Quick-release lever
- No flaring under the strongest loads
- Loosening under continuous pressure of a national
- Nickel plated
- Chrome molybdenum
- Two component handle





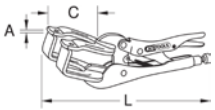


	A mm	C mm	L mm	B mm	g	
115.2076	0-40	45,0	205,0	80,0	600	
115.2077	0-55	45,0	250,0	80,0	800	

Welding gripping pliers

- With malleable cast iron jaws
- Suitable for setting the welding points between the cut outs
- With loosening lever
- Size adjustment using the adjustment wheel
- To hold and adjust sheets and profiles
- With easy locking action
- No flaring under the strongest loads
- Loosening under continuous pressure of a national
- Nickel plated
- Chrome molybdenum







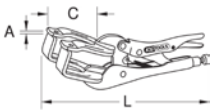
	A mm	C mm	L mm	g	
115.1078	0-45	70,0	220,0	600	
115.1079	0-55	70,0	260,0	780	



Welding gripping pliers with quick-release lever

- With malleable cast iron jaws
- Suitable for setting the welding points between the cut outs
- Size adjustment using the adjustment wheel
- To hold and adjust sheets and profiles
- With easy locking action
- Quick-release lever
- No flaring under the strongest loads
- Loosening under continuous pressure of a national
- Nickel plated
- Chrome molybdenum
- Two component handle



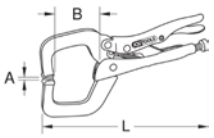




	A mm	C mm	L mm	g	
115.2078	0-45	70,0	220,0	710	
115.2079	0-65	70,0	260,0	875	

Welding gripping pliers

- Forged semi-circular gripping jaws
- With loosening lever
- With easy locking action
- Size adjustment using the adjustment wheel
- For profiled bulky components
- Good adaptation to existing surfaces
- No flaring under the strongest loads
- Loosening under continuous pressure of a national
- Nickel plated
- Chrome molybdenum

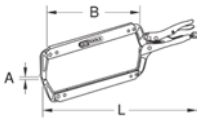





	A mm	B mm	L mm	g
115.1070	0-35	40,0	170,0	240

Welding gripping pliers, extra long

- Round forged gripping jaws
- With loosening lever
- With easy locking action
- Size adjustment using the adjustment wheel
- For profiled bulky components
- Large clamping depth for front and rear panels
- Good adaptation to existing surfaces
- No flaring under the strongest loads
- Loosening under continuous pressure of a national
- Nickel plated
- Chrome molybdenum

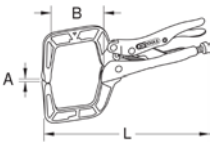


	A mm	B mm	L mm	kg
115.1072	0-270	250,0	450,0	1,18



Welding gripping pliers

- Very good clamping capacity
- Round forged gripping jaws
- With loosening lever
- With easy locking action
- Size adjustment using the adjustment wheel
- For profiled bulky components
- Good adaptation to existing surfaces
- No flaring under the strongest loads
- Loosening under continuous pressure of a national
- Nickel plated
- Chrome molybdenum

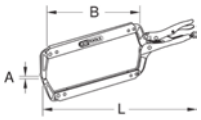





	A mm	B mm	L mm	g
115.1071	0-100	90,0	270,0	780

Welding gripping pliers, extra long

- Round forged gripping jaws
- With loosening lever
- With easy locking action
- Size adjustment using the adjustment wheel
- For profiled bulky components
- Large clamping depth for front and rear panels
- Good adaptation to existing surfaces
- No flaring under the strongest loads
- Loosening under continuous pressure of a national
- Nickel plated
- Chrome molybdenum

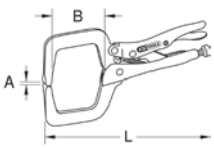


	A mm	B mm	L mm	kg
115.0573	0-295	415,0	610,0	1,50



Welding clamp gripping pliers with quick-release lever

- Very good clamping capacity
- Round forged gripping jaws
- Quick-release lever
- With easy locking action
- Size adjustment using the adjustment wheel
- For profiled bulky components
- Good adaptation to existing surfaces
- No flaring under the strongest loads
- Loosening under continuous pressure of a national
- Nickel plated
- Chrome molybdenum
- Two component handle

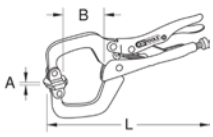





	A mm	B mm	L mm	g
115.2008	0-45	45,0	165,0	300
115.2009	0-90	85,0	280,0	900

Welding gripping pliers with movable clamping jaws

- Flat gripping jaws
- Movable clamping jaws
- With loosening lever
- With easy locking action
- Size adjustment using the adjustment wheel
- For profiled bulky components
- Good adaptation to existing surfaces
- No flaring under the strongest loads
- Loosening under continuous pressure of a national
- Nickel plated
- Chrome molybdenum

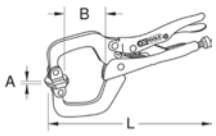


	A mm	B mm	L mm	kg
115.1178	0-25	25,0	125,0	0,15
115.1073	0-35	40,0	170,0	0,24
115.1074	0-100	70,0	285,0	0,78
115.1075	0-270	240,0	420,0	1,25
115.0570	0-420	395,0	610,0	1,54

Welding gripping pliers with movable clamping jaws

- Flat gripping jaws
- Movable clamping jaws
- Quick-release lever
- With easy locking action
- Size adjustment using the adjustment wheel
- For profiled bulky components
- Good adaptation to existing surfaces
- No flaring under the strongest loads
- Loosening under continuous pressure of a national
- Nickel plated
- Chrome molybdenum
- Two component handle







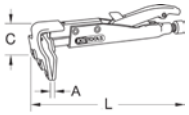
	A mm	B mm	L mm	kg	
115.2013	0-30	40,0	175,0	0,30	
115.2014	0-85	75,0	290,0	0,85	



Welding gripping pliers

- For applications that need a straight jaw
- Jaws from special steel
- With easy locking action
- Quick-release lever
- Size adjustment using the adjustment wheel
- Ideal for spot welding
- Nickel plated handle
- Chrome molybdenum





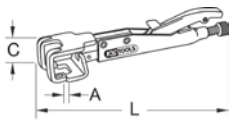


	A mm	C mm	L mm	g	
115.1080	0-20	56,0	205,0	548	

Welding gripping pliers

- For applications that required double curved jaws
- Jaws from special steel
- With easy locking action
- Quick-release lever
- Size adjustment using the adjustment wheel
- Ideal for fitting and mounting of body parts
- Nickel plated handle
- Chrome molybdenum





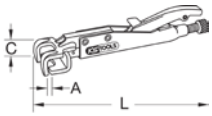


	A mm	C mm	L mm	g	
115.1081	0-20	39,0	230,0	568	

Welding gripping pliers

- For applications that required double curved jaws
- Jaws from special steel
- With easy locking action
- Quick-release lever
- Size adjustment using the adjustment wheel
- For welding of the hole between the panels
- Also suitable for U-profile
- Nickel plated handle
- Chrome molybdenum





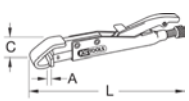


	A mm	C mm	L mm	g	
115.1082	0-15	26,0	215,0	562	

Welding gripping pliers

- For applications that need a angled jaw
- Jaws from special steel
- With easy locking action
- Quick-release lever
- Size adjustment using the adjustment wheel
- Ideal for welding in the fold
- Also suitable for U-profile
- Nickel plated handle
- Chrome molybdenum





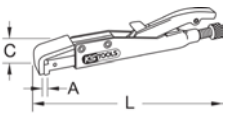


	A mm	C mm	L mm	g	
115.1083	0-20	30,0	210,0	509	

Welding gripping pliers

- For applications that need a straight jaw
- Slim design
- Jaws from special steel
- With easy locking action
- Quick-release lever
- Size adjustment using the adjustment wheel
- For right angled terminals in the fold
- For difficult to access areas
- Nickel plated handle
- Chrome molybdenum







	A mm	C mm	L mm	g	
115.1084	0-16	30,0	195,0	488	

Welding gripping pliers set

- For applications that need a straight jaw
- Extra slim design
- Jaws from special steel
- With easy locking action
- Quick-release lever
- Size adjustment using the adjustment wheel
- For right angled terminals in the fold
- For difficult to access areas
- For welding of the hole between the panels
- Also suitable for U profile
- Ideal for spot welding
- Nickel plated handle
- Chrome molybdenum





			kg	
115.1085	5 pcs	Welding gripping pliers set	2,62	

consists of:

		g	
115.1080	Welding self grip pliers, 205 mm	548	
115.1081	Welding self grip pliers, 230 mm	568	
115.1082	Welding self grip pliers, 215 mm	562	
115.1083	Welding self grip pliers, 210 mm	509	
115.1084	Welding self grip pliers, 195 mm	488	

Welding gripping pliers

- Flat gripping jaws
- Movable clamping jaws
- Serrated execution
- No sticking to the electrode
- Quick-release lever
- With easy locking action
- Good adaptation to existing surfaces
- Copper alloy clamping jaws
- No flaring under the strongest loads
- Loosening under continuous pressure of a national
- Nickel plated handle
- Chrome molybdenum





	A mm	C mm	L mm	g	
115.1180	0-70	85,0	240,0	500	

RIVET TOOLS

Plastic rivet pliers set included rivets

- Suitable for plastic rivets
- Narrow head pliers
- Can be used in hard to access areas
- 90° angled rivet head
- With rubber grip
- Includes 40 plastic rivets
- Die-cast metal body

Plastic rivets: 5.0x15.8 - 5.0x17.2 - 6.3x25.2 - 6.6x17.2 mm





			g	
150.9650	41 pcs	Plastic rivet pliers set included rivets	760	

consists of:

		g	
150.9651	Plastic rivet pliers	580	
150.9652	Replacement rivets pack of 10, 17,2x6,6mm	20	
150.9653	Replacement rivets pack of 10, 25,2x6,3mm	22	
150.9654	Replacement rivets pack of 10, 17,2x5mm	15	
150.9655	Replacement rivets pack of 10, 15,8x5mm	16	

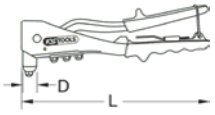


Standard hand riveting tool

- Suitable for blind rivets
- Including four interchangeable mouthpieces
- Magazine and key in the riveter body
- Narrow head pliers
- With safety lock on the handle end
- With rubber grip
- Die-cast metal body

Blind rivets: 2,4 - 3,2 - 4,0 - 4,8 mm







	D mm	L mm	g	
150.9510	21,0	270,0	920	

Standard hand riveting tool set

- Suitable for blind rivets
- Four interchangeable mouthpieces
- Magazine and key in the riveter body
- Includes 200 blind rivets
- With rubber grip
- Die-cast metal body

Blind rivets: 2,4 - 3,2 - 4,0 - 4,8 mm

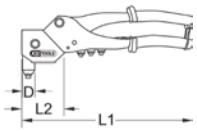


			kg	
150.9520	205 pcs	Standard hand riveting tool set	1,25	

Hand rivet tool

- Suitable for blind rivets
- 360° rotating head
- For difficult to access areas
- Narrow head pliers
- With safety lock on the handle end
- Including four interchangeable mouthpieces
- Die-cast metal body

Blind rivets: 2,4 - 3,2 - 4,0 - 4,8 mm





	D mm	L1 mm	L2 mm	g	
150.9540	21,0	290,0	70,0	751	

Universal hand rivet tool with swivel head

- Suitable for blind rivets
- 360° rotating head
- For difficult to access areas
- Die-cast metal body

Blind rivets: 2.4mm-3.2mm-4.0mm-4.8 mm



	L mm	g	
150.9619	290,0	500	



Universal hand riveting tool set

- Suitable for blind rivets, blind rivet nuts and hollow metal dowels
- 360° rotating head
- For difficult to access areas
- Four interchangeable mouthpieces and nut rivet pulling inserts
- Die-cast metal body

Blind rivets: 2.4mm-3.2mm-4.0mm-4.8mm
Rivet nuts: M3-M4-M5-M6
Cavity metal dowels: 3.0 - 6.0 mm



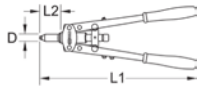
			kg	
150.9610	10 pcs	Universal hand riveting tool set	1,96	

consists of:

		g	
150.9570	Mouthpieces for riveting, 2.4 mm	10	
150.9571	Mouthpieces for riveting, 3.2 mm	10	
150.9572	Mouthpieces for riveting, 4.0 mm	10	
150.9573	Mouthpieces for riveting, 4.8 mm	10	
150.9613	Rivet nut pulling spindle for riveting tools, M3	30	
150.9614	Rivet nut pulling spindle for riveting tools, M4	30	
150.9615	Rivet nut pulling spindle for riveting tools, M5	30	
150.9616	Rivet nut pulling spindle for riveting tools, M6	30	
150.9619	Hand rivet tool 360° rotating head	500	
150.9620	Rivet head for 150.9610	160	

Long arm hand riveting tool

- Suitable for blind rivets
- Including four interchangeable mouthpieces
- Extra-long lever arms
- High power transmission
- Magazine and key in the riveter body
- With rubber grip
- Die-cast metal bodyBlind rivets: 2,4 - 3,2 - 4,0 - 4,8 mm





	D mm	L1 mm	L2 mm	kg	
150.9530	21,0	410,0	59,0	1,50	

Long-arm hand riveter set for thread sleeves

- Suitable for thread sleeves
- Including four interchangeable mandrels and mouthpieces
- Extra-long lever arms
- High power transmission
- Suitable for aluminium, steel, and stainless steel sleeves
- With rubber grip
- Die-cast metal body

Application range: for 5.0-6.0-8.0-10.0 mm thread sleeves



			kg	
150.9660	10 pcs	Long-arm hand riveter set for thread sleeves	1,60	

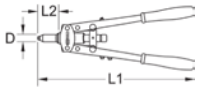
consists of:

		g	
150.9661	Long arm hand riveting tool	1290	
150.9662	Threaded mandrel, M5	35	
150.9663	Mouthpiece, M5	32	
150.9664	Threaded mandrel, M6	36	
150.9665	Mouthpiece, M6	34	
150.9666	Thread arbour, M8	42	
150.9667	Mouthpiece, M8	33	
150.9668	Thread arbour, M10	32	
150.9669	Mouthpiece, M10	32	
150.9670	Wrench 10 mm for threaded mandrel	12	

Universal riveting tool

- Suitable for blind rivets, blind rivet nuts and hollow metal dowels
- Retractable legs for increased power consumption
- Mouthpiece magazine intergrated in the handle
- Two component handle
- Die-cast metal body

Blind rivets: 2,4 - 3,2 - 4,0 - 4,8 - 6,4 mm





	D mm	L1 mm	L2 mm	kg	
150.9633	30,0	510,0	45,0	1,60	



Universal riveting tool set

- Suitable for blind rivets, blind rivet nuts and hollow metal dowels
- Retractable legs for increased power consumption
- Mouthpiece magazine intergrated in the handle
- Two component handle
- Die-cast metal body

Blind rivets: 2,4 - 3,2 - 4,0 - 4,8 - 6,4 mm
Rivet nuts: M4 - M5 - M6 - M8 - M10





			kg	
150.9630	17 pcs	Universal riveting tool set	2,67	

consists of:

		g	
150.9570	Mouthpieces for riveting, 2,4mm	10	
150.9571	Mouthpieces for riveting, 3,2mm	10	
150.9572	Mouthpieces for riveting, 4,0mm	10	
150.9573	Mouthpieces for riveting, 4,8mm	10	
150.9575	Mouthpieces for riveting, 6,4mm	10	
150.9630-1	Collection container for 150.9630	100	
150.9632	Replacement rivet heads for nosepieces 150.9630	40	
150.9634	Rivet nut pulling spindle for riveting tools 150.9630, M4	40	
150.9635	Rivet nut pulling spindle for riveting tools 150.9630, M5	40	
150.9636	Rivet nut pulling spindle for riveting tools 150.9630, M6	40	
150.9637	Universal riveting tool, 510 mm	1350	
150.9638	Rivet nut pulling spindle for riveting tools 150.9630, M8	70	
150.9640	Rivet nut pulling spindle for riveting tools 150.9630,M10	70	
150.9642	Combination spanner 8.5 + 5.5 mm, for 150.9630	15	
150.9643	Combination spanner 17 + 12 mm, for 150.9630	29	
150.9644	Combination spanner 19 + 15 mm, for 150.9630	35	
151.2026	Hexagon key wrench, short, 6mm	30	

accessories:

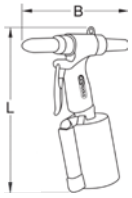
		g	
150.9570	Mouthpieces for riveting, 2,4mm	10	
150.9571	Mouthpieces for riveting, 3,2mm	10	
150.9572	Mouthpieces for riveting, 4,0mm	10	
150.9573	Mouthpieces for riveting, 4,8mm	10	
150.9574	Mouthpieces for riveting, 5mm	10	
150.9575	Mouthpieces for riveting, 6,4mm	10	
150.9578	Replacement jaws for gripping rivet 150.9610 and 150.9530	10	
150.9579	Replacement jaws for gripping rivet 150.9630	10	
150.9620	Cavity wall fixing rivet head f.150.9610	160	
150.9613	Rivet nut pulling spindle for riveting tools 150.9610, M3	30	
150.9614	Rivet nut pulling spindle for riveting tools 150.9610, M4	30	
150.9615	Rivet nut pulling spindle for riveting tools 150.9610, M5	30	
150.9616	Rivet nut pulling spindle for riveting tools 150.9610, M6	30	
150.9634	Rivet nut pulling spindle for riveting tools 150.9630, M4	40	
150.9635	Rivet nut pulling spindle for riveting tools 150.9630, M5	40	
150.9636	Rivet nut pulling spindle for riveting tools 150.9630, M6	40	
150.9638	Rivet nut pulling spindle for riveting tools 150.9630, M8	70	
150.9640	Rivet nut pulling spindle for riveting tools 150.9630,M10	70	
150.9611	Replacement rivet heads for rivet tools 150.9610	60	
150.9631	Replacement rivet heads for draw pins 150.9630	100	
150.9632	Replacement rivet heads for nosepieces 150.9630	40	



Pneumatic riveting tool pistol

- Air exhaust through the handle rear end
- For one handed operation with ergonomic design
- For pop rivet working
- With swivel joint at the coupling connector for flexible use
- Cold insulated
- Includes 1/4" coupling connector
- Robust aluminium housing







Technical data:

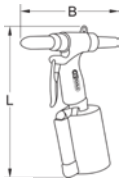
Rivet sizes:	2,4 - 3,2 - 4,0 - 4,8 mm
Stroke length:	14 mm
Driving power:	8677,5 N
Vibration acceleration:	< 1,20 m/s²
Noise performance level:	98,6 dbA
Noise pressure level:	85 dbA
Air consumption:	1 l/Hub
Operating pressure:	max. 6,3 bar (90 psi)
Min. tube diameter:	3/8" - 10 mm
Connection thread:	1/4"PT

	B mm	L mm	kg	
515.3102	195,0	290,0	1,50	

Pneumatic riveting tool pistol

- Air exhaust through the handle rear end
- For one handed operation with ergonomic design
- For professional riveting, continuous operation
- For steel, aluminium, stainless steel or copper riveting up to 6,4 mm
- With 6 mouth pieces, 4,8 mm is pre assembled
- Especially low noise level
- Swivel joint at the connection thread for flexible use
- Cold insulated
- Includes 1/4" coupling connector
- Robust aluminium housing







Technical data:

Rivet sizes:	2,4 - 3,2 - 4 - 4,8 - 5,6 - 6,4mm
Stroke length:	19 mm
Driving power:	13839,5 N
Vibration acceleration:	< 0,60 m/s²
Noise performance level:	85 dbA
Noise pressure level:	73,3 dbA
Air consumption:	1,8 l/Hub
Operating pressure:	
Min. tube diameter:	3/8" - 10 mm
Connection thread:	1/4"PT

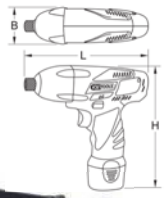
	B mm	L mm	kg	
515.3101	210,0	340,0	2,00	



Cordless riveting tool pistol

- Handy and ergonomic dual component housing
- Universal use for aluminium and steel rivets Ø 2.4/3.2/4.0/4.8 mm
- Approx. 220 rivets per battery
- With practical clockwise and anticlockwise reversing function
- Short set-up time
- Fast change of rivets
- Short processing time
- Stepless controllable motor speed through electronic switch
- 40% extended lifespan due to changeable special carbon brush conductors
- With lithium-ion high performance rechargeable battery
- Includes automatic turn off charging station
- Fast charging function (1 hour)
- Blow mould plastic housing
- In durable plastic storage case







Technical data:

Rivet sizes:	2,4 / 3,2 / 4,0 / 4,8 mm
Stroke length:	15 mm
Vibration acceleration:	3,2 m/s²
Noise performance level:	86,9 dbA
Noise pressure level:	75,9 dbA
Driving power:	4.900
Electrical Voltage:	10,8 V
Rechargeable battery:	10,8 V - 2,0 Ah

	L mm	B mm	H mm	Spare carbon brushes set	Battery pack	Number of Charger batteries		kg
515.4104	235,0	55,0	200,0	515.3595	515.3592	0	0	2,04
515.4105	235,0	55,0	200,0	515.3595	515.3592	1	1	2,80
515.4106	235,0	55,0	200,0	515.3595	515.3592	2	1	2,85

Blind rivets assortment

- Breakable pin made from steel
- In plastic storage case



			g	
970.0150	400 pcs	Blind rivets assortment	250	

100 x		2,4 mm
100 x		3,2 mm
100 x		4,0 mm
100 x		4,8 mm

Threaded rivets assortment, aluminium

- Aluminium threaded rivets
- In durable plastic storage case





970.0620	150 pcs	Threaded rivets assortment, aluminium	220	
25 x		M3 x 9 mm		
25 x		M4 x 11 mm		
25 x		M5 x 13 mm		
25 x		M6 x 15 mm		
25 x		M8 x 18 mm		
25 x		M10 x 21 mm		

Threaded rivets assortment, steel

- Steel threaded rivets
- In durable plastic storage case





970.0610	150 pcs	Threaded rivets assortment, steel	460	
25 x		M3 x 9 mm		
25 x		M4 x 11 mm		
25 x		M5 x 13 mm		
25 x		M6 x 15 mm		
25 x		M8 x 18 mm		
25 x		M10 x 21 mm		

Threaded rivets assortment, steel + aluminium

- Steel/aluminium threaded rivets
- In durable plastic storage case





970.0630	300 pcs	Threaded rivets assortment, steel + aluminium	0,96	
25 x		M3 x 9 mm		
25 x		M4 x 11 mm		
25 x		M5 x 13 mm		
25 x		M6 x 15 mm		
25 x		M8 x 18 mm		
25 x		M10 x 21 mm		
25 x		M3 x 9 mm		
25 x		M4 x 11 mm		
25 x		M5 x 13 mm		
25 x		M6 x 15 mm		
25 x		M8 x 18 mm		
25 x		M10 x 21 mm		



WELDING

Electronic surge protection

- Constantly suppresses emerging voltage peaks to safe levels and therefore protects the vehicle power supply against overvoltages
- Prevents damage to the on-board electronics when charging the built-in battery or even during welding work
- Maximum load 200 A (8/20 µs)
- With fuse protection
- Visibility and tone signal in the event of voltages peaks
- With reverse polarity protection
- The connection to the battery takes place via two plastic-coated crocodile pole clamps
- Sturdy workshop design



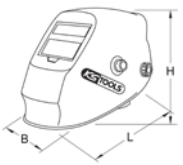


		Cable length mm		
150.3080	12 V	195	480	
150.3045	12/24V	195	480	

Welders protective helmet

- Turns fully automatically from bright after dark as soon as the light arch is ignited
- Due to high quality solar cells battery replacement is no longer require
- Equiped with a sensitivityand delaying switch for switching between dark and light to prevent welders blindness when welding at high amp capacity
- Quick switching is possible when changing from seam to spot welding
- Selection switch for reaction time
- Robust multi positional head band
- Complete neck protection
- Face protection to EN 175 / eye protection to EN379 1/2/1





Technical data:

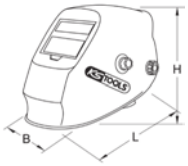
Switching timed:	1/25,000 s
	0.6 s delay
Window:	98 x 40 mm (3.7/8" x 1.5/8")
Cassette size:	110 x 90 x 9 mm (4.3/8" x 3.1/2" x 0,35")
Power requirement:	litium battery + solar cells
UV / IR protection:	according to EN169 / to DIN 16
Colour selection:	varible adjustment from DIN 9-13
	standard light adjustment DIN 3 (4)
Working temperature:	-5° to +55°C
Storage temperature:	-20° up tp +70°C

	L mm	B mm	H mm		
310.0180	330,0	200,0	200,0	830	

Welders protective helmet with integrated headlamp

- Ideal for dark work areas where poor light conditions are given
- Turns fully automatically from bright after dark as soon as the light arch is ignited
- Due to high quality solar cells battery replacement is no longer require
- Equiped with a sensitivityand delaying switch for switching between dark and light to prevent welders blindness when welding at high amp capacity
- Quick switching is possible when changing from seam to spot welding
- Selection switch for reaction time
- Robust multi positional head band
- Complete neck protection
- Face protection to EN 175 / eye protection to EN379 1/2/1
- 3 Watt CREE Chip Power LED
- Luminous flux 100 Lumen
- up to 100 m light range
- Zoom from spot to flood light
- with multifunctional-button: 1W / 3W / Blink
- Lamp can be additionally tilted in 5 click stops
- Weatherproof protection IPX3
- 3 hours lamp duration
- Includes 3 x AAA 1,5V batteries







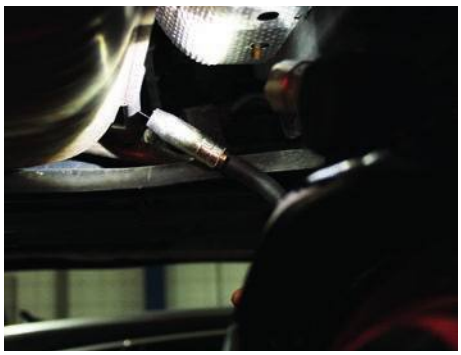
Technical data:

Switching timed:	1/25,000 s
	0.6 s delay
Window:	98 x 40 mm (3.7/8" x 1.5/8")
Cassette size:	110 x 90 x 9 mm (4.3/8" x 3.1/2" x 0,35")
Power requirement:	litium battery + solar cells
UV / IR protection:	according to EN169 / to DIN 16
Colour selection:	varible adjustment from DIN 9-13
	standard light adjustment DIN 3 (4)
Working temperature:	-5° to +55°C
Storage temperature:	-20° up tp +70°C
Headlight range:	max. 100,0 m
Luminosity:	3 W

	L mm	B mm	H mm	g	
310.0185	330,0	200,0	200,0	575	

consists of:

		g	
550.1238	perfectLight headlamp with focus 140 lumen	170	
310.0180	Welders protective helmet, racing design	830	



Welding apron

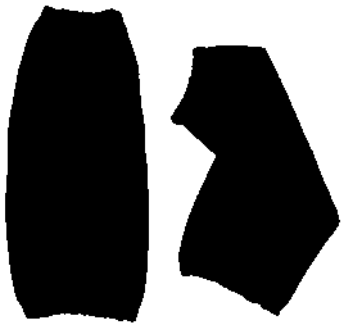
- Made from leather
- Adjustable in length
- Size of the waist adjustable
- Breast pocket



		L mm	g	
985.7019	L	910,0	775	
985.7020	XL	1080,0	775	

Leather sleeves

- Dark brown
- Made from leather
- Ends with elastic band



	L mm	Content	g	
985.7021	400,0	2	320	

Leather sleeves

- Light brown
- Made from leather
- Ends with elastic band



	L mm	Content	g	
985.7022	400,0	2	335	

Welding coat

- Double leather closure, front
- With hook and loop fastener
- Adjustable cuffs
- Lined collar and with hook and loop fastener for additional protection
- Inner pocket



		kg	
985.7000	L	1,80	
985.7001	XL	1,80	
985.7002	XXL	1,82	
985.7003	XXXL	1,82	

Welding leather gloves

- Made from leather
- Good, comfortable wear
- Can be used for applications with heat
- With open sleeves



	Size mm	g	
985.7034	8	365	
985.7035	9	365	
985.7036	10	365	
985.7037	11	365	

Welding leather gloves, long

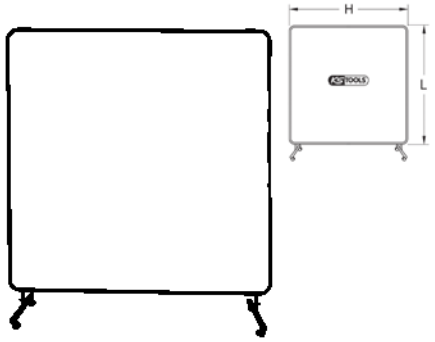
- Made from leather
- Extra long
- Good, comfortable wear
- Can be used for applications with heat
- With open sleeves



	Size mm	g	
985.7038	8	495	
985.7039	9	495	
985.7040	10	495	
985.7041	11	495	

Frame for welding protection screen

- Very stable frame made from steel tubing
- With direct rolls
- With 360° swivel joint

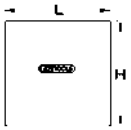


	L mm	H mm	kg	
985.7026	1780,0	1780,0	4,50	

Welding protection awning

- Resistant against UV rays, flames and wear
- Edges with eyelets at 30cm intervals
- Without frame





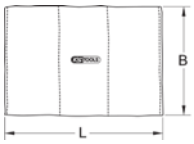


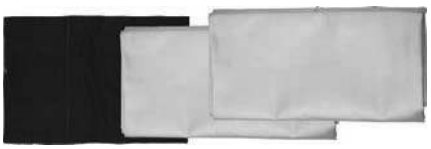
	Colour code	L mm	H mm	kg	
985.7027		1740,0	1740,0	1,72	
985.7028		1740,0	1740,0	1,72	
985.7029		1740,0	1740,0	1,72	

Flame proof mats

- Asbestos free
- Reduced fire risk
- Very flexible
- Good formability







	B mm	L mm	max. °C	g	
610.3350	330,0	500,0	700	330	
610.3351	460,0	800,0	700	650	
610.3399	1500,0	2000,0	600	2110	

Super spotter - Welding gun 220V - 50/60 Hz

- Handy workshop tool
- For the repair of bodywork damage
- For hammering out body panels
- Plastic housing

Technical data:

Attention idle cut-out: 200 Ampere
Attention light cut-out: 200 Ampere





	Length mm	kg	
500.8551	285,0	5,46	

Slide hammer puller 1.5 kg

- For problem free hammerring out of car bodywork panels
- With 1.5 kg slide weight
- Usable in connection with the super spotter
- Special tool steel





	Length mm	Height mm	Replacement span head	kg	
500.8559	475,0	80,0	500.8561	2,08	



Super spotter - Welding gun set

- Handy workshop tool
- For the repair of bodywork damage
- For hammering out body panels
- By means of special electrodes nails or washers are welded on the sheet metal so the dents can be removed with an impact hammer using accurate blows
- With a heat electrode placed hot points can be set on the sheet metal
- Also contains an electrode for welding copper-plated dome head screws for the reinforcement of housings, parts etc. directly on the bodywork
- In durable plastic storage case

Technical data:

Attention idle cut-out: 200 Ampere
Attention light cut-out: 200 Ampere





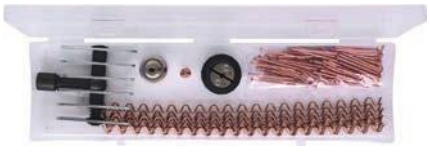
			kg	
500.8550	12 pcs	Super spotter - Welding gun set	10,39	

consists of:

		g	
500.8551	Welding gun, 220V, 50/60 Hz	5460	
500.8554	Electrode f.welding nails, copper	10	
500.8556	Electrode f.rivets, magnetic, copper	10	
500.8557	Electrode f.washers, brass	10	
500.8558	Heating electrode f.hot spots, brass	10	
500.8559	Slide hammer, 1.5kg	2080	
500.8560	Electrode extension, brass	10	
500.8571	Nails 2.0 x 50.0 mm copper coated, pack of 500	660	
500.8572	Nails 2.5 x 50.0 mm copper coated, pack of 100	210	
500.8574	Rivets 3.0 x 3.2 mm copper coated, pack of 100	30	
500.8579	Screws M4 x 16.0 mm copper coated, pack of 100	140	
500.8592	Washers 8.0 x 16.0 mm copper coated, pack of 100	160	

Super spotter addditional kit

- For removing of car body damage
- Includes the adaptor for the slide hammer puller
- The flexible and strong steel wire profile is used so the processing of securing car body panels
- The movable pull hooks situated can be pulled by the claw fastener straightening the carbody and/or the bump on
- It can be hooked on 1-9 pull hooks, at what point exact or extensive enabling the removal of dents



			kg	
500.8530	15 pcs	Super spotter addditional kit	1,04	

consists of:

		g	
500.8531	Welding electrode for corrugated wire	23	
500.8532	Corrugated wire, pack of 10, 2x310mm	122	
500.8533	Corrugated wire magnetic positioner	34	
500.8534	Multi hook head, 6 claw connection, IG M14x1,5	315	
500.8536	System adaptor side hammer	86	
500.8572	Nails 2.5 x 50.0 mm copper coated, pack of 100	210	

Super spotter electrodes

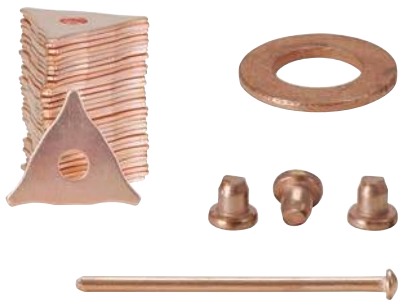
- Usable in connection with the super spotter
- Copper and/or brass



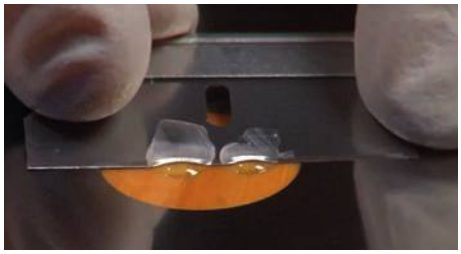
		g
500.8554	Electrode for welding nails, Copper	10
500.8556	Electrode for rivets, magnetic, Copper	10
500.8562	Electrode for screws, Copper	20
500.8557	Electrode for washers, Brass	10
500.8558	Heating electrode for hot spots, Brass	10
500.8560	Electrode extension, brass	10

Super spotter consumables

- Usable in connection with the super spotter
- For the reinforcement of the car body
- Copper coated



		g
500.8570	Nails 2.0 x 50.0 mm copper coated, pack of 100	140
500.8571	Nails 2.0 x 50.0 mm copper coated, pack of 500	660
500.8572	Nails 2.5 x 50.0 mm copper coated, pack of 100	210
500.8573	Nails 2.5 x 50.0 mm copper coated, pack of 500	1150
500.8592	Washers 8.0 x 16.0 mm copper coated, pack of 100	160
500.8595	Triangular-washer 2.5 x 50.0 mm copper coated, pack of 100	500
500.8574	Rivets 3.0 x 3.2 mm copper coated, pack of 100	30
500.8575	Rivets 3.0 x 4.5 mm copper coated, pack of 100	40
500.8576	Rivets 5.0 x 8.2 mm copper coated, pack of 100	40
500.8579	Screws M4 x 16.0 mm copper coated, pack of 100	140



SURFACE TREATMENT

Magnet protector set

- Suitable for protecting door edges and trims
- Ideal for polishing, painting and grinding
- Flexible use thanks to flexible magnetic film
- Surface made from rugged special plastic
- Easy to use







			g
903.1040	2 pcs	Magnet protector set	131

consists of:

		g
903.1041	Magnet protector, small, 120 mm	51
903.1042	Magnet protector, large, 150 mm	80

Masking stencil set

- Choice of four stencil shapes
- For repairing of small paint damages
- Minimizing area when sanding paint-filled chips or scratches
- To prevent wear-through during sanding or Sanding smaller surface irregularities
- Allows the surface treatment in a limited area
- Can be used with a sandblasting gun, sanding block, Grinding, one-sided razor blade etc.
- For precise work on the damaged paintwork areas
- Reusable
- Material strength 0.05 mm
- Mask size 120.0 x 120.0 mm
- Low resistance when using abrasives
- No deburring necessary
- Rust-proof
- Stainless steel





			g
903.1045	3 pcs	Masking stencil set	12

Pneumatic sand blaster

- Ideal for specific working
- With integrated storage tank 600 cm³
- Suitable for blasting material grain size 46-100
- Suitable for quartz sand, glass beads, plastic granulate, aluminium oxide, standard corundum and glass granulate
- Supply for blasting material can be switched off and therefore also be used as normal pneumatic guns
- ABS tank
- Robust steel handle
- Steel nozzle, maintenance-free

Application range: Paint stripping, paint removal, rust removal, cleaning, surface cleaning





Technical data:

Operating pressure:	max. 6,3 bar (90 psi)
Air consumption:	200 l/min
Min. tube diameter:	3/8" - 10 mm
Connection thread:	1/4"NPT

	Length mm	Height mm	Ø mm	kg
515.1909	260,0	280,0	5,0	1,30

Soda compressed air cleaning gun

- Suitable for cleaning and removing paint, colours, etc.
- For all possible surfaces, such as glass, plastic, rubber, wood, stone, etc.
- Soda blasting agent neither heats nor warps the panel
- Pneumatic-operated with simple handling
- Efficient and environmentally-friendly cleaning with NaHCO3 (soda)
- Air exhaust through the handle
- Cold insulated handle
- Includes 1/4" coupling connector





Technical data:

Operating pressure:	max. 6,3 - 8,2 bar (90 - 120 psi)
Min. tube diameter:	3/8" - 10 mm
Connection thread:	1/4"
Air consumption:	57 l/min

		kg
515.1919	Soda compressed air cleaning gun	1,47

Soda blasting agent

- Suitable for cleaning and removing paint, colours, etc.
- For all possible surfaces, such as glass, plastic, rubber, wood, stone, etc.
- Soda blasting agent neither heats nor warps the panel
- Efficient and environmentally-friendly cleaning with NaHCO3 (soda)
- In a practical 5 kg bucket



Technical data:

Water content:	< 0,25%
Chloride content:	< 150 ppm
Sulphate content:	< 150 ppm
sieve fraction:	< 0,5 mm: 95%

		kg	
515.1923	Soda blasting agent	5,38	

Pneumatic pencil grinder, 70.000 rpm

- Straight design
- Air exhaust through the used air tube
- Ideal for carbide, corundum and tungsten carbide burrs
- For working in hard to access areas
- Very handy and compact construction
- Suitable for different repair works
- With stepless speed regulation
- Vibration dampened
- Cold insulated handle
- Includes 1/4" coupling connector and chuck wrench
- Aluminium housing





Technical data:

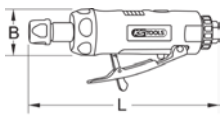
Tube length:	1 m
Tube diameter:	5 mm
Chuck capacity:	3 mm
Capacity:	150 KW
No load current:	70000 r.p.m.
Vibration acceleration:	< 0,80 m/s²
Noise performance level:	86 dbA
Noise pressure level:	74 dbA
Air consumption:	140 l/min
Operating pressure:	max. 6,3 bar (90 psi)
Min. tube diameter:	1/4" - 6,35 mm
Connection thread:	1/4"PT

	D mm	L mm	g	
515.3198	16,0	132,0	330	

SlimPOWER mini-pneumatic die grinder, straight

- Straight design
- Air exhaust through the handle rear end
- For one handed operation with ergonomic design
- For HM mills, mini cutting discs and grinding heads with a 6 mm shaft
- Ideal for grinding, polishing and engraving work
- For working in hard to access areas
- Secure operation lever with locking device
- Stepless speed regulation
- Vibration dampened
- Very compact construction
- Includes 1/4" coupling connector
- Robust housing







Technical data:

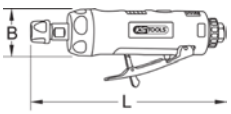
Chuck:	6 mm
Capacity:	220 Watt
No load current:	25000 r.p.m.
Vibration acceleration:	< 2,6 m/s²
Noise performance level:	95,6 dbA
Noise pressure level:	84,6 dbA
Air consumption:	283 l/min
Min. tube diameter:	3/8" - 10 mm
Operating pressure:	max. 6,3 bar (90 psi)
Connection thread:	1/4"NPT

	B mm	L mm	g	
515.5530	35,0	123,0	300	

Pneumatic die grinder

- Straight design
- Air exhaust through the handle rear end
- For one handed operation with ergonomic design
- For HM mills, mini cutting discs and grinding heads with a 6 mm shaft
- Ideal for grinding, polishing and engraving work
- For working in hard to access areas
- Very handy and compact construction
- Secure operation lever with locking device
- Number of revolutions adjustable through regulating screw
- Vibration dampened
- Cold insulated handle
- Includes 1/4" coupling connector
- Ultra light robust housing special plastic







Technical data:

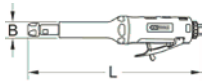
Chuck:	6 mm
Capacity:	370 Watt
No load current:	23000 r.p.m.
Vibration acceleration:	< 2,0 m/s²
Noise performance level:	101,1 dbA
Noise pressure level:	90,1 dbA
Air consumption:	350 l/min
Operating pressure:	max. 6,3 bar (90 psi)
Min. tube diameter:	3/8" - 10 mm
Connection thread:	1/4"NPT

	B mm	L mm	g	
515.5410	45,0	188,0	620	

Long shaft die grinder

- Straight design
- Air exhaust through the handle rear end
- For one handed operation with ergonomic design
- For HM mills, mini cutting discs and grinding heads with a 6 mm shaft
- Ideal for grinding, polishing and engraving work
- For working in deep lying areas
- Secure operation lever with locking device
- Stepless speed regulation
- Number of revolutions adjustable through regulating screw
- Vibration dampened
- Cold insulated handle
- Includes 1/4" coupling connector
- Ultra light robust housing special plastic







Technical data:

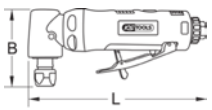
Chuck:	6 mm
Capacity:	370 Watt
No load current:	23000 r.p.m.
Vibration acceleration:	< 2,4 m/s²
Noise performance level:	102,6 dbA
Noise pressure level:	91,6 dbA
Air consumption:	350 l/min
Operating pressure:	max. 6,3 bar (90 psi)
Min. tube diameter:	3/8" - 10 mm
Connection thread:	1/4"NPT

	B mm	L mm	kg	
515.5415	26,0	350,0	1,15	

SlimPOWER mini-pneumatic angled die grinder

- Angled design
- Air exhaust through the handle rear end
- For one handed operation with ergonomic design
- For HM mills, mini cutting discs and grinding heads with a 6 mm shaft
- Ideal for grinding, polishing and engraving work
- For working in hard to access areas
- Secure operation lever with locking device
- Stepless speed regulation
- Vibration dampened
- Very compact construction
- Includes 1/4" coupling connector
- Robust housing







Technical data:

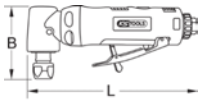
No load current:	19000 r.p.m.
Vibration acceleration:	< 3,5 m/s²
Noise performance level:	97,9 dbA
Noise pressure level:	86,9 dbA
Air consumption:	283 l/min
Min. tube diameter:	3/8" - 10 mm
Operating pressure:	max. 6,3 bar (90 psi)
Connection thread:	1/4"NPT

	B mm	L mm	g	
515.5535	75,0	123,0	300	

SlimPOWER mini-pneumatic angled die grinder

- Angled design
- Air exhaust through the handle rear end
- For one handed operation with ergonomic design
- For HM mills, mini cutting discs and grinding heads with a 6 mm shaft
- Ideal for grinding, polishing and engraving work
- For working in hard to access areas
- Secure operation lever with locking device
- Stepless speed regulation
- Vibration dampened
- Very compact construction
- Includes 1/4" coupling connector
- Robust housing







Technical data:

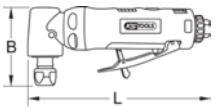
Chuck:	6 mm
Capacity:	220 Watt
No load current:	18000 r.p.m.
Vibration acceleration:	< 6,5 m/s²
Noise performance level:	97,8 dbA
Noise pressure level:	86,8 dbA
Air consumption:	283 l/min
Min. tube diameter:	3/8" - 10 mm
Operating pressure:	max. 6,3 bar (90 psi)
Connection thread:	1/4"NPT

	B mm	L mm	g	
515.5540	70,0	270,0	700	

Pneumatic angled die grinder

- Angled design
- Air exhaust through the handle rear end
- For one handed operation with ergonomic design
- For HM mills, mini cutting discs and grinding heads with a 6 mm shaft
- Ideal for grinding, polishing and engraving work
- For working in hard to access areas
- Secure operation lever with locking device
- Stepless speed regulation
- Number of revolutions adjustable through regulating screw
- Vibration dampened
- Cold insulated handle
- Includes 1/4" coupling connector
- Ultra light robust housing special plastic







Technical data:

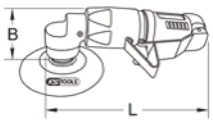
Angle size:	80 mm
Chuck:	6 mm
Capacity:	370 Watt
No load current:	18000 r.p.m.
Vibration acceleration:	< 4,4 m/s²
Noise performance level:	101 dbA
Noise pressure level:	90,0 dbA
Air consumption:	350 l/min
Operating pressure:	max. 6,3 bar (90 psi)
Min. tube diameter:	3/8" - 10 mm
Connection thread:	1/4"NPT

	B mm	L mm	g	
515.5420	85,0	200,0	780	

SlimPOWER mini-pneumatic burnisher

- Angled design
- Air exhaust through the handle rear end
- For one hand operation
- Ideal for curved cutting
- For working in hard to access areas
- Secure operation lever with locking device
- Stepless speed regulation
- Vibration dampened
- Very compact construction
- Receiver: External thread
- Includes 3 Velcro receivers
- Includes 1/4" coupling connector
- Robust housing







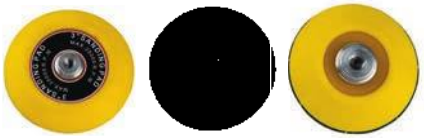
Technical data:

Capacity:	186 Watt
No load current:	5000 r.p.m.
Sponge diameter:	50 + 75 mm
Polishing sponge diameter:	46 mm
Vibration acceleration:	< 3,3 m/s²
Noise performance level:	96,9 dbA
Noise pressure level:	85,9 dbA
Air consumption:	240 l/min
Min. tube diameter:	3/8" - 10 mm
Operating pressure:	max. 6,3 bar (90 psi)
Connection thread:	1/4"NPT

	B mm	L mm	g	
515.5590	55,0	140,0	600	

Grinding disc

- With Velcro receiver
- With internal thread receiver



	Ø mm	Material	Content	g	
515.5101	46,0	flexible	5	275	
515.5102	75,0	flexible	5	125	
515.5103	46,0	rigid	5	55	

Burnishing pads

- For burnishing of smooth surfaces



	Ø mm	Material	Colour code	Content	g	
515.5126	50,0	plastic	yellow	5	10	
515.5122	85,0	plastic	yellow	5	55	
515.5127	50,0	plastic	white	5	10	
515.5123	85,0	plastic	white	5	55	
515.5128	50,0	plastic	black	5	10	
515.5129	50,0	leather		5	48	
515.5124	80,0	leather		5	80	

Mini pneumatic burnisher set

- For hard to reach places and improvement work
- With non slip soft grip handle
- Angled design
- Air exhaust through the handle rear end
- For one hand operation
- Ideal for curved cutting
- For working in hard to access areas
- Vibration dampened
- Very compact construction
- Grinding disc with Velcro
- Includes 1/4" coupling connector
- Receiver: Internal thread
- Robust housing
- In durable plastic storage case





Technical data:

No load current:	2500 r.p.m.
Vibration acceleration:	< 0,77 m/s²
Noise performance level:	94 dbA
Noise pressure level:	81 dbA
Air consumption:	113 l/min
Operating pressure:	max. 5,2 bar
Min. tube diameter:	3/8" - 10 mm
Connection thread:	1/4"

			kg	
515.5120	5 pcs	Mini pneumatic burnisher set	1,80	

consists of:

		g	
515.5121	1/4" mini burnishing machine	1000	
515.5122	Burnishing pads yellow, Ø 85,0mm, pack of 5	55	
515.5123	Burnishing pads white, Ø 85,0mm, pack of 5	55	
515.5124	Burnishing pads lambskin Ø 80,0mm, pack of 5	80	
515.5112	Grinding disc Ø76.5 mm	20	

Grinding disc

- With Velcro receiver
- With external thread receiver



	Ø mm	Material	Content	g	
515.5113	46,0	flexible	5	13	
515.5112	76,5	flexible	5	20	

Burnishing pads

- For burnishing of smooth surfaces

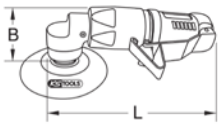


	Ø mm	Material	Colour code	Content	g	
515.5126	50,0	plastic	yellow	5	10	
515.5122	85,0	plastic	yellow	5	55	
515.5127	50,0	plastic	white	5	10	
515.5123	85,0	plastic	white	5	55	
515.5128	50,0	plastic	black	5	10	
515.5129	50,0	leather		5	48	
515.5124	80,0	leather		5	80	

Pneumatic polisher

- Angled design
- Air exhaust through the handle rear end
- For one handed operation with ergonomic design
- Ideal for polishing work
- Secure operation lever with locking device
- Stepless speed regulation
- Vibration dampened
- Very compact construction
- Receiver: External thread
- Including 1 velcro holder Ø 75 mm
- Cold insulated handle
- Includes 1/4” coupling connector
- Ultra light robust housing special plastic







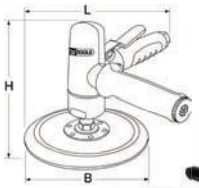
Technical data:

Capacity:	370 Watt
No load current:	3000 r.p.m.
Sponge diameter:	75 mm
Polishing sponge diameter:	85 mm
Vibration acceleration:	< 0,9 m/s²
Noise performance level:	103,2 dbA
Noise pressure level:	92,2 dbA
Air consumption:	350 l/min
Min. tube diameter:	3/8” - 10 mm
Operating pressure:	max. 6,3 bar (90 psi)
Connection thread:	1/4”NPT

	B mm	L mm	g
515.5455	9,0	210,0	1140

Pneumatic polisher

- Handy and ergonomic housing
- Polishing with a fast and excellent work result
- Lateral handle for better guidance of the polisher
- Air exhaust through the handle to the sides
- For two-hand operation
- Stepless speed regulation
- Includes 1/4” coupling connector





Technical data:

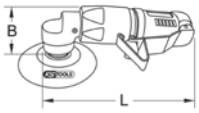
Capacity:	450 Watt
No load current:	3500 r.p.m.
Sponge diameter:	150 mm
Polishing sponge diameter:	145 mm
Vibration acceleration:	< 1,20 m/s²
Noise performance level:	80 dbA
Noise pressure level:	91 dbA
Air consumption:	110 l/min
Min. tube diameter:	3/8” - 10 mm
Operating pressure:	max. 6,3 bar (90 psi)
Tool holder:	5/16” UNF
Connection thread:	1/4”

	H mm	B mm	L mm	g
515.3063	158,0	123,0	240,0	2200

SlimPOWER mini-pneumatic grinding machine

- Angled design
- Air exhaust through the handle rear end
- For one hand operation
- Ideal for curved cutting
- For working in hard to access areas
- Secure operation lever with locking device
- Stepless speed regulation
- Vibration dampened
- Very compact construction
- Includes 1/4” coupling connector
- Receiver: External thread
- Robust housing
- Incl. three grinding discs







Technical data:

Capacity:	220 Watt
No load current:	19000 r.p.m.
Sponge diameter:	50 + 75 mm
Polishing sponge diameter:	46 mm
Vibration acceleration:	< 3,5 m/s²
Noise performance level:	96,8 dbA
Noise pressure level:	85,8 dbA
Air consumption:	283 l/min
Min. tube diameter:	3/8” - 10 mm
Operating pressure:	max. 6,3 bar (90 psi)
Connection thread:	1/4”NPT

	B mm	L mm	g
515.5585	40,0	120,0	300

Grinding disc

- With Velcro receiver
- With internal thread receiver



	Ø mm	Material	Content	g
515.5101	46,0	flexible	5	275
515.5102	75,0	flexible	5	125
515.5103	46,0	rigid	5	55

Grinding pads

- For polishing rough surfaces made from wood, metal, varnish and natural stone
- For breaking edges

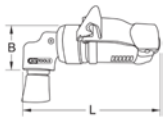


	Ø mm	Grain	Content	g
515.5119	50,0	320	10	16
515.5116	75,0	320	10	19
515.5118	50,0	400	10	16
515.5115	75,0	400	10	19
515.5117	50,0	600	10	16
515.5114	75,0	600	10	19

SlimPOWER mini-pneumatic grinding machine for small pads

- Angled design
- Air exhaust through the handle rear end
- For one hand operation
- Ideal for curved cutting
- For working in hard to access areas
- Secure operation lever with locking device
- Stepless speed regulation
- Vibration dampened
- Very compact construction
- For screw in pads with 26.7 mm diameter
- Includes 1/4” coupling connector
- Receiver: Internal thread
- Robust housing







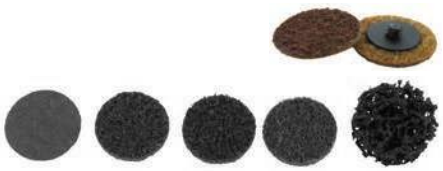
Technical data:

No load current:	19000 r.p.m.
Vibration acceleration:	< 3,5 m/s²
Noise performance level:	96,8 dbA
Noise pressure level:	85,8 dbA
Air consumption:	283 l/min
Min. tube diameter:	3/8” - 10 mm
Operating pressure:	max. 6,3 bar (90 psi)
Connection thread:	1/4”NPT

	B mm	L mm	g
515.5570	65,0	120,0	300

Grinding pads

- For polishing rough surfaces made from wood, metal, varnish and natural stone
- For breaking edges
- With external thread receiver



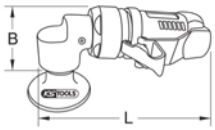
	Material	Ø mm	Grain	Colour code	Content	g
515.5071		26,7	60	brown	10	10
515.5072		26,7	80	brown	10	20
515.5073		26,7	150	purple	10	20
515.5074		26,7	300	blue	10	20
515.5075	Strip Rad	26,7		black	10	25



SlimPOWER mini-pneumatic grinding machine for large pads

- Angled design
- Air exhaust through the handle rear end
- For one hand operation
- Ideal for curved cutting
- For working in hard to access areas
- Secure operation lever with locking device
- Stepless speed regulation
- Vibration dampened
- Very compact construction
- For screw in pads with 50.0 mm diameter
- Includes 1/4" coupling connector
- Receiver: Internal thread
- Robust housing







Technical data:

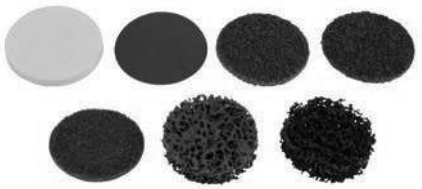
No load current:	19000 r.p.m.
Vibration acceleration:	< 3,5 m/s²
Noise performance level:	96,8 dbA
Noise pressure level:	85,8 dbA
Air consumption:	283 l/min
Min. tube diameter:	3/8" - 10 mm
Operating pressure:	max. 6,3 bar (90 psi)
Connection thread:	1/4"NPT

	B mm	L mm	g	
515.5580	70,0	120,0	300	

Grinding pads

- For polishing rough surfaces made from wood, metal, varnish and natural stone
- For breaking edges
- With external thread receiver





	Material	Ø mm	Grain	Colour code	Content	g	
515.5081	Scouring wool	50,0		white	10	60	
515.5083	Sand paper	50,0	80	brown	10	60	
515.5084	Sand paper	50,0	150	purple	10	60	
515.5082	Sand paper	50,0	240	brown	10	30	
515.5085	Sand paper	50,0	300	blue	10	60	
515.5086	Strip Rad	50,0		purple	10	100	
515.5087	Strip Rad	50,0		black	10	100	

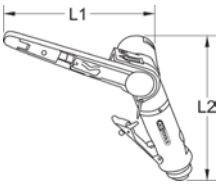




Pneumatic belt grinder

- With non slip soft grip handle
- Air exhaust through the handle rear end
- Working head is 360° ajustable
- Adjustable for quick sanding belt change
- Ideal for narrow areas (10 mm belt width)
- Secure operation lever with locking device
- Stepless speed regulation
- Number of revolutions adjustable through regulating screw
- Vibration dampened
- Cold insulated handle
- Includes 1/4" coupling connector
- Light aluminium housing
- For sanding belts with a lenght of 330 mm







Technical data:

Belt speed:	1188 m/min
No load current:	18000 r.p.m.
Vibration acceleration:	< 1,01 m/s²
Noise performance level:	81 dbA
Noise pressure level:	73 dbA
Air consumption:	142 l/min
Operating pressure:	max. 6,3 bar (90 psi)
Min. tube diameter:	3/8" - 10 mm
Connection thread:	1/4"PT

	L1 mm	L2 mm	g	
515.3549	150,0	170,0	800	

Abrasive belts for pneumatic belt grinders

- Abrasive belts for pneumatic belt grinders 515.3549

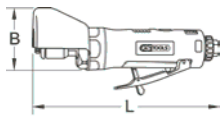


	Grain	Content	g	
515.3551	80	10	60	
515.3552	100	10	80	
515.3553	120	10	100	

Pneumatic cut-off sander

- Air exhaust through the handle rear end
- For one handed operation with ergonomic design
- For cutting wheels up to Ø 75 mm x 10 mm
- With safety cover
- For cutting metal sheet and steel
- Secure operation lever with locking device
- For working in inaccessible places
- Stepless speed regulation
- Number of revolutions adjustable through regulating screw
- Vibration dampened
- Cold insulated handle
- Includes 1/4" coupling connector
- Ultra light robust housing special plastic







Technical data:

Capacity:	370 Watt
No load current:	23000 r.p.m.
Vibration acceleration:	< 6,2 m/s²
Noise performance level:	103,2 dbA
Noise pressure level:	92,2 dbA
Air consumption:	350 l/min
Min. tube diameter:	3/8" - 10 mm
Connection thread:	1/4"NPT

	B mm	L mm	kg	
515.5440	85,0	200,0	0,82	

Mini pneumatic random orbital sander set

- For hard to reach places and improvement work
- With non-slip soft-grip-handle
- Angled design
- Air exhaust through the handle rear end
- For one hand operation
- Ideal for curved cutting
- For working in hard to access areas
- Vibration dampened
- Very compact construction
- Includes ¼" coupling connector
- Receiver: Internal thread
- Robust housing
- Grinding disc with Velcro
- In durable plastic storage case



Technical data:

Oscillating circuit:	2,5 mm
No load current:	15000 r.p.m.
Vibration acceleration:	< 0,77 m/s²
Noise performance level:	94 dbA
Noise pressure level:	81 dbA
Air consumption:	113 l/min
Operating pressure:	max. 5,2 bar
Min. tube diameter:	3/8" - 10 mm
Connection thread:	1/4"

			kg	
515.5110	63 pcs	Mini pneumatic random orbital sander set	1,45	

consists of:

		g
515.5111	Mini random orbital sander	700
515.5119	Grinding pads, grit 320 Ø 50mm, pack of 10	16
515.5118	Grinding pads, grit 400 Ø 50mm, pack of 10	16
515.5117	Grinding pads, grit 600 Ø 50mm, pack of 10	16
515.5116	Grinding pads, grit 320 Ø 75mm, pack of 10	19
515.5115	Grinding pads, grit 400 Ø 75mm, pack of 10	19
515.5114	Grinding pads, grit 600 Ø 75mm, pack of 10	19
515.5113	Grinding disc Ø 46.0 mm	13
515.5112	Grinding disc Ø76.5 mm	20

Grinding disc

- With Velcro receiver
- With external thread receiver



	Ø mm	Material	Content	g
515.5113	46,0	flexible	5	13
515.5112	76,5	flexible	5	20

Grinding pads

- For polishing rough surfaces made from wood, metal, varnish and natural stone
- For breaking edges



	Ø mm	Grain	Content	g
515.5119	50,0	320	10	16
515.5116	75,0	320	10	19
515.5118	50,0	400	10	16
515.5115	75,0	400	10	19
515.5117	50,0	600	10	16
515.5114	75,0	600	10	19



Fine-sanding pneumatic random orbital sander with dust extraction

- Air exhaust through the used air tube
- With ergonomic design for fatigue free working
- Compact constuction height and light composite housing for controlled working
- For sanding or polishing
- Alternatively can be used with dust bag or industrial vacuum cleaner
- Includes fabric dust collection bag
- With 6 punched hole in pitch circle: 80 mm / Ø 11 mm
- Stepless speed regulation
- Cold insulated handle
- Includes 1/4" coupling connector
- Ultra light robust housing special plastic



Technical data:

Oscillating circuit:	2,5 mm
Velcro disc receiver:	Ø 152,4 mm = 6"
Tube length:	2 m
Capacity:	240 Watt
No load current:	10000 r.p.m.
Vibration acceleration:	< 0,80 m/s²
Noise performance level:	71 dbA
Noise pressure level:	60 dbA
Air consumption:	255 l/min
Operating pressure:	max. 6,3 bar (90 psi)
Min. tube diameter:	3/8" - 10 mm
Connection thread:	1/4"PT

	D mm	L mm	kg
515.3061	150,0	196,0	1,50

Coarse sanding pneumatic random orbital sander with dust extraction

- Air exhaust through the used air tube
- With ergonomic design for fatigue free working
- Compact constuction height and light composite housing for controlled working
- For sanding or polishing
- Alternatively can be used with dust bag or industrial vacuum cleaner
- Includes fabric dust collection bag
- With 6 punched hole in pitch circle: 80 mm / Ø 11 mm
- Stepless speed regulation
- Cold insulated handle
- Includes 1/4" coupling connector
- Ultra light robust housing special plastic



Technical data:

Oscillating circuit:	5 mm
Velcro disc receiver:	Ø 152,4 mm = 6"
Tube length:	2 m
Capacity:	240 Watt
No load current:	10000 r.p.m.
Vibration acceleration:	< 0,80 m/s²
Noise performance level:	71 dbA
Noise pressure level:	60 dbA
Air consumption:	225 l/min
Operating pressure:	max. 6,3 bar (90 psi)
Min. tube diameter:	1/4" - 6,35 mm
Connection thread:	1/4"PT

	D mm	L mm	g
515.3066	150,0	100,0	900



Pneumatic multi-grinder set

- For removing underbody coating, sealant, rust, corrosion, clingages, paints, films, text as well as for paint stripping
- With non slip soft grip handle
- For hard to reach places
- Air exhaust through the handle rear end
- Easy operation
- Ideal for grinding and erasing work
- For working in hard to access areas
- Vibration dampened
- Includes 1/4" coupling connector
- Robust housing
- In durable plastic storage case





Technical data:

No load current:	4000 r.p.m.
Vibration acceleration:	< 0,7 m/s²
Noise performance level:	100 dbA
Noise pressure level:	89,0 dbA
Air consumption:	350 l/min
Operating pressure:	max. 6,3 bar (90 psi)
Min. tube diameter:	3/8" - 10 mm
Connection thread:	1/4"NPT

			kg
515.5430	8 pcs	Pneumatic multi-grinder set	4,70

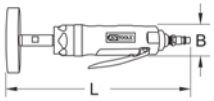
consists of:

		g
515.5431	Multi-grinder with handle, 212 mm	1400
515.5432	Film eraser, light execution, Ø100 mm	260
515.5433	Brush strip coarse	250
515.5434	Brush strip fine	325
515.5436	Attachment for brush strip	900
515.5437	Grinding wheel, pack of 2	80
515.5438	Attachment for grinding wheel	375

Pneumatic erasing machine

- Straight design
- Air exhaust through the handle rear end
- For one handed operation with ergonomic design
- Ideal for removing of stickers glue and color remainders
- Stepless speed regulation
- Number of revolutions adjustable through regulating screw
- Vibration dampened
- Cold insulated handle
- Includes 1/4" coupling connector
- Ultra light robust housing special plastic







Technical data:

Tool holder:	5/16" - 24 mm
Capacity:	370 Watt
No load current:	4000 r.p.m.
Vibration acceleration:	< 1,6 m/s²
Noise performance level:	102,5 dbA
Noise pressure level:	91,5 dbA
Air consumption:	350 l/min
Operating pressure:	max. 6,3 bar (90 psi)
Min. tube diameter:	3/8" - 10 mm
Connection thread:	1/4"NPT

	B mm	L mm	Eraser wheels	kg	
515.5445	45,0	200,0	515.1243	0,76	

Mandrel for stripe removing pad

- with internal M8 thread
- Tension pin shaft Ø 6 mm
- for fastening film erasure discs on drilling machines



	size internal thread	Length mm	g	
515.1218	M8	40,0	25	

Stripe removing pad

- For removing of stickers, glue and color remainders on varnished areas
- Includes neutral colored rubber eraser preventing a smearing on the surface
- Not suitable for pneumatic die grinders





Technical data:

Speed:	4000 rpm
Shaft:	M8

	Width mm	Ø mm	Content	kg	
515.1243	15,0	90,0	1	110	
515.1285	15,0	90,0	6	660	

Stripe removing pad with lamellae

- For removing of stickers, glue and color remainders on varnished areas
- Includes neutral colored rubber eraser preventing a smearing on the surface
- Not suitable for pneumatic die grinders



Technical data:

Speed:	4000 rpm
Shaft:	M8

	Width mm	Ø mm	Content	kg	
515.1247	24,0	100	1	0,29	
515.1366	24,0	100	6	1,74	

Stripe removing pad with lamellae

- For removing of stickers, glue and color remainders on varnished areas
- Includes neutral colored rubber eraser preventing a smearing on the surface
- Not suitable for pneumatic die grinders



Technical data:

Speed:	4000 rpm
Shaft:	M8

	Width mm	Ø mm	Content	g	
515.1248	20,0	90	1	160	
515.1368	20,0	90	6	960	

Stripe removing pad with lamellae

- For removing of stickers, glue and color remainders on varnished areas
- Includes neutral colored rubber eraser preventing a smearing on the surface
- Not suitable for pneumatic die grinders



Technical data:

Speed:	4000 rpm
Shaft:	M8

	Width mm	Ø mm	Content	kg	
515.1249	26,5	100	1	0,26	
515.1369	26,5	100	6	1,56	

Soldering wood set

- Suitable for working hot-tinned surfaces
- Comprehensive set with various soldering woods
- Beech wood



			g	
903.1010	5 pcs	Soldering wood set	460	

consists of:

		g	
903.1011	Soldering wood chock, 180 x 53 x 34 mm	120	
903.1012	Soldering wood chock, 158 x 40 x 50 mm	120	
903.1013	Soldering wood chock, 130 x 41 x 40 mm	80	
903.1016	Soldering wood block, 92 x 30 x 25 mm	40	
903.1017	Soldering wood block, 92 x 47 x 20 mm	60	

Stainless steel spatula with short handle

- Two component handle
- Ground
- Polished
- With hanging hole
- Extremely long service life
- Rust-proof
- Stainless steel

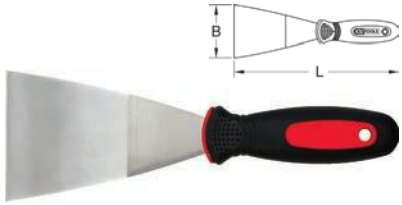




	Length mm	Width mm	g	
144.0631	50,0	100,0	20	
144.0632	75,0	113,0	30	
144.0633	100,0	116,0	50	
144.0634	150,0	120,0	85	

Stainless steel scraper

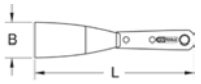
- Two component handle
- Ground
- Polished
- With hanging hole
- Stainless steel



	L mm	B mm	g	
144.0622	225,0	30,0	72	
144.0624	225,0	40,0	73	
144.0625	225,0	50,0	75	
144.0626	225,0	60,0	84	
144.0628	225,0	80,0	85	

Stainless steel scraper

- With wooden handle
- Ground
- Polished
- With hanging hole
- Suitable for use at extremely low temperatures
- Extreme resistance to intergranular corrosion and oxidation
- Extremely long service life
- Autoclavable (heating of the tools to over 100°C to kill germs)
- Rust-proof and acid resistant
- Stainless steel





	L mm	B mm	g	
907.2261	225,0	25,0	70	
907.2262	225,0	38,0	70	
907.2263	225,0	50,0	70	
907.2264	225,0	63,0	70	
907.2265	225,0	75,0	80	

Sanding block with sponge rubber backing

- Accepts emery and sandpaper etc
- Moulded handle ensures a comfortable grip
- Ideally suited to working on level surfaces
- Clamping clips made from stainless steel
- Special plastic



	L mm	B mm	g	
515.3095	210,0	105,0	330	

Grinding hand block set

- Ideal for grinding and polishing
- For affixing sandpaper etc. by hook and loop fastener
- Ideally suited to working on level surfaces
- With ergonomic design for fatigue free working
- Low height
- With dust suction in combination with an industrial vacuum cleaner
- With non-slip soft touch handle
- Ultra light robust housing special plastic





			g	
140.3065	3 pcs	Grinding hand block set	690	

consists of:

		g	
140.3066	Grinding hand block, small, 70 x 125 mm	180	
140.3067	Grinding hand block, medium, 90 x 175 mm	215	
140.3068	Grinding hand block, large, 115 x 225 mm	290	

INTERNAL CLEANING

Plasma air-cleaner with ionisator technology

- Eliminates odours and disinfects the interior of the vehicle
- Compact, lightweight, and high ozone emission
- For use in closed passenger compartments
- In odour elimination mode, it switches off automatically after 60 minutes
- In disinfection mode, it automatically switches off after 30 minutes and immediately switches to odour elimination mode for 30 minutes
- Works without chemical additives , guaranteed to leave no residue
- It leaves no traces, even on sensitive surfaces
- Removes mould, bacteria, fungus and mites
- Includes an active carbon HEPA technology replacement filter
- Simple operation







Technical data:

Dimensions:	173x122x49 mm
Battery technologie:	Lithium-ion
Rechargeable battery:	850 mAh
Operational voltage:	DC 12-24V / AC 100-240V / 50/60 Hz
Power consumption:	5 W
Ozone transformation:	5 mg/h
Negative Ion concentration:	3000000 pcs/cm²
Covering scope:	15m²

	Replacement filter	Scented cube	g	
550.1183	550.1199	550.1189	360	

Compressed-air cleaning guns

- Ideal for spraying cleaning fluids or oils
- With integrated storage tank 750 cm³
- Simple handling
- Sturdy design
- Coated metal

Application range: Waxing, sealing, impregnating, spraying cold cleaners in or on to surfaces, washing agents, antirust agents, spray oils etc.





Technical data:

Operating pressure:	max. 6,3 bar (90 psi)
Air consumption:	170 l/min
Min. tube diameter:	3/8" - 10 mm
Connection thread:	1/4"

	Length mm	Height mm	Ø mm	g	
515.1911	310,0	230,0	4,5	500	

Pneumatic cleaning gun

- Ideal for professional cleaning of cushions, door pillars, ventilation channels, carpets, foot mats, fabric seats etc.
- Pneumatic-operated with simple handling
- Unique, cyclonic, ball bearing mounted rotation cleaning technology
- Efficient and energy-saving using targeted air turbulence
- For all possible surfaces, cleaned damp or dry
- Also suitable for hard-to-reach places, e.g. between seats and seams
- Cleaned surfaces also dry extremely quickly thanks for the fine misted cleaning solution
- With pressure regulator
- Includes 360° rotating and 30° angled ball joint and plug nipple





Technical data:

No load current:	8000 r.p.m.
Vibration acceleration:	< 3,9 m/s²
Noise performance level:	106 dbA
Noise pressure level:	95 dbA
Air consumption:	160 l/min
Operating pressure:	max. 6,3 bar (90 psi)
Min. tube diameter:	3/8" - 10 mm
Connection thread:	1/4"PT

		g	
515.1980	1.000 ml	680	

Cleaning Brush-Adaptor

- Ideal addition for cleaning the interior
- Can be used in conjunction with compressed-air cleaning guns (515.1980)
- With screw connection
- Plastic housing



		g	
515.1983	Cleaning Brush-Adaptor	27	

Cleaning Brush

- Ideal addition for cleaning the interior
- Can be used in conjunction with compressed-air cleaning guns (515.1980)
- With hanging hole
- Plastic housing

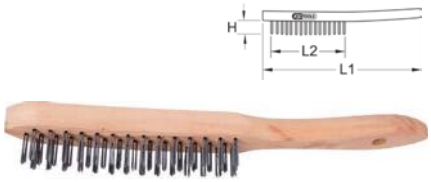


		g	
515.1986	Cleaning Brush	60	

WIRE BRUSHES

Steel hand wire brush 3 rowed

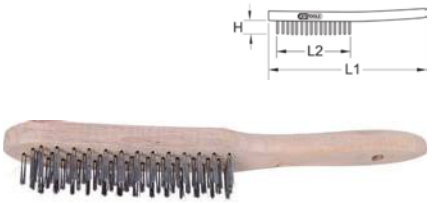
- 3 rowed
- Universal usage
- wooden handle
- For surface preparation
- With steel bristles



	H mm	L1 mm	L2 mm	g	
201.2305	32,0	290,0	138,0	120	

Steel hand wire brush 4 rowed

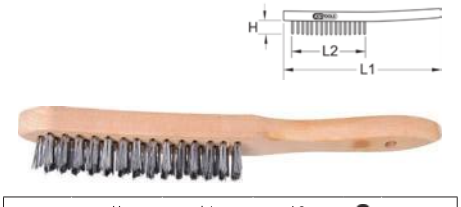
- 4 rowed
- Universal usage
- wooden handle
- For surface preparation
- With steel bristles



	H mm	L1 mm	L2 mm	g	
201.2311	32,0	290,0	138,0	120	

Stainless steel hand wire hand brush 3 rowed

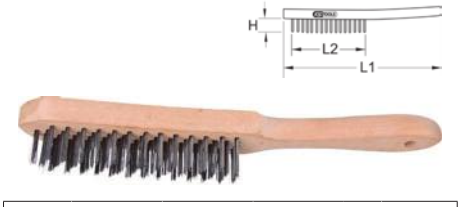
- 3 rowed
- Universal usage
- wooden handle
- For surface preparation
- With stainless steel bristles



	H mm	L1 mm	L2 mm	g	
201.2310	32,0	290,0	138,0	120	

Stainless steel hand wire hand brush 4 rowed

- 4 rowed
- Universal usage
- wooden handle
- For surface preparation
- With stainless steel bristles



	H mm	L1 mm	L2 mm	g	
201.2306	32,0	290,0	138,0	100	

Brass wire hand brush 3 rowed

- 3 rowed
- Universal usage
- Plastic hand grip casing
- For surface preparation
- Straight brass wire



	H mm	L1 mm	L2 mm	g	
201.2326	25,0	285,0	130,0	105	

Steel wire hand brush 4 rowed

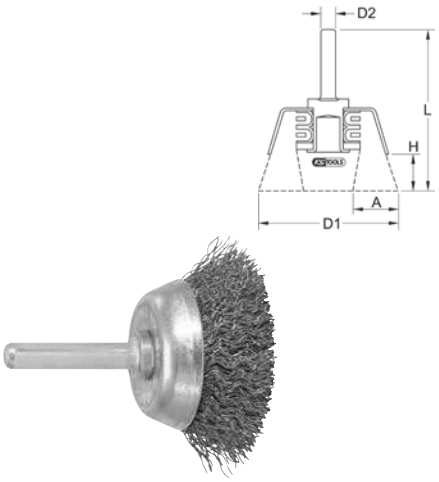
- 4 rowed
- Universal usage
- Plastic hand grip casing
- For surface preparation
- Smooth steel wire



	H mm	L1 mm	L2 mm	g	
201.2325	25,0	285,0	130,0	120	

Steel wire jar brush 0,3 mm

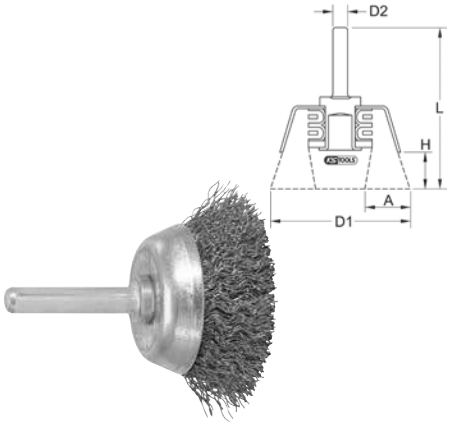
- With 6 mm mandril
- To enable with high rotary speed
- Long durability through compact border
- For use with drill machine
- For surface preparation
- Crimped steel wire



	RPM max	A mm	D1 mm	D2 mm	H mm	L mm	g	
340.0001	4500	10,0	38,0	6,0	20,0	55,0	50	
340.0002	4500	10,0	50,0	6,0	20,0	70,0	60	
340.0003	4500	10,0	63,0	6,0	20,0	88,0	70	
340.0004	4500	15,0	75,0	6,0	25,0	105,0	80	
340.0005	4500	15,0	80,0	6,0	25,0	112,0	90	

Rust free steel jar brush 0,3 mm

- With 6 mm mandril
- To enable with high rotary speed
- Long durability through compact border
- For use with drill machine
- For surface preparation
- Curled and rust free steel wire



	RPM max	A mm	D1 mm	D2 mm	H mm	L mm	g	
340.0011	4500	10,0	38,0	6,0	20,0	55,0	50	
340.0012	4500	10,0	50,0	6,0	20,0	70,0	60	
340.0013	4500	10,0	63,0	6,0	20,0	88,0	70	
340.0014	4500	15,0	75,0	6,0	25,0	105,0	80	
340.0015	4500	15,0	80,0	6,0	25,0	112,0	90	

Steel wire brush 0,3 mm

- With 6 mm mandril
- For use with drill machine
- For difficult to access areas
- For surface preparation
- Crimped steel wire



	RPM max	D1 mm	D2 mm	H mm	L mm	g	
340.0016	20000	17,0	6,0	22,0	65,0	30	
340.0017	18000	23,0	6,0	25,0	68,0	40	
340.0018	18000	30,0	6,0	25,0	68,0	50	

Paint brush steel wire brush 0,5 mm

- With 6 mm mandril
- For use with drill machine
- For difficult to access areas
- For surface preparation
- Crimped steel wire



	RPM max	D1 mm	D2 mm	H mm	L mm	g	
340.0019	20000	17,0	6,0	22,0	65,0	30	
340.0020	18000	23,0	6,0	25,0	68,0	40	
340.0021	18000	30,0	6,0	25,0	68,0	40	

Steel wire jar brush 0,5 mm

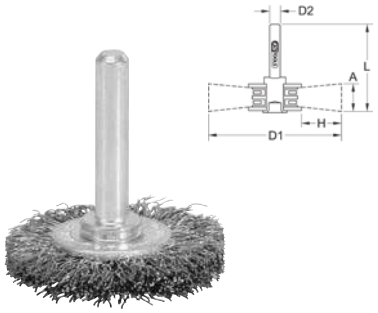
- Braided design
- With thread arbor
- For use in one hand angle grinder
- Ideal for heavy brush works
- For surface preparation
- Crimped steel wire



	RPM max	mm	D mm	H mm	L mm	No. plaits	g
340.0022	12500	M14 x 2,0	65,0	20,0	55,0	18	160
340.0023	11500	M14 x 2,0	80,0	22,0	68,0	20	200
340.0024	11500	M14 x 2,0	90,0	22,0	77,0	20	240

Rust free steel wire brush disc 0,3 mm

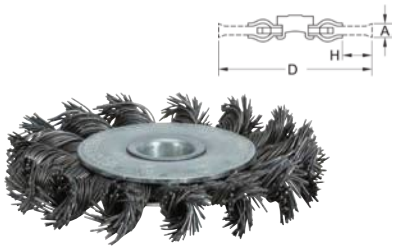
- With 6 mm mandril
- Especially longlife industry version
- For use with drill machine
- For surface preparation
- Curled and rust free steel wire



	RPM max	A mm	D1 mm	D2 mm	H mm	L mm	g
340.0033	20000	9,0	30,0	6,0	6,0	45,0	40
340.0034	15000	14,0	50,0	6,0	12,0	45,0	40
340.0035	15000	14,0	60,0	6,0	17,0	45,0	60
340.0036	15000	16,0	70,0	6,0	19,0	45,0	80
340.0037	15000	18,0	80,0	6,0	20,0	45,0	100

Steel wire circular brush 0,5 mm

- Braided design
- With 22,2 mm bore reception
- Longlife industry version
- For use in one hand angle grinder
- For removing of rubber, grate and lacquer residue
- For surface preparation
- Smooth steel wire



	RPM max	A mm	D mm	H mm	No. plaits	g
340.0040	12500	11,0	75,0	16,0	15	90
340.0041	12500	11,0	100,0	20,5	18	120
340.0042	12500	11,0	115,0	23,5	20	140
340.0043	12500	11,0	125,0	24,5	22	150

Rust free stainless steel wire jar brush 0,5 mm

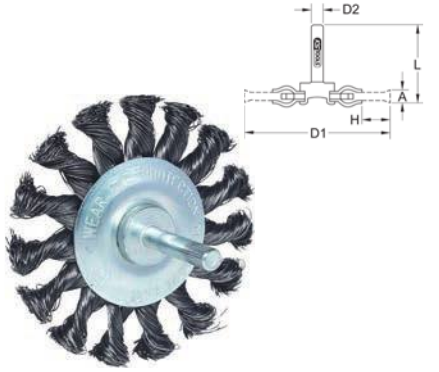
- Braided design
- With thread arbor
- For use in one hand angle grinder
- Ideal for heavy brush works
- For surface preparation
- Curled and rust free steel wire



	RPM max	mm	D mm	H mm	L mm	No. plaits	g
340.0025	12500	M14 x 2,0	65,0	20,0	55,0	18	160
340.0026	11500	M14 x 2,0	80,0	22,0	68,0	20	200
340.0027	11500	M14 x 2,0	90,0	22,0	77,0	20	240

Steel wire circular brush 0,3 mm

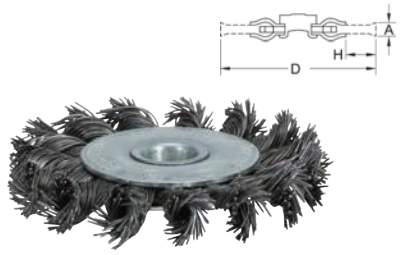
- Braided design
- With 6 mm mandril
- Especially longlife industry version
- For use with drill machine
- For removing of underbody coating
- For surface preparation
- Smooth steel wire



	RPM max	A mm	D1 mm	D2 mm	H mm	L mm	g
340.0038	15000	12,0	75,0	6,0	15,0	43,0	100

Stainless steel and brushed steel 0,5 mm

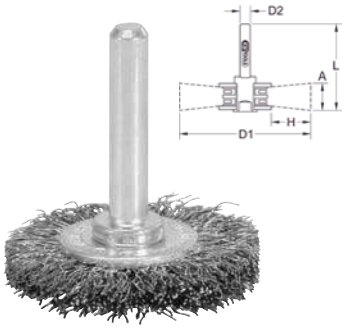
- Braided design
- With 22,2 mm bore reception
- Longlife industry version
- For use in one hand angle grinder
- For removing of rubber, grate and lacquer residue
- For surface preparation
- Flat and grate free steel wire



	RPM max	A mm	D mm	H mm	No. plaits	g
340.0044	12500	11,0	75,0	16,0	15	90
340.0045	12500	11,0	100,0	20,5	18	120
340.0046	12500	11,0	115,0	23,5	20	140
340.0047	12500	11,0	125,0	24,5	22	150

Steel wire brush disc 0,3 mm

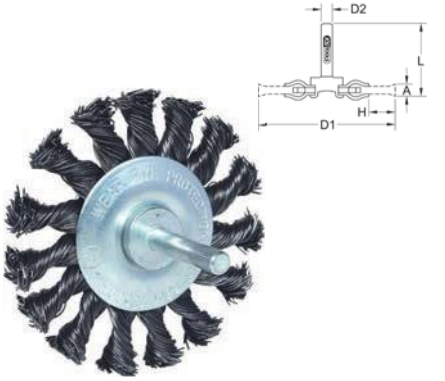
- With 6 mm mandril
- Especially longlife industry version
- For use with drill machine
- For surface preparation
- Crimped steel wire



	RPM max	A mm	D1 mm	D2 mm	H mm	L mm	g
340.0028	20000	9,0	30,0	6,0	6,0	45,0	40
340.0029	15000	14,0	50,0	6,0	12,0	45,0	40
340.0030	15000	14,0	60,0	6,0	17,0	45,0	60
340.0031	15000	16,0	70,0	6,0	19,0	45,0	80
340.0032	15000	18,0	80,0	6,0	20,0	45,0	100

Steel wire circular brush 0,5 mm

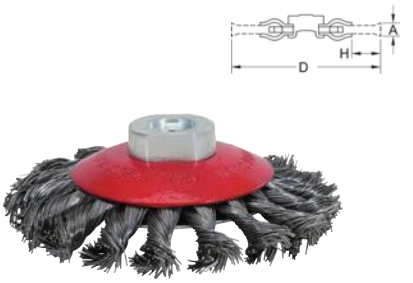
- Braided design
- With 6 mm mandril
- Especially longlife industry version
- For use in with drill machine
- For removing of underbody coating
- For surface preparation
- Smooth steel wire



	RPM max	A mm	D1 mm	D2 mm	H mm	L mm	g
340.0039	15000	12,0	75,0	6,0	15,0	43,0	100

Cone design steel wire circular brush 0,5 mm

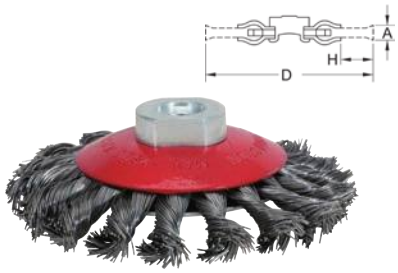
- Braided design
- With thread arbor
- Especially longlife industry version
- For use in one hand angle grinder
- For hard to reach places
- For surface preparation
- Smooth steel wire



	RPM max	mm	A mm	D mm	H mm	No. plaits	g
340.0048	12500	M 14 x 2,0	12,0	100,0	20,0	18	190
340.0049	15000	M 14 x 2,0	12,0	115,0	24,0	20	210

Rust free cone design steel wire circular brush 0,5 mm

- Braided design
- With thread arbor
- Especially longlife industry version
- For use in one hand angle grinder
- For hard to reach places
- For surface preparation
- Flat and grate free steel wire



	RPM max	mm	A mm	D mm	H mm	No. plaits	g	
340.0050	12500	M 14 x 2,0	12,0	100,0	20,0	18	190	
340.0051	15000	M 14 x 2,0	12,0	115,0	24,0	20	210	

STEERING WHEEL AND FITTING

Universal steering wheel puller 2 arm for passenger cars

- Suitable for quick, clean and damage-free removal of the steering wheel
- Short and long hooks as well as pressure piece for spindle
- Suitable for universal use due to longitudinal grooves in the puller bridge
- Extremely robust spindle with inductively hardened thread
- Special tool steel



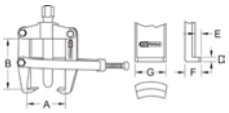
	A mm	B mm	max t	mm	g	E mm	F mm	G mm		
670.0201	90	135	2,5	M14x1,5 x 130	17	3,5	11	7,5		900



Universal 2 arm puller set with clamping yoke

- Shearing action increases the pressing power when removing
- Clamping yoke compresses the legs firmly
- Prevents slipping
- Extremely robust spindle with inductively hardened thread
- Special tool steel







	A mm	B mm	max t	mm	g	D mm	E mm	F mm	G mm	kg	
620.5401	80	90	5	M18 x 1,5 x 130		19	3	12	26	24	1,70

Steering wheel distance sleeve puller for Volkswagen

- Suitable for quick, clean and damage-free removal of the adapter sleeve on the steering arm
- External drive hexagonal socket 17.0 mm
- Extremely robust spindle with inductively hardened thread
- Special tool steel

Application range: Volkswagen Golf 2, Golf 3, Golf 4, Jetta, Passat > 1988





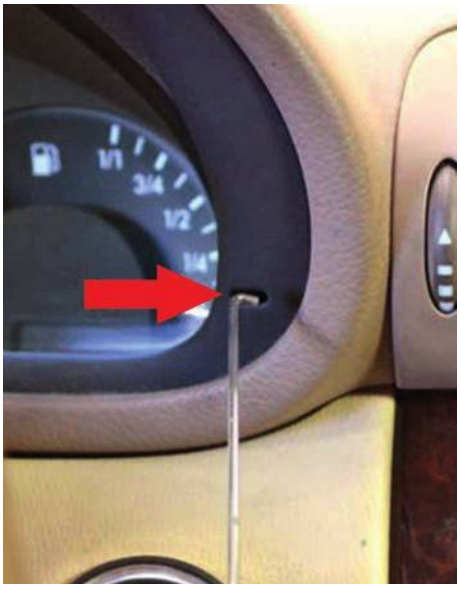
	Length mm	g	
450.0303	180,0	720	

Steering wheel distance sleeve mandrel

- Suitable in order to strike the adapter sleeve damage-free on the steering column
- Brass



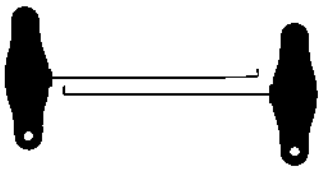
	Length mm	Ø mm	g	
450.0304	150,0	30,0	720	



Draw hook set for instrument clusters and headrests

- ideally suited to pull out the instrument cluster and remove the headrest guide sleeves from the seat
- without this tool it is impossible to remove the instrument cluster or the guide sleeves without damage
- specially bent
- One component handle
- With hanging hole





			g	
140.2380	2 pcs	Draw hook set for instrument clusters and headrests	112	

consists of:

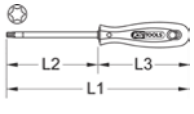
	x		g	
140.2381	2	Pull hook for headrests, 172 mm	56	

Steering column shroud screwdriver for Torx screws

- Suitable for assembly and disassembly of steering column shroud
- Two component handle
- Optimal power transmission
- Hardened blade
- Chrome finish with burnished tips
- Blade made of chrome vanadium

Application range: Audi A4 (8E), A6 (4F)







		L1 mm	L2 mm	L3 mm	g	
911.1661	T8	350,0	250,0	100,0	80	



VENTILATION

Special blower motor tool with centring pin for Volvo

- for mounting and dismounting the blower motor
- without this tool it is impossible to remove and install the blower motor without damage
- Saves time
- High accuracy of fit
- Matt finish
- Chrome vanadium

Application range: Volvo S60, S60 Cross Country, S60L, S80, S80L, V60, V60 Cross Country, V70, XC60, XC70, **Land Rover** Freelander 2, **Range Rover** Evoque



		kg	
140.2605	Special blower motor tool with centring pin for Volvo	0,82	

AIRBAG

Special airbag bit socket for hexagon screws

- For the dismantling and assembly of airbag units
- Optimal access to the airbag unit screws
- Hexagon socket
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Bit socket in custom lengths
- with press-fitted nickel-plated bit
- For manual operation
- Matt finish
- Chrome vanadium





1/4"

	mm	Length mm	g	
140.2303	5	85,0	30	

Special airbag bit socket for Torx screws

- For the dismantling and assembly of airbag units
- Optimal access to the airbag unit screws
- Torx
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Bit socket in custom lengths
- with press-fitted nickel-plated bit
- For manual operation
- Matt finish
- Chrome vanadium





1/4"

		Length mm	g	
140.2305	T25	85,0	30	

Special airbag bit socket for Torx screws with bore hole

- For the dismantling and assembly of airbag units
- Optimal access to the airbag unit screws
- Torx tamperproof
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Bit socket in custom lengths
- with press-fitted nickel-plated bit
- For manual operation
- Matt finish
- Chrome vanadium





1/4"

		Length mm	g	
140.2304	TB25	85,0	30	

Special airbag bit socket for Torx screws

- For the dismantling and assembly of airbag units
- Optimal access to the airbag unit screws
- Torx
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Bit socket in custom lengths
- with press-fitted nickel-plated bit
- For manual operation
- Matt finish
- Chrome vanadium





1/4"

		Length mm	g	
140.2307	T27	85,0	30	

Special airbag bit socket for Torx screws with bore hole

- For the dismantling and assembly of airbag units
- Optimal access to the airbag unit screws
- Torx tamperproof
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Bit socket in custom lengths
- with press-fitted nickel-plated bit
- For manual operation
- Matt finish
- Chrome vanadium

Application range: Audi A4 > 2004 etc.





1/4"

		Length mm	g	
140.2308	TB27	85,0	30	

Special airbag bit socket for Torx screws

- For the dismantling and assembly of airbag units
- Optimal access to the airbag unit screws
- Torx
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Bit socket in custom lengths
- with press-fitted nickel-plated bit
- For manual operation
- Matt finish
- Chrome vanadium





1/4"

		Length mm	g	
140.2302	T30	85,0	30	

Special airbag bit socket for Torx screws with bore hole

- For the dismantling and assembly of airbag units
- Optimal access to the airbag unit screws
- Torx tamperproof
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Bit socket in custom lengths
- with press-fitted nickel-plated bit
- For manual operation
- Matt finish
- Chrome vanadium





1/4"

		Length mm	g	
140.2301	TB30	85,0	30	

Special airbag bit socket set

- For the dismantling and assembly of airbag units
- Optimal access to the airbag unit screws
- Internal hexagon, Torx with and without tamperproof borehole
- Range for the assembly and disassembly of the airbag unit
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Bit socket in custom lengths
- with press-fitted nickel-plated bit
- For manual operation
- Matt finish
- Chrome vanadium





1/4"

			g
140.2300	5 pcs	Special airbag bit socket set	200

consists of:

		g
140.2301	1/4" Airbag bit socket, TB 30	30
140.2302	1/4" Airbag bit socket, T30	30
140.2303	1/4" Airbag bit socket, hex 5mm	30
140.2304	1/4" Airbag bit socket, TB 25	30
140.2305	1/4" Airbag bit socket, T25	30

Special airbag unlocking tool

- Suitable for disassembling the airbag unit
- Optimal access to the airbag unit
- For manual operation
- One component handle
- Special tool steel

Application range: Opel Insignia, Astra J etc.



	Length mm	g
140.2318	185,0	40

Special airbag unlocking tool

- Suitable for disassembling the airbag unit
- Optimal access to the airbag unit
- For manual operation
- One component handle
- Special tool steel



		g
140.2317	Special airbag unlocking tool	30

Special airbag key

- Suitable for disassembling the airbag unit
- Optimal access to the airbag unit
- For manual operation
- Contains 2 pieces as standard
- One component handle
- Special tool steel

Application range: Audi A4, A6, **Volkswagen** Passat, Polo, Lupo etc.



		g
140.2313	Special airbag key	100

Special airbag key

- Suitable for disassembling the airbag unit
- Optimal access to the airbag unit
- For manual operation
- Contains 2 pieces as standard
- One component handle
- Special tool steel

Application range: Seat, **Škoda** Fabia, Octavia, **Volkswagen** Golf 4, New Beetle etc.



		g
140.2311	Special airbag key	70

Special airbag unlocking tool

- Suitable for disassembling the airbag unit
- Optimal access to the airbag unit
- For manual operation
- With hanging hole
- Special tool steel

Application range: Volkswagen, Golf 4, Bora, Passat etc.



		g
140.2315	Special airbag unlocking tool	30



Special airbag removal lever

- Suitable for disassembling the airbag unit
- Optimal access to the airbag unit
- For manual operation
- Special tool steel

Application range: Volkswagen



	Width mm	Length mm	g
140.2316	5,5 + 8,0	105,0 + 96,0	50

Airbag dismantling tool set

- For the dismantling and assembly of airbag units
- Sockets are the ideal length
- Optimal access to the reinforcement screws of the airbag pad
- Universal usage
- In durable plastic storage case





		kg	
140.2310	12 pcs	Airbag dismantling tool set	1,60

consists of:

		g
140.2301	1/4" Airbag bit socket, TB 30	30
140.2302	1/4" Airbag bit socket, T30	30
140.2303	1/4" Airbag bit socket, hex 5mm	30
140.2304	1/4" Airbag bit socket, TB 25	30
140.2305	1/4" Airbag bit socket, T25	30
140.2311	Special airbag key, 2 pcs, Seat, Škoda Fabia, Octavia,Volkswagen Golf 4, New Beetle	70
140.2313	Special airbag key, 2 pcs, Audi A4, A6,Volkswagen Passat, Polo, Lupo	100
140.2315	Special airbag unlocking tool, Golf 4, Passat, Bora	30
140.2316	Special airbag removal lever VW, 105x96mm	50
140.2317	Special airbag unlocking tool, universal	30

LOCKING CYLINDER

Door lock screwdriver

- Spline (XZN®)
- Suitable for the assembly and disassembly of the door lock screws
- Also suitable for the external door handle
- One component handle
- Blade made of chrome vanadium





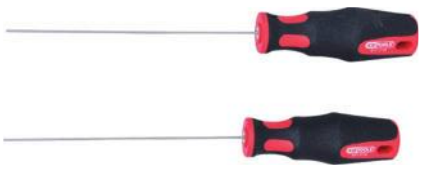
		L1 mm	L2 mm	g	
911.1117	M4	215,0	125,0	50	

Ignition lock removal needle tool for VAG

- Suitable for disassembling the ignition lock
- For unlocking the interior locking bolt
- Two component handle
- Blade made of chrome vanadium

Application range: Audi A3, **Volkswagen** Golf 4, Passat >1997, **Seat** etc.





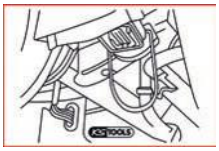
	Ø mm	L1 mm	L2 mm	g	
911.1118	1,4	200,0	120,0	60	



Steering wheel lock spring bracket for Mercedes

- Suitable for disassembling the protective sleeve with ignition starter switch from the steering wheel lock
- Locating bolts in the steering lock part must be pressed in with the spring clamps
- Contains 2 pieces as standard
- Special tool steel

Application range: Mercedes W129, W140, W210 and W202 with FBS2 ignition lock





	Length mm	Width mm	g	
500.1310	150,0	105,0	10	

Rear lock disassembly needle tool for Mercedes

- Suitable for the quick removal of the locking cylinder on the rear lock
- Contains 2 pieces as standard
- Special tool steel

Application range: Mercedes W203 rear lock

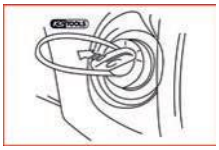


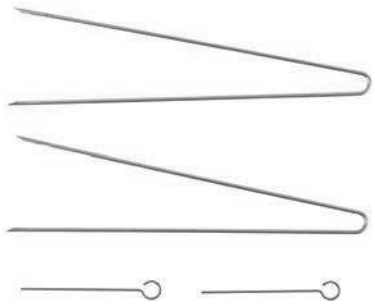
	Length mm	g	
500.1311	110,0	10	

Ignition Lock Disassembly Needle Tool Set for Mercedes

- Ideal for fast disassembly of the ignition
- Easy removal
- Special tool steel

Application range: Mercedes W116, W123, W124, W126, W201





			g	
500.1315	4 pcs	Ignition Lock Disassembly Needle Tool Set for Mercedes	25	

consists of:

		g	
500.1383	Mercedes ignition removal needle tool Ø 1.25 mm, 2 pcs.	9	
500.1384	Mercedes ignition removal needle tool Ø 2.0 mm, 2 pcs.	1	

Ignition key mounting sleeve

- Suitable for the quick release of the ignition lock rosette
- With hanging hole
- Aluminium

Application range: Mercedes W129, W140, W203, W208, W209, W210, W211, W220, W230, W906 with FBS2 and FBS3 ignition lock systems, **Volkswagen** Crafter





	Length mm	g	
500.1312	80,0	55	

Ignition key mounting sleeve

- Suitable for the quick release of the ignition lock rosette
- With rubber mat in the interior
- Special tool steel

Application range: Mercedes W202, W210 until 1997



	Length mm	g	
500.1313	110,0	150	

Locking cylinder assembly sleeve

- Suitable for the quick and exact repair of the door lock
- For inside track closure with internal spring
- Special tool steel

Application range: Seat, **Škoda**, **Volkswagen** Passat, Vento, Beetle, Lupo, Golf 4 (not Cabrio) etc.



	Total length mm	g	
500.1314	65,0	100	

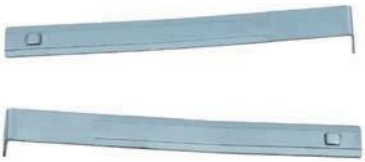
RADIO AND NAVIGATION SYSTEM

Radio and navigation device unlocking tool Panasonic

- Ideal for the assembly and disassembly of car radios and navigation devices
- Professionally and without damage
- Saves time
- Contains 2 pieces as standard

Application range: for Panasonic





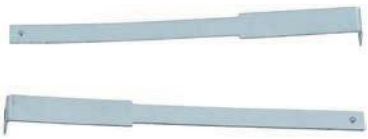
	Length mm	g	
500.1366	100,0	6	

Radio and navigation device unlocking tool Kenwood

- Ideal for the assembly and disassembly of car radios and navigation devices
- Professionally and without damage
- Saves time
- Contains 2 pieces as standard

Application range: for Kenwood > 1998





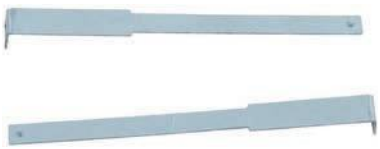
	Length mm	g	
500.1367	110,0	4	

Radio and navigation device unlocking tool Panasonic

- Ideal for the assembly and disassembly of car radios and navigation devices
- Professionally and without damage
- Saves time
- Contains 2 pieces as standard

Application range: for Panasonic





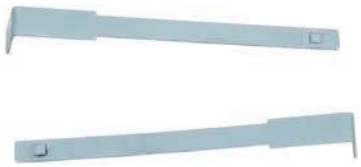
	Length mm	g	
500.1368	105,0	5	

Radio and navigation system unlocking tool Pioneer and JVC

- Ideal for the assembly and disassembly of car radios and navigation devices
- Professionally and without damage
- Saves time
- Contains 2 pieces as standard

Application range: for Pioneer and JVC





	Length mm	g	
500.1369	95,0	6	

Radio installation and removal set

- Ideal for the assembly and disassembly of car radios and navigation devices
- Professionally and without damage
- Saves time
- Contains 2 pieces as standard

Application range: for Blaupunkt, Grundig, **Volkswagen**, **Audi**, **Ford**





	Length mm	g	
500.1371	96,0	22	

Radio installation and removal set

- Ideal for the assembly and disassembly of car radios and navigation devices
- Professionally and without damage
- Saves time
- Contains 1 pieces as standard

Application range: for **BMW**





	Length mm	g	
500.1372	85,0	20	

Radio installation and removal set

- Ideal for the assembly and disassembly of car radios and navigation devices
- Professionally and without damage
- Saves time
- Contains 4 pieces as standard

Application range: for **Audi**, **Volkswagen**, Becker, **Mercedes**





	Length mm	g	
500.1373	78,0	15	

Radio installation and removal set

- Ideal for the assembly and disassembly of car radios and navigation devices
- Professionally and without damage
- Saves time
- Contains 2 pieces as standard

Application range: for Becker, **Porsche**, **Mercedes**





	Length mm	g	
500.1374	68,0	6	

Radio installation and removal set

- Ideal for the assembly and disassembly of car radios and navigation devices
- Professionally and without damage
- Saves time
- Contains 2 pieces as standard

Application range: for **Volkswagen**





	Length mm	g	
500.1375	61,0	6	

Radio installation and removal set

- Ideal for the assembly and disassembly of car radios and navigation devices
- Professionally and without damage
- Saves time
- Contains 1 pieces as standard

Application range: for **BMW** and **Opel**



	Length mm	g	
500.1376	52,0	2	

Radio installation and removal set

- Ideal for the assembly and disassembly of car radios and navigation devices
- Professionally and without damage
- Saves time
- Contains 2 pieces as standard

Application range: for Becker > 2002



	Length mm	g	
500.1377	89,0	11	

Radio installation and removal set

- Ideal for the assembly and disassembly of car radios and navigation devices
- Professionally and without damage
- Saves time
- Contains 2 pieces as standard

Application range: for **Škoda** > 2002



	Length mm	g	
500.1378	65,0	7	

Radio installation and removal set

- Ideal for the assembly and disassembly of car radios and navigation devices
- Professionally and without damage
- Saves time
- Contains 2 pieces as standard

Application range: for Blaupunkt > 2002



	Length mm	g	
500.1379	97,0	24	

Radio and navigation device unlocking tool Opel

- Ideal for the assembly and disassembly of car radios and navigation devices
- Professionally and without damage
- Saves time
- Contains 2 pieces as standard

Application range: for **Opel** double ball hexagon socket

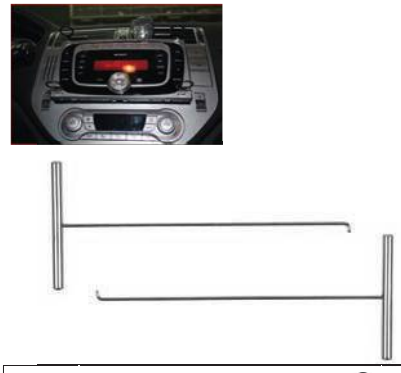


	Length mm	g	
500.1381	90,0	15	

Radio and navigation system unlocking tool Mercedes and BMW

- Ideal for the assembly and disassembly of car radios and navigation devices
- Professionally and without damage
- Saves time
- Contains 2 pieces as standard

Application range: for **Mercedes** and **BMW**

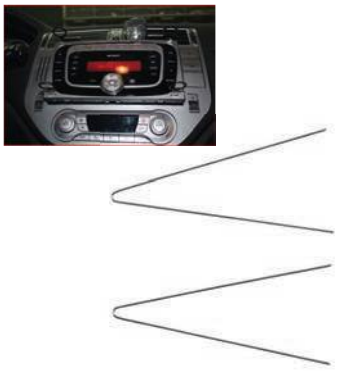


	Length mm	g	
500.1382	165,0	21	

Mercedes ignition demounting needle tool Ø 1.25 mm

- Ideal for the assembly and disassembly of car radios and navigation devices
- Professionally and without damage
- Saves time
- Contains 2 pieces as standard

Application range: for **Mercedes** and **BMW**



	Length mm	g	
500.1383	180,0	9	

Mercedes ignition removal needle tool Ø 2.0 mm

- Ideal for the assembly and disassembly of car radios and navigation devices
- Professionally and without damage
- Saves time
- Contains 2 pieces as standard

Application range: for **Mercedes** and **BMW**



	Length mm	g	
500.1384	65,0	1	

Radio and navigation device unlocking tool Clarion

- Ideal for the assembly and disassembly of car radios and navigation devices
- Professionally and without damage
- Saves time
- Contains 2 pieces as standard

Application range: for Clarion new



	Length mm	g	
500.1385	115,0	11	

Radio and navigation device unlocking tool Kenwood

- Ideal for the assembly and disassembly of car radios and navigation devices
- Professionally and without damage
- Saves time
- Contains 2 pieces as standard

Application range: for Kenwood



	Length mm	g	
500.1386	110,0	9	

Radio and navigation device unlocking tool Clarion

- Ideal for the assembly and disassembly of car radios and navigation devices
- Professionally and without damage
- Saves time
- Contains 2 pieces as standard

Application range: for Clarion old



	Length mm	g	
500.1387	115,0	28	

Radio and navigation device unlocking tool Kenwood

- Ideal for the assembly and disassembly of car radios and navigation devices
- Professionally and without damage
- Saves time
- Contains 2 pieces as standard

Application range: for Kenwood III > 2002



	Length mm	g	
500.1388	120,0	7	

Radio and navigation device unlocking tool Sony

- Ideal for the assembly and disassembly of car radios and navigation devices
- Professionally and without damage
- Saves time
- Contains 2 pieces as standard

Application range: for Sony II > 2002



	Length mm	g	
500.1389	97,0	7	

Radio and navigation device unlocking tool Kenwood

- Ideal for the assembly and disassembly of car radios and navigation devices
- Professionally and without damage
- Saves time
- Contains 2 pieces as standard

Application range: for Kenwood II 1998-2001



	Length mm	g	
500.1396	120,0	7	

Radio and navigation device unlocking tool Sony

- Ideal for the assembly and disassembly of car radios and navigation devices
- Professionally and without damage
- Saves time
- Contains 2 pieces as standard

Application range: for Sony I > 2005



	Length mm	g	
500.1397	115,0	7	

Radio and navigation device unlocking tool Sony

- Ideal for the assembly and disassembly of car radios and navigation devices
- Professionally and without damage
- Saves time
- Contains 2 pieces as standard

Application range: for Sony I > 2001

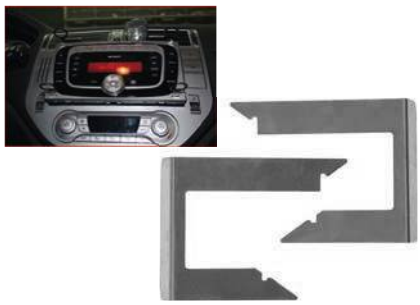


	Length mm	g	
500.1398	54,0	4	

Radio and navigation device unlocking tool Fiat

- Ideal for the assembly and disassembly of car radios and navigation devices
- Professionally and without damage
- Saves time
- Contains 2 pieces as standard

Application range: for **Fiat** Brava



	Length mm	g	
500.1399	74,0	10	

Radio installation and removal set

- Ideal for the assembly and disassembly of car radios and navigation devices
- For loosening the locking devices
- Range for various unlocking systems
- In plastic storage pouch



			g	
500.1370	18 pcs	Radio installation and removal set	160	

consists of:

		g	
500.1371	Radio and navigation device unlocking tool, 2 pcs, Blaupunkt	22	
500.1372	Radio and navigation device unlocking tool, BMW	20	
500.1373	Radio and navigation device unlocking tool, 4 pcs	15	
500.1374	Radio and navigation device unlocking tool, 2 pcs, Becker	6	
500.1375	Radio and navigation device unlocking tool, VW, 2 pcs	6	
500.1376	Radio and navigation device unlocking tool, BMW, Opel	2	
500.1377	Radio and navigation device unlocking tool Becker, 2 pcs	11	
500.1378	Radio and navigation device unlocking tool, Škoda, 2 pcs	7	
500.1379	Radio and navigation device unlocking tool,Blaupunkt,2 pcs	24	

Radio and navigation system installation and removal set

- Ideal for the assembly and disassembly of car radios and navigation devices
- For loosening the locking devices
- Extensive range for various unlocking systems
- In durable plastic storage case

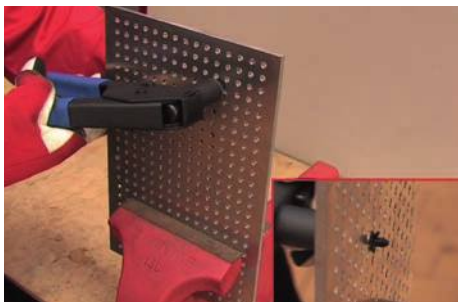




			kg	
500.1380	52 pcs	Radio and navigation system installation and removal set	1,41	

consists of:

		g	
500.1366	Radio and navigation device unlocking tool Panasonic, 2 pcs	6	
500.1367	Radio and navigation device unlocking tool Kenwood, 2 pcs	4	
500.1368	Radio and navigation device unlocking tool Panasonic, 2 pcs	5	
500.1369	Radio and navigation device unlocking tool Pioneer, JVC, 2 pcs	6	
500.1371	Radio and navigation device unlocking tool, 2 pcs, Blaupunkt	22	
500.1372	Radio and navigation device unlocking tool, BMW	20	
500.1373	Radio and navigation device unlocking tool, 4 pcs	15	
500.1374	Radio and navigation device unlocking tool, 2 pcs, Becker	6	
500.1375	Radio and navigation device unlocking tool, VW, 2 pcs	6	
500.1376	Radio and navigation device unlocking tool, BMW, Opel	2	
500.1377	Radio and navigation device unlocking tool Becker, 2 pcs	11	
500.1378	Radio and navigation device unlocking tool, Škoda, 2 pcs	7	
500.1379	Radio and navigation device unlocking tool,Blaupunkt,2 pcs	24	
500.1381	Radio and navigation device unlocking tool Opel, 2 pcs	15	
500.1382	Radio and navigation device unlocking tool, Mercedes, BMW, 2 pcs	21	
500.1383	Mercedes ignition removal needle tool Ø 1.25 mm, 2 pcs	9	
500.1384	Mercedes ignition removal needle tool Ø 2.0 mm, 2 pcs	1	
500.1385	Radio and navigation device unlocking tool Clarion, 2 pcs	11	
500.1386	Radio and navigation device unlocking tool Kenwood, 2 pcs	9	
500.1387	Radio and navigation device unlocking tool Clarion, 2 pcs	28	
500.1388	Radio and navigation device unlocking tool Kenwood III, 2 pcs	7	
500.1389	Radio and navigation device unlocking tool Sony II, 2 pcs	7	
500.1396	Radio and navigation device unlocking tool Kenwood II, 2 pcs	7	
500.1397	Radio and navigation device unlocking tool Sony I, 2 pcs	7	
500.1398	Radio and navigation device unlocking tool Sony I, 2 pcs	4	
500.1399	Radio and navigation device unlocking tool Fiat, 2 pcs	10	



CLIP, RIVET AND EXTRACTION TOOLS

Plastic rivet pliers set included rivets

- Suitable for plastic rivets
- Narrow head pliers
- Can be used in hard to access areas
- 90° angled rivet head
- With rubber grip
- Includes 40 plastic rivets
- Die-cast metal body

Plastic rivets: 5.0x15.8 - 5.0x17.2 - 6.3x25.2 - 6.6x17.2 mm





			g	
150.9650	41 pcs	Plastic rivet pliers set included rivets	760	

consists of:

		g	
150.9651	Plastic rivet pliers	580	
150.9652	Replacement rivets pack of 10, 17,2x6,6mm	20	
150.9653	Replacement rivets pack of 10, 25,2x6,3mm	22	
150.9654	Replacement rivets pack of 10, 17,2x5mm	15	
150.9655	Replacement rivets pack of 10, 15,8x5mm	16	

Rivet removal pliers set

- Suited to the dismantling of plastic rivets
- Self opening
- Including angled and straight set up
- Plastic





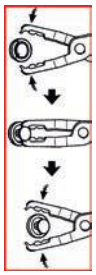
			g	
115.1096	2 pcs	Rivet removal pliers set	40	

consists of:

		g	
115.1097	Rivet pliers, red, angled, 100mm	20	
115.1098	Rivet pliers, blue, straight, 100mm	20	

Trim clip pliers set

- Suited to the dismantling of plastic rivets and plastic clips
- With various profiles
- 35° + 80° angled tips
- Self opening
- Chrome vanadium





			g	
115.1086	2 pcs	Trim clip pliers set	380	

consists of:

		g	
115.1087	Trim clip pliers,35° offset, 190mm	180	
115.1088	Trim clip pliers, 80° offset, 200mm	190	

Clip remover

- For metal and plastic clips
- Durable tool for the removal of door panels
- Easier release lever for the damage-free disassembly of plastic hub caps
- Lever effect due to the angled head on the front end of the lifter
- Robust execution with durable square shaft
- With protective insulation
- Ergonomic single component handle





	Length mm	g	
911.8150	300,0	190	

Clip remover, short

- For metal and plastic clips
- Durable tool for the removal of door panels
- Lever effect due to the angled head on the front end of the lifter
- Rugged design with durable shaft
- With hanging hole
- 15° angled
- Two component handle
- Special tool steel



	Length mm	opening mm	g	
140.2371	245,0	4,0	65	
140.2372	245,0	8,0	65	
140.2373	245,0	10,0	65	

Clip remover, long

- For metal and plastic clips
- Durable tool for the removal of door panels
- Lever effect due to the angled head on the front end of the lifter
- Rugged design with durable shaft
- With hanging hole
- 15° angled
- Two component handle
- Special tool steel



	Length mm	opening mm	g	
140.2374	510,0	4,0	150	
140.2375	510,0	8,0	150	
140.2376	510,0	10,0	150	

Clip removal set

- For metal and plastic clips
- Durable tool for the removal of door panels
- Lever effect due to the angled head on the front end of the lifter
- Rugged design with durable shaft
- With hanging hole
- 15° angled
- Two component handle
- Special tool steel



			kg	
140.2370	6 pcs	Clip removal set	1,00	

consists of:

		g	
140.2371	Clip remover short, length 245 mm, opening 4 mm	65	
140.2372	Clip remover short, length 245 mm, opening 8 mm	65	
140.2373	Clip remover short, length 245 mm, opening 10 mm	65	
140.2374	Clip remover long, length 510 mm, opening 4 mm	150	
140.2375	Clip remover long, length 510 mm, opening 8 mm	150	
140.2376	Clip remover long, length 510 mm, opening 10 mm	150	

Clip remover

- For removing and installing clips
- With varying length ends
- Very flat and robust execution
- Painted surface
- Metal



	L1 mm	L2 mm	L3 mm	g	
140.2249	230,0	100,0	50,0	170	

Clip remover U-form

- For metal and plastic clips
- Durable tool for the removal of door panels
- Lever effect due to the angled head on the front end of the lifter
- Sturdy design
- With PVC dipped handle
- Chrome vanadium





	L mm	opening mm	g	
140.2325	173,0	5,0	120	

Clip removal set

- Special tool for the careful removal of metal and plastic clips and Rubber plugs
- Straight and angled form
- With rubber handle
- Metal



			g	
140.2232	2 pcs	Clip removal set	90	

consists of:

		g	
140.2223	Clip remover angled form	45	
140.2224	Clip remover straight form	45	

Standard clip remover

- With wedge shaped end
- With lifting and wedge function
- Ideal for loosening panels without damage to the paintwork
- Special plastic



	L mm	B mm	g	
911.8125	210,0	20,0	80	

Double clip remover

- With wedge shaped end
- Very robust execution
- With 2 different lever angles at 75° and 30°
- Special plastic



	L mm	B mm	g	
911.8123	200,0	30,0	70	

Clip remover with pulling eye

- With wedge shaped end
- Pulling eye for removal
- With 90° angled side
- Ideal for loosening panels without damage to the paintwork
- Special plastic

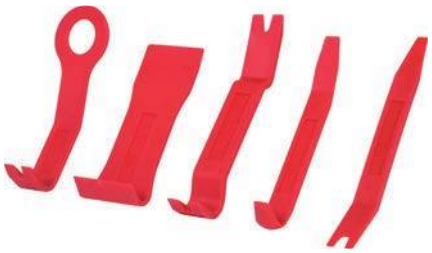


	L mm	B mm	g	
911.8124	180,0	30,0	70	

Plastic lever wedge set

- Ideal for loosening miscellaneous cover parts
- Practical assortment of different wedge and clip removal tools
- Slim and robust design
- Ideal for avoiding paint damage and damage-free release of interior trims, panels etc.
- For delicate work on fragile cover parts
- Special plastic





			g	
911.8120	5 pcs	Plastic lever wedge set	300	

consists of:

		g	
911.8121	Bumper trim removal wedge, 160mm	80	
911.8122	Trim removal wedge, 180mm	40	
911.8123	Double clip remover, 200mm	70	
911.8124	Clip remover with pulling eye, 180mm	70	
911.8125	Standard clip remover, 210mm	80	

Dual clip remover, offset

- Flat shaped back
- Durable design
- With straight- and sharp chisel end
- Ideal for loosening panels without damage to the paintwork
- With hanging hole
- Special plastic





	L mm	B mm	g	
911.8106	200,0	30,0	40	

Dual clip remover, straight profiled

- Flat shaped back
- Durable design due to straight profile
- Blunt chisel end
- Ideal for loosening panels without damage to the paintwork
- With hanging hole
- Special plastic





	L mm	B mm	g
911.8107	200,0	30,0	40

Clip remover U-form, wide offset

- Universal usage
- For removing cover panels trims and protective caps, etc
- Beveled ground blades
- With hanging hole
- Two component handle
- Stainless steel





	Width mm	Depth mm	Total length mm	l= mm	Blade thickness mm	g
911.8193	8,0	20,0	260,0	120,0	2,5	210

Clip remover and cutting set

- Universal use due to different blades
- For removing cover panels trims and protective caps, etc
- Beveled ground blades
- With hanging hole
- Two component handle
- Stainless steel





			kg
911.8190	5 pcs	Clip remover and cutting set	2,00

consists of:

		g
911.8191	Panel lever U-form, narrow, 230mm	120
911.8192	Cutting blade V-form, 230mm	120
911.8193	Panel lever U-form, wide offset, 230mm	210
911.8194	Panel lever U-form, wide angled, 230mm	150
911.8195	Panel lever hook Y-form, 230mm	150

Clip remover U-form, narrow angled

- Universal usage
- For removing cover panels trims and protective caps, etc
- Beveled ground blades
- With hanging hole
- Two component handle
- Stainless steel





	Width mm	Depth mm	Total length mm	l= mm	Blade thickness mm	g
911.8191	6,0	13,0	230,0	95,0	2,5	120

Clip remover U-form, wide angled

- Universal usage
- For removing cover panels trims and protective caps, etc
- Beveled ground blades
- With hanging hole
- Two component handle
- Stainless steel



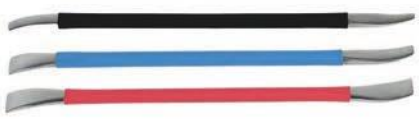


	Width mm	Depth mm	Total length mm	l= mm	Blade thickness mm	g
911.8194	16,0	20,0	230,0	95,0	2,5	150

Precision lever tool set

- Ideal for the protective and damage-free loosening of cover parts, trims, etc.
- Practical assortment of different lever variants
- Slim and robust design
- For delicate work on fragile cover parts
- With soft handles
- Stainless steel





			g
911.8225	3 pcs	Precision lever tool set	113

consists of:

		g
911.8226	Lever tool, black, 3.4 x 5.5 mm, length 185 mm	36
911.8227	Lever tool, blue, 7.5 x 10.1 mm, length 185 mm	37
911.8228	Lever tool, red, 10.2 x 12.6 mm, length 185 mm	39

Clip remover V-form

- Universal usage
- For removing cover panels trims and protective caps, etc
- With cutting edge blade
- Bevelled ground cutting edge blade
- With hanging hole
- Two component handle
- Stainless steel





	Width mm	Depth mm	Total length mm	l= mm	Blade thickness mm	g
911.8192	5,0	8,0	230,0	95,0	2,5	120

Clip remover Y-form, double width angled

- Universal usage
- For removing cover panels trims and protective caps, etc
- Beveled ground blades
- With hanging hole
- Two component handle
- Stainless steel





	Width mm	Depth mm	Total length mm	l= mm	Blade thickness mm	g
911.8195	8,0	20,0	230,0	95,0	2,5	150

FASTENING CLIPS FOR ALFA ROMEO

Trim clip

- for Fiat
- for Alfa Romeo
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1208	10	18,5	18,5	8,8	14188282, 60507749, 46306526	10	
420.5208	50	18,5	18,5	8,8	14188282, 60507749, 46306526	51	

FASTENING CLIPS FOR AUDI

Door panel clip

- for Audi
- for Volkswagen
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1010	10	22,0	10,0	10,0	3B0868243, 3B0838243	18	
420.5010	50	22,0	10,0	10,0	3B0868243, 3B0838243	91	

Push-type clip

- for Audi
- for Volkswagen
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1001	10	24,0	15,0	8,3	51481915964, 1H0867199A	18	
420.5001	50	24,0	15,0	8,3	51481915964, 1H0867199A	89	

Car interior lining connection clip

- for Audi
- for Volkswagen
- in polybag



	Content	Head Ø mm	Length mm	OE	g	
420.1002	10	28,3	31,3	1H0868243B, 1H086243	38	
420.5002	50	28,3	31,3	1H0868243B, 1H086243	192	

Side moulding rubber

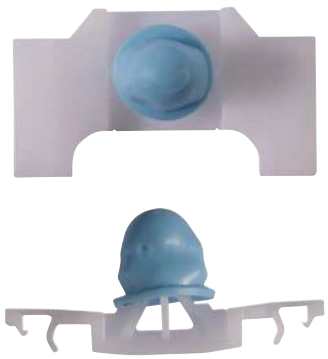
- for Audi
- for Citroën/Peugeot
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1653	10	17,7	21,8	9,3	6991W4, 357853575	13	
420.5653	50	17,7	21,8	9,3	6991W4, 357853575	64	

Connection rubber seal

- for Audi
- for Volkswagen
- for Škoda
- in polybag



	Content	Width mm	OE	g	
420.1003	10	40,2	1H0853585A	31	
420.5003	50	40,2	1H0853585A	157	

Connection rubber seal

- for Audi
- for Volkswagen
- in polybag



	Content	Width mm	OE	g	
420.1004	10	40,2	3A0853575	75	
420.5004	50	40,2	3A0853575	374	

Connection rubber seal

- for Audi
- for Volkswagen
- in polybag



	Content	Head Ø mm	Width mm	Ø mm	OE	g	
420.1005	10	18,0	21,0	11,0	3B0853575	16	
420.5005	50	18,0	21,0	11,0	3B0853575	78	

Fastening clip

- for Audi
- for Volkswagen
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1006	10	16,0	12,0	10,0	3A0853575A, 3A0853575	14	
420.5006	50	16,0	12,0	10,0	3A0853575A, 3A0853575	70	

Plastic fastening clip

- for Audi
- for Volkswagen
- in polybag



	Content	Width mm	Length mm	OE	g	
420.1007	10	25,2	34,8	4A0853825C	26	
420.5007	50	25,2	34,8	4A0853825C	131	

Plastic clip

- for Audi
- for Volkswagen
- in polybag



	Content	Width mm	Length mm	OE	g	
420.1864	10	21,9	34,9	4A0853825A, 4A0853825	23	
420.5864	50	21,9	34,9	4A0853825A, 4A0853825	115	

Extraction hood support

- for Audi
- for Seat
- in polybag



	Content	Head Ø mm	Width mm	Ø mm	OE	g	
420.1008	10	27,6	16,0	7,2	1H0823397	20	
420.5008	50	27,6	16,0	7,2	1H0823397	99	

Push-type clip

- for Audi
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1009	10	23,0	29,0	5,5	1H0819055C01C	18	
420.5009	50	23,0	29,0	5,5	1H0819055C01C	88	

Door strip fastening

- for Audi
- for Volkswagen
- in polybag



	Content	Width mm	Length mm	OE	g	
420.1011	10	8,1	31,0	6U085733	8	
420.5011	50	8,1	31,0	6U085733	38	

Fastening clip

- for Audi
- for Citroën/Peugeot
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1012	10	17,8	17,3	8,0	95667895, 357853575	11	
420.5012	50	17,8	17,3	8,0	95667895, 357853575	54	

Drive-in connection clip

- for Audi
- for Volkswagen
- in polybag



	Content	Rod Ø mm	Ø mm	OE	g	
420.1013	10	4,5	7,5	6N0823397C	17	
420.5013	50	4,5	7,5	6N0823397C	87	

Plastic nut clip

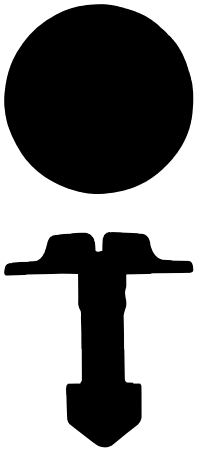
- for Audi
- in polybag



	Content	Head Ø mm	Ø mm	OE	g	
420.1016	10	15,5	7,5	N90821401	9	
420.5016	50	15,5	7,5	N90821401	43	

Motor protection/bumper clip

- for Audi
- for Volkswagen
- in polybag



	Content	Head Ø mm	Length mm	OE	g	
420.1017	10	25,0	27,8	4A0805121C	22	
420.5017	50	25,0	27,8	4A0805121C	112	

Trim clip

- for Audi
- for Škoda
- in polybag



	Content	Head Ø mm	Ø mm	OE	g	
420.1018	10	21,0	10,0	703867299	8	
420.5018	50	21,0	10,0	703867299	39	

Bumper grommet

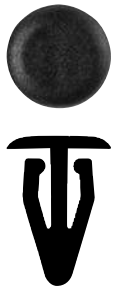
- for Audi
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1019	10	13,0	12,7	8,6	1H0853586	5	
420.5019	50	13,0	12,7	8,6	1H0853586	26	

Boot interior lining clip

- for Audi
- in polybag



	Content	Head Ø mm	Ø mm	OE	g	
420.1020	10	13,8	8,0	80186729901C	8	
420.5020	50	13,8	8,0	80186729901C	40	



Quick-release fastener

- for Audi
- for Volkswagen
- for Seat
- in polybag



	Content	Ø mm	OE	g	
420.1015	10	32,0	N90796501	22	
420.5015	50	32,0	N90796501	112	

UNIVERSAL FASTENING CLIPS ALSO FOR AUDI

Drive-in connection clip

- for Audi
- for Citroën/Peugeot
- for Opel
- for Volkswagen
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1857	10	12,3	17,5	8,4	N0385501, 7814.24	6	
420.5857	50	12,3	17,5	8,4	N0385501, 7814.24	30	

Plastic connection nuts

- for Audi
- for Volkswagen
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1860	10	14,1	10,3	4,5	171201969	8	
420.5860	50	14,1	10,3	4,5	171201969	41	

Connection clip

- for Audi
- for Volkswagen
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1862	10	27,0	30,0	10,0	1H0868243B	40	
420.5862	50	27,0	30,0	10,0	1H0868243B	202	

Screw grommet

- for Audi
- for Volkswagen
- in polybag



	Content	Head Ø mm	Length mm	Screw no	OE	g	
420.1863	10	15,0	12,0	8	N90833801	6	
420.5863	50	15,0	12,0	8	N90833801	32	

Connection clip

- for Audi
- for Volkswagen
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1865	10	22,0	25,0	10,0	3B0853576	25	
420.5865	50	22,0	25,0	10,0	3B0853576	124	

Plastic screw

- for Audi
- for Volkswagen
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1869	10	20,0	15,0	10,0	191941142	7
420.5869	50	20,0	15,0	10,0	191941142	37

Connection clip

- for Audi
- for Renault
- for Opel
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1604	10	18,0	20,0	8,2	2345959, 7L5853994, 7701053516	9
420.5604	50	18,0	20,0	8,2	2345959, 7L5853994, 7701053516	43

Quick-release fastener

- for Audi
- for Citroën/Peugeot
- for Opel
- for Volkswagen
- in polybag



	Content	Ø mm	OE	g
420.1014	10	32,0	N90335006, N90335004	24
420.5014	50	32,0	N90335006, N90335004	119

FASTENING CLIPS FOR BMW

Clamping nut

- for BMW
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1056	10	15,5	14,4	7,0	51311802258	5
420.5056	50	15,5	14,4	7,0	51311802258	24

Connection clip

- for BMW
- for Volvo
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1057	10	18,0	8,0	7,0	51131804205	6
420.5057	50	18,0	8,0	7,0	51131804205	31

Bumper lining clip

- for BMW
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1052	10	20,0	17,0	6,3	51118174185	9
420.5052	50	20,0	17,0	6,3	51118174185	43

Push-type connection clip

- for BMW
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1058	10	19,8	9,0	6,6	51481938725	12
420.5058	50	19,8	9,0	6,6	51481938725	62

Car interior lining clip

- for BMW
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1053	10	18,0	14,0	9,0	823867299, 703867299	8
420.5053	50	18,0	14,0	9,0	823867299, 703867299	39

Push-type connection clip

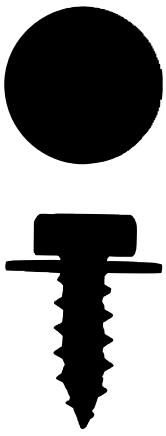
- for BMW
- in polybag



	Content	Width mm	Length mm	OE	g
420.1059	10	22,0	35,0	51131960054	23
420.5059	50	22,0	35,0	51131960054	113

Metal screw/washer

- for BMW
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1908	10	20,9	17,3	9,4	07147129160	55
420.5908	50	20,9	17,3	9,4	07147129160	275

Plastic fastening clip

- for BMW
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1054	10	16,0	11,0	4,4	16131176747	12	
420.5054	50	16,0	11,0	4,4	16131176747	58	

Drive-in rivet

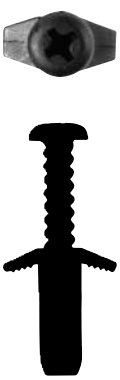
- for BMW
- for Mercedes
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1060	10	20,0	15,0	8,0	2019900292, 81471911992, 30820141	15	
420.5060	50	20,0	15,0	8,0	2019900292, 81471911992, 30820141	75	

Screw-in rivets

- for BMW
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1067	10	15,0	7,0	7,0	51131885399	4	
420.5067	50	15,0	7,0	7,0	51131885399	20	

Plastic rivet for glove compartment

- for BMW
- for Citroën/Peugeot
- for Volkswagen
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1061	10	10,0	12,0	6,0	51161881149, N10259301, 7703072116	5	
420.5061	50	10,0	12,0	6,0	51161881149, N10259301, 7703072116	24	

Door trim clip

- for BMW
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1062	10	18,0	14,0	8,2	51411973500	12	
420.5062	50	18,0	14,0	8,2	51411973500	59	

Door trim clip

- for BMW
- in polybag

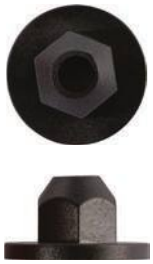


	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1064	10	18,0	14,0	8,2	51418224768	12	
420.5064	50	18,0	14,0	8,2	51418224768	59	



Plastic fastening clip

- for BMW
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1055	10	18,4	11,0	4,5	51711958025	11	
420.5055	50	18,4	11,0	4,5	51711958025	54	

Blind rivet connection clip

- for BMW
- in polybag



	Content	Length mm	Ø mm	OE	g	
420.1051	10	51,0	6,0	51717002953	16	
420.5051	50	51,0	6,0	51717002953	80	

Bumper/door skills clip

- for BMW
- in polybag



	Content	Head Ø mm	OE	g	
420.1065	10	24,0	7131480419	30	
420.5065	50	24,0	7131480419	148	

Bumper clip

- for BMW
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1063	10	20,0	15,0	10,0	7887508000	16
420.5063	50	20,0	15,0	10,0	7887508000	79

Carpeting fastening clip

- for BMW
- in polybag



	Content	Head Ø mm	Length mm	OE	g
420.1066	10	18,5	25,0	82119410191	20
420.5066	50	18,5	25,0	82119410191	99

Fastening clip

- for BMW
- in polybag



	Content	Head Ø mm	Ø mm	OE	g
420.1068	10	13,3	6,3	51471840961	4
420.5068	50	13,3	6,3	51471840961	19

Fastening clip

- for BMW
- in polybag



	Content	Head Ø mm	Ø mm	OE	g
420.1069	10	19,1	11,2	51418172050	8
420.5069	50	19,1	11,2	51418172050	38

UNIVERSAL FASTENING CLIPS ALSO FOR BMW

Metal screw/washer

- for BMW
- for Mercedes
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1464	10	10,8	18,8	6,3	N914031006203, 07119916946	81
420.5464	50	10,8	18,8	6,3	N914031006203, 07119916946	404

Cable harness connection clip

- for BMW
- for Opel
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1373	10	18,0	27,6	7,6	10124502	9
420.5373	50	18,0	27,6	7,6	10124502	43

Cable harness fastening

- for BMW
- for Opel
- for Volkswagen
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1856	10	20,3	20,2	9,1	2207713, N9020160H, 514719044317	13
420.5856	50	20,3	20,2	9,1	2207713, N9020160H, 514719044317	63

Wheel housing clip

- for BMW
- in polybag

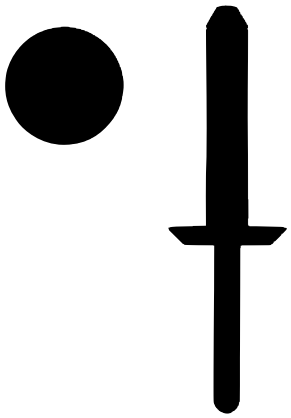


	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1871	10	20,9	17,3	9,4	07132757821	13
420.5871	50	20,9	17,3	9,4	07132757821	66

FASTENING CLIPS FOR CHRYSLER

Plastic rivet

- for Ford
- for Chrysler
- in polybag



	Content	Length mm	Ø mm	OE	g
420.1276	10	54,0	6,3	N804675S, 6503860	19
420.5276	50	54,0	6,3	N804675S, 6503860	96

Bonnet stripped insulation fastening

- for Mitsubishi
- for Chrysler
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1504	10	26,0	8,0	10,0	MB020923	9
420.5504	50	26,0	8,0	10,0	MB020923	45

Blind rivet connection clip

- for Chrysler
- in polybag



	Content	Length mm	Ø mm	OE	g
420.1104	10	52,0	5,9	25524005	15
420.5104	50	52,0	5,9	25524005	76

Engine bonnet sealing clip

- for Chrysler
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1105	10	29,3	12,8	8,7	4878883AA	10
420.5105	50	29,3	12,8	8,7	4878883AA	48

Cable harness fastening

- for Chrysler
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1901	10	24,4	18,0	7,8	6003423	11
420.5901	50	24,4	18,0	7,8	6003423	53

Door-panel clip

- for Chrysler
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1101	10	19,2	18,6	7,8	6033862	9
420.5101	50	19,2	18,6	7,8	6033862	46

Blind rivet connection clip

- for Chrysler
- in polybag



	Content	Length mm	Ø mm	OE	g
420.1103	10	51,8	5,1	6500898	9
420.5103	50	51,8	5,1	6500898	47

Door and window rubber clip

- for Opel
- for Chrysler
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1102	10	10,0	11,7	6,0	6502328, 20699808	3
420.5102	50	10,0	11,7	6,0	6502328, 20699808	13

Boot interior lining clip

- for Citroën/Peugeot
- for Chrysler
- in polybag



	Content	Head Ø mm	Ø mm	OE	g
420.1661	10	20,0	8,0	856553, 856548	7
420.5661	50	20,0	8,0	856553, 856548	33

Engine bonnet clip

- for Citroën/Peugeot
- for Renault
- for Chrysler
- in polybag



	Content	Head Ø mm	Ø mm	OE	g
420.1151	10	19,8	8,6	856553	16
420.5151	50	19,8	8,6	856553	79

Cable harness fastening

- for Ford
- for Volkswagen
- for Chrysler
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1852	10	24,3	18,0	7,9	385661, N989022, 6003349	10
420.5852	50	24,3	18,0	7,9	385661, N989022, 6003349	51

Door strip fastening

- for Opel
- for Volkswagen
- for Chrysler
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1851	10	24,2	18,5	7,7	6003349, N98905101, 9685057	14	
420.5851	50	24,2	18,5	7,7	6003349, N98905101, 9685057	71	

Push-type clip

- for Opel
- for Chrysler
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1301	10	17,3	13,5	6,3	34201621, 14019205	11	
420.5301	50	17,3	13,5	6,3	34201621, 14019205	53	

Blind rivet connection clip

- for Opel
- for Chrysler
- in polybag



	Content	Length mm	Ø mm	OE	g	
420.1304	10	46,0	5,1	6004212, 204655395	7	
420.5304	50	46,0	5,1	6004212, 204655395	34	

Push-type clip

- for Ford
- for Opel
- for Chrysler
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1254	10	17,8	17,5	6,3	10139822, 6508197AA, 1673046	9	
420.5254	50	17,8	17,5	6,3	10139822, 6508197AA, 1673046	46	

Push-type clip

- for Ford
- for Chrysler
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1255	10	15,5	22,8	6,3	6502871, 1007932	10	
420.5255	50	15,5	22,8	6,3	6502871, 1007932	50	

Bumper connection clip

- for Opel
- for Chrysler
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1308	10	21,0	25,0	12,0	6502625, 10140480	22	
420.5308	50	21,0	25,0	12,0	6502625, 10140480	109	

Air baffle connection clip

- for Opel
- for Chrysler
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1311	10	20,0	20,0	8,0	6503598&, 21030249	18	
420.5311	50	20,0	20,0	8,0	6503598&, 21030249	91	

Bonnet stripped insulation fastening

- for Ford
- for Chrysler
- in polybag



	Content	Width mm	Length mm	Ø mm	OE	g	
420.1256	10	12,7	40,0	7,0	6003351, 385330	13	
420.5256	50	12,7	40,0	7,0	6003351, 385330	67	

Car interior lining clip

- for Opel
- for Chrysler
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1315	10	14,5	17,5	9,0	4005099, 796255, 6033862	11	
420.5315	50	14,5	17,5	9,0	4005099, 796255, 6033862	53	

Tail light connection clip

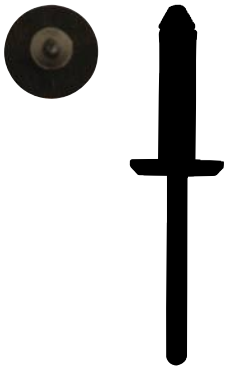
- for Ford
- for Opel
- for Chrysler
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1316	10	7,0	12,1	4,7	6500787, 16500308	4	
420.5316	50	7,0	12,1	4,7	6500787, 16500308	19	

Plastic rivet

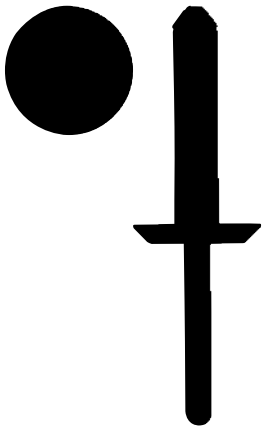
- for Volkswagen
- for Chrysler
- in polybag



	Content	Length mm	Ø mm	OE	g	
420.1870	10	47,7	5,1	6503800, 1758535570C	9	
420.5870	50	47,7	5,1	6503800, 1758535570C	46	

Plastic rivet

- for Ford
- for Opel
- for Chrysler
- in polybag



	Content	Length mm	Ø mm	OE	g	
420.1275	10	55,5	6,3	14063981, N8030433, 6500911	18	
420.5275	50	55,5	6,3	14063981, N8030433, 6500911	88	

FASTENING CLIPS FOR CITROËN/PEUGEOT

Push-type clip

- for Citroën/Peugeot
- for Mercedes
- for Volvo
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1651	10	10,0	7,0	5,0	790307216, A0009903492, 947098	3	
420.5651	50	10,0	7,0	5,0	790307216, A0009903492, 947098	15	

Car interior lining clip

- for Citroën/Peugeot
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1652	10	18,0	13,0	9,5	856535	8	
420.5652	50	18,0	13,0	9,5	856535	42	

Side moulding rubber

- for Audi
- for Citroën/Peugeot
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1653	10	17,7	21,8	9,3	6991W4, 357853575	13	
420.5653	50	17,7	21,8	9,3	6991W4, 357853575	64	

Connection clip

- for Citroën/Peugeot
- in polybag



	Content	Head Ø mm	Length mm	g	
420.1655	10	18,0	25,2	13	
420.5655	50	18,0	25,2	67	

Connection clip

- for Citroën/Peugeot
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1656	10	18,0	16,5	9,3	694143	8	
420.5656	50	18,0	16,5	9,3	694143	40	

Connection clip

- for Citroën/Peugeot
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1657	10	20,6	24,0	7,0	743707	8	
420.5657	50	20,6	24,0	7,0	743707	42	



Plastic clamping nuts

- for Citroën/Peugeot
- for Mercedes
- for Renault
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1452	10	16,3	16,7	8,7	A108980027, 7703074022	5	
420.5452	50	16,3	16,7	8,7	A108980027, 7703074022	26	

Insert connection clip

- for Citroën/Peugeot
- for Fiat
- for Renault
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1701	10	16,8	11,0	9,5	7703077059, 14188380	7	
420.5701	50	16,8	11,0	9,5	7703077059, 14188380	36	

Clip buckle

- for Citroën/Peugeot
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1654	10	20,6	24,0	7,0	698317	16	
420.5654	50	20,6	24,0	7,0	698317	82	

Trim clip

- for Citroën/Peugeot
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1658	10	16,4	20,9	6,7	699502	12	
420.5658	50	16,4	20,9	6,7	699502	62	

Trim clip

- for Citroën/Peugeot
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1659	10	14,7	14,0	11,5	6995X3	8	
420.5659	50	14,7	14,0	11,5	6995X3	39	

Trim clip

- for Citroën/Peugeot
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1660	10	10,0	16,5	8,1	69945	6	
420.5660	50	10,0	16,5	8,1	69945	31	

UNIVERSAL FASTENING CLIPS ALSO FOR CITROËN/PEUGEOT

Fastening clip

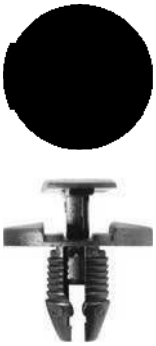
- for Audi
- for Citroën/Peugeot
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1012	10	17,8	17,3	8,0	95667895, 357853575	11	
420.5012	50	17,8	17,3	8,0	95667895, 357853575	54	

Engine bonnet clip

- for Citroën/Peugeot
- for Renault
- for Chrysler
- in polybag



	Content	Head Ø mm	Ø mm	OE	g	
420.1151	10	19,8	8,6	856553	16	
420.5151	50	19,8	8,6	856553	79	

Drive-in connection clip

- for Audi
- for Citroën/Peugeot
- for Opel
- for Volkswagen
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1857	10	12,3	17,5	8,4	N0385501, 7814.24	6	
420.5857	50	12,3	17,5	8,4	N0385501, 7814.24	30	

Plastic rivet for glove compartment

- for BMW
- for Citroën/Peugeot
- for Volkswagen
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1061	10	10,0	12,0	6,0	51161881149, N10259301, 7703072116	5	
420.5061	50	10,0	12,0	6,0	51161881149, N10259301, 7703072116	24	

Door trim clip

- for Citroën/Peugeot
- for Renault
- in polybag



	Content	Head Ø mm	Ø mm	OE	g	
420.1704	10	18,0	8,5	699636, 09409083085ES	9	
420.5704	50	18,0	8,5	699636, 09409083085ES	46	



Boot interior lining clip

- for Citroën/Peugeot
- for Mercedes
- in polybag



	Content	Head Ø mm	Ø mm	OE	g	
420.1465	10	20,0	8,0	781324, 1239900292	11	
420.5465	50	20,0	8,0	781324, 1239900292	57	

Boot interior lining clip

- for Citroën/Peugeot
- for Chrysler
- in polybag



	Content	Head Ø mm	Ø mm	OE	g	
420.1661	10	20,0	8,0	856553, 856548	7	
420.5661	50	20,0	8,0	856553, 856548	33	

Push-type clip

- for Citroën/Peugeot
- for Renault
- in polybag

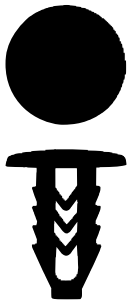


	Content	Head Ø mm	Ø mm	OE	g	
420.1705	10	36,0	9,3	7703077225, 7518N8	23	
420.5705	50	36,0	9,3	7703077225, 7518N8	114	

FASTENING CLIPS FOR FIAT

Interior strip clip

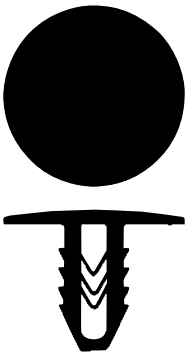
- for Fiat
- for Volvo
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1201	10	16,0	18,0	9,0	4292906	8	
420.5201	50	16,0	18,0	9,0	4292906	42	

Push-type fastening clip

- for Fiat
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1202	10	24,0	17,5	9,0	1459487	14	
420.5202	50	24,0	17,5	9,0	1459487	72	

Push-type fastening clip

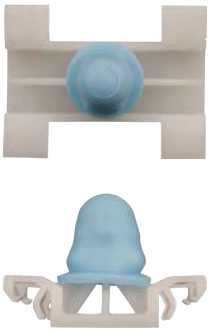
- for Fiat
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1203	10	18,0	22,0	9,0	1300433650	13	
420.5203	50	18,0	22,0	9,0	1300433650	65	

Fastening clip

- for Fiat
- in polybag



	Content	Width mm	Length mm	OE	g	
420.1204	10	27,0	17,0	71717421	32	
420.5204	50	27,0	17,0	71717421	162	

Trim clip

- for Fiat
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1205	10	18,3	21,5	7,7	82456515	16	
420.5205	50	18,3	21,5	7,7	82456515	80	

Trim clip

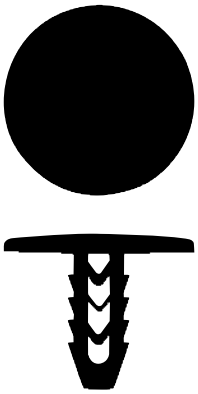
- for Fiat
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1206	10	18,1	21,4	7,6	5757139	9	
420.5206	50	18,1	21,4	7,6	5757139	43	

Interior strip clip

- for Fiat
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1207	10	25,2	18,0	8,0	1459387	11	
420.5207	50	25,2	18,0	8,0	1459387	55	

Trim clip

- for Fiat
- for Alfa Romeo
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1208	10	18,5	18,5	8,8	14188282, 60507749, 46306526	10	
420.5208	50	18,5	18,5	8,8	14188282, 60507749, 46306526	51	

Trim clip

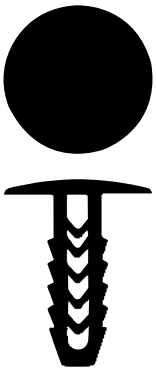
- for Fiat
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1209	10	19,8	18,0	9,4	14591687	13	
420.5209	50	19,8	18,0	9,4	14591687	67	

Trim clip

- for Fiat
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1210	10	19,7	22,6	8,0	1452387	11	
420.5210	50	19,7	22,6	8,0	1452387	54	

Screw grommet

- for Fiat
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1211	10	12,3	18,0	9,7	83468473	14	
420.5211	50	12,3	18,0	9,7	83468473	68	

Fastening clip

- for Fiat
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1212	10	13,9	10,9	7,5	7677865	4	
420.5212	50	13,9	10,9	7,5	7677865	21	

UNIVERSAL FASTENING CLIPS ALSO FOR FIAT

Insert connection clip

- for Citroën/Peugeot
- for Fiat
- for Renault
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1701	10	16,8	11,0	9,5	7703077059, 14188380	7	
420.5701	50	16,8	11,0	9,5	7703077059, 14188380	36	

FASTENING CLIPS FOR FORD

Cable harness fastening

- for Ford
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1251	10	18,0	20,0	7,9	388577S	7	
420.5251	50	18,0	20,0	7,9	388577S	35	

Door strip fastening

- for Ford
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1261	10	20,0	19,3	7,9	N8011925S	9	
420.5261	50	20,0	19,3	7,9	N8011925S	47	

Door and window rubber clip

- for Ford
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1262	10	5,1	14,5	7,0	N806289S	4	
420.5262	50	5,1	14,5	7,0	N806289S	18	

Screw

- for Ford
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1263	10	10,1	10,4	6,3	N379830S	4	
420.5263	50	10,1	10,4	6,3	N379830S	22	

Push-type clip

- for Ford
- for Nissan
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1553	10	19,2	12,9	8,0	6384401A00, 1007932	29	
420.5553	50	19,2	12,9	8,0	6384401A00, 1007932	143	

Trim clip

- for Ford
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1264	10	24,0	24,1	8,0	N387496S	17	
420.5264	50	24,0	24,1	8,0	N387496S	86	

Tail light connection clip

- for Ford
- for Opel
- for Chrysler
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1316	10	7,0	12,1	4,7	6500787, 16500308	4	
420.5316	50	7,0	12,1	4,7	6500787, 16500308	19	

Cable harness fastening

- for Ford
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1265	10	11,2	12,3	5,0	N803170S	4	
420.5265	50	11,2	12,3	5,0	N803170S	18	

Push-type connection clip

- for Ford
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1266	10	23,2	17,4	9,5	W704958S300	30	
420.5266	50	23,2	17,4	9,5	W704958S300	148	



Push-type connection clip

- for Ford
- for Mazda
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1267	10	18,0	18,0	8,0	W706713S300, NAU156145	9	
420.5267	50	18,0	18,0	8,0	W706713S300, NAU156145	47	

Cable harness fastening

- for Ford
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1268	10	19,4	12,7	7,1	N388246S	4	
420.5268	50	19,4	12,7	7,1	N388246S	21	

Connection clip

- for Ford
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1269	10	19,0	16,0	6,3	N387944S	15	
420.5269	50	19,0	16,0	6,3	N387944S	73	

Bonnet stripped insulation fastening

- for Ford
- for Mazda
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1409	10	20,0	9,0	6,0	F22Z16774A, 6508197AA	3	
420.5409	50	20,0	9,0	6,0	F22Z16774A, 6508197AA	16	

Push-type clip

- for Ford
- for Opel
- for Chrysler
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1254	10	17,8	17,5	6,3	10139822, 6508197AA, 1673046	9	
420.5254	50	17,8	17,5	6,3	10139822, 6508197AA, 1673046	46	

Push-type connection clip

- for Ford
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1271	10	15,8	13,5	6,3	N805231S	10	
420.5271	50	15,8	13,5	6,3	N805231S	52	

Connection clip

- for Ford
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1272	10	10,0	12,0	6,0	W705532S300	11	
420.5272	50	10,0	12,0	6,0	W705532S300	57	

Connection clip

- for Ford
- for Mazda
- in polybag



	Content	Head Ø mm	Ø mm	OE	g	
420.1260	10	14,0	6,0	F1CZ16674A, B45556741	5	
420.5260	50	14,0	6,0	F1CZ16674A, B45556741	25	

Push-type connection clip

- for Ford
- in polybag



	Content	Head Ø mm	Ø mm	OE	g	
420.1273	10	20,0	8,0	W710250S300	14	
420.5273	50	20,0	8,0	W710250S300	72	

Mudguard connection clip

- for Ford
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1904	10	11,2	8,0	4,0	W701380SSW	5	
420.5904	50	11,2	8,0	4,0	W701380SSW	24	

Dashboard connection clip

- for Ford
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1253	10	21,4	29,0	11,3	N804379S	22	
420.5253	50	21,4	29,0	11,3	N804379S	109	

Cable harness fastening

- for Ford
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1252	10	17,6	15,5	7,9	6998849	5	
420.5252	50	17,6	15,5	7,9	6998849	27	

Push-type clip

- for Ford
- for Chrysler
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1255	10	15,5	22,8	6,3	6502871, 1007932	10	
420.5255	50	15,5	22,8	6,3	6502871, 1007932	50	

Bonnet stripped insulation fastening

- for Ford
- for Chrysler
- in polybag



	Content	Width mm	Length mm	Ø mm	OE	g
420.1256	10	12,7	40,0	7,0	6003351, 385330	13
420.5256	50	12,7	40,0	7,0	6003351, 385330	67

Push-type clip

- for Ford
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1257	10	18,4	10,7	6,1	1007932	13
420.5257	50	18,4	10,7	6,1	1007932	65

Push-type clip

- for Ford
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1258	10	18,0	20,5	7,9	1070107	9
420.5258	50	18,0	20,5	7,9	1070107	46

Insert connection clip

- for Ford
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1259	10	19,0	20,1	8,0	1629279672595	6
420.5259	50	19,0	20,1	8,0	1629279672595	29

Boot interior lining clip

- for Ford
- for Volkswagen
- in polybag



	Content	Head Ø mm	Ø mm	OE	g
420.1278	10	25,0	8,0	6678518, 6448410	9
420.5278	50	25,0	8,0	6678518, 6448410	46

Door trim clip

- for Ford
- in polybag



	Content	Head Ø mm	Length mm	OE	g
420.1279	10	18,5	25,0	1257376	11
420.5279	50	18,5	25,0	1257376	54

Plastic rivet

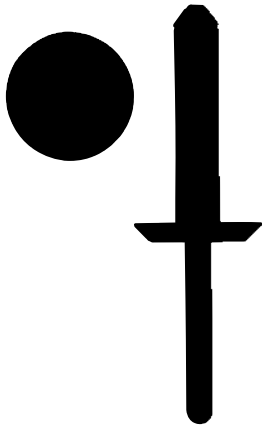
- for Ford
- in polybag



	Content	Length mm	Ø mm	OE	g
420.1274	10	64,2	4,0	N804583S	9
420.5274	50	64,2	4,0	N804583S	45

Plastic rivet

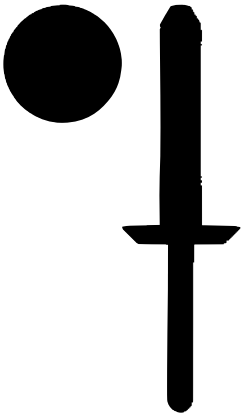
- for Ford
- for Opel
- for Chrysler
- in polybag



	Content	Length mm	Ø mm	OE	g
420.1275	10	55,5	6,3	14063981, N8030433, 6500911	18
420.5275	50	55,5	6,3	14063981, N8030433, 6500911	88

Plastic rivet

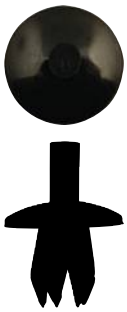
- for Ford
- in polybag



	Content	Length mm	Ø mm	OE	g
420.1276	10	54,0	6,3	N804675S, 6503860	19
420.5276	50	54,0	6,3	N804675S, 6503860	96

Rivet for headlamp bracket

- for Ford
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1277	10	15,8	11,1	6,3	383142S	9	
420.5277	50	15,8	11,1	6,3	383142S	45	

UNIVERSAL FASTENING CLIPS ALSO FOR FORD

Cable harness fastening

- for Ford
- for Volkswagen
- for Chrysler
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1852	10	24,3	18,0	7,9	385661, N989022, 6003349	10	
420.5852	50	24,3	18,0	7,9	385661, N989022, 6003349	51	

Luggage compartment lining clip

- for Ford
- for Honda
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1358	10	16,0	27,0	6,0	90669SP0003ZA	6	
420.5358	50	16,0	27,0	6,0	90669SP0003ZA	29	

Bonnet stripped insulation fastening

- for Ford
- for Mazda
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1409	10	20,0	9,0	6,0	F22Z16774A, 6508197AA	3	
420.5409	50	20,0	9,0	6,0	F22Z16774A, 6508197AA	16	

Bumper cover clip

- for Ford
- for Opel
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1307	10	17,9	16,4	7,8	N806113S, 16674629	6	
420.5307	50	17,9	16,4	7,8	N806113S, 16674629	32	

Trim clip

- for Ford
- for Opel
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1602	10	18,5	18,3	7,7	174864, 1591426	7	
420.5602	50	18,5	18,3	7,7	174864, 1591426	34	

Connection clip

- for Ford
- for Mazda
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1260	10	14,0	10,0	6,0	F1CZ16674A, B45556741	5	
420.5260	50	14,0	10,0	6,0	F1CZ16674A, B45556741	25	

FASTENING CLIPS FOR HONDA

Front grill clip

- for Honda
- for Mitsubishi
- for Toyota/Lexus
- in polybag



	Content	Width mm	Length mm	OE	g	
420.1753	10	13,6	21,7	9046712020, 8942180270	7	
420.5753	50	13,6	21,7	9046712020, 8942180270	37	

Push-type clip

- for Honda
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1351	10	20,5	20,7	8,0	91502SP0003	24	
420.5351	50	20,5	20,7	8,0	91502SP0003	120	

Push-type clip

- for Honda
- for Nissan
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1352	10	20,6	9,5	8,0	90675SB003, 75521611000	13	
420.5352	50	20,6	9,5	8,0	90675SB003, 75521611000	63	

Trim clip

- for Honda
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	
420.1359	10	17,4	14,2	9,0	91566SP0003	10
420.5359	50	17,4	14,2	9,0	91566SP0003	52

Bonnet stripped insulation fastening

- for Honda
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	
420.1360	10	6,4	12,0	5,0	91513SE003	4
420.5360	50	6,4	12,0	5,0	91513SE003	19

Door and window rubber clip

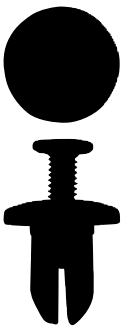
- for Honda
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	
420.1361	10	5,1	10,0	6,0	91530ST5003	4
420.5361	50	5,1	10,0	6,0	91530ST5003	19

Boot interior lining clip

- for Honda
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	
420.1362	10	15,4	13,4	7,0	91550SH3003	10
420.5362	50	15,4	13,4	7,0	91550SH3003	50

Screw grommet

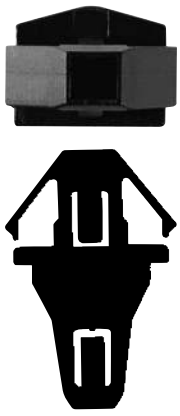
- for Honda
- in polybag



	Content	Head Ø mm	Length mm	Screw no	OE	
420.1363	10	13,3	16,8	4	91620SR2003	8
420.5363	50	13,3	16,8	4	91620SR2003	41

Radiator grill clip

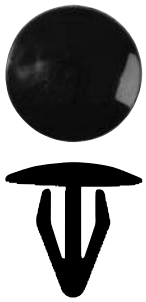
- for Honda
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	
420.1364	10	26,0	14,9	26,0	91578SV4003	42
420.5364	50	26,0	14,9	26,0	91578SV4003	210

Connection clip

- for Honda
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	
420.1365	10	18,1	15,0	7,0	38529689A6300	8
420.5365	50	18,1	15,0	7,0	38529689A6300	41

Push-type connection clip

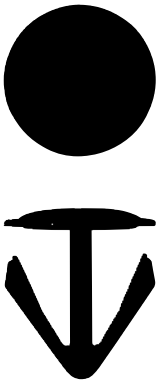
- for Honda
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	
420.1366	10	20,0	10,2	8,0	91512SX0003	14
420.5366	50	20,0	10,2	8,0	91512SX0003	69

Connection clip

- for Honda
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	
420.1367	10	20,1	20,4	10,0	906876710030	15
420.5367	50	20,1	20,4	10,0	906876710030	77

Push-type connection clip

- for Honda
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	
420.1368	10	15,2	13,8	6,0	90683SA5003	8
420.5368	50	15,2	13,8	6,0	90683SA5003	41

Connection clip

- for Honda
- for Nissan
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	
420.1369	10	13,2	14,8	5,0	90687SA50030, 01553	6
420.5369	50	13,2	14,8	5,0	90687SA50030, 01553	29

Retaining bracket clip

- for Honda
- for Toyota/Lexus
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1757	10	15,0	20,4	7,0	90672671003, 9046709065	9
420.5757	50	15,0	20,4	7,0	90672671003, 9046709065	44

Push-type connection clip

- for Honda
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1370	10	13,6	9,1	8,0	91808SM4000	18
420.5370	50	13,6	9,1	8,0	91808SM4000	88

Trim clip

- for Honda
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1371	10	10,8	11,9	10,5	91534SEO000	8
420.5371	50	10,8	11,9	10,5	91534SEO000	40

Side indicator clip

- for Honda
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1372	10	13,8	8,0	10,0	34355SD2003	11
420.5372	50	13,8	8,0	10,0	34355SD2003	57

Rubber screw clip

- for Honda
- for Toyota/Lexus
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1357	10	14,0	10,0	7,7	90662693003, 9018904066	6
420.5357	50	14,0	10,0	7,7	90662693003, 9018904066	31

Car interior lining clip

- for Honda
- for Nissan
- for Isuzu
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1354	10	30,0	14,8	5,0	90667SA70030, 8942798070	5
420.5354	50	30,0	14,8	5,0	90667SA70030, 8942798070	26

Luggage compartment lining clip

- for Ford
- for Honda
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1358	10	16,0	27,0	6,0	90669SP0003ZA	6
420.5358	50	16,0	27,0	6,0	90669SP0003ZA	29

Round nut clip

- for Honda
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1353	10	14,2	15,1	7,7	90672671811M, 9018904013	7
420.5353	50	14,2	15,1	7,7	90672671811M, 9018904013	34

Rubber screw clip

- for Honda
- for Nissan
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1355	10	12,0	17,0	8,5	906836930000, 78856R4301	13
420.5355	50	12,0	17,0	8,5	906836930000, 78856R4301	64

Sealing clip

- for Honda
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1913	10	5,1	7,8	6,0	91530ST5003	3
420.5913	50	5,1	7,8	6,0	91530ST5003	15

Car interior lining connection clip

- for Honda
- for Toyota/Lexus
- for Subaru
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1356	10	18,0	14,0	9,0	9046710161, 91560S6A003, 909130115	11
420.5356	50	18,0	14,0	9,0	9046710161, 91560S6A003, 909130115	54

UNIVERSAL FASTENING CLIPS ALSO FOR HONDA

Push-type clip

- for Honda
- for Mazda
- for Opel
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1406	10	14,0	11,0	7,0	90657SA60030, N30413356A, 9418687	7
420.5406	50	14,0	11,0	7,0	90657SA60030, N30413356A, 9418687	37

Cable harness fastening

- for Honda
- for Nissan
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1559	10	18,0	20,0	6,0	90667SA0003, 7699601P02	10
420.5559	50	18,0	20,0	6,0	90667SA0003, 7699601P02	48

Mudguard/bumper clip

- for Honda
- for Mitsubishi
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1506	10	20,0	13,0	10,0	MR200300	19
420.5506	50	20,0	13,0	10,0	MR200300	97

FASTENING CLIPS FOR ISUZU

Fastening clip

- for Mazda
- for Toyota/Lexus
- for Isuzu
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1401	10	10,2	21,0	9,0	6777112010, 992740825, 8942264920	11
420.5401	50	10,2	21,0	9,0	6777112010, 992740825, 8942264920	56

Push-type clip

- for Nissan
- for Isuzu
- for Kia
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1554	10	17,0	13,0	7,0	1099830880, KK37668868, 8942981190	8
420.5554	50	17,0	13,0	7,0	1099830880, KK37668868, 8942981190	39

Push-type clip

- for Nissan
- for Isuzu
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1556	10	14,2	9,0	7,0	8942211500, 63844D0100	10
420.5556	50	14,2	9,0	7,0	8942211500, 63844D0100	51

Car interior lining clip

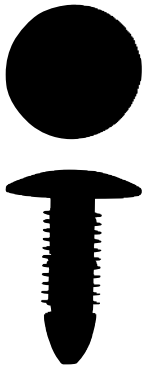
- for Honda
- for Nissan
- for Isuzu
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1354	10	30,0	14,8	5,0	90667SA70030, 8942798070	5
420.5354	50	30,0	14,8	5,0	90667SA70030, 8942798070	26

Cable harness fastening

- for Opel
- for Isuzu
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1309	10	18,0	23,0	7,0	94145515, 894145510	11
420.5309	50	18,0	23,0	7,0	94145515, 894145510	56

FASTENING CLIPS FOR KIA

Push-type clip

- for Nissan
- for Isuzu
- for Kia
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1554	10	17,0	13,0	7,0	1099830880, KK37668868, 8942981190	8
420.5554	50	17,0	13,0	7,0	1099830880, KK37668868, 8942981190	39

FASTENING CLIPS FOR MAZDA

Push-type clip

- for Mazda
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1402	10	15,2	12,6	7,0	MB345544, 2042301	8
420.5402	50	15,2	12,6	7,0	MB345544, 2042301	40

Square nut clip

- for Mazda
- for Nissan
- for Toyota/Lexus
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1404	10	9,8	16,7	8,0	999100402, 0128100501	5
420.5404	50	9,8	16,7	8,0	999100402, 0128100501	23

Retaining bracket clip

- for Mazda
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1405	10	15,3	15,0	8,0	B0016830200, 9095001248	9
420.5405	50	15,3	15,0	8,0	B0016830200, 9095001248	46

Push-type clip

- for Honda
- for Mazda
- for Opel
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1406	10	14,0	11,0	7,0	90657SA60030, N30413356A, 9418687	7
420.5406	50	14,0	11,0	7,0	90657SA60030, N30413356A, 9418687	37

Bumper connection clip

- for Mazda
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1415	10	20,3	11,0	10,0	BF6750033	25
420.5415	50	20,3	11,0	10,0	BF6750033	123

Fastening clip

- for Mazda
- for Nissan
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1408	10	11,0	15,0	5,5	992640543A, 0155300291	4
420.5408	50	11,0	15,0	5,5	992640543A, 0155300291	19

Swivel head clip

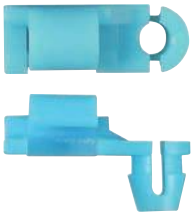
- for Mazda
- in polybag



	Content	Rod Ø mm	Ø mm	OE	g
420.1416	10	4,0	6,0	992780405	8
420.5416	50	4,0	6,0	992780404	38

Swivel head clip

- for Mazda
- in polybag



	Content	Rod Ø mm	Ø mm	OE	g
420.1417	10	4,0	6,0	992780404	8
420.5417	50	4,0	6,0	992780404	39

Cable harness connection clip

- for Mazda
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1418	10	12,0	12,0	4,0	99249051B	4
420.5418	50	12,0	12,0	4,0	99249051B	18

Bonnet stripped insulation fastening

- for Ford
- for Mazda
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1409	10	20,0	9,0	6,0	F22Z16774A, 6508197AA	3
420.5409	50	20,0	9,0	6,0	F22Z16774A, 6508197AA	16

Bumper cover clip

- for Mazda
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1410	10	23,3	20,0	10,0	BF8250233	31
420.5410	50	23,3	20,0	10,0	BF8250233	156

Push-type clip

- for Mazda
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1411	10	14,0	16,0	6,0	B1016825200	6	
420.5411	50	14,0	16,0	6,0	B1016825200	30	

Push-type clip

- for Mazda
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1412	10	18,0	14,0	8,0	B09251833	11	
420.5412	50	18,0	14,0	8,0	B09251833	55	

Trim clip

- for Mazda
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1420	10	18,0	14,0	5,0	992640543A	5	
420.5420	50	18,0	14,0	5,0	992640543A	23	

Connection clip

- for Ford
- for Mazda
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1260	10	14,0	10,0	6,0	F1CZ16674A, B45556741	5	
420.5260	50	14,0	10,0	6,0	F1CZ16674A, B45556741	25	

Door and window rubber clip

- for Mazda
- for Toyota/Lexus
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1413	10	5,2	10,0	5,0	G03158762, 6786889101	2	
420.5413	50	5,2	10,0	5,0	G03158762, 6786889101	12	

Push-type connection clip

- for Mazda
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1419	10	20,0	15,0	8,0	BC1DSA145	17	
420.5419	50	20,0	15,0	8,0	BC1DSA145	83	

Wheel case connection clip

- for Mazda
- for Toyota/Lexus
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1766	10	18,0	15,0	9,0	9046709139	18	
420.5766	50	18,0	15,0	9,0	9046709139	89	

Car interior lining clip

- for Mazda
- for Toyota/Lexus
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1403	10	18,6	14,2	8,0	992740822, 6258114020	9	
420.5403	50	18,6	14,2	8,0	992740822, 6258114020	43	

Fastening clip

- for Mazda
- for Toyota/Lexus
- for Isuzu
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1401	10	10,2	21,0	9,0	6777112010, 992740825, 8942264920	11	
420.5401	50	10,2	21,0	9,0	6777112010, 992740825, 8942264920	56	

Front grill clip

- for Mazda
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1407	10	19,5	15,0	10,0	GD7A50EA1	26	
420.5407	50	19,5	15,0	10,0	GD7A50EA1	130	

UNIVERSAL FASTENING CLIPS ALSO FOR MAZDA

Square nut clip

- for Mazda
- for Nissan
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1551	10	9,2	6,6	7,0	999100501, 96706B0700	3	
420.5551	50	9,2	6,6	7,0	999100501, 96706B0700	14	

Square nut clip

- for Mazda
- in polybag

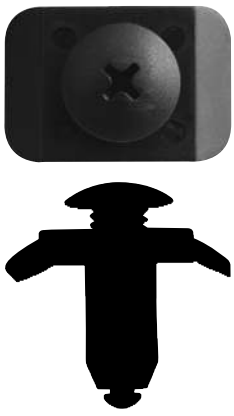


	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1903	10	16,0	12,0	10,5	999100501	7	
420.5903	50	16,0	12,0	10,5	999100501	33	



Bumper cover clip

- for Mazda
- for Nissan
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1555	10	20,3	18,0	10,0	BF8250233, 0155301393	27	
420.5555	50	20,3	18,0	10,0	BF8250233, 0155301393	136	

Fastening clip

- for Mazda
- for Nissan
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1106	10	18,5	17,3	8,0	813350022, 76906T300	6	
420.5106	50	18,5	17,3	8,0	813350022, 76906T300	31	

Push-type connection clip

- for Ford
- for Mazda
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1267	10	18,0	18,0	8,0	W706713S300, NAU156145	9	
420.5267	50	18,0	18,0	8,0	W706713S300, NAU156145	47	

FASTENING CLIPS FOR MERCEDES

Push-type connection clip

- for Mercedes
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1453	10	18,0	19,0	10,0	A1269900392	19	
420.5453	50	18,0	19,0	10,0	A1269900392	96	

Connection clip

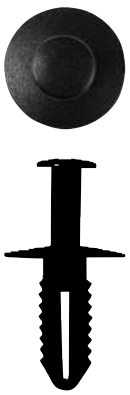
- for Mercedes
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1454	10	18,3	14,5	9,8	A0019882981	6	
420.5454	50	18,3	14,5	9,8	A0019882981	30	

Push-type connection clip

- for Mercedes
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1455	10	16,0	18,0	7,0	A1249900492	8	
420.5455	50	16,0	18,0	7,0	A1249900492	41	

Connection clip

- for Mercedes
- in polybag



	Content	Width mm	Length mm	OE	g	
420.1456	10	22,8	32,3	A0019888081	35	
420.5456	50	22,8	32,3	A0019888081	177	

Connection clip

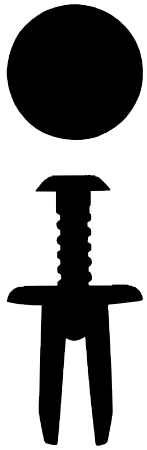
- for Mercedes
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1457	10	18,0	18,0	16,0	A1249880492	35
420.5457	50	18,0	18,0	16,0	A1249880492	175

Push-type connection clip

- for Mercedes
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1458	10	18,0	19,0	9,0	A9904692	16
420.5458	50	18,0	19,0	9,0	A9904692	78

Push-type connection clip

- for Mercedes
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1459	10	9,9	10,7	6,1	A0009908492	5
420.5459	50	9,9	10,7	6,1	A0009908492	23

Connection clip

- for Mercedes
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1460	10	20,1	10,0	14,0	A0019880325	70
420.5460	50	20,1	10,0	14,0	A0019880325	350

Cable harness connection clip

- for Mercedes
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1461	10	18,9	27,2	8,0	A1406980260	15
420.5461	50	18,9	27,2	8,0	A1406980260	76

Connection clip

- for Mercedes
- in polybag



	Content	Width mm	Length mm	OE	g
420.1462	10	15,5	22,5	A0019885081	17
420.5462	50	15,5	22,5	A0019885081	84

Connection clip

- for Mercedes
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1463	10	4,9	15,9	8,3	A0019884481	9
420.5463	50	4,9	15,9	8,3	A0019884481	43

Plastic clamping nuts

- for Citroën/Peugeot
- for Mercedes
- for Renault
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1452	10	16,3	16,7	8,7	A108980027, 7703074022	5
420.5452	50	16,3	16,7	8,7	A108980027, 7703074022	26

Drive-in clip

- for Mercedes
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1451	10	13,0	14,0	8,0	A0009903792	10
420.5451	50	13,0	14,0	8,0	A0009903792	48

Boot interior lining clip

- for Citroën/Peugeot
- for Mercedes
- in polybag



	Content	Head Ø mm	Ø mm	OE	g
420.1465	10	20,0	8,0	781324, 1239900292	11
420.5465	50	20,0	8,0	781324, 1239900292	57

Metal screw/washer

- for BMW
- for Mercedes
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1464	10	10,8	18,8	6,3	N914031006203, 07119916946	81	
420.5464	50	10,8	18,8	6,3	N914031006203, 07119916946	404	

UNIVERSAL FASTENING CLIPS ALSO FOR MERCEDES

Push-type clip

- for Citroën/Peugeot
- for Mercedes
- for Volvo
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1651	10	10,0	7,0	5,0	790307216, A0009903492, 947098	3	
420.5651	50	10,0	7,0	5,0	790307216, A0009903492, 947098	15	

Drive-in rivet

- for BMW
- for Mercedes
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1060	10	20,0	15,0	8,0	2019900292, 81471911992, 30820141	15	
420.5060	50	20,0	15,0	8,0	2019900292, 81471911992, 30820141	75	

FASTENING CLIPS FOR MITSUBISHI

Front grill clip

- for Honda
- for Mitsubishi
- for Toyota/Lexus
- in polybag



	Content	Width mm	Length mm	OE	g	
420.1753	10	13,6	21,7	9046712020, 8942180270	7	
420.5753	50	13,6	21,7	9046712020, 8942180270	37	

Square nut clip

- for Mitsubishi
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1501	10	11,9	10,5	9,0	9018905013	7	
420.5501	50	11,9	10,5	9,0	9018905013	35	

Round nut clip

- for Mitsubishi
- for Toyota/Lexus
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1502	10	17,7	16,3	8,5	MU480033, 9018906001	11	
420.5502	50	17,7	16,3	8,5	MU480033, 9018906001	53	

Round nut clip

- for Mitsubishi
- for Nissan
- for Toyota/Lexus
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1755	10	16,4	17,3	8,5	9018906001, 128100231	12	
420.5755	50	16,4	17,3	8,5	9018906001, 128100231	60	

Screw grommet

- for Mitsubishi
- in polybag



	Content	Head Ø mm	Length mm	Screw no	OE	g	
420.1508	10	16,6	18,0	8	MU480034	12	
420.5508	50	16,6	18,0	8	MU480034	61	

Push-type clip

- for Mitsubishi
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1509	10	20,0	26,0	8,0	MR138807	21	
420.5509	50	20,0	26,0	8,0	MR138807	106	

Push-type clip

- for Mitsubishi
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1503	10	20,5	20,7	8,0	MB253964	19
420.5503	50	20,5	20,7	8,0	MB253964	97

Connection clip

- for Mitsubishi
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1510	10	18,3	15,5	8,0	HB121467	10
420.5510	50	18,3	15,5	8,0	HB121467	50

Bumper cover clip

- for Mitsubishi
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1505	10	24,2	21,8	12,8	MB271999	28
420.5505	50	24,2	21,8	12,8	MB271999	139

Trim clip

- for Mitsubishi
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1511	10	16,0	11,0	9,0	MB696120	9
420.5511	50	16,0	11,0	9,0	MB696120	44

Mudguard/bumper clip

- for Honda
- for Mitsubishi
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1506	10	20,0	13,0	10,0	MR200300	19
420.5506	50	20,0	13,0	10,0	MR200300	97

Door sill clip

- for Mitsubishi
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1512	10	16,0	14,0	7,0	MB846992	11
420.5512	50	16,0	14,0	7,0	MB846992	54

Bonnet stripped insulation fastening

- for Mitsubishi
- for Chrysler
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1504	10	26,0	8,0	10,0	MB020923	9
420.5504	50	26,0	8,0	10,0	MB020923	45

Door trim clip

- for Mitsubishi
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1507	10	16,0	24,0	6,0	MB566719	10
420.5507	50	16,0	24,0	6,0	MB566719	49

UNIVERSAL FASTENING CLIPS ALSO FOR MITSUBISHI

Square nut clip

- for Mitsubishi
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1902	10	13,1	15,1	10,5	MB293328	10
420.5902	50	13,1	15,1	10,5	MB293328	48

Rubber screw clip

- for Mitsubishi
- for Toyota/Lexus
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1760	10	12,0	16,0	10,0	MB083120, 9018904008	18	
420.5760	50	12,0	16,0	10,0	MB083120, 9018904008	89	

FASTENING CLIPS FOR NISSAN

Fastening clip

- for Mazda
- for Nissan
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1106	10	18,5	17,3	8,0	813350022, 76906T300	6	
420.5106	50	18,5	17,3	8,0	813350022, 76906T300	31	

Fastening clip

- for Nissan
- for Toyota/Lexus
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1751	10	30,4	15,5	7,0	9046707050, 0155300172	3	
420.5751	50	30,4	15,5	7,0	9046707050, 0155300172	17	

Square nut clip

- for Nissan
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1552	10	16,7	8,0	8,5	68425H5000	10	
420.5552	50	16,7	8,0	8,5	68425H5000	51	

Push-type clip

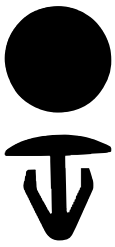
- for Honda
- for Nissan
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1352	10	20,6	9,5	8,0	90675SB003, 75521611000	13	
420.5352	50	20,6	9,5	8,0	90675SB003, 75521611000	63	

Fastening clip

- for Nissan
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1561	10	14,1	10,5	6,0	62869N4700	5	
420.5561	50	14,1	10,5	6,0	62869N4700	26	

Grill grommet

- for Nissan
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1562	10	21,5	8,1	6,0	62380U7400	20	
420.5562	50	21,5	8,1	6,0	62380U7400	101	

Push-type clip

- for Ford
- for Nissan
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1553	10	19,2	12,9	8,0	6384401A00, 1007932	29	
420.5553	50	19,2	12,9	8,0	6384401A00, 1007932	143	

Push-type clip

- for Nissan
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1563	10	17,7	21,0	8,0	7688257A00	13	
420.5563	50	17,7	21,0	8,0	7688257A00	66	

Radiator grill clip

- for Nissan
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1564	10	11,8	7,2	6,0	6684101G00	5	
420.5564	50	11,8	7,2	6,0	6684101G00	27	

Push-type clip

- for Nissan
- for Isuzu
- for Kia
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1554	10	17,0	13,0	7,0	1099830880, KK37668868, 8942981190	8	
420.5554	50	17,0	13,0	7,0	1099830880, KK37668868, 8942981190	39	

Bumper cover clip

- for Mazda
- for Nissan
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1555	10	20,3	18,0	10,0	BF8250233, 0155301393	27	
420.5555	50	20,3	18,0	10,0	BF8250233, 0155301393	136	

Nylon U-nut

- for Nissan
- in polybag



	Content	Width mm	Length mm	Screw no	OE	g	
420.1414	10	31,0	22,0	12	63848D400, 5378914010	27	
420.5414	50	31,0	22,0	12	63848D400, 5378914010	133	

Car interior lining clip

- for Honda
- for Nissan
- for Isuzu
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1354	10	30,0	14,8	5,0	90667SA70030, 8942798070	5	
420.5354	50	30,0	14,8	5,0	90667SA70030, 8942798070	26	

Push-type clip

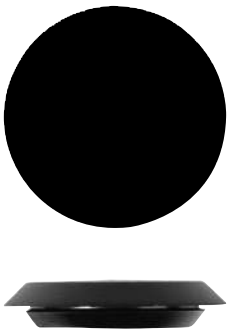
- for Nissan
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1565	10	20,0	22,0	8,0	6387801E10	13	
420.5565	50	20,0	22,0	8,0	6387801E10	67	

Sheet plug

- for Nissan
- in polybag



	Content	Head Ø mm	OE	g	
420.1566	10	29,4	22,2	14	
420.5566	50	29,4	22,2	68	

Rubber screw clip

- for Honda
- for Nissan
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1355	10	12,0	17,0	8,5	906836930000, 78856R4301	13	
420.5355	50	12,0	17,0	8,5	906836930000, 78856R4301	64	

Push-type clip

- for Nissan
- for Volvo
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1560	10	20,0	14,0	8,0	6384801G00	13	
420.5560	50	20,0	14,0	8,0	6384801G00	66	

Push-type rivet

- for Nissan
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1567	10	20,0	20,0	8,0	6385401A00	118	
420.5567	50	20,0	20,0	8,0	6385401A00	590	

Square nut clip

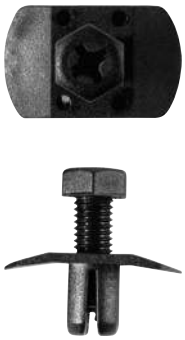
- for Mazda
- for Nissan
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1551	10	9,2	6,6	7,0	999100501, 96706B0700	3
420.5551	50	9,2	6,6	7,0	999100501, 96706B0700	14

Push-type clip

- for Nissan
- for Isuzu
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1556	10	14,2	9,0	7,0	8942211500, 63844D0100	10
420.5556	50	14,2	9,0	7,0	8942211500, 63844D0100	51

Splash guard connection clip

- for Nissan
- for Opel
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1557	10	13,7	16,5	6,0	94051933, 6686001W01	6
420.5557	50	13,7	16,5	6,0	94051933, 6686001W01	30



Push-type clip

- for Nissan
- for Volvo
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1558	10	18,0	11,0	7,0	9046707043, 8099905N07	11
420.5558	50	18,0	11,0	7,0	9046707043, 8099905N07	56

Cable harness fastening

- for Honda
- for Nissan
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1559	10	18,0	20,0	6,0	90667SA0003, 7699601P02	10
420.5559	50	18,0	20,0	6,0	90667SA0003, 7699601P02	48

Engine grill cable fastening

- for Nissan
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1568	10	12,0	16,0	6,0	0153301781	5
420.5568	50	12,0	16,0	6,0	0153301781	23

UNIVERSAL FASTENING CLIPS ALSO FOR NISSAN

Round nut clip

- for Mitsubishi
- for Nissan
- for Toyota/Lexus
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1755	10	16,4	17,3	8,5	9018906001, 128100231	12
420.5755	50	16,4	17,3	8,5	9018906001, 128100231	60

Square nut clip

- for Mazda
- for Nissan
- for Toyota/Lexus
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1404	10	9,8	16,7	8,0	999100402, 0128100501	5
420.5404	50	9,8	16,7	8,0	999100402, 0128100501	23

Door panel clip

- for Nissan
- for Toyota/Lexus
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1761	10	14,0	8,0	10,0	9046701766, 0153301733	8
420.5761	50	14,0	8,0	10,0	9046701766, 0153301733	38

Fastening clip

- for Mazda
- for Nissan
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1408	10	11,0	15,0	5,5	992640543A, 0155300291	4
420.5408	50	11,0	15,0	5,5	992640543A, 0155300291	19

Push-type clip

- for Nissan
- for Toyota/Lexus
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1767	10	19,5	14,0	8,0	6777152010B1, 0155301553	14
420.5767	50	19,5	14,0	8,0	6777152010B1, 0155301553	70

Connection clip

- for Honda
- for Nissan
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1369	10	13,2	14,8	5,0	90687SA50030, 01553	6
420.5369	50	13,2	14,8	5,0	90687SA50030, 01553	29

Square nut clip

- for Nissan
- for Toyota/Lexus
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1758	10	9,2	13,1	7,7	96706P0105, 75521611000	8
420.5758	50	9,2	13,1	7,7	96706P0105, 75521611000	40

FASTENING CLIPS FOR OPEL

Connection clip

- for Opel
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1603	10	27,0	12,0	16,0	90218614	17
420.5603	50	27,0	12,0	16,0	90218614	86

Trim clip

- for Ford
- for Opel
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1602	10	18,5	18,3	7,7	174864, 1591426	7
420.5602	50	18,5	18,3	7,7	174864, 1591426	34

Drive-in connection clip

- for Audi
- for Citroën/Peugeot
- for Opel
- for Volkswagen
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1857	10	12,3	17,5	8,4	N0385501, 7814.24	6
420.5857	50	12,3	17,5	8,4	N0385501, 7814.24	30

Connection clip

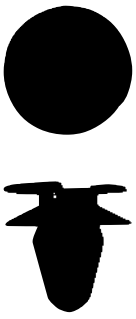
- for Audi
- for Renault
- for Opel
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1604	10	18,0	20,0	8,2	2345959, 7L5853994, 7701053516	9
420.5604	50	18,0	20,0	8,2	2345959, 7L5853994, 7701053516	43

Connection clip

- for Opel
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1605	10	17,0	13,5	9,5	2240582	8
420.5605	50	17,0	13,5	9,5	2240582	42

Plastic screw

- for Opel
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1606	10	16,0	12,9	9,7	180942	15	
420.5606	50	16,0	12,9	9,7	180942	73	

Fastening clip

- for Opel
- for Volkswagen
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1601	10	15,8	18,4	6,0	1H0837719, 15979	3	
420.5601	50	15,8	18,4	6,0	1H0837719, 15979	17	

UNIVERSAL FASTENING CLIPS ALSO FOR OPEL

Cable harness fastening

- for BMW
- for Opel
- for Volkswagen
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1856	10	20,3	20,2	9,1	2207713, N9020160H, 514719044317	13	
420.5856	50	20,3	20,2	9,1	2207713, N9020160H, 514719044317	63	

Door strip fastening

- for Opel
- for Volkswagen
- for Chrysler
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1851	10	24,2	18,5	7,7	6003349, N98905101, 9685057	14	
420.5851	50	24,2	18,5	7,7	6003349, N98905101, 9685057	71	

Push-type clip

- for Opel
- for Chrysler
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1301	10	17,3	13,5	6,3	34201621, 14019205	11	
420.5301	50	17,3	13,5	6,3	34201621, 14019205	53	

Tail light connection clip

- for Opel
- for Volkswagen
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1853	10	12,9	7,8	10,0	3997391, 179813881	4	
420.5853	50	12,9	7,8	10,0	3997391, 179813881	21	

Dashboard connection clip

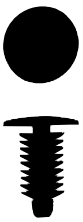
- for Opel
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1302	10	25,4	22,7	12,7	5973996	34	
420.5302	50	25,4	22,7	12,7	5973996	169	

Door and window rubber clip

- for Opel
- for Chrysler
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1102	10	10,0	11,7	6,0	6502328, 20699808	3	
420.5102	50	10,0	11,7	6,0	6502328, 20699808	13	

Push-type clip

- for Honda
- for Mazda
- for Opel
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1406	10	14,0	11,0	7,0	90657SA60030, N30413356A, 9418687	7	
420.5406	50	14,0	11,0	7,0	90657SA60030, N30413356A, 9418687	37	

Splash guard connection clip

- for Nissan
- for Opel
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1557	10	13,7	16,5	6,0	94051933, 6686001W01	6	
420.5557	50	13,7	16,5	6,0	94051933, 6686001W01	30	

Door lock clip

- for Opel
- in polybag



	Content	Pod Ø mm	Ø mm	OE	g	
420.1303	10	3,9	6,0	D2VZ6521952A, 9815325	9	
420.5303	50	3,9	6,0	D2VZ6521952A, 9815325	43	

Headlamp union nut

- for Opel
- for Volkswagen
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1855	10	10,5	14,8	7,2	441035555, 1370853	4	
420.5855	50	10,5	14,8	7,2	441035555, 1370853	22	

Blind rivet connection clip

- for Opel
- for Chrysler
- in polybag



	Content	Length mm	Ø mm	OE	g	
420.1304	10	46,0	5,1	6004212, 204655395	7	
420.5304	50	46,0	5,1	6004212, 204655395	34	

Blind rivet connection clip

- for Opel
- in polybag



	Content	Length mm	Ø mm	OE	g	
420.1305	10	54,0	5,9	10036503	18	
420.5305	50	54,0	5,9	10036503	91	





Push-type clip

- for Ford
- for Opel
- for Chrysler
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1254	10	17,8	17,5	6,3	10139822, 6508197AA, 1673046	9	
420.5254	50	17,8	17,5	6,3	10139822, 6508197AA, 1673046	46	

Blind rivet connection clip

- for Opel
- in polybag



	Content	Length mm	Ø mm	OE	g	
420.1306	10	53,4	7,1	10109689	19	
420.5306	50	53,4	7,1	10109689	96	

Bumper cover clip

- for Ford
- for Opel
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1307	10	17,9	16,4	7,8	N806113S, 16674629	6	
420.5307	50	17,9	16,4	7,8	N806113S, 16674629	32	

Bumper connection clip

- for Opel
- for Chrysler
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1308	10	21,0	25,0	12,0	6502625, 10140480	22	
420.5308	50	21,0	25,0	12,0	6502625, 10140480	109	

Cable harness fastening

- for Opel
- for Isuzu
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1309	10	18,0	23,0	7,0	94145515, 894145510	11	
420.5309	50	18,0	23,0	7,0	94145515, 894145510	56	

Dashboard connection clip

- for Opel
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1310	10	15,0	23,0	6,0	15681408	11	
420.5310	50	15,0	23,0	6,0	15681408	53	

Air baffle connection clip

- for Opel
- for Chrysler
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1311	10	20,0	20,0	8,0	6503598&, 21030249	18	
420.5311	50	20,0	20,0	8,0	6503598&, 21030249	91	

Cable harness connection clip

- for BMW
- for Opel
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1373	10	18,0	27,6	7,6	10124502	9	
420.5373	50	18,0	27,6	7,6	10124502	43	

Bonnet stripped insulation fastening

- for Opel
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1313	10	19,0	25,4	7,9	20200750	2	
420.5313	50	19,0	25,4	7,9	20200750	12	

Door panel clip

- for Opel
- in polybag



	Content	Rod Ø mm	Ø mm	OE	g	
420.1314	10	3,9	7,6	16675980, 1662990	24	
420.5314	50	3,9	7,6	16675980, 1662990	120	

Car interior lining clip

- for Opel
- for Chrysler
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1315	10	14,5	17,5	9,0	4005099, 796255, 6033862	11	
420.5315	50	14,5	17,5	9,0	4005099, 796255, 6033862	53	

Tail light connection clip

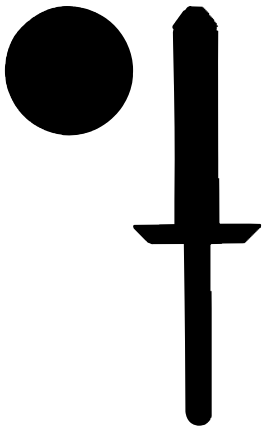
- for Ford
- for Opel
- for Chrysler
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1316	10	7,0	12,1	4,7	6500787, 16500308	4	
420.5316	50	7,0	12,1	4,7	6500787, 16500308	19	

Plastic rivet

- for Ford
- for Opel
- for Chrysler
- in polybag



	Content	Length mm	Ø mm	OE	g	
420.1275	10	55,5	6,3	14063981, N8030433, 6500911	18	
420.5275	50	55,5	6,3	14063981, N8030433, 6500911	88	

Plastic rivet

- for Opel
- in polybag



	Content	Length mm	Ø mm	OE	g	
420.1317	10	50,8	6,3	15506827	18	
420.5317	50	50,8	6,3	15506827	90	

Plastic rivet

- for Opel
- in polybag



	Content	Length mm	Ø mm	OE	g	
420.1318	10	55,6	6,3	14070914	17	
420.5318	50	55,6	6,3	14070914	87	

Drive rivet for air conditioning

- for Opel
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1319	10	11,3	7,0	4,9	14005089	4	
420.5319	50	11,3	7,0	4,9	14005089	22	

FASTENING CLIPS FOR RENAULT

Door strip fastening

- for Renault
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1702	10	20,0	10,0	6,8	7703077421	9	
420.5702	50	20,0	10,0	6,8	7703077421	47	

Insert connection clip

- for Renault
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	g	
420.1916	10	15,5	15,6	8,6	11	
420.5916	50	15,5	15,6	8,6	54	

Push-type fastening clip

- for Renault
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1703	10	14,0	14,0	8,0	7703081184	8	
420.5703	50	14,0	14,0	8,0	7703081184	42	

Buckle

- for Renault
- in polybag



	Content	Width mm	Length mm	g	
420.1917	10	25,1	36,5	35	
420.5917	50	25,1	36,5	176	



Plastic clamping nuts

- for Citroën/Peugeot
- for Mercedes
- for Renault
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1452	10	16,3	16,7	8,7	A108980027, 7703074022	5	
420.5452	50	16,3	16,7	8,7	A108980027, 7703074022	26	

Insert connection clip

- for Citroën/Peugeot
- for Fiat
- for Renault
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1701	10	16,8	11,0	9,5	7703077059, 14188380	7	
420.5701	50	16,8	11,0	9,5	7703077059, 14188380	36	

Door trim clip

- for Citroën/Peugeot
- for Renault
- in polybag



	Content	Head Ø mm	Ø mm	OE	g	
420.1704	10	18,0	8,5	699636, 09409083085ES	9	
420.5704	50	18,0	8,5	699636, 09409083085ES	46	

Push-type clip

- for Citroën/Peugeot
- for Renault
- in polybag



	Content	Head Ø mm	Ø mm	OE	g	
420.1705	10	36,0	9,3	7703077225, 7518N8	23	
420.5705	50	36,0	9,3	7703077225, 7518N8	114	

UNIVERSAL FASTENING CLIPS ALSO FOR RENAULT

Engine bonnet clip

- for Citroën/Peugeot
- for Renault
- for Chrysler
- in polybag



	Content	Head Ø mm	Ø mm	OE	g	
420.1151	10	19,8	8,6	856553	16	
420.5151	50	19,8	8,6	856553	79	



Connection clip

- for Audi
- for Renault
- for Opel
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1604	10	18,0	20,0	8,2	2345959, 7L5853994, 7701053516	9	
420.5604	50	18,0	20,0	8,2	2345959, 7L5853994, 7701053516	43	

FASTENING CLIPS FOR SEAT

Extraction hood support

- for Audi
- for Seat
- in polybag



	Content	Head Ø mm	Width mm	Ø mm	OE	g	
420.1008	10	27,6	16,0	7,2	1H0823397	20	
420.5008	50	27,6	16,0	7,2	1H0823397	99	

Quick-release fastener

- for Audi
- for Volkswagen
- for Seat
- for Škoda
- in polybag



	Content	Ø mm	OE	g	
420.1014	10	32,0	N90335006, N90335004	24	
420.5014	50	32,0	N90335006, N90335004	119	

Quick-release fastener

- for Audi
- for Volkswagen
- for Seat
- in polybag

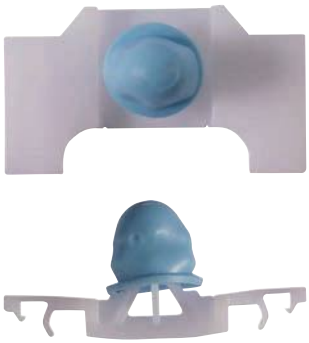


	Content	Ø mm	OE	g
420.1015	10	32,0	N90796501	22
420.5015	50	32,0	N90796501	112

FASTENING CLIPS FOR ŠKODA

Connection rubber seal

- for Audi
- for Volkswagen
- for Škoda
- in polybag



	Content	Width mm	OE	g
420.1003	10	40,2	1H0853585A	31
420.5003	50	40,2	1H0853585A	157

Trim clip

- for Audi
- for Škoda
- in polybag



	Content	Head Ø mm	Ø mm	OE	g
420.1018	10	21,0	10,0	703867299	8
420.5018	50	21,0	10,0	703867299	39

Quick-release fastener

- for Audi
- for Volkswagen
- for Seat
- for Škoda
- in polybag



	Content	Ø mm	OE	g
420.1014	10	32,0	N90335006, N90335004	24
420.5014	50	32,0	N90335006, N90335004	119

FASTENING CLIPS FOR SUBARU

Car interior lining connection clip

- for Honda
- for Toyota/Lexus
- for Subaru
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1356	10	18,0	14,0	9,0	9046710161, 91560S6A003, 909130115	11
420.5356	50	18,0	14,0	9,0	9046710161, 91560S6A003, 909130115	54

FASTENING CLIPS FOR TOYOTA/LEXUS

Bonnet stripped insulation fastening

- for Toyota/Lexus
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1752	10	30,0	16,0	8,0	9046709006	15
420.5752	50	30,0	16,0	8,0	9046709006	73

Round nut clip

- for Mitsubishi
- for Nissan
- for Toyota/Lexus
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1755	10	16,4	17,3	8,5	9018906001, 128100231	12
420.5755	50	16,4	17,3	8,5	9018906001, 128100231	60

Push-type clip

- for Toyota/Lexus
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1769	10	20,0	11,3	7,0	9046707138	16
420.5769	50	20,0	11,3	7,0	9046707138	78

Push-type clip

- for Toyota/Lexus
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1770	10	16,8	8,0	7,0	9046707117	8
420.5770	50	16,8	8,0	7,0	9046707117	40

Connection clip

- for Toyota/Lexus
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1771	10	14,0	19,5	7,0	9046709138	7
420.5771	50	14,0	19,5	7,0	9046709138	33

Bumper clip

- for Toyota/Lexus
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1772	10	18,1	24,7	9,0	9046709101	13
420.5772	50	18,1	24,7	9,0	9046709101	66

Bumper clip

- for Toyota/Lexus
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1773	10	15,0	26,8	9,0	9046709093	16
420.5773	50	15,0	26,8	9,0	9046709093	82

Square nut clip

- for Nissan
- for Toyota/Lexus
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1758	10	9,2	13,1	7,7	96706P0105, 75521611000	8
420.5758	50	9,2	13,1	7,7	96706P0105, 75521611000	40

Lateral protection strip - rubber

- for Toyota/Lexus
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1774	10	15,1	11,6	19,0	7504933010	20
420.5774	50	15,1	11,6	19,0	7504933010	99

Door panel clip

- for Toyota/Lexus
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1775	10	17,0	12,0	8,0	7503933060	14
420.5775	50	17,0	12,0	8,0	7503933060	72

Nylon U-nut clip

- for Toyota/Lexus
- in polybag



	Content	Width mm	Length mm	Screw no	OE	g
420.1762	10	18,0	27,0	10	9017905060	25
420.5762	50	18,0	27,0	10	9017905060	126

Trim clip

- for Toyota/Lexus
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1776	10	18,0	14,0	9,0	677711250	11
420.5776	50	18,0	14,0	9,0	677711250	55

Door sill clip

- for Toyota/Lexus
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1763	10	18,0	8,8	8,5	9046711063	11
420.5763	50	18,0	8,8	8,5	9046711063	57

Trim clip

- for Toyota/Lexus
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1764	10	18,0	9,0	8,4	7539533030	12
420.5764	50	18,0	9,0	8,4	7539533030	58

Push-type clip

- for Toyota/Lexus
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1777	10	19,0	26,0	9,0	9046709143	21
420.5777	50	19,0	26,0	9,0	9046709143	104

Bonnet stripped insulation fastening

- for Toyota/Lexus
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	
420.1778	10	25,0	12,0	8,0	9046708124	9
420.5778	50	25,0	12,0	8,0	9046708124	46

Fender push-type clip

- for Toyota/Lexus
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	
420.1779	10	15,0	27,0	9,0	9046709096	18
420.5779	50	15,0	27,0	9,0	9046709096	92

Bonnet stripped insulation fastening

- for Toyota/Lexus
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	
420.1780	10	25,0	10,0	7,0	9046709050	12
420.5780	50	25,0	10,0	7,0	9046709050	61

Fastening clip

- for Nissan
- for Toyota/Lexus
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	
420.1751	10	30,4	15,5	7,0	9046707050, 0155300172	3
420.5751	50	30,4	15,5	7,0	9046707050, 0155300172	17

Screw rod clip

- for Toyota/Lexus
- in polybag



	Content	Rod Ø mm	Ø mm	OE	
420.1756	10	8,0	14,0	5345514020	17
420.5756	50	8,0	14,0	5345514020	86

Push-type clip

- for Nissan
- for Toyota/Lexus
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	
420.1767	10	19,5	14,0	8,0	6777152010B1, 0155301553	14
420.5767	50	19,5	14,0	8,0	6777152010B1, 0155301553	70

Rubber screw clip

- for Mitsubishi
- for Toyota/Lexus
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	
420.1760	10	12,0	16,0	10,0	MB083120, 9018904008	18
420.5760	50	12,0	16,0	10,0	MB083120, 9018904008	89

Round nut clip

- for Toyota/Lexus
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	
420.1754	10	20,5	17,7	8,8	9018906013	11
420.5754	50	20,5	17,7	8,8	9018906013	54

Bonnet/mudguard clip

- for Toyota/Lexus
- in polybag

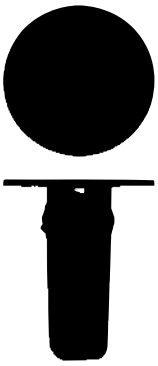


	Content	Head Ø mm	Length mm	Ø mm	OE	
420.1759	10	21,0	16,0	5,2	9018906065	12
420.5759	50	21,0	16,0	5,2	9018906065	61



Wing lining screw clip

- for Toyota/Lexus
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1785	10	20,0	22,0	8,0	9018906157	15
420.5785	50	20,0	22,0	8,0	9018906157	75

Sealing rivet

- for Toyota/Lexus
- in polybag



	Content	Flange mm	Length mm	Ø mm	OE	g
420.1782	10	6,2	42,4	3,8	9026904051	12
420.5782	50	6,2	42,4	3,8	9026904051	58

Sealing rivet

- for Toyota/Lexus
- in polybag



	Content	Flange mm	Length mm	Ø mm	OE	g
420.1783	10	8,7	51,9	4,0	9026904053	13
420.5783	50	8,7	51,9	4,0	9026904053	67

Sealing rivet

- for Toyota/Lexus
- in polybag



	Content	Flange mm	Length mm	Ø mm	OE	g
420.1784	10	12,7	49,8	4,9	9026905054	24
420.5784	50	12,7	49,8	4,9	9026905054	119

Sealing rivet

- for Toyota/Lexus
- in polybag



	Content	Flange mm	Length mm	Ø mm	OE	g
420.1781	10	12,8	48,5	5,7	9026905065	37
420.5781	50	12,8	48,5	5,7	9026905065	187

Door panel clip

- for Nissan
- for Toyota/Lexus
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1761	10	14,0	8,0	10,0	9046701766, 0153301733	8
420.5761	50	14,0	8,0	10,0	9046701766, 0153301733	38

Retaining bracket clip

- for Honda
- for Toyota/Lexus
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1757	10	15,0	20,4	7,0	90672671003, 9046709065	9
420.5757	50	15,0	20,4	7,0	90672671003, 9046709065	44

Wheel case connection clip

- for Mazda
- for Toyota/Lexus
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1766	10	18,0	15,0	9,0	9046709139	18
420.5766	50	18,0	15,0	9,0	9046709139	89

Front grill clip

- for Honda
- for Mitsubishi
- for Toyota/Lexus
- in polybag



	Content	Width mm	Length mm	OE	g
420.1753	10	13,6	21,7	9046712020, 8942180270	7
420.5753	50	13,6	21,7	9046712020, 8942180270	37

Fastening clip

- for Toyota/Lexus
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1765	10	18,0	15,0	8,0	9046712078	11	
420.5765	50	18,0	15,0	8,0	9046712078	53	

UNIVERSAL FASTENING CLIPS ALSO FOR TOYOTA/LEXUS

Round nut clip

- for Mitsubishi
- for Toyota/Lexus
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1502	10	17,7	16,3	8,5	MU480033, 9018906001	11	
420.5502	50	17,7	16,3	8,5	MU480033, 9018906001	53	

Fastening clip

- for Mazda
- for Toyota/Lexus
- for Isuzu
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1401	10	10,2	21,0	9,0	6777112010, 992740825, 8942264920	11	
420.5401	50	10,2	21,0	9,0	6777112010, 992740825, 8942264920	56	

Car interior lining clip

- for Mazda
- for Toyota/Lexus
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1403	10	18,6	14,2	8,0	992740822, 6258114020	9	
420.5403	50	18,6	14,2	8,0	992740822, 6258114020	43	

Square nut clip

- for Mazda
- for Nissan
- for Toyota/Lexus
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1404	10	9,8	16,7	8,0	999100402, 0128100501	5	
420.5404	50	9,8	16,7	8,0	999100402, 0128100501	23	

Car interior lining connection clip

- for Honda
- for Toyota/Lexus
- for Subaru
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1356	10	18,0	14,0	9,0	9046710161, 91560S6A003, 909130115	11	
420.5356	50	18,0	14,0	9,0	9046710161, 91560S6A003, 909130115	54	

Rubber screw clip

- for Honda
- for Toyota/Lexus
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1357	10	14,0	10,0	7,7	90662693003, 9018904066	6	
420.5357	50	14,0	10,0	7,7	90662693003, 9018904066	31	

Door and window rubber clip

- for Mazda
- for Toyota/Lexus
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1413	10	5,2	10,0	5,0	G03158762, 6786889101	2	
420.5413	50	5,2	10,0	5,0	G03158762, 6786889101	12	

FASTENING CLIPS FOR VOLKSWAGEN

Connection clip

- for Audi
- for Volkswagen
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1862	10	27,0	30,0	10,0	1H0868243B	40	
420.5862	50	27,0	30,0	10,0	1H0868243B	202	

Screw grommet

- for Audi
- for Volkswagen
- in polybag



	Content	Head Ø mm	Length mm	Screw no	OE	g	
420.1863	10	15,0	12,0	8	N90833801	6	
420.5863	50	15,0	12,0	8	N90833801	32	

Fastening clip

- for Audi
- for Volkswagen
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1006	10	16,0	12,0	10,0	3A0853575A, 3A0853575	14	
420.5006	50	16,0	12,0	10,0	3A0853575A, 3A0853575	70	

Plastic clip

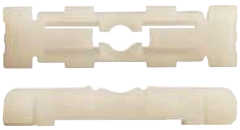
- for Audi
- for Volkswagen
- in polybag



	Content	Width mm	Length mm	OE	g	
420.1864	10	21,9	34,9	4A0853825A, 4A0853825	23	
420.5864	50	21,9	34,9	4A0853825A, 4A0853825	115	

Door strip fastening

- for Audi
- for Volkswagen
- in polybag



	Content	Width mm	Length mm	OE	g	
420.1011	10	8,1	31,0	6U085733	8	
420.5011	50	8,1	31,0	6U085733	38	

Connection clip

- for Audi
- for Volkswagen
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1865	10	22,0	25,0	10,0	3B0853576	25	
420.5865	50	22,0	25,0	10,0	3B0853576	124	

Connection clip

- for Volkswagen
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1866	10	22,8	17,0	6,3	1H0819055B01C	11	
420.5866	50	22,8	17,0	6,3	1H0819055B01C	53	

Plastic connection

- for Volkswagen
- in polybag



	Content	Head Ø mm	Length mm	OE	g	
420.1867	10	41,6	29,0	443853909A	19	
420.5867	50	41,6	29,0	443853909A	96	

Push-type connection clip

- for Volkswagen
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1868	10	18,0	29,2	7,4	171885767	12	
420.5868	50	18,0	29,2	7,4	171885767	60	

Cable harness fastening

- for BMW
- for Opel
- for Volkswagen
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1856	10	20,3	20,2	9,1	2207713, N9020160H, 514719044317	13	
420.5856	50	20,3	20,2	9,1	2207713, N9020160H, 514719044317	63	

Drive-in connection clip

- for Audi
- for Citroën/Peugeot
- for Opel
- for Volkswagen
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1857	10	12,3	17,5	8,4	N0385501, 7814.24	6	
420.5857	50	12,3	17,5	8,4	N0385501, 7814.24	30	

Plastic screw

- for Audi
- for Volkswagen
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1869	10	20,0	15,0	10,0	191941142	7	
420.5869	50	20,0	15,0	10,0	191941142	37	

Plastic connection nuts

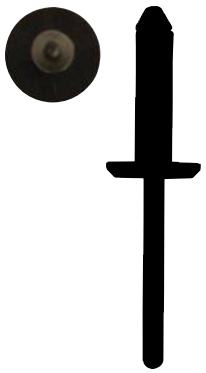
- for Audi
- for Volkswagen
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1860	10	14,1	10,3	4,5	171201969	8	
420.5860	50	14,1	10,3	4,5	171201969	41	

Plastic rivet

- for Volkswagen
- for Chrysler
- in polybag



	Content	Length mm	Ø mm	OE	g	
420.1870	10	47,7	5,1	6503800, 1758535570C	9	
420.5870	50	47,7	5,1	6503800, 1758535570C	46	

Breather connection nut

- for Volkswagen
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1854	10	9,5	9,8	6,9	175853674	3	
420.5854	50	9,5	9,8	6,9	175853674	16	

Tail light connection clip

- for Opel
- for Volkswagen
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1853	10	12,9	7,8	10,0	3997391, 179813881	4	
420.5853	50	12,9	7,8	10,0	3997391, 179813881	21	

Headlamp union nut

- for Opel
- for Volkswagen
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1855	10	10,5	14,8	7,2	441035555, 1370853	4	
420.5855	50	10,5	14,8	7,2	441035555, 1370853	22	

Nylon rubber nut

- for Volkswagen
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1859	10	12,6	12,3	8,0	811807577C	5	
420.5859	50	12,6	12,3	8,0	811807577C	26	

Nylon rubber nut

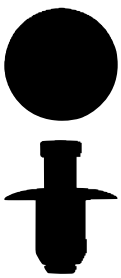
- for Volkswagen
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1858	10	12,2	16,7	8,2	867809966	7	
420.5858	50	12,2	16,7	8,2	867809966	36	

Drive rivet

- for Volkswagen
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1872	10	14,8	9,7	6,6	8N0863788	8	
420.5872	50	14,8	9,7	6,6	8N0863788	38	

Drive-in connection clip

- for Volkswagen
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1861	10	16,0	12,0	8,0	N16186729901C	10	
420.5861	50	16,0	12,0	8,0	N16186729901C	49	

Cable harness fastening

- for Ford
- for Volkswagen
- for Chrysler
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1852	10	24,3	18,0	7,9	385661, N989022, 6003349	10	
420.5852	50	24,3	18,0	7,9	385661, N989022, 6003349	51	

Door strip fastening

- for Opel
- for Volkswagen
- for Chrysler
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1851	10	24,2	18,5	7,7	6003349, N98905101, 9685057	14	
420.5851	50	24,2	18,5	7,7	6003349, N98905101, 9685057	71	

UNIVERSAL FASTENING CLIPS ALSO FOR VOLKSWAGEN

Door panel clip

- for Audi
- for Volkswagen
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1010	10	22,0	10,0	10,0	3B0868243, 3B0838243	18	
420.5010	50	22,0	10,0	10,0	3B0868243, 3B0838243	91	

Push-type clip

- for Audi
- for Volkswagen
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1001	10	24,0	15,0	8,3	51481915964, 1H0867199A	18	
420.5001	50	24,0	15,0	8,3	51481915964, 1H0867199A	89	

Car interior lining connection clip

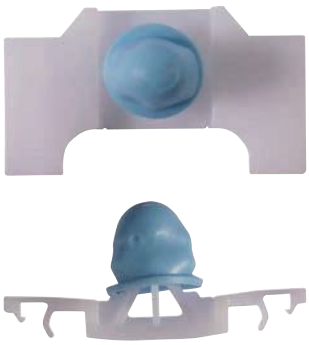
- for Audi
- for Volkswagen
- in polybag



	Content	Head Ø mm	Length mm	OE	g	
420.1002	10	28,3	31,3	1H0868243B, 1H086243	38	
420.5002	50	28,3	31,3	1H0868243B, 1H086243	192	

Connection rubber seal

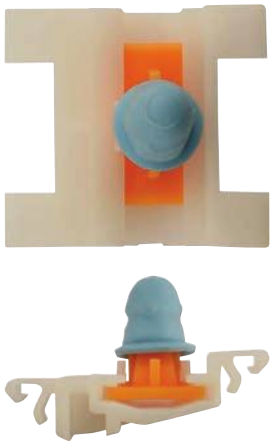
- for Audi
- for Volkswagen
- for Škoda
- in polybag



	Content	Width mm	OE	g	
420.1003	10	40,2	1H0853585A	31	
420.5003	50	40,2	1H0853585A	157	

Connection rubber seal

- for Audi
- for Volkswagen
- in polybag



	Content	Width mm	OE	g	
420.1004	10	40,2	3A0853575	75	
420.5004	50	40,2	3A0853575	374	

Connection rubber seal

- for Audi
- for Volkswagen
- in polybag



	Content	Head Ø mm	Width mm	Ø mm	OE	g	
420.1005	10	18,0	21,0	11,0	3B0853575	16	
420.5005	50	18,0	21,0	11,0	3B0853575	78	

Fastening clip

- for Opel
- for Volkswagen
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1601	10	15,8	18,4	6,0	1H0837719, 15979	3	
420.5601	50	15,8	18,4	6,0	1H0837719, 15979	17	

Drive-in connection clip

- for Audi
- for Volkswagen
- in polybag



	Content	Rod Ø mm	Ø mm	OE	g	
420.1013	10	4,5	7,5	6N0823397C	17	
420.5013	50	4,5	7,5	6N0823397C	87	

Plastic rivet for glove compartment

- for BMW
- for Citroën/Peugeot
- for Volkswagen
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1061	10	10,0	12,0	6,0	51161881149, N10259301, 7703072116	5	
420.5061	50	10,0	12,0	6,0	51161881149, N10259301, 7703072116	24	

Boot interior lining clip

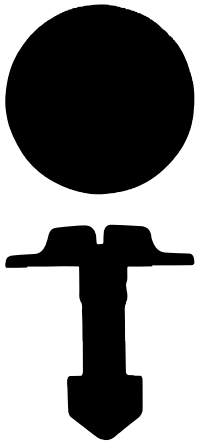
- for Ford
- for Volkswagen
- in polybag



	Content	Head Ø mm	Ø mm	OE		
420.1278	10	25,0	8,0	6678518, 6448410	9	
420.5278	50	25,0	8,0	6678518, 6448410	46	

Motor protection/bumper clip

- for Audi
- for Volkswagen
- in polybag



	Content	Head Ø mm	Length mm	OE		
420.1017	10	25,0	27,8	4A0805121C	22	
420.5017	50	25,0	27,8	4A0805121C	112	

Plastic fastening clip

- for Audi
- for Volkswagen
- in polybag



	Content	Width mm	Length mm	OE		
420.1007	10	25,2	34,8	4A0853825C	26	
420.5007	50	25,2	34,8	4A0853825C	131	

Quick-release fastener

- for Audi
- for Volkswagen
- for Seat
- for Škoda
- in polybag



	Content	Ø mm	OE		
420.1014	10	32,0	N90335006, N90335004	24	
420.5014	50	32,0	N90335006, N90335004	119	

Quick-release fastener

- for Audi
- for Volkswagen
- for Seat
- in polybag



	Content	Ø mm	OE		
420.1015	10	32,0	N90796501	22	
420.5015	50	32,0	N90796501	112	

Lateral protection strips clip

- for Volkswagen
- for Volvo
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE		
420.1803	10	16,0	12,0	3,5	591740, 171583585	3	
420.5803	50	16,0	12,0	3,5	591740, 171583585	15	

FASTENING CLIPS FOR VOLVO

Push-type clip

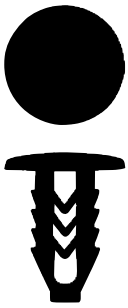
- for Nissan
- for Volvo
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE		
420.1558	10	18,0	11,0	7,0	9046707043, 8099905N07	11	
420.5558	50	18,0	11,0	7,0	9046707043, 8099905N07	56	

Interior strip clip

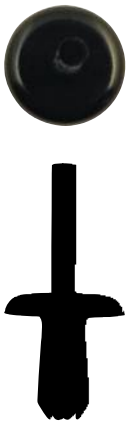
- for Fiat
- for Volvo
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE		
420.1201	10	16,0	18,0	9,0	4292906	8	
420.5201	50	16,0	18,0	9,0	4292906	42	

Drive rivet for bumper

- for Volvo
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE		
420.1801	10	16,0	14,0	6,0	1268176	11	
420.5801	50	16,0	14,0	6,0	1268176	56	

Connection clip

- for BMW
- for Volvo
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1057	10	18,0	8,0	7,0	51131804205	6	
420.5057	50	18,0	8,0	7,0	51131804205	31	

Push-type clip

- for Citroën/Peugeot
- for Mercedes
- for Volvo
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1651	10	10,0	7,0	5,0	790307216, A0009903492, 947098	3	
420.5651	50	10,0	7,0	5,0	790307216, A0009903492, 947098	15	

Lateral protection strips clip

- for Volkswagen
- for Volvo
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1803	10	16,0	12,0	3,5	591740, 171583585	3	
420.5803	50	16,0	12,0	3,5	591740, 171583585	15	

Push-type clip

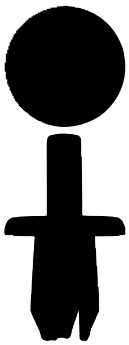
- for Nissan
- for Volvo
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1560	10	20,0	14,0	8,0	6384801G00	13	
420.5560	50	20,0	14,0	8,0	6384801G00	66	

Drive rivet

- for Volvo
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1802	10	16,0	14,0	9,0	9133417	12	
420.5802	50	16,0	14,0	9,0	9133417	59	

Bonnet clip

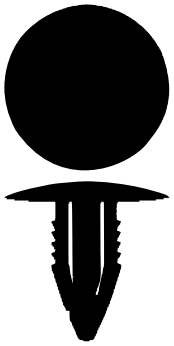
- for Volvo
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1804	10	25,0	10,0	5,0	9133073	5	
420.5804	50	25,0	10,0	5,0	9133073	27	

Bumper clip

- for Volvo
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1805	10	21,8	19,7	9,0	3272075327462B	10	
420.5805	50	21,8	19,7	9,0	3272075327462B	50	

Bumper clip

- for Volvo
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1806	10	22,0	19,7	9,1	327462A	12	
420.5806	50	22,0	19,7	9,1	327462A	58	

Bonnet screw rods clip

- for Volvo
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1807	10	20,9	10,5	11,7	3923712	11	
420.5807	50	20,9	10,5	11,7	3923712	57	

FASTENING CLIPS - CABLE HARNESSES

Cable harness fastening

- for Ford
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1251	10	18,0	20,0	7,9	388577S	7	
420.5251	50	18,0	20,0	7,9	388577S	35	

Cable harness fastening

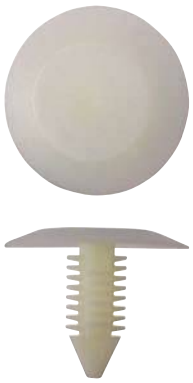
- for Ford
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1252	10	17,6	15,5	7,9	6998849	5	
420.5252	50	17,6	15,5	7,9	6998849	27	

Cable harness fastening

- for Chrysler
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE		
420.1901	10	24,4	18,0	7,8	6003423	11	
420.5901	50	24,4	18,0	7,8	6003423	53	

Cable harness fastening

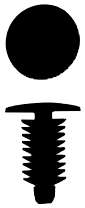
- for Ford
- for Volkswagen
- for Chrysler
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE		
420.1852	10	24,3	18,0	7,9	385661, N989022, 6003349	10	
420.5852	50	24,3	18,0	7,9	385661, N989022, 6003349	51	

Door and window rubber clip

- for Opel
- for Chrysler
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE		
420.1102	10	10,0	11,7	6,0	6502328, 20699808	3	
420.5102	50	10,0	11,7	6,0	6502328, 20699808	13	

Dashboard connection clip

- for Ford
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE		
420.1253	10	21,4	29,0	11,3	N804379S	22	
420.5253	50	21,4	29,0	11,3	N804379S	109	

Bonnet stripped insulation fastening

- for Ford
- for Mazda
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE		
420.1409	10	20,0	9,0	6,0	F22Z16774A, 6508197AA	3	
420.5409	50	20,0	9,0	6,0	F22Z16774A, 6508197AA	16	

Bumper cover clip

- for Ford
- for Opel
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE		
420.1307	10	17,9	16,4	7,8	N806113S, 16674629	6	
420.5307	50	17,9	16,4	7,8	N806113S, 16674629	32	

Engine grill cable fastening

- for Nissan
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE		
420.1568	10	12,0	16,0	6,0	0153301781	5	
420.5568	50	12,0	16,0	6,0	0153301781	23	

Cable harness connection clip

- for BMW
- for Opel
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE		
420.1373	10	18,0	27,6	7,6	10124502	9	
420.5373	50	18,0	27,6	7,6	10124502	43	

Cable harness fastening

- for BMW
- for Opel
- for Volkswagen
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE		
420.1856	10	20,3	20,2	9,1	2207713, N9020160H, 514719044317	13	
420.5856	50	20,3	20,2	9,1	2207713, N9020160H, 514719044317	63	

Cable harness fastening

- Universal
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	g	
420.1768	10	16,1	15,5	6,7	7	
420.5768	50	16,1	15,5	6,7	35	

FASTENING CLIPS - PLASTIC RIVETS

Plastic rivet

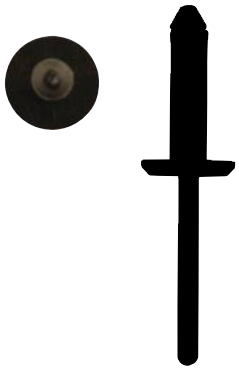
- for Ford
- in polybag



	Content	Length mm	Ø mm	OE	g	
420.1274	10	64,2	4,0	N804583S	9	
420.5274	50	64,2	4,0	N804583S	45	

Plastic rivet

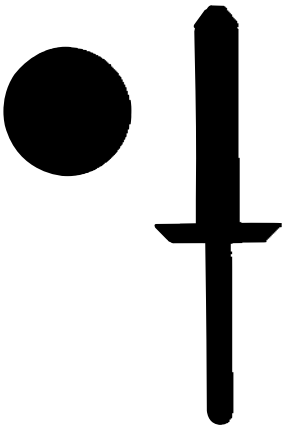
- for Volkswagen
- for Chrysler
- in polybag



	Content	Length mm	Ø mm	OE	g	
420.1870	10	47,7	5,1	6503800, 1758535570C	9	
420.5870	50	47,7	5,1	6503800, 1758535570C	46	

Plastic rivet

- for Ford
- for Opel
- for Chrysler
- in polybag



	Content	Length mm	Ø mm	OE	g	
420.1275	10	55,5	6,3	14063981, N8030433, 6500911	18	
420.5275	50	55,5	6,3	14063981, N8030433, 6500911	88	

Blind rivet connection clip

- for Chrysler
- in polybag



	Content	Length mm	Ø mm	OE	g	
420.1103	10	51,8	5,1	6500898	9	
420.5103	50	51,8	5,1	6500898	47	

Blind rivet connection clip

- for BMW
- in polybag



	Content	Length mm	Ø mm	OE	g	
420.1051	10	51,0	6,0	51717002953	16	
420.5051	50	51,0	6,0	51717002953	80	

Plastic rivet

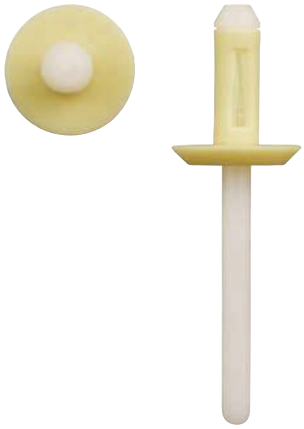
- for Opel
- in polybag



	Content	Length mm	Ø mm	OE	g	
420.1317	10	50,8	6,3	15506827	18	
420.5317	50	50,8	6,3	15506827	90	

Plastic rivet

- for Opel
- in polybag



	Content	Length mm	Ø mm	OE	g	
420.1318	10	55,6	6,3	14070914	17	
420.5318	50	55,6	6,3	14070914	87	

Blind rivet connection clip

- for Chrysler
- in polybag



	Content	Length mm	Ø mm	OE	g	
420.1104	10	52,0	5,9	25524005	15	
420.5104	50	52,0	5,9	25524005	76	

Blind rivet connection clip

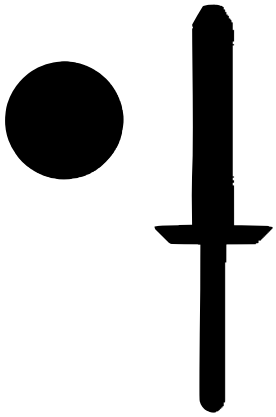
- for Opel
- for Chrysler
- in polybag



	Content	Length mm	Ø mm	OE	
420.1304	10	46,0	5,1	6004212, 204655395	7
420.5304	50	46,0	5,1	6004212, 204655395	34

Plastic rivet

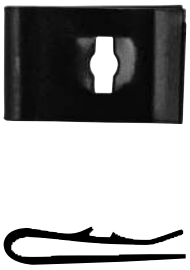
- for Ford
- for Chrysler
- in polybag



	Content	Length mm	Ø mm	OE	
420.1276	10	54,0	6,3	N804675S, 6503860	19
420.5276	50	54,0	6,3	N804675S, 6503860	96

Metal U-nut

- for Škoda
- in polybag



	Content	Width mm	Length mm	
420.1906	10	13,5	21,1	27
420.5906	50	13,5	21,1	137

Blind rivet connection clip

- for Opel
- in polybag



	Content	Length mm	Ø mm	OE	
420.1305	10	54,0	5,9	10036503	18
420.5305	50	54,0	5,9	10036503	91

Blind rivet connection clip

- for Opel
- in polybag



	Content	Length mm	Ø mm	OE	
420.1306	10	53,4	7,1	10109689	19
420.5306	50	53,4	7,1	10109689	96

FASTENING CLIPS - QUICK-RELEASE FASTENER

Quick-release fastener

- for Audi
- for Volkswagen
- for Seat
- for Škoda
- in polybag



	Content	Ø mm	OE	
420.1014	10	32,0	N90335006, N90335004	24
420.5014	50	32,0	N90335006, N90335004	119

Quick-release fastener

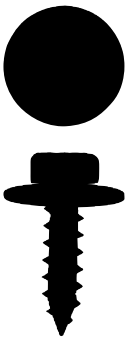
- for Audi
- for Volkswagen
- for Seat
- in polybag



	Content	Ø mm	OE	
420.1015	10	32,0	N90796501	22
420.5015	50	32,0	N90796501	112

Metal screw/washer

- Universal
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	
420.1907	10	10,0	24,0	6,2	66
420.5907	50	10,0	24,0	6,2	328

Metal screw/washer

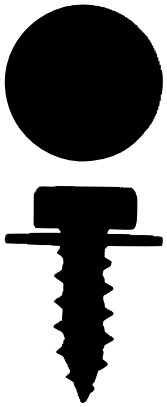
- for BMW
- for Mercedes
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	
420.1464	10	10,8	18,8	6,3	81
420.5464	50	10,8	18,8	6,3	404

Metal screw/washer

- for BMW
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	g	
420.1908	10	20,9	17,3	9,4	55	
420.5908	50	20,9	17,3	9,4	275	

Sealing rivet

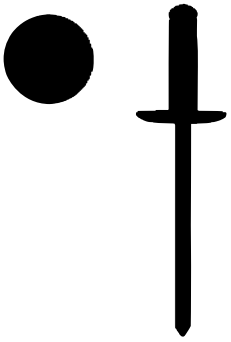
- for Toyota/Lexus
- in polybag



	Content	Flange mm	Length mm	Ø mm	g	
420.1781	10	12,8	48,5	5,7	37	
420.5781	50	12,8	48,5	5,7	187	

Sealing rivet

- for Audi
- for Citroën/Peugeot
- for Opel
- for Volkswagen
- in polybag



	Content	Flange mm	Length mm	Ø mm	g	
420.1909	10	12,0	44,0	4,0	21	
420.5909	50	12,0	44,0	4,0	104	

Sealing rivet

- for Toyota/Lexus
- in polybag



	Content	Flange mm	Length mm	Ø mm	g	
420.1782	10	6,2	42,4	3,8	12	
420.5782	50	6,2	42,4	3,8	58	

Sealing rivet

- for Toyota/Lexus
- in polybag



	Content	Flange mm	Length mm	Ø mm	g	
420.1783	10	8,7	51,9	4,0	13	
420.5783	50	8,7	51,9	4,0	67	

Sealing rivet

- for Toyota/Lexus
- in polybag



	Content	Flange mm	Length mm	Ø mm	g	
420.1784	10	12,7	49,8	4,9	24	
420.5784	50	12,7	49,8	4,9	119	

Star rivet

- for Audi
- for Citroën/Peugeot
- for Opel
- for Volkswagen
- in polybag

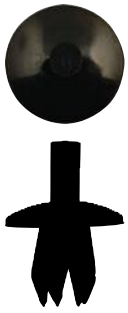


	Content	Flange mm	Length mm	Ø mm	g	
420.1911	10	12,1	47,9	3,9	21	
420.5911	50	12,1	47,9	3,9	106	

FASTENING CLIPS - PUSH-IN RIVETS

Rivet for headlamp bracket

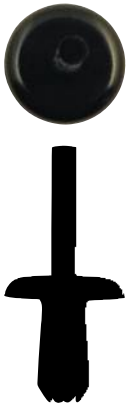
- for Ford
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1277	10	15,8	11,1	6,3	383142S	9	
420.5277	50	15,8	11,1	6,3	383142S	45	

Drive rivet for bumper

- for Volvo
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1801	10	16,0	14,0	6,0	1268176	11	
420.5801	50	16,0	14,0	6,0	1268176	56	

Push-type clip

- for Citroën/Peugeot
- for Mercedes
- for Volvo
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1651	10	10,0	7,0	5,0	790307216, A0009903492, 947098	3	
420.5651	50	10,0	7,0	5,0	790307216, A0009903492, 947098	15	

Drive rivet for air conditioning

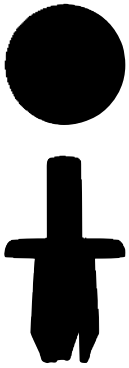
- for Opel
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1319	10	11,3	7,0	4,9	14005089	4	
420.5319	50	11,3	7,0	4,9	14005089	22	

Drive rivet

- for Volvo
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1802	10	16,0	14,0	9,0	9133417	12	
420.5802	50	16,0	14,0	9,0	9133417	59	



Drive-in clip

- for Mercedes
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1451	10	13,0	14,0	8,0	A0009903792	10	
420.5451	50	13,0	14,0	8,0	A0009903792	48	

Push-type connection clip

- for Volkswagen
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1868	10	18,0	29,2	7,4	171885767	12	
420.5868	50	18,0	29,2	7,4	171885767	60	

Drive-in connection clip

- for Audi
- for Citroën/Peugeot
- for Opel
- for Volkswagen
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1857	10	12,3	17,5	8,4	N0385501, 7814.24	6	
420.5857	50	12,3	17,5	8,4	N0385501, 7814.24	30	

Push-type connection clip

- for Mercedes
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1459	10	9,9	10,7	6,1	A0009908492	5	
420.5459	50	9,9	10,7	6,1	A0009908492	23	

Drive-in connection clip

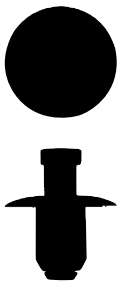
- for Volkswagen
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1861	10	16,0	12,0	8,0	N16186729901C	10	
420.5861	50	16,0	12,0	8,0	N16186729901C	49	

Drive rivet

- for Volkswagen
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1872	10	14,8	9,7	6,6	8N0863788	8	
420.5872	50	14,8	9,7	6,6	8N0863788	38	

Drive rivet

- Universal
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	g	
420.1912	10	10,0	12,0	5,0	5	
420.5912	50	10,0	12,0	5,0	23	

FASTENING CLIPS - PLASTIC NUTS

Square nut clip

- for Mitsubishi
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1501	10	11,9	10,5	9,0	9018905013	7
420.5501	50	11,9	10,5	9,0	9018905013	35

Round nut clip

- for Toyota/Lexus
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1754	10	20,5	17,7	8,8	9018906013	11
420.5754	50	20,5	17,7	8,8	9018906013	54

Round nut clip

- for Mitsubishi
- for Nissan
- for Toyota/Lexus
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1755	10	16,4	17,3	8,5	9018906001, 128100231	12
420.5755	50	16,4	17,3	8,5	9018906001, 128100231	60

Square nut clip

- for Mazda
- for Nissan
- for Toyota/Lexus
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1404	10	9,8	16,7	8,0	999100402, 0128100501	5
420.5404	50	9,8	16,7	8,0	999100402, 0128100501	23

Screw grommet

- for Mitsubishi
- in polybag



	Content	Head Ø mm	Length mm	Screw no	OE	g
420.1508	10	16,6	18,0	8	MU480034	12
420.5508	50	16,6	18,0	8	MU480034	61

Screw

- for Ford
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1263	10	10,1	10,4	6,3	N379830S	4
420.5263	50	10,1	10,4	6,3	N379830S	22

Square nut clip

- for Nissan
- for Toyota/Lexus
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1758	10	9,2	13,1	7,7	96706P0105, 75521611000	8
420.5758	50	9,2	13,1	7,7	96706P0105, 75521611000	40

Headlamp union nut

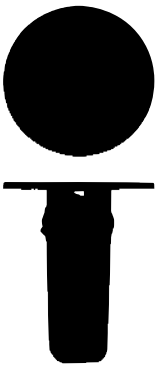
- for Opel
- for Volkswagen
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1855	10	10,5	14,8	7,2	441035555, 1370853	4
420.5855	50	10,5	14,8	7,2	441035555, 1370853	22

Wing lining screw clip

- for Toyota/Lexus
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1785	10	20,0	22,0	8,0	9018906157	15
420.5785	50	20,0	22,0	8,0	9018906157	75

Connection clip

- for Mercedes
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1454	10	18,3	14,5	9,8	A0019882981	6
420.5454	50	18,3	14,5	9,8	A0019882981	30

Push-type fastening clip

- for Renault
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1703	10	14,0	14,0	8,0	7703081184	8
420.5703	50	14,0	14,0	8,0	7703081184	42

Screw grommet

- for Fiat
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1211	10	12,3	18,0	9,7	83468473	14	
420.5211	50	12,3	18,0	9,7	83468473	68	

FASTENING CLIPS - SCREW-IN RIVETS

Push-type clip

- for Mazda
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1402	10	15,2	12,6	7,0	MB345544, 2042301	8	
420.5402	50	15,2	12,6	7,0	MB345544, 2042301	40	

Push-type clip

- for Honda
- for Nissan
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1352	10	20,6	9,5	8,0	90675SB003, 75521611000	13	
420.5352	50	20,6	9,5	8,0	90675SB003, 75521611000	63	

Push-type clip

- for Ford
- for Nissan
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1553	10	19,2	12,9	8,0	6384401A00, 1007932	29	
420.5553	50	19,2	12,9	8,0	6384401A00, 1007932	143	

Splash guard connection clip

- for Nissan
- for Opel
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1557	10	13,7	16,5	6,0	94051933, 6686001W01	6	
420.5557	50	13,7	16,5	6,0	94051933, 6686001W01	30	

Push-type clip

- for Nissan
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1565	10	20,0	22,0	8,0	6387801E10	13	
420.5565	50	20,0	22,0	8,0	6387801E10	67	

Push-type connection clip

- for Ford
- for Mazda
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1267	10	18,0	18,0	8,0	W706713S300, NAU156145	9	
420.5267	50	18,0	18,0	8,0	W706713S300, NAU156145	47	

Push-type clip

- for Ford
- for Opel
- for Chrysler
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1254	10	17,8	17,5	6,3	10139822, 6508197AA, 1673046	9	
420.5254	50	17,8	17,5	6,3	10139822, 6508197AA, 1673046	46	

Push-type clip

- for Ford
- for Chrysler
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g	
420.1255	10	15,5	22,8	6,3	6502871, 1007932	10	
420.5255	50	15,5	22,8	6,3	6502871, 1007932	50	

Push-type connection clip

- for Mercedes
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1453	10	18,0	19,0	10,0	A1269900392	19
420.5453	50	18,0	19,0	10,0	A1269900392	96

Push-type connection clip

- for Mercedes
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1458	10	18,0	19,0	9,0	A9904692	16
420.5458	50	18,0	19,0	9,0	A9904692	78

Push-type clip

- for Audi
- for Volkswagen
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1001	10	24,0	15,0	8,3	51481915964, 1H0867199A	18
420.5001	50	24,0	15,0	8,3	51481915964, 1H0867199A	89

Push-type clip

- for Audi
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1009	10	23,0	29,0	5,5	1H0819055C01C	18
420.5009	50	23,0	29,0	5,5	1H0819055C01C	88

FASTENING CLIPS FOR GENERAL VEHICLE APPLICATION

Square nut clip

- for Mitsubishi
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1902	10	13,1	15,1	10,5	MB293328	10
420.5902	50	13,1	15,1	10,5	MB293328	48

Square nut clip

- for Mazda
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	OE	g
420.1903	10	16,0	12,0	10,5	999100501	7
420.5903	50	16,0	12,0	10,5	999100501	33



Insert connection clip

- for Renault
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	g
420.1916	10	15,5	15,6	8,6	11
420.5916	50	15,5	15,6	8,6	54

Cable harness fastening

- Universal
- in polybag



	Content	Head Ø mm	Length mm	Ø mm	g
420.1768	10	16,1	15,5	6,7	7
420.5768	50	16,1	15,5	6,7	35

Buckle

- for Renault
- in polybag



	Content	Width mm	Length mm	g
420.1917	10	25,1	36,5	35
420.5917	50	25,1	36,5	176

Metal U-nut

- for Škoda
- in polybag



	Content	Width mm	Length mm	g
420.1906	10	13,5	21,1	27
420.5906	50	13,5	21,1	137

Metal screw/washer

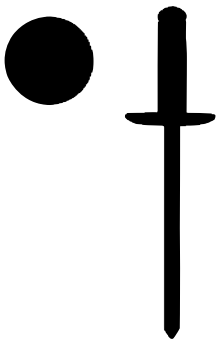
- Universal
- in polybag



	Content	Head Ø mm	Length mm	Ø mm		
420.1907	10	10,0	24,0	6,2	66	
420.5907	50	10,0	24,0	6,2	328	

Sealing rivet

- for Audi
- for Citroën/Peugeot
- for Opel
- for Volkswagen
- in polybag



	Content	Length mm	Flange mm	Ø mm		
420.1909	10	44,0	12,0	4,0	21	
420.5909	50	44,0	12,0	4,0	104	

Star rivet

- for Audi
- for Citroën/Peugeot
- for Opel
- for Volkswagen
- in polybag



	Content	Length mm	Flange mm	Ø mm		
420.1911	10	47,9	12,1	3,9	21	
420.5911	50	47,9	12,1	3,9	106	

Drive rivet

- Universal
- in polybag



	Content	Head Ø mm	Length mm	Ø mm		
420.1912	10	10,0	12,0	5,0	5	
420.5912	50	10,0	12,0	5,0	23	

Cable clip - Wire

- for Audi
- for Citroën/Peugeot
- for Opel
- for Volkswagen
- in polybag



	Content	Ø mm		
420.1957	10	6,3	6	
420.5957	50	6,3	32	

Cable clip - Wire

- for Audi
- for Citroën/Peugeot
- for Opel
- for Volkswagen
- in polybag



	Content	Ø mm		
420.1958	10	9,5	7	
420.5958	50	9,5	33	

Cable clip - Wire

- for Audi
- for Citroën/Peugeot
- for Opel
- for Volkswagen
- in polybag



	Content	Ø mm		
420.1959	10	12,7	8	
420.5959	50	12,7	40	

Cable clip - Wire

- for Audi
- for Citroën/Peugeot
- for Opel
- for Volkswagen
- in polybag



	Content	Ø mm		
420.1960	10	5,0	4	
420.5960	50	5,0	20	

FASTENING CLIP SETS

Trim Clips Assortment - Fir Tree Fixings

- Universal



420.0900	340 pcs	Trim Clips Assortment - Fir Tree Fixings	447

OE			
420.1251	388577S	30 x	
420.1252	6998849	30 x	
420.1901	6003423	15 x	
420.1852	385661, 6003349, N989022	15 x	
420.1102	20699808, 6502328	50 x	
420.1253	N804379S	10 x	
420.1409	6508197AA, F22Z16774A	35 x	
420.1307	16674629, N806113S	30 x	
420.1568	0153301781	50 x	
420.1373	10124502	25 x	
420.1856	2207713, 514719044317, N9020160H	20 x	
420.1768		30 x	

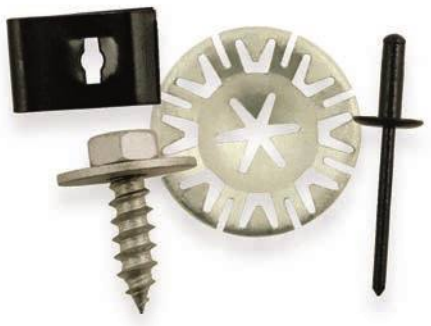
Trim Clips Assortment - Plastic Rivets

•Universal



420.0905	235 pcs	Trim Clips Assortment - Plastic Rivets	540	

OE			
420.1274	N804583S	20 x	
420.1870	1758535570C, 6503800	30 x	
420.1275	14063981, 6500911, N8030433	15 x	
420.1103	6500898	25 x	
420.1051	51717002953	15 x	
420.1317	15506827	15 x	
420.1318	14070914	15 x	
420.1104	25524005	20 x	
420.1304	204655395, 6004212	35 x	
420.1305	10036503	15 x	
420.1306	10109689	15 x	
420.1276	6503860, N804675S	15 x	





Trim Clips Assortment - Bodyshop Metal Fasteners

•Universal





420.0915	400 pcs	Trim Clips Assortment - Bodyshop Metal Fasteners	1397	

OE			
420.1014	N90335004, N90335006	25 x	
420.1015	N90796501	25 x	
420.1906		50 x	
420.1907		30 x	
420.1464	07119916946, N914031006203	20 x	
420.1908	07147129160	30 x	
420.1781	9026905065	30 x	
420.1909		35 x	
420.1782	9026904051	50 x	
420.1783	9026904053	50 x	
420.1784	9026905054	25 x	
420.1911		30 x	

Trim Clips Assortment - Popular Drive Push-Pin Rivets

•Universal



420.0920	350 pcs	Trim Clips Assortment - Popular Drive Push-Pin Rivets	455	

OE			
420.1277	383142S	25 x	
420.1801	1268176	20 x	
420.1651	790307216, 947098, A0009903492	40 x	
420.1319	14005089	30 x	
420.1802	9133417	20 x	
420.1451	A0009903792	30 x	
420.1868	171885767	20 x	
420.1857	7814.24, N0385501	40 x	
420.1459	A0009908492	30 x	
420.1861	N16186729901C	20 x	
420.1872	8N0863788	40 x	
420.1912		35 x	

Trim Clips Assortment - Plastic Locking Nuts

•Universal



420.0925	350 pcs	Trim Clips Assortment - Plastic Locking Nuts	495	

OE			
420.1501	9018905013	30 x	

	OE		
420.1754	9018906013	20 x	
420.1755	128100231, 9018906001	30 x	
420.1404	0128100501, 999100402	40 x	
420.1508	MU480034	25 x	
420.1263	N379830S	40 x	
420.1758	75521611000, 96706P0105	30 x	
420.1855	1370853, 441035555	40 x	
420.1785	9018906157	20 x	
420.1454	A0019882981	25 x	
420.1703	7703081184	25 x	
420.1211	83468473	25 x	

Trim Clips Assortment - Screw Rivets

- Universal



420.0930	240 pcs	Trim Clips Assortment - Screw Rivets	478

	OE		
420.1402	2042301, MB345544	30 x	
420.1352	75521611000, 90675SB003	20 x	
420.1553	1007932, 6384401A00	20 x	
420.1557	6686001W01, 94051933	40 x	
420.1565	6387801E10	15 x	
420.1267	NAU156145, W706713S300	20 x	
420.1254	10139822, 1673046, 6508197AA	20 x	
420.1255	1007932, 6502871	25 x	
420.1453	A1269900392	15 x	

	OE		
420.1458	A9904692	15 x	
420.1001	1H0867199A, 51481915964	10 x	
420.1009	1H0819055C01C	10 x	

Trim Clips Assortment - Audi

- for Audi



420.0000	160 pcs	Trim Clips Assortment - Audi	545

	OE		
420.1010	3B0838243, 3B0868243	10 x	
420.1001	1H0867199A, 51481915964	10 x	
420.1002	1H086243, 1H0868243B	10 x	
420.1653	357853575, 6991W4	20 x	
420.1003	1H0853585A	10 x	
420.1004	3A0853575	5 x	
420.1005	3B0853575	20 x	
420.1006	3A0853575, 3A0853575A	20 x	
420.1007	4A0853825C	10 x	
420.1864	4A0853825, 4A0853825A	15 x	
420.1008	1H0823397	15 x	
420.1009	1H0819055C01C	15 x	



Trim Clips Assortment - BMW

- for BMW



420.0050	290 pcs	Trim Clips Assortment - BMW	443

	OE		
420.1056	51311802258	80 x	
420.1057	51131804205	80 x	
420.1052	51118174185	35 x	
420.1058	51481938725	35 x	
420.1053	703867299, 823867299	40 x	
420.1059	51131960054	20 x	

Trim Clips Assortment - Peugeot / Citroën

- for Citroën/Peugeot



420.0650	345 pcs	Trim Clips Assortment - Peugeot / Citroën	498

	OE		
420.1651	790307216, 947098, A0009903492	50 x	
420.1652	856535	20 x	
420.1653	357853575, 6991W4	20 x	
420.1655		20 x	
420.1656	694143	25 x	
420.1657	743707	35 x	

	OE		
420.1452	7703074022, A108980027	30 x	
420.1701	14188380, 7703077059	35 x	
420.1654	698317	15 x	
420.1658	699502	25 x	
420.1659	6995X3	30 x	
420.1660	69945	40 x	

Trim Clips Assortment - Fiat

•for Fiat





420.0910	308 pcs	Trim Clips Assortment - Fiat	540

	OE		
420.1201	4292906	30 x	
420.1202	1459487	20 x	
420.1203	1300433650	25 x	
420.1204	71717421	8 x	
420.1205	82456515	25 x	
420.1206	5757139	25 x	
420.1207	1459387	20 x	
420.1208	14188282, 46306526, 60507749	25 x	
420.1209	14591687	25 x	
420.1210	1452387	25 x	
420.1211	83468473	30 x	
420.1212	7677865	50 x	

Trim Clips Assortment - Ford

•for Ford



420.0250	415 pcs	Trim Clips Assortment - Ford	517

	OE		
420.1251	388577S	25 x	
420.1261	N8011925S	15 x	
420.1262	N806289S	40 x	
420.1263	N379830S	30 x	
420.1553	1007932, 6384401A00	15 x	
420.1264	N387496S	10 x	
420.1316	16500308, 6500787	35 x	
420.1265	N803170S	35 x	
420.1266	W704958S300	10 x	
420.1267	NAU156145, W706713S300	20 x	
420.1268	N388246S	35 x	
420.1269	N387944S	15 x	
420.1409	6508197AA, F22Z16774A	30 x	
420.1254	10139822, 1673046, 6508197AA	20 x	
420.1271	N805231S	20 x	
420.1272	W705532S300	15 x	
420.1260	B45556741, F1CZ16674A	30 x	
420.1273	W710250S300	15 x	

Trim Clips Assortment - Honda

•for Honda





420.0350	418 pcs	Trim Clips Assortment - Honda	564

	OE		
420.1753	8942180270, 9046712020	30 x	
420.1351	91502SP0003	8 x	
420.1352	75521611000, 90675SB003	15 x	
420.1359	91566SP0003	20 x	
420.1360	91513SE003	50 x	
420.1361	91530ST5003	40 x	
420.1362	91550SH3003	20 x	
420.1363	91620SR2003	25 x	
420.1364	91578SV4003	5 x	
420.1365	38529689A6300	30 x	
420.1366	91512SX0003	15 x	
420.1367	906876710030	15 x	
420.1368	90683SA5003	30 x	
420.1369	01553, 90687SA50030	30 x	
420.1757	9046709065, 90672671003	20 x	
420.1370	91808SM4000	15 x	
420.1371	91534SEO000	30 x	
420.1372	34355SD2003	20 x	

Trim Clips Assortment - Mazda

•for Mazda



420.0400	475 pcs	Trim Clips Assortment - Mazda	525

OE			
420.1402	2042301, MB345544	20 x	
420.1404	0128100501, 999100402	25 x	
420.1405	9095001248, B0016830200	20 x	
420.1406	90657SA60030, 9418687, N30413356A	25 x	
420.1415	BF6750033	5 x	
420.1408	0155300291, 992640543A	40 x	
420.1416	992780405	20 x	
420.1417	992780404	20 x	
420.1418	99249051B	50 x	
420.1409	6508197AA, F22Z16774A	30 x	
420.1410	BF8250233	5 x	
420.1411	B1016825200	20 x	
420.1412	B09251833	15 x	
420.1420	992640543A	50 x	
420.1260	B45556741, F1CZ16674A	50 x	
420.1413	6786889101, G03158762	50 x	
420.1419	BC1DSA145	15 x	
420.1766	9046709139	15 x	

Trim Clips Assortment - Mercedes

•for Mercedes



420.0450	270 pcs	Trim Clips Assortment - Mercedes	481

OE			
420.1453	A1269900392	15 x	

OE			
420.1454	A0019882981	30 x	
420.1455	A1249900492	25 x	
420.1456	A0019888081	5 x	
420.1457	A1249880492	10 x	
420.1458	A9904692	15 x	
420.1459	A0009908492	40 x	
420.1460	A0019880325	30 x	
420.1461	A1406980260	15 x	
420.1462	A0019885081	20 x	
420.1463	A0019884481	35 x	
420.1452	7703074022, A108980027	30 x	

Trim Clips Assortment - Mitsubishi

•for Mitsubishi



420.0500	370 pcs	Trim Clips Assortment - Mitsubishi	642

OE			
420.1753	8942180270, 9046712020	50 x	
420.1501	9018905013	50 x	
420.1502	9018906001, MU480033	30 x	
420.1755	128100231, 9018906001	30 x	
420.1508	MU480034	30 x	
420.1509	MR138807	10 x	
420.1503	MB253964	15 x	
420.1510	HB121467	40 x	
420.1505	MB271999	15 x	

OE			
420.1511	MB696120	40 x	
420.1506	MR200300	20 x	
420.1512	MB846992	40 x	

Trim Clips Assortment - Nissan

•for Nissan



420.0550	408 pcs	Trim Clips Assortment - Nissan	604

OE			
420.1106	76906T300, 813350022	30 x	
420.1751	0155300172, 9046707050	40 x	
420.1552	68425H5000	25 x	
420.1352	75521611000, 90675SB003	15 x	
420.1561	62869N4700	50 x	
420.1562	62380U7400	15 x	
420.1553	1007932, 6384401A00	15 x	
420.1563	7688257A00	20 x	
420.1564	6684101G00	40 x	
420.1554	1099830880, 8942981190, KK37668868	30 x	
420.1555	0155301393, BF8250233	8 x	
420.1414	5378914010, 63848D400	10 x	
420.1354	8942798070, 90667SA70030	25 x	
420.1565	6387801E10	10 x	
420.1566		15 x	
420.1355	78856R4301, 906836930000	25 x	
420.1560	6384801G00	20 x	
420.1567	6385401A00	15 x	

Trim Clips Assortment - Renault

•for Renault



420.0750	300 pcs	Trim Clips Assortment - Renault	486

OE		
420.1702	7703077421	50 x
420.1916		50 x
420.1703	7703081184	60 x
420.1917		15 x
420.1452	7703074022, A108980027	60 x
420.1701	14188380, 7703077059	65 x

Trim Clips Assortment - Toyota / Lexus

•for Toyota/Lexus



420.0800	360 pcs	Trim Clips Assortment - Toyota / Lexus	656

OE		
420.1752	9046709006	10 x
420.1755	128100231, 9018906001	25 x
420.1769	9046707138	20 x
420.1770	9046707117	35 x
420.1771	9046709138	30 x
420.1772	9046709101	15 x
420.1773	9046709093	15 x
420.1758	75521611000, 96706P0105	40 x
420.1774	7504933010	10 x

OE		
420.1775	7503933060	20 x
420.1762	9017905060	10 x
420.1776	677711250	20 x
420.1763	9046711063	25 x
420.1764	7539533030	25 x
420.1777	9046709143	15 x
420.1778	9046708124	20 x
420.1779	9046709096	10 x
420.1780	9046709050	15 x

Trim Clips Assortment - Opel

•for Opel



420.0600	300 pcs	Trim Clips Assortment - Opel	469

OE		
420.1603	90218614	20 x
420.1602	1591426, 174864	40 x
420.1857	7814.24, N0385501	100 x
420.1604	2345959, 7701053516, 7L5853994	50 x
420.1605	2240582	50 x
420.1606	180942	40 x

Trim Clips Assortment - Volkswagen

•for Volkswagen



420.0850	255 pcs	Trim Clips Assortment - Volkswagen	520

OE		
420.1862	1H0868243B	5 x

OE		
420.1863	N90833801	30 x
420.1006	3A0853575, 3A0853575A	20 x
420.1864	4A0853825, 4A0853825A	15 x
420.1011	6U085733	30 x
420.1865	3B0853576	10 x
420.1866	1H0819055B01C	25 x
420.1867	443853909A	15 x
420.1868	171885767	30 x
420.1856	2207713, 514719044317, N9020160H	20 x
420.1857	7814.24, N0385501	30 x
420.1869	191941142	25 x

Trim Clips Assortment - Volvo

•for Volvo



420.0700	350 pcs	Trim Clips Assortment - Volvo	478

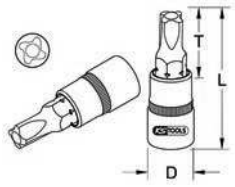
OE		
420.1558	8099905N07, 9046707043	25 x
420.1201	4292906	30 x
420.1801	1268176	20 x
420.1057	51131804205	40 x
420.1651	790307216, 947098, A0009903492	40 x
420.1803	171583585, 591740	40 x
420.1560	6384801G00	25 x
420.1802	9133417	20 x
420.1804	9133073	40 x
420.1805	3272075327462B	30 x
420.1806	327462A	20 x
420.1807	3923712	20 x

INTERIOR TRIM AND LINER

Cylinder head bit socket for MTS MORTORq® screws

- MTS MORTORq®
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- With a phosphated bit insert
- For manual operation
- Matt finish
- Chrome vanadium





3/8"

		D mm	L mm	T mm	g	
911.4011	MTS0	18,0	50,0	4,0	39	
911.4012	MTS1	18,0	50,0	5,0	40	
911.4013	MTS2	18,0	50,0	6,5	48	
911.4014	MTS3	20,0	50,0	7,5	62	
911.4016	MTS4	20,0	50,0	7,8	67	

Bit socket set for MTS MORTORq® screws

- MTS MORTORq®
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- With a phosphated bit insert
- For manual operation
- Matt finish
- Chrome vanadium
- Includes storage rail



3/8"

			g	
911.4010	5 pcs	MTS0 - MTS1 - MTS2 - MTS3 - MTS4	275	

Upholstery clamp pliers set

- Straps for attaching bolster clamps to vehicle seats
- For all common bolster clamps
- Includes 100 clamps
- With PVC dipped handle
- Chrome vanadium





			g	
118.0160	101 pcs	Upholstery clamp pliers set	310	

consists of:

		g	
118.0161	Clamps, 100 pcs	85	
118.0162	Seat clamp pliers	180	

Tail gate panel remover

- Suitable for releasing hard-to-reach places retaining clips on vehicle panels
- With specially angled handle
- Sturdy design
- Special tool steel

Application range: Audi A3, A4 Avant, A6, **Volkswagen** Golf 4, **Seat**, **Škoda** etc.





	Length mm	g	
140.2378	500,0	240	

Roof handle release tool

- with special fork profile
- for damage-free removal of the roof handle
- For loosening the locking hook which is difficult to access
- With hanging hole
- Two component handle
- Chrome vanadium

Application range: Seat Ateca (>2016), **Volkswagen** Golf (>2013), Golf Variant (>2013), Golf Plus (>2014), Tiguan (>2016)



	Length mm	g	
140.2328	248,0	146	

Panel bag with hand pump

- Universal usage for positioning, fixing and separating body parts
- Ideal for the damage-free opening of car doors
- Levelling tool for the installation of door and window frames
- Extremely high pressure power
- Easy to pump with the hand pump
- Robust panel bag





	L mm	B mm	g	
116.1035	200,0	150,0	190	

Panel bag set with hand pump

- Universal usage for positioning, fixing and separating body parts
- Ideal for the damage-free opening of vehicle doors
- Levelling tool for the installation of door and window frames
- For separating interior trim
- Pumping via a hand pump with valve connector
- Release valve on the bellows
- Extremely high pressure power





			g	
150.1685	4 pcs	Panel bag set with hand pump	300	

consists of:

		g	
150.1686	Hand bellows	84	
150.1687	Panel bag 180 x 40mm	23	
150.1688	Panel bag 190 x 60mm	27	
150.1689	Panel bag 160 x 160mm	47	

Window trim removal tool

- Narrow tool
- Ideal for fast and safe dismantling of the shaft covers, front grille, auxiliary lights, covers etc.
- With 180° angled profiled stainless steel blade
- One component handle

Application range: Audi, **Volkswagen**, **Seat**, **Volvo** etc.







	Width mm	Length mm	g	
140.2208	30,0	170,0	90	

Window strip lever

- Ideally suitable for the dismantling and assembly of cavity strips and trims
- Optimal leverage across the total width of the plate
- With problem free insertion due to the sharply chamfered lever blade
- Ideally suited for curved surfaces
- Back with semicircular profile for professional fitting of the trim strip
- Unbreakable special plastic





	Length mm	Width mm	g	
911.8118	350,0	180,0	690	

Hook tool set

- Ideal for removing and use of O rings and seals
- Two component handle
- Special tool steel





			g	
550.1045	4 pcs	Hook tool set	120	

consists of:

		g	
550.1046	Hook, straight	27	
550.1047	Hook, 45° offset	27	
550.1048	Hook, 90° offset	27	
550.1049	Hook, 135° bent	27	





Master hook tool set

- Ideal for removing and use of O rings and seals
- Special tool steel





			g	
550.1070	9 pcs	Master hook tool set	680	

consists of:

		g	
550.1046	Hook, straight	27	
550.1047	Hook, 45° offset	27	
550.1048	Hook, 90° offset	27	
550.1049	Hook, 135° bent	27	
550.1071	Hook, large, straight	91	
550.1072	Hook, large, 90° bent	105	
550.1073	Hook, large, sickle	88	
550.1074	T hook, S form small, 120mm	42	
550.1075	T hook, S form large, 165mm	96	

Door spring pliers

- Ideal for the assembly and disassembly of window crank handle lock
- Prevents damage to the door panel
- Insulated handle
- Chrome vanadium
- Head burnished

Application range: Sunshade, rear mirror, window cranks etc.





	opening mm	Length mm	g	
115.0994	8-45	210,0	140	

Security ring assembly and de assembly tool

- Simple dismantling of the window crank handle
- Closed end used for the assembly
- Open end used for the dismantling
- Painted surface

Application range: Window cranks and door handles



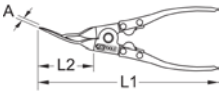


	Length mm	g	
140.2279	265,0	120	

Door panel rivet tool

- For the gentle release of clips of all kinds on the entire vehicle
- Through the gentle release of the clips can be reused
- Self-closing
- With spring clip
- Head burnished
- Chrome vanadium







	A mm	L1 mm	L2 mm	g	
115.1051	32,0	240,0	80,0	240	

Ventilation grille and cladding release for VAG

- ideal for removing ventilation grilles, interior lighting, interior panelling, etc.
- with 90° angled blade
- 1 component handle

Application range: Volkswagen Bora (>1999), Golf (>1998), Golf Plus (>2005), Jetta (>2006), Crafter (>2006), Tiguan (>2008), Passat (>2006), Scirocco (>2009), **Audi** A2, A3, A4, A5, A6, A8, Q5, Q7, R8



	Length mm	g	
140.2329	220,0	86	

Mould release tool set

- With rubber underside to prevent damage from scratches
- For removing the clips on bonded car screens
- Ideally suited to removing double clips, which are barbed on both sides
- Can be used for all clip types that must be tightened with the windscreen
- Overall length 220.0 mm
- With hanging hole
- Insulated handle



			g
140.2202	2 pcs	Mould release tool set	280

consists of:

		g
140.2351	Trim tool, right	140
140.2352	Trim tool, left	140

Door panel remover lever

- Ideal for releasing the fastening stoppers on the door panels
- Prevents damage to the door panel
- Optimum power transmission through lever function
- Includes protective coating
- Two component handle
- Special tool steel

Application range: Ford Galaxy >1995, **Seat** Alhambra >1996, **Volkswagen** Sharan >1996, Touareg >2003, Touran >2004, Phaeton >2003 etc.





	Length mm	g
140.2306	260,0	440

Rivet removal pliers set

- Suited to the dismantling of plastic rivets
- Self opening
- Including angled and straight set up
- Plastic





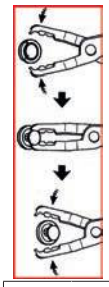
			g
115.1096	2 pcs	Rivet removal pliers set	40

consists of:

		g
115.1097	Rivet pliers, red, angled, 100mm	20
115.1098	Rivet pliers, blue, straight, 100mm	20

Trim clip pliers set

- Suited to the dismantling of plastic rivets and plastic clips
- With various profiles
- 35° + 80° angled tips
- Self opening
- Chrome vanadium





			g
115.1086	2 pcs	Trim clip pliers set	380

consists of:

		g
115.1087	Trim clip pliers,35° offset, 190mm	180
115.1088	Trim clip pliers, 80° offset, 200mm	190

Clip remover

- For metal and plastic clips
- Durable tool for the removal of door panels
- Easier release lever for the damage-free disassembly of plastic hub caps
- Lever effect due to the angled head on the front end of the lifter
- Robust execution with durable square shaft
- With protective insulation
- Ergonomic single component handle





	Length mm	g
911.8150	300,0	190

Clip removal set

- For metal and plastic clips
- Durable tool for the removal of door panels
- Lever effect due to the angled head on the front end of the lifter
- Rugged design with durable shaft
- With hanging hole
- 15° angled
- Two component handle
- Special tool steel



			kg
140.2370	6 pcs	Clip removal set	1,00

consists of:

		g
140.2371	Clip remover short, length 245 mm, opening 4 mm	65
140.2372	Clip remover short, length 245 mm, opening 8 mm	65
140.2373	Clip remover short, length 245 mm, opening 10 mm	65
140.2374	Clip remover long, length 510 mm, opening 4 mm	150
140.2375	Clip remover long, length 510 mm, opening 8 mm	150
140.2376	Clip remover long, length 510 mm, opening 10 mm	150

Clip remover

- For removing and installing clips
- With varying length ends
- Very flat and robust execution
- Painted surface
- Metal





	L1 mm	L2 mm	L3 mm	g
140.2249	230,0	100,0	50,0	170

Clip remover U-form, narrow angled

- Universal usage
- For removing cover panels trims and protective caps, etc
- Beveled ground blades
- With hanging hole
- Two component handle
- Stainless steel





	Width mm	Depth mm	Total length mm	L mm	Blade thickness mm	g
911.8191	6,0	13,0	230,0	95,0	2,5	120

Clip remover V-form

- Universal usage
- For removing cover panels trims and protective caps, etc
- With cutting edge blade
- Bevelled ground cutting edge blade
- With hanging hole
- Two component handle
- Stainless steel





	Width mm	Depth mm	Total length mm	L mm	Blade thickness mm	g
911.8192	5,0	8,0	230,0	95,0	2,5	120

Clip remover U-form, wide offset

- Universal usage
- For removing cover panels trims and protective caps, etc
- Beveled ground blades
- With hanging hole
- Two component handle
- Stainless steel





	Width mm	Depth mm	Total length mm	l = mm	Blade thickness mm	g	
911.8193	8,0	20,0	260,0	120,0	2,5	210	

Clip remover U-form, wide angled

- Universal usage
- For removing cover panels trims and protective caps, etc
- Beveled ground blades
- With hanging hole
- Two component handle
- Stainless steel





	Width mm	Depth mm	Total length mm	l = mm	Blade thickness mm	g	
911.8194	16,0	20,0	230,0	95,0	2,5	150	

Clip remover Y-form, double width angled

- Universal usage
- For removing cover panels trims and protective caps, etc
- Beveled ground blades
- With hanging hole
- Two component handle
- Stainless steel





	Width mm	Depth mm	Total length mm	l = mm	Blade thickness mm	g	
911.8195	8,0	20,0	230,0	95,0	2,5	150	

Clip remover and cutting set

- Universal use due to different blades
- For removing cover panels trims and protective caps, etc
- Beveled ground blades
- With hanging hole
- Two component handle
- Stainless steel





			g
911.8190	5 pcs	Clip remover and cutting set	2,00

consists of:

		g
911.8191	Panel lever U-form, narrow, 230mm	120
911.8192	Cutting blade V-form, 230mm	120
911.8193	Panel lever U-form, wide offset, 230mm	210
911.8194	Panel lever U-form, wide angled, 230mm	150
911.8195	Panel lever hook Y-form, 230mm	150

Standard clip remover

- With wedge shaped end
- With lifting and wedge function
- Ideal for loosening panels without damage to the paintwork
- Special plastic



	L mm	B mm	g
911.8125	210,0	20,0	80

Trim removal wedge

- With wedge shaped end
- Narrow execution
- With 2 different levering angles
- Angled sides have a 90° and 30° angle
- Ideal for loosening panels without damage to the paintwork
- Special plastic



	L mm	B mm	g
911.8122	180,0	20,0	40

Double clip remover

- With wedge shaped end
- Very robust execution
- With 2 different lever angles at 75° and 30°
- Special plastic



	L mm	B mm	g
911.8123	200,0	30,0	70

Bumper trim removal wedge

- With wedge shaped end
- Wide execution
- With 90° angled side
- Ideal for loosening panels without damage to the paintwork
- Special plastic



	L mm	B mm	g
911.8121	160,0	60,0	80

Clip remover with pulling eye

- With wedge shaped end
- Pulling eye for removal
- With 90° angled side
- Ideal for loosening panels without damage to the paintwork
- Special plastic

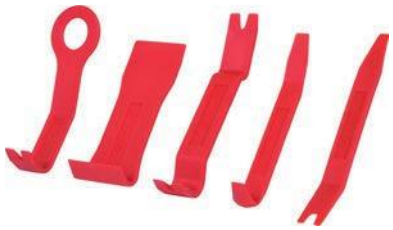


	L mm	B mm	g
911.8124	180,0	30,0	70

Plastic lever wedge set

- Ideal for loosening miscellaneous cover parts
- Practical assortment of different wedge and clip removal tools
- Slim and robust design
- Ideal for avoiding paint damage and damage-free release of interior trims, panels etc.
- For delicate work on fragile cover parts
- Special plastic





			g
911.8120	5 pcs	Plastic lever wedge set	300

consists of:

911.8121	Bumper trim removal wedge, 160mm	80	
911.8122	Trim removal wedge, 180mm	40	
911.8123	Double clip remover, 200mm	70	
911.8124	Clip remover with pulling eye, 180mm	70	
911.8125	Standard clip remover, 210mm	80	

Dual clip remover, offset

- Flat shaped back
- Durable design
- With straight- and sharp chisel end
- Ideal for loosening panels without damage to the paintwork
- With hanging hole
- Special plastic





	L mm	B mm		
911.8106	200,0	30,0	40	

Dual clip remover, straight profiled

- Flat shaped back
- Durable design due to straight profile
- Blunt chisel end
- Ideal for loosening panels without damage to the paintwork
- With hanging hole
- Special plastic





	L mm	B mm		
911.8107	200,0	30,0	40	

Double ended clip lever narrow

- Flat shaped back
- Narrow execution
- Wedge end tips pointed and chisel formed
- Ideal for loosening panels without damage to the paintwork
- With hanging hole
- Special plastic



	L mm	B mm		
911.8110	200,0	15,0	20	

Double ended pointed and rounded head lever

- Flat shaped back
- Flattened and flexible radius side
- Blunt chisel side
- Ideal for loosening clips
- With hanging hole
- Special plastic





	L mm	B mm		
911.8108	200,0	25,0	20	

Double ended sword and rounded head lever

- Flat oval on the front and back side
- Both ends chisel edged formed
- Flexible
- Ideal for loosening clips
- With hanging hole
- Special plastic





	L mm	B mm		
911.8109	200,0	20,0	20	

Adhesive weight remover with saw blade

- Ideal for protective disassembly of adhesive wheel weights on aluminium rims
- With flexible flat scraper and cutting edge
- Lever back flat side chisel form, cutting side with teeth
- Special lever for the removal of wheel weights
- Also suitable for the removal of labels, adhesive and type plates
- Surfaces are not damaged
- Sharpened with a file
- Solvent-resistant
- Special plastic





	Radius dimensions in mm	Length mm		
911.8111	38,0	200,0	20	

Interior panelling removal tool set

- Ideal for loosening miscellaneous cover parts
- Practical assortment of different wedge and clip removal tools
- Slim and robust design
- Ideal for avoiding paint damage and damage-free release of interior trims, panels etc.
- For delicate work on fragile cover parts
- With hanging hole
- Special plastic





911.8105	6 pcs	Interior panelling removal tool set	280	

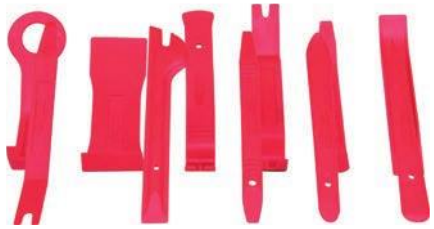
consists of:

911.8106	Double ended clip lever, angled, 200mm	40	
911.8107	Double ended clip lever, straight, 200mm	40	
911.8108	Double ended pointed and rounded head lever, 200mm	20	
911.8109	Double ended sword and rounded head lever, 200mm	20	
911.8110	Double ended wedge lever, slim, 200mm	20	
911.8111	Adhesive weight remover with saw blade	20	

Plastic lever wedge set

- Ideal for loosening miscellaneous cover parts
- Practical assortment of different wedge and clip removal tools
- Slim and robust design
- Ideal for avoiding paint damage and damage-free release of interior trims, panels etc.
- For delicate work on fragile cover parts
- Special plastic
- In a practical storage case





911.8205	11 pcs	Plastic lever wedge set	530	

consists of:

		g	
911.8106	Double ended clip lever, angled, 200mm	40	
911.8107	Double ended clip lever, straight, 200mm	40	
911.8108	Double ended pointed and rounded head lever, 200mm	20	
911.8109	Double ended sword and rounded head lever, 200mm	20	
911.8110	Double ended wedge lever, slim, 200mm	20	
911.8111	Adhesive weight remover with saw blade	20	
911.8121	Bumper trim removal wedge, 160mm	80	
911.8122	Trim removal wedge, 180mm	40	
911.8123	Double clip remover, 200mm	70	
911.8124	Clip remover with pulling eye, 180mm	70	
911.8125	Standard clip remover, 210mm	80	

Plastic wedge and glass scraper set

- Ideal for loosening miscellaneous cover parts
- Practical range of different wedge and glass scrapers
- Slim and robust design
- Ideal for avoiding paint damage and damage-free release of interior trims, panels etc.
- For delicate work on fragile cover parts
- Special plastic



			g	
911.8210	4 pcs	Plastic wedge and glass scraper set	120	

consists of:

		g	
911.8211	Glass scraper, straight, 175 mm	20	
911.8212	Glass scraper, angled, 175 mm	30	
911.8213	Wedge, cornered, 175 mm	30	
911.8214	Wedge, curved tip, 175 mm	30	

Moulding wedge with felt

- With felt trimming
- For the careful assembly by pressing in trim mouldings
- The flat surface protects components
- Suitable for the aligning of car doors or to force them open
- Special plastic



	L mm	B mm	g	
911.8141	250,0	20,0	70	

Plastic lever and beveled wedge

- The flat surface protects components
- Ideally suited for working on trims, door panels, rubber seals etc.
- Special plastic



	L mm	B mm	g	
911.8142	250,0	20,0	30	

Trim plastic wedge

- Ideal for the aligning of car doors or to force them open
- The flat surface protects components
- Suitable for working on trims, door panels, rubber seals etc.
- Special plastic





	L mm	B mm	g	
911.8138	195,0	30,0	90	
911.8139	195,0	60,0	150	

Trim removal combination wedge

- Ideally suitable for the dismantling and assembly of trims Door mouldings, door accessories etc
- Swallow tail opening 45° angled
- The flat surface protects components
- Optimal leverage with the short wedge and long lever
- Optimal usage for removal and refitting trims and mouldings cutting edges on the ends
- Special plastic





	L mm	B mm	g	
911.8140	210,0	26,0	90	

Plastic lever wedge set

- Ideal for the aligning of car doors or to force them open
- The flat surface protects components
- Suitable for working on trims, door panels, rubber seals etc.
- Impact resistant special plastic





			g	
911.8160	5 pcs	Plastic lever wedge set	430	

consists of:

		g	
911.8138	Trim plastic wedge, 195x30mm	90	
911.8139	Trim plastic wedge, 195x60mm	150	
911.8140	Trim wedge, 210x26mm	90	
911.8141	Moulding wedge with felt, 250x20mm	70	
911.8142	Plastic wever + beveled wedge, 250x20mm	30	

Removal wedge

- Ideally suited for the dismantling of sensitive components
- The flat surface protects damaging laquer
- Ideal for hard to access areas
- Special plastic







	L1 mm	L2 mm	L3 mm	B mm	g	
911.8119	600,0	340,0	200,0	30,0	340	

STORAGE COMPARTMENTS

Windscreen table with rubber protective pads

- ideal geeignet zum Ablegen von Scheiben beim Entfernen bzw. Aufbringen von Klebematerial etc.
- vier bewegliche Gummisauger halten die Scheibe sicher in Position und schützen vor Kratzern
- Breite mehrfach verstellbar
- beinahe für alle Scheibengrößen
- klappbar, dadurch platzsparend bei der Lagerung
- robuste Konstruktion
- belastbar bis zu 50 kg mit Gummisauger
- belastbar bis zu 300 kg ohne Gummisauger
- aus verzinktem Stahlrohr





Technical data:

max. Load: 50 kg

	Length mm	Width mm	Height mm	kg	
140.2225	1030,0	50,0	1040,0	8,40	

Universal storage table

- Ideally suited to holding the windscreen when removing, or removing adhesive material
- Holding tube with non-slip, coated padding offer optimal grip and prevent scratches
- Fully adjustably
- For nearly all windscreen sizes
- Foldable to save space during storage
- Robust construction
- Capacity up to 80 kg
- Made from zinc coated steel tube





Technical data:
max. Load: 80 kg

	Length mm	Width mm	Height mm	Pad	kg
140.2226	1030,0	900,0	940,0	140.2226-1	6,60

Universal Telescopic-Multi-purpose trolley with rollers

- Ideally suited to bodywork restoration, in the painting area or for filing screens when removing, or applying adhesive material etc.
- Holding tube with non-slip, coated padding offer optimal grip and prevent scratches
- The multi-talented universal use, since width and height are fully adjustable and lockable
- For nearly all windscreen sizes
- Can also be used as a work bench or for carrying parts
- Collapsible to save space during storage
- With 4 stable castors, 2 with locking brakes
- Simple handling
- Capacity up to 100 kg
- Robust construction made from square tube





Technical data:
max. Load: 100 kg

	Length mm	min. width mm	Max width mm	Height min in mm	Height max in mm	kg
500.8100	1320,0	257,0	1380,0	845,0	1320,0	23,50

Universal storage table with rollers

- Ideally suited to holding the windscreen when removing, or removing adhesive material
- Holding tube with non-slip, coated padding offer optimal grip and prevent scratches
- For nearly all windscreen sizes
- Foldable to save space during storage
- 4 substaintial wheels, 2 with locking brakes
- Simple handling
- Capacity up to 100 kg
- Robust construction from steel pipe





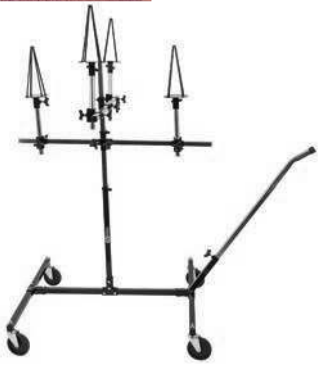
Technical data:
max. Load: 100 kg

	Length mm	Width mm	Height mm	Pad	kg
140.2227	900,0	760,0	930,0	140.2228	8,00

Paint stand for wheel rims

- Ideally suited to filing rims or wheels when grinding or painting
- Adjustable holding devices offer optimum grip and protect from scratches
- Multi-way adjustment: width, height and tilt
- For almost all sizes
- With four sturdy rollers, two of which have brakes
- Efficient, one-handed working
- Support rods and cone can be adjusted optimally
- Rims and wheels can be turned for optimum results
- No stopping work leading to a smoother finish
- Saves a lot of time when preparing for painting
- Better results
- Up to 90 kg capacity
- Robust construction from steel pipe





Technical data:
max. Load: 90 kg

	Length mm	Width mm	Height min in mm	Height max in mm	kg
140.2222	950,0	900,0	1350,0	1950,0	19,00

Painting stands

- Ideally suited to filing bonnets, tail gates, wings, bumpers and when grinding or painting
- Adjustable holding devices offer optimum grip and protect from scratches
- Multi-way adjustment: width, height and tilt
- For almost all sizes
- With 4 sturdy castors, 2 of which have brakes and steering
- Efficient, one-handed working
- No stopping work leading to a smoother finish
- Saves a lot of time when preparing for painting
- Better results
- Up to 35 kg capacity
- Robust construction from steel pipe





Technical data:
max. Load: 35 kg

	Length mm	Width mm	Height mm	kg
140.2254	1100,0	780,0	1500,0	17,50

Rotatable paint stands

- Ideally suited to filing bonnets, tail gates, wings, bumpers and small parts when grinding or painting
- Adjustable holding devices offer optimum grip and protect from scratches
- Multi-way adjustment: width, height and tilt
- Can be turned 360° with foot lever
- For almost all sizes
- Includes lengthener which can be disassembled at any time
- With 6 universally adjustable holding arms
- Includes gun holder on one side
- With two sturdy wheels
- Efficient, one-handed working
- No stopping work leading to a smoother finish
- Saves a lot of time when preparing for painting
- Better results
- Up to 35 kg capacity
- Robust, galvanised construction





Technical data:
max. Load: 35 kg

	Length mm	Width mm	Height mm	kg
140.2384	1900,0	800,0	1000,0	17,00

Paper trolley with 2 shelves

- Ideally suited to masking painting
- Mobile paper dispenser with 2 shelves for up to 2 paper rolls
- Suitable for covering paper and covering sheets up to 45 cm
- Supplied with adjustable tape pressure rollers
- Includes gun holder on one side
- Problem-free and graded separation with use of a sharp blade
- With practical storage compartments
- With two sturdy wheels
- including handles for easy manoeuvring
- Robust construction from steel pipe





	Total depth mm	Width mm	Depth mm	kg
140.2382	920,0	660,0	600,0	11,00

Paper trolley with 4 shelves

- Ideally suited to masking painting
- Mobile paper giver with 4 shelves for up to 4 paper rolls
- Suitable for covering paper and covering sheets up to 45 cm
- Two shelves for max. 30 cm and two shelves for max. 45 cm
- Supplied with adjustable tape pressure rollers
- Problem-free and graded separation with use of a sharp blade
- With two sturdy wheels
- Includes handle for easy movement in the workshop
- Robust construction from steel pipe





	Length mm	Width mm	Height mm	kg
140.2383	580,0	560,0	1080,0	11,00

Paper trolley with 3 shelves

- Ideally suited to masking painting
- Mobile paper giver with 4 shelves for up to 6 paper rolls
- Suitable for covering paper and covering sheets up to 90 cm
- Supplied with adjustable tape pressure rollers
- Simple replacing of paper rolls
- Multi-adjustable for different lengths
- Includes gun holder on both sides
- With 4 sturdy, steerable castors
- Including bracket for easy manoeuvring
- Robust construction from steel pipe





	Total depth mm	Width mm	Depth mm	kg
140.2350	1130,0	1240,0	540,0	29,00

Pallet cage trolley

- For universal use
- With 4 steering castors
- Load capacity up to 80 kg
- Robust construction from steel pipe



Technical data:

Total load capacity: 80 kg

	Total depth mm	Width mm	Depth mm	kg
160.0260	1965,0	900,0	600,0	40,86

ECO*line* Workshop service trolley

- Made from robust sheet steel construction
- Easy to move, even with heavy loads
- All shelves with high retaining border
- Internal dimension 565 x 395 mm
- With side pull handle
- Two fixed wheels Ø 100 mm
- Two castor wheels Ø 100 mm with rolling and turning brake
- High level of stability





Technical data:

Total load capacity: 150 kg

Wheel diameter: 100 mm

	H mm	B mm	T mm	kg
890.0001	850,0	680,0	425,0	12,60

ECO*line* Workshop-Service Trolley with Perforated Plate Cover

- Made from robust sheet steel construction
- Easy to move, even with heavy loads
- All shelves with high retaining border
- Internal dimension 565 x 395 mm
- lateral perforated steel cover for use with extra tools
- lockable at the back
- clearly organised workspace
- With side pull handle
- Two fixed wheels Ø 100 mm
- Two castor wheels Ø 100 mm with rolling and turning brake
- High level of stability





Technical data:

Total load capacity: 150 kg

Wheel diameter: 100 mm

	H mm	B mm	T mm	kg
890.0006	850,0	682,0	426,0	20,00

Workshop service trolley

- Extremely substaintial plastic construction
- Without screws easily costructed
- Distance between the ground 30 cm
- With two handles
- 2 castor wheels 100 mm
- 2 castor wheels with brake 100 mm
- High level of stability
- Light profile weight
- Columns made out of anodised aluminum



Technical data:

Total load capacity: 200 kg
Wheel diameter: 100 mm

	H mm	B mm	T mm	kg	
800.0020	1010,0	860,0	480,0	12,10	

Workshop service trolley with lining

- Extremely substaintial plastic construction
- Equipment lining
- Without screws easily costructed
- Distance between the ground 30 cm
- With two handles
- 2 castor wheels 100 mm
- 2 castor wheels with brake 100 mm
- High level of stability
- Light profile weight
- Columns made out of anodised aluminum



Technical data:

Total load capacity: 200 kg
Wheel diameter: 100 mm

	H mm	B mm	T mm	kg	
800.0021	1010,0	860,0	480,0	12,10	

Workshop service trolley with 2 drawers

- Extremely substaintial plastic construction
- Without screws easily costructed
- Two ball bearing drawer runner guides
- With two handles
- 2 castor wheels 100 mm
- 2 castor wheels with brake 100 mm
- High level of stability
- Light profile weight
- Columns made out of anodised aluminum



Technical data:

Total load capacity: 200 kg
Wheel diameter: 100 mm

	H mm	B mm	T mm	kg	
800.0030	1010,0	860,0	480,0	14,20	

Workshop service trolley with 2 drawers and lining

- Extremely substaintial plastic construction
- Without screws easily costructed
- Two ball bearing drawer runner guides
- With two handles
- 2 castor wheels 100 mm
- 2 castor wheels with brake 100 mm
- High level of stability
- Light profile weight
- Columns made out of anodised aluminum



Technical data:

Total load capacity: 200 kg
Wheel diameter: 100 mm

	H mm	B mm	T mm	kg	
800.0031	1010,0	860,0	480,0	15,00	

GENERAL TOOLS

Contour gauge

- For quickly removing and transferring bodywork contours
- Precise and accurate work results
- Easy handling
- Side metal holder for optional attachment of second gauge
- Expansion of the working area to 500 mm
- with 250 mm/10" long scale/divided into mm/inches
- 45 mm insertion depth
- With 4 magnets on the reverse
- Distortion-resistant design
- Plastic

Application range: Body work/Model construction/Joiner/Tiler







	H mm	T mm	L mm	g	
140.2147	100,0	20,0	280,0	421	

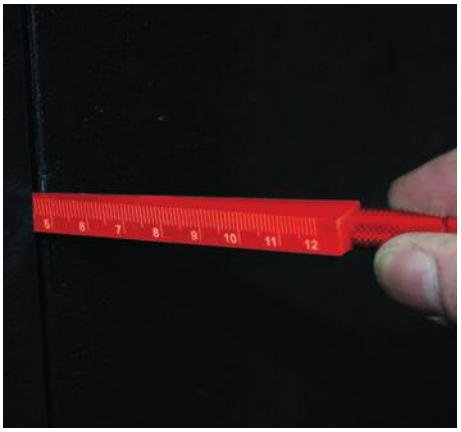
Gap wedge

- For adjusting when installing bodywork parts
- Original size can be decreased with gauge beforehand by an undamaged side
- Also suitable for rapid comparison measurement
- With measuring scale
- With handle
- Plastic





	Length mm	Measuring range mm	g	
150.1569	155,0	0,5 - 120,0	25	



Pannel gap gauge set

- For the adaptation and installation of car windows and body parts
- Adaptation to body due to pivoting, ball-bearing construction
- The gap gauge can be adjusted 3-dimensionally and can be easily positioned according to the respective requirements
- The 10 spacer plates allow a precise determination of the gap dimension
- Original size can be removed from an undamaged side with gauge beforehand
- No damage or scratching of already painted parts
- With mounting suction cup
- With flexible gooseneck
- Plastic





		Length mm	Width mm	Height mm	g	
150.1570	3 pcs	110,0	20,0	45,0	100	

Clamping device for gas pressure shock absorbers

- ideally suited for clamping weak or defective gas pressure dampers
- can be used on bonnets or boots
- for gas pressure shock absorbers up to 30 mm piston rod diameter
- Aluminium



	Length mm	g	
140.2327	80,0	86	

Telescopic engine compartment and tail gate supports

- Ideal for working on the engine compartment or tail gate, e.g. when replacing the dampers
- Tail gate can be locked into any position required
- Infinitely variable
- With practical fastening mechanism
- Special tool steel





	Length mm	kg	
140.2199	650 - 1500	1,80	

Telescopic engine compartment and tail gate supports

- Ideally for supporting the engine compartment or tail gate
- Also suitable for blocking the pedals
- Rubber surfaces protect against scratches
- Allows for a constant brake pressure over a longer time
- Infinitely adjustable





	Length mm	g	
140.2178	640,0 - 1090,0	920	

Mechanics stethoscope

- Very flexible
- Serves the acoustic test and judgment of a component under load
- Quick and precise error detection from the sound
- With steel tip

Application range:
Engine: Valves, bearings, piston pins
Alternator: Bearing sounds
Differential: Barrel sounds
Bodywork: Creak and squeak sounds





	Length mm	g	
150.1645	1120,0	200	



Mechanic's stethoscope, electronic

- Very flexible
- Serves the acoustic test and judgment of a component under load
- Quick and precise error detection from the sound
- Includes 9V block battery
- With steel tip

Application range:
Engine: Valves, bearings, piston pins
Alternator: Bearing sounds
Differential: Barrel sounds
Bodywork: Creak and squeak sounds



	Cable length mm	Length mm	g	
150.1410	1160,0	190,0	100	

Electronic professional stethoscope

- For the professional defect diagnosis
- Serves the acoustic test and judgment of a component under load
- Delivers fast, absolutely clear and unambiguous test results over sounds
- Contains 6 independent sensors that can mounted for example on the vehicle floor or in the engine compartment for ease
- Simple coordination of the defect source through colour coded cable and colour table on the box
- In durable plastic storage case

Application range:
Engine: Valves, baerings, piston pins
Alternator: Bearing sounds
Differential: Barrel sounds
Bodywork: Creak and squeak sounds





			kg	
150.1695	18 pcs	Electronic professional stethoscope	2,50	

consists of:

		g
150.1695-1	Headset	350
150.1695-2	Amplifier	115
150.1695-3	Hand held stethoscope	165
150.1695-4	Velcro strap, 8 pcs	9
150.1695-5	Sensor	10
150.1695-6	Coulour coded cable, 6 pcs	755

Ultrasound leak detector

- Acoustic locating of leaks on bodywork
- Receiver is passed externally along the bodywork
- Simplifies cause investigation for wind noise and water leaks
- In a practical storage case





		g
150.1690	Ultrasound leak detector	460



Layer thicknesses measuring instrument

- For fast measurement of coatings
- For coatings on aluminium, iron and non-ferrous metals
- Ideally suited to the disclosure of accident damage
- Digital display with lighting
- Automatic switch off
- One-handed operation
- Sturdy plastic housing
- With practical storage case





Technical data:

Readout:	3.1/2" LCD readout
Operating settings:	0°C - 50°C (32°F - 50°F) < 75% air humidity
Response time	1 second
Loading gage "Strength":	0-40 mils (0-1000 µm)
Display accuracy:	+/- 4 dgts up 0 to 7,8 mils
	+/- 10 dgts up 0 to 199 µm
	+/- (3% + 4 dgts) up 7,9 mils to 40 mils
	+/- (3% + 10 dgts) up 200 to 1000 µm

	H mm	B mm	T mm	g
150.3010	148,0	105,0	42,0	280

Heat blow gun set

- High-performance hot-air gun with two supply levels
- Seamless temperature regulation
- Adjustment wheel with marking for 6 temperature settings
- Stand for high up-right assembly
- Includes 4 different replacement nozzles
- Supply level 1: 200-300 l/min (max. 450°C)
- Supply level 2: 350-500 l/min (max. 650°C)
- Temperature settings: 1≈50°C/2≈100°C/3≈200°C/4≈350°C/5≈550°C/6≈650°C

Application range: Removing paint, soldering pipes, shrinking PVS, welding and bending plastics, drying, thawing etc.





			kg
960.1190	5 pcs	Heat blow gun set	1,11

consists of:

		g
960.1191	Heat blow gun	670
960.1192	Broad blast pipe 75 mm	20
960.1193	Reflector blast pipe	20
960.1194	Restrictor 45mm	20
960.1195	Restrictor 14mm	50

Digital heat blow gun set

- High-performance hot-air gun with two supply levels
- Digital seamless temperature regulation
- Includes jig for up-right assembly
- 10 blower levels
- Includes 4 different replacement nozzles
- LCD display
- Power: 2000W
- Supply level 1: 200-300 l/min (max. 450°C)
- Supply level 2: 350-500 l/min (max. 650°C)
- Temperature settings: 1≈50°C/2≈100°C/3≈200°C/4≈350°C/5≈550°C/6≈650°C

Application range: Removing paint, soldering pipes, shrinking PVS, welding and bending plastics, drying, thawing etc.





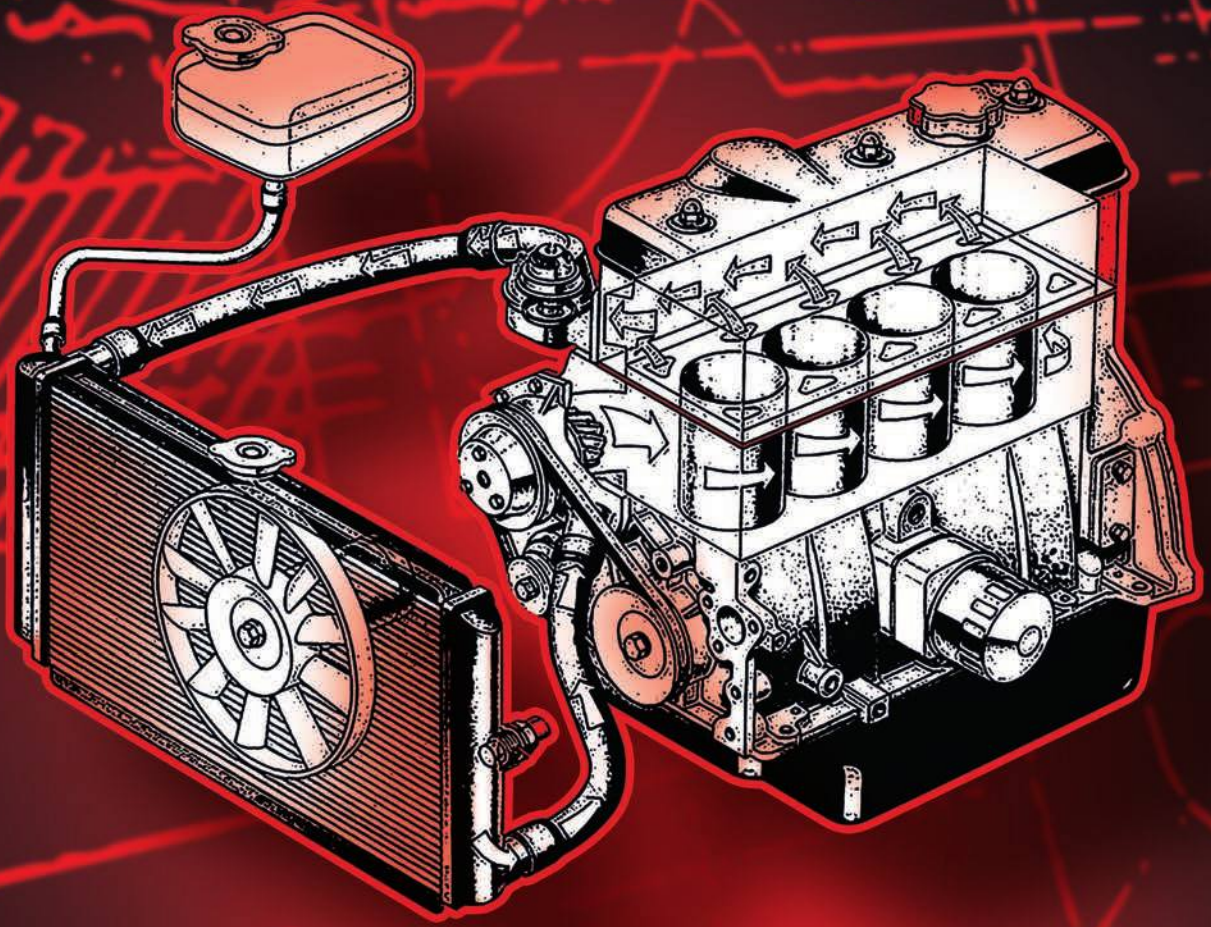
			g
960.1175	5 pcs	Digital heat blow gun set	850

consists of:

		g
960.1176	Heat blow gun, digital	740
960.1192	Broad blast pipe 75 mm	20
960.1193	Reflector blast pipe	20
960.1194	Restrictor 45mm	20
960.1195	Restrictor 14mm	50



ENGINE - ENGINE COOLING SYSTEM





KS TOOLS®

Innovation is our mission!

	FROM PAGE
WATER PUMP TEST	142
WATER PUMP TOOL	142
COOLING SYSTEM CLEANING	143
COOLING SYSTEM VACUUM FILLING DEVICE	143
COOLING SYSTEM CONE TEST ADAPTER	143
COOLING SYSTEM PRESS-OFF PUMPS	144
COOLER ADAPTER	144
COOLING SYSTEM DIAGNOSIS SYSTEM SET	147
CYLINDER HEAD LEAK TESTER	147
THERMAL SWITCH SOCKET	147
LOCKING SCREW TURNER	148
COUNTER HOLD TOOL	148
FROST PROTECTION AND COOLANT WATER TESTER	150
TEMPERATURE MEASURING DEVICE	151
RELEASE TOOLS	152
HOSE CLAMP TOOL	152
HOSE DISCONNECTION TOOLS	156
DRIP PANS	158
MEASURING BEAKER, JUG AND FUNNEL	159
TRANSFER PUMPS	160

WATER PUMP TEST

Water pump testing set

- Enables an effective display of the coolant flow
- No removal of the water pump is necessary
- Test is carried out with the motor running
- Time-saving diagnosis
- Hose connectors with conically stepped sections for an internal hose diameter of 10, 15, 18 and 20 mm
- Pipe connector for an external hose diameter of 10 - 20 mm, infinitely adjustable





			g	
150.9020	8 pcs	Water pump testing set	520	

consists of:

	x		g	
150.9021	1	Measuring device (low pressure 0-15 psi)	192	
150.9022	2	Dummy plug	2	
150.9023	1	Rubber pipe sealant set, 2 pcs	63	
150.9025	1	6 mm plastic hose, 2 m long	30	
150.9026	1	Hose connector with external thread	52	
150.9027	1	Pipe plug	130	

WATER PUMP TOOL

Holding key for water pump pulleys for VAG

- Ideal for locking and releasing during assembly and disassembly of water pump belt pulleys
- Easy to remove fixed screws
- Internal square drive allows for lengthening possibilities
- Chrome vanadium





1/2"

	Length mm	g	
150.3026	250,0	490	

pulley wrench

- Enables the safe locking of belt pulleys
- For easy releasing of secured screws
- for deep-drawn water pumps on air-conditioned engines
- Plastic coated handle
- Chrome vanadium



	Length mm	g	
150.3028	300,0	560	

Socket wrench for thermostat for VAG

- ideally suited for mounting and dismounting the thermostat on the water pump
- Special profile
- Internal square drive to DIN 3120 / ISO 1174
- Special tool steel

Application range: Audi A3 (>2013), **Volkswagen** Golf (>2013), **Škoda** Oktavia (>2013), **Seat** Leon (>2013) with 1.0 / 1.4 TFSI, 1.2 TSI, 1.6 FSI und 1.4 TDI

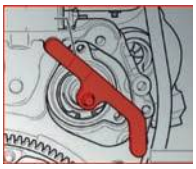


	Ø mm	Stud Ø mm	g	
150.3007	35,0	3,0	76	

Volkswagen water pump removal tool set

- Ideal for the quick and easy removal of the water pump or the water pump's gear on diesel engines
- Also suitable for turning the crank shaft to the TDC position as well as holding the fixing screws when removing
- Saves a lot of time
- Sturdy design
- Special tool steel

Application range: Volkswagen (Touareg 2.5 Litre straight 5 cylinder diesel engine (R5) > 2003 with engine codes: MKB, BAC, BLK, BPD, BPE), **Volkswagen** (Transporter Multivan T5 LT 2.5 Litre straight 5 cylinder diesel engine (R5) >2004 with engine codes MKB, AXD, AXE, BLJ, BNZ, BPC)





			kg	
700.1900	3 pcs	Volkswagen water pump removal tool set	1,10	

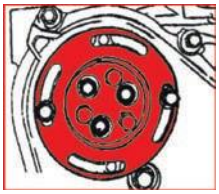
consists of:

		g	
700.1901	Volkswagen water pump puller	333	
700.1902	Volkswagen crank shaft securing	105	
700.1903	Volkswagen water pump drive wheel puller	303	

Water pump fixing tool for Opel

- Ideal for quick and easy assembly and disassembly of water pumps
- Required to secure the water pump belt pulley
- Saves a lot of time
- Sturdy design
- Special tool steel

Application range: Opel Astra, Insignia, Signum, Omega, Speedster, GT, Vectra, Zafira etc. with engine code: A 20 NHT, Z 20 NET, Z 20 NHH, Z 22 SE, Z 22 SE, Z 22 XE, Z 22 YH





	Ø mm		g	
700.1905	100,0	Water pump fixing tool for Opel	400	

Water pump fixing and holding tool for Opel

- Ideal for quick and easy assembly and disassembly of water pumps
- required for fixing the control chain and the gear wheel when removing the water pump
- Crescent shape allows easier access of the screw connections
- Saves a lot of time
- Sturdy design
- Aluminium

Application range: Opel Astra, Signum, Speedster, Vectra, Zafira with 2.2 16V engines (engine code: Z22SE, Z22YH)



	Ø mm		g	
700.1904	100,0	Water pump fixing and holding tool for Opel	98	



COOLING SYSTEM CLEANING

Cooling system pneumatic flush gun

- ideal for fast and efficient rinsing of the cooling system
- restores optimum operation of the cooling system
- can be used without solvents or aggressive chemicals
- works in conjunction with compressed air and water, increasing the water pressure
- the cooling system flush gun is equipped with a standard 1/2" / Ø 13 mm water connection
- universal rubber nozzle with various diameters 19.0 / 29.0 / 32.0 / 36.5 and 40.0 mm
- for all common coolant hoses
- Includes 1/4" coupling connector
- Ultra light robust housing special plastic





Technical data:

Input pressure:	max. 8,5 bar
Operating pressure:	max. 6,3 bar (90 psi)
Connection thread:	1/4"PT

	Ø mm	Total length mm	g	
515.1216	19,0 / 29,0 / 32,0 / 36,5 / 40,0	350,0	300	

COOLING SYSTEM VACUUM FILLING DEVICE

Cooling system vacuum filling valve

- Ideally suited to the filling and testing of the tightness of the cooling system
- Includes valves, connections and dial gauge
- With supporting chain to hang it up



		g	
150.1960	Cooling system vacuum filling valve	577	

Coolant system filling hose

- Ideally suited to filling the coolant system
- Includes quick coupling
- Transparent
- With suction head base



	L mm	g	
150.1961	1600,0	208	

Vacuum cooling system filling device

- Universally suitable for the filling of the cooling system of current common vehicles
- Through production of a vacuum within the cooling system the new coolant becomes of an even density sucked into the system
- During the vacuum process the cooling system is tested simultaneously for density
- Bubble free filling prevents air inclusions in the cooling system
- A cleaning of the cool system is unnecessary
- Universally suitable through conical rubber connection piece
- In durable plastic storage case

Please note: Filling device does not empty automatically the old coolant!





Technical data:

Manometer:	max. -30 PSI / -1 Bar
Air pressure:	min. 550kPa - max. 690kPa
Air consumption:	max. 180l/min / 690kPa
Low pressure:	0.85 bar at 690kPa

			kg	
150.2070	4 pcs	Vacuum cooling system filling device	1,88	

consists of:

		kg	
150.2070-1	Replacement gun	1,28	
150.2070-28	Rubber cone adaptor small	0,06	
150.2070-29	Rubber cone adaptor large	0,07	
150.2070-30	Hose, 1.5 m	0,20	

COOLING SYSTEM CONE TEST ADAPTER

Cooling system cone test adapter

- For testing pressure and diagnosing leaks in the coolant system
- The pressure generated holds the matching rubber cone in the cooler or expansion tank opening
- Can be fitted directly onto the cooler or expansion tank
- Secure fit
- Simple handling
- Can be used with manual vacuum pump or filling device
- Sturdy design





	Ø mm	H mm	g	
455.0136	17,0 - 31,0	180,0	62	
455.0137	24,0 - 39,0	180,0	77	
455.0138	34,0 - 50,0	180,0	110	

Cooling system cone set 17.0 - 50.0 mm

- For testing pressure and diagnosing leaks in the coolant system
- The pressure generated holds the matching rubber cone in the cooler or expansion tank opening
- Can be fitted directly onto the cooler or expansion tank
- Secure fit
- Simple handling
- Can be used with manual vacuum pump or filling device
- Sturdy design





			g	
455.0135	3 pcs	Cooling system cone set 17.0 - 50.0 mm	265	

consists of:

		g	
455.0136	Cooling system cone test adapter, Ø 17.0-31.0 mm	62	
455.0137	Cooling system cone test adapter, Ø 24.0-39.0 mm	77	
455.0138	Cooling system cone test adapter, Ø 34.0-50.0 mm	110	

Cooling system expander cone test adapter

- For testing pressure and diagnosing leaks in the coolant system
- Also suitable for filling the cooling system alongside a filling valve
- The pressure generated holds the matching rubber cone in the cooler or expansion tank opening
- Can be fitted directly onto the cooler or expansion tank
- Secure fit due to expansion
- No need to purchase expensive individual adapters
- Removes need to purchase single adapters
- Simple handling
- Optimal use alongside KS Test pump 455.0111
- Robust design made from POM (polyoxmethylene)



	Ø mm	H mm	g	
455.0141	17,0 - 37,0	170,0	252	
455.0142	28,0 - 41,0	170,0	280	
455.0143	37,0 - 50,0	170,0	320	
455.0144	47,0 - 60,0	170,0	410	

Cooling system expander cones test adapter set 17.0 - 60.0 mm

- For testing pressure and diagnosing leaks in the coolant system
- Also suitable for filling the cooling system alongside a filling valve
- The pressure generated holds the matching rubber cone in the cooler or expansion tank opening
- Can be fitted directly onto the cooler or expansion tank
- Secure fit due to expansion
- No need to purchase expensive individual adapters
- Removes need to purchase single adapters
- Simple handling
- Optimal use alongside KS Test pump 455.0111
- Robust design made from POM (polyoxmethylene)





			kg	
455.0140	4 pcs	Cooling system expander cones test adapter set 17.0 - 60.0 mm	1,50	

consists of:

		g	
455.0141	Adaptor for cooling systems, Ø 17-37 mm	252	
455.0142	Adaptor for cooling systems, Ø 28-41 mm	280	
455.0143	Adaptor for cooling systems, Ø 37-50 mm	320	
455.0144	Adaptor for cooling systems, Ø 47-60 mm	410	

COOLING SYSTEM PRESS-OFF PUMPS

Hand pump with manometer

- Ideal for testing tightness in the coolant system and heating
- Measurement range from 0 bar 2.5
- With pressure-release valve
- Manometer with protective rubber cap
- Includes hose
- Sturdy design



	Measuring range bar	g	
150.1931	0 - 2,5	443	

Hand pump with manometer

- Ideal for testing tightness in the coolant system and heating
- Measurement range from 0 bar 2.5
- With pressure-release valve
- Manometer with protective rubber cap
- Sturdy design



	Measuring range bar	g	
455.0111	0 - 2,5	473	

COOLER ADAPTER

Cooling system test socket R123/R124

- Ideally suited to test the cooler cover
- Serves as an adapter between the hand pump and cooler cover
- Double connection
- Black



		g	
150.1932	Cooling system test socket R123/R124	42	

Cooling system test socket R123/R125

- Ideally suited to test the cooler cover
- Serves as an adapter between the hand pump and cooler cover
- Double connection
- Blue



		g	
150.1933	Cooling system test socket R123/R125	42	

Cooling system bayonet adapter, 90° angled

- For testing pressure and diagnosing leaks in the coolant system
- Also suitable for filling the cooling system alongside a filling valve
- With quick coupling
- Extra short execution
- Rotatable 360°
- Universal usage



	Height mm	g	
150.1957	47,5	80	

Cooling system bayonet adapter, small

- Ideal for testing the coolant system
- With quick coupling
- Aluminium

Application range: Honda, **Toyota**, **Suzuki**, **Mitsubishi**, **Chrysler**, **Acura**, **Lexus** etc.



		g	
150.1916	Cooling system bayonet adapter, small	60	

Cooling system bayonet adapter, medium

- Ideal for testing the coolant system
- With quick coupling
- Aluminium

Application range: Ford, **Peugeot**, **Subaru**, **Chrysler**, **Acura**, **GM**, **Mitsubishi**, **Nissan**, **Mazda**, **Toyota**, Infinity etc.



		g	
150.1917	Cooling system bayonet adapter, medium	80	

Cooling system bayonet adapter, large

- Ideal for testing the coolant system
- With quick coupling
- Aluminium

Application range: Mercedes (W123, W126, W124, W201, Unimog), **GM** (Buick), **Jeep** etc.



		g	
150.1918	Cooling system bayonet adapter, large	110	

Coolant system adapter M 52 x 3.0

- Ideal for testing the coolant system
- With quick coupling
- External thread
- Violet
- Made from impact resistant plastic

Application range: Toyota (RAV 4, Previa) etc.



150.1954	Coolant system adapter M 52 x 3.0	51	

Coolant system adapter M 45 x 3.0

- Ideal for testing the coolant system
- With quick coupling
- Internal thread
- Red
- Made from impact resistant plastic

Application range: Audi, **Volkswagen** etc.



150.1946	Coolant system adapter M 45 x 3.0	56	

Coolant system adapter M 52 x 3.0

- Ideal for testing the coolant system
- With quick coupling
- Internal thread
- White
- Made from impact resistant plastic

Application range: Saab (Eco Power 9-3, 9-5)



150.1955	Coolant system adapter M 52 x 3.0	64	

Coolant system adapter M 50 x 2.5

- Ideal for testing the coolant system
- With quick coupling
- Internal thread
- Purple
- Made from impact resistant plastic

Application range: Mercedes (A class, Sprinter >2009) etc.



150.1951	Coolant system adapter M 50 x 2.5	73	

Coolant system adapter M 48 x 4.0

- Ideal for testing the coolant system
- With quick coupling
- Internal thread
- Grey
- Made from impact resistant plastic

Application range: BMW (3 series E36, E46, E90, 5 series E34, E39, 7er E32, E38) etc.



150.1945	Coolant system adapter M 48 x 4.0	80	

Coolant system adapter M 52 x 3.0

- Ideal for testing the coolant system
- With quick coupling
- Internal thread
- Turquoise
- Made from impact resistant plastic

Application range: Seat (Alhambra), **Volkswagen** (Sharan 1.8 T and 2.8 L)



150.1953	Coolant system adapter M 52 x 3.0	64	

Coolant system adapter M 42 x 3.0

- Ideal for testing the coolant system
- With quick coupling
- Internal thread
- Brown
- Made from impact resistant plastic

Application range: Citroën, **Fiat**, **Alfa Romeo**, **Mini**, **Peugeot**, **Jeep**, **Sterling**, **Renault**, **Saab**, **Volvo** etc.



150.1942	Coolant system adapter M 42 x 3.0	66	

Coolant system adapter M 45 x 3.0

- Ideal for testing the coolant system
- With quick coupling
- Internal thread
- Moss green
- Made from impact resistant plastic

Application range: BMW Mini >2008, PSA 2008-2010 etc.



150.1994	Coolant system adapter M 45 x 3.0	48	

Coolant system adapter M 50 x 2.5

- Ideal for testing the coolant system
- With quick coupling
- Internal thread
- Pink
- Made from impact resistant plastic

Application range: Mazda (3) etc.



150.1950	Coolant system adapter M 50 x 2.5	75	

Coolant system adapter M 50 x 2.5

- Ideal for testing the coolant system
- With quick coupling
- Internal thread
- Orange
- Made from impact resistant plastic

Application range: Ford (Fiesta >1995, Focus >1998, Fusion >2006), **Opel** (Astra F and G, Corsa B, Tigra, Vectra), **Porsche** (911 >1999, Boxter >1997), **Mercedes** (ML-class, W163, W164), **GM**, **Saab** (900 1994-1998), **Land Rover** (Discovery 1989-2004), Range Rover 1988-1994 etc.



150.1941	Coolant system adapter M 50 x 2.5	62	

Coolant system adapter M 52 x 3.0

- Ideal for testing the coolant system
- With quick coupling
- Internal thread
- Yellow
- Made from impact resistant plastic

Application range: Ford (Mondeo, C-Max >2003) etc.



150.1949	Coolant system adapter M 52 x 3.0	91	

Coolant system adapter M 60 x 4.0

- Ideal for testing the coolant system
- With quick coupling
- Internal thread
- Blue
- Made from impact resistant plastic

Application range: Mercedes (C class, E class, S class) etc.



150.1948	Coolant system adapter M 60 x 4.0	90	

Coolant system adapter M 50 x 2.5

- Ideal for testing the coolant system
- With quick coupling
- Internal thread
- Green
- Made from impact resistant plastic

Application range: Ford, **Opel** (Insignia, Corsa D), **Jaguar**, **Land Rover**, **Ssangyoung** etc.



150.1947	Coolant system adapter M 50 x 2.5	86	

Coolant system adapter M 52 x 3.0

- Ideal for testing the coolant system
- With quick coupling
- Internal thread
- Orange
- Made from impact resistant plastic

Application range: Cadillac, **Chevrolet**, **Fiat** (Chroma), **Ford**, **Isuzu**, **Mazda** (6), **Opel**, Astra, Meriva, Zafira, Signum), **Saab**, **Suzuki** etc.



150.1956	Coolant system adapter M 52 x 3.0	64	

Coolant system adapter M 62 x 3.0

- Ideal for testing the coolant system
- With quick coupling
- External thread
- Black
- Made from impact resistant plastic

Application range: Audi (A4, A5, A6), **BMW**, **Volkswagen** (Passat 1,9TDI, Golf 4 1,4FSI, Touran 1,4TSI), **Škoda** (Fabia 1.4), **Porsche** (Cayenne) etc.



150.1944	Coolant system adapter M 62 x 3.0	72	

Coolant system adapter M 52 x 3.0

- Ideal for testing the coolant system
- With quick coupling
- Internal thread
- Light blue
- Made from impact resistant plastic

Application range: BMW (5 series E60, F11, 6 series E63, E64, 7 series E65) etc.



150.1952	Coolant system adapter M 52 x 3.0	84	

Coolant system adapter M 58 x 3.0

- Ideal for testing the coolant system
- With quick coupling
- External thread
- Black
- Made from impact resistant plastic

Application range: Volkswagen (Beetle, Golf, Sharan, Passat, T4, T5, Vento) etc.



150.1943	Coolant system adapter M 58 x 3.0	69	

Coolant system adapter M 52 x 3.0

- Ideal for testing the coolant system
- With quick coupling
- External thread
- Purple
- Made from impact resistant plastic

Application range: Audi, **Volkswagen**, **Porsche** etc.



150.1958	Coolant system adapter M 52 x 3.0	73	

COOLING SYSTEM DIAGNOSIS SYSTEM SET

Universal cooling system diagnostic service set

- Innovative and universal diagnosis device for testing the pressure in the cooling system as well as the pressure caps
- Suitable for almost all common vehicles with water-cooled engines thanks to the inflatable universal bladder sealing system
- Test cap with 6 special double-sided adapters
- Quickly find leaks in the cooling system, e.g. cylinder head seals, cooling unit, water pumps, hoses etc.
- The pressure loss inspection is carried out via the manometer
- Quick and efficient use
- Measurement range from 0 bar 2.5
- In durable plastic storage case

Application range: for almost 95% of all vehicle manufacturers





			kg	
150.2065	12 pcs	Universal cooling system diagnostic service set	2,30	

consists of:

		g	
150.2065-1	Adapter A, blue	66	
150.2065-2	Adapter B, yellow	44	
150.2065-3	Adapter C, green	58	
150.2065-4	Adapter D, red	55	
150.2065-5	Adapter E, orange	71	
150.2065-6	Adapter F, grey	81	
150.2066	Adapter, blue, small	30	
150.2067	Adapter, red, small	25	
150.2068	Adapter, black, small	40	
150.2044	Pressure pump	2000	
150.2065-01	Universal connection adapter	129	
150.2065-07	Control valve	50	



MASTER Cooling system diagnostic service set

- Ideal compilation set for testing the cooling system as well as the pressure caps
- With cooling system filling valve
- Quickly find leaks in the cooling system, e.g. cylinder head seals, cooling unit, water pumps, hoses etc.
- Suitable for all common vehicles with water-cooled engines, e.g. from Europe, Japan, USA etc.
- The pressure loss inspection is carried out via the manometer
- Quick and efficient use
- Measurement range from 0 bar 2.5
- Includes thermometer
- In durable plastic storage case





			kg	
150.1930	25 pcs	MASTER Cooling system diagnostic service set	5,41	

consists of:

		Colour code	g	
150.1931	Hand pump with manometer		443	
150.1960	Cooling system vacuum filling valve		577	
150.1961	Coolant system filling hose		208	
150.1932	Cooling system test socket R123/R124	●	42	
150.1933	Cooling system test socket R123/R125	●	42	
150.1916	Cooling system bayonet adapter, small		60	
150.1917	Cooling system bayonet adapter, medium		80	
150.1918	Cooling system bayonet adapter, large		110	
150.1941	Coolant system adapter M 50 x 2.5	●	62	
150.1942	Coolant system adapter M 42 x 3.0	●	66	
150.1943	Coolant system adapter M 58 x 3.0	●	69	
150.1944	Coolant system adapter M 62 x 3.0	●	72	
150.1945	Coolant system adapter M 48 x 4.0	●	80	
150.1946	Coolant system adapter M 45 x 3.0	●	56	
150.1947	Coolant system adapter M 50 x 2.5	●	86	
150.1948	Coolant system adapter M 60 x 4.0	●	90	
150.1949	Coolant system adapter M 52 x 3.0	●	91	
150.1950	Coolant system adapter M 50 x 2.5	●	75	
150.1951	Coolant system adapter M 50 x 2.5	●	73	
150.1952	Coolant system adapter M 52 x 3.0	●	84	
150.1953	Coolant system adapter M 52 x 3.0	●	64	
150.1954	Coolant system adapter M 52 x 3.0	●	51	
150.1962	Rubber cone adaptor, 14-45 mm, L=75 mm		88	
150.1963	Rod thermometer		27	
150.1940	Wrench for adapter		50	

CYLINDER HEAD LEAK TESTER

CO2 Cylinder head leak testing set

- For the locating of leaks on combustion engines
- Rational and dependable finding of cracks and leakages
- Potential CO2 content in the coolant solution is detected
- Ideally suited for the cylinder head, cylinder head seals and engine block
- Leakages are visible through discoloration of the test fluid
- For all current vehicles with water cooled engines (Gas, Diesel and Petrol)
- Automatic regenerating reaction fluid for multiple use
- In durable plastic storage case





			kg	
150.1910	8 pcs	CO2 Cylinder head leak testing set	1,43	

consists of:

		g	
150.1911	Intake hand squeeze pump	30	
150.1912	Two way brass valve	120	
150.1913	Leak test chamber with 2 Test chambers and cones	120	
150.1914	Reaction fluid, 250ml	250	
150.1915	Empty container, 250ml	30	
150.1916	Cooling system bayonet adapter, #1	60	
150.1917	Cooling system bayonet adapter, #2	80	
150.1918	Cooling system bayonet adapter, #3	110	

THERMAL SWITCH SOCKET

Thermal switch sensor socket

- Ideally suited to the assembly and disassembly of hard-to-reach thermal switches
- Also for thermal switches with long contact pins or plastic casings, as well as switches with cables
- Slotted design
- Internal square to DIN 3120 / ISO 1174 with ball reception
- For manual operation
- Phosphate finish
- Chrome molybdenum





	mm		Length mm	g	
150.2123	29	1/2"	90,0	500	

Special socket wrench

- Open 6-point profile
- Suitable for assembling upper and side cables temperature sensors, thermal switches and other parts
- Also suitable for screwing in angled pipes
- Matt chrome
- Chrome vanadium





3/8"

	mm	■	g	
150.3810	10,0	3/8"	19	
150.3811	11,0	3/8"	41	
150.3812	12,0	3/8"	49	
150.3814	14,0	3/8"	69	
150.3817	17,0	3/8"	108	
150.3819	19,0	3/8"	135	

Special socket wrench set

- Open 6-point profile
- Suitable for assembling upper and side cables temperature sensors, thermal switches and other parts
- Also suitable for screwing in angled pipes
- Matt chrome
- Chrome vanadium
- Clip mounting

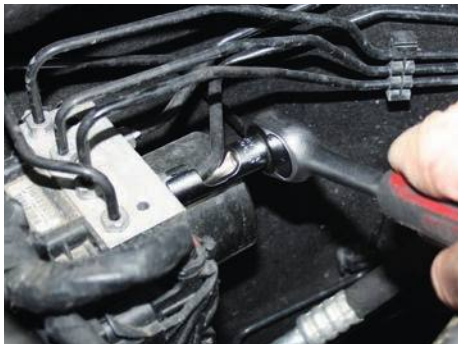


3/8"

			g	
150.3805	6 pcs	Special socket wrench set	460	

consists of:

		g	
150.3810	3/8" Special socket wrench, 10 mm	19	
150.3811	3/8" Special socket wrench, 11 mm	41	
150.3812	3/8" Special socket wrench, 12 mm	49	
150.3814	3/8" Special socket wrench, 14 mm	69	
150.3817	3/8" Special socket wrench, 17 mm	108	
150.3819	3/8" Special socket wrench, 19 mm	135	



LOCKING SCREW TURNER

Battery plug turner with T-handle

- For the damage-free screwing in and out of battery plugs
- Special slot profile for battery plug
- Universal application also with short overall height
- With T-handle
- Mirror polished
- Chrome vanadium





	mm	Length mm	g	
550.1682	14,5 x 1,7	95,0	62	

Screw plug screwdriver with gag

- for damage-free insertion and removal of battery plugs and vent plugs on the radiator
- Special cross profile
- Universal application also with short overall height
- Locking handle
- Mirror polished
- Chrome vanadium





	Blade thickness mm	shank Ø mm	Blade height mm	Length mm	g	
550.1686	1,3	12,0	13,0	90,0	87	

Screw plug screwdriver with gag

- for damage-free insertion and removal of battery plugs and vent plugs on the radiator
- Special cross profile
- Universal application also with short overall height
- Locking handle
- Mirror polished
- Chrome vanadium





	Blade thickness mm	shank Ø mm	Blade height mm	Length mm	g	
550.1687	1,8	12,0	13,0	90,0	87	

Cooler lid removal tool for BMW

- ideal for removing the cooler lid on the surge tank
- Makes possible simple and time-saving work
- Internal square drive adaptor
- For manual operation
- Chrome vanadium

Application range: BMW E60, E61, E63, E64, E70, E71, E72, E81, E82, E84, E87, E88, E89, E91, E91, E92, E93, F01, F02, F03, F04, F06, F07, F10, F11, F12, F13, F15, F15, F16, F18, F20, F21, F25, F26, F30, F31, F32, F33, F34, F35, F36, F80, F82, F83, F85, F86





3/8"

	mm	■	Stud	g	
150.2152	87	3/8"	6	985	

COUNTER HOLD TOOL

Counter hold wrench, 39.0 mm

- For turning the water pump
- To tighten / depressurize the drive belt
- Internal square drive adaptor
- Burnished
- Chrome molybdenum

Application range: Opel/Vauxhall, **GM** OHC engines





1/2"

	mm	■	Length mm	g	
516.1004	39	1/2"	90,0	100	

Counter hold wrench, 41.0 mm

- For turning the water pump
- To tighten / depressurize the drive belt
- Internal square drive adaptor
- Burnished
- Chrome molybdenum

Application range: Opel/Vauxhall, **GM** OHC engines 1.2, 1.3, 1.4 and 1.6 l





1/2"

	mm	■	Length mm	g	
516.1002	41	1/2"	90,0	110	

Counter hold wrench, 46.0 mm

- For turning the water pump
- To tighten / depressurize the drive belt
- Internal square drive adaptor
- Burnished
- Chrome molybdenum

Application range: Suitable for **Opel** and **GM** OHC engines





1/2"

	mm		Length mm	g	
516.1001	46	1/2"	90,0	120	

Universal Visco ventilator wrench

- For removing the hubs and bleeding with viscous couplings
- Especially slim design
- Enables easy access
- With PVC dipped handle
- Special tool steel





	mm	Suitable for	g	
150.3022	32	for clamping the viscous coupling drive shaft on BMW, Ford	300	
150.3027	36	For counter holding the Visco coupling drive shaft BMW, Ford, GM	340	
150.3023	41	for twisting the water pump on Opel and GM	422	
150.3024	46	for twisting the water pump on Opel and GM	405	

Visco ventilator wrench

- For removing the hubs and bleeding with viscous couplings
- Especially slim design
- Enables easy access
- With hanging hole
- Special tool steel

Application range: Mercedes engines M103 (6 cylinder), M104 (6 cylinder 4 valve), M119 (8 cylinder 4 valve), M120 (12 cylinder 4 valve)



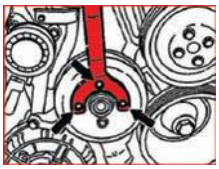


	mm	Length mm	g	
150.3301	65	400,0	472	

Visco ventilator wrench

- For removing the hubs and bleeding with viscous couplings
- Especially slim design
- Enables easy access
- specially bent
- With hanging hole
- Special tool steel

Application range: Mercedes (engine: M 111.979, 112, 113, 119.985)





	Length mm	g	
150.3008	410,0	370	

Holding wrench for Visco ventilator

- For counter holding the ventilation valve when disassembling the Visco ventilator
- Especially slim design
- Enables easy access
- Special tool steel

Application range: BMW engine M10, M20, M21, M30, M50, M51, M52, M52TU, M54, M56, M70, M73, S14 and S38





	Length mm	g	
150.3306	380,0	330	

Fan hub wrench for Ford

- For the professional engine repair
- Simple assembly and disassembly of the Visco coupling rotor
- Makes it possible to secure the pulley wheel of the water pump and at the same time release the heating filter
- Special tool steel
- Very high degree of accuracy

Application range:Ford Transit (2001 - 2006)



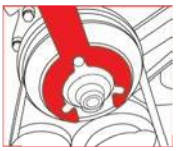
1/2"

	Pin key mm	g	
400.9014	69,0	133	

Fan-hub wrench set for Land Rover

- For counter holding the Visco coupling drive shaft
- Makes it possible to secure the pulley wheel of the water pump and at the same time release the heating filter
- Also suitable for the removal of the viscous connecting socket on the cooler ventilator
- Special tool steel

Application range:Land Rover Discovery II, Range Rover, Defender 1990-2006 with Td5 or V8 engines







			kg	
400.4175	2 pcs	Land Rover	1,80	

consists of:

		kg	
400.0176	Holding wrench for Visco fan for Land Rover	1.05	
400.0177	Visco fan wrench 36.0 mm for Land Rover	14.78	

Belt disc wrench for Mercedes 8.0 mm

- Suitable for the installation and removal of the fan coupling and the belt disc
- Required when changing the water pump
- For hard to reach places
- With plastic-coated handle
- Chrome vanadium

Application range: Mercedes engines M102, M103, OM601, OM602, OM603, OM605, OM606



			g	
150.1303	2 pcs	Belt disc wrench for Mercedes 8.0 mm	460	

consists of:

		g	
150.1227	Special wrench with 8.0 mm hexagonal drive, 450 mm	440	
150.1307	Bit with 8.0 mm hexagonal drive for internal hexagonal screws 8.0 mm	20	

Compressor belt disc wrench for Mercedes 10.0 mm

- Suitable for releasing the screws on the compressor belt disc
- Required when changing the water pump
- For hard to reach places
- With plastic-coated handle
- Chrome vanadium

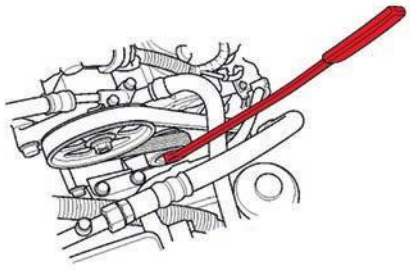
Application range: Mercedes engines M102, M103, OM601, OM602, OM603, OM605, OM606



			g	
150.1304	2 pcs	Compressor belt disc wrench for Mercedes 10.0 mm	460	

consists of:

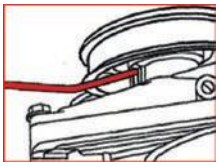
		g	
150.1227	Special wrench with 8.0 mm hexagonal drive, 450 mm	440	
150.1308	Bit with 8.0 mm hexagonal drive for internal hexagonal screws 10.0 mm	20	

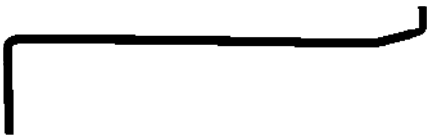


Ventilator coupling counter hold for Mercedes

- Ideally suited to securing the ventilator coupling
- Especially slim design
- Enables easy access
- Especially curved for use
- Special tool steel

Application range: Mercedes (engine: M 103, 104)





	Length mm	g	
150.3009	300,0	105	

Ventilator hub wrench set

- For counter holding the Visco coupling drive shaft
- Makes it possible to secure the pulley wheel of the water pump and at the same time release the heating filter
- Also suitable for the removal of the viscous connecting socket on the cooler ventilator
- Special tool steel
- In durable plastic storage case





			kg	
150.3320	12 pcs	Ventilator hub wrench set	1,89	



consists of:

		g	
150.3008	Visco ventilator wrench	370	
150.3009	Ventilator coupling counter hold for Mercedes	105	
150.3022	Universal Visco ventilator wrench, 32mm	300	
150.3024	Universal Visco ventilator wrench, 46mm	405	
150.3027	Universal Visco ventilator wrench, 36mm	340	
150.3301	Visco ventilator wrench	472	
150.3306	Holding wrench for Visco ventilator	330	
150.3321	Adaptor, short, Ø 20 mm	5	
150.3322	Adaptor, Ø 8 mm	22	
150.3323	Adaptor, Ø 10 mm	29	
150.3324	1/2" Holding wrench	635	
151.26025	Hexagon key wrench, phosphate finish, short, 2,5mm	10	

Pin-type face wrench set, seamlessly adjustable with interchangeable pins

- Universal application for common two-hole nuts
- With interchangeable pins
- Each double pin wrench is replacing 4 single key sizes
- Adjustable in diameter
- Phosphate finish
- Special tool steel
- In durable plastic storage case





			kg	
150.3205	20 pcs	Pin-type face wrench set, seamlessly adjustable with interchangeable pins	1,56	

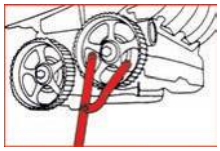
consists of:

		g	
150.3206	Pin-type face wrench, adjustable, 263 mm	485	
150.3207	Pin-type face wrench, adjustable, 215 mm	293	
150.3208	Pin-type face wrench, adjustable, 161 mm	155	
150.3209	Pin-type face wrench, adjustable, 115 mm	57	
150.3210	Pin pair, Ø 2.37 mm	2	
150.3211	Pin pair, Ø 2.90 mm	2	
150.3212	Pin pair, Ø 4.87 mm	5	
150.3213	Pin pair, Ø 5.91 mm	7	
150.3214	Pin pair, Ø 6.87 mm	13	
150.3215	Pin pair, Ø 7.92 mm	15	
150.3216	Pin pair, Ø 9.87 mm	28	
150.3217	Pin pair, Ø 11.90 mm	37	



Universal timing gear holder set

- Ideally suited to almost all vehicle types
- Universally used tool for locking, turning and securing locked pulley wheels
- The overall length of 520 mm guarantees an optimal lever for loosening the timing belts reinforcement screws
- Stepless adjustment of Ø 40 - 220 mm - pin height: 35 mm
- Includes 4 pairs of screw on plugs
- With plastic-coated handle
- Special tool steel





			kg	
150.3000	11 pcs	Universal timing gear holder set	2,20	

consists of:

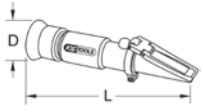
		g	
150.3001	Adjustable lever f.150.3000, 520 mm	1120	
150.3002	Locking pin f.150.3000, 2 pcs, 6-10 mm	100	
150.3003	Locking pin f.150.3000, 2 pcs, 8-11 mm	50	
150.3004	Locking pin f.150.3000, 2 pcs, 10-12 mm	40	
150.3005	Locking pin f.150.3000, 2 pcs, 11-16 mm	40	
150.3006	Knurled nut f.locking pin,150.3000, 2 pcs	20	

FROST PROTECTION AND COOLANT WATER TESTER

Refractometer - optical tester for battery fluid and antifreeze

- For the quick and accurate testing of acidity in the battery fluid and the antifreeze content
- Can also be used for coolant and windscreen wiper fluid
- Adjustable eye piece with rubber viewing rest
- With automatic temperature compensation (ATC)
- Also suitable in ambient temperatures of less than 10 °C
- Reading correction function by means of bimetallic measurement
- High quality design made from aluminium
- Good readability due to defined dividing lines
- Recalibration possible
- Includes calibration screwdriver and pipette
- In practical plastic case







Technical data:

Battery acid:	acid density (measuring range 1.1 to 1.4 kg/l)
Coolant water Propylene:	temperature resistance (measuring range 0° to -50°C)
Coolant water Ethylene:	temperature resistance (measuring range 0° to -50°C)
Windscreen water:	antifreeze (measuring range 0° to -40° C)

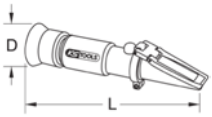
	D mm	L mm	Glass face mm	g	
550.1290	40,0	149,0	40 x 13	630	

Refractometer - optical tester for battery fluid, antifreeze and AdBlue® additives

- For the quick and accurate testing of the acidity of the battery fluid, the antifreeze content and the AdBlue® additives
- Can also be used for coolant and windscreen wiper fluid
- Adjustable eye piece with rubber viewing rest
- With automatic temperature compensation (ATC)
- Also suitable in ambient temperatures of less than 10 °C
- Reading correction function by means of bimetallic measurement
- High quality design made from aluminium
- Good readability due to defined dividing lines
- Recalibration possible
- Includes calibration screwdriver and pipette
- In practical plastic case

*AdBlue® is a registered trademark of the Verband der Automobilindustrie e.V (VDA).







Technical data:

Battery acid:	acid density (measuring range 1.1 to 1.3 kg/l)
Coolant water Propylene:	temperature resistance (measuring range -25° to -50°C)
Coolant water Ethylene:	temperature resistance (measuring range -25° to -50°C)
Windscreen water:	antifreeze (measuring range -10° to -40° C)
For AdBlue® additives (VRA):	urea content (measuring range 30% - 35%)

	D mm	L mm	Glass face mm	g	
550.1285	40,0	160,0	40 x 13	480	

Antifreeze tester

- For quick and precise testing of antifreeze
- For ethylene glycol/water mixture in the cooling circuit for passenger cars, commercial vehicles etc.
- Also allows for a visual inspection for rust and other impurities
- Also suitable in ambient temperatures of less than 10 °C
- Easy to read with the pendulum display (up to -50 °C/-60 °F)
- High-quality design
- Plastic housing
- Good readability





		g	
550.1241	Antifreeze tester	120	

TEMPERATURE MEASURING DEVICE

Rod thermometer

- Controls temperature of air streams through air channels
- Controls the water temperature
- With long and narrow measuring instruments
- Scale with °C and °F measurements





	Length mm	Working range °C	Working range °F	g	
150.1963	210,0	0 - 200	0 - 400	27	

Digital rod thermometer

- Controls temperature of air streams through air channels
- Controls the water temperature
- With long, narrow measuring instruments
- Good readability
- Includes 9V block battery
- Includes hold function
- Includes LCD display





	Length mm	Working range °C	g	
150.1968	125,5	-50 - +150	145	



Infrared thermometer

- Laser pistol for non contact temperature measurement
- Ideally suited for the automotive sector, industrial, and construction usage Chemical and foodsuffs industry
- Laser measuring beam with a red measuring point
- Illuminating Display
- LCD Digital display
- Automatic swiching off
- Includes 9V block battery
- Sturdy plastic housing

Application range: In turning motors, difficult to access places, fluids, under current line directions, in heating appliances, gas and, air-conditioning, coolent systems, brake discs aggressive chemicals and groceries





Technical data:

Switchable:	°C / °F
Working range:	-20 °C - 500 °C
Switching mode for spectral range:	0,85 - 0,90 - 0,95 µm
Power output max:	1mW
Power requirement:	9V block battery

		g	
150.3040	Infrared thermometer	135	



Thermal imaging camera with UV light

- Compact thermal imaging camera for applications in construction, electrical engineering, mechanical engineering, automotive industry, etc.
- Reliably measure temperature and store images and data for reports
- Accurate readings can be taken from safer distances
- Colour display for the safe evaluation and analysis of temperature conditions
- With a laser pointer for precise positioning
- Three selectable colour palettes for image display: hot iron, rainbow and grey
- Selectable measuring range between Celsius °C or Fahrenheit °F
- Integrated LED lights support working in dark areas
- The integrated UV lamps are ideal for the detection of leaks in cooling or air conditioning systems
- Adjustable automatic switch-off
- Date and time can be set for accurate data acquisition
- Integrated micro USB interface
- On and off switch is also used to protect the camera
- Includes 3xAA batteries
- In durable plastic storage case
- for replacing the silent bearing from the longitudinal control arm and cross control arm on the front and rear axles

Advantages:
- Measure temperatures more accurately
- Result report with integrated images
- Quick fault diagnosis
- Safety and greater distance for the employee

Contents:
- Basic unit
- 2 GB micro SD memory cards
- Batteries 3xAA

Technical data:
- Accuracy: ±1.5% or 1.5°C
- Measurement range: -30°C to 650°C (-22°F to 1202°F)
- Emissivity: 4 pre-set values, user adjustments between ε 0.10 and 1.00 are possible
- Distance-to-spot ratio (D:S): 30:1
- Measurement value resolution: 0.1°C/°F
- Response time: >125 ms
- Spectral range: 8 to 14 µmv
- Laser: a laser cross-hair encircles the area being measured
- Detector: IR-EX™ technology (integrated IR array sensor with CMOS sensor)
- Screen resolution (H x W): 16,384 pixels (128 x 128)
- Field of view (H x W): 30.0°
- Upper range: 650°C
- Thermal sensitivity: 150 mK
- Screen refresh rate: <9 Hz
- Colour range: 3 (iron, rainbow and grey)
- Picture storage format: image in bitmap format (BMP) with temperature and emissivity
- Screen: 1.77" TFT colour screen (pixel resolution 128 x 160)
- Battery: 3 x AA
- Battery life with laser and light: 12 hours
- Memory: 2 GB micro SD card
- Working temperature: 0°C to 50°C (31°F to 122°F)





	Length mm	Width mm	Height mm	g	
150.3220	185,0	54,0	104,0	300	

RELEASE TOOLS

Heater hose unlocking tool for Ford

- for professional loosening of the heating hoses on the spray wall
- no damage to the plug-in couplings
- quick and easy disconnection of the hoses
- Plastic



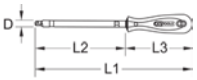
		g	
150.3013	Heater hose unlocking tool for Ford	4	

HOSE CLAMP TOOL

ERGOTORQUE*plus*® socket screwdriver

- Two component handle
- 6 point
- Flexible
- Limited torque
- Double spiral shaft
- Plastic protective coating
- Chrome vanadium





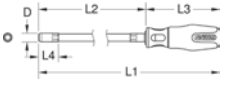


	mm	D mm	L1 mm	L2 mm	L3 mm	L4 mm	g	
159.1126	6,0	10,8	259,0	150,0	109,0	9,3	155	
159.1127	7,0	11,7	259,0	150,0	109,0	10,0	155	
159.2128	8,0	11,9	259,0	150,0	109,0	10,0	155	
159.1125	10,0	12,5	279,0	170,0	109,0	14,3	170	

ERGOTORQUE*plus*® socket screwdriver, extra long

- Two component handle
- 6 point
- Flexible
- Ideal for deep seated screw-hose clamps
- Limited torque
- Double spiral shaft
- Plastic protective coating
- Chrome vanadium







	mm	D mm	L1 mm	L2 mm	L3 mm	L4 mm	g	
911.1175	5	11,9	614,0	500,0	114,0	8,9	270	
911.1176	6	10,9	614,0	500,0	114,0	11,3	280	
911.1177	7	11,7	614,0	500,0	114,0	11,3	280	
911.1178	8	11,7	614,0	500,0	114,0	11,3	280	

ERGOTORQUE*plus*® screwdriver set

- Two component handle
- Flexible blade with double spiral shaft
- Limited torque
- Plastic protective coating
- Contains also the most current 1/4" bits and sockets
- In display box





			kg	
911.1180	16 pcs	ERGOTORQUE*plus*® screwdriver set	1,30	
1 x		1/4"		
1 x		1/4"		
1 x		7 mm		
3 x		5 - 6 - 8 mm		
2 x		5.5 - 6.5 mm		
2 x		PH1 - PH2		
6 x		T10 - T15 - T20 - T25 - T27 - T30		

Hose clamp tension device

- For the dismantling and assembly of hose clamps
- Easy to use
- Less space required
- Wear-resistant spindle drive
- Hand-wheel operation
- 6-point and 1/4" drive
- Chrome molybdenum





	Ø mm	Ø mm	Span width mm	g	
115.0910	6-40	0-37	80	130	
115.0911	6-65	0-62	105	160	



Hose clamp gripping pliers

- Forged gripping jaws
- Serrated execution
- Size adjustment using the adjustment wheel
- Quick-release lever
- With easy locking action
- For round and flat material
- Nickel plated
- Chrome vanadium





	Clamping range mm	Length mm	g	
115.1126	18-36	175,0	231	
115.1127	18-54	230,0	420	

Hose clamp pliers, angled

- Suitable for assembly and disassembly of spring clamps
- 90° angled
- Optimal mounting due to special construction of jaws
- With offset side attachment nuts
- Includes locking mechanism and ratchet function
- Insulated handle
- Simple handling
- Special tool steel





	Clamping range mm	Length mm	g	
115.1182	0-22	220,0	380	

Universal hose clamp pliers

- Universal crown profile
- For difficult to reach clamps
- With PVC dipped handle
- Includes locking mechanism
- Versitile usage
- Chrome molybdenum





	A mm	C mm	L mm	g	
115.1043	0-48,5	40,0	220,0	240	

Hose clamp gripping pliers set

- Forged gripping jaws
- Serrated execution
- Size adjustment using the adjustment wheel
- Quick-release lever
- With easy locking action
- For round and flat material
- Nickel plated
- Chrome vanadium





			g	
115.1125	2 pcs	175 - 230 mm	653	

Hose clamp pliers, angled

- 45° angled head
- With variable jaws
- For difficult to reach clamps
- Includes locking mechanism
- With PVC dipped handle
- Chrome molybdenum





	A mm	C mm	L mm	g	
115.1042	0-65	55,0	220,0	210	

Hose clamp pliers

- Suitable for correct assembly and disassembly of spring clamps
- Turnable jaws
- Includes ratchet function
- Effortless opening and closing
- Insulated handle
- Special tool steel





	A mm	L mm	g	
115.1167	15-56	275,0	400	

Hose clamp pliers

- Suitable for assembly and disassembly of spring clamps
- Optimal mounting due to special construction of jaws
- Includes locking mechanism and ratchet function
- Insulated handle
- Simple handling
- Special tool steel





	Clamping range mm	Length mm	g	
115.1181	0-55	260,0	380	

Hose clamp pliers, angled

- 90° angled head
- With variable jaws
- For difficult to reach clamps
- Includes locking mechanism
- With PVC dipped handle
- Chrome molybdenum





	Ø mm	Clamping range mm	Length mm	g	
115.1198	18- 53	5-43	210,0	400	

Hose clamp pliers

- With PVC dipped handle
- For spring pipe clamps
- Includes locking mechanism and ratchet function
- Chrome molybdenum



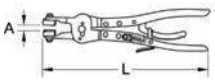


	A mm	C mm	L mm	g	
115.1046	0-45	37,0	220,0	230	

Hose clamp pliers, angled

- Suitable for correct assembly and disassembly of spring clamps
- 110° angled
- Turnable jaws
- With locking device
- Insulated handle
- Special tool steel





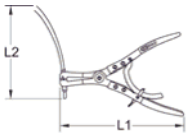


	A mm	L mm	g	
115.1173	6-58	250,0	400	

Hose clamp pliers with double bowden cable

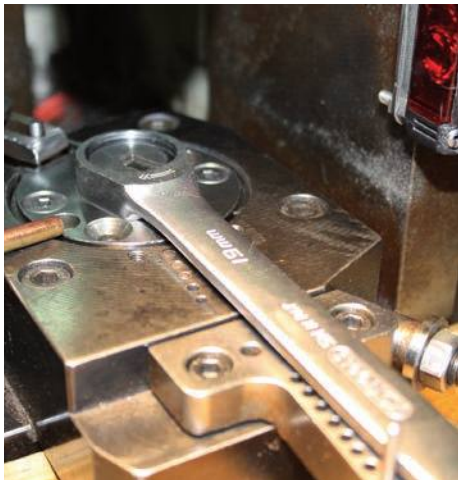
- With PVC dipped handle
- For spring pipe clamps
- With 600 mm bowden cable
- Adjustable length bowden cable
- Includes locking mechanism
- For difficult to reach clamps
- Special tool steel







	Ø mm	L1 mm	L2 mm		g	
115.1065	0 - 70	270,0	600,0	115.1065-1	540	

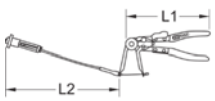


Hose clamp pliers, VAG

- Suitable for assembly or disassembly of spring clamps with reducing ends
- With PVC dipped handle
- With 600 mm bowden cable
- Includes ratchet function, locking mechanism and loosening lever
- Internal spring
- For difficult to reach clamps
- Chrome molybdenum

Application range: VAG 2.0 TDI engines (BKD), especially suitably for hard to reach lower coolant hose





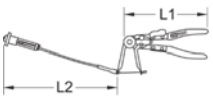


	Ø mm	L1 mm	L2 mm	g	
115.1169	0 - 60	260,0	600,0	500	

Hose clamp pliers with bowden cable

- With PVC dipped handle
- For spring pipe clamps
- With 650 mm Bowden cable
- Includes ratchet function, locking mechanism and loosening lever
- Internal spring
- For difficult to reach clamps
- Chrome molybdenum







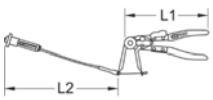
	Ø mm	L1 mm	L2 mm	g	
115.1168	0 - 70	260,0	650,0	500	

Hose clamp pliers with bowden cable

- Ideally suited for opening and closing hose clamps
- Suitable for hard to reach self-tensioning spring clamps
- With 590 mm strengthened Bowden cable
- Includes locking mechanism
- Internal spring
- The torsion of the pliers is reduced with strong clamps
- With quick change system for Bowden cable replacement
- Two component handle
- Strengthened steel

Application range: MUBEA and NORMA





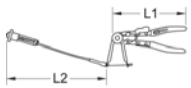


	Ø mm	L1 mm	L2 mm		g	
115.0901	15 - 54	260,0	730,0	115.0902	500	

Hose clamp pliers with bowden cable

- For self-tensioning hose clamps
- In particular for fuel lines, cooling and washing water hoses
- With flat attachment for spring clamps with flat adjoining ends
- Opening and closing the clamps without damage to the hose also in hard to reach places
- With 650 mm Bowden cable
- Includes locking mechanism
- Self opening
- With PVC dipped handle
- Chrome molybdenum





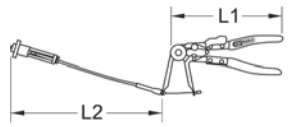


	Ø mm	L1 mm	L2 mm		g	
115.1041	0 - 60	200,0	650,0	115.1041-1	470	

Clic and Clic-R hose clamp pliers

- For the correct assembly and disassembly of spring clamps
- With 600 mm Bowden cable for hard to reach areas
- Step-less locking mechanism
- Quick-release lever
- Simple handling
- Special tool steel







	Ø mm	L1 mm	L2 mm	
115.1189	0-50	210,0	600,0	330





Hose clamp pliers with swivel prism reception

- Suitable for the correct assembly and disassembly of Click, Click-R and Cobra clamps
- Also suitable for self-tensioning hose clamps with flat 3 pinch ends
- In particular for fuel lines, cooling and washing water hoses
- With swivel prism attachment
- Self opening
- Surface nickel-plated
- Special tool steel





	Clamping range mm	Length mm	
115.1188	8-18	210,0	200

Click hose clamp pliers, angled

- Suitable for the correct assembly and disassembly of Click, Click-R and Cobra clamps
- Also suitable for self-tensioning hose clamps with flat 3 pinch ends
- 90° angled head
- Effortless opening and closing
- Forged bite jaws
- With PVC dipped handle
- Special tool steel





	Clamping range mm	Length mm	
115.1179	0-18	180,0	160

Click hose clamp pliers, forged

- Suitable for the correct assembly and disassembly of Click, Click-R and Cobra clamps
- Also suitable for self-tensioning hose clamps with flat 3 pinch ends
- Re-usable V2A-clamps
- With PVC dipped handle
- With self-opening mechanism
- Chrome molybdenum



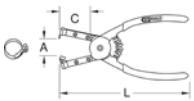


	A mm	C mm	L mm	
115.1045	0-38	25,0	180,0	215

Click hose clamp pliers

- Suitable for the correct assembly and disassembly of Click, Click-R and Cobra clamps
- Also suitable for self-tensioning hose clamps with flat 3 pinch ends
- With PVC dipped handle
- Self opening
- Chrome molybdenum





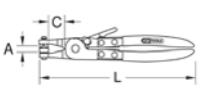


	A mm	C mm	L mm	
115.1040	0-25	40,0	160,0	120

Hose clamp pliers

- With PVC dipped handle
- For spring pipe clamps
- Includes locking mechanism and ratchet function
- Chrome molybdenum







	A mm	C mm	L mm	
115.1047	0-45	37,0	220,0	230

Automotive hose clamp pliers set

- Handle dip insulated
- Ideal for deep seated spring clamps
- Includes locking mechanism
- For self tensioning spring pipe clamps with 3 point mounting
- Self opening
- For opening and closing re/useable clic hose clamps, type Clic + Clic-R
- For difficult to reach clamps
- Special tool steel

Application area: For connecting and removing fuel, immersed ventilation, coolant, washer water and vacuum hoses etc.





			kg	
115.1104	4 pcs	Automotive hose clamp pliers set	1,12	

consists of:

		g	
115.1045	Hose clamp pliers (click type), 180mm	215	
115.1042	Hose clamp pliers (recessed/slot), 220mm	210	
115.1187	Hose clamp pliers with prism, 8-18mm	189	
115.1065	Hose clamp pliers (dbl bowden cable), 600mm	540	

Automotive hose clamp pliers set

- With PVC dipped handle
- For opening and closing of cobra hose clamps
- Swivel pressed jaws
- Includes locking mechanism and ratchet function
- Self opening mechanism
- For the dismantling and assembly of hose clamps
- Includes bowden cable
- Chrome molybdenum





			kg	
115.1055	7 pcs	Automotive hose clamp pliers set	4,00	

consists of:

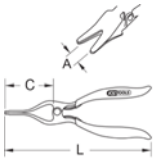
		g	
115.1041	Hose clamp pliers (bowden cable), 650mm	470	
115.1042	Hose clamp pliers (recessed/slot), 220mm	210	
115.1043	Hose clamp pliers (crown profile), 220mm	240	
115.1044	Hose pliers, 195mm	190	
115.1045	Hose clamp pliers (click type), 180mm	215	
115.1046	Hose clamp pliers (recessed/slot),220mm	230	
115.1047	Hose clamp pliers (dbl cross slot),220mm	230	

Special hose pliers

- For dismantling and assembly
- For removing of hose connections from hose tails
- For correct opening of fuel pipe coupling
- For professional and damage-free use
- Extra flat jaws to the end
- With PVC dipped handle
- Special tool steel

Ideally suited in e.g. fuel vacuum hoses, low pressure systems and water hoses.







	A mm	L mm	C mm	g	
115.1044	0-30	195,0	70,0	190	

Hose release pliers

- Suitable for releasing secured cooling hoses
- Securing screw for adjusting jaws
- Gentle on materials
- Lower power usage
- Simple operation
- Plastic handle
- Special tool steel





	Length mm	Ø mm	g	
115.1199	180,0	15-54	180	

Hose unscrewing pliers with increased unscrewing force

- Suitable for releasing secured cooling hoses
- Securing screw for adjusting jaws
- increased loosening force due to pulling cable
- Gentle on materials
- Lower power usage
- Simple operation
- Plastic handle
- Special tool steel



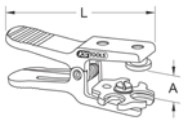
	Length mm	Ø mm	g	
115.1103	285,0	45-120	530	

HOSE DISCONNECTION TOOLS

ALLinONE Hose clamp pliers set

- Simple sealing of pipe lines, 4.75 mm (3/16“) to 14.0 mm (9/16“)
- Rotary magazine with 4 slots for the corresponding pipe size
- Ideal for maintenance work with gasoline, oil, water and antifreeze
- Prevents moisture and foreign objects from entering
- Ideal for use in passenger cars, vans and large vans, commercial vehicles, tractors, agricultural machinery, construction machinery and industrial applications
- Special plastic







		Ø mm	A mm	L mm	g	
122.1295	3 pcs	4,75-14	38,0	120,0	149	

consists of:

		g	
122.1296	ALLinONE Fluidstopper Ø 4,75-14 mm	60	
122.1297	Replaceable plastic plugs for 122.1296 pipe stopper pliers	50	

Hose clamp

- For easy clamping of flexible hose parts from 10.0 mm (3/8”) to 45.0 mm (1.3/4”)
- Continuous flow rate regulation, sensitive flow rate regulation or complete flow rate stop
- The hose is crimped over a wide area against the sturdy steel cross, damage to the hose is therefore prevented
- With revolving clamp wing from metal
- Ideal for maintenance work with gasoline, oil, water and antifreeze
- Protects against leakage of fuel, oil, water and antifreeze
- Ideal for use in passenger cars, vans and large vans, commercial vehicles, tractors, agricultural machinery, construction machinery and industrial applications
- Heat resistant up to 160 °C
- Special tool steel





	Ø mm	g	
122.1201	10,0	41	
122.1202	15,0	46	
122.1203	25,0	96	
122.1204	45,0	237	

Hose clamp set

- For easy clamping of flexible hose parts from 10.0 mm (3/8") to 45.0 mm (1.3/4")
- Continuous flow rate regulation, sensitive flow rate regulation or complete flow rate stop
- The hose is crimped over a wide area against the sturdy steel cross, damage to the hose is therefore prevented
- With revolving clamp wing from metal
- Ideal for maintenance work with gasoline, oil, water and antifreeze
- Protects against leakage of fuel, oil, water and antifreeze
- Ideal for use in passenger cars, vans and large vans, commercial vehicles, tractors, agricultural machinery, construction machinery and industrial applications
- Heat resistant up to 160 °C
- Special tool steel





122.1200	4 pcs	Hose clamp set	420

consists of:

122.1201	Hose clamp max. Ø 10 mm (3/8")	41
122.1202	Hose clamp max. Ø 15 mm (1/2")	46
122.1203	Hose clamp max. Ø 25 mm (1")	96
122.1204	Hose clamp max. Ø 45 mm (1.3/4")	237



Hose clamp gripper

- For simple clamping of flexible for hoses from 15.9 mm (5/8") up to 60.0 mm (2.3/8")
- For stopping the flow
- The hose is a broad area squeezed against the stable support surface, damaging the hose is avoided
- Variable adjustment with locking function
- Prevents petrol, oil, water and radiator anti-freeze from escaping during maintenance work
- Ideal for use in passenger cars, vans and large vans, commercial vehicles, tractors, agricultural machinery, construction machinery and industrial applications
- Heat resistant up to 160 °C
- Special plastic



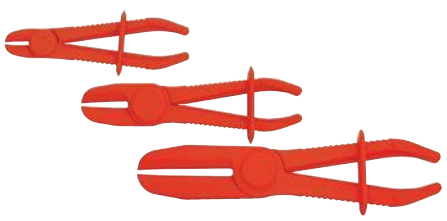


	Hose external-Ø mm		
115.5052	15,0	80	
115.5053	30,0	130	
115.5054	60,0	160	

Hose clamp pliers set

- For simple clamping of flexible for hoses from 15.9 mm (5/8") up to 60.0 mm (2.3/8")
- For stopping the flow
- The hose is a broad area squeezed against the stable support surface, damaging the hose is avoided
- Variable adjustment with locking function
- Prevents petrol, oil, water and radiator anti-freeze from escaping during maintenance work
- Ideal for use in passenger cars, vans and large vans, commercial vehicles, tractors, agricultural machinery, construction machinery and industrial applications
- Heat resistant up to 160 °C
- Special plastic





115.5050	3 pcs	Hose clamp pliers set	370

consists of:

115.5052	Hose clamp gripper, 15mm	80
115.5053	Hose clamp gripper, 30mm	130
115.5054	Hose clamp gripper, 60mm	160

Hose clamp pliers 90°

- For simple clamping of flexible for hoses from 15.9 mm (5/8") up to 60.0 mm (2.3/8")
- Angled design for use in confined spaces
- For stopping the flow
- The hose is a broad area squeezed against the stable support surface, damaging the hose is avoided
- Variable adjustment with locking function
- Prevents petrol, oil, water and radiator anti-freeze from escaping during maintenance work
- Ideal for use in passenger cars, vans and large vans, commercial vehicles, tractors, agricultural machinery, construction machinery and industrial applications
- Heat resistant up to 160 °C
- Special plastic





	Hose external-Ø mm		
115.5057	15,0	55	
115.5058	23,0	95	
115.5059	35,0	130	

Hose clamp pliers set 90° angled

- For simple clamping of flexible for hoses from 15.9 mm (5/8") up to 60.0 mm (2.3/8")
- Angled design for use in confined spaces
- For stopping the flow
- The hose is a broad area squeezed against the stable support surface, damaging the hose is avoided
- Variable adjustment with locking function
- Prevents petrol, oil, water and radiator anti-freeze from escaping during maintenance work
- Ideal for use in passenger cars, vans and large vans, commercial vehicles, tractors, agricultural machinery, construction machinery and industrial applications
- Heat resistant up to 160 °C
- Special plastic





115.5055	3 pcs	Hose clamp pliers set 90° angled	370

consists of:

115.5057	Hose clamp gripper 90°, Ø 15mm	55
115.5058	Hose clamp gripper 90°, Ø 23mm	95
115.5059	Hose clamp gripper 90°, Ø 35mm	130

Stepless hose clamp pliers, angled

- Stepless
- To simply clamp flexible hose lines of 20.0 to 74.0 mm
- For stopping the flow
- The hose is squeezed against the stable bearing area,
- any damage to the hose is avoided
- Flexible jaws enable universal use
- Prevents petrol, oil, water and radiator anti-freeze from escaping during maintenance work
- Ideal for use in passenger cars, vans and large vans, commercial vehicles, tractors, agricultural machinery, construction machinery and industrial applications
- Burnished
- Special tool steel





	Hose external-Ø mm	g	
115.5012	20,0	70	
115.5013	35,0	320	
115.5014	74,0	505	

Stepless hose clamp-off pliers set, angled

- Stepless
- To simply clamp flexible hose lines of 20.0 to 74.0 mm
- For stopping the flow
- The hose is squeezed against the stable bearing area,
- any damage to the hose is avoided
- Flexible jaws enable universal use
- Prevents petrol, oil, water and radiator anti-freeze from escaping during maintenance work
- Ideal for use in passenger cars, vans and large vans, commercial vehicles, tractors, agricultural machinery, construction machinery and industrial applications
- Burnished
- Special tool steel





			g	
115.5010	3 pcs	Stepless hose clamp-off pliers set, angled	895	

consists of:

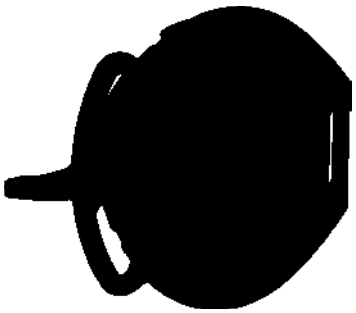
		g	
115.5012	Stepless hose clamp pliers, angled, Ø 20.0 mm	70	
115.5013	Stepless hose clamp pliers, angled, Ø 35.0 mm	320	
115.5014	Stepless hose clamp pliers, angled, Ø 74.0 mm	505	

DRIP PANS

Drain pan 7.5 litres

- With three carry handles
- Safe and clean pouring with the self-contained overflow edge and spout
- Ideally suited to collecting different fluids
- Suitable for oil, chemicals, petrol, acid and anti-freeze fluid
- Also suitable for cleaning parts
- Practical, quick and friendly to the environment
- Shock and impact resistant





	Ø mm	H mm	g	
150.9359	385,0	130,0	620	

Drain pan 8 litres

- With three carry handles
- Safe and clean pouring with the spout
- Ideally suited to collecting different fluids
- Suitable for oil, chemicals, petrol, acid and anti-freeze fluid
- Also suitable for cleaning parts
- Practical, quick and friendly to the environment
- Screwed connection with rubber seal for safe transport
- Shock and impact resistant





	B mm	H mm	L mm	g	
150.9357	340,0	120,0	600,0	1,06	



Drain pan 17 litres

- With three carry handles
- Safe and clean pouring with the self-contained overflow edge and spout
- Ideally suited to collecting different fluids
- Suitable for oil, chemicals, petrol, acid and anti-freeze fluid
- Also suitable for cleaning parts
- Practical, quick and friendly to the environment
- Shock and impact resistant





	Ø mm	H mm	kg	
150.9360	445,0	145,0	1,07	

Drain pan 17 litres

- With three carry handles
- Safe and clean pouring with the self-contained overflow edge and spout
- Ideally suited to collecting different fluids
- Suitable for oil, chemicals, petrol, acid and anti-freeze fluid
- Also suitable for cleaning parts
- Practical, quick and friendly to the environment
- Shock and impact resistant





	Ø mm	H mm	kg	
150.9361	445,0	145,0	1,16	



Mobile drain pan, 30 litres, extra flat with castors

- With five carry handles
- 12.0 cm high, extra flat edges
- Safe and clean pouring with the closed contained and spout
- Ideally suited to collecting different fluids
- Suitable for oil, chemicals, petrol, acid and anti-freeze fluid
- Also suitable for cleaning parts
- With four steerable castors
- Practical, quick and friendly to the environment
- Includes removable sieve
- Screwed connection with rubber seal for safe transport
- Shock and impact resistant





	B mm	H mm	L mm	kg	
150.9354	600,0	120,0	850,0	5,60	

Drain pan 55 litres, extra flat

- With four carry handles
- 11.0 cm high, extra flat edges
- Safe and clean pouring with the self-contained overflow edge and spout
- Ideally suited to collecting different fluids
- Suitable for oil, chemicals, petrol, acid and anti-freeze fluid
- Also suitable for cleaning parts
- Practical, quick and friendly to the environment
- Shock and impact resistant
- Polyethylene





	L mm	B mm	H mm	kg	
150.9358	1030,0	724,0	110,0	6,80	

MEASURING BEAKER, JUG AND FUNNEL

Measuring cup set

- Configuration of practical measuring cup sizes
- For a wide range of uses
- Transparent
- Break-resistant
- Red primed scale division
- Resistant to oil, petrol and acid
- With handle and spout
- PE (polyethylene)

Scales: L/ml, cups, Oz, quart







			kg	
150.9205	3 pcs	250 - 500 - 1.000 ml	227	

Measuring cup with flexible outlet spout

- For a wide range of uses
- Flexible, funnel-shaped spout allows for a clean drainage
- Suitable for oil, chemicals, petrol, acid, anti-freeze fluid and non-acidic fluids
- Break-resistant
- Steady
- With a graduation scale
- With practical carry handle
- Special plastic





		Spout	kg	
150.9234	1	150.9236	150	
150.9235	2	150.9236	250	
150.9001	3	150.9003	310	
150.9002	5	150.9003	440	

Water can

- For a wide range of uses
- Break-resistant
- With 2 carry handles
- Pouring spout enables clean emptying
- Suitable for water and coolant fluid
- Special plastic





		kg	
150.9239	9	920	

Funnel set

- Configuration of practical funnel sizes
- For a wide range of uses
- Red
- Break-resistant
- Resistant to oil, petrol and acid
- Grip strap for convenient use
- HDPE (high density polyethylene)





			kg	
150.9240	5 pcs	Ø 50 - Ø 75 - Ø 95 - Ø 115 - Ø 150 mm	251	



Universal funnel set

- Special flexible funnel for hard-to-reach places
- For a wide range of uses
- With bayonet connection and seal
- Direct connection to the oil fill opening
- No more lengthy and time consuming pouring
- Includes clear hose with sealing plug on the end of the hose
- Grip strap for convenient use
- Reduces loss and dirtying of oily engines
- Special plastic





		Ø Tube mm	l	Ø mm	tube length mm	g
150.9230	3 pcs	14x16	1	160	400	240



TRANSFER PUMPS

Mini transfer pump

- Ideal tool for refilling in case of emergencies
- Suitable for battery acid, fuels, oils and distilled water
- The hoses are attached to the balloon lifter using the supplied hose clamps
- Special plastic





	Tube inner Ø mm	tube length mm	g
150.1665	8,0	2 x 900	320

Transfer pump

- Ideal aid for easy transferring and pumping
- Suitable for battery acid, fuels, antifreeze, oils and distilled water
- Acid-resistant
- With high quality pump body and reinforced pump handle
- Through a rubber tube can also be used as an air pump
- Includes rubber tubes and reduce piece
- Special plastic



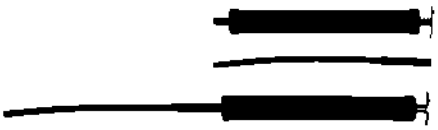


	Tube inner Ø mm	tube length mm	g
150.1660	12,0	2 x 1.300	465

Syringe for fluid change 0.2 litre

- Ideal tool for decanting, removing or dosing liquids to transmissions, power steering, hydraulics, engines etc.
- Suitable for fuel oil, water and antifreeze
- Fine dosing
- Overflowing material can be pumped back problem-free
- Includes rubber hose
- Robust metal execution





	l	Tube inner Ø mm	Hose external-Ø mm	tube length mm	housing length mm	g
150.1684	0,2	8	10	290	290	365

Syringe for fluid change 0.2 litre

- Ideal tool for decanting, removing or dosing liquids to transmissions, power steering, hydraulics, engines etc.
- Suitable for fuel oil, water and antifreeze
- Fine dosing
- Overflowing material can be pumped back problem-free
- Includes rubber hose with flow stop cap
- Robust PP design



	l	Tube inner Ø mm	Hose external-Ø mm	tube length mm	housing length mm	g
150.9221	0,2	6	8	210	210	245



Syringe for fluid change 1.5 litre

- Ideal tool for decanting, removing or dosing liquids to transmissions, power steering, hydraulics, engines etc.
- Suitable for fuel oil, water and antifreeze
- Fine dosing
- Overflowing material can be pumped back problem-free
- Includes rubber hose with flow stop cap
- Robust PP design





	l	Tube inner Ø mm	Hose external-Ø mm	tube length mm	housing length mm	g
150.9222	1,5	14	16	320	320	900

Electric suction and transfer pump

- Ideal for bleeding and filling of fluids
- suitable for diesel, engine oil and heating oil
- Suction capacity: Engine oil 0.2 l/min, diesel and heating oil 1.2 l/min
- 12V connection via the crocodile terminals of the vehicle or an external battery
- including 6 mm suction probe
- not suitable for water, gear oil and highly flammable liquids such as petrol, etc.





	Tube inner Ø mm	kg
150.2800	13	1,15

2 direction suction and filling hand pump

- Ideal for bleeding and filling of fluids
- With ball valve to select between suction and pressure
- Suck and press with every way
- Wear-resistant and temperature resistant
- For difficult to reach openings
- With 2 tubes
- Suction tube clear Ø I x E: 10x16 mm, length 600 mm
- Pressure tube fabric-reinforced Ø I x E: 16x21mm, length 600 mm
- For brake fluid, motor / transmission oil, petrol, diesel, fuel oils, spirit, petroleum, antifreeze etc.
- Robust aluminum piping



	Stroke mm	Content	Length mm	Ø mm	g	
150.9255	208,0	256	808,0	40	662	
150.9256	255,0	720	855,0	60	884	

Dispense hand pump PVC, 1 litre with tube

- For the controlled bleeding and filling of fluids
- Exact dosage per scale
- High suction
- For difficult to reach openings
- For brake fluid, motor / transmission oil, petrol, diesel, fuel oils, spirit, petroleum, antifreeze etc.
- Fabric-reinforced PVC tube
- PVC cylinder



Technical data:

Lift volume:	1,000 ml
Stroke:	420,0 mm
Scale division:	25 ml
Connection thread:	M15x1.5IG

	Ø mm	Length mm	g	
150.9250	60	465,0	931	

PVC Tube

- Fabric-reinforced
- For 150.9250



	Length mm	Inner Ø mm	Outer Ø mm	g	
150.9253	600,0	10,0	16,0	110	

PVC Tube with curved outlet pipe

- For difficult to reach openings
- With wing nut and sealing for locking
- With external thread M15 x 1.5
- Robust, curved aluminum piping
- Fabric-reinforced
- Ideal for use with KS dispense hand pump 150.9250



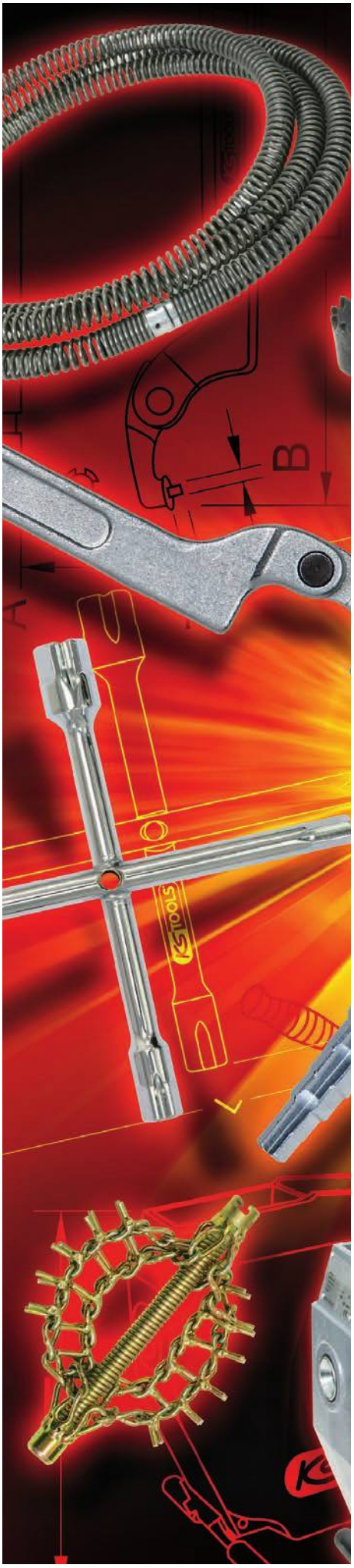
	Length mm	Ø mm	Bend radius	g	
150.9252	750,0	10	120°	125	

Metal pipe, flexible with outlet head

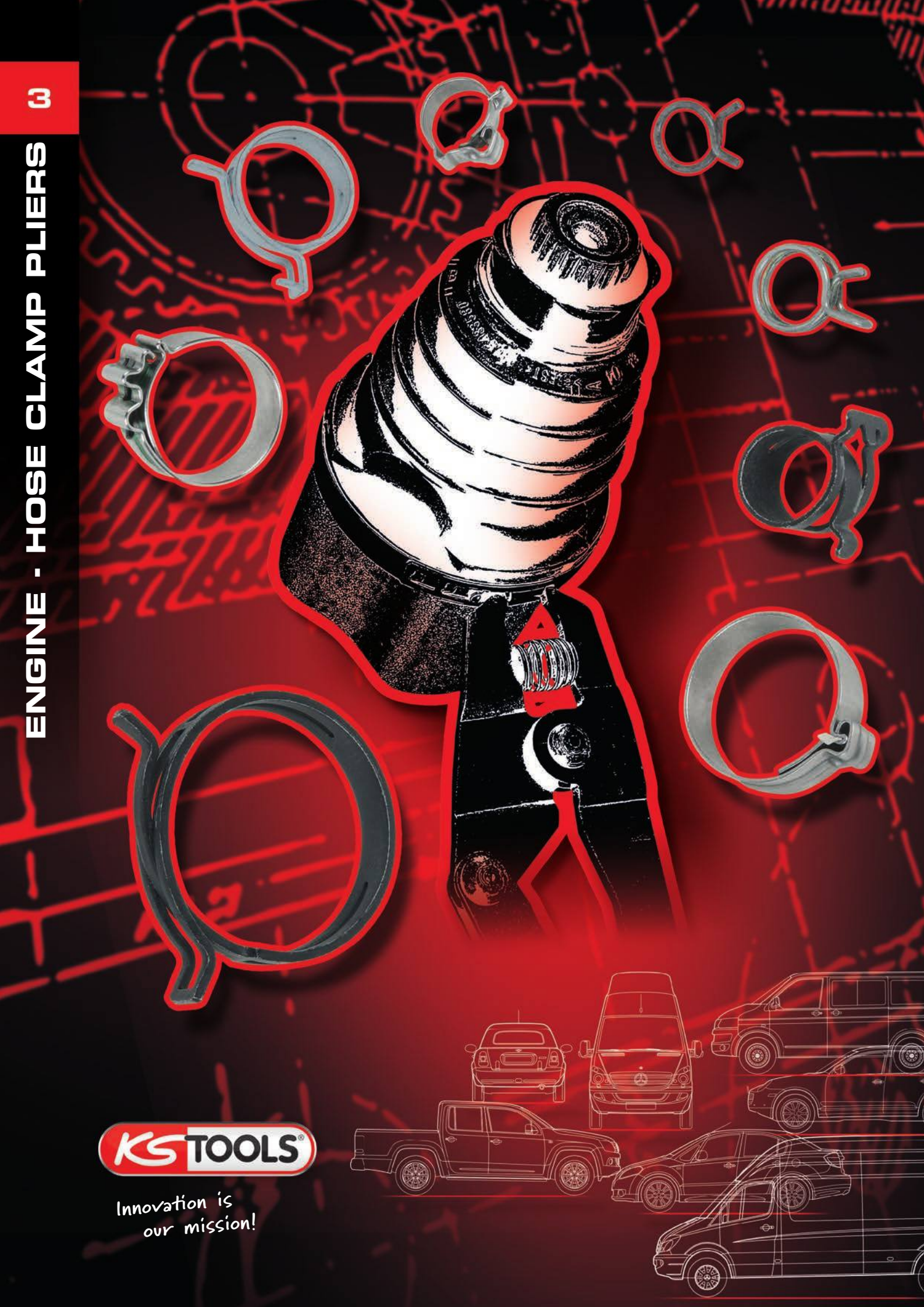
- For difficult to reach openings
- With wing nut and sealing for locking
- With external thread M15 x 1.5
- Durable, flexible steel pipe
- Ideal for use with KS dispense hand pump 150.9250



	Length mm	Ø mm	g	
150.9251	250,0	10	82	



ENGINE - HOSE CLAMP PLIERS



KS TOOLS

Innovation is our mission!

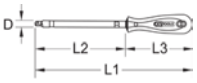
	FROM PAGE
SCREW HOSE CLAMPS	164
SPRING STRIP HOSE CLAMPS	164
CLICK AND COBRA HOSE CLAMPS	167
EARLESS HOSE CLAMPS	168
ONE EAR HOSE CLAMPS	168
TENSION BANDS	168
SPRING WIRE HOSE CLAMPS	169
FUEL PIPE CLAMP PLIERS	169
HOSE CLAMP PLIERS SETS	169
HOSE ASSEMBLY AND REMOVAL TOOLS	170
HOSE DISCONNECTION TOOLS	170

SCREW HOSE CLAMPS

ERGOTORQUE*plus*® socket screwdriver

- Two component handle
- 6 point
- Flexible
- Limited torque
- Double spiral shaft
- Plastic protective coating
- Chrome vanadium





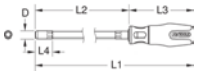


	mm	D mm	L1 mm	L2 mm	L3 mm	L4 mm	g	
159.1126	6,0	10,8	259,0	150,0	109,0	9,3	155	
159.1127	7,0	11,7	259,0	150,0	109,0	10,0	155	
159.2128	8,0	11,9	259,0	150,0	109,0	10,0	155	
159.1125	10,0	12,5	279,0	170,0	109,0	14,3	170	

ERGOTORQUE*plus*® socket screwdriver, extra long

- Two component handle
- 6 point
- Flexible
- Ideal for deep seated screw-hose clamps
- Limited torque
- Double spiral shaft
- Plastic protective coating
- Chrome vanadium





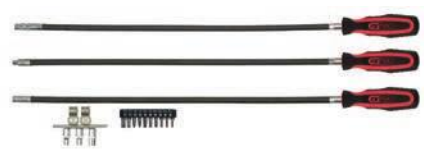


	mm	D mm	L1 mm	L2 mm	L3 mm	L4 mm	g	
911.1175	5	11,9	614,0	500,0	114,0	8,9	270	
911.1176	6	10,9	614,0	500,0	114,0	11,3	280	
911.1177	7	11,7	614,0	500,0	114,0	11,3	280	
911.1178	8	11,7	614,0	500,0	114,0	11,3	280	

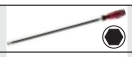
ERGOTORQUE*plus*® screwdriver set

- Two component handle
- Flexible blade with double spiral shaft
- Limited torque
- Plastic protective coating
- Contains also the most current 1/4" bits and sockets
- In display box





			kg	
911.1180	16 pcs	ERGOTORQUE*plus*® screwdriver set	1,30	

1 x		1/4"
1 x		1/4"
1 x		7 mm
3 x		5 - 6 - 8 mm
2 x		5.5 - 6.5 mm
2 x		PH1 - PH2
6 x		T10 - T15 - T20 - T25 - T27 - T30

SPRING STRIP HOSE CLAMPS

Hose clamp tension device

- For the dismantling and assembly of hose clamps
- Easy to use
- Less space required
- Wear-resistant spindle drive
- Hand-wheel operation
- 6-point and 1/4" drive
- Chrome molybdenum





	Ø mm	Ø mm	Span width mm	g	
115.0910	6-40	0-37	80	130	
115.0911	6-65	0-62	105	160	



Hose clamp gripping pliers

- Forged gripping jaws
- Serrated execution
- Size adjustment using the adjustment wheel
- Quick-release lever
- With easy locking action
- For round and flat material
- Nickel plated
- Chrome vanadium





	Clamping range mm	Length mm	g	
115.1126	18-36	175,0	231	
115.1127	18-54	230,0	420	

Hose clamp gripping pliers set

- Forged gripping jaws
- Serrated execution
- Size adjustment using the adjustment wheel
- Quick-release lever
- With easy locking action
- For round and flat material
- Nickel plated
- Chrome vanadium



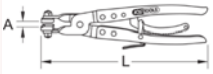


			g	
115.1125	2 pcs	175 - 230 mm	653	

Hose clamp pliers with prism reception

- For self-tensioning hose clamps with flat 3 pinch ends
- In particular for fuel lines, cooling and washing water hoses
- With prism attachment for spring clamps with flat adjoining ends
- Opening and closing the clamps without damage to the hose also in hard to reach places
- Self opening
- Special tool steel







	Clamping range mm	Length mm	g	
115.1187	8-18	195,0	189	

Hose clamp pliers

- Suitable for assembly and disassembly of spring clamps
- Optimal mounting due to special construction of jaws
- Includes locking mechanism and ratchet function
- Insulated handle
- Simple handling
- Special tool steel





	Clamping range mm	Length mm	g	
115.1181	0-55	260,0	380	

Hose clamp pliers, angled

- Suitable for assembly and disassembly of spring clamps
- 90° angled
- Optimal mounting due to special construction of jaws
- With offset side attachment nuts
- Includes locking mechanism and ratchet function
- Insulated handle
- Simple handling
- Special tool steel



	Clamping range mm	Length mm	g	
115.1182	0-22	220,0	380	

Hose clamp pliers, angled

- 45° angled head
- With variable jaws
- For difficult to reach clamps
- Includes locking mechanism
- With PVC dipped handle
- Chrome molybdenum



	A mm	C mm	L mm	g	
115.1042	0-65	55,0	220,0	210	

Hose clamp pliers, angled

- 90° angled head
- With variable jaws
- For difficult to reach clamps
- Includes locking mechanism
- With PVC dipped handle
- Chrome molybdenum



	Ø mm	Clamping range mm	Length mm	g	
115.1198	18- 53	5-43	210,0	400	

Universal hose clamp pliers

- Universal crown profile
- For difficult to reach clamps
- With PVC dipped handle
- Includes locking mechanism
- Versitile usage
- Chrome molybdenum



	A mm	C mm	L mm	g	
115.1043	0-48,5	40,0	220,0	240	

Hose clamp pliers

- Suitable for correct assembly and disassembly of spring clamps
- Turnable jaws
- Includes ratchet function
- Effortless opening and closing
- Insulated handle
- Special tool steel



	A mm	L mm	g	
115.1167	15-56	275,0	400	

Hose clamp pliers

- Suitable for correct assembly and disassembly of spring clamps
- Turnable jaws
- Includes locking mechanism and ratchet function
- Insulated handle
- Special tool steel



	A mm	L mm	g	
115.1183	0-40	220,0	350	

Hose clamp pliers

- With PVC dipped handle
- For spring pipe clamps
- Includes locking mechanism and ratchet function
- Chrome molybdenum



	A mm	C mm	L mm	g	
115.1046	0-45	37,0	220,0	230	

Hose clamp pliers, angled

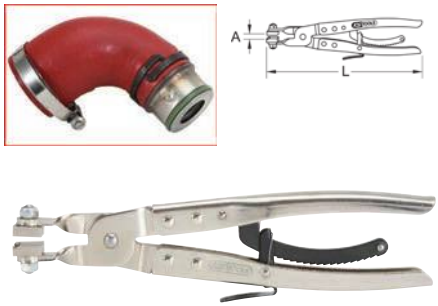
- Suitable for correct assembly and disassembly of spring clamps
- 110° angled
- Turnable jaws
- With locking device
- Insulated handle
- Special tool steel



	A mm	L mm	g	
115.1173	6-58	250,0	400	

Hose clamp pliers type MU1

- For secure and correct dismantling and assembly of clamps
- Suitable for flat fitting and eccentric clamps
- Includes locking mechanism and ratchet function
- For difficult to reach clamps
- For new type and hard to access steel band clamps
- Special tool steel

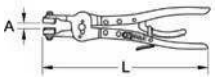


	A mm	L mm	g	
115.1062	0-30	235,0	390	

Hose clamp pliers type MU2

- For secure and correct dismantling and assembly of clamps
- Suitable for flat fitting and eccentric clamps
- Includes locking mechanism and ratchet function
- For difficult to reach clamps
- For new type and hard to access steel band clamps
- Special tool steel

Application range: VAG 2,0 TDI / MC:BKD, **Volkswagen** Passat from 2005, Touran, Golf V, **Škoda** Octavia, **Audi** A3 etc.



	A mm	L mm	g
115.1063	0-40	295,0	470

Hose clamp pliers type MU2

- Suitable for correct assembly and disassembly of spring clamps
- Ideal for deep seated spring clamps
- Turnable jaws
- Includes ratchet function
- Insulated handle
- Special tool steel

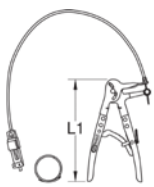



	A mm	L mm	g
115.1166	4-45	290,0	440

Hose clamp pliers type MU3

- For secure and correct dismantling and assembly of clamps
- Suitable for flat fitting and eccentric clamps
- With 600 mm bowden cable
- Adjustable length bowden cable
- Includes locking mechanism and ratchet function
- For difficult to reach clamps
- For new type and hard to access steel band clamps
- Special tool steel

Application range: VAG 2,0 TDI / MC:BKD, **Volkswagen** Passat from 2005,Touran, Golf V, **Škoda** Octavia, **Audi** A3

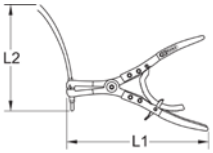





	Ø mm	L1 mm	L2 mm		g
115.1064	0 - 50	240,0	600,0	115.1066	540

Hose clamp pliers with double bowden cable

- With PVC dipped handle
- For spring pipe clamps
- With 600 mm bowden cable
- Adjustable length bowden cable
- Includes locking mechanism
- For difficult to reach clamps
- Special tool steel

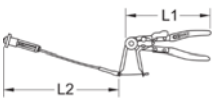


	Ø mm	L1 mm	L2 mm		g
115.1065	0 - 70	270,0	600,0	115.1065-1	540

Hose clamp pliers, VAG

- Suitable for assembly or disassembly of spring clamps with reducing ends
- With PVC dipped handle
- With 600 mm bowden cable
- Includes ratchet function, locking mechanism and loosening lever
- Internal spring
- For difficult to reach clamps
- Chrome molybdenum

Application range: VAG 2.0 TDI engines (BKD), especially suitably for hard to reach lower coolant hose

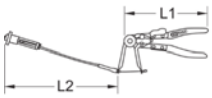





	Ø mm	L1 mm	L2 mm	g
115.1169	0 - 60	260,0	600,0	500

Hose clamp pliers with bowden cable

- With PVC dipped handle
- For spring pipe clamps
- With 650 mm Bowden cable
- Includes ratchet function, locking mechanism and loosening lever
- Internal spring
- For difficult to reach clamps
- Chrome molybdenum

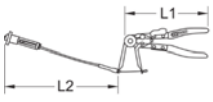


	Ø mm	L1 mm	L2 mm	g
115.1168	0 - 70	260,0	650,0	500

Hose clamp pliers with bowden cable

- Ideally suited for opening and closing hose clamps
- Suitable for hard to reach self-tensioning spring clamps
- With 590 mm strengthened Bowden cable
- Includes locking mechanism
- Internal spring
- The torsion of the pliers is reduced with strong clamps
- With quick change system for Bowden cable replacement
- Two component handle
- Strengthened steel

Application range: MUBEA and NORMA

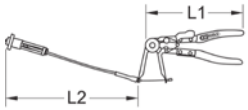


	Ø mm	L1 mm	L2 mm		g
115.0901	15 - 54	260,0	730,0	115.0902	500

Hose clamp pliers with bowden cable

- For self-tensioning hose clamps
- In particular for fuel lines, cooling and washing water hoses
- With flat attachment for spring clamps with flat adjoining ends
- Opening and closing the clamps without damage to the hose also in hard to reach places
- With 650 mm Bowden cable
- Includes locking mechanism
- Self opening
- With PVC dipped handle
- Chrome molybdenum







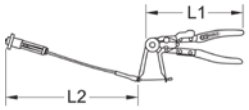
	Ø mm	L1 mm	L2 mm		g
115.1041	0 - 60	200,0	650,0	115.1041-1	470



Clic and Clic-R hose clamp pliers

- For the correct assembly and disassembly of spring clamps
- With 600 mm Bowden cable for hard to reach areas
- Step-less locking mechanism
- Quick-release lever
- Simple handling
- Special tool steel







	Ø mm	L1 mm	L2 mm	g
115.1189	0-50	210,0	600,0	330

CLICK AND COBRA HOSE CLAMPS

Hose clamp pliers with swivel prism reception

- Suitable for the correct assembly and disassembly of Click, Click-R and Cobra clamps
- Also suitable for self-tensioning hose clamps with flat 3 pinch ends
- In particular for fuel lines, cooling and washing water hoses
- With swivel prism attachment
- Self opening
- Surface nickel-plated
- Special tool steel





	Clamping range mm	Length mm	g
115.1188	8-18	210,0	200

Click hose clamp pliers, angled

- Suitable for the correct assembly and disassembly of Click, Click-R and Cobra clamps
- Also suitable for self-tensioning hose clamps with flat 3 pinch ends
- 90° angled head
- Effortless opening and closing
- Forged bite jaws
- With PVC dipped handle
- Special tool steel





	Clamping range mm	Length mm	g
115.1179	0-18	180,0	160

Click hose clamp pliers, forged

- Suitable for the correct assembly and disassembly of Click, Click-R and Cobra clamps
- Also suitable for self-tensioning hose clamps with flat 3 pinch ends
- Re-usable V2A-clamps
- With PVC dipped handle
- With self-opening mechanism
- Chrome molybdenum



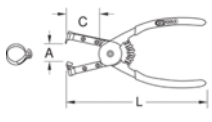


	A mm	C mm	L mm	g
115.1045	0-38	25,0	180,0	215

Click hose clamp pliers

- Suitable for the correct assembly and disassembly of Click, Click-R and Cobra clamps
- Also suitable for self-tensioning hose clamps with flat 3 pinch ends
- With PVC dipped handle
- Self opening
- Chrome molybdenum



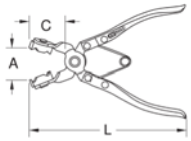




	A mm	C mm	L mm	g
115.1040	0-25	40,0	160,0	120

Clic and Clic-R hose clamp pliers

- Suitable for the correct assembly and disassembly of Click, Click-R and Cobra clamps
- Also suitable for self-tensioning hose clamps with flat 3 pinch ends
- With moveable jaws to enable the use of hose clamp pliers on fuel lines that are hard to reach
- 45° angled head
- Suitable for narrow spaces
- Self opening
- Chrome molybdenum

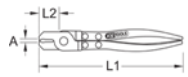


	A mm	C mm	L mm	g	
115.1057	0-30	45,0	200,0	180	

EARLESS HOSE CLAMPS

Hose clamp pliers, ear type

- Knurled handle
- To the dismantling and assembly of “ear type” hose clamp
- For connections on axle boots, coolers and fuel hoses
- Universal usage
- Chrome molybdenum



	A mm	L1 mm	L2 mm	g	
115.1039	0-60	230,0	25,0	320	

Hose clip pliers for earless hose bands

- With PVC dipped handle
- For working of earless clamps
- Also suitable for thermoplastic axle boots
- Uniform compressing of the ear piece
- No damage to the sleeve
- With lever translation
- Nickel-plated finish
- Chrome molybdenum

Application range: Axle boots for **Audi**, **BMW**, **Chrysler**, **Ford**, **GM**, **Honda**, **Mazda**, **Mercedes**, **Nissan**, **Opel**, **Porsche**, **Volkswagen** etc.



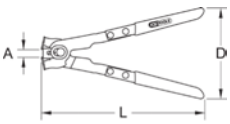

	Ø mm	Length mm	g	
115.1210	100	248,0	330	

ONE EAR HOSE CLAMPS

Hose clamp pliers, ear type

- With PVC dipped handle
- For the fitting of ear clamps
- No sticking up of the ears during the press process
- Uniform compressing of the ear piece
- No damage to the sleeve
- Nickel-plated finish
- Chrome molybdenum

Application range: Axle boots, coolant and fuel hoses for **Volkswagen**, **Audi**, **Opel**, **BMW**, **Mercedes**, **Honda**, **Nissan** and **Mazda**

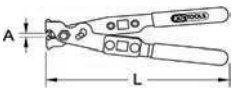





	A mm	L mm	g	
115.1050	0-22	260,0	380	

Hose clamp pliers

- With PVC dipped handle
- With 3/8” drive for use with a torque wrench
- For the fitting and clamping of ear clamps
- 1/2” 4-point recess in the handle for use with torque wrench
- Chrome molybdenum



	A mm	L mm	g	
115.1053	0-17	240,0	540	

Hose clamp pliers

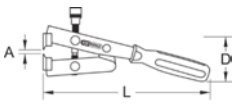
- Work side
- For compressing locking hose clips
- With PVC dipped handle
- Chrome vanadium




	Length mm	g	
115.1185	240,0	335	

Hose clamp pliers for torque wrench

- Black plastic handle
- With 3/8” drive for use with a torque wrench
- Enables clamping and/or copressing of the hose clamps
- Suitable for the stainless steel hose clamps on drive shafts
- Robust cast steel construction



	A mm	L mm	g	
115.1056	0-45	270,0	880	

TENSION BANDS

Stainless steel ball-lock cable ties

- Ideal for fastening axle boots, steering joints etc.
- Adjustable as desired
- Stainless steel 304




	Length mm	Width mm	Content	g	
115.1591	200,0	4,6	100	200	
115.1592	250,0	4,6	100	300	
115.1593	350,0	4,6	100	400	
115.1594	500,0	4,6	100	500	

Clamping and cutting tool for tubing bands

- Straps for attaching to CV joint boots
- Integrated clamping and cutting device
- Suitable for prefabricated and endless band clamps up to 9.5 mm
- Special tool steel




	Length mm	g	
115.1059	163,0	437	

Plier for stainless steel ball-lock cable ties

- Ideal for working stainless steel cable binders
- Can be used up to a tape width of 12 mm
- Controlled tensioning and precise cutting off of the cable binder in a single step
- Tensile force is determined by the operator
- Suitable for steel, stainless steel and epoxy cable binder
- Special tool steel





	Length mm	g	
115.1590	210,0	650	

Hose strap cutter, angled

- For cutting off earless hose clamps
- For connections on axle boots, cooler and fuel hoses
- Insulated handle
- Chrome vanadium



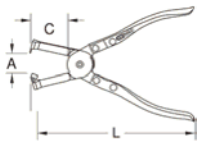


	Length mm	g	
115.1186	220,0	345	

Hose strap cutter, angled

- For cutting off earless hose clamps
- 45° angled head
- For connections on axle boots, cooler and fuel hoses
- Damage-free opening of clamps and tubing bands
- Universal usage
- Nickel-plated finish







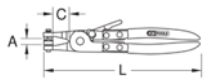
	A mm	C mm	L mm	g	
115.1191	0 - 30,0	50,0	230,0	330	

SPRING WIRE HOSE CLAMPS

Hose clamp pliers

- With PVC dipped handle
- For spring pipe clamps
- Includes locking mechanism and ratchet function
- Chrome molybdenum







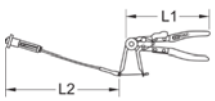
	A mm	C mm	L mm	g	
115.1047	0-45	37,0	220,0	230	

FUEL PIPE CLAMP PLIERS

Fuel pipe clamp with Bowden cable for quick coupling

- For correct unbolting of fuel pipe coupling
- With locking mechanism
- Especially for fuel pipe couplings on which the unbolting elements are reached from the side
- With 650 mm Bowden cable
- No damage to the compression coupling, fuel pipes and fuel hoses
- Quick and easy separation of the fuel pipes
- With PVC dipped handle
- Matt chrome
- Special tool steel







	L1 mm	L2 mm		g	
115.1060	230,0	670,0	115.1058	420	



HOSE CLAMP PLIERS SETS

Automotive hose clamp pliers set

- Handle dip insulated
- Ideal for deep seated spring clamps
- Includes locking mechanism
- For self tensioning spring pipe clamps with 3 point mounting
- Self opening
- For opening and closing re/useable clic hose clamps, type Clic + Clic-R
- For difficult to reach clamps
- Special tool steel

Application area: For connecting and removing fuel, immersed ventilation, coolant, washer water and vacuum hoses etc.





			kg	
115.1104	4 pcs	Automotive hose clamp pliers set	1,12	

consists of:

		g	
115.1045	Hose clamp pliers (click type), 180mm	215	
115.1042	Hose clamp pliers (recessed/slot), 220mm	210	
115.1187	Hose clamp pliers with prism, 8-18mm	189	
115.1065	Hose clamp pliers (dbl bowden cable), 600mm	540	

Automotive hose clamp pliers set

- With PVC dipped handle
- For opening and closing of cobra hose clamps
- Swivel pressed jaws
- Includes locking mechanism and ratchet function
- Self opening mechanism
- For the dismantling and assembly of hose clamps
- Includes bowden cable
- Chrome molybdenum





			kg	
115.1055	7 pcs	Automotive hose clamp pliers set	4,00	

consists of:

115.1041	Hose clamp pliers (bowden cable), 650mm	470
115.1042	Hose clamp pliers (recessed/slot), 220mm	210
115.1043	Hose clamp pliers (crown profile), 220mm	240
115.1044	Hose pliers, 195mm	190
115.1045	Hose clamp pliers (click type), 180mm	215
115.1046	Hose clamp pliers (recessed/slot),220mm	230
115.1047	Hose clamp pliers (dbl cross slot),220mm	230

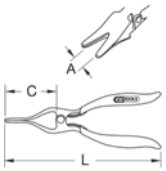
HOSE ASSEMBLY AND REMOVAL TOOLS

Special hose pliers

- For dismantling and assembly
- For removing of hose connections from hose tails
- For correct opening of fuel pipe coupling
- For professional and damage-free use
- Extra flat jaws to the end
- With PVC dipped handle
- Special tool steel

Ideally suited in e.g. fuel vacuum hoses, low pressure systems and water hoses.







	A mm	L mm	C mm	
115.1044	0-30	195,0	70,0	190

Hose release pliers

- Suitable for releasing secured cooling hoses
- Securing screw for adjusting jaws
- Gentle on materials
- Lower power usage
- Simple operation
- Plastic handle
- Special tool steel





	Length mm	Ø mm		
115.1199	180,0	15-54	180	

Hose unscrewing pliers with increased unscrewing force

- Suitable for releasing secured cooling hoses
- Securing screw for adjusting jaws
- increased loosening force due to pulling cable
- Gentle on materials
- Lower power usage
- Simple operation
- Plastic handle
- Special tool steel



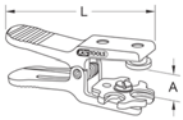
	Length mm	Ø mm		
115.1103	285,0	45-120	530	

HOSE DISCONNECTION TOOLS

ALLinONE Hose clamp pliers set

- Simple sealing of pipe lines, 4.75 mm (3/16“) to 14.0 mm (9/16“)
- Rotary magazine with 4 slots for the corresponding pipe size
- Ideal for maintenance work with gasoline, oil, water and antifreeze
- Prevents moisture and foreign objects from entering
- Ideal for use in passenger cars, vans and large vans, commercial vehicles, tractors, agricultural machinery, construction machinery and industrial applications
- Special plastic







		Ø mm	A mm	L mm	
122.1295	3 pcs	4,75-14	38,0	120,0	149

consists of:

	x		
122.1296	2	ALLinONE Fluidstopper Ø 4,75-14 mm	60
122.1297	1	Replaceable plastic plugs for 122.1296 pipe stopper pliers	50



Hose clamp

- For easy clamping of flexible hose parts from 10.0 mm (3/8”) to 45.0 mm (1.3/4”)
- Continuous flow rate regulation, sensitive flow rate regulation or complete flow rate stop
- The hose is crimped over a wide area against the sturdy steel cross, damage to the hose is therefore prevented
- With revolving clamp wing from metal
- Ideal for maintenance work with gasoline, oil, water and antifreeze
- Protects against leakage of fuel, oil, water and antifreeze
- Ideal for use in passenger cars, vans and large vans, commercial vehicles, tractors, agricultural machinery, construction machinery and industrial applications
- Heat resistant up to 160 °C
- Special tool steel





	Ø mm		
122.1201	10,0	41	
122.1202	15,0	46	
122.1203	25,0	96	
122.1204	45,0	237	

Hose clamp set

- For easy clamping of flexible hose parts from 10.0 mm (3/8”) to 45.0 mm (1.3/4”)
- Continuous flow rate regulation, sensitive flow rate regulation or complete flow rate stop
- The hose is crimped over a wide area against the sturdy steel cross, damage to the hose is therefore prevented
- With revolving clamp wing from metal
- Ideal for maintenance work with gasoline, oil, water and antifreeze
- Protects against leakage of fuel, oil, water and antifreeze
- Ideal for use in passenger cars, vans and large vans, commercial vehicles, tractors, agricultural machinery, construction machinery and industrial applications
- Heat resistant up to 160 °C
- Special tool steel





122.1200	4 pcs	Hose clamp set	420

consists of:

122.1201	Hose clamp max. Ø 10 mm (3/8")	41	
122.1202	Hose clamp max. Ø 15 mm (1/2")	46	
122.1203	Hose clamp max. Ø 25 mm (1")	96	
122.1204	Hose clamp max. Ø 45 mm (1.3/4")	237	

Hose clamp gripper

- For simple clamping of flexible for hoses from 15.9 mm (5/8") up to 60.0 mm (2.3/8")
- For stopping the flow
- The hose is a broad area squeezed against the stable support surface, damaging the hose is avoided
- Variable adjustment with locking function
- Prevents petrol, oil, water and radiator anti-freeze from escaping during maintenance work
- Ideal for use in passenger cars, vans and large vans, commercial vehicles, tractors, agricultural machinery, construction machinery and industrial applications
- Heat resistant up to 160 °C
- Special plastic



	Hose external-Ø mm		
115.5052	15,0	80	
115.5053	30,0	130	
115.5054	60,0	160	

Hose clamp pliers set

- For simple clamping of flexible for hoses from 15.9 mm (5/8") up to 60.0 mm (2.3/8")
- For stopping the flow
- The hose is a broad area squeezed against the stable support surface, damaging the hose is avoided
- Variable adjustment with locking function
- Prevents petrol, oil, water and radiator anti-freeze from escaping during maintenance work
- Ideal for use in passenger cars, vans and large vans, commercial vehicles, tractors, agricultural machinery, construction machinery and industrial applications
- Heat resistant up to 160 °C
- Special plastic





115.5050	3 pcs	Hose clamp pliers set	370	

consists of:

115.5052	Hose clamp gripper, 15mm	80	
115.5053	Hose clamp gripper, 30mm	130	
115.5054	Hose clamp gripper, 60mm	160	

Hose clamp pliers 90°

- For simple clamping of flexible for hoses from 15.9 mm (5/8") up to 60.0 mm (2.3/8")
- Angled design for use in confined spaces
- For stopping the flow
- The hose is a broad area squeezed against the stable support surface, damaging the hose is avoided
- Variable adjustment with locking function
- Prevents petrol, oil, water and radiator anti-freeze from escaping during maintenance work
- Ideal for use in passenger cars, vans and large vans, commercial vehicles, tractors, agricultural machinery, construction machinery and industrial applications
- Heat resistant up to 160 °C
- Special plastic



	Hose external-Ø mm		
115.5057	15,0	55	
115.5058	23,0	95	
115.5059	35,0	130	

Hose clamp pliers set 90° angled

- For simple clamping of flexible for hoses from 15.9 mm (5/8") up to 60.0 mm (2.3/8")
- Angled design for use in confined spaces
- For stopping the flow
- The hose is a broad area squeezed against the stable support surface, damaging the hose is avoided
- Variable adjustment with locking function
- Prevents petrol, oil, water and radiator anti-freeze from escaping during maintenance work
- Ideal for use in passenger cars, vans and large vans, commercial vehicles, tractors, agricultural machinery, construction machinery and industrial applications
- Heat resistant up to 160 °C
- Special plastic





115.5055	3 pcs	Hose clamp pliers set 90° angled	370	

consists of:

115.5057	Hose clamp gripper 90°, Ø 15mm	55	
115.5058	Hose clamp gripper 90°, Ø 23mm	95	
115.5059	Hose clamp gripper 90°, Ø 35mm	130	

Stepless hose clamp pliers, angled

- Stepless
- To simply clamp flexible hose lines of 20.0 to 74.0 mm
- For stopping the flow
- The hose is squeezed against the stable bearing area,
- any damage to the hose is avoided
- Flexible jaws enable universal use
- Prevents petrol, oil, water and radiator anti-freeze from escaping during maintenance work
- Ideal for use in passenger cars, vans and large vans, commercial vehicles, tractors, agricultural machinery, construction machinery and industrial applications
- Burnished
- Special tool steel



	Hose external-Ø mm		
115.5012	20,0	70	
115.5013	35,0	320	
115.5014	74,0	505	

Stepless hose clamp-off pliers set, angled

- Stepless
- To simply clamp flexible hose lines of 20.0 to 74.0 mm
- For stopping the flow
- The hose is squeezed against the stable bearing area,
- any damage to the hose is avoided
- Flexible jaws enable universal use
- Prevents petrol, oil, water and radiator anti-freeze from escaping during maintenance work
- Ideal for use in passenger cars, vans and large vans, commercial vehicles, tractors, agricultural machinery, construction machinery and industrial applications
- Burnished
- Special tool steel

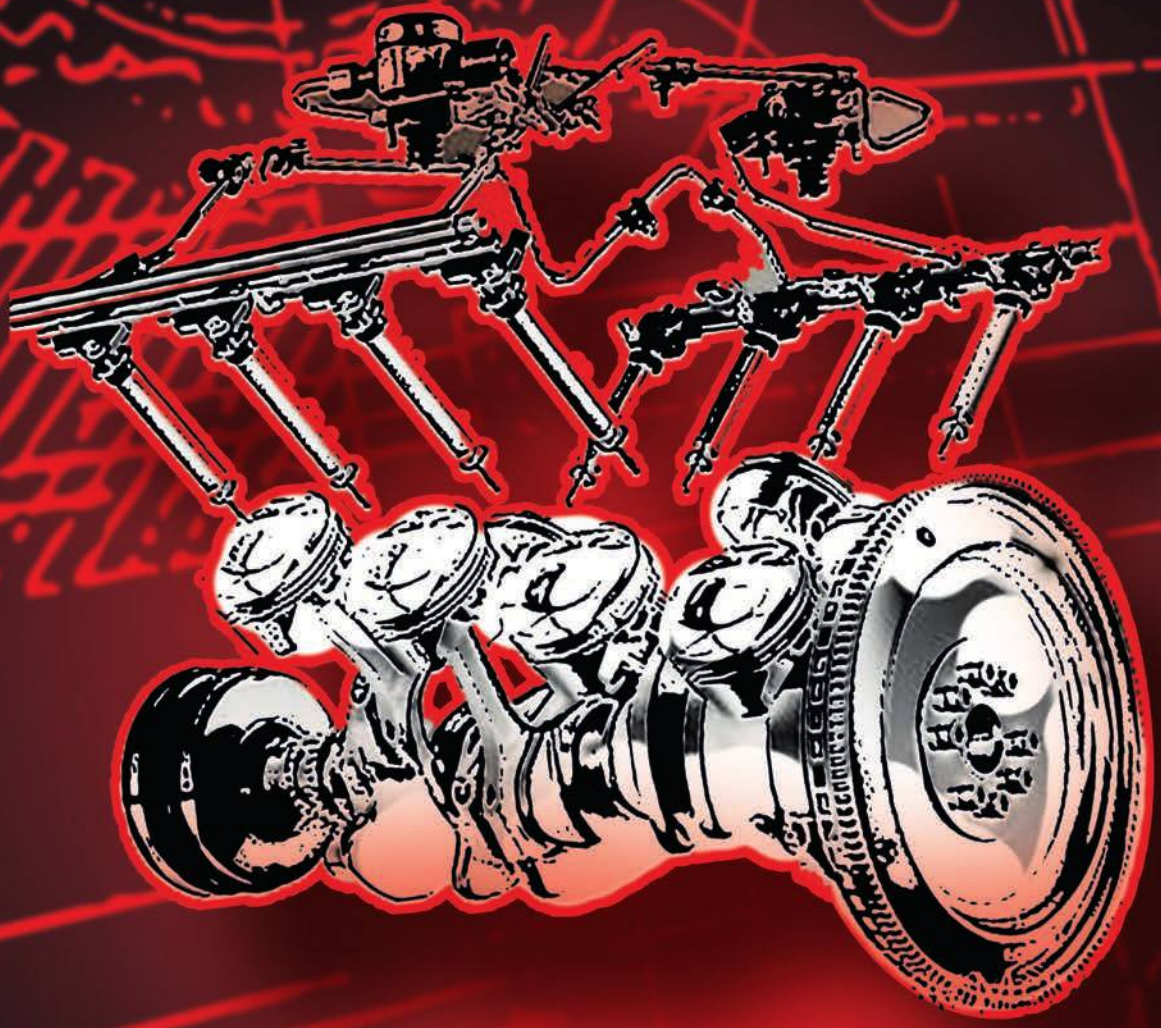




115.5010	3 pcs	Stepless hose clamp-off pliers set, angled	895	

consists of:

115.5012	Stepless hose clamp pliers, angled, Ø 20.0 mm	70	
115.5013	Stepless hose clamp pliers, angled, Ø 35.0 mm	320	
115.5014	Stepless hose clamp pliers, angled, Ø 74.0 mm	505	



KS TOOLS®

Innovation is our mission!

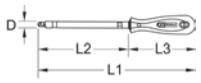
	FROM PAGE
HOSE CLAMP TOOL	174
HOSE PINCH TOOL	178
FUEL PIPE CLAMP PLIERS	179
PIPE COUPLING UNLOCKING TOOL	181
PIPE WRENCH	182
INJECTOR NOZZLE TOOL	183
FUEL FILTER TOOL	185
TANK SENDER WRENCH	187
TEST DEVICE	189
TRANSFER PUMPS	190
FILLING DEVICE AND AIR VENT DEVICE	190

HOSE CLAMP TOOL

ERGOTORQUE*plus*® socket screwdriver

- Two component handle
- 6 point
- Flexible
- Limited torque
- Double spiral shaft
- Plastic protective coating
- Chrome vanadium





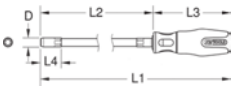


	mm	D mm	L1 mm	L2 mm	L3 mm	L4 mm	g
159.1126	6,0	10,8	259,0	150,0	109,0	9,3	155
159.1127	7,0	11,7	259,0	150,0	109,0	10,0	155
159.2128	8,0	11,9	259,0	150,0	109,0	10,0	155
159.1125	10,0	12,5	279,0	170,0	109,0	14,3	170

ERGOTORQUE*plus*® socket screwdriver, extra long

- Two component handle
- 6 point
- Flexible
- Ideal for deep seated screw-hose clamps
- Limited torque
- Double spiral shaft
- Plastic protective coating
- Chrome vanadium







	mm	D mm	L1 mm	L2 mm	L3 mm	L4 mm	g
911.1175	5	11,9	614,0	500,0	114,0	8,9	270
911.1176	6	10,9	614,0	500,0	114,0	11,3	280
911.1177	7	11,7	614,0	500,0	114,0	11,3	280
911.1178	8	11,7	614,0	500,0	114,0	11,3	280

ERGOTORQUE*plus*® screwdriver set

- Two component handle
- Flexible blade with double spiral shaft
- Limited torque
- Plastic protective coating
- Contains also the most current 1/4" bits and sockets
- In display box





			kg
911.1180	16 pcs	ERGOTORQUE*plus*® screwdriver set	1,30

1 x		1/4"
1 x		1/4"
1 x		7 mm
3 x		5 - 6 - 8 mm
2 x		5.5 - 6.5 mm
2 x		PH1 - PH2
6 x		T10 - T15 - T20 - T25 - T27 - T30

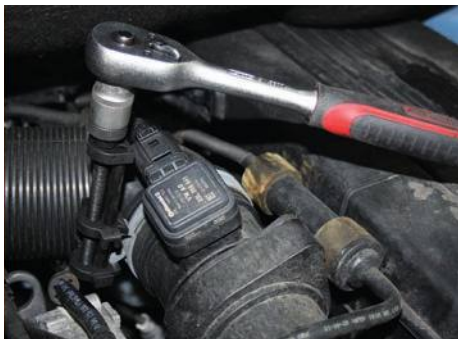
Hose clamp tension device

- For the dismantling and assembly of hose clamps
- Easy to use
- Less space required
- Wear-resistant spindle drive
- Hand-wheel operation
- 6-point and 1/4" drive
- Chrome molybdenum





	Ø mm	Ø mm	Span width mm	g
115.0910	6-40	0-37	80	130
115.0911	6-65	0-62	105	160



Hose clamp gripping pliers

- Forged gripping jaws
- Serrated execution
- Size adjustment using the adjustment wheel
- Quick-release lever
- With easy locking action
- For round and flat material
- Nickel plated
- Chrome vanadium





	Clamping range mm	Length mm	g
115.1126	18-36	175,0	231
115.1127	18-54	230,0	420

Hose clamp gripping pliers set

- Forged gripping jaws
- Serrated execution
- Size adjustment using the adjustment wheel
- Quick-release lever
- With easy locking action
- For round and flat material
- Nickel plated
- Chrome vanadium





			g
115.1125	2 pcs	175 - 230 mm	653

Hose clamp pliers with prism reception

- For self-tensioning hose clamps with flat 3 pinch ends
- In particular for fuel lines, cooling and washing water hoses
- With prism attachment for spring clamps with flat adjoining ends
- Opening and closing the clamps without damage to the hose also in hard to reach places
- Self opening
- Special tool steel





	Clamping range mm	Length mm	g
115.1187	8-18	195,0	189

Hose clamp pliers

- Suitable for assembly and disassembly of spring clamps
- Optimal mounting due to special construction of jaws
- Includes locking mechanism and ratchet function
- Insulated handle
- Simple handling
- Special tool steel





	Clamping range mm	Length mm	g
115.1181	0-55	260,0	380

Hose clamp pliers, angled

- Suitable for assembly and disassembly of spring clamps
- 90° angled
- Optimal mounting due to special construction of jaws
- With offset side attachment nuts
- Includes locking mechanism and ratchet function
- Insulated handle
- Simple handling
- Special tool steel



	Clamping range mm	Length mm	g	
115.1182	0-22	220,0	380	

Hose clamp pliers, angled

- 45° angled head
- With variable jaws
- For difficult to reach clamps
- Includes locking mechanism
- With PVC dipped handle
- Chrome molybdenum



	A mm	C mm	L mm	g	
115.1042	0-65	55,0	220,0	210	

Hose clamp pliers, angled

- 90° angled head
- With variable jaws
- For difficult to reach clamps
- Includes locking mechanism
- With PVC dipped handle
- Chrome molybdenum



	Ø mm	Clamping range mm	Length mm	g	
115.1198	18- 53	5-43	210,0	400	

Universal hose clamp pliers

- Universal crown profile
- For difficult to reach clamps
- With PVC dipped handle
- Includes locking mechanism
- Versitile usage
- Chrome molybdenum



	A mm	C mm	L mm	g	
115.1043	0-48,5	40,0	220,0	240	

Hose clamp pliers

- Suitable for correct assembly and disassembly of spring clamps
- Turnable jaws
- Includes ratchet function
- Effortless opening and closing
- Insulated handle
- Special tool steel



	A mm	L mm	g	
115.1167	15-56	275,0	400	

Hose clamp pliers

- With PVC dipped handle
- For spring pipe clamps
- Includes locking mechanism and ratchet function
- Chrome molybdenum



	A mm	C mm	L mm	g	
115.1046	0-45	37,0	220,0	230	



Hose clamp pliers, angled

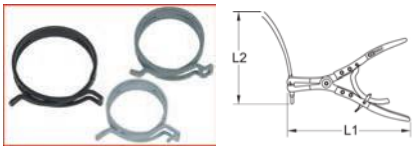
- Suitable for correct assembly and disassembly of spring clamps
- 110° angled
- Turnable jaws
- With locking device
- Insulated handle
- Special tool steel



	A mm	L mm	g	
115.1173	6-58	250,0	400	

Hose clamp pliers with double bowden cable

- With PVC dipped handle
- For spring pipe clamps
- With 600 mm bowden cable
- Adjustable length bowden cable
- Includes locking mechanism
- For difficult to reach clamps
- Special tool steel





	Ø mm	L1 mm	L2 mm		g	
115.1065	0 - 70	270,0	600,0	115.1065-1	540	

Hose clamp pliers, VAG

- Suitable for assembly or disassembly of spring clamps with reducing ends
- With PVC dipped handle
- With 600 mm bowden cable
- Includes ratchet function, locking mechanism and loosening lever
- Internal spring
- For difficult to reach clamps
- Chrome molybdenum

Application range: VAG 2.0 TDI engines (BKD), especially suitably for hard to reach lower coolant hose





	Ø mm	L1 mm	L2 mm	g
115.1169	0 - 60	260,0	600,0	500

Hose clamp pliers with bowden cable

- With PVC dipped handle
- For spring pipe clamps
- With 650 mm Bowden cable
- Includes ratchet function, locking mechanism and loosening lever
- Internal spring
- For difficult to reach clamps
- Chrome molybdenum





	Ø mm	L1 mm	L2 mm	g
115.1168	0 - 70	260,0	650,0	500

Hose clamp pliers with bowden cable

- Ideally suited for opening and closing hose clamps
- Suitable for hard to reach self-tensioning spring clamps
- With 590 mm strengthened Bowden cable
- Includes locking mechanism
- Internal spring
- The torsion of the pliers is reduced with strong clamps
- With quick change system for Bowden cable replacement
- Two component handle
- Strengthened steel

Application range: MUBEA and NORMA





	Ø mm	L1 mm	L2 mm		g
115.0901	15 - 54	260,0	730,0	115.0902	500

Hose clamp pliers with bowden cable

- For self-tensioning hose clamps
- In particular for fuel lines, cooling and washing water hoses
- With flat attachment for spring clamps with flat adjoining ends
- Opening and closing the clamps without damage to the hose also in hard to reach places
- With 650 mm Bowden cable
- Includes locking mechanism
- Self opening
- With PVC dipped handle
- Chrome molybdenum





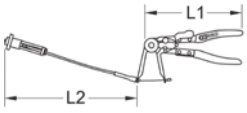
	Ø mm	L1 mm	L2 mm		g
115.1041	0 - 60	200,0	650,0	115.1041-1	470



Clic and Clic-R hose clamp pliers

- For the correct assembly and disassembly of spring clamps
- With 600 mm Bowden cable for hard to reach areas
- Step-less locking mechanism
- Quick-release lever
- Simple handling
- Special tool steel







	Ø mm	L1 mm	L2 mm	g
115.1189	0-50	210,0	600,0	330

Hose clamp pliers with swivel prism reception

- Suitable for the correct assembly and disassembly of Click, Click-R and Cobra clamps
- Also suitable for self-tensioning hose clamps with flat 3 pinch ends
- In particular for fuel lines, cooling and washing water hoses
- With swivel prism attachment
- Self opening
- Surface nickel-plated
- Special tool steel





	Clamping range mm	Length mm	g	
115.1188	8-18	210,0	200	

Click hose clamp pliers, angled

- Suitable for the correct assembly and disassembly of Click, Click-R and Cobra clamps
- Also suitable for self-tensioning hose clamps with flat 3 pinch ends
- 90° angled head
- Effortless opening and closing
- Forged bite jaws
- With PVC dipped handle
- Special tool steel





	Clamping range mm	Length mm	g	
115.1179	0-18	180,0	160	

Click hose clamp pliers, forged

- Suitable for the correct assembly and disassembly of Click, Click-R and Cobra clamps
- Also suitable for self-tensioning hose clamps with flat 3 pinch ends
- Re-usable V2A-clamps
- With PVC dipped handle
- With self-opening mechanism
- Chrome molybdenum





	A mm	C mm	L mm	g	
115.1045	0-38	25,0	180,0	215	

Click hose clamp pliers

- Suitable for the correct assembly and disassembly of Click, Click-R and Cobra clamps
- Also suitable for self-tensioning hose clamps with flat 3 pinch ends
- With PVC dipped handle
- Self opening
- Chrome molybdenum



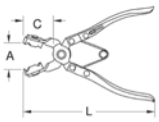


	A mm	C mm	L mm	g	
115.1040	0-25	40,0	160,0	120	

Clic and Clic-R hose clamp pliers

- Suitable for the correct assembly and disassembly of Click, Click-R and Cobra clamps
- Also suitable for self-tensioning hose clamps with flat 3 pinch ends
- With moveable jaws to enable the use of hose clamp pliers on fuel lines that are hard to reach
- 45° angled head
- Suitable for narrow spaces
- Self opening
- Chrome molybdenum







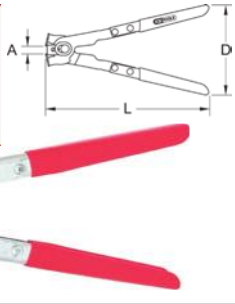
	A mm	C mm	L mm	g	
115.1057	0-30	45,0	200,0	180	

Hose clamp pliers, ear type

- With PVC dipped handle
- For the fitting of ear clamps
- No sticking up of the ears during the press process
- Uniform compressing of the ear piece
- No damage to the sleeve
- Nickel-plated finish
- Chrome molybdenum

Application range: Axle boots, coolant and fuel hoses for **Volkswagen**, **Audi**, **Opel**, **BMW**, **Mercedes**, **Honda**, **Nissan** and **Mazda**



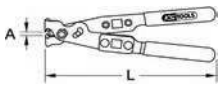


	A mm	L mm	g	
115.1050	0-22	260,0	380	

Hose clamp pliers

- With PVC dipped handle
- With 3/8" drive for use with a torque wrench
- For the fitting and clamping of ear clamps
- 1/2" 4-point recess in the handle for use with torque wrench
- Chrome molybdenum





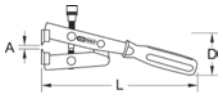


	A mm	L mm	g	
115.1053	0-17	240,0	540	

Hose clamp pliers for torque wrench

- Black plastic handle
- With 3/8" drive for use with a torque wrench
- Enables clamping and/or copressing of the hose clamps
- Suitable for the stainless steel hose clamps on drive shafts
- Robust cast steel construction





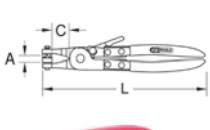


	A mm	L mm	g	
115.1056	0-45	270,0	880	

Hose clamp pliers

- With PVC dipped handle
- For spring pipe clamps
- Includes locking mechanism and ratchet function
- Chrome molybdenum





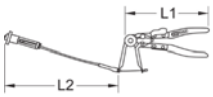


	A mm	C mm	L mm	g	
115.1047	0-45	37,0	220,0	230	

Fuel pipe clamp with Bowden cable for quick coupling

- For correct unbolting of fuel pipe coupling
- With locking mechanism
- Especially for fuel pipe couplings on which the unbolting elements are reached from the side
- With 650 mm Bowden cable
- No damage to the compression coupling, fuel pipes and fuel hoses
- Quick and easy separation of the fuel pipes
- With PVC dipped handle
- Matt chrome
- Special tool steel







	Ø mm	L1 mm	L2 mm		g
115.1060	0-20	230,0	670,0	115.1058	420



Automotive hose clamp pliers set

- Handle dip insulated
- Ideal for deep seated spring clamps
- Includes locking mechanism
- For self tensioning spring pipe clamps with 3 point mounting
- Self opening
- For opening and closing re/useable clic hose clamps, type Clic + Clic-R
- For difficult to reach clamps
- Special tool steel

Application area: For connecting and removing fuel, immersed ventilation, coolant, washer water and vacuum hoses etc.





			kg	
115.1104	4 pcs	Automotive hose clamp pliers set	1,12	

consists of:

		g	
115.1045	Hose clamp pliers (click type), 180mm	215	
115.1042	Hose clamp pliers (recessed/slot), 220mm	210	
115.1187	Hose clamp pliers with prism, 8-18mm	189	
115.1065	Hose clamp pliers (dbl bowden cable), 600mm	540	

Automotive hose clamp pliers set

- With PVC dipped handle
- For opening and closing of cobra hose clamps
- Swivel pressed jaws
- Includes locking mechanism and ratchet function
- Self opening mechanism
- For the dismantling and assembly of hose clamps
- Includes bowden cable
- Chrome molybdenum





			kg	
115.1055	7 pcs	Automotive hose clamp pliers set	4,00	

consists of:

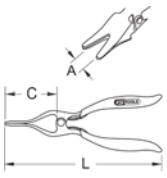
		g	
115.1041	Hose clamp pliers (bowden cable), 650mm	470	
115.1042	Hose clamp pliers (recessed/slot), 220mm	210	
115.1043	Hose clamp pliers (crown profile), 220mm	240	
115.1044	Hose pliers, 195mm	190	
115.1045	Hose clamp pliers (click type), 180mm	215	
115.1046	Hose clamp pliers (recessed/slot),220mm	230	
115.1047	Hose clamp pliers (dbl cross slot),220mm	230	

Special hose pliers

- For dismantling and assembly
- For removing of hose connections from hose tails
- For correct opening of fuel pipe coupling
- For professional and damage-free use
- Extra flat jaws to the end
- With PVC dipped handle
- Special tool steel

Ideally suited in e.g. fuel vacuum hoses, low pressure systems and water hoses.







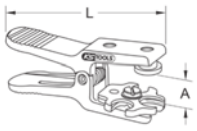
	A mm	L mm	C mm	g	
115.1044	0-30	195,0	70,0	190	

HOSE PINCH TOOL

ALLinONE Hose clamp pliers set

- Simple sealing of pipe lines, 4.75 mm (3/16“) to 14.0 mm (9/16“)
- Rotary magazine with 4 slots for the corresponding pipe size
- Ideal for maintenance work with gasoline, oil, water and antifreeze
- Prevents moisture and foreign objects from entering
- Ideal for use in passenger cars, vans and large vans, commercial vehicles, tractors, agricultural machinery, construction machinery and industrial applications
- Special plastic







		Ø mm	A mm	L mm	g	
122.1295	3 pcs	4,75-14	38,0	120,0	149	

consists of:

	x		g	
122.1296	2	ALLinONE Fluidstopper Ø 4,75-14 mm	60	
122.1297	1	Replaceable plastic plugs for 122.1296 pipe stopper pliers	50	

Hose clamp set

- For easy clamping of flexible hose parts from 10.0 mm (3/8”) to 45.0 mm (1.3/4”)
- Continuous flow rate regulation, sensitive flow rate regulation or complete flow rate stop
- The hose is crimped over a wide area against the sturdy steel cross, damage to the hose is therefore prevented
- With revolving clamp wing from metal
- Ideal for maintenance work with gasoline, oil, water and antifreeze
- Protects against leakage of fuel, oil, water and antifreeze
- Ideal for use in passenger cars, vans and large vans, commercial vehicles, tractors, agricultural machinery, construction machinery and industrial applications
- Heat resistant up to 160 °C
- Special tool steel





			g	
122.1200	4 pcs	Hose clamp set	420	

consists of:

		g	
122.1201	Hose clamp max. Ø 10 mm (3/8”)	41	
122.1202	Hose clamp max. Ø 15 mm (1/2”)	46	
122.1203	Hose clamp max. Ø 25 mm (1”)	96	
122.1204	Hose clamp max. Ø 45 mm (1.3/4”)	237	

Hose clamp pliers set

- For simple clamping of flexible for hoses from 15.9 mm (5/8") up to 60.0 mm (2.3/8")
- For stopping the flow
- The hose is a broad area squeezed against the stable support surface, damaging the hose is avoided
- Variable adjustment with locking function
- Prevents petrol, oil, water and radiator anti-freeze from escaping during maintenance work
- Ideal for use in passenger cars, vans and large vans, commercial vehicles, tractors, agricultural machinery, construction machinery and industrial applications
- Heat resistant up to 160 °C
- Special plastic





			g	
115.5050	3 pcs	Hose clamp pliers set	370	

consists of:

		g	
115.5052	Hose clamp gripper, 15mm	80	
115.5053	Hose clamp gripper, 30mm	130	
115.5054	Hose clamp gripper, 60mm	160	

Hose clamp pliers set 90° angled

- For simple clamping of flexible for hoses from 15.9 mm (5/8") up to 60.0 mm (2.3/8")
- Angled design for use in confined spaces
- For stopping the flow
- The hose is a broad area squeezed against the stable support surface, damaging the hose is avoided
- Variable adjustment with locking function
- Prevents petrol, oil, water and radiator anti-freeze from escaping during maintenance work
- Ideal for use in passenger cars, vans and large vans, commercial vehicles, tractors, agricultural machinery, construction machinery and industrial applications
- Heat resistant up to 160 °C
- Special plastic





			g	
115.5055	3 pcs	Hose clamp pliers set 90° angled	370	

consists of:

		g	
115.5057	Hose clamp gripper 90°, Ø 15mm	55	
115.5058	Hose clamp gripper 90°, Ø 23mm	95	
115.5059	Hose clamp gripper 90°, Ø 35mm	130	

Stepless hose clamp-off pliers set, angled

- Stepless
- To simply clamp flexible hose lines of 20.0 to 74.0 mm
- For stopping the flow
- The hose is squeezed against the stable bearing area,
- any damage to the hose is avoided
- Flexible jaws enable universal use
- Prevents petrol, oil, water and radiator anti-freeze from escaping during maintenance work
- Ideal for use in passenger cars, vans and large vans, commercial vehicles, tractors, agricultural machinery, construction machinery and industrial applications
- Burnished
- Special tool steel





			g	
115.5010	3 pcs	Stepless hose clamp-off pliers set, angled	895	

consists of:

		g	
115.5012	Stepless hose clamp pliers, angled, Ø 20.0 mm	70	
115.5013	Stepless hose clamp pliers, angled, Ø 35.0 mm	320	
115.5014	Stepless hose clamp pliers, angled, Ø 74.0 mm	505	

FUEL PIPE CLAMP PLIERS

Fuel pipe pliers for quick coupling

- For correct unbolting of fuel pipe coupling
- Especially for fuel pipe couplings on which the unbolting elements are reached from the side
- No damage to the compression coupling, fuel pipes and fuel hoses
- Quick and easy separation of the fuel pipes
- For universal pipe coupling diameter
- Self opening
- Special tool steel





	Length mm	g	
115.1184	124,0	45	

Fuel pipe pliers for quick coupling

- For correct unbolting of fuel pipe coupling
- No damage to the compression coupling, fuel pipes and fuel hoses
- Quick and easy separation of the fuel pipes
- Curved design
- Two component handle
- Matt chrome
- Special tool steel



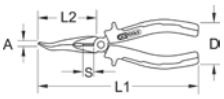


	Length mm	g	
115.1008	210,0	200	

Diesel leak oil line long nosed pliers

- Ideal to use for safety rings on fuel lines that are hard to reach
- For attaching and removing the fuel return line (leak oil line)
- No damage to the overflow pipe
- Cranked design for deep-seated injection nozzles on diesel engines
- With intergrated cutting edge
- Two component handle
- Matt chrome
- Chrome vanadium







	A mm	L1 mm	L2 mm	S mm	g	
115.1067	0-75	200,0	75,0	15,0	220	

Return hose pliers

- Angled design
- With intergrated cutting edge
- For attaching and pulling out of pipes on low sunken nozzles
- No damage to the overflow pipe
- Two component handle
- Matt chrome
- Chrome vanadium



	Ø mm	A mm	Length mm	g	
115.2112	7,0	0-68	190,0	220	

Fuel pipe pliers for quick coupling

- For correct unbolting and bolting of fuel pipe coupling
- With the special tip pliers the interlock can be moved forward (locked) and backwards (unlocked).
- No damage to the compression coupling, fuel pipes and fuel hoses
- Quick and easy separation of the fuel pipes
- Curved design
- Two component handle
- Chrome vanadium



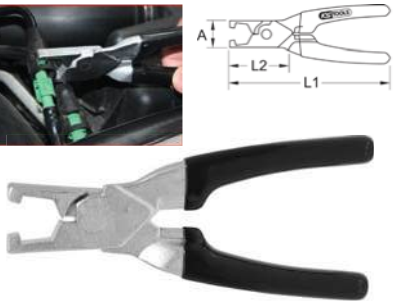


	Ø mm	L mm	g	
115.0900	0-105	230,0	310	

Fuel pipe pliers for quick coupling

- For correct unbolting of fuel pipe coupling
- Especially for fuel pipe couplings on which the unbolting elements are reached from the side
- No damage to the compression coupling, fuel pipes and fuel hoses
- Quick and easy separation of the fuel pipes
- With PVC dipped handle
- Matt chrome
- Special tool steel





	A mm	L1 mm	L2 mm	g	
115.1094	0-30	160,0	50,0	220	

Fuel pipe pliers for quick coupling, offset

- For correct unbolting of fuel pipe coupling
- No damage to the compression coupling, fuel pipes and fuel hoses
- Quick and easy separation of the fuel pipes
- Angled design for use in confined spaces
- With PVC dipped handle
- Black lacquer
- Aluminium



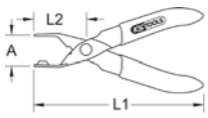


	A mm	L1 mm	L2 mm	g	
115.1099	0-24	220,0	39,0	280	

Universal fuel pipe pliers for compression coupling

- For correct opening of fuel pipe coupling
- Extra flat jaws to the end
- No damage to the compression coupling, fuel pipes and fuel hoses
- Quick and easy separation of the fuel pipes and fuel hoses
- Self-closing
- With PVC dipped handle
- Special tool steel





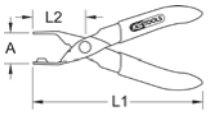


	Ø mm	A mm	L1 mm	L2 mm	g	
115.1091	8,0	20,0	120,0	35,0	80	
115.1092	10,0	22,0	120,0	35,0	80	

Fuel pliers for compression coupling for Opel/GM

- For correct opening of fuel pipe coupling
- Extra flat jaws to the end
- With two noses 6.5 mm x 6.0 mm
- No damage to the compression coupling, fuel pipes and fuel hoses
- Quick and easy separation of the fuel pipes and fuel hoses
- Self-closing
- With PVC dipped handle
- Special tool steel







	A mm	L1 mm	L2 mm	g	
115.1093	22,0	120,0	35,0	80	



Fuel pipe pliers set

- For correct opening of fuel pipe coupling
- Extra flat jaws to the end
- No damage to the compression coupling, fuel pipes and fuel hoses
- Quick and easy separation of the fuel pipes and fuel hoses
- Self-closing
- With PVC dipped handle
- Special tool steel





			g	
115.1090	3 pcs	Fuel pipe pliers set	310	

consists of:

		g	
115.1091	Fuel pipe pliers, 8mm	80	
115.1092	Fuel pipe pliers, 10mm	80	
115.1093	Fuel pipe pliers, GM-Opel	80	

Fuel line unlocking tool for Mini

- for professional unlocking of the low-pressure fuel line coupling at the inlet of the high-pressure pump
- Especially for fuel pipe couplings on which the unbolting elements are reached from the side
- no damage to the plug-in couplings, fuel lines and high-pressure pump
- Quick and easy separation of the fuel pipes
- With knurled knob
- Special tool steel



	Inner Ø mm	Outer Ø mm	g	
115.1295	15,0	33,0	80	

Fuel line unlocking tool for BMW

- For correct unbolting of fuel pipe coupling
- no damage to the plug couplings and fuel lines
- Quick and easy separation of the fuel pipes
- Aluminium

Application range: BMW 3 Series (2006 - 2011) and X3 E83 (2006 - 2009)



		g
150.3233	Fuel line unlocking tool for BMW	20

Special puller for leakage oil line

- for damage-free removal of the leakage oil line from the injector
- specially shaped profile
- Aluminium

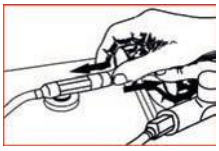


	Length mm	g
405.0019	62,0	46

PIPE COUPLING UNLOCKING TOOL

Pipe connection release clip set for CLIC spring closing pipe coupling

- For the assembly and disassembly of hard to open CLIC spring closure pipe coupling for fuel, air-conditioning, air and hydraulic pipes
- No damage to the compression coupling, fuel pipes and fuel hoses
- Quick and easy separation of the pipes
- Ideal for use with passenger cars, vans and saloon cars
- Suitable for metric couplings
- Special plastic

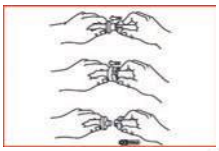




		Ø mm	g
115.1095	6 pcs	6 - 8 - 10 - 12 - 15 - 16	60

Pipe connection release clip set for CLIC spring closing pipe coupling

- For the assembly and disassembly of hard to open CLIC spring closure pipe coupling for fuel, air-conditioning, air and hydraulic pipes
- No damage to the compression coupling, fuel pipes and fuel hoses
- Quick and easy separation of the pipes
- Ideally suited to passenger cars, transporters, MPVs, commercial vehicles, tractors, agricultural and construction machinery
- For almost all pipe connections on European, Asian and American vehicle types
- Suitable for metric and imperial couplings
- Special plastic





		Ø mm	g
115.1089	7 pcs	6,35 (1/4") - 7,9 (5/16") - 9,5 (3/8") - 12,7 (1/2") - 15,9 (5/8") - 19,0 (3/4") - 22,2 (7/8")	90

consists of:

		g
115.1261	Unlocking clip white, 1/4"	1
115.1262	Unlocking clip white, 5/16"	1
115.1263	Unlocking clip white, 3/8"	1
115.1264	Unlocking clip white, 1/2"	5
115.1265	Unlocking clip white, 5/8"	7
115.1266	Unlocking clip white, 3/4"	8
115.1267	Unlocking clip white, 7/8"	9

Disassembly tool set for CLIC spring closure pipe coupling

- For the disassembly of hard to open CLIC spring closure pipe coupling for fuel, air-conditioning, air and hydraulic pipes
- No damage to the compression coupling, fuel pipes and fuel hoses
- Quick and easy separation of the pipes
- Ideally suited to passenger cars, transporters, MPVs, commercial vehicles, tractors, agricultural and construction machinery
- For almost all pipe connections on European, Asian and American vehicle types
- Suitable for metric and imperial couplings
- Aluminium





		Ø mm	g
115.1285	7 pcs	7,9 (5/16") - 9,5 (3/8") - 12,7 (1/2") - 15,9 (5/8") - 19,0 (3/4") - 22,2 (7/8")	250

consists of:

		g
115.1274	Unlocking ring, gold, 5/16"	35
115.1275	Unlocking ring, blue, 3/8"	36
115.1276	Unlocking ring, yellow, 1/2"	36
115.1277	Unlocking ring, green, 5/8"	41
115.1278	Unlocking ring, black, 3/4"	42
115.1279	Unlocking ring, red, 7/8"	43
115.1282	Replacement rubber ring set, 6 pcs	1

MASTER pipe connector release clip set for CLIC spring clamp pipe coupling

- For the assembly and disassembly of hard to open CLIC spring closure pipe coupling for fuel, air-conditioning, air and hydraulic pipes
- No damage to the compression coupling, fuel pipes and fuel hoses
- Quick and easy separation of the fuel pipes
- Ideally suited to passenger cars, transporters, MPVs, commercial vehicles, tractors, agricultural and construction machinery
- For almost all pipe connections on European, Asian and American vehicle types
- Suitable for metric and imperial couplings
- Special plastic

Application range: Air-conditioning, fuel and air lines as well as hydraulics lines





			kg	
115.1260	22 pcs	MASTER pipe connector release clip set for CLIC spring clamp pipe coupling	1,00	

consists of:

		g
115.1261	Unlocking clip white, 1/4"	1
115.1262	Unlocking clip white, 5/16"	1
115.1263	Unlocking clip white, 3/8"	1
115.1264	Unlocking clip white, 1/2"	5
115.1265	Unlocking clip white, 5/8"	7
115.1266	Unlocking clip white, 3/4"	8
115.1267	Unlocking clip white, 7/8"	9
115.1268	Unlocking clip, open, 5/16"	37
115.1269	Barrel unlocking with spring, red, 3/8"	12
115.1270	Barrel unlocking with spring, blue, 1/2"	13
115.1271	Barrel unlocking + spring, black, 5/8"	12
115.1272	Barrel unlocking + spring, white, 3/4"	12
115.1273	Double unlocking ring, 5/16"x3/8"	54
115.1274	Unlocking ring, gold, 5/16"	35
115.1275	Unlocking ring, blue, 3/8"	36
115.1276	Unlocking ring, yellow, 1/2"	36
115.1277	Unlocking ring, green, 5/8"	41
115.1278	Unlocking ring, black, 3/4"	42
115.1279	Unlocking ring, red, 7/8"	43
115.1280	Lever, release open, 5/16"	84
115.1281	Fork plug, unlocking, black	15
115.1282	Replacement rubber ring set, 6 pcs	1

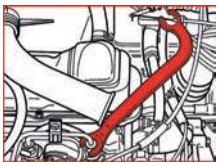


PIPE WRENCH

Double open ring injection spanner

- Special length and design
- For the assembly and disassembly of hard-to-reach injection pipes
- Makes possible simple and time-saving work
- Wrench has single-sided head
- Open 12-point
- Matt finish
- Chrome vanadium

Application range: Audi, **Volkswagen**, **Škoda** etc. e.g. for 1.6 l 4 cyl., 2.0 l 5 cyl., 2.4 l 6 cyl. diesel engines





	mm	Length mm	g	
517.0057	17x17	220,0	140	



T-handle box wrench

- 6 point
- With T-handle
- Matt finish
- Chrome vanadium





	mm	Length mm	Width mm	g	
517.1181	8	300,0	200,0	310	
517.1182	9	300,0	200,0	300	
517.1183	10	300,0	200,0	310	
517.1184	11	300,0	200,0	320	
517.1185	12	300,0	200,0	320	
517.1186	13	300,0	200,0	330	
517.1187	14	300,0	200,0	310	

T-handle box wrench set

- 6 point
- With T-handle
- Matt finish
- Chrome vanadium





		kg	
517.1180	7 pcs T-handle box wrench set	2,50	

consists of:

		g	
517.1181	T-handle box wrench, 300mm, 8mm	310	
517.1182	T-handle box wrench, 300mm, 9mm	300	
517.1183	T-handle box wrench, 300mm, 10mm	310	
517.1184	T-handle box wrench, 300mm, 11mm	320	
517.1185	T-handle box wrench, 300mm, 12mm	320	
517.1186	T-handle box wrench, 300mm, 13mm	330	
517.1187	T-handle box wrench, 300mm, 14mm	310	

Oxygen sensor and injector line key

- 12 point
- Special socket for mounting and dismounting hard-to-reach lambda sensors and injector lines
- time-saving work even on lambda probes and injector lines that are difficult to access
- For professional and damage-free use
- Universal application and highly durable
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Matt finish
- Chrome vanadium



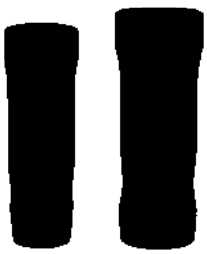
1/2"

	mm	Length mm	g	
152.1401	17,0	80,0	150	

Injector wrench set for BMW

- 12 point
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Special length and design
- For the assembly and disassembly of hard-to-reach injection pipes
- Makes possible simple and time-saving work
- Opening allows 180° rotation
- Phosphate finish
- Chrome molybdenum

Application range: BMW (engine code: N54, N63 and S63)



3/8" 1/2"

		g	
405.0150	2 pcs Injector wrench set for BMW	195	

consists of:

		g	
405.0151	3/8" injection line wrench for BMW, 14 mm	76	
405.0152	1/2" injection line wrench for BMW, 17 mm	120	

Open box head spanner

- 12 point
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Special length and design
- For most current vehicle types
- For the assembly and disassembly of hard-to-reach injection pipes
- Makes possible simple and time-saving work
- With opening
- Special tool steel





1/2"

	mm	Length mm	g	
913.1211	12	100,0	122	
913.1212	14	100,0	129	
913.1213	16	100,0	146	
913.1214	17	100,0	140	
913.1215	18	100,0	145	
913.1216	19	100,0	147	

Open box head spanner set

- 12 point
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Special length and design
- For most current vehicle types
- For the assembly and disassembly of hard-to-reach injection pipes
- Makes possible simple and time-saving work
- With opening
- Special tool steel
- In durable plastic storage case





1/2"

			kg	
913.1210	6 pcs	12 - 14 - 16 - 17 - 18 - 19 mm	1,13	

consists of:

		g	
913.1211	Open box head spanner, 1/2", 12mm	122	
913.1212	Open box head spanner, 1/2", 14mm	129	
913.1213	Open box head spanner, 1/2", 16mm	146	
913.1214	Open box head spanner, 1/2", 17mm	140	
913.1215	Open box head spanner, 1/2", 18mm	145	
913.1216	Open box head spanner, 1/2", 19mm	147	

INJECTOR NOZZLE TOOL

Injector-socket

- 12 point
- Ideal for assembly and disassembly of injectors
- Internal square to DIN 3120 / ISO 1174 with ball reception
- For manual operation
- Matt finish
- Chrome vanadium

Application range: Volkswagen Polo 1.3 l Diesel-Motor, **Nissan** Terrano TD 25, 27 from 1988



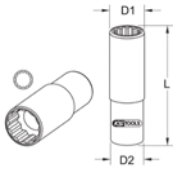
1/2"

	mm	D1 mm	D2 mm	L mm	g
150.2311	22	31,0	25,0	85,0	170

Injector-socket

- 12 point
- Ideal for assembly and disassembly of injectors
- Internal square to DIN 3120 / ISO 1174 with ball reception
- For manual operation
- Matt finish
- Chrome vanadium







1/2"

	mm	D1 mm	D2 mm	L mm	g
150.2312	27	37,0	30,0	85,0	260



Injector-socket

- 6 point
- Ideal for assembly and disassembly of injectors
- Internal square to DIN 3120 / ISO 1174 with ball reception
- For manual operation
- Burnished
- Chrome vanadium





1/2"

	mm	D1 mm	D2 mm	L mm	g
150.2314	27	35,3	36,7	110,0	260

Injector-socket

- 6 point
- Ideal for assembly and disassembly of injectors
- With side window and opening for connection to nozzle head (E-connection)
- Internal square to DIN 3120 / ISO 1174 with ball reception
- For manual operation
- Burnished
- Special tool steel





1/2"

	mm	Ø mm	mm	L mm	g
150.2391	25	37,0	22,0	100,0	300

Injector-socket

- 6 point
- Ideal for assembly and disassembly of injectors
- With side window and opening for connection to nozzle head (E-connection)
- Internal square to DIN 3120 / ISO 1174 with ball reception
- For manual operation
- Burnished
- Special tool steel

Application range: 2.0 l DW 10 HDI engines etc.





1/2"

	mm	Ø mm	mm	L mm	g
150.2307	27	38,0	22,0	100,0	280

Injector-socket

- 6 point
- Ideal for assembly and disassembly of injectors
- With side window and opening for connection to nozzle head (E-connection)
- Internal square to DIN 3120 / ISO 1174 with ball reception
- For manual operation
- Burnished
- Special tool steel

Application range: DCI and HDI engines etc.





1/2"

	mm	Ø mm	mm	L mm	g
150.2308	29	42,0	22,0	100,0	340

Injector-socket

- 6 point
- Ideal for assembly and disassembly of injectors
- With side window and opening for connection to nozzle head (E-connection)
- Internal square to DIN 3120 / ISO 1174 with ball reception
- For manual operation
- Burnished
- Special tool steel

Application range: Renault, **Nissan**, 1.9 l F9Q engines etc.





1/2"

	mm	Ø mm	mm	L mm	g
150.2309	30	43,0	22,0	100,0	360

Injector-socket set

- 6 point
- Ideal for assembly and disassembly of injectors
- With side window and opening for connection to nozzle head (E-connection)
- Internal square to DIN 3120 / ISO 1174 with ball reception
- For manual operation
- Burnished
- Special tool steel
- In durable plastic storage case





1/2"

			kg
150.2310	4 pcs	Injector-socket set	1,56

consists of:

		g
150.2391	1/2" injector nozzle socket, 25.0 mm	300
150.2307	1/2" Injector socket, 27mm	280
150.2308	1/2" Injector socket, 29mm	340
150.2309	1/2" Injector socket, 30mm	360

Socket for external 12-sided counter-holder

- 12 point
- ideally suited for mounting and dismounting injection nozzles and the rear shock absorbers
- Internal square to DIN 3120 / ISO 1174 with ball reception
- With a side window for guiding the cable of the motion sensor and the return pipe
- For manual operation
- Phosphate finish
- Chrome molybdenum





1/2"

	mm	D1 mm	D2 mm	L mm	g	
150.9541	21	32,0	34,0	90,0	300	

Injector-socket

- 12 point
- Ideal for assembly and disassembly of injectors
- Internal square to DIN 3120 / ISO 1174 with ball reception
- With a side window for guiding the cable of the motion sensor and the return pipe
- For manual operation
- Burnished
- Special tool steel

Application range: Alfa Romeo, **Chrysler**, Rover, **MAN** 2.5TD





1/2"

	mm	D1 mm	D2 mm	L mm	g	
150.2322	28	40,0	33,0	78,0	280	

Diesel injector socket

- 6 point
- Special socket key for dismantling and assembly of injectors
- For professional and damage-free use
- Internal square to DIN 3120 / ISO 1174 with ball reception
- Ideally suited for commercial vehicles, light commercial, SUV, etc
- Black, tempered surface
- Special tool steel

Application range: Mercedes, Motor 604 / 605 / 606





1/2"

	mm	L mm	g	
455.0034	22	110,0	250	

Diesel injector socket

- 12 point
- Special socket key for dismantling and assembly of injectors
- For professional and damage-free use
- Internal square to DIN 3120 / ISO 1174 with ball reception
- Ideally suited for commercial vehicles, light commercial, SUV, etc
- Black, tempered surface
- Special tool steel

Application range: Mercedes Actros, Motor 457 / 541 / 542, **Ford** Maverick 2,7 TDI, **Nissan** Terrano TD 2,5L / 2,7L, **Opel** Corsa 1,5D / 1,7 TD, **Isuzu**





1/2"

	mm	L mm	g	
455.0033	22	80,0	250	

Diesel injector socket

- 12 point
- Special socket key for dismantling and assembly of injectors
- For professional and damage-free use
- Internal square to DIN 3120 / ISO 1174 with ball reception
- Ideally suited for commercial vehicles, light commercial, SUV, etc
- Black, tempered surface
- Special tool steel

Application range: Suitable for diesel engines from **Fiat**, **Ford**, **Mercedes** and **Volkswagen** (vans and passenger cars), **MAN** 2,5 TD





1/2"

	mm	L mm	g	
455.0032	27	78,0	250	

Diesel injector socket

- 12 point
- Special socket key for dismantling and assembly of injectors
- For professional and damage-free use
- Internal square to DIN 3120 / ISO 1174 with ball reception
- Ideally suited for commercial vehicles, light commercial, SUV, etc
- Black, tempered surface
- Special tool steel

Application range: MAN 6 cylinder in line D 0226, **Chrysler** Voyager, **Jeep** Cherokee, **Opel** Frontera VM 41 B, Rover, **Landrover** Discovery Motor VM 2,5L TD





1/2"

	mm	L mm	g	
455.0031	28	78,0	250	

Diesel injector socket set

- Special socket key for dismantling and assembly of injectors
- For professional and damage-free use
- Internal square to DIN 3120 / ISO 1174 with ball reception
- Ideally suited for commercial vehicles, light commercial, SUV, etc
- Black, tempered surface
- Special tool steel
- In durable plastic storage case





1/2"

			kg	
455.0030	4 pcs	Diesel injector socket set	1,10	

consists of:

		g	
455.0031	1/2" Diesel injector socket 12 point, 28mm	250	
455.0032	1/2" Diesel injector socket 12 point, 27mm	250	
455.0033	1/2" Diesel injector socket 12 point, 22mm	250	
455.0034	1/2" Diesel injector socket 6 point, 22mm	250	

Injector-socket with bore hole

- Hexagon socket with bore hole
- Ideal for assembly and disassembly of Common Rail couplings
- Internal square to DIN 3120 / ISO 1174 with ball reception
- For manual operation
- Mirror polished
- Chrome vanadium

Application range: Bosch injectors in DCI and HDI engines etc.





1/2"

	mm	D mm	L mm	T mm	g	
152.1057	10	22,0	75,0	35,0	100	



Injector socket

- 6 point
- Ideal for assembly and disassembly of injectors
- With side window and opening for connection to nozzle head (E-connection)
- Internal square to DIN 3120 / ISO 1174 with ball reception
- External drive hexagonal socket 22.0 mm
- For manual operation
- Burnished
- Special tool steel





1/2"

	mm	Ø mm	Total length mm	g	
152.1195	25,0	37,0	100,0	270	

Injector socket

- 6 point
- Ideal for assembly and disassembly of injectors
- With side window and opening for connection to nozzle head (E-connection)
- Internal square to DIN 3120 / ISO 1174 with ball reception
- External drive hexagonal socket 22.0 mm
- For manual operation
- Burnished
- Special tool steel

Application range: 2.0 l DW 10 HDI engines etc.





1/2"

	mm	Ø mm	Total length mm	g	
152.1196	27,0	38,0	100,0	270	

Injector socket

- 6 point
- Ideal for assembly and disassembly of injectors
- With side window and opening for connection to nozzle head (E-connection)
- Internal square to DIN 3120 / ISO 1174 with ball reception
- Opened design
- For damage-free assembly and disassembly
- Tempered surface
- Special tool steel

Application range: Mercedes A- and B-Class, **Fiat** 1.3MJ





1/2"

	mm	Ø mm	Total length mm	g	
152.1058	29,0	42,0	78,0	274	

Injector socket

- 6 point
- Ideal for assembly and disassembly of injectors
- With side window and opening for connection to nozzle head (E-connection)
- Internal square to DIN 3120 / ISO 1174 with ball reception
- External drive hexagonal socket 22.0 mm
- For manual operation
- Burnished
- Special tool steel

Application range: Mercedes A- and B-Class, **Fiat** 1.3MJ





1/2"

	mm	Ø mm	Total length mm	g	
152.1197	29,0	42,0	100,0	342	

Injector socket

- 6 point
- Ideal for assembly and disassembly of injectors
- With side window and opening for connection to nozzle head (E-connection)
- Internal square to DIN 3120 / ISO 1174 with ball reception
- External drive hexagonal socket 22.0 mm
- For manual operation
- Burnished
- Special tool steel

Application range: Renault, **Nissan**, 1.9 l F9Q engines etc.





1/2"

	mm	Ø mm	Total length mm	g	
152.1198	30,0	43,0	100,0	358	

FUEL FILTER TOOL

Diesel filter bit socket

- Ideal for releasing and tightening of fuel, coolant and central reinforcement screws
- Also suitable for brass injector inserts
- Makes possible simple and time-saving work
- Ideal length for pump injector engines
- Hexagon socket
- In accordance with DIN 7422
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Matt finish
- Chrome vanadium



1/2"

	mm	Length mm	g	
911.1961	11,0	100,0	100	
911.1963	13,0	140,0	100	

Fuel filter wrench for 2.0/2.2 HDI engines

- Special for 2.0/2.2 HDI
- Ideal for releasing and fastening diesel filters
- Makes possible simple and time-saving work
- Internal square drive adaptor to DIN 3120 / ISO 1174
- Matt finish
- Chrome vanadium





	mm	Length mm	g	
150.3195	27	42,0	140	

Oil filter wrench Ø 109.0 mm / 6 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface

Application range: Fiat, **Alfa Romeo**, **Lancia**, **Opel** etc. with 1,3L, 1,9L and 2,4L diesel engines







3/8"

	Grooves	mm	g	
150.9383	6	109	380	

Fuel filter removal tool for JTD engines

- Ideal for releasing and fastening fuel filter covers
- Necessary for the removal and installation of the fuel filter cover when changing the fuel filter insert
- Makes precise torque installation possible
- Prevents damage to the fuel filter housing and the mounting ring
- Makes possible simple and time-saving work
- Internal square drive adaptor to DIN 3120 / ISO 1174
- Matt finish
- Chrome vanadium





1/2"

			g	
150.3113	2 pcs	Fuel filter removal tool for JTD engines	548	

consists of:

			g	
150.3114	1/2" Diesel filter case wrench		223	
150.3124	Diesel filter clamping device		322	

Fuel filter wrench for PSA HDI engines

- Ideal for releasing and fastening fuel filter covers
- Necessary for the removal and installation of the fuel filter cover when changing the fuel filter insert
- Makes precise torque installation possible
- Prevents damage to the fuel filter housing and the mounting ring
- Makes possible simple and time-saving work
- Internal square drive adaptor to DIN 3120 / ISO 1174
- Matt finish
- Chrome vanadium





3/8"

	Ø mm	g	
150.3122	109,0	245	

Fuel filter wrench for Volvo 2.4D/2.4D5 engines

- Ideal for releasing and fastening fuel filter covers
- Necessary for the removal and installation of the fuel filter cover when changing the fuel filter insert
- Makes precise torque installation possible
- Prevents damage to the fuel filter housing and the mounting ring
- Makes possible simple and time-saving work
- Internal square drive adaptor to DIN 3120 / ISO 1174
- Matt finish
- Chrome vanadium

Application range: Volvo (e.g. S60, S80, V70, XC70, XC90 with 2.4D and 2.4D5 engines)





3/8"

	Ø mm	g	
150.3121	82,0	200	

Fuel filter key for Volkswagen Crafter

- Ideal for releasing and fastening fuel filter covers
- Necessary for the removal and installation of the fuel filter cover when changing the fuel filter insert
- Makes precise torque installation possible
- Prevents damage to the fuel filter housing and the mounting ring
- Makes possible simple and time-saving work
- Internal square drive adaptor to DIN 3120 / ISO 1174
- Phosphate finish
- Chrome vanadium

Application range: Volkswagen Crafter (2006 - 2011) with 2.5 TDI engine



3/8"

	Ø mm	g	
150.3162	86,5	176	

Fuel filter wrench for PSA HDI engines

- Ideal for releasing and fastening fuel filter covers
- Necessary for the removal and installation of the fuel filter cover when changing the fuel filter insert
- Makes precise torque installation possible
- Prevents damage to the fuel filter housing and the mounting ring
- Makes possible simple and time-saving work
- Internal square drive adaptor to DIN 3120 / ISO 1174
- Matt finish
- Chrome vanadium





3/8"

	Grooves	Ø mm	g	
150.9398	8	109,0	480	

Fuel filter removal bar for UFI filters

- Ideal for releasing and fastening UFI fuel filter covers
- Necessary for the removal and installation of the fuel filter cover when changing the fuel filter insert
- Multi-adjustable, six-stage lever adjustment opening makes a large working area possible
- Flexible rotary magazine adapter with diverse attachments for corresponding use
- Prevents damage to the fuel filter housing and the mounting ring
- Prevents leakages which may cause engine damage when coming into contact with the timing belt
- Makes possible simple and time-saving work
- Matt finish
- With PVC handle and anchor
- Special tool steel

Application range: Audi, **Seat**, **Škoda** and **Volkswagen** (2.0 l TDI CR)





	Length mm	Spare adaptor	g	
150.3126	420,0	150.3127	480	



Fuel filter key for Ford Transit

- Ideal for releasing and fastening fuel filter covers
- Necessary for the removal and installation of the fuel filter cover when changing the fuel filter insert
- Makes precise torque installation possible
- Prevents damage to the fuel filter housing and the mounting ring
- Makes possible simple and time-saving work
- Internal square drive adaptor to DIN 3120 / ISO 1174
- Matt finish
- Chrome vanadium

Application range: Ford Transit 2,2 L TDCI



1/2"

	Ø mm	g	
150.3164	115,0	300	

Fuel filter wrench for Mercedes CDI

- Ideal for releasing and fastening fuel filter covers
- Necessary for the removal and installation of the fuel filter cover when changing the fuel filter insert
- Makes precise torque installation possible
- Prevents damage to the fuel filter housing and the mounting ring
- Makes possible simple and time-saving work
- Internal square drive adaptor to DIN 3120 / ISO 1174
- Matt finish
- Chrome vanadium

Application range: Mercedes CDI engines





3/8"

	Height mm	Length mm	g	
150.3134	70,0	112,0	240	

Universal fuel filter pliers with flexible jaws

- Ideally suited to releasing and tightening the fuel filter cover on hard-to-reach filters.
- Necessary for the removal and installation of the fuel filter cover when changing the fuel filter insert
- Multi-adjustable, two-stage pliers opening makes a large working area possible
- Double-sided 90° jaws, adjustable in 4 positions (45° steps)
- Retaining claws on the jaws prevent slipping when changing the filter
- Prevents damage to the fuel filter housing and the mounting ring
- Makes possible simple and time-saving work
- With PVC dipped handle
- Phosphate finish
- Chrome vanadium





	Ø mm	Length mm	g	
150.3129	57,0-120,0	325,0	640	

TANK SENDER WRENCH

2-jaw universal fuel gauge sender unit key

- With 6 point drive
- Ideal for releasing and tightening the fuel filter locking ring from the tank sender to the fuel tank
- Makes possible simple and time-saving work
- Adjustable
- Mirror polished
- Chrome vanadium





	mm	Ø mm	g	
150.9384	24	80,0 - 120,0	400	
150.9385	24	110,0 - 170,0	460	

2-jaw fuel sender unit key set

- With 6 point drive
- Ideal for releasing and tightening the fuel filter locking ring from the tank sender to the fuel tank
- Makes possible simple and time-saving work
- Adjustable
- Mirror polished
- Chrome vanadium





			g	
150.9387	2 pcs	2-jaw fuel sender unit key set	900	

consists of:

		g	
150.9384	2-jaw universal fuel gauge sender unit key, Ø 80-120mm	400	
150.9385	2-jaw universal fuel gauge sender unit key, Ø 110-170mm	460	

3-jaw universal fuel gauge sender unit key

- With 6 point drive
- Ideal for releasing and tightening the fuel filter locking ring from the tank sender to the fuel tank
- Makes possible simple and time-saving work
- Adjustable
- Mirror polished
- Chrome vanadium





	mm	Ø mm	g	
150.9386	24	75,0-160,0	570	

3-jaw fuel gauge and pump sender collar wrench

- With 6 point drive
- Ideal for releasing and tightening the fuel filter locking ring from the tank sender to the fuel tank
- Makes possible simple and time-saving work
- No damage to the ring by the tool
- Makes work in tight gaps possible
- Less space required
- Quick adjustments
- Special tool steel





	mm	Ø mm	g	
150.9388	16	87,0 - 170,0	960	

Fuel filler wrench for Alfa Romeo / Fiat / Lancia / Ferrari / Maserati

- Ideal for releasing and tightening the fuel filter locking ring from the tank sender to the fuel tank
- Internal square drive adaptor to DIN 3120 / ISO 1174
- Makes possible simple and time-saving work
- No damage to the ring by the tool
- Makes work in tight gaps possible
- Less space required
- Special tool steel

Application range: Alfa Romeo GT, 147, 156, 159, 166, **Fiat** Grande Punto, Idea, Linea, Multipla, Panda, Nuova Bravo, Panda 4x4, Punto, Sedici, Doblo, Croma, Stilo, Ducato, Soblo Cargo, Idea Van, Grande Punto Van, Multipla Van, Panda Van, Scudo, **Lancia** Y, Ypsilon, Musa Thesis, **Ferrari** 360 Spider, 430 Coupé, 430 Scuderia, 430 Scuderia Spider, 430 Scuderia Spider 16M, 430 Spider, 575 Superamerica, 757 Maranello, 599 GTB Fiorano, 612 Scaglietti, Enzo, **Maserati** 4200 Coupé, 4200 Gransport, 4200 Spyder, GranTurismo and Quattroporte

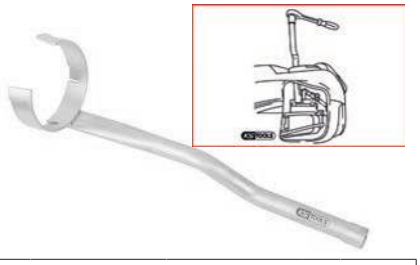


1/2"

	mm	Inner Ø mm	g	
150.3230	21	149,0	585	

Wrench for VAG fuel pumps

- Ideally suited to assembly and disassembly of fuel pumps
- Internal square drive to DIN 3120 / ISO 1174
- Special profile
- Aluminium



	Ø mm	Length mm	g	
150.3179	100	390,0	700	

Tank filler wrench for VAG

- Ideal for releasing and tightening the fuel filter locking ring from the tank sender to the fuel tank
- Internal square drive adaptor to DIN 3120 / ISO 1174
- Makes possible simple and time-saving work
- No damage to the ring by the tool
- Makes work in tight gaps possible
- Less space required
- Phosphate finish
- Chrome vanadium

Application range: Audi A3, A4, A6, A7, A8, Q3, Q5, Q7, R8, TT, **Volkswagen** Polo, Beetle, Golf, Golf Plus, Jetta, Eos, Scirocco, Passat, Passat CC, Sharan, Touran, Tiguan, Touareg, Phaeton, Caddy and Transporter



1/2"

	Ø mm	g	
150.3167	120,0	700	

Tank filler wrench for Mercedes and Audi

- Ideal for releasing and tightening the fuel filter locking ring from the tank sender to the fuel tank
- Internal square drive adaptor to DIN 3120 / ISO 1174
- Makes possible simple and time-saving work
- No damage to the ring by the tool
- Makes work in tight gaps possible
- Less space required
- Special tool steel

Application range: Mercedes M-Class (W164, W166) and R-Class (W251), **Audi** A4 (2008 - 2016), A5 (2008 - 2016), A6 (2005 - 2011) and A8 (>1994)



1/2"

	mm	Inner Ø mm	g	
150.3234	21	125,0	889	

Tank filler wrench for BMW

- Ideal for releasing and tightening the fuel filter locking ring from the tank sender to the fuel tank
- Internal square drive adaptor to DIN 3120 / ISO 1174
- Makes possible simple and time-saving work
- No damage to the ring by the tool
- Makes work in tight gaps possible
- Less space required
- Special tool steel

Application range: BMW 7 and X3 (F01, F02, F03, F25)



1/2"

	Length mm	g	
150.3174	180,0	945	

Tank filler wrench for Mercedes / BMW / VAG

- Ideal for releasing and tightening the fuel filter locking ring from the tank sender to the fuel tank
- With 6 point drive
- Makes possible simple and time-saving work
- No damage to the ring by the tool
- Makes work in tight gaps possible
- Less space required
- Special tool steel

Application range: Mercedes W163, W203, W211, **BMW** E36, E46, **Audi** and **Volkswagen**



	Inner Ø mm	mm	g
150.3222	143,0	17	574

Tank filler wrench for BMW / Mini / Porsche

- Ideal for releasing and tightening the fuel filter locking ring from the tank sender to the fuel tank
- Internal square drive adaptor to DIN 3120 / ISO 1174
- Makes possible simple and time-saving work
- No damage to the ring by the tool
- Makes work in tight gaps possible
- Less space required
- anodised
- Aluminium

Application range: BMW E31, E34, E36, E38, E39, E46, E53, E60, E63, E64, E65, E83, E85, E90 (1988 - 2013), **Mini** R50, R52, R53, R55, R56, R57 (1988 - 2013), **Porsche** Boxster, Cayman (986), 911 Carrera, Turbo, GT2 and GT 3 (2005 - 2012)



1/2"

	Inner Ø mm	g
150.3166	115,0	482

Tank filler wrench for Opel / Mercedes / BMW / Volvo

- Ideal for releasing and tightening the fuel filter locking ring from the tank sender to the fuel tank
- Internal square drive adaptor to DIN 3120 / ISO 1174
- Makes possible simple and time-saving work
- No damage to the ring by the tool
- Makes work in tight gaps possible
- Less space required
- Special tool steel

Application range: Opel Antara >2007, Astra J >2010, Insignia >2009, Signum 2003 - 2008, Vectra C 2003 - 2008, **Mercedes** E- and C-Class (W204, W207, W212), **BMW** 5 Series, 6 Series and 7 Series (F01, F02, F20, F12), **Volvo** S40 and V40



1/2"

	Ø mm	g
150.3173	186,0	545

Tank filler wrench for Fiat / Jeep

- Ideal for releasing and tightening the fuel filter locking ring from the tank sender to the fuel tank
- Internal square drive adaptor to DIN 3120 / ISO 1174
- Makes possible simple and time-saving work
- No damage to the ring by the tool
- Makes work in tight gaps possible
- Less space required
- Special tool steel

Application range: Fiat Freemont, 500L, 500X, **Jeep** Renegade etc.



1/2"

	mm	Inner Ø mm	g
150.3229	21	152,0	689

Tank filler wrench for Opel / Saab

- Ideal for releasing and tightening the fuel filter locking ring from the tank sender to the fuel tank
- Internal square drive adaptor to DIN 3120 / ISO 1174
- Makes possible simple and time-saving work
- No damage to the ring by the tool
- Makes work in tight gaps possible
- Less space required
- Special tool steel

Application range: Opel Astra G (1998 - 2012), Astra H (2004 - 2012), Zafira A (1998 - 2012), Zafira B (2005 - 2012), Corsa C (2001 - 2012), Vectra C (2002 - 2012), Signum (20003 - 2012), Tigra B (2004 - 2012), **Saab** 9-3 (2003 - 2011) engine code: (B207, B284, D223L, Z19DT, Z19DTH, Z19DTR)



1/2"

	Ø mm	g
150.3231	140,0	380

Fuel sender wrench for Mercedes W210

- With two pins
- With 6 point drive
- Ideal for releasing and tightening the fuel filter locking ring from the tank sender to the fuel tank on the Mercedes W210 (E Class)
- Makes possible simple and time-saving work
- Special tool steel

Application range: Mercedes W210 (E Class)



	mm	L mm	g
150.9389	17	80,0	120

Fuel sender wrench for Mercedes W202

- With 6 point drive
- Ideal for releasing and tightening the fuel filter locking ring from the tank sender to the fuel tank on the Mercedes W202 (C Class)
- Makes possible simple and time-saving work
- With four pins
- Special tool steel

Application range: Mercedes W202 (C Class)



	mm	Ø mm	g
150.9399	24	108	820

Tank filler wrench for Volvo

- Ideal for releasing and tightening the fuel filter locking ring from the tank sender to the fuel tank
- Internal square drive adaptor to DIN 3120 / ISO 1174
- Makes possible simple and time-saving work
- No damage to the ring by the tool
- Makes work in tight gaps possible
- Less space required
- Special tool steel

Application range: Volvo C30, C70 >2006, S40 >2004, S60 >2011, S80 >2007, S80L, V40 >2013, V40 Cross Country, V50, V60, V70 >2008, XC60 and XC70 >2007 (engine code: B4064S3 / B4164T / B4164T3 / B4164T4 / B4184S11 / B5204S3 / B4204S4 / B4204T11 / B4204T12 / B4204T15 / B4204T6 / B4204T7 / B5204T8 / B5204T9 / B5244S4 / B5244S6 / B5254T10 / B5254T11 / B5254T12 / B5254T14 / B5254T3 / B5254T6 / B5254T7 / B5254T8 / B6324S / B63254S2 / B6324S4 / B6324S5 / D4162T / D4164T / D4204T / D4204T2 / D4204T5 / D5204T / D5204T2 / F5204T3 / D5204T4 / D5204T5 / D5204T6 / D5204T7 / D5244T10 / DD5244T11 / D5244T13 / D5244T14 / D5244T15 / D5244T17 / D5244T19 / D5244T4 / D5244T5 / D5244T8 / D5244T9)



1/2"

	mm	Inner Ø mm	g
150.3228	21	155,0	890

Tank filler wrench for Volvo

- Ideal for releasing and tightening the fuel filter locking ring from the tank sender to the fuel tank
- Internal square drive adaptor to DIN 3120 / ISO 1174
- Makes possible simple and time-saving work
- No damage to the ring by the tool
- Makes work in tight gaps possible
- Less space required
- Special tool steel

Application range: Volvo V70 >00, S80, XC90, S60, V70 and XC70 (engine code: B5204T4 / B52044T5 / B5234T3 / B5234T7 / B5244S / B5244S2 / B5244S6 / B5244SG / B5244SG2 / B5244T3 / B5244T4 / B554T2 / B6284T / B6294S / B6304S3 / B8444S / B5244T / D5244T2 / D5244T3 / D5252T / B5204T3)



1/2"

	Inner Ø mm	g
150.3193	110,0	795

TEST DEVICE

Synchronous carburettor test device with 4 synchronous clocks

- For synchronous measurement on 2 – 4 carburettors with vacuum connection to the carburettor
- After adjustment and inspection of the valve clearances the carburettors should be synchronised
- Universal usage
- Unit for vacuum measurement: 0-70 cmHg / in0-30 inHg
- Generally necessary after a major inspection
- Optimum results for mechanical function-free engines
- Must be used with running engine
- Pressure gauges are fitted on the plate
- In durable plastic storage case

Application range: Multi-cylinder engines require synchronous opening of the throttle valve Through tolerances in the intake system, adjustment of the throttle valve stop is not sufficient. Dynamic adjustment is required her. Through synchronisation, the same vacuum is reached before the carburettors. A dial is required for each carburettor for synchronisation. Adjustment of the individual compressors is done via the adjustment mechanisms.



			kg	
150.3600	28 pcs	Synchronous carburettor test device with 4 synchronous clocks	3,00	

consists of:

	x		g	
150.3601	4	Pressure gauge Ø 92 mm	1600	
150.3602	4	Rubber house 8 x 5 x 750 mm	20	
150.3603	4	Hose clamp with replacement washer	1	
150.3604	4	Connection piece 53 mm, M6 x 0.75 mm	8	
150.3605	4	Connection piece 60 mm, M6 x 1.0 mm	12	
150.3606	4	Extension 3.9 x 52 mm	8	
150.3607	4	Extension 3.9 x 122 mm	12	

Low fuel pressure diagnosis set

- Ideal for the quick and easy testing of low pressure circuit (flow pressure and return pressure measurement)
- Quick to find leaks
- Fits all common vehicles
- The pressure loss inspection is carried out via the manometer
- Quick and efficient use
- For the diagnosis of the following basic tests: the supply of fuel from the tank, air bubbles in the fuel system, impurities in the fuel
- In durable plastic storage case



			kg	
150.1845	14 pcs	Low fuel pressure diagnosis set	4,00	

consists of:

	x		g	
150.1846	2	Adaptor hose Ø 6.0 mm, 2 m long	320	
150.1847	1	Manometer 1.0-5.0 bar incl. connection nipple and safety cover	140	

consists of:

	x		g	
150.1848	1	Manometer 1.0-15.0 bar incl. connection nipple and safety cover	140	
150.1849	1	T-piece SAE 8 x 20 mm (red)	100	
150.1851	1	T-piece SAE 9.5 x 20 mm (grey)	100	
150.1852	1	T-piece SAE 10 x 20 mm (green)	120	
150.1853	1	T-piece SAE 10 x 30 mm (blue)	120	
150.1854	1	T-piece NG8 Type 246 (white)	100	
150.1855	1	T-piece Ø 6.0 mm (brown)	60	
150.1856	1	T-piece Ø 8.0 mm (orange)	60	
150.1857	1	T-piece Ø 10.0 mm (purple)	60	
150.1858	1	T-piece 11.8 x 25 mm (light blue)	140	
150.1859	1	T-piece SAE 8 x 30 mm (yellow)	100	

Master fuel injection system pressure test set for petrol engines

- Ideal for quick and reliable pressure testing on all common injection systems of petrol engines
- For simple testing of fuel pumps, system pressure sensors and tightness
- Suitable for mechanical and electrical petrol injection systems
- For almost all common, European, Asian and American vehicle types
- Includes shock-proof, large precision manometer Ø 100.00 mm, 0 - 10 bar with rubber cover
- Includes shock-proof, small precision manometer Ø 75.00 mm, 0 - 1 bar especially for the central injection with rubber cover
- Compact quick couplings to all adapters and hoses
- Replacement washers (20 pieces) are available in the set
- In durable plastic storage case

Application range / injection systems: Bosch K-Jetronic, Bosch L/LH-Jetronic, Bosch Motronic, Bosch Motronic-Jetronic, MPFI, TBI, Eci, MPi, EFI, EGI, PGM-Fi, DIGIFANT 1/2, CIS-Digital, Weber CFI, Spi, Singlepoint, Multipoint, Multec SPi, EFI, Simtec EFI, 1-Tec, Magent Marelli G5/G6 Mono, Weber-Marelli 1AW, CFI, Volkswagen 1AW, R Electronc etc.



			kg	
150.2325	42 pcs	Master fuel injection system pressure test set for petrol engines	4,00	

consists of:

	x	Type		g	
150.2326	1	A	Manometer Ø 100.0 mm, 0-10 bar with 1/4" quick coupling	360	
150.2327	1	B	Manometer Ø 75.0 mm, 0-1 bar with 1/4" quick coupling	202	
150.2328	2	GA	Adaptor piece M14x1.5 internal thread and 1/4" hose connection	41	
150.2329	2	GT	Adaptor piece M16x1.5 internal thread and 1/4" hose connection	39	
150.2340	1	GS	Double-sided adapter piece 5/8"x18 internal thread	28	
150.2341	2	GV	Adaptor piece 5/8"x1.8 external thread and 1/4" hose connection	26	
150.2342	2	GU	Adaptor piece M16x1.5 external thread and 1/4" hose connection with washer	48	
150.2343	2	GB	Adaptor piece M14x1.5 external thread and 1/4" hose connection with washer	39	
150.2344	1	GC	Connection adapter piece M14x1.5 external thread and 16 mm hexagon with washer	37	
150.2345	1	AE	Adaptor piece (long) M8x1.0 external thread and 1/4" hose connection with washer	70	
150.2346	1	AB	Dual adapter piece M16x1.5 internal and external thread and 3/8" hose connection	65	
150.2347	1	AA	Dual adapter piece M14x1.5 internal and external thread and 3/8" hose connection	65	
150.2348	1	AI	Adaptor piece M10x1.0 external thread and 1/4" hose connection with washer	35	
150.2349	1	AJ	Adaptor piece M10x1.0 internal thread and 1/4" hose connection	21	

consists of:

	x	Type		g	
150.2360	1	HO	Hollow bolt M8x1.0 and 1/4" hose connection	22	
150.2361	1	HN	Hollow bolt M6x1.0 and 1/4" hose connection	19	
150.2362	1	G	Manometer connection hose with 1/4" hose connection with valve for Bosch CSI and GM TBI systems	110	
150.2363	1	W	Manometer connection hose with 1/4" hose connection for Ford EFI systems	324	
150.2364	1	F	Manometer connection hose with 1/4" hose connection for universal use with 3/8" and 5/16" high-pressure hose connections	160	
150.2365	1	C	Adaptor hose for small Schrader valve 5/16"x32 UNF internal thread and 1/4" hose connection	95	
150.2366	1	D	Manometer connection hose with 1/4" hose connection including pressure release valve, transparent hose	110	
150.2367	1	E	Adaptor hose for standard Schrader valve 7/16"x20 UNF internal thread and 1/4" hose connection	116	
150.2368	1	X	Manometer 5/16" quick coupling connection hose with 1/4" hose connection for Ford EFI systems	40	
150.2369	1	XA	Manometer 5/16" quick coupling connecting hose with 1/4" hose connection for GM TBI systems	55	
150.2650	2	AM	Adaptor piece M8x1.0 external thread and 1/4" hose connection with washer	13	
150.2651	2	AK	Adaptor piece M12x1.5 internal thread and 1/4" hose connection	24	
150.2652	1	AL	Adaptor piece M8x1.0 internal thread and 1/4" hose connection	22	
150.2653	1	AC	Dual adapter piece M14x1.25 internal and external thread and 1/4" hose connection	63	
150.2654	1	AG	Adaptor piece (long) M8x1.0 internal thread and 1/4" hose connection	64	
150.2655	1	HA	Adaptor piece (long) for 1/4", 3/8", 1/2" hoses and 1/4" hose connection	51	
150.2656	1	HE	Hollow bolt M14x1.5 and 1/4" hose connection	28	
150.2657	1	HR	Hollow bolt M12x1.5 and 1/4" hose connection	38	
150.2658	1	HQ	Hollow bolt M12x1.25 and 1/4" hose connection	33	
150.2659	1	HP	Hollow bolt M10x1.0 and 1/4" hose connection	29	
150.2661	1		Replacement washer packet 20 Pieces	10	

Common rail injector test assortment with 8 measurement pipes

- Professional test assortment to the misdiagnosis through measurement of the return stroke quantities of high pressure injectors
- Measurement of up to 8 high pressures Injectors simultaneously possible
- Ideal supplement to the engine diagnosis device
- Diesel sutible silicone tubes
- Tube end with coupling and original adapter for safe connection
- Double sealed brass connections in the test tube
- Stable acrylic test block with filling line scale
- Precise measurement result through 25 ml volumetric capacity in the test tube
- In durable plastic storage case

Application range: Mercedes, **BMW**, **Ford**, **Renault**, **Opel**, **Vauxhall**, **Toyota**, **Nissan**, **Citroën**, **Volvo**, **Peugeot** etc.





			kg	
150.1580	65 pcs	Common rail injector test assortment with 8 measurement pipes	3,16	

consists of:

	X		g
150.1581	1	Acrylic block	800
150.1582	8	Silicon pipes, 5,2x8,8x600mm	40
150.1584	8	Adaptor, acrylic block+O-ring	24
150.1594	8	Adaptor 01- BOSCH	10
150.1595	8	Adaptor 02-SIEMENS	10
150.1596	8	Adaptor 03-DENSO	10
150.1597	8	Adaptor-DELPHI	10
150.1598	8	Adaptor-BOSCH	30
150.1599	8	Quick coupler	30

Locknut Set for Injection/Diesel Engines

- ideal for closing the injector
- protects the injector from impurities
- to close the injector for various pressure tests
- Locknuts with integrated seal
- for the most common sized M12 x 1.50 and M14 x 1.50
- In durable plastic storage case



			g
150.1835	12 pcs	Locknut Set for Injection/Diesel Engines	60

consists of:

	X		g
150.1836	6	Fixing rail with hook	20
150.1837	6	Locknut M14 x 1.50	20

plug set

- ideally suited for sealing a wide variety of cables
- suitable for fuel, pressure and vacuum lines
- 48 colour-coded sealing plugs pairs
- for cables with Ø 3.2 mm to 11.7 mm
- Rubber
- In plastic storage case



			g
405.0020	48 pcs	plug set	140

consists of:

	X		g
405.0021	6	Sealing plug, Ø 11.7	4
405.0022	12	Sealing plug, Ø 7.8	2
405.0023	18	Sealing plug, Ø 4.7	1
405.0024	12	Sealing plug, Ø 3.2	0,25



Fuel system testing and cleaning set

- Makes possible quick, simple and correct operation of the engine, without using the tank fitted to the vehicle
- Suitable for diagnosing faults between the tank and high-pressure tank, fuel filter etc.
- Ideal for fuel systems to release soiling and gunk in the injection system with an exact mix of fuel/cleaning agent
- In durable plastic storage case

Application range: Universally suitable for all vehicles with a naturally aspirated engine



			kg
150.1860	43 pcs	Fuel system testing and cleaning set	8,00

consists of:

	X		g
150.1861	1	10 litre container	1000
150.1661	1	Hand pump with male coupling	280
150.1862	2	Adaptor hose Ø 8.0 mm, 4 m long	650
150.1864	1	Adaptor set 3 part SAE 8 x 20 mm (red)	120
150.1865	1	Adaptor set 3 part SAE 8 x 30 mm (yellow)	120
150.1866	1	Adaptor set 3 part SAE 9.5 x 20 mm (grey)	120
150.1867	1	Adaptor set 3 part SAE 10 x 20 mm (green)	120
150.1868	1	Adaptor set 3 part SAE 10 x 30 mm (blue)	160
150.1869	1	Adaptor set 3 part NG8 Type 246 (white)	120
150.1870	1	Adaptor set 3 part Ø 6.0 mm (light blue)	200
150.1871	1	Adaptor set 3 part Ø 8.0 mm (pink)	180
150.1872	1	Adaptor set 3 part Ø 10.0 mm (purple)	100
150.1873	1	Adaptor set 3 part 11.8 x 25 mm (brown)	80
150.1874	1	Adaptor set 3 part NG12 Type 246 (orange)	100
150.1875	1	Adaptor set 3 part Ø 12.0 mm (black)	140
150.2324	2	Double-sided adapter 3/8", short	36
150.2323	1	Double-sided quick coupling 3/8"	74

TRANSFER PUMPS

Mini transfer pump

- Ideal tool for refilling in case of emergencies
- Suitable for battery acid, fuels, oils and distilled water
- The hoses are attached to the balloon lifter using the supplied hose clamps
- Special plastic





	Tube inner Ø mm	tube length mm	g
150.1665	8,0	2 x 900	320

Transfer pump

- Ideal aid for easy transferring and pumping
- Suitable for battery acid, fuels, antifreeze, oils and distilled water
- Acid-resistant
- With high quality pump body and reinforced pump handle
- Through a rubber tube can also be used as an air pump
- Includes rubber tubes and reduce piece
- Special plastic





	Tube inner Ø mm	tube length mm	g
150.1660	12,0	2 x 1.300	465

Electric suction and transfer pump

- Ideal for bleeding and filling of fluids
- suitable for diesel, engine oil and heating oil
- Suction capacity: Engine oil 0.2 l/min, diesel and heating oil 1.2 l/min
- 12V connection via the crocodile terminals of the vehicle or an external battery
- including 6 mm suction probe
- not suitable for water, gear oil and highly flammable liquids such as petrol, etc.





	Tube inner Ø mm	tube length mm	kg
150.2800	13	2 x 1.200	1,15

FILLING DEVICE AND AIR VENT DEVICE

Disposable filling hose for AdBlue® additives - drip free

- ideal for topping up AdBlue®-additives
- special developed refill device
- drip free
- protects the interior from soiling or unpleasant odors
- suitable for 5 and 10 liter container
- Plastic

*AdBlue® is a registered trademark of the Verband der Automobilindustrie e.V (VDA).





	L mm	g
550.1288	1000,0	163

Filling Hopper for AdBlue® additives, straight

- ideal for topping up AdBlue®-additives
- Is screwed directly onto the AdBlue® tank connection
- special developed refill device
- drip free
- With a graduation scale
- Plastic

* AdBlue® is a registered trademark of VDA German Association of Automotive Industry





550.1287	1,1	300	

Filling Hopper for AdBlue® additives, angled

- ideal for topping up AdBlue®-additives
- Is screwed directly onto the AdBlue® tank connection
- special developed refill device
- drip free
- Connection thread 45° angled
- With a graduation scale
- Plastic

* AdBlue® is a registered trademark of VDA German Association of Automotive Industry





550.1286	1,1	326	

Diesel air venting / pre-filling set

- Makes the air venting of many diesel fuel systems possible





150.9030	7 pcs	Diesel air venting / pre-filling set	700

consists of:

150.9031	Hose with pump	250
150.9032	Connection piece PSA, 8 mm	50
150.9033	Connection piece PSA, 10 mm	24
150.9034	Connection piece Ford	52
150.9035	Connection piece Renault, GM, Fiat, large	66
150.9036	Connection piece Renault, GM, Fiat, small	48
150.9037	Connection piece GM	53

Diesel filling and air venting device for diesel fuel systems

- Ideal for clean, quick and simple air venting and filling of diesel filter in the pre-installed state
- Suitable for all diesel vehicles and also direct injectors
- Can be used when changing filter, on tanks that have been run empty, on tanks with incorrect fuel inside
- Applicable in pre-installed state - eliminates inconvenient filling out of the vehicle
- Connection carried out on the diesel engine inlet to the engine
- Using a pneumatic connection and actuation of the hand lever a vacuum is created in the diesel filter filling and exhaust device (Venturi effect) therefore sucking out fuel
- Includes universal suitable silicone hose assortment Ø 8-9.5-12 mm
- With high-quality pump housing and strengthened pump head
- The suction hose is resistant to diesel and brake fluid
- With quick coupling system for easy hose exchange
- Polyethylene





Technical data:

Work pressure:	6-10 bar
Capacity:	1,8 l
Max. flow rate:	180 l/min

		H mm	kg	
150.9355	11 pcs	300,0	1,60	

consists of:

150.9031	Hose with pump	250
150.9032	Connection piece PSA, 8 mm	50
150.9033	Connection piece PSA, 10 mm	24
150.9034	Connection piece Ford	52
150.9035	Connection piece Renault, GM, Fiat, large	66
150.9036	Connection piece Renault, GM, Fiat, small	48
150.9037	Connection piece GM	53



Vacuum fluid extractor suction pump 9.5 litre

- Ideal for quick, clean and simple suction, intake and emptying of fluids
- Suitable for engine oil, transmission oil, hydraulic oil, brake fluid, water etc.
- For pneumatic use with a compressor or manual use with the integrated hand pump
- Select a suitable probe and suck easily using the vacuum principle
- Suction process automatically stopped when housing is full, preventing fluids from spilling over
- With integrated pressure relief valve for more safety
- With high-quality pump housing and strengthened pump head
- Includes 4 probes for different uses
- Ideally suited to hard-to-reach places thanks to the included, long suction hose
- The suction hose is resistant to petrol and oil
- Polyethylene





Technical data:

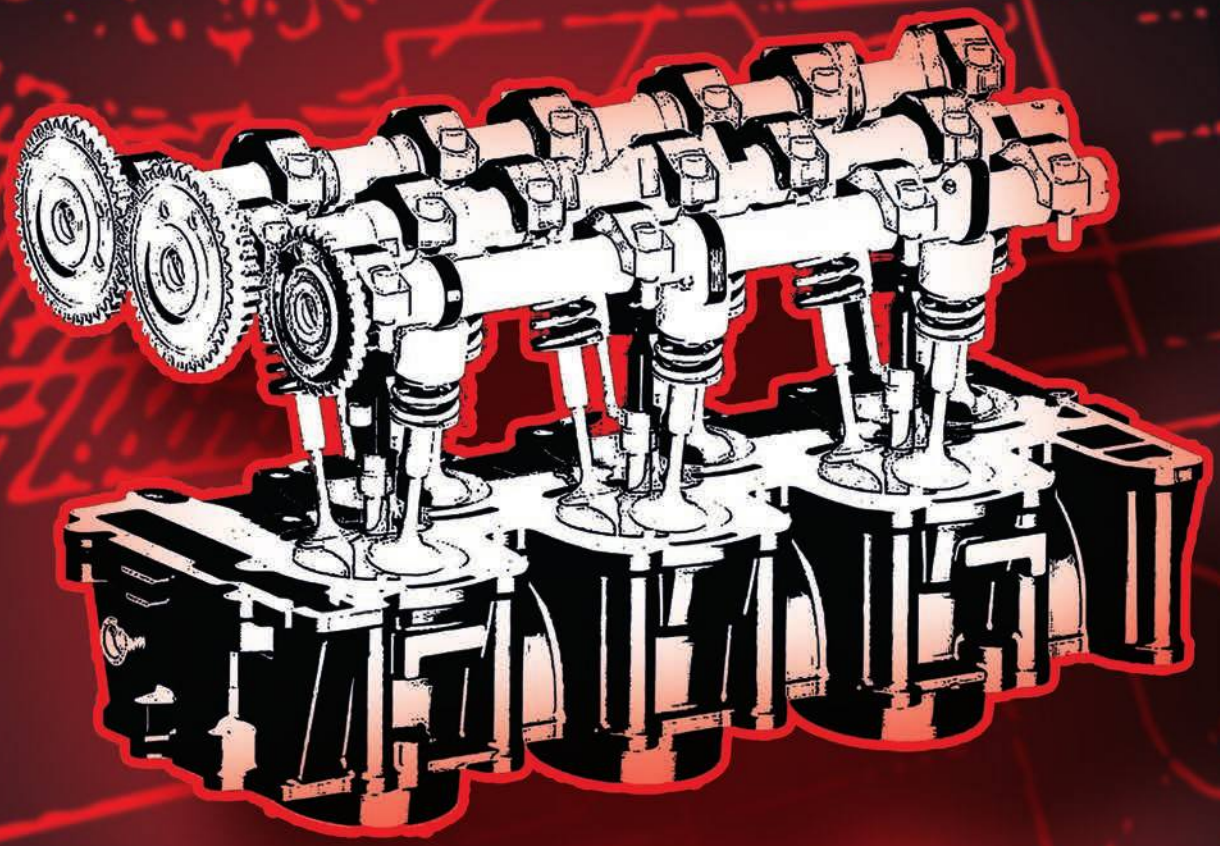
Work pressure:	5-11,5 bar
Capacity:	9,5 l
Operating temperature:	+0 °C to +55 °C
Filling tube length:	1,5 m
Max. flow rate:	125 l/min

		kg	
160.0790	5 pcs	Vacuum fluid extractor suction pump 9.5 litre	5,00

consists of:

160.0791	Vacuum fluid extractor suction pump 9.5 litre	3708	
160.0792	Adaptor and tube 4x8mm x1,5m	200	
160.0793	Main probe 7.8 x 9.8 mm x 1 m	200	
160.0794	Probe 5.3 x 6.7 mm x 1 m	200	
160.0795	Probe 3.5 x 4.5 mm x 1 m	200	

ENGINE - CYLINDER HEAD / ENGINE BLOCK





KS TOOLS®

Innovation is our mission!

	FROM PAGE
TOOLS FOR ENGINE BLOCK SCREWS	194
TOOLS FOR CYLINDER BLOCK SCREWS	195
VIBRATION DAMPER TOOLS	200
SERVICE STANDS AND PARTS STATIONS	200
SLIDE RAIL BOLTS EXTRACTION TOOLS	200
GUIDE SLEEVES INTERNAL EXTRACTOR	201
EXTRACTION TOOL AND SPIRAL PROFILE SOCKETS	201
NUT SPLITTER	205
THREAD BORING TOOL AND BORE JIGS	206
CRANK SHAFT FACING TOOLS	206
CAMSHAFT TOOLS	206
PULLERS	207
VALVE GAUGES	207
VALVE PNEUMATIC ADAPTER	207
VALVE RETAINER AND VALVE SPRING TENSIONER	207
VALVE SHALT SEALING TOOLS	209
GASKET SCRAPER	210
WASHER TOOLS	212
ASSEMBLY AIDS	215
VALVE SEAT CUTTER	215
VALVE CUTTER	215
VALVE WEDGE ASSEMBLY	216
VALVE ADJUSTMENT TOOLS	216
PISTON RING TOOLS	216
CYLINDER LINER TOOLS	217
CYLINDER HON DEVICES	217
TEST AND MEASURING TOOLS	218

TOOLS FOR ENGINE BLOCK SCREWS

Engine support socket set for VAG, extra short

- 12 point
- For the assembly and removal of the aluminium engine support (hard to reach sites)
- Ideal for timing belt change
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Extra short execution
- For manual operation
- Matt finish
- Chrome vanadium

Application range: For timing belt change on **Volkswagen** Golf IV, **Audi**, **Škoda**, **Seat** etc.



3/8"

			g	
911.1295	2 pcs	Engine support socket set for VAG, extra short	110	

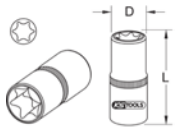
consists of:

		g	
911.1293	1/2" 12 point socket, 16.0 mm short	40	
911.1294	1/2" 12 point socket, 16.0 mm long	67	

Torx-E socket for Mercedes, extra-short

- Torx E
- Ideally suited for various engine screws
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Extra short execution
- For manual operation
- Matt finish
- Chrome vanadium

Application range: Engine screws (e.g. various supports, housing cover etc.) on **Mercedes** diesel engines 642, 651 and petrol engines 276, 278, 271





1/2"

		D mm	L mm	g	
911.1288	E12	22,0	25,0	40	

Bit socket for hexagon screws for VAG, extra long

- Hexagon socket with ball end
- For releasing and tightening the TDC sensor
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Extra-long design
- For manual operation
- Matt finish
- Chrome vanadium

Application range: VAG models from 2005, 4-cylinder 2.0l diesel engines



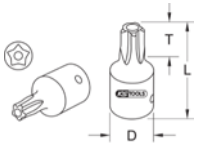
1/4"

	mm	Ø mm	Length mm	g	
911.1598	4,0	11	300,0	80	

Bit socket for five star tamperproof screws

- Five star, tamperproof
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- For manual operation
- Matt finish
- Chrome vanadium

Application range: Control devices, alternator, air quantity meter, exterior mirror, insertion pumps for pump-line-nozzle system, door lock fastening screw for **Volkswagen**, **Audi**, **Ford**, **Mercedes**, Rover, **Seat**, **Škoda**, **Volvo** etc.





1/4"

	D	D mm	L mm	T mm	g	
911.2471	TS8	12,0	25,0	5,0	10	
911.1471	TS10	12,0	25,0	6,0	10	
911.1472	TS15	12,0	25,0	6,0	10	
911.1473	TS20	12,0	25,0	7,0	10	
911.1474	TS25	12,0	25,0	7,0	10	
911.1475	TS27	12,0	25,0	8,0	10	
911.1476	TS30	12,0	25,0	8,0	10	
911.1477	TS40	12,0	25,0	9,0	10	

Bit socket set for tamperproof five star screws

- Five star, tamperproof
- For the assembly and disassembly of safety bolts on temperature sensors and air volume measuring instruments
- For modern diesel injection systems (pump-nozzle device, pump and electricity nozzle, common rail), e.g. Bosch injection systems
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- For manual operation
- Matt finish
- Chrome vanadium
- Includes storage rail

Application range: Control units, alternator, air flow meter, exterior mirrors, plug-in pumps for pump line nozzle system (also for **Mercedes** Atego and Actros), door lock fastening screws for **Volkswagen**, **Audi**, **Ford**, **Mercedes**, **Rover**, **Seat**, **Škoda**, **Volvo** etc.





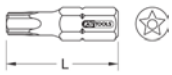
1/4"

			g	
911.1470	7 pcs	TS10 - TS15 - TS20 - TS25 - TS27 - TS30 - TS40	160	

Bit for tamperproof five star bits

- Five star, tamperproof
- External hexagon drive to DIN 3126 / ISO 1173 - C 6,3
- Can be used by hand or with an electric screwdriver
- Ideally suited for fittings in trade and industry
- Nickel plated
- Special tool steel

Application range: Control devices, alternator, air quantity meter, exterior mirror, insertion pumps for pump-line-nozzle system, door lock fastening screw for **Volkswagen**, **Audi**, **Ford**, **Mercedes**, Rover, **Seat**, **Škoda**, **Volvo** etc.





1/4"

		L mm	Content	g	
911.3101	TS10	30,0	1	5	
911.3102	TS15	30,0	1	5	
911.3103	TS20	30,0	1	5	
911.3104	TS25	30,0	1	6	
911.3105	TS27	30,0	1	6	
911.3106	TS30	30,0	1	6	
911.3107	TS40	30,0	1	8	

Bit set for tamperproof five star screws

- Five star, tamperproof
- For the assembly and disassembly of safety bolts on temperature sensors and air volume measuring instruments
- For modern diesel injection systems (pump-nozzle device, pump and electricity nozzle, common rail), e.g. Bosch injection systems
- External hexagon drive to DIN 3126 / ISO 1173 - E 6,3
- Can be used by hand or with an electric screwdriver
- 1/4" Bit adaptor socket
- Ideally suited for fittings in trade and industry
- Nickel plated
- Special tool steel

Application range: Control devices, alternator, air quantity meter, exterior mirror, insertion pumps for pump-line-nozzle system, door lock fastening screw for **Volkswagen**, **Audi**, **Ford**, **Mercedes**, **Rover**, **Seat**, **Škoda**, **Volvo** etc.





1/4"

			g	
911.1480	8 pcs	TS10 - TS15 - TS20 - TS25 - TS27 - TS30 - TS40	50	



Five star profile tamperproof key wrench set

- Long execution
- Bore hole at the short and long end
- Continuous hardened
- Matt chrome
- Special tool steel

Application range: Control devices, alternator, air quantity meter, exterior mirror, insertion pumps for pump-line-nozzle system, door lock fastening screw for **Volkswagen, Audi, Ford, Mercedes, Rover, Seat, Škoda, Volvo** etc.

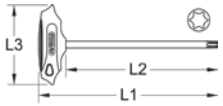


151.2470	9 pcs	TS10 - TS15 - TS20 - TS25 - TS27 - TS30 - TS40 - TS45 - TS50	330

T-handle Torx key wrench, long

- Extra long execution
- Two component handle
- Continuous hardened
- Matt chrome
- Special tool steel







		L1 mm	L2 mm	L3 mm	
158.8051	T10	403,0	373,0	80,0	30
158.8052	T15	403,0	373,0	80,0	30
158.8053	T20	403,0	373,0	100,0	40
158.8054	T25	408,0	373,0	100,0	40
158.8055	T27	408,0	373,0	100,0	40
158.8056	T30	408,0	373,0	100,0	45

T-handle Torx key wrench set

- Extra long execution
- Two component handle
- Continuous hardened
- Matt chrome
- Special tool steel



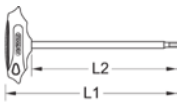


158.8050	6 pcs	T10 - T15 - T20 - T25 - T27 - T30	375

ERGOTORQUE*plus*® T handle RIBE profile extra long

- Extra long execution
- Two component handle
- Continuous hardened
- Mirror polished
- Special tool steel

Application range: for mounting and dismounting the oil pan on **Opel**, **Fiat**, **Alfa Romeo**, **Suzuki** and **Saab** and for valve covers and spark plug covers on **Alfa Romeo**, **Fiat**, **Lancia** etc.





		L1 mm	L2 mm	
158.5121	M4	280,0	250,0	100
158.5122	M5	280,0	250,0	100
158.5123	M6	280,0	250,0	100
158.5124	M7	280,0	250,0	130
158.5125	M8	280,0	250,0	145
158.5126	M9	280,0	250,0	145
158.5127	M10	290,0	250,0	316

ERGOTORQUE*plus*® T handle RIBE key wrench set, extra long

- Extra long execution
- Two component handle
- Continuous hardened
- Mirror polished
- Special tool steel

Application range: for mounting and dismounting the oil pan on **Opel**, **Fiat**, **Alfa Romeo**, **Suzuki** and **Saab** and for valve covers and spark plug covers on **Alfa Romeo**, **Fiat**, **Lancia** etc.



158.5050	7 pcs	M4 - M5 - M6 - M7 - M8 - M9 - M10	1,00

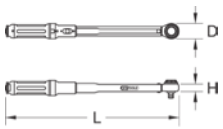


TOOLS FOR CYLINDER BLOCK SCREWS

ERGOTORQUE®*precision* torque wrench with rotary mushroom ratchet head

- Actuation accuracy: ±3 % tolerance of the set scale value
- Precise reading accuracy for a minimum 5.000 tightening cycles
- For controlled fastening in clockwise and counter clockwise directions
- Torque setting by pulling out and pushing in the slide in knob at the end of the handle
- The direction of rotation (clockwise and counter clockwise) can be changed by simply rotating the square drive piece
- Double scale in Nm and lbf•ft divisions for precise adjustment
- Includes micrometer scale in Nm divisions for precise and fine adjustment
- Large vision panel, precise adjustment using a magnifying glass
- An audible and palpable signal when the desired torque value is achieved
- Exact gearing 30 teeth ratchet mechanism
- Torque setting is quick and easy using the locking knob in the handle end
- Secure locking function within the handle
- With ejection mechanism on the ratchet head
- Two component handle with a soft zone, is ergonomic in design and comfortable in the hand
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- Individually marked with serial number - unique product identification
- including calibration declaration of conformity according to DIN EN ISO 6789:2017(E) - traceable to national standards







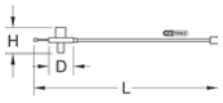
1/4" 3/8" 1/2"

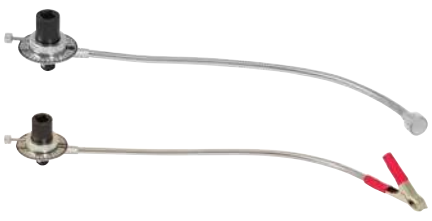
		N·m	Division N·m	lbf·ft	L mm	D mm	H mm	
516.1412	1/4"	5-25	0,10	0,8 - 18	289,0	35,0	18,0	0,46
516.1422	3/8"	10-50	0,25	4 - 37	350,0	45,0	23,0	0,61
516.1432	1/2"	20-100	0,50	8 - 75	412,0	45,0	23,0	0,91

Rotary angle disc

- For fastening screws at an angle
- Device for angle regulated fastening with a torque wrench
- Flexible arm
- Range 0° - 360°
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- Optionally with a magnetic arm or claw arm







			Arm	Pitch	D mm	H mm	L mm	
516.1195	1/2"	1/2"	magnet	2°	67,0	63,0	480,0	170
516.1196	1/2"	1/2"	claw	2°	67,0	63,0	538,0	60

Digital rotation protractor with magnet

- For fastening screws at an angle
- Magnetic
- digital angle display
- acoustic signal and LED display refer to reaching the set angle
- Right- and left-hand suit
- Angle precision: ± 2%
- Resolution: 0.1 °
- Includes 2 AAA 1,5 V batteries
- including calibration declaration of conformity according to DIN EN ISO 6789:2017(E) - traceable to national standards
- In durable plastic storage case





	Ø mm	g	
516.1191	55,0	720	



Digital torque adapter with protractor

- 1/2" square drive and output
- Right- and left-hand suit
- Clockwise torque precision: 3% and counterclockwise: ± 4%
- Digital torque and rotation angle display
- acoustic signal and LED display indicate that the set angle of rotation or torque has been reached
- 5 selectable units (Nm, ft-lb, in-lb, kg-cm, degrees)
- Includes 2 AAA 1,5 V batteries
- including calibration declaration of conformity according to DIN EN ISO 6789:2017(E) - traceable to national standards
- In durable plastic storage case

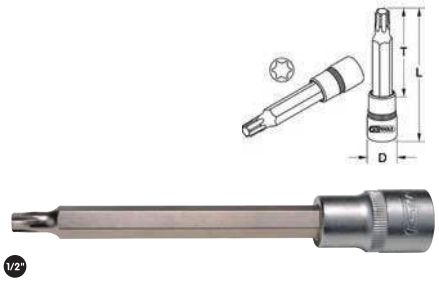


1/2"

	■	Ø mm	Measuring range Nm	g	
516.1192	1/2"	85,0	6,8-135	242	
516.1193	1/2"	85,0	10-200	242	
516.1194	1/2"	85,0	17-340	242	

Bit plug nut for Torx screws, 140mm long

- Torx
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Long execution
- with press-fitted nickel-plated bit
- For manual operation
- Matt finish
- Chrome vanadium



1/2"

		D mm	L mm	T mm	g	
911.1937	T40	22,0	140,0	72,0	125	
911.1938	T45	22,0	140,0	72,0	125	
911.1939	T50	22,0	140,0	72,0	125	
911.1940	T55	22,0	140,0	72,0	125	
911.1517	T70	22,0	110,0	72,0	180	

Bit socket for spline (XZN®) screws, long

- Spline (XZN®)
- For loosening and tightening cylinder head screws
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Long execution
- with press-fitted nickel-plated bit
- For manual operation
- Matt finish
- Chrome vanadium

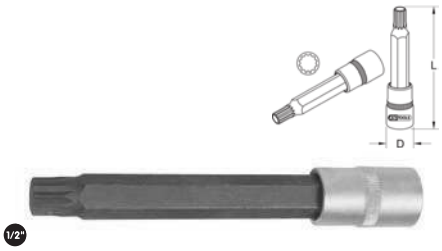


1/2"

		D mm	L mm	T mm	g	
911.1350	M5	22,0	110,0	72,0	107	
911.1351	M6	22,0	110,0	72,0	109	
911.1352	M8	22,0	110,0	72,0	109	
911.1359	M9	22,0	110,0	72,0	112	
911.1353	M10	22,0	110,0	72,0	112	
911.1354	M12	22,0	110,0	72,0	138	
911.1355	M14	22,0	110,0	72,0	179	
911.1356	M16	22,0	110,0	72,0	250	

Cylinder head bit socket for spline (XZN®) screws, extra-long

- Spline (XZN®)
- For loosening and tightening cylinder head screws
- This length allows deep seated and difficult to access cylinder head screws to be removed and inserted without problem
- Internal square drive to DIN 3121 / ISO 1174
- Extra long execution
- with press-fitted nickel-plated bit
- For manual operation
- Matt finish
- Chrome vanadium



1/2"

		D mm	L mm	g	
911.1394	M9	22,0	140,0	72	

Cylinder head impact bit socket for RIBE® screws, extra-long

- For RIBE® screws
- Internal square drive to DIN 3121 / ISO 1174
- Extra long execution
- For machinery usage
- Phosphate finish
- Chrome molybdenum



1/2"

		D mm	L mm	g	
911.1395	M9 / M10	25,0	128,0	110	

Cylinder head impact bit socket for RIBE® screws, extra-long

- RIBE®
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Extra long execution
- with press-fitted nickel-plated bit
- For manual operation
- Matt finish
- Chrome vanadium

Application range: Polydrive cylinder head screws for **VAG**



1/2"

		Ø mm	L mm	g	
515.1281	M10	22,0	165,0	160	

RIBE® Bit socket for tamperproof screws, long

- For tamperproof RIBE® profile
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Long execution
- with press-fitted nickel-plated bit
- For manual operation
- Matt finish
- Chrome vanadium



1/2"

		D mm	L mm	T mm	g	
911.3951	M5	22,0	110,0	72,0	120	
911.3952	M6	22,0	110,0	72,0	120	
911.3953	M7	22,0	110,0	72,0	120	
911.3954	M8	22,0	110,0	72,0	120	
911.3955	M9	22,0	110,0	72,0	130	
911.3956	M10	22,0	110,0	72,0	130	
911.3957	M12	22,0	110,0	72,0	150	
911.3958	M13	22,0	110,0	72,0	180	
911.3959	M14	22,0	110,0	72,0	180	

RIBE® Bit socket set for tamperproof screws, long

- For tamperproof RIBE® profile
- RIBE® profile for tamperproof screws
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Long execution
- With press fitted insert bit
- For manual operation
- Matt finish
- Chrome vanadium
- Includes storage rail



1/2"

			kg	
911.1630	9 pcs	M5 - M6 - M7 - M8 - M9 - M10 - M12 - M13 - M14	1,24	

Cylinder head surface drive socket, long

- Special profile (Surface-Drive)
- For loosening and tightening cylinder head screws
- Internal square drive to DIN 3121 / ISO 1174
- Long execution
- For machinery usage
- Phosphate finish
- Chrome molybdenum



1/2"

	mm	D mm	L mm	g	
515.1277	13,0	20,5	77,0	120	

Cylinder head 12-point socket, long

- 12 point
- For loosening and tightening cylinder head screws
- Internal square drive to DIN 3121 / ISO 1174
- Long execution
- For machinery usage
- Phosphate finish
- Chrome molybdenum



1/2"

	mm	D mm	L mm	g	
515.1276	10,0	15,5	130,0	225	

Torx E socket, deep

- Torx E
- Ideal for the assembly and disassembly of the deep-seated door hinge holding screws on the rear hinged door and sliding door
- For loosening and tightening Torx-E cylinder head screws
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Long execution
- For manual operation
- Matt finish
- Chrome vanadium



1/2"

		L mm	g	
911.4451	E10	150,0	260	
911.4452	E12	150,0	260	
911.4453	E14	150,0	260	
911.4454	E16	150,0	260	
911.4455	E18	150,0	260	
911.4456	E20	150,0	260	

Torx E socket set

- Torx E
- For loosening and tightening Torx-E cylinder head screws
- With incorporated retaining ball for accurate removing of the bolt
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Long execution
- For manual operation
- Matt finish
- Chrome vanadium
- In durable plastic storage case



1/2"

			kg	
911.4450	6 pcs	E10 - E12 - E14 - E16 - E18 - E20	1,90	

RIBE® impact socket

- For tamperproof RIBE® profile
- zum Lösen und Anziehen von Zylinderkopf- und Kupplungsverschraubungen
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- For machinery usage
- Phosphate finish
- Chrome vanadium

Application range: Nissan and **Renault**

1/2"

		L mm	g	
911.0896	M6S	38,0	49	
911.0897	M8S	38,0	50	
911.0898	M12S	38,0	71	

RIBE® impact socket set

- For tamperproof RIBE® profile
- zum Lösen und Anziehen von Zylinderkopf- und Kupplungsverschraubungen
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- For machinery usage
- Phosphate finish
- Chrome vanadium

Application range: Nissan and **Renault**

1/2"

			g	
911.0895	3 pcs	M6S - M8S - M12S	190	

12 Point impact socket

- 12 point
- Internal square drive to DIN 3121 / ISO 1174
- Short execution
- For machinery usage
- Phosphate finish
- Chrome molybdenum
- In durable plastic storage case



3/8"

			kg	
515.0950	10 pcs	8 - 9 - 10 - 11 - 12 - 13 - 14 - 15 - 16 - 17 mm	1,65	

12 Point impact socket set

- 12 point
- Internal square drive to DIN 3121 / ISO 1174
- Short execution
- For machinery usage
- Phosphate finish
- Chrome molybdenum
- In durable plastic storage case



1/2"

			kg	
515.0900	13 pcs	10 - 12 - 13 - 14 - 15 - 16 - 17 - 19 - 20 - 21 - 22 - 23 - 24 mm	2,80	

Torx PLUS bit set

- Ideal set compilation for Torx and Torx PLUS screws
- With external hexagon drive to DIN 3126 / ISO 1173 Form C 6,3 and C 8
- Can be used by hand or with an electric screwdriver
- Ideally suited for fittings in trade and industry
- Reinforced execution
- Nickel plated
- Special tool steel
- In durable plastic storage case

Applications for TX PLUS:
flywheel / timing belt housing cover / general engine / transmission

Applications for Tamper TX:
plug-in pumps of pump-line-nozzle systems, air mass meters, EWS3 immobiliser controller / injection pumps / alternators etc.



1/4"

			g	
911.3120	22 pcs	Torx PLUS bit set	432	

consists of:

		g	
911.3101	1/4" Bit tamperproof five star, TS10	5	
911.3102	1/4" Bit tamperproof five star, TS15	5	
911.3103	1/4" Bit tamperproof five star, TS20	5	
911.3104	1/4" Bit tamperproof five star, TS25	6	
911.3106	1/4" Bit tamperproof five star, TS30	6	
911.3240	1/4" Torx PLUS Bit, 30mm, IP10	8	
911.3241	1/4" Torx PLUS Bit, 30mm, IP15	8	
911.3242	1/4" Torx PLUS Bit, 30mm, IP20	8	
911.3243	1/4" Torx PLUS Bit, 30mm, IP25	8	
911.3244	1/4" Torx PLUS Bit, 30mm, IP30	8	
911.3260	10mm Torx PLUS Bit, 30mm, IP40	13	
911.3261	10mm Torx PLUS Bit, 30mm, IP45	14	
911.3262	10mm Torx PLUS Bit, 30mm, IP50	16	
911.3263	10 mm Torx PLUS Bit, 30mm, IP55	20	
911.3264	10 mm Torx PLUS Bit, 30mm, IP60	25	
911.4327	1/4" Bit adaptor socket with clamping ring	10	
911.4311	3/8" Bit adaptor socket, for bits 10mm	30	
911.3121	10 mm Bit tamperproof five star, TS40	10	
911.3122	10 mm Bit tamperproof five star, TS45	11	
911.3123	10 mm Bit tamperproof five star, TS50	11	
911.3124	10 mm Bit tamperproof five star, TS55	13	
911.3125	10 mm Bit tamperproof five star, TS60	22	



RIBE® Bit set

- Ideal set compilation for RIBE® screws
- External hexagon drive to DIN 3126 / ISO 1173 form C 8
- Can be used by hand, electric screwdriver and impact drivers
- Ideally suited for fittings in trade and industry
- Reinforced execution
- Precise arrangement of the popular 5/16" RIBE® bits
- Phosphate finish
- Special tool steel
- In durable plastic storage case



5/16"

			g	
911.4306	14 pcs	RIBE® Bit set	820	

consists of:

		g	
911.5165	5/16" Bit RIBE, 38mm, M5	10	
911.5166	5/16" Bit RIBE, 38mm, M6	10	
911.5167	5/16" Bit RIBE, 38mm, M7	10	
911.5168	5/16" Bit RIBE, 38mm, M8	20	
911.5169	5/16" Bit RIBE, 38mm, M10	20	
911.5170	5/16" Bit RIBE, 38mm, M12	30	
911.5171	5/16" Bit RIBE, 100mm, M7	40	
911.5172	5/16" Bit RIBE, 100mm, M8	50	
911.5173	5/16" Bit RIBE, 100mm, M9	60	
911.5174	5/16" Bit RIBE, 100mm, M10	70	
911.5175	5/16" Bit RIBE, 100mm, M12	80	
911.5176	5/16" Bit RIBE, 100mm, M13	90	
911.5177	5/16" Bit RIBE, 100mm, M14	100	
911.5178	1/2" Bit adaptor impact, for bits 5/16"	60	

Cylinder head bolt socket set

- Perfect for the most common cylinder head screws
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Short and long design
- For manual operation
- Phosphate finish
- Chrome vanadium
- In durable plastic storage case



1/2"

			kg	
911.4535	9 pcs	Cylinder head bolt socket set	1,90	

consists of:

		g	
911.4536	1/2" bit socket for Torx-E screws, E12, length 150mm, phosphate finish	214	
911.4537	1/2" bit socket for Torx screws, T55, length 140mm, phosphate finish	139	
911.4538	1/2" bit socket for Torx screws, T70, length 120 mm, phosphate finish	200	
911.4539	1/2" bit socket for spline (XZN®) screws, M10, length 140 mm, phosphate finish	137	
911.4541	1/2" bit socket XZN M12, length 140 mm, phosphate finish	165	
911.4542	1/2" bit socket for RIBE® screws, M10, length 165 mm, phosphate finish	154	
911.4543	1/2" bit socket for RIBE® screws, M12, length 120 mm, phosphate finish	148	
911.4544	1/2" bit socket for RIBE® screws, M13, length 120 mm, phosphate finish	195	
911.4545	1/2" bit socket for RIBE® screws, M14, length 120 mm, phosphate finish	198	



Cylinder head bolt socket set

- Range of all current inserts for cylinder head screws
- Correct and quick engine repair
- Chrome vanadium
- In durable plastic storage case





1/2"

			kg	
911.4460	11 pcs	Cylinder head bolt socket set	1,51	

consists of:

		g	
911.4452	1/2" Torx E Socket, 150mm, E12	260	
911.4453	1/2" Torx E Socket, 150mm, E14	260	
911.1940	1/2" Bit socket Torx, T55, 140mm	125	
911.1942	1/2" Bit socket Torx, T70, 140mm	125	
911.1359	1/2" Bit socket spline (XZN), M9, 110 mm	112	
911.1970	1/2" Bit socket spline (XZN), M10, 140 mm	125	
911.1972	1/2" Bit socket spline (XZN), M12, 140 mm	125	
911.1995	1/2" Bit socket RIBE, M12, 110 mm	175	
911.1996	1/2" Bit socket RIBE, M13, 110 mm	175	
911.1997	1/2" Bit socket RIBE, M14, 110 mm	175	
911.1395	1/2" Impact bit socket RIBE extra long,M9/10	110	

Cylinder head bolt socket set

- Range of all current inserts for cylinder head screws
- Correct and quick engine repair
- Matt finish
- Chrome vanadium
- In durable plastic storage case

Application range: Cylinder head screws, air quantity meter, oil sump drain plugs, gearbox oil, airbag, brake saddle etc.





1/4" 1/2"

			kg	
911.4500	38 pcs	Cylinder head bolt socket set	6,50	

consists of:

		g	
911.1701	1/4" Bit socket five star tamperproof, TS10, of 911.4500	10	
911.1702	1/4" Bit socket five star tamperproof, TS15, of 911.4500	10	
911.1703	1/4" Bit socket five star tamperproof, TS20, of 911.4500	10	
911.1704	1/4" Bit socket five star tamperproof, TS25, of 911.4500	10	
911.1705	1/4" Bit socket five star tamperproof, TS27, of 911.4500	10	
911.1706	1/4" Bit socket five star tamperproof, TS30, of 911.4500	10	
911.1707	1/4" Bit socket five star tamperproof, TS40, of 911.4500	10	
911.1708	1/4" Bit socket five star tamperproof, TS45	10	
911.1709	1/4" Bit socket five star tamperproof, TS50	10	
911.1314	1/2" Bit socket hexagon, short, 14mm	113	
911.1317	1/2" Bit socket hexagon, short, 17mm	150	
911.1319	1/2" Bit socket hexagon, short, 19mm	182	
911.1322	1/2" Bit socket hexagon, short, 22mm	195	
911.1324	1/2" Bit socket hexagon, short, 24mm	210	
911.1348	1/2" Bit socket spline (XZN) tamperproof, M16, 55 mm	140	
911.0954	1/2" Impact bit socket for spline(XZN) screws, 75mm, M18	146	
911.1925	1/2" Bit socket RIBE, M9, 110mm	112	
911.1359	1/2" Bit socket spline (XZN), M9, 110 mm	112	
911.1356	1/2" Bit socket spline (XZN), M16, 110 mm	250	
911.1632	1/2" Bit socket Torx tamperproof T80 long	125	
911.1960	1/2" Bit socket hexagon, 10mm, 140mm	90	
911.1961	1/2" Bit socket hexagon, long, 11mm	100	
911.1963	1/2" Bit socket hexagon, long, 13mm	100	
911.1937	1/2" Bit socket Torx, T40, 140mm	125	
911.1938	1/2" Exhaust regulation valve socket for Opel, 140mm, T45	125	
911.1939	1/2" Bit socket Torx, T50, 140mm	125	
911.1940	1/2" Bit socket Torx, T55, 140mm	125	
911.1941	1/2" Bit socket Torx, T60, 140mm	125	
911.1942	1/2" Bit socket Torx, T70, 140mm	125	
911.1970	1/2" Bit socket spline (XZN), M10, 140 mm	125	
911.1972	1/2" Bit socket spline (XZN), M12, 140 mm	125	
911.1974	1/2" Bit socket spline (XZN), M14, 140 mm	125	
911.1685	Ball head hex bit socket, 1/2", 5x160mm	125	
911.1327-240	Hexagonal bit socket, 1/2", 7x240mm	185	
911.1993	1/2" Bit socket RIBE, M7, 240mm	175	
911.1994	1/2" Bit socket RIBE, M8, 240 mm	175	
911.1980	1/2" Bit socket RIBE, M10, 140mm	194	
911.1624-300	Bit socket Torx tamperproof, 1/2", T30, 300mm	125	

RIBE® bit socket set

- Ideal configuration for the most common RIBE® cylinder head screws
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Short and long design
- With press fitted insert bit
- For manual operation
- Matt finish
- Chrome vanadium
- In durable plastic storage case



1/2"

			kg	
911.4530	32 pcs	RIBE® bit socket set	5,46	

consists of:

		g	
911.4511	Bit socket for RIBE screws, M5, length 55 mm	32	
911.4512	Bit socket for RIBE screws, M6, length 55 mm	34	
911.4513	Bit socket for RIBE screws, M7, length 55 mm	35	
911.4514	Bit socket for RIBE screws, M8, length 55 mm	35	
911.4515	Bit socket for RIBE screws, M9, length 55 mm	36	
911.4516	Bit socket for RIBE screws, M10, length 55 mm	37	
911.4517	Bit socket for RIBE screws, M12, length 55 mm	39	
911.4518	Bit socket for RIBE screws, M13, length 55 mm	39	
911.4519	Bit socket for RIBE screws, M14, length 55 mm	40	
911.1921	1/2" Bit socket RIBE, M5, 110 mm	108	
911.1922	1/2" Bit socket RIBE, M6, 110 mm	108	
911.1923	1/2" Bit socket RIBE, M7, 110 mm	109	
911.1924	1/2" Bit socket RIBE, M8, 110 mm	109	
911.1925	1/2" Bit socket RIBE, M9, 110mm	112	
911.1926	1/2" Bit socket RIBE, M10, 110 mm	112	
911.1995	1/2" Bit socket RIBE, M12, 110 mm	175	
911.1996	1/2" Bit socket RIBE, M13, 110 mm	175	
911.1997	1/2" Bit socket RIBE, M14, 110 mm	175	
911.4521	Bit socket for RIBE screws, M8, length 140 mm	130	
911.4522	Bit socket for RIBE screws, M9, length 140 mm	131	
911.1980	1/2" Bit socket RIBE, M10, 140mm	194	
911.4506	Bit socket for RIBE screws, M10.3, length 140 mm	132	
911.4523	Bit socket for RIBE screws, M12, length 140 mm	163	
911.4524	Bit socket for RIBE screws, M13, length 140 mm	202	
911.4525	Bit socket for RIBE screws, M14, length 140 mm	205	
911.4508	Bit socket for RIBE screws, M8, length 200 mm	175	
911.4526	Bit socket for RIBE screws, M9, length 200 mm	175	
911.4509	Bit socket for RIBE screws, M10, length 200 mm	175	
911.4507	Bit socket for RIBE screws, M10.3, length 200 mm	175	
911.4528	Bit socket for RIBE screws, M12, length 200 mm	220	
911.4529	Bit socket for RIBE screws, M13, length 200 mm	280	
911.4531	Bit socket for RIBE screws, M14, length 200 mm	285	

XZN® socket-set

- ideal combination for the most common XZN® cylinder head screws
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Short and long design
- With press fitted insert bit
- For manual operation
- Matt finish
- Chrome vanadium
- In durable plastic storage case



1/2"

			kg	
911.1635	26 pcs	XZN® socket-set	4,46	

consists of:

		g	
911.1340	1/2" Bit socket spline (XZN), M5, 55 mm	68	
911.1341	1/2" Bit socket spline (XZN), M6, 55 mm	69	
911.1342	1/2" Bit socket spline (XZN), M8, 55 mm	71	
911.1313	1/2" Bit socket spline (XZN), M9, 55 mm	71	
911.1343	1/2" Bit socket spline (XZN), M10, 55 mm	72	
911.1344	1/2" Bit socket spline (XZN), M12, 55 mm	85	
911.1345	1/2" Bit socket spline (XZN), M14, 55 mm	105	
911.1346	1/2" Bit socket spline (XZN), M16, 55 mm	140	
911.1350	1/2" Bit socket spline (XZN), M5, 110 mm	107	
911.1351	1/2" Bit socket spline (XZN), M6, 110 mm	109	
911.1352	1/2" Bit socket spline (XZN), M8, 110 mm	109	
911.1359	1/2" Bit socket spline (XZN), M9, 110 mm	112	
911.1353	1/2" Bit socket spline (XZN), M10, 110 mm	112	
911.1354	1/2" Bit socket spline (XZN), M12, 110 mm	138	
911.1355	1/2" Bit socket spline (XZN), M14, 110 mm	179	
911.1391	1/2" Bit socket XZN, M5, length 140 mm	67	
911.1392	1/2" Bit socket XZN, M6, length 140 mm	68	
911.1393	1/2" Bit socket XZN, M8, length 140 mm	71	
911.1394	1/2" Bit socket XZN, M9, length 140 mm	72	
911.1970	1/2" Bit socket spline (XZN), M10, 140 mm	125	
911.1972	1/2" Bit socket spline (XZN), M12, 140 mm	125	
911.1974	1/2" Bit socket spline (XZN), M14, 140 mm	125	
911.1593	1/2" Bit socket XZN, M8, length 200 mm	70	
911.1594	1/2" Bit socket XZN, M10, length 200 mm	71	
911.1596	1/2" Bit socket XZN, M12, length 200 mm	110	
911.1597	1/2" Bit socket XZN, M14, length 200 mm	160	



VIBRATION DAMPER TOOLS

Vibration damper holding screw set for BMW

- For clamping the crank shaft when loosening and tightening the crankshaft central screw
- Prevents slipping whilst holding
- With replaceable and tight-fit guide sleeves (Ø 57.0 / 59.5 / 60.5 mm)
- Minimal force required thanks to extra-long lever
- Matt finish
- Chrome vanadium

Application range: BMW 1 series (E81, E82, E87, E88), 3 series (E46, E90, E91, E92, E93), 5 series (E60, E61), X3 (E83) with 1.8 and 2.0 diesel engines when working on the timing drive of **BMW** M47 TU / TU2 engines with old and new vibration damper design





			kg	
911.1720	5 pcs	Vibration damper holding screw set for BMW	4,60	

consists of:

		kg	
911.1721	Extension pipe, 1000 mm	1,90	
911.1722	Vibration damper holding wrench insert, 22.0 mm	1,40	
911.1723	Guide sleeve, ∅ 57.0 mm	0,38	
911.1724	Guide sleeve, ∅ 59.5 mm	0,44	
911.1725	Guide sleeve, ∅ 60.5 mm	0,48	

Pulley retaining wrench for VAG

- For the professional engine repair
- Simple assembly and disassembly of the crank shaft pulley wheel or vibration dampers
- Special profiles allows for counter holding when releasing or securing the crank shaft central screw
- The handle can be lengthened via the 3/4" internal square
- Very high degree of accuracy

Application range: VAG group vehicles with 2.4 engines, in particular **Volkswagen** T2, T3 , T4 Transporter, LT , Golf , Passat and **Audi** (engine code: AAB, AJA, ADG, ABL, 1X, 1Y, 1W, 1V, CS, CW, KY, JR, JX, JD, JP, 1Z, AAT, AEL, AAZ, AHU, AFN, AEY, AVG, ALE, AFF, AHH, ACV, AHY, AJT, AUF, AXG, AXL, AYC)





	Suitable for	g	
400.9042	VAG	714	

Belt pulley counter spanner set for Subaru

- For counter holding the crank shaft belt drive when releasing or tightening the crank shaft central screw
- Required when changing the belt disc or repairing the engine
- With PVC dipped handle
- Special tool steel

Application range: Subaru BRZ (>2012), Impreza (>1993), Lagacy (1994-2011), Forester (1998-2010), Outback (1994-2011), Baja (2004-2006) ,**Toyota** GT86 (>2012), **Scion** FR-S (>2012), **Saab** 9-2X (2005-2006)



			g	
911.1735	9 pcs	Belt pulley counter spanner set for Subaru	1590	

consists of:

		kg	
911.1737	Belt disc counter hold tool for Mercedes	1,36	
911.1738	Screw M12 x 1,25 x 47,5	0,05	
911.1739	Screw M7 x 1,0 x 45	0,01	

Vibration damper wrench for Volvo and Ford

- For clamping the crank shaft when loosening and tightening the crankshaft central screw
- Prevents slipping whilst holding
- The handle can be lengthened via the 1/2" internal square
- Matt finish
- Chrome vanadium

Application range: Volvo C30, C70, S40, S60, S70, S80, V40, V50, V60, V70, XC60, XC70, XC90, XC90 (1.6 / 1.8 / 1.9 / 2.0 / 2.3 / 2.4 / 2.5 / 2.8 / 2.9 with 4- and 5-cylinder petrol and diesel engines as well as 2.0 and 2.4 with 5-cylinder diesel engines), **Ford** Focus, Galaxy, Kuga, Mondeo, S-Max with 2.5 Duratec (VI5) petrol engine (>2004)



1/2"

	Total length mm	g	
400.9070	255,0	550	

SERVICE STANDS AND PARTS STATIONS

Cylinder head service pillar

- Suitable for all current cylinder heads
- Especially for engines with horizontal camshafts
- Damage free working on the cylinder head
- Special tool steel





		kg	
150.1170	Cylinder head service pillar	4,20	

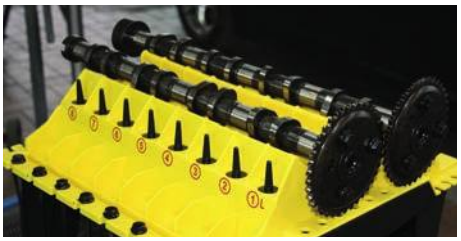
Parts storage for cylinder head components

- Ideal organisational aid for the systematic storage of small parts from the cylinder head
- Suitable for all cylinder heads
- No-loss work on cylinder heads
- Made from rugged plastic





	L mm	B mm	H mm	kg	
150.1173	404,0	450,0	230,0	1,70	



SLIDE RAIL BOLTS EXTRACTION TOOLS

Puller set for slide rail bolts

- Allows simple removal for chain slide rail bolts
- For repair without cooler removal
- Includes tension bolts and adapter screw
- Special tool steel





			g	
700.1135	5 pcs	Puller set for slide rail bolts	580	

consists of:

		g	
700.1136	Basic pullers	520	
700.1137	Tension bolts M8 x 30 mm	5	
700.1138	Tension bolts M6 x 60 mm	20	
700.1139	Tension bolts M8 x 60 mm	20	
700.1141	Adaptor disk	15	

GUIDE SLEEVES INTERNAL EXTRACTOR

Guide sleeves internal puller set for engines and gearboxes

- Damage-free removal and insertion of guide sleeves on engines and gearboxes
- Prevents damage to the guide sleeves from possible use of pliers or a hammer
- Centering shaft
- Enormous time and cost saving
- Universal usage
- Special tool steel
- In durable plastic storage case





			kg	
700.1520	7 pcs	Guide sleeves internal puller set for engines and gearboxes	2,40	

consists of:

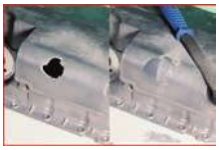
		kg	
700.1521	Impact hammer M8x1.25	1,32	
700.1522	Collet for internal Ø 5 mm	0,08	
700.1523	Collet for internal Ø 6 mm	0,08	
700.1524	Collet for internal Ø 7 mm	0,08	
700.1525	Collet for internal Ø 8 mm	0,08	
700.1526	Collet for internal Ø 9 mm	0,08	
700.1527	Collet for internal Ø 10 mm	0,08	

EXTRACTION TOOL AND SPIRAL PROFILE SOCKETS

Epoxy metal Quicksteel

- Optimal adhesive power
- Enables durable repair
- Mechanical preparation after the curing possible
- Firmly set after 15 minutes
- Cures after 60 minutes completely
- Also suitable for use under water
- Temperature resistant up to 260°C
- Approx three years use duration
- Resistant to oil, diesel, petrol and battery acid

Application range: Metal, glass, plastic, ceramics, wood, concrete optical fiber reinforced plastic etc.





		g
500.1015	Epoxy metal Quicksteel	80

Screw grab screw assistance

- Increases the static friction by up to 400%
- Residue free washes off and non-toxic
- Immediate effect without waiting
- Applicable for all screw heads
- Unlimited storage

Application range: In rounded turned screw heads



	Content	g
500.1010	15 ml	250

Stud bolt puller

- For screwing in or extracting out stud bolts
- Right and left clamping function
- also for lengthy stud bolts
- Special tool steel



	Ø mm	max N·m	⬢	g
670.0231	5 - 15	120	19 mm	360
670.0232	10 - 19	120	19 mm	400
670.0233	18 - 28	120	19 mm	450

Stud bolt puller

- For screwing in or extracting out stud bolts
- Right and left clamping function
- also for lengthy stud bolts
- Special tool steel



	Ø mm	max N·m	⬢	g
670.0241	5 - 20	120	19 mm	400

Stud bolt puller

- External hexagon drive
- With right and left hand clamping function
- Safe clamping due to 3 rollers
- Stud screws can be screwed in or out without using counter nuts on the bolt
- Also for extra long studs that will go through the through socket
- Mirror polished
- Chrome vanadium



		■	⬢	g
152.1005	M5	3/8"	19 mm	150
152.1006	M6	1/2"	21 mm	160
152.1007	M7	1/2"	21 mm	160
152.1008	M8	1/2"	21 mm	170
152.1010	M10	1/2"	21 mm	180
152.1012	M12	1/2"	21 mm	200
152.1014	M14		24 mm	200
152.1016	M16		24 mm	303
152.1018	M18	3/4"	36 mm	838
152.1002	M20	3/4"	36 mm	818
152.1003	M22		36 mm	748
152.1004	M24		36 mm	728
152.1029	M30		46 mm	1677

Screw bolt puller set

- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- External drive hexagonal socket 21.0 mm
- With right and left hand clamping function
- Safe clamping due to 3 rollers
- allows quick and effortless insertion and removal of studs, dowel screws, threaded rods etc.
- Stud screws can be screwed in or out without using counter nuts on the bolt
- Also for extra long studs that will go through the through socket
- Mirror polished
- Chrome vanadium
- In durable plastic storage case



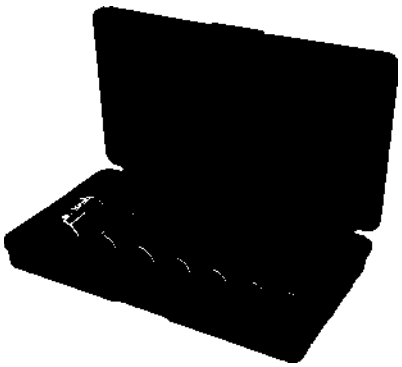


			g
152.1100	4 pcs	M6 - M8 - M10 - M12	790

Screw bolt puller set

- External hexagon drive
- With right and left hand clamping function
- Safe clamping due to 3 rollers
- Stud screws can be screwed in or out without using counter nuts on the bolt
- Also for extra long studs that will go through the through socket
- Mirror polished
- Chrome vanadium
- In durable plastic storage case





			kg	
152.1101	7 pcs	M5 - M6 - M7 - M8 - M10 - M12 - M14	1,50	

Spiral extractor

- Extra short execution
- With external drive hexagonal socket 13.0 mm
- Slightly conical tapered spiral
- Can also be used for broken screws and stud bolts
- Counter effect motion guarantees easy extraction
- Special tool steel

Application range: Hexagon head, brakes + Water pumps, Spline drives etc.



	D	L mm	g	
150.1371	1/8"	36,0	20	
150.1373	3/16"	36,0	20	
150.1375	1/4"	36,0	20	
150.1379	3/8"	36,0	20	
150.1381	1/2"	36,0	20	
150.1386	3 mm	36,0	20	
150.1387	4 mm	36,0	20	
150.1388	5 mm	36,0	20	
150.1389	5,5 mm	36,0	30	
150.1390	6 mm	36,0	30	
150.1391	8 mm	36,0	30	
150.1392	10 mm	36,0	30	
150.1393	11 mm	36,0	30	
150.1394	12 mm	36,0	40	
150.1395	14 mm	36,0	40	

Captive bolt extractor set

- Extra short execution
- With external drive hexagonal socket 13.0 mm
- Slightly conical tapered spiral
- Can also be used for broken screws and stud bolts
- Counter effect motion guarantees easy extraction
- Special tool steel
- In durable plastic storage case

Application range: Hexagon head, brakes + water pumps, spline drives etc.





			g	
150.1385	15 pcs	Captive bolt extractor set	360	

consists of:

		g	
150.1371	Spiral extractor, 1/8"	20	
150.1373	Spiral extractor, 3/16"	20	
150.1375	Spiral extractor, 1/2"	20	
150.1379	Spiral extractor, 3/8"	20	
150.1381	Spiral extractor, 1/2"	20	
150.1386	Spiral extractor, 3mm	20	
150.1387	Spiral extractor, 4mm	20	
150.1388	Spiral extractor, 5mm	20	
150.1389	Spiral extractor, 5,5mm	30	
150.1390	Spiral extractor, 6mm	30	
150.1391	Spiral extractor, 8mm	30	
150.1392	Spiral extractor, 10mm	30	
150.1393	Spiral extractor, 11mm	30	
150.1394	Spiral extractor, 12mm	40	
150.1395	Spiral extractor, 14mm	40	

Removal sleeve

- for removal of stud bolts
- Very flat compact and robust execution
- Right and left clamping function
- also for lengthy stud bolts
- Special tool steel



	D	g	
670.0259	M6 x 1.0	60	
670.0258	M8 x 1.25	40	
670.0257	M10 x 1.25	60	
670.0256	M10 x 1,5	60	

Assembly sleeve

- for driving in stud bolts
- Very flat compact and robust execution
- Right and left clamping function
- also for lengthy stud bolts
- Special tool steel



	D	g	
670.0267	M6 x 1.0	40	
670.0266	M8 x 1.25	40	
670.0264	M10 x 1.25	40	
670.0263	M10 x 1,5	40	

Stud bolt extraction and insertion tool set

- For screwing in or extracting out stud bolts
- With external hexagonal socket drive 17.0 mm and 19.0 mm
- Very flat compact and robust execution
- Right and left clamping function
- also for lengthy stud bolts
- Special tool steel
- In durable plastic storage case





			g	
670.0255	12 pcs	Stud bolt extraction and insertion tool set	544	

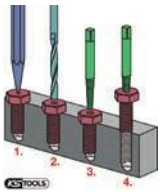
consists of:

		g	
670.0256	Expansion sleeve, 2 pcs M10 x 1.5	60	
670.0257	Expansion sleeve, 2 pcs M10 x 1.25	60	
670.0258	Expansion sleeve, 2 pcs M8 x 1.25	40	
670.0259	Expansion sleeve, 2 pcs M6 x 1.0	60	
670.0263	Mounting sleeve, M10 x 1.5	40	
670.0264	Mounting sleeve, M10 x 1.25	40	
670.0266	Mounting sleeve, M8 x 1.25	40	
670.0267	Mounting sleeve, M6 x 1.0	40	



Screw extractor set

- For screws from M3 - M18
- Enable the loosening of screws and bolts with turned off heads
- Conical tapered spiral
- In durable plastic case





			g	
150.1330	6 pcs	M3-M6 - M6-M8 - M8-M11 - M11-M14 - M14-M18 - M18-M24	64	

Special Torx Screw Extractor Bit

- Ideal for loosening and opening screws and bolts whose head is damaged or worn off
- Special, left-handed thread with conical tapered cutting edges
- TE10 to TE40 = 6.3 mm hexagonal
- TE50 to TE55 = 10.0 mm hexagonal
- For manual operation
- Special tool steel



1/4" 10 mm

		L mm	g	
150.7016	TE10	50,0	45	
150.7017	TE15	50,0	45	
150.7018	TE20	50,0	45	
150.7019	TE25	50,0	45	
150.7021	TE27	50,0	45	
150.7022	TE30	50,0	45	
150.7023	TE40	50,0	55	
150.7024	TE50	38,0	65	
150.7026	TE55	38,0	65	

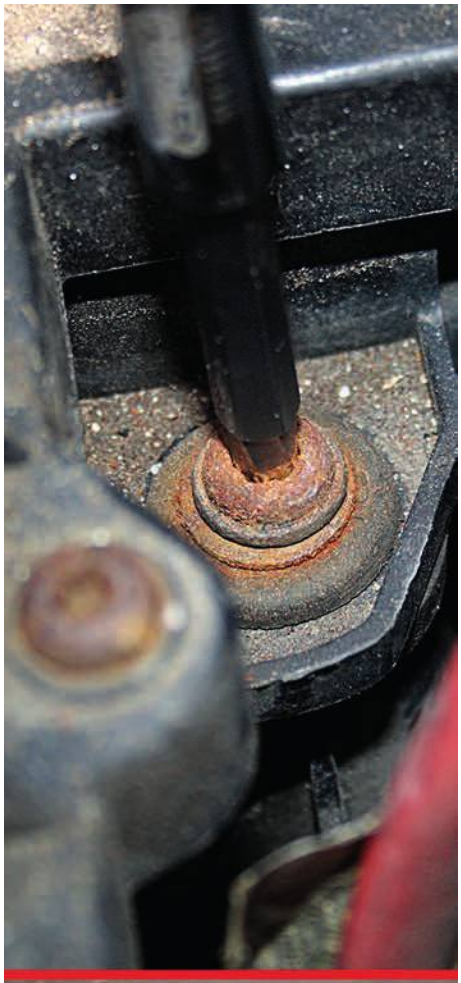
Special hexagon socket screw extractor bit

- Ideal for loosening and opening screws and bolts whose head is damaged or worn off
- Special, left-handed thread with conical tapered cutting edges
- For manual operation
- Special tool steel



1/4"

		L mm	g	
150.7061	HE1,5	50,0	12	
150.7062	HE2	50,0	12	
150.7063	HE2,5	50,0	14	
150.7064	HE3	50,0	16	
150.7065	HE4	50,0	16	
150.7066	HE5	50,0	16	
150.7067	HE6	50,0	16	
150.7068	HE8	38,0	20	
150.7069	HE10	38,0	24	





Torx and hexagon socket screw extractor set

- Ideal for loosening and opening screws and bolts whose head is damaged or worn off
- Special left-hand cutting thread with tapered cutting edges for Torx screws and specially shaped extractors for hexagon socket screws
- Including TORSIONpower bits for Torx and hexagon socket screws
- Bits with torsion zone for cushioning of the torque peak
- Includes magnetic quick release bit holder and 1/2" socket adapter
- Colour-coded bits
- For manual operation
- Longer service life
- Nickel plated
- Special tool steel
- In durable plastic case





1/4" 10 mm

			g	
150.7060	34 pcs	Torx and hexagon socket screw extractor set	520	

consists of:

		g	
918.3505	1/4" TORSIONpower Bit Torx, 25mm, T10	4	
918.3510	1/4" TORSIONpower Bit Torx, 25mm, T15	4	
918.3515	1/4" TORSIONpower Bit Torx, 25mm, T20	4	
918.3520	1/4" TORSIONpower Bit Torx, 25mm, T25	4	
918.3525	1/4" TORSIONpower Bit Torx, 25mm, T27	5	
918.3530	1/4" TORSIONpower Bit Torx, 25mm, T30	5	
918.3535	1/4" TORSIONpower Bit Torx, 25mm, T40	6	
918.1271	1/2" Bit adaptor socket, for bits 10mm	40	
514.1113	1/4" Auto slimlock magnetic quick release bit holder, 65mm	30	
150.7016	1/4" Special Torx Screw Extractor Bit, TE10	45	
150.7017	1/4" Special Torx Screw Extractor Bit, TE15	45	
150.7018	1/4" Special Torx Screw Extractor Bit, TE20	45	
150.7019	1/4" Special Torx Screw Extractor Bit, TE25	45	
150.7021	1/4" Special Torx Screw Extractor Bit, TE27	45	
150.7022	1/4" Special Torx Screw Extractor Bit, TE30	45	
150.7023	1/4" Special Torx Screw Extractor Bit, TE40	55	
150.7024	10 mm special Torx Screw Extractor Bit, TE50	65	
150.7026	10 mm special Torx Screw Extractor Bit, TE55	65	
150.7061	1/4" special hexagonal screw extractor bit, HE 1.5	12	
150.7062	1/4" special hexagonal screw extractor bit, HE 2	12	
150.7063	1/4" special hexagonal screw extractor bit, HE 2.5	14	
150.7064	1/4" special hexagonal screw extractor bit, HE 3	16	
150.7065	1/4" special hexagonal screw extractor bit, HE 4	16	
150.7066	1/4" special hexagonal screw extractor bit, HE 5	16	
150.7067	1/4" special hexagonal screw extractor bit, HE 6	16	
150.7068	10 mm special hexagonal screw extractor bit, HE 8	20	
150.7069	10 mm special hexagonal screw extractor bit, HE 10	24	
918.3401	1/4" TORSIONpower Bit hexagonal, 25mm, 1,5mm	6	
918.3403	1/4" TORSIONpower Bit hexagonal, 25mm, 1,5mm	6	
918.3407	1/4" TORSIONpower Bit hexagonal, 25mm, 1,5mm	6	
918.3405	1/4" TORSIONpower Bit hexagonal, 25mm, 3mm	10	
918.3410	1/4" TORSIONpower Bit hexagonal, 25mm, 4mm	4	
918.3415	1/4" TORSIONpower Bit hexagonal, 25mm, 5mm	6	
918.3420	1/4" TORSIONpower Bit hexagonal, 25mm, 6mm	6	

Spiral profile socket nut

- Very flat compact and robust execution
- Rejuvenating special profile with aggressive spiral nut
- Bites firmly to give a firm connection between stuck nut and head
- Can be used with a socket or ring spanner
- Phosphate finish
- Chrome molybdenum



		mm	g	
913.3881	M8	16,0	10	
913.3882	M10	16,0	10	
913.3883	M11	18,0	10	
913.3884	M12	19,0	10	
913.3885	M13	19,0	20	
913.3886	M14	21,0	20	
913.3887	M15	23,0	20	
913.3888	M16	24,0	30	
913.3889	M17	26,0	40	
913.3890	M19	27,0	40	

Spiral profile socket nut set

- For loosening and unscrewing of fixed bolt and nuts with damaged “round turned” threads or heads
- Special, left handed cutting edge thread with 6 conical reducing cutting edges
- Very flat compact and robust execution
- The drive can be used alternatively with a socket ring or combination spanner
- In durable plastic storage case



			g	
913.3880	10 pcs	M8 - M10 - M11 - M12 - M13 - M14 - M15 - M16 - M17 - M19	300	

Spiral profile impact socket

- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Rejuvenating special profile with aggressive spiral nut
- For turning off of screws with rounded or turned heads
- Bites firmly to give a firm connection between stuck nut and head
- Phosphate finish
- Chrome molybdenum





1/4"

	mm	D mm	L mm	g	
913.1473	6,0	17,0	32,0	40	
913.1408	8,0	17,0	32,0	40	
913.1410	10,0	17,0	32,0	40	
913.1470	11,0	17,0	32,0	40	
913.1412	12,0	17,0	32,0	40	
913.1413	13,0	19,0	32,0	40	



Spiral profile socket set

- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Rejuvenating special profile with aggressive spiral nut
- For turning off of screws with rounded or turned heads
- Bites firmly to give a firm connection between stuck nut and head
- Phosphate finish
- Chrome molybdenum
- Includes storage rail



1/4"

			g	
913.1450	4 pcs	Spiral profile socket set	200	

Spiral profile impact socket

- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Rejuvenating special profile with aggressive spiral nut
- For turning off of screws with rounded or turned heads
- Bites firmly to give a firm connection between stuck nut and head
- Phosphate finish
- Chrome molybdenum





3/8"

	mm	D mm	L mm	g	
913.3858	8,0	17,0	34,0	30	
913.3860	10,0	15,0	34,0	30	
913.3861	11,0	16,0	34,0	30	
913.3862	12,0	18,0	34,0	40	
913.3863	13,0	18,5	34,0	40	
913.3864	14,0	20,5	34,0	40	
913.3865	15,0	22,0	34,0	60	
913.3866	16,0	22,5	34,0	60	
913.3867	17,0	24,5	34,0	70	
913.3868	18,0	26,0	34,0	80	
913.3869	19,0	27,0	34,0	80	

Spiral profile impact socket

- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Rejuvenating special profile with aggressive spiral nut
- For turning off of screws with rounded or turned heads
- Bites firmly to give a firm connection between stuck nut and head
- Phosphate finish
- Chrome molybdenum







	mm	L mm	g	
913.1469	12,0	34,0	40	
913.1468	13,0	34,0	50	
913.1467	14,0	34,0	70	
913.1466	15,0	34,0	70	
913.1465	17,0	34,0	70	
913.1464	19,0	34,0	90	
913.1249	19,0	50,0	90	
913.1250	20,0	50,0	110	
913.1463	21,0	34,0	90	
913.1252	22,0	50,0	120	
913.1253	23,0	50,0	130	
913.1462	24,0	34,0	110	
913.1255	25,0	50,0	150	
913.1461	27,0	34,0	110	

Spiral profile socket set

- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Rejuvenating special profile with aggressive spiral nut
- For turning off of screws with rounded or turned heads
- Bites firmly to give a firm connection between stuck nut and head
- Phosphate finish
- Chrome molybdenum
- Includes storage rail



3/8"

			g	
913.3850	4 pcs	Spiral profile socket set	200	

consists of:

		g	
913.3858	3/8” Spiral profile impact socket, 8mm	30	
913.3860	3/8” Spiral profile impact socket, 10mm	30	
913.3862	3/8” Spiral profile impact socket, 12mm	40	
913.3863	3/8” Spiral profile impact socket, 13mm	40	



Spiral profile impact socket set

- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Rejuvenating special profile with aggressive spiral nut
- For turning off of screws with rounded or turned heads
- Bites firmly to give a firm connection between stuck nut and head
- Drive out pin
- Phosphate finish
- Chrome molybdenum
- In durable plastic storage case





3/8"

			g	
913.3855	10 pcs	Spiral profile impact socket set	660	

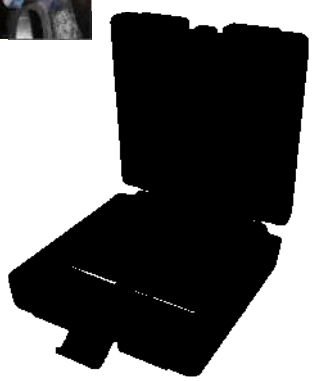
consists of:

		g	
913.3860	3/8" Spiral profile impact socket, 10mm	30	
913.3861	3/8" Spiral profile impact socket, 11mm	30	
913.3862	3/8" Spiral profile impact socket, 12mm	40	
913.3863	3/8" Spiral profile impact socket, 13mm	40	
913.3864	3/8" Spiral profile impact socket, 14mm	40	
913.3865	3/8" Spiral profile impact socket, 15mm	60	
913.3866	3/8" Spiral profile impact socket, 16mm	60	
913.3867	3/8" Spiral profile impact socket, 17mm	70	
913.3869	3/8" Spiral profile impact socket, 19mm	80	
913.3870	Burr arbor, 3/8", for 913.3855	30	

Spiral profile impact socket set

- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Rejuvenating special profile with aggressive spiral nut
- For turning off of screws with rounded or turned heads
- Bites firmly to give a firm connection between stuck nut and head
- Drive out pin
- Phosphate finish
- Chrome molybdenum
- In durable plastic storage case





1/4" 1/2"

			kg	
913.1460	15 pcs	Spiral profile impact socket set	1,10	

consists of:

		g	
913.1473	1/4" Spiral profile impact socket, 6mm	40	
913.1408	1/4" Spiral profile impact socket, 8mm	40	
913.1410	1/4" Spiral profile impact socket, 10mm	40	
913.1470	1/4" Spiral profile impact socket, 11mm	40	
913.1412	1/4" Spiral profile impact socket, 12mm	40	
913.1468	1/2" Spiral profile impact socket, 13mm	50	
913.1467	1/2" Spiral profile impact socket, 14mm	70	
913.1466	1/2" Spiral profile impact socket, 15mm	70	
913.1465	1/2" Spiral profile impact socket, 17mm	70	
913.1463	1/2" Spiral profile impact socket, 21mm	90	
913.1462	1/2" Spiral profile impact socket, 24mm	110	
913.1461	1/2" Spiral profile impact socket, 27mm	110	
913.1464	1/2" Spiral-Profile-Force-Plug, 19mm	90	

NUT SPLITTER

Mechanical nut splitter

- For splashing on tight and overtightened nuts without damaging the threaded bolt
- Suitable for nuts to a tensile strength class 6
- Special tool steel





	■ mm	L mm	Height of head mm	for nut	g	
700.1181	12,0	76,0	9 mm	9-12 mm	90	
700.1182	14,0	93,0	11 mm	12-16 mm	170	
700.1183	19,0	124,0	16 mm	16-22 mm	380	
700.1184	21,0	150,0	18 mm	22-27 mm	660	

Mechanical nut splitter set

- For splashing on tight and overtightened nuts without damaging the threaded bolt
- Suitable for nuts to a tensile strength class 6
- Special tool steel





			kg	
700.1180	4 pcs	Mechanical nut splitter set	1,58	

consists of:

		g	
700.1181	Nut splitter, 9-12mm	90	
700.1182	Nut splitter, 12-16mm	170	
700.1183	Nut splitter, 16-22mm	380	
700.1184	Nut splitter, 22-27mm	660	

Hydraulic nut splitter

- Small execution
- Suitable for nuts to a tensile strength class 10
- Work pressure max. 5 t
- Suitable for narrow spaces





	mm	D	L mm	g	
700.1150	7 -21	M4 - M14	210,0	700	

Hydraulic nut splitter set

- Large execution
- Suitable for nuts to a tensile strength class 10
- Work pressure max. 13 t
- In durable plastic storage case



			kg	
700.1160	4 pcs	22 - 36 mm; M14 - M24	3,80	

consists of:

		g	
700.1161	Replacement chisel small	100	
700.1162	Replacement plate small	100	
700.1163	Nut splitter, hydraulic, 22-36mm	3600	
151.2073	Hexagon key wrench, long, 3/8"	110	

Hydraulic nut splitter set

- For splashing on tight and overtightened nuts without damaging the threaded bolt
- Working range 7.0 - 36. mm
- Induction hardened in the cutting area
- Suitable for nuts to a tensile strength class 10
- Excellent power transfer
- Special tool steel
- In durable plastic storage case





			kg	
700.1170	7 pcs	Hydraulic nut splitter set	5,00	

consists of:

700.1150	Nut splitter, hydraulic, 7-21mm	700
700.1163	Nut splitter, hydraulic, 22-36mm	3600
700.1151	Replacement chisel small	50
700.1152	Replacement plate small	50
700.1161	Replacement chisel small	100
700.1162	Replacement plate small	100
151.2073	Hexagon key wrench, long, 3/8"	110

Hydraulic nut splitter

- Small execution
- Suitable for nuts to a tensile strength class 10
- Compressive force max. 15 t
- Suitable for narrow spaces
- Exchangeable chisel

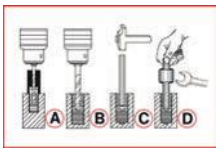


	mm	Length mm	kg
630.0022	22-36	290,0	2,90

THREAD BORING TOOL AND BORE JIGS

Stud extractor set

- Set contents for extensive applications
- For removing of threaded bolts, studding and screws
- No damage of the thread
- Only negligible enlarging of the threaded bolt through special profile extractor pin
- For screws and bolts M5 - M16
- Special tool steel
- In durable plastic storage case





150.1305	25 pcs	Stud extractor set	650

extractor:

	Size mm	Ø mm	Ø	Thread	L mm	Extractor pin incl thrust bolt	
150.0521	1	3,2	1/8"	M5 - M6	60.0	150.0511S	150
150.0522	2	4,8	3/16"	M7 - M8	70.0	150.0512S	180
150.0523	3	6,4	1/4"	M9 - M10	78.0	150.0513S	230
150.0524	4	8,0	5/16"	M12	83.0	150.0514S	300
150.0525	5	8,7	11/32"	M14 - M16	94.0	150.0515S	350

extractor nut:

	Size mm	Pin dim	mm	L mm	
150.0511	1	1	10,0	16.0	130
150.0512	2	2	11,0	16.0	230
150.0513	3	3	13,0	16.0	350
150.0514	4	4	14,0	16.0	470
150.0515	5	5	17,0	16.0	590

drill:

	Ø mm	Ø	Drill bush	L mm	
150.1305-21	3,2	1/8"	1 - 4	65.0	20
150.1305-22	4,8	3/16"	5 - 7	86.0	20
150.1305-23	6,4	1/4"	8	101.0	20
150.1305-24	8,0	5/16"	9	117.0	20
150.1305-25	8,7	11/32"	10	125.0	20

bushes:

	Size mm	Inner Ø 1 mm	Inner Ø 2 mm	Inner Ø 1	Inner Ø 2	L mm	
150.0501	1	4,0	3,2	5/32"	1/8"	30,0	3
150.0502	2	4,8	3,2	3/16"	1/8"	30,0	8
150.0503	3	4,8	3,2	3/16"	1/8"	30,0	10
150.0504	4	4,8	3,2	3/16"	1/8"	30,0	14
150.0505	5	6,0	4,8		3/16"	30,0	12
150.0506	6	7,0	4,8	9/32"	3/16"	30,0	14
150.0507	7	7,0	4,8	9/32"	3/16"	30,0	18
150.0508	8	7,0	4,8	9/32"	3/16"	30,0	22
150.0509	9	9,0	6,5		1/4"	30,0	17
150.0510	10	9,5	6,5	3/16"	1/4"	30,0	21

Cylinder head bore jig set

- Permits the quick and accurate boring out of broken or torn out stud screws on cylinder heads or exhaust flanges directly on the vehicle
- Universal usage
- High time savings of up to 4 hours
- Cylinder head does not need to be removed
- Straight boring out of old screw
- In durable plastic storage case

Application range: Can be used universally on cylinder heads or exhaust flanges with bolt threads M8 and M10





			kg
150.7040	28 pcs	Cylinder head bore jig set	1,36

consists of:

	X		
150.7030	1	Drilling template	120
150.7031	3	Centring pin, conical	40
150.7032	3	Guide sleeve, Ø 8.0 mm	20
150.7033	3	Guide sleeve, Ø 10.0 mm	20
150.7034	2	Hexagon collar nut, M8	12
150.7035	2	Hexagon collar nut, M10	18
150.7036	1	Drill bush with cylinder pin, 4.0 mm	35
150.7037	1	Drill bush with cylinder pin, 6.5 mm	30
150.7038	1	Drill bush with cylinder pin, 8.5 mm	25
150.7039	1	Guide sleeve, M8	60
150.7041	1	Guide sleeve, M10	60
150.7042	1	Drilling stop with cylinder screws, 4.0 mm	40
150.7043	1	Drilling stop with cylinder screws, 6.5 mm	40
150.7044	1	Drilling stop with cylinder screws, 8.5 mm	40
150.7045	1	Hexagonal key socket wrench, 2 mm	8
150.7046	1	Hexagonal key socket wrench, 4 mm	13
150.7047	1	Hexagonal key socket wrench, 5 mm	22
150.7048	1	Special spiral drill, Ø 4.0 mm	14
150.7049	1	Special spiral drill, Ø 6.5 mm	23
150.7050	1	Special spiral drill, Ø 8.5 mm	28

CRANK SHAFT FACING TOOLS

Face milling attachment for crank shaft mating surfaces

- Precise repair of damaged mating surfaces on the front of the crank shaft
- Prevents repeated loosening of the toothed belt wheel by reworking the mating surfaces
- Accurately guided mill using the centring pin
- Front is reworked precisely on angles and planes
- Correct seat of the new toothed belt wheel

Application range: Audi, **Volkswagen**, **Seat**, **Škoda** 4-cylinder engines with crank shaft thread M14x1.5





150.7010	4 pcs	Face milling attachment for crank shaft mating surfaces	385

consists of:

150.7011	Face milling cutter, Ø 35.0 mm	150
150.7012	Cleaning brush	11
150.7013	Special socket	65
150.7014	Centring bolts, M14 x 1.5 x 73 mm	50

CAMSHAFT TOOLS

Camshaft assembly and dismantling set for VAG

- For the professional engine repair
- for the correct assembly and dismantling of the camshaft
- fastens the slide pieces of the camshaft slide pieces
- Very high degree of accuracy

Application range:
Audi A3, A4, A5, A6, Q3, Q5, TT, **Seat** Alhambra, Altea, Exeo, Leon, Toledo, **Škoda** Octavia II, Superb II, Yeti, **Volkswagen** Beetle, CC, EOS, Golf 6, Jetta, Passat, Scirocco, Sharan and Tiguan with 1.8 and 2.0L TFSI petrol engines with turbocharger and 4 valves (>2008)





150.7005	9 pcs	Camshaft assembly and dismantling set for VAG	200

consists of:

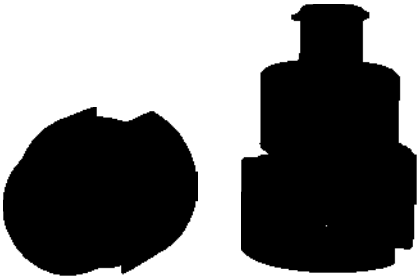
	x		g	
150.7008	4	Pin for camshaft magnet	33	
150.7007	2	Spacer for camshaft, 15 mm	29	
150.7006	3	Spacer for camshaft, 9 mm	38	

PULLERS

Balancing shaft puller for VAG

- ideally suited for the dismantling of balancer shafts
- can be used in conjunction with impact extractors from set 152.1405 or 152.1350
- Mounting thread on the balancer shaft puller M8 x 1.25 mm
- Sturdy design

Application range: Volkswagen (>2004), Passat (>2006), Passat CC (>2009), Tiguan (>2008), EOS (>2006), **Audi** A3 (>2004), A4 (>2008), A5 (>2008), TT (>2007), **SEAT** Alhambra (>2011), Exeo (>2009), Leon (>2006), Toledo (>2005), Altea (>2005), Altea XL (>2007), Altea Freetra with 1.8 und 2.0 petrol engines



		g	
150.3608	Balancing shaft puller for VAG	287	

VALVE GAUGES

Feeler gauge

- For the testing of intervals, contact distances etc.
- Feeler gauge conical tapered
- Fixing nut
- Leaves individually marked with size
- Blades made out of hardened spring steel



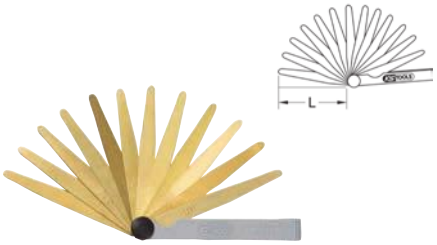




	Tooth pitch	L mm	Measuring range mm	g	
300.0600	20	100,0	0,05-0,10-0,15-0,20-0,25-0,30-0,35-0,40-0,45-0,50-0,55-0,60-0,65-0,70-0,75-0,80-0,85-0,90-0,95-1,00	88	

Antimagnetic brass feeler gauge

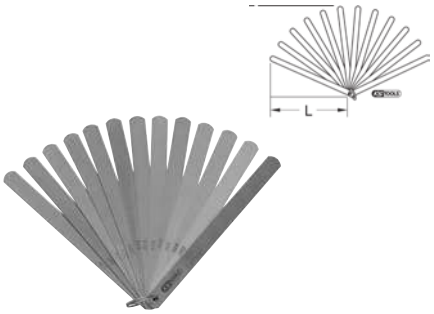
- For the testing of intervals, contact distances etc.
- Feeler gauge conical tapered
- Fixing nut
- Leaves individually marked with size
- Blades made of brass



	Tooth pitch	Measuring range mm	L mm	g	
300.0611	8	0,05-0,1-0,15-0,2-0,25-0,3-0,4-0,5	100,0	55	
300.0612	13	0,05-0,1-0,15-0,2-0,25-0,3-0,4-0,5-0,6-0,7-0,8-0,9-1,0	100,0	70	
300.0613	20	0,05-0,1-0,15-0,2-0,25-0,3-0,35-0,4-0,45-0,5-0,55-0,6-0,65-0,7-0,75-0,8-0,85-0,9-0,95-1,0	100,0	85	

Piston tolerance gauge

- For the testing of intervals, contact distances etc.
- Feeler gauge cylindrical
- Blades fan shaped on a ring
- Leaves individually marked with size
- Blades made out of hardened spring steel



	Tooth pitch	Measuring range mm	L mm	g	
300.0614	8	0,05-0,1-0,15-0,2-0,25-0,3-0,4-0,5	150,0	30	
300.0617	8	0,05-0,1-0,15-0,2-0,25-0,3-0,4-0,5	200,0	50	
300.0615	13	0,05-0,1-0,15-0,2-0,25-0,3-0,4-0,5-0,6-0,7-0,8-0,9-1,0	150,0	80	
300.0618	13	0,05-0,1-0,15-0,2-0,25-0,3-0,4-0,5-0,6-0,7-0,8-0,9-1,0	200,0	150	
300.0616	20	0,05-0,1-0,15-0,2-0,25-0,3-0,35-0,4-0,45-0,5-0,55-0,6-0,65-0,7-0,75-0,8-0,85-0,9-0,95-1,0	150,0	150	



VALVE PNEUMATIC ADAPTER

Valve pneumatic adapter

- For holding up the installed valves when removing and fitting the valve fixing wedges on the cylinder head
- Suitable for spark plug thread M14 x 1.25 and M18 x 1.5
- Ideal when replacing the valve shaft seals without removing the cylinder head
- With 13 mm hexagon pneumatic connection and rubber rings for sealing
- Special tool steel

Application range: For all petrol engines with sufficient clearance in the spark plug bore, e.g. **Volkswagen**, **Audi**, **Ford** (excluding CVH and multi-valve engines) etc.





	Length mm	g	
515.1002	140,0	240	

Valve pneumatic adapter, flexible

- For holding up the installed valves when removing and fitting the valve fixing wedges on the cylinder head
- Can be used universally in place of the spark plugs or glow plugs
- Ideal when replacing the valve shaft seals without removing the cylinder head
- For hard to reach spark plugs and glow plugs too
- Can also be used as an adapter for pressure loss testing
- Flexible reinforced hose



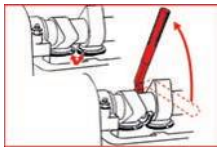
		Length mm	g	
515.1043	M12 x 1,25	250,0	150	
515.1041	M14 x 1,25	250,0	150	
515.1042	M10 x 1,25	250,0	150	

VALVE RETAINER AND VALVE SPRING TENSIONER

Tappet retainer

- Required for valve adjustment
- For retaining the tappet
- Functional area additionally surface hardened
- Phosphate finish
- Chrome vanadium

Application range: all 4 / 5 / 6-cylinder engines with tappet



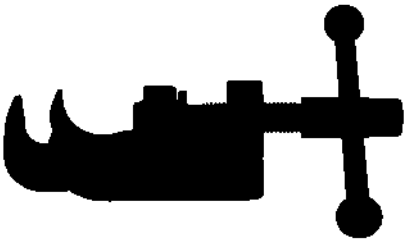


	Length mm	g	
150.0909	245,0	220	

Valve retainer

- For the suppression of the cup valve stem for the removal of the valve platelets
- Special tool steel

Application range: Opel-Diesel 1,5 D + 1,7 DT-**Isuzu Renault** 1,7 Diesel, Engines F2N + F3N + F8Q z.B. Clio, R19, R21, R9,Super 5 **Volvo** Diesel 340, 440, 460 + 480 Engines B 172K + B 18KD, **Mazda** 323 S - 1.7 TD



	Length mm	g	
150.1211	145,0	445	

Valve spring assembly tool

- Required the assembly and removal of the valves
- Universal usage
- Enormous time and cost saving
- Expansion of the cup valve stem is generally not necessary
- Special tool steel

Application range: BMW, **Ford**, **Mercedes**, **Opel**, **Porsche**, **VAG** etc. with SV OHV and OHC engines





	Length mm	g	
150.0918	305,0	745	

Valve spring clamp for Ford CVH-engines

- For clamping the valve springs in the course of restoration works in the area of the cylinder head

Application range: 1.3 / 1.4 and 1.6 litre of CVH engines in the Escort (incl. XR31 and RS Turbo), Fiesta (incl. RS Turbo) and Orion



	mm	L mm	g	
150.1160	24	100,0	320	

Valve spring tension

- Easy and quick change of the valve
- Expansion of the cylinder head is not necessary
- Use in conjunction with pneumatic adapter 150.1105 or 150.1107
- Special tool steel



	L mm	g	
150.1210	130,0	442	

Valve spring compressor for VAG

- For retaining the valve springs
- Replaceable plastic pressure piece
- Chrome vanadium
- Surface finished in chrome

Application range: e.g. **VAG** with tappet engines 1.3 – 1.8l with stud bolts M8





	Length mm	Spare thrust piece	g	
150.0919	405,0	150.0919-1	700	

Valve spring compressor for PSA

- For the professional engine repair
- For retaining the valve springs
- Universal usage
- Includes 8 screws with pressure cone and 2 locking screws
- Chrome vanadium
- Very high degree of accuracy

Application range: Citroën Berlingo, Xsara petrol engines with 1.0, 1.1, 1.4, 1.6l, and **Peugeot** 106, 205, 206, 306, 307, 405 with petrol engines





	Length mm	kg	
400.9001	390,0	3,80	

Valve spring clamping yoke

- Robust, adjustable and cam assembly tool with parallel stroke
- The tool is to be sure special for motors with horizontal camshaft (OHC motors) conceives, can however also be used in small and medium-sized OHV engines where neede
- The activity handles locks automatically after the clamping of the valve spring so that the hands remain free for removing and/or placing of the valve wedges





	Type	Min span depth mm	Max span depth mm	Span width mm	Pressure pad small	Pressure pad big	kg	
150.1135	1	10,0	135,0	160,0	25,0	30,0	2,00	
150.1140	2	20,0	120,0	240,0	25,0	30,0	2,00	

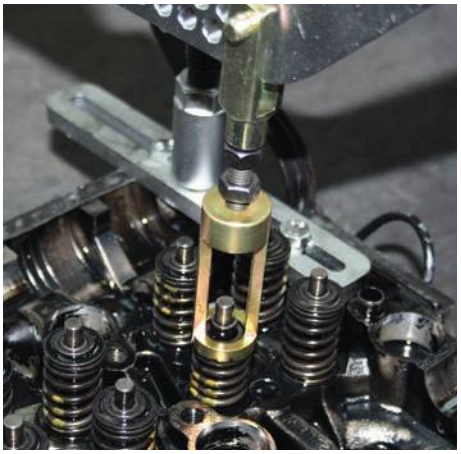
Valve spring compressor for Peugeot

- For assembly and removal of valve springs
- For fitted or removed cylinder head
- For valve springs with tappet with Ø 38.0 mm
- Universal usage
- Chrome vanadium





	Length mm	kg	
150.0924	400,0	1,22	



Valve mounting bridge set

- For assembly and removal of valve springs
- For fitted or removed cylinder head
- Can be used universally with various assembly and adjustment options
- time- and cost-efficient
- Removal of cylinder head not necessary for repair of valve shaft seals or valve springs
- Flange fastenings can be attached crossways or parallel to the cam shaft axis from the cylinder head
- Optionally upgradeable with specific pressure pieces
- Special tool steel

Application range: All cylinder heads from 1 to 12-cylinder engines, 2 to 4 valve technology for which the valves are arranged in a row or in a V.





			kg	
160.0270	15 pcs	Valve mounting bridge set	8,28	

consists of:

	X		g	
160.0271	2	Foot	1240	
160.0272	1	Rod	1940	
160.0273	2	O-ring 17 x 4	10	
160.0274	1	Pressure lever	880	
160.0275	1	Threaded pin M8 x 50	20	
160.0276	1	Clevis with spring cap bolts M8 x 32	60	
160.0277	4	Thrust bolt	60	
160.0279	2	Hexagon bolt M8	10	
160.0295	1	Valve pressure adaptors for mounting bridges	120	

Valve pressure adaptors for mounting bridges

- For assembly and removal of valve springs
- For use in conjunction with valve mounting bridge
- Special tool steel





		Suitable for	g	
160.0280	Pressure adaptor external Ø 21 mm	Peugot, Citröen HDI	40	
160.0281	Pressure adaptor external Ø 24 mm	Opel, Seat, Audi, VW	50	
160.0282	Pressure adaptor external Ø 25 mm	Hyundai	60	
160.0283	Pressure adaptor external Ø 28 mm	Toyota, Ford 16V	70	
160.0284	Pressure adaptor external Ø 30 mm	Nissan	80	
160.0285	Pressure adaptor external Ø 31 mm	Toyota	90	
160.0286	Pressure adaptor external Ø 32 mm	Opel, Peugot	100	
160.0287	Pressure adaptor external Ø 33 mm	Renault 19/Clio	120	
160.0289	Pressure adaptor external Ø 35 mm	Renault, Mazda, Peugot 106, Mercedes M102, M104	130	
160.0290	Pressure adaptor external Ø 37 mm	Fiat	140	
160.0291	Pressure adaptor external Ø 38 mm	Peugot, Citröen	150	
160.0292	Pressure adaptor external Ø 40 mm	Mercedes OM 601, 602, 603	160	
160.0293	Pressure adaptor external Ø 42 mm	Ford	170	
160.0294	Pressure adaptor external Ø 44 mm	Fiat Diesel	180	
160.0295	Pressure adaptor external Ø 34 mm	BMW M40	120	

Valve dismantling and assembly tool set

- Assortment for changing of defective sealings on the cylinder head
- Enormous time savings as the cylinder head does not need to be dismantled
- For professional and damage-free use
- In durable plastic storage case





			kg	
150.1100	44 pcs	Valve dismantling and assembly tool set	4,20	

consists of:

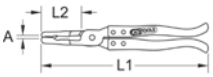
		g	
115.1061	Valve removal pliers, 275mm	380	
150.1101	Coupling AG 1/4", TSC 06	20	
150.1103	Coupling AG 1/4", ORG 08	20	
150.1104	Coupling AG 1/4", IRC 06	20	
150.1105	Compressed air adator, coupling ERC07	220	
150.1106	Clamp	380	
150.1107	Air adaptor tube, AG M14x1,25, AG M18x1,5	80	
150.1108	Magnetic valve wedge	60	
150.1109	Air adaptor, Ext.M24x2.0 Int.	150	
150.1110	Valve spring plate adaptor	130	
150.1111	Connector, 510mm	710	
150.1112	Angled valve shaft pliers	330	
150.1113	Assembly sleeve, 110 mm	120	
150.1114	Impact arbor	310	
150.1115	Screw+bolt clamping set,14 pcs	60	
150.1116	End bracket, pack of 2	260	
150.1117	Assembly sleeve #6, 17x11mm	40	
150.1118	Assembly sleeve #5, 15x10mm	40	
150.1119	Assembly sleeve #4, 13x8mm	30	
150.1120	Assenbly sleeve #3, 12x7mm	30	
150.1121	Assembly sleeve #2, 10x6mm	40	
150.1122	Assembly sleeve #1, 10x5mm	40	
150.1124	End bracket screw set, 8 pcs	100	

VALVE SHALT SEALING TOOLS

Valve shaft removal pliers

- Slim execution
- Plastic coated jaws
- Knurled handle
- With self-opening mechanism
- Quick and easy removal of valves from the valve shaft
- For the extension of the valve spring lever
- Ideally suitable for engines with 4 valve technology
- Nickel-plated finish
- Special tool steel







	A mm	L1 mm	L2 mm	g	
115.1061	0-125	275,0	100,0	380	

Valve washer pliers

- For removing valve shaft seals on 2-valve engines
- Hardened jaws
- Longitudinal teeth
- Functional area dip-insulated to avoid damage to the valve control
- Straight design
- Special tool steel





	Length mm	g	
115.3007	250,0	340	

Valve washer pliers, long

- For removing valve shaft seals on multi-valve engines
- For easy removal of deep seated valve shaft seals using extra-long jaws
- Hardened jaws
- Longitudinal teeth
- Functional area dip-insulated to avoid damage to the valve control
- Straight design
- Special tool steel





	Length mm	g	
115.3008	270,0	340	

Valve shaft sealing pliers

- Slim execution
- Knurled handle
- Quick and easy removal of valves from the valve shaft
- For the extension of the valve spring lever
- Ideally suitable for engines with 4 valve technology
- Nickel-plated finish
- Special tool steel





	Length mm	g	
150.1112	275,0	330	

Valve plate pliers for Volkswagen

- For replacing the valve plates
- Tempered tips
- Special tool steel

Application range: Volkswagen tappet engines from 1.3 l



	Length mm	g	
115.3009	265,0	220	

Valve shaft seal pusher

- For pushing on valve shaft seals Ø 7.0 mm on multi-valve engines
- Plastic

Application range: Multi-valve engines M104, M119, M120





	Length mm	g	
150.0945	165,0	80	

Valve shaft seal pusher

- For pushing on valve shaft seals Ø 7.0 mm and 8.0 mm
- Phosphate finish
- Special tool steel

Application range: BMW and **Opel** Omega B 2.5l turbo diesel





	Length mm	g	
150.8001	150,0	98	

Slide hammer puller for valve shaft washer

- Special construction allows quick and easy removal of seized valve shaft washers
- Universal usage
- Secure working without damage to the tappet guide on the cylinder head
- With collect and plastic sleeve
- Special tool steel

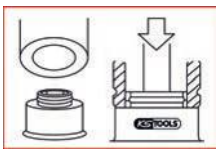




	Ø Bore mm	Length mm	kg	
150.0941	10 - 19	350,0	1,38	

Valve shaft washer tool set

- Permits the assembly and removal of valve shaft washers
- Universal usage
- Damage-free operation due to wear-resistant plastic pusher
- Includes extra-long pliers and slide hammer puller with collets
- In durable plastic storage case





			kg	
150.3510	16 pcs	Valve shaft washer tool set	3,36	

consists of:

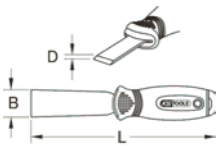
		g	
150.3511	Push-on mandrel Ø 9.5 mm	60	
150.3512	Push-on mandrel Ø 10.0 mm	60	
150.3513	Push-on mandrel Ø 10.5 mm	60	
150.3514	Push-on mandrel Ø 11.0 mm	60	
150.3515	Push-on mandrel Ø 11.5 mm	60	
150.3516	Push-on mandrel Ø 12.0 mm	60	
150.3517	Push-on mandrel Ø 12.5 mm	60	
150.3518	Push-on mandrel Ø 13.0 mm	60	
150.3519	Push-on mandrel Ø 13.5 mm	60	
150.3520	Push-on mandrel Ø 14.0 mm	60	
150.3521	Push-on mandrel Ø 15.0 mm	60	
150.3522	Collet for valve shaft washer	340	
150.3523	Collet for valve shaft washer, small	240	
150.3524	Slide hammer puller basic unit	1220	
150.3526	Plastic sleeve	20	
115.3008	Valve washer pliers, 270mm	340	

GASKET SCRAPER

STAINLESS STEEL Chisel scraper

- Ideal for removing of stickers, seal and glue residues
- Also suitable for the removal and chiselling of plates or welding spots
- Continuous stainless steel blade that can be re sharpened
- With reinforcement eyelet
- With hammer cap on the handle
- With ergonomic moulded two component handle
- Suitable for use at extremely low temperatures
- Extreme resistance to intergranular corrosion and oxidation
- Extremely long service life
- Autoclavable (heating of the tools to over 100 °C to kill germs)
- Rust-proof and acid resistant
- Stainless steel







	B mm	D mm	L mm	g	
907.2211	32,0	1,2	190,0	160	
907.2213	25,0	1,2	165,0	100	
907.2212	32,0	2,5	190,0	160	
907.2214	25,0	2,5	165,0	110	



STAINLESS STEEL Chisel scraper set

- Ideal for removing of stickers, seal and glue residues
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- Stainless steel





907.2210	4 pcs	32 x 1,2; 32 x 2,5; 25 x 1,2; 25 x 2,5 mm	580	



Pinch weld scraper

- Ideal for removing of stickers, seal and glue residues
- With interchangeable spring steel blade
- Working length max. 115 mm
- Aluminium handle





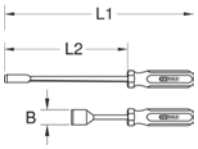


	B mm	L mm		
140.2282	13,0	240,0	140.2283	200
140.2286	16,0	240,0	140.2287	200
140.2288	19,0	240,0	140.2289	200

Gasket scraper

- Ideal for removing of stickers, seal and glue residues
- Blades can be re-sharpened
- Blade 10° angled
- Extra long execution for reaching inaccessible areas
- For removing extremely stubborn gaskets and seals
- With ergonomic moulded one component handle







	B mm	L1 mm	L2 mm	
907.2231	12,5	200,0	100,0	120
907.2232	25,0	200,0	100,0	140
907.2233	12,5	300,0	200,0	180
907.2234	25,0	300,0	200,0	200

Gasket scraper set

- Ideal for removing of stickers, seal and glue residues
- Blades can be re-sharpened
- Blade 10° angled
- Extra long execution for reaching inaccessible areas
- For removing extremely stubborn gaskets and seals
- With ergonomic moulded one component handle

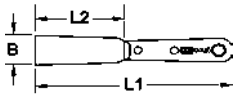




907.2230	4 pcs	12,5 x 200; 25 x 200; 12,5 x 300; 25 x 300 mm	1,28

Chisel scraper

- Ideal for removing stickers, seal and glue residues
- Also for removing extremely stubborn impurities and seal residue
- Blade 10° angled
- Blades can be re-sharpened
- Rust-proof and acid resistant
- Wooden handle





	B mm	L1 mm	L2 mm	
907.2266	15,0	175,0	50.0	42
907.2267	20,0	185,0	60.0	50
907.2268	30,0	190,0	65.0	57

Chisel scraper set

- Ideal for removing stickers, seal and glue residues
- Also for removing extremely stubborn impurities and seal residue
- Blade 10° angled
- Blades can be re-sharpened
- Rust-proof and acid resistant
- Wooden handle



907.2270	3 pcs	Chisel scraper set	150

Pinch weld scraper set

- Ideal for removing of stickers, seal and glue residues
- Simple blade change by loosening the knurled thumb screw on the chuck
- With 10 straight scraper blades 16 mm
- Scraper with two component handle



907.2215	11 pcs	Pinch weld scraper set	100

consists of:

907.2201	2 component scraper handle	60
907.2203	Spare blades, pack of 10, 16mm wide/ straigh	20

Replacement blades:

	Width mm	Form	Content	
907.2202	12,0	straight	10	20
907.2204	16,0	53° angled	10	20
907.2203	16,0	straight	10	20
907.2205	20,0	straight	10	40



Knife scraper set

- Ideal for removing of stickers, seal and glue residues
- Simple blade change by loosening the knurled thumb screw on the chuck
- Practical storage system for changeable blades
- Suitable for many different application due to the wide range of blades
- Scraper with two component handle
- Professional universal knife with aluminium housing
- In durable plastic storage case





			g
907.2200	27 pcs	Knife scraper set	600

consists of:

		g
907.2170	Professional universal knife, with trapezoid blades	90
907.2201	2 component scraper handle	60

Replacement blades:

	Width mm	Form	Content	g	
907.2202	12,0	straight	10	20	
907.2203	16,0	straight	10	20	
907.2204	16,0	53° angled	10	20	
907.2205	20,0	straight	10	40	
907.2206	19,0	torpedo form	10	60	

carbide scraper

- ideal for removing stubborn impurities, sealant residues and surface treatment
- for burnt on pads on the exhaust, brakes etc.
- with a very hard-wearing carbide cutting element
- a solid blade with two scraping edges
- Extremely long service life
- works as a compression and a pulling blade
- With an ergonomic, moulded, one component handle
- With reinforcement eyelet





	Length mm	Width mm	g	
907.2237	210,0	32,0	129	

Gasket scraper set

- For removing seal residue, e.g. cylinder head seals
- With replacement blade
- Extra long execution for reaching inaccessible areas
- Angled blade head
- With ergonomic moulded two component handle
- Special tool steel





			g
907.2280	2 pcs	Gasket scraper set	180

consists of:

		g
907.2281	Scraper, 270 mm	155
907.2282	Scraper blade	5

Scraper blades

- 5 replacement blades for seal scraper 907.2280
- For removing seal residue, e.g. cylinder head seals
- For angled blade head
- Special tool steel



	Content	Length mm	Width mm	Height mm	g	
907.2285	5	22,0	12,0	21,0	25	

Scraper

- Ideal for removing of stickers, seal and glue residues
- With easily interchangeable and retractable blades
- With reinforcement eyelet
- Scraper blade retractable via spline end for protection
- With metal housing





	Length mm	Width mm		g	
907.2240	110,0	39,0	911.8127	90	

Scraper

- Ideal for removing of stickers, seal and glue residues
- With easily interchangeable blades
- With reinforcement eyelet
- Soft grip handle





	Length mm	Width mm		g	
911.8126	160,0	38,0	911.8127	90	

Scraper

- With easily interchangeable and retractable blades
- With reinforcement eyelet
- With metal housing
- Two component handle

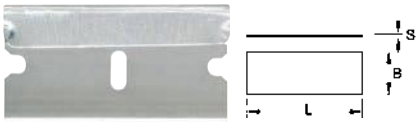


	Width mm	Length mm		g	
907.2242	40,0	145,0	911.8127	103	

Replacement scraper blades

- For all standard scrapers
- SK steel
- In a carton

Application range: for the removal of labels on bumpers, front windscreens etc.



	Content	L mm	B mm	S mm	g	
911.8127	5	40,0	19,5	0,29	40	

WASHER TOOLS

Hook tool set

- Ideal for removing and use of O rings and seals
- Special tool steel



			g	
550.1040	2 pcs	Hook tool set	30	

consists of:

		g	
550.1041	Hook, 90° short, 180° short bent	11	
550.1042	Hook, 45° long, 90° long	11	

Magnet and hook tool set

- Ideal for removing and use of O rings and seals
- With telescopic magnet attachment and replaceable hook
- Storage compartment in the handle for the various attachments
- Special tool steel





			g	
550.1080	6 pcs	Magnet and hook tool set	70	

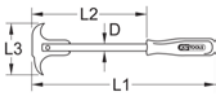
consists of:

		g	
550.1081	Basic unit	35	
550.1082	Telescopic magnet attachment, 90-390 mm	13	
550.1083	Hook attachment, straight, 75 mm	5	
550.1084	Hook attachment, 90°, 75 mm	5	
550.1085	Hook attachment, 120°, 75 mm	5	
550.1086	Hook attachment, lateral bend, 75 mm	5	

Gasket ring dismantling tool

- sickle-shaped
- For the removal of washers
- Long durability through hardened leverage
- Universal usage
- One component handle
- Burnished
- Chromium vanadium







	L1 mm	L2 mm	L3 mm	D mm	g	
550.1060	300,0	195,0	85,0	12,0	380	

Slide hammer puller with thread tip

- For the removal of radial shaft seals and small bearings
- For hard to reach places too
- Quick and easy to remove
- Using the blow weight the thread tip is hit into the radial shaft seal and turned by hand and then removed with the blow weight
- Universal usage
- Two component handle
- Special tool steel
- Diameter of thread tip: 1,5 - 4,7mm
- Total length of thread tip: 13,9mm



	Total length mm		Blade thickness mm	Impact weight kg	g	
150.3611	380	250,0	8,0	0,32	500	



Radial shaft seal remover set

- For the removal of radial shaft seals and small bearings
- For hard to reach places too
- Quick and easy to remove
- Using the blow weight the thread tip is hit into the radial shaft seal and turned by hand and then removed with the blow weight
- Long durability through hardened leverage
- Universal usage
- Special tool steel



			g	
150.3610	2 pcs	Radial shaft seal remover set	880	

consists of:

		g	
550.1060	Washer disassembly tool, 300mm	380	
150.3611	Slide hammer puller with thread tip	500	

Hook tool set

- Ideal for removing and use of O rings and seals
- Two component handle
- Special tool steel





			g	
550.1045	4 pcs	Hook tool set	120	

consists of:

		g	
550.1046	Hook, straight	27	
550.1047	Hook, 45° offset	27	
550.1048	Hook, 90° offset	27	
550.1049	Hook, 135° bent	27	

Master hook tool set

- Ideal for removing and use of O rings and seals
- Special tool steel





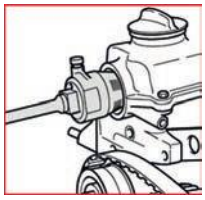
			g	
550.1070	9 pcs	Master hook tool set	680	

consists of:

		g	
550.1046	Hook, straight	27	
550.1047	Hook, 45° offset	27	
550.1048	Hook, 90° offset	27	
550.1049	Hook, 135° bent	27	
550.1071	Hook, large, straight	91	
550.1072	Hook, large, 90° bent	105	
550.1073	Hook, large, sickle	88	
550.1074	T hook, S form small, 120mm	42	
550.1075	T hook, S form large, 165mm	96	

Washer removal tool for VAG

- For the quick and correct removal of the washers on engine shafts such as the crank shaft, cam shaft or intermediate shaft
- time- and cost-efficient
- No need to strip the engine
- Universal usage
- With external square drive hexagonal socket 22.0 mm
- With internal square drive to DIN 3120 / ISO 1174
- Special tool steel





1/2"

	mm	Ø mm	Length mm	g	
150.3616	22,0	27,0	67,0	465	
150.3617	22,0	32,0	68,0	622	
150.3618	22,0	55,0	69,0	757	

Washer assembly set for BMW

- For assembly and removal of washers
- Specially for the front crankshaft radial washer
- Includes puller and mounting tool
- Special tool steel
- In durable plastic storage case

Application range: BMW engines N40, N42, N43, N45, N45T, N46, N51, N52, N52K, N53, N54





			kg	
150.3625	4 pcs	Washer assembly set for BMW	2,18	

consists of:

		g	
150.3626	Extraction tool	500	
150.3627	Mounting tool Ø 90 mm	280	
150.3628	Mounting tool Ø 60 mm	560	
150.3629	Mounting tool nut	100	

Assembly tool set for sealing flange with sensor wheel

- For the correct and damage-free assembly of the sealing flange
- With integrated pulse sensor wheel
- Exact sensor wheel adjustment - Precise sensor signal
- No need for reworking with repeated removal of the gearbox
- Enormous time and cost saving

Application range: Volkswagen, **Audi**, **Seat**, **Škoda**, petrol and diesel engines e.g. 1.0, 1.4, 1.4 16V, 1.4 TSI, 1.6 16V, 1.6 FSI, 1.6 TDI, 1.9 TDI, 2.0 TDI, 2.0 TDI BiTDI, 2.0 TDI 16V, 2.0 SDI, 2.0 DI-D, 2.0 TDI Quattro at **Audi** (A1, A2, A3, A4, A5, A6, Q3, Q5, TT), **Volkswagen** (Amarok, Beetle, Caddy, Eos, Polo, Golf, Jetta, Passat, Scirocco, Sharan, Tiguan, Touran), **Seat** (Alhambra, Altea, Cordoba, Exeo, Ibiza, Leon, Toledo), **Škoda** (Fabia, Octavia, Rapid, Roomster, Superb, Yeti) and **Mitsubishi** (Grandis, Outlander)



			kg	
150.3630	8 pcs	Assembly tool set for sealing flange with sensor wheel	1,83	

consists of:

	x		g	
150.3653	2	Guide bolts, Ø 10 mm	30	
150.3654	3	Guide bolts, Ø 6 mm	31	
150.3632	1	Tensioner locking pin set, Ø 3,5 mm	5	
150.3631	1	Housing with centring pin	880	
150.3633	1	Flange with spindle and nut for 150.3630	540	

Assembly tool set for sealing flange with sensor wheel for Volkswagen Crafter

- For the correct and damage-free assembly of the sealing flange
- With integrated pulse sensor wheel
- Exact sensor wheel adjustment - Precise sensor signal
- No need for reworking with repeated removal of the gearbox
- Enormous time and cost saving

Application range: Volkswagen Crafter with 5-cylinder diesel engines >2006 (engine code: BJM / BJJ / BJK / BJL / CECB / CECA / CEBA / CEBB)





			kg	
150.3620	7 pcs	Assembly tool set for sealing flange with sensor wheel for Volkswagen Crafter	1,80	

consists of:

	x		g	
150.3621	1	Housing with centring pin	1100	
150.3622	1	Flange with spindle and nut for 150.3620	521	
150.3653	2	Guide bolts, Ø 10 mm	30	
150.3654	3	Guide bolts, Ø 6 mm	31	

Crank seal remover and installer for Volvo

- Suitable for the damage-free and correct assembly and removal of radial shaft seals and drive shaft circlips
- time- and cost-efficient
- Prevents the ring from becoming loose
- for precisely fitting application

Application range: Volvo: 850, C30, C70 (>2006), C70 Convertible (<2005), C70 Coupe (<2002), S40 (<2004), S60 (>2009), S70, S80 (<2006), V40 (<2004), V50, V70 (>2000), V70 (2000-2008), V70XC (>2001), XC70 (<2007), XC90 (>2003)

(engine code: B4184S10, B4184S2, B4184S3, B4184S9, B4194T2, B4204S2, B4204T2, B4204T2 CVVT, B4204T3, B4204T3 (CA) (US), B4204T4, B4204T5, B5202FS, B5204T2, B5204T3, B5204T4, B5204T5, B5234FS, B5234T2, B5234T3, B5234T4, B5234T6, B5234T7, B5234T8, B5234T9, B5244S, B5244S2, B5244S4, B5244S5, B5244S6, B5244S7, B5244SG, B5244SG2, B5244T, B5244T2, B5244T3, B5244T4, B5244T5, B5244T7, B5252FS, B5254FS M 4.4, B5254S DENSO, B5254T, B5254T2, B5254T4, B5254T9, B6284T, B6294S, B6294S2, B6294T, B6304S3, GB5252S)



		kg	
150.3640	Crank seal remover and installer for Volvo	67,00	

Universal crank seal remover and installer set

- Suitable for the damage-free and correct assembly and removal of radial shaft seals and drive shaft circlips
- For tight-fit application on engine shafts such as crank shaft, cam shaft or intermediate shaft
- Can used universally for radial washers in diameters from 21.5 mm to 64.0 mm
- time- and cost-efficient
- No need to strip the engine
- Prevents damage to the aluminium fits
- Set contents for extensive applications
- Includes puller and pressing tool
- Prevents the ring from becoming loose
- In durable plastic storage case

Application range: Extensive universal tool including pressing tools for radial washers in diameters from 21.5 mm to 64.0 mm on almost all vehicles





			kg	
700.1280	24 pcs	Universal crank seal remover and installer set	1,90	

consists of:

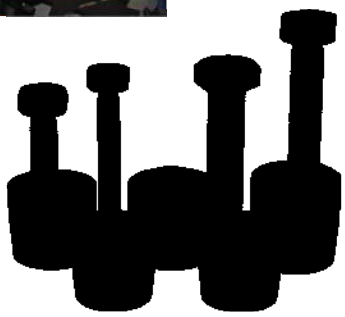
		g	
700.1277	Steel sleeve 22 mm, long for 700.1280	180	
700.1278	Steel sleeve 27 mm, long for 700.1280	220	
700.1279	Main body for 700.1280	140	
700.1281	Hook 70 mm, for 700.1280 2 pcs	12	
700.1282	Hook 114 mm, for 700.1280 2 pcs	22	
700.1283	Adaptor sleeve for 700.1280	75	
700.1284	Nut 20.2 mm for 700.1280	25	
700.1285	Nut 18.2 mm for 700.1280	23	
700.1286	Nut 16.2 mm for 700.1280	21	
700.1287	Nut 14.2 mm for 700.1280	19	
700.1288	Nut 12.2 mm for 700.1280	17	
700.1289	Nut 10.2 mm for 700.1280	15	
700.1290	Nut 8.1 mm for 700.1280	10	
700.1291	Adaptor 27.6 mm for 700.1280	37	
700.1292	Adaptor 45.9 mm for 700.1280	27	
700.1293	Adaptor 48.9 mm for 700.1280	27	
700.1294	Adaptor 56 mm for 700.1280	35	
700.1295	Adaptor 64 mm for 700.1280	55	
700.1296	Adaptor 33.6 mm for 700.1280	35	
700.1297	Adaptor 41.9 mm for 700.1280	30	
700.1298	Steel sleeve 10 mm for 700.1280	80	
700.1299	Steel sleeve 18 mm for 700.1280	145	



Teflon crank seal remover and installer set

- Suitable for the damage-free and correct assembly and removal of radial shaft seals and drive shaft circlips
- For tight-fit application on engine shafts such as crank shaft, cam shaft or intermediate shaft
- Can used universally for radial washers in diameters from 23.0 mm to 35.0 mm
- time- and cost-efficient
- No need to strip the engine
- Prevents damage to the aluminium fits
- Prevents the ring from becoming loose
- Expansion set for use in connection with 700.1280





			g
150.3635	9 pcs	Teflon crank seal remover and installer set	404

consists of:

		g
150.3636	Installation cone outer-Ø 32.2 mm, 29 mm	19
150.3637	Installation cone outer-Ø 32 mm, 29.5 mm	14
150.3638	Installation cone outer-Ø 35.3 mm, 35 mm	22
150.3639	Installation cone outer-Ø 35 mm, 30 mm	8
150.3641	Installation cone outer-Ø 35 mm, 35 mm	8
150.3642	Installation screw, M12 x 1.5 mm, 50 mm	44
150.3643	Installation screw, M10 x 1 mm, 60 mm	56
150.3644	Installation screw, M14 x 1.5 mm, 80 mm	109
150.3646	Installation screw, M16 x 1.5 mm, 60 mm	118

ASSEMBLY AIDS

FIXIT screw-in assembly aid for seals

- Ideal for the assembly of oil sump seals
- Aligns the oil sump and oil sump seal
- Secures the oil sump so that the screws can be inserted without any problems
- The assembly aid can then be removed again
- Plastic







	Content	Size mm	g
150.5006	4	6 mm	15

FIXIT screw-in assembly aid for seals

- Ideal for the assembly of oil sump seals
- Aligns the oil sump and oil sump seal
- Secures the oil sump so that the screws can be inserted without any problems
- The assembly aid can then be removed again
- Plastic







	Content	Size mm	g
150.5007	4	8 mm	15

FIXIT screw-in assembly aid for seals

- Ideal for the assembly of oil sump seals
- Aligns the oil sump and oil sump seal
- Secures the oil sump so that the screws can be inserted without any problems
- The assembly aid can then be removed again
- Available in 2 different sizes (6 mm, 8 mm)
- Plastic





			g
150.5005	8 pcs	FIXIT screw-in assembly aid for seals	30

consists of:

		g
150.5006	FIXIT screw-in assembly aid set, 6 mm, 4 pcs.	15
150.5007	FIXIT screw-in assembly aid set, 8 mm, 4 pcs.	15



VALVE SEAT CUTTER

Universal valve milling set, Ø 28-65 mm

- For cutting valve seats on internal combustion engines
- Suitable for hardened valve seats (lead free)
- With seat angles 30° + 45° and correction cutters 30°, 60° + 75°
- Optimum cutting head guidance by means of expander pilots
- Clean cut surface with no chatter marks
- Adjustable working diameter by means of moveable cutting blades
- Cutter blades from special steel
- In durable plastic storage case





			kg
150.3570	12 pcs	Universal valve milling set, Ø 28-65 mm	1,90

consists of:

		g
150.3571	Drive tool with T-bar	400
150.3572	Cutting head, 45° + 75°, Ø 28-37 mm	50
150.3573	Cutting head, 30° + 75°, Ø 28-37 mm, Ø 37-44 mm	65
150.3574	Cutting head, 45° + 60°, Ø 37-46 mm	95
150.3575	Cutting head, 30° + 75°, Ø 44-52 mm, Ø 37-46 mm	105
150.3576	Cutting head, 45° + 30°, Ø 46-60 mm	175
150.3577	Cutting head, 60° + 75°, Ø 52-65 mm	150
150.3578	Expander pilot, Ø 7,0-8,0 mm	60
150.3579	Expander pilot, Ø 8,0-9,5 mm	80
150.3580	Expander pilot, Ø 9,0-11,0 mm	100
150.3581	Expander pilot, Ø 11,0-12,5 mm	130
150.3582	Pilot, Ø 5,5 mm	45

VALVE CUTTER

Valve grinder

- With two sided sucker
- For the bow on the valve seat in the cylinder head
- Body made out of sealed hard wood
- Suckers made out of rubber





	Ø mm	L mm	g
150.1133	16/21	210,0	60
150.1131	19/22	245,0	33
150.1132	22/32	255,0	34
150.1134	29/35	225,0	60

Valve seat grinding set

- With two sided sucker
- For the bow on the valve seat in the cylinder head
- Body made out of sealed hard wood
- Suckers made out of rubber



			kg	
150.1130	2 pcs	Valve seat grinding set	2,21	

consists of:

		g	
150.1131	Valve lapper, 19+22mmm	33	
150.1132	Valve lapper, 22+32mmm	34	

Valve grinding tool with 2 suction discs

- 8 mm bore reception
- For grinding the valve seats after repair work
- The detention of the device body is automatically generated via a transmission, the typical right left wing movement used in grinding
- Gives you convenient and rapid seat grinding with the drill between approx. 500-1.000 rpm





	L mm	Replacement plate Ø 22 mm	Replacement plate Ø 28 mm	g	
150.1165	130,0	150.1166	150.1167	442	

Pneumatic valve grinder with 4 suction cups

- For grinding the valve seats after repair work
- Allows convenient and rapid grinding
- In durable plastic storage case





			kg	
515.2005	5 pcs	Pneumatic valve grinder with 4 suction cups	1,69	

consists of:

		g	
515.2006	Pneumatic valve grinder	1430	
515.2007	Sucker, Ø 20 mm	4	
515.2008	Sucker, Ø 30 mm	7	
515.2009	Sucker, Ø 34 mm	16	
515.2010	Sucker, Ø 45 mm	20	

VALVE WEDGE ASSEMBLY

Valve wedge assembly tool Ø 5mm for Opel, Volkswagen, Audi

- For the assembly of valve wedges
- Easy to fit even in cramped spaces
- Also suitable for valve springs that are arranged deep in the cylinder head or are seated in a cup guide
- Allows easy and secure assembly of one- and three-grooved valve wedges on fitted and removed cylinder head
- Special tool steel





	Ø mm	g	
150.7056	5	50	

VALVE ADJUSTMENT TOOLS

Valve adjustment push-through square

- Push-through square
- Valve adjustment tool for spinning the engine when adjusting the valve, control times
- Serviceable from both sides
- For use with a 1/2" push-through ratchet
- Special tool steel

Application range: Mercedes engine type 102, 103, 104, 110, 115, 116, 117, 119, 120, 123



1/2"

	Length mm	g	
150.3585	80,0	80	

Ratchet

- Internal square drive to DIN 3120 / ISO 1174
- For the use of step wrenches
- Ergonomic 2-component handle
- Special tool steel



1/2"

	Length mm	g	
130.1000	270,0	500	

Valve adjustment spanner

- For adjusting the valves
- Prevents the valve plate
- Universal usage
- Can be used in conjunction with 150.3589 or 150.3590
- Special tool steel





	mm	Length mm	g	
150.3587	30,0	170,0	135	

Valve adjustment spanner

- For adjusting the valves
- Can be used in conjunction with 150.3587
- Can be used in pairs
- Special tool steel



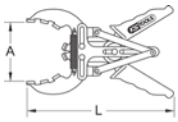


	mm	Length mm	g	
150.3589	14,0	225,0	140	
150.3590	14,0	160,0	100	

PISTON RING TOOLS

Piston ring pliers

- With PVC dipped handle
- For the safe disassembly and assembly of piston rings
- Surface nickel-plated
- Special tool steel





	Ø mm	A mm	L mm	g	
150.1175	50-100	0-100	210,0	305	
150.1176	80-120	0-120	220,0	340	
150.1177	110-160	0-160	280,0	445	

Piston ring pliers

- Special wheel clamps with suspension hole for fixing the piston ring when splaying
- With restriction of the splaying dimension
- Special tool steel



	Ø mm	Ø	g	
115.1301	83-135	3.1/4" - 5.5/16"	330	

Piston ring pliers

- For the removal and replacement of piston rings
- Suitable for most passenger cars and vans
- Plastic coated handle
- Self closing pliers
- Special tool steel



	L mm	g	
150.1179	221,0	210	

Piston ring tensioning tool

- Flexible tool for assembly and removal of piston rings
- Profiled tension band Ø 38.0 mm
- Low friction between tension band and piston ring
- The profile band cannot slip between the piston and cylinder
- Universal usage





	Ø mm	g	
115.3014	75,0-125,0	123	

Piston ring tension band set

- For the pretensioning of the piston rings when inserting the piston in the cylinder
- Self locking ratchet function
- Phosphate finish
- In durable plastic storage case



			kg	
150.1150	7 pcs	Piston ring tension band set	1,62	

consists of:

		g	
150.1151	Piston ring tension band pliers	380	
150.1152	Piston ring tension band, Ø 73-79mm	90	
150.1153	Piston ring tension band, Ø 79-86mm	90	
150.1154	Piston ring tension band, Ø 86-92mm	100	
150.1155	Piston ring tension band, Ø 92-98mm	110	
150.1156	Piston ring tension band, Ø 98-105mm	110	
150.1157	Piston ring tension band, Ø 105-111mm	120	

Piston ring tension band

- For the pretensioning of the piston rings when inserting the piston in the cylinder
- Continuous adjustment of operating tool
- Spring steel strip



	Ø mm	Ø	H mm	g	
150.1141	45 - 90	1.3/4" - 3.1/2"	50,0	158	
150.1142	57 - 125	2.1/4" - 5"	100,0	300	
150.1143	90 - 175	3.1/2" - 7"	100,0	340	
150.1144	90 - 175	3.1/2" - 7"	165,0	555	

CYLINDER LINER TOOLS

Securing straps for PSA

- Prevents the lift-off of the cylinder liners from their seat
- Securing straps prevent the cylinder liners coming away from the engine block
- Can be used with wet cylinder liners
- Supplied in pairs
- Special tool steel





		Hole spacing mm	hole diameter	Length mm	g	
150.3593	2 pcs	75,0-106,0	12.0 mm	130,0	260	

Lever for cylinder head for PSA

- For removing cylinder heads on engines with wet cylinder liners
- Prevents the lift-off of the cylinder liners from their seat
- Cylinder head should not be lifted off, but instead rolled off to the side and secured with the securing straps 150.3593
- Supplied in pairs
- Special tool steel



		Stud Ø mm	Length mm	kg	
150.3594	2 pcs	12,0	280,0	1,14	

CYLINDER HON DEVICES

Cylinder honing machine

- For honing / deburring of cylinders, bearings, bores, pipes etc.
- Interchangeable honing
- Automatic spigot end and exact honing
- Flexible drive shaft for air or electric drills
- Special tool steel

Application range: Automotive brake and clutch cylinders, engine cylinders of motor cycles,lawn mowers, outboard motors, hydraulic cylinders, marine and industrial engines etc.







	Ø mm	Arm	Honing stone set	kg	
150.1180	20 - 63	2	150.1181	0,90	
150.1185	22 - 69	3	150.1186	1,30	
150.1190	32 - 89	3	150.1191	1,40	
150.1195	51 - 177	3	150.1196	1,90	

Replacement stones

- Replacement honing stones for 150.1195
- For Honing/Deburring of cylinders, bearings, bores, pipes etc.
- Special tool steel

Application range: car brake and clutch cylinders, engine cylinders of motorbikes, lawn mowers, outboard motors, hydraulic cylinders, ship engines and industrial motors etc.



		L mm	g	
150.1181	2 pcs	28,8	10	
150.1186	3 pcs	28,8	15	
150.1191	3 pcs	51,0	30	
150.1196	3 pcs	76,0	80	

TEST AND MEASURING TOOLS

Speed setting tool

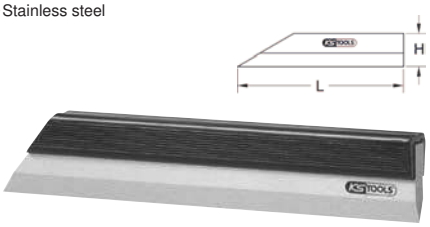
- ideal for setting the engine speed
- Easy one-man operation
- stepless regulation of the engine speed
- enables fast diagnosis of engine noises, engine control, e.g. injector return flow rate test, charging system test, etc.
- Attached to the brake pedal with a clamping screw



	Total length mm	g	
150.3645	200,0	430	

Precision straightedge

- In accordance with DIN 874/00
- Hand warmth protection
- Test area precise and finely engineered
- Flatness tolerance for highest accuracy
- For controlled and test working in the light gap procedure
- Hardened
- Stainless steel



	L mm	H mm	g	
300.0630	50,0	25,0	40	
300.0631	75,0	25,0	60	
300.0632	100,0	25,0	80	
300.0633	125,0	25,0	100	
300.0634	150,0	25,0	120	
300.0635	200,0	25,0	160	
300.0636	300,0	25,0	240	
300.0637	400,0	25,0	320	
300.0638	500,0	25,0	400	
300.0639	600,0	25,0	480	

Precision straightedge

- For the inspection and the exact working on cylinder heads
- In accordance with DIN 874/1
- Double T profile rail with rear 5 hand slots
- On edge and flat sides examination process
- With hanging hole
- Steel





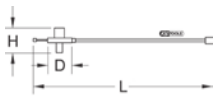


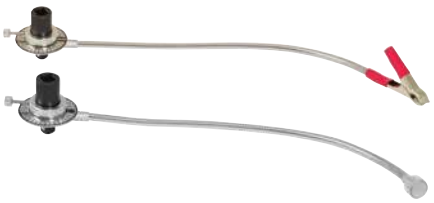
	L mm	H mm	S mm	kg	
152.1090	600,0	30,0	16,0	2,10	

Rotary angle disc

- For fastening screws at an angle
- Device for angle regulated fastening with a torque wrench
- Flexible arm
- Range 0° - 360°
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- Optionally with a magnetic arm or claw arm







	□	■	Arm	Pitch	D mm	H mm	L mm	g	
516.1195	1/2"	1/2"	magnet	2°	67,0	63,0	480,0	170	
516.1196	1/2"	1/2"	claw	2°	67,0	63,0	538,0	60	

Digital rotation protractor with magnet

- For fastening screws at an angle
- Magnetic
- digital angle display
- acoustic signal and LED display refer to reaching the set angle
- Right- and left-hand suit
- Angle precision: ± 2%
- Resolution: 0.1°
- Includes 2 AAA 1,5 V batteries
- including calibration declaration of conformity according to DIN EN ISO 6789:2017(E) - traceable to national standards
- In durable plastic storage case







	Ø mm	g	
516.1191	55,0	720	

Digital torque adapter with protractor

- 1/2" square drive and output
- Right- and left-hand suit
- Clockwise torque precision: 3% and counterclockwise: ± 4%
- Digital torque and rotation angle display
- acoustic signal and LED display indicate that the set angle of rotation or torque has been reached
- 5 selectable units (Nm, ft-lb, in-lb, kg-cm, degrees)
- Includes 2 AAA 1,5 V batteries
- including calibration declaration of conformity according to DIN EN ISO 6789:2017(E) - traceable to national standards
- In durable plastic storage case



1/2"

	■	Ø mm	Measuring range N•m	g	
516.1192	1/2"	85,0	6,8-135	242	
516.1193	1/2"	85,0	10-200	242	
516.1194	1/2"	85,0	17-340	242	

Mechanics stethoscope

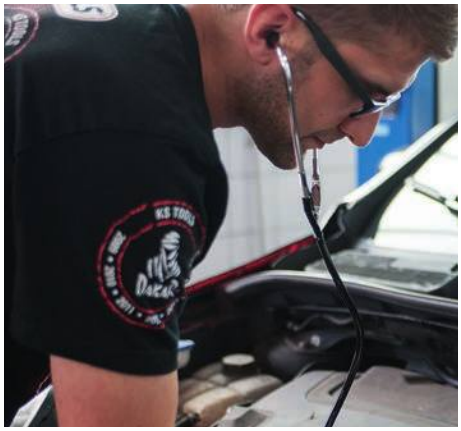
- Very flexible
- Serves the acoustic test and judgment of a component under load
- Quick and precise error detection from the sound
- With steel tip

Application range:
Engine: Valves, bearings, piston pins
Alternator: Bearing sounds
Differential: Barrel sounds
Bodywork: Creak and squeak sounds





	Length mm	g	
150.1645	1120,0	200	





Mechanic's stethoscope, electronic

- Very flexible
- Serves the acoustic test and judgment of a component under load
- Quick and precise error detection from the sound
- Includes 9V block battery
- With steel tip

Application range:
Engine: Valves, bearings, piston pins
Alternator: Bearing sounds
Differential: Barrel sounds
Bodywork: Creak and squeak sounds



		Cable length mm	Length mm	g	
150.1410		1160,0	190,0	100	

Electronic professional stethoscope

- For the professional defect diagnosis
- Serves the acoustic test and judgment of a component under load
- Delivers fast, absolutely clear and unambiguous test results over sounds
- Contains 6 independent sensors that can mounted for example on the vehicle floor or in the engine compartment for ease
- Simple coordination of the defect source through colour coded cable and colour table on the box
- In durable plastic storage case

Application range:
Engine: Valves, baerings, piston pins
Alternator: Bearing sounds
Differential: Barrel sounds
Bodywork: Creak and squeak sounds





			kg	
150.1695	18 pcs	Electronic professional stethoscope	2,50	

consists of:

		g	
150.1695-1	Headset	350	
150.1695-2	Amplifier	115	
150.1695-3	Hand held stethoscope	165	
150.1695-4	Velcro strap, 8 pcs	9	
150.1695-5	Sensor	10	
150.1695-6	Coulour coded cable, 6 pcs	755	

Ultrasound leak detector

- Acoustic locating of leaks on bodywork
- Receiver is passed externally along the bodywork
- Simplifies cause investigation for wind noise and water leaks
- In a practical storage case





		g	
150.1690	Ultrasound leak detector	460	

Wi-Fi video scope set with Ø 3.9 mm 0° HD front camera probe

- Easy to connect to your smartphone via Wi-Fi
- For Android smartphone (via Android System 4.4+) and iPhone IOS system (via IOS 8.0)
- 3.9 mm HD camera
- Cable-free and easy to set up
- Photos and videos are saved directly to your smartphone
- 4 adjustable mini LED lamps
- Mobile and network independent system
- Optimal handling through network or independent working
- Probes substantially stronger and less breakage, there no glass fiber cable
- Working temperature from -15°C to +50°C
- Excellent picture quality and viewing through special camera in the probe head
- Very good picture and video quality
- Picture reception in JPEG format
- Video records in MPEG4-format
- Versitile usage
- Transmitter with integrated battery, charging indicator light and light
- About 60 minutes of continuous operation possible
- Transmitter is charged via USB
- Including USB adapter, which allows the camera to be connected to a laptop or PC
- Included hook, magnet and mirrow





Technical data:

Operating time :	ca. 60 min
Operating temperature:	-15°C to +50°C
Bend radius:	15 mm
Protection class:	IP67
Camera resolution:	1600 x 1200 (YUV), 1280 x 720 (photograph) = 2.0 mega pixel
Angle:	0 °
Focused depth of field:	1 - 1,5 cm
Resistance:	Engine oil-resistant probe
Connection:	USB 2.0
Light source:	4 dimmable white mini LED lamps
Rechargeable battery:	3,7 V / 800 mAh
Battery technologie:	Lithium-ion

			g	
550.7520	7 pcs	Wi-Fi video scope set with Ø 3.9 mm 0° HD front camera probe	240	

consists of:

		g	
550.7511	Wi-Fi transmitter	50	
550.7522	Wi-Fi video scope set 0°, Ø 3.9 mm	23	
550.7527	Wi-Fi video scope telescopic holder for probe Ø 3.9 mm	55	
550.7516	USB adapter	7	
550.7523	Wi-Fi video scope hook attachment for probe Ø 3.9 mm	2	
550.7524	Wi-Fi video scope magnetic attachment for probe Ø 3.9 mm	3	
550.7526	Wi-Fi video scope mirror attachment for probe Ø 3.9 mm	2	

Wi-Fi video scope set with Ø 5.5 mm 0° HD front camera probe

- Easy to connect to your smartphone via Wi-Fi
- For Android smartphone (via Android System 4.4+) and iPhone IOS system (via IOS 8.0)
- 5.5mm HD camera
- Cable-free and easy to set up
- Photos and videos are saved directly to your smartphone
- 6 adjustable mini LED lamps
- Mobile and network independent system
- Optimal handling through network or independent working
- Probes substantially stronger and less breakage, there no glass fiber cable
- Working temperature from -15°C to +50°C
- Excellent picture quality and viewing through special camera in the probe head
- Very good picture and video quality
- Picture reception in JPEG format
- Video records in MPEG4-format
- Versitile usage
- Transmitter with integrated battery, charging indicator light and light
- About 60 minutes of continuous operation possible
- Transmitter is charged via USB
- Including USB adapter, which allows the camera to be connected to a laptop or PC
- Included hook, magnet and mirrow





Technical data:

Operating time :	ca. 60 min
Operating temperature:	-15°C to +50°C
Bend radius:	15 mm
Protection class:	IP67
Camera resolution:	1600 x 1200 (YUV), 1280 x 720 (photograph) = 2.0 mega pixel
Angle:	0 °
Focused depth of field:	3 - 6 cm
Resistance:	Engine oil-resistant probe
Connection:	USB 2.0
Light source:	6 dimmable white mini LED lamps
Rechargeable battery:	3,7 V / 800 mAh
Battery technologie:	Lithium-ion

			g	
550.7510	7 pcs	Wi-Fi video scope set with Ø 5.5 mm 0° HD front camera probe	250	

consists of:

		g	
550.7511	Wi-Fi transmitter	50	
550.7512	Wi-Fi video scope set 0°, Ø 5.5 mm	180	
550.7513	Wi-Fi video scope telescopic holder for probe Ø 5.5 - 6.0 mm	55	
550.7516	USB adapter	7	
550.7517	Wi-Fi video scope hook attachment for probe Ø 5.5 mm	2	
550.7518	Wi-Fi video scope magnetic attachment for probe Ø 5.5 mm	3	
550.7519	Wi-Fi video scope mirror attachment for probe Ø 5.5 mm	2	

Wi-Fi video scope set with Ø 6.0 mm 0° and 90° HD front camera probe, switchable

- Easy to connect to your smartphone via Wi-Fi
- For Android smartphone (via Android System 4.4+) and iPhone IOS system (via IOS 8.0)
- 6.0mm HD camera
- Cable-free and easy to set up
- Photos and videos are saved directly to your smartphone
- 4 mini LED lamps
- Mobile and network independent system
- Optimal handling through network or independent working
- Probes substantially stronger and less breakage, there no glass fiber cable
- Working temperature from -15°C to +50°C
- Excellent picture quality and viewing through special camera in the probe head
- Very good picture and video quality
- Picture reception in JPEG format
- Video records in MPEG4-format
- Versitile usage
- Transmitter with integrated battery, charging indicator light and light
- About 60 minutes of continuous operation possible
- Transmitter is charged via USB
- Including USB adapter, which allows the camera to be connected to a laptop or PC





Technical data:

Operating time :	ca. 60 min
Operating temperature:	-15°C to +50°C
Bend radius:	15 mm
Protection class:	IP67
Camera resolution:	1600 x 1200 (YUV), 1280 x 720 (photograph) = 2.0 mega pixel
Angle:	0 + 90 °
Focused depth of field:	1 - 1,5 cm
Resistance:	Engine oil-resistant probe
Connection:	USB 2.0
Light source:	6 dimmable white mini LED lamps
Rechargeable battery:	3,7 V / 800 mAh
Battery technologie:	Lithium-ion

			g	
550.7540	4 pcs	Wi-Fi video scope set with Ø 6.0 mm 0° and 90° HD front camera probe, switchable	150	

consists of:

		g	
550.7511	Wi-Fi transmitter	50	
550.7541	Wi-Fi video scope set switchable, 0° and 00°, Ø 6.0 mm	31	
550.7513	Wi-Fi video scope telescopic holder for probe Ø 5.5 - 6.0 mm	55	
550.7516	USB adapter	7	

CO2 Cylinder head leak testing set

- For the locating of leaks on combustion engines
- Rational and dependable finding of cracks and leakages
- Potential CO2 content in the coolant solution is detected
- Ideally suited for the cylinder head, cylinder head seals and engine block
- Leakages are visible through discoloration of the test fluid
- For all current vehicles with water cooled engines (Gas, Diesel and Petrol)
- Automatic regenerating reaction fluid for multiple use
- In durable plastic storage case





			kg	
150.1910	8 pcs	CO2 Cylinder head leak testing set	1,43	

consists of:

		g	
150.1911	Intake hand squeeze pump	30	
150.1912	Two way brass valve	120	
150.1913	Leak test chamber with 2 Test chambers and cones	120	
150.1914	Reaction fluid, 250ml	250	
150.1915	Empty container, 250ml	30	
150.1916	Cooling system bayonet adapter, #1	60	
150.1917	Cooling system bayonet adapter, #2	80	
150.1918	Cooling system bayonet adapter, #3	110	





Oil pressure testing equipment

- Quick safe and problem free testing of the oil pressure on the engine
- Adaption with oil pressure sensor thread
- Includes shock-proof precision manometer diameter 75.00 mm 0 - 10 bar
- Flexible tube (L=1.3 m) with anti-kink device, decompression valve and quick coupling
- incl. 10 adaptors
- Replacement washers are available in the set
- Universal usage
- Sturdy design
- In durable plastic storage case





			kg	
150.1920	12 pcs	Oil pressure testing equipment	1,89	

		g	
150.1921	Manometer with tube, 10 bar	594	
150.1922	90° Adaptor angled	44	
150.1920-1	Screw adaptor no 1, R1/8"	23	
150.1920-10	Screw adaptor no 10, M18 x 1.5	34	
150.1920-2	Screw adaptor no 2, 1/8" x 27 NPT	24	
150.1920-3	Screw adaptor no 3, 1/4" x 18 NPT	33	
150.1920-4	Screw adaptor no 4, 3/8" x 20 UNF	23	
150.1920-5	Screw adaptor no 5, 1/2" x 20 UNF	27	
150.1920-6	Screw adaptor no 6, M10 x 1.0	24	
150.1920-7	Screw adaptor no 7, M12 x 1.5	24	
150.1920-8	Screw adaptor no 8, M14 x 1.5	29	
150.1920-9	Screw adaptor no 9, M16 x 1.5	33	

Cylinder leak detector tester set

- For diagnosis of compression pressure loss
- Suitable for analysing inlet and outlet valves, piston rings or cylinder liner, cylinder head or head seal
- Better alternative for compression measurement
- Universal usage
- Integrated pressure reducer
- Necessary working pressure: 1.0 bar
- For use on engines at operating temperature
- In durable plastic storage case

Test results:

Outlet valves not tight:
Air noises in exhaust, manifold and cylinder head on the outlet side

Inlet valves not tight:
Air noises in intake, on cylinder head on the inlet side

Piston rings, pistons, cylinder bore damaged:
Air noises on the crankcase breather or on the dipstick

Cylinder head seal defective:
Air noises in the adjacent cylinder, spark plug bore

Cylinder head seal defective or tear in cylinder head
Air noises or bubble formation in the cooling system or reservoir



			kg	
150.1780	9 pcs	Cylinder leak detector tester set	2,30	

consists of:

		g	
150.1781	Test device with dual display	570	
150.1782	Hose 14/18 mm	132	
150.1783	House with adaptor	108	
150.1784	Adaptor M10 x 1.0 mm	280	
150.1785	Adaptor M12 x 1.25 mm	310	
150.1786	Adaptor M14 x 1.25 mm	330	
150.1787	Adaptor M14 x 1.25 mm, long design	550	
150.1788	Spark plug adapter M12 x 1.25 mm	251	
150.1789	Spark plug adaptor M14 x 1.25 mm	255	



Compression test set

- For quick and exact compression pressure testing of petrol engines
- Includes shock-proof precision manometer diameter 75.00 mm
- Suitable for 14 mm and 18 mm spark plug threads
- Very flexible tube for hard-to-reach places
- Display: psi; kg/cm²
- Universal usage





			g	
152.2067	2 pcs	Compression test set	440	

consists of:

		g	
152.2068	Compression manometer 0-20 bar	320	
152.2069	Adaptor	40	

Compression tester set, digital

- For quick and exact compression pressure testing of petrol and diesel engines
- Quick and compact coupling to all adapters
- Includes shock-proof precision manometer diameter 75.00 mm 0 - 20 bar
- Very flexible tube for hard-to-reach places
- Display: bar, psi
- Includes 1x 9 V block battery as standard
- Universal usage
- In durable plastic storage case





			kg	
152.2030	7 pcs	Compression tester set, digital	1,10	

consists of:

		g	
152.2031	Compression manometer 0-20 bar	240	
152.2032	Adaptor M 10 x 1.0	10	
152.2033	Adaptor M 12 x 1.25	10	
152.2034	Adaptor M 14 x 1.25	12	
152.2036	Hose, l = 450 mm	120	
152.2037	Pressure pipe with rubber cap, straight	120	
152.2038	Pressure pipe with rubber cap, angled	120	

Digital compression pressure test set for petrol engines

- For dry and wet compression tests
- Compact adaptor pieces with quick couplings
- Includes extensive adaptor assortment and analogue manometer (psi)
- Digital manometer with reading storage up to 12 cylinders
- By means of brass coupling the repair is possible on valve seals without dismantling of the cylinder head
- Very flexible tube for hard-to-reach places
- In durable plastic storage case



			kg	
150.1650	10 pcs	Digital compression pressure test set for petrol engines	2,20	

consists of:

		g	
150.1650-1	Digital guage	420	
150.1650-10	Fiitings f.150.1650	5	
150.1650-2	Analogue guage	120	
150.1650-3	Adaptor M18x1.5	100	
150.1650-4	Adaptor M14x1.25 long	90	
150.1650-5	Adaptor M14x1.25 short	110	
150.1650-6	Adaptor L=64mm M18x1,5	105	
150.1650-7	Adaptor L=42mm M12x1,25	40	
150.1650-8	Adaptor L=42mm M10x1,0	40	
150.1650-9	Coupling f.150.1650, 1/4'' Int.	80	

Compression pressure test instrument for petrol engines with diagram recorder

- With quick coupling
- Includes large-scale record card (approx. 50 mm) with coated surface
- Perfect for completing checks and documentation
- Includes 3 adaptors (M10, M12, M18)
- Provides clear and accurate pressure test results
- Each diagram map enables up to eight tests
- Very flexible tube for hard-to-reach places
- Includes 48 diagram maps
- In durable plastic storage case





			kg	
150.1653	58 pcs	Compression pressure test instrument for petrol engines with diagram recorder	2,20	

consists of:

		g	
150.1659	Compression pressure test instrument for petrol engines with diagram recorder	917	
150.1654	Compression pressure test diagram card set for petrol engines (packaging unit=48)	31	
150.1682	Holder for diagram crad	22	
150.1683	Rubber seal set (packaging unit=5)	6	
150.1692	Adapter for 150.1653, M10	67	
150.1693	Adapter for 150.1653, M12	52	
150.1694	Adapter for 150.1653, M18	80	

Compression pressure test diagram card set for petrol engines (max. 17 bar)

- Each diagram map enables up to eight tests
- For use with 150.1653



	Content		g	
150.1654	48	Compression pressure test diagram card set for petrol engines (max. 17 bar)	31	

Compression pressure test instrument for diesel engines

- Complete test tool set with or without direct injection
- Compact adaptor pieces with quick couplings
- Includes extensive adaptor assortment
- Very flexible tube for hard-to-reach places
- In durable plastic storage case



Technical data:

Manometer:	0,0-70,0 bar
Tube length:	355,0
Manometer gauge:	bar, psi or KPA

			kg	
150.1680	13 pcs	Compression pressure test instrument for diesel engines	2,56	

consists of:

		g	
150.1680-1	Manometer with tube for 150.1680	640	
150.1680-2	Glow plug adaptor, M10x1,25	40	
150.1680-3	Glow plug adaptor, M12x1,25	40	
150.1680-4	Glow plug adaptor, M14x1,25	70	
150.1680-5	Compression pressure test adaptor, 114mm, Ø 21mm	220	
150.1680-6	Compression pressure test adaptor, M24x2	160	
150.1680-7	Compression pressure test adaptor	60	
150.1680-8	Glow Plug Adaptor M 10 x 1,25	60	
150.1680-9	Glow plug adaptor, M10x1	45	
150.1680-10	Compression pressure test adaptor, M 20 x 1,5mm	145	
150.1680-11	Replacement sealings and washers	15	
150.1680-12	Angle connecting piece	50	
150.1680-13	Clamp arch	70	

Compression pressure test set for diesel engines

- Important tool for engine diagnosis
- For identifying wear and leaks on piston rings
- Compression pressure test up to 70 bar (1000 psi) possible
- Quick coupling in either straight or angled set up
- Due to the variety of the adapter further applications such as car, wagon, ship and agricultural petrol and diesel engines
- For a long life in daily workshop use
- In durable plastic storage case





			kg	
150.3660	36 pcs	Compression pressure test set for diesel engines	4,22	

consists of:

	Type		g	
150.3661		Manometer with hose, 0-1000 psi, Ø 70 mm	550	
150.3662	#1	Glow plugs adapter, M 12 x 1.25 with external thread, length 47 mm	26	
150.3663	#2	Glow plugs adapter, M 12 x 1.25 with external thread, length 55 mm	29	
150.3664	#3	Glow plugs adapter, M 12 x 1.25 with external thread, length 87 mm	46	
150.3665	#4	Injector adapter, M 10 x 1.25 with external thread, length 70 mm	27	
150.3666	#5	Injector adapter, M 10 x 1.25 with external thread, length 57 mm	23	
150.3667	#6	Injector adapter, M 10 x 1.25 with external thread, length 70 mm	28	
150.3668	#7	Injector adapter, M 10 x 1.25 with external thread, length 82 mm	32	
150.3669	#8	Injector adapter, M 10 x 1.25 with external thread, length 170 mm	66	
150.3670	#9	Glow plugs adapter, M 10 x 1.25 with external thread, length 120 mm	42	
150.3671	#10	Injector adapter, M 10 x 1.25 with external thread, length 132 mm	47	
150.3672	#11	Glow plugs adapter, M 10 x 1.25 with external thread, length 70 mm	27	
150.3673	#12	Glow plugs adapter, M 10 x 1.0 with external thread, length 83 mm	29	
150.3674	#13	Glow plugs adapter, M 10 x 1.0 with external thread, length 74 mm	26	
150.3675	#15	Glow plugs adapter, M 10 x 1.0 with external thread, length 75 mm	27	
150.3676	#16	Glow plugs adapter, M 10 x 1.0 with external thread, length 99 mm	34	
150.3677	#17	Glow plugs adapter, M 10 x 1.0 with external thread, length 108 mm	37	
150.3678	#18	Glow plugs adapter, M 10 x 1.0 with external thread, length 75 mm	26	
150.3679	#19	Glow plugs adapter, M 10 x 1.0 with external thread, length 135 mm	53	
150.3680	#20	Glow plugs adapter, M 10 x 1.0 with external thread, length 175 mm	66	
150.3681	#21	Glow plugs adapter, M 8 x 1.0 with external thread, length 120 mm	36	
150.3682	#26	Injector adapter, length 133 mm	78	
150.3683	#27	Injector adapter, M 22 x 1.5, length 92 mm	174	
150.3684	#28	Injector adapter, M 24 x 1.5, length 80 mm	151	
150.3685	#29	Injector adapter, M 20 x 1.5, length 65 mm	85	
150.3686	#30	Injector adapter, M 24 x 2.0, length 72 mm	167	
150.3687	#31	Injector adapter with seal, Ø 14 mm, #31	100	
150.3688	#32	Injector adapter with seal, Ø 6 mm	97	
150.3689	#33	Injector adapter with seal, Ø 17 mm	41	
150.3690	#34	Injector adapter with seal, Ø 14 mm, #34	76	
150.3691	#35	Injector adapter with seal, Ø 7 mm	38	
150.3692	#36	Pressure tube, 180 mm	201	
150.3693	#37	Small bridges	38	
150.3694	#38	Medium bridges	65	
150.3695	#39	Large bridges	88	
150.3696	B	Angle piece	44	

Compression pressure test instrument for diesel engines with diagram recorder

- Quick connection system for dummy injectors, no tools required
- Can only be used with glow plug adapter or injector adapter
- Includes large-scale record card (approx. 50 mm) with coated surface
- 1x adapter M12x1.5 mm for original injection nozzles
- 1x adapter M14x1.5 mm to be used when the quick connector cannot be assembled
- Provides clear and accurate pressure test results
- Each diagram map enables up to 8 tests (+2 optional)
- Very flexible tube for hard-to-reach places
- Includes 48 diagram maps
- In durable plastic storage case





			kg	
150.1656	53 pcs	Compression pressure test instrument for diesel engines with diagram recorder	2,80	

consists of:

		g	
150.1662	Compression pressure test instrument for diesel engines with diagram recorder	839	
150.1696	Adapter for 150.1656 M12x1.5 mm	52	
150.1697	Adapter for 150.1656 M14x1.5 mm	57	
150.1657	Compression pressure test diagram card set for diesel engines (packaging unit=48)	24	
150.1682	Holder for diagram crad	22	
150.1698	Quick connection system for dummy injectors	177	

Compression pressure test diagram card set for diesel engines (max. 60 bar)

- Each diagram map enables up to 8 tests (+2 optional)
- For use with 150.1656



	Content		g	
150.1657	48	Compression pressure test diagram card set for diesel engines (max. 60 bar)	24	



YOUR POWERFUL PARTNER FOR HYBRID AND ELECTRIC VEHICLE EXPERTS!

SAFE TOOLS FOR EVERY JOB!



The specialist tools are specially designed for the mechanics of electric and hybrid vehicles. They are manufactured and individually tested in accordance with the BGV A3 regulations (VBG-4) by KS Tools. Some systems in these vehicles have up to 500 volts running through them. This is enough volts to cause serious bodily harm when working with normal tools and can also lead to death.

The KS Tools specialist tools for hybrid and electric vehicles are manufactured to the most recent and international regulations from high-quality materials and offer maximum protection for every user!

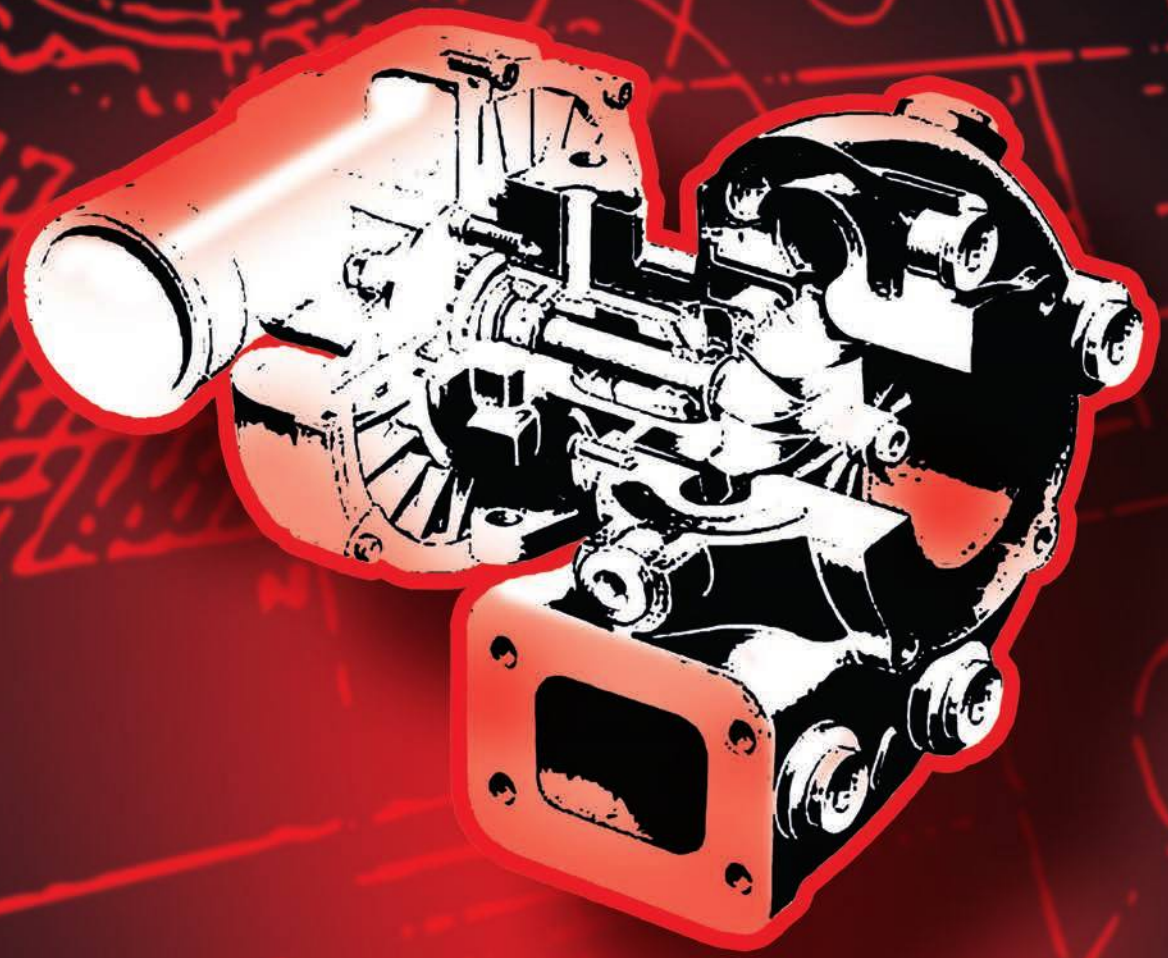


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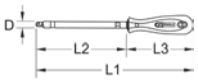
	FROM PAGE
HOSE CLAMP TOOL	226
RELEASE TOOLS	229
GASKET SCRAPER	230
WASHER HOOK TOOLS	231
SPECIAL SPANNER AND ADAPTER	232
VACUUM TESTING TOOLS	233
PRESSURE TESTING TOOLS	234
TESTING ACCESSORIES	236

HOSE CLAMP TOOL

ERGOTORQUE*plus*® socket screwdriver

- Two component handle
- 6 point
- Flexible
- Limited torque
- Double spiral shaft
- Plastic protective coating
- Chrome vanadium





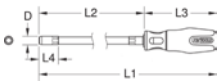


	mm	D mm	L1 mm	L2 mm	L3 mm	L4 mm	g
159.1126	6,0	10,8	259,0	150,0	109,0	9,3	155
159.1127	7,0	11,7	259,0	150,0	109,0	10,0	155
159.2128	8,0	11,9	259,0	150,0	109,0	10,0	155
159.1125	10,0	12,5	279,0	170,0	109,0	14,3	170

ERGOTORQUE*plus*® socket screwdriver, extra long

- Two component handle
- 6 point
- Flexible
- Ideal for deep seated screw-hose clamps
- Limited torque
- Double spiral shaft
- Plastic protective coating
- Chrome vanadium







	mm	D mm	L1 mm	L2 mm	L3 mm	L4 mm	g
911.1175	5	11,9	614,0	500,0	114,0	8,9	270
911.1176	6	10,9	614,0	500,0	114,0	11,3	280
911.1177	7	11,7	614,0	500,0	114,0	11,3	280
911.1178	8	11,7	614,0	500,0	114,0	11,3	280

ERGOTORQUE*plus*® screwdriver set

- Two component handle
- Flexible blade with double spiral shaft
- Limited torque
- Plastic protective coating
- Contains also the most current 1/4" bits and sockets
- In display box





			kg
911.1180	16 pcs	ERGOTORQUE*plus*® screwdriver set	1,30

1 x		1/4"
1 x		1/4"
1 x		7 mm
3 x		5 - 6 - 8 mm
2 x		5.5 - 6.5 mm
2 x		PH1 - PH2
6 x		T10 - T15 - T20 - T25 - T27 - T30

Special Release Tool for HENN® Clamps

- universally suitable for vehicles with HENN® clamps
- suitable for unlocking or loosening clamps on air or coolant hoses
- head adjustable with a grip up to 90° for harder-to-reach areas
- With PVC dipped handle
- Special tool steel



	Length mm	g
150.2233	96,0	95

Hose clamp tension device

- For the dismantling and assembly of hose clamps
- Easy to use
- Less space required
- Wear-resistant spindle drive
- Hand-wheel operation
- 6-point and 1/4" drive
- Chrome molybdenum



	Ø mm	Ø mm	Span width mm	g
115.0910	6-40	0-37	80	130
115.0911	6-65	0-62	105	160

Hose clamp gripping pliers

- Forged gripping jaws
- Serrated execution
- Size adjustment using the adjustment wheel
- Quick-release lever
- With easy locking action
- For round and flat material
- Nickel plated
- Chrome vanadium





	Clamping range mm	Length mm	g
115.1126	18-36	175,0	231
115.1127	18-54	230,0	420

Hose clamp gripping pliers set

- Forged gripping jaws
- Serrated execution
- Size adjustment using the adjustment wheel
- Quick-release lever
- With easy locking action
- For round and flat material
- Nickel plated
- Chrome vanadium



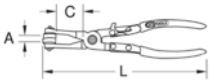


			g
115.1125	2 pcs	175 - 230 mm	653

Hose clamp pliers, angled

- 45° angled head
- With variable jaws
- For difficult to reach clamps
- Includes locking mechanism
- With PVC dipped handle
- Chrome molybdenum







	A mm	C mm	L mm	g
115.1042	0-65	55,0	220,0	210

Hose clamp pliers, angled

- 90° angled head
- With variable jaws
- For difficult to reach clamps
- Includes locking mechanism
- With PVC dipped handle
- Chrome molybdenum

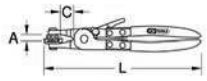




	Ø mm	Clamping range mm	Length mm	g
115.1198	18- 53	5-43	210,0	400

Universal hose clamp pliers

- Universal crown profile
- For difficult to reach clamps
- With PVC dipped handle
- Includes locking mechanism
- Versitile usage
- Chrome molybdenum

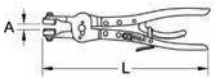





	A mm	C mm	L mm	g
115.1043	0-48,5	40,0	220,0	240

Hose clamp pliers

- Suitable for correct assembly and disassembly of spring clamps
- Turnable jaws
- Includes ratchet function
- Effortless opening and closing
- Insulated handle
- Special tool steel

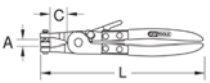





	A mm	L mm	g
115.1167	15-56	275,0	400

Hose clamp pliers

- With PVC dipped handle
- For spring pipe clamps
- Includes locking mechanism and ratchet function
- Chrome molybdenum

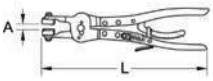





	A mm	C mm	L mm	g
115.1046	0-45	37,0	220,0	230

Hose clamp pliers, angled

- Suitable for correct assembly and disassembly of spring clamps
- 110° angled
- Turnable jaws
- With locking device
- Insulated handle
- Special tool steel

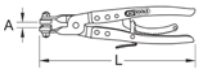





	A mm	L mm	g
115.1173	6-58	250,0	400

Hose clamp pliers type MU1

- For secure and correct dismantling and assembly of clamps
- Suitable for flat fitting and eccentric clamps
- Includes locking mechanism and ratchet function
- For difficult to reach clamps
- For new type and hard to access steel band clamps
- Special tool steel

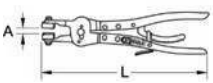


	A mm	L mm	g
115.1062	0-30	235,0	390

Hose clamp pliers type MU2

- For secure and correct dismantling and assembly of clamps
- Suitable for flat fitting and eccentric clamps
- Includes locking mechanism and ratchet function
- For difficult to reach clamps
- For new type and hard to access steel band clamps
- Special tool steel

Application range: VAG 2,0 TDI / MC:BKD, **Volkswagen** Passat from 2005, Touran, Golf V, **Škoda** Octavia, **Audi** A3 etc.



	A mm	L mm	g
115.1063	0-40	295,0	470

Hose clamp pliers type MU2

- Suitable for correct assembly and disassembly of spring clamps
- Ideal for deep seated spring clamps
- Turnable jaws
- Includes ratchet function
- Insulated handle
- Special tool steel

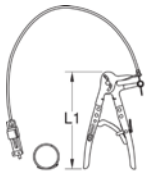



	A mm	L mm	g
115.1166	4-45	290,0	440

Hose clamp pliers type MU3

- For secure and correct dismantling and assembly of clamps
- Suitable for flat fitting and eccentric clamps
- With 600 mm bowden cable
- Adjustable length bowden cable
- Includes locking mechanism and ratchet function
- For difficult to reach clamps
- For new type and hard to access steel band clamps
- Special tool steel

Application range: VAG 2,0 TDI / MC:BKD, **Volkswagen** Passat from 2005,Touran, Golf V, **Škoda** Octavia, **Audi** A3



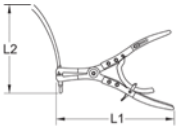
	Ø mm	L1 mm	L2 mm		g
115.1064	0 - 50	240,0	600,0	115.1066	540



Hose clamp pliers with double bowden cable

- With PVC dipped handle
- For spring pipe clamps
- With 600 mm bowden cable
- Adjustable length bowden cable
- Includes locking mechanism
- For difficult to reach clamps
- Special tool steel





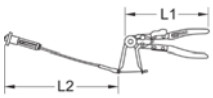


	Ø mm	L1 mm	L2 mm		g
115.1065	0 - 70	270,0	600,0	115.1065-1	540

Hose clamp pliers with bowden cable

- With PVC dipped handle
- For spring pipe clamps
- With 650 mm Bowden cable
- Includes ratchet function, locking mechanism and loosening lever
- Internal spring
- For difficult to reach clamps
- Chrome molybdenum



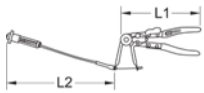




	Ø mm	L1 mm	L2 mm	g
115.1168	0 - 70	260,0	650,0	500

Hose clamp pliers with bowden cable

- For self-tensioning hose clamps
- In particular for fuel lines, cooling and washing water hoses
- With flat attachment for spring clamps with flat adjoining ends
- Opening and closing the clamps without damage to the hose also in hard to reach places
- With 650 mm Bowden cable
- Includes locking mechanism
- Self opening
- With PVC dipped handle
- Chrome molybdenum

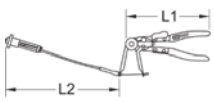


	Ø mm	L1 mm	L2 mm		g
115.1041	0 - 60	200,0	650,0	115.1041-1	470

Hose clamp pliers, VAG

- Suitable for assembly or disassembly of spring clamps with reducing ends
- With PVC dipped handle
- With 600 mm bowden cable
- Includes ratchet function, locking mechanism and loosening lever
- Internal spring
- For difficult to reach clamps
- Chrome molybdenum

Application range: VAG 2.0 TDI engines (BKD), especially suitably for hard to reach lower coolant hose

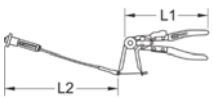


	Ø mm	L1 mm	L2 mm	g
115.1169	0 - 60	260,0	600,0	500

Hose clamp pliers with bowden cable

- Ideally suited for opening and closing hose clamps
- Suitable for hard to reach self-tensioning spring clamps
- With 590 mm strengthened Bowden cable
- Includes locking mechanism
- Internal spring
- The torsion of the pliers is reduced with strong clamps
- With quick change system for Bowden cable replacement
- Two component handle
- Strengthened steel

Application range: MUBEA and NORMA



	Ø mm	L1 mm	L2 mm		g
115.0901	15 - 54	260,0	730,0	115.0902	500



Clic and Clic-R hose clamp pliers

- For the correct assembly and disassembly of spring clamps
- With 600 mm Bowden cable for hard to reach areas
- Step-less locking mechanism
- Quick-release lever
- Simple handling
- Special tool steel





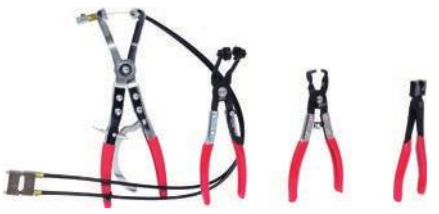
	Ø mm	L1 mm	L2 mm	g	
115.1189	0-50	210,0	600,0	330	

Automotive hose clamp pliers set

- Handle dip insulated
- Ideal for deep seated spring clamps
- Includes locking mechanism
- For self tensioning spring pipe clamps with 3 point mounting
- Self opening
- For opening and closing re/useable clic hose clamps, type Clic + Clic-R
- For difficult to reach clamps
- Special tool steel

Application area: For connecting and removing fuel, immersed ventilation, coolant, washer water and vacuum hoses etc.





			kg	
115.1104	4 pcs	Automotive hose clamp pliers set	1,12	

consists of:

		g	
115.1045	Hose clamp pliers (click type), 180mm	215	
115.1042	Hose clamp pliers (recessed/slot), 220mm	210	
115.1187	Hose clamp pliers with prism, 8-18mm	189	
115.1065	Hose clamp pliers (dbl bowden cable), 600mm	540	

Automotive hose clamp pliers set

- With PVC dipped handle
- For opening and closing of cobra hose clamps
- Swivel pressed jaws
- Includes locking mechanism and ratchet function
- Self opening mechanism
- For the dismantling and assembly of hose clamps
- Includes bowden cable
- Chrome molybdenum





			kg	
115.1055	7 pcs	Automotive hose clamp pliers set	4,00	

consists of:

		g	
115.1041	Hose clamp pliers (bowden cable), 650mm	470	
115.1042	Hose clamp pliers (recessed/slot), 220mm	210	
115.1043	Hose clamp pliers (crown profile), 220mm	240	
115.1044	Hose pliers, 195mm	190	
115.1045	Hose clamp pliers (click type), 180mm	215	
115.1046	Hose clamp pliers (recessed/slot),220mm	230	
115.1047	Hose clamp pliers (dbl cross slot),220mm	230	

Hose release pliers

- Suitable for releasing secured cooling hoses
- Securing screw for adjusting jaws
- Gentle on materials
- Lower power usage
- Simple operation
- Plastic handle
- Special tool steel





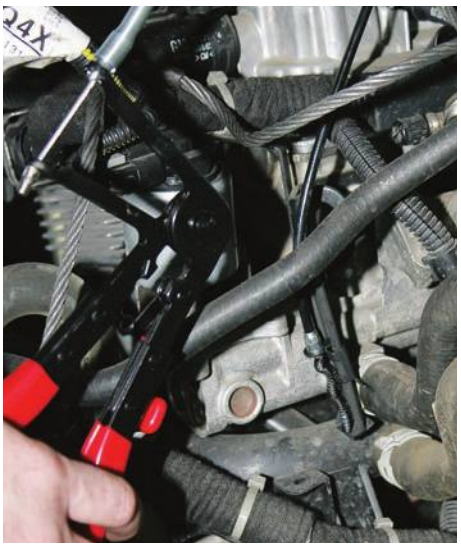
	Length mm	Ø mm	g	
115.1199	180,0	15-54	180	

Hose unscrewing pliers with increased unscrewing force

- Suitable for releasing secured cooling hoses
- Securing screw for adjusting jaws
- increased loosening force due to pulling cable
- Gentle on materials
- Lower power usage
- Simple operation
- Plastic handle
- Special tool steel



	Length mm	Ø mm	g	
115.1103	285,0	45-120	530	



RELEASE TOOLS

Unlocking tool set for VAG

- for professional and non-destructive unlocking of the suction pipes
- no damage to the suction pipes or connections
- fast and easy separation
- Contains 2 pieces as standard

Application range: Volkswagen Golf >2013, **Audi** A3, Q3 >2013, **Seat** Leon >2013, Ibiza >2008, Ateca, **Škoda** Octavia >2013 with 1.0 / 1.2 and 1.4 L engines



			g	
115.1069	2 pcs	Unlocking tool set for VAG	102	

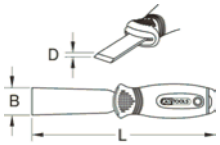
consists of:

		g	
150.2276	Unlocking tool, 62.7 mm	50	
150.2277	Unlocking tool, 78.4 mm	52	

GASKET SCRAPER

STAINLESS STEEL Chisel scraper

- Ideal for removing of stickers, seal and glue residues
- Also suitable for the removal and chiselling of plates or welding spots
- Continuous stainless steel blade that can be re sharpened
- With reinforcement eyelet
- With hammer cap on the handle
- With ergonomic moulded two component handle
- Suitable for use at extremely low temperatures
- Extreme resistance to intergranular corrosion and oxidation
- Extremely long service life
- Autoclavable (heating of the tools to over 100°C to kill germs)
- Rust-proof and acid resistant
- Stainless steel





	B mm	D mm	L mm	g	
907.2211	32,0	1,2	190,0	160	
907.2213	25,0	1,2	165,0	100	
907.2212	32,0	2,5	190,0	160	
907.2214	25,0	2,5	165,0	110	

STAINLESS STEEL Chisel scraper set

- Ideal for removing of stickers, seal and glue residues
- Also suitable for the removal and chiselling of plates or welding spots
- Continuous stainless steel blade that can be re sharpened
- With reinforcement eyelet
- With hammer cap on the handle
- With ergonomic moulded two component handle
- Suitable for use at extremely low temperatures
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- Extremely long service life
- Autoclavable (heating of the tools to over 100°C to kill germs)
- Rust-proof and acid resistant
- Stainless steel



			g	
907.2210	4 pcs	32 x 1,2; 32 x 2,5; 25 x 1,2; 25 x 2,5 mm	580	

Pinch weld scraper

- Ideal for removing of stickers, seal and glue residues
- With interchangeable spring steel blade
- Working length max. 115 mm
- Aluminium handle



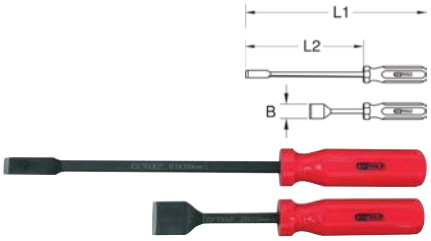




	B mm	L mm		g	
140.2282	13,0	240,0	140.2283	200	
140.2286	16,0	240,0	140.2287	200	
140.2288	19,0	240,0	140.2289	200	

Gasket scraper

- Ideal for removing of stickers, seal and glue residues
- Blades can be re-sharpened
- Blade 10° angled
- Extra long execution for reaching inaccessible areas
- For removing extremely stubborn gaskets and seals
- With ergonomic moulded one component handle



	B mm	L1 mm	L2 mm	g	
907.2231	12,5	200,0	100,0	120	
907.2232	25,0	200,0	100,0	140	
907.2233	12,5	300,0	200,0	180	
907.2234	25,0	300,0	200,0	200	

Gasket scraper set

- Ideal for removing of stickers, seal and glue residues
- Blades can be re-sharpened
- Blade 10° angled
- Extra long execution for reaching inaccessible areas
- For removing extremely stubborn gaskets and seals
- With ergonomic moulded one component handle



			kg	
907.2230	4 pcs	12,5 x 200; 25 x 200; 12,5 x 300; 25 x 300 mm	1,28	

Chisel scraper

- Ideal for removing stickers, seal and glue residues
- Also for removing extremely stubborn impurities and seal residue
- Blade 10° angled
- Blades can be re-sharpened
- Rust-proof and acid resistant
- Wooden handle





	B mm	L1 mm	L2 mm	g	
907.2266	15,0	175,0	50.0	42	
907.2267	20,0	185,0	60.0	50	
907.2268	30,0	190,0	65.0	57	

Chisel scraper set

- Ideal for removing stickers, seal and glue residues
- Also for removing extremely stubborn impurities and seal residue
- Blade 10° angled
- Blades can be re-sharpened
- Rust-proof and acid resistant
- Wooden handle



			g	
907.2270	3 pcs	15x175 - 20x185 - 30x190 mm	150	

Pinch weld scraper set

- Ideal for removing of stickers, seal and glue residues
- Simple blade change by loosening the knurled thumb screw on the chuck
- With 10 straight scraper blades 16 mm
- Scraper with two component handle



			g	
907.2215	11 pcs	Pinch weld scraper set	100	
1 x		907.2201		
10 x		16 mm		

Replacement blades:

	Width mm	Form	Content	g	
907.2202	12,0	straight	10	20	
907.2204	16,0	53° angled	10	20	
907.2203	16,0	straight	10	20	
907.2205	20,0	straight	10	40	

Knife scraper set

- Ideal for removing of stickers, seal and glue residues
- Simple blade change by loosening the knurled thumb screw on the chuck
- Practical storage system for changeable blades
- Suitable for many different application due to the wide range of blades
- Scraper with two component handle
- Professional universal knife with aluminium housing
- In durable plastic storage case





			g
907.2200	27 pcs	Knife scraper set	600

consists of:

		g
907.2170	Professional universal knife, with trapezoid blades	90
907.2201	2 component scraper handle	60

Replacement blades:

	Width mm	Form	Content	g
907.2202	12,0	straight	10	20
907.2203	16,0	straight	10	20
907.2204	16,0	53° angled	10	20
907.2205	20,0	straight	10	40
907.2206	19,0	torpedo form	10	60

carbide scraper

- ideal for removing stubborn impurities, sealant residues and surface treatment
- for burnt on pads on the exhaust, brakes etc.
- with a very hard-wearing carbide cutting element
- a solid blade with two scraping edges
- Extremely long service life
- works as a compression and a pulling blade
- With an ergonomic, moulded, one component handle
- With reinforcement eyelet





	Length mm	Width mm	g
907.2237	210,0	32,0	129

Gasket scraper set

- For removing seal residue, e.g. cylinder head seals
- With replacement blade
- Extra long execution for reaching inaccessible areas
- Angled blade head
- With ergonomic moulded two component handle
- Special tool steel





			g
907.2280	2 pcs	Gasket scraper set	180

consists of:

		g
907.2281	Scraper, 270 mm	155
907.2282	Scraper blade	5

Scraper blades

- 5 replacement blades for seal scraper 907.2280
- For removing seal residue, e.g. cylinder head seals
- For angled blade head
- Special tool steel



	Content	Length mm	Width mm	Height mm	g
907.2285	5	22,0	12,0	21,0	25

Scraper

- Ideal for removing of stickers, seal and glue residues
- With easily interchangeable and retractable blades
- With reinforcement eyelet
- Scraper blade retractable via spline end for protection
- With metal housing





	Length mm	Width mm		g
907.2240	110,0	39,0	911.8127	90

Scraper

- Ideal for removing of stickers, seal and glue residues
- With easily interchangeable blades
- With reinforcement eyelet
- Soft grip handle





	Length mm	Width mm		g
911.8126	160,0	38,0	911.8127	90

Scraper

- With easily interchangeable and retractable blades
- With reinforcement eyelet
- With metal housing
- Two component handle



	Width mm	Length mm		g
907.2242	40,0	145,0	911.8127	103

Replacement scraper blades

- For all standard scrapers
- SK steel
- In a carton

Application range: for the removal of labels on bumpers, front windscreens etc.





	Content	L mm	B mm	S mm	g
911.8127	5	40,0	19,5	0,29	40

WASHER HOOK TOOLS

Hook tool set

- Ideal for removing and use of O rings and seals
- Special tool steel



			g
550.1040	2 pcs	Hook tool set	30

consists of:

		g
550.1041	Hook, 90° short, 180° short bent	11
550.1042	Hook, 45° long, 90° long	11

Magnet and hook tool set

- Ideal for removing and use of O rings and seals
- With telescopic magnet attachment and replaceable hook
- Storage compartment in the handle for the various attachments
- Special tool steel

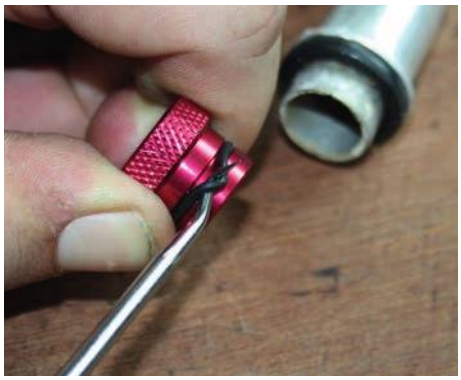




			g
550.1080	6 pcs	Magnet and hook tool set	70

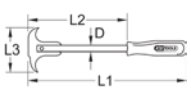
consists of:

		g
550.1081	Basic unit	35
550.1082	Telescopic magnet attachment, 90-390 mm	13
550.1083	Hook attachment, straight, 75 mm	5
550.1084	Hook attachment, 90°, 75 mm	5
550.1085	Hook attachment, 120°, 75 mm	5
550.1086	Hook attachment, lateral bend, 75 mm	5



Gasket ring dismantling tool

- sickle-shaped
- For the removal of washers
- Long durability through hardened leverage
- Universal usage
- One component handle
- Burnished
- Chrome vanadium





	L1 mm	L2 mm	L3 mm	D mm	g
550.1060	300,0	195,0	85,0	12,0	380

Hook tool set

- Ideal for removing and use of O rings and seals
- Two component handle
- Special tool steel





			g
550.1045	4 pcs	Hook tool set	120

consists of:

		g
550.1046	Hook, straight	27
550.1047	Hook, 45° offset	27
550.1048	Hook, 90° offset	27
550.1049	Hook, 135° bent	27

Master hook tool set

- Ideal for removing and use of O rings and seals
- Special tool steel





			g
550.1070	9 pcs	Master hook tool set	680

consists of:

		g
550.1046	Hook, straight	27
550.1047	Hook, 45° offset	27
550.1048	Hook, 90° offset	27
550.1049	Hook, 135° bent	27
550.1071	Hook, large, straight	91
550.1072	Hook, large, 90° bent	105

consists of:

		g
550.1073	Hook, large, sickle	88
550.1074	T hook, S form small, 120mm	42
550.1075	T hook, S form large, 165mm	96

SPECIAL SPANNER AND ADAPTER

Turbo system wrench for VAG TDI

- Ideal for loosening difficult to access nuts when assembling and disassembling the turbocharger
- Higher twisting angle due to special shape compared to standard spanners
- Angled ring spanner specially adapted to tight spaces
- 12 point
- Special tool steel

Application range: VAG diesel engines with turbocharger





3/8"

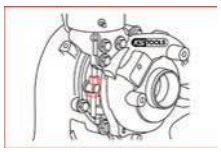
	mm	Depth mm	Length mm	g
150.2249	12	70,0	95,0	100

Turbo system wrench for VAG

- Perfect for releasing control shaft screw connections during assembly and disassembly of the pressure cell including position generator for charging pressure controllers on the exhaust turbocharger
- Enables the disassembly/assembly and adjustment of the control rod in the installed state
- Bent double ring spanner
- Can be used in conjunction with 150.2232
- Chrome vanadium

Application range: 2.0 l common rail engines, **VW** Golf (>2009), Golf (>2009), Eos (>2006), Jetta (>2006), Passat (>2006), Passat CC (>2009), Beetle (>2011), Scirocco (>2009), Tiguan (>2008), Transporter (>2010) **Audi** A3(>2004), TT (2008-2014) **Seat** Altea (>2006), Leon (2006-2012), Toledo (2006-2009) **Škoda** Octavia (2006-2013), Superb (2009-2015), Yeti (>2009)

Engine code: CAAA, CAAB, CAAD, CAAE, CCHB, CAAC, CFFD, CBDC, CLCA, CLJA, CBAA, CFFA, CJAA, CBAB, CTHC, CFFB, CFJA, CBBB, CBAC, CFGA, CRBC, CRLB, CBBA, CBDA, CBDA, CEGA, BKP, BMA, BMR, BKD, AZV





	mm	Length mm	g
150.2231	10x12	147,0	70

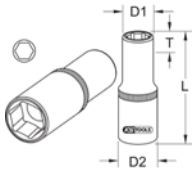
Turbocharger special 12-point socket spanner for VAG

- Perfect for releasing control shaft screw connections during assembly and disassembly of the pressure cell including position generator for charging pressure controllers on the exhaust turbocharger
- Enables the disassembly/assembly and adjustment of the control rod in the installed state
- Socket with side slot
- Can be used in conjunction with 150.2231
- 12 point
- Internal square drive to DIN 3120 / ISO 1174
- Long execution
- For manual operation
- Chrome vanadium

Application range: 2.0 l common rail engines, **Volkswagen** Golf (>2009), Golf (>2009), Eos (>2006), Jetta (>2006), Passat (>2006), Passat CC (>2009), Beetle (>2011), Scirocco (>2009), Tiguan (>2008), Transporter (>2010) **Audi** A3(>2004), TT (2008-2014) **Seat** Altea (>2006), Leon (2006-2012), Toledo (2006-2009) **Škoda** Octavia (2006-2013), Superb (2009-2015), Yeti (>2009)

Engine code: CAAA, CAAB, CAAD, CAAE, CCHB, CAAC, CFFD, CBDC, CLCA, CLJA, CBAA, CFFA, CJAA, CBAB, CTHC, CFFB, CFJA, CBBB, CBAC, CFGA, CRBC, CRLB, CBBA, CBDA, CBDA, CEGA, BKP, BMA, BMR, BKD, AZV







1/4"

	mm	D1 mm	D2 mm	L mm	T mm	g	
150.2232	10	15,0	15,0	57,0	49,0	34	

Ratchet ring spanner set

- 12 point
- Exact gearing with 72 teeth
- 180° revolving head
- 360° lockable ratchet ring spanner
- with interchangeable ring wrench inserts
- ergonomic 2-component handle
- High quality finish
- Chrome vanadium
- In durable plastic storage case



			kg	
503.4820	13 pcs	Ratchet ring spanner set	1,35	

consists of:

		g	
503.4821	Special ratcheting spanner	251	
503.4822	Ring spanner insert, 8 mm	27	
503.4823	Ring spanner insert, 9 mm	27	
503.4824	Ring spanner insert, 10 mm	39	
503.4825	Ring spanner insert, 11 mm	39	
503.4826	Ring spanner insert, 12 mm	47	
503.4827	Ring spanner insert, 13 mm	48	
503.4828	Ring spanner insert, 14 mm	64	
503.4829	Ring spanner insert, 15 mm	64	
503.4831	Ring spanner insert, 16 mm	87	
503.4832	Ring spanner insert, 17 mm	83	
503.4833	Ring spanner insert, 18 mm	102	
503.4834	Ring spanner insert, 19 mm	104	

Turbocharger oil pressure adapter

- Quick and accurate oil pressure testing directly on the turbocharger before and after turbocharger replacement
- High time and cost savings due to early identification of blocked oil screen
- Avoids complaints due to repeated turbocharger damage
- With quick coupling adapter
- Special tool steel



1/2"

	Length mm	g	
150.1923	70,0	60	

Oil pressure testing equipment

- Quick safe and problem free testing of the oil pressure on the engine
- Adaption with oil pressure sensor thread
- Includes shock-proof precision manometer diameter 75.00 mm 0 - 10 bar
- Flexible tube (L=1.3 m) with anti-kink device, decompression valve and quick coupling
- incl. 10 adaptors
- Replacement washers are available in the set
- Universal usage
- Sturdy design
- In durable plastic storage case





			kg	
150.1920	12 pcs	Oil pressure testing equipment	1,89	

		g	
150.1921	Manometer with tube, 10 bar	594	
150.1922	90° Adaptor angled	44	
150.1920-1	Screw adaptor no 1, R1/8"	23	
150.1920-10	Screw adaptor no 10, M18 x 1.5	34	
150.1920-2	Screw adaptor no 2, 1/8" x 27 NPT	24	
150.1920-3	Screw adaptor no 3, 1/4" x 18 NPT	33	
150.1920-4	Screw adaptor no 4, 3/8" x 20 UNF	23	
150.1920-5	Screw adaptor no 5, 1/2" x 20 UNF	27	
150.1920-6	Screw adaptor no 6, M10 x 1.0	24	
150.1920-7	Screw adaptor no 7, M12 x 1.5	24	
150.1920-8	Screw adaptor no 8, M14 x 1.5	29	
150.1920-9	Screw adaptor no 9, M16 x 1.5	33	

VACUUM TESTING TOOLS

Pressure and vacuum pump set

- For ventilating of smaller brake parts and for inspection of different areas including Low pressure and pressure functions
- Suitable for almost all current vehicles
- Robust metal execution
- Compact pistol form, one man operation
- Shock proof pressure and low pressure manometer with double scale
- Includes extensive adaptor assortment
- Readable in bar or psi
- In durable plastic storage case

Application range: Brake bleeding, test of the low pressure attitude the fuel pressure regulator, turbo charger valve, exhaust gas return valve and brake servos







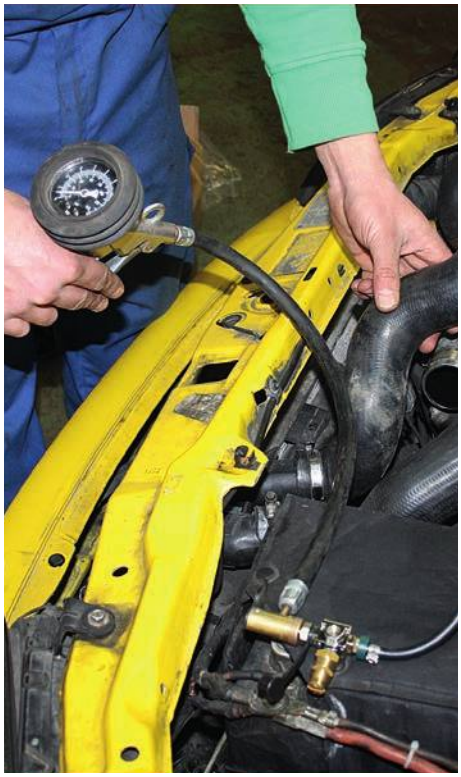
Technical data:

Working range: vacuum up to -0,7 bar -20 Hg
pressure up to +1.5 bar 43,5 psi

			kg	
150.1900	7 pcs	Pressure and vacuum pump set	1,80	

consists of:

		g	
150.1901	Pressure and vacuum pump	730	
150.1902	Drip measuring beaker, 120 ml	44	
150.1903	Supply measuring beaker, 120ml	44	
150.1904	Adaptor set, 14 pcs	15	
150.1905	Connection hose and sucker	23	
150.1906	Connection point set, 4 pcs	9	
150.1907	Connection hose set, 2 pcs	45	



PRESSURE TESTING TOOLS

Turbocharger charged air system inlet test adapter, 2 stages

- Inlet adapter for closing the charged air system
- For passenger car and commercial vehicle turbo engines, diesel and petrol
- Allows rapid diagnosis by pressure testing the charged air system with hose internal diameters 31.0 - 110.0 mm when fitted
- Time-saving and professional testing of leaking charged air cooler and hidden cracks in the charged air hoses
- Also for checking the tightness of the AGR valve
- Suitable for all current hoses on the charged air system that are not fitted with a bayonet connector using the multi-stage offset adapter
- In the event of pressure loss, the leak can be quickly and simply localised by scanning the part or using leak spray
- Can be used together with compatible counter stopper adapters and air inlet system adapters and in combination with a conventional tyre inflator

Application range: Intercooler systems





		g	
150.2521	2-stage inlet adapter, 31 x 38 mm	80	
150.2522	2-stage inlet adapter, 46 x 51 mm	120	
150.2523	2-stage inlet adapter, 55 x 60 mm	160	
150.2524	2-stage inlet adapter, 65 x 70 mm	200	
150.2525	2-stage inlet adapter, 75 x 80 mm	220	
150.2526	2-stage inlet adapter, 85 x 90 mm	260	
150.2527	2-stage inlet adapter, 95 x 100 mm	300	
150.2528	2-stage inlet adapter, 105 x 110 mm	340	

Turbocharger charged air system counter stoppers, 2 stages

- Counter stoppers for closing the charged air system
- For passenger car and commercial vehicle turbo engines, diesel and petrol
- Allows rapid diagnosis by pressure testing the charged air system with hose internal diameters 31.0 - 110.0 mm when fitted
- Time-saving and professional testing of leaking charged air cooler and hidden cracks in the charged air hoses
- Also for checking the tightness of the AGR valve
- Suitable for all current hoses on the charged air system that are not fitted with a bayonet connector using the multi-stage offset adapter
- In the event of pressure loss, the leak can be quickly and simply localised by scanning the part or using leak spray
- Can be used together with compatible inlet test adapters and air inlet system adapters and in combination with a conventional tyre inflator

Application range: Intercooler systems





		g	
150.2529	2-stage counter-stopper adapter, 31 x 38 mm	100	
150.2530	2-stage counter-stopper adapter, 46 x 51 mm	140	
150.2531	2-stage counter-stopper adapter, 55 x 60 mm	160	
150.2532	2-stage counter-stopper adapter, 65 x 70 mm	200	
150.2533	2-stage counter-stopper adapter, 75 x 80 mm	240	
150.2534	2-stage counter-stopper adapter, 85 x 90 mm	260	

Turbocharger charged air system air inlet adapter with hose

- Suitable for 2-stage turbocharger charged air system test adapter
- For passenger car and commercial vehicle turbo engines, diesel and petrol
- Time-saving and professional testing of leaking charged air cooler and hidden cracks in the charged air hoses
- Also for checking the tightness of the AGR valve
- In the event of pressure loss, the leak can be quickly and simply localised by scanning the part or using leak spray
- With integrated overpressure safety valve - opens at max. 1.8 bar
- The pressure gauge on the tyre inflator also indicates pressure loss
- Can be used together with an inlet test adapter and counter stopper and in combination with a conventional tyre inflator

Application range: Intercooler systems





	Length mm	g	
150.1894	360,0	120	

Turbo system pressure tester kit with stepped adaptor

- For passenger car and commercial vehicle turbo engines, diesel and petrol
- Allows rapid diagnosis by pressure testing the charged air system with hose internal diameters 31.0 - 110.0 mm when fitted
- Time-saving and professional testing of leaking charged air cooler and hidden cracks in the charged air hoses
- Also for checking the tightness of the AGR valve
- Suitable for all current hoses on the charged air system that are not fitted with a bayonet connector using the multi-stage offset adapter
- In the event of pressure loss, the leak can be quickly and simply localised by scanning the part or using leak spray
- With integrated overpressure safety valve - opens at max. 1.8 bar
- Can be used in conjunction with conventional tyre inflators
- The pressure gauge on the tyre inflator also indicates pressure loss
- In durable plastic storage case

Application range: Intercooler systems





			kg	
150.2520	17 pcs	Turbo system pressure tester kit with stepped adaptor	4,00	

consists of:

		g	
150.2521	2-stage inlet adapter, 31 x 38 mm	80	
150.2522	2-stage inlet adapter, 46 x 51 mm	120	
150.2523	2-stage inlet adapter, 55 x 60 mm	160	
150.2524	2-stage inlet adapter, 65 x 70 mm	200	
150.2525	2-stage inlet adapter, 75 x 80 mm	220	
150.2526	2-stage inlet adapter, 85 x 90 mm	260	
150.2527	2-stage inlet adapter, 95 x 100 mm	300	
150.2528	2-stage inlet adapter, 105 x 110 mm	340	
150.2529	2-stage counter-stopper adapter, 31 x 38 mm	100	
150.2530	2-stage counter-stopper adapter, 46 x 51 mm	140	
150.2531	2-stage counter-stopper adapter, 55 x 60 mm	160	
150.2532	2-stage counter-stopper adapter, 65 x 70 mm	200	
150.2533	2-stage counter-stopper adapter, 75 x 80 mm	240	
150.2534	2-stage counter-stopper adapter, 85 x 90 mm	260	
150.2535	2-stage counter-stopper adapter, 95 x 100 mm	300	
150.2536	2-stage counter-stopper adapter, 105 x 110 mm	340	
150.1894	Universal air inlet system adapter with hose for 150.2520	120	



Turbocharger charged air system inlet test adapter, bayonet

- Inlet adapter for closing the charged air system
- For passenger car and commercial vehicle turbo engines, diesel and petrol
- Allows rapid diagnosis by pressure testing the charged air system with bayonet connector diameters 31.0 - 61.0 mm when fitted
- Time-saving and professional testing of leaking charged air cooler and hidden cracks in the charged air hoses
- Also for checking the tightness of the AGR valve
- Suitable for all current hoses on the charged air system that are fitted with a bayonet connector
- In the event of pressure loss, the leak can be quickly and simply localised by scanning the part or using leak spray
- Can be used together with compatible counter stopper adapters and air inlet system adapters and in combination with a conventional tyre inflator





		g	
150.1826	Bayonet inlet adapter, Ø 31 mm	80	
150.1827	Bayonet inlet adapter, Ø 38 mm	85	
150.1828	Bayonet inlet adapter, Ø 46 mm	90	
150.1829	Bayonet inlet adapter, Ø 51 mm	95	
150.1831	Bayonet inlet adapter, Ø 56 mm	100	
150.1832	Bayonet inlet adapter, Ø 61 mm	105	

Turbocharger charged air system counter stoppers, bayonet

- Counter stoppers for closing the charged air system
- For passenger car and commercial vehicle turbo engines, diesel and petrol
- Allows rapid diagnosis by pressure testing the charged air system with bayonet connector diameters 31.0 - 61.0 mm when fitted
- Time-saving and professional testing of leaking charged air cooler and hidden cracks in the charged air hoses
- Also for checking the tightness of the AGR valve
- Suitable for all current hoses on the charged air system that are fitted with a bayonet connector
- In the event of pressure loss, the leak can be quickly and simply localised by scanning the part or using leak spray
- Can be used together with compatible inlet test adapters and air inlet system adapters and in combination with a conventional tyre inflator





		g	
150.1833	Bayonet counter stopper adapter, Ø 31 mm	60	
150.1834	Bayonet counter stopper adapter, Ø 38 mm	65	
150.1843	Bayonet counter stopper adapter, Ø 46 mm	70	
150.1844	Bayonet counter stopper adapter, Ø 51 mm	75	
150.1876	Bayonet counter stopper adapter, Ø 56 mm	80	
150.1877	Bayonet counter stopper adapter, Ø 61 mm	85	



Turbocharger charged air system air inlet adapter with hose

- Compatible with the bayonet turbocharger charged air system test adapter
- For passenger car and commercial vehicle turbo engines, diesel and petrol
- Time-saving and professional testing of leaking charged air cooler and hidden cracks in the charged air hoses
- Also for checking the tightness of the AGR valve
- In the event of pressure loss, the leak can be quickly and simply localised by scanning the part or using leak spray
- With integrated overpressure safety valve - opens at max. 1.8 bar
- The pressure gauge on the tyre inflator also indicates pressure loss
- Can be used together with an inlet test adapter and counter stopper and in combination with a conventional tyre inflator





	Total length mm	g	
150.1896	360,0	120	



Turbo system pressure tester kit with bayonet adaptor

- For charged passenger car engines, diesel and petrol
- Allows rapid diagnosis by pressure testing the charged air system with bayonet connector diameters 31.0 - 61.0 mm
- Time-saving and professional testing of leaking charged air cooler and hidden cracks in the charged air hoses
- Also for checking the tightness of the AGR valve
- Suitable for all current hoses on the charged air system that are fitted with a bayonet connector
- In the event of pressure loss, the leak can be quickly and simply localised by scanning the part or using leak spray
- With integrated overpressure safety valve - opens at max. 1.8 bar
- Can be used in conjunction with conventional tyre inflators
- The pressure gauge on the tyre inflator also indicates pressure loss
- In durable plastic storage case

Application range: Charged air systems for passenger cars





			kg	
150.1825	13 pcs	Turbo system pressure tester kit with bayonet adaptor	2,56	

consists of:

		g	
150.1826	Bayonet inlet adapter, Ø 31 mm	80	
150.1827	Bayonet inlet adapter, Ø 38 mm	85	
150.1828	Bayonet inlet adapter, Ø 46 mm	90	
150.1829	Bayonet inlet adapter, Ø 51 mm	95	
150.1831	Bayonet inlet adapter, Ø 56 mm	100	
150.1832	Bayonet inlet adapter, Ø 61 mm	105	
150.1833	Bayonet counter stopper adapter, Ø 31 mm	60	
150.1834	Bayonet counter stopper adapter, Ø 38 mm	65	
150.1843	Bayonet counter stopper adapter, Ø 46 mm	70	
150.1844	Bayonet counter stopper adapter, Ø 51 mm	75	
150.1876	Bayonet counter stopper adapter, Ø 56 mm	80	
150.1877	Bayonet counter stopper adapter, Ø 61 mm	85	
150.1896	Universal air inlet system adapter with hose for 150.1825	120	

TESTING ACCESSORIES

Calibrated tyre filling gauge

- For one handed operation with ergonomic design
- with rubber-coated manometer
- Manometer with bar scale
- With filling lever and pressure release button
- Hose with integrated locking male nipple
- With hanging hole
- Includes 1/4" coupling connector
- Robust rubber coated housing



Technical data:

Working range:	0 - 10 bar
Hose length:	400 mm
Operating pressure:	max. 6,3 bar (90 psi)
Connection thread:	1/4"PT

515.1960	Calibrated tyre filling gauge	450	

Tyre filling gauge

- For one handed operation with ergonomic design
- with rubber-coated manometer
- manometer with bar and psi scale
- With filling lever and pressure release button
- long hose with integrated moment plug nipple
- With hanging hole
- Includes 1/4" coupling connector
- Robust rubber coated housing



Technical data:

Working range:	0 - 11 bar
	9 - 160 psi
Hose length:	490 mm
Operating pressure:	max 6,3 bar (90 psi)
Connection thread:	1/4"PT

515.1950	Tyre filling gauge	600	

Tyre filling gauge

- For one hand operation
- with rubber-coated manometer
- Manometer with bar and psi scale
- With filling lever and pressure release button
- Hose with integrated locking male nipple
- Robust rubber coated housing



Technical data:

Working range:	0 - 15 bar
	0 - 220 psi
Hose length:	350 mm
Operating pressure:	11 bar (160 psi)
Connection thread:	1/4"PT

515.1905	Tyre filling gauge	120	



Tyre filling gauge

- For one handed operation with ergonomic design
- with rubber-coated manometer
- manometer with bar and psi scale
- With filling lever and pressure release button
- extra long hose with integrated instant nipple plug
- With hanging hole
- Includes 1/4" coupling connector
- Robust rubber coated housing





Technical data:

Working range:	0 - 12 bar
	0 - 174 psi
Hose length:	1000 mm
Operating pressure:	6,3 bar (90 psi)
Connection thread:	1/4"PT

515.1920	Tyre filling gauge	420	

Digital tyre filling gauge

- For one hand operation
- With rubber coated display
- Manometer with digital display
- With filling lever and pressure release button
- Hose with integrated locking male nipple
- With automatic switch-on and off
- Large LCD display
- Includes 1/4" coupling connector
- Switchable: Bar, PSI, KPA, Kgf/cm³





Technical data:

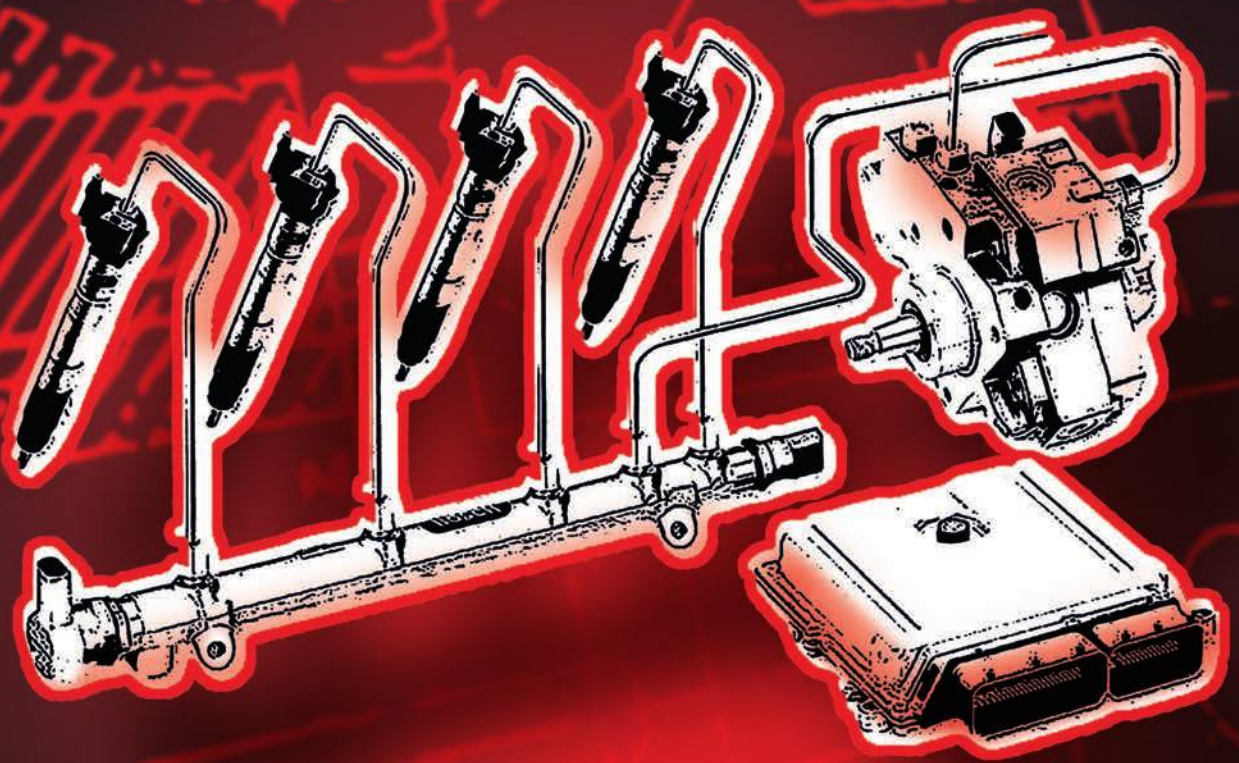
Working range:	0 - 14 bar
	0 - 200 psi
Battery:	2x 1,5V (AAA)
Hose length:	500 mm
Operating pressure:	max. 6,3 bar (90 psi)
Working temperature:	- 15°C to + 60°C
Connection thread:	1/4"PT

515.1970	Digital tyre filling gauge	490	


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7

ENGINE - FUEL INJECTION SYSTEM



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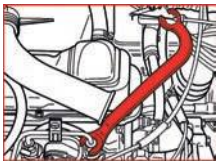
	FROM PAGE
FUEL INJECTOR RAIL WRENCH	240
PRE-COMBUSTION CHAMBER SOCKET WRENCH	244
RELEASE TOOLS	244
INSPECTION AND TEST TOOLS	245
PNEUMATIC ADAPTER FOR GLOW PLUG BORES	245
INJECTOR REMOVAL TOOLS	246
BORING TOOLS FOR CLAMPING SCREWS	248
INJECTOR WASHER EXTRACTOR	249
INJECTOR AND INJECTOR SEAT CLEANING	249
INJECTOR SHAFT CLEANING	251
INJECTOR PUMP WRENCH	252
PUMP WHEEL EXTRACTOR	252
LOCKRING DRIVER AND ADJUSTMENT TOOLS	253
INJECTOR PUMP ADJUSTING TOOLS	254

FUEL INJECTOR RAIL WRENCH

Double open ring injection spanner

- Special length and design
- For the assembly and disassembly of hard-to-reach injection pipes
- Makes possible simple and time-saving work
- Wrench has single-sided head
- Open 12-point
- Matt finish
- Chrome vanadium

Application range: Audi, **Volkswagen**, **Škoda** etc. e.g. for 1.6 l 4 cyl., 2.0 l 5 cyl., 2.4 l 6 cyl. diesel engines



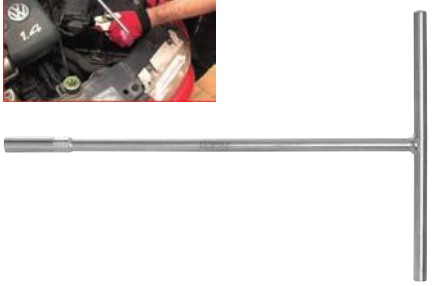


	mm	Length mm	g	
517.0057	17x17	220,0	140	

T-handle box wrench

- 6 point
- With T-handle
- Matt finish
- Chrome vanadium





	mm	Length mm	Width mm	g	
517.1181	8	300,0	200,0	310	
517.1182	9	300,0	200,0	300	
517.1183	10	300,0	200,0	310	
517.1184	11	300,0	200,0	320	
517.1185	12	300,0	200,0	320	
517.1186	13	300,0	200,0	330	
517.1187	14	300,0	200,0	310	



T-handle box wrench set

- 6 point
- With T-handle
- Matt finish
- Chrome vanadium





			kg	
517.1180	7 pcs	T-handle box wrench set	2,50	

consists of:

		g	
517.1181	T-handle box wrench, 300mm, 8mm	310	
517.1182	T-handle box wrench, 300mm, 9mm	300	
517.1183	T-handle box wrench, 300mm, 10mm	310	
517.1184	T-handle box wrench, 300mm, 11mm	320	
517.1185	T-handle box wrench, 300mm, 12mm	320	
517.1186	T-handle box wrench, 300mm, 13mm	330	
517.1187	T-handle box wrench, 300mm, 14mm	310	

Oxygen sensor and injector line key

- 12 point
- Special socket for mounting and dismounting hard-to-reach lambda sensors and injector lines
- time-saving work even on lambda probes and injector lines that are difficult to access
- For professional and damage-free use
- Universal application and highly durable
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Matt finish
- Chrome vanadium



1/2"

	mm	Length mm	g	
152.1401	17,0	80,0	150	

Open box head spanner

- 12 point
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Special length and design
- For most current vehicle types
- For the assembly and disassembly of hard-to-reach injection pipes
- Makes possible simple and time-saving work
- With opening
- Special tool steel





	mm	Length mm	g	
913.1211	12	100,0	122	
913.1212	14	100,0	129	
913.1213	16	100,0	146	
913.1214	17	100,0	140	
913.1215	18	100,0	145	
913.1216	19	100,0	147	

Open box head spanner set

- 12 point
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Special length and design
- For most current vehicle types
- For the assembly and disassembly of hard-to-reach injection pipes
- Makes possible simple and time-saving work
- With opening
- Special tool steel
- In durable plastic storage case





1/2"

			kg	
913.1210	6 pcs	12 - 14 - 16 - 17 - 18 - 19 mm	1,13	

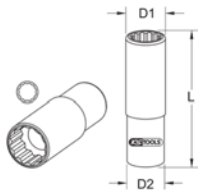
consists of:

		g	
913.1211	Open box head spanner, 1/2", 12mm	122	
913.1212	Open box head spanner, 1/2", 14mm	129	
913.1213	Open box head spanner, 1/2", 16mm	146	
913.1214	Open box head spanner, 1/2", 17mm	140	
913.1215	Open box head spanner, 1/2", 18mm	145	
913.1216	Open box head spanner, 1/2", 19mm	147	

Injector-socket

- 12 point
- Ideal for assembly and disassembly of injectors
- Internal square to DIN 3120 / ISO 1174 with ball reception
- For manual operation
- Matt finish
- Chrome vanadium

Application range: Volkswagen Polo 1.3 l Diesel-Motor, **Nissan** Terrano TD 25, 27 from 1988





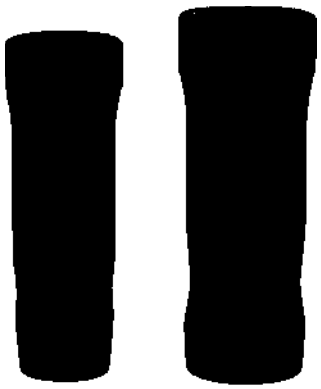
1/2"

	mm	D1 mm	D2 mm	L mm	g	
150.2311	22	31,0	25,0	85,0	170	

Injector wrench set for BMW

- 12 point
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Special length and design
- For the assembly and disassembly of hard-to-reach injection pipes
- Makes possible simple and time-saving work
- Opening allows 180° rotation
- Phosphate finish
- Chrome molybdenum

Application range: BMW (engine code: N54, N63 and S63)



3/8" 1/2"

			g
405.0150	2 pcs	Injector wrench set for BMW	195

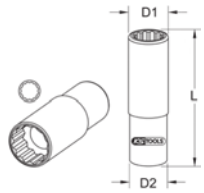
consists of:

		g
405.0151	3/8" injection line wrench for BMW, 14 mm	76
405.0152	1/2" injection line wrench for BMW, 17 mm	120

Injector-socket

- 12 point
- Ideal for assembly and disassembly of injectors
- Internal square to DIN 3120 / ISO 1174 with ball reception
- For manual operation
- Matt finish
- Chrome vanadium







1/2"

	mm	D1 mm	D2 mm	L mm	g
150.2312	27	37,0	30,0	85,0	260

Injector-socket

- 6 point
- Ideal for assembly and disassembly of injectors
- Internal square to DIN 3120 / ISO 1174 with ball reception
- For manual operation
- Burnished
- Chrome vanadium





	mm	D1 mm	D2 mm	L mm	g
150.2314	27	35,3	36,7	110,0	260

Injector-socket

- 6 point
- Ideal for assembly and disassembly of injectors
- With side window and opening for connection to nozzle head (E-connection)
- Internal square to DIN 3120 / ISO 1174 with ball reception
- For manual operation
- Burnished
- Special tool steel





1/2"

	mm	Ø mm	mm	L mm	g
150.2391	25	37,0	22,0	100,0	300

Injector-socket

- 6 point
- Ideal for assembly and disassembly of injectors
- With side window and opening for connection to nozzle head (E-connection)
- Internal square to DIN 3120 / ISO 1174 with ball reception
- For manual operation
- Burnished
- Special tool steel

Application range: 2.0 l DW 10 HDI engines etc.





1/2"

	mm	Ø mm	mm	L mm	g
150.2307	27	38,0	22,0	100,0	280

Injector-socket

- 6 point
- Ideal for assembly and disassembly of injectors
- With side window and opening for connection to nozzle head (E-connection)
- Internal square to DIN 3120 / ISO 1174 with ball reception
- For manual operation
- Burnished
- Special tool steel

Application range: DCI and HDI engines etc.





1/2"

	mm	Ø mm	mm	L mm	g
150.2308	29	42,0	22,0	100,0	340

Injector-socket

- 6 point
- Ideal for assembly and disassembly of injectors
- With side window and opening for connection to nozzle head (E-connection)
- Internal square to DIN 3120 / ISO 1174 with ball reception
- For manual operation
- Burnished
- Special tool steel

Application range: Renault, **Nissan**, 1.9 l F9Q engines etc.





1/2"

	mm	Ø mm	mm	L mm	g
150.2309	30	43,0	22,0	100,0	360



Injector-socket set

- 6 point
- Ideal for assembly and disassembly of injectors
- With side window and opening for connection to nozzle head (E-connection)
- Internal square to DIN 3120 / ISO 1174 with ball reception
- For manual operation
- Burnished
- Special tool steel
- In durable plastic storage case





1/2"

		kg	
150.2310	4 pcs	Injector-socket set	1,56	

consists of:

		g	
150.2391	1/2" injector nozzle socket, 25.0 mm	300	
150.2307	1/2" Injector socket, 27mm	280	
150.2308	1/2" Injector socket, 29mm	340	
150.2309	1/2" Injector socket, 30mm	360	

Socket for external 12-sided counter-holder

- 12 point
- ideally suited for mounting and dismounting injection nozzles and the rear shock absorbers
- Internal square to DIN 3120 / ISO 1174 with ball reception
- With a side window for guiding the cable of the motion sensor and the return pipe
- For manual operation
- Phosphate finish
- Chrome molybdenum





1/2"

	mm	D1 mm	D2 mm	L mm	g	
150.9541	21	32,0	34,0	90,0	300	

Injector-socket

- 12 point
- Ideal for assembly and disassembly of injectors
- Internal square to DIN 3120 / ISO 1174 with ball reception
- With a side window for guiding the cable of the motion sensor and the return pipe
- For manual operation
- Burnished
- Special tool steel

Application range: Alfa Romeo, **Chrysler**, Rover, **MAN** 2.5TD





1/2"

	mm	D1 mm	D2 mm	L mm	g	
150.2322	28	40,0	33,0	78,0	280	

Diesel injector socket

- 6 point
- Special socket key for dismantling and assembly of injectors
- For professional and damage-free use
- Internal square to DIN 3120 / ISO 1174 with ball reception
- Ideally suited for commercial vehicles, light commercial, SUV, etc
- Black, tempered surface
- Special tool steel

Application range: Mercedes, Motor 604 / 605 / 606





1/2"

	mm	L mm	g	
455.0034	22	110,0	250	

Diesel injector socket

- 12 point
- Special socket key for dismantling and assembly of injectors
- For professional and damage-free use
- Internal square to DIN 3120 / ISO 1174 with ball reception
- Ideally suited for commercial vehicles, light commercial, SUV, etc
- Black, tempered surface
- Special tool steel

Application range: Mercedes Actros, Motor 457 / 541 / 542, **Ford** Maverick 2,7 TDI, **Nissan** Terrano TD 2,5L / 2,7L, **Opel** Corsa 1,5D / 1,7 TD, **Isuzu**





1/2"

	mm	L mm	g	
455.0033	22	80,0	250	

Diesel injector socket

- 12 point
- Special socket key for dismantling and assembly of injectors
- For professional and damage-free use
- Internal square to DIN 3120 / ISO 1174 with ball reception
- Ideally suited for commercial vehicles, light commercial, SUV, etc
- Black, tempered surface
- Special tool steel

Application range: Suitable for diesel engines from **Fiat**, **Ford**, **Mercedes** and **Volkswagen** (vans and passenger cars), **MAN** 2,5 TD





1/2"

	mm	L mm	g	
455.0032	27	78,0	250	

Diesel injector socket

- 12 point
- Special socket key for dismantling and assembly of injectors
- For professional and damage-free use
- Internal square to DIN 3120 / ISO 1174 with ball reception
- Ideally suited for commercial vehicles, light commercial, SUV, etc
- Black, tempered surface
- Special tool steel

Application range: MAN 6 cylinder in line D 0226, **Chrysler** Voyager, **Jeep** Cherokee, **Opel** Frontera VM 41 B, Rover, **Landrover** Discovery Motor VM 2,5L TD





1/2"

	mm	L mm	g	
455.0031	28	78,0	250	

Diesel injector socket set

- Special socket key for dismantling and assembly of injectors
- For professional and damage-free use
- Internal square to DIN 3120 / ISO 1174 with ball reception
- Ideally suited for commercial vehicles, light commercial, SUV, etc
- Black, tempered surface
- Special tool steel
- In durable plastic storage case





1/2"

		kg	
455.0030	4 pcs	Diesel injector socket set	1,10	

consists of:

455.0031	1/2" Diesel injector socket 12 point, 28mm	250
455.0032	1/2" Diesel injector socket 12 point, 27mm	250
455.0033	1/2" Diesel injector socket 12 point, 22mm	250
455.0034	1/2" Diesel injector socket 6 point, 22mm	250

Injector-socket with bore hole

- Hexagon socket with bore hole
- Ideal for assembly and disassembly of Common Rail couplings
- Internal square to DIN 3120 / ISO 1174 with ball reception
- For manual operation
- Mirror polished
- Chrome vanadium

Application range: Bosch injectors in DCI and HDI engines etc.





1/2"

	mm	D mm	L mm	T mm	
152.1057	10	22,0	75,0	35,0	100

Injector socket

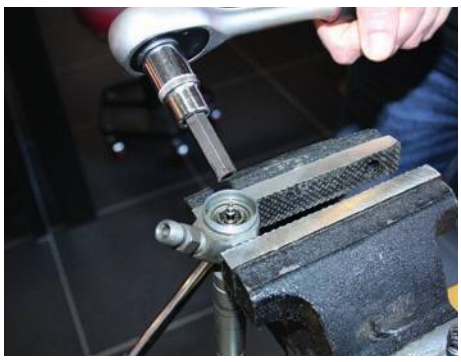
- 6 point
- Ideal for assembly and disassembly of injectors
- With side window and opening for connection to nozzle head (E-connection)
- Internal square to DIN 3120 / ISO 1174 with ball reception
- External drive hexagonal socket 22.0 mm
- For manual operation
- Burnished
- Special tool steel





1/2"

	mm	Ø mm	Total length mm	
152.1195	25,0	37,0	100,0	270



Injector socket

- 6 point
- Ideal for assembly and disassembly of injectors
- With side window and opening for connection to nozzle head (E-connection)
- Internal square to DIN 3120 / ISO 1174 with ball reception
- External drive hexagonal socket 22.0 mm
- For manual operation
- Burnished
- Special tool steel

Application range: 2.0 l DW 10 HDI engines etc.





1/2"

	mm	Ø mm	Total length mm	
152.1196	27,0	38,0	100,0	270

Injector socket

- 6 point
- Ideal for assembly and disassembly of injectors
- With side window and opening for connection to nozzle head (E-connection)
- Internal square to DIN 3120 / ISO 1174 with ball reception
- Opened design
- For damage-free assembly and disassembly
- Tempered surface
- Special tool steel

Application range: Mercedes A- and B-Class, **Fiat** 1.3MJ





1/2"

	mm	Ø mm	Total length mm	
152.1058	29,0	42,0	78,0	274

Injector socket

- 6 point
- Ideal for assembly and disassembly of injectors
- With side window and opening for connection to nozzle head (E-connection)
- Internal square to DIN 3120 / ISO 1174 with ball reception
- External drive hexagonal socket 22.0 mm
- For manual operation
- Burnished
- Special tool steel

Application range: Mercedes A- and B-Class, **Fiat** 1.3MJ





1/2"

	mm	Ø mm	Total length mm	
152.1197	29,0	42,0	100,0	342

Injector socket

- 6 point
- Ideal for assembly and disassembly of injectors
- With side window and opening for connection to nozzle head (E-connection)
- Internal square to DIN 3120 / ISO 1174 with ball reception
- External drive hexagonal socket 22.0 mm
- For manual operation
- Burnished
- Special tool steel

Application range: Renault, **Nissan**, 1.9 l F9Q engines etc.



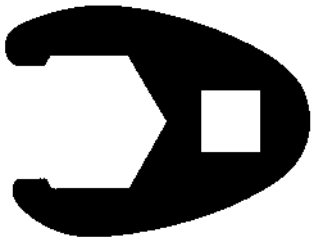


1/2"

	mm	Ø mm	Total length mm	
152.1198	30,0	43,0	100,0	358

Crawfoot wrench, hexagonal

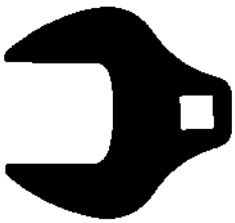
- 6 point
- Internal square drive
- For tightening and loosening pipe connections
- For manual operation
- Slim execution
- For difficult to access areas
- Burnished
- Special tool steel



	□	mm	
913.1321	3/8	17	72
913.1322	3/8	18	74
913.1323	3/8	19	75
913.1324	1/2	22	109
913.1325	1/2	24	127
913.1326	1/2	27	135
913.1327	1/2	30	163
913.1328	1/2	32	181

12 point crawfoot wrench

- Internal square drive
- For tightening and loosening pipe connections
- For manual operation
- For difficult to access areas
- Burnished
- Special tool steel



1/2"

	mm	
913.1329	36	275
913.1330	41	392
913.1331	46	390

12 point crawfoot wrench

- 12 point
- For tightening and loosening pipe connections
- For manual operation
- Slim execution
- For difficult to access areas
- Burnished
- Special tool steel
- In durable plastic storage case





	□	mm	g
913.1301	3/8”	19	62
913.1302	1/2”	21	94
913.1303	1/2”	22	112
913.1304	1/2”	24	120
913.1305	1/2”	27	153
913.1306	1/2”	30	170
913.1307	1/2”	32	168
913.1308	3/4”	36	337
913.1309	3/4”	41	400
913.1310	3/4”	46	632

12 point crawfoot wrench set

- 12 point
- Internal square drive
- For tightening and loosening pipe connections
- For manual operation
- Slim execution
- For difficult to access areas
- Burnished
- Special tool steel
- In durable plastic storage case







			kg
913.1300	10 pcs	12 point crawfoot wrench set	2,14

consists of:

		g
913.1301	3/8” 12 point crawfoot wrench, 19mm	62
913.1302	1/2” 12 point crawfoot wrench, 21mm	94
913.1303	1/2” 12 point crawfoot wrench, 22mm	112
913.1304	1/2” 12 point crawfoot wrench, 24mm	120
913.1305	1/2” 12 point crawfoot wrench, 27mm	153
913.1306	1/2” 12 point crawfoot wrench, 30mm	170
913.1307	1/2” 12 point crawfoot wrench, 32mm	168
913.1308	3/4” 12 point crawfoot wrench, 36mm	337
913.1309	3/4” 12 point crawfoot wrench, 41mm	400
913.1310	3/4” 12 point crawfoot wrench, 46mm	632

PRE-COMBUSTION CHAMBER SOCKET WRENCH

Special tooth socket for pre chamber

- Ideal for removing the diesel pre-combustion chamber washer nuts
- Internal square to DIN 3120 / ISO 1174 with ball reception
- With 58 notched teeth
- Phosphate finish
- Special tool steel

Application range: Mercedes engines OM 601, OM602, OM603, OM604, OM605 and OM606



1/2”

	No. teeth	Length mm	g
455.0005	58	60,0	215

Pin wrench for pre-chamber

- Ideal for removing the diesel pre-combustion chamber washer nuts
- Internal square to DIN 3120 / ISO 1174 with ball reception
- Includes screw
- Phosphate finish
- Special tool steel

Application range: Mercedes engines OM 615, OM616 and OM617





1/2”

	Length mm	g
455.0006	65,0	280

Impact extractor for pre-chamber

- Ideal for removing trapped diesel pre-combustion chambers
- Sturdy design
- Enables short and intensive impact through impact weight
- Includes impact weight, adapter and tension bolts
- Special tool steel

Application range: Mercedes engines OM615, OM616, OM617, OM601, OM602, OM603, OM604, OM605 and OM606





			kg
150.2510	6 pcs	Impact extractor for pre-chamber	3,76

consists of:

		g
150.2511	Connecting rod	460
150.2512	Impact weight of 2.4 kg	2400
150.2513	Nut M14	20
150.2514	T-handle	400
150.2515	M14 to M12 adapter	100
150.2516	Tension bolts for Mercedes pre-chamber	360

RELEASE TOOLS

Fuel line unlocking tool for Mini

- for professional unlocking of the low-pressure fuel line coupling at the inlet of the high-pressure pump
- Especially for fuel pipe couplings on which the unbolting elements are reached from the side
- no damage to the plug-in couplings, fuel lines and high-pressure pump
- Quick and easy separation of the fuel pipes
- With knurled knob
- Special tool steel



	Inner Ø mm	Outer Ø mm	g
115.1295	15,0	33,0	80

Fuel line unlocking tool for BMW

- For correct unbolting of fuel pipe coupling
- no damage to the plug couplings and fuel lines
- Quick and easy separation of the fuel pipes
- Aluminium

Application range: BMW 3 Series (2006 - 2011) and X3 E83 (2006 - 2009)



		g
150.3233	Fuel line unlocking tool for BMW	20

Special puller for leakage oil line

- for damage-free removal of the leakage oil line from the injector
- specially shaped profile
- Aluminium



	Length mm	g
405.0019	62,0	46

INSPECTION AND TEST TOOLS

Common rail injector test assortment with 8 measurement pipes

- Professional test assortment to the misdiagnosis through measurement of the return stroke quantities of high pressure injectors
- Measurement of up to 8 high pressures Injectors simultaneously possible
- Ideal supplement to the engine diagnosis device
- Diesel sutible silicone tubes
- Tube end with coupling and original adapter for safe connection
- Double sealed brass connections in the test tube
- Stable acrylic test block with filling line scale
- Precise measurement result through 25 ml volumetric capacity in the test tube
- In durable plastic storage case

Application range: Mercedes, **BMW**, **Ford**, **Renault**, **Opel**, **Vauxhall**, **Toyota**, **Nissan**, **Citroën**, **Volvo**, **Peugeot** etc.





			kg	
150.1580	65 pcs	Common rail injector test assortment with 8 measurement pipes	3,16	

consists of:

	X		g	
150.1581	1	Acrylic block	800	
150.1582	8	Silicon pipes, 5,2x8,8x600mm	40	
150.1584	8	Adaptor, acrylic block+O-ring	24	
150.1594	8	Adaptor 01- BOSCH	10	
150.1595	8	Adaptor 02-SIEMENS	10	
150.1596	8	Adaptor 03-DENSO	10	
150.1597	8	Adaptor-DELPHI	10	
150.1598	8	Adaptor-BOSCH	30	
150.1599	8	Quick coupler	30	

Plastic pipe with adapter

- Fitted directly on the injector
- Perfect supplement to set 150.1580



	Length mm	g	
150.1571	165,0	18	

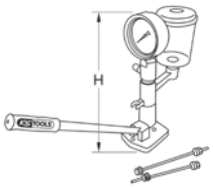
Diesel injector test device set 0-600 bar

- Table device for the testing of diesel injectors for opening pressure, density and jet shape
- During testing the fluid is injected back in to the storage tank with spray guard
- Fluid container volume 330 cm³
- Piston displacement 35 cm³
- Bolted precision manometer Ø 100.0 mm with protective rubber parts 0-600 bar
- Includes two high pressure pipe adapters
- Device body made from sturdy metal cast
- Test container from shock-proof and diesel resistant plastic with fine filter
- Feet (118 mm x 97 mm) with four bore holes for sturdy mounting onto work bench

For testing the following methods:
Jet free or blocked
Opening pressure
Jet nozzle pattern/nebulisation
Clasp drip behaviour
Acoustic inspection (chattering)
Density of the pressure tube between injection pump and nozzle

Application range:
M14 x 1.5 universal
M12 x 1.25 **VAG** TDI engines







	H mm	kg	
455.0120	345,0	2,90	

consists of:

		g	
455.0121	Connection pipe M14 x M14, 210 mm	80	
455.0122	Connection pipe M14 x M12, 210 mm	72	
455.0123	Diesel injector test device 0-600 bar	2700	

Injector test equipment

- For the diagnosis of fuel pipes and faults in electronic injectors
- Pulse generator may be used with fuel manometer



		g	
150.9010	Injector test equipment	200	

Locknut Set for Injection/Diesel Engines

- ideal for closing the injector
- protects the injector from impurities
- to close the injector for various pressure tests
- Locknuts with integrated seal
- for the most common sized M12 x 1.50 and M14 x 1.50
- In durable plastic storage case



			g	
150.1835	12 pcs	Locknut Set for Injection/Diesel Engines	60	

consists of:

	X		g	
150.1836	6	Fixing rail with hook	20	
150.1837	6	Locknut M14 x 1.50	20	

plug set

- ideally suited for sealing a wide variety of cables
- suitable for fuel, pressure and vacuum lines
- 48 colour-coded sealing plugs pairs
- for cables with Ø 3.2 mm to 11.7 mm
- Rubber
- In plastic storage case



			g	
405.0020	48 pcs	plug set	140	

consists of:

	X		g	
405.0021	6	Sealing plug, Ø 11.7	4	
405.0022	12	Sealing plug, Ø 7.8	2	
405.0023	18	Sealing plug, Ø 4.7	1	
405.0024	12	Sealing plug, Ø 3.2	0,25	

PNEUMATIC ADAPTER FOR GLOW PLUG BORES

Pneumatic adapter for M8 x 1.0 glow plug holes

- Ideal for boring in the glow plug bores
- The injection of air prevents contaminants building up in the combustion chamber
- Enables simple and professional work
- Air supply can be set with lever
- Sturdy design
- Special tool steel





		Length mm	D mm	g	
152.1511	M8 x 1,0	178,0	12 x 80	180	

Pneumatic adapter for M10 x 1.0 glow plug holes

- Ideal for boring in the glow plug bores
- The injection of air prevents contaminants building up in the combustion chamber
- Enables simple and professional work
- Air supply can be set with lever
- Sturdy design
- Special tool steel





		Length mm	D mm	g
152.1512	M10 x 1,0	178,0	15 x 100	180

Pneumatic adapter for M10 x 1.25 glow plug holes

- Ideal for boring in the glow plug bores
- The injection of air prevents contaminants building up in the combustion chamber
- Enables simple and professional work
- Air supply can be set with lever
- Sturdy design
- Special tool steel





		Length mm	D mm	g
152.1513	M10 x 1,25	207,0	15	190

INJECTOR REMOVAL TOOLS

Injector mounting and dismounting tool for BMW N63 and S63

- ideally suited for mounting and dismounting fixed injection nozzles in the cylinder head on the BMW N63 and S63
- Sturdy design
- Tilt of injection nozzles is avoided
- Special tool steel

Application range: BMW 550i (2012 - 2014), 650i (2011 - 2014), 750i Alpina (2012 - 2014), X5 (50i (2012 - 2014), X6 50i (2013 - 2014)



		g
405.0120	Injector mounting and dismounting tool for BMW N63 and S63	511

Injector mounting and dismounting tool for BMW N20, N26 and N55

- ideally suited for mounting and dismounting fixed injection nozzles in the cylinder head of BMW N55 3.0l engines
- Sturdy design
- Tilt of injection nozzles is avoided
- Special tool steel

Application range: BMW 1 Series (E82, E88, F20 and F21), 3 Series (E90, E91, E92, E93, F30, F31 and F34), 4 Series (F32, F33 and F36), 5 Series (F07, F10 and F11), X3 (F25), X4 (F26), X5 (E70 and F15), X6 (E71) with 3.0l petrol engines (engine code: N55B30)



		g
405.0130	Injector mounting and dismounting tool for BMW N20, N26 and N55	456

Injector mounting and dismounting tool for BMW N20, N26 and N55

- ideally suited for mounting and dismounting fixed injection nozzles in the cylinder head of BMW N20, N26 and N55
- N55 from engine number 14407685
- only X5 (E70) and X6 (E71) with engine N55 from engine number 02167649
- Sturdy design
- Tilt of injection nozzles is avoided
- Special tool steel

Application range: BMW with 1.6l and 2.0l petrol engines (engine code: N20), with 2.0l petrol engines (engine code: N26) and 3.0l petrol engines (engine code: N55)



		g
405.0140	Injector mounting and dismounting tool for BMW N20, N26 and N55	519

Injection nozzle extractor set for Ford

- ideally suited for dismantling injectors on Ford EcoBoost GDi engines
- enables short and intensive impact through impact weight
- Sturdy design
- Cylinder head does not work against the thrust bearing
- Tilt of injection nozzles is avoided
- Special tool steel
- In durable steel storage case

Application range: Ford EcoBoost GDi 1.0L to 2.0L



			kg
405.0070	3 pcs	Injection nozzle extractor set for Ford	1,94

consists of:

		g
405.0072	Puller	433
405.0071	Guide rod with impact weight	893

Injector grab hook extractor with 1.25 kg impact weight

- For Mercedes CDI Bosch common rail injectors
- For the extraction of the firmly burned injectors in the cylinder head
- Arched lever area on the handle hook for exact extraction
- Avoids tilting of the injectors
- Claw and impact weight can be used separately
- Includes impact weight
- Special tool steel





	Impact weight kg	Thread impact weight	Length mm	Replacement claw	Replacement impact weight	kg
152.1050	1,25	M10 x 1,5	410,0	152.1045	152.1040	1,45

Injector extractor with 6 + 3 kg impact weight

- Ideal for Bosch injectors with M17 x 1.0 internal thread
- Sturdy design
- For the extraction of the firmly burned injectors in the cylinder head
- Enables short and intensive impact through impact weight
- Cylinder head does not work against the thrust bearing
- Avoids tilting of the injectors
- Includes impact weight
- Special tool steel





			kg
152.1055	3 pcs	Injector extractor with 6 + 3 kg impact weight	12,50

consists of:

		kg
700.1415	Universal slide hammer 6+3kg, 850mm	12,00
152.1056	Adaptor, M17	0,24
152.1057	Hex special bit socket, tamperproof,10mm	0,10

Injector-extractor for 1.5 kg impact weight

- Ideal for Siemens injectors with M 25 x 1.0 internal thread
- Sturdy design
- For the extraction of the firmly burned injectors in the cylinder head
- Enables short and intensive impact through impact weight
- Cylinder head does not work against the thrust bearing
- Avoids tilting of the injectors
- Short design for hard-to-reach areas
- Includes impact weight
- Thread on impact extractor 5/16" x 16 mm
- Special tool steel



			kg
152.1200	2 pcs	Injector-extractor for 1.5 kg impact weight	2,52

consists of:

		kg	
152.1255	Slide hammer 1.5 kg, thread 5/16" x 16 mm	2,34	
152.1455	Screw-in adapter for Siemens, M25 x 1	0,18	

Injector-extractor for 1.5 kg impact weight

- Ideal for Denso injectors M20 x 1.0
- Sturdy design
- For the extraction of the firmly burned injectors in the cylinder head
- Enables short and intensive impact through impact weight
- Cylinder head does not work against the thrust bearing
- Avoids tilting of the injectors
- Short design for hard-to-reach areas
- Includes impact weight
- Thread on impact extractor 5/16" x 16 mm
- Special tool steel



			kg	
152.1265	2 pcs	Injector-extractor for 1.5 kg impact weight	2,52	

consists of:

		g	
152.1255	Slide hammer 1.5 kg, thread 5/16" x 16 mm	2340	
152.1456	Screw-in adapter for Denso, M20 x 1	180	

Injector-extractor for 1.5 kg impact weight

- Ideal for Siemens injectors M27 x 1.0
- Sturdy design
- For the extraction of the firmly burned injectors in the cylinder head
- Enables short and intensive impact through impact weight
- Cylinder head does not work against the thrust bearing
- Avoids tilting of the injectors
- Short design for hard-to-reach areas
- Includes impact weight
- Thread on impact extractor 5/16" x 16 mm
- Special tool steel



			kg	
152.1270	2 pcs	Injector-extractor for 1.5 kg impact weight	2,58	

consists of:

		kg	
152.1255	Slide hammer 1.5 kg, thread 5/16" x 16 mm	2,34	
152.1457	Screw-in adapter for Siemens, M27 x 1	0,24	

Injector-extractor for 1.5 kg impact weight

- Ideally suited Bosch injectors M27/M17 and 10 mm
- Sturdy design
- For the extraction of the firmly burned injectors in the cylinder head
- Enables short and intensive impact through impact weight
- Cylinder head does not work against the thrust bearing
- Avoids tilting of the injectors
- Short design for hard-to-reach areas
- Includes impact weight
- Thread on impact extractor 5/16" x 16 mm
- Special tool steel



			kg	
152.1275	4 pcs	Injector-extractor for 1.5 kg impact weight	2,64	

consists of:

		kg	
152.1255	Slide hammer 1.5 kg, thread 5/16" x 16 mm	2,34	
152.1458	Screw-in adapter set for Bosch M27/M17 and 10 mm, 3 pcs	0,30	

Injector-extractor for 1.5 kg impact weight

- Ideal for older high pressure injectors with M12 thread
- Sturdy design
- For the extraction of the firmly burned injectors in the cylinder head
- Enables short and intensive impact through impact weight
- Cylinder head does not work against the thrust bearing
- Avoids tilting of the injectors
- Short design for hard-to-reach areas
- Includes impact weight
- Thread on impact extractor 5/16" x 16 mm
- Special tool steel



			kg	
152.1280	2 pcs	Injector-extractor for 1.5 kg impact weight	2,48	

consists of:

		kg	
152.1255	Slide hammer 1.5 kg, thread 5/16" x 16 mm	2,34	
152.1459	Screw-in adapter for M12	0,14	

Injector-extractor for 1.5 kg impact weight

- Ideal for Bosch and Delphi injectors M14
- Sturdy design
- For the extraction of the firmly burned injectors in the cylinder head
- Enables short and intensive impact through impact weight
- Cylinder head does not work against the thrust bearing
- Avoids tilting of the injectors
- Short design for hard-to-reach areas
- Includes impact weight
- Thread on impact extractor 5/16" x 16 mm
- Special tool steel



			kg	
152.1285	2 pcs	Injector-extractor for 1.5 kg impact weight	2,54	

consists of:

		kg	
152.1255	Slide hammer 1.5 kg, thread 5/16" x 16 mm	2,34	
152.1461	Screw-in adapter for Bosch and Delphi, M14	0,20	

Universal injector-extractor

- For the extraction of the firmly burned injectors in the cylinder head
- Arched lever area on the handle hook for exact extraction
- Avoids tilting of the injectors
- Claw and impact weight can be used separately
- Includes impact weight
- Special tool steel

Application range: Common Rail engines with Denso, Bosch, Siemens, Delphi injectors





	Impact weight kg	Length mm	kg	
152.2070	1,55	395,0	3,22	

Air chisel injector pump puller set with adaptors

- Suited to the dismantling of injectors
- Sturdy design
- For the extraction of the firmly burned injectors in the cylinder head
- Enables short and intensive impacts by supporting a pneumatic power chisel with 10 mm adapter
- Cylinder head does not work against the thrust bearing
- Avoids tilting of the injectors
- including extensive range of adapters
- Thread on injector extractor 5/16" x 16 mm
- Special tool steel





			kg	
152.1450	10 pcs	Air chisel injector pump puller set with adaptors	3,54	

consists of:

		g	
152.1455	Screw-in adapter for Siemens, M25 x 1	180	
152.1456	Screw-in adapter for Denso, M20 x 1	180	
152.1457	Screw-in adapter for Siemens, M27 x 1	240	
152.1458	Screw-in adapter set for Bosch M27/M17 and 10 mm, 3 pcs	300	
152.1459	Screw-in adapter for M12	140	
152.1461	Screw-in adapter for Bosch and Delphi, M14	200	
152.1462	Universal adapter	150	
152.1463	Pneumatic power chisel extractor	1400	



Universal injector removal kit

- Suited to the dismantling of injectors
- Sturdy design
- For the extraction of the firmly burned injectors in the cylinder head
- enables short and intensive impact through impact weight
- Cylinder head does not work against the thrust bearing
- Avoids tilting of the injectors
- including extensive range of adapters
- Includes impact weight
- Receiving thread on injector extractor M18 x 1.5 mm
- Special tool steel
- In durable plastic case





			kg	
152.1085	14 pcs	Universal injector removal kit	13,00	

consists of:

		g	
152.1086	Injector nozzles hexagon socket with borehole 10 mm, Ø 6 mm	78	
152.1087	Injector nozzles hexagon socket with borehole 10 mm, Ø 7 mm	80	
152.1088	M14 x 1.5 mm adapter, BMW M47, MB W211cdi	68	
152.1089	M16 x 1.0 mm adapter, Toyota 2.2	110	
152.1190	M17 x 1.0 mm adapter, MB Bosch	114	
152.1191	M20 x 1.0 mm adapter, Denso	110	
152.1192	M25 x 1.0 mm adapter, Siemens	126	
152.1193	M27 x 1.0 mm adapter, Siemens	136	
152.1194	Slide hammer 3 + 5 kg	7840	
152.1195	1/2" injector socket, 25.0 mm, l = 100 mm	270	
152.1196	1/2" injector socket, 27.0 mm, l = 100 mm	270	
152.1197	1/2" injector socket, 29.0 mm, l = 100 mm	342	
152.1198	1/2" injector socket, 30.0 mm, l = 100 mm	358	
152.1199	M18 x 1.5 mm universal joint	474	

Pump/nozzle and TDI injector extractor set

- Ideal for disassembly of pumps/nozzle units
- Sturdy design
- For the removal of the firmly burned pump/nozzle unit from the cylinder head
- Cylinder head does not work against the thrust bearing
- Avoids tilting of the injectors
- Special tool steel



			kg	
152.1405	6 pcs	Pump/nozzle and TDI injector extractor set	1,16	

consists of:

		g	
152.1352	Impact weight for 152.1350	809	
152.1354	Guide rod with nut for 152.1350	110	
152.1359	T-type extractor for 152.1350	49	
152.1360	T-type extractor for 152.1360	62	
152.1363	Hex bolts for 152.1350, 40 mm	102	
152.1364	Hex bolts for 152.1350, 30 mm	38	

Injector nozzle extractor set for VAG

- Suited to the dismantling of injectors
- suitable for FSI, SDI, TDI, Common Rail and pump injector engines
- Sturdy design
- For the extraction of the firmly burned injectors in the cylinder head
- Cylinder head does not work against the thrust bearing
- Avoids tilting of the injectors
- including extensive range of adapters
- Special tool steel





			kg	
152.1350	24 pcs	Injector nozzle extractor set for VAG	3,00	

consists of:

		g	
152.1351	Handle for 152.1350	379	
152.1352	Impact weight for 152.1350	809	
152.1353	Guide rod for 152.1350	51	
152.1354	Guide rod with nut for 152.1350	110	
152.1355	Injector pump extractor for 152.1350	258	
152.1356	Brass casing no 1 for 152.1350	73	
152.1357	Brass casing no 2 for 152.1350	74	
152.1358	Brass casing no 3 for 152.1350	74	
152.1359	T-type extractor for 152.1350	49	
152.1360	T-type extractor for 152.1360	62	
152.1361	Adjustable extracting tool for 152.1350	100	
152.1362	Socket extracting tool for 152.1350	90	
152.1363	Hex bolts for 152.1350, 40 mm	102	
152.1364	Hex bolts for 152.1350, 30 mm	38	
152.1365	Brass cone for 152.1350	7	
152.1366	Brass casing 14 x 40 mm	46	
152.1367	Brass casing 12.5 x 40 mm	49	
152.1368	Brass casing 12.5 x 20 mm	19	
152.1369	Connector extraction tool type I	52	
152.1379	Injector extraction sleeve for 152.1350	173	
152.1451	Connector extraction tool type U	47	
152.1452	Brass cone 10 x 7 x 35 mm	15	
152.1453	Stainless steel wrench for 152.1350	6	
152.1454	Bracket injector extracting tool for 152.1350	173	

BORING TOOLS FOR CLAMPING SCREWS

Injector fastening screw repair set for Mercedes CDI

- Ideally suited for boring out broken clamping bolts
- Simple and user friendly repair method
- Allows the damaged M6 x 1,0 thread in the cylinder head to be repaired
- Removal of the valve cover and seal no longer required
- Including drill, centring tool and threaded sleeves
- Enormous time and cost saving
- In durable plastic storage case

Application range: Mercedes CDI engines



			g	
405.0800	9 pcs	Injector fastening screw repair set for Mercedes CDI	464	

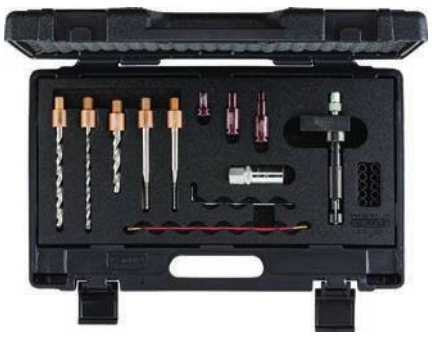
consists of:

		g	
405.0801	Centring tool	21	
405.0802	Twist drill 6 mm	29	
405.0803	Stepped drill M8	49	
405.0804	Thread cutter M8	19	
405.0806	Set of threaded sleeves M8, 5 pcs.	15	
405.0807	Screwing aid	34	

Injector clamping screw boring set

- ideally suited for boring out torn off injector clamping screws
- Simple and user friendly repair method
- quick and cost-effective solution
- allows the damaged M8 x 1.25 clamping screw thread to be repaired by reaming to M10 x 1.25
- including drills, stud extractors, taps and threaded sleeves
- In durable plastic storage case

Application range: Citroën Relay, Jumper 3, **Peugeot** Boxer, **Fiat** Ducato, **Iveco** Daily with 3,0 HDI, 2,3, 3,0 JTD / HPI Common Rail Diesel engine (engine code: F1AE0481A, F1AE0481B, F1AE0481C, F1AE0481D, F1AE0481F, F1AE0481FA, F1AE0481G, F1AE0481GA, F1AE0481H, F1AE0481HA, F1AE0481N, F1AE0481R, F1AE0481RA, F1AE0481UA, F1AE0481VA, F1CE0481A, F1CE0481B, F1CE0481D, F1CE0481F, F1CE0481H, F1CE3481E, F1CE3481M, F1CE3481N, F30DTE, F1CE0481D, F1CE3481D, F1CE3481DM, F1CE3481E, F1CE3481N)



			kg	
405.0050	22 pcs	Injector clamping screw boring set	2,07	

consists of:

		g	
405.0051	Basic unit	570	
405.0052	Drill sleeve Ø 6.8 mm	57	
405.0053	Drill sleeve Ø 9.1 mm	45	

consists of:

405.0054	Drill sleeve Ø 10.1 mm	13	
405.0055	Set of threaded sleeves M8, 10 pcs.	30	
405.0056	Core drill, 6.8 mm	62	
405.0057	Conical drill, 10.1 mm	7	
405.0058	Thread tap for M8 x 1.25 mm	9	
405.0059	Core drill, 9.1 mm	75	
405.0060	Thread tap for M10 x 1.25 mm	96	
405.0061	flexible solenoid lifter	30	
152.1008	Stud bolt puller, M8	170	
151.31025	Ball ended hexagon key wrench, extra long, 2,5mm	10	

INJECTOR WASHER EXTRACTOR

Injector washer extractor

- Ideal for removing firmly burned injector copper washers from the injector shaft
- No damage to the cylinder head
- Universal usage
- Precision pressing on the washer
- Simple handling and guiding
- Special tool steel





	Length mm		
152.1173	260,0	425	

Injector washer extractor with impact weight

- Ideal for removing firmly burned injector copper washers from the injector shaft
- No damage to the cylinder head
- Universal usage
- precision pressing on the washer due to cone-shaped gear tooth system
- Simple handling and guiding
- Special tool steel





	Ø mm	Length mm	Impact weight kg		
152.1183	4 - 16	370,0	0,85	1,36	

Injector test equipment

- For the diagnosis of fuel pipes and faults in electronic injectors
- Pulse generator may be used with fuel manometer



150.9010	Injector test equipment	200	

INJECTOR AND INJECTOR SEAT CLEANING

Injector sealing surface cleaner

- Ideal for cleaning the injector head
- Clean, professional and fast work
- Simple handling
- Special tool steel





	Ø mm	Length mm		
152.1179	20	49,0	97	

Injector seal seat cutter Ø 15/19 mm

- Ideally suited to cleaning the injector seat
- Clean, professional and fast work
- Simple handling
- With T-handle
- Special tool steel





152.1465	Injector seal seat cutter Ø 15/19 mm	481

consists of:

152.1171	3/8" Milling head pilot, 19.0 mm, 175 mm	185	
152.1172	3/8" T-handle key for milling machine, 150mm	240	
152.1175	Injector gasket milling seat head Ø 15/19mm, 38mm	550	

Injector seal seat cutter Ø 17/17 mm

- Ideally suited to cleaning the injector seat
- Clean, professional and fast work
- Simple handling
- With T-handle
- Special tool steel





152.1466	Injector seal seat cutter Ø 17/17 mm	471

consists of:

152.1171	3/8" Milling head pilot, 19.0 mm, 175 mm	185	
152.1172	3/8" T-handle key for milling machine, 150mm	240	
152.1176	Injector gasket milling seat head Ø 17/17mm, 38mm	47	

Injector seal seat cutter Ø 17/19 mm

- Ideally suited to cleaning the injector seat
- Clean, professional and fast work
- Simple handling
- With T-handle
- Special tool steel





152.1467	Injector seal seat cutter Ø 17/19 mm	460

152.1171	3/8" Milling head pilot, 19.0 mm, 175 mm	185	
152.1172	3/8" T-handle key for milling machine, 150mm	240	
152.1177	Injector gasket milling seat head Ø 17/19mm, 38mm	58	



Injector seal seat cutter Ø 19/21 mm

- Ideally suited to cleaning the injector seat
- Clean, professional and fast work
- Simple handling
- With T-handle
- Special tool steel





152.1464	Injector seal seat cutter Ø 19/21 mm	490

consists of:

152.1171	3/8" Milling head pilot, 19.0 mm, 175 mm	185	
152.1172	3/8" T-handle key for milling machine, 150mm	240	
152.1178	Injector gasket milling seat head Ø 19/21mm, 38mm	68	

Injector density seat cleaning set

- Assortment to the cleaning of the density seat of the diesel injector
- Simple handling
- For professional and damage-free use
- In durable plastic storage case





			kg	
152.1170	13 pcs	Injector density seat cleaning set	2,38	

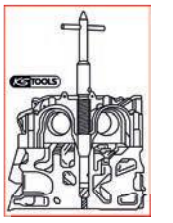
consists of:

		g	
152.1171	3/8" Milling head pilot, 19.0 mm, 175 mm	185	
152.1172	3/8" T-handle key for milling machine, 150mm	240	
152.1173	Injector sealing ring, 260mm	425	
152.1174	Injector milling re-seating tool, 225mm	370	
152.1175	Injector gasket milling seat head Ø 15/19mm, 38mm	550	
152.1176	Injector gasket milling seat head Ø 17/17mm, 38mm	47	
152.1177	Injector gasket milling seat head Ø 17/19mm, 38mm	58	
152.1178	Injector gasket milling seat head Ø 19/21mm, 38mm	68	
152.1180	Cleaning brush	45	
152.1181	Milling head cleaning brush, nylon	13	

Injector seat cleaning tool

- Ideally suited to cleaning the injector seat
- The special design enables cleaning of the nozzle seat, the mounting hole of the injection nozzles and the small openings to the combustion chamber in one single process
- Clean, professional and fast work
- Simple handling
- With T-handle
- Special tool steel

Application range: BMW Common Rail diesel engines M47TU, M57 and M57TU



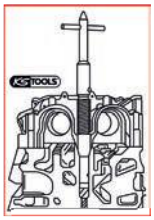


	Ø1 mm	Ø2 mm	Ø3 mm	Length mm	g	
152.1386	7,5	17,0	23,7	296,0	370	

Injector seat cleaning tool

- Ideally suited to cleaning the injector seat
- The special design enables cleaning of the nozzle seat, the mounting hole of the injection nozzles and the small openings to the combustion chamber in one single process
- Clean, professional and fast work
- Simple handling
- With T-handle
- Special tool steel

Application range: BMW Common Rail M47 diesel engines



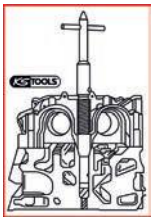


	Ø1 mm	Ø2 mm	Length mm	g	
152.1387	7,5	17,0	290,0	370	

Injector seat cleaning tool

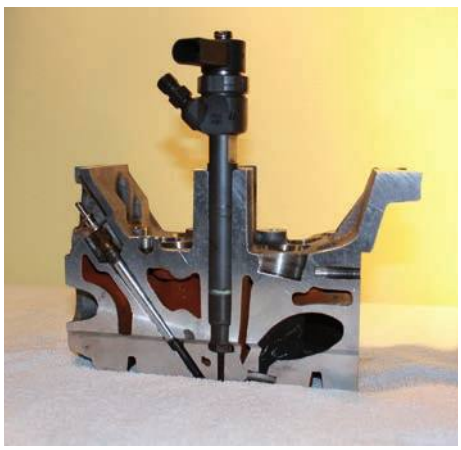
- Ideally suited to cleaning the injector seat
- The special design enables cleaning of the nozzle seat, the mounting hole of the injection nozzles and the small openings to the combustion chamber in one single process
- Clean, professional and fast work
- Simple handling
- With T-handle
- Special tool steel

Application range: Mercedes Common Rail diesel engines OM611, OM612, OM 613, OM639, OM640, OM642, OM646, OM647, OM648, OM651, OM668, **Smart** R660; **PSA** 2.7 HDI, Motor DT17 and 3.0 HDI, DT20 engine; **Chrysler** 2.5 crd, engine OM664; **Toyota** 3.0 D-4D, engine 1 KD-FTV and 2.2 D-4D, engine 2 AD-FHV and 2 AD-FTV; **Lexus** 2.2 diesel, engine 2 AD-FHV





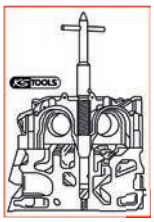
	Ø1 mm	Ø2 mm	Ø3 mm	Length mm	g	
152.1388	7,5	17,0	19,1	261,0	360	



Injector seat cleaning tool

- Ideally suited to cleaning the injector seat
- The special design enables cleaning of the nozzle seat, the mounting hole of the injection nozzles and the small openings to the combustion chamber in one single process
- Clean, professional and fast work
- Simple handling
- With T-handle
- Special tool steel

Application range: Opel, **Fiat**, **Lancia**, **Suzuki** 1.3 JTD, 1.3 CDTi, 1.3 JTD, 1.3 DDis Common-Rail diesel engines Z13DT, 188A9.000.



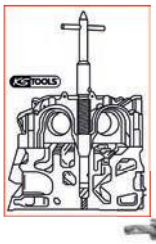


	Ø1 mm	Ø2 mm	Ø3 mm	Length mm	g	
152.1389	7,5	17,0	17,6	261,0	360	

Injector seat cleaning tool

- Ideally suited to cleaning the injector seat
- The special design enables cleaning of the nozzle seat, the mounting hole of the injection nozzles and the small openings to the combustion chamber in one single process
- Clean, professional and fast work
- Simple handling
- With T-handle
- Special tool steel

Application range: Renault, **Nissan**, **Opel**, **Suzuki**, **Mitsubishi**, 1.9 dTI, 1.9 dCi, 1.9 CDTI, 1.9 Di, 1.9 DDis, 1.9Di-D Common Rail diesel engines



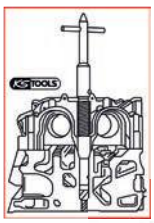


	Ø1 mm	Ø2 mm	Ø3 mm	Length mm	g	
152.1391	7,5	17,4	19,0	245,0	350	

Injector seat cleaning tool

- Ideally suited to cleaning the injector seat
- The special design enables cleaning of the nozzle seat, the mounting hole of the injection nozzles and the small openings to the combustion chamber in one single process
- Clean, professional and fast work
- Simple handling
- With T-handle
- Special tool steel

Application range: Renault, **Suzuki**, **Nissan**, **Dacia**, 1.5 dCI, 1.5 DDis Common Rail diesel engines K9K



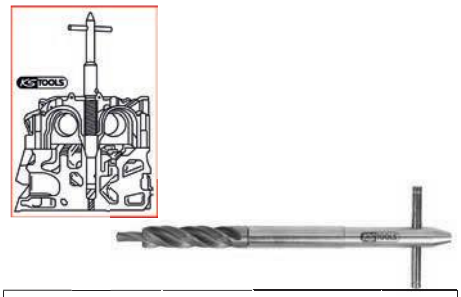


	Ø1 mm	Ø2 mm	Ø3 mm	Length mm	g	
152.1392	7,5	17,0	20,1	265,0	360	

Injector seat cleaning tool

- Ideally suited to cleaning the injector seat
- The special design enables cleaning of the nozzle seat, the mounting hole of the injection nozzles and the small openings to the combustion chamber in one single process
- Clean, professional and fast work
- Simple handling
- With T-handle
- Special tool steel

Application range: Peugeot, **Citroën**, **Fiat**, **Lancia**, **Suzuki**, 2.0 HDI, 2.0 JTD, engine code DW10 Common Rail diesel engines, **Mercedes**, OM646 EVO, **Renault**, **Nissan**, **Opel**, 2.2 DTI, CDTI, CDI, engine code G9T and 2.5 DTI, CDTI, CDI, engine code G9U

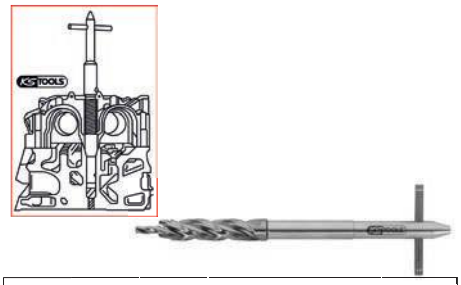


	Ø1 mm	Ø2 mm	Length mm	g	
152.1393	7,5	17,0	261,0	360	

Injector seat cleaning tool

- Ideally suited to cleaning the injector seat
- The special design enables cleaning of the nozzle seat, the mounting hole of the injection nozzles and the small openings to the combustion chamber in one single process
- Clean, professional and fast work
- Simple handling
- With T-handle
- Special tool steel

Application range: Peugeot, **Citroën**, **Fiat**, **Lancia**, 2.2 HDI, 2.2 JTD, Common-Rail diesel engines

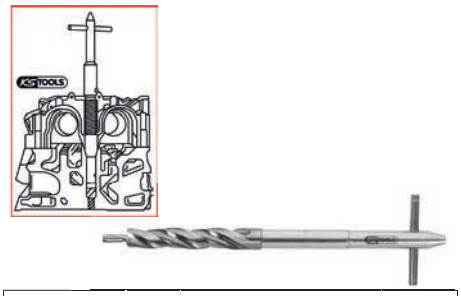


	Ø1 mm	Ø2 mm	Ø3 mm	Length mm	g	
152.1394	7,5	17,0	19,6	275,0	360	

Injector seat cleaning tool

- Ideally suited to cleaning the injector seat
- The special design enables cleaning of the nozzle seat, the mounting hole of the injection nozzles and the small openings to the combustion chamber in one single process
- Clean, professional and fast work
- Simple handling
- With T-handle
- Special tool steel

Application range: 1.6 l **PSA** Common Rail diesel engines, **Fiat** 1.6 l HDI, engine code DV6, 9HX, 9HY, 9HZ; **Ford** 1.6 l TDCi, engine code G8DA, G8DB, HHDA, HHJA, HHJB; **Volvo** 1.6 l D, engine code D4164T; **Mazda** 1.6 l D, engine code Y6



	Ø1 mm	Ø2 mm	Ø3 mm	Ø4 mm	Length mm	g	
152.1395	7,5	17,0	17,6	18,7	195,0	330	

Injector seat cleaning tool

- Ideally suited to cleaning the injector seat
- Clean, professional and fast work
- Simple handling
- with 13 mm square drive
- including protective sleeve for milling head
- Special tool steel

Application range: Mercedes diesel engines OM601, OM602, OM603, OM604, OM605 and OM606



	Ø mm	Length mm	g	
405.0010	33	220,0	875	

INJECTOR SHAFT CLEANING

Injector pump cleaning set

- Range for cleaning the injector shaft
- Also suitable for various other applications
- Cleaning brushes with various diameters
- Simple handling
- For professional and damage-free use
- In durable plastic storage case





			kg	
152.1370	23 pcs	Injector pump cleaning set	1,80	

consists of:

	X		g	
152.1173	1	Injector washer extractor	425	
152.1372	1	Sealing plugs assembly rod	30	
152.1373	6	Sealing plugs for M5 internal thread	4	
152.1374	1	Bit receptacle with flexible shaft	80	
152.1375	2	Brush for nozzle channel Ø 7.24 mm	16	
152.1376	2	Brush for injector shaft Ø 18 mm	10	
152.1381	2	Brush for injector shaft Ø 19 mm	10	
152.1382	2	Brush for injector shaft Ø 21 mm	10	
152.1383	2	Brush for injector shaft Ø 24 mm	10	
152.1377	1	Special holder for injector shaft brushes	71	
152.1384	2	End brush with corrugated brass wire	32	
152.1385	1	Plastic sleeve for end brush	22	

MASTER cleaning brush set

- For cleaning and deburring threads, cylinders, connectors, pipes and other components with nylon, brass and steel edging
- External hexagon drive to DIN 3126 / ISO 1173 - C 6,3
- With locking and quick-change mechanism on the handle grip and extension
- Can be used by hand or with an electric screwdriver
- Can be used with an electric screwdriver in a clockwise direction
- Nickel plated
- In durable plastic storage case





1/4"

			kg	
340.0010	38 pcs	MASTER cleaning brush set	1,43	

consists of:

		g	
340.0061	1/4" handle with quick action lock	71	
340.0062	1/4" extension with quick action lock, 150 mm	51	
340.0063	1/4" brass brush Ø 8 mm	15	
340.0064	1/4" brass brush Ø 9 mm	15	
340.0065	1/4" brass brush Ø 10 mm	15	
340.0066	1/4" brass brush Ø 11 mm	16	
340.0067	1/4" brass brush Ø 12 mm	16	
340.0068	1/4" brass brush Ø 13 mm	16	
340.0069	1/4" brass brush Ø 14 mm	17	
340.0070	1/4" brass brush Ø 15 mm	17	
340.0071	1/4" brass brush Ø 16 mm	17	
340.0072	1/4" brass brush Ø 17 mm	18	
340.0073	1/4" brass brush Ø 18 mm	18	
340.0074	1/4" brass brush Ø 19 mm	18	
340.0075	1/4" steel brush Ø 8 mm	15	
340.0076	1/4" steel brush Ø 9 mm	15	
340.0077	1/4" steel brush Ø 10 mm	15	
340.0078	1/4" steel brush Ø 11 mm	15	
340.0079	1/4" steel brush Ø 12 mm	16	
340.0080	1/4" steel brush Ø 13 mm	16	
340.0081	1/4" steel brush Ø 14 mm	17	
340.0082	1/4" steel brush Ø 15 mm	17	
340.0083	1/4" steel brush Ø 16 mm	17	
340.0084	1/4" steel brush Ø 17 mm	17	
340.0085	1/4" steel brush Ø 18 mm	18	
340.0086	1/4" steel brush Ø 19 mm	18	
340.0087	1/4" nylon brush Ø 8 mm	15	
340.0088	1/4" nylon brush Ø 9 mm	15	
340.0089	1/4" nylon brush Ø 10 mm	15	
340.0090	1/4" nylon brush Ø 11 mm	15	
340.0091	1/4" nylon brush Ø 12 mm	15	
340.0092	1/4" nylon brush Ø 13 mm	15	
340.0093	1/4" nylon brush Ø 14 mm	15	
340.0094	1/4" nylon brush Ø 15 mm	15	
340.0095	1/4" nylon brush Ø 16 mm	15	
340.0096	1/4" nylon brush Ø 17 mm	15	
340.0097	1/4" nylon brush Ø 18 mm	15	
340.0098	1/4" nylon brush Ø 19 mm	15	

INJECTOR PUMP WRENCH

Injector pump wrench

- Ideal for assembly and disassembly of securing screws on the injection pump
- Also required when changing the tooth belt or to adjust the beginning of the injection process
- 90° angled
- Matt finish
- Chrome vanadium

Application range: Audi 1.6 l diesel, **Citroën**, **Volkswagen** Golf, Jetta, Caddy, Passat etc.



	mm	Length mm	g	
152.1396	13	165,0	140	

Injection pump multi-tooth socket

- Ideal for assembly and disassembly of the pressure Valve holder on the in-line injection pump
- Also required for start of fuel delivery inspection
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Matt finish
- Chrome vanadium

Application range: Mercedes diesel engines 601, 602, 603, 605, 606, 615, 616, 617



1/2"

	Tooth	L mm	D mm	g	
152.1397	33	40,0	27,0	104	

Bosch injector pump socket set

- Ideal for Bosch high pressure pumps (VP37) and distributor injection pumps
- For loosening the cover screws
- Required for disassembling and tightening the pump
- Special tool steel

Application range: Bosch VP37, Bosch VE pumps





			g	
152.1380	2 pcs	Bosch injector pump socket set	114	

consists of:

152.1347	Bosch injector pump socket, 7.8 mm, l = 36 mm	44	
152.1348	Bosch injector pump socket, 13.5 mm, l = 45 mm	70	

Bosch injection pump socket set for VE pumps

- Ideal for Bosch high pressure pumps (VP37) and distributor injection pumps
- for loosening the lateral central screw and the pressure control valve
- Required for disassembling and tightening the pump
- Matt finish
- Chrome vanadium

Application range: Bosch VP37, Bosch VE pumps



1/2"

			g	
405.0080	2 pcs	Bosch injection pump socket set for VE pumps	344	

consists of:

405.0081	Injection pump socket for central screw, Ø 35 mm, length 42 mm	184	
405.0082	Injection pump socket for pressure control screw, Ø 19 mm, length 80 mm	160	

PUMP WHEEL EXTRACTOR

Injection pump sprocket removal tool for BMW

- Ideal for loosening the injection pump sprocket from the shaft when disassembling the injection pump
- Sturdy design
- Special tool steel

Application range: BMW engine 4 cylinder M41 and 6 cylinder M51, **Opel** Omega B 2.5 TD



	Ø mm	Length mm	g	
150.1506	32,5	79,0	220	

Injection pump sprocket removal tool for BMW

- Ideal for securing the injection pump sprocket and for pushing out the injection shaft
- Necessary for disassembling the injection pump
- With extractor sleeve and hexagon adapter
- Sturdy design
- Special tool steel

Application range: BMW 116d, 118d, 120d, 123d (E81, E82, E87, E88, F20)/316d, 318d, 320d, 325d, 330d (E90, E91, E92, E93, F30)/520d, 525d, 530d, 530d GT, 535d, 535d GT, M550d (E60, E61, F07, F10, F11)/640d (F12)/730d, 740d, 750d (F01)/X1 - 1.8d, 2.0d, 2.3d (E84)/X3 - 1.8d, 2.0d, 3.0d, 3.5d (E83, F25)/X5 - 3.0d, 4.0d, M5.0d (E70)/X6 - 3.0d, 4.0d, M5.0d (E71)



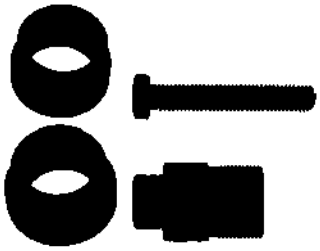
	Ø mm	Length mm	g	
150.1507	32,0	33,0	80	

Injection pump sprocket removal tool set for BMW

- Ideal for securing the injection pump sprocket and for pushing out the injection shaft
- Necessary for disassembling the injection pump
- Sturdy design
- Special tool steel

Application range: BMW engines M47, M47T2, M47TU, M57, M57TU (E38, E39, E60, E61, E46, E53)





			g	
150.1575	4 pcs	Injection pump sprocket removal tool set for BMW	520	

consists of:

		g	
150.1576	Casing	160	
150.1577	Spindle M18 x 1.5 mm	60	
150.1578	Threaded sleeve, M40 x 1.5 mm	120	
150.1579	Threaded sleeve, M42 x 1.5 mm	180	

Injection pump sprocket removal tool set for VAG

- ideal for quick and easy removal of the injection pump wheel
- Pressure spindles M12 x 1.75 mm with pressure ball
- including cutting knife
- Saves a lot of time
- Sturdy design
- In durable plastic storage case

Application range: Volkswagen LT



			kg	
405.0100	13 pcs	Injection pump sprocket removal tool set for VAG	2,38	

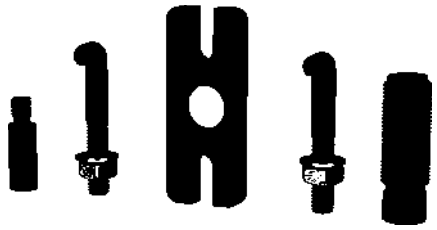
consists of:

		g	
405.0101	Separator-puller tool	563	
405.0102	Pressure piece, 60 mm	260	
405.0103	Pressure spindle, M12 x 1.75 mm, 50 mm	52	
405.0104	Clamping screw, M10 x 1.5 mm, 66.5 mm	47	
405.0106	Traverse, 100 mm	237	
405.0107	Pressure piece, Ø 52 mm	130	
405.0108	Pressure spindle, M12 x 1.75 mm, 90 mm	81	
405.0109	Traverse, 110 mm	319	
405.0111	Gliding screw with nut, M8	70	

Diesel pump sprocket puller set

- ideal for quick and easy removal of the sprocket or diesel pump
- Saves a lot of time
- Sturdy design
- Special tool steel

Application range: Ford Transit 2.2 TDCi >2011



			g
150.3235	7 pcs	Diesel pump sprocket puller set	402

consists of:

		g
150.3236	Traverse	138
150.3237	Extraction hook	40
150.3238	Nut	11
150.3239	Spindle	123
150.3266	Pin with thread	34

LOCKRING DRIVER AND ADJUSTMENT TOOLS

Injection pump locking pin

- Ideal for securing the injection pump for adjustment work on engines
- Simple handling
- Special tool steel



	Ø mm	L1 mm	L2 mm	g
400.0251	6,0	78,0	49,0	30

In-line injector pump adjusting screw

- Ideal for setting the start of fuel delivery of the in-line injector pump
- Simple handling
- Special tool steel

Application range: Mercedes diesel engines 601, 602, 603, 605, 606 and 617



	Ø mm	Length mm	g
400.9050	6,0	52,0	60

Valve injection pump block screw

- Ideal for locking the distributor injection pump when starting to deliver fuel when assembling and disassembling
- Simple handling
- Special tool steel

Application range: Mercedes diesel engine 604 with Lucas distributor injection pump, **Renault** with Delphi distributor injection pump



	Ø mm	Length mm	g
400.9055	6,5	62,0	20

Valve injector pump alignment pin

- Ideal for locking distributor injection pump e.g. when changing tooth belt
- Simple handling
- Special tool steel

Application range: Fiat Ducato 2.5, 2.8D, 2.8TD, Croma TD; **Peugeot**; **Opel** Movano 2.5D; **Citroën**



	Ø mm	Length mm	g
400.9060	5,0	70,0	80

Injection pump locking pin

- Ideal for securing the injection pump for adjustment work on engines
- Simple handling
- Special tool steel



	Ø mm	Length mm	g
400.0678	6,0	110,0	41

Injection pump impeller fixing tool for Renault

- For the professional engine repair
- Ideal for locking the sprocket wheel of the injection pump
- Simple handling
- Very high degree of accuracy
- Special tool steel

Application range: Renault Clio, Mégane, Laguna, Kangoo with 1.9 dTi engines (engine code: F9Q)



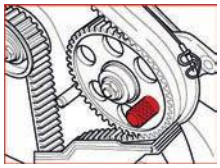


		g
400.9016	Injection pump impeller fixing tool for Renault	166

Injection pump locking pin

- For the professional engine repair
- Ideally suited to securing the injection pump
- Simple handling
- Very high degree of accuracy
- Special tool steel

Application range: VAG group vehicles with diesel engines, in particular **Volkswagen** T2, T3, T4 , LT, Golf, Passat, **Audi** with 2.4D 6 cylinder and 2.4 TD 5 cylinder TDI engines, as well as all older diesel engines such as 1.6 D and 1.7 D GTD (engine code: CS, CW, JD, JX, JP, JR, 1X, 1Y, 1Z, KY, AAZ, AAT, AEL, AFN, AFF, AHU, AHH, AVG, AAB, AJA, AHY)



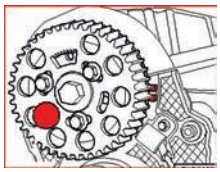


	Ø mm	Length mm	g
400.9015	15,4	67,0	126

Injection pump locking pin for VAG

- For the professional engine repair
- Ideally suited to securing the injection pump
- With air inlet
- Simple handling
- Special tool steel
- Very high degree of accuracy

Application range:Volkswagen Lupo 3L, 1.2/1.4 TDi, Polo 1.4 TDi, Golf / Bora 1.9 SDi / TDi, Passat 1.9 TD (1994-1996), Beetle 1.9 TDi (>1999) and Transporter 1.9TD





	Ø mm	Length mm	g
400.9018	6,0	80,0	20

Injection pump locking pin

- Ideal for setting up the injection pump
- Simple handling
- Special tool steel



	Ø mm	Length mm	g
400.1805	5,0	75,0	20

Pump cover locking tool

- Ideal for locking the injection pump when carrying out adjustment work on the engine
- Simple handling
- Special tool steel



	Ø mm	g	
400.0807	104,0	2	

Injector pump locking pin set

- Ideal for securing the injection pump for adjustment work on engines
- Simple handling
- Special tool steel



	Ø mm	Length mm	g	
400.0289	6,0	70,0	14	

Camshaft locking pin

- Ideal for securing the injection pump for adjustment work on engines
- Simple handling
- Special tool steel

Application range: Citroën AX, Jumper, Jumper II, Saxo, XM, Xsara, Ducato
MC: 8140.43, 8140.43S, 8140.63, F1AE0481C, F1AE0481D, F1AE0481N, THY (DK5ATE/L), THY (DK5ATED), VJX (TUD5B/L4), VJY (TUD5/Y), VJY (TUD5/Y/L3), VJZ (TUD5/L/L3), VJZ (TUD5/L/Y/L3), VJZ (TUD5/L3)



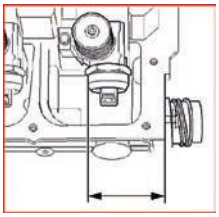
	Ø mm	Length mm	g	
400.0165	5,0	70,0	19	

INJECTOR PUMP ADJUSTING TOOLS

Pump injector setting gauge, 3 cylinders

- Simple adjustment of the pump injector unit during assembly
- Adjustment unit for old and new magnetic valve bolts
- Precision positioning through slotted holes on the cylinder head
- Professional inspection of the assembly position
- Can be used in variety of situations

Application range: Audi, **Volkswagen**, **Seat**, **Škoda**, **Ford**, with 3 cylinder pump nozzle engines



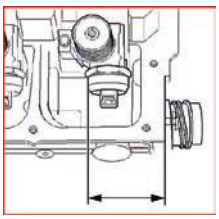


	Length mm	g	
400.9097	305	520	

Pump injector setting gauge, 4 cylinders

- Simple adjustment of the pump injector unit during assembly
- Adjustment unit for old and new magnetic valve bolts
- Precision positioning through slotted holes on the cylinder head
- Professional inspection of the assembly position
- Can be used in variety of situations

Application range: Audi, **Volkswagen**, **Seat**, **Škoda**, **Ford**, with 4 cylinder pump nozzle engines





	Length mm	g	
400.9089	410	660	

Diesel pump adjustment tool

- Secure stand for the pump wheel when assembling and disassembling the high pressure pump
- exact positioning of the pump wheel
- no need to disassemble the tooth belt
- saves work of making further adjustments to the pump
- Saves a lot of time
- Special tool steel

Application range: Diesel engines F9Q for **Opel**, **Renault**, and **Nissan** vehicles



		g	
400.9051	Diesel pump adjustment tool	420	

Injector pump adjusting tool set

- For adjusting the start of fuel delivery
- For diesel engines with adjustable pump wheel
- For Bosch and CAV pumps

Application range: 1.9 l diesel direct-injector F8Q and F9Q **Renault** Clio, Laguna, Megane, Scenic, **Mitsubishi**, Carisma, **Opel**, **Volvo** S40, V40 etc.



			g	
400.9065	3 pcs	Injector pump adjusting tool set	365	

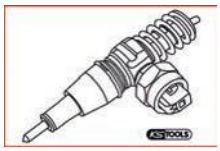
consists of:

		g	
400.9066	Bosch adaptor M10 x M8	6	
400.9067	Adjustment tool with 3 x 4 mm pins	300	
400.9068	Special applications, 27 mm hexagon socket, 1/2" drive	59	

Mounting sleeve set for pump injectors

- For changing the O-rings of the pump injection unit without causing any damage
- Precision positioning of the fuel injection unit
- In durable plastic storage case

Application range: Volkswagen Phaeton and Touareg > 2003, T5 >2004 (5 + 10 cylinder diesel engines), Touran > 2004, **Audi** A3 > 2004 (4 cylinder, 4 valve diesel engines), **Seat**, **Škoda** etc.





			g	
400.9080	6 pcs	Mounting sleeve set for pump injectors	580	

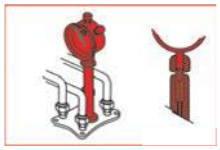
consists of:

		g	
400.9083	Adjustment gauge, length 165.00 mm	60	
400.9084	Assembly sleeve Ø 17.5 mm, length 28.9 mm	40	
400.9085	Assembly sleeve Ø 21.6 mm, length 47.0 mm	60	
400.9086	Assembly sleeve Ø 23.3 mm, length 67.2 mm	80	
400.9087	Assembly sleeve Ø 31.0 mm, length 28.0 mm	60	
400.9088	Assembly sleeve Ø 32.4 mm, length 40.3 mm	60	

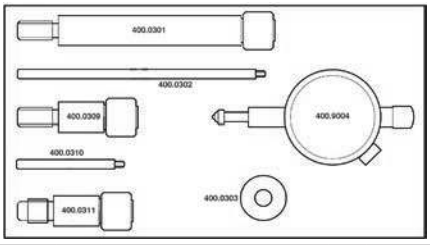
Diesel fuel pump timing set

- For the professional engine repair
- Precise measuring device
- Very high degree of accuracy
- In durable steel storage case

Application range: Alfa Romeo, **Audi**, **BMW**, **Daihatsu**, **Fiat**, **Ford**, **Isuzu**, **Iveco**, **Lancia**, **Land Rover**, **Mazda**, **Mitsubishi**, **Nissan**, **Renault**, **Rover** and **Volkswagen** vehicles with Bosch, Kikki, Nippon Denso injection pumps with threads of M8, M10 and M12, with new M10 Adapter in particular for **Ford** Transit







			g	
400.0325	7 pcs	universal	301	

consists of:

		g	
400.0301	Dial gauge adapter M8 (Bosch), long	71	
400.0302	Dial gauge extension, long 99 mm	9	
400.0303	Convertor M8 x M12	12	
400.9004	Precision-dial indicator gauge 0-10 mm, Ø 40 mm	78	
400.0309	Dial gauge adapter M8 (Bosch) short, silver	37	
400.0310	Dial gauge extension short	4	
400.0311	Dial gauge adapter M10 (Bosch) short, black	40	



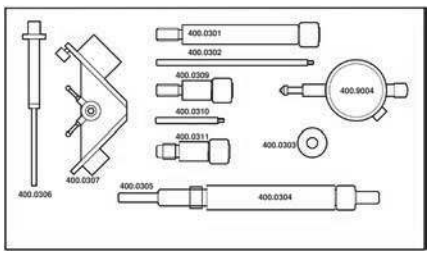
Diesel fuel pump timing set

- For the professional engine repair
- Precise measuring device for the upper entry hole
- For resetting the injection time on diesel engines
- Very high degree of accuracy
- In durable steel storage case

Application range: Alfa Romeo, **Audi**, **BMW**, **Daihatsu**, **Fiat**, **Ford**, **Isuzu**, **Iveco**, **Lancia**, **Land Rover**, **Mazda**, **Mitsubishi**, **Nissan**, **PSA** (XUD), **Renault**, **Rover**, **Volkswagen** vehicles with Bosch, EP/VE Rotary, Niki, Nippon Denso, CAV RotoDiesel, Top injection fuel pumps







			g	
400.0300	11 pcs	universal	710	

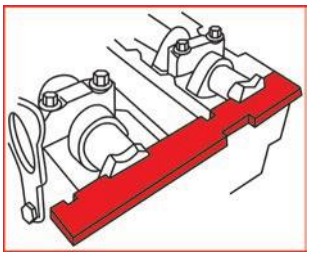
consists of:

		g	
400.0301	Dial gauge adapter M8 (Bosch), long	71	
400.0302	Dial gauge extension, long 99 mm	9	
400.0303	Convertor M8 x M12	12	
400.0304	TDC determining pin / dial indicator bracket M14 x 2.0 mm	135	
400.0305	Extension	460	
400.0306	Dial gauge probe for Lucas-CAV-Roto	17	
400.0307	Dial gauge assy for Lucas-CAV-Roto	125	
400.0309	Dial gauge adapter M8 (Bosch) short, silver	37	
400.0310	Dial gauge extension short	4	
400.0311	Dial gauge adapter M10 (Bosch) short, black	40	
400.9004	Precision-dial indicator gauge 0-10 mm, Ø 40 mm	78	

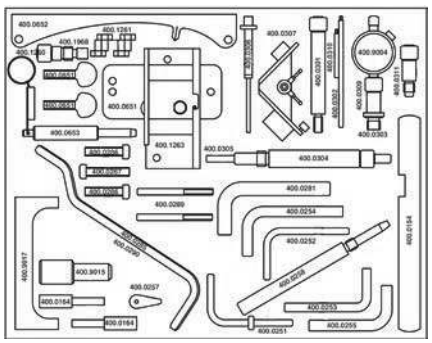
Universal - Engine Timing Tool Set for diesel engines

- For the professional engine repair
- Special set for adjusting and locking diesel engines
- Very high degree of accuracy
- In durable steel storage case

Application range: Audi, **Citroën**, **Ford**, **Opel**, **Peugeot**, **Renault**, **Rover**, **Volvo**, **Volkswagen** vehicles with diesel engines



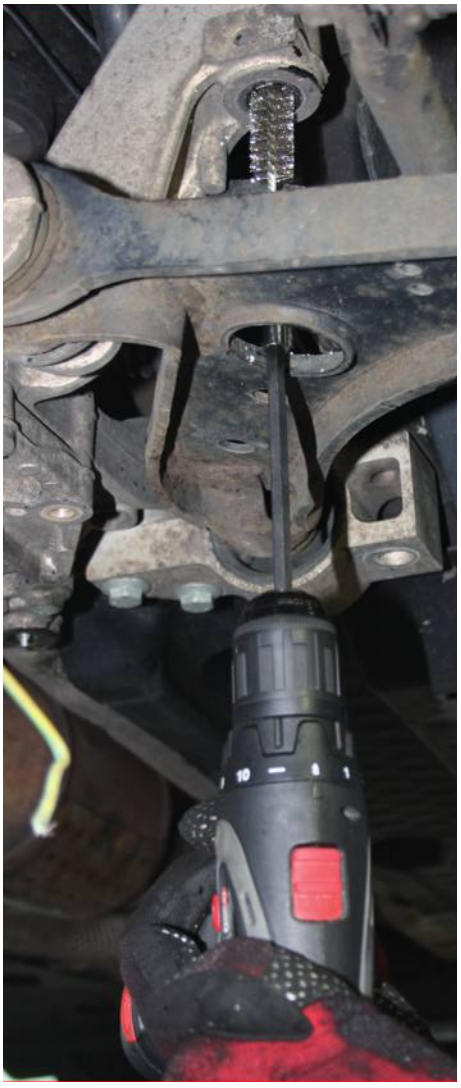




			kg	
400.1950	41 pcs	universal	4,74	

consists of:

		g	
400.0154	Camshaft setting strap 200 mm	130	
400.0164	Timing pin Ø 6,6 mm (2)	74	
400.0251	Injection pump locking pin Ø 6.0 mm	30	
400.0252	Camshaft locking pin 6.0 mm	26	
400.0253	Locking pin Ø 8.0 mm	41	
400.0254	Locking pin Ø 9.5 mm	60	
400.0255	Locking pin Ø 10.0 mm	60	
400.0257	Crankshaft TDC locking pin Ø 5 mm, 160 mm	124	
400.0258	Shim tool (2)	3	
400.0281	Timing pin Ø 12,7 mm	569	
400.0285	Crankshaft locking pin Ø 8,0 mm 200 mm	97	
400.0286	Screw M8 x 35 mm (2)	16	
400.0287	Screw M8 x 40,0 mm	18	
400.0289	Injector pump locking pin (2), Ø 6 mm, 70 mm	14	
400.0290	Crankshaft setting pin Ø 6,0 mm	55	
400.0301	Dial gauge adapter M8 (Bosch), long	71	
400.0302	Dial gauge extension, long 99 mm	9	
400.0303	Convertor M8 x M12	12	
400.0304	TDC determining pin / dial indicator bracket M14 x 2.0 mm	135	
400.0305	Extension	460	
400.0306	Dial gauge probe for Lucas-CAV-Roto	17	
400.0307	Dial gauge assy for Lucas-CAV-Roto	125	
400.0309	Dial gauge adapter M8 (Bosch) short, silver	37	
400.0310	Dial gauge extension short	4	
400.0311	Dial gauge adapter M10 (Bosch) short, black	40	
400.0651	Camshaft locking tool (3), 110 x 50 mm	169	
400.0652	Flywheel TDC indicator	80	
400.0653	Flywheel locking pin with spring on ring, 103 mm	79	
400.1260	Screw for 400.1263	9	
400.1261	Locking screw M6 x 10.0 mm	4	
400.1263	Mounting bracket assy	330	
400.1968	Special tip	16	
400.9004	Precision-dial indicator gauge 0-10 mm, Ø 40 mm	78	
400.9015	Injection pump locking pin Ø 15.4 mm	126	
400.9017	Camshaft setting strap for VAG	120	




KS TOOLS
Innovation is our mission!

	FROM PAGE
SPARK PLUG CONNECTOR PULLER	258
IGNITION COIL PULLER	258
SPARK PLUG CONNECTOR PLIERS	259
STANDARD NUT SOCKETS FOR SPARK PLUGS	260
SPARK PLUG SCREWING AID	262
TORQUE TOOLS	263
REAMER FOR CLEANING	263
SPARK PLUG THREAD REPAIR	263
SPARK PLUG THREAD CUTTING TOOLS	264
CONTACT CLEANING	265
SENSOR AND THREAD GAUGES	265
TEST DEVICE	266

SPARK PLUG CONNECTOR PULLER

T-handle spark plug connector puller, short

- Short execution
- For most current vehicle types
- Pipe part slotted to ensure optimal guidance of the cable without damage
- For damage-free removal and insertion of spark plug connectors, even when the engine is warm
- With hanging hole
- One component handle
- Special tool steel





	Length mm	g	
500.7525	225,0	230	

T-handle spark plug connector puller, long

- Long design specially for engines with deep seating of the spark plugs
- For most current vehicle types
- Pipe part slotted to ensure optimal guidance of the cable without damage
- For damage-free removal and insertion of spark plug connectors, even when the engine is warm
- With hanging hole
- One component handle
- Special tool steel





	Length mm	g	
500.7535	350,0	270	

T-handle spark plug connector puller, angled, long

- Angled long design specially for engines with deep seating of the spark plugs
- For most current vehicle types
- Pipe part slotted to ensure optimal guidance of the cable without damage
- For damage-free removal and insertion of spark plug connectors, even when the engine is warm
- With hanging hole
- One component handle
- Special tool steel





	Length mm	g	
500.7530	280,0	90	

IGNITION COIL PULLER

T-handle ignition coil puller for VAG engines

- Ideal for the fast and safe assembly and removal of ignition coils with power output stage
- Prevents damage to the coil and on the housing
- With hanging hole
- One component handle
- Matt chrome
- Chrome vanadium

Application range: 6 cylinder 24 V and 5 cylinder engines, Golf/Bora from 1998, Passat/Touareg from 1997, Sharan from 1996, Phaeton/Touareg 6 cylinder from 2003, Transporter T5 6 cylinder injection from 2004; **Audi** direct injection A3 from 04, 2.0 l, A4 from 02, 2.0 l, A5 from 08 3.2 l and 4.2 l, A6 from 05, 3.2 l, A8 from 03, 3.2 l - 4.2 l and 5.2 l, TT from 07, 1.8 l and 2.0 l, R8 from 08, 4.2 l, Q5 from 08, 2.0 l and 3.2 l, Q7 from 07, 3.6 l and 4.2 l





	Fork opening mm	Length mm	g	
500.7545	18,0	135,0	130	

T-handle ignition coil puller VAG engines

- Ideal for the fast and safe assembly and removal of ignition coils with power output stage
- Prevents damage to the coil and on the housing
- With hanging hole
- One component handle
- Matt chrome
- Chrome vanadium

Application range: 6 cyl. (4V) and 5 cyl. petrol injection engines **Volkswagen** FSI engines: Golf/Bora from 1998, Polo from 2002, Touran, Touareg, Sharan from 2004, New Beetle from 2003, Passat from 1997, Phaeton, T4, T5 + **Audi** A2 from 2001





	Fork opening mm	Length mm	g	
500.7540	26,0	135,0	150	

T-handle ignition coil puller VAG engines

- Ideal for the fast and safe assembly and removal of ignition coils with power output stage
- Prevents damage to the coil and on the housing
- With hanging hole
- One component handle
- Matt chrome
- Chrome vanadium

Application range: Volkswagen direct injection 2.0: Golf + Touran from 2004, Passat + Eos + Tiguan from 2006, Polo from 2002 4 cyl. 5V, Scirocco from 2009 1.8 l and 2.0 l, Phaeton from 2003 8 cyl., **Audi** direct injection A3 from 2004 2.0 l, A4 from 2002 2.0 l, A5 3.2 l and S5/RS5 4.2 l + R8 4.2 l + Q5 2.0 l and 3.2 l from 2008, A6 3.2 from 2005, A8 3.2 l and 4.2 l + S8 5.2 l from 2003, TT 1.8 l and 2.0 l + Q7 3.6 l and 4.2 l from 2007



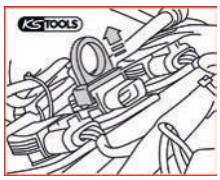


	Fork opening mm	Length mm	g	
500.7550	44,0	105,0	200	

Ignition coil puller VAG engines

- Ideal for the fast and safe assembly and removal of ignition coils with power output stage
- Prevents damage to the coil and on the housing
- With finger pull ring
- Matt chrome
- Chrome vanadium

Application range: For 1.8 l turbo petrol injection engines with engine code: ARZ, AQA, AUM, AUQ e.g. for **Audi** A3 2.0 l from 2004, A6 3.2 l from 2005, TT, **Volkswagen** direct injection 2.0: Golf +Touran from 2004, Passat + Eos from 2006 **Audi** direct injection: A3 2.0 l from 2004, A6 3.2 l from 2005





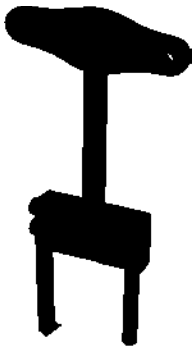
	Fork opening mm	Length mm	g	
500.7555	44,0	90,0	100	

T-grip ignition coil puller for pencil-type ignition coils

- Perfect for the fast and safe disassembly of pencil-type ignition coils
- Prevents damage to the coil and on the housing
- With hanging hole
- One component handle
- Matt chrome
- Chrome vanadium

Application range: 1.0 l / 1.0 l TSI / TFSI - 1.2 l TSI - 1.4 l TSI /TFSI - 2.0 l GTI
Volkswagen Up (>2011), Polo (>2012), Golf (>2013), Beetle (>2014), Caddy (>2015), Passat (>2014), Tiguan (>2015), Touran (>2015), Sharan (>2015) **Audi** A1 (>2012), A3 (>2013) **Seat** Mii (>2011), Ibiza (>2013), Leon (>2013) **Škoda** Citigo (>2011), Fabia (>2014), Octavia (>2013)





	Length mm	g	
500.7534	156,0	178	

Plug-in connector unlocking tool for VAG / Porsche

- Perfect for removing the plug-in connectors for VAG and Porsche
- Particularly for connections on mass airflow sensors, ignition coils, headlamps, fog lights, level sensors etc.
- Fits directly on the push and pull connections of the plug-in connectors
- With hanging hole
- Saves a lot of time
- One component T-handle
- Matt finish
- Chrome vanadium

Application range: Audi, **Seat**, **Škoda**, **Porsche**, **Volkswagen** etc.



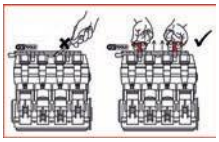


	Length mm	g	
150.1361	90,0	54	

Ignition module puller set

- For uniform assembly and removal of ignition coils
- Prevents damage to the ignition module
- Safe and easy use (usage in pairs is recommended)
- The screws must be tightened for mounting with max. 8 Nm
- With hanging hole
- One component handle
- Special tool steel

Application range: **Chevrolet** ans **Vauxhall**/**Opel** 3 and 4 cylinder 1.0, 1.2, 1.4, 1.6, 1.8, 2.0, 2,2 petrol injection engines and **Fiat** Croma 1,8 l **Alfa Romeo** 159 1,8 l





			g	
150.1516	2 pcs	Ignition module puller set	120	

consists of:

	x		g	
150.1517	2	Ignition module puller	60	

T handle ignition coils remover set for VAG and Opel engines

- Ideal for the fast and safe assembly and removal of ignition coils with power output stage
- Prevents damage to the coil and on the housing
- covers nearly the entire model plates of VAG and Opel engines
- With hanging hole
- One component handle
- Matt chrome
- Chrome vanadium
- In durable plastic storage case



			kg	
500.7570	7 pcs	T handle ignition coils remover set for VAG and Opel engines	1,65	

consists of:

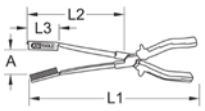
		g	
500.7540	T-handle ignition coil puller, type 1, 135mm	150	
500.7545	T-handle ignition coil puller, type 2, 135mm	130	
500.7550	T-handle ignition coil puller, type 3, 105mm	200	
500.7555	Ignition coil puller, type 4, 90mm	100	
500.7534	T-grip ignition coil puller for pencil-type ignition coils, 156 mm	178	
150.1516	Ignition module puller set, 2-pcs.	120	

SPARK PLUG CONNECTOR PLIERS

Spark plug connector pliers, short

- Short execution
- Universal usage
- 10° angled gripper sleeves
- Secure handling thanks to gripper sleeves with milled inner profile
- Short plier arms
- For damage-free removal and insertion of spark plug connectors, even when the engine is warm
- Two component handle
- Chrome vanadium







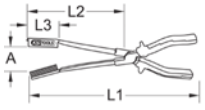
	Ø mm	L1 mm	g	
500.7532	8,0-15,0	220,0	260	



Spark plug connector pliers, long

- Long design specially for engines with deep seating of the spark plugs
- Universal usage
- 10° angled gripper sleeves
- Secure handling thanks to gripper sleeves with milled inner profile
- Very long plier arms
- Wide safety clearance to the hot unit
- For damage-free removal and insertion of spark plug connectors, even when the engine is warm
- Two component handle
- Chrome vanadium







	Ø mm	L1 mm	L2 mm	L3 mm	g	
500.7510	8,0-15,0	290,0	145,0	50,0	280	

Spark plug connector pliers, short

- Short execution
- Universal usage
- Ideal for heat protection connectors
- 45° angled gripper sleeves
- Secure handling thanks to plier tips with milled inner profile
- Short plier arms
- For damage-free removal and insertion of spark plug connectors, even when the engine is warm
- Two component handle
- Chrome vanadium





	Ø mm	Length mm	g	
500.7533	9,0	190,0	220	

Spark plug connector double joint pliers, long

- Long design specially for engines with deep seating of the spark plugs
- Universal usage
- Ideal for heat protection connectors
- Double joint means the pliers require less space to open and grab
- 45° angled gripper sleeves
- Secure handling thanks to plier tips with milled inner profile
- Very long plier arms
- Wide safety clearance to the hot unit
- For damage-free removal and insertion of spark plug connectors, even when the engine is warm
- With PVC dipped handle
- Chrome vanadium





	Ø mm	Length mm	g	
500.7166	8,0	340,0	400	



Spark plug connector double joint pliers, long

- Long design specially for engines with deep seating of the spark plugs
- Universal usage
- Ideal for heat protection connectors
- Double joint means the pliers require less space to open and grab
- 45° angled gripper sleeves
- Secure handling thanks to plier tips with milled inner profile
- Very long plier arms
- Wide safety clearance to the hot unit
- For damage-free removal and insertion of spark plug connectors, even when the engine is warm
- With PVC dipped handle
- Chrome vanadium





	Ø mm	Length mm	g	
500.7167	13,0	340,0	400	

Spark plug connector double joint pliers, long

- Long design specially for engines with deep seating of the spark plugs
- Universal usage
- Ideal for heat protection connectors
- Double joint means the pliers require less space to open and grab
- 45° angled gripper sleeves
- Secure handling thanks to plier tips with milled inner profile
- Very long plier arms
- Wide safety clearance to the hot unit
- For damage-free removal and insertion of spark plug connectors, even when the engine is warm
- With PVC dipped handle
- Chrome vanadium





	Ø mm	Length mm	g	
500.7205	19,0	320,0	420	

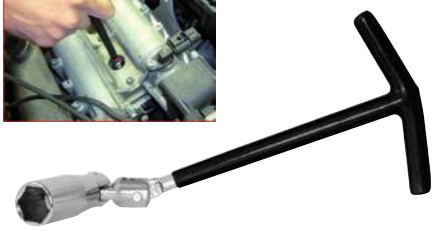


STANDARD NUT SOCKETS FOR SPARK PLUGS

T-handle spark plug spanner with joint

- 6 point
- Universal usage
- With flexible head
- With rubber stop for holding the spark plugs
- Mirror polished
- Chrome vanadium



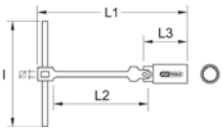


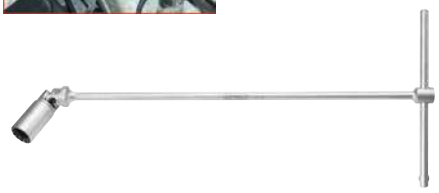
	mm		L mm	g	
517.1170	16,0	5/8"	235,0	250	
517.1175	21,0	13/16"	235,0	280	

T-handle spark plug spanner with joint, long

- 12 point
- Double hexagon profile allows the pickup of hexagon and 12-point spark plugs
- For difficult to access areas
- Universal usage
- With flexible head
- With rubber stop for holding the spark plugs
- Matt finish
- Chrome vanadium







	Profile	mm	l mm	L1 mm	L2 mm	L3 mm	g	
517.1131	○	14,0	200,0	500,0	418,5	81,5	490	
517.1132	○	16,0	200,0	500,0	418,5	81,5	500	
517.1133	○	18,0	200,0	500,0	418,5	81,5	580	
517.1134	○	21,0	200,0	500,0	418,5	81,5	590	

T-handle spark plug spanner set with joint, long

- 12 point
- Double hexagon profile allows the pickup of hexagon and 12-point spark plugs
- For difficult to access areas
- Universal usage
- With flexible head
- With rubber stop for holding the spark plugs
- Matt finish
- Chrome vanadium

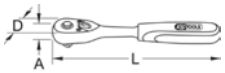




			kg	
517.1130	4 pcs	14 - 16 - 18 - 21 mm	2,42	

Flexible head reversible ratchet

- According to DIN 3122 / ISO 3315
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- 180° revolving head
- Reversible
- Exact gearing 72 teeth ratchet mechanism
- With ejection mechanism on the ratchet head
- Ergonomic 2 component handle
- Recessed reverse lever
- Matt finish
- Chrome vanadium



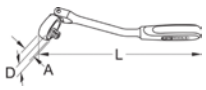


3/8"

	A mm	D mm	L mm	Repair set	g
914.3896	16,0	30,0	275,0	914.3897	260

CHROME*plus*® flexible head reversible ratchet with cranked shaft

- According to DIN 3122 / ISO 3315
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- 180° revolving head
- Cranked shaft
- Reversible
- Fine gearing 72 teeth ratchet mechanism
- With ejection mechanism on the ratchet head
- Ergonomic 2 component handle
- Lightweight recessed reverse lever
- Mirror polished
- Chrome vanadium





3/8"

	A mm	D mm	L mm	Repair set	g
918.3895	16,0	30,0	275,0	914.3895	230

Telescopic spark plug socket, adjustable length

- 6 point
- Length adjustable to 146 / 161 / 176 / 191 / 206 mm
- Long design if required for engines with deep seated spark plugs
- Universal usage
- With rubber stop for holding the spark plugs
- Internal square drive to DIN 3120 / ISO 1174
- For manual operation
- Matt finish
- Chrome vanadium



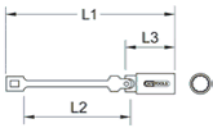
3/8"

	Profile	mm	Length mm	g
500.3801	○	14,0	146/161/176/191/206	240
500.3802	○	16,0	146/161/176/191/206	250
500.3803	○	21,0	146/161/176/191/206	260

Spark plug socket with joint, long

- 12 point
- Double hexagon profile allows the pickup of hexagon and 12-point spark plugs
- Very long design specially for engines with deep seated spark plugs
- Universal usage
- With flexible head
- With rubber stop for holding the spark plugs
- Internal square drive adaptor to DIN 3120 / ISO 1174
- Matt finish
- Chrome vanadium







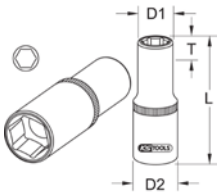
3/8"

	Profile	mm	L1 mm	L2 mm	L3 mm	g
517.1191	○	14,0	500,0	418,5	81,5	370
517.1192	○	16,0	500,0	418,5	81,5	380
517.1193	○	18,0	500,0	418,5	81,5	390
517.1194	○	21,0	500,0	418,5	81,5	400



Spark plug socket

- 6 point
- DIN 3124 / ISO 3315
- FlankTraction profile
- Internal square to DIN 3120 / ISO 1174 with ball reception
- With rubber stop for holding the spark plugs
- Long execution
- For manual operation
- Matt finish
- Chrome vanadium



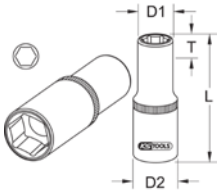


3/8"

	Profile	mm		D1 mm	D2 mm	L mm	g
911.3804	○	16,0		22,0	19,0	65,0	94
911.3823	○	18,0		26,0	21,0	65,0	136
911.3805	○	21,0		28,0	22,0	65,0	140
911.3909	○		5/8"	22,0	19,0	65,0	94
911.3908	○		13/16"	28,0	22,0	65,0	136

CHROME*plus*® Spark plug socket

- 6 point
- DIN 3124 / ISO 3315
- FlankTraction profile
- Internal square to DIN 3120 / ISO 1174 with ball reception
- With rubber stop for holding the spark plugs
- Long execution
- For manual operation
- Mirror polished
- Chrome vanadium





3/8"

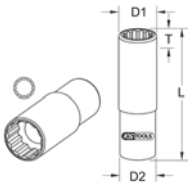
	Profile	mm		D1 mm	D2 mm	L mm	g
918.3804	○	16,0		22,0	19,0	65,0	94
918.3805	○	18,0		26,0	23,0	64,0	94
918.3806	○	21,0		28,0	22,0	65,0	136
918.3991	○		13/16"	28,0	22,0	65,0	136
918.3992	○		5/8"	22,0	19,0	65,0	94

Special spark plug socket, thin-walled

- 12 point
- Double hexagon profile allows the pickup of hexagon and 12-point spark plugs
- Extra slim design
- For spark plugs with platinum electrodes for example Bosch 14 ZR
- With rubber stop for holding the spark plugs
- Internal square drive to DIN 3120 / ISO 1174
- For manual operation
- Matt finish
- Chrome vanadium

Application range: BMW E90 N 54 engine 335i from 2006, 1 Series (F20) 118i
Renault Modus, Twingo, Clio, Kangoo with 1.2 l 16V engine
Peugeot 207, 307
Citroën C4 1.4 and 1.6 l 16V engine, C5 2.0 l HPi engine
Mercedes Motor M156, engine M 276
Nissan Micra, Note
MINI 1.2 - 1.4 l 4 cyl from 2007
FORD 1.0 EcoBoost engine
Alfa 1.8 TBI engine
KIA







3/8"

	Profile	mm	D1 mm	D2 mm	L mm	T mm	g
911.3990	○	14,0	20,0	18,0	63,0	23,0	75

CHROMEplus® Special spark plug socket, thin-walled

- 12 point
- Double hexagon profile allows the pickup of hexagon and 12-point spark plugs
- Extra slim design
- For spark plugs with platinum electrodes for example Bosch 14 ZR
- With rubber stop for holding the spark plugs
- Internal square drive to DIN 3120 / ISO 1174
- For manual operation
- Mirror polished
- Chrome vanadium

Application range: BMW E90 N 54 engine 335i from 2006, 1 Series (F20) 118i
Renault Modus, Twingo, Clio, Kangoo with 1.2 l 16V engine
Peugeot 207, 307
Citroën C4 1.4 and 1.6 l 16V engine, C5 2.0 l HPi engine
Mercedes Motor M156, engine M 276
Nissan Micra, Note
MINI 1.2 - 1.4 l 4 cyl from 2007
FORD 1.0 EcoBoost engine
Alfa 1.8 TBI engine
KIA





3/8"

	Profile	mm	D1 mm	D2 mm	L mm	T mm	g
918.3990	◯	14,0	20,0	18,0	65,0	23,0	75

Special spark plug socket, extremely thin-walled

- 12 point
- Double hexagon profile allows the pickup of hexagon and 12-point spark plugs
- Extra slim design
- For spark plugs with platinum electrodes for example Bosch 14 ZR
- With rubber stop for holding the spark plugs
- Internal square drive to DIN 3120 / ISO 1174
- For manual operation
- Matt finish
- Chrome vanadium

Application range:
BMW E90 N 54 engine 335i from 2006, 1 Series (F20) 118i
Renault Modus, Twingo, Clio, Kangoo with 1.2 l 16V engine
Peugeot 207, 307
Citroën C4 1.4 and 1.6 l 16V engine, C5 2.0 l HPi engine
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FORD 1.0 EcoBoost engine
Alfa 1.8 TBI engine
KIA





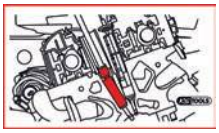
3/8"

	Profile	mm	D1 mm	D2 mm	L mm	T mm	g
911.3991	◯	14,0	18,0	18,0	64,0	23,0	51

Special spark plug socket for BMW with joint

- 12 point
- Double hexagon profile allows the pickup of hexagon and 12-point spark plugs
- Extra slim design
- With swivel head for hard to reach spark plugs
- Ideal for BMW N43 engines , because the spark plugs are installed at an angle of > 5°
- With rubber stop for holding the spark plugs
- Holding rubber facilitates the assembly and disassembly
- Avoids damage to the ceramic
- Trouble free spark plug replacement
- For manual operation
- Matt finish
- Chrome vanadium

Application range: BMW 1er (E81 / E87), 3er (E90) and 5er (E60) with **BMW** N43 engines , because the spark plugs are installed at an angle of > 5°





3/8"

	Profile	mm	D mm	L mm	T mm	g
911.3999	◯	14,0	19,0	92,0	19,5	110

Spark plug socket, long

- 12 point
- Double hexagon profile allows the pickup of hexagon and 12-point spark plugs
- Long design specially for engines with deep seating of the spark plugs
- Universal usage
- Extra slim design
- With strong, integrated magnets for holding the spark plugs
- Internal square drive to DIN 3120 / ISO 1174
- For manual operation
- Matt finish
- Chrome vanadium

Application range: Citroën C5 (HPI); **Peugeot** 207,308 (1.6 16V); 406 (HPI); **Mini** One 1.4 l; **Renault** Clio (1.2 16V); Twingo (1.2 16V); **Volkswagen**-16 valve; **Mazda** 626, 2.0 l, 16 valve with DOHC engine from 87; **Mazda** 323, 1.6 l and 1.9 l from 89; MX 5, 1.6 l from 90





3/8"

	Profile	mm	Length mm	g
517.1143	◯	14,0	250,0	300
517.1141	◯	16,0	250,0	360
517.1142	◯	21,0	250,0	560

CHROMEplus® spark plug service set

- Mirror polished
- Chrome vanadium
- In durable plastic storage case



3/8"

			kg	
918.0607	7 pcs	CHROMEplus® spark plug service set	1,44	

consists of:

		g	
918.3802	3/8" CHROMEplus Wobble extension, 150mm	145	
918.3804	3/8" CHROMEplus Spark plug socket, 16mm	94	
918.3805	3/8" CHROMEplus Spark plug socket, 18mm	94	
918.3806	3/8" CHROMEplus Spark plug socket, 21mm	136	
918.3895	3/8" CHROMEplus Flexibel head reversible ratchet with cranked shaft, 72 teeth	230	
918.3990	3/8" CHROMEplus® Special spark plug socket, thin-walled, 14mm	75	
919.3804	3/8" CHROMEplus Extensions with interlock, 150mm	140	



SPARK PLUG SCREWING AID

Spark plug screw in tool, double sided

- For universal applications spark plug and glow plugs
- For the clean and preparing of the first thread gears
- Especially in common rail glow plugs
- Double sided usage
- Solid rubber





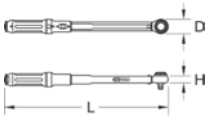
	Length mm	g
500.7520	240,0	75

TORQUE TOOLS

ERGOTORQUE®*precision* torque wrench with rotary mushroom ratchet head

- Actuation accuracy: ±3 % tolerance of the set scale value
- Precise reading accuracy for a minimum 5.000 tightening cycles
- For controlled fastening in clockwise and counter clockwise directions
- Torque setting by pulling out and pushing in the slide in knob at the end of the handle
- The direction of rotation (clockwise and counter clockwise) can be changed by simply rotating the square drive piece
- Double scale in Nm and lbf•ft divisions for precise adjustment
- Includes micrometer scale in Nm divisions for precise and fine adjustment
- Large vision panel, precise adjustment using a magnifying glass
- An audible and palpable signal when the desired torque value is achieved
- Exact gearing 30 teeth ratchet mechanism
- Torque setting is quick and easy using the locking knob in the handle end
- Secure locking function within the handle
- With ejection mechanism on the ratchet head
- Two component handle with a soft zone, is ergonomic in design and comfortable in the hand
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- Individually marked with serial number - unique product identification
- including calibration declaration of conformity according to DIN EN ISO 6789:2017(E) - traceable to national standards







3/8"

		N•m	Division Nm	lbf•ft	L mm	D mm	H mm	kg	
516.1422	3/8"	10-50	0,25	4 - 37	350,0	45,0	23,0	0,61	

Torque limiter adaptor set

- High accuracy
- For controlled fastening in a clockwise direction with 18 Nm or 24 Nm
- Clearly perceptible torque through the ratchet
- It is not possible to over tighten the set value
- Without scale - with a fixed adjustable value
- Can untighten without any torque restraint thanks to the anticlockwise latch
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- In durable steel storage case





3/8"

			g	
516.1500	2 pcs	18 - 24 Nm	410	

consists of:

516.1501	Torque limiter for spark plugs, 3/8", 18Nm	165	
516.1502	Torque limiter for spark plugs, 3/8", 24Nm	166	

Torque limiter spark plug socket set

- For the controlled screwing of sparks plugs
- Includes 2 magnetic 250 mm long sparks plug socket
- High accuracy
- For controlled fastening in a clockwise direction with 18 Nm or 24 Nm
- Clearly perceptible torque through the ratchet
- It is not possible to over tighten the set value
- Without scale - with a fixed adjustable value
- Can untighten without any torque restraint thanks to the anticlockwise latch
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- In durable steel storage case





3/8"

			kg	
517.1140	5 pcs	Torque limiter spark plug socket set	2,07	

consists of:

516.1501	Torque limiter for spark plugs, 3/8", 18Nm	165	
516.1502	Torque limiter for spark plugs, 3/8", 24Nm	166	
517.1141	3/8" Spark plug socket, long, 16mm	360	
517.1142	3/8" Spark plug socket, long, 21mm	560	
918.3890	3/8" CHROMEplus Reversible ratchet, 72 teeth, plactic handle	130	

REAMER FOR CLEANING

Special thread cleaner with integrated seal seat milling tool

- Ideal for cleaning the internal thread of the spark plugs on the cylinder head
- Optimum cleaning of the spark plug seat using a compression spring with integrated seal seat milling tool
- Simple handling
- Internal square drive adaptor to DIN 3120 / ISO 1174
- External hexagon drive
- Special tool steel





1/2"

150.5017	M14 x 1,25	1/2"	60	
150.5016	M16 x 1,25	1/2"	65	
150.5018	M18 x 1,5	1/2"	70	

SPARK PLUG THREAD REPAIR

THREADfix repair set M12 x 1.25 for glow and spark plugs

- Unique assortment for the repair of worn or damaged threads
- Ideal for spark plugs and glow plugs
- Simple handling and correct repair
- Provides an entirely firm and gastight seat of the inserts
- Extremely thin walled inserts with rustproofing protection
- Includes thread tap and assembly tool
- Fast repair option without costly warehousing of components
- In durable plastic storage case

M12 x 1.25 x 120 mm
M12 x 1.25 x 130 mm
M12 x 1.25 x 150 mm





			g	
150.5060	21 pcs	THREADfix repair set M12 x 1.25 for glow and spark plugs	920	

consists of:

150.5061	Threaded drill with guide pin,M12x1,25	47	
150.5062	Threaded drill with guide pin,M14x1,25	53	
150.5063	Reamer with guide pin f.150.5060	52	
150.5064	Screw f.bushes, l=89mm,M12x-1,25,GL=108mm	230	
150.5068	Screw f.bushes, l=95mm,M12x-1,25,GL=114mm	238	
150.5069	Screw f.bushes, l=103mm,M12x-1,25,GL=122mm	246	
150.5077	Threaded bush + collar L=12m-m,IG=M12x1.25/AG=M14x1.25, pack of 5	20	
150.5078	Threaded bush + collar L=19m-m,IG=M12x1.25/AG=M14x1.25, pack of 5	20	
150.5079	Threaded bush + collar L=26m-m,IG=M12x1.25/AG=M14x1.25, pack of 5	20	



Spark plug thread repair set M14 x 1,25 for spark plugs

- Proven and solid repair system for torn out and damaged spark plug threads (e.g. in light metal cylinder heads).
- Particularly time and cost saving, as the repair can be carried out without dismantling the cylinder head. Thanks to the special tap, the old thread remainders are removed and the new thread is cut in a single operation.
- Absolutely tight and gas-tight fit of the thread inserts, no unscrewing at later candle change.
- The special steel thread inserts are extremely thin-walled and equipped with corrosion protection (internal thread M14x1.25 / external thread M16x1.25).
- Delivery incl. inserts for conical sealing seats (without sealing ring) e.g. Ford, Peugeot, MB etc.
- In durable plastic storage case





			g
150.1280	16 pcs	Spark plug thread repair set M14 x 1,25 for spark plugs	200

consists of:

		g
150.1281	Tap, M16 x 1,25 mm	80
150.1282	Tap adaptor, M14 x 1,25 mm, 11,2 mm, pack of 5	20
150.1283	Tap adaptor, M14 x 1,25 mm, 17,5 mm, pack of 5	40
150.1284	Tap adaptor,for tapered sealing seat, pack of 5	40

THREADfix repair set M14 x 1.25 for spark plugs

- Unique assortment for the repair of worn or damaged threads
- Ideal for spark plugs
- Simple handling and correct repair
- Provides an entirely firm and gastight seat of the inserts
- Extremely thin walled inserts with rustproofing protection
- Includes thread tap and assembly tool
- Fast repair option without costly warehousing of components
- In durable plastic storage case

M14 x 1.25 x 120 mm
M14 x 1.25 x 135 mm





			kg
150.5080	21 pcs	THREADfix repair set M14 x 1.25 for spark plugs	1,16

consists of:

		g
150.5081	Threaded drill with guide pin,M14x-1,25,L=70mm	59
150.5082	Threaded drill with guide pin,M16x-1,25,L=70mm	74
150.5083	Reamer with guide pin f.150.5080, L=70mm	71
150.5084	Screw f.bushes, l=90mm,M14x-1,25,GL=109mm	343
150.5085	Threaded bush + collar L=11,2m-m,IG=M14x1,25/AG=M16x1,25	41
150.5086	Threaded bush + collar L=17,5m-m,IG=M14x1,25/AG=M16x1,25	64
150.5087	Threaded bush + cones L=17,5m-m,IG=M14x1,25/AG=M16x1,25	62
150.5088	Screw f.bushes, l=90mm,M14x-1,25,GL=117mm	355



Stainless steel thread repair set for spark plug threads M14 x 1,25 mm

- Unique assortment for the repair of worn or damaged threads
- Ideal for spark plugs
- Simple handling and correct repair
- Provides an entirely firm and gastight seat of the inserts
- Extremely thin walled inserts made from stainless steel
- Includes thread tap and assembly tool
- Fast repair option without costly warehousing of components
- In durable steel storage case



			g
150.6140	17 pcs	Stainless steel thread repair set for spark plug threads M14 x 1,25 mm	457

consists of:

		g
150.6141	Thread insert M14x1,25, 16,4mm, pack of 5	16
150.6142	Thread insert M14x1,25, 12,4mm, pack of 5	12
150.6143	Thread insert M14x1,25, 8,4mm, pack of 5	7
150.6144	Threaded tap/Aufweiter M14x1,25	72
150.6145	Mounting tool M14x1,25	80

SPARK PLUG THREAD CUTTING TOOLS

Special hand thread cutter, extra long

- For cleaning and re-cutting spark plug or glow plug threads
- Special length for deep seated thread
- Quick and easy thread repair



		mm	Length mm	g
150.5011	M8 x 1,0	5,5	200,0	80
150.5012	M9 x 1,0	5,5	200,0	80
150.5013	M10 x 1,0	5,5	200,0	85
150.5014	M10 x 1,25	5,5	200,0	85
150.5015	M14 x 1,25	9,0	200,0	90

Spark plug thread cutting tool M14 x 1.25

- For cleaning and re-cutting M14 x 1.25 glow plug threads
- Simple handling due to eccentric function
- Special length for deep seated thread
- Quick and low-cost thread repair
- Centering shaft
- With conical mounting shaft for thread repair sleeves
- External hexagon drive
- With knurled knob





		mm	Length mm	g
150.6505	M14 x 1,25	13,0	140,0	120
150.6506	M14 x 1,25	13,0	270,0	280



Glow plug and spark plug thread cutting tool set

- For cleaning and re-cutting spark plug or glow plug threads
- Simple handling due to eccentric function
- Special length for deep seated thread
- Quick and low-cost thread repair
- Centering shaft
- With conical mounting shaft for thread repair sleeves
- External hexagon drive
- With knurled knob
- In durable plastic storage case





			kg	
150.6500	7 pcs	Glow plug and spark plug thread cutting tool set	1,40	

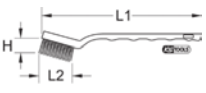
consists of:

		g	
150.6501	Thread cutting tool, M8 x 1.0, 115 mm	80	
150.6502	Thread cutting tool, M10 x 1.0, 115 mm	100	
150.6503	Thread cutting tool, M12 x 1.25, 140 mm	120	
150.6504	Thread cutting tool, M12 x 1.25, 270 mm	280	
150.6505	Thread cutting tool, M14 x 1.25, 140 mm	120	
150.6506	Thread cutting tool, M14 x 1.25, 270 mm	280	
150.6507	Thread cutting tool, M18 x 1.5, 90 mm	100	

CONTACT CLEANING

Steel wire spark plug wire brush 2 rowed

- 2 rowed
- for gentle cleaning of electrodes and contacts on spark plugs
- For surface preparation
- Steel wire

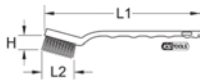




	H mm	L1 mm	L2 mm	g	
201.2315	14,8	170,0	24,5	20	

Brass wire spark plug wire brush 2 rowed

- 2 rowed
- for gentle cleaning of electrodes and contacts on spark plugs
- For surface preparation
- Brass wire





	H mm	L1 mm	L2 mm	g	
201.2316	14,8	170,0	24,5	20	

Contact file for spark plug contacts

- For delicate cleaning of spark plug contacts
- Second cut
- For surface preparation
- Special tool steel



		Length mm	Width mm	g	
201.2330	2	150,0	8,0	5	

MASTER cleaning brush set

- For cleaning and deburring threads, cylinders, connectors, pipes and other components with nylon, brass and steel edging
- External hexagon drive to DIN 3126 / ISO 1173 - C 6,3
- With locking and quick-change mechanism on the handle grip and extension
- Can be used by hand or with an electric screwdriver
- Can be used with an electric screwdriver in a clockwise direction
- Nickel plated
- In durable plastic storage case





1/4"

			kg	
340.0010	38 pcs	MASTER cleaning brush set	1,43	

consists of:

		g	
340.0061	1/4" handle with quick action lock	71	
340.0062	1/4" extension with quick action lock, 150 mm	51	
340.0063	1/4" brass brush Ø 8 mm	15	
340.0064	1/4" brass brush Ø 9 mm	15	
340.0065	1/4" brass brush Ø 10 mm	15	
340.0066	1/4" brass brush Ø 11 mm	16	
340.0067	1/4" brass brush Ø 12 mm	16	
340.0068	1/4" brass brush Ø 13 mm	16	
340.0069	1/4" brass brush Ø 14 mm	17	
340.0070	1/4" brass brush Ø 15 mm	17	
340.0071	1/4" brass brush Ø 16 mm	17	
340.0072	1/4" brass brush Ø 17 mm	18	
340.0073	1/4" brass brush Ø 18 mm	18	
340.0074	1/4" brass brush Ø 19 mm	18	
340.0075	1/4" steel brush Ø 8 mm	15	
340.0076	1/4" steel brush Ø 9 mm	15	
340.0077	1/4" steel brush Ø 10 mm	15	
340.0078	1/4" steel brush Ø 11 mm	15	
340.0079	1/4" steel brush Ø 12 mm	16	
340.0080	1/4" steel brush Ø 13 mm	16	
340.0081	1/4" steel brush Ø 14 mm	17	
340.0082	1/4" steel brush Ø 15 mm	17	
340.0083	1/4" steel brush Ø 16 mm	17	
340.0084	1/4" steel brush Ø 17 mm	17	
340.0085	1/4" steel brush Ø 18 mm	18	
340.0086	1/4" steel brush Ø 19 mm	18	
340.0087	1/4" nylon brush Ø 8 mm	15	
340.0088	1/4" nylon brush Ø 9 mm	15	
340.0089	1/4" nylon brush Ø 10 mm	15	
340.0090	1/4" nylon brush Ø 11 mm	15	
340.0091	1/4" nylon brush Ø 12 mm	15	
340.0092	1/4" nylon brush Ø 13 mm	15	
340.0093	1/4" nylon brush Ø 14 mm	15	
340.0094	1/4" nylon brush Ø 15 mm	15	
340.0095	1/4" nylon brush Ø 16 mm	15	
340.0096	1/4" nylon brush Ø 17 mm	15	
340.0097	1/4" nylon brush Ø 18 mm	15	
340.0098	1/4" nylon brush Ø 19 mm	15	



SENSOR AND THREAD GAUGES

Feeler gauge

- For the testing of intervals, contact distances etc.
- Feeler gauge conical tapered
- Fixing nut
- Leaves individually marked with size
- Blades made out of hardened spring steel





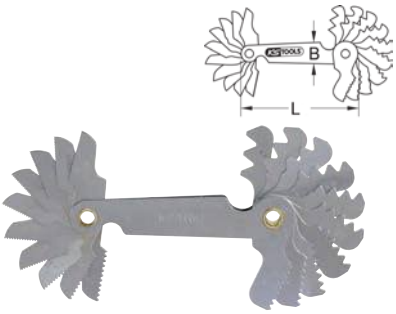


	Tooth pitch	Measuring range mm	L mm	g	
300.0600	20	0,05-0,10-0,15-0,20-0,25-0,30-0,35-0,40-0,45-0,50-0,55-0,60-0,65-0,70-0,75-0,80-0,85-0,90-0,95-1,00	100,0	88	



Thread gauge

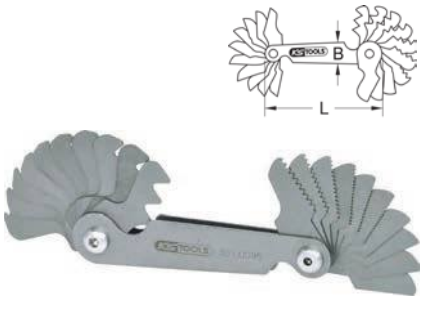
- For controlling and increasing the interior thread and outside thread
- Imperial sizes
- Cylindrical tapered
- Leaves fan shaped arrangement
- Leaves individually marked with size
- Out of hardened spring steel



	Tooth pitch	for thread size	B mm	L mm	g	
301.0090	22	4-4,5-5-6-7-8-9-10-11-12-13-14-16-18 20-22-24-32-40-48-56-64 speed	12,2	66,5	40	

Thread gauge

- For controlling and increasing the interior thread and outside thread
- Metric sizes
- Cylindrical tapered
- Leaves fan shaped arrangement
- Leaves individually marked with size
- Out of hardened spring steel



	Tooth pitch	for thread size	B mm	L mm	g	
301.0095	20	0,40-0,45-0,50-0,60-0,70-0,75-0,80-1,00-1,25-1,50-1,75-2,00-2,50-3,00-3,50-4,00-4,50-5,00-5,50-6,00mm	12,2	66,5	40	

TEST DEVICE

Test spark plug

- For checking ignition systems
- No damage to control devices due to earth connection
- Universal usage
- On vehicles with DIS ignition systems 2 pieces are required





	Length mm	g	
550.1507	68,0	60	

Test lamp for ignition cable

- For quickly finding defective ignition cables
- No piercing of the insulation, prevents contact with live wires
- Correct operation of the ignition cable is indicated by a light





	Length mm	Cable length mm	g	
550.1506	200,0	1200	40	



Digital ignition timing gun (stroboscope) with LED display

- For checking and adjustment the ignition timing on petrol engines
- For 12 V systems on 2, 3, 4, 5, 6 and 8 cylinder engines
- For all current vehicles with high voltage ignition cable
- Specially for engines that have no angle marking on the belt pulley
- Can be used for 4-stroke distributor ignition systems, 2-stroke and dual spark ignition systems
- Extra bright Xenon lights through special lenses
- Internal power supply through crocodile clips
- Additional crocodile clip and inductive pliers for measuring rotation speed, dwell angle and voltage test
- Perfect adjustment of ignition from 0 to 60°
- Dwell angle test from 0 to 99.9% with conversion table
- Engine speed counter from 200 to 9999 rpm
- Voltage drop test
- Voltmeter
- Control dial on housing side for adjusting the flash delay
- Mode can be chosen using a push-button on the back of the housing





	Length mm	Width mm	Height mm	g	
550.1500	270,0	65,0	180,0	885	

Converter box with diesel cable

- Ideal for testing and adjusting the start of delivery of diesel engines
- Suitable up to 2000 rpm.
- Signal acceptance takes place via a piezo sensor
- Mounting on the diesel line
- For use with digital ignition gun 550.1500



		g	
550.1500-1	Converter box with diesel cable	150	

TRULY THE HIGHEST PERFORMING 1/2" PNEUMATIC IMPACT WRENCH!

1690 N•m

MONSTER

1690 N•m

931 N•m

931 N•m









max. 1.690 Nm | max. 510 Nm | max. 680 Nm | max. 931 Nm

1/4" PT | 7.930 rpm | 178 L/min | 6,3 bar | 1,2" - 13,0 mm | 1,99 kg | <13,56 m/s² | 104 dbA | 88 dbA | max. M 16

515.1210 MONSTER
High-performance pneumatic impact wrench



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	FROM PAGE
GLOW PLUG CONNECTOR PLIERS	270
STANDARD NUT SOCKETS FOR GLOW PLUGS	270
GLOW PLUG SCREWING AID	271
TORQUE TOOLS	272
RATCHET RING SPANNER	272
ELECTRODE HEAD EXTRACTION TOOL	272
GLOW PLUG EXTRACTOR TOOLS	272
REAMER FOR CLEANING	273
GLOW PLUG DRILL OUT TOOLS	274
GLOW PLUG TIP BORING TOOLS	276
GLOW PLUG THREAD CUTTING TOOL	276
GLOW PLUG THREAD REPAIR	277
THREAD GAUGES	279
TEST DEVICE	279

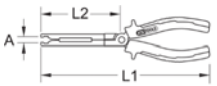
GLOW PLUG CONNECTOR PLIERS

Glow plug pliers

- Suitable for very firmly seated glow plugs
- For the expert installation and removal of glow plugs
- Specially milled plier profile for positive holding
- For difficult to access areas
- Two component handle
- Special tool steel

Application range: Modern diesel engines, e.g. **Mercedes**, **BMW**, **Volkswagen**-**Audi**







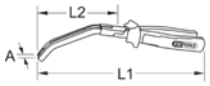
	A mm	L1 mm	L2 mm	g	
500.7330	0-125	265,0	95,0	400	

Glow plug pliers, angled

- Suitable for very firmly seated glow plugs
- For the expert installation and removal of glow plugs
- Specially milled plier profile for positive holding
- Angled head
- For difficult to access areas
- Two component handle
- Special tool steel

Application range: Modern diesel engines, e.g. **Mercedes**, **BMW**, **Volkswagen**-**Audi**





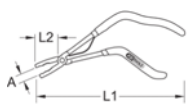


	A mm	L1 mm	L2 mm	g	
500.7310	0-105	235,0	120,0	400	

Glow plug dismantling pliers

- With rubber dipped handle
- Serrated jaws
- Length wise mounted handle arranged at the plier jaw
- With self-opening mechanism
- In order to pull out the glow plugs from the glow plug canal in the cylinder head
- Allows the removal of firmly seated and difficult to access glow plug connectors
- Range also possible to extract incompleted glow plugs
- Optimum power transmission with rotary and train movements
- Universal usage
- Special tool steel







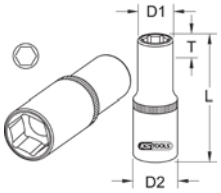
	A mm	L1 mm	L2 mm	g	
500.7335	0-35	260,0	40,0	280	

STANDARD NUT SOCKETS FOR GLOW PLUGS

Hexagonal socket, deep

- 6 point
- For installing and removing the glow plugs
- FlankTraction profile
- According to DIN 3124 / ISO 2725
- Internal square to DIN 3120 / ISO 1174 with ball reception
- Long execution
- For manual operation
- Matt finish
- Chrome vanadium





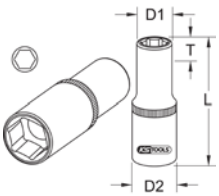


3/8"

	mm	D1 mm	D2 mm	L mm	T mm	g	
917.3828	8,0	12,0	16,0	63,0	10,0	110	
917.3830	10,0	15,0	18,0	63,0	11,0	110	

Glow plug special socket 10 mm

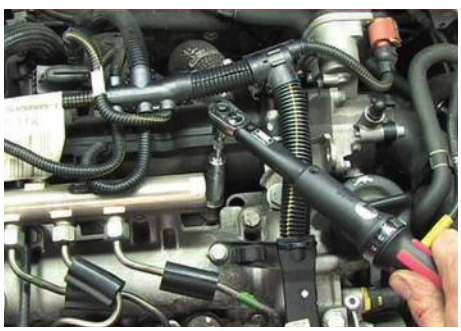
- 6 point
- For installing and removing the glow plugs
- Very narrow design
- FlankTraction profile
- Internal square to DIN 3120 / ISO 1174 with ball reception
- Long execution
- For manual operation
- Matt finish
- Chrome vanadium





1/4"

	mm	D1 mm	D2 mm	L mm	T mm	g	
500.1410	10,0	13,5	11,0	50,0	10,0	110	



PSG glow plug socket 12 mm, incl. 5 PSG protection caps

- 6 point
- For the safe assembly and removal of PSG glow plugs
- Can also be used for removal/assembly of standard glow plus with 12 mm
- Supplied 5 PSG glow plug protective caps prevent electrostatic charging and contamination of the PSG glow plugs
- Integrated ball and outer ring for secure holding of the glow plug
- Breaking moment of the PSG glow plugs at 22 Nm
- Glow plugs must only be strained up to 12 Nm
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Matt finish
- Chrome vanadium

Application range: A4/S4 (Avant/Quattro) 3.0 l from 11/09; Q7 3.0 l from 11/08; Touareg 3.0 l from 02/09; Golf (Variant/4motion) 2.0 l from 09/09; Insignia (Sports Tourer) 2.0 CDTI from 03/09; Insignia (Bi Turbo) 2.0 CDTI from 07/08; Meriva B (CDTI) 1.3 l from 03/10; Astra J 1.3 l 03/10





	mm	Replacement protective cap	g	
500.7345	12,0	500.7345-01	49	



Special glow plug socket

- For the safe assembly and removal of glow plugs
- Socket with side slot
- Does not destroy the connector cable
- Simple handling
- For difficult to access areas
- External drive hexagonal socket 10.0 mm
- Special tool steel

Application range: Alfa Romeo 147,156,159, GT; **Fiat** Bravo, Stilo; **Opel** Astra, Signum, Vectra-C, Zafira; **Saab** 93,95





	mm	Length mm	g	
500.7351	8,0	50,0	20	
500.7352	9,0	50,0	20	
500.7353	10,0	50,0	20	

Special glow plug socket set

- For the safe assembly and removal of glow plugs
- Socket with side slot
- Does not destroy the connector cable
- Simple handling
- For difficult to access areas
- Special tool steel

Application range: Alfa Romeo 147,156,159, GT; **Fiat** Bravo, Stilo; **Opel** Astra, Signum, Vectra-C, Zafira; **Saab** 93,95





			g	
500.7350	3 pcs	Special glow plug socket set	120	

consists of:

		g	
500.7351	Special glow plug socket, 8 mm	20	
500.7352	Special glow plug socket, 9 mm	20	
500.7353	Special glow plug socket, 10 mm	20	

Glow plug flexible socket

- 6 point
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Short execution
- For the safe assembly and removal of glow plugs
- For difficult to access areas
- Suitable for all current glow plugs
- With screwed universal joint
- Inclusive rubber rings for safe holding of the glow plug
- Matt finish
- Chrome vanadium





3/8"

	mm	L mm	g	
500.7301	8,0	75,0	70	
500.7302	9,0	75,0	70	
500.7303	10,0	75,0	70	
500.7304	12,0	75,0	70	
500.7305	14,0	80,0	80	
500.7306	16,0	80,0	100	

Glow plug flexible socket set

- 6 point
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Short execution
- For the safe assembly and removal of glow plugs
- For difficult to access areas
- Suitable for all current glow plugs
- With screwed universal joint
- Inclusive rubber rings for safe holding of the glow plug
- Matt finish
- Chrome vanadium





3/8"

			g	
500.7300	6 pcs	Glow plug flexible socket set	610	

consists of:

		g	
500.7301	Glowplug socket, short, 75mm, 3/8", 8mm	70	
500.7302	Glowplug socket, short, 75mm, 3/8", 9mm	70	
500.7303	Glowplug socket, short, 75mm, 3/8", 10mm	70	
500.7304	Glowplug socket, short, 75mm, 3/8", 12mm	70	
500.7305	Glowplug socket, short, 75mm, 3/8", 14mm	80	
500.7306	Glowplug socket, short, 75mm, 3/8", 16mm	100	

Glow plug flexible socket, long

- 6 point
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Long execution
- For the safe assembly and removal of glow plugs
- For difficult to access areas
- Suitable for all current glow plugs
- With screwed universal joint
- Inclusive rubber rings for safe holding of the glow plug
- Matt finish
- Chrome vanadium





3/8"

	mm	L mm	g	
500.7311	8,0	150,0	190	
500.7312	9,0	150,0	190	
500.7313	10,0	150,0	190	
500.7314	12,0	150,0	190	
500.7315	14,0	160,0	190	
500.7316	16,0	160,0	190	

Glow plug swivel wrench set, long

- 6 point
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Long execution
- For the safe assembly and removal of glow plugs
- For difficult to access areas
- Suitable for all current glow plugs
- With screwed universal joint
- Inclusive rubber rings for safe holding of the glow plug
- Matt finish
- Chrome vanadium
- In durable plastic storage case





3/8"

			kg	
500.7320	6 pcs	Glow plug swivel wrench set, long	1,40	

consists of:

		g	
500.7311	Glowplug socket, long, 150mm, 3/8", 8mm	190	
500.7312	Glowplug socket, long, 150mm, 3/8", 9mm	190	
500.7313	Glowplug socket, long, 150mm, 3/8", 10mm	190	
500.7314	Glowplug socket, long, 150mm, 3/8", 12mm	190	
500.7315	Glowplug socket, long, 150mm, 3/8", 14mm	190	
500.7316	Glowplug socket, long, 150mm, 3/8", 16mm	190	

GLOW PLUG SCREWING AID

Spark plug screw in tool, double sided

- For universal applications spark plug and glow plugs
- For the clean and preparing of the first thread gears
- Especially in common rail glow plugs
- Double sided usage
- Solid rubber





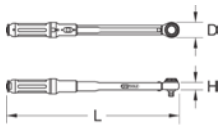
	Length mm	g	
500.7520	240,0	75	

TORQUE TOOLS

ERGOTORQUE®*precision* torque wrench with rotary mushroom ratchet head

- Actuation accuracy: ±3 % tolerance of the set scale value
- Precise reading accuracy for a minimum 5.000 tightening cycles
- For controlled fastening in clockwise and counter clockwise directions
- Torque setting by pulling out and pushing in the slide in knob at the end of the handle
- The direction of rotation (clockwise and counter clockwise) can be changed by simply rotating the square drive piece
- Double scale in Nm and lbf•ft divisions for precise adjustment
- Includes micrometer scale in Nm divisions for precise and fine adjustment
- Large vision panel, precise adjustment using a magnifying glass
- An audible and palpable signal when the desired torque value is achieved
- Exact gearing 30 teeth ratchet mechanism
- Torque setting is quick and easy using the locking knob in the handle end
- Secure locking function within the handle
- With ejection mechanism on the ratchet head
- Two component handle with a soft zone, is ergonomic in design and comfortable in the hand
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- Individually marked with serial number - unique product identification
- including calibration declaration of conformity according to DIN EN ISO 6789:2017(E) - traceable to national standards







3/8"

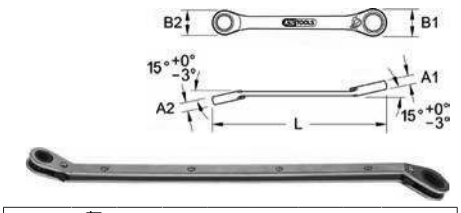
		N•m	Division N•m	lbf•ft	L mm	D mm	H mm	g
516.1422	3/8"	10-50	0,25	4 - 37	350,0	45,0	23,0	610

RATCHET RING SPANNER

Glow plug double ring ratcheting spanner, offset

- FlankTraction profile
- 45° angled
- Very narrow design
- Long execution
- For installing and removing the glow plugs
- Ideal for use in difficult to access areas
- 8 mm for actuation of the power rails screw
- With stop for guiding the 8 mm nut
- 12 mm for actuation of the glow plugs
- Matt finish
- Chrome vanadium





	mm	A1 mm	A2 mm	B1 mm	B2 mm	L mm	g
503.0812	8x12	11,0	11,0	26,0	21,0	300,0	260

Glow plug T-handle ring ratchet wrench

- 6 point
- With T-handle
- For extremely heavily deposited glow plugs
- Right or left handed usage through the turning of the head
- Special tool steel

Application range: dim. 8 for electric cable nut in diesel motors (**Volkswagen**, **Audi**, **Seat** etc.) dim. 10 + 12 for glow plugs and hand brake adjustment





	mm	L mm	g
500.7340	8,0	295,0	175
500.7341	10,0	295,0	180
500.7342	12,0	300,0	195
500.7343	14,0	300,0	200

ELECTRODE HEAD EXTRACTION TOOL

Glow plug electrode head extraction tool

- Special profile
- For removing the electrode head or protruding central electrode
- For electrode diameters 2.5 - 3.5 - 4.0 mm
- Safe clamping due to rollers
- Internal square drive to DIN 3120/ISO 1174 with ball stop
- With external drive hexagonal socket 12.0 mm
- Special tool steel





	Ø mm	Outer Ø mm	L mm	g
500.1401	2,5	13,4	50,0	41
500.1402	3,5	13,4	50,0	41
500.1403	4,0	13,4	50,0	53



GLOW PLUG EXTRACTOR TOOLS

Glow plug extractor for CDI engines

- For turning off and pulling out the glow plugs from the glow plug canal in the cylinder head
- Removal of the cylinder head is not necessary for disassembly
- Can be used for glow plugs jammed by corrosion and/or soot coal
- Optimum power transmission with rotary and train movements
- Fits all glow plugs with hexagonal connector 10.0 mm
- Correct easy and damage free dismantling of the glow plug
- Chrome vanadium

Application range: Spark plugs 10.0 mm, **Mercedes** CDI engines OM 611, 612, 613





3/8"

		L mm	g
152.1080	3/8"	190,0	315

Glow plug impact extraction set for CDI engines

- Ideal for unscrewed, but firmly seated glow plugs
- Can be used universally for M10 glow plugs
- Reaches into the electrical connection of the glow plugs with the support sleeve or impact hammer the glow plug is removed
- On engines for which the support sleeve cannot be used, the impact hammer is used
- Easy to fit
- Safe to use
- No sharp edges
- Saves a lot of time
- Special tool steel

Application range: Mercedes CDI engines OM 611, 612, 613





			kg
700.1330	4 pcs	Glow plug impact extraction set for CDI engines	2,00

consists of:

		kg
700.1331	Special impact hammer	1,50
700.1332	Glow plug puller set, 3 pcs	0,50

Glow plug puller for CDI engines

- Ideal for unscrewed, but firmly seated glow plugs
- Can be used universally for M10 glow plugs
- Reaches into the electrical connection of the glow plugs with the support sleeve or impact hammer the glow plug is removed
- Easy to fit
- Safe to use
- No sharp edges
- Saves a lot of time
- Special tool steel

Application range: Mercedes CDI engines OM 611, 612, 613, 646 (excluding 646 EVO), 647, 648 etc.





	Ø mm	L mm	g	
152.1096	10,0	133,0	280	

Glow plug service set

- For removing the glow plugs from the glow plug channel in the cylinder head
- Reamer for cleaning the glow plug channel in the cylinder head
- Removes deposits and carbonisation between glow plug and cylinder head
- Can be used for glow plugs jammed by corrosion and/or soot coal
- In durable plastic storage case

Application range: Reamer M10 x 1.00: **Mercedes** 4, 5 and 6 cylinder CDI engines, **Smart** CDI (660) reamer M12 x 1.25: **Mercedes** 4 valve technology engines (OM604/605/606) glow plug puller: Glow plugs 10.0 mm e.g. **Mercedes** CDI (OM 611/612/613)





			g	
152.1095	3 pcs	Glow plug service set	596	

consists of:

		g	
152.1096	Glow plug extractor, 10mm	280	
152.1097	Glow plug reamer, M10x1mm	50	
152.1098	Glow plug reamer, M12x1.25mm	80	

Glow plug pneumatic vibration screwdriver set

- Ideal for loosening and extracting jammed glow plugs
- Especially suitable in glow plugs jammed by corrosion and/or soot coal
- Produces controlled vibration impulse
- Suitable for all current glow plugs
- Loosening torque in 4 stages in accordance with manufacturer guidelines
- Extensive cost intensive repairs can be avoided through dismantling glow plugs
- Includes 1/4" coupling connector
- In durable steel storage case





Technical data:

Square drive:	1/4"
Max. tightening torque:	40 Nm
Max. loosening torque:	1 = 10 Nm
	2 = 20 Nm
	3 = 30 Nm
	4 = 40 Nm
No load current:	7500 r.p.m.
Vibration acceleration:	< 2,52 m/s²
Noise performance level:	104 dbA
Noise pressure level:	88 dbA
Recomended torque:	42 Nm
Air consumption:	128 l/min
Operating pressure:	max. 6,3 bar (90 psi)
Max. screw size:	M16
Min. tube diameter:	3/8" - 10 mm
Connection thread:	1/4"PT

			kg	
152.1060	5 pcs	Glow plug pneumatic vibration screwdriver set	1,80	

consists of:

		g	
152.1061	Vibration impact gun, 1/4", 10-40Nm	900	
152.1062	Long impact socket, 1/4", 8mm	30	
152.1063	Long impact socket, 1/4",10mm	40	
152.1064	Long impact socket, 1/4",12mm	50	
152.1065	Uni joint, 1/4"	40	



REAMER FOR CLEANING

3 in 1 glow plug reamer M8 x 1.0

- Special reamer geometry cleans the glow plug shaft, sealing seat and glow rod channel in a single step
- For professional cleaning of glow plug channels in the cylinder head of sizes M8 x 1.0
- Removes deposits between the glow plugs and cylinder head
- Damage due to deep penetration and slipping of the reamer is prevented by fixable stoppers
- Includes a centring sleeve with thread of the corresponding glow plug
- Prior to fitting new glow plugs it is recommended to clean the glow plug shafts
- Universal usage
- External hexagon drive 10.0 mm with milled manual drive head
- Multi-level reamer made out of one piece

Application range: For all vehicles with glow plugs of sizes M8 x 1.0





		mm	Length mm	g	
152.1121	M8x1,0	10	195,0	230	

3 in 1 glow plug reamer M9 x 1.0

- Special reamer geometry cleans the glow plug shaft, sealing seat and glow rod channel in a single step
- For professional cleaning of glow plug channels in the cylinder head of sizes M9 x 1.0
- Removes deposits between the glow plugs and cylinder head
- Damage due to deep penetration and slipping of the reamer is prevented by fixable stoppers
- Includes a centring sleeve with thread of the corresponding glow plug
- Prior to fitting new glow plugs it is recommended to clean the glow plug shafts
- Universal usage
- External hexagon drive 17.0 mm with milled manual drive head
- Multi-level reamer made out of one piece

Application range: For all vehicles with glow plugs of sizes M9 x 1.0





		mm	Length mm	g	
152.1122	M9x1,0	17	200,0	230	

3 in 1 glow plug reamer M10 x 1.0

- Special reamer geometry cleans the glow plug shaft, sealing seat and glow rod channel in a single step
- For professional cleaning of glow plug channels in the cylinder head of sizes M10 x 1.0
- Removes deposits between the glow plugs and cylinder head
- Damage due to deep penetration and slipping of the reamer is prevented by fixable stoppers
- Includes a centring sleeve with thread of the corresponding glow plug
- Prior to fitting new glow plugs it is recommended to clean the glow plug shafts
- Universal usage
- External hexagon drive 17.0 mm with milled manual drive head
- Multi-level reamer made out of one piece

Application range: For all vehicles with glow plugs of sizes M10 x 1.0





	mm	mm	Length mm	g	
152.1123	M10x1,0	17	200,0	230	

3 in 1 glow plug reamer M10 x 1.25

- Special reamer geometry cleans the glow plug shaft, sealing seat and glow rod channel in a single step
- For professional cleaning of glow plug channels in the cylinder head of sizes M10 x 1.25
- Removes deposits between the glow plugs and cylinder head
- Damage due to deep penetration and slipping of the reamer is prevented by fixable stoppers
- Includes a centring sleeve with thread of the corresponding glow plug
- Prior to fitting new glow plugs it is recommended to clean the glow plug shafts
- Universal usage
- External hexagon drive 17.0 mm with milled manual drive head
- Multi-level reamer made out of one piece

Application range: For all vehicles with glow plugs of sizes M10 x 1.25





	mm	mm	Length mm	g	
152.1124	M10x1,25	17	200,0	230	

3 in 1 glow plug reamer M12 x 1.25

- Special reamer geometry cleans the glow plug shaft, sealing seat and glow rod channel in a single step
- For professional cleaning of glow plug channels in the cylinder head of sizes M12 x 1.25
- Removes deposits between the glow plugs and cylinder head
- Damage due to deep penetration and slipping of the reamer is prevented by fixable stoppers
- Includes a centring sleeve with thread of the corresponding glow plug
- Prior to fitting new glow plugs it is recommended to clean the glow plug shafts
- Universal usage
- External hexagon drive 17.0 mm with milled manual drive head
- Multi-level reamer made out of one piece

Application range: For all vehicles with glow plugs of sizes M12 x 1.25



	mm	mm	Length mm	g	
152.1125	M12x1,25	17	180,0	230	

MASTER 3 in 1 glow plug reamer set

- Special reamer geometry cleans the glow plug shaft, sealing seat and glow rod channel in a single step
- For professional cleaning of glow plug channels in the cylinder head of sizes M8 x 1.0, M10 x 1.0, M10 x 1.25 and M12 x 1.25
- Removes deposits between the glow plugs and cylinder head
- Damage due to deep penetration and slipping of the reamer is prevented by fixable stoppers
- Includes a centring sleeve with thread of the corresponding glow plug
- Prior to fitting new glow plugs it is recommended to clean the glow plug shafts
- Universal usage
- For most vehicle types
- External hexagon drive 10.0 or 17.0 mm with milled manual drive head
- Multi-level reamer made out of one piece





			kg	
152.1120	9 pcs	MASTER 3 in 1 glow plug reamer set	1,12	

consists of:

		g	
152.1120-01	17 mm adapter M12 x 1.25	50	
152.1120-02	17 mm adapter M10 x 1.25	50	
152.1120-03	17 mm adapter M10 x 1.0	50	
152.1120-04	17 mm adapter M8 x 1.0	18	
152.1120-05	Reamer M12	110	
152.1120-06	Reamer M10	106	
152.1120-07	Reamer M8	103	
152.1120-08	Stopper for reamers	20	
152.1120-09	Drive head	55	

GLOW PLUG DRILL OUT TOOLS

Universal glow plug drill out kit M8 x 1,0

- Universal repair system with innovative principle for dismantled glow plugs
- Simple and user friendly repair method
- Fast and economical solution of the dismantling problems of glow plugs
- Using a special left-cutting 3-blade stepped drill avoids the need to use drilling sleeves compared to other systems
- Optionally upgradeable with standard impact hammers (M10 x 1.5)
- In durable metal case

Application range: Volkswagen, Audi, Seat, Škoda, Mitsubishi, Mercedes, Fiat, Peugeot, Volvo, Ford, Mazda, Citroën, Opel

Application range:
1. Shear off centre electrode
2. Drill out with left-cutting stepped drill
3. Cut left thread M6
4. Clean thread gears M8 x 1
5. Clear the remains of the glow plug with impact weight





			g	
152.1020	8 pcs	Universal glow plug drill out kit M8 x 1,0	800	

consists of:

		g	
152.1021	Thread tap, M8x1, TIN	20	
152.1022	Remover left thread drive, M6x1x120mm	30	
152.1023	tap left, M6x1, TIN	20	
152.1024	Step drill left, M5x7x150mm	90	
152.1026	Extractor for electrode 3,20 mm	20	
152.1032	Extractor for electrode 4,50 mm	20	
152.1027	Extractor for electrode 6,50 mm	30	
152.1037	Swing adaptor	62	



Universal glow plug drill out kit M9 x 1.0

- Universal repair system with innovative principle for dismantled glow plugs
- Simple and user friendly repair method
- Fast and economical solution of the dismantling problems of glow plugs
- Using a special left-cutting 3-blade stepped drill avoids the need to use drilling sleeves compared to other systems
- Optionally upgradeable with standard impact hammers (M10 x 1.5)
- In durable metal case

Application:
1. Shear off centre electrode
2. Drill out with left-cutting stepped drill
3. Cut left thread M7
4. Clean thread gears M9 x 1.0
5. Clear the remains of the glow plug with impact weight



152.1620	8 pcs	Universal glow plug drill out kit M9 x 1.0	900	

consists of:

152.1022	Remover left thread drive, M6x1x120mm	30	
152.1023	tap left, M6x1, TIN	20	
152.1624	Stepped drill left, M7	240	
152.1625	Thread drill M9 x 1.0	20	
152.1621	Extractor for glow plug electrode 2.60 mm	30	
152.1032	Extractor for electrode 4,50 mm	20	
152.1033	Extractor for electrode 8,25 mm	30	
152.1037	Swing adaptor	62	

Universal glow plug drill out kit M10 x 1.0

- Universal repair system with innovative principle for dismantled glow plugs
- Simple and user friendly repair method
- Fast and economical solution of the dismantling problems of glow plugs
- Using a special left-cutting 3-blade stepped drill avoids the need to use drilling sleeves compared to other systems
- Customer-oriented solution
- Cylinder head does not need to be removed
- Optionally upgradeable with standard impact hammers (M10 x 1.5)
- In durable metal case

Application range: Volkswagen, Audi, Seat, Škoda, Mitsubishi, Mercedes, Fiat, Peugeot, Volvo, Ford, Mazda, Citroën, Opel

Application range:
1. Shear off centre electrode
2. Drill out with left-cutting stepped drill
3. Cut left thread M7
4. Clean thread gears M10 x 1
5. Clear the remains of the glow plug with impact weight



152.1030	8 pcs	Universal glow plug drill out kit M10 x 1.0	900	

consists of:

152.1034	Left thread drill, M7, TIN	30	
152.1035	Extractor, M7x120mm	40	
152.1038	Thread tap, M10x1	30	
152.1036	Remover left thread drive, 9x180mm	114	
152.1031	Extractor for electrode 3,50 mm	14	
152.1032	Extractor for electrode 4,50 mm	20	
152.1033	Extractor for electrode 8,25 mm	30	
152.1037	Swing adaptor	62	



Universal glow plug drill out kit M10 x 1.25

- Universal repair system with innovative principle for dismantled glow plugs
- Simple and user friendly repair method
- Fast and economical solution of the dismantling problems of glow plugs
- Using a special left-cutting 3-blade stepped drill avoids the need to use drilling sleeves compared to other systems
- Optionally upgradeable with standard impact hammers (M10 x 1.5)
- In durable metal case

Application:
1. Shear off centre electrode
2. Drill out with left-cutting stepped drill
3. Cut left thread M7
4. Clean thread gears M10 x 1.25
5. Clear the remains of the glow plug with impact weight





152.1610	8 pcs	Universal glow plug drill out kit M10 x 1.25	900	

consists of:

152.1615	Thread tap M10 x 1.25	30	
152.1035	Extractor, M7x120mm	40	
152.1034	Left thread drill, M7, TIN	30	
152.1036	Remover left thread drive, 9x180mm	114	
152.1031	Extractor for electrode 3,50 mm	14	
152.1032	Extractor for electrode 4,50 mm	20	
152.1033	Extractor for electrode 8,25 mm	30	
152.1037	Swing adaptor	62	

Universal glow plug drill out kit M12 x 1.25

- Universal repair system with innovative principle for dismantled glow plugs
- Simple and user friendly repair method
- Fast and economical solution of the dismantling problems of glow plugs
- Using a special left-cutting 3-blade stepped drill avoids the need to use drilling sleeves compared to other systems
- Optionally upgradeable with standard impact hammers (M10 x 1.5)
- In durable metal case

Application:
1. Shear off centre electrode
2. Drill out with left-cutting stepped drill
3. Cut left thread M7
4. Clean thread gears M12 x 1.25
5. Clear the remains of the glow plug with impact weight





152.1630	8 pcs	Universal glow plug drill out kit M12 x 1.25	900	

consists of:

152.1634	Stepped drill left, 10.8 x 180 mm	250	
152.1635	Thread tap M12 x 1.25	47	
152.1636	Glow plug thread tap left, M8	40	
152.1637	Puller left, M8	50	
152.1031	Extractor for electrode 3,50 mm	14	
152.1032	Extractor for electrode 4,50 mm	20	
152.1033	Extractor for electrode 8,25 mm	30	
152.1037	Swing adaptor	62	

Impact weight and guide rod

- Arched lever area on the handle hook for exact extraction
- Includes impact weight
- Special tool steel





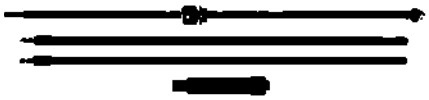
	Impact weight kg		L mm		
152.1040	1,25	M10x1,5	280,0	1,21	

GLOW PLUG TIP BORING TOOLS

Universal glow plug element removal set M8 x 1.0

- For boring out glow plug tips remaining in the cylinder head
- Universal repair system for dismantled glow plug tips in size M8 x 1.0
- Simple and user friendly repair method
- Fast and economical solution of the dismantling problems of glow plugs
- Insert made from high quality foam





			kg	
152.1640	5 pcs	Universal glow plug element removal set M8 x 1.0	0,17	

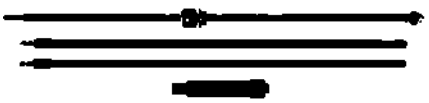
consists of:

		g	
152.1641	Drill M3 x 235 mm	34	
152.1642	Thread tap M3 x 235 mm	35	
152.1643	Guide sleeve M8 x 1,0	20	
152.1644	Pressure rod M3 x 250 mm with pressure nut	30	
152.1646	Thrust bearing, IØ 11 mm	2	

Universal glow plug element removal set M9 x 1.0

- For boring out glow plug tips remaining in the cylinder head
- Universal repair system for dismantled glow plug tips in size M9 x 1.0
- Simple and user friendly repair method
- Fast and economical solution of the dismantling problems of glow plugs
- Insert made from high quality foam





			kg	
152.1645	5 pcs	Universal glow plug element removal set M9 x 1.0	0,12	

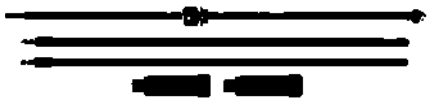
consists of:

		g	
152.1646	Thrust bearing, IØ 11 mm	2	
152.1648	Drill bit, 3.2 mm x 220 mm	31	
152.1649	Drill tap for M4 x 215 mm	32	
152.1651	Guide sleeve M9 x 1.0 mm	21	
152.1652	Pressure rod, M4 x 225 mm with pressure nut	30	

Universal glow plug element removal set M10 x 1.0 / M10 x 1.25

- For boring out glow plug tips remaining in the cylinder head
- Universal repair system for dismantled glow plug tips in sizes M10 x 1.0 and M10 x 1.25
- Simple and user friendly repair method
- Fast and economical solution of the dismantling problems of glow plugs
- Insert made from high quality foam





			kg	
152.1660	6 pcs	Universal glow plug element removal set M10 x 1.0 / M10 x 1.25	0,24	

consists of:

		g	
152.1646	Thrust bearing, IØ 11 mm	2	
152.1653	Drill bit, 3.2 mm x 240 mm	51	
152.1654	Drill tap for M4 x 240 mm	51	
152.1655	Guide sleeve M10 x 1.0 mm	44	
152.1656	Guide sleeve M10 x 1.25 mm	44	
152.1657	Pressure rod, M4 x 255 mm with pressure nut	48	

Universal glow plug element removal set M8 x 1,0, M9 x 1,0, M10 x 1,0, M10 x 1,25

- For boring out glow plug tips remaining in the cylinder head
- Universal repair system for dismantled glow plug tips in sizes M8 x 1.0, M9 x 1.0, M10 x 1.0, M10 x 1.25
- Simple and user friendly repair method
- Fast and economical solution of the dismantling problems of glow plugs
- Insert made from high quality foam
- In durable plastic storage case





			g	
152.1650	16 pcs	Universal glow plug element removal set M8 x 1,0, M9 x 1,0, M10 x 1,0, M10 x 1,25	520	

consists of:

			g	
152.1641	1	Drill M3 x 235 mm	34	
152.1642	1	Thread tap M3 x 235 mm	35	
152.1643	1	Guide sleeve M8 x 1,0	20	
152.1644	1	Pressure rod M3 x 250 mm with pressure nut	30	
152.1646	3	Thrust bearing, IØ 11 mm	2	
152.1648	1	Drill bit, 3.2 mm x 220 mm	31	
152.1649	1	Drill tap for M4 x 215 mm	32	
152.1651	1	Guide sleeve M9 x 1.0 mm	21	
152.1652	1	Pressure rod, M4 x 225 mm with pressure nut	30	
152.1653	1	Drill bit, 3.2 mm x 240 mm	51	
152.1654	1	Drill tap for M4 x 240 mm	51	
152.1655	1	Guide sleeve M10 x 1.0 mm	44	
152.1656	1	Guide sleeve M10 x 1.25 mm	44	
152.1657	1	Pressure rod, M4 x 255 mm with pressure nut	48	

GLOW PLUG THREAD CUTTING TOOL

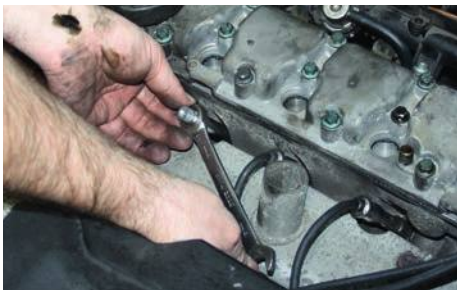
Glow plug thread cutting tool M8 x 1.0

- For cleaning and re-cutting M8 x 1.0 glow plug threads
- Simple handling due to eccentric function
- Special length for deep seated thread
- Quick and low-cost thread repair
- Centering shaft
- With conical mounting shaft for thread repair sleeves
- External hexagon drive
- With knurled knob





		mm	mm	Length mm	g	
150.6501	M8 x 1,0	13,0	115,0	80		



Glow plug thread cutting tool M10 x 1.0

- For cleaning and re-cutting M10 x 1.0 glow plug threads
- Simple handling due to eccentric function
- Special length for deep seated thread
- Quick and low-cost thread repair
- Centering shaft
- With conical mounting shaft for thread repair sleeves
- External hexagon drive
- With knurled knob





		mm	mm	Length mm	g	
150.6502	M10 x 1,0	13,0	115,0	100		

Glow plug thread cutting tool M12 x 1.25

- For cleaning and re-cutting M12 x 1.25 glow plug threads
- Simple handling due to eccentric function
- Special length for deep seated thread
- Quick and low-cost thread repair
- Centering shaft
- With conical mounting shaft for thread repair sleeves
- External hexagon drive
- With knurled knob





	mm	mm	Length mm	g	
150.6503	M12 x 1,25	13,0	140,0	120	
150.6504	M12 x 1,25	13,0	270,0	280	

Spark plug thread cutting tool M14 x 1.25

- For cleaning and re-cutting M14 x 1.25 glow plug threads
- Simple handling due to eccentric function
- Special length for deep seated thread
- Quick and low-cost thread repair
- Centering shaft
- With conical mounting shaft for thread repair sleeves
- External hexagon drive
- With knurled knob





	mm	mm	Length mm	g	
150.6505	M14 x 1,25	13,0	140,0	120	

Glow plug and spark plug thread cutting tool set

- For cleaning and re-cutting spark plug or glow plug threads
- Simple handling due to eccentric function
- Special length for deep seated thread
- Quick and low-cost thread repair
- Centering shaft
- With conical mounting shaft for thread repair sleeves
- External hexagon drive
- With knurled knob
- In durable plastic storage case





			kg	g	
150.6500	7 pcs	Glow plug and spark plug thread cutting tool set	1,40		

consists of:

		g	
150.6501	Thread cutting tool, M8 x 1.0, 115 mm	80	
150.6502	Thread cutting tool, M10 x 1.0, 115 mm	100	
150.6503	Thread cutting tool, M12 x 1.25, 140 mm	120	
150.6504	Thread cutting tool, M12 x 1.25, 270 mm	280	
150.6505	Thread cutting tool, M14 x 1.25, 140 mm	120	
150.6506	Thread cutting tool, M14 x 1.25, 270 mm	280	
150.6507	Thread cutting tool, M18 x 1.5, 90 mm	100	

GLOW PLUG THREAD REPAIR

THREADfix repair set M8 x 1.0 for glow plugs

- Unique assortment for the repair of worn or damaged threads
- Ideal for glow plugs
- Simple handling and correct repair
- Provides an entirely firm and gastight seat of the inserts
- Extremely thin walled inserts with rustproofing protection
- Includes thread tap and assembly tool
- Fast repair option without costly warehousing of components
- In durable plastic storage case

M8 x 1.0 x 110 mm





			g	
150.5020	9 pcs	THREADfix repair set M8 x 1.0 for glow plugs	300	

consists of:

		g	
150.5021	Threaded drill with guide pin,M8x1	18	
150.5022	Threaded drill with guide pin,M10x1	21	
150.5023	Reamer with guide pin f.150.5020	19	
150.5024	Screw f.bushes, l=90mm,M8x1,GL=106mm	124	
150.5026	Threaded bush + collar L=11mm,IG=M8x1/ AG=M10x1,pack of 5	20	

THREADfix repair set M9 x 1.0 for glow plugs

- Unique assortment for the repair of worn or damaged threads
- Ideal for glow plugs
- Simple handling and correct repair
- Provides an entirely firm and gastight seat of the inserts
- Extremely thin walled inserts with rustproofing protection
- Includes thread tap and assembly tool
- Fast repair option without costly warehousing of components
- In durable plastic storage case

M9 x 1.0 x 115 mm





			g	
150.5030	9 pcs	THREADfix repair set M9 x 1.0 for glow plugs	380	

consists of:

		g	
150.5031	Threaded drill with guide pin,M9x1	19	
150.5032	Threaded drill with guide pin,M11x1	24	
150.5033	Reamer with guide pin f.150.5030	24	
150.5034	Screw f.bushes, l=93mm,M9x1,GL=109mm	180	
150.5036	Threaded bush + collar L=11mm,IG=M9x1/ AG=M11x1,pack of 5	20	

THREADfix repair set M10 x 1.0 for glow plugs

- Unique assortment for the repair of worn or damaged threads
- Ideal for glow plugs
- Simple handling and correct repair
- Provides an entirely firm and gastight seat of the inserts
- Extremely thin walled inserts with rustproofing protection
- Includes thread tap and assembly tool
- Fast repair option without costly warehousing of components
- In durable plastic storage case

M10 x 1.0 x 120 mm
M10 x 1.0 x 128 mm





			g	
150.5040	15 pcs	THREADfix repair set M10 x 1.0 for glow plugs	810	

consists of:

		g	
150.5041	Threaded drill with guide pin,M10x1	26	
150.5042	Threaded drill with guide pin f.150.5040	30	
150.5043	Reamer with guide pin f.150.5040	29	
150.5044	Screw f.bushes, l=85mm,M10x1,GL=103mm	175	
150.5047	Screw f.bushes, l=91mm,M10x1,GL=109mm	180	
150.5048	Threaded bush + collar L=12mm,IG=M10x1/ AG=M12x1,pack of 5	20	
150.5049	Threaded bush + collar L=19mm,IG=M10x1/ AG=M12x1,pack of 5	20	

THREADfix repair set M10 x 1.25 for glow plugs

- Unique assortment for the repair of worn or damaged threads
- Ideal for glow plugs
- Simple handling and correct repair
- Provides an entirely firm and gastight seat of the inserts
- Extremely thin walled inserts with rustproofing protection
- Includes thread tap and assembly tool
- Fast repair option without costly warehousing of components
- In durable plastic storage case

M10 x 1.25 x 125 mm





			g	
150.5050	9 pcs	THREADfix repair set M10 x 1.25 for glow plugs	630	

consists of:

150.5051	Threaded drill with guide pin,M10x1,25	24	
150.5052	Threaded drill with guide pin,M12x1,25	25	
150.5053	Reamer with guide pin f.150.5050	25	
150.5054	Screw f.bushes,150.5050,L=84m-m,M10x1.25	183	
150.5056	Threaded bush + collar L=12m-m,IG=M10x1.25/AG=M12x1.25, pack of 5	20	

THREADfix repair set M12 x 1.25 for glow and spark plugs

- Unique assortment for the repair of worn or damaged threads
- Ideal for spark plugs and glow plugs
- Simple handling and correct repair
- Provides an entirely firm and gastight seat of the inserts
- Extremely thin walled inserts with rustproofing protection
- Includes thread tap and assembly tool
- Fast repair option without costly warehousing of components
- In durable plastic storage case

M12 x 1.25 x 120 mm
M12 x 1.25 x 130 mm
M12 x 1.25 x 150 mm





150.5060	21 pcs	THREADfix repair set M12 x 1.25 for glow and spark plugs	920	

consists of:

150.5061	Threaded drill with guide pin,M12x1,25	47	
150.5062	Threaded drill with guide pin,M14x1,25	53	
150.5063	Reamer with guide pin f.150.5060	52	
150.5064	Screw f.bushes, l=89mm,M12x-1,25,GL=108mm	230	
150.5068	Screw f.bushes, l=95mm,M12x-1,25,GL=114mm	238	
150.5069	Screw f.bushes, l=103mm,M12x-1,25,GL=122mm	246	
150.5077	Threaded bush + collar L=12m-m,IG=M12x1.25/AG=M14x1.25, pack of 5	20	
150.5078	Threaded bush + collar L=19m-m,IG=M12x1.25/AG=M14x1.25, pack of 5	20	
150.5079	Threaded bush + collar L=26m-m,IG=M12x1.25/AG=M14x1.25, pack of 5	20	

Stainless steel repair set M8 x 1,00 for glow plugs

- Unique assortment for the repair of worn or damaged threads
- Ideal for glow plugs
- Simple handling and correct repair
- Provides an entirely firm and gastight seat of the inserts
- Extremely thin walled inserts made from stainless steel
- Includes thread tap and assembly tool
- Fast repair option without costly warehousing of components
- In durable steel storage case



150.6030	24 pcs	Stainless steel repair set M8 x 1,00 for glow plugs	268	

consists of:

150.6031	Thread insert M8x1,0, 11mm, pack of 10	120	
150.6032	Twist drill, M8, Ø 8,3mm	34	
150.6033	Spare threaded tap for M8x1,0 tap adaptor	36	
150.6034	Mounting tool M8	48	
150.6025	Insertion pin breaker M7/M8	16	

Stainless steel thread repair set M8 x 1,25 x 10,8 mm

- Assortment of for repairing thread damaged or worn threads indispensably use of materials with light stability e.g. aluminum alloy or magnesium alloy
- Ideally for the mechanical engineering, vehicle technology, electro and medical technology
- Resistant to corrosion effects and temperature resistant thread uses
- Includes thread tap and assembly tool
- Fast repair option without costly warehousing of components
- Special stainless steel
- In durable steel storage case



150.6040	24 pcs	Stainless steel thread repair set M8 x 1,25 x 10,8 mm	277	

consists of:

150.6041	Thread insert M8x1,25, 10,8mm, pack of 10	26	
150.6032	Twist drill, M8, Ø 8,3mm	34	
150.6043	Spare threaded tap for M8x1,25 tap adaptor	36	
150.6034	Mounting tool M8	48	
150.6025	Insertion pin breaker M7/M8	16	

Stainless steel repair set M10 x 1.0 for glow plugs

- Unique assortment for the repair of worn or damaged threads
- Ideal for glow plugs
- Simple handling and correct repair
- Provides an entirely firm and gastight seat of the inserts
- Extremely thin walled inserts made from stainless steel
- Includes thread tap and assembly tool
- Fast repair option without costly warehousing of components
- In durable steel storage case



150.6060	19 pcs	Stainless steel repair set M10 x 1.0 for glow plugs	318	

consists of:

150.6061	Thread insert M10x1,0, 14mm, pack of 5	47	
150.6062	Twist drill, M10x, Ø 10,3mm	58	
150.6063	Spare threaded tap for M10x1,0 tap adaptor	33	
150.6064	Mounting tool M10x1,0	62	
150.6065	Insertion pin breaker M10	26	

Stainless steel repair set M10 x 1.25 for glow plugs

- Unique assortment for the repair of worn or damaged threads
- Ideal for glow plugs
- Simple handling and correct repair
- Provides an entirely firm and gastight seat of the inserts
- Extremely thin walled inserts made from stainless steel
- Includes thread tap and assembly tool
- Fast repair option without costly warehousing of components
- In durable steel storage case



150.6070	19 pcs	Stainless steel repair set M10 x 1.25 for glow plugs	328	

consists of:

150.6071	Thread insert M10x1,25, 13,8mm, pack of 5	62	
150.6062	Twist drill, M10x, Ø 10,3mm	58	
150.6073	Spare threaded tap for M10x1,25 tap adaptor	33	
150.6064	Mounting tool M10x1,0	62	
150.6065	Insertion pin breaker M10	26	

Stainless steel repair set M12 x 1.25 for glow plugs

- Unique assortment for the repair of worn or damaged threads
- Ideal for spark plugs and glow plugs
- Simple handling and correct repair
- Provides an entirely firm and gastight seat of the inserts
- Extremely thin walled inserts made from stainless steel
- Includes thread tap and assembly tool
- Fast repair option without costly warehousing of components
- In durable steel storage case



150.6110	14 pcs	Stainless steel repair set M12 x 1.25 for glow plugs	453	

consists of:

150.6111	Thread insert M12x1,25, 16,8mm, pack of 5	85	
150.6102	Twist drill, M12, Ø 12,3mm	84	
150.6113	Spare threaded tap for M12x1,25 tap adaptor	67	
150.6104	Mounting tool M12	104	
150.6105	Insertion pin breaker M12	46	

Stainless steel repair set M5 - M12 for glow plugs

- Unique assortment for the repair of worn or damaged threads
- Ideal for spark plugs and glow plugs
- Simple handling and correct repair
- Provides an entirely firm and gastight seat of the inserts
- Extremely thin walled inserts made from stainless steel
- Includes thread tap and assembly tool
- Fast repair option without costly warehousing of components
- In durable steel storage case



150.6150	130 pcs	Stainless steel repair set M5 - M12 for glow plugs	2,05	

consists of:

		g	
150.6001	Thread insert M5x0,8, 6,7mm, pack of 10	14	
150.6002	Twist drill, M5, Ø 5,2mm	9	
150.6003	Spare threaded tap for M5x0,8 tap adaptor	12	
150.6004	Mounting tool M5	20	
150.6005	Insertion pin breaker M5	9	
150.6011	Thread insert M6x1,0, 8mm, pack of 10	17	
150.6012	Twist drill, M6, Ø 6,3mm	17	
150.6013	Spare threaded tap for M6x1,0 tap adaptor	21	
150.6014	Mounting tool M6	24	
150.6015	Insertion pin breaker M6	10	
150.6025	Insertion pin breaker M7/M8	16	
150.6032	Twist drill, M8, Ø 8,3mm	34	
150.6034	Mounting tool M8	48	
150.6041	Thread insert M8x1,25, 10,8mm, pack of 10	26	
150.6043	Spare threaded tap for M8x1,25 tap adaptor	36	
150.6064	Mounting tool M10x1,0	62	
150.6065	Insertion pin breaker M10	26	
150.6081	Thread insert M10x1,5, 13,5mm, pack of 5	24	
150.6082	Twist drill, M10, Ø 10,4mm	61	
150.6083	Spare threaded tap for M10x1,5 tap adaptor	41	
150.6104	Mounting tool M12	104	
150.6105	Insertion pin breaker M12	46	
150.6122	Twist drill, M12, Ø 12,4mm	88	
150.6123	Spare threaded tap for M12x1,5 tap adaptor	67	
150.6131	Thread insert M12x1,75, 16,3mm, pack of 5	33	

Stainless steel thread repair set M6 - M10

- Assortment of for repairing thread damaged or worn threads indispensably use of materials with light stability e.g. aluminum alloy or magnesium alloy
- Ideally for the mechanical engineering, vehicle technology, electro and medical technology
- Resistant to corrosion effects and temperature resistant thread uses
- Includes thread tap and assembly tool
- Fast repair option without costly warehousing of components
- Special stainless steel
- In durable steel storage case



			kg	
150.6155	87 pcs	Stainless steel thread repair set M6 - M10	1,53	

consists of:

		g	
150.6011	Thread insert M6x1,0, 8mm, pack of 10	17	
150.6012	Twist drill, M6, Ø 6,3mm	17	
150.6013	Spare threaded tap for M6x1,0 tap adaptor	21	
150.6014	Mounting tool M6	24	
150.6015	Insertion pin breaker M6	10	
150.6025	Insertion pin breaker M7/M8	16	
150.6032	Twist drill, M8, Ø 8,3mm	34	
150.6034	Mounting tool M8	48	
150.6041	Thread insert M8x1,25, 10,8mm, pack of 10	26	
150.6043	Spare threaded tap for M8x1,25 tap adaptor	36	
150.6064	Mounting tool M10x1,0	62	
150.6065	Insertion pin breaker M10	26	
150.6081	Thread insert M10x1,5, 13,5mm, pack of 5	24	
150.6082	Twist drill, M10, Ø 10,4mm	61	
150.6083	Spare threaded tap for M10x1,5 tap adaptor	41	

Stainless steel thread repair set M6 - M14

- Assortment of for repairing thread damaged or worn threads indispensably use of materials with light stability e.g. aluminum alloy or magnesium alloy
- Ideally for the mechanical engineering, vehicle technology, electro and medical technology
- Resistant to corrosion effects and temperature resistant thread uses
- Includes thread tap and assembly tool
- Fast repair option without costly warehousing of components
- Special stainless steel
- In durable steel storage case



			kg	
150.6160	113 pcs	Stainless steel thread repair set M6 - M14	2,52	

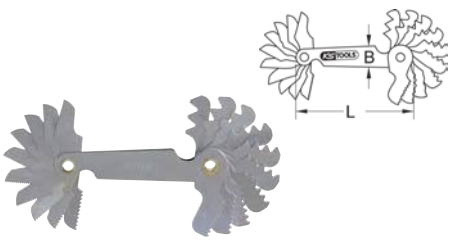
consists of:

		g	
150.6011	Thread insert M6x1,0, 8mm, pack of 10	17	
150.6012	Twist drill, M6, Ø 6,3mm	17	
150.6013	Spare threaded tap for M6x1,0 tap adaptor	21	
150.6014	Mounting tool M6	24	
150.6015	Insertion pin breaker M6	10	
150.6025	Insertion pin breaker M7/M8	16	
150.6032	Twist drill, M8, Ø 8,3mm	34	
150.6034	Mounting tool M8	48	
150.6041	Thread insert M8x1,25, 10,8mm, pack of 10	26	
150.6043	Spare threaded tap for M8x1,25 tap adaptor	36	
150.6064	Mounting tool M10x1,0	62	
150.6065	Insertion pin breaker M10	26	
150.6081	Thread insert M10x1,5, 13,5mm, pack of 5	24	
150.6082	Twist drill, M10, Ø 10,4mm	61	
150.6083	Spare threaded tap for M10x1,5 tap adaptor	41	
150.6104	Mounting tool M12	104	
150.6105	Insertion pin breaker M12	46	
150.6122	Twist drill, M12, Ø 12,4mm	88	
150.6131	Thread insert M12x1,75, 16,3mm, pack of 5	33	
150.6133	Spare threaded tap for M12x1,75 tap adaptor	68	
150.6141	Thread insert M14x1,25, 16,4mm, pack of 5	16	
150.6142	Thread insert M14x1,25, 12,4mm, pack of 5	12	
150.6143	Thread insert M14x1,25, 8,4mm, pack of 5	7	
150.6144	Threaded tap/Aufweiter M14x1,25	72	
150.6145	Mounting tool M14x1,25	80	

THREAD GAUGES

Thread gauge

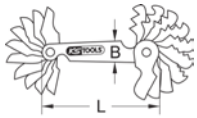
- For controlling and increasing the interior thread and outside thread
- Imperial sizes
- Cylindrical tapered
- Leaves fan shaped arrangement
- Leaves individually marked with size
- Out of hardened spring steel



	Tooth pitch	for thread size		B mm	L mm	g	
301.0090	22	4-4,5-5-6-7-8-9-10-11-12-13-14-16-18 20-22-24-32-40-48-56-64 speed		12,2	66,5	40	

Thread gauge

- For controlling and increasing the interior thread and outside thread
- Metric sizes
- Cylindrical tapered
- Leaves fan shaped arrangement
- Leaves individually marked with size
- Out of hardened spring steel





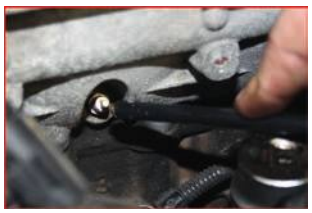
	Tooth pitch	for thread size		B mm	L mm	g	
301.0095	20	0,40-0,45-0,50-0,60-0,70-0,75-0,80-1,00-1,25-1,50-1,75-2,00-2,50-3,00-3,50-4,00-4,50-5,00-5,50-6,00mm		12,2	66,5	40	

TEST DEVICE

Glow plug tester

- Quick identification of defective glow plugs independent of the voltage
- Testing is carried out when installed, no need to remove the glow plugs
- For 12.0 V glow plugs in diesel engines
- With integrated LED display for the state of the glow plugs
- Automatic switch off
- Voltage supply from 12.0 V starter battery on the vehicle
- 1280.0 mm cable length with crocodile clips
- 300.0 mm cable length with test probe
- In a practical storage case

Application range: All vehicles with diesel engines with 12.0 V glow plugs

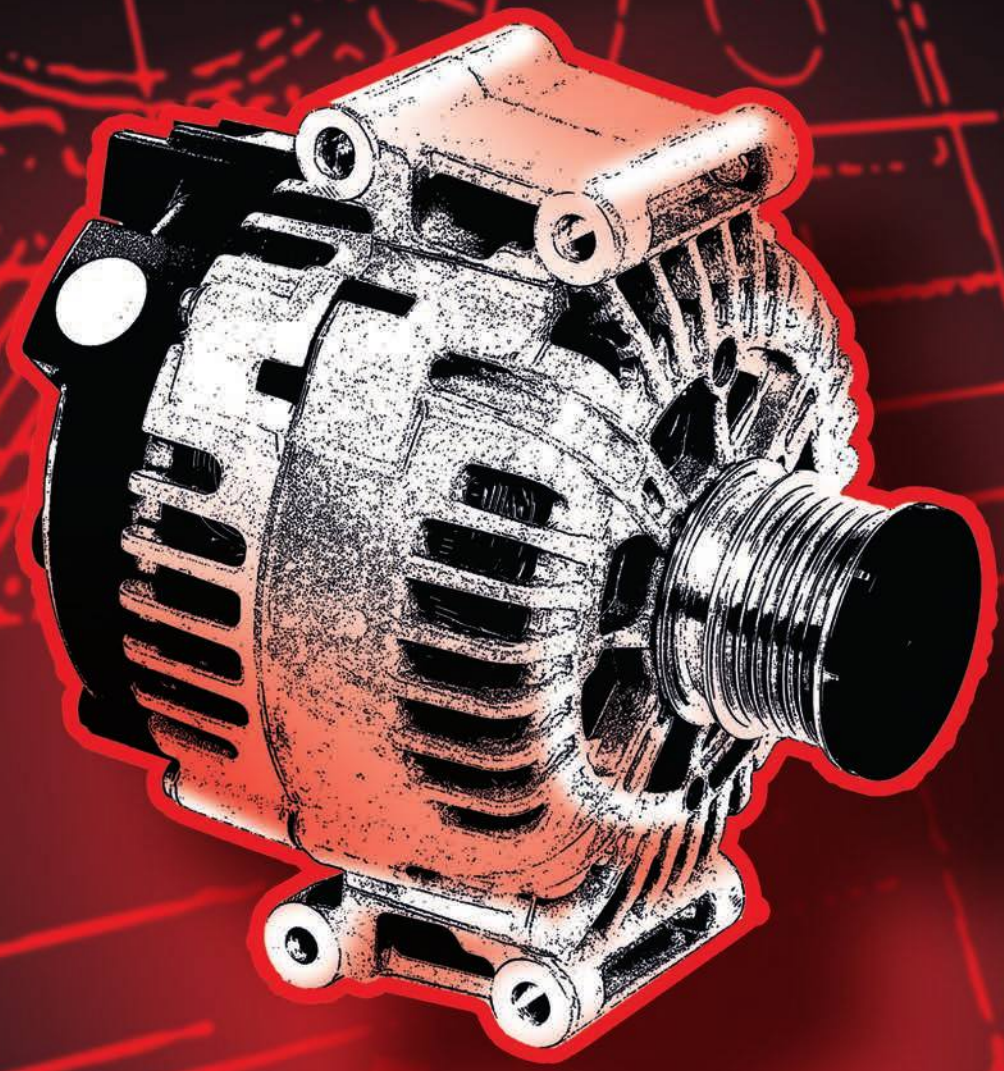




	Length mm	Width mm	Height mm	g	
550.1401	135,0	80,0	35,0	340	

10

ENGINE - AUXILIARY DRIVE BELT / ALTERNATOR





KS TOOLS®

Innovation is our mission!

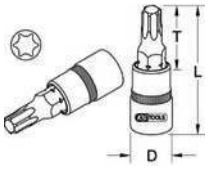
	FROM PAGE
TENSION PULLEY WRENCH V/V RIBBED BELTS	282
V-RIBBED BELT TOOLS	284
ELASTIC BELT TOOL	284
COUNTER HOLD TOOL	284
VISCO FAN TOOL	286
SLOGGING SPANNER	287
ALTERNATOR WRENCH	287
FREE-RUNNING BELT DISC TOOL	287
BELT TENSION CHECKER	289
PULLING TOOL	289
STETHOSCOPE	290

TENSION PULLEY WRENCH V/V RIBBED BELTS

Bit socket for Torx screws

- suitable for assembly and disassembly of the fan belt
- For operating the tension pulley securing screws
- Torx
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- with press-fitted nickel-plated bit
- For manual operation
- Matt finish
- Chrome vanadium







1/2"

		D mm	L mm	T mm	g	
911.1361	T20	22,0	55,0	17,0	70	
911.1362	T25	22,0	55,0	17,0	700	
911.1363	T27	22,0	55,0	17,0	710	
911.1364	T30	22,0	55,0	17,0	710	
911.1365	T40	22,0	55,0	17,0	730	
911.1366	T45	22,0	55,0	17,0	90	
911.1367	T50	22,0	55,0	17,0	90	
911.1368	T55	22,0	55,0	17,0	770	
911.1369	T60	22,0	55,0	17,0	90	

V-belt and tooth belt wrenches

- 12 point
- For loosening the automatic clamping device
- Problem free changing of the belt
- Saves the cooling unit service on VAG
- For hard to reach places
- With plastic-coated handle
- Chrome vanadium

Application range:Audi A4, **Volkswagen** Passat > 97 with TDI or pump injector engines **Opel**, DOHC 4- / 6 cylinder (e.g.. Astra F with cooling), **Saab** V6 engines, **Mitsubish**i





	mm	Length mm	g	
150.1206	10	460,0	320	
150.1207	11	460,0	320	
150.1208	12	460,0	320	
150.1201	13	460,0	320	
150.1209	14	460,0	320	
150.1202	15	460,0	320	
150.1203	16	460,0	320	
150.1204	17	460,0	320	
150.1213	18	460,0	320	
150.1205	19	460,0	320	

Universal wedge and timing belt wrench set

- 12 point
- For loosening the automatic clamping device
- Problem free changing of the belt
- Saves the cooling unit service on VAG
- For hard to reach places
- With plastic-coated handle
- Chrome vanadium

Application range: Audi A4, **Volkswagen** Passat after 97 with TDI or Pump-Nozzle Engine **Opel** DOHC 4- / 6-Cylinder (e.g. Astra F with air conditioning), **Saab** V6-Engines, **Mitsubishi**





			kg	
150.1200	5 pcs	Universal wedge and timing belt wrench set	2,18	

consists of:

		g	
150.1201	V-belt+tooth belt wrench, 13mm, L=460mm	320	
150.1202	V-belt+tooth belt wrench, 15mm, L=460mm	320	
150.1203	V-belt+tooth belt wrench, 16mm, L=460mm	320	
150.1204	V-belt+tooth belt wrench, 17mm, L=460mm	320	
150.1205	V-belt+tooth belt wrench, 19mm, L=460mm	320	

Universal V-belt and tooth belt wrenches

- Torx-E-Profile
- For loosening the automatic clamping device
- Problem free changing of the belt
- For hard to reach places
- With plastic-coated handle
- Chrome vanadium



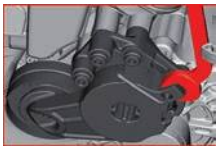


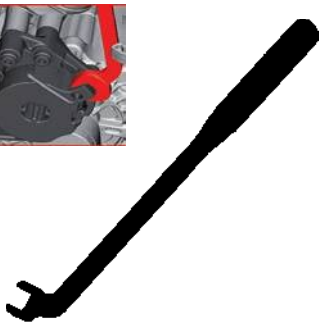
		Length mm	g	
150.1214	E8	460,0	320	
150.1216	E10	460,0	320	
150.1217	E12	460,0	320	
150.1218	E14	460,0	320	
150.1219	E16	460,0	320	
150.1221	E18	460,0	320	
150.1222	E20	460,0	320	
150.1223	E22	460,0	320	

V-belt and toothed belt wrench for VAG

- For loosening the automatic clamping device
- Problem free changing of the belt
- For hard to reach places
- With plastic-coated handle
- Chrome vanadium

Application range:Audi, **Seat**, **Škoda** and **Volkswagen** with 2.0 TDI and 1.4 TSI engines
Volkswagen Beetle (2011-2013), Eos (2007-2013), Golf (2003-2008), Golf (>2008), Golf Estate (2007-2009), Golf Estate (>2009), Gold Plus (2005-2009), Golf Plus (>2009), Golf VI Cabrio (>2011), Jetta (2005-2011), Jetta (>2011), Scirocco (>2008); Passat (2005-2011), Passat (>2011), Tiguan (2010-2013), Polo (>2009), Touran (2007-2013), **Audi** A1 (2010-2013), **Škoda** Octavia (>2004), Yeti (2010-2013), engine code: CAVD, CAXA, CAVB, CAVC





	mm	Length mm	g	
400.4300	16	380,0	501	

V belt tension wrench for Ford

- ideally suited for operating the belt tensioning device
- Problem free changing of the belt
- For hard to reach places
- Internal square drive adaptor
- Phosphate finish
- Chrome vanadium

Application range: Ford Duratorq 2.0 / 2.2 TDDi and TDCi (engine code: D5BA, D6BA, HJBA, HJBC, FMBA, N7BA, QJBB, QJBA)

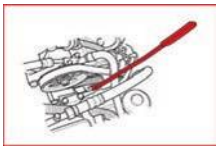


	Length mm	g	
405.0090	470,0	150	

V belt wrench Torx T45 for Renault

- suitable for assembly and disassembly of the fan belt
- necessary to relieve the automatic tension pulley for pulling the fan belt
- For hard to reach places
- With plastic-coated handle
- Chrome vanadium

Application range: Renault 2.2 L Diesel engines (G8T), e.g. Safrane, Laguna, Espace etc.





			g	
150.1226	2 pcs	V belt wrench Torx T45 for Renault	460	

consists of:

		g	
150.1227	Special wrench with 8.0 mm hexagonal drive, 450 mm	440	
150.1228	Bit with 8.0 mm hexagonal drive for Torx screws T45	20	

V belt wrench Torx for VAG

- suitable for assembly and disassembly of the fan belt
- necessary to relieve the automatic tension pulley for pulling the fan belt
- For hard to reach places
- With plastic-coated handle
- Chrome vanadium

Application range: Audi and **Volkswagen** 2.7 and 3.0 V6 TDI diesel engines, e.g. **Audi** A5, A6, A8, Q5, Q7, **Volkswagen** Phaeton and Touareg





			g	
150.1229	2 pcs	V belt wrench Torx for VAG	470	

consists of:

		g	
150.1227	Special wrench with 8.0 mm hexagonal drive, 450 mm	440	
150.1233	Bit with 8.0 mm hexagonal drive for Torx screws T60, 50mm long	20	

V belt wrench Torx for BMW and Mercedes T60

- suitable for assembly and disassembly of the fan belt
- necessary to relieve the automatic tension pulley for pulling the fan belt
- For hard to reach places
- With plastic-coated handle
- Chrome vanadium

Application range: BMW 5 series (E60) 2.0 L petrol engine M54 and **Mercedes** C class (W203, W204) 1.8 L petrol engine M271 etc.





			g	
150.1234	2 pcs	V belt wrench Torx for BMW and Mercedes T60	460	

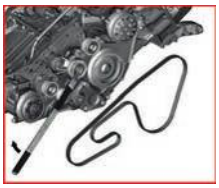
consists of:

		g	
150.1227	Special wrench with 8.0 mm hexagonal drive, 450 mm	440	
150.1236	Bit with 8.0 mm hexagonal drive for Torx screws T60, 22mm long	20	

V wedge assembly lever for Mercedes

- suitable for assembly and disassembly of the fan belt
- Required to operate the automatic pulley
- For hard to reach places
- Bronzed bolts
- Chrome vanadium

Application range: Mercedes Type 168, 169 (A class) and Type 245 (B class)





	Ø mm	Length mm	g	
150.1238	15,0	610,0	620	

V belt tension wrench for Mercedes

- suitable for assembly and disassembly of the fan belt
- Required to pull back the automatic tension pulley and to relax the V wedge
- For hard to reach places
- Special tool steel

Application range: Mercedes Transporter 208 D and 410 D range (engine code: OM601 and OM602), also for **Mercedes** passenger cars with hydraulic pump for the new regulations



3/8"

		g	
150.1239	V belt tension wrench for Mercedes	60	

V belt tension lever for VAG

- suitable for assembly and disassembly of the fan belt
- Required to release the automatic pulley
- Universal usage thanks to the attachable head piece
- For hard to reach places
- Chrome vanadium





	Length mm	g	
150.1237	450,0	700	

V-ribbed belt wrench set for Mini

- suitable for installation and removal of the V-ribbed belt
- required to relieve the automatic tension pulley and the V-ribbed belt
- 12 point
- For hard to reach places
- With plastic-coated handle
- Chrome vanadium

Application range: Mini (R56 / R57), Coupé ((R58), Roadster (R59), Clubman (R55), Countryman (R60), Paceman (R61) and Clubvan (R55) >2007, (engine code: N12, N14, N16, N18)





			g	
150.3340	2 pcs	V-ribbed belt wrench set for Mini	890	

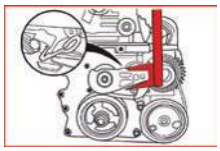
consists of:

		g	
150.3341	1/2" V-ribbed belt wrench, 21 mm	451	
150.3342	1/2" V-ribbed belt wrench, 30 mm	439	

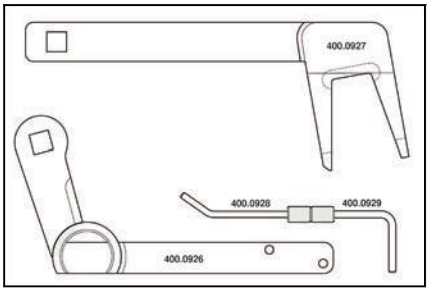
Engine Timing Tool Set for BMW / Mini

- For the professional engine repair
- For locking the cam shaft
- For changing the timing chain
- Very high degree of accuracy
- In durable steel storage case

Application range: BMW Mini One, Cooper, Cooper S with 1.6 petrol engines (engine code: W10816AA / W10816BA / W11816AA)







			kg	
400.0925	4 pcs	Engine Timing Tool Set for BMW / Mini	2,03	

consists of:

		g	
400.0926	Serpentine belt tensioner	435	
400.0927	Camshaft pulley loosening tools	400	
400.0928	Tensioning locking pin, Ø 4 mm	15	
400.0929	Locking pin, Ø 4,5 mm	18	

Vibration damper clamps for Mercedes

- suitable for mounting and dismounting the V-ribbed belt
- Quick, problem-free and correct changing of the belt
- No damage to the pulley wheel and the belt
- for vehicles with air conditioning and start-stop function
- Minimal force required
- Special tool steel

Application range: Mercedes A-Class (W169) 2004 - 2012, B-Class (W245) 2005 - 2011



	Length mm	Width mm	Height mm	g	
150.3345	182,0	40,0	20,0	360	

V-RIBBED BELT TOOLS

V-ribbed belt tool

- Suitable for the assembly and disassembly of the elastic V ribbed discs
- Quick, problem-free and correct changing of the belt
- No damage to the pulley wheel and the belt
- Minimal force required
- Special tool steel





		g	
150.3305	V-ribbed belt tool	187	

V-ribbed belt mounting aid

- ideal aid for the assembly of V-ribbed belts
- Quick, problem-free and correct changing of the belt
- No damage to the pulley wheel and the belt
- Minimal force required
- with magnet for better hold



		g	
150.3344	V-ribbed belt mounting aid	20	

V-ribbed belt assembly aid for BMW / Mini

- suitable for assembling the V-ribbed belt
- Quick, problem-free and correct changing of the belt
- No damage to the pulley wheel and the belt
- Minimal force required
- With knurled knob
- Chrome vanadium

Application range: BMW with N62 engines and **Mini** with W17 engines





		g	
150.3343	V-ribbed belt assembly aid for BMW / Mini	90	

ELASTIC BELT TOOL

Elastic strap and serpentine belt tool set

- Suitable for the assembly and disassembly of the elastic V ribbed discs
- Also suitable use with double ribbed discs
- Quick, problem-free and correct changing of the belt
- No damage to the pulley wheel and the belt
- Minimal force required
- Large working range thanks to various assembly and disassembly tools
- In durable plastic storage case





			kg	
150.3180	11 pcs	Elastic strap and serpentine belt tool set	2,24	

consists of:

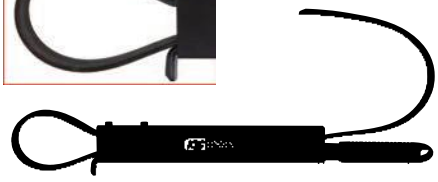
		g	
150.3181	Engine turning adaptor	441	
150.3182	Adaptor f. water pump, Ford/Volvo	370	
150.3183	Adaptor f. Crankshaft Pulley	75	
150.3184	Belt attachmenttool type 1	225	
150.3185	Belt attachmenttool type 2	100	
150.3186	Spacer screw, 65mm	250	
150.3187	Spacer screw, 40mm	15	
150.3188	Spacer screw, 25mm	12	
150.3189	Belt attachmenttool type3	23	
150.3198	Belt stretcher	230	
150.3199	Cover	210	

COUNTER HOLD TOOL

Universal counter holder for V ribbed belt discs

- With strong belt that has an adjustable flexible diameter
- For securing belt discs
- Ideal for water pumps, alternators, drive pulleys for pumps, fans etc.
- Can be used for discs with a diameter 50.00-200.00 mm





	Length mm	Replacement belt	g	
150.3152	360,0	150.3153	506	

Universal counter holder for V ribbed discs

- With strong belt that has an adjustable flexible diameter
- 5.0 mm groove spacing
- For securing toothed-belt discs
- Ideal for water pumps, alternators, drive pulleys for pumps, fans etc.
- Can be used for discs with a diameter 50.00-200.00 mm

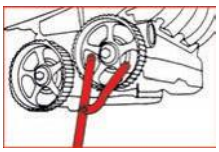




	L mm	Replacement belt	g	
150.3150	360,0	150.3151	542	

Pulley wheel counter hold wrench

- Suitable for counter holding the timing belt wheel on the cam shaft
- Hole distance can be varied
- Adjustable, universal usage
- With plastic-coated handle
- Chrome vanadium





	Length mm	g	
400.9007	410,0	525	

Universal timing gear holder set

- Ideally suited to almost all vehicle types
- Universally used tool for locking, turning and securing locked pulley wheels
- The overall length of 520 mm guarantees an optimal lever for loosening the timing belts reinforcement screws
- Stepless adjustment of Ø 40 - 220 mm - pin height: 35 mm
- Includes 4 pairs of screw on plugs
- With plastic-coated handle
- Special tool steel





			kg	
150.3000	11 pcs	Universal timing gear holder set	2,20	

consists of:

		kg	
150.3001	Adjustable lever f.150.3000, 520 mm	1,12	
150.3002	Locking pin f.150.3000, 2 pcs, 6-10 mm	0,10	
150.3003	Locking pin f.150.3000, 2 pcs, 8-11 mm	0,05	
150.3004	Locking pin f.150.3000, 2 pcs, 10-12 mm	0,04	
150.3005	Locking pin f.150.3000, 2 pcs, 11-16 mm	0,04	
150.3006	Knurled nut f.locking pin,150.3000, 2 pcs	0,02	

Universal locking tool / counter tool for crank shaft wheels

- Ideally suited to almost all vehicle types
- For working areas with gear diameters 45 - 190 mm
- With quick adjustment for setting the working area
- Universally used tool for locking, turning and securing locked pulley wheels
- Allows the crank shaft drive wheels to turn or for releasing the securing screws on the pulley wheel
- Ideal leverage thanks to 390 mm total length
- Very narrow tool for maximum access
- Quick and easy usage
- Maximum holding force
- With plastic-coated handle
- Special tool steel





	Ø mm	Length mm	g	
150.2990	45-190	390,0	500	

Belt disc counter hold tool for Mercedes

- Damage-free and secure counter holding of the belt disc
- Long lever
- With hanging hole
- Chrome vanadium

Application range: Mercedes engines 602, 603, 604, 605, 606



	Length mm	g	
150.1252	350,0	440	

Belt disc counter hold tool set for Mercedes

- For counter holding the crank shaft belt drive when releasing or tightening the crank shaft central screw
- Required when changing the belt disc or repairing the engine
- Special tool steel

Application range: Mercedes engines, e.g. M112, M113 and OM 642 etc.



			kg	
150.3310	7 pcs	Belt disc counter hold tool set for Mercedes	2,24	

consists of:

	X		g	
150.3311	1	Perforated disc	1219	
150.3312	3	Bolts, Ø 15 mm	126	
150.3313	3	Bolts, Ø 20 mm	215	

7-piece Flywheel Holder Set for BMW

- for locking the flywheel when loosening or tightening the central screw on the pulley
- Required for the removal and installation of disc flywheels, clutch pressure plates and belt pulleys
- Sturdy design
- In durable plastic storage case

Application range: BMW 1 series 116i, 118i, 120i, 128i, 130i, 135i, 135is, 118d, 120d, 123d (E81, E82, E87, E88), 3er 316i, 318i, 318ti, 320i, 320Si, 323i, 325i, 325xi, 328i, 328xi, 330i, 330xi, 335i, 335xi, 318d, 320d, 320td, 325d, 330d, 330xd, 335d (E46, E90, E91, E92, E93), 5er 20i, 523i, 525i, 525xi, 530i, 530xi, 535i, 535xi, 520d, 525d, 525xd, 530d, 530xd, 535d, (E60, E61), 6er 630i, 635d (E63, E64), 7er 730i, 730d, 740d, (E38, E65, E66), X3-2.0i, X3-2.0d, X3-3.0d, X5-3.0D, X6-3.5D, X6-3.0d, X6-3.5d(E53, E70, E83), Z4-2.0i, Z4-2.5i, Z4-3.0i (E85, E86) and **Mini** One (R50) / (engine code: M47T2 / M47TU / M57T2 / M57TU / M67 / N43 / N45 / N45T / N46 / N46T / N47 / N47S / N51 / N52 / N53, N54, W17)



			g	
150.3325	7 pcs	7-piece Flywheel Holder Set for BMW	933	

consists of:

		g	
150.3326	Parting-off holder with screw	251	
150.3327	Primary body	416	
150.3328	Adapter for E65 / E67 with screw	22	
150.3329	Adapter for E46 / M47TU with screw	245	



Holding key for water pump pulleys for VAG

- Ideal for locking and releasing during assembly and disassembly of water pump belt pulleys
- Easy to remove fixed screws
- Internal square drive allows for lengthening possibilities
- Chrome vanadium





1/2"

	Length mm	g	
150.3026	250,0	490	

pulley wrench

- Enables the safe locking of belt pulleys
- For easy releasing of secured screws
- for deep-drawn water pumps on air-conditioned engines
- Plastic coated handle
- Chrome vanadium



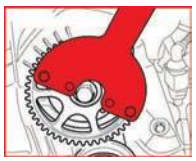


	Length mm	g	
150.3028	300,0	560	

Belt disc counter hold wrench for VAG

- Simple assembly and disassembly of the crank shaft belt disc and the crank shaft toothed-belt wheel
- Versitile usage
- Long lever
- With plastic-coated handle
- Chrome vanadium

Application range: Audi A2, A4, A6, **Seat**, **Škoda**, **Volkswagen** Lupo, Polo, Golf 4, Bora, Passat, Beetle, Sharan etc.
engine code: AGP, AGR, AMF, AJM, ATJ, AEE, AEX, APE, AEH, AKL, APF, AWH, ALN, ANA, ARM, AUA, ADX, AEA, AFH, AFK, AHW etc.





	Length mm	kg	
150.1244	687,0	2,06	

Universal belt pulley rotary lever

- Universal adjustable lever
- For the spinning of the endine by means of the belt pulley
- With plastic-coated handle
- Chrome vanadium





	Length mm	g	
150.3029	325,0	650	

VISCO FAN TOOL

Universal Visco ventilator wrench

- For removing the hubs and bleeding with viscous couplings
- Especially slim design
- Enables easy access
- With PVC dipped handle
- Special tool steel





	mm	Suitable for	g	
150.3022	32	for clamping the viscous coupling drive shaft on BMW, Ford	300	
150.3027	36	For counter holding the Visco coupling drive shaft BMW, Ford, GM	340	
150.3023	41	for twisting the water pump on Opel and GM	422	
150.3024	46	for twisting the water pump on Opel and GM	405	

Fan hub wrench for Ford

- For the professional engine repair
- Simple assembly and disassembly of the Visco coupling rotor
- Makes it possible to secure the pulley wheel of the water pump and at the same time release the heating filter
- Special tool steel
- Very high degree of accuracy

Application range:Ford Transit (2001 - 2006)



1/2"

	Pin key mm	g	
400.9014	69,0	133	

Visco ventilator wrench

- For removing the hubs and bleeding with viscous couplings
- Especially slim design
- Enables easy access
- With hanging hole
- Special tool steel

Application range: Mercedes engines M103 (6 cylinder), M104 (6 cylinder 4 valve), M119 (8 cylinder 4 valve), M120 (12 cylinder 4 valve)



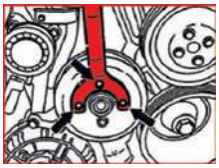


	mm	Length mm	g	
150.3301	65	400,0	472	

Visco ventilator wrench

- For removing the hubs and bleeding with viscous couplings
- Especially slim design
- Enables easy access
- specially bent
- With hanging hole
- Special tool steel

Application range: Mercedes (engine: M 111.979, 112, 113, 119.985)





		Length mm	g	
150.3008	Visco ventilator wrench	410,0	370	

Holding wrench for Visco ventilator

- For counter holding the ventilation valve when disassembling the Visco ventilator
- Especially slim design
- Enables easy access
- Special tool steel

Application range: BMW engine M10, M20, M21, M30, M50, M51, M52, M52TU, M54, M56, M70, M73, S14 and S38



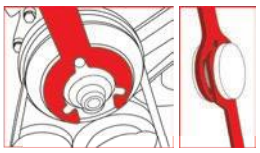


	Length mm	g	
150.3306	380,0	330	

Fan-hub wrench set for Land Rover

- For counter holding the Visco coupling drive shaft
- Makes it possible to secure the pulley wheel of the water pump and at the same time release the heating filter
- Also suitable for the removal of the viscous connecting socket on the cooler ventilator
- Special tool steel

Application range:Land Rover Discovery II, Range Rover, Defender 1990-2006 with Td5 or V8 engines





			kg	
400.4175	2 pcs	Land Rover	1,80	

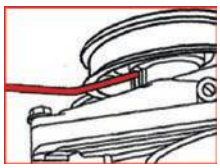
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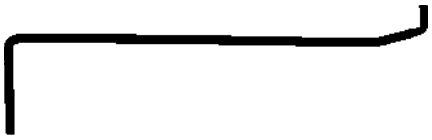
		kg	
400.0176	Holding wrench for Visco fan for Land Rover	1.05	
400.0177	Visco fan wrench 36.0 mm for Land Rover	14.78	

Ventilator coupling counter hold for Mercedes

- Ideally suited to securing the ventilator coupling
- Especially slim design
- Enables easy access
- Especially curved for use
- Special tool steel

Application range: Mercedes (engine: M 103, 104)



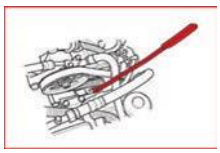


		Length mm	g	
150.3009	Ventilator coupling counter hold for Mercedes	300,0	105	

Belt disc wrench for Mercedes 8.0 mm

- Suitable for the installation and removal of the fan coupling and the belt disc
- Required when changing the water pump
- For hard to reach places
- With plastic-coated handle
- Chrome vanadium

Application range: Mercedes engines M102, M103, OM601, OM602, OM603, OM605, OM606





			g	
150.1303	2 pcs	Belt disc wrench for Mercedes 8.0 mm	460	

consists of:

		g	
150.1227	Special wrench with 8.0 mm hexagonal drive, 450 mm	440	
150.1307	Bit with 8.0 mm hexagonal drive for internal hexagonal screws 8.0 mm	20	



Compressor belt disc wrench for Mercedes 10.0 mm

- Suitable for releasing the screws on the compressor belt disc
- Required when changing the water pump
- For hard to reach places
- With plastic-coated handle
- Chrome vanadium

Application range: Mercedes engines M102, M103, OM601, OM602, OM603, OM605, OM606





			g	
150.1304	2 pcs	Compressor belt disc wrench for Mercedes 10.0 mm	460	

consists of:

		g	
150.1227	Special wrench with 8.0 mm hexagonal drive, 450 mm	440	
150.1308	Bit with 8.0 mm hexagonal drive for internal hexagonal screws 10.0 mm	20	

Ventilator hub wrench set

- For counter holding the Visco coupling drive shaft
- Makes it possible to secure the pulley wheel of the water pump and at the same time release the heating filter
- Also suitable for the removal of the viscous connecting socket on the cooler ventilator
- Special tool steel
- In durable plastic storage case





			kg	
150.3320	12 pcs	Ventilator hub wrench set	1,89	

consists of:

		g	
150.3008	Visco ventilator wrench	370	
150.3009	Ventilator coupling counter hold for Mercedes	105	
150.3022	Universal Visco ventilator wrench, 32mm	300	
150.3024	Universal Visco ventilator wrench, 46mm	405	
150.3027	Universal Visco ventilator wrench, 36mm	340	
150.3301	Visco ventilator wrench	472	
150.3306	Holding wrench for Visco ventilator	330	
150.3321	Adaptor, short, Ø 20 mm	5	
150.3322	Adaptor, Ø 8 mm	22	
150.3323	Adaptor, Ø 10 mm	29	
150.3324	1/2" Holding wrench	635	
151.26025	Hexagon key wrench, phosphate finish, short, 2,5mm	10	

SLOGGING SPANNER

Hand impact wrench

- Ideal for loosening extremely jammed screws
- Also usably to the tightening of screws and/or nuts
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- Optimal 8:1 torque ratio
- 360° rotating head
- Impact screw can be combined with every 1/2" drive nut
- One component handle

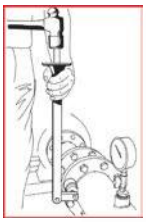




	■	Length mm	kg	
150.2096	1/2"	475,0	1,32	

Impact spanner

- For the installation and extension of compensational corrugated discs without extension of the struts
- For loosening of stuck stop screws
- Suitable for narrow spaces
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- Can be combined with every any 1/2" drive nut
- Optimal loosening moment through blow effect
- With hand protection grip
- Special tool steel



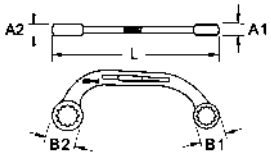


	■	Length mm	kg	
150.2090	1/2"	560,0	1,32	

ALTERNATOR WRENCH

CHROME*plus*® Starter and block spanner

- FlankTraction profile
- Suitable for narrow spaces
- Mirror polished
- Chrome vanadium





	mm	A1 mm	A2 mm	B1 mm	B2 mm	L mm	g	
518.0852	10x12	7,5	8,5	16,5	19,8	149,0	60	
518.0853	11x13	7,5	8,5	16,8	19,8	149,0	98	
518.0856	14x17	9,0	9,2	22,7	25,8	190,0	129	
518.0857	16x18	9,5	10,2	25,5	28,5	194,0	171	
518.0859	19x22	10,0	11,5	28,8	33,0	225,0	244	

CHROME*plus*® half moon - and manifold spanner set

- FlankTraction profile
- Suitable for narrow spaces
- Mirror polished
- Chrome vanadium



			g	
518.0850	5 pcs	10x12 - 11x13 - 14x17 - 16x18 - 19x22 mm	890	

Alternator tension wrench

- Suitable for engines in which the V ribbed belt is only tensioned via the spring-loaded alternator
- With strengthened and ribbed pins to relax the V ribbed belt
- Ribs prevent the pins from displacing from the bore holes of the alternator
- Special tool steel





1/2"

	Pin key mm	g	
150.3037	157,0	440	

FREE-RUNNING BELT DISC TOOL

V-Ribbed Alternator combination key - internal hexagon

- For the assembly and disassembly of free-running belt discs when changing alternator or the belt disc
- Locking the alternator is done with the special bit
- Actuation of the screws is carried out with the union nut
- Also for checking screws
- Allows for the releasing and securing of the central nut at the same time as counter holding the belt disc shaft
- Internal square drive to DIN 3120 / ISO 1174 with ball reception

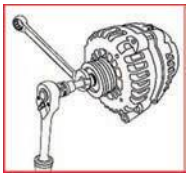


1/2"

	mm	Nut Ø mm	Tooth	Length mm	g	
150.3155	8,0	22,0	33	96,0	163	

V-Ribbed Alternator combination key - internal hexagon

- For the assembly and disassembly of free-running belt discs when changing alternator or the belt disc
- Locking the alternator is done with the special bit
- Actuation of the screws is carried out with the union nut
- Also for checking screws
- Allows for the releasing and securing of the central nut at the same time as counter holding the belt disc shaft
- Internal square drive to DIN 3120 / ISO 1174 with ball reception



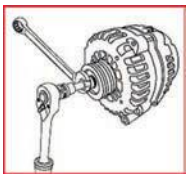


1/2"

	mm	Nut Ø mm	Tooth	Length mm	g	
150.3156	10,0	22,0	33	96,0	163	

V-Ribbed Alternator combination key - XZN

- For the assembly and disassembly of free-running belt discs when changing alternator or the belt disc
- Locking the alternator is done with the special bit
- Actuation of the screws is carried out with the union nut
- Also for checking screws
- Allows for the releasing and securing of the central nut at the same time as counter holding the belt disc shaft
- Internal square drive to DIN 3120 / ISO 1174 with ball reception



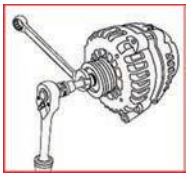


1/2"

		Nut Ø mm	Tooth	Length mm	g	
150.3102	M10	19,5	33	115,0	170	

V-Ribbed Alternator combination key - XZN

- For the assembly and disassembly of free-running belt discs when changing alternator or the belt disc
- Locking the alternator is done with the special bit
- Actuation of the screws is carried out with the union nut
- Also for checking screws
- Allows for the releasing and securing of the central nut at the same time as counter holding the belt disc shaft
- Internal square drive to DIN 3120 / ISO 1174 with ball reception





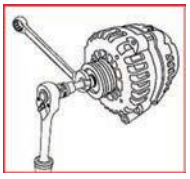
1/2"

		Nut Ø mm	Tooth	Length mm	g	
150.3135	M10	28,0	33	96,0	300	

V-Ribbed Alternator combination key - Torx

- For the assembly and disassembly of free-running belt discs when changing alternator or the belt disc
- Locking the alternator is done with the special bit
- Actuation of the screws is carried out with the union nut
- Also for checking screws
- Allows for the releasing and securing of the central nut at the same time as counter holding the belt disc shaft
- Internal square drive to DIN 3120 / ISO 1174 with ball reception

Application range: BMW F20, **Mercedes** A class, C class, **Renault** 1.9 DTI





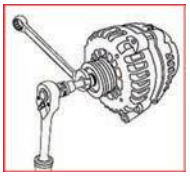
1/2"

		Nut Ø mm	Tooth	Length mm	g	
150.3101	T50	19,5	33	115,0	170	



V-Ribbed Alternator combination key - internal hexagon

- For the assembly and disassembly of free-running belt discs when changing alternator or the belt disc
- Locking the alternator is done with the special bit
- Actuation of the screws is carried out with the union nut
- Also for checking screws
- Allows for the releasing and securing of the central nut at the same time as counter holding the belt disc shaft
- Internal square drive to DIN 3120 / ISO 1174 with ball reception



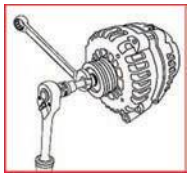


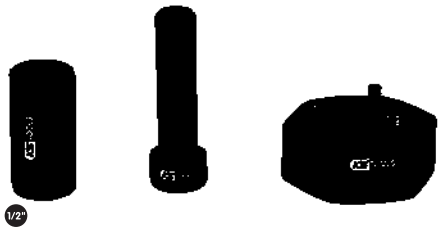
1/2"

	mm	Nut Ø mm	Tooth	Length mm	g	
150.3157	10,0	22,0	33	70,0	163	

V-Ribbed Alternator combination key - internal hexagon

- For the assembly and disassembly of free-running belt discs when changing alternator or the belt disc
- Locking the alternator is done with the special bit
- Actuation of the screws is carried out with the union nut
- Also for checking screws
- Allows for the releasing and securing of the central nut at the same time as counter holding the belt disc shaft
- Internal square drive to DIN 3120 / ISO 1174 with ball reception





1/2"

	mm	mm	g	
150.3175	10,0	17,0	200	

consists of:

		g	
150.3176	Union nut 17.00 mm	40	
150.3177	Union nut with 3 pins	120	
150.3201	Socket 10mm	40	

V-Ribbed Alternator combination key set

- For the assembly and disassembly of free-running belt discs when changing alternator or the belt disc
- Locking the alternator is done with the special bit
- Actuation of the screws is carried out with the union nut
- Also for checking screws
- Allows for the releasing and securing of the central nut at the same time as counter holding the belt disc shaft
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Suitable for a wide range of applications
- Saves the removal of additional parts, e.g. cooler





			g	
150.3200	5 pcs	V-Ribbed Alternator combination key set	310	

consists of:

		g	
150.3110	10mm Spezial Bit spline XZN, M10, 75mm	60	
150.3112	10mm Spezial bit Torx, T50, 75mm	60	
150.3201	Socket 10mm	40	
150.3202	6 point adaptor Ø 19mm	110	
150.3203	Spline adaptor Ø 17mm	40	

V-Ribbed Alternator combination key set

- For the assembly and disassembly of free-running belt discs when changing alternator or the belt disc
- Locking the alternator is done with the special bit
- Actuation of the screws is carried out with the union nut
- Also for checking screws
- Allows for the releasing and securing of the central nut at the same time as counter holding the belt disc shaft
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Suitable for a wide range of applications
- Saves the removal of additional parts, e.g. cooler



			kg	
150.3100	13 pcs	V-Ribbed Alternator combination key set	0,99	

consists of:

		g	
150.3101	1/2" V-Ribbed Alternator combination key Torx, T50	170	
150.3102	1/2" V-Ribbed Alternator combination key XZN, M10, 115 mm	170	
150.3103	Spline pulley key, 15mm, 33 teeth, bored	50	
150.3104	Spline pulley key, 22mm, 33 teeth, bored	30	
150.3105	22mm Adaptor for belt pulley wrench L=30mm	70	
150.3106	17mm Special adaptor, 4 mm L=30mm	120	
150.3107	10mm Spezial hexagon bit, 8mm, 75mm	60	
150.3108	10mm Spezial hexagon bit, 10mm, 75mm	60	
150.3109	10mm Spezial Bit spline XZN, M8, 75mm	60	
150.3110	10mm Spezial Bit spline XZN, M10, 75mm	60	
150.3111	10mm Spezial bit Torx, T40, 75mm	60	
150.3112	10mm Spezial bit Torx, T50, 75mm	60	
918.1271	1/2" Bit adaptor socket, for bits 10mm	40	

BELT TENSION CHECKER

Timing belt tensions test instrument

- For inspection of the timing post tensioning
- For the timing belt on the combustion engine
- With mm scale
- 10N (~1kp corresponds a revolution)
- Special tool steel

Application range: Can be used everywhere there is the technical data for the allowable through bend of the timing belt in mm in a certain power in N or kp revolutions



Technical data:

Scale division:	in mm
Measurement mode:	mechanical (spring)
Adjusting nut revolution around 360°	1,0
Adjusting nut pitch:	1,0/10,0 mm

	Length mm		g	
150.3015	100,0	0,0-20,0 mm	260	

Electronic timing belt tension tester

- For testing the tension of toothed belts and V-ribbed belts
- Measurement using the latest method = frequency measurement in Hertz
- With data log, setting values and correct position of the measuring sensor on the belt drive
- One man operation, easy to use
- LED display and acoustic measuring signal
- Automatic shutdown after 120 seconds
- In durable plastic storage case

Application range: Maintenance of vehicles, replacement of belts, suitable for passenger cars up to commercial vehicles



Technical data:

Power requirement:	9V block battery
Working range:	30-520 Hz
Cable length:	1,2 m

			kg	
150.3165	8 pcs	Electronic timing belt tension tester	1,13	

PULLING TOOL

Draw off lining

- For drawing off the shoulder housings interior ring of light machines, motor parts and other machine parts
- Special tool steel

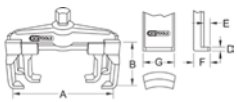


	Ø mm	L mm	max N·m		mm	kg	
670.0221	5-32	135	60	17	M14x1,5 x 130	1,40	

Universal camshaft solid wheel puller 2 arm

- Four special hooks for 5 and 6 armed spoked wheels
- Suitable for many VAG models
- Extremely robust spindle with inductively hardened thread
- Special tool steel





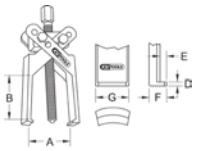


	A mm	B mm	max t		mm	D mm	E mm	F mm	G mm	kg	
670.0211	130	44	2,5	M14x1,5 x 55	17	4	9	20	15	900	

Universal 2 arm puller

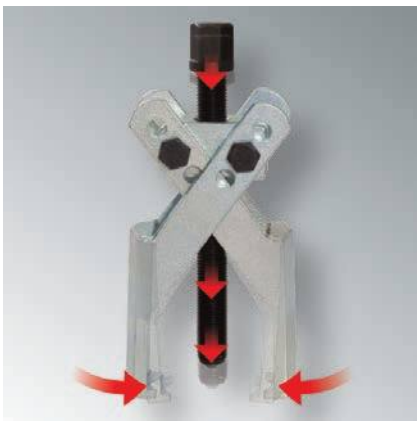
- Legs are adjustable in the working depth
- Automatic pressure on the legs
- Extremely robust spindle with inductively hardened thread
- Special tool steel







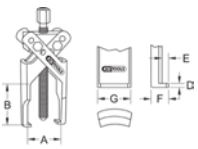
	A mm	B mm	max t		mm	D mm	E mm	F mm	G mm	kg	
620.5201	6-100	70/85	1,5	M10 x 105	12	2,5	4,5	8,5	23	0,40	
620.5202	10-140	85/120	3,5	M14x1,5 x 130	17	3,5	5	10	31	0,90	
620.5203	15-140	125/155	4,5	M14x1,5 x 200	17	3,5	5	10	31	1,10	



Universal 2 arm puller set with narrow legs

- Legs are adjustable in the working depth
- Ideal for confined spaces
- Automatic pressure on the legs
- Extremely robust spindle with inductively hardened thread
- Special tool steel





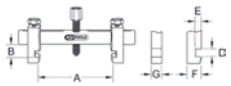


	A mm	B mm	max t		mm	D mm	E mm	F mm	G mm	kg	
620.5301	6-100	70/85	1	M10 x 105	12	2,5	4,5	8,5	11	0,40	
620.5302	15-140	125/155	2	M14x1,5 x 200	17	3,5	5	11	12	1,00	

Universal belt pulley puller 2 arm

- For grooved belt pulleys
- Draw off arms with locking device
- Clamping yoke compresses the legs firmly
- Prevents slipping
- Less space requirement through compact method of building
- Suited for work on engines in the vehicle or removed
- Special tool steel





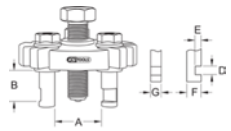


	A mm	B mm	mm	mm	D mm	E mm	F mm	G mm	kg
150.3170	40-165	30	M12 x 75	17	10	9	18	35	1,60

Universal belt pulley puller 3 arm

- For the damage free drawing off of pulley belts
- Universal suitable for several diameters and different hole divisions
- Less space requirement through compact method of building
- Suited for work on engines in the vehicle or removed
- Special tool steel





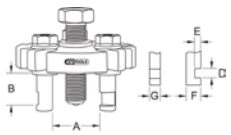


	A mm	B mm	mm	mm	D mm	E mm	F mm	G mm	g
150.3130	90	30	M16x1,5 x 75	24	10	6	11	12	900

Universal belt pulley puller 3 arm

- For the damage free drawing off of pulley belts
- Universal suitable for several diameters and different hole divisions
- Less space requirement through compact method of building
- Suited for work on engines in the vehicle or removed
- Special tool steel







	A mm	B mm	mm	mm	D mm	E mm	F mm	G mm	g
150.3194	30-60	30	M14x1,5 x 75	19	10	6	11	11	745



STETHOSCOPE

Mechanics stethoscope

- Very flexible
- Serves the acoustic test and judgment of a component under load
- Quick and precise error detection from the sound
- With steel tip

Application range:
Engine: Valves, bearings, piston pins
Alternator: Bearing sounds
Differential: Barrel sounds
Bodywork: Creak and squeak sounds





	Length mm	g
150.1645	1120,0	200

Mechanic's stethoscope, electronic

- Very flexible
- Serves the acoustic test and judgment of a component under load
- Quick and precise error detection from the sound
- Includes 9V block battery
- With steel tip

Application range:
Engine: Valves, bearings, piston pins
Alternator: Bearing sounds
Differential: Barrel sounds
Bodywork: Creak and squeak sounds



	Cable length mm	Length mm	g
150.1410	1160,0	190,0	100

Electronic professional stethoscope

- For the professional defect diagnosis
- Serves the acoustic test and judgment of a component under load
- Delivers fast, absolutely clear and unambiguous test results over sounds
- Contains 6 independent sensors that can mounted for example on the vehicle floor or in the engine compartment for ease
- Simple coordination of the defect source through colour coded cable and colour table on the box
- In durable plastic storage case

Application range:
Engine: Valves, baerings, piston pins
Alternator: Bearing sounds
Differential: Barrel sounds
Bodywork: Creak and squeak sounds





		kg
150.1695	18 pcs Electronic professional stethoscope	2,50

consists of:

		g
150.1695-1	Headset	350
150.1695-2	Amplifier	115
150.1695-3	Hand held stethoscope	165
150.1695-4	Velcro strap, 8 pcs	9
150.1695-5	Sensor	10
150.1695-6	Coulour coded cable, 6 pcs	755

Ultrasound leak detector

- Acoustic locating of leaks on bodywork
- Receiver is passed externally along the bodywork
- Simplifies cause investigation for wind noise and water leaks
- In a practical storage case





		g
150.1690	Ultrasound leak detector	460

KSTOOLS®

THE ACCUMULATED PULLER EXPERTISE

MADE IN GERMANY



FROM SMALL TO LARGE



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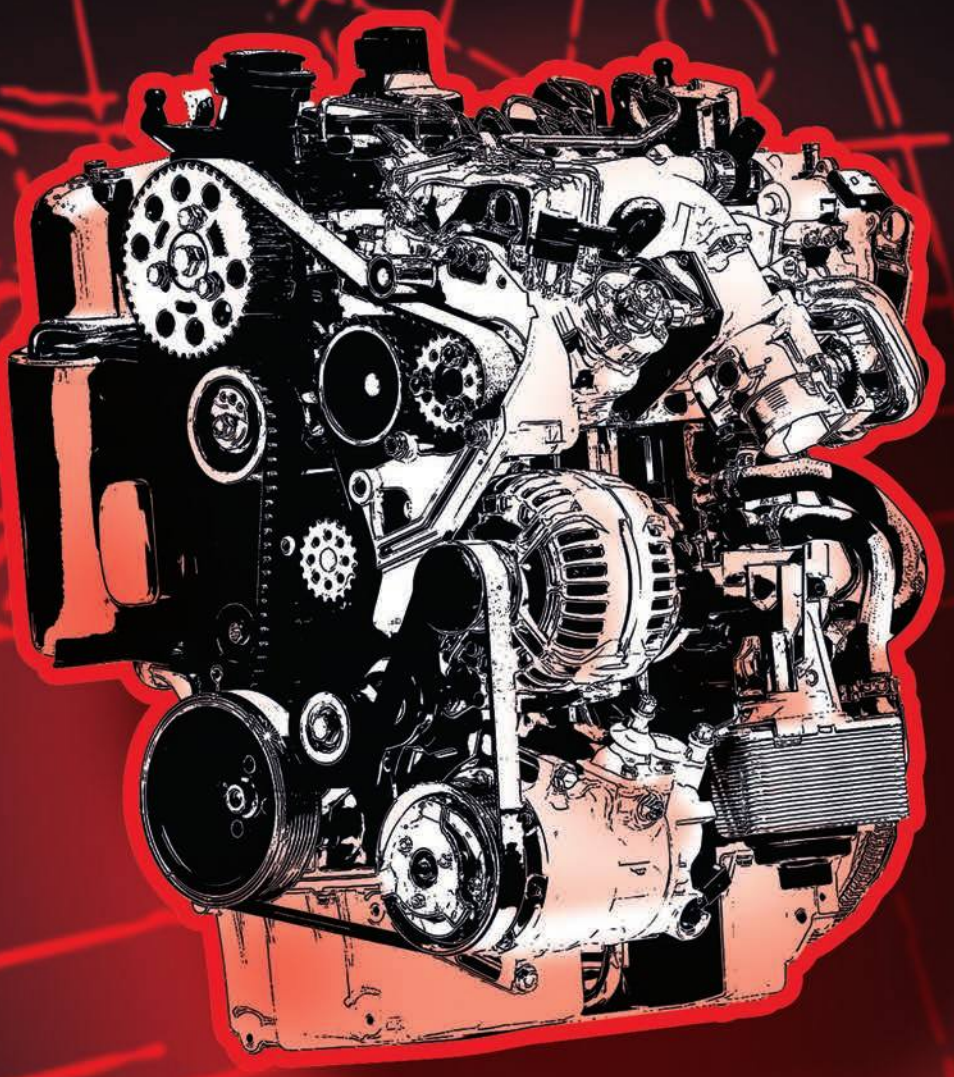
OVER 1,000 PULLER VARIANTS UP TO 50 T
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11

ENGINE TIMING TOOLS





KS TOOLS

Innovation is our mission!

	FROM PAGE
VAG	294
ALFA ROMEO	308
BMW	312
CHRYSLER	319
CITROËN	320
FIAT	325
FORD	330
GM	337
HONDA	339
HYUNDAI	339
ISUZU	340
IVECO	341
JAGUAR	341
JEEP	343
KIA	344
LANCIA	344
LAND ROVER	346
MAZDA	349
MERCEDES	350
MINI	354
MITSUBISHI	357
NISSAN	357
OPEL	359
PSA	368
PORSCHE	373
RENAULT	373
ROVER	378
SAAB	379
SUBARU	382
VOLVO	382
UNIVERSAL COUNTER HOLD TOOL	384
VISCO FAN TOOL	385
TENSION PULLEY WRENCH V/V RIBBED BELTS	386
BELT TENSION CHECKER	386
UNIVERSAL	387

VAG

pulley wrench

- Enables the safe locking of belt pulleys
- For easy releasing of secured screws
- for deep-drawn water pumps on air-conditioned engines
- Plastic coated handle
- Chrome vanadium



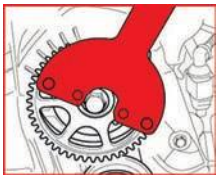


	Length mm	g	
150.3028	300,0	560	

Belt disc counter hold wrench for VAG

- Simple assembly and disassembly of the crank shaft belt disc and the crank shaft toothed-belt wheel
- Versitile usage
- Long lever
- With plastic-coated handle
- Chrome vanadium

Application range: Audi A2, A4, A6, **Seat**, **Škoda**, **Volkswagen** Lupo, Polo, Golf 4, Bora, Passat, Beetle, Sharan etc.
engine code: AGP, AGR, AMF, AJM, ATJ, AEE, AEX, APE, AEH, AKL, APF, AWH, ALN, ANA, ARM, AUA, ADX, AEA, AFH, AFK, AHW etc.





	Length mm	kg	
150.1244	687,0	2,06	

Pulley retaining wrench for VAG

- For the professional engine repair
- Simple assembly and disassembly of the crank shaft pulley wheel or vibration dampers
- Special profiles allows for counter holding when releasing or securing the crank shaft central screw
- Very high degree of accuracy

Application range: Volkswagen with 1.0 MPI / TSI, 1.2 TSI, 1.4 TFSI, 1.4 TDI



	Length mm	kg	
400.0048	735,0	2,22	

V belt wrench Torx for VAG

- suitable for assembly and disassembly of the fan belt
- necessary to relieve the automatic tension pulley for pulling the fan belt
- For hard to reach places
- With plastic-coated handle
- Chrome vanadium

Application range: Audi and **Volkswagen** 2.7 and 3.0 V6 TDI diesel engines, e.g. **Audi** A5, A6, A8, Q5, Q7, **Volkswagen** Phaeton and Touareg





			g	
150.1229	2 pcs	V belt wrench Torx for VAG	470	

consists of:

		g	
150.1227	Special wrench with 8.0 mm hexagonal drive, 450 mm	440	
150.1233	Bit with 8.0 mm hexagonal drive for Torx screws T60, 50mm long	20	

V belt tension lever for VAG

- suitable for assembly and disassembly of the fan belt
- Required to release the automatic pulley
- Universal usage thanks to the attachable head piece
- For hard to reach places
- Chrome vanadium





	Length mm	g	
150.1237	450,0	700	

V-belt and toothed belt wrench for VAG

- For loosening the automatic clamping device
- Problem free changing of the belt
- For hard to reach places
- With plastic-coated handle
- Chrome vanadium

Application range:Audi, **Seat**, **Škoda** and **Volkswagen** with 2.0 TDI and 1.4 TSI engines
Volkswagen Beetle (2011-2013), Eos (2007-2013), Golf (2003-2008), Golf (>2008), Golf Estate (2007-2009), Golf Estate (>2009), Gold Plus (2005-2009), Golf Plus (>2009), Golf VI Cabrio (>2011), Jetta (2005-2011), Jetta (>2011), Scirocco (>2008); Passat (2005-2011), Passat (>2011), Tiguan (2010-2013), Polo (>2009), Touran (2007-2013), **Audi** A1 (2010-2013), **Škoda** Octavia (>2004), Yeti (2010-2013), engine code: CAVD, CAXA, CAVB, CAVC





	Suitable for	mm	Length mm	g	
400.4300	VAG	16	380,0	501	

Engine support socket set for VAG, extra short

- 12 point
- For the assembly and removal of the aluminium engine support (hard to reach sites)
- Ideal for timing belt change
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Extra short execution
- For manual operation
- Matt finish
- Chrome vanadium

Application range: For timing belt change on **Volkswagen** Golf IV, **Audi**, **Škoda**, **Seat** etc.



3/8"

			g	
911.1295	2 pcs	Engine support socket set for VAG, extra short	110	

consists of:

		g	
911.1293	1/2" 12 point socket, 16.0 mm short	40	
911.1294	1/2" 12 point socket, 16.0 mm long	67	

Pulleys hexagonal-socket, long

- Suited for the assembly and disassembly of the pulley wheel vibration damper, e.g. when changing the timing belt
- 6 point
- FlankTraction profile
- According to DIN 3124 / ISO 2725
- Internal square to DIN 3120 / ISO 1174 with ball reception
- Long execution
- For manual operation
- Chrome vanadium

Application range: Audi, **Seat**, **Škoda** and **Volkswagen**

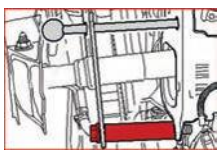


1/2"

	mm	D1 mm	D2 mm	L mm	T mm	g	
917.1254	27,0	34,0	36,0	76,0	19,0	280	

Front mask stub rod for VAG

- For moving the front mask (radiator support) forward in order to carry out service work
- Allows for timing belt changes or the renewal of the water pump
- Removes the need for the adjustment of the bonnet lock and the gap measurements

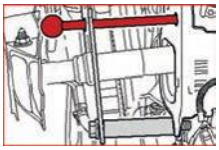




	Suitable for	mm	Length mm	g	
150.3012	VAG	M8	100,0	170	

Front mask guide rods for VAG

- For moving the front mask (radiator support) forward in order to carry out service work
- Allows for timing belt changes or the renewal of the water pump
- Removes the need for the adjustment of the bonnet lock and the gap measurements

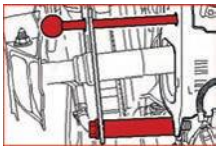




	Suitable for	mm	Length mm	Content	g	
400.2077	VAG	M8	180,0	2	80	
400.2078	VAG	M10	180,0	2	120	
400.4565	VW T5	M8	200,0	4	860	

Front mask guide and push rod set for VAG

- For moving the front mask (radiator support) forward in order to carry out service work
- Allows for timing belt changes or the renewal of the water pump
- Removes the need for the adjustment of the bonnet lock and the gap measurements





			g
400.2075	6 pcs	Front mask guide and push rod set for VAG	749

consists of:

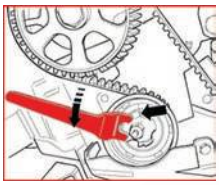
	x		g
150.3012	2	Front mask stub rod for VAG	170
400.2077	1	Front mask removal aid (2)	80
400.2078	1	Front mask removal aid for VAG (2)	120



Automatic pulley wrench for pin-type face for VAG

- For tightening and relaxing the timing belt on VAG vehicles
- For pin spacers with driver bores (pin-type face)
- Cranked shape
- With plastic-coated handle

Application range: Audi, **Volkswagen**, **Seat**, **Škoda** 4 and 5 cylinder TDI engines, also **Volkswagen** T4 power steering pumps



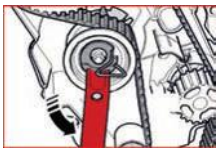


	Suitable for	Length mm	g	
400.9008	VAG	140,0	206	
400.9009	VAG	210,0	263	

Automatic pulley wrench for pin-type face for VAG

- For the professional engine repair
- For tightening and relaxing the timing belt on VAG vehicles
- For pin spacers with driver bores (pin-type face)
- Angled shape
- With plastic-coated handle
- Very high degree of accuracy

Application range: Audi, **Volkswagen**, **Seat**, **Škoda** 4 and 5 cylinder TDI engines



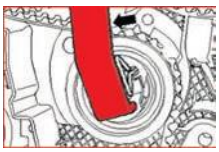


	Suitable for	Pin key mm	Stud Ø mm	g	
400.9010	VAG	18,0	3,0	230	

Tensioner pulley wrench for two-hole nuts for VAG

- For tightening and relaxing the timing belt on VAG vehicles
- For pin spacers with driver bores (pin-type face)
- 15° angled
- With plastic-coated handle

Application range: Audi, **Volkswagen**, **Seat**, **Škoda** 2,0 FSI/ TDI engines





	Suitable for	Pin key mm	Stud Ø mm	g	
400.9011	VAG	18,0	3,0	259	

Pin wrench for VAG, 3 mm, adjustable

- Universal usage
- For the actuation of belt tensioners in VAG
- Phosphate finish
- Special tool steel





	Suitable for	Ø mm	Length mm	g	
150.3018	VAG	9,0-45,0	150,0	100	

Automatic pulley wrench for pin-type face for VAG

- For tightening and relaxing the timing belt on VAG vehicles
- 180° adjustable handle
- For pin spacers with tappet tolerances
- Normal and extra flat ideal for hard to access areas
- With plastic-coated handle

Application range: VAG 4 and 5 cylinder TDI-Model, T4 Servo pump





	Suitable for	Length mm	Stud Ø mm	Pin key mm	g	
500.4315	VAG	180,0	3,0	18,0	95	
150.3017	VAG	185,0	3,0	18,0	105	

Automatic pulley wrench set for 2.0 RDI PD engines for VAG

- Suitable for the assembly and disassembly of the timing belt
- For hard-to-reach places due to the modified support frame screws
- Chrome vanadium

Application range: Audi A3 2.0 TDI PD DPHC (05-08) with the engine ID codes AZU, BKD, BHN, BUY and **Volkswagen** Caddy, Caddy Maxi 2.0 SDI (09-) with BDJ, BST with engines with hydraulic spanners and Transporter 1.9 TDi Pd (06-09)



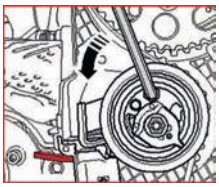
			g
400.2150	3 pcs	Automatic pulley wrench set for 2.0 RDI PD engines for VAG	160

consists of:

400.2151	Tensioner adjuster 6.0 mm, 200 mm	20
400.2152	Tensioner adjuster Ø 3.9 mm	70
400.2153	Tensioner adjuster Ø 2.5 mm, 200 mm	70

Locking plate for locking the tension pulley for VAG

- For the professional engine repair
- Especially designed for fixing the hydraulic timing belt spanner
- Secure hold for changing the timing belt or engine repairs
- Very high degree of accuracy



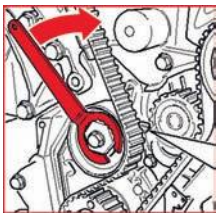


	Length mm	Width mm	
400.9019	55,0	12,0	20

Drive pulley wrench for VAG, 32.0 mm

- For the professional engine repair
- Open 12-point
- For tightening and loosening the automatic timing belt pulley
- With plastic-coated handle
- With hanging hole
- Special tool steel
- Very high degree of accuracy

Application range: Audi 100, A4, A6 TDI 5 cylinder engines, **Volkswagen** Polo / Lupo from 1999 onwards, LT 2.5 TDI





	Suitable for	mm	Length mm	Thickness mm	
150.3016	VAG	32,0	175,0	3,0	110



Camshaft holding and turning tool for VAG

- ideal for blocking and releasing during assembly and disassembly of the camshaft adjuster
- For easy releasing of secured screws
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- very flat design
- For working in hard to access areas
- Perfect profile for correct actuation
- For manual operation
- Chrome vanadium

Application range: Audi A4 (>2008), A5 Cabriolet (>2009), A5 Coupe (>2008), Q5 (>2008), A3 (>2012) 4-cylinder 1.8L and 2.0L 4V TFSI engines

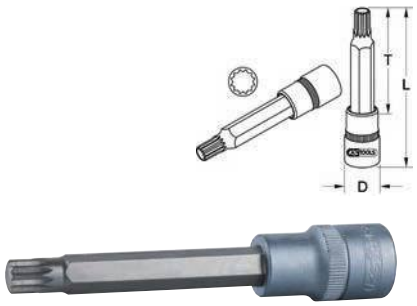


3/8"

400.0056	Camshaft holding and turning tool for VAG	118

Bit socket for spline (XZN®) screws, long

- suitable for loosening and tightening cylinder head screws and the fastening screws of the high-pressure pump timing belt wheel, e.g. when changing the timing belt
- Spline (XZN®)
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Long execution
- with press-fitted nickel-plated bit
- For manual operation
- Matt finish
- Chrome vanadium



1/2"

		D mm	L mm	T mm	
911.1353	M10	22,0	110,0	72,0	112

Bit socket for hexagon screws for VAG, extra long

- Hexagon socket with ball end
- For releasing and tightening the TDC sensor
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Extra-long design
- For manual operation
- Matt finish
- Chrome vanadium

Application range: VAG models from 2005, 4-cylinder 2.0l diesel engines



1/4"

	mm	Ø mm	Length mm	
911.1598	4,0	11	300,0	80

Impact bit socket for spline(XZN®) screws, long

- Ideally suited to releasing and tightening the securing screws on the cam shaft wheel
- Spline (XZN®)
- Internal square drive to DIN 3121 / ISO 1174
- Long execution
- For machinery usage
- Phosphate finish
- Chrome molybdenum

Application range: Volkswagen Transporter >2004 with 2.5 TDI engines and Touareg >2003 with 2.5 TDI engines, engine code: AXD, BNZ, BAC and BPE



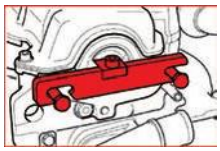
1/2"

		L mm	D mm	T mm	
911.0953	M16	75,0	25,0	45,0	150

Camshaft setting bracket for VAG

- For the professional engine repair
- For locking the cam shafts
- Allows for correct engine adjustment
- With central centring screw
- Removal of the valve cover and seal no longer required
- Very high degree of accuracy

Application range: Audi A4, **Volkswagen** Golf, Bora, New Beetle, **Seat** Ibiza, Cardoba, Alhambra, Inca, **Škoda** Octavia with 1.9 SDI or TDI engines (engine code: AHF, ALH, ASY, ASV, AGP, AGR, AQM, AHR, AYQ)



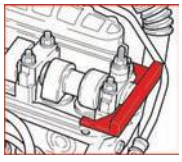


400.9044	Camshaft setting bracket for VAG	309

Camshaft ruler for VAG

- For the professional engine repair
- Ideally suited to fixing the cam shaft
- Simple handling
- Special tool steel
- Very high degree of accuracy

Application range: VAG group vehicles with diesel engines, in particular **Volkswagen** T2, T3, T4 , LT, Golf, Passat, **Audi** with 2.4D 6 cylinder and 2.4 TD 5 cylinder TDI engines, as well as all older diesel engines such as 1.6 D and 1.7 D GTD (engine code: CS, CW, JD, JX, JP, JR, 1X, 1Y, 1Z, KY, AAZ, AAT, AEL, AFN, AFF, AHU, AHH, AVG, AAB, AJA, AHY)





400.9017	Camshaft ruler for VAG	120

Camshaft locking tool for Volkswagen

- For the professional engine repair
- for checking and adjusting the valve control
- Very high degree of accuracy

Application range: Volkswagen LT (1997 - 2006) with 2.8 l diesel engines (engine code: AGK / ATA / AUH / BCQ)

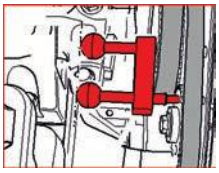


		g	
400.0049	Camshaft locking tool for Volkswagen	823	

Camshaft locking device for VAG

- For the professional engine repair
- For locking both cam shaft wheels (TDC setting)
- Secure hold thanks to optimal positioning
- Very high degree of accuracy

Application range: VAG 1.4 / 1.6 L petrol engines - **Volkswagen** Lupo, Polo, Golf IV, Bora, **Audi** A2, **Seat**, **Škoda** etc.



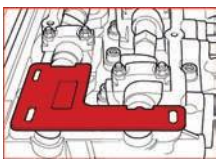


		g	
150.3034	Camshaft locking device for VAG	370	

Camshaft adjustment plate for VAG

- For the professional engine repair
- Device for a secure hold to change the timing belt
- For locking the cam shaft
- Secure hold thanks to optimal positioning
- Very high degree of accuracy

Application:VAG chain-driven Group vehicles with 2.3 / 2.8 and 2.9 engines, in particular **Volkswagen** Golf, Bora, Vento, Corrado, Passat, Sharon, Transporter, **Seat** Toledo



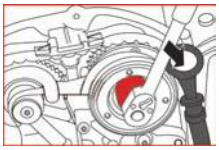


		g	
400.9040	Camshaft adjustment plate for VAG	57	

4/3 way cam shaft adjustment tool for VAG

- For the professional engine repair
- For the installation and removal of the central cam shaft adjustment
- Saves removing the timing chain or removing the engine
- Very high degree of accuracy
- Serviceable from both sides

Application range: VAG Group vehicles 1.8 and 2.0 litre TFSI / TSI engines with timing chains (engine codes: BYT / BZB / CABA / CABB / CABD / CAWB / CBFA / CCTA / CCZA / CCZB / CCZC / CDAA / CDHA / CDHB / CDNB / CDNC / CDND / CFKA / CGYA / CCZA / CCZB / CCZD / CDAA / CDABBYT / BZB / CABA / CABB / CABD / CAWB / CBFA / CCTA / CCZA / CCZB / CCZC / CDAA / CDHA / CDHB / CDNB / CDNC / CDND / CFKA / CGYA / CCZA / CCZB / CCZD / CDAA / CDABBYT)



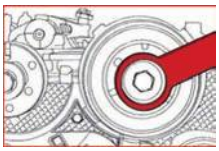


			g	
400.9094	4/3 way cam shaft adjustment tool for VAG	63		

Camshaft hub removal tool set for VAG

- For the professional engine repair
- Suitable for the simple and correct removal of the cam shaft hub
- Counter hold wrench allows for a precise release or tightening of the cam shaft hub securing screw
- Special tool steel
- Very high degree of accuracy

Application range: Audi, **Seat**, **Škoda** and **Volkswagen** with 1.6 TDI and 2.0 TDI engines





			g	
400.2110	2 pcs	Camshaft hub removal tool set for VAG	760	

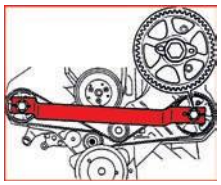
consists of:

		g	
400.2104	Sprocket holding tool	179	
400.2105	Cam sprocket hub puller	581	

Camshaft fixing tool for VAG

- For the professional engine repair
- For locking the cam shafts
- Allows for correct engine adjustment
- Very high degree of accuracy

Application range: Audi A4 2.4 and 2.8 1997-2002, A6 2.4 1997-2002, A6 2.8 1997-2002, A8 2,8 1997-2002, S4 2.7 Turbo 1997-2001 and **Volkswagen** Passat 2.4 1996-2002, Passat 2.8 30V 1996-2001 (engine code: ACK, ALG, APR, AQD)



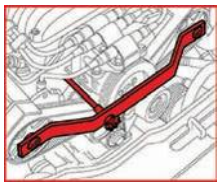


		kg	
400.9013	Camshaft fixing tool for VAG	2,41	

Camshaft fixing tool for VAG

- For the professional engine repair
- For locking the cam shafts
- Allows for correct engine adjustment
- Very high degree of accuracy

Application range: Audi 80, 90, A4, A6, A8 with 2.6 V6 12V engines (engine code: ABC, ACZ) and with 2.8 V6 12V engines (AAH, AEJ)





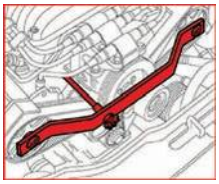
		kg	
400.9012	Camshaft fixing tool for VAG	2,01	



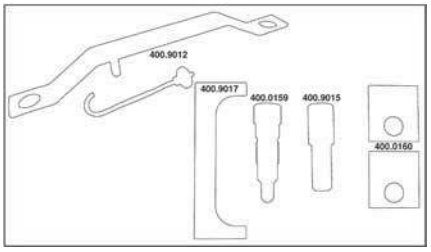
Engine Timing Tool Set for VAG

- For the professional engine repair
- Necessary to separate the V6 2 valve engine cam shafts from each other
- Very high degree of accuracy

Application range: Audi 80 (1991-2002) with 2.6 / 2.8 engines, A4 with 2.6 / 2.8 engines, 100 with 2.6 / 2.8 engines, A8 with 2.8 engines, Cabrio, Coupe with 2.6 / 2.8 engines (engine code: AAH, ABC)







			kg	
400.0225	6 pcs	Engine Timing Tool Set for VAG	3,02	

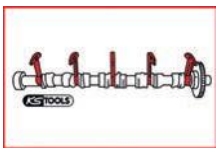
consists of:

		kg	
400.0159	Crankshaft timing pin	0,12	
400.0160	Camshaft timing tool (2), 38 x 44 mm	0,12	
400.9012	Camshaft locking tool, 585 mm	2,01	
400.9015	Injection pump locking pin Ø 15.4 mm	0,13	
400.9017	Camshaft setting strap for VAG	0,12	

Camshaft assembly and dismantling set for VAG

- For the professional engine repair
- for the correct assembly and dismantling of the camshaft
- fastens the slide pieces of the camshaft slide pieces
- Very high degree of accuracy

Application range:
Audi A3, A4, A5, A6, Q3, Q5, TT, **Seat** Alhambra, Altea, Exeo, Leon, Toledo, **Škoda** Octavia II, Superb II, Yeti, **Volkswagen** Beetle, CC, EOS, Golf 6, Jetta, Passat, Scirocco, Sharan and Tiguan with 1.8 and 2.0L TFSI petrol engines with turbocharger and 4 valves (>2008)





			g	
150.7005	9 pcs	Camshaft assembly and dismantling set for VAG	200	

consists of:

	x		g	
150.7008	4	Pin for camshaft magnet	33	
150.7007	2	Spacer for camshaft, 15 mm	29	
150.7006	3	Spacer for camshaft, 9 mm	38	



Camshaft mounting tool set for VAG

- For the professional engine repair
- ideally suited for simple and professional positioning and mounting of the camshaft in the camshaft module
- for diesel vehicles with 1.6, 2.0, 2.7, 3.0, 4.0 and 4.2 common rail engines
- Very high degree of accuracy
- Special tool steel
- In durable plastic storage case

Application range: Audi A1 (8Xa / 8X1), A3 (8Pa / 8P1 / 8P7), A4 (8K2 / 8K5), A5 (8Ta), A6 (4F2 / 4F5 / 4G2 / 4G5), TT (8J3 / 8J9), Q3 (8Ub), Q5 (8Rb), **Seat** Ibiza (6J1 / 6J5 / 6J8), Leon (1P1), Altea (5P1 / 5P5 / 5P8), Toledo (Kg3 / 5P2), Exeo (3R2 / 3R5), Alhambra (710), **Skoda** Fabia II (542 / 545), Yeti (5L7), Roomster (5J7), Rapid (Nh3), Octavia II (1Z3 / 1Z5), Superb II (3T4 / 3T5), **Volkswagen** Polo (6R1), Golf V (1K5), Golf VI (5K1 / Aj5 / 517), Golf VII (5G1), Golf Plus (521), Beetle (5C1 / 5C7), Scirocco (137), Eos (1F7 / 1F8), Jetta (1K2 / 162), Passat (3C2 / 3C5 / 362 / 365), Passat CC (357 / 358), Touran (1T1 / 1T2 / 1T3), Sharan (7N1), Tiguan (5N1 / 5N2), Amarok (2H), Caddy (2K / 2C), Transporter (7E / 7F / 7H / 7J), Crafter (2E / 2F) with 1.6, 2.0, 2.7, 3.0, 4.0 and 4.2 Common Rail engines



			kg	
400.0035	10 pcs	Camshaft mounting tool set for VAG	12,40	

consists of:

		kg	
400.0036	Assembly plate	7,09	
400.0037	Camshaft retaining clamp	0,95	
400.0038	Alignment clamp	0,17	
400.0039	Alignment clamp 1	0,08	
400.0041	Camshaft support, wide	0,59	
400.0042	Camshaft support, slim	1,28	
400.0043	Camshaft support, angled	0,33	
400.0044	Camshaft support, stepped	0,02	
400.0046	Camshaft locking tool	0,04	
400.0047	Camshaft support, angled with pins	0,41	

Pulley retaining wrench for VAG

- For the professional engine repair
- Simple assembly and disassembly of the crank shaft pulley wheel or vibration dampers
- Special profiles allows for counter holding when releasing or securing the crank shaft central screw
- The handle can be lengthened via the 3/4" internal square
- Very high degree of accuracy

Application range: VAG group vehicles with 2.4 engines, in particular **Volkswagen** T2, T3 , T4 Transporter, LT , Golf , Passat and **Audi** (engine code: AAB, AJA, ADG, ABL, 1X, 1Y, 1W, 1V, CS, CW, KY, JR, JX, JD, JP, 1Z, AAT, AEL, AAZ, AHU, AFN, AEY, AVG, ALE, AFF, AHH, ACV, AHY, AJT, AUF, AXG, AXL, AYC)



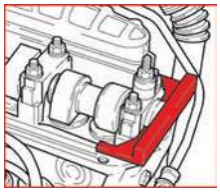


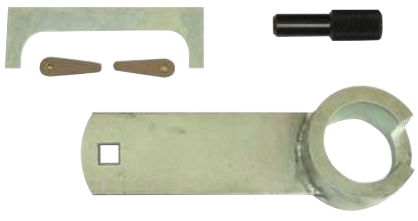
		g	
400.9042	Pulley retaining wrench for VAG	714	

Engine adjustment tool set for VAG

- For the professional engine repair
- Range for changing timing belts or for working on timing devices
- Very high degree of accuracy
- In durable steel storage case

Application range: VAG group vehicles with 2.4 engines, in particular **Volkswagen** T2, T3 , T4 Transporter, LT , Golf , Passat and **Audi** (engine code: AAB, AJA, ADG, ABL, 1X, 1Y, 1W, 1V, CS, CW, KY, JR, JX, JD, JP, 1Z, AAT, AEL, AAZ, AHU, AFN, AEY, AVG, ALE, AFF, AHH, ACV, AHY, AJT, AUF, AXG, AXL, AYC)





			g	
400.2125	5 pcs	Engine adjustment tool set for VAG	951	

consists of:

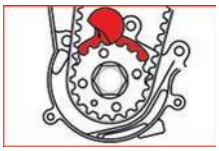
		g	
400.0258	Shim tool (2)	3	
400.9015	Injection pump locking pin Ø 15.4 mm	126	
400.9017	Camshaft setting strap for VAG	120	
400.9042	Pulley wheel counter hold wrench for VAG	714	



Crank shaft locking device for VAG

- For the professional engine repair
- For locking the oval crank shaft timing belt wheel
- Secure hold thanks to optimal positioning
- Very high degree of accuracy

Application range: VAG 4 cylinder diesel / Pump injection engines from 2005 onwards and **VAG** 2.0 l Common Rail diesel engines





		g
150.3067	Crank shaft locking device for VAG	60

Crankshaft holding tool for VAG

- For the professional engine repair
- Simple assembly and disassembly of the crank shaft pulley wheel
- Special profiles allows for counter holding when releasing or securing the crank shaft central screw
- The handle can be lengthened via the 1/2" internal square
- Very high degree of accuracy

Application range: Audi A1, A2, A3, S1, **Seat** Leon, Ibiza, Toledo, Alhambra, Altea, Altea XL, Cordoba, **Škoda** Fabia II, Octavia II, Praktik, Rapid, Spaceback, Roomster, Yeti, Yeti Outdoor, **Volkswagen** Polo, Fox, Jetta



		g
400.0012	Crankshaft holding tool for VAG	850

Crank shaft timing belt puller for VAG

- For the professional engine repair
- For damage-free removal of crank shaft timing belt wheels
- Less space requirement through compact method of building
- Suited for work on engines in the vehicle or removed
- Special tool steel
- Very high degree of accuracy

Application range: Audi and **Volkswagen** with 4 and 5 cylinder engines



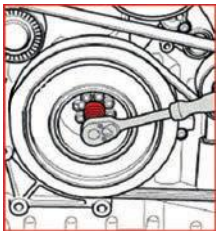


	Suitable for	Ø mm	Height mm	g
150.3154	VAG	65,0	75,0	440

Crankshaft pulley bolt adaptor for VAG

- For the professional engine repair
- For turning the crank shaft on VAG engines
- Required for adjusting and turning the crank shaft when working on engine timing
- Can also be used as a counter holder
- Includes centring pin
- Burnished
- Very high degree of accuracy

Application range: Audi A4, A6, A8, Q7, 6 and 8 cylinder 2.4 and 3.2 L FSI as well as 6 and 8 cylinder TDI Common Rail





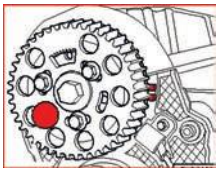
1/2"

		g
400.9043	Crankshaft pulley bolt adaptor for VAG	140

Injection pump locking pin for VAG

- For the professional engine repair
- Ideally suited to securing the injection pump
- With air inlet
- Simple handling
- Special tool steel
- Very high degree of accuracy

Application range:Volkswagen Lupo 3L, 1.2/1.4 TDi, Polo 1.4 TDi, Golf / Bora 1.9 SDi / TDi, Passat 1.9 TD (1994-1996), Beetle 1.9 TDi (>1999) and Transporter 1.9TD



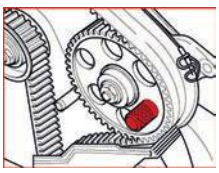


	Suitable for	Ø mm	Length mm	g
400.9018	VAG	6,0	80,0	20

Injection pump locking pin

- For the professional engine repair
- Ideally suited to securing the injection pump
- Simple handling
- Very high degree of accuracy
- Special tool steel

Application range: VAG group vehicles with diesel engines, in particular **Volkswagen** T2, T3, T4 , LT, Golf, Passat, **Audi** with 2.4D 6 cylinder and 2.4 TD 5 cylinder TDI engines, as well as all older diesel engines such as 1.6 D and 1.7 D GTD (engine code: CS, CW, JD, JX, JP, JR, 1X, 1Y, 1Z, KY, AAZ, AAT, AEL, AFN, AFF, AHU, AHH, AVG, AAB, AJA, AHY)



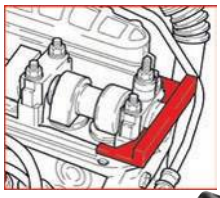


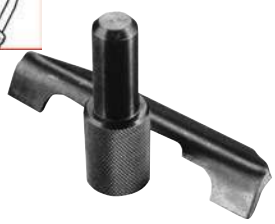
	Suitable for	Ø mm	Length mm	g
400.9015	VAG	15,4	67,0	126

Engine Timing Tool Set for VAG / Volvo

- For the professional engine repair
- For locking the crank shaft or cam shaft
- For changing the timing belt
- Very high degree of accuracy

Application range: Audi, **Seat**, **Volkswagen**, **Volvo** vehicles





			g
400.1725	2 pcs	Engine Timing Tool Set for VAG / Volvo	251

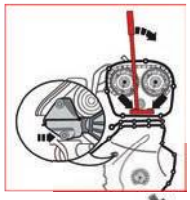
consists of:

		g
400.9015	Injection pump locking pin Ø 15.4 mm	126
400.9017	Camshaft setting strap for VAG	120

Timing chain tensioning wrench for VAG

- For the professional engine repair
- For adjusting the timing chain tension
- For putting on the chain tensioner
- Very high degree of accuracy

Application:VAG Group vehicles with 4 valve engines 1.8 and 2.0 TFSI 4 cylinder from the 3rd generation (engine code: CCZA, CCZB, CCZC, CCZD, CDAA, CCAB)





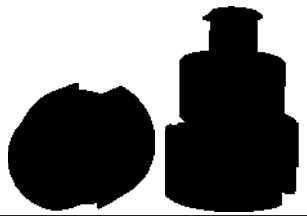
		g
400.4350	Timing chain tensioning wrench for VAG	562



Balancing shaft puller for VAG

- ideally suited for the dismantling of balancer shafts
- can be used in conjunction with impact extractors from set 152.1405 or 152.1350
- Mounting thread on the balancer shaft puller M8 x 1.25 mm
- Sturdy design

Application range: Volkswagen (>2004), Passat (>2006), Passat CC (>2009), Tiguan (>2008), EOS (>2006), **Audi** A3 (>2004), A4 (>2008), A5 (>2008), TT (>2007), **SEAT** Alhambra (>2011), Exeo (>2009), Leon (>2006), Toledo (>2005), Altea (>2005), Altea XL (>2007), Altea Freetra with 1.8 und 2.0 petrol engines

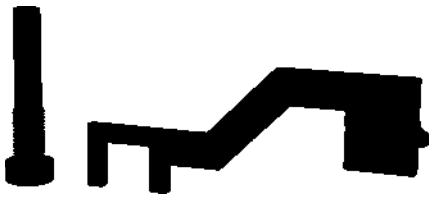


150.3608	Balancing shaft puller for VAG	287	

Engine adjustment tool set for VAG

- For the professional engine repair
- For locking the cam shaft
- For changing the timing belt
- Very high degree of accuracy

Application range: Audi A1 (2012 – 2015), A1 Sportback (2012 – 2015), A3 (2012 – 2015), Q3 (2012 – 2015), **Seat** Leon (2012 – 2015), **Škoda** Fabia III (2012 – 2015), Octavia III (2012 – 2015), **Volkswagen** Golf VII (2012 – 2015), Jetta (2012 – 2015), Passat (2012 – 2015), Golf Sportsvan (2012 – 2015), Golf VII (2012 – 2015), Polo (2012 – 2015) for 1.2 l and 1.4 l TSI four-cylinder petrol engines (engine code: CJZA / CZCA / CYVB / CXSB / CJZB / CMBA / CJZB / CMBA / CYVA / CXSA / CJZD / CHPB / CJZC / CPWA / CYVD / CHPA / CNG / CRJA / CUKC / CZDA / CPVA / CPVB / CUKB)



400.4525	2 pcs	Engine adjustment tool set for VAG	250

consists of:

400.2145	Camshaft locking tool 140 mm	111	
400.2205	Crankshaft locking pin	111	

Engine adjustment tool set for VAG

- For the professional engine repair
- For locking the crank shaft and cam shaft
- For changing the timing belt
- Secure hold thanks to optimal positioning
- Very high degree of accuracy
- In durable plastic storage case

Application range: Seat Mii (2012 – 2015), **Škoda** Citigo (2011 -2015), **Volkswagen** Up! (2011 - 2015) with 1.0 l petrol engines (engine code: CHYA / CHYB / CPGA / CHYA / CHYB / CPGA / CHYA / CHYB / CPGA)



400.4520	4 pcs	Engine adjustment tool set for VAG	360

consists of:

400.2146	Camshaft locking tool, 3 cylinders, 140 mm	100	
400.2148	Cam shaft wheel arresting tool with guide	126	
400.2205	Crankshaft locking pin	111	

Timing chain testing tool for Volkswagen

- ideally suited to assess the chain elongation of the timing chain
- is fixed to the crankshaft
- Enormous time and cost saving
- In durable steel storage case

Application range: Volkswagen Passat (2009 - 2015), Polo (2010 - 2014), Scirocco (2008 - 2016), Sharan (2010 - 2015), Tiguan (2009 - 2016), Touran (2008 - 2015), Beetle (2011 - 2017), EOS (2008 - 2015) and Golf (2007 - 2016) with 1.4 l TSI petrol engines (engine code: CAXA / CTHD / CDGA / CKMA / CAVB / CAVE / CTHE / CAVC / CMSB / CAVA / CTHA / CAVD / CTHB / CTHC / CTKA)



400.4560	3 pcs	Timing chain testing tool for Volkswagen	1,32	

consists of:

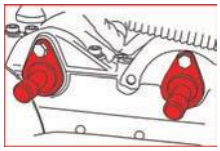
400.4561	Exhaust camshaft holding disc	384	
400.4562	Inclinometer mounting boss	240	
300.0208	Digital inclinometer	110	



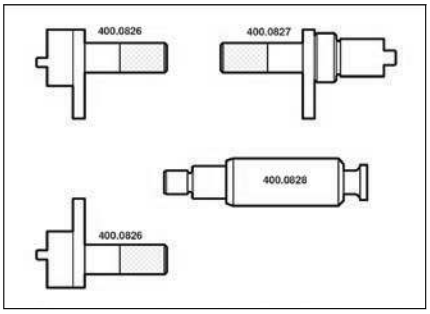
Engine Timing Tool Set for VAG

- For the professional engine repair
- For locking the cam shaft
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Volkswagen Lupo, Polo with 1.2 6V / 12V engines, **Seat** Cordoba, Ibiza with 1.2 engines (2002-2009), **Škoda** Fabia II, Roomster with 1.2P engines (engine code: AWY / BMD / AZQ / BME / BZG)







400.0825	4 pcs	Engine Timing Tool Set for VAG	747	

consists of:

400.0826	Camshaft aligning tool 12V (2)	97	
400.0827	Camshaft aligning tool 6V	113	
400.0828	Crankshaft locking pin 6V/12V	115	

Camshaft locking tool set for VAG

- For the professional engine repair
- For locking the cam shaft
- For changing the timing belt
- Secure hold thanks to optimal positioning
- Very high degree of accuracy
- In durable plastic storage case

Application range: Audi A1/A1 Sportback (2012 – 2016), A3 Cabrio (2012.2016), A3 Saloon (2012 – 2016), A3/A3 Sportback (2012 – 2016), Q3 (2012 – 2016), **Seat** Ibiza (2012 – 2016), **Volkswagen** Golf 7 (2012 – 2016), Passat (2012 – 2016), Polo (2012 – 2016) with 1.4 l TSI and TFSI petrol engines (engine code: CPTA / CZEA)



400.4530	4 pcs	Camshaft locking tool set for VAG	600	

consists of:

400.2141	Camshaft locking tool 170 mm	47	
400.2142	Marking pin 6x33 mm, short	23	

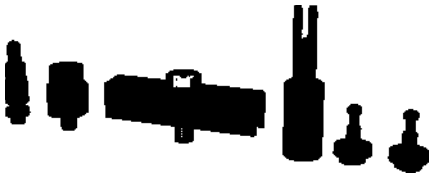
consists of:

400.2144	Marking pin 5x92 mm, long	25	
400.2205	Crankshaft locking pin	111	

Injection pump wheel puller set for VAG

- ideal for quick and easy removal of the injection pump wheel
- Saves a lot of time
- Sturdy design
- Special tool steel

Application range: Audi Q5 (2008 - 2012), A5 Coupé (2007 - 2012), A4 (2007 - 2012), Q7 (2007 - 2012), A6 Quattro (2008 - 2011), **Porsche** Cayenne (2008 - 2016), **Volkswagen** Phaeton (2007 - 2015) 2.7 l and 3.0 l diesel engines (engine code: CAMA / CAMB / CANA / CGKA / CGKB / CANC / CAND / CANB / CCWA / CASA / CASB / CDYC / CDYA / CCWB / CCMA / CCLA / CDYB / M05/9D (CAS) / M05/9E / CAS / CARA / CEXA / CATA / CASC / CASD / CEXB)



400.4540	4 pcs	Injection pump wheel puller set for VAG	1,01	

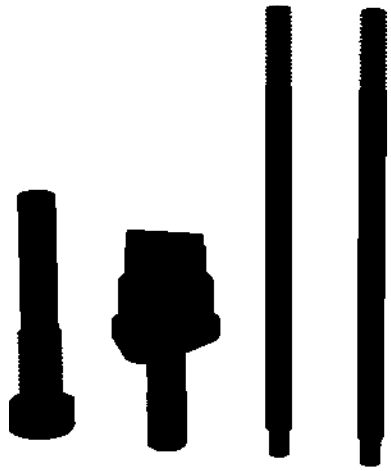
consists of:

400.4541	High pressure pump locking tool	230	
400.0159	Crankshaft timing pin	120	
400.4542	Camshaft sprocket puller	610	
400.9043	VAG Crankshaft pulley bolt adaptor	140	

Timing chain assembly tool set for VAG

- For the professional engine repair
- for mounting and dismounting the timing chain unit
- Secure hold thanks to optimal positioning
- Very high degree of accuracy
- In durable plastic storage case

Application range: Audi A1, A3, **Seat** Altea, Ibiza, Leon, Toledo, **Škoda** Fabia, Fabia Combi, Octavia, Roomster, Yeti, **Volkswagen** New Beetle, Caddy, Golf, Jetta, Polo and Touran with 1.2l and 1.4 l petrol engines (engine code: CBZA, CBZB, CBZC)



400.4550	4 pcs	Timing chain assembly tool set for VAG	480	

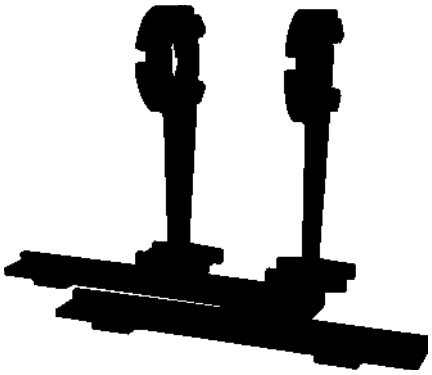
consists of:

400.2205	Crankshaft locking pin	111	
400.3301	Camshaft locking tool, 67 mm	174	
400.2206	Crankshaft locking pin (2) 6 mm, 135 mm	53	

Engine Timing Tool Set for Audi

- For the professional engine repair
- For changing the timing chain
- Very high degree of accuracy

Application range: Audi V8 with 4.2 l petrol engines



400.4570	4 pcs	Engine Timing Tool Set for Audi	1,59	

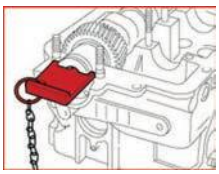
consists of:

400.4571	2	Camshaft position sensor disc setting tool	518	
400.4572	2	Camshaft locking tool	249	

Engine Timing Tool Set for VAG

- For the professional engine repair
- For locking the crank shaft or cam shaft
- For changing the timing belt
- Very high degree of accuracy

Application range: Audi A4, A6, A8 with 2.5 TDI engines, **Volkswagen** Passat, Sharan with 2.5 TDI engines

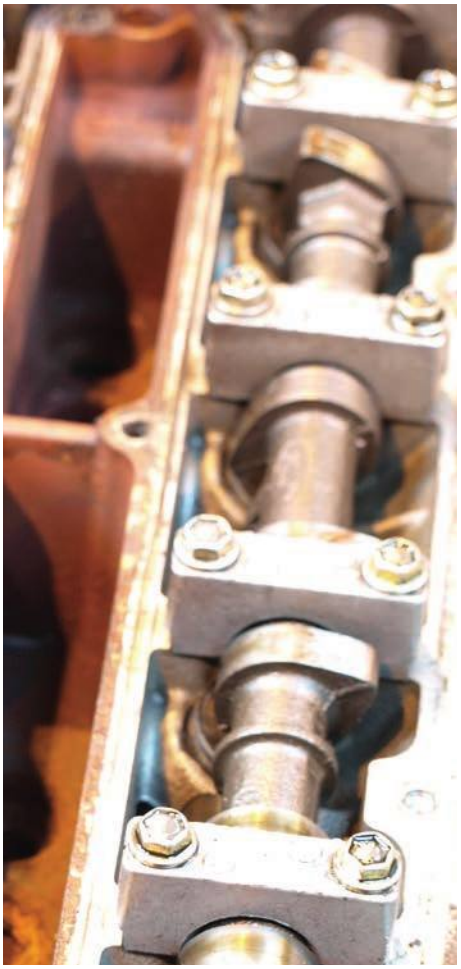




400.1550	5 pcs	Engine Timing Tool Set for VAG	560	

consists of:

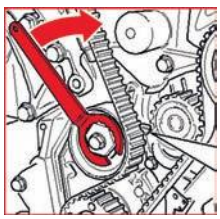
150.3012	2	Front mask stub rod for VAG	170	
400.0159	1	Crankshaft timing pin	120	
400.0160	1	Camshaft timing tool (2), 38 x 44 mm	118	



Engine Timing Tool Set for VAG

- For the professional engine repair
- For locking the cam shaft
- For changing the timing belt
- Very high degree of accuracy

Application range: Volkswagen Crafter (2006-2009) with 2.5 TDi engine (engine code: BJJ / BJK / BJL / BJM)





400.0975	5 pcs	Engine Timing Tool Set for VAG	255	

consists of:

		g	
150.3016	Drive pulley wrench, 32, 175mm	110	
400.0258	Shim tool (2)	3	
400.0978	Crankshaft timing pin	103	
400.9017	Camshaft setting strap for VAG	120	

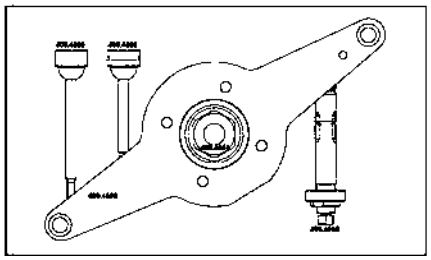


Engine adjustment tool set for VAG

- For the professional engine repair
- for changing the vibration damper
- Very high degree of accuracy
- In durable steel storage case

Application range: Audi A1 (2015 – 2017), A3 (2007 – 2017), A4 (2007 – 2017), A5 (2007 – 2017), A6 (2012 – 2017), A7 (2014 – 2017), A8 (2012 – 2014), Q3 (2011 – 2017), Q5 (2008 – 2017), Q7 (2015 – 2017), TT (2008 – 2017), S1 (2014 – 2017), S3 (2013 – 2017), **Seat** Altea (2006 – 2015), Exeo (2010 – 2013), Ibiza (2015 – 2017), Leon (2007 – 2017), Toledo (2007 – 2017), **Škoda** Octavia (2007 – 2017), Superb (2008 – 2017), Yeti (2009 – 2015), **Volkswagen** Passat (2007 – 2017), Scirocco (2008 – 2017), Sharan (2011 – 2017), Tiguan (2007 – 2016), T5 (2011 – 2015), T6 (2015 – 2017), Amarok (2010 – 2016), Beetle (2013 – 2017), Eos (2008 – 2015), Polo (2014 – 2017), Touran (2015 – 2017) and Golf (2007 – 2017) with 1.8 l and 2.0 l petrol engines (engine code: BZB / CDAA / BPU / BYT / CABA / CABB / CDHA / CDHB / CABD / CDAB / CJSA / CJSB / CJSC / CJEB / CJEE / CJED / CGYA / CYGA / DAJA / DAJB / CDND / CAWB / CJXA / CCZA / CJXE / CBFA / CJXH / CCTA / CHHB / CDNB / CHHA / CDNC / ULA / CFKA / DEDA / CHJA / CAWA / CCZC / CCZD / CPSA / CJKA / CESA / CJKB / CETA / CFPA / CNCD / CPLA / CYRB / CYRC / CNCE / CYNB / CYPA / CYPB / CULB / CULC / CNCB / CWZA / CJXF / CJXC / CJXB / CJXG / CHHC / CCZB)





		kg	
400.4555	5 pcs	Engine adjustment tool set for VAG	3,87

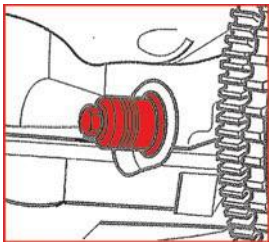
consists of:

		g	
400.4556	Vibration damper holding tool with screws	90	
400.4557	Crankshaft sprocket holding tool adaptor	220	
400.4558	Crankshaft sprocket holding tool	220	

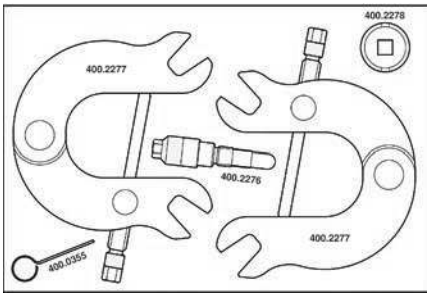
Engine Timing Tool Set for VAG

- For the professional engine repair
- Especially for chain-driven engines
- Very high degree of accuracy
- In durable steel storage case

Application range: Audi A4, A6 (engine code: ASN / BBJ)







			kg	
400.2275	5 pcs	Engine Timing Tool Set for VAG	2,46	

consists of:

		g	
400.0355	Tensioner pushrod retension pin	1	
400.2276	Crankshaft locking tool 80 mm	80	
400.2277	Camshaft locking tool (2)	1050	
400.2278	Camshaft sprocket adjusting tool	80	

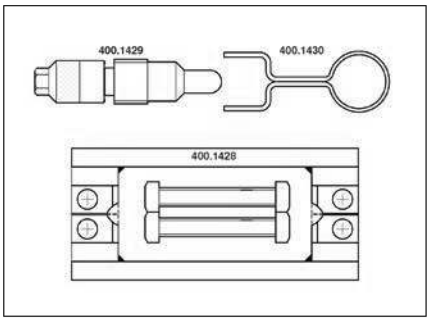
Engine Timing Tool Set for VAG

- For the professional engine repair
- For locking the crank shaft or cam shaft
- Very high degree of accuracy
- In durable steel storage case

Application range: Audi vehicles with V6, V8, V10 FSI engines







			g	
400.2250	12 pcs	Engine Timing Tool Set for VAG	899	

consists of:

		g	
400.1428	Camshaft locking tool (10) 123 mm	665	
400.1429	Crankshaft timing pin	80	
400.1430	Timing chain tensioner locking pin Ø 3 mm, 75 mm	10	

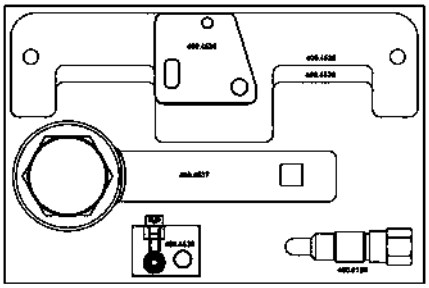


Engine adjustment tool set for VAG

- For the professional engine repair
- For changing the timing chain
- Very high degree of accuracy
- In durable steel storage case

Application range: Audi A8 (2002 – 2011), S8 (2001 – 2015), Q7 (2003 – 2010), A3 (2005 – 2015), TT (2011 – 2012), **Porsche** Cayenne (2001 – 2004), **Škoda** Superb 2 (2010 – 2016), **Volkswagen** Phaeton (2007 – 2015), Touareg (2003 – 2012), Passat (2005 – 2014), Passat CC (2010 – 2014), Eos (2010 – 2014), Golf 4 (2001 – 2004), Golf 5 (2006 – 2009), Bora (2001 – 2004), Sharan (2000 – 2010) and T4 (2000 – 2003) with 2.8 l, 3.2 l, 3.6 l, 4.0 l, 6.0 l and 6.3 l petrol engines (engine code: BDE / AYL / AMV / CBRA / AXZ / BDB / BMJ / BUB / M55/02 / M55/01 / CDVA / BWS / CHNA / BHK / BHL / CGRA / CMTA / BDN / BDP / BAN / BAP / BRN / BRP / BTT / BJN / CEJA / CTNA)

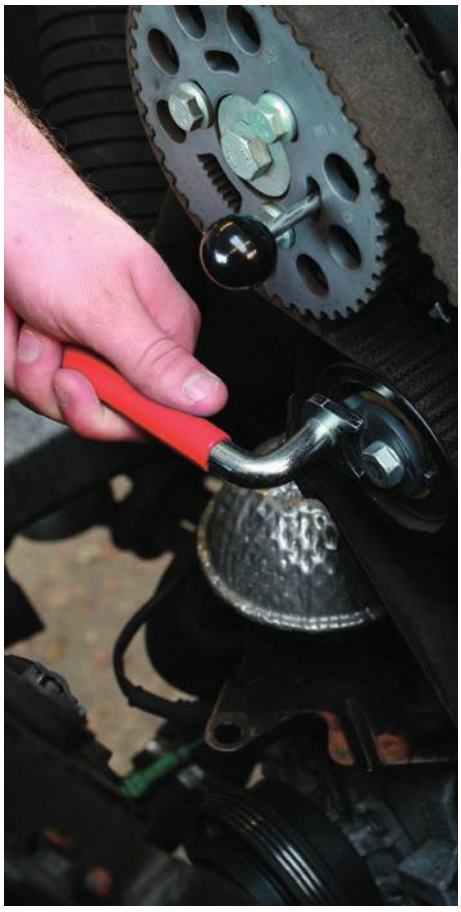




			kg	
400.4535	6 pcs	Engine adjustment tool set for VAG	3,20	

consists of:

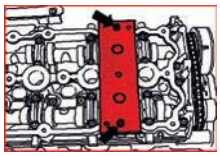
	x		g	
400.0159	1	Crankshaft timing pin	120	
400.4536	2	Camshaft alignment plates	400	
400.4537	1	Crankshaft pulley holding tool	870	
400.4538	1	Fuel pump sprocket locking tool (with mech fuel pump)	170	
400.4539	1	Fuel pump sprocket locking tool (without mech fuel pump)	110	



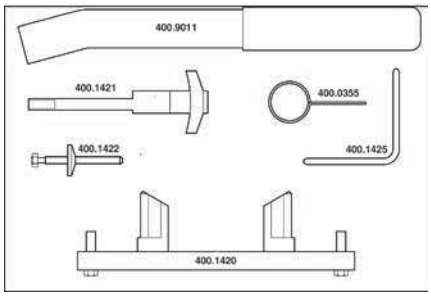
Engine Timing Tool Set for VAG

- For the professional engine repair
- For changing the timing belt or the chain
- Very high degree of accuracy
- In durable steel storage case

Application range: Audi vehicles (2003-2010) with 2.0 FSI and TFSI engines







			kg	
400.2175	6 pcs	Engine Timing Tool Set for VAG	1,35	

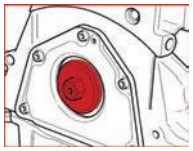
consists of:

		g	
400.0355	Tensioner pushrod retension pin	1	
400.1420	Camshaft alignment tool 180 mm	802	
400.1421	Chain tensioner retainer	40	
400.1422	Chain tensioner retainer	17	
400.1425	Tensioning locking pin, Ø 4 mm, 57 mm	11	
400.9011	Automatic pulley wrench for pin-type face	259	

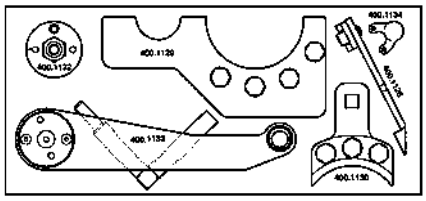
Engine Timing Tool Set for VAG

- For the professional engine repair
- For timing wheel-driven engines
- Very high degree of accuracy
- In durable steel storage case

Application range: Volkswagen Touareg, Transporter (engine code: AXE / AXD / BAC / BLK / BLJ / BNZ / BPC / BPE / BPD)







			kg	
400.2500	6 pcs	Engine Timing Tool Set for VAG	6,50	

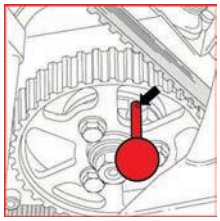
consists of:

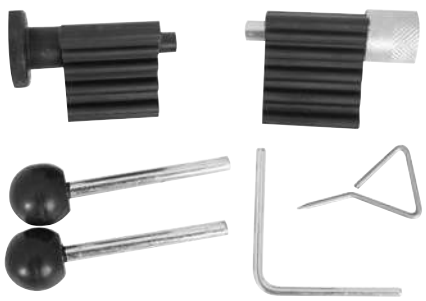
		kg	
400.1126	Camshaft locking tool 148 mm	0,23	
400.1129	Camshaft gear retaining tool (big)	2,77	
400.1130	Camshaft gear retaining tool (small)	0,68	
400.1132	Crankshaft turning tool (TDC-cylinder 1)	0,14	
400.1133	Crankshaft alignment tool (TDC-cylinder 1) (3)	1,00	
400.1134	Camshaft compensation gear pre-tensioning tool	0,08	

Engine Timing Tool Set for VAG

- For the professional engine repair
- For TDI pump injection engines
- For changing the timing belt
- Secure hold for changing the timing belt or engine repairs

Application range: universal usage for many **VAG** group vehicles, in particular **Audi** A3, A4, A6, **Škoda** Octavia 2, Fabia, **Volkswagen** Golf, Golf Plus, Jetta, Touran, Lupo, Fox, Bora, Beetle, Caddy, Sharan, Passat, **Seat** Leon, Toldeo, Althea, Alhambra with 1.4 / 1.9 / 2.0 TDi engines





			g	
400.2700	6 pcs	Engine Timing Tool Set for VAG	455	

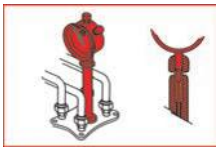
consists of:

	x		g	
400.0615	1	Crankshaft pulley setting tool, 60 mm	190	
400.0901	1	Tensioning locking pin, 45 mm	4	
400.1415	1	Crankshaft pulley setting tool, 55 mm	192	
400.1425	1	Tensioning locking pin, Ø 4 mm, 57 mm	11	
400.9018	2	Injection pump wheel - locking pin Ø 6.0 mm	20	

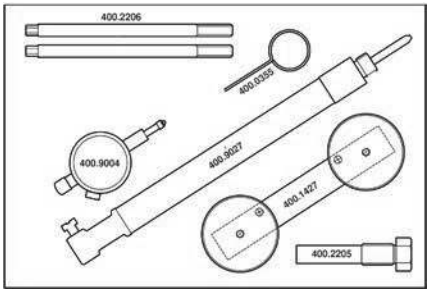
Engine Timing Tool Set for VAG

- For the professional engine repair
- For chain-driven vehicles
- Very high degree of accuracy
- In durable steel storage case

Application range: Audi A3, **Volkswagen** Polo, Golf, Jetta, Passat, Eos, Tiguan, Touran (engine code: AXU / BAG / BKG / BLF / BLN / BLP / BMY / BWK / CAXA)







			kg	
400.2200	7 pcs	Engine Timing Tool Set for VAG	2,11	

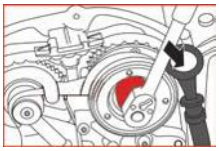
consists of:

		g	
400.1427	Camshaft alignment tool Ø 50 mm	433	
400.9027	TDC determining pin Ø 5,0 mm / dial indicator bracket M14 x 1.25	288	
400.9004	Precision-dial indicator gauge 0-10 mm, Ø 40 mm	78	
400.2206	Crankshaft locking pin (2) 6 mm, 135 mm	53	
400.2205	Crankshaft locking pin	111	
400.0355	Tensioner pushrod retension pin	1	

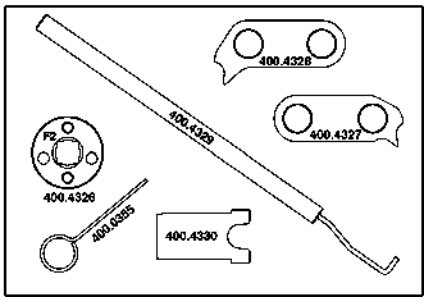
Engine Timing Tool Set for VAG

- For the professional engine repair
- Expansion set for use alongside 400.2300 / 400.3300
- Very high degree of accuracy
- In durable steel storage case

Application range: Audi, **Seat**, **Škoda**, **Volkswagen** vehicles with 1.8 / 2.0 TFSI and FSI engines







			kg	
400.4325	6 pcs	Engine Timing Tool Set for VAG	1,87	

consists of:

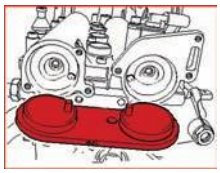
		g	
400.0355	Tensioner pushrod retension pin	1	
400.4326	Cam shaft control valve removal tool	60	
400.4327	Cam shaft clamp external	130	
400.4328	Cam shaft clamp internal	130	
400.4329	Oil pumps securing pin	160	
400.4330	Timing chain wrench 42 mm	30	



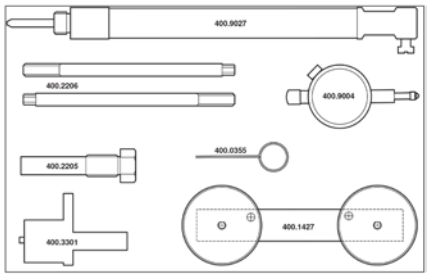
Engine Timing Tool Set for VAG

- For the professional engine repair
- For locking the cam shaft
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Volkswagen and other VW Group vehicles 1.4 / 1.6 FSi and 1.4 TSi and 1.2 TFSi / FSi engines







			kg	
400.3300	8 pcs	Engine Timing Tool Set for VAG	2,14	

consists of:

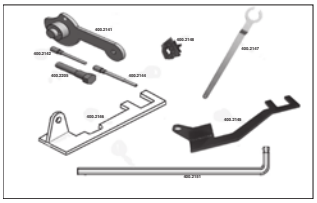
		g	
400.0355	Tensioner pushrod retension pin	1	
400.9027	TDC determining pin Ø 5,0 mm / dial indicator bracket M14 x 1.25	288	
400.1427	Camshaft alignment tool Ø 50 mm	433	
400.2205	Crankshaft locking pin	111	
400.2206	Crankshaft locking pin (2) 6 mm, 135 mm	53	
400.3301	Camshaft locking tool, 67 mm	174	
400.9004	Precision-dial indicator gauge 0-10 mm, Ø 40 mm	78	

Engine Timing Tool Set for VAG

- For the professional engine repair
- For blocking the cam and balance shafts
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Audi A1, A3, Q3, **Seat** Leon Ibiza, Mii, **Škoda** Fabia III, Estate, Octavia III, Yeti, Citigo **Volkswagen** Golf, Up, Jetta, Passat, Polo with 1.0/1.2/1.4/1.6 engines (2011–2016) (engine code: CZCA/CXSB/CJZA/CMBA/CXSA/CYVB/CPWA/CHPB/CUKB/CZDA/CJZB/CYVA/CHPA/CJZC/CJZD/CRJA/CUKC/CPVA/CPVB/CWVA/CYVD/CWVB/CPTA/CZEA/CHYA/CHYB/CPGA)





			kg	
400.2140	9 pcs	Engine Timing Tool Set for VAG	3,00	

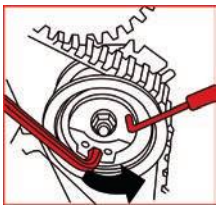
consists of:

		g	
400.2141	Camshaft locking tool 170 mm	47	
400.2142	Marking pin 6x33 mm, short	23	
400.2144	Marking pin 5x92 mm, long	25	
400.2145	Camshaft locking tool 140 mm	111	
400.2146	Camshaft locking tool, 3 cylinders, 140 mm	100	
400.2147	Tensioner adjuster with opening for VAG	160	
400.2148	Cam shaft wheel arresting tool with guide	126	
400.2205	Crankshaft locking pin	111	
400.2151	Tensioner adjuster 6.0 mm, 200 mm	20	

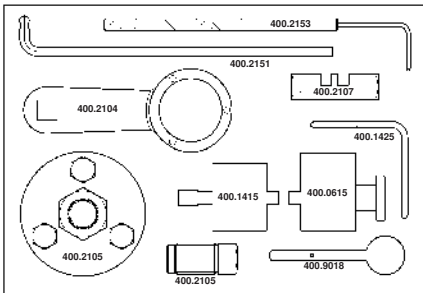
Engine Timing Tool Set for VAG

- For the professional engine repair
- For changing the timing belt or the chain
- Very high degree of accuracy
- In durable steel storage case

Application range: Audi A3, A4, A5, A6, Q5, **Volkswagen** Golf, Tiguan, Passat, Eos, **Seat** Exeo







			kg	
400.2100	9 pcs	Engine Timing Tool Set for VAG	2,61	

consists of:

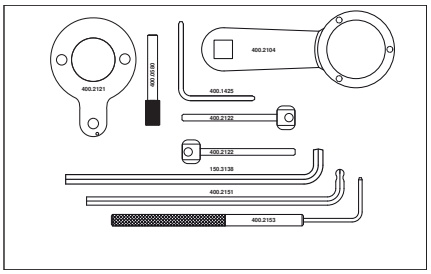
		g	
400.1415	Crankshaft pulley setting tool, 55 mm	192	
400.1425	Tensioning locking pin, Ø 4 mm, 57 mm	11	
400.2104	Sprocket holding tool	179	
400.2105	Cam sprocket hub puller	581	
400.2107	Setting tool	72	
400.2153	Tensioner adjuster Ø 2.5 mm, 200 mm	70	
400.2151	Tensioner adjuster 6.0 mm, 200 mm	20	
400.9018	Injection pump wheel - locking pin Ø 6.0 mm	20	
400.0615	Crankshaft pulley setting tool, 60 mm	190	

Engine Timing Tool Set for VAG

- For the professional engine repair
- For blocking the cam and balance shafts
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Audi, **Volkswagen**, **Seat**, **Škoda** 1.6 and 2.0 TDI from 2012 onwards (engine code: CRBC/CUNA/CKFB/CRLB/CRFC/CRVC/CRBB/CKFC/CUPA/CLHA/CRBK/CLHB)





			kg	
400.2120	9 pcs	Engine Timing Tool Set for VAG	1,30	

consists of:

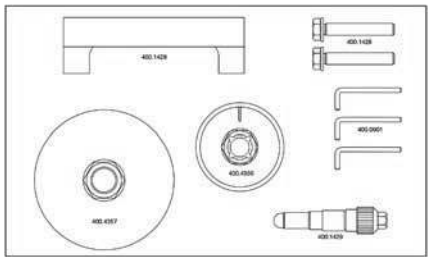
		g	
400.2121	Crank shaft holding tool, internal Ø 30.0 mm	68	
400.2122	Connection pin Ø 6,0 mm, 90,0 mm	47	
400.0580	Crankshaft locking pin Ø 8,0 mm, 70 mm	30	
400.1425	Tensioning locking pin, Ø 4 mm, 57 mm	11	
400.2104	Sprocket holding tool	179	
400.2151	Tensioner adjuster 6.0 mm, 200 mm	20	
400.2153	Tensioner adjuster Ø 2.5 mm, 200 mm	70	
151.3138	Hexagon key wrench, extra long, 8mm	100	

Engine Timing Tool Set for Audi

- For the professional engine repair
- For changing the timing chain
- Very high degree of accuracy
- In durable steel storage case

Application range: Audi RS Q3 (2013 - 2016), RS 3 (2010 - 2016) and TT (2009 - 2014) with 2.5 l TFSI or RS Plus petrol engines (engine code: CZGA / CZGB / CEPA / CEPB / CTSA)





			kg	
400.4355	16 pcs	Engine Timing Tool Set for Audi	1,77	

consists of:

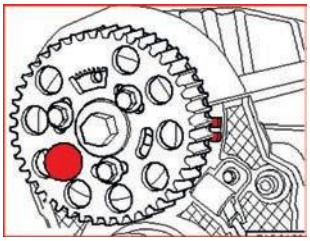
	x		g	
400.1428	1	Camshaft locking tool (10) 123 mm	665	
400.0901	3	Tensioning locking pin, 45 mm	4	
400.4356	1	Crankshaft pulley bolt adaptor	202	
400.1429	1	Crankshaft timing pin	80	
400.4357	1	Camshaft adjuster holding tool	220	



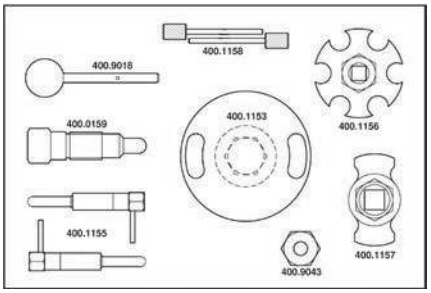
Engine Timing Tool Set for VAG

- For the professional engine repair
- For locking the cam shaft
- For changing the timing chain
- Very high degree of accuracy
- In durable steel storage case

Application range: Audi A4 (2005-2009) with 2.7 TDI engine, A4 Quattro (2005-2006) with 2.0 TDI engine, Q7 with 3.0 TDI engine, **Volkswagen** Touareg (>2008), Phaeton (>2006) with 3.0 TDi V6 engine (engine code: BPP / BMZ / BUG / BUN)







			kg	
400.1150	10 pcs	Engine Timing Tool Set for VAG	2,41	

consists of:

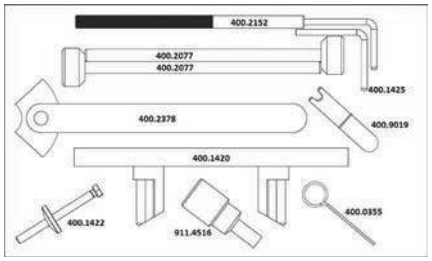
		g	
400.0159	Crankshaft timing pin	120	
400.1153	Crankshaft turning tool	354	
400.1155	Camshaft locking pin (2) Ø 8 mm	47	
400.1156	Camshaft alignment/locking tool	366	
400.1157	Camshaft sprocket holding tool	120	
400.1158	Timing pin Ø 3,3 mm (2)	12	
400.9018	Injection pump wheel - locking pin Ø 6.0 mm	20	
400.9043	VAG Crankshaft pulley bolt adaptor	140	

Engine adjustment tool set for VAG

- For the professional engine repair
- for holding the camshaft
- Very high degree of accuracy
- In durable steel storage case

Application range: Audi A3, A4, A4, A6, S3, TT, **Škoda** Octavia II, **Seat** Altea, Exeo, Leon, Toledo, **Volkswagen** Eos, Golf, Jetta, Passat, Scirocco, Touran with 2.0 l TFSI / FSI / TSI petrol engines (engine code: AWA / AXW / AXX / BGB / BHD / BHZ / BLR / BLX / BLY / BMB / BPG / BPJ / BPY / BUL / BVX / BVY / BVZ / BWA / BWA1 / BWE / BWJ / BWT / BYD / BYK / BZC / CDLA / CDLB / CDLC / CDLF / CDMA)





			kg	
400.4600	10 pcs	Engine adjustment tool set for VAG	1,99	

consists of:

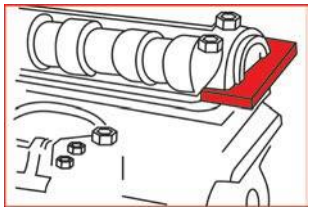
		g	
400.0355	Tensioner pushrod retension pin	1	
400.9019	Tensioner locking tool	20	
400.2152	Tensioner adjuster Ø 3.9 mm	70	
400.1425	Tensioning locking pin, Ø 4 mm, 57 mm	11	
400.1422	Chain tensioner retainer	17	
400.1420	Camshaft alignment tool 180 mm	802	
400.2378	Tensioner pulley holding wrench	230	
400.2077	Front mask removal aid (2)	80	
911.4516	Bit socket for RIBE screws, M10, length 55 mm	37	



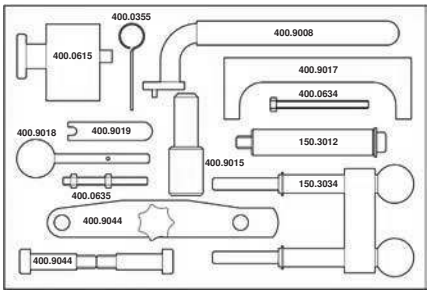
Engine Timing Tool Set for VAG

- For the professional engine repair
- For locking the cam shaft
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Audi A2 with 1.2, 1.4 TDI engines, A3 with 1.9 TDI engines (> 1996), A3, A4, A6 with 1.9TDI engines (>1999), **Seat** Toledo with 1.9 TDI engines (>1999), **Škoda** Octavia with 1.9 SDI/TDI engines (>1996), **Volkswagen** Golf, Bora with 1.9 SDI/TDI engines, New Beetle with 1.9 TDI engines (>1997), Lupo with 3L 1.2 TDI, Lupo, Polo 1.4 TDI, Golf, Bora 1.9 TDI engines (>1999)







			kg	
400.0625	12 pcs	Engine Timing Tool Set for VAG	1,73	

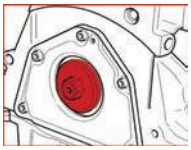
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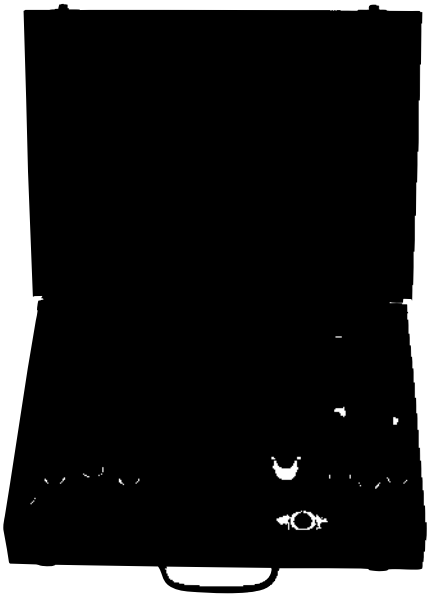
		g	
150.3012	Front mask stub rod for VAG	170	
400.0355	Tensioner pushrod retension pin	1	
400.0615	Crankshaft pulley setting tool, 60 mm	190	
400.0634	Locking screw M5 x 60.0 mm	8	
400.0635	Stud and nut M5 x 55,0 mm	8	
400.9008	Automatic pulley wrench for pin-type face, 140mm	206	
400.9015	Injection pump locking pin Ø 15.4 mm	126	
400.9017	Camshaft setting strap for VAG	120	
400.9018	Injection pump wheel - locking pin Ø 6.0 mm	20	
400.9019	Tensioner locking tool	20	
400.9044	Camshaft setting strap, 150 mm	309	
150.3034	Camshaft locking tool for VAG	370	
400.0049	Camshaft locking tool for Volkswagen	823	

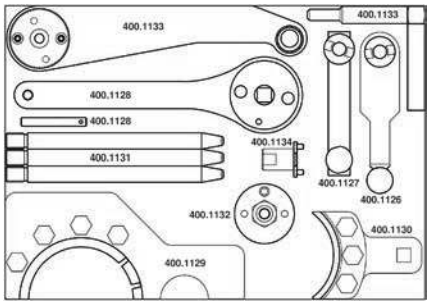
Engine Timing Tool Set for VAG

- For the professional engine repair
- Especially for timing wheel-driven vehicles
- For adjusting the injection adjuster via the cam shaft follower
- Very high degree of accuracy
- In durable steel storage case

Application range: Volkswagen Touareg, Transporter (> 2003) with 2.5 TDI engines (engine code: BAC / BLK / BPD / AXD / AXE / BLJ / BNZ / BPC) and 4.9D / TDI (engine code: AYH)







			kg	
400.1125	14 pcs	Engine Timing Tool Set for VAG	9,45	

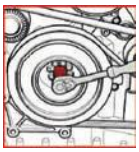
consists of:

		kg	
400.1126	Camshaft locking tool 148 mm	0,23	
400.1127	Camshaft locking tool 130 mm	0,17	
400.1128	Crankshaft timing tool (2) Ø 8 mm	1,19	
400.1129	Camshaft gear retaining tool (big)	2,77	
400.1130	Camshaft gear retaining tool (small)	0,68	
400.1131	Guide pin set (3)	0,77	
400.1132	Crankshaft turning tool (TDC-cylinder 1)	0,14	
400.1133	Crankshaft alignment tool (TDC-cylinder 1) (3)	1,00	
400.1134	Camshaft compensation gear pre-tensioning tool	0,08	

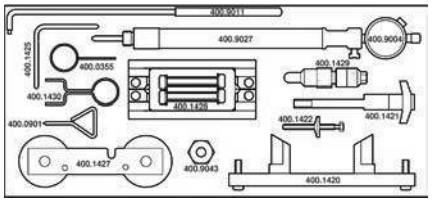
Engine Timing Tool Set for VAG

- For the professional engine repair
- Comprehensive set for locking timing chains
- Very high degree of accuracy
- In durable steel storage case

Application range: Audi A3, A4, A6, A8, **Škoda** Octavia, **Volkswagen** Polo, Golf, Touran, Passat (engine code: AXW / AXU / BAG / BLF / BKG / BLN / BLP / BUL / BPJ / BGB / BWA / BWE)



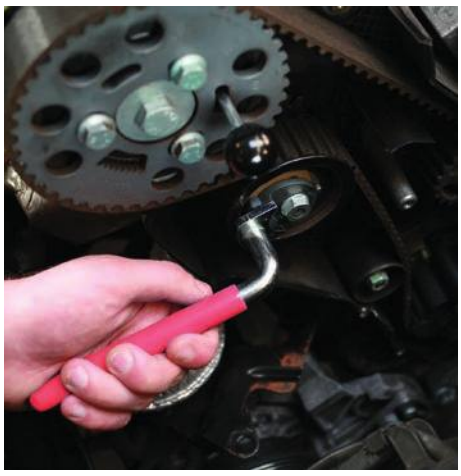


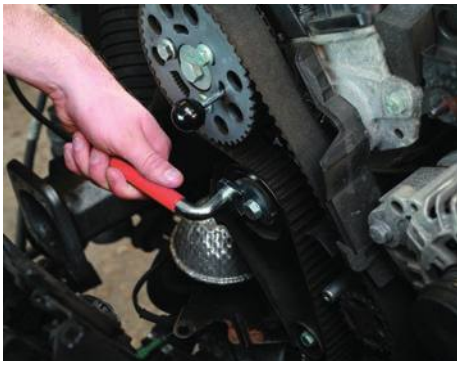


			kg	
400.2300	23 pcs	Engine Timing Tool Set for VAG	2,83	

consists of:

		g	
400.0355	Tensioner pushrod retension pin	1	
400.0901	Tensioning locking pin, 45 mm	4	
400.1420	Camshaft alignment tool 180 mm	802	
400.1421	Chain tensioner retainer	40	
400.1422	Chain tensioner retainer	17	
400.1425	Tensioning locking pin, Ø 4 mm, 57 mm	11	
400.1427	Camshaft alignment tool Ø 50 mm	433	
400.1428	Camshaft locking tool (10) 123 mm	665	
400.1429	Crankshaft timing pin	80	
400.1430	Timing chain tensioner locking pin Ø 3 mm, 75 mm	10	
400.9004	Precision-dial indicator gauge 0-10 mm, Ø 40 mm	78	
400.9011	Automatic pulley wrench for pin-type face	259	
400.9027	TDC determining pin Ø 5,0 mm / dial indicator bracket M14 x 1.25	288	
400.9043	VAG Crankshaft pulley bolt adaptor	140	

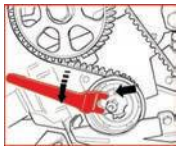




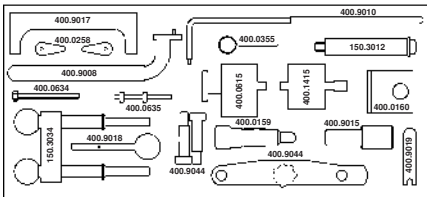
Engine Timing Tool Set for VAG

- For the professional engine repair
- For locking the crank shaft or cam shaft
- Very high degree of accuracy
- In durable steel storage case

Application range: Audi, **Seat**, **Škoda**, **Volkswagen** with 1.4 / 1.6 / 1.8 / 2.0 Turbo / 2.2 / 2.3 / 1.8 / 2.0 16V, 2.6 / 2.8 with petrol engines and 1.0 / 1.2 / 1.3 / 1.4 / 1.9 TDi / 1.7 / 1.9 SDi / 2.5 TDi / 2.8 30V diesel engines







			kg	
400.2225	21 pcs	Engine Timing Tool Set for VAG	2,23	

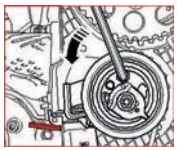
consists of:

		g	
400.0159	Crankshaft timing pin	120	
400.9044	Camshaft setting strap, 150 mm	309	
400.9019	Tensioner locking tool	20	
400.9018	Injection pump wheel - locking pin Ø 6.0 mm	20	
400.9017	Camshaft setting strap for VAG	120	
400.9015	Injection pump locking pin Ø 15.4 mm	126	
400.9010	Automatic pulley wrench for pin-type face	230	
400.9008	Automatic pulley wrench for pin-type face, 140mm	206	
400.1415	Crankshaft pulley setting tool, 55 mm	192	
400.0635	Stud and nut M5 x 55,0 mm	8	
400.0634	Locking screw M5 x 60.0 mm	8	
400.0615	Crankshaft pulley setting tool, 60 mm	190	
400.0355	Tensioner pushrod retension pin	1	
400.0258	Shim tool (2)	3	
400.0160	Camshaft timing tool (2), 38 x 44 mm	118	
150.3012	Front mask stub rod for VAG	170	
150.3034	Camshaft locking tool for VAG	370	
400.0049	Camshaft locking tool for Volkswagen	823	

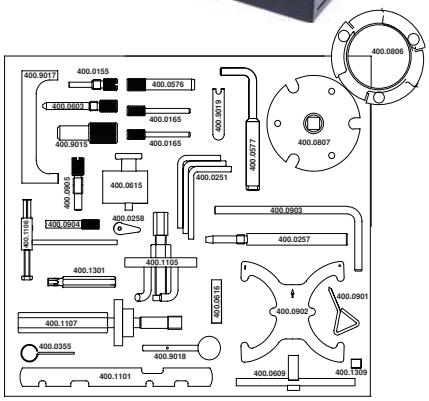
Engine Timing Tool Kit for Ford / VAG

- For the professional engine repair
- For locking the cam shaft
- For changing the timing belt or the chain
- Very high degree of accuracy
- In durable steel storage case

Application range: Ford vehicles with TDDi / TDCi and Duratorq engines and **Ford** Galaxy with similar engines to **Volkswagen**







			kg	
400.1300	34 pcs	Engine Timing Tool Kit for Ford / VAG	6,68	

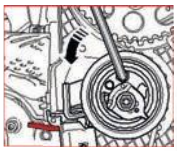
consists of:

		g	
400.0155	Crankshaft locking pin Ø 5 mm	25	
400.9019	Tensioner locking tool	20	
400.9018	Injection pump wheel - locking pin Ø 6.0 mm	20	
400.9017	Camshaft setting strap for VAG	120	
400.9015	Injection pump locking pin Ø 15.4 mm	126	
400.1309	Flywheel locking adaptor 20 mm	13	
400.1301	Torx T45 bit, 75 mm	31	
400.1107	Chain cover alignment tool	497	
400.1106	Fuel sprocket remover for Ford, 106 mm	80	
400.1105	Camshaft sprocket puller	552	
400.1101	Camshaft setting strap, 200 mm	140	
400.0905	Crankshaft locking pin, Ø 8 mm, 58 mm	33	
400.0904	Camshaft/injection pump locking pin	26	
400.0903	Crankshaft locking pin	85	
400.0902	Camshaft locking tool	384	
400.0901	Tensioning locking pin, 45 mm	4	
400.0807	Pump cover locking tool	2	
400.0806	Locking tool	45	
400.0616	Flywheel locking adaptor 50 mm	74	
400.0615	Crankshaft pulley setting tool, 60 mm	190	
400.0609	Flywheel locking tool 133 x 40 mm	308	
400.0603	Crankshaft timing pin, 83 mm	51	
400.0165	Camshaft locking pin 5.0 mm	19	
400.0251	Injection pump locking pin Ø 6.0 mm	30	
400.0257	Crankshaft TDC locking pin Ø 5 mm, 160 mm	124	
400.0258	Shim tool (2)	3	
400.0355	Tensioner pushrod retension pin	1	
400.0576	Flywheel locking pin Ø 12 mm	64	
400.0577	Flywheel locking tool Ø 8 mm, 126 mm	124	
400.0578	Flywheel locking pin	122	

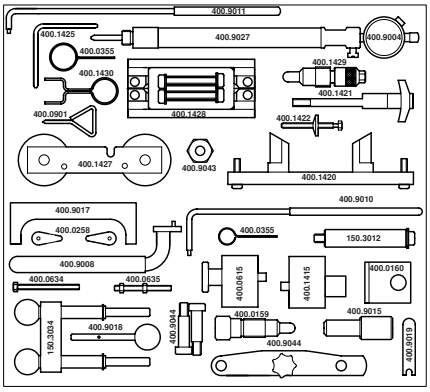
Engine Timing Tool Set for VAG

- For the professional engine repair
- For changing the timing belt or the timing chain
- Very high degree of accuracy
- In durable steel storage case

Application range: Audi, **Seat**, **Škoda**, **Volkswagen** vehicles including FSI and TFSI engines







			kg	
400.1400	42 pcs	Engine Timing Tool Set for VAG	7,94	

consists of:

		g	
400.0159	Crankshaft timing pin	120	
400.9044	Camshaft setting strap, 150 mm	309	
400.9043	VAG Crankshaft pulley bolt adaptor	140	
400.9027	TDC determining pin Ø 5,0 mm / dial indicator bracket M14 x 1.25	288	
400.9019	Tensioner locking tool	20	
400.9018	Injection pump wheel - locking pin Ø 6.0 mm	20	
400.9017	Camshaft setting strap for VAG	120	
400.9015	Injection pump locking pin Ø 15.4 mm	126	
400.9011	Automatic pulley wrench for pin-type face	259	
400.9010	Automatic pulley wrench for pin-type face	230	
400.9008	Automatic pulley wrench for pin-type face, 140mm	206	
400.9004	Precision-dial indicator gauge 0-10 mm, Ø 40 mm	78	
400.1430	Timing chain tensioner locking pin Ø 3 mm, 75 mm	10	
400.1429	Crankshaft timing pin	80	
400.1428	Camshaft locking tool (10) 123 mm	665	
400.1427	Camshaft alignment tool Ø 50 mm	433	
400.1425	Tensioning locking pin, Ø 4 mm, 57 mm	11	
400.1422	Chain tensioner retainer	17	
400.1421	Chain tensioner retainer	40	
400.1420	Camshaft alignment tool 180 mm	802	
400.1415	Crankshaft pulley setting tool, 55 mm	192	
400.0901	Tensioning locking pin, 45 mm	4	
400.0635	Stud and nut M5 x 55,0 mm	8	
400.0634	Locking screw M5 x 60.0 mm	8	
400.0615	Crankshaft pulley setting tool, 60 mm	190	
400.0355	Tensioner pushrod retension pin	1	
400.0258	Shim tool (2)	3	
400.0160	Camshaft timing tool (2), 38 x 44 mm	118	
150.3012	Front mask stub rod for VAG	170	
150.3034	Camshaft locking tool for VAG	370	
400.0049	Camshaft locking tool for Volkswagen	823	

ALFA ROMEO

Phase adjuster for Alfa Romeo

- For the professional engine repair
- For the safe removal of the cam shaft phase adjuster (variator)
- Special tool steel
- Very high degree of accuracy

Application range: Alfa Romeo 145/145 Twin Spark with 1.4 engines with cam shaft variator

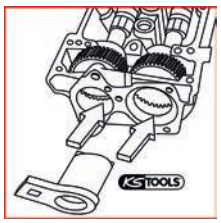


	Suitable for	Ø mm	mm	g	
400.9005	Alfa Romeo	57	24,0	283	

Camshaft locking tool for PSA

- For the professional engine repair
- To counter hold when loosening and tightening the cam shaft wheel screws
- Square drive 1/2"
- Very high degree of accuracy

Application range: Citroën, **Peugeot**, **Fiat**, **Ford**, **Alfa Romeo** with 1.3 JTD engines





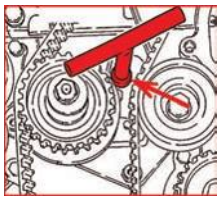
1/2"

		g	
400.2429	Camshaft locking tool for PSA	485	

Automatic tension pulley wrench for Alfa Romeo

- Eccentric
- Suitable for the assembly and disassembly of the timing belt
- For adjusting the timing belt tension on the automatic pulley
- Not suitable for balancing belts
- Locking handle
- With plastic-coated handle
- Chrome vanadium

Application range:Alfa Romeo 145, 146 for 1.4L and 1.6L Twin Spark engines >1996, **Alfa Romeo** 155, 156 for 1.6L Twin Spark engines >1996



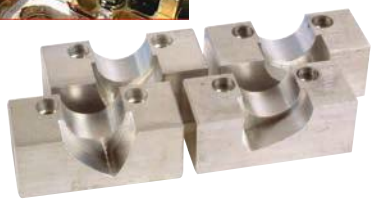


	Suitable for	Length mm	g	
150.1253	Alfa Romeo	83,0	80	

Camshaft alignment tools for Alfa Romeo / Fiat / Lancia

- For the professional engine repair
- For locking the cam shaft wheels (TDC position)
- Secure hold thanks to optimal positioning
- Very high degree of accuracy





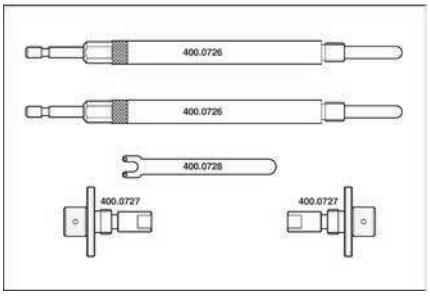
	X	Suitable for		
400.9028	4	156 2.5 V6 (> 1997)	690	
400.9029	2	145/146 1.8, 2.0 Twin Spark (> 1996), Spider/GTV 2.0 16v (> 1995)	276	
400.9030	2	145/146 1.4, 1.6 Twin Spark (> 1996), 155/156 Twin Spark (> 1996)	251	
400.9037	2	Fiat Bravo, Brava, Marea, Marea Weekend, 2.0 20v (>1994)	267	
400.9038	2	147 1.6 (120bhp) (>2004)	270	
400.9039	2	156 2.0 JTS (>2006)	267	
400.4410	2	Alfa 147 1.6 Twin Spark (105bhp) (2001 – 2010)	113	

Engine adjustment tool set for Alfa Romeo / Fiat

- For the professional engine repair
- For locking the cam shaft
- Very high degree of accuracy
- In durable steel storage case

Application range: Alfa Romeo Giulietta, Mito, **Fiat** 500, Brava, Bravo, Grande Punto, Marea, Marea Weekend, Marengo, Palio Weekend, Panda, Punto Classic, Ritmo, Stilo, Idea, **Lancia** Delta, Susa, Ypsilon with 1.2 16V engines





400.0725	5 pcs	Engine adjustment tool set for Alfa Romeo / Fiat	989

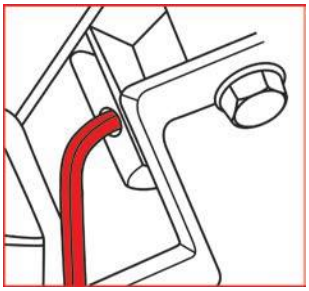
consists of:

400.0726	Piston height gauge (2)	250	
400.0727	Camshaft locking tool (2) Ø 45 mm	130	
400.0728	Tensioner adjusting tool	30	

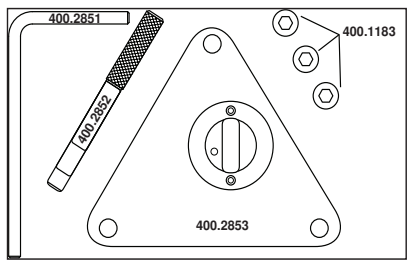
Engine Timing Tool Kit for Alfa Romeo / Fiat / Lancia

- For the professional engine repair
- Especially for chain-driven engines
- Very high degree of accuracy
- In durable steel storage case

Application range: Fiat Panda, Punto, 500, 500c, **Alfa Romeo** Mito, **Lancia** Ypsilon (engine code: 313A2.000)







400.2850	6 pcs	Engine Timing Tool Kit for Alfa Romeo / Fiat / Lancia	1,60

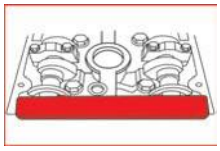
consists of:

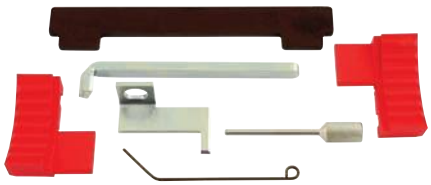
	X		
400.2851	1	Flywheel locking tool 115 mm	460
400.2853	1	Camshaft Locking Plate	490
400.2852	1	Pulley locking pin	550
400.1183	3	Camshaft alignment tool bolt M8 x 25 mm	15

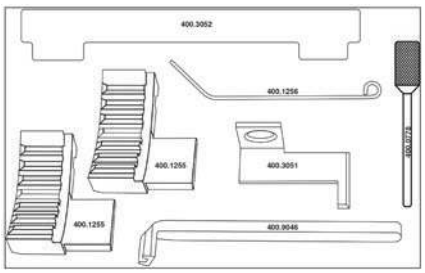
Engine Timing Tool Set for Alfa Romeo / Fiat / GM / Opel

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy

Application range: Chevrolet Cruze, Orlando with 1.4 / 1.6 / 1.8 engines, **Opel** Astra-G, Astra-H, Corsa-D, Insignia, Meriva, Signum, Vectra-C, Zafira-B, **Fiat** Croma, **Alfa Romeo** 159 (engine code: Z / A / 939A4.000)







400.3050	7 pcs	Engine Timing Tool Set for Alfa Romeo / Fiat / GM / Opel	424	

consists of:

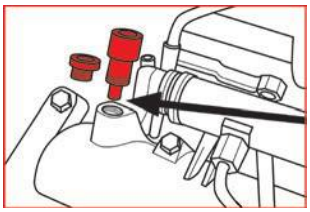
400.0778	Locking pin, 80 mm	20	
400.1255	Camshaft locking tool for Opel (2), red	56	
400.1256	Tensioner locking pin for 400.1250	3	
400.3051	Flywheel holding tool	32	
400.3052	Camshaft Locking Bar	148	
400.9046	Flywheel locking tool, 130 mm	80	



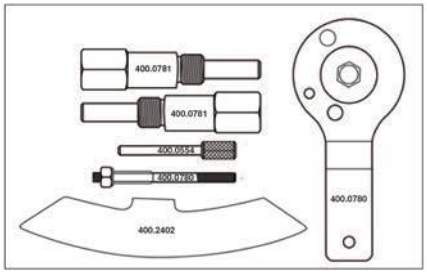
Engine Timing Tool Set for Alfa Romeo / Fiat

- For the professional engine repair
- For locking the crank shaft or cam shaft and injection pump
- Very high degree of accuracy
- In durable steel storage case

Application range: Fiat vehicles with 1.6 / 1.9 / 2.4 JTD Multi-jet diesel engines, **Alfa Romeo** with 2.0 JTD diesel engines (engine code: 939B3.000)







			kg	
400.2400	7 pcs	Engine Timing Tool Set for Alfa Romeo / Fiat	1,46	

consists of:

		g	
400.0554	Locking pin Ø 6.0 mm	19	
400.0780	Crankshaft pulley setting tool (3)	260	
400.0781	Camshaft timing pin set (2)	180	
400.2402	Flywheel sprocket alignment tool 134 mm	130	

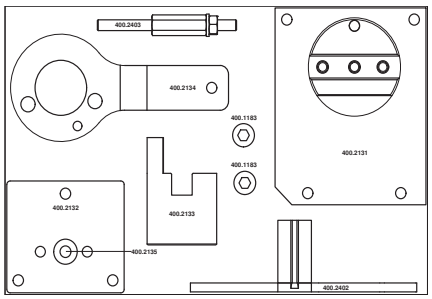


Engine Timing Tool Set for Alfa Romeo / Lancia

- For the professional engine repair
- For blocking the cam and crank shafts
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Alfa Romeo 159, Brera, Giulietta, Spider, **Lancia** Delta with 1.75 TBi engines >2009 (engine code: 939B1.000/940A1.000)





			kg	
400.2130	9 pcs	Engine Timing Tool Set for Alfa Romeo / Lancia	3,08	

consists of:

	x		g	
400.2402	1	Flywheel sprocket alignment tool 134 mm	130	
400.2403	1	Stud assembly	33	
400.1183	2	Camshaft alignment tool bolt M8 x 25 mm	15	
400.2134	1	Crankshaft locking tool 130 mm	271	
400.2135	1	Countersunk screw, M6x16	10	
400.2131	1	Cam shaft arresting tool with plate	892	
400.2132	1	Cam shaft alignment plate with pins	362	
400.2133	1	Cam shaft alignment tool for alignment plate	193	



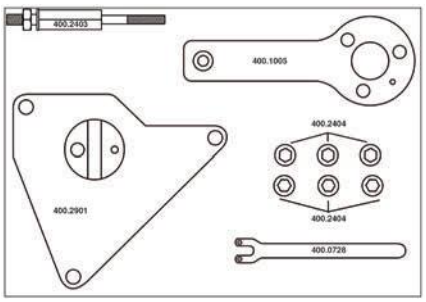
Engine Timing Tool Kit for Alfa Romeo / Fiat / Lancia

- For the professional engine repair
- For locking the crank shaft
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: AlfaRomeo Mito, Giulietta MultiAir 105 , MultiAir Turbo 135 , 163 / 170 (2009-2013) **Fiat** Punto Evo, Punto, Bravo (2009-2013) **Lancia** Delta (2010-2013) - (engine code: 955A6.000 / 955A7.000 / 955A8.000 / 955A2.000 / 940A2.000)



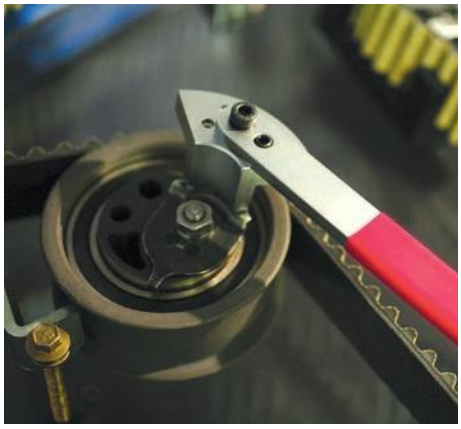




			kg	
400.2900	10 pcs	Engine Timing Tool Kit for Alfa Romeo / Fiat / Lancia	1,40	

consists of:

	x		g	
400.0728	1	Tensioner adjusting tool	30	
400.1005	1	Crankshaft locking tool Ø 22 mm	7	
400.2403	1	Stud assembly	33	
400.2404	6	Socket head screw M8 x 20 mm	13	
400.2901	1	Tensioner adjusting tool 130 mm	504	



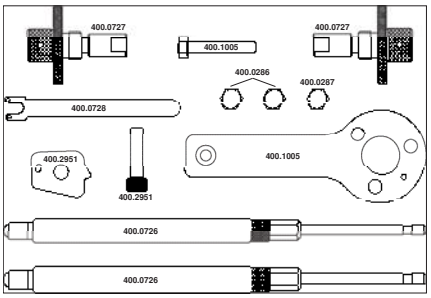
Engine Timing Tool Kit for Alfa Romeo / Fiat / Lancia

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Alfa Romeo Giulietta , MiTo **Fiat** 500, Brava, Bravo, Grande Punto, Marea, Marea Weekend, Marengo, Palio Weekend Panda, Punto, Punto Classic, Ritmo, Stilo, Idea **Lancia** Delta, Musa, Ypsilon







			kg	
400.2950	10 pcs	Engine Timing Tool Kit for Alfa Romeo / Fiat / Lancia	1,22	

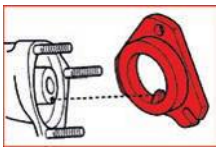
consists of:

	x			
400.0726	1	Piston height gauge (2)	250	
400.2951	1	Camshaft pulley holding tool, 35 mm	126	
400.1005	5	Crankshaft locking tool Ø 22 mm	7	
400.0728	1	Tensioner adjusting tool	30	
400.0727	1	Camshaft locking tool (2) Ø 45 mm	130	
400.0286	1	Screw M8 x 35 mm (2)	16	
400.0287	1	Screw M8 x 40,0 mm	18	

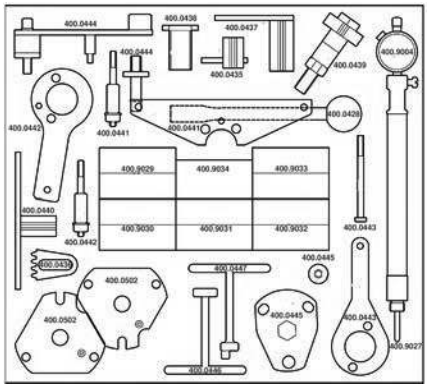
Engine Timing Tool Set for Alfa Romeo / Fiat / Lancia

- For the professional engine repair
- For locking the crank shaft and cam shaft
- Suitable for pre-tensioning timing belt tensioner on the automatic pulley
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: universal usage on many Italian vehicles, in particular **Alfa Romeo**, **Fiat**, **Lancia** vehicles with 1.4 / 1.6 / 1.8 / 2.0 / Twinspark 1.2 / 1.4 / 1.6 / 1.8 16 V petrol engines 1.6 / 1.8 / 1.9D / TD / 2.0 / 2.1 12V / 2.4 diesel engines







			kg	
400.0425	36 pcs	Engine Timing Tool Set for Alfa Romeo / Fiat / Lancia	7,57	

consists of:

400.0428	Tensioning tool-pry 180 mm	170	
400.0435	Flywheel locking tool 45 x 30 mm	57	
400.0436	Flywheel locking tool, 28 x 45 mm	135	

consists of:

400.0437	Flywheel locking tool 77 x 60 mm	100	
400.0438	Flywheel locking tool 44 x 35 mm	51	
400.0439	Flywheel locking tool 87 x 40 mm	317	
400.0440	Flywheel locking tool 135 x 40 mm	136	
400.0441	Crankshaft timing tool (3) 175 mm	154	
400.0442	Crankshaft timing tool (2) 130 mm	154	
400.0443	Crankshaft timing tool (3)	160	
400.0444	Tensioning tool	240	
400.0445	Camshaft locking tool (2), Alfa Romeo, Fiat, Lancia	530	
400.0446	Balancer shaft belt tensioning tool	97	
400.0447	Tensioning tool-pry 93 mm	70	
400.0502	Camshaft locking tool (2) 86 x 78 mm	400	
400.9004	Precision-dial indicator gauge 0-10 mm, Ø 40 mm	78	
400.9027	TDC determining pin Ø 5,0 mm / dial indicator bracket M14 x 1.25	288	
400.9029	Camshaft locking tool (2), B	276	
400.9030	Camshaft locking tool (2), C	251	
400.9031	Camshaft locking tool (2), D	272	
400.9032	Camshaft locking tool (2), E	269	
400.9033	Camshaft locking tool (2), F	276	
400.9034	Crankshaft timing tool, G	178	



BMW

Holding wrench for Visco ventilator

- For counter holding the ventilation valve when disassembling the Visco ventilator
- Especially slim design
- Enables easy access
- Special tool steel

Application range: BMW engine M10, M20, M21, M30, M50, M51, M52, M52TU, M54, M56, M70, M73, S14 and S38





		Length mm	g	
150.3306		380,0	330	

V belt wrench Torx for BMW and Mercedes T60

- suitable for assembly and disassembly of the fan belt
- necessary to relieve the automatic tension pulley for pulling the fan belt
- For hard to reach places
- With plastic-coated handle
- Chrome vanadium

Application range: BMW 5 series (E60) 2.0 L petrol engine M54 and **Mercedes** C class (W203, W204) 1.8 L petrol engine M271 etc.





			g	
150.1234	2 pcs	V belt wrench Torx for BMW and Mercedes T60	460	

consists of:

		g	
150.1227	Special wrench with 8.0 mm hexagonal drive, 450 mm	440	
150.1236	Bit with 8.0 mm hexagonal drive for Torx screws T60, 22mm long	20	

Belt pulley retaining wrench for BMW

- For the professional engine repair
- Simple assembly and disassembly of the crank shaft pulley wheel or vibration dampers
- Special profiles allows for counter holding when releasing or securing the crank shaft central screw
- Very high degree of accuracy

Application range: BMW (engine code: M60/M62)



		Length mm	kg	
400.4585		530,0	2,08	

Crankshaft pulley locking tool for BMW / Mini

- For the professional engine repair
- Simple assembly and disassembly of the crank shaft pulley wheel
- Special profiles allows for counter holding when releasing or securing the crank shaft central screw
- Very high degree of accuracy

Application range: BMW 1 Series (2007 - 2016), 2 Series Coupé (2007 - 2016), 3 Series (2007 - 2016), 4 Series (2007 - 2016), 5 Series (2007 - 2016), 6 Series (2007 - 2016), 7 Series (2007 - 2016), X1 (2007 - 2016), X3 (2007 - 2016), X4 (2007 - 2016), X5 (2007 - 2016), X6 (2007 - 2016), **Mini** Clubman (2007 - 2016), Clubvan (2007 - 2016), Countryman (2007 – 2016), Coupe (2007 – 2016), Mini (2007 – 2016), Paceman (2007 – 2016), Roadster (2007 – 2016) for 1.6 l, 2.0 l, 3.0 l diesel engines (engine code: N47 D20A/K0 / N47 D20A / N47 D16C / N47 D16 / N47S D20B/D/T0 / N47 D20C/K1 / N47 D20C / N47 D20C/U1 / N47 D20D/T1 / N47 D20D / N47 D20C/01 / N47 D20A/U0 / N47 D20K1 / N47 D20U0 / N47T D20O1 / N47D20C/O / N47 D20U1 / N47 / N47 D20C/01 / N47 D20O0 / N47S D20D/T0 / N47 D20A/O0 / N47 C16U1 / N47 C16K1 / N47 C20K1 / N47 C20U1 / N47 C16A/U1 / N47 C20A/K1 / N57 D30A/O0 / D57 D30A/O1 / N57 D30U0 / N57 D30B / N57 D30A / N57 D30UO / N57 D30B / N57 D30A / N57 D30UO / N57 D30O0 / N57 D30O1 / N57 D30B/T1 / N57 D30TO / N57 D30C/S1 / N57 D30A0 / N57 D30T0 / N57 D30C / N57D30B/T0)



			kg	
400.4370	6 pcs	Crankshaft pulley locking tool for BMW / Mini	1,24	

consists of:

		g	
400.4371	Retainer plate	830	
400.4372	Retaining mandrel set 5 pcs	390	

Balancer shaft alignment tool for BMW / Mini

- For the professional engine repair
- ideally suited for aligning the balancer shaft
- Very high degree of accuracy
- In durable plastic case

Application range: BMW 1 Series (20– - 2016), 2 Series (2014 - 2016), 3 Series (2007 - 2016), 4 Series (2013 - 2016), 5 Series (2007 - 2016), X1 (2009 - 2016), X3 (2007 - 2016), X4 (2014 - 2016), X5 (2013 - 2016), **Mini** Clubman (2015 - 2016) and Mini hatchback (2014 - 2016) with 2.0 l diesel engines (engine code: B47 D20A / B47 C20A / B48 A20B / B47 / B47 C20 / B48 A20A / N47 D20A/K0 / N47 D20A / N47S D20B/D/T0 / N47 D16C / N47 D16 / N47 D20C/K1 / N47 D20C / N47 D20C/U1 / N47 D20C/O1 / N47 D20D/T1 / N47 D20D / N47 D20A/U0 / N47T D20K1 / N47 D20U0 / N47T D20U1 / N47T D20O1 / N47 D20C/O / N47 D20C/01 / N47 D20O0 / N47S D20D/T0 / N47 D20A/O0)



			kg	
400.4390	Balancer shaft alignment tool for BMW / Mini	2,93		

Balancer shaft removal tool set for BMW / Mini

- For the professional engine repair
- ideally suited for dismantling the balancer shaft
- Very high degree of accuracy
- In durable plastic storage case

Application range: BMW 1 Series F20/F21 (2015 - 2017), 2 Series F22/F23/F45/F46 (2014 - 2017), 3 Series F30/F31 (2015 - 2017), i8 I12 (2014 - 2017), X1 F48 (2015 - 2017), **Mini** Clubman F54 (2015 - 2017), Convertible F57 (2016 - 2017) and Mini hatchback F55/F56 (2014 - 2017) with 1.2 l and 1.5 l petrol or 1.5 l diesel engines (engine code: B38 A12A / B37 D15A / B37 C15A / B38 B15A / B38 A15A / B38 K15A)



			kg	
400.4380	4 pcs	Balancer shaft removal tool set for BMW / Mini	1,55	

consists of:

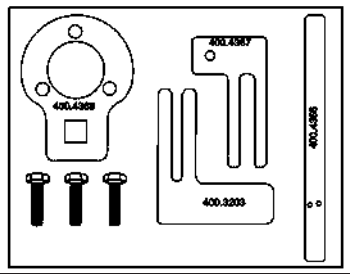
		g	
400.4381	Balance shaft locking tool, Diesel	255	
400.4382	Balance shaft locking tool, Diesel	190	
400.4383	Balance shaft disassembly tool	710	
400.4384	Assembly plate for alignment tools	215	

Balancer shaft locking tool set for BMW

- For the professional engine repair
- for locking the balance shafts
- Secure hold thanks to optimal positioning
- Very high degree of accuracy
- In durable plastic storage case

Application range: BMW 1 Series E87/E81/E88/F20/F22 (2004 - 2015), 3 Series E46 (2001 - 2004), E90/E91/E92/E93 (2005 - 2015), 5 Series E60/E61 (2007 - 2010), X1 E84 (2010 - 2012), X3 E83 (2005 - 2010), Z4 E85/86 (2004 - 2009) with 1.6 l, 1.8 l and 2.0 l petrol engines (engine code: N45 B16A / N45T B16AC / N42 B18A / N46 B18 / N46 B20B / N46T B20 / N46TB20Bz / N46T B20O2 / N42 B20A / N46 B20 / N46T B20BD / N45 B20AA / N46T B20B)





			kg	
400.4365	7 pcs	Balancer shaft locking tool set for BMW	0,72	

consists of:

		g	
400.3203	Balance shaft locking tool	100	
400.4366	Balance shaft aligning tool, 184 mm	80	
400.4367	Balance shaft aligning tool, 75 mm	90	
400.4368	Vibration damper holding tool with screws	400	

Special socket with special profile

- special profile
- ideally suited to operate the new central screw connection on the central valve of the camshaft adjuster
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Extra short execution
- replaces the old 6-sided screw connection
- For manual operation
- Matt finish
- Chrome vanadium

Application range: Central bolting of the Vanos unit for **BMW**, **Mini** and the CVT module for **Ford**



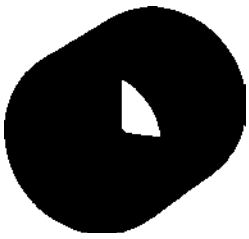
1/2"

	Length mm	Ø mm	g	
400.0002	30,0	30	103	

Special socket with special profile

- special profile
- ideally suited to operate the new central screw connection on the central valve of the camshaft adjuster
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Extra short execution
- replaces the old 6-sided screw connection
- For machinery usage
- Phosphate finish
- Chrome molybdenum

Application range: Central bolting of the Vanos unit for **BMW**, **Mini** and the CVT module for **Ford**



1/2"

	Length mm	Ø mm	kg	
400.0003	30,0	30	0,10	

Crankshaft fixing tool for BMW / Mini

- For the professional engine repair
- For changing the timing chain
- Very high degree of accuracy
- In durable steel storage case

Application range: BMW 1 Series F20/F21 (2011 - 2015), 2 Series F22 (2014 - 2016), 3 Series E90/E91/E92/E93/F30/F31/F34 (2010 - 2016), 4 Series F33/F32/F36 (2013 - 2016), 5 Series F07/F10/F11 (2010 - 2017), X1 E84 (2009 - 2015), X3 F25 (2012 - 2014), X5 F15 (2014 - 2016), X5 F15 (2014 – 2016), Mini Clubman R55 (2010 - 2014), Clubvan R55 (2012 - 2014), Countryman R60 (2010 - 2017), Mini R56/R57 (2010 - 2015), Paceman R61 (2013 - 2017), Clubman R55 (2011 - 2014), Coupé R58 (2011 - 2015) and Roadster R59 (2012 - 2015) with 1.6 l and 2.0 l petrol engines (engine code: N47 C16U1 / N47 C16K1 / N47 C16A/U1 / N47 D16C / N47 D16 N47 / C20K1 / N47 C20U1 / N47 C20A/K1 / N47S D20B/D/T0 / N47 D20C/K1 / N47 D20C, N47 D20C/U1 / N47 D20C/O1 / N47 D20D / N47 D20D/T1 / N47T D20O1 / N47 D20C/O / N47 D20A / N47 D20C/01 / N47 D20U0)



		kg	
400.4395	Crankshaft fixing tool for BMW / Mini	0,47	

Crankshaft holding tool for BMW

- For the professional engine repair
- ideally suited for holding and locking the crankshaft of N47 and N57 diesel engines
- required when replacing the secondary drive chain
- Very high degree of accuracy

Application range: BMW 1 Series E81/E82/E87/E88 (>2007), F20/F21 (>2007), 3 Series E90/E91/E92/E93/F30/F31 (>2007), 5 Series E60/E61/F07/F10/F11 (>2007), X1/X3 E84/E83/F25 (>2007), 6 Series F06/F12/F13 (>2007), 7 Series F01/F02/F04 (>2007), X5 E70 (>2007), X6 E71/E72 (>2007) for 1.6 l, 2.0 l and 3.0 l diesel engines

(engine code: N47 D16 / N47 D16C / N47 / N47 D20A / N47 D20A/0U0 / N47 D20A/K0 / N47 D20A/O0 / N47 D20C / N47 D20C/01 / N47 D20C/K1 /N47 D20C/O / N47 D20C/O1 / N47 D20C/U1 / N47 D20D / N47 D20D/T1 / N47 D20O0 / N47 D20O1 / N47 D20U0 / N47S D20B/D/T0 / N47S D20D/T0 / N47T D20O1 / N47T D20U1 / N57 D30 / N57 D30A / N57 D30A/O0 / N57 D30A/O1 / N57 D30A0/O0 / N57 D30B / N57 D30B/T0 / N57 D30B/T1 / N57 D30O0 / N57 D30O1 / N57 D30T0 / N57 D30TO / N57 D30U0 / N57 D30UO / N57 D30C / N57 D30C/S1)



			g	
400.4385	6 pcs	Crankshaft holding tool for BMW	400	

consists of:

		g	
400.4386	Main plate	290	
400.4387	Countersunk screw	95	
400.4388	Adjusting screw M6 x 16 mm with nut and washer	4	

Vibration damper holding screw set for BMW

- For clamping the crank shaft when loosening and tightening the crankshaft central screw
- Prevents slipping whilst holding
- With replaceable and tight-fit guide sleeves (Ø 57.0 / 59.5 / 60.5 mm)
- Minimal force required thanks to extra-long lever
- Matt finish
- Chrome vanadium

Application range: BMW 1 series (E81, E82, E87, E88), 3 series (E46, E90, E91, E92, E93), 5 series (E60, E61), X3 (E83) with 1.8 and 2.0 diesel engines when working on the timing drive of **BMW** M47 TU / TU2 engines with old and new vibration damper design





			kg	
911.1720	5 pcs	Vibration damper holding screw set for BMW	4,60	

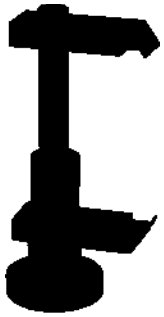
consists of:

		kg	
911.1721	Extension pipe, 1000 mm	1,90	
911.1722	Vibration damper holding wrench insert, 22.0 mm	1,40	
911.1723	Guide sleeve, ∅ 57.0 mm	0,38	
911.1724	Guide sleeve, ∅ 59.5 mm	0,44	
911.1725	Guide sleeve, ∅ 60.5 mm	0,48	

Camshaft alignment tool for Opel / BMW / Mini

- For the professional engine repair
- ideally suited for locking the intake camshaft gear wheel
- Secure hold thanks to optimal positioning
- Very high degree of accuracy

Application range: Opel Corsa E (>2015), **BMW** 1 Series (>2015), 2 Series (>2014), X1 (>2015), **Mini** One (>2014) for 1.3 l and 1.5 l diesel engines (engine code: LKU/B13DTE / LKU/B13DTR / LKV/B13DTC / B37 C15A / B367 D15A)



		g	
400.0009	Camshaft alignment tool for Opel / BMW / Mini	400	

Crank shaft locking tool set for BMW

- For the professional engine repair
- For fixing the crank shaft
- Secure fix
- Very high degree of accuracy

Application range: BMW E81/E82/E87/E88/E46/E60/E61/E83/E90/E91/E92/E93/E65/E66/E53/E70/E71/E72 (engine code: 20 4D 4, 30 6D 2, 30 6D 3, 30 6D 4, 30 6D 5)





			g	
400.2375	2 pcs	Crank shaft locking tool set for BMW	127	

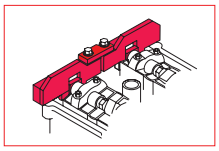
consists of:

		g	
400.2376	Crankshaft timing tool 73 mm	52	
400.2377	Crankshaft timing tool 78,5 mm	55	

Engine Timing Tool Set for BMW

- For the professional engine repair
- Especially for chain-driven vehicles
- For locking twin-cam, dual cam shaft
- Very high degree of accuracy
- In durable steel storage case

Application range: for all **BMW** vehicles with petrol engines (engine code: M42 / M43 / M50 / M52 / M60) and diesel engines (engine code: M51)





			kg	
400.0125	3 pcs	Engine Timing Tool Set for BMW	2,66	

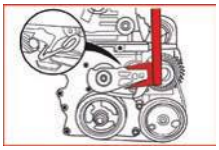
consists of:

400.0127	Camshaft locking tool exhaust (2)	900	
400.2351	Crankshaft TDC locking pin 130 mm	108	

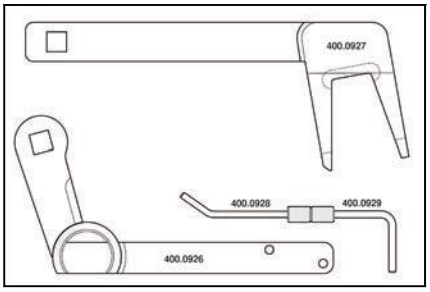
Engine Timing Tool Set for BMW / Mini

- For the professional engine repair
- For locking the cam shaft
- For changing the timing chain
- Very high degree of accuracy
- In durable steel storage case

Application range: BMW Mini One, Cooper, Cooper S with 1.6 petrol engines (engine code: W10816AA / W10816BA / W11816AA)







			kg	
400.0925	4 pcs	Engine Timing Tool Set for BMW / Mini	2,03	

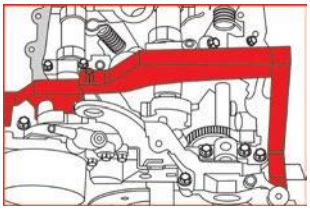
consists of:

400.0926	Serpentine belt tensioner	435	
400.0927	Camshaft pulley loosening tools	400	
400.0928	Tensioning locking pin, Ø 4 mm	15	
400.0929	Locking pin, Ø 4,5 mm	18	

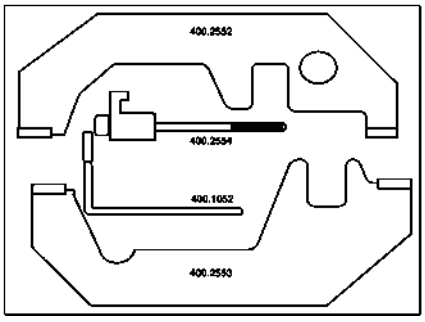
Engine Timing Tool Set for BMW

- For the professional engine repair
- For chain-driven engines
- Very high degree of accuracy
- In durable steel storage case

Application range: BMW 5, 6, 7, X5 (engine code: N62 / N73)







			kg	
400.2550	4 pcs	Engine Timing Tool Set for BMW	2,74	

consists of:

400.1052	Flywheel TDC locking pin Ø 8 mm	20	
400.2552	Camshaft setting tool (inlet)	698	
400.2553	Camshaft setting tool (exhaust)	783	
400.2554	Holding screw	105	

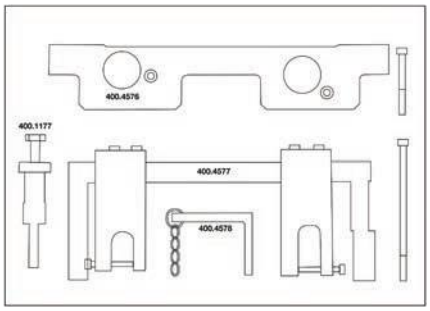


Engine adjustment tool set for BMW

- For the professional engine repair
- For changing the timing chain
- Very high degree of accuracy
- In durable plastic storage case

Application range: BMW 1 Series F20/F21 (2012 - 2014), 3 Series F30/F31 (2012 - 2014), 5 Series F10/F11 (2010 - 2014), X1 E84 (2011 - 2014), X3 F25 (2011 - 2014), Z4 E89 (2013 - 2013) with 2.0 l petrol engines (engine code: N20 B20A / N26 B20 / N20 B20B/U0 / N20 B20O0)





			kg	
400.4575	4 pcs	Engine adjustment tool set for BMW	5,28	

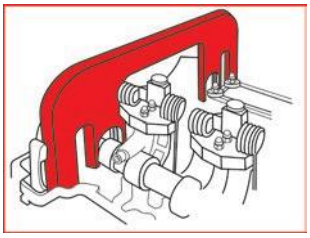
consists of:

400.4576	Alignement tool	0,74	
400.4577	Camshaft alignment bridge	3,12	
400.4578	Camshaft timing pin	0,07	
400.1177	Timing chain pre-tensioning tool Ø 10 mm x 22 mm, 115 mm	0,06	

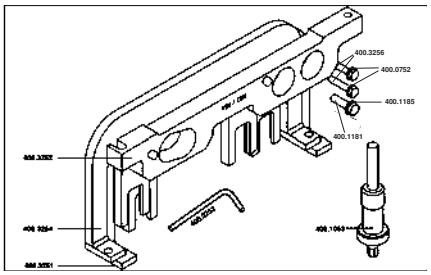
Engine Timing Tool Set for BMW

- In durable steel storage case
- For the professional engine repair
- Very high degree of accuracy
- For locking the cam shaft
- For changing the timing chain

Application range: BMW 323i, 325i, 523i, Z4, X3, 130i, 330i, 530i, 630i, 730i, 528i, X1, 125i, 525i, 740i, X6, 135i, 335i, 3.0 M Coupe with 2.3 / 2.8 / 3.0 / 3.5 / 4.0 engines (engine code: N52 B25A / N52 B25AE / N52 B25AF / N52 B25BE / N52 B25O1 / N52 B25O2 / N52 B30A / N52 B30AF / N52 B30O2 / N52 B30U1 / N52K B25A/O1 / N52K B25AE / N52K B25U1 / N52K B30A / N52K / B30A/O1 / N52K B30AE / N52K B30AF / N53 B25A / N53 B30A / N53 B30A/O0 / N53 B30UO / N54 B30A / N54 B30A/AA / N54 B30A/TO / N54 B30TO)



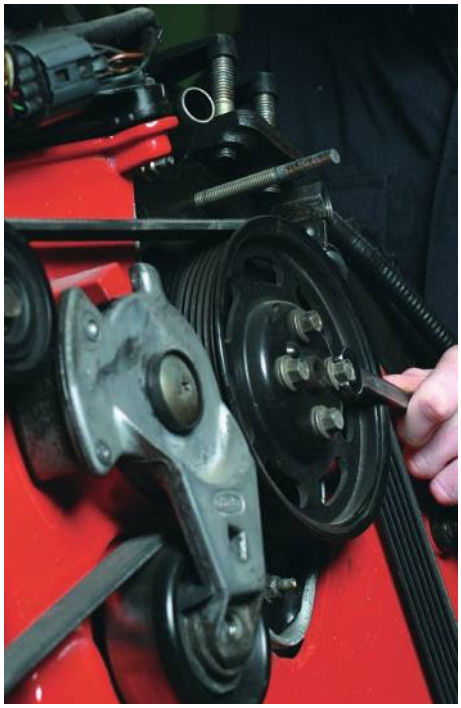




			kg	
400.3250	13 pcs	Engine Timing Tool Set for BMW	5,40	

consists of:

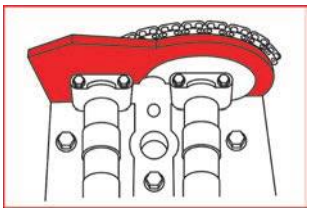
	X		g	
400.0253	1	Locking pin Ø 8.0 mm	41	
400.0752	2	Washers M8	1	
400.1053	1	Timing chain pre-tensioning tool Ø 10 mm x 21 mm, 130 mm	219	
400.1181	2	Bolt M6x30	8	
400.1185	1	Washers M6 2 pcs	1	
400.3251	1	Camshaft alignement tool 280 mm	1396	
400.3252	1	Camshaft VANOS sensor alignment tool	527	
400.3254	1	Camshaft alignement tool 285 mm	1518	
400.3256	1	Adjusting screw M7x20mm, 2 pcs	8	



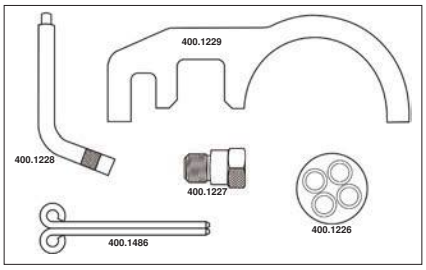
Engine adjustment tool set for BMW / Mini

- For the professional engine repair
- For locking the cam shaft
- For changing the timing chain
- Very high degree of accuracy
- In durable steel storage case

Application range: BMW with 2.0 engines (2007-2010) (engine codes: N47 / N47S), **BMW Mini** Countryman, Clubman (>2007) (engine code: R55 / R56 / R57 / R60). Contains pumps / pulley wheels disassembly tool







			kg	
400.1225	6 pcs	Engine adjustment tool set for BMW / Mini	1,91	

consists of:

		g	
400.1226	Crankshaft pulley turning tool	183	
400.1227	High pressure pump sprocket removal tool	89	
400.1228	Flywheel plate timing pin	109	
400.1229	Camshaft alignement tool Ø 93 mm	242	
400.1486	Tensioner locking pin (2)	29	

Engine Timing Tool Set for BMW / Mini

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy

Application range: BMW Mini with 16V engines (engine code: W16D)



			g	
400.2475	8 pcs	Engine Timing Tool Set for BMW / Mini	126	

consists of:

	X		g	
400.0165	2	Camshaft locking pin 5.0 mm	19	
400.2476	1	Flywheel locking pin, BMW-Mini	40	
400.0580	1	Crankshaft locking pin Ø 8,0 mm, 70 mm	30	
400.1185	1	Washers M6 2 pcs	1	
400.3204	2	Screw 6 point M6x16mm	5	

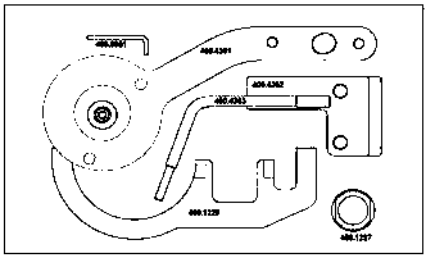


Engine adjustment tool set for BMW / Mini

- For the professional engine repair
- For changing the timing chain
- Very high degree of accuracy
- In durable steel storage case

Application range: BMW 1 Series F20/F21 (2015 - 2017), 2 Series F22/F23/F45/F46 (2014 - 2017), 3 Series F30/F31/34 (2015 - 2017), 4 Series F32/F33/F36 (2015 - 2017), 5 Series F10/F11 (2014 - 2017), X1 F48 (2015 - 2017), X3 F25 (2014 - 2017), X4 F26 (2014 - 2017), X5 F15 (2015 - 2017), **Mini** Clubman F54 (2015 - 2017), Cabrio F57 (2016 – 2017) and Mini hatchback F55/F56 (2014 – 2017) with 1.5 l or 2.0 l diesel engines (engine code: B37 D15A / B37 C15A / B47 D20A / B47 D20B / B47 C20A / B47 / B47 C20B)





			g	
400.4360	6 pcs	Engine adjustment tool set for BMW / Mini	980	

consists of:

		g	
400.0901	Tensioning locking pin, 45 mm	4	
400.4361	Crankshaft holding tool	320	
400.4362	A/T Drive plate timing pin adaptor	490	
400.4363	Flywheel drive plate timing pin	70	
400.1227	High pressure pump sprocket removal tool	89	
400.1229	Camshaft alignement tool Ø 93 mm	242	

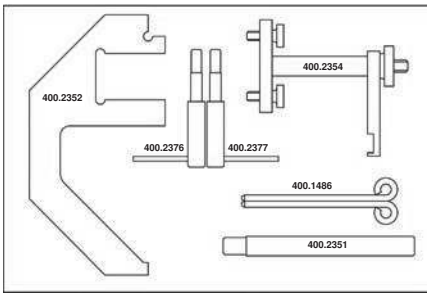
Engine Timing Tool Kit for BMW / Land Rover / Rover

- For the professional engine repair
- For locking the crank shaft or cam shaft
- For changing the timing belt or the timing chain
- Very high degree of accuracy
- In durable steel storage case

Application range: BMW 1, 3, 5, X3, **Land Rover** Freelander, **Rover** 75 (engine code: M47)



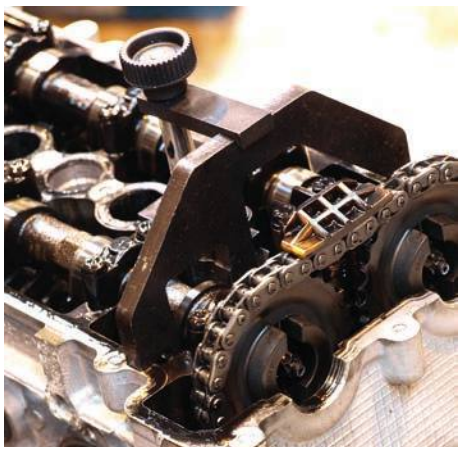




			kg	
400.2350	7 pcs	Engine Timing Tool Kit for BMW / Land Rover / Rover	1,03	

consists of:

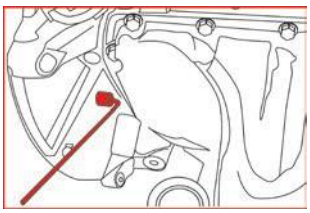
		g	
400.2351	Crankshaft TDC locking pin 130 mm	108	
400.2352	Camshaft locking tool 167 x 90 mm	461	
400.2354	Camshaft locking holding tool	240	
400.1486	Tensioner locking pin (2)	29	
400.2376	Crankshaft timing tool 73 mm	52	
400.2377	Crankshaft timing tool 78,5 mm	55	



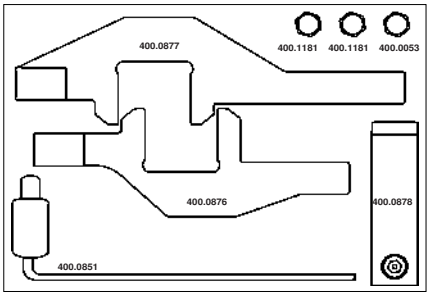
Engine Timing Tool Kit for BMW / Mini / PSA

- In durable steel storage case
- For the professional engine repair
- Very high degree of accuracy
- For locking the cam shaft
- For changing the timing chain

Application range: BMW Mini with 1.6 engines (engine code: N14 / R56), **Peugeot** 207, 308 with 1.6 engines (engine code: EP6 / EP6DT / DTS), **Citroën** with 1.6 engines (engine code: EP6 / EP6DT / DTS)







			kg	
400.0875	7 pcs	Engine Timing Tool Kit for BMW / Mini / PSA	1,49	

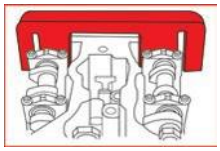
consists of:

	x		g	
400.0053	1	Screw M6 x 20,0 mm	6	
400.0851	1	Crankshaft locking pin Ø 8 mm	52	
400.0876	1	Camshaft alignment tool (inlet)	270	
400.0877	1	Camshaft alignment tool (exhaust)	423	
400.0878	1	Support clamp	93	
400.1181	2	Bolt M6x30	8	

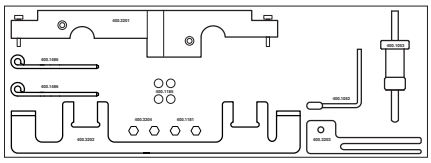
Engine Timing Tool Set for BMW

- In durable steel storage case
- For the professional engine repair
- Very high degree of accuracy
- For locking the cam shaft
- For changing the timing chain

Application range: BMW with 1.6 / 2.0 engines (>2006) (engine codes: N43 / B126A/AA / B16AA / B20KO / B20AY / B20A / B16AA/OO / B20AY / B20UO / B20A / B20A/AA)







			kg	
400.3200	13 pcs	Engine Timing Tool Set for BMW	3,09	

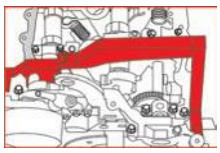
consists of:

	x		g	
400.1052	1	Flywheel TDC locking pin Ø 8 mm	20	
400.1053	1	Timing chain pre-tensioning tool Ø 10 mm x 21 mm, 130 mm	219	
400.1181	2	Bolt M6x30	8	
400.1185	2	Washers M6 2 pcs	1	
400.1486	1	Tensioner locking pin (2)	29	
400.3201	1	VANOS Sensor alignment tool	457	
400.3202	1	Camshaft alignement tool 268 mm	683	
400.3203	1	Balance shaft locking tool	100	
400.3204	2	Screw 6 point M6x16mm	5	

Engine Timing Tool Set for BMW / Mini / PSA

- For the professional engine repair
- For locking the cam shaft
- For changing the timing chain
- Very high degree of accuracy

Application range: BMW Mini with 1.4 / 1.6 Valvetronic engines (engine code: N12), **Peugeot** 207, 308 with 1.4 / 1.6 engines (engine code: EP3 / EP6), **Citroën** with 1.4 / 1.6 engines (engine code: EP3 / EP6)

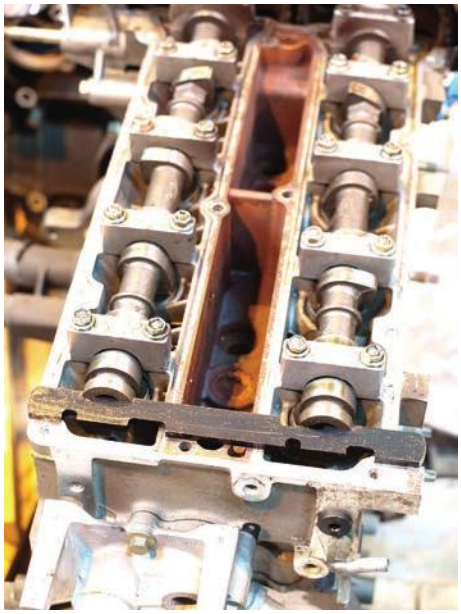




			kg	
400.0850	7 pcs	Engine Timing Tool Set for BMW / Mini / PSA	1,40	

consists of:

	x		g	
400.0851	1	Crankshaft locking pin Ø 8 mm	52	
400.0852	1	Camshaft locking tool inlet (2)	812	
400.0853	1	Camshaft locking tool (EX)	358	
400.1181	3	Bolt M6x30	8	



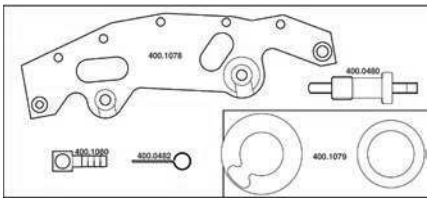
Engine Timing Tool Set for BMW

- For the professional engine repair
- Expansion set for use in connection with 400.0125
- For changing the timing chain
- Very high degree of accuracy
- In durable steel storage case

Application range: BMW 528i, X5, E46, Z3, Z4, 325, 525 (engine code: M52 / M54 / M56 / 22 6S1 / 25 6S5 / 30 6S3). Contains a setting gauge from the double VANOS







			kg	
400.1075	7 pcs	Engine Timing Tool Set for BMW	3,56	

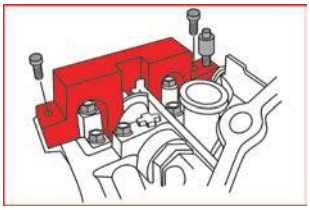
consists of:

		g	
400.0480	Primary timing chain pre-load pin (3)	112	
400.0482	Tensioner locking pin set, 72 mm	3	
400.1078	Camshaft timing setting tool VANOS	972	
400.1079	Flywheel sprocket alignment tool 197 mm	806	
400.1080	Pneumatic connector	37	

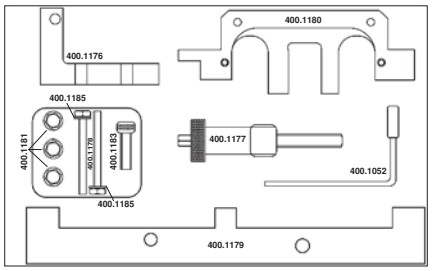
Engine Timing Tool Set for BMW

- In durable steel storage case
- For the professional engine repair
- Very high degree of accuracy
- For locking the cam shaft
- For changing the timing chain

Application range: BMW (E81/E87) 116i 316i, (E46/E40) 316Ci, (E46) 316Ti with 1.6 engines (engine code: N40 / N45 / N45T)







			kg	
400.1175	14 pcs	Engine Timing Tool Set for BMW	2,70	

consists of:

		g	
400.1052	Flywheel TDC locking pin Ø 8 mm	20	
400.1176	Camshaft locking tool (inlet)	278	
400.1177	Timing chain pre-tensioning tool Ø 10 mm x 22 mm, 115 mm	55	
400.1178	Large bush pre-load tool	40	
400.1179	VANOS sensor setting tool	301	
400.1180	Camshaft alignment tool (exhaust)	671	
400.1181	Bolt M6x30	8	
400.1183	Camshaft alignment tool bolt M8 x 25 mm	15	
400.1184	Locking screw set M6 x 55 mm, 2 pcs	11	
400.1185	Washers M6 2 pcs	1	



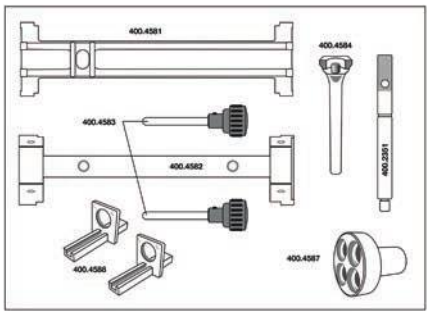


Engine adjustment tool set for BMW

- For the professional engine repair
- For changing the timing chain
- Very high degree of accuracy
- In durable plastic storage case

Application range: BMW 3 Series M3 E46 (>2000), Z3 E36 (>2000) and Z4 E85/86 (>2006) with 3.2 l petrol engines (engine code: S54 (32-6S-4))





			kg	
400.4580	9 pcs	Engine adjustment tool set for BMW	2,81	

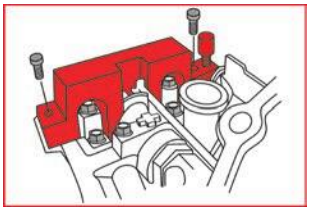
consists of:

	x		g	
400.4581	1	Valve timing check tool	304	
400.4582	1	Camshaft locking tool	570	
400.4583	2	Camshaft setting tool pins	40	
400.4584	1	VANOS alignment lever	44	
400.2351	1	Crankshaft TDC locking pin 130 mm	108	
400.4586	2	VANOS spacers	4	
400.4587	1	Crankshaft turning tool	269	

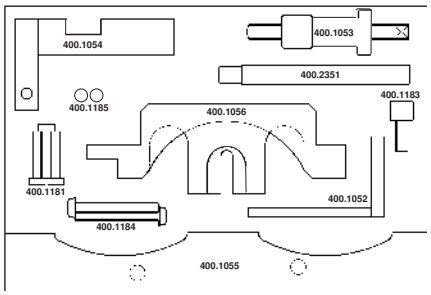
Engine Timing Tool Set for BMW

- For the professional engine repair
- For locking the cam shaft
- For changing the timing chain
- Very high degree of accuracy
- In durable steel storage case

Application range: BMW (E46) 316, 316ti Compact (engine code: N42 B18A / N46 B18), (E46) 318i, 318ti Compact (engine code: M42 B20A / N46 B18 / N46 B20), (E81/82/87) 118i, 120i (engine code: N46 B20B / N46T B20), (E90/91/92/93) 318i, 320i. (engine code: N46 B18B / N46 B20B), (E85) Z4 2,0 (engine code: N46 B20), (E83) X3 2,0 (engine code: N46 B20B



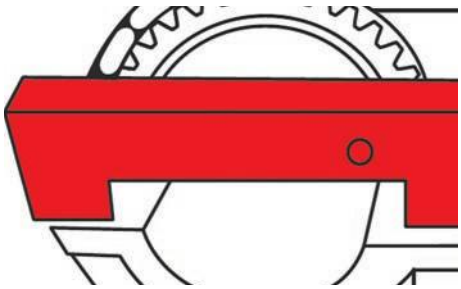




			kg	
400.1050	10 pcs	Engine Timing Tool Set for BMW	2,10	

consists of:

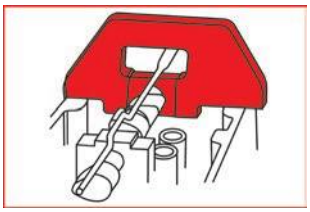
		g	
400.1052	Flywheel TDC locking pin Ø 8 mm	20	
400.1053	Timing chain pre-tensioning tool Ø 10 mm x 21 mm, 130 mm	219	
400.1054	Camshaft alignment tool (inlet)	262	
400.1055	Sensor gear alignment tool	332	
400.1056	Camshaft alignment tool exhaust	677	
400.2351	Crankshaft TDC locking pin 130 mm	108	
400.1181	Bolt M6x30	8	
400.1184	Locking screw set M6 x 55 mm, 2 pcs	11	
400.1185	Washers M6 2 pcs	1	
400.1183	Camshaft alignment tool bolt M8 x 25 mm	15	



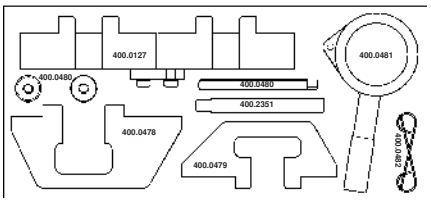
Engine Timing Tool Set for BMW

- For the professional engine repair
- Especially for chain-driven vehicles
- For locking the crank shaft or cam shaft
- Ideal for the installation and removal of the VANOS unit
- Suitable for tensioning the chain
- Very high degree of accuracy
- In durable steel storage case

Application range: for all **BMW** vehicles with petrol engines (engine code: M42 / M43 / M50 / M52 / M60) and diesel engines (engine code: M51). Contains a special wrench for controlling the turn of the exhaust cam shaft pinion when removing and installing the VANOS unit There is also a tensioning tool included for tensioning the timing chain



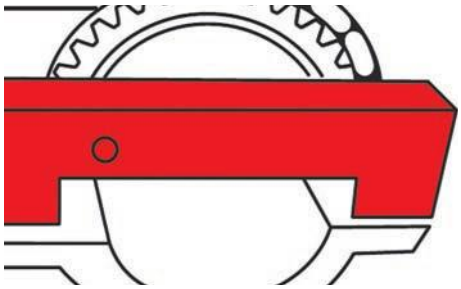




			kg	
400.0475	11 pcs	Engine Timing Tool Set for BMW	4,08	

consists of:

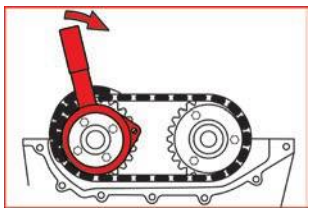
	x		g	
400.0127	1	Camshaft locking tool exhaust (2)	900	
400.0478	1	Camshaft locking tool 165 x 80 mm	854	
400.0479	1	Camshaft locking tool 150 x 64 mm	425	
400.0480	1	Primary timing chain pre-load pin (3)	112	
400.0481	1	VANOS unit engagement wrench	357	
400.0482	2	Tensioner locking pin set, 72 mm	3	
400.2351	1	Crankshaft TDC locking pin 130 mm	108	



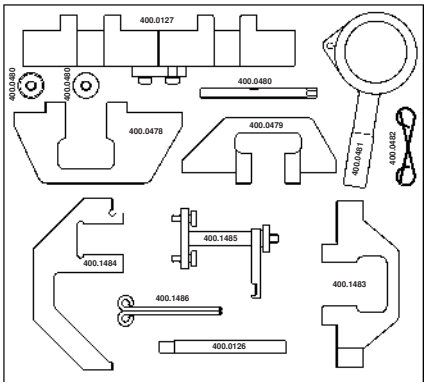
Engine Timing Tool Set for BMW

- In durable steel storage case
- For the professional engine repair
- Very high degree of accuracy
- Especially for chain-driven engines

Application range: BMW 3, 5, 7, X3, X5, Z3, Z4, 8 (E20, E28, E31, E32, E34, E36, E38, E46, E53, E65, E66, E83, E84) with petrol and diesel engines







			kg	
400.1475	16 pcs	Engine Timing Tool Set for BMW	5,32	

consists of:

	x		g	
400.0127	1	Camshaft locking tool exhaust (2)	900	
400.0478	1	Camshaft locking tool 165 x 80 mm	854	
400.0479	1	Camshaft locking tool 150 x 64 mm	425	
400.0480	1	Primary timing chain pre-load pin (3)	112	
400.0481	1	VANOS unit engagement wrench	357	
400.0482	2	Tensioner locking pin set, 72 mm	3	
400.1483	1	Camshaft locking tool 161 mm	731	
400.1484	1	Camshaft locking tool 166 x 87 mm	468	
400.1486	1	Tensioner locking pin (2)	29	
400.2351	1	Crankshaft TDC locking pin 130 mm	108	
400.2354	1	Camshaft locking holding tool	240	

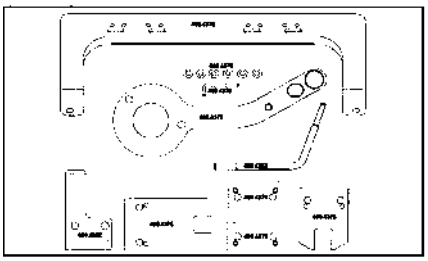


Engine Timing Tool Set for BMW / Mini

- For the professional engine repair
- For changing the timing chain
- Very high degree of accuracy
- In durable steel storage case

Application range: BMW 1 Series F20/F21 (2015 - 2017), 2 Series F22/F23/F45/F46 (2014 - 2017), 3 Series F30/F31/34/36 (2015 - 2017), 4 Series F32/F33/F36 (2015 - 2017), 7 Series G11/G12 (2015 - 2017), i8 I112 (2014 - 2017), X1 F48 (2015 - 2017), **Mini** Clubman F54 (2015 - 2017), Cabrio F57 (2016 - 2017) and Mini Schrägheck F55/F56 (2014 – 2017) with 1.2 l, 1.5 l, 2.0 l and 3.0 l petrol engines (engine code: B38 A12A / B38 B15A / B38 A15A / B38 K15A / B48 B20A / B48 B20B / B48 A20A / B48 A20B / B48 / B58 B30A)





			kg	
400.4375	5 pcs	Engine Timing Tool Set for BMW / Mini	4,68	

consists of:

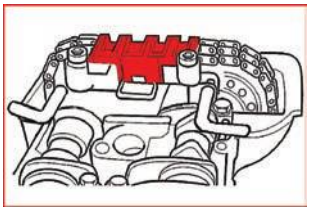
		kg	
400.4376	Camshaft alignment tool with screws	1,94	
400.4377	Crankshaft holding tool	0,21	
400.4362	A/T Drive plate timing pin adaptor	0,49	
400.4363	Flywheel drive plate timing pin	0,07	
400.4378	Locking pin for spanner	0,01	

CHRYSLER

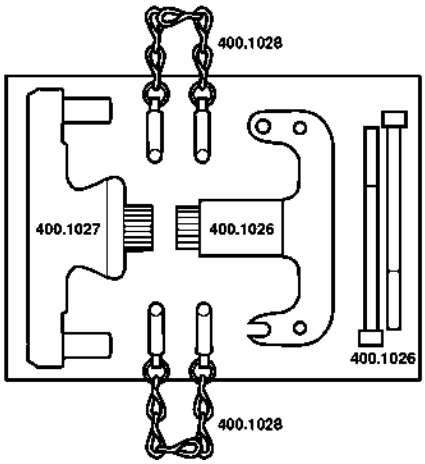
Engine Timing Tool Kit for Chrysler / Mercedes

- For the professional engine repair
- For locking the cam shaft
- For changing the timing chain
- Very high degree of accuracy
- In durable steel storage case

Application range: Mercedes vehicles with 2.2 / 2.7 CRD engines, **Chrysler** PT Cruiser with 2.2 CRD engines, **Jeep** Gran Cherokee with 2.7 CRD engines







			kg	
400.1025	6 pcs	Engine Timing Tool Kit for Chrysler / Mercedes	1,46	

consists of:

		g	
400.1026	Flywheel locking tool (3) 105 mm	197	
400.1027	Flywheel locking tool 125 mm	436	
400.1028	Camshaft locking tool (2) Ø 6 mm	36	

Engine Timing Tool Set for Chrysler

- For the professional engine repair
- Very high degree of accuracy
- For locking the cam shaft

Application range: Chrysler Voyager, Grand Voyager with 2.5 CRD Common-Rail Diesel engines (engine code: R2516C / R2516I)

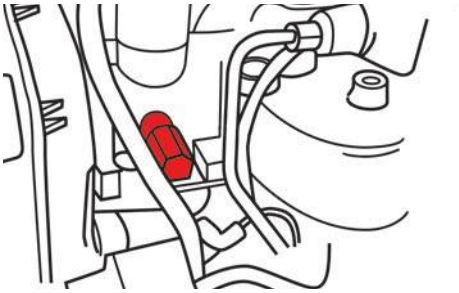




			g	
400.2450	8 pcs	Engine Timing Tool Set for Chrysler	514	

consists of:

		g	
400.2451	Flywheel locking pin 105 mm	35	
400.2452	Flywheel locking pin 85 mm	420	
400.2453	Camshaft locking pin (inlet)	89	
400.2454	Camshaft locking pin (exhaust)	30	
400.2455	Camshaft belt holding tool	7	
400.2456	Flywheel locking pin 2,8 mm	50	
400.2457	Flywheel locking pin 2,8 mm	50	
400.9008	Automatic pulley wrench for pin-type face, 140mm	206	



Flywheel Pegging Tool Set for Chrysler / Jeep

- ideal for fixing the flywheel
- Simple handling
- for use with 400.2450 Engine Timing Tool Set for Chrysler
- Special tool steel

Application range: Chrysler / **Jeep** Cherokee (2001 - 2008) with 2.5 l and 2.8 l diesel engines



			g	
400.4405	2 pcs	Flywheel Pegging Tool Set for Chrysler / Jeep	72	

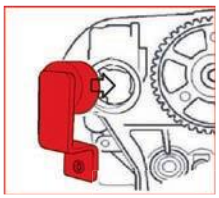
consists of:

		g	
400.4406	Flywheel Pegging Tool, 2.5 l	35	
400.4407	Flywheel Pegging Tool, 2.8 l	35	

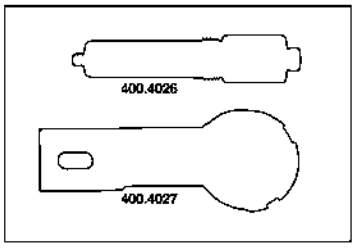
Engine Timing Tool Set for Chrysler

- For the professional engine repair
- For locking the crank shaft and cam shaft
- For changing the timing belt
- Very high degree of accuracy

Application range: Jeep Cherokee (2008-2011) with 2.8 CRD (engine code: ENS(51C), **Chrysler** Grand Voyager (2008-2011) (engine code: VM64C)







			g	
400.4025	2 pcs	Engine Timing Tool Set for Chrysler	500	

consists of:

		g	
400.4026	Crankshaft locking tool 106 mm	160	
400.4027	Camshaft locking tool 102 mm	340	

Riveting tool for timing chains for Mercedes / Chrysler / Jeep

- For the professional engine repair
- for mounting and dismounting the timing chain
- Provisional chain links facilitate installation
- Very high degree of accuracy
- Special tool steel

Application range: Mercedes 1.7 D, 2.1 D, 2.2 D, 2.7 D, 3.0 D, 3.2 D, 3.9 D, 4.0 CDI, **Chrysler** and **Jeep** 2.2 D, 2.7 D, 3.0 CRD



			kg	
400.4605	17 pcs	Riveting tool for timing chains for Mercedes / Chrysler / Jeep	2,90	

consists of:

	X		g	
400.4606	1	Press-out tool for chain links	900	
400.4607	1	Press-in tool for chain links	950	
400.4608	1	Die for fixing	46	
400.4609	1	Die for flanging and pressing	62	
400.4610	1	Die jaw for flanging or pressing	62	
400.4611	1	Die for fixing	70	
400.4612	2	Press-out pin for chain link, Ø 2.75 mm	3	
400.4613	1	Mounting element set (provisional)	20	
400.4614	1	Die for fixing	52	
400.4615	1	Chain link press-out spindle	106	
400.4616	1	Einzugsglied set (provisional)	14	
400.4617	1	Fixing screw for die	5	
400.4618	1	Dies for fixing	46	
400.4619	1	Dies for fixing	66	
400.4621	2	Press-out pin for chain link, Ø 4.0 mm	5	

CITROËN

High pressure fuel pump alignment mandrel for PSA

- For the professional engine repair
- ideally suited for aligning the high-pressure fuel pump at Citroen and Peugeot with Blue Technology
- Simple handling
- Very high degree of accuracy

Application range: Citroën Berlingo III (2014 - 2017), C3 (2014 - 2017), C4 (2014 - 2017), C4 Picasso/Grand Picasso II (2014 - 2017), C-Elysee (2014 - 2017), DS3/DS3 Convertible (2014 - 2015), DS4 (2014 - 2015), DS5 (2014 - 2015), **Peugeot** 2008 (2014 - 2017), 208 (2014 - 2017), 3008 (2014 - 2016), 301 (2014 – 2017), 308 (2014 – 2017), 5008 (2014 – 2017), 508 (2014 – 2017), Partner III (2014 – 2017) for 1.6 l diesel engines (engine code: BHW (DV6FE) / BHY (DV6FD) / BHZ (DV6FC) / BHX (DV6FC) / DV6FC (BHX) / DV6FC (BHZ) / DV6FD (BHY) / DV6FE (BHW) / DV6FD)

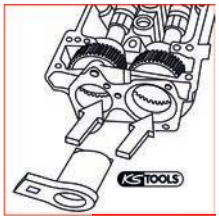


		g	
400.0011	High pressure fuel pump alignment mandrel for PSA	30	

Camshaft locking tool for PSA

- For the professional engine repair
- To counter hold when loosening and tightening the cam shaft wheel screws
- Square drive 1/2”
- Very high degree of accuracy

Application range: Citroën, **Peugeot**, **Fiat**, **Ford**, **Alfa Romeo** with 1.3 JTD engines





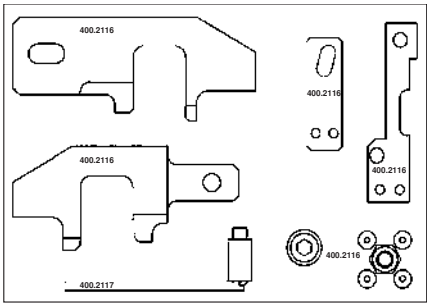
		g	
400.2429	Camshaft locking tool for PSA	485	

Engine Timing Tool Set for PSA

- For the professional engine repair
- For blocking the cam and crank shaft
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Citroën, Peugeot with 1.0 and 1.2 petrol engines (engine code: ZMZ (EBO)/HMZ (EB2)/HMY (EB2M)/EB2 (HMZ)/EBO (ZMZ)/EB2 (HMW)/EB2DTS (HNY)

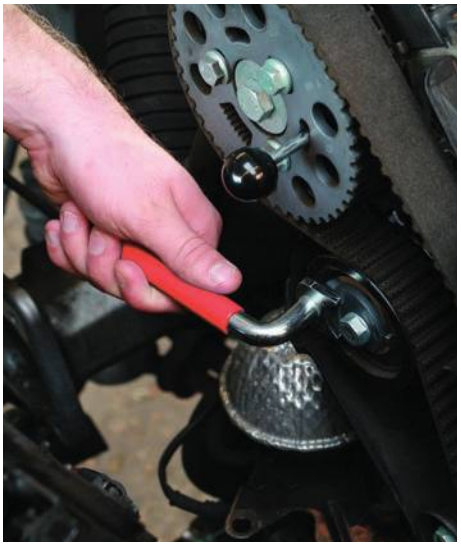




			kg	
400.2115	11 pcs	Engine Timing Tool Set for PSA	1,99	

consists of:

		kg	
400.2116	Cam shaft adjustment tool	0,74	
400.2117	Crank shaft locking pin, 105 mm	0,07	



Assembly tool set for Citroën / Ford / Land Rover / Mitsubishi / Peugeot

- For the professional engine repair
- For locking the cam shaft
- Secure hold thanks to optimal positioning
- Very high degree of accuracy
- In durable plastic storage case

Application range: Land Rover Discovery (2009 – 2015), Discovery Sport (2009 – 2015), Freelander 2 (2009 – 2015), eD4 (2009 – 2015), TD4 (2009 – 2015), TD4e (2009 - 2015), **Citroën** C5 (2002 – 2015), C5 II (2002 – 2015) , C5 III (2002 – 2015), C6 (2002 – 2015), C8 (2002 – 2015), C-Crosse (2002 - 2015), **Mitsubishi** Outlander DI-D (2007 – 2013), DI-DC (2007-2013), **Peugeot** 4007 (2000 – 2015), 407 (2000- 2015), 607 (2000 – 2015), 807 (2000 – 2015), 406 (2000 – 2015), 508 (2000 – 2015), 607 (2000 – 2015), GT (2000-2015), **Ford** Galaxy (2008 - 2015), Mondeo (2008 - 2015), S-Max (2008 - 2015) for 2.2 l diesel engines (engine codes: 224DT / DW12CTED4 224DT / DW12BTED4 224DT /4HX (DW12CT-ED4) / 4HP (DW12BTED4) / 4HX (DW12TED4) / 4HW (DW12TED4/L4) / 4HK, 4HN / DW12MTED4 (4HK) / DW12MT-ED4 (4HN) / DW12BTED4 (4HP) / DW12BTED4 (4HR) / DW-12BTED4 (4HT) / DW12TED4/L4 (4HW) / DW12BTED4 (4HS) / DW12ATED (4HZ) / DW12ATED4 (4HX) / DW12ATED (4HZ) / DW12CTED4 (4HL), KNBB, KNBA, KNWA, Q4BA)



			g	
400.4450	3 pcs	Assembly tool set for Citroën / Ford / Land Rover / Mitsubishi / Peugeot	680	

consists of:

		g	
400.4451	Balance shaft locking tool	190	
400.4452	Balance shaft tool	140	
400.4453	Balance shaft adjustment tool	230	

Engine Timing Tool Set for Citroën / Fiat

- For the professional engine repair
- For locking the cam shaft and the diesel pump
- Very high degree of accuracy

Application range: Citroën C15, Relais, Visa, Xantia, XM, Xsara, ZW, **Fiat** Ducato, Scudo, Ulysse



			g	
400.1700	4 pcs	Engine Timing Tool Set for Citroën / Fiat	199	

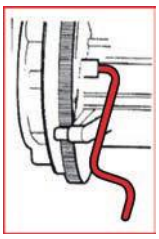
consists of:

		g	
400.0285	Crankshaft locking pin Ø 8,0 mm 200 mm	97	
400.0286	Screw M8 x 35 mm (2)	16	
400.0287	Screw M8 x 40,0 mm	18	

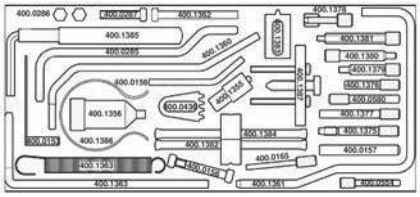
Engine Timing Tool Set for PSA

- In durable steel storage case
- For the professional engine repair
- Very high degree of accuracy
- For changing the timing belt

Application range: Citroën, **Peugeot** vehicles with HPi and HDi engines







			kg	
400.1650	39 pcs	Engine Timing Tool Set for PSA	2,17	

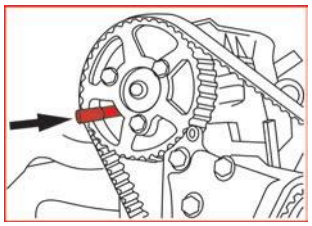
consists of:

	x		g	
400.0153	1	Tensioner adjuster, square 8.0 mm	6	
400.0156	1	Crankshaft timing pin Ø 6,0 mm	23	
400.0157	1	Crankshaft locking pin Ø 10.0 mm, short (2)	120	
400.0158	1	Crankshaft locking pin (2) Ø 8,5 mm	30	
400.0165	2	Camshaft locking pin 5.0 mm	19	
400.0285	1	Crankshaft locking pin Ø 8,0 mm 200 mm	97	
400.0286	1	Screw M8 x 35 mm (2)	16	
400.0287	1	Screw M8 x 40,0 mm	18	
400.0436	1	Flywheel locking tool, 28 x 45 mm	135	
400.0554	1	Locking pin Ø 6.0 mm	19	
400.0580	1	Crankshaft locking pin Ø 8,0 mm, 70 mm	30	
400.1355	1	Flywheel locking pin	80	
400.1356	1	Flywheel locking tool Ø 8 mm x 28 mm	252	
400.1360	1	Flywheel locking tool Ø 7 mm	82	
400.1361	1	Flywheel locking tool Ø 8 mm	146	
400.1362	1	Locking screw M8 x 80.0 mm	31	
400.1363	1	Flywheel locking pin with spring (2)	126	
400.1375	1	Injection pump timing pin, M8	32	
400.1376	1	Camshaft locking pin Ø 8 mm	24	
400.1377	1	Tensioning locking pin Ø 8 mm	35	
400.1378	1	Camshaft locking pin (2) Ø 6 mm	21	
400.1379	1	Camshaft locking pin Ø 6 mm	37	
400.1380	1	Camshaft locking pin, 71,0 mm	43	
400.1381	1	Camshaft locking pin (VTC)	50	
400.1382	1	Tensioner adjuster Ø 9 mm, 155 x 30 mm	115	
400.1383	1	Flywheel locking tool 50 mm	30	
400.1384	1	Tensioner adjuster Ø 9 mm, 155 x 20 mm	118	
400.1385	1	Tensioner adjuster, hex 8.0 mm	177	
400.1386	1	Belt retaining tool, Ø 70 mm	50	
400.1387	1	Crankshaft pulley remover (4)	153	

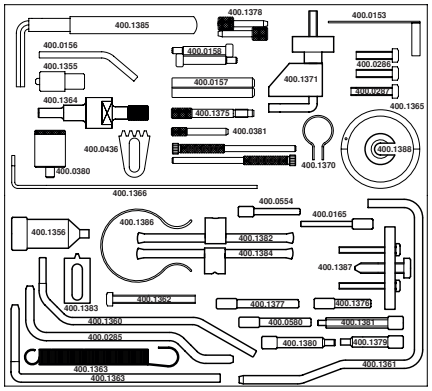
Engine Timing Tool Set for PSA

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: PSA vehicles including 2nd generation with EW 16V and 2.5 / 2.7 / 2.8 diesel engines







			kg	
400.1350	49 pcs	Engine Timing Tool Set for PSA	5,93	

consists of:

	x		g	
400.0153	1	Tensioner adjuster, square 8.0 mm	6	
400.0156	1	Crankshaft timing pin Ø 6,0 mm	23	
400.0157	1	Crankshaft locking pin Ø 10.0 mm, short (2)	120	
400.0158	1	Crankshaft locking pin (2) Ø 8,5 mm	30	
400.0165	1	Camshaft locking pin 5.0 mm	19	
400.0285	1	Crankshaft locking pin Ø 8,0 mm 200 mm	97	
400.0286	1	Screw M8 x 35 mm (2)	16	
400.0287	1	Screw M8 x 40,0 mm	18	
400.0377	1	Camshaft sprocket locking pin (2)	68	
400.0380	1	Flywheel locking tool Ø 30 mm	222	
400.0381	1	Coolant Pump tensioning locking pin	30	
400.0436	1	Flywheel locking tool, 28 x 45 mm	135	
400.0554	2	Locking pin Ø 6.0 mm	19	

consists of:

	x		g	
400.0580	1	Crankshaft locking pin Ø 8,0 mm, 70 mm	30	
400.1355	1	Flywheel locking pin	80	
400.1356	1	Flywheel locking tool Ø 8 mm x 28 mm	252	
400.1360	1	Flywheel locking tool Ø 7 mm	82	
400.1361	1	Flywheel locking tool Ø 8 mm	146	
400.1362	1	Locking screw M8 x 80.0 mm	31	
400.1363	1	Flywheel locking pin with spring (2)	126	
400.1364	1	Flywheel locking pin Ø 9 mm x 15 mm	215	
400.1365	1	Tensioner pulley adjusting tool	330	
400.1366	1	Tensioner adjuster, square, 4.0 mm	44	
400.1370	1	Crankshaft sprocket centraliser	2	
400.1371	1	Belt retaining tool Ø 25 mm	99	
400.1375	1	Injection pump timing pin, M8	32	
400.1376	1	Camshaft locking pin Ø 8 mm	24	
400.1377	1	Tensioning locking pin Ø 8 mm	35	
400.1378	1	Camshaft locking pin (2) Ø 6 mm	21	
400.1379	1	Camshaft locking pin Ø 6 mm	37	
400.1380	1	Camshaft locking pin, 71,0 mm	43	
400.1381	1	Camshaft locking pin (VTC)	50	
400.1382	1	Tensioner adjuster Ø 9 mm, 155 x 30 mm	115	
400.1383	1	Flywheel locking tool 50 mm	30	
400.1384	1	Tensioner adjuster Ø 9 mm, 155 x 20 mm	118	
400.1385	1	Tensioner adjuster, hex 8.0 mm	177	
400.1386	1	Belt retaining tool, Ø 70 mm	50	
400.1387	1	Crankshaft pulley remover (4)	153	
400.1388	1	Tensioner adjuster Ø 30 mm	41	

Engine Timing Tool Kit for Fiat / Iveco / PSA

- For the professional engine repair
- For locking the cam shaft or fly wheels
- Very high degree of accuracy
- In durable steel storage case

Application range: Fiat Ducato 2.8 TD, JTD, **Iveco** 2.8 D, TDI, **Citroën** Relay, Jumper, **Peugeot** Boxer, Boxer II (engine code: 8140,43 / 8140.43N / 8140.43S / 8140,63)

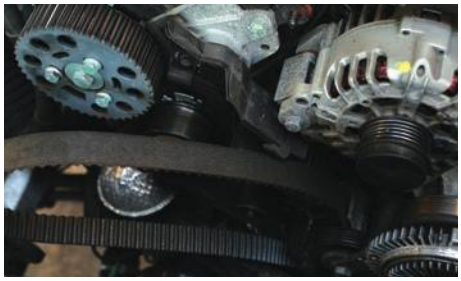


			g	
400.3000	5 pcs	Engine Timing Tool Kit for Fiat / Iveco / PSA	200	

consists of:

		g	
400.0165	Camshaft locking pin 5.0 mm	19	
400.1377	Tensioning locking pin Ø 8 mm	35	
400.1388	Tensioner adjuster Ø 30 mm	41	
400.3001	Flywheel holding tool, 45 mm	106	

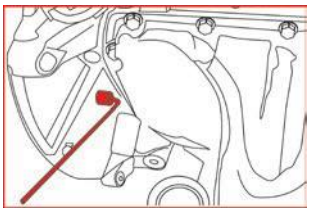




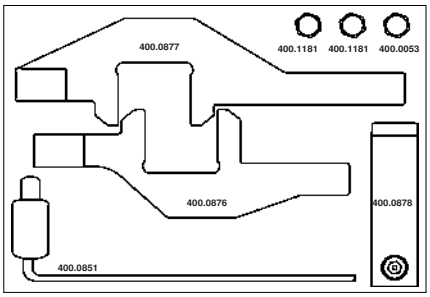
Engine Timing Tool Kit for BMW / Mini / PSA

- In durable steel storage case
- For the professional engine repair
- Very high degree of accuracy
- For locking the cam shaft
- For changing the timing chain

Application range: BMW Mini with 1.6 engines (engine code: N14 / R56), **Peugeot** 207, 308 with 1.6 engines (engine code: EP6 / EP6DT / DTS), **Citroën** with 1.6 engines (engine code: EP6 / EP6DT / DTS)







			kg	
400.0875	7 pcs	Engine Timing Tool Kit for BMW / Mini / PSA	1,49	

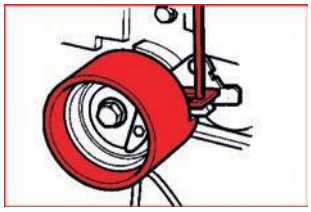
consists of:

		g	
400.0851	Crankshaft locking pin Ø 8 mm	52	
400.0878	Support clamp	93	
400.0877	Camshaft alignment tool (exhaust)	423	
400.0876	Camshaft alignment tool (inlet)	270	
400.1181	Bolt M6x30	8	
400.0053	Screw M6 x 20,0 mm	6	

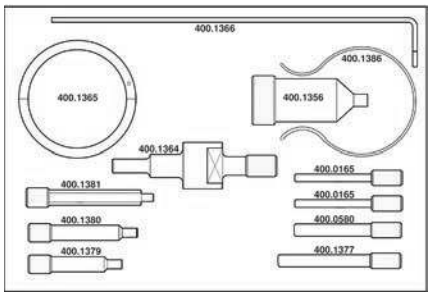
Engine adjustment tool set for PSA

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Citroën Xsara, Picasso, C5, C4, Evasion, Synergie, C8, Jumpy, Dispatch, **Peugeot** 206, 307, 406, 607, 806, 807, Expert (engine code: EW12J4(3FC) / EW10D-HPI(RLZ) / EW10J4S(RFK) / EW10J4(RFN/RFR) / EW7J4(6FZ)







			kg	
400.1750	12 pcs	Engine adjustment tool set for PSA	1,26	

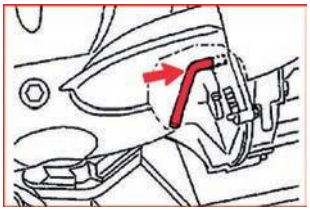
consists of:

	x		g	
400.0165	2	Camshaft locking pin 5.0 mm	19	
400.0580	1	Crankshaft locking pin Ø 8,0 mm, 70 mm	30	
400.1356	1	Flywheel locking tool Ø 8 mm x 28 mm	252	
400.1364	1	Flywheel locking pin Ø 9 mm x 15 mm	215	
400.1365	1	Tensioner pulley adjusting tool	330	
400.1366	1	Tensioner adjuster, square, 4.0 mm	44	
400.1377	1	Tensioning locking pin Ø 8 mm	35	
400.1379	1	Camshaft locking pin Ø 6 mm	37	
400.1380	1	Camshaft locking pin, 71,0 mm	43	
400.1381	1	Camshaft locking pin (VTC)	50	
400.1386	1	Belt retaining tool, Ø 70 mm	50	

Crankshaft locking tool set for PSA

- For the professional engine repair
- For fixing the crank shaft
- Contains special square wrench for adjusting the timing belt on the automatic pulley
- For changing the timing belt
- Secure hold for changing the timing belt or engine repairs
- Very high degree of accuracy

Application range: Citroën AX with 1.0/1.1 and 1.4 engines, BX 16, BX 19, BX 16 valve, **Peugeot** 106, 205, 405 with 1.0/1.1 and 1.4 engines, **Peugeot** 205, 305, 309, 405 with 1.6 and 1.9 engines, 309 GTI, 405 Mi1,6





			g	
400.0200	6 pcs	Crankshaft locking tool set for PSA	235	

consists of:

		g	
400.0153	Tensioner adjuster, square 8.0 mm	6	
400.0156	Crankshaft timing pin Ø 6,0 mm	23	
400.0157	Crankshaft locking pin Ø 10.0 mm, short (2)	120	
400.0158	Crankshaft locking pin (2) Ø 8,5 mm	30	

Valve spring compressor for PSA

- For the professional engine repair
- For retaining the valve springs
- Universal usage
- Includes 8 screws with pressure cone and 2 locking screws
- Chrome vanadium
- Very high degree of accuracy

Application range: Citroën Berlingo, Xsara petrol engines with 1.0, 1.1, 1.4, 1.6l, and **Peugeot** 106, 205, 206, 306, 307, 405 with petrol engines



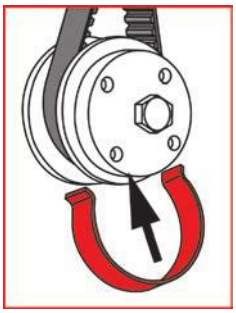


	Suitable for	Length mm	kg	
400.9001	PSA	390,0	3,80	

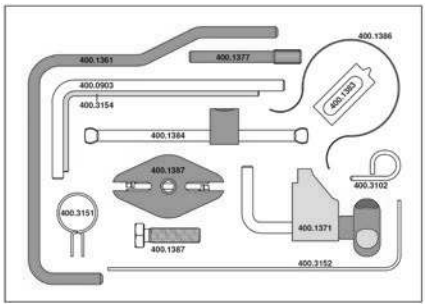
Engine Timing Tool Kit for Fiat / PSA

- For the professional engine repair
- For adjusting the valve controls
- For twin cam shaft systems with timing belt/chain combinations
- Very high degree of accuracy
- In durable steel storage case

Application range: Citroën and **Fiat** with 2.0 / 2.2 SOHC and DOHC engines (engine code: DW10 / DW12)







			g	
400.3150	15 pcs	Engine Timing Tool Kit for Fiat / PSA	814	

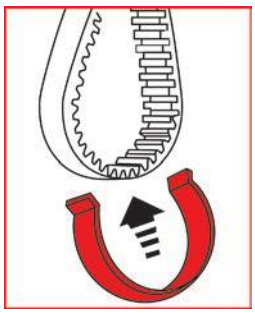
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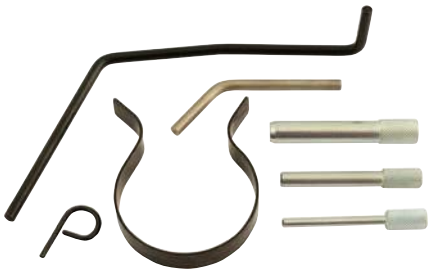
		g	
400.0903	Crankshaft locking pin	85	
400.1361	Flywheel locking tool Ø 8 mm	146	
400.1371	Belt retaining tool Ø 25 mm	99	
400.1377	Tensioning locking pin Ø 8 mm	35	
400.1383	Flywheel locking tool 50 mm	30	
400.1384	Tensioner adjuster Ø 9 mm, 155 x 20 mm	118	
400.1386	Belt retaining tool, Ø 70 mm	50	
400.1387	Crankshaft pulley remover (4)	153	
400.3102	Tensioner locking pin, 37 mm	4	
400.3151	Crankshaft pulley centralisation tool	2	
400.3152	Tensioner locking pin, 210 mm	7	
400.3154	Auxiliary drive belt tensioner locking pin Ø 4.0 mm	18	

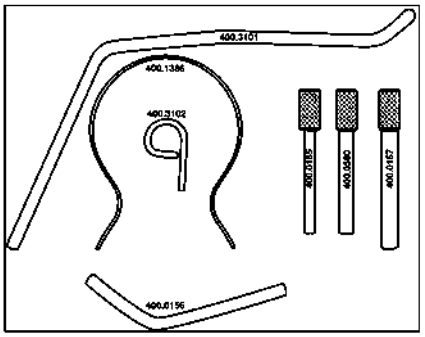
Engine Timing Tool Set for PSA

- For the professional engine repair
- For locking the crank shaft or cam shaft
- For changing the timing belt
- Very high degree of accuracy

Application range: PSA vehicles with 1.4 8V and 16V engines (engine code: KFU)



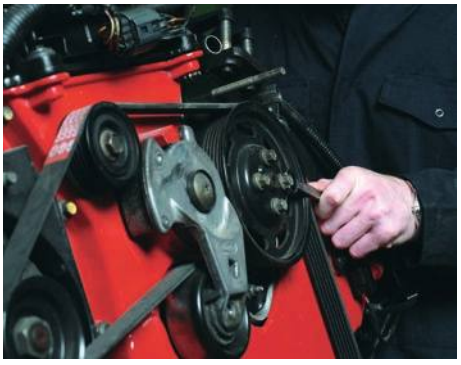




			g	
400.3100	8 pcs	Engine Timing Tool Set for PSA	362	

consists of:

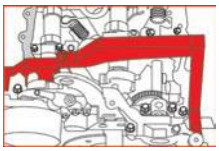
		g	
400.0156	Crankshaft timing pin Ø 6,0 mm	23	
400.0157	Crankshaft locking pin Ø 10.0 mm, short (2)	120	
400.0165	Camshaft locking pin 5.0 mm	19	
400.0580	Crankshaft locking pin Ø 8,0 mm, 70 mm	30	
400.1386	Belt retaining tool, Ø 70 mm	50	
400.3101	Flywheel locking pin Ø 6.0 mm, long	58	
400.3102	Tensioner locking pin, 37 mm	4	



Engine Timing Tool Set for BMW / Mini / PSA

- For the professional engine repair
- For locking the cam shaft
- For changing the timing chain
- Very high degree of accuracy

Application range: BMW Mini with 1.4 / 1.6 Valvetronic engines (engine code: N12), **Peugeot** 207, 308 with 1.4 / 1.6 engines (engine code: EP3 / EP6), **Citroën** with 1.4 / 1.6 engines (engine code: EP3 / EP6)





			kg	
400.0850	7 pcs	Engine Timing Tool Set for BMW / Mini / PSA	1,40	

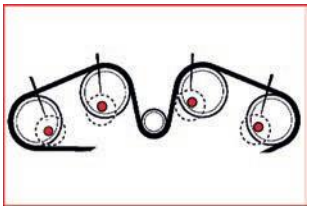
consists of:

	x		g	
400.0851	1	Crankshaft locking pin Ø 8 mm	52	
400.0852	1	Camshaft locking tool inlet (2)	812	
400.0853	1	Camshaft locking tool (EX)	358	
400.1181	3	Bolt M6x30	8	

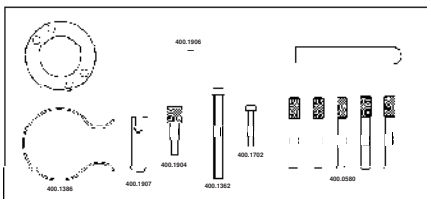
Engine adjustment tool set for PSA / Renault

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Citroën XM, **Peugeot** 605, **Renault** Safrane, Espace (engine code: L7X 700 / 701 / 713 / 727 / 731 / XFZ / ES9J4)







			kg	
400.1900	11 pcs	Engine adjustment tool set for PSA / Renault	2,31	

consists of:

	x		g	
400.0580	5	Crankshaft locking pin Ø 8,0 mm, 70 mm	30	
400.1362	1	Locking screw M8 x 80.0 mm	31	
400.1386	1	Belt retaining tool, Ø 70 mm	50	
400.1702	1	Locking screw set M8 x 35mm, 2 pcs	17	
400.1904	1	Gauge pin	14	
400.1906	1	Camshaft locking tool	896	
400.1907	1	Tensioning fork	35	

Timing belt tensioning tool for PSA / Toyota

- For the professional engine repair
- 7.0 mm square
- Suitable for pre-tensioning timing belt tensioner on the automatic pulley
- Chrome vanadium
- Very high degree of accuracy

Application range: universal usage on many **Peugeot** and **Toyota** vehicles





	Suitable for	Length mm	g	
150.3011	PSA, Toyota	157,0	80	

Timing belt tensioning tool for PSA

- For the professional engine repair
- 8.0 mm square
- Suitable for pre-tensioning timing belt tensioner on the automatic pulley
- Chrome vanadium
- Very high degree of accuracy

Application range: universal usage on many **Peugeot** vehicles





	Suitable for	Length mm	g	
150.3014	PSA	157,0	100	



Universal fly wheel locking tool set

- For the professional engine repair
- For locking the fly wheels
- Secure hold thanks to optimal positioning
- Special plastic
- Very high degree of accuracy

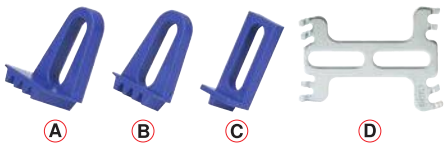
A Fly wheel Locking device for:Citroën: Synergie 2.0/Turbo. ZX 1.9D/TD, Xantia 1.9D/TD, Berlingo 1.9D, Dispatch 1.9D/TD, Synergie1.9D, Relay 1.9D/TD, **Fiat:** Ulysse, 2.0/Turbo Ducato 2.0, FSO: 1.9D, LDV: 200 1.9D, Pilot 1.9D, **Peugeot:** 205 1.6/1.9, 305 1.6/1.9, 309 1.6/1.9, 405 1.6/1.9, 405 1.8/2.0 (92-), 605 2.0, Boxer 2.0, c205 1.8/1.9D, 305 1.8/1.9D, 306 1.8/1.9D/TD, 309 1.8/1.9D 1.8TD, 405 1.8TD, 405 1.9D, 406 1.9D, Partner 1.9D, Talbot / Horizon / Solara 1.9D, J5/Talbot Express 1.9D, 605D/TD, 806 1.9TD, Expert 1.9D, Boxer 1.9D/TD, **Renault:** R5, 1.6D, R9 1.6D, 411 1.6D Express/Extra 1.6D-F8M diesel engines, Clio, Express/Extra, 1.9D earlier F8Q diesel engines, Espace 2.1D, R21 2.1D, R25 2.1D, Trafic/Master 2.1D-J8S diesel engines, Clio 1.2/1.4, Express/Extra, R19 1.4, Megane/Scenic 1.4/1.6-E7F/E7J petrol engines, R5 1.7, Clio 1.7/1,8, R19 1.7, R21 1.7 1.7 Megane/Scenic 2.0, Laguna 1.8/2.0, Trafic 1.7-F3N/F3P/F2R petrol engines, Clio, Williams, R19, Megane 2.0 16V Twin-Cam F7P/F7R engines, Laguna/ Safrane 2.0 16V Twin-Cam N7Q/N7U engines

B Fly wheel Locking device for:Renault: Clio, Twingo, Kangoo, Megane/Scenic, 1.2/1.6 D7F + K7M Petrol engine, Megane/Scenic, Kangoo 1.9D FBQ + F9Q Diesel engine (direct injection)

C Fly wheel Locking device for:Citroën: Xsara, Xantia 1.8/2.0XU7 JP/JB petrol engines, Xsara 1.8 16V XU7 JP4 twin cam shaft engines, ZX.Xantia, XM2.0 16V XU10J4 twin cam shaft engines, Xantia 1.9D/TD XUD9BTF diesel engines, Xantia, XM2.1TD XUD 11BTE diesel engines, **Peugeot:** 406, 1.8/2.0 XU7 JP/JB Petrol engine, 406 1.8 16V XU7 JP4 Double cam shaft engines, 306, 405, 605 2.0 16V XU10J4 Double cam shaft engines, 406, 1.9D/TD XUD9BTF Diesel engines, 406, 605 2.1 TD XUD 11BTE Diesel engines

D Fly wheel Locking device forVauxhall/Opel: 1.2, 1.4, 1.6, 1.8, 2.0 OHC Petrol engines, 1.6D & 1.7, OHC Diesel engines, 1.5 & 1.7 OHE Diesel(Isuzu)-Engines





			g	
150.3025	4 pcs	Universal fly wheel locking tool set	30	

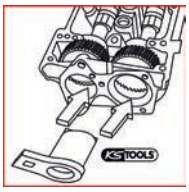


FIAT

Camshaft locking tool for PSA

- For the professional engine repair
- To counter hold when loosening and tightening the cam shaft wheel screws
- Square drive 1/2"
- Very high degree of accuracy

Application range: Citroën, **Peugeot**, **Fiat**, **Ford**, **Alfa Romeo** with 1.3 JTD engines





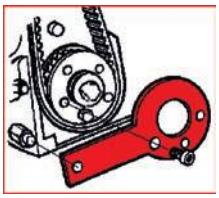
1/2"

		g
400.2429	Camshaft locking tool for PSA	485

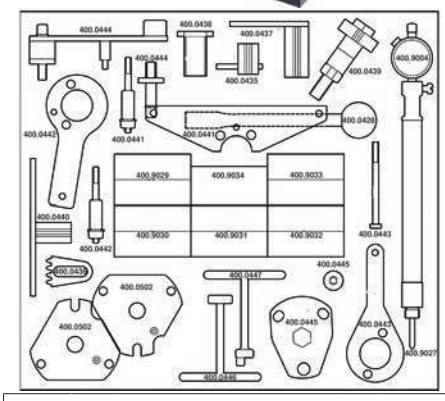
Engine Timing Tool Set for Alfa Romeo / Fiat / Lancia

- For the professional engine repair
- For locking the crank shaft and cam shaft
- Suitable for pre-tensioning timing belt tensioner on the automatic pulley
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: universal usage on many Italian vehicles, in particular **Alfa Romeo**, **Fiat**, **Lancia** vehicles with 1.4 / 1.6 / 1.8 / 2.0 / Twinspark 1.2 / 1.4 / 1.6 / 1.8 16 V petrol engines 1.6 / 1.8 / 1.9D / TD / 2.0 / 2.1 12V / 2.4 diesel engines







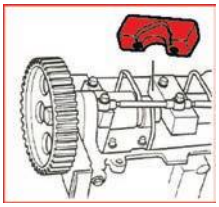
			kg
400.0425	36 pcs	Engine Timing Tool Set for Alfa Romeo / Fiat / Lancia	7,57

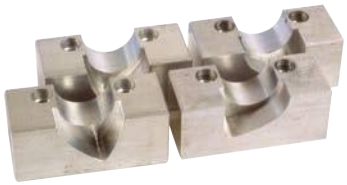
consists of:

		g
400.0428	Tensioning tool-pry 180 mm	170
400.0435	Flywheel locking tool 45 x 30 mm	57
400.0436	Flywheel locking tool, 28 x 45 mm	135
400.0437	Flywheel locking tool 77 x 60 mm	100
400.0438	Flywheel locking tool 44 x 35 mm	51
400.0439	Flywheel locking tool 87 x 40 mm	317
400.0440	Flywheel locking tool 135 x 40 mm	136
400.0441	Crankshaft timing tool (3) 175 mm	154
400.0442	Crankshaft timing tool (2) 130 mm	154
400.0443	Crankshaft timing tool (3)	160
400.0444	Tensioning tool	240
400.0445	Camshaft locking tool (2), Alfa Romeo, Fiat, Lancia	530
400.0446	Balancer shaft belt tensioning tool	97
400.0447	Tensioning tool-pry 93 mm	70
400.0502	Camshaft locking tool (2) 86 x 78 mm	400
400.9004	Precision-dial indicator gauge 0-10 mm, Ø 40 mm	78
400.9027	TDC determining pin Ø 5,0 mm / dial indicator bracket M14 x 1.25	288
400.9029	Camshaft locking tool (2), B	276
400.9030	Camshaft locking tool (2), C	251
400.9031	Camshaft locking tool (2), D	272
400.9032	Camshaft locking tool (2), E	269
400.9033	Camshaft locking tool (2), F	276
400.9034	Crankshaft timing tool, G	178

Camshaft alignment tools for Alfa Romeo / Fiat / Lancia

- For the professional engine repair
- For locking the cam shaft wheels (TDC position)
- Secure hold thanks to optimal positioning
- Very high degree of accuracy





	X	Suitable for	g
400.9031	2	Barchetta, Coupe 1.8 16v (> 1996)	272
400.9032	2	Brava, Bravo, Marea, Marea Weekend 1.8 16v (> 1995)	269
400.9033	2	Bravo, Marea, Marea Weekend, Coupe 2.0 20v (> 1994)	276
400.9034	1	Brava, Bravo 1.4 12v (> 1995) Lancia Ypsilon 1.4 12v (1996 – 1999)	178
400.9035	2	Lancia Kappa 2.0 2.4 20v (1994 – 1997), Stilo 2.4 20v (> 2001)	269
400.9036	2	Bravo, Marea, Marea Weekend, Coupe 2.0 20v (> 1994)	280

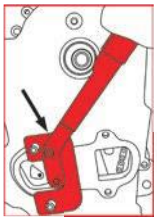




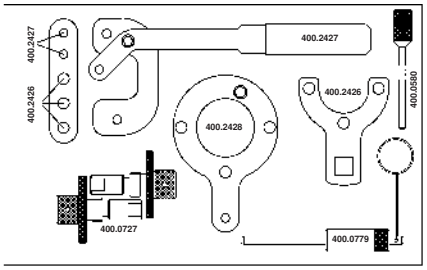
Engine Timing Tool Kit for Fiat / Ford / Opel / Suzuki

- For the professional engine repair
- Especially for chain-driven engines
- For changing the steering chain
- Very high degree of accuracy
- In durable steel storage case

Application range: Fiat 1.3 JTD, **Opel** 1.3 CDTI, **Ford** 1.3 TDCi, **Suzuki** (engine code: Z13DT)







			kg
400.2425	12 pcs	Engine Timing Tool Kit for Fiat / Ford / Opel / Suzuki	1,12

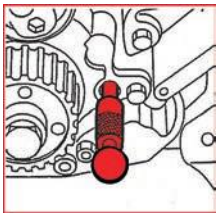
consists of:

		g
400.0580	Crankshaft locking pin Ø 8,0 mm, 70 mm	30
400.0727	Camshaft locking tool (2) Ø 45 mm	130
400.0779	Crankshaft locking tool Ø 6 mm	80
400.2426	Cranshaft pulley flange holding tool (4)	88
400.2427	Timing chain tensioning tool (3)	171
400.2428	Flywheel timing position tool	398

Engine Timing Tool Set for Fiat / Iveco

- For the professional engine repair
- For locking the crank shaft and cam shaft
- For changing the timing belt
- Very high degree of accuracy

Application range: Fiat Ducato, **Iveco** Daily with 2.3 / 3.0 JTF engines (engine code: F1AE0481C, F1AE0481D, F1AE0481N, F1CE0481D)





			g	
400.0400	5 pcs	Engine Timing Tool Set for Fiat / Iveco	518	

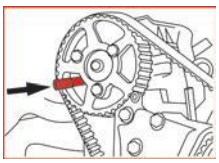
consists of:

		g	
400.0161	Crankshaft TDC locking pin, 102 mm	75	
400.0165	Camshaft locking pin 5.0 mm	19	
400.0401	Camshaft aligning tool (2)	70	
400.0402	Crankshaft timing pin, Fiat	200	

Engine Timing Tool Set for Fiat / GM / Opel / PSA / Renault

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy

Application range: Fiat, **PSA**, **Renault**, **Opel** vehicles with 2.5 / 2.8D engines





			g	
400.1775	4 pcs	Engine Timing Tool Set for Fiat / GM / Opel / PSA / Renault	143	

consists of:

	X		g	
400.0165	2	Camshaft locking pin 5.0 mm	19	
400.0754	1	Camshaft locking pin	51	
400.1388	1	Tensioner adjuster Ø 30 mm	41	

Engine Timing Tool Set for Citroën / Fiat

- For the professional engine repair
- For locking the cam shaft and the diesel pump
- Very high degree of accuracy

Application range: Citroën C15, Relais, Visa, Xantia, XM, Xsara, ZW, **Fiat** Ducato, Scudo, Ulysse



			g	
400.1700	4 pcs	Engine Timing Tool Set for Citroën / Fiat	199	

consists of:

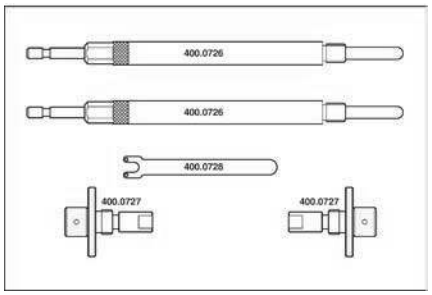
		g	
400.0285	Crankshaft locking pin Ø 8,0 mm 200 mm	97	
400.0286	Screw M8 x 35 mm (2)	16	
400.0287	Screw M8 x 40,0 mm	18	

Engine adjustment tool set for Alfa Romeo / Fiat

- For the professional engine repair
- For locking the cam shaft
- Very high degree of accuracy
- In durable steel storage case

Application range: Alfa Romeo Giulietta, Mito, **Fiat** 500, Brava, Bravo, Grande Punto, Marea, Marea Weekend, Marengo, Palio Weekend, Panda, Punto Classic, Ritmo, Stilo, Idea, **Lancia** Delta, Susa, Ypsilon with 1.2 16V engines





			g	
400.0725	5 pcs	Engine adjustment tool set for Alfa Romeo / Fiat	989	

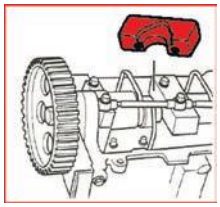
consists of:

		g	
400.0726	Piston height gauge (2)	250	
400.0727	Camshaft locking tool (2) Ø 45 mm	130	
400.0728	Tensioner adjusting tool	30	

Engine Timing Tool Set for Fiat

- For the professional engine repair
- For locking the cam shaft
- For changing the timing belt
- Very high degree of accuracy

Application range: Fiat Brava, Bravo with 1.4 12V engines (engine code: 182 A3.000 / 182 A5.000)





			g	
400.0525	4 pcs	Engine Timing Tool Set for Fiat	286	

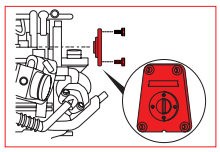
consists of:

		g	
400.0441	Crankshaft timing tool (3) 175 mm	154	
400.9034	Crankshaft timing tool, G	178	

Engine Timing Tool Set for Fiat

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy

Application range: Fiat with 1.7D, TD engines (engine code: 184 B3.000 / 176 A3.000 / 176 A5.000)





			g	
400.2000	4 pcs	Engine Timing Tool Set for Fiat	619	

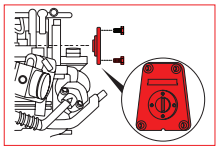
consists of:

		g	
400.0443	Crankshaft timing tool (3)	160	
400.0451	Camshaft locking plate, 45°	530	

Engine Timing Tool Set for Fiat

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy

Application range: Fiat Tipo, Tempra, Ducato (engine code: 149 B1.000 / 160 A6.000 / 160 A7.000 / 160 D1.000 / 230 A2.000 / 230 A3.000 / 230 A4.000 / 280 B1.000)





			g	
400.2025	4 pcs	Engine Timing Tool Set for Fiat	629	

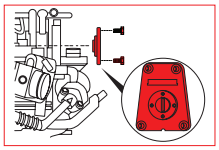
consists of:

		g	
400.0443	Crankshaft timing tool (3)	160	
400.0452	Camshaft locking plate, 43°	530	

Engine Timing Tool Set for Fiat

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy

Application range: Fiat Tipo, Tempra, Ducato with 1.9 TD engines





			g	
400.2050	4 pcs	Engine Timing Tool Set for Fiat	586	

consists of:

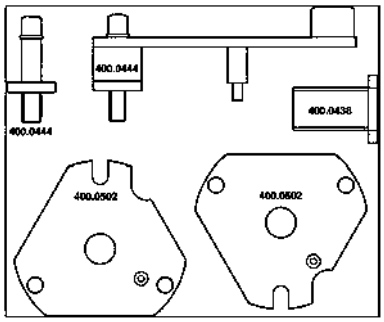
		g	
400.0443	Crankshaft timing tool (3)	160	
400.0453	Camshaft locking plate, 41°	530	

Engine Timing Tool Set for Fiat

- For the professional engine repair
- For locking the double cam shaft
- Suitable for pre-tensioning the timing belt tension
- Very high degree of accuracy
- In durable steel storage case

Application range: Fiat Brava, Bravo, Marea, Marea weekend, Multipla, Palio (> 1995) with 1.6 engines. With the tensioning tool the connecting screws can be exchanged from M8 to M10 for one another.





			kg	
400.0500	5 pcs	Engine Timing Tool Set for Fiat	1,87	

consists of:

		g	
400.0438	Flywheel locking tool 44 x 35 mm	51	
400.0444	Tensioning tool	240	
400.0502	Camshaft locking tool (2) 86 x 78 mm	400	



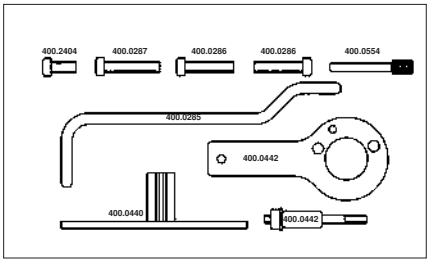


Engine Timing Tool Set for Fiat / Peugeot

- For the professional engine repair
- For locking the crank shaft and cam shaft
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Fiat Brava, Bravo, Marea, Marea (sic) and **Peugeot** with 1.9 D/TD engines (> 1996)





			kg	
400.0550	9 pcs	Engine Timing Tool Set for Fiat / Peugeot	1,25	

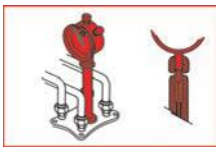
consists of:

		g	
400.0285	Crankshaft locking pin Ø 8,0 mm 200 mm	97	
400.0286	Screw M8 x 35 mm (2)	16	
400.0287	Screw M8 x 40,0 mm	18	
400.0440	Flywheel locking tool 135 x 40 mm	136	
400.0442	Crankshaft timing tool (2) 130 mm	154	
400.0554	Locking pin Ø 6.0 mm	19	
400.2404	Socket head screw M8 x 20 mm	13	

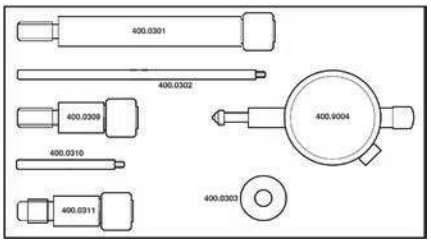
Diesel fuel pump timing set

- For the professional engine repair
- Precise measuring device
- Very high degree of accuracy
- In durable steel storage case

Application range: Alfa Romeo, **Audi**, **BMW**, **Daihatsu**, **Fiat**, **Ford**, **Isuzu**, **Iveco**, **Lancia**, **Land Rover**, **Mazda**, **Mitsubishi**, **Nissan**, **Renault**, **Rover** and **Volkswagen** vehicles with Bosch, Kikki, Nippon Denso injection pumps with threads of M8, M10 and M12, with new M10 Adapter in particular for **Ford** Transit







			g	
400.0325	7 pcs	Diesel fuel pump timing set	301	

consists of:

		g	
400.0301	Dial gauge adapter M8 (Bosch), long	71	
400.0302	Dial gauge extension, long 99 mm	9	
400.0303	Convertor M8 x M12	12	
400.9004	Precision-dial indicator gauge 0-10 mm, Ø 40 mm	78	
400.0309	Dial gauge adapter M8 (Bosch) short, silver	37	
400.0310	Dial gauge extension short	4	
400.0311	Dial gauge adapter M10 (Bosch) short, black	40	

Engine Timing Tool Set for Fiat

- For the professional engine repair
- For locking the cam shaft
- For changing the timing belt
- Very high degree of accuracy

Application range: Fiat Punto, Tipo, Tempra, Ducato with 1.7 D/TD / 1.9 D / 1.9 TD diesel engines



			kg	
400.0450	4 pcs	Engine Timing Tool Set for Fiat	1,53	

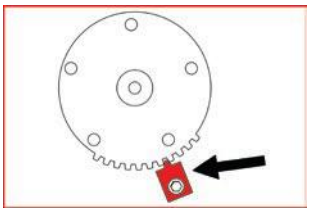
consists of:

		g	
400.0451	Camshaft locking plate, 45°	530	
400.0452	Camshaft locking plate, 43°	530	
400.0453	Camshaft locking plate, 41°	530	

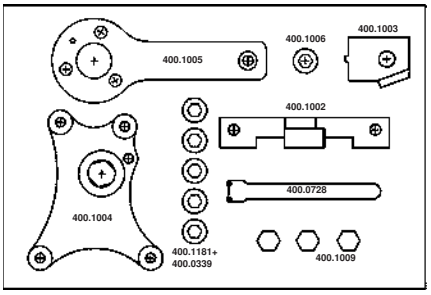
Engine Timing Tool Kit for Fiat / Ford

- For the professional engine repair
- For locking the cam shaft
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Fiat 500, Idea, Linea, Punto, Doblo, Panda, **Ford** Ka with 1.2 / 1.4 8V engines



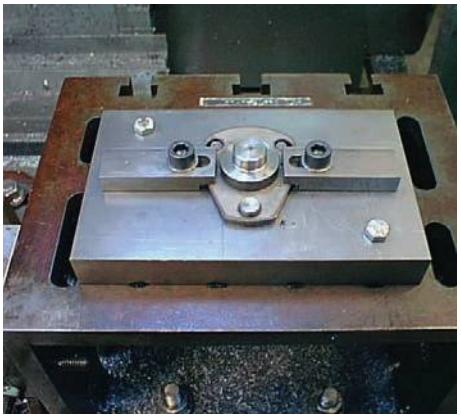




			kg	
400.1000	19 pcs	Engine Timing Tool Kit for Fiat / Ford	1,99	

consists of:

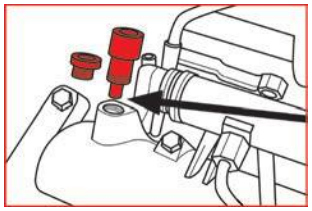
	x		g	
400.0728	1	Tensioner adjusting tool	30	
400.1002	1	Camshaft setting strap 110 mm	80	
400.1003	1	Camshaft locking tool M10	86	
400.1004	1	Camshaft cover locking tool	300	
400.1005	1	Crankshaft locking tool Ø 22 mm	7	
400.1006	1	Screw M10 x 20,0 mm	22	
400.1009	3	Locking screw M8 x 20.0 mm	11	
400.1181	5	Bolt M6x30	8	
400.0339	5	Washers M6	2	



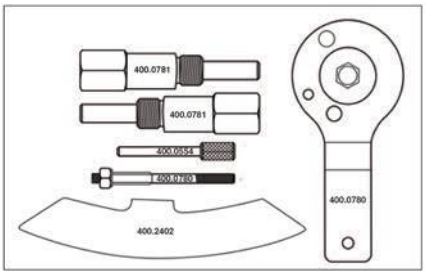
Engine Timing Tool Set for Alfa Romeo / Fiat

- For the professional engine repair
- For locking the crank shaft or cam shaft and injection pump
- Very high degree of accuracy
- In durable steel storage case

Application range: Fiat vehicles with 1.6 / 1.9 / 2.4 JTD Multi-jet diesel engines, **Alfa Romeo** with 2.0 JTD diesel engines (engine code: 939B3.000)







			kg	
400.2400	7 pcs	Engine Timing Tool Set for Alfa Romeo / Fiat	1,46	

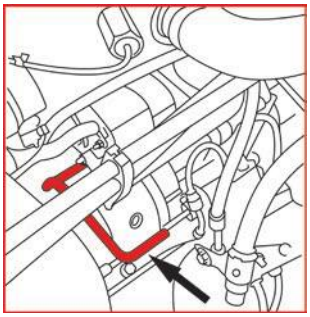
consists of:

		g	
400.0554	Locking pin Ø 6.0 mm	19	
400.0780	Crankshaft pulley setting tool (3)	260	
400.0781	Camshaft timing pin set (2)	180	
400.2402	Flywheel sprocket alignment tool 134 mm	130	

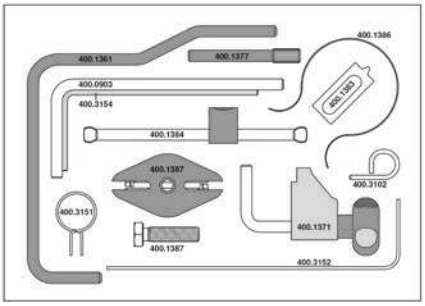
Engine Timing Tool Kit for Fiat / PSA

- For the professional engine repair
- For adjusting the valve controls
- For twin cam shaft systems with timing belt/chain combinations
- Very high degree of accuracy
- In durable steel storage case

Application range: Citroën and **Fiat** with 2.0 / 2.2 SOHC and DOHC engines (engine code: DW10 / DW12)







			g
400.3150	15 pcs	Engine Timing Tool Kit for Fiat / PSA	814

consists of:

		g
400.0903	Crankshaft locking pin	85
400.1361	Flywheel locking tool Ø 8 mm	146
400.1371	Belt retaining tool Ø 25 mm	99
400.1377	Tensioning locking pin Ø 8 mm	35
400.1383	Flywheel locking tool 50 mm	30
400.1384	Tensioner adjuster Ø 9 mm, 155 x 20 mm	118
400.1386	Belt retaining tool, Ø 70 mm	50
400.1387	Crankshaft pulley remover (4)	153
400.3102	Tensioner locking pin, 37 mm	4
400.3151	Crankshaft pulley centralisation tool	2
400.3152	Tensioner locking pin, 210 mm	7
400.3154	Auxiliary drive belt tensioner locking pin Ø 4.0 mm	18

Engine Timing Tool Kit for Fiat / Iveco / PSA

- For the professional engine repair
- For locking the cam shaft or fly wheels
- Very high degree of accuracy
- In durable steel storage case

Application range: Fiat Ducato 2.8 TD, JTD, **Iveco** 2.8 D, TDI, **Citroën** Relay, Jumper, **Peugeot** Boxer, Boxer II (engine code: 8140,43 / 8140.43N / 8140.43S / 8140,63)



			g
400.3000	5 pcs	Engine Timing Tool Kit for Fiat / Iveco / PSA	200

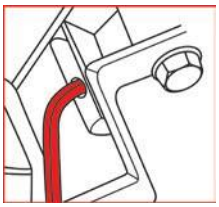
consists of:

		g
400.0165	Camshaft locking pin 5.0 mm	19
400.1377	Tensioning locking pin Ø 8 mm	35
400.1388	Tensioner adjuster Ø 30 mm	41
400.3001	Flywheel holding tool, 45 mm	106

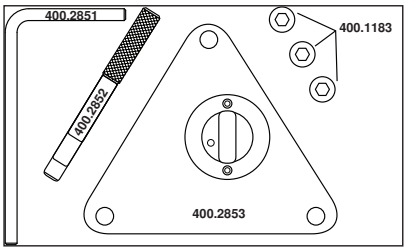
Engine Timing Tool Kit for Alfa Romeo / Fiat / Lancia

- For the professional engine repair
- Especially for chain-driven engines
- Very high degree of accuracy
- In durable steel storage case

Application range: Fiat Panda, Punto, 500, 500c, **Alfa Romeo** Mito, **Lancia** Ypsilon (engine code: 313A2.000)







			kg
400.2850	6 pcs	Engine Timing Tool Kit for Alfa Romeo / Fiat / Lancia	1,60

consists of:

	X		g
400.2851	1	Flywheel locking tool 115 mm	460
400.2853	1	Camshaft Locking Plate	490
400.2852	1	Pulley locking pin	550
400.1183	3	Camshaft alignment tool bolt M8 x 25 mm	15

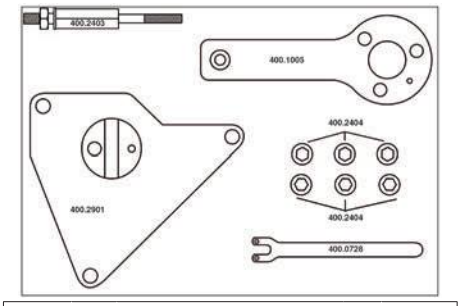
Engine Timing Tool Kit for Alfa Romeo / Fiat / Lancia

- For the professional engine repair
- For locking the crank shaft
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: AlfaRomeo Mito, Giulietta MultiAir 105 , MultiAir Turbo 135 , 163 / 170 (2009-2013) **Fiat** Punto Evo, Punto, Bravo (2009-2013) **Lancia** Delta (2010-2013) - (engine code: 955A6.000 / 955A7.000 / 955A8.000 / 955A2.000 / 940A2.000)







			kg
400.2900	10 pcs	Engine Timing Tool Kit for Alfa Romeo / Fiat / Lancia	1,40

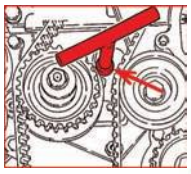
consists of:

	X		g
400.0728	1	Tensioner adjusting tool	30
400.1005	1	Crankshaft locking tool Ø 22 mm	7
400.2403	1	Stud assembly	33
400.2404	6	Socket head screw M8 x 20 mm	13
400.2901	1	Tensioner adjusting tool 130 mm	504

Tension pulley wrench for Fiat

- Eccentric
- Suitable for the assembly and disassembly of the timing belt
- For adjusting the timing belt tension on the automatic pulley
- Not suitable for balancing belts
- Locking handle
- With plastic-coated handle
- Chrome vanadium

Application range: Fiat Brava, Bravo and Marea with 1.8L 16V engines >1996, **Fiat** Barchetta Coupe 1.8L 16V engine >1996



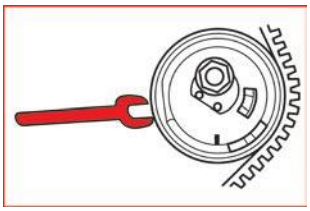


	Suitable for	Length mm	g
150.1254	Fiat	95,0	80

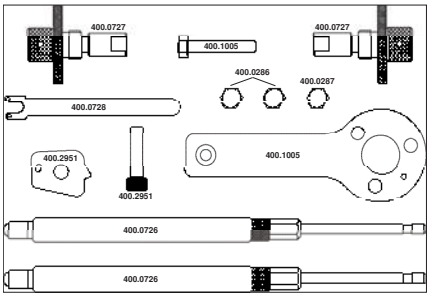
Engine Timing Tool Kit for Alfa Romeo / Fiat / Lancia

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Alfa Romeo Giulietta , MiTo **Fiat** 500, Brava, Bravo, Grande Punto, Marea, Marea Weekend, Marengo, Palio Weekend Panda, Punto, Punto Classic, Ritmo, Stilo, Idea **Lancia** Delta, Musa, Ypsilon



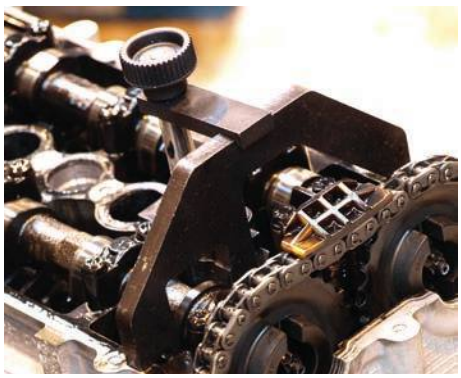




			kg	
400.2950	10 pcs	Engine Timing Tool Kit for Alfa Romeo / Fiat / Lancia	1,22	

consists of:

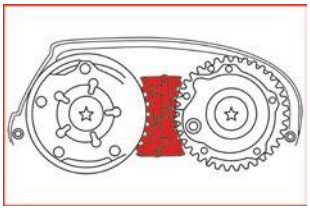
		g	
400.0726	Piston height gauge (2)	250	
400.2951	Camshaft pulley holding tool, 35 mm	126	
400.1005	Crankshaft locking tool Ø 22 mm	7	
400.0728	Tensioner adjusting tool	30	
400.0727	Camshaft locking tool (2) Ø 45 mm	130	
400.0286	Screw M8 x 35 mm (2)	16	
400.0287	Screw M8 x 40,0 mm	18	

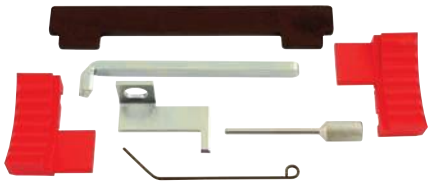


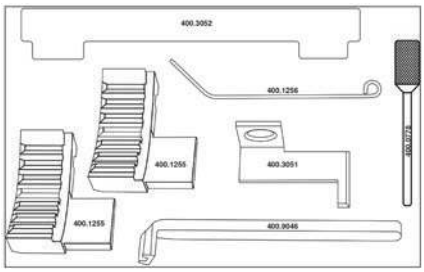
Engine Timing Tool Set for Alfa Romeo / Fiat / GM / Opel

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy

Application range: Chevrolet Cruze, Orlando with 1.4 / 1.6 / 1.8 engines, **Opel** Astra-G, Astra-H, Corsa-D, Insignia, Meriva, Signum, Vectra-C, Zafira-B, **Fiat** Croma, **Alfa Romeo** 159 (engine code: Z / A / 939A4.000)







			g	
400.3050	7 pcs	Engine Timing Tool Set for Alfa Romeo / Fiat / GM / Opel	424	

consists of:

		g	
400.0778	Locking pin, 80 mm	20	
400.1255	Camshaft locking tool for Opel (2), red	56	
400.1256	Tensioner locking pin for 400.1250	3	
400.3051	Flywheel holding tool	32	
400.3052	Camshaft Locking Bar	148	
400.9046	Flywheel locking tool, 130 mm	80	

FORD

Special socket with special profile

- special profile
- ideally suited to operate the new central screw connection on the central valve of the camshaft adjuster
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Extra short execution
- replaces the old 6-sided screw connection
- For manual operation
- Matt finish
- Chrome vanadium

Application range: Central bolting of the Vanos unit for **BMW**, **Mini** and the CVT module for **Ford**



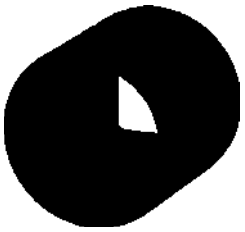
1/2"

	Length mm	Ø mm	g	
400.0002	30,0	30	103	

Special socket with special profile

- special profile
- ideally suited to operate the new central screw connection on the central valve of the camshaft adjuster
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Extra short execution
- replaces the old 6-sided screw connection
- For machinery usage
- Phosphate finish
- Chrome molybdenum

Application range: Central bolting of the Vanos unit for **BMW**, **Mini** and the CVT module for **Ford**



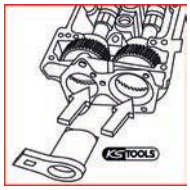
1/2"

	Length mm	Ø mm	g	
400.0003	30,0	30	95	

Camshaft locking tool for PSA

- For the professional engine repair
- To counter hold when loosening and tightening the cam shaft wheel screws
- Square drive 1/2"
- Very high degree of accuracy

Application range: Citroën, **Peugeot**, **Fiat**, **Ford**, **Alfa Romeo** with 1.3 JTD engines





1/2"

		g	
400.2429	Camshaft locking tool for PSA	485	

Vibration damper wrench for Volvo and Ford

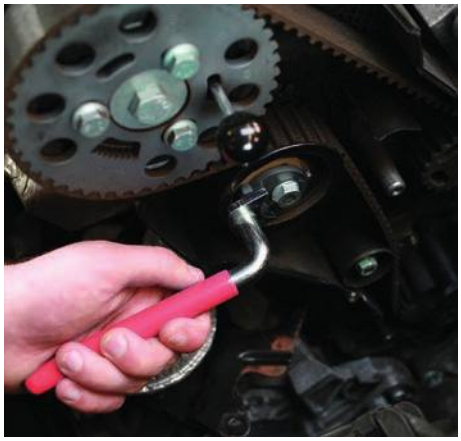
- For clamping the crank shaft when loosening and tightening the crankshaft central screw
- Prevents slipping whilst holding
- The handle can be lengthened via the 1/2" internal square
- Matt finish
- Chrome vanadium

Application range: Volvo C30, C70, S40, S60, S70, S80, V40, V50, V60, V70, XC60, XC70, XC90, XC90 (1.6 / 1.8 / 1.9 / 2.0 / 2.3 / 2.4 / 2.5 / 2.8 / 2.9 with 4- and 5-cylinder petrol and diesel engines as well as 2.0 and 2.4 with 5-cylinder diesel engines), **Ford** Focus, Galaxy, Kuga, Mondeo, S-Max with 2.5 Duratec (VI5) petrol engine (>2004)



1/2"

	Total length mm	g	
400.9070	255,0	550	



V belt tension wrench for Ford

- ideally suited for operating the belt tensioning device
- Problem free changing of the belt
- For hard to reach places
- Internal square drive adaptor
- Phosphate finish
- Chrome vanadium

Application range: Ford Duratorq 2.0 / 2.2 TDDi and TDCi (engine code: D5BA, D6BA, HJBA, HJBC, FMBA, N7BA, QJBB, QJBA)



	Length mm	g	
405.0090	470,0	150	

Engine Timing Tool Set for Ford / Volvo

- For the professional engine repair
- for holding the camshaft
- Very high degree of accuracy
- In durable steel storage case

Application range: Ford Focus (2005 – 2011), Galaxy (2006 – 2010), Kuga (2009 – 2013), Mondeo (2007 – 2010), S-Max (2006 – 2010), **Volvo** C30 (2006 – 2013), C70 (2006 – 2013), S40 (2003 – 2012), S60 (2003 – 2016), S80 (2003 – 2012), V40 (2012 – 2015), V50 (2004 – 2012), V70 (2002 – 2012), XC60 (2014 – 2016), XC70 (2002 – 2007) and XC90 (2002 – 2014) with 2.5 l petrol engines (engine code: HYDA / HYDB / HUBA / B5254T10 / B5254T11 / B5254T12 / B5254T14 / B5254T2 / B5254T3 / B5254T4 / B5254T5 / B5254T6 / B5254T7 / B5254T8 / B5254T9)



Pulley Wrench for Ford

- For the professional engine repair
- Simple assembly and disassembly of the crank shaft pulley wheel
- Special profile opposite to the screw head
- Long lever
- With plastic-coated handle
- Chrome vanadium
- Very high degree of accuracy

Application range: Ford Mondeo, Transit from 2001 onwards with 2.0 / 2.4 / 3.2 Duratorq TDCi engines





	Suitable for	Length mm	kg	
400.9003	Ford	600,0	1,55	

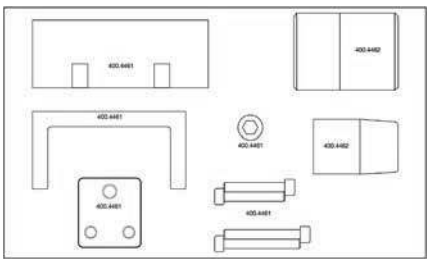
Camshaft ruler for Ford

- For the professional engine repair
- Ideally suited to fixing the cam shaft
- Simple handling
- Special tool steel
- Very high degree of accuracy

Application range: Ford B-MAX (>2012), C-MAX (>2010), Fiesta (>2013), Focus (>2011), Galaxy (>2010), Grand C-MAX (>2010), Kuga (>2013), Mondeo (>2010), S-MAX (>2010), Tourneo Connect (>2013), Transit Connect (>2013) for 1.6 l EcoBoost petrol engines (engine code: JQMA / JQMB / JTMA / IQJA / JQDA / JQDB / JTDA / JTDB / IQDA / IQDB / PNDA / XTDA / MUDA / JTJA / JTWA / JTWB / JTBA / JTBB / KGBA / JQGA)



		g	
400.4440	Camshaft ruler for Ford	340	



		kg	
400.4460	10 pcs	Engine Timing Tool Set for Ford / Volvo	1,99	

consists of:

		g	
400.4461	Camshaft holding bracket	490	
400.4462	Crankshaft front oil sealer cup	650	

Fan hub wrench for Ford

- For the professional engine repair
- Simple assembly and disassembly of the Visco coupling rotor
- Makes it possible to secure the pulley wheel of the water pump and at the same time release the heating filter
- Special tool steel
- Very high degree of accuracy

Application range:Ford Transit (2001 - 2006)



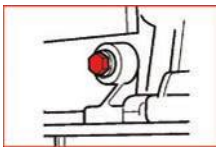
1/2"

	Suitable for	Pin key mm	g	
400.9014	Ford	69,0	133	

Engine Timing Tool Kit for Ford / Mazda

- For the professional engine repair
- For locking the crank shaft
- Especially for Ford 16V vehicles
- Very high degree of accuracy

Application range: Ford Fiesta 1.25 / 1.4 engines, Puma 1.4 / 1.7 engines, Mondeo 1.6 / 1.8 / 2.0 engines, **Mazda** 121 with 1.25 engines

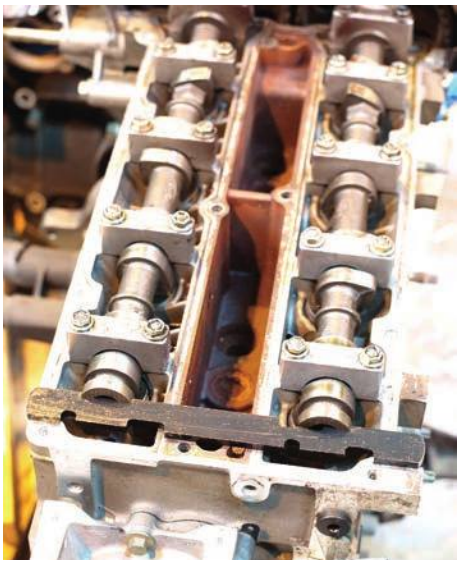




			g	
400.0175	2 pcs	Engine Timing Tool Kit for Ford / Mazda	175	

consists of:

		g	
400.0154	Camshaft setting strap 200 mm	130	
400.0155	Crankshaft locking pin Ø 5 mm	25	



Assembly tool set for Citroën / Ford / Land Rover / Mitsubishi / Peugeot

- For the professional engine repair
- For locking the cam shaft
- Secure hold thanks to optimal positioning
- Very high degree of accuracy
- In durable plastic storage case

Application range: Land Rover Discovery (2009 – 2015), Discovery Sport (2009 – 2015), Freelander 2 (2009 – 2015), eD4 (2009 – 2015), TD4 (2009 – 2015), TD4e (2009 - 2015), **Citroën** C5 (2002 – 2015), C5 II (2002 – 2015) , C5 III (2002 – 2015), C6 (2002 – 2015), C8 (2002 – 2015), C-Crosse (2002 - 2015), **Mitsubishi** Outlander DI-D (2007 – 2013), DI-DC (2007-2013), **Peugeot** 4007 (2000 – 2015), 407 (2000- 2015), 607 (2000 – 2015), 807 (2000 – 2015), 406 (2000 – 2015), 508 (2000 – 2015), 607 (2000 – 2015), GT (2000-2015), **Ford** Galaxy (2008 - 2015), Mondeo (2008 - 2015), S-Max (2008 - 2015) for 2.2 l diesel engines (engine codes: 224DT / DW12CTED4 224DT / DW12BTED4 224DT /4HX (DW12CT-ED4) / 4HP (DW12BTED4) / 4HX (DW12TED4) / 4HW (DW12TED4/L4) / 4HK, 4HN / DW12MTED4 (4HK) / DW12MT-ED4 (4HN) / DW12BTED4 (4HP) / DW12BTED4 (4HR) / DW-12BTED4 (4HT) / DW12TED4/L4 (4HW) / DW12BTED4 (4HS) / DW12ATED (4HZ) / DW12ATED4 (4HX) / DW12ATED (4HZ) / DW12CTED4 (4HL), KNBB, KNBA, KNWA, Q4BA)



			g
400.4450	3 pcs	Assembly tool set for Citroën / Ford / Land Rover / Mitsubishi / Peugeot	680

consists of:

		g
400.4451	Balance shaft locking tool	190
400.4452	Balance shaft tool	140
400.4453	Balance shaft adjustment tool	230

VCT Locking Tool Set for Ford

- For the professional engine repair
- for adjusting the pulleys of the variable camshaft control (VCT)
- Secure hold thanks to optimal positioning
- Very high degree of accuracy
- In durable plastic storage case

Application range: Ford B-MAX (2012 - 2015), C-MAX (2012 - 2015), EcoSport (2012 - 2015), Fiesta (2012 - 2015), Focus (2012 - 2015), Grand C-MAX (2012 - 2015), Grand Tourneo Connect (2012 - 2015), Tourneo Connect (2012 - 2015), Transit Connect (2012 - 2015), Transit Courier (2012 - 2015) with 1.0 l petrol engines (engine code: M1JA / SFJA / SFJB / M1DA / M2DA / P4JA / P4JB / XMJA / XMJB / M1JE / M2GA)



			kg
400.4425	2 pcs	VCT Locking Tool Set for Ford	1,33

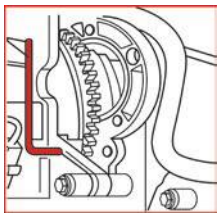
consists of:

		g
400.4427	VCT Locking tool - inlet	610
400.4428	VCT Locking tool - exhaust	610

Engine Timing Tool Set for Ford / Land Rover / PSA / Volvo

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy

Application range: Ford, **Land Rover**, **PSA**, **Volvo** vehicles with 2,0 / 2,2 DOHC Common-Rail Diesel engines





			g
400.1625	6 pcs	Engine Timing Tool Set for Ford / Land Rover / PSA / Volvo	473

consists of:

		g
400.0580	Crankshaft locking pin Ø 8,0 mm, 70 mm	30
400.0609	Flywheel locking tool 133 x 40 mm	308
400.0903	Crankshaft locking pin	85

Crankshaft locking pin for Ford

- For the professional engine repair
- special profile as counter profile
- for use with 400.9003 Pulley Retainer Wrench for Ford
- Chrome vanadium
- Very high degree of accuracy

Application range: Ford Transit (2011 - 2014) and Ranger (2011 - 2017) with 2.2 l and 3.2 l Duratorq TDCi engines with rear-wheel drive (engine code: CVRA / CVRB / CYRA / CURB / DRRA / DRRB / USRA / USRB / SAFA)



	L mm	g
400.4445	135,0	161

Oil pump locking tool for Ford / Jaguar / Land Rover

- especially suitable for staking out the oil pump
- Sturdy design
- Special tool steel

Application range: Ford Mondeo and Transit, **Jaguar** X400 and X Type for 2.0 l, 2.2 l, 2.4 l, 3.2 l diesel engines and 2.3 l petrol engines



		g
400.4455	Oil pump locking tool for Ford / Jaguar / Land Rover	60

Fuel pump locking tool for Ford Transit

- ideal for quick and easy locking of the injection pump wheel
- Saves a lot of time
- Sturdy design

Application range: Ford Transit Duratorq (>2006), Ranger Duratorq (>2011) with 2.2l and 3.2 l diesel engines

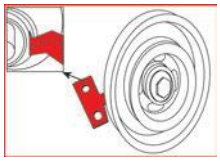


		g
400.0014	Fuel pump locking tool for Ford Transit	200

Engine Timing Tool Set for Ford / Volvo

- For the professional engine repair
- For locking the crank shaft and cam shaft
- For changing the timing belt
- Very high degree of accuracy

Application range: Ford B-Max (2012), C-Max (2010), Focus (2011), Galaxy (2010), Grand-C-Max (2010-2011), Mondeo (2010), S-Max (2010), **Volvo** S60 (2001), S80 (2010-2011), V60 (2011), V70 (2010-2011) with 1.6 Ti-VCT, 2.0 TDCI engines (engine code: IQJA / JQDA / JQDB / JQDA / JTDB / JQDA / JQDB / JTWA / JTWB / JQDA / JTDA / JTDB / JTBA / JTBB / B4164T3 / B4164T / B41464T2)





			g
400.4125	4 pcs	Engine Timing Tool Set for Ford / Volvo	498

consists of:

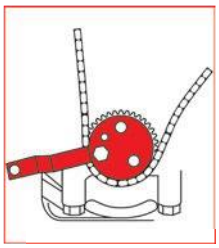
		g
400.0902	Camshaft locking tool	384
400.0905	Crankshaft locking pin, Ø 8 mm, 58 mm	33
400.4126	Crank shaft discs adjustment tool	50
400.4127	Pin for chain tensioner	10



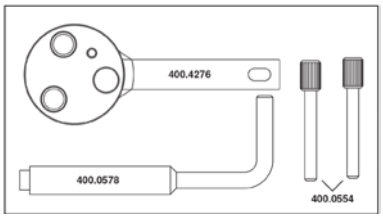
Engine Timing Tool Set for Ford

- For the professional engine repair
- For locking the cam shaft
- For changing the timing belt
- Very high degree of accuracy

Application range: Ford Transit 2.2 TDCi engines (> 2006), including Econetic and HDT engines







			g	
400.4275	4 pcs	Engine Timing Tool Set for Ford	415	

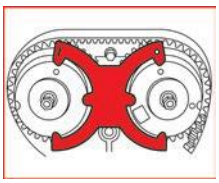
consists of:

	x		g	
400.0554	2	Locking pin Ø 6.0 mm	19	
400.0578	1	Flywheel locking pin	122	
400.4276	1	Crank shaft chain wheel holding tool	200	

Engine Timing Tool Set for Ford

- For the professional engine repair
- For locking the cam shaft
- For changing the timing belt
- Very high degree of accuracy

Application range: Ford Focus, C-Max with 1.6 TI-VCT and 2.0 TDCi engines (2003-2007) (engine code: HXDA / G6DA / G6DB / G6DC)





			kg	
400.0900	5 pcs	Engine Timing Tool Set for Ford	1,16	

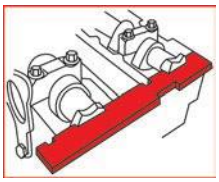
consists of:

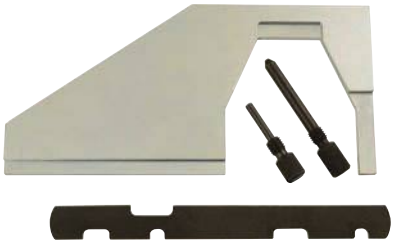
		g	
400.0901	Tensioning locking pin, 45 mm	4	
400.0902	Camshaft locking tool	384	
400.0903	Crankshaft locking pin	85	
400.0904	Camshaft/injection pump locking pin	26	
400.0905	Crankshaft locking pin, Ø 8 mm, 58 mm	33	

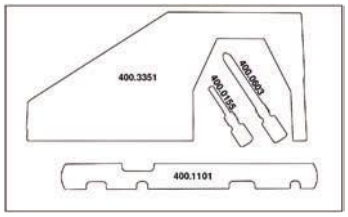
Engine Timing Tool Set for Ford / Mazda

- For the professional engine repair
- For locking the crank shaft and cam shaft
- For changing the timing belt
- Very high degree of accuracy

Application range: Ford Mondeo with 1.8 engines and **Mazda** 3, 5, 6, CV7, MX5, MPV, Tribute with Zetec/Duratec or DISI engines







			kg	
400.3350	4 pcs	Engine Timing Tool Set for Ford / Mazda	1,05	

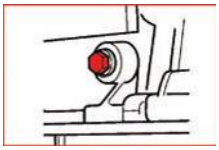
consists of:

		g	
400.0155	Crankshaft locking pin Ø 5 mm	25	
400.0603	Crankshaft timing pin, 83 mm	51	
400.1101	Camshaft setting strap, 200 mm	140	
400.3351	Camshaft Locking Plate, 220 mm	780	

Engine Timing Tool Set for Ford / Volvo

- For the professional engine repair
- For locking the crank shaft or cam shaft
- For changing the timing belt
- Very high degree of accuracy

Application range: Ford, **Volvo** with petrol engines





			g	
400.1525	4 pcs	Engine Timing Tool Set for Ford / Volvo	291	

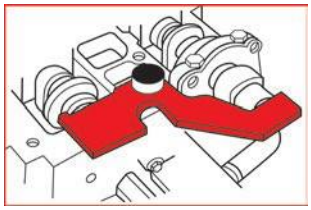
consists of:

		g	
400.0155	Crankshaft locking pin Ø 5 mm	25	
400.0603	Crankshaft timing pin, 83 mm	51	
400.0905	Crankshaft locking pin, Ø 8 mm, 58 mm	33	
400.1101	Camshaft setting strap, 200 mm	140	

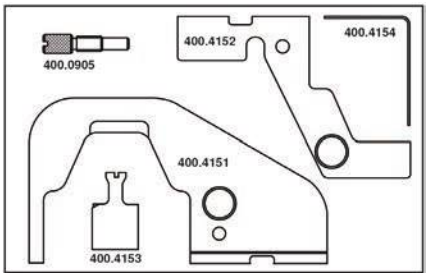
Engine Timing Tool Set for Ford

- For the professional engine repair
- For locking the crank shaft and cam shaft
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Ford Galaxy (2010), Mondeo (2010), S Max (2010), Focus (2011) with 2.0 SCTI Ecoboost / Ti-VCT engines (engine code: TNWA / TNWB / TNBA / TPWA / MGDA / XQDA)







			kg	
400.4150	5 pcs	Engine Timing Tool Set for Ford	2,18	

consists of:

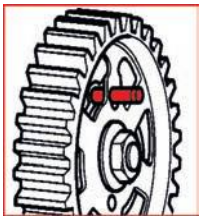
		g	
400.0905	Crankshaft locking pin, Ø 8 mm, 58 mm	33	
400.4151	Cam shaft alignment plate 198 mm	700	
400.4152	Cam shaft alignment plate 149 mm	250	
400.4153	Pin for aligning the cam shaft	30	
400.4154	Tension pin 2.0 mm	20	



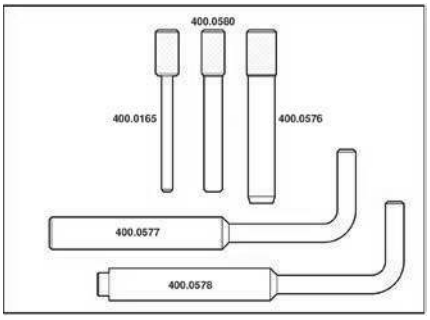
Engine Timing Tool Kit for Ford

- For the professional engine repair
- Expansion set for Ford Duratorque engines
- For locking the crank shaft and cam shaft
- For changing the timing belt or the chain
- Very high degree of accuracy
- In durable steel storage case

Application range: Ford Duratorq-engines Fiesta and Fusion with 1.4 D/TDCi engines with timing belt, Mondeo, Transit 2.0 D/Di with timing chain, Puma, Transit with 2.4 D/Di/TDDi with timing chain, Mondeo with 2.0 / 2.2 TDCi with timing chain, Transit (2000-2008) with 2.0 / 2.2 TDCi, 2.4 TDi with timing chain







			g	
400.0575	5 pcs	Engine Timing Tool Kit for Ford	319	

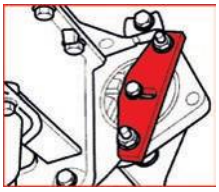
consists of:

		g	
400.0165	Camshaft locking pin 5.0 mm	19	
400.0576	Flywheel locking pin Ø 12 mm	64	
400.0577	Flywheel locking tool Ø 8 mm, 126 mm	124	
400.0578	Flywheel locking pin	122	
400.0580	Crankshaft locking pin Ø 8,0 mm, 70 mm	30	

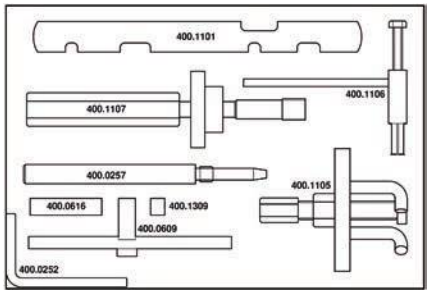
Engine Timing Tool Set for Ford

- For the professional engine repair
- For locking the cam shaft
- For changing the cam belt or the chain
- Very high degree of accuracy
- In durable steel storage case

Application range: Ford vehicles with 1.8 TDDI / TDCI engines







			kg	
400.1100	12 pcs	Engine Timing Tool Set for Ford	2,00	

consists of:

		g	
400.0252	Camshaft locking pin 6.0 mm	26	
400.1107	Chain cover alignment tool	497	
400.1106	Fuel sprocket remover for Ford, 106 mm	80	
400.1105	Camshaft sprocket puller	552	
400.1101	Camshaft setting strap, 200 mm	140	
400.0257	Crankshaft TDC locking pin Ø 5 mm, 160 mm	124	
400.0609	Flywheel locking tool 133 x 40 mm	308	
400.0616	Flywheel locking adaptor 50 mm	74	
400.1309	Flywheel locking adaptor 20 mm	13	



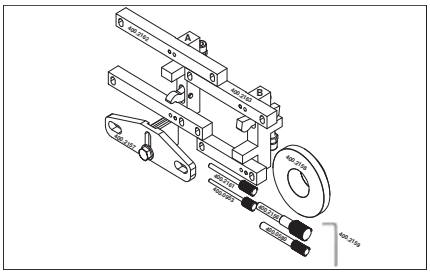


Engine Timing Tool Set for Ford

- For the professional engine repair
- For blocking the cam and crank shaft
- For changing the timing chain
- Very high degree of accuracy
- In durable steel storage case

Application range: Ford B-Max, C-Max, Fiesta, Focus, Grand C-Max, Transit Connect with 1.0 engines, 3 cylinder EcoBoost (>2012)





			kg	
400.2155	9 pcs	Engine Timing Tool Set for Ford	3,83	

consists of:

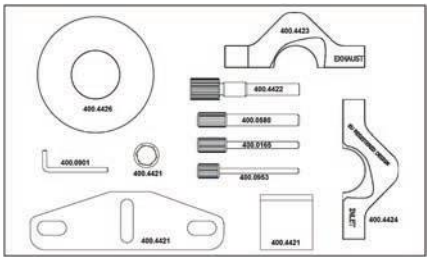
		g	
400.0580	Crankshaft locking pin Ø 8,0 mm, 70 mm	30	
400.0953	Auxilliary drive belt tensioning locking pin	13	
400.2156	GTDI crank shaft locking pin, Ø 8.0 mm	72	
400.2157	Flywheel locking tool, 132 mm	345	
400.2158	Shaft washer tool, round	45	
400.2159	Connection pin Ø 3,0 mm	3	
400.2161	Connection pin Ø 5,0 mm, 70 mm	30	
400.2162	Camshaft locking tool A	721	
400.2163	Camshaft locking tool B	721	

Engine Timing Tool Set for Ford

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy
- In durable plastic storage case

Application range: Ford B-Max (2012 - 2017), C-Max (2012 - 2017), EcoSport (2013 - 2017), Fiesta (2013 - 2017), Focus (2012 - 2017), Grande C-Max (2012 - 2017), Grande Tourneo Connect (2013 - 2017), Mondeo (2015 - 2017), Tourneo Connect (2013 - 2017), Transit Connect (2013 - 2017) and Transit Courier (2014 - 2017) with 1.0 l EcoBoost, Zetec S Red M1CA / M1CB / M1DA / M1DD / M1JA / M1JC / M1JE / M1JH / M1JJ / M2DA / M2DB / M2DC / M2GA / M2GB / P4JA / P4JB / P4JC / P4JD / SFCA / SFCB / SFCC / SFCD / SFDB / SFJA / SFJB / SFJC / SFJD / XMJA / XMJB / XMJC / XMJD / YYJA / YYJB)





			kg	
400.4420	9 pcs	Engine Timing Tool Set for Ford	1,60	

consists of:

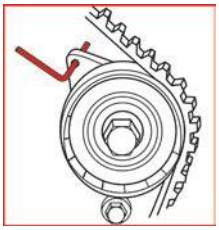
		g	
400.4421	Flywheel locking tool	350	
400.4422	Crankshaft timing pin	50	
400.0901	Tensioning locking pin, 45 mm	4	
400.0580	Crankshaft locking pin Ø 8,0 mm, 70 mm	30	
400.4423	Camshaft setting block exhaust	110	
400.4424	Camshaft locking block inlet	120	
400.4426	Oil seal installer	450	
400.0165	Camshaft locking pin 5.0 mm	19	
400.0953	Auxilliary drive belt tensioning locking pin	13	



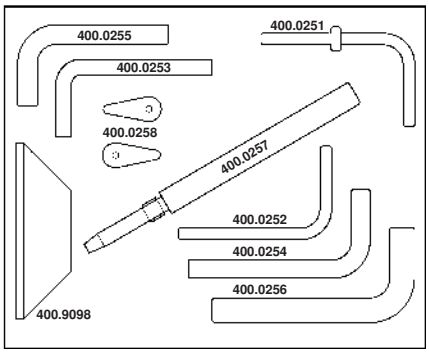
Engine Timing Tool Set for Ford

- For the professional engine repair
- For locking the crank shaft or cam shaft
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Ford vehicles with 1.6 / 1.8 / 2.5 diesel engines







			g	
400.0250	10 pcs	Engine Timing Tool Set for Ford	590	

consists of:

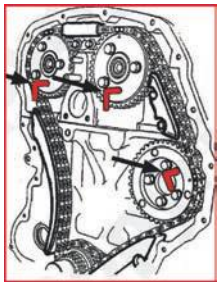
		g	
400.0251	Injection pump locking pin Ø 6.0 mm	30	
400.0252	Camshaft locking pin 6.0 mm	26	
400.0253	Locking pin Ø 8.0 mm	41	
400.0254	Locking pin Ø 9.5 mm	60	
400.0255	Locking pin Ø 10.0 mm	60	
400.0256	Locking pin Ø 12.0 mm	120	
400.0257	Crankshaft TDC locking pin Ø 5 mm, 160 mm	124	
400.0258	Shim tool (2)	3	
400.9098	Alignment ruler	86	

Engine Timing Tool Set for Ford

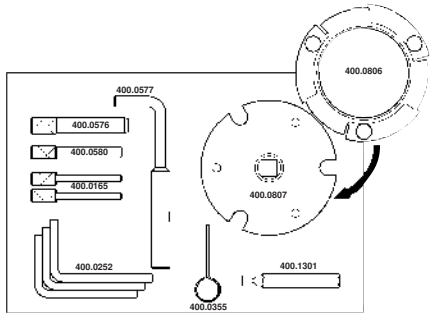
- For the professional engine repair
- For locking the cam shaft
- For changing the timing belt or the chain
- Very high degree of accuracy
- In durable steel storage case

Application range: Ford vehicles with chain-driven 2.0 / 2.4 Duratorq engines (2002-2010), also for the belt change on 1.4 / 1.6 engines. Contains tool for the removal and exchanging of fuel injection pumps on **Ford** 2.0 / 2.4 Duratorq Di/TDDI and 2.2 / 2.4 Duratorq TDCI diesel engines

Please carry out an up-to-date test for the specific vehicle on www.timingtool.de







			g	
400.0800	11 pcs	Engine Timing Tool Set for Ford	956	

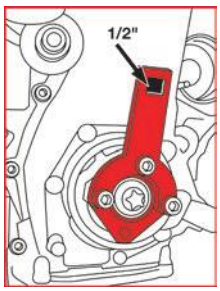
consists of:

	X		g	
400.0165	2	Camshaft locking pin 5.0 mm	19	
400.0252	2	Camshaft locking pin 6.0 mm	26	
400.0355	1	Tensioner pushrod retension pin	1	
400.0576	1	Flywheel locking pin Ø 12 mm	64	
400.0577	1	Flywheel locking tool Ø 8 mm, 126 mm	124	
400.0580	1	Crankshaft locking pin Ø 8,0 mm, 70 mm	30	
400.0806	1	Locking tool	45	
400.0807	1	Pump cover locking tool	2	
400.1301	1	Torx T45 bit, 75 mm	31	

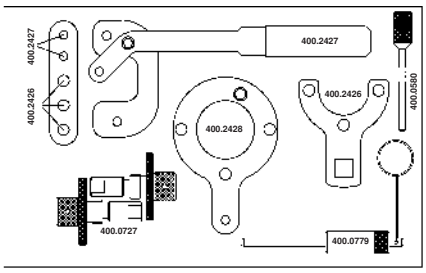
Engine Timing Tool Kit for Fiat / Ford / Opel / Suzuki

- For the professional engine repair
- Especially for chain-driven engines
- For changing the steering chain
- Very high degree of accuracy
- In durable steel storage case

Application range: Fiat 1.3 JTD, **Opel** 1.3 CDTI, **Ford** 1.3 TDCi, **Suzuki** (engine code: Z13DT)







			kg	
400.2425	12 pcs	Engine Timing Tool Kit for Fiat / Ford / Opel / Suzuki	1,12	

consists of:

		g	
400.0580	Crankshaft locking pin Ø 8,0 mm, 70 mm	30	
400.0727	Camshaft locking tool (2) Ø 45 mm	130	
400.0779	Crankshaft locking tool Ø 6 mm	80	
400.2426	Cranshaft pulley flange holding tool (4)	88	
400.2427	Timing chain tensioning tool (3)	171	
400.2428	Flywheel timing position tool	398	

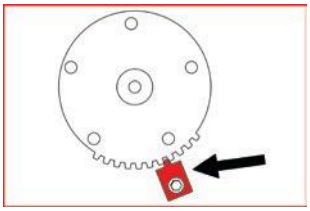




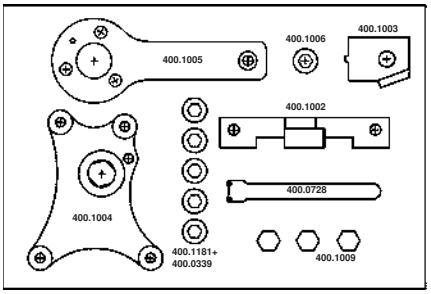
Engine Timing Tool Kit for Fiat / Ford

- For the professional engine repair
- For locking the cam shaft
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Fiat 500, Idea, Linea, Punto, Doblo, Panda, **Ford** Ka with 1.2 / 1.4 8V engines







			kg	
400.1000	19 pcs	Engine Timing Tool Kit for Fiat / Ford	1,99	

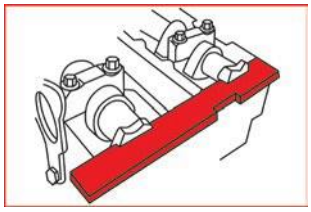
consists of:

	x		g	
400.0728	1	Tensioner adjusting tool	30	
400.1002	1	Camshaft setting strap 110 mm	80	
400.1003	1	Camshaft locking tool M10	86	
400.1004	1	Camshaft cover locking tool	300	
400.1005	1	Crankshaft locking tool Ø 22 mm	7	
400.1006	1	Screw M10 x 20,0 mm	22	
400.1009	3	Locking screw M8 x 20.0 mm	11	
400.1181	5	Bolt M6x30	8	
400.0339	5	Washers M6	2	

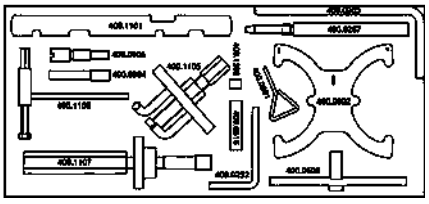
Engine Timing Tool Set for Ford

- For the professional engine repair
- Expansion set for use in connection with 400.0600
- For locking the crank shaft or cam shaft
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Ford Focus, C-Max with 1.6 Ti VCT engines, Fiesta, Fusion with 1.4 / 1.6 TDCi engines, Mondeo, S-Max, Transit Connect, Tourneo Connect with 1.8 TDdi / TDCi and 2.0 TDCi engines (engine code: HXADA)







			kg	
400.1200	17 pcs	Engine Timing Tool Set for Ford	2,26	

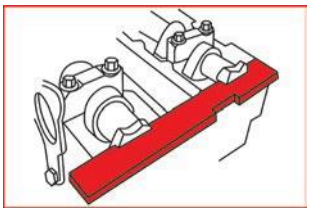
consists of:

		g	
400.0252	Camshaft locking pin 6.0 mm	26	
400.1107	Chain cover alignment tool	497	
400.1106	Fuel sprocket remover for Ford, 106 mm	80	
400.1105	Camshaft sprocket puller	552	
400.1101	Camshaft setting strap, 200 mm	140	
400.0905	Crankshaft locking pin, Ø 8 mm, 58 mm	33	
400.0904	Camshaft/injection pump locking pin	26	
400.0903	Crankshaft locking pin	85	
400.0902	Camshaft locking tool	384	
400.0901	Tensioning locking pin, 45 mm	4	
400.0257	Crankshaft TDC locking pin Ø 5 mm, 160 mm	124	
400.0609	Flywheel locking tool 133 x 40 mm	308	
400.0616	Flywheel locking adaptor 50 mm	74	
400.1309	Flywheel locking adaptor 20 mm	13	

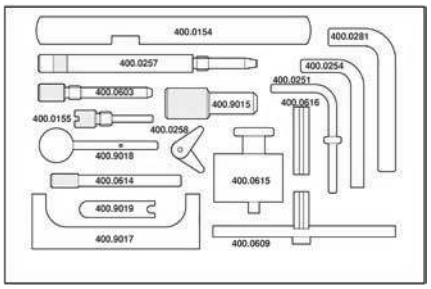
Engine Timing Tool Kit for Ford / Mazda

- For the professional engine repair
- For locking the crank shaft or cam shaft
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Ford and **Mazda** vehicles with 1.2 / 1.3 / 1.4 / 1.6 SOHC and 1.6 / 1.8 / 2.0 16V petrol engines, 1.8 / 1.9 D/TD / 1.9 TDi / 2.5 TDi diesel engines and Zetec engines







			kg	
400.0600	20 pcs	Engine Timing Tool Kit for Ford / Mazda	1,48	

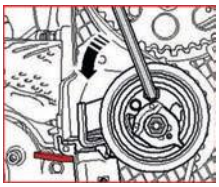
consists of:

		g	
400.0154	Camshaft setting strap 200 mm	130	
400.0155	Crankshaft locking pin Ø 5 mm	25	
400.0251	Injection pump locking pin Ø 6.0 mm	30	
400.0254	Locking pin Ø 9.5 mm	60	
400.0257	Crankshaft TDC locking pin Ø 5 mm, 160 mm	124	
400.0258	Shim tool (2)	3	
400.0281	Timing pin Ø 12,7 mm	569	
400.0603	Crankshaft timing pin, 83 mm	51	
400.0609	Flywheel locking tool 133 x 40 mm	308	
400.0614	Locking pin, Ø 8.25 mm	40	
400.0615	Crankshaft pulley setting tool, 60 mm	190	
400.0616	Flywheel locking adaptor 50 mm	74	
400.9015	Injection pump locking pin Ø 15.4 mm	126	
400.9017	Camshaft setting strap for VAG	120	
400.9018	Injection pump wheel - locking pin Ø 6.0 mm	20	
400.9019	Tensioner locking tool	20	

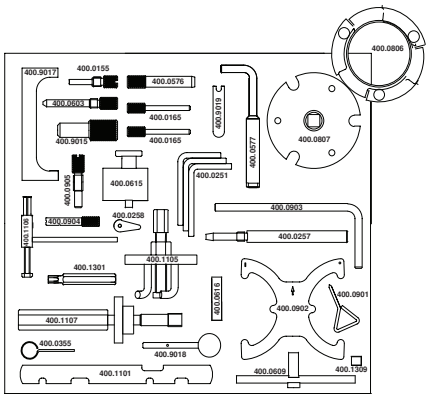
Engine Timing Tool Kit for Ford / VAG

- For the professional engine repair
- For locking the cam shaft
- For changing the timing belt or the chain
- Very high degree of accuracy
- In durable steel storage case

Application range: Ford vehicles with TDDi / TDCi and Duratorq engines and **Ford** Galaxy with similar engines to **Volkswagen**







			kg	
400.1300	34 pcs	Engine Timing Tool Kit for Ford / VAG	6,68	

consists of:

		g	
400.0155	Crankshaft locking pin Ø 5 mm	25	
400.9019	Tensioner locking tool	20	
400.9018	Injection pump wheel - locking pin Ø 6.0 mm	20	
400.9017	Camshaft setting strap for VAG	120	
400.9015	Injection pump locking pin Ø 15.4 mm	126	
400.1309	Flywheel locking adaptor 20 mm	13	
400.1301	Torx T45 bit, 75 mm	31	
400.1107	Chain cover alignment tool	497	
400.1106	Fuel sprocket remover for Ford, 106 mm	80	
400.1105	Camshaft sprocket puller	552	
400.1101	Camshaft setting strap, 200 mm	140	
400.0905	Crankshaft locking pin, Ø 8 mm, 58 mm	33	
400.0904	Camshaft/injection pump locking pin	26	
400.0903	Crankshaft locking pin	85	
400.0902	Camshaft locking tool	384	
400.0901	Tensioning locking pin, 45 mm	4	
400.0807	Pump cover locking tool	2	
400.0806	Locking tool	45	

consists of:

		g	
400.0616	Flywheel locking adaptor 50 mm	74	
400.0615	Crankshaft pulley setting tool, 60 mm	190	
400.0609	Flywheel locking tool 133 x 40 mm	308	
400.0603	Crankshaft timing pin, 83 mm	51	
400.0165	Camshaft locking pin 5.0 mm	19	
400.0251	Injection pump locking pin Ø 6.0 mm	30	
400.0257	Crankshaft TDC locking pin Ø 5 mm, 160 mm	124	
400.0258	Shim tool (2)	3	
400.0355	Tensioner pushrod retension pin	1	
400.0576	Flywheel locking pin Ø 12 mm	64	
400.0577	Flywheel locking tool Ø 8 mm, 126 mm	124	
400.0578	Flywheel locking pin	122	

GM

Engine Timing Tool Set for GM / Opel

- For the professional engine repair
- For locking the cam shaft or chain tensioner
- Very high degree of accuracy

Application range: Opel Astra-G, Vectra-B, Vectra-C, Signum, Zafira-A (engine code: Z22SE / Z22YH)



			g	
400.2325	2 pcs	Engine Timing Tool Set for GM / Opel	787	

consists of:

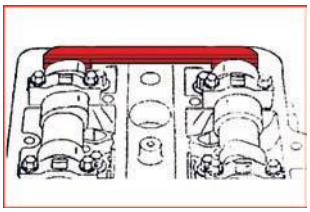
		g	
400.2326	Camshaft locking tool, 260 mm	786	
400.2327	Timing chain tensioner locking pin	1	



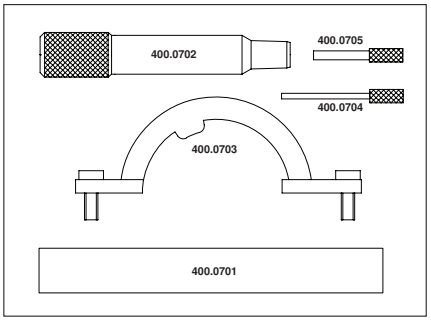
Engine Timing Tool Set for GM / Isuzu / Opel / Saab

- For the professional engine repair
- Especially for chain-driven vehicles
- For locking dual cam shafts
- Very high degree of accuracy
- In durable steel storage case

Application range: Opel Agila, Astra-G, Astra-H, Combo-C, Corsa-B, Corsa-C, Corsa-D, Meriva-A, Tigra-B (1993-2010) with 1.0 12V / 1.2 16V engines (engine code: X10XE / Z10XE / Z10 XEP / X12XE / Z12XE / Z12 XEP / Z14XEL / Z14XEA) and similar **Isuzu**- and **Saab**-engines







400.0700	5 pcs	Engine Timing Tool Set for GM / Isuzu / Opel / Saab	1060	

consists of:

400.0701	Camshaft timing tool 155 mm	120	
400.0702	Flywheel TDC locking pin Ø 12 mm, 113 mm	205	
400.0703	Camshaft position (CMP) sensor disc setting tool	110	
400.0704	Tensioner retaining pin, Ø2,5mm	5	
400.0705	Tensioner retaining pin, Ø4,0mm	5	

Engine Timing Tool Set for GM / Opel

- For the professional engine repair
- Expansion set
- For engines without thread attachment bore holes
- Very high degree of accuracy

Application range: Opel Astra-F, Astra-G, Cavalier, Vectra-A (1997 - 2001) with 1.7 engines (engine code: 17DR / X17DT / DTL)



400.0650	5 pcs	Engine Timing Tool Set for GM / Opel	380	

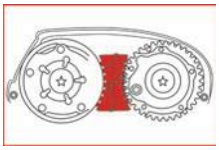
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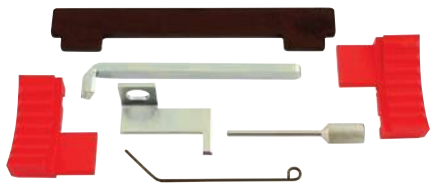
400.0651	Camshaft locking tool (3), 110 x 50 mm	169	
400.0652	Flywheel TDC indicator	80	
400.0653	Flywheel locking pin with spring on ring, 103 mm	79	

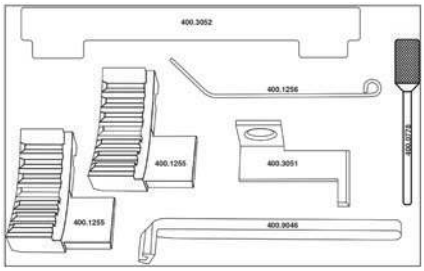
Engine Timing Tool Set for Alfa Romeo / Fiat / GM / Opel

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy

Application range: Chevrolet Cruze, Orlando with 1.4 / 1.6 / 1.8 engines, **Opel** Astra-G, Astra-H, Corsa-D, Insignia, Meriva, Signum, Vectra-C, Zafira-B, **Fiat** Croma, **Alfa Romeo** 159 (engine code: Z / A / 939A4.000)







400.3050	7 pcs	Engine Timing Tool Set for Alfa Romeo / Fiat / GM / Opel	424	

consists of:

400.0778	Locking pin, 80 mm	20	
400.1255	Camshaft locking tool for Opel (2), red	56	

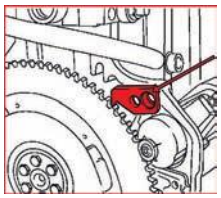
consists of:

400.1256	Tensioner locking pin for 400.1250	3	
400.3051	Flywheel holding tool	32	
400.3052	Camshaft Locking Bar	148	
400.9046	Flywheel locking tool, 130 mm	80	

Flywheel locking tool for GM / Opel

- For locking the fly wheels
- For easily attaching to one of the small fixing pins next to the fly wheel
- Special tool steel

Application range: for all **Opel** and **GM** 4 and 6 cylinder CIH, 24V and OHC engines





400.9045	Flywheel locking tool for GM / Opel	80	



HONDA

Crankshaft pulley retainer for Honda

- 6 point
- ideally suited for holding the crankshaft belt pulleys in place when loosening the fastening screw
- Maximum holding force
- Very high degree of accuracy

Application range: Honda Prelude, Accura V6



1/2"

	mm	Length mm	kg	
400.0015	45	210,0	0,51	

Crankshaft pulley retainer for Honda

- 6 point
- ideally suited for holding the crankshaft belt pulleys in place when loosening the fastening screw
- Maximum holding force
- Very high degree of accuracy
- One component handle



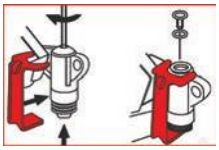
	mm	Length mm	kg	
400.0016	50	715,0	1,85	



Engine Timing Tool Set for Honda

- For the professional engine repair
- For locking the belt drive on twin-cam, dual-cam shaft engines
- Very high degree of accuracy

Application range: Honda Civic, Accord, Prelude, Shuttle, Odyssey (engine code: F18A3 / F18B2 / F18B4 / F20AF / F20B3 / F20B5 / F20B6 / F20B7 / F20Z1 / F20Z2 / F22Z2 / F22B5 / F22B8 / F22A2 / H22A5 / H22A7 / H22A8 / F23A7 / F23Z5 / H23A2 / H23A3 / J30A1 / B16A2 / F18A3)





			g
400.2525	5 pcs	Engine Timing Tool Set for Honda	194

consists of:

	x		g
400.0165	2	Camshaft locking pin 5.0 mm	19
400.0753	1	Locking screw M6 x 30.0 mm	10
400.2526	1	Tensioner locking pin tool	60
400.2527	1	Balance shaft locking tool	46

HYUNDAI

Injection pump pinion puller for Hyundai / Kia

- especially suitable for removing the high-pressure injection pump pinion
- Sturdy design
- Very high degree of accuracy
- Special tool steel

Application range: Hyundai and **Kia** with 2.0 l or 2.2 l CRDI engines with timing chain



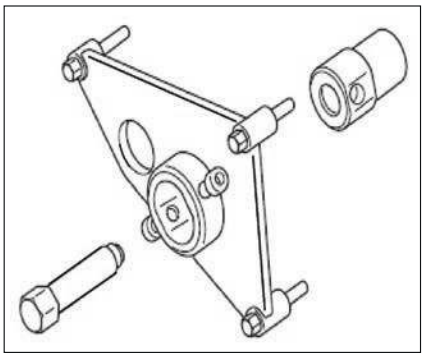
		g
400.0017	Injection pump pinion puller for Hyundai / Kia	350

Injection pump pinion puller set for Hyundai / Kia

- especially suitable for removing the high-pressure injection pump pinion
- Sturdy design
- Very high degree of accuracy
- Special tool steel
- In durable plastic storage case

Application range: Hyundai and **Kia** (2001 - 2016) with 1.1 l, 1.4 l, 1.5 l, 1.6 l or 1.7 l CRD engines with timing chain





			kg	
400.0018	8 pcs	Injection pump pinion puller set for Hyundai / Kia	1,53	

consists of:

		g	
400.0078	Pressure screw	122	
400.0079	Puller plate with screws	900	
400.0083	Injection pump pinion puller	216	

Engine Timing Tool Set for Hyundai / Mitsubishi / Volvo

- For the professional engine repair
- For actuating belt tensioners
- Very high degree of accuracy

Application range: universal usage on many **Hyundai**, **Mitsubishi**, **Volvo** vehicles



			g	
400.0075	2 pcs	Engine Timing Tool Set for Hyundai / Mitsubishi / Volvo	131	

consists of:

		g	
400.0076	Tensioning locking pin, 250 mm	630	
400.0077	Belt tensioner wrench	210	

ISUZU

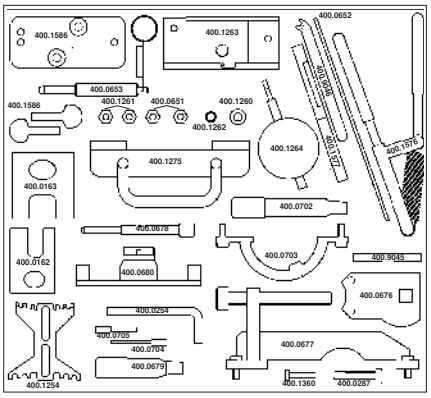
Engine Timing Tool Kit for Isuzu / GM / Opel / Saab

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Opel Agila, Ascona, Astra-F, Astra-G, Corsa-B, Corsa-C, Frontera, Kadett-E, Midi, Monterey, Omega-B, Sintra, Vectra-A, Vectra-B, Vectra-C, Zafira and similar **Isuzu** and **Saab** vehicles







			kg	
400.1575	32 pcs	Engine Timing Tool Kit for Isuzu / GM / Opel / Saab	3,91	

consists of:

		g	
400.0162	Camshaft locking tool for Opel / Saab, blue	186	
400.0163	Camshaft locking tool for GM / Opel, gold	143	
400.0254	Locking pin Ø 9.5 mm	60	
400.0287	Screw M8 x 40,0 mm	18	
400.0652	Flywheel TDC indicator	80	
400.0653	Flywheel locking pin with spring on ring, 103 mm	79	
400.0676	Camshaft turning tool	7	
400.0677	Bracket for timing adjustment wrench	111	
400.0678	Injection pump locking pin, Ø 6 mm, 110 mm	41	
400.0679	Flywheel TDC locking pin Ø 12 mm, 86 mm	160	
400.0680	Camshaft locking tool 120 mm	322	
400.0702	Flywheel TDC locking pin Ø 12 mm, 113 mm	205	
400.0703	Camshaft position (CMP) sensor disc setting tool	110	
400.0704	Tensioner retaining pin, Ø2,5mm	5	
400.0705	Tensioner retaining pin, Ø4,0mm	5	
400.1254	Flywheel locking tool, 70 x 54 mm	23	
400.1260	Screw for 400.1263	9	
400.1261	Locking screw M6 x 10.0 mm	4	
400.1262	Special tip	10	
400.1263	Mounting bracket assy	330	
400.1275	Camshaft setting strap (TDC)	404	
400.1360	Flywheel locking tool Ø 7 mm	82	

consists of:

		g	
400.1576	Belt tensioner adjuster	297	
400.1577	Camshaft setting strap 140 mm	99	
400.1586	Camshaft position locking tool (5)	170	
400.9045	Flywheel locking tool, 62 x 30 mm	80	
400.9046	Flywheel locking tool, 130 mm	80	
400.1264	Dial gauge Ø 51 (10 x 0.01 mm) 103 mm	161	

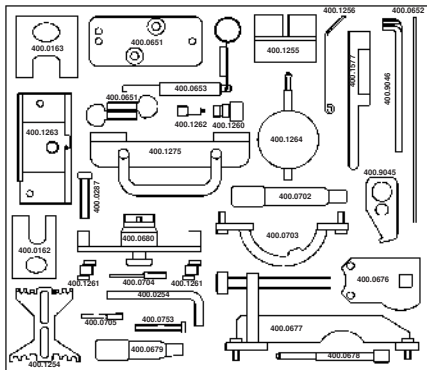
Engine Timing Tool Set for GM / Isuzu / Opel / Saab

- For the professional engine repair
- For locking the cam shaft
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Opel Agila, Ascona, Astra-F, Astra-G, Astramax, Belmont, Cavalier, Corsa-B, Corsa-C, Frontera, Kadett-E, Midi, Monterey, Omega-B, Sintra, Vectra-A, Vectra-B, Vectra-C, Zafira with petrol and diesel engines including Eco-Tec engines and similar **Isuzu** and **Saab** engines







			kg	
400.1250	36 pcs	Engine Timing Tool Set for GM / Isuzu / Opel / Saab	6,18	

consists of:

	X		g	
400.0162	1	Camshaft locking tool for Opel / Saab, blue	186	
400.0163	1	Camshaft locking tool for GM / Opel, gold	143	
400.0254	1	Locking pin Ø 9.5 mm	60	
400.0287	1	Screw M8 x 40,0 mm	18	
400.0651	1	Camshaft locking tool (3), 110 x 50 mm	169	
400.0652	1	Flywheel TDC indicator	80	
400.0653	1	Flywheel locking pin with spring on ring, 103 mm	79	
400.0676	1	Camshaft turning tool	7	
400.0677	1	Bracket for timing adjustment wrench	111	
400.0678	1	Injection pump locking pin, Ø 6 mm, 110 mm	41	
400.0679	1	Flywheel TDC locking pin Ø 12 mm, 86 mm	160	
400.0680	1	Camshaft locking tool 120 mm	322	
400.0702	1	Flywheel TDC locking pin Ø 12 mm, 113 mm	205	

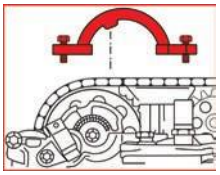
consists of:

	X		g	
400.0703	1	Camshaft position (CMP) sensor disc setting tool	110	
400.0704	1	Tensioner retaining pin, Ø2,5mm	5	
400.0705	1	Tensioner retaining pin, Ø4,0mm	5	
400.0753	1	Locking screw M6 x 30.0 mm	10	
400.1254	1	Flywheel locking tool, 70 x 54 mm	23	
400.1255	1	Camshaft locking tool for Opel (2), red	56	
400.1256	1	Tensioner locking pin for 400.1250	3	
400.1260	1	Screw for 400.1263	9	
400.1261	4	Locking screw M6 x 10.0 mm	4	
400.1262	1	Special tip	10	
400.1263	1	Mounting bracket assy	330	
400.1264	1	Dial gauge Ø 51 (10 x 0.01 mm) 103 mm	161	
400.1275	1	Camshaft setting strap (TDC)	404	
400.9045	1	Flywheel locking tool, 62 x 30 mm	80	
400.9046	1	Flywheel locking tool, 130 mm	80	
400.1577	1	Camshaft setting strap 140 mm	99	

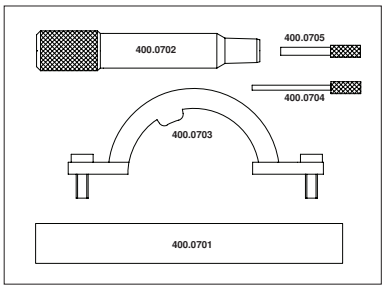
Engine Timing Tool Set for GM / Isuzu / Opel / Saab

- For the professional engine repair
- Especially for chain-driven vehicles
- For locking dual cam shafts
- Very high degree of accuracy
- In durable steel storage case

Application range: Opel Agila, Astra-G, Astra-H, Combo-C, Corsa-B, Corsa-C, Corsa-D, Meriva-A, Tigra-B (1993-2010) with 1.0 12V / 1.2 16V engines (engine code: X10XE / Z10XE / Z10 XEP / X12XE / Z12XE / Z12 XEP / Z14XEL / Z14XEA) and similar **Isuzu**- and **Saab**-engines







			g	
400.0700	5 pcs	Engine Timing Tool Set for GM / Isuzu / Opel / Saab	1060	

consists of:

		g	
400.0701	Camshaft timing tool 155 mm	120	
400.0702	Flywheel TDC locking pin Ø 12 mm, 113 mm	205	
400.0703	Camshaft position (CMP) sensor disc setting tool	110	
400.0704	Tensioner retaining pin, Ø2,5mm	5	
400.0705	Tensioner retaining pin, Ø4,0mm	5	

Camshaft locking device for GM / Isuzu / Opel / Saab

- For the professional engine repair
- Clamping device for a secure hold to change the timing belt
- Aluminium
- Very high degree of accuracy

Application range: Opel Tigra 2004 - 2008 (engine code: Z18XE) with 1.8 engines, Frontera, Frontera-B and Sintra-A, Omega-B 1995 - 2004 (engine code: X22SE, X33XE, YEESE, Y22XE Z22XE) with 2.2 16V engines. **Saab** 9-3 1996 - 2005 with 1.8 engines (engine code: Z18XE) and similar **Isuzu** and **Saab** engines



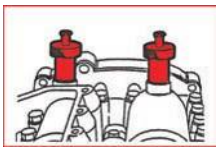
400.0162	Camshaft locking device for GM / Isuzu / Opel / Saab	186	

IVECO

Engine Timing Tool Set for Fiat / Iveco

- For the professional engine repair
- For locking the crank shaft and cam shaft
- For changing the timing belt
- Very high degree of accuracy

Application range: Fiat Ducato, **Iveco** Daily with 2.3 / 3.0 JTF engines (engine code: F1AE0481C, F1AE0481D, F1AE0481N, F1CE0481D)





400.0400	5 pcs	Engine Timing Tool Set for Fiat / Iveco	518

consists of:

400.0161	Crankshaft TDC locking pin, 102 mm	75
400.0165	Camshaft locking pin 5.0 mm	19
400.0401	Camshaft aligning tool (2)	70
400.0402	Crankshaft timing pin, Fiat	200



Engine Timing Tool Kit for Fiat / Iveco / PSA

- For the professional engine repair
- For locking the cam shaft or fly wheels
- Very high degree of accuracy
- In durable steel storage case

Application range: Fiat Ducato 2.8 TD, JTD, **Iveco** 2.8 D, TDI, **Citroën** Relay, Jumper, **Peugeot** Boxer, Boxer II (engine code: 8140,43 / 8140.43N / 8140.43S / 8140,63)



400.3000	5 pcs	Engine Timing Tool Kit for Fiat / Iveco / PSA	200

consists of:

400.0165	Camshaft locking pin 5.0 mm	19
400.1377	Tensioning locking pin Ø 8 mm	35
400.1388	Tensioner adjuster Ø 30 mm	41
400.3001	Flywheel holding tool, 45 mm	106

JAGUAR

Injection Pump Wheel Removal Tool for Jaguar / Land Rover

- Ideal for securing the injection pump for adjustment work on engines
- Simple handling
- Special tool steel

Application range: Jaguar XF, XJ, **Land Rover** Discovery 4, Range Rover and Range Rover Sports (2009 - 2014) with 3.0 l diesel engines



400.0004	Injection Pump Wheel Removal Tool for Jaguar / Land Rover	152	

Oil pump locking tool for Ford / Jaguar / Land Rover

- especially suitable for staking out the oil pump
- Sturdy design
- Special tool steel

Application range: Ford Mondeo and Transit, **Jaguar** X400 and X Type for 2.0 l, 2.2 l, 2.4 l, 3.2 l diesel engines and 2.3 l petrol engines



400.4455	Oil pump locking tool for Ford / Jaguar / Land Rover	60	

Flywheel locking tool set for Jaguar / Land Rover

- suitable for locking the flywheel
- for mounting and dismounting the front pulley screw
- Secure hold thanks to optimal positioning
- Very high degree of accuracy

Application range: Jaguar F-Type (2013 - 2017), XF (2009 - 2015), XFR/-S (2009 - 2015), XJ (2010 - 2017), XJR (2013 - 2017), XK8 (2009 - 2015), XKR (2009 - 2015), **Land Rover** Discovery (2009 - 2016), Range Rover (2009 - 2017) and Range Rover Sport (2009 - 2017) with 5.0 l petrol engines (engine code: AJ-133/508PS / AJ-133/508PN / 508PS / 508PN)



400.4470	5 pcs	Flywheel locking tool set for Jaguar / Land Rover	863

consists of:

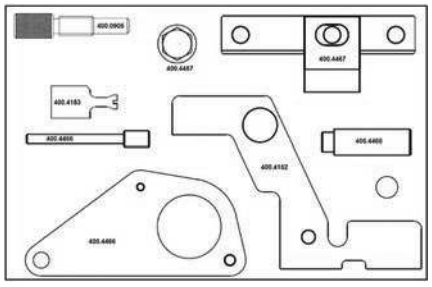
400.4471	Engine support beam with screws	380
400.4472	Locking tool, slotted	208
400.4473	Locking tool with wedge	181

Engine Timing Tool Set for Jaguar / Land Rover

- For the professional engine repair
- For changing the timing chain
- Very high degree of accuracy
- In durable steel storage case

Application range: Jaguar XE (2015 - 2016), XF (2012 - 2015), XJ (2013 - 2016), **Land Rover** Discovery Sport (2015 - 2016), Freelander 2 (2012 - 2015) and Range Rover Evoque (2011 - 2016) with 2.0 l GTDi and Si4 diesel engines (engine code: 204PT)





400.4465	8 pcs	Engine Timing Tool Set for Jaguar / Land Rover	2,65

consists of:

		g	
400.4152	Cam shaft alignment plate 149 mm	250	
400.4466	Crankshaft alignment tool plate with guides and pins	450	
400.4153	Pin for aligning the cam shaft	30	
400.4467	Flywheel locking tool	700	
400.0905	Crankshaft locking pin, Ø 8 mm, 58 mm	33	

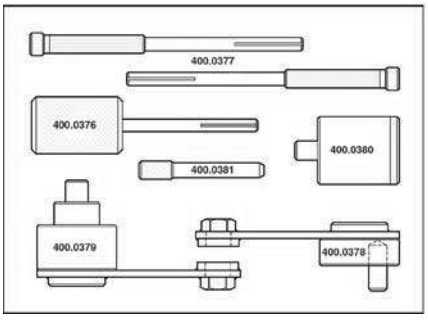


Engine Timing Tool Kit for Land Rover / Jaguar

- For the professional engine repair
- For locking the cam shaft
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Land Rover Discovery, Range Rover Sport with 2.7 TDV6 engines and **Jaguar** S Type with TDVi V6 engines, including fly wheel locking tool for automatic and manual transmissions (engine code: 276D T)





		g	
400.0375	7 pcs	Engine Timing Tool Kit for Land Rover / Jaguar	912	

consists of:

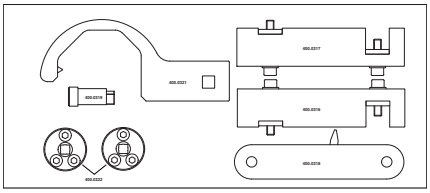
		g	
400.0376	Camshaft sprocket locking tool	165	
400.0377	Camshaft sprocket locking pin (2)	68	
400.0378	Flywheel locking tool-automatic tensioner	195	
400.0379	Flywheel locking tool-manual tensioner	268	
400.0380	Flywheel locking tool Ø 30 mm	222	
400.0381	Coolant Pump tensioning locking pin	30	

Engine Timing Tool Kit for Land Rover / Jaguar

- For the professional engine repair
- For locking the cam shaft
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Land Rover Discovery 4, Range Rover, Range Rover Sport with 5.0 l engines (engine code: 508PN/508PS) and **Jaguar** XF, XFR, XJ XK8, XKR with 5.0 l engines (engine code: AJ-133/508PN/AJ-133/508PS)





			kg	
400.0315	7 pcs	Engine Timing Tool Kit for Land Rover / Jaguar	5,35	

consists of:

	x		kg	
400.0316	1	Camshaft locking tool Type 1	1,28	
400.0317	1	Camshaft locking tool Type 2	1,28	
400.0318	1	Flywheel locking tool, 175 mm	0,41	
400.0319	1	Crank shaft fixing tool with square drive	0,08	
400.0321	1	Pre-tensioning key with square drive	0,28	
400.0322	2	Cam shaft turning tool Ø 45.0 mm	0,21	

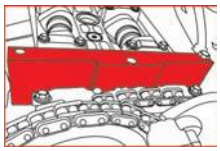




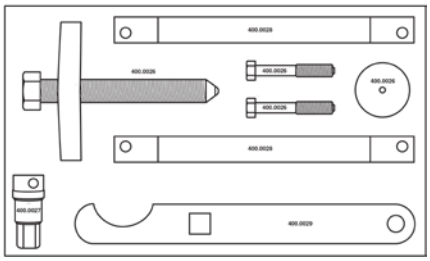
Engine Timing Tool Kit for Jaguar / Land Rover

- For the professional engine repair
- Especially for chain-driven vehicles
- Very high degree of accuracy
- In durable steel storage case

Application range: Jaguar and **Mercedes** V8, Sport 4,0 / 3,2 / 4,2 / 3,5, S-Type, XJ8, XJR, XK8, XKR (< 2010) with 4.0 / 4.2 V8 engines (engine code: BC / LB / LC / GC / AC / KC / DC / CC / CE / NC / EG / PA / HB / 1B / RB / SB / TB / 3B / PC / NB), **Land Rover** Discovery3, Range Rover 4.2, Supercharged 4.4 (engine code: 4PN / 428PS)







			kg	
400.0025	8 pcs	Engine Timing Tool Kit for Jaguar / Land Rover	3,51	

consists of:

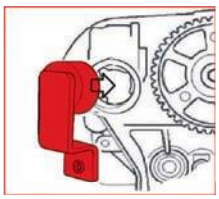
		g	
400.0026	Crankshaft pulley puller (4)	530	
400.0027	Crankshaft locking tool	70	
400.0028	Camshaft locking tool (2) , 185 mm	740	
400.0029	Timing chain wrench, 205 mm	200	

JEEP

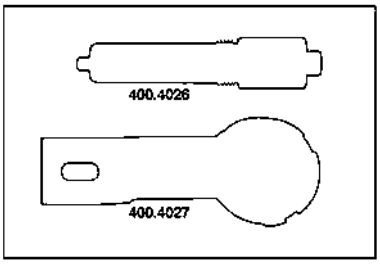
Engine Timing Tool Set for Chrysler

- For the professional engine repair
- For locking the crank shaft and cam shaft
- For changing the timing belt
- Very high degree of accuracy

Application range: Jeep Cherokee (2008-2011) with 2.8 CRD (engine code: ENS(51C), **Chrysler** Grand Voyager (2008-2011) (engine code: VM64C)







400.4025	2 pcs	Engine Timing Tool Set for Chrysler	500	

consists of:

400.4026	Crankshaft locking tool 106 mm	160	
400.4027	Camshaft locking tool 102 mm	340	

Flywheel Pegging Tool Set for Chrysler / Jeep

- ideal for fixing the flywheel
- Simple handling
- for use with 400.2450 Engine Timing Tool Set for Chrysler
- Special tool steel

Application range: Chrysler / **Jeep** Cherokee (2001 - 2008) with 2.5 l and 2.8 l diesel engines





400.4405	2 pcs	Flywheel Pegging Tool Set for Chrysler / Jeep	72	

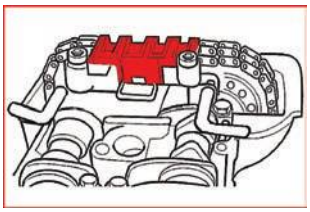
consists of:

400.4406	Flywheel Pegging Tool, 2.5 l	35	
400.4407	Flywheel Pegging Tool, 2.8 l	35	

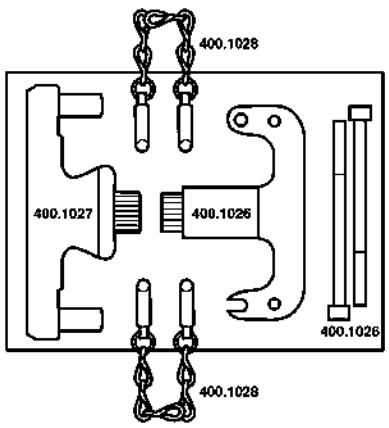
Engine Timing Tool Kit for Chrysler / Mercedes

- For the professional engine repair
- For locking the cam shaft
- For changing the timing chain
- Very high degree of accuracy
- In durable steel storage case

Application range: Mercedes vehicles with 2.2 / 2.7 CRD engines, **Chrysler** PT Cruiser with 2.2 CRD engines, **Jeep** Gran Cherokee with 2.7 CRD engines







400.1025	6 pcs	Engine Timing Tool Kit for Chrysler / Mercedes	1,46	

consists of:

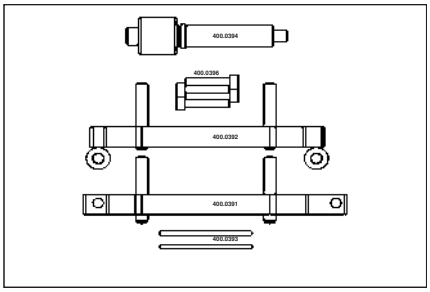
400.1026	Flywheel locking tool (3) 105 mm	197	
400.1027	Flywheel locking tool 125 mm	436	
400.1028	Camshaft locking tool (2) Ø 6 mm	36	

Engine Timing Tool Set for Jeep

- For the professional engine repair
- For blocking the cam and balance shafts
- For changing the timing chain
- Very high degree of accuracy
- In durable steel storage case

Application range: Jeep Grand Cherokee with 3.0 CRD/Multi-jet engines (engine code: EXF VM23D/EXF VM44D)





400.0390	9 pcs	Engine Timing Tool Set for Jeep	2,15	

consists of:

	X			
400.0391	1	Opel Camshaft locking tool (right), 176 mm	375	
400.0392	1	Camshaft locking tool left, 162 mm	393	
400.0393	2	Tension locking pin Ø 3,0 mm	4	
400.0394	1	Crank shaft locking pin with screw M8x1.25, 2 pcs.	192	
400.0396	4	Screw M6x30	32	

Riveting tool for timing chains for Mercedes / Chrysler / Jeep

- For the professional engine repair
- for mounting and dismounting the timing chain
- Provisional chain links facilitate installation
- Very high degree of accuracy
- Special tool steel

Application range: Mercedes 1.7 D, 2.1 D, 2.2 D, 2.7 D, 3.0 D, 3.2 D, 3.9 D, 4.0 CDI, **Chrysler** and **Jeep** 2.2 D, 2.7 D, 3.0 CRD



400.4605	17 pcs	Riveting tool for timing chains for Mercedes / Chrysler / Jeep	2,90	

consists of:

	x		g	
400.4606	1	Press-out tool for chain links	900	
400.4607	1	Press-in tool for chain links	950	
400.4608	1	Die for fixing	46	
400.4609	1	Die for flanging and pressing	62	
400.4610	1	Die jaw for flanging or pressing	62	
400.4611	1	Die for fixing	70	
400.4612	2	Press-out pin for chain link, Ø 2.75 mm	3	
400.4613	1	Mounting element set (provisional)	20	
400.4614	1	Die for fixing	52	
400.4615	1	Chain link press-out spindle	106	
400.4616	1	Einzugsglied set (provisional)	14	
400.4617	1	Fixing screw for die	5	
400.4618	1	Dies for fixing	46	
400.4619	1	Dies for fixing	66	
400.4621	2	Press-out pin for chain link, Ø 4.0 mm	5	

KIA

Injection pump pinion puller for Hyundai / Kia

- especially suitable for removing the high-pressure injection pump pinion
- Sturdy design
- Very high degree of accuracy
- Special tool steel

Application range: Hyundai and **Kia** with 2.0 l or 2.2 l CRDI engines with timing chain



		g	
400.0017	Injection pump pinion puller for Hyundai / Kia	350	

Injection pump pinion puller set for Hyundai / Kia

- especially suitable for removing the high-pressure injection pump pinion
- Sturdy design
- Very high degree of accuracy
- Special tool steel
- In durable plastic storage case

Application range: Hyundai and **Kia** (2001 - 2016) with 1.1 l, 1.4 l, 1.5 l, 1.6 l or 1.7 l CRD engines with timing chain



			kg	
400.0018	8 pcs	Injection pump pinion puller set for Hyundai / Kia	1,53	

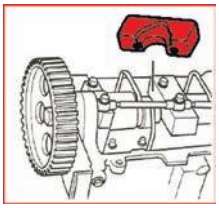
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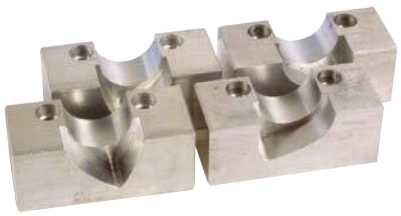
		g	
400.0078	Pressure screw	122	
400.0079	Puller plate with screws	900	
400.0083	Injection pump pinion puller	216	

LANCIA

Camshaft alignment tools for Alfa Romeo / Fiat / Lancia

- For the professional engine repair
- For locking the cam shaft wheels (TDC position)
- Secure hold thanks to optimal positioning
- Very high degree of accuracy





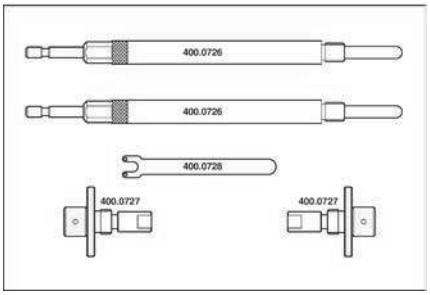
	x	Suitable for	g	
400.9034	1	Brava, Bravo 1.4 12v (> 1995) Lancia Ypsilon 1.4 12v (1996 – 1999)	178	
400.9035	2	Lancia Kappa 2.0 2.4 20v (1994 – 1997), Stilo 2.4 20v (> 2001)	269	

Engine adjustment tool set for Alfa Romeo / Fiat

- For the professional engine repair
- For locking the cam shaft
- Very high degree of accuracy
- In durable steel storage case

Application range: Alfa Romeo Giulietta, Mito, **Fiat** 500, Brava, Bravo, Grande Punto, Marea, Marea Weekend, Marengo, Palio Weekend, Panda, Punto Classic, Ritmo, Stilo, Idea, **Lancia** Delta, Susa, Ypsilon with 1.2 16V engines





			g	
400.0725	5 pcs	Engine adjustment tool set for Alfa Romeo / Fiat	989	

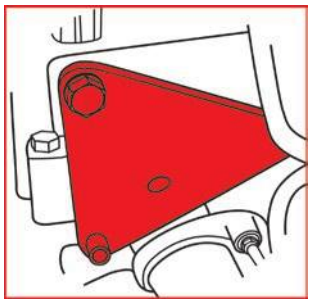
consists of:

		g	
400.0726	Piston height gauge (2)	250	
400.0727	Camshaft locking tool (2) Ø 45 mm	130	
400.0728	Tensioner adjusting tool	30	

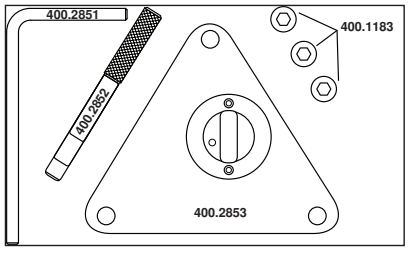
Engine Timing Tool Kit for Alfa Romeo / Fiat / Lancia

- For the professional engine repair
- Especially for chain-driven engines
- Very high degree of accuracy
- In durable steel storage case

Application range: Fiat Panda, Punto, 500, 500c, **Alfa Romeo** Mito, **Lancia** Ypsilon (engine code: 313A2.000)







			kg	
400.2850	6 pcs	Engine Timing Tool Kit for Alfa Romeo / Fiat / Lancia	1,60	

consists of:

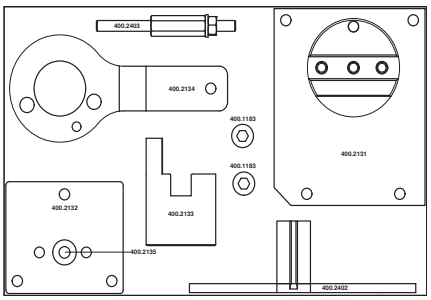
	x		g	
400.2851	1	Flywheel locking tool 115 mm	460	
400.2853	1	Camshaft Locking Plate	490	
400.2852	1	Pulley locking pin	550	
400.1183	3	Camshaft alignment tool bolt M8 x 25 mm	15	

Engine Timing Tool Set for Alfa Romeo / Lancia

- For the professional engine repair
- For blocking the cam and crank shafts
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Alfa Romeo 159, Brera, Giulietta, Spider, **Lancia** Delta with 1.75 TBi engines >2009 (engine code: 939B1.000/940A1.000)





			kg	
400.2130	9 pcs	Engine Timing Tool Set for Alfa Romeo / Lancia	3,08	

consists of:

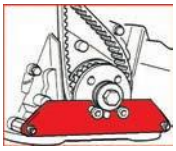
	x		g	
400.2402	1	Flywheel sprocket alignment tool 134 mm	130	
400.2403	1	Stud assembly	33	
400.1183	2	Camshaft alignment tool bolt M8 x 25 mm	15	
400.2134	1	Crankshaft locking tool 130 mm	271	
400.2135	1	Countersunk screw, M6x16	10	
400.2131	1	Cam shaft arresting tool with plate	892	
400.2132	1	Cam shaft alignment plate with pins	362	
400.2133	1	Cam shaft alignment tool for alignment plate	193	



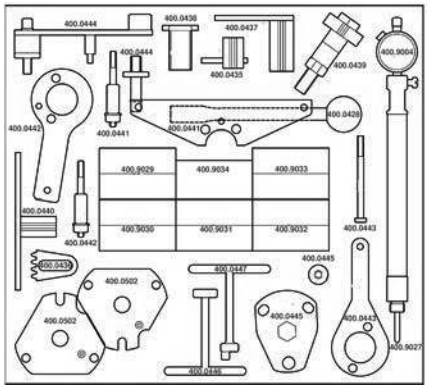
Engine Timing Tool Set for Alfa Romeo / Fiat / Lancia

- For the professional engine repair
- For locking the crank shaft and cam shaft
- Suitable for pre-tensioning timing belt tensioner on the automatic pulley
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: universal usage on many Italian vehicles, in particular **Alfa Romeo**, **Fiat**, **Lancia** vehicles with 1.4 / 1.6 / 1.8 / 2.0 / Twinspark 1.2 / 1.4 / 1.6 / 1.8 16 V petrol engines 1.6 / 1.8 / 1.9D / TD / 2.0 / 2.1 12V / 2.4 diesel engines







			kg	
400.0425	36 pcs	Engine Timing Tool Set for Alfa Romeo / Fiat / Lancia	7,57	

consists of:

		g	
400.0428	Tensioning tool-pry 180 mm	170	
400.0435	Flywheel locking tool 45 x 30 mm	57	
400.0436	Flywheel locking tool, 28 x 45 mm	135	
400.0437	Flywheel locking tool 77 x 60 mm	100	
400.0438	Flywheel locking tool 44 x 35 mm	51	
400.0439	Flywheel locking tool 87 x 40 mm	317	
400.0440	Flywheel locking tool 135 x 40 mm	136	
400.0441	Crankshaft timing tool (3) 175 mm	154	
400.0442	Crankshaft timing tool (2) 130 mm	154	
400.0443	Crankshaft timing tool (3)	160	
400.0444	Tensioning tool	240	
400.0445	Camshaft locking tool (2), Alfa Romeo, Fiat, Lancia	530	
400.0446	Balancer shaft belt tensioning tool	97	
400.0447	Tensioning tool-pry 93 mm	70	
400.0502	Camshaft locking tool (2) 86 x 78 mm	400	
400.9004	Precision-dial indicator gauge 0-10 mm, Ø 40 mm	78	
400.9027	TDC determining pin Ø 5,0 mm / dial indicator bracket M14 x 1.25	288	

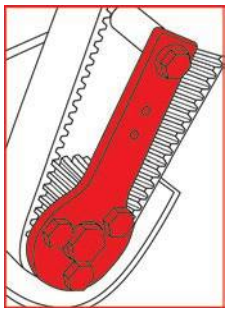
consists of:

		g	
400.9029	Camshaft locking tool (2), B	276	
400.9030	Camshaft locking tool (2), C	251	
400.9031	Camshaft locking tool (2), D	272	
400.9032	Camshaft locking tool (2), E	269	
400.9033	Camshaft locking tool (2), F	276	
400.9034	Crankshaft timing tool, G	178	

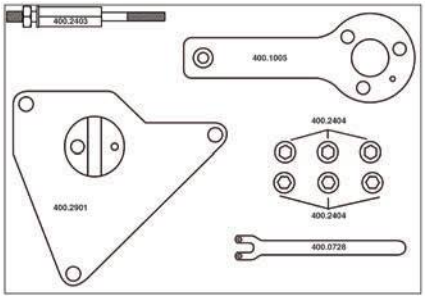
Engine Timing Tool Kit for Alfa Romeo / Fiat / Lancia

- For the professional engine repair
- For locking the crank shaft
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: AlfaRomeo Mito, Giulietta MultiAir 105 , MultiAir Turbo 135 , 163 / 170 (2009-2013) **Fiat** Punto Evo, Punto, Bravo (2009-2013) **Lancia** Delta (2010-2013) - (engine code: 955A6.000 / 955A7.000 / 955A8.000 / 955A2.000 / 940A2.000)







			kg	
400.2900	10 pcs	Engine Timing Tool Kit for Alfa Romeo / Fiat / Lancia	1,40	

consists of:

	x		g	
400.0728	1	Tensioner adjusting tool	30	
400.1005	1	Crankshaft locking tool Ø 22 mm	7	
400.2403	1	Stud assembly	33	
400.2404	6	Socket head screw M8 x 20 mm	13	
400.2901	1	Tensioner adjusting tool 130 mm	504	

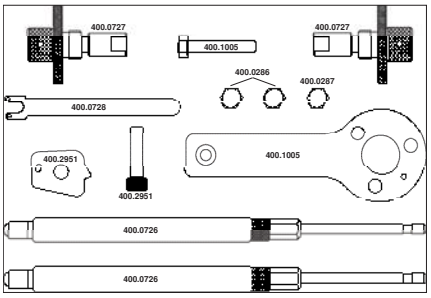
Engine Timing Tool Kit for Alfa Romeo / Fiat / Lancia

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Alfa Romeo Giulietta , MiTo **Fiat** 500, Brava, Bravo, Grande Punto, Marea, Marea Weekend, Marengo, Palio Weekend Panda, Punto, Punto Classic, Ritmo, Stilo, Idea **Lancia** Delta, Musa, Ypsilon



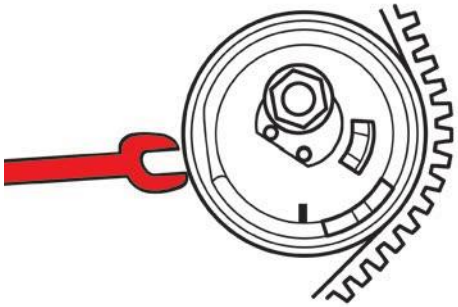




			kg	
400.2950	10 pcs	Engine Timing Tool Kit for Alfa Romeo / Fiat / Lancia	1,22	

consists of:

		g	
400.0726	Piston height gauge (2)	250	
400.2951	Camshaft pulley holding tool, 35 mm	126	
400.1005	Crankshaft locking tool Ø 22 mm	7	
400.0728	Tensioner adjusting tool	30	
400.0727	Camshaft locking tool (2) Ø 45 mm	130	
400.0286	Screw M8 x 35 mm (2)	16	
400.0287	Screw M8 x 40,0 mm	18	

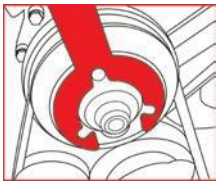


LAND ROVER

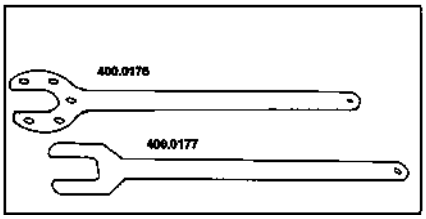
Fan-hub wrench set for Land Rover

- For counter holding the Visco coupling drive shaft
- Makes it possible to secure the pulley wheel of the water pump and at the same time release the heating filter
- Also suitable for the removal of the viscous connecting socket on the cooler ventilator
- Special tool steel

Application range:Land Rover Discovery II, Range Rover, Defender 1990-2006 with Td5 or V8 engines







			kg	
400.4175	2 pcs	Fan-hub wrench set for Land Rover	1,80	

consists of:

		kg	
400.0176	Holding wrench for Visco fan for Land Rover	1,05	
400.0177	Visco fan wrench 36.0 mm for Land Rover	14,78	

Selector lever locking tool for Land Rover / Range Rover

- for professional gearbox repair
- ideally suited for locking and aligning the XYZ switch on automatic transmissions
- Secure hold thanks to optimal positioning
- Very high degree of accuracy

Application range: Land Rover V8 Defender (1990 - 2005), Discovery I (1990 - 2005), Discovery II (1990 - 2005), Range Rover Classic (1994 - 2002), P38 (1994 - 2002) (transmission code: ZF4HP22 / ZF4HP 24 / ZF4HP 44)



			g	
400.0081	2 pcs	Selector lever locking tool for Land Rover / Range Rover	400	

consists of:

		g	
400.0082	Selector lever locking tool	200	
400.0086	Marking pin, Ø 4 mm	80	

Injection Pump Wheel Removal Tool for Jaguar / Land Rover

- Ideal for securing the injection pump for adjustment work on engines
- Simple handling
- Special tool steel

Application range: Jaguar XF, XJ, **Land Rover** Discovery 4, Range Rover and Range Rover Sports (2009 - 2014) with 3.0 l diesel engines



		g	
400.0004	Injection Pump Wheel Removal Tool for Jaguar / Land Rover	152	

Oil pump locking tool for Ford / Jaguar / Land Rover

- especially suitable for staking out the oil pump
- Sturdy design
- Special tool steel

Application range: Ford Mondeo and Transit, **Jaguar** X400 and X Type for 2.0 l, 2.2 l, 2.4 l, 3.2 l diesel engines and 2.3 l petrol engines



		g	
400.4455	Oil pump locking tool for Ford / Jaguar / Land Rover	60	

Locking pins for Land Rover

- For the professional engine repair
- ideally suited for locking the camshaft, crankshaft and flywheel
- Especially for chain-driven engines
- Very high degree of accuracy

Application range: Land Rover Defender (1999 - 2007), Discovery II (1999 - 2007) for 5-cylinder diesel engines (engine code: 10P, 15P, 16P)

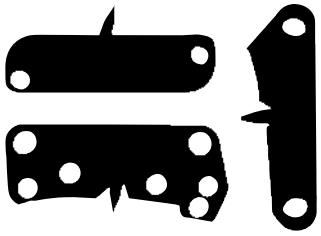


		g	
400.0019	Locking pins for Land Rover	200	

Engine Timing Tool Kit for Land Rover / Rover

- For the professional engine repair
- For locking the crank shaft or fly disc
- For changing the timing belt
- Very high degree of accuracy

Application range: Land Rover Freelander 1.8 , **Rover** Metro, 214, 216, 218 16V, 414, 416 16V, 216, 416 GTi, **Rover** Diesel 218, 418



400.2600	3 pcs	Engine Timing Tool Kit for Land Rover / Rover	1,50	

consists of:

400.2601	Flywheel locking tool 133 x 43,5 mm	470	
400.2602	Flywheel locking tool 140 mm	480	
400.2603	Flywheel locking tool 130 mm	460	

Assembly tool set for Citroën / Ford / Land Rover / Mitsubishi / Peugeot

- For the professional engine repair
- For locking the cam shaft
- Secure hold thanks to optimal positioning
- Very high degree of accuracy
- In durable plastic storage case

Application range: Land Rover Discovery (2009 – 2015), Discovery Sport (2009 – 2015), Freelander 2 (2009 – 2015), eD4 (2009 – 2015), TD4 (2009 – 2015), TD4e (2009 - 2015), **Citroën** C5 (2002 – 2015), C5 II (2002 – 2015) , C5 III (2002 – 2015), C6 (2002 – 2015), C8 (2002 – 2015), C-Crosse (2002 - 2015), **Mitsubishi** Outlander DI-D (2007 – 2013), DI-DC (2007-2013), **Peugeot** 4007 (2000 – 2015), 407 (2000- 2015), 607 (2000 – 2015), 807 (2000 – 2015), 406 (2000 – 2015), 508 (2000 – 2015), 607 (2000 – 2015), GT (2000-2015), **Ford** Galaxy (2008 - 2015), Mondeo (2008 - 2015), S-Max (2008 - 2015) for 2.2 l diesel engines (engine codes: 224DT / DW12CTED4 224DT / DW12BTED4 224DT /4HX (DW12CT-ED4) / 4HP (DW12BTED4) / 4HX (DW12TED4) / 4HW (DW12TED4/L4) / 4HK, 4HN / DW12MTED4 (4HK) / DW12MT-ED4 (4HN) / DW12BTED4 (4HP) / DW12BTED4 (4HR) / DW-12BTED4 (4HT) / DW12TED4/L4 (4HW) / DW12BTED4 (4HS) / DW12ATED (4HZ) / DW12ATED4 (4HX) / DW12ATED (4HZ) / DW12CTED4 (4HL), KNBB, KNBA, KNWA, Q4BA)



400.4450	3 pcs	Assembly tool set for Citroën / Ford / Land Rover / Mitsubishi / Peugeot	680	

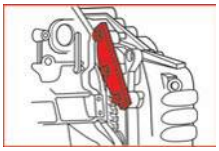
consists of:

400.4451	Balance shaft locking tool	190	
400.4452	Balance shaft tool	140	
400.4453	Balance shaft adjustment tool	230	

Engine Timing Tool Set for Ford / Land Rover / PSA / Volvo

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy

Application range: Ford, **Land Rover**, **PSA**, **Volvo** vehicles with 2,0 / 2,2 DOHC Common-Rail Diesel engines





400.1625	6 pcs	Engine Timing Tool Set for Ford / Land Rover / PSA / Volvo	473	

consists of:

400.0580	Crankshaft locking pin Ø 8,0 mm, 70 mm	30	
400.0609	Flywheel locking tool 133 x 40 mm	308	
400.0903	Crankshaft locking pin	85	

Flywheel locking tool set for Jaguar / Land Rover

- suitable for locking the flywheel
- for mounting and dismounting the front pulley screw
- Secure hold thanks to optimal positioning
- Very high degree of accuracy

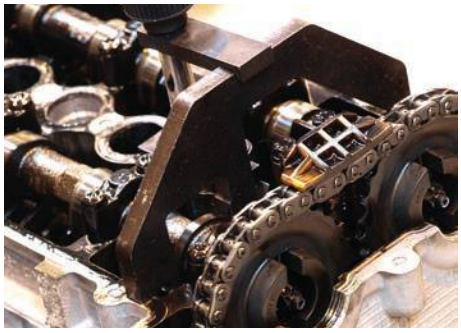
Application range: Jaguar F-Type (2013 - 2017), XF (2009 - 2015), XFR/-S (2009 - 2015), XJ (2010 - 2017), XJR (2013 - 2017), XK8 (2009 - 2015), XKR (2009 - 2015), **Land Rover** Discovery (2009 - 2016), Range Rover (2009 - 2017) and Range Rover Sport (2009 - 2017) with 5.0 l petrol engines (engine code: AJ-133/508PS / AJ-133/508PN / 508PS / 508PN)

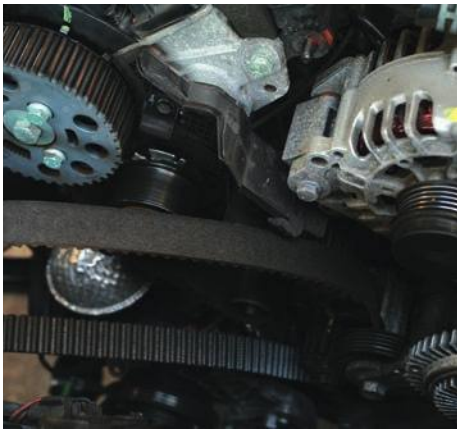


400.4470	5 pcs	Flywheel locking tool set for Jaguar / Land Rover	863	

consists of:

400.4471	Engine support beam with screws	380	
400.4472	Locking tool, slotted	208	
400.4473	Locking tool with wedge	181	



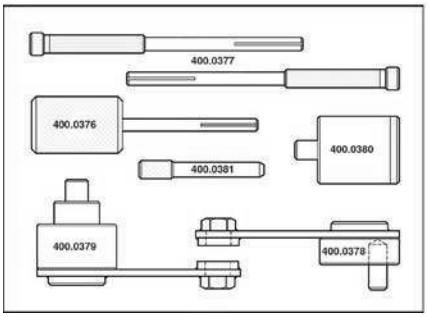


Engine Timing Tool Kit for Land Rover / Jaguar

- For the professional engine repair
- For locking the cam shaft
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Land Rover Discovery, Range Rover Sport with 2.7 TDV6 engines and **Jaguar** S Type with TDVi V6 engines, including fly wheel locking tool for automatic and manual transmissions (engine code: 276D T)





400.0375	7 pcs	Engine Timing Tool Kit for Land Rover / Jaguar	912	

consists of:

400.0376	Camshaft sprocket locking tool	165	
400.0377	Camshaft sprocket locking pin (2)	68	
400.0378	Flywheel locking tool-automatic tensioner	195	
400.0379	Flywheel locking tool-manual tensioner	268	
400.0380	Flywheel locking tool Ø 30 mm	222	
400.0381	Coolant Pump tensioning locking pin	30	

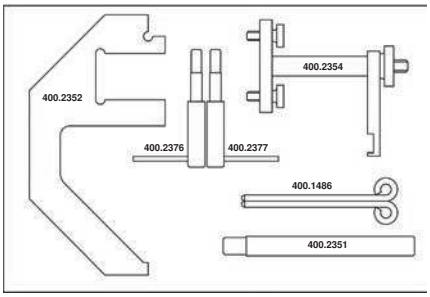
Engine Timing Tool Kit for BMW / Land Rover / Rover

- For the professional engine repair
- For locking the crank shaft or cam shaft
- For changing the timing belt or the timing chain
- Very high degree of accuracy
- In durable steel storage case

Application range: BMW 1, 3, 5, X3, **Land Rover** Freelander, **Rover** 75 (engine code: M47)



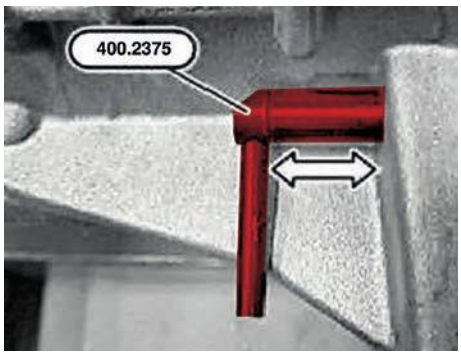




			kg	
400.2350	7 pcs	Engine Timing Tool Kit for BMW / Land Rover / Rover	1,03	

consists of:

		g	
400.2351	Crankshaft TDC locking pin 130 mm	108	
400.2352	Camshaft locking tool 167 x 90 mm	461	
400.2354	Camshaft locking holding tool	240	
400.1486	Tensioner locking pin (2)	29	
400.2376	Crankshaft timing tool 73 mm	52	
400.2377	Crankshaft timing tool 78,5 mm	55	

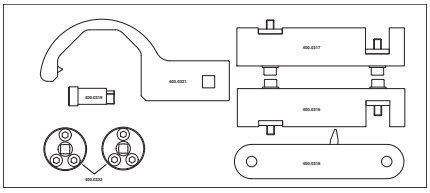


Engine Timing Tool Kit for Land Rover / Jaguar

- For the professional engine repair
- For locking the cam shaft
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Land Rover Discovery 4, Range Rover, Range Rover Sport with 5.0 l engines (engine code: 508PN/508PS) and **Jaguar** XF, XFR, XJ XK8, XKR with 5.0 l engines (engine code: AJ-133/508PN/AJ-133/508PS)





			kg	
400.0315	7 pcs	Engine Timing Tool Kit for Land Rover / Jaguar	5,35	

consists of:

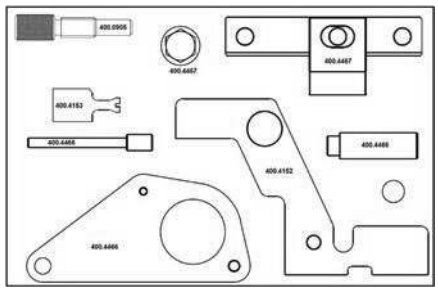
	X		kg	
400.0316	1	Camshaft locking tool Type 1	1,28	
400.0317	1	Camshaft locking tool Type 2	1,28	
400.0318	1	Flywheel locking tool, 175 mm	0,41	
400.0319	1	Crank shaft fixing tool with square drive	0,08	
400.0321	1	Pre-tensioning key with square drive	0,28	
400.0322	2	Cam shaft turning tool Ø 45.0 mm	0,21	

Engine Timing Tool Set for Jaguar / Land Rover

- For the professional engine repair
- For changing the timing chain
- Very high degree of accuracy
- In durable steel storage case

Application range: Jaguar XE (2015 - 2016), XF (2012 - 2015), XJ (2013 - 2016), **Land Rover** Discovery Sport (2015 - 2016), Freelander 2 (2012 - 2015) and Range Rover Evoque (2011 - 2016) with 2.0 l GTDi and Si4 diesel engines (engine code: 204PT)





			kg	
400.4465	8 pcs	Engine Timing Tool Set for Jaguar / Land Rover	2,65	

consists of:

		g	
400.4152	Cam shaft alignment plate 149 mm	250	
400.4466	Crankshaft alignment tool plate with guides and pins	450	
400.4153	Pin for aligning the cam shaft	30	
400.4467	Flywheel locking tool	700	
400.0905	Crankshaft locking pin, Ø 8 mm, 58 mm	33	

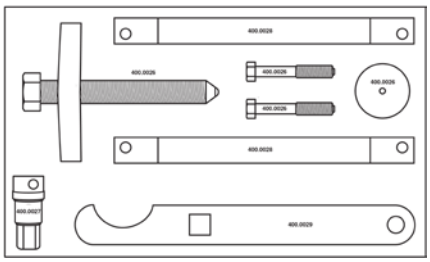
Engine Timing Tool Kit for Jaguar / Land Rover

- For the professional engine repair
- Especially for chain-driven vehicles
- Very high degree of accuracy
- In durable steel storage case

Application range: Jaguar and **Mercedes** V8, Sport 4,0 / 3,2 / 4,2 / 3,5, S-Type, XJ8, XJR, XK8, XKR (< 2010) with 4.0 / 4.2 V8 engines (engine code: BC / LB / LC / GC / AC / KC / DC / CC / CE / NC / EG / PA / HB / 1B / RB / SB / TB / 3B / PC / NB), **Land Rover** Discovery3, Range Rover 4.2, Supercharged 4.4 (engine code: 4PN / 428PS)







			kg	
400.0025	8 pcs	Engine Timing Tool Kit for Jaguar / Land Rover	3,51	

consists of:

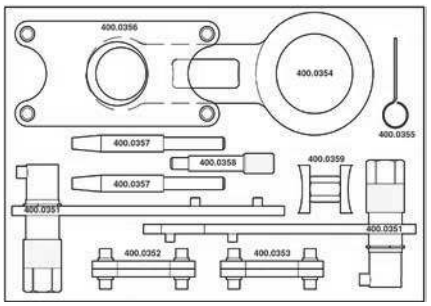
		g	
400.0026	Crankshaft pulley puller (4)	530	
400.0027	Crankshaft locking tool	70	
400.0028	Camshaft locking tool (2) , 185 mm	740	
400.0029	Timing chain wrench, 205 mm	200	

Engine Timing Tool Set for Land Rover / MG / Rover

- For the professional engine repair
- For locking the cam shaft of all KV6 variants
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Rover 825, 45, 75, **Land Rover** Freelander 2.5, **MG** ZS, ZT, ZT-T 160, 180, 190 with 2.0 / 2.5 V6 Quad-Cam petrol engines





			kg	
400.0350	12 pcs	Engine Timing Tool Set for Land Rover / MG / Rover	3,62	

consists of:

		g	
400.0351	Crankshaft timing tool (2) Ø 34 mm, 180 mm	500	
400.0352	Camshaft locking adaptor set, capacity 2.0 L (2)	76	
400.0353	Camshaft locking adaptor set, capacity 2.5 L (2)	80	
400.0354	Rear camshaft sprocket setting tool 190 mm	480	
400.0355	Tensioner pushrod retension pin	1	
400.0356	Rear camshaft sprocket setting tool Ø 39 mm	390	
400.0357	Rear camshaft sprocket guide pin	50	
400.0358	Crankshaft locking pin 67 mm	40	
400.0359	Rear cam sprocket spreader	80	

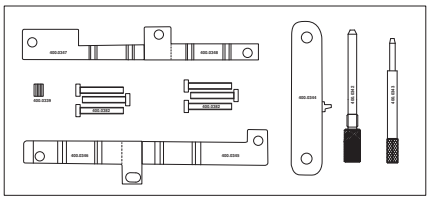


Engine Timing Tool Set for Land Rover / Range Rover

- For the professional engine repair
- For locking the cam shaft
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Land Rover and **Range Rover** with 3.6 V8 diesel engines (engine code: 368DT)

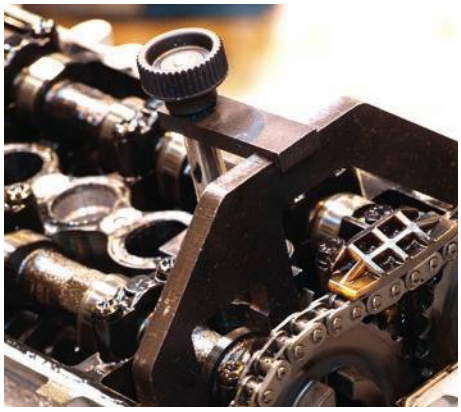




			kg	
400.0340	19 pcs	Engine Timing Tool Set for Land Rover / Range Rover	2,84	

consists of:

	x		g	
400.0342	1	Crank shaft locking pin, 223 mm	90	
400.0343	1	Cam shaft tommy bar 125 mm	71	
400.0344	1	Fly wheel locking plate, 150 mm	250	
400.0345	1	Camshaft alignement tool B1	240	
400.0346	1	Camshaft alignement tool B2	164	
400.0347	1	Camshaft alignement tool A1	223	
400.0348	1	Camshaft alignement tool A2	127	
400.0382	6	Screw M6x40, 45,0 mm	10	
400.0339	6	Washers M6	2	

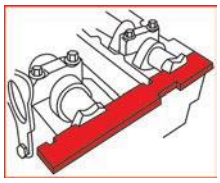


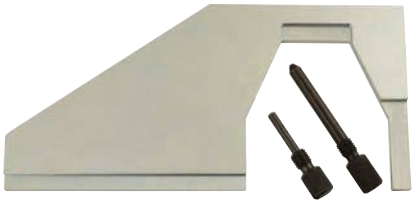
MAZDA

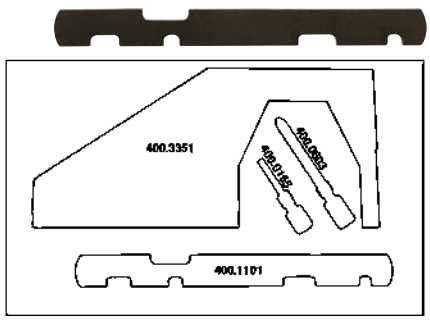
Engine Timing Tool Set for Ford / Mazda

- For the professional engine repair
- For locking the crank shaft and cam shaft
- For changing the timing belt
- Very high degree of accuracy

Application range: Ford Mondeo with 1.8 engines and **Mazda** 3, 5, 6, CV7, MX5, MPV, Tribute with Zetec/Duratec or DISI engines



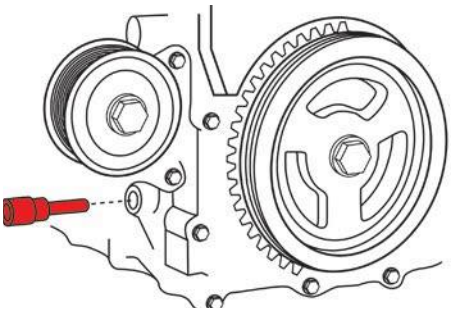




			kg	
400.3350	4 pcs	Engine Timing Tool Set for Ford / Mazda	1,05	

consists of:

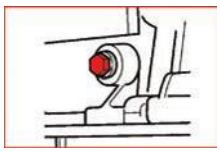
		g	
400.0155	Crankshaft locking pin Ø 5 mm	25	
400.0603	Crankshaft timing pin, 83 mm	51	
400.1101	Camshaft setting strap, 200 mm	140	
400.3351	Camshaft Locking Plate, 220 mm	780	



Engine Timing Tool Kit for Ford / Mazda

- For the professional engine repair
- For locking the crank shaft
- Especially for Ford 16V vehicles
- Very high degree of accuracy

Application range: Ford Fiesta 1.25 / 1.4 engines, Puma 1.4 / 1.7 engines, Mondeo 1.6 / 1.8 / 2.0 engines, **Mazda** 121 with 1.25 engines





			g	
400.0175	2 pcs	Engine Timing Tool Kit for Ford / Mazda	175	

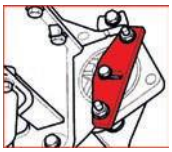
consists of:

		g
400.0154	Camshaft setting strap 200 mm	130
400.0155	Crankshaft locking pin Ø 5 mm	25

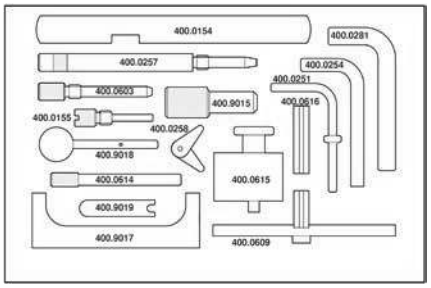
Engine Timing Tool Kit for Ford / Mazda

- For the professional engine repair
- For locking the crank shaft or cam shaft
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Ford and **Mazda** vehicles with 1.2 / 1.3 / 1.4 / 1.6 SOHC and 1.6 / 1.8 / 2.0 16V petrol engines, 1.8 / 1.9 D/TD / 1.9 TDi / 2.5 TDi diesel engines and Zetec engines







			kg
400.0600	20 pcs	Engine Timing Tool Kit for Ford / Mazda	1,48

consists of:

		g
400.0154	Camshaft setting strap 200 mm	130
400.0155	Crankshaft locking pin Ø 5 mm	25
400.0251	Injection pump locking pin Ø 6.0 mm	30
400.0254	Locking pin Ø 9.5 mm	60
400.0257	Crankshaft TDC locking pin Ø 5 mm, 160 mm	124
400.0258	Shim tool (2)	3
400.0281	Timing pin Ø 12,7 mm	569
400.0603	Crankshaft timing pin, 83 mm	51
400.0609	Flywheel locking tool 133 x 40 mm	308
400.0614	Locking pin, Ø 8.25 mm	40
400.0615	Crankshaft pulley setting tool, 60 mm	190
400.0616	Flywheel locking adaptor 50 mm	74
400.9015	Injection pump locking pin Ø 15.4 mm	126
400.9017	Camshaft setting strap for VAG	120
400.9018	Injection pump wheel - locking pin Ø 6.0 mm	20
400.9019	Tensioner locking tool	20

MERCEDES

Vibration damper clamps for Mercedes

- suitable for mounting and dismounting the V-ribbed belt
- Quick, problem-free and correct changing of the belt
- No damage to the pulley wheel and the belt
- for vehicles with air conditioning and start-stop function
- Minimal force required
- Special tool steel

Application range: Mercedes A-Class (W169) 2004 - 2012, B-Class (W245) 2005 - 2011



	Length mm	Width mm	Height mm	g
150.3345	182,0	40,0	20,0	360

Belt disc wrench for Mercedes 8.0 mm

- Suitable for the installation and removal of the fan coupling and the belt disc
- Required when changing the water pump
- For hard to reach places
- With plastic-coated handle
- Chrome vanadium

Application range: Mercedes engines M102, M103, OM601, OM602, OM603, OM605, OM606



			g
150.1303	2 pcs	Belt disc wrench for Mercedes 8.0 mm	460

consists of:

		g
150.1227	Special wrench with 8.0 mm hexagonal drive, 450 mm	440
150.1307	Bit with 8.0 mm hexagonal drive for internal hexagonal screws 8.0 mm	20

Compressor belt disc wrench for Mercedes 10.0 mm

- Suitable for releasing the screws on the compressor belt disc
- Required when changing the water pump
- For hard to reach places
- With plastic-coated handle
- Chrome vanadium

Application range: Mercedes engines M102, M103, OM601, OM602, OM603, OM605, OM606



			g
150.1304	2 pcs	Compressor belt disc wrench for Mercedes 10.0 mm	460

consists of:

		g
150.1227	Special wrench with 8.0 mm hexagonal drive, 450 mm	440
150.1308	Bit with 8.0 mm hexagonal drive for internal hexagonal screws 10.0 mm	20

V belt wrench Torx for BMW and Mercedes T60

- suitable for assembly and disassembly of the fan belt
- necessary to relieve the automatic tension pulley for pulling the fan belt
- For hard to reach places
- With plastic-coated handle
- Chrome vanadium

Application range: BMW 5 series (E60) 2.0 L petrol engine M54 and **Mercedes** C class (W203, W204) 1.8 L petrol engine M271 etc.





			g
150.1234	2 pcs	V belt wrench Torx for BMW and Mercedes T60	460

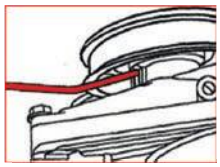
consists of:

		g
150.1227	Special wrench with 8.0 mm hexagonal drive, 450 mm	440
150.1236	Bit with 8.0 mm hexagonal drive for Torx screws T60, 22mm long	20

Ventilator coupling counter hold for Mercedes

- Ideally suited to securing the ventilator coupling
- Especially slim design
- Enables easy access
- Especially curved for use
- Special tool steel

Application range: Mercedes (engine: M 103, 104)



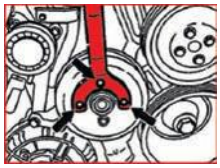


		Length mm	g
150.3009	Ventilator coupling counter hold for Mercedes	300,0	105

Visco ventilator wrench

- For removing the hubs and bleeding with viscous couplings
- Especially slim design
- Enables easy access
- specially bent
- With hanging hole
- Special tool steel

Application range: Mercedes (engine: M 111.979, 112, 113, 119.985)





		Length mm	g
150.3008	Visco ventilator wrench	410,0	370

Visco ventilator wrench

- For removing the hubs and bleeding with viscous couplings
- Especially slim design
- Enables easy access
- With hanging hole
- Special tool steel

Application range: Mercedes engines M103 (6 cylinder), M104 (6 cylinder 4 valve), M119 (8 cylinder 4 valve), M120 (12 cylinder 4 valve)





	mm	Length mm	g	
150.3301	65	400,0	472	

Belt disc counter hold tool set for Mercedes

- For counter holding the crank shaft belt drive when releasing or tightening the crank shaft central screw
- Required when changing the belt disc or repairing the engine
- Special tool steel

Application range: Mercedes engines, e.g. M112, M113 and OM 642 etc.



			kg	
150.3310	7 pcs	Belt disc counter hold tool set for Mercedes	2,24	

consists of:

	x		g	
150.3311	1	Perforated disc	1219	
150.3312	3	Bolts, Ø 15 mm	126	
150.3313	3	Bolts, Ø 20 mm	215	

Belt disc counter hold tool for Mercedes

- Damage-free and secure counter holding of the belt disc
- Long lever
- With hanging hole
- Chrome vanadium

Application range: Mercedes engines 602, 603, 604, 605, 606



	Length mm	g	
150.1252	350,0	440	

V belt tension wrench for Mercedes

- suitable for assembly and disassembly of the fan belt
- Required to pull back the automatic tension pulley and to relax the V wedge
- For hard to reach places
- Special tool steel

Application range: Mercedes Transporter 208 D and 410 D range (engine code: OM601 and OM602), also for **Mercedes** passenger cars with hydraulic pump for the new regulations



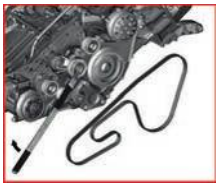
3/8"

		g	
150.1239	V belt tension wrench for Mercedes	60	

V wedge assembly lever for Mercedes

- suitable for assembly and disassembly of the fan belt
- Required to operate the automatic pulley
- For hard to reach places
- Bronzed bolts
- Chrome vanadium

Application range: Mercedes Type 168, 169 (A class) and Type 245 (B class)





	Ø mm	Length mm	g	
150.1238	15,0	610,0	620	

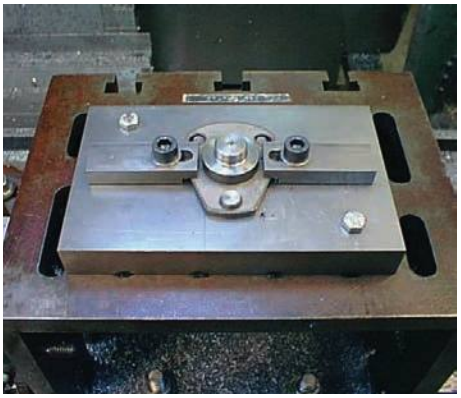
Cam shaft locking tool for Mercedes

- For the professional engine repair
- For locking the cam shaft wheels when removing the cylinder head
- Secure hold thanks to optimal positioning
- Very high degree of accuracy

Application range: for **Mercedes** A-, B-, C-, CLC-, CLK-, CLS-, E-, G-, GL-, M-, R-, S-, SLK-, V classes, Sprinter, Vito and Viano with petrol engines (engine code: M104, M111, M112, M119, M120, M272, M273) and diesel engines with 4 valve technology (engine code: OM605, OM606, OM611, OM612, OM613, OM614, OM628, OM629, OM640, OM642, OM643, OM646, OM646 EVO, OM647, OM648, OM649)



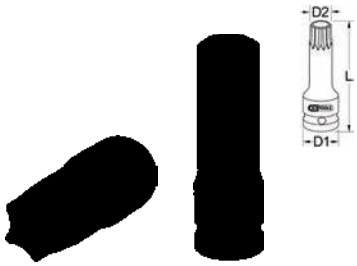
	Suitable for	Ø mm	Length mm	g	
550.1193	Mercedes	5,8 x 6,0	212,0	38	



Special Torx® bit socket for Mercedes camshaft adjuster

- ideally suited for loosening and tightening the fastening screw of the camshaft adjuster
- For tamperproof Torx
- Internal square drive to DIN 3121 / ISO 1174
- Long execution
- For manual operation
- Matt finish
- Chrome vanadium

Application range: Mercedes C-Class Type 203, 204, 205, CLK 209, E-Class Type 211, 212, Coupé Type 207, SLK Type 171, 172, G-Class Type 463, Sprinter Type 906
Petrol engines: M133, M157, M176, M177, M270, M271, M271.8, M271.9, M272, M273, M274, M276, M278



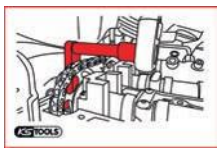
1/2"

	D1 mm	D2 mm	L mm	g	
400.0001	25,0	22,0	78	180	

Torx e-key for camshaft socket screw connections for Mercedes

- ideal for loosening and tightening the fastening screws on the camshaft wheels, e.g. when changing the control chain
- suitable for narrow spaces before the bulkhead
- Bevel ensures simply application
- Internal square drive to DIN 3121 / ISO 1174
- For manual operation
- Matt finish
- Chrome vanadium

Application range: Mercedes A-Class Type 176, C-Class Type 204, 205, E-Class Type 212, S-Class Type 221, 222, V-Class Type 639, 447, CLA Type 117, GLA Type X156, GLK Type X204, CLS Type C/X218, ML Type 166, SLK / SLC Type 172, GLC Type X253 and Sprinter Type 206 with 1.8l and 2.2l diesel engines





1/2"

	Length mm	g	
150.3036	E14	97,0	222	

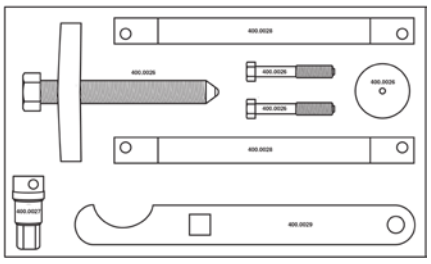
Engine Timing Tool Kit for Jaguar / Land Rover

- For the professional engine repair
- Especially for chain-driven vehicles
- Very high degree of accuracy
- In durable steel storage case

Application range: Jaguar and **Mercedes** V8, Sport 4,0 / 3,2 / 4,2 / 3,5, S-Type, XJ8, XJR, XK8, XKR (< 2010) with 4.0 / 4.2 V8 engines (engine code: BC / LB / LC / GC / AC / KC / DC / CC / CE / NC / EG / PA / HB / 1B / RB / SB / TB / 3B / PC / NB), **Land Rover** Discovery3, Range Rover 4.2, Supercharged 4.4 (engine code: 4PN / 428PS)







			kg	
400.0025	8 pcs	Engine Timing Tool Kit for Jaguar / Land Rover	3,51	

consists of:

		g	
400.0026	Crankshaft pulley puller (4)	530	
400.0027	Crankshaft locking tool	70	
400.0028	Camshaft locking tool (2) , 185 mm	740	
400.0029	Timing chain wrench, 205 mm	200	





Riveting tool for timing chains for Mercedes / Chrysler / Jeep

- For the professional engine repair
- for mounting and dismounting the timing chain
- Provisional chain links facilitate installation
- Very high degree of accuracy
- Special tool steel

Application range: Mercedes 1.7 D, 2.1 D, 2.2 D, 2.7 D, 3.0 D, 3.2 D, 3.9 D, 4.0 CDI, **Chrysler** and **Jeep** 2.2 D, 2.7 D, 3.0 CRD



			kg	
400.4605	17 pcs	Riveting tool for timing chains for Mercedes / Chrysler / Jeep	2,90	

consists of:

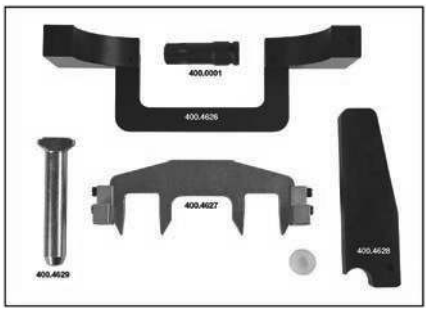
	x		g	
400.4606	1	Press-out tool for chain links	900	
400.4607	1	Press-in tool for chain links	950	
400.4608	1	Die for fixing	46	
400.4609	1	Die for flanging and pressing	62	
400.4610	1	Die jaw for flanging or pressing	62	
400.4611	1	Die for fixing	70	
400.4612	2	Press-out pin for chain link, Ø 2.75 mm	3	
400.4613	1	Mounting element set (provisional)	20	
400.4614	1	Die for fixing	52	
400.4615	1	Chain link press-out spindle	106	
400.4616	1	Einzugsglied set (provisional)	14	
400.4617	1	Fixing screw for die	5	
400.4618	1	Dies for fixing	46	
400.4619	1	Dies for fixing	66	
400.4621	2	Press-out pin for chain link, Ø 4.0 mm	5	

Engine Timing Tool Set for Mercedes

- For the professional engine repair
- For changing the timing chain
- Very high degree of accuracy
- In durable plastic storage case

Application range: Mercedes C-Class (2002 - 2015), C-Class Coupé (2011 - 2015), CLC (2008 - 2012), CLK-Class (2002 - 2009), E-Class Coupé / Cabriolet (2004 - 2013), SLK (2004 - 2015) and Sprinter (2009 - 2015) with 1.8 l petrol engines (engine code: 271.861 / 271.820 / 271.860 / 271.921 / 271.946 / 271.942 / 271.940 / 271.948 /271.952 / 271.958 / 271.950 / 271.944 / 271.955 / 271.954 / 271.957 / 271.941 / 271.951 / 271.956 / 271.943)





			kg	
400.4625	5 pcs	Engine Timing Tool Set for Mercedes	3,15	

consists of:

		g	
400.0001	1/2" Special Torx® bit socket for Mercedes camshaft adjuster, TB100	180	
400.4626	Camchain retaining bridge	385	
400.4627	Camshaft locking tool	802	
400.4628	Camchain tensioner rail wedge	157	
400.4629	Camchain tensioner drift	408	



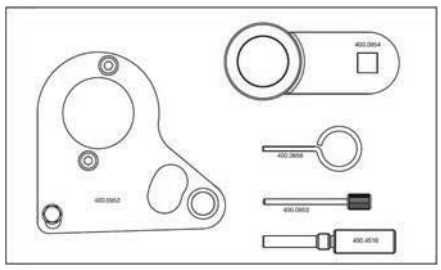


Engine adjustment Tool Set for Mercedes / Opel / Renault / Nissan

- For the professional engine repair
- For changing the timing chain
- Very high degree of accuracy
- In durable steel storage case

Application range: Mercedes C-Klasse (2014 – 2016), Vito (2014 – 2016), **Opel** Vivaro B (2013 – 2016), **Renault** Scenic / Grand Scenic 3 (2011 – 2016), Megane 3 (2012 – 2015), Trafic 3 (2014 – 2016), Espace 5 (2015 – 2016), **Nissan** Qashqai (2011 – 2016), X-Trail (2014 – 2016) with 1.6 l C180 BlueTEC, C200 BlueTEC, CDTi, CDTi BiTurbo, XMOD dCi, dCi Diesel engines (engine code: 626.951 (R9M) / 622.951 / LWX/ R9M 408 / LWZ/R9M 408 / LWU/R9M 450 / LWY/R9M 450 / R9M / R9M 410 / R9M 402 / R9M 404 / R9M 408 / R9M 450 / R9M 409 / R9M 452 / R9M 413)





			kg	
400.4515	6 pcs	Engine adjustment Tool Set for Mercedes / Opel / Renault / Nissan	2,12	

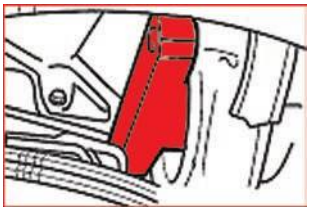
consists of:

		g	
400.0952	Camshaft locking tool	398	
400.0954	Crankshaft pulley holding tool	424	
400.0956	Timing chain tensioner locking pin Ø 3 mm, 65 mm	6	
400.0953	Auxilliary drive belt tensioning locking pin	13	
400.4516	Locking pin for crankshaft	70	

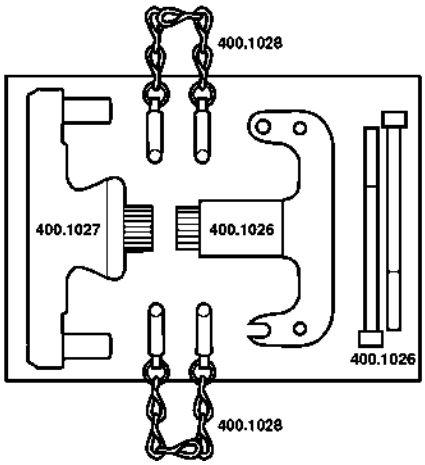
Engine Timing Tool Kit for Chrysler / Mercedes

- For the professional engine repair
- For locking the cam shaft
- For changing the timing chain
- Very high degree of accuracy
- In durable steel storage case

Application range: Mercedes vehicles with 2.2 / 2.7 CRD engines, **Chrysler** PT Cruiser with 2.2 CRD engines, **Jeep** Gran Cherokee with 2.7 CRD engines



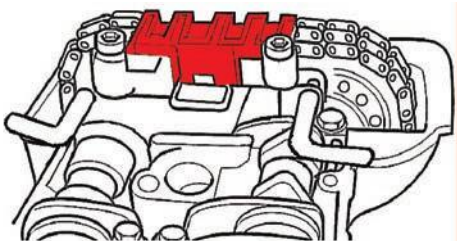


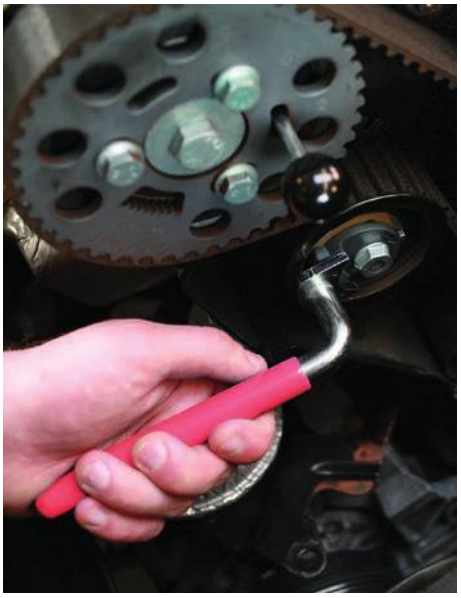


			kg	
400.1025	6 pcs	Engine Timing Tool Kit for Chrysler / Mercedes	1,46	

consists of:

		g	
400.1026	Flywheel locking tool (3) 105 mm	197	
400.1027	Flywheel locking tool 125 mm	436	
400.1028	Camshaft locking tool (2) Ø 6 mm	36	



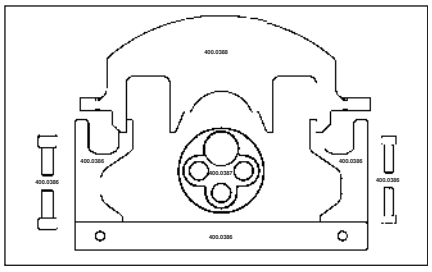


Engine Timing Tool Set for Mercedes

- For the professional engine repair
- For blocking the cam and balance shafts
- For changing the timing chain
- Very high degree of accuracy
- In durable steel storage case

Application range: Mercedes A-, B-, C-, M-, S-class, Vito, Viano and Sprinter with 1.8 and 2.1 diesel engines (engine code: 651.901/651.911/651.912/951.913/651.916/651.922/651.924/651.925/651.930/651.940/651.955/651.956/651.957/651.960/651.961/651.980)





			kg	
400.0385	7 pcs	Engine Timing Tool Set for Mercedes	3,55	

consists of:

		kg	
400.0386	Balancer shaft locking tool with screws, 203 mm, 5 pcs.	1,26	
400.0387	Crank shaft holding turning tool, 19 mm	0,46	
400.0388	Crank shaft alignment tool for Mercedes	0,33	

MINI

V-ribbed belt wrench set for Mini

- suitable for installation and removal of the V-ribbed belt
- required to relieve the automatic tension pulley and the V-ribbed belt
- 12 point
- For hard to reach places
- With plastic-coated handle
- Chrome vanadium

Application range: Mini (R56 / R57), Coupé ((R58), Roadster (R59), Clubman (R55), Countryman (R60), Paceman (R61) and Clubvan (R55) >2007, (engine code: N12, N14, N16, N18)





150.3340	2 pcs	V-ribbed belt wrench set for Mini	890

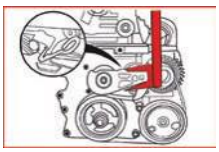
consists of:

150.3341	1/2" V-ribbed belt wrench, 21 mm	451
150.3342	1/2" V-ribbed belt wrench, 30 mm	439

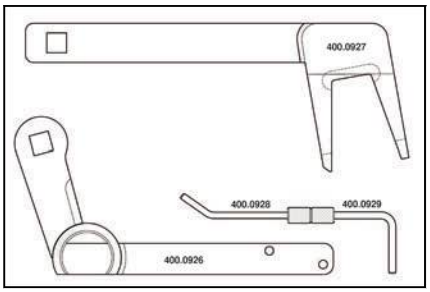
Engine Timing Tool Set for BMW / Mini

- For the professional engine repair
- For locking the cam shaft
- For changing the timing chain
- Very high degree of accuracy
- In durable steel storage case

Application range: BMW Mini One, Cooper, Cooper S with 1.6 petrol engines (engine code: W10816AA / W10816BA / W11816AA)







400.0925	4 pcs	Engine Timing Tool Set for BMW / Mini	2,03

consists of:

400.0926	Serpentine belt tensioner	435
400.0927	Camshaft pulley loosening tools	400
400.0928	Tensioning locking pin, Ø 4 mm	15
400.0929	Locking pin, Ø 4,5 mm	18

timing chain testing tool for mini

- ideally suited to assess the chain elongation of the camshaft timing chain
- is used instead of the belt tensioner
- Removal of the engine is not necessary
- Enormous time and cost saving

Application range: Mini Clubman R55 (2007 - 2014), Clubvan R55 (2012 - 2014), Countryman R60 (2010 - 2017), Coupé R58 (2011 - 2015), Mini R56/R57 (2006 - 2015), Paceman R61 (2013 - 2017) and Roadster R59 (2012 - 2015) with 1.4 l and 1.6 l petrol engines (engine code: N12 B14AB / N12 B14 / N12 B16A / N16 B16A / N16 B16M0 / N16 B16U0 / N16 B16A/M0 / N16 B16K0 / N16 B16A/MO / N18 B16A / N18 B16A/M0 / N18 B16C / N18 B16A/MO / N18 / N18 B16M0 / N18 B16C/TO)



400.4400	timing chain testing tool for mini	27	185

Special socket with special profile

- special profile
- ideally suited to operate the new central screw connection on the central valve of the camshaft adjuster
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Extra short execution
- replaces the old 6-sided screw connection
- For manual operation
- Matt finish
- Chrome vanadium

Application range: Central bolting of the Vanos unit for **BMW**, **Mini** and the CVT module for **Ford**



1/2"

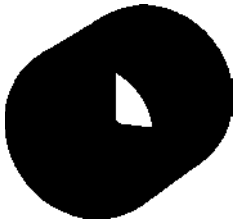
400.0002	30,0	30	103



Special socket with special profile

- special profile
- ideally suited to operate the new central screw connection on the central valve of the camshaft adjuster
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Extra short execution
- replaces the old 6-sided screw connection
- For machinery usage
- Phosphate finish
- Chrome molybdenum

Application range: Central bolting of the Vanos unit for **BMW**, **Mini** and the CVT module for **Ford**



1/2"

400.0003	30,0	30	95

Camshaft alignment tool for Opel / BMW / Mini

- For the professional engine repair
- ideally suited for locking the intake camshaft gear wheel
- Secure hold thanks to optimal positioning
- Very high degree of accuracy

Application range: Opel Corsa E (>2015), **BMW** 1 Series (>2015), 2 Series (>2014), X1 (>2015), **Mini** One (>2014) for 1.3 l and 1.5 l diesel engines (engine code: LKU/B13DTE / LKU/B13DTR / LKV/B13DTC / B37 C15A / B367 D15A)



400.0009	Camshaft alignment tool for Opel / BMW / Mini	400

Balancer shaft alignment tool for BMW / Mini

- For the professional engine repair
- ideally suited for aligning the balancer shaft
- Very high degree of accuracy
- In durable plastic case

Application range: BMW 1 Series (20– - 2016), 2 Series (2014 - 2016), 3 Series (2007 - 2016), 4 Series (2013 - 2016), 5 Series (2007 - 2016), X1 (2009 - 2016), X3 (2007 - 2016), X4 (2014 - 2016), X5 (2013 - 2016), **Mini** Clubman (2015 - 2016) and Mini hatchback (2014 - 2016) with 2.0 l diesel engines (engine code: B47 D20A / B47 C20A / B48 A20B / B47 / B47 C20 / B48 A20A / N47 D20A/K0 / N47 D20A / N47S D20B/D/T0 / N47 D16C / N47 D16 / N47 D20C/K1 / N47 D20C / N47 D20C/U1 / N47 D20C/O1 / N47 D20D/T1 / N47 D20D / N47 D20A/U0 / N47T D20K1 / N47 D20U0 / N47T D20U1 / N47T D20O1 / N47 D20C/O / N47 D20C/01 / N47 D20O0 / N47S D20D/T0 / N47 D20A/O0)

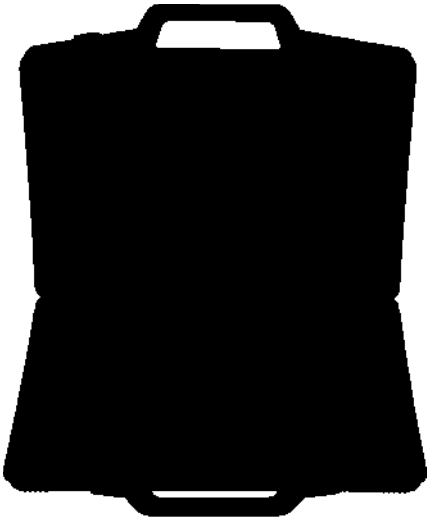


400.4390	Balancer shaft alignment tool for BMW / Mini	2,93	

Balancer shaft removal tool set for BMW / Mini

- For the professional engine repair
- ideally suited for dismantling the balancer shaft
- Very high degree of accuracy
- In durable plastic storage case

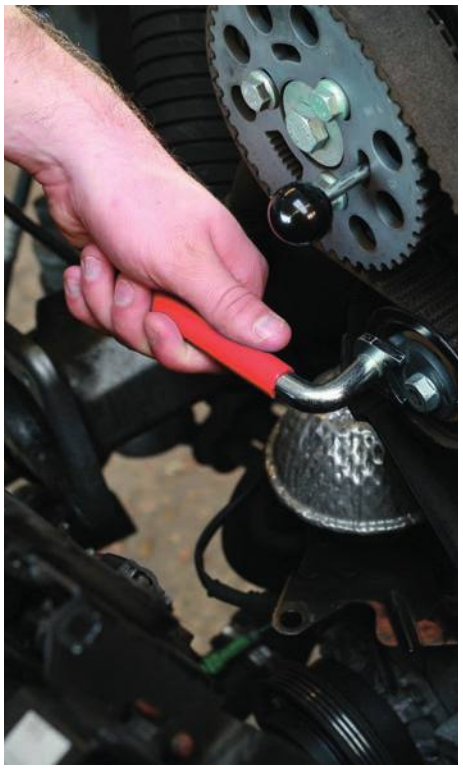
Application range: BMW 1 Series F20/F21 (2015 - 2017), 2 Series F22/F23/F45/F46 (2014 - 2017), 3 Series F30/F31 (2015 - 2017), i8 I12 (2014 - 2017), X1 F48 (2015 - 2017), **Mini** Clubman F54 (2015 - 2017), Convertible F57 (2016 - 2017) and Mini hatchback F55/F56 (2014 - 2017) with 1.2 l and 1.5 l petrol or 1.5 l diesel engines (engine code: B38 A12A / B37 D15A / B37 C15A / B38 B15A / B38 A15A / B38 K15A)



			kg	
400.4380	4 pcs	Balancer shaft removal tool set for BMW / Mini	1,55	

consists of:

		g	
400.4381	Balance shaft locking tool, Diesel	255	
400.4382	Balance shaft locking tool, Diesel	190	
400.4383	Balance shaft disassembly tool	710	
400.4384	Assembly plate for alignment tools	215	



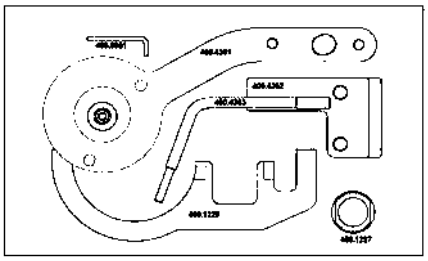


Engine adjustment tool set for BMW / Mini

- For the professional engine repair
- For changing the timing chain
- Very high degree of accuracy
- In durable steel storage case

Application range: BMW 1 Series F20/F21 (2015 - 2017), 2 Series F22/F23/F45/F46 (2014 - 2017), 3 Series F30/F31/34 (2015 - 2017), 4 Series F32/F33/F36 (2015 - 2017), 5 Series F10/F11 (2014 - 2017), X1 F48 (2015 - 2017), X3 F25 (2014 - 2017), X4 F26 (2014 - 2017), X5 F15 (2015 - 2017), **Mini** Clubman F54 (2015 - 2017), Cabrio F57 (2016 – 2017) and Mini hatchback F55/F56 (2014 – 2017) with 1.5 l or 2.0 l diesel engines (engine code: B37 D15A / B37 C15A / B47 D20A / B47 D20B / B47 C20A / B47 / B47 C20B)





			g	
400.4360	6 pcs	Engine adjustment tool set for BMW / Mini	980	

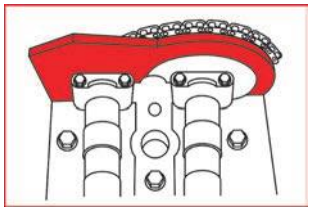
consists of:

		g	
400.0901	Tensioning locking pin, 45 mm	4	
400.4361	Crankshaft holding tool	320	
400.4362	A/T Drive plate timing pin adaptor	490	
400.4363	Flywheel drive plate timing pin	70	
400.1227	High pressure pump sprocket removal tool	89	
400.1229	Camshaft alignement tool Ø 93 mm	242	

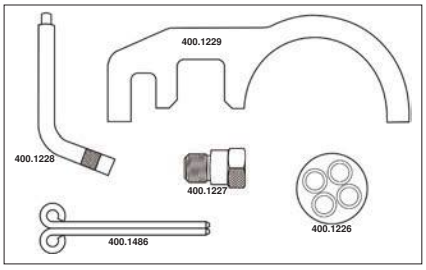
Engine adjustment tool set for BMW / Mini

- For the professional engine repair
- For locking the cam shaft
- For changing the timing chain
- Very high degree of accuracy
- In durable steel storage case

Application range: BMW with 2.0 engines (2007-2010) (engine codes: N47 / N47S), **BMW Mini** Countryman, Clubman (>2007) (engine code: R55 / R56 / R57 / R60). Contains pumps / pulley wheels disassembly tool



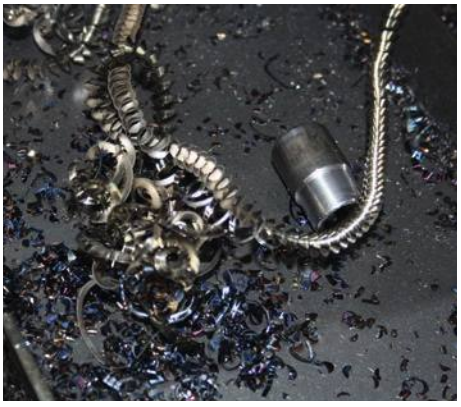




			kg	
400.1225	6 pcs	Engine adjustment tool set for BMW / Mini	1,91	

consists of:

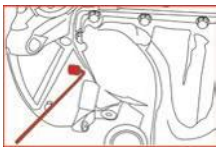
		g	
400.1226	Crankshaft pulley turning tool	183	
400.1227	High pressure pump sprocket removal tool	89	
400.1228	Flywheel plate timing pin	109	
400.1229	Camshaft alignement tool Ø 93 mm	242	
400.1486	Tensioner locking pin (2)	29	



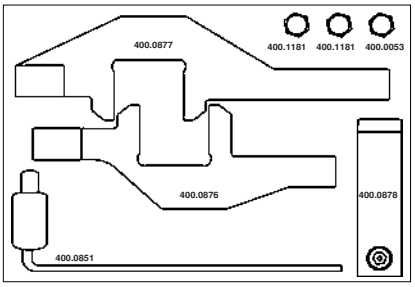
Engine Timing Tool Kit for BMW / Mini / PSA

- In durable steel storage case
- For the professional engine repair
- Very high degree of accuracy
- For locking the cam shaft
- For changing the timing chain

Application range: BMW Mini with 1.6 engines (engine code: N14 / R56), **Peugeot** 207, 308 with 1.6 engines (engine code: EP6 / EP6DT / DTS), **Citroën** with 1.6 engines (engine code: EP6 / EP6DT / DTS)







			kg	
400.0875	7 pcs	Engine Timing Tool Kit for BMW / Mini / PSA	1,49	

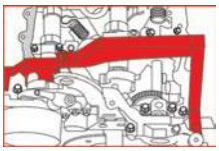
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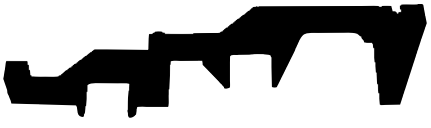
	X		g	
400.0851	1	Crankshaft locking pin Ø 8 mm	52	
400.0878	1	Support clamp	93	
400.0877	1	Camshaft alignment tool (exhaust)	423	
400.0876	1	Camshaft alignment tool (inlet)	270	
400.1181	2	Bolt M6x30	8	
400.0053	1	Screw M6 x 20,0 mm	6	

Engine Timing Tool Set for BMW / Mini / PSA

- For the professional engine repair
- For locking the cam shaft
- For changing the timing chain
- Very high degree of accuracy

Application range: BMW Mini with 1.4 / 1.6 Valvetronic engines (engine code: N12), **Peugeot** 207, 308 with 1.4 / 1.6 engines (engine code: EP3 / EP6), **Citroën** with 1.4 / 1.6 engines (engine code: EP3 / EP6)





			kg	
400.0850	7 pcs	Engine Timing Tool Set for BMW / Mini / PSA	1,40	

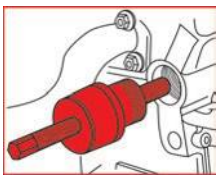
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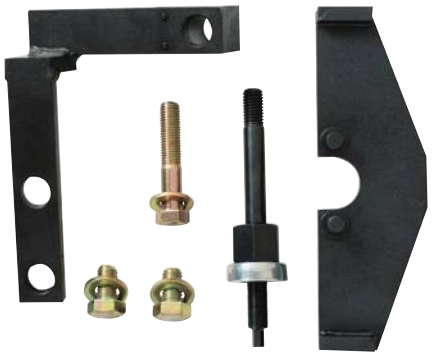
	X		g	
400.0851	1	Crankshaft locking pin Ø 8 mm	52	
400.0852	1	Camshaft locking tool inlet (2)	812	
400.0853	1	Camshaft locking tool (EX)	358	
400.1181	3	Bolt M6x30	8	

Engine Timing Tool Set for BMW / Mini

- For the professional engine repair
- For locking the cam shaft
- For changing the timing chain
- Very high degree of accuracy

Application range: BMW Mini (2001-2006) (engine code: W10B16AA/BA)





			kg	
400.9090	7 pcs	Engine Timing Tool Set for BMW / Mini	1,93	

consists of:

			g	
400.9091	Camshaft locking tool 187 mm		575	
400.9092	Engine support bracket (4)		615	
400.9093	Timing chain pre-tensioning tool, 140 mm (2)		215	

Engine Timing Tool Set for BMW / Mini

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy

Application range: BMW Mini with 16V engines (engine code: W16D)



			g	
400.2475	8 pcs	Engine Timing Tool Set for BMW / Mini	126	

consists of:

	X		g	
400.0165	2	Camshaft locking pin 5.0 mm	19	
400.2476	1	Flywheel locking pin, BMW-Mini	40	
400.0580	1	Crankshaft locking pin Ø 8,0 mm, 70 mm	30	
400.1185	1	Washers M6 2 pcs	1	
400.3204	2	Screw 6 point M6x16mm	5	

Crankshaft fixing tool for BMW / Mini

- For the professional engine repair
- For changing the timing chain
- Very high degree of accuracy
- In durable steel storage case

Application range: BMW 1 Series F20/F21 (2011 - 2015), 2 Series F22 (2014 - 2016), 3 Series E90/E91/E92/E93/F30/F31/F34 (2010 - 2016), 4 Series F33/F32/F36 (2013 - 2016), 5 Series F07/F10/F11 (2010 - 2017), X1 E84 (2009 - 2015), X3 F25 (2012 - 2014), X5 F15 (2014 - 2016), X5 F15 (2014 – 2016), Mini Clubman R55 (2010 - 2014), Clubvan R55 (2012 - 2014), Countryman R60 (2010 - 2017), Mini R56/R57 (2010 - 2015), Paceman R61 (2013 - 2017), Clubman R55 (2011 - 2014), Coupé R58 (2011 - 2015) and Roadster R59 (2012 - 2015) with 1.6 l and 2.0 l petrol engines (engine code: N47 C16U1 / N47 C16K1 / N47 C16A/U1 / N47 D16C / N47 D16 N47 / C20K1 / N47 C20U1 / N47 C20A/K1 / N47S D20B/D/T0 / N47 D20C/K1 / N47 D20C, N47 D20C/U1 / N47 D20C/O1 / N47 D20D / N47 D20D/T1 / N47T D20O1 / N47 D20C/O / N47 D20A / N47 D20C/01 / N47 D20U0)



		g	
400.4395	Crankshaft fixing tool for BMW / Mini	465	

Crankshaft pulley locking tool for BMW / Mini

- For the professional engine repair
- Simple assembly and disassembly of the crank shaft pulley wheel
- Special profiles allows for counter holding when releasing or securing the crank shaft central screw
- Very high degree of accuracy

Application range: BMW 1 Series (2007 - 2016), 2 Series Coupé (2007 - 2016), 3 Series (2007 - 2016), 4 Series (2007 - 2016), 5 Series (2007 - 2016), 6 Series (2007 - 2016), 7 Series (2007 - 2016), X1 (2007 - 2016), X3 (2007 - 2016), X4 (2007 - 2016), X5 (2007 - 2016), X6 (2007 - 2016), **Mini** Clubman (2007 - 2016), Clubvan (2007 - 2016), Countryman (2007 – 2016), Coupe (2007 – 2016), Mini (2007 – 2016), Paceman (2007 – 2016), Roadster (2007 – 2016) for 1.6 l, 2.0 l, 3.0 l diesel engines (engine code: N47 D20A/K0 / N47 D20A / N47 D16C / N47 D16 / N47S D20B/D/T0 / N47 D20C/K1 / N47 D20C / N47 D20C/U1 / N47 D20D/T1 / N47 D20D / N47 D20C/01 / N47 D20A/U0 / N47 D20K1 / N47 D20U0 / N47T D20O1 / N47D20C/O / N47 D20U1 / N47 / N47 D20C/01 / N47 D20O0 / N47S D20D/T0 / N47 D20A/O0 / N47 C16U1 / N47 C16K1 / N47 C20K1 / N47 C20U1 / N47 C16A/U1 / N47 C20A/K1 / N57 D30A/O0 / D57 D30A/O1 / N57 D30U0 / N57 D30B / N57 D30A / N57 D30UO / N57 D30B / N57 D30A / N57 D30UO / N57 D30O0 / N57 D30O1 / N57 D30B/T1 / N57 D30TO / N57 D30C/S1 / N57 D30A0 / N57 D30T0 / N57 D30C / N57D30B/T0)



			kg	
400.4370	6 pcs	Crankshaft pulley locking tool for BMW / Mini	1,24	

consists of:

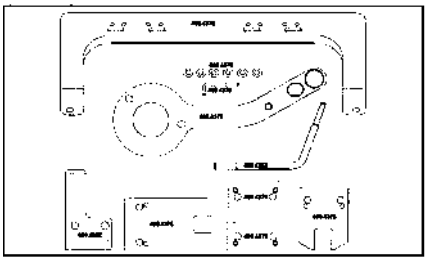
		g	
400.4371	Retainer plate	830	
400.4372	Retaining mandrel set 5 pcs	390	

Engine Timing Tool Set for BMW / Mini

- For the professional engine repair
- For changing the timing chain
- Very high degree of accuracy
- In durable steel storage case

Application range: BMW 1 Series F20/F21 (2015 - 2017), 2 Series F22/F23/F45/F46 (2014 - 2017), 3 Series F30/F31/34/36 (2015 - 2017), 4 Series F32/F33/F36 (2015 - 2017), 7 Series G11/G12 (2015 - 2017), i8 I112 (2014 - 2017), X1 F48 (2015 - 2017), **Mini** Clubman F54 (2015 - 2017), Cabrio F57 (2016 - 2017) and Mini Schrägheck F55/F56 (2014 – 2017) with 1.2 l, 1.5 l, 2.0 l and 3.0 l petrol engines (engine code: B38 A12A / B38 B15A / B38 A15A / B38 K15A / B48 B20A / B48 B20B / B48 A20A / B48 A20B / B48 / B58 B30A)





			kg	
400.4375	5 pcs	Engine Timing Tool Set for BMW / Mini	4,68	

consists of:

		kg	
400.4376	Camshaft alignment tool with screws	1,94	
400.4377	Crankshaft holding tool	0,21	
400.4362	A/T Drive plate timing pin adaptor	0,49	
400.4363	Flywheel drive plate timing pin	0,07	
400.4378	Locking pin for spanner	0,01	



MITSUBISHI

Engine Timing Tool Set for Hyundai / Mitsubishi / Volvo

- For the professional engine repair
- For actuating belt tensioners
- Very high degree of accuracy

Application range: universal usage on many **Hyundai**, **Mitsubishi**, **Volvo** vehicles



			g	
400.0075	2 pcs	Engine Timing Tool Set for Hyundai / Mitsubishi / Volvo	131	

consists of:

		g	
400.0076	Tensioning locking pin, 250 mm	630	
400.0077	Belt tensioner wrench	210	

Assembly tool set for Citroën / Ford / Land Rover / Mitsubishi / Peugeot

- For the professional engine repair
- For locking the cam shaft
- Secure hold thanks to optimal positioning
- Very high degree of accuracy
- In durable plastic storage case

Application range: Land Rover Discovery (2009 – 2015), Discovery Sport (2009 – 2015), Freelander 2 (2009 – 2015), eD4 (2009 – 2015), TD4 (2009 – 2015), TD4e (2009 - 2015), **Citroën** C5 (2002 – 2015), C5 II (2002 – 2015) , C5 III (2002 – 2015), C6 (2002 – 2015), C8 (2002 – 2015), C-Crosse (2002 - 2015), **Mitsubishi** Outlander DI-D (2007 – 2013), DI-DC (2007-2013), **Peugeot** 4007 (2000 – 2015), 407 (2000- 2015), 607 (2000 – 2015), 807 (2000 – 2015), 406 (2000 – 2015), 508 (2000 – 2015), 607 (2000 – 2015), GT (2000-2015), **Ford** Galaxy (2008 - 2015), Mondeo (2008 - 2015), S-Max (2008 - 2015) for 2.2 l diesel engines (engine codes: 224DT / DW12CTED4 224DT / DW12BTED4 224DT /4HX (DW12CTED4) / 4HP (DW12BTED4) / 4HX (DW12TED4) / 4HW (DW12TED4/L4) / 4HK, 4HN / DW12MTED4 (4HK) / DW12MTED4 (4HN) / DW12BTED4 (4HP) / DW12BTED4 (4HR) / DW12BTED4 (4HT) / DW12TED4/L4 (4HW) / DW12BTED4 (4HS) / DW12ATED (4HZ) / DW12ATED4 (4HX) / DW12ATED (4HZ) / DW12CTED4 (4HL), KNBB, KNBA, KNWA, Q4BA)



			g	
400.4450	3 pcs	Assembly tool set for Citroën / Ford / Land Rover / Mitsubishi / Peugeot	680	

consists of:

		g	
400.4451	Balance shaft locking tool	190	
400.4452	Balance shaft tool	140	
400.4453	Balance shaft adjustment tool	230	

NISSAN

Fixing mandrel injection pump wheel for Nissan

- For the professional engine repair
- Ideally suited to securing the injection pump
- Simple handling
- Special tool steel
- Very high degree of accuracy

Application range: Nissan Almera, Almera Tino, Cabstar, Navara, Pathfinder, Primera, X-Trail with 2.2 and 2.5 Diesel engines



		g	
400.9047	Fixing mandrel injection pump wheel for Nissan	18	

Diesel pump adjustment tool

- Secure stand for the pump wheel when assembling and disassembling the high pressure pump
- exact positioning of the pump wheel
- no need to disassemble the tooth belt
- saves work of making further adjustments to the pump
- Saves a lot of time
- Special tool steel

Application range: Diesel engines F9Q for **Opel**, **Renault**, and **Nissan** vehicles



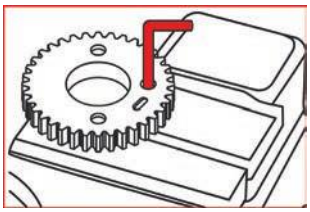
		g	
400.9051	Diesel pump adjustment tool	420	



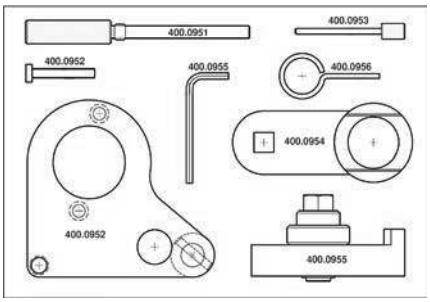
Engine Timing Tool Kit for Nissan / Renault

- For the professional engine repair
- For locking the cam shaft
- For changing the timing chain
- Very high degree of accuracy
- In durable steel storage case

Application range: Renault Megane, Vel Satis, Espace, Scenic, Trafic, Laguna, Koleos, **Nissan** Qashqai, **Opel** Vivaro with 2.0 dCi engine (engine code: M9R)







			kg	
400.0950	8 pcs	Engine Timing Tool Kit for Nissan / Renault	2,73	

consists of:

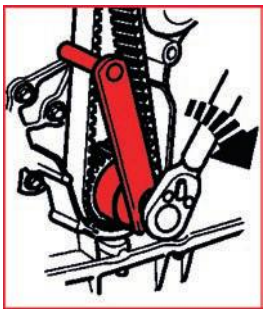
		g	
400.0951	Crankshaft locking pin Ø 8 mm, 144 mm	103	
400.0952	Camshaft locking tool	398	
400.0953	Auxilliary drive belt tensioning locking pin	13	
400.0954	Crankshaft pulley holding tool	424	
400.0955	Camshaft gear alignment tool (2)	593	
400.0956	Timing chain tensioner locking pin Ø 3 mm, 65 mm	6	
400.0957	Key hex, 4.0 mm	1	
400.0958	Locking screw M6 x 40.0 mm	18	



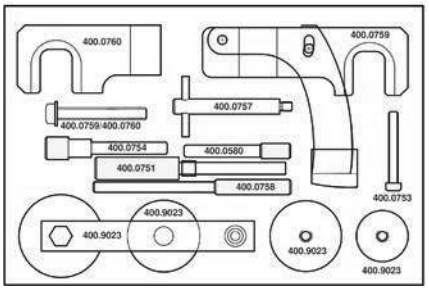
Engine adjustment tool kit for Nissan / Opel / Renault

- For the professional engine repair
- For locking the cam shaft
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Renault Clio 1.5 / 1.9 / 2.3 / 2.5 dCi, Laguna II, Espace, Trafic, Master with 2.2 DTI (2000-2005) G9 engines, **Opel** Movano 2.2 Tdi, **Nissan** Kubistar, Primastar, Interstar and Micra with 1.5 / 2.2 / 2.5 dCi engines







			kg	
400.0750	15 pcs	Engine adjustment tool kit for Nissan / Opel / Renault	1,69	

consists of:

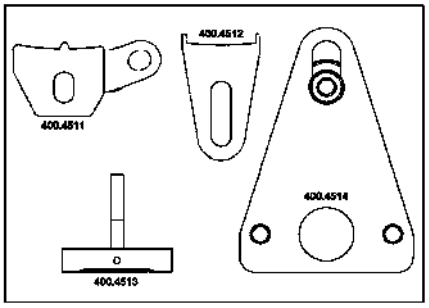
		g	
400.0580	Crankshaft locking pin Ø 8,0 mm, 70 mm	30	
400.0751	Crankshaft locking pin Ø 7,5 mm	102	
400.0752	Washers M8	1	
400.0753	Locking screw M6 x 30.0 mm	10	
400.0754	Camshaft locking pin	51	
400.0757	Hi-Pressure pump locking pin	43	
400.0758	Flywheel locking pin Ø 7 mm	55	
400.0759	Camshaft setting tool (exhaust) (2)	20	
400.0760	Camshaft setting tool (inlet)	223	
400.9023	Cam belt tensioning tool for Renault	669	

Flywheel locking tool set for Renault / Nissan

- For the professional engine repair
- For locking the fly wheels
- Secure hold thanks to optimal positioning
- Very high degree of accuracy
- In durable plastic storage case

Application range: Renault Espace V (2015 - 2016), Clio (2006 – 2016), Fluence (2009 – 2015), Laguna (2005 – 2015), Latitude (2010 – 2016), Megane (2006 -2015), Scenic/ Grand Scenic (2006 – 2015), Espace/Grand Espace IV (2002 -2015), Koleos (2008 - 2016), Trafic II (2007 - 2015), Vel Satis (2000 – 2010), Master III (2010 – 2016), **Nissan** Primastar (2006 – 2015), Qashqai/Qashqai+2 (2007 -2014), X-Trail (2007 – 2014), NP300 Navara (2015 – 2016) and NV400 (2011 – 2016) with 1.4 l, 1.6 l, 2.0 l, 2.3 l, 2.5 l and 3.5 l petrol engines (engine code: H4JT 700 / M5M 400 / M5M / M5M 450 / M4R 700 / M4R 701 / M4R 714 / M4R 750 / M4R 751 / M4R 752 / M4R 753 / M4R 737 / M4R 704 / M4R 726 / M4R 730 / M4R 735 / M4R 746 / M4R / M4R 711 / M4R 713 / M9R 740 / M9R 760 / M9R 761 / M9R 812 / M9R 814 / M9R 815 / M9R 830 / M9R 832 / M9R 833 / M9R 834 / M9R 835 / M9R 836 / M9R 838 / M9R 855 / M9R 856 / M9R 865 / M9R 866 / M9R 742 / M9R 800 / M9R 805 / M9R 700 / M9R 721 / M9R 722 / M9R 724 / M9R 613 / M9R 615 / M9R 610 / M9R 630 / M9R 780 / M9R 782 / M9R 750 / M9R 762 / M9R 763 / M9R 858 / M9R 859 / M9R 8 / M9R 744 / M9R 746 / M9R 748 / M9R 754 / M9R 802 / M9R 803 / M9R 806 / M9R 808 / M9R 809 / M9R 820 / M9R 828 / M9R 845 / M9R 849 / M9R 854 / M9R 857 / M9R 816 / M9R 756 / M9R 804 / M9R 811 / M9R 817 / M9R 824 / M9R 839 / M9R 844 / M9R 846 / M9R 692 / M9R 784 / M9R 786 / M9R 788 / M9R M9T 670 / M9T 672 / M9T 676 / M9T 678 / M9T 680 / M9T 686 / M9T 690 / M9T 692 / M9T 694 / M9T 696 / M9T 698 / M9T 700 / M9T 702 / M9T 870 / M9T 880 / M9T 890 / M9T 896 / M9T 898 / M9T C6 / YS23DDT / YS23DDTT / M9T 706 / M9T 708 / 2TR 700 / 2TR 700 / 2TR 702 / 2TR 703 / 2TR 704 / 2TR 705 / 2ZV 604 / V4U 604 / VQ25 V4Y 711 / V4Y 715 / V4Y 701 / V4Y 713)



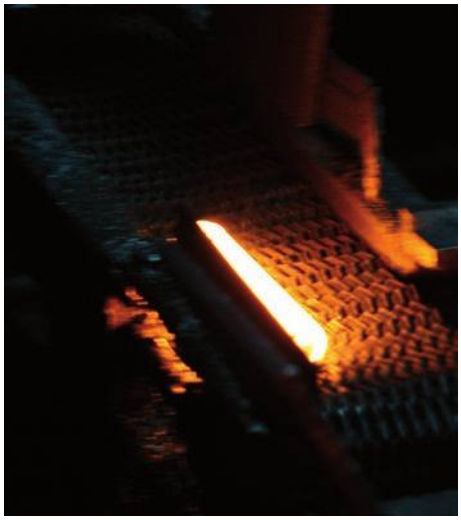


			kg	
400.4510	4 pcs	Flywheel locking tool set for Renault / Nissan	1,27	

consists of:

		g	
400.4511	Flywheel locking tool, 80 mm	250	
400.4512	Flywheel locking tool, 90 mm	180	
400.4513	Sump separator tool	180	
400.4514	Crankshaft pulley holding tool	840	



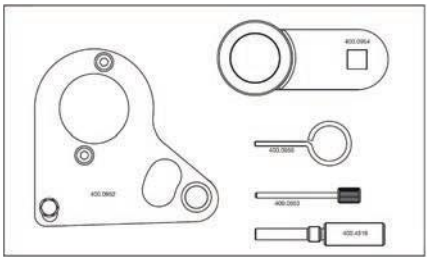


Engine adjustment Tool Set for Mercedes / Opel / Renault / Nissan

- For the professional engine repair
- For changing the timing chain
- Very high degree of accuracy
- In durable steel storage case

Application range: Mercedes C-Klasse (2014 – 2016), Vito (2014 – 2016), **Opel** Vivaro B (2013 – 2016), **Renault** Scenic / Grand Scenic 3 (2011 – 2016), Megane 3 (2012 – 2015), Trafic 3 (2014 – 2016), Espace 5 (2015 – 2016), **Nissan** Qashqai (2011 – 2016), X-Trail (2014 – 2016) with 1.6 l C180 BlueTEC, C200 BlueTEC, CDTi, CDTi BiTurbo, XMOD dCi, dCi Diesel engines (engine code: 626.951 (R9M) / 622.951 / LWX/ R9M 408 / LWZ/R9M 408 / LWU/R9M 450 / LWY/R9M 450 / R9M / R9M 410 / R9M 402 / R9M 404 / R9M 408 / R9M 450 / R9M 409 / R9M 452 / R9M 413)





400.4515	6 pcs	Engine adjustment Tool Set for Mercedes / Opel / Renault / Nissan	2,12

consists of:

400.0952	Camshaft locking tool	398
400.0954	Crankshaft pulley holding tool	424
400.0956	Timing chain tensioner locking pin Ø 3 mm, 65 mm	6
400.0953	Auxilliary drive belt tensioning locking pin	13
400.4516	Locking pin for crankshaft	70

OPEL

Counter hold wrench, 39.0 mm

- For turning the water pump
- To tighten / depressurize the drive belt
- Internal square drive adaptor
- Burnished
- Chrome molybdenum

Application range: Opel/Vauxhall, **GM** OHC engines





	mm	Length mm	g
516.1004	39	90,0	100

Counter hold wrench, 41.0 mm

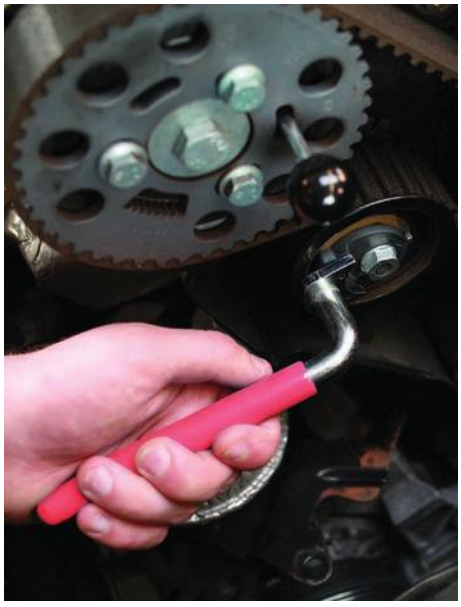
- For turning the water pump
- To tighten / depressurize the drive belt
- Internal square drive adaptor
- Burnished
- Chrome molybdenum

Application range: Opel/Vauxhall, **GM** OHC engines 1.2, 1.3, 1.4 and 1.6 l





	mm	Length mm	g
516.1002	41	90,0	110



Counter hold wrench, 46.0 mm

- For turning the water pump
- To tighten / depressurize the drive belt
- Internal square drive adaptor
- Burnished
- Chrome molybdenum

Application range: Suitable for **Opel** and **GM** OHC engines





	mm	Length mm	g
516.1001	46	90,0	120

Engine Timing Tool Set for GM / Opel

- For the professional engine repair
- For locking the cam shaft or chain tensioner
- Very high degree of accuracy

Application range: Opel Astra-G, Vectra-B, Vectra-C, Signum, Zafira-A (engine code: Z22SE / Z22YH)



400.2325	2 pcs	Engine Timing Tool Set for GM / Opel	787

consists of:

400.2326	Camshaft locking tool, 260 mm	786
400.2327	Timing chain tensioner locking pin	1

Camshaft locking device for GM / Isuzu / Opel / Saab

- For the professional engine repair
- Clamping device for a secure hold to change the timing belt
- Aluminium
- Very high degree of accuracy

Application range: Opel Tigra 2004 - 2008 (engine code: Z18XE) with 1.8 engines, Frontera, Frontera-B and Sintra-A, Omega-B 1995 - 2004 (engine code: X22SE, X33XE, YEESE, Y22XE Z22XE) with 2.2 16V engines. **Saab** 9-3 1996 - 2005 with 1.8 engines (engine code: Z18XE) and similar **Isuzu** and **Saab** engines



	X		
400.0162	1	Camshaft locking device for GM / Isuzu / Opel / Saab	186

Camshaft locking tool for GM / Opel

- For the professional engine repair
- Clamping device for a secure hold to change the timing belt
- Aluminium
- Very high degree of accuracy

Application range: Opel Omega-B 1995 – 2004 (engine code: X22SE, X22XE, Y22SE, Y22XE, Z22XE) with 2.2 16V and Astra-G 2.0 16V and Vectra 1.8/2.0 16V 1995 – 2000 (engine code: X18XE, C20SEL, X20XEV)



	x		g
400.0163	1	Camshaft locking tool for GM / Opel	143

Camshaft locking tool for GM / Opel (right)

- For the professional engine repair
- Clamping device for a secure hold to change the timing belt
- Aluminium
- Very high degree of accuracy

Application range: Opel Vectra-B, Omega-B, Sintra, Calibra (engine code: X25XE, X30XE, Y26SE, Y32SE)



	x		g
400.0103	1	Camshaft locking tool for GM / Opel (right)	119

Flywheel locking tool for GM / Opel / Saab

- For locking the fly wheels
- Secure hold thanks to optimal positioning
- Special tool steel

Application range: Opel and **Saab** vehicles (1996 - 2005, engine code: Z18XE)





		g
400.9046	Flywheel locking tool for GM / Opel / Saab	80

Camshaft locking tool for GM / Opel

- For the professional engine repair
- Clamping device for a secure hold to change the timing belt
- Aluminium
- Very high degree of accuracy

Application range: Opel Astra G, Astra H, Meriva, Zafira 2003 - 2007 (engine code: Z16LET, Z16XEP) with 1.6 16V engines



	x		g
400.2800	2	Camshaft locking tool for GM / Opel	590

Crankshaft holding key for Opel

- For counter holding the crank shaft belt drive when releasing or tightening the crank shaft central screw
- Prevents slipping whilst holding
- The handle can be lengthened via the 1/2" internal square
- Very high degree of accuracy

Application range: Opel Adam (2012 - 2017), Ampera (2011 - 2015), Astra (2009 - 2017), Cascada (2013 - 2017) Corsa (2009 - 2017), GTC (2015 - 2017), Insignia (2011 - 2017), Meriva B (2010 - 2017), Mocha (2012 - 2016), Zafira (2011 - 2017), **Chevrolet** Aveo (2011 - 2015), Cruze (2012 - 2015), Orlando (2012 - 2015), Trax (2013 - 2015) LE1/B10XFL / LE1/B10XFT / LE1/B10XHL / A10XEP / LWD/A12XEL / LWD/B12XEL / A12XEL / A12XER / LDC/B12XEL/ L2Q/A12XEL / LDC/A12XER / L2Z/A14XEL / LDD/A14XER / LDD/B14XEL / LDD/B14XER / LUJ/B14NEH / LUU/A14XFL / LDD/A14XEL / LUJ/A14NEL / LUJ/A14NET / LUJ/B14NEL / LUJ/B14NET / A14XEL / A14XER / A14NEL / LDD/B14XEJ / LUJ/B14NEJ / LUH/A14NEL / LUH/B14NEL / L2I / LDD / LUJ / LUV / LUU)

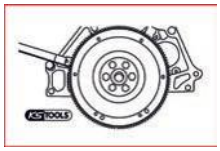


		kg
400.0010	Crankshaft holding key for Opel	2,66

Flywheel holding key

- To lock the flywheel
- Required for the removal and installation of disc flywheels, clutch pressure plates and belt pulleys
- Sturdy design

Application range: Opel with front-wheel drive





	Suitable for	Length mm	Width mm	Total depth mm	g
150.2438	Opel	255,0	26,0	26,0	500

Camshaft locking tool for GM / Opel (left)

- For the professional engine repair
- Clamping device for a secure hold to change the timing belt
- Aluminium
- Very high degree of accuracy

Application range: Opel Vectra-B, Omega-B, Sintra, Calibra (engine code: X25XE, X30XE, Y26SE, Y32SE)

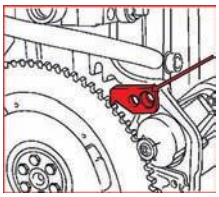


	x		g
400.0104	1	Camshaft locking tool for GM / Opel (left)	120

Flywheel locking tool for GM / Opel

- For locking the fly wheels
- For easily attaching to one of the small fixing pins next to the fly wheel
- Special tool steel

Application range: for all **Opel** and **GM** 4 and 6 cylinder CIH, 24V and OHC engines





		g
400.9045	Flywheel locking tool for GM / Opel	80



Universal fly wheel locking tool set

- For the professional engine repair
- For locking the fly wheels
- Secure hold thanks to optimal positioning
- Special plastic
- Very high degree of accuracy

A Fly wheel Locking device for:Citroën: Synergie 2.0/Turbo. ZX 1.9D/TD, Xantia 1.9D/TD, Berlingo 1.9D, Dispatch 1.9D/TD, Synergie1.9D, Relay 1.9D/TD, **Fiat:** Ulysse, 2.0/Turbo Ducato 2.0, FSO: 1.9D, LDV: 200 1.9D, Pilot 1.9D, **Peugeot:** 205 1.6/1.9, 305 1.6/1.9, 309 1.6/1.9, 405 1.6/1.9, 405 1.8/2.0 (92-), 605 2.0, Boxer 2.0, c205 1.8/1.9D, 305 1.8/1.9D, 306 1.8/1.9D/TD, 309 1.8/1.9D 1.8TD, 405 1.8TD, 405 1.9D, 406 1.9D, Partner 1.9D, Talbot / Horizon / Solara 1.9D, J5/Talbot Express 1.9D, 605D/TD, 806 1.9TD, Expert 1.9D, Boxer 1.9D/TD, **Renault:** R5, 1.6D, R9 1.6D, 411 1.6D Express/Extra 1.6D-F8M diesel engines, Clio, Express/Extra, 1.9D earlier F8Q diesel engines, Espace 2.1D, R21 2.1D, R25 2.1D, Trafic/Master 2.1D-J8S diesel engines, Clio 1.2/1.4, Express/Extra, R19 1.4, Megane/Scenic 1.4/1.6-E7F/E7J petrol engines, R5 1.7, Clio 1.7/1,8, R19 1.7, R21 1.7 1.7 Megane/Scenic 2.0, Laguna 1.8/2.0, Trafic 1.7-F3N/F3P/F2R petrol engines, Clio, Williams, R19, Megane 2.0 16V Twin-Cam F7P/F7R engines, Laguna/ Safrane 2.0 16V Twin-Cam N7Q/N7U engines

B Fly wheel Locking device for:Renault: Clio, Twingo, Kangoo, Megane/Scenic, 1.2/1.6 D7F + K7M Petrol engine, Megane/Scenic, Kangoo 1.9D FBQ + F9Q Diesel engine (direct injection)

C Fly wheel Locking device for:Citroën: Xsara, Xantia 1.8/2.0XU7 JP/JB petrol engines, Xsara 1.8 16V XU7 JP4 twin cam shaft engines, ZX.Xantia, XM2.0 16V XU10J4 twin cam shaft engines, Xantia 1.9D/TD XUD9BTF diesel engines, Xantia, XM2.1TD XUD 11BTE diesel engines, **Peugeot:** 406, 1.8/2.0 XU7 JP/JB Petrol engine, 406 1.8 16V XU7 JP4 Double cam shaft engines, 306, 405, 605 2.0 16V XU10J4 Double cam shaft engines, 406, 1.9D/TD XUD9BTF Diesel engines, 406, 605 2.1 TD XUD 11BTE Diesel engines

D Fly wheel Locking device forVauxhall/Opel: 1.2, 1.4, 1.6, 1.8, 2.0 OHC Petrol engines, 1.6D & 1.7, OHC Diesel engines, 1.5 & 1.7 OHE Diesel(Isuzu)-Engines





			g
150.3025	4 pcs	Universal fly wheel locking tool set	30

Camshaft alignment tool for Opel / BMW / Mini

- For the professional engine repair
- ideally suited for locking the intake camshaft gear wheel
- Secure hold thanks to optimal positioning
- Very high degree of accuracy

Application range: Opel Corsa E (>2015), **BMW** 1 Series (>2015), 2 Series (>2014), X1 (>2015), **Mini** One (>2014) for 1.3 l and 1.5 l diesel engines (engine code: LKU/B13DTE / LKU/B13DTR / LKV/B13DTC / B37 C15A / B367 D15A)



		g
400.0009	Camshaft alignment tool for Opel / BMW / Mini	400

Camshaft locking tool set for Opel

- For the professional engine repair
- Ideally suited to fixing the cam shaft
- Simple handling
- Very high degree of accuracy

Application range: Opel Cascada (2015 - 2017), Insignia (2014 - 2017), Insignia Country Tourer (2014 - 2017), Zafira C Tourer (2014 - 2017) for 2.0 l diesel engines (engine code: B20DTH)



			g
400.4490	2 pcs	Camshaft locking tool set for Opel	690

consists of:

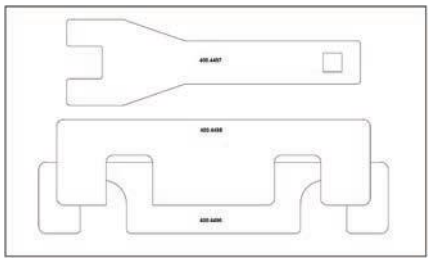
		g
400.0901	Tensioning locking pin, 45 mm	4
400.4491	Camshaft alignment tool	690

Engine adjustment tool set for Opel

- For the professional engine repair
- for locking the camshaft
- Very high degree of accuracy
- In durable steel storage case

Application range: Opel Adam (2014 - 2017), Astra K (2014 - 2017) and Corsa E (2014 - 2017) with 1.0 l and 1.4 l turbo, SIDI or Ecoflex engines (engine code: LE1/B10XFL, LE1/B10XFT, LE1/B10XHL, LV7/B14XE, LE2/B14XHL, LE2/B14XHT)





		g
400.4495	3 pcs	Engine adjustment tool set for Opel	1,44

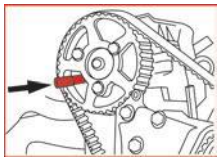
consists of:

		g
400.4496	Camshaft alignment tool 1,0 l and 1,4 l Turbo	470
400.4497	Balance shaft holding tool	460
400.4498	Camshaft alignment plate 1,4 l without turbo system	510

Engine Timing Tool Set for Fiat / GM / Opel / PSA / Renault

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy

Application range: Fiat, **PSA**, **Renault**, **Opel** vehicles with 2.5 / 2.8D engines





			g
400.1775	4 pcs	Engine Timing Tool Set for Fiat / GM / Opel / PSA / Renault	143

consists of:

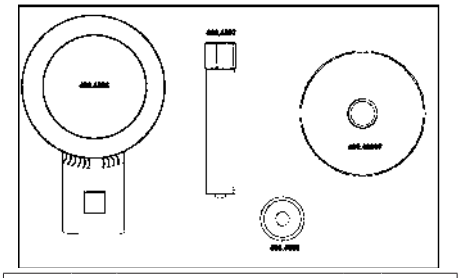
	X		g
400.0165	2	Camshaft locking pin 5.0 mm	19
400.0754	1	Camshaft locking pin	51
400.1388	1	Tensioner adjuster Ø 30 mm	41

Engine adjustment tool set for Opel

- For the professional engine repair
- to hold the crankshaft
- Very high degree of accuracy
- In durable steel storage case

Application range: Opel Karl (2015 - 2017), Viva (2015 - 2017) and Astra K (2015 - 2017) with 1.0 l and 1.4 l turbo or Ecoflex petrol engines (engine code: L5Q/B10XE / LWT/B10XL / LV7/B14XE / LE2/B14XHL / LE2/B14XHT)





			kg
400.4505	4 pcs	Engine adjustment tool set for Opel	1,83

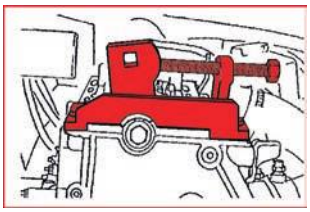
consists of:

		g
400.4506	Crankshaft pulley holding tool	720
400.4507	Pressure plate with puller screw	360
400.4508	Crankshaft protector	70

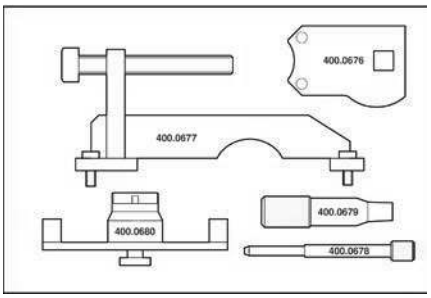
Engine Timing Tool Set for GM / Opel / Saab

- For the professional engine repair
- For locking the cam shaft
- For changing the timing belt or the chain
- Very high degree of accuracy
- In durable steel storage case

Application range: Opel Astra-G (1998-2006), Vectra-B, Vectra-C (1997 - 2005), Signum (2003-2005), Omega-B (1998-2003), Zafira-A (1999-2005), Sintra (1998-1999), Frontera-B (1998-2004) with 2.0 / 2.2 DTi engines (engine code: Z20DTH / Z20DTL / Z22DTH / Z22DTR) and **Saab** 9-3 (1998-2004) with 2.2 TID, 9-5 (2002-2007) with 2.2 TID engines (engine code: D223L)







			kg	
400.0675	5 pcs	Engine Timing Tool Set for GM / Opel / Saab	1,36	

consists of:

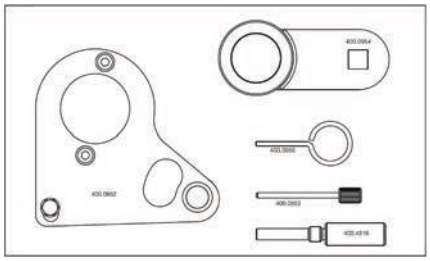
		g	
400.0676	Camshaft turning tool	7	
400.0677	Bracket for timing adjustment wrench	111	
400.0678	Injection pump locking pin, Ø 6 mm, 110 mm	41	
400.0679	Flywheel TDC locking pin Ø 12 mm, 86 mm	160	
400.0680	Camshaft locking tool 120 mm	322	

Engine adjustment Tool Set for Mercedes / Opel / Renault / Nissan

- For the professional engine repair
- For changing the timing chain
- Very high degree of accuracy
- In durable steel storage case

Application range: Mercedes C-Klasse (2014 – 2016), Vito (2014 – 2016), **Opel** Vivaro B (2013 – 2016), **Renault** Scenic / Grand Scenic 3 (2011 – 2016), Megane 3 (2012 – 2015), Trafic 3 (2014 – 2016), Espace 5 (2015 – 2016), **Nissan** Qashqai (2011 – 2016), X-Trail (2014 – 2016) with 1.6 l C180 BlueTEC, C200 BlueTEC, CDTi, CDTi BiTurbo, XMOD dCi, dCi Diesel engines (engine code: 626.951 (R9M) / 622.951 / LWX/ R9M 408 / LWZ/R9M 408 / LWU/R9M 450 / LWY/R9M 450 / R9M / R9M 410 / R9M 402 / R9M 404 / R9M 408 / R9M 450 / R9M 409 / R9M 452 / R9M 413)





			kg	
400.4515	6 pcs	Engine adjustment Tool Set for Mercedes / Opel / Renault / Nissan	2,12	

consists of:

		g	
400.0952	Camshaft locking tool	398	
400.0954	Crankshaft pulley holding tool	424	
400.0956	Timing chain tensioner locking pin Ø 3 mm, 65 mm	6	
400.0953	Auxilliary drive belt tensioning locking pin	13	
400.4516	Locking pin for crankshaft	70	

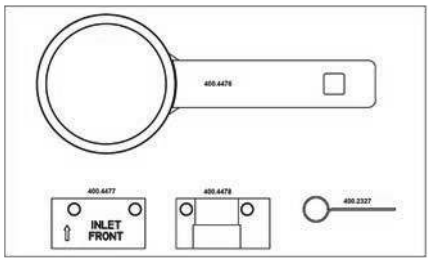


Engine adjustment tool set for Opel / Saab

- For the professional engine repair
- For changing the timing chain
- Very high degree of accuracy
- In durable steel storage case

Application range: Opel Signum Turbo (2002 - 2008), Vectra C Turbo (2002 - 2008), **Saab** 9-3 1.8 Turbo (2002 - 2011), 9-3 1.8 Turbo BioPower (2002 - 2011), 9-3 2.0 Turbo (2002 - 2012), 9-3 2.0 Turbo BioPower (2010 - 2012) and 9-3XT (2009 - 2011) with petrol engines (engine code: Z20NET / B207E / B207L / B207)





			g	
400.4475	4 pcs	Engine adjustment tool set for Opel / Saab	780	

consists of:

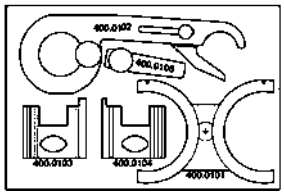
		g	
400.2327	Timing chain tensioner locking pin	1	
400.4476	Crankshaft holding tool	550	
400.4477	Camshaft alignment block - inlet	90	
400.4478	Camshaft alignment block - exhaust	90	

Engine Timing Tool Set for GM / Opel / Saab

- For the professional engine repair
- For engines with bevel on the automatic pulley
- Very high degree of accuracy
- In durable steel storage case

Application range: Opel Vectra-B, Omega-B, Sintra, Calibra with 2.5 / 2.6 / 3.0 V6 engines (1998-2003) (engine code: X25XE, X30XE, Y26SE, Y32SE), **Saab** 9-5 with 3.0 V6 engines (engine code: B308E)





			kg	
400.0100	5 pcs	Engine Timing Tool Set for GM / Opel / Saab	2,44	

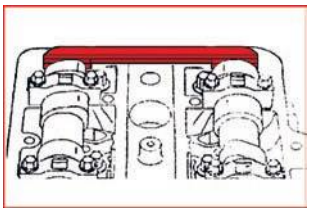
consists of:

		g	
400.0101	Crankshaft locking tool 137 mm	812	
400.0102	Camshaft locking tool Ø 29-50 mm	585	
400.0103	Opel Camshaft locking tool (right)	119	
400.0104	Camshaft locking tool left	120	
400.0105	Belt holding wedge	100	

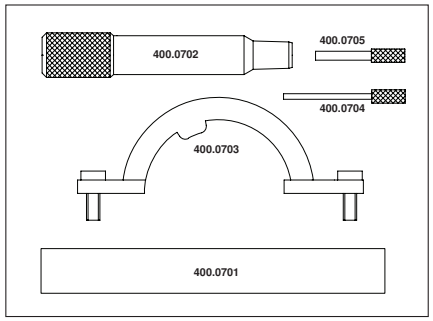
Engine Timing Tool Set for GM / Isuzu / Opel / Saab

- For the professional engine repair
- Especially for chain-driven vehicles
- For locking dual cam shafts
- Very high degree of accuracy
- In durable steel storage case

Application range: Opel Agila, Astra-G, Astra-H, Combo-C, Corsa-B, Corsa-C, Corsa-D, Meriva-A, Tigra-B (1993-2010) with 1.0 12V / 1.2 16V engines (engine code: X10XE / Z10XE / Z10 XEP / X12XE / Z12XE / Z12 XEP / Z14XEL / Z14XEA) and similar **Isuzu**- and **Saab**-engines







400.0700	5 pcs	Engine Timing Tool Set for GM / Isuzu / Opel / Saab	1060	

consists of:

400.0701	Camshaft timing tool 155 mm	120	
400.0702	Flywheel TDC locking pin Ø 12 mm, 113 mm	205	
400.0703	Camshaft position (CMP) sensor disc setting tool	110	
400.0704	Tensioner retaining pin, Ø2,5mm	5	
400.0705	Tensioner retaining pin, Ø4,0mm	5	

Engine Timing Tool Set for GM / Opel

- For the professional engine repair
- Expansion set
- For engines without thread attachment bore holes
- Very high degree of accuracy

Application range: Opel Astra-F, Astra-G, Cavalier, Vectra-A (1997 - 2001) with 1.7 engines (engine code: 17DR / X17DT / DTL)



400.0650	5 pcs	Engine Timing Tool Set for GM / Opel	380	

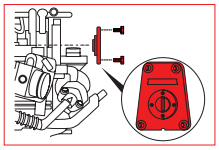
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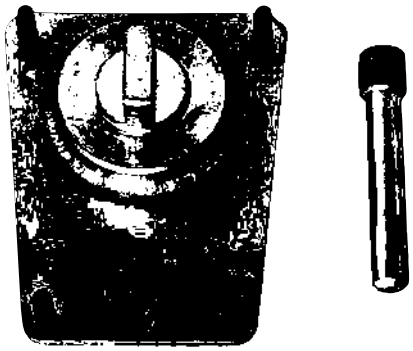
400.0651	Camshaft locking tool (3), 110 x 50 mm	169	
400.0652	Flywheel TDC indicator	80	
400.0653	Flywheel locking pin with spring on ring, 103 mm	79	

Engine Timing Tool Set for GM / Opel

- For the professional engine repair
- For locking the cam shaft
- For changing the timing belt
- Very high degree of accuracy

Application range: Opel Antara, **Chevrolet** Captiva, Curze, Epica, Lacetti with 2.0 SOHC 16V Common-Rail diesel engine (engine code: Z20DM / Z20DMH / LLWZ20DMH / RA420 / Z20SI / Z20S3 / Z20S4 / Z20S5)





400.0050	6 pcs	Engine Timing Tool Set for GM / Opel	748	

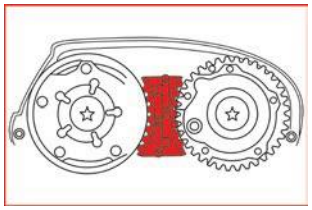
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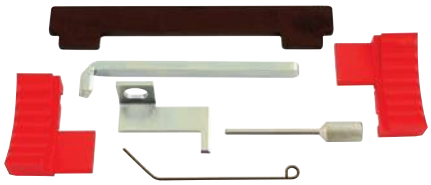
	X			
400.0051	1	Crankshaft locking pin, 80 mm	70	
400.0052	1	Camshaft locking tool, 113 mm	650	
400.0053	4	Screw M6 x 20,0 mm	6	

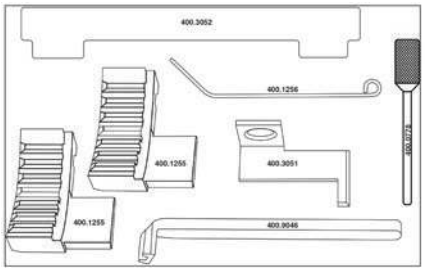
Engine Timing Tool Set for Alfa Romeo / Fiat / GM / Opel

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy

Application range: Chevrolet Cruze, Orlando with 1.4 / 1.6 / 1.8 engines, **Opel** Astra-G, Astra-H, Corsa-D, Insignia, Meriva, Signum, Vectra-C, Zafira-B, **Fiat** Croma, **Alfa Romeo** 159 (engine code: Z / A / 939A4.000)







400.3050	7 pcs	Engine Timing Tool Set for Alfa Romeo / Fiat / GM / Opel	424	

consists of:

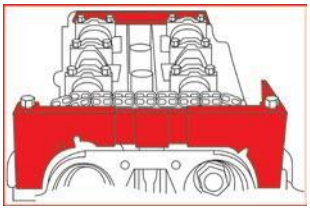
400.0778	Locking pin, 80 mm	20	
400.1255	Camshaft locking tool for Opel (2), red	56	
400.1256	Tensioner locking pin for 400.1250	3	
400.3051	Flywheel holding tool	32	
400.3052	Camshaft Locking Bar	148	
400.9046	Flywheel locking tool, 130 mm	80	



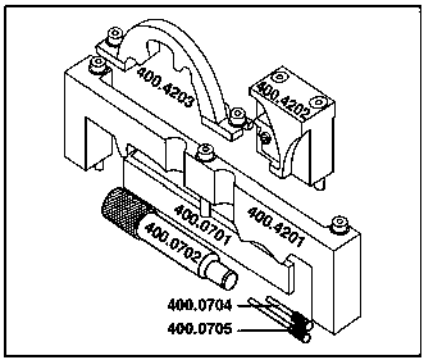
Engine Timing Tool Set for GM / Opel

- For the professional engine repair
- For locking the crank shaft and cam shaft
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Opel Adam, Ampera, Astra-J, Aveo, Corsa-D, Insignia, Meriva-B, Mokka, Zafira-C Tourer with 1.0 / 1.2 / 1.4 engines (engine code: LWD / L2Z / LDD / LUU/A14XFL / LDD/A14XER / LDD/A14XEL / LUJ/114NET / LUJ/A14NEL / A10XEP / A12XEL / A12XER / A14XEL / A14XER / A14NEL / LUJ/A14NET / LDD/A14XER / LUJ/A14NET / LUH/A14NEL / LUJ/A14NET / LUJ/A14NEL / L2Q/A12XEL / LDC/A12XER / LWD/A12XEL / LDD/A14XEL / LDD/A14XER)



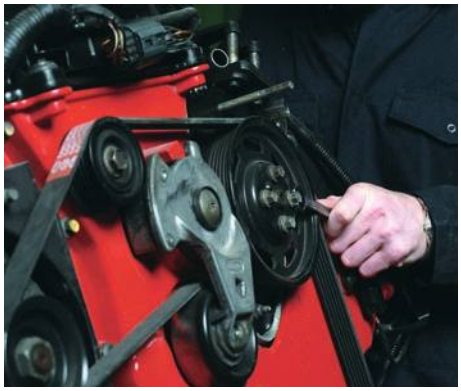




			kg	
400.4200	7 pcs	Engine Timing Tool Set for GM / Opel	2,18	

consists of:

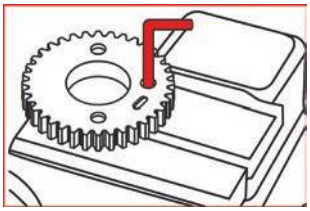
		g	
400.0701	Camshaft timing tool 155 mm	120	
400.0702	Flywheel TDC locking pin Ø 12 mm, 113 mm	205	
400.0704	Tensioner retaining pin, Ø2,5mm	5	
400.0705	Tensioner retaining pin, Ø4,0mm	5	
400.4201	Cam shaft sensor disc adjustment tool	340	
400.4202	Camshaft adjustment tool (inlet)	340	
400.4203	Cam shaft sensor locking tool	180	



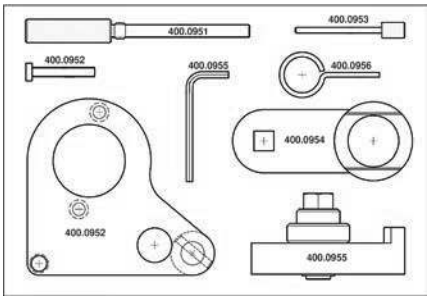
Engine Timing Tool Kit for Nissan / Renault

- For the professional engine repair
- For locking the cam shaft
- For changing the timing chain
- Very high degree of accuracy
- In durable steel storage case

Application range: Renault Megane, Vel Satis, Espace, Scenic, Trafic, Laguna, Koleos, **Nissan** Qashqai, **Opel** Vivaro with 2.0 dCi engine (engine code: M9R)







			kg	
400.0950	8 pcs	Engine Timing Tool Kit for Nissan / Renault	2,73	

consists of:

		g	
400.0951	Crankshaft locking pin Ø 8 mm, 144 mm	103	
400.0952	Camshaft locking tool	398	
400.0953	Auxilliary drive belt tensioning locking pin	13	
400.0954	Crankshaft pulley holding tool	424	
400.0955	Camshaft gear alignment tool (2)	593	
400.0956	Timing chain tensioner locking pin Ø 3 mm, 65 mm	6	
400.0957	Key hex, 4.0 mm	1	

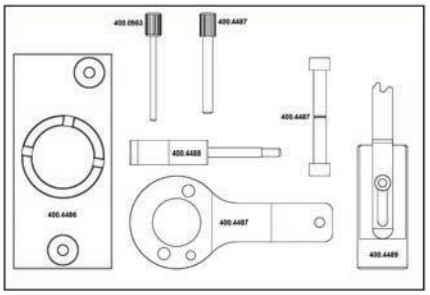
Engine adjustment tool set for Opel

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Opel Cascada (2015 - 2017), Insignia (2014 - 2017), Insignia Country Tourer (2014 - 2017) and Zafira C Tourer (2014 - 2017) with 2.0 l CDTi ecoFLEX and CDTi diesel engines (engine code: LFS/B20DTH)

			g	
400.0958	Locking screw M6 x 40,0 mm		18	





			g	
400.4485	8 pcs	Engine adjustment tool set for Opel	403	

consists of:

		g	
400.0953	Auxilliary drive belt tensioning locking pin	13	
400.4486	High pressure fuel pump sprocket locking tool	170	
400.4487	Crankshaft timing tool with screws and pin	240	
400.4488	Locking pin for camshaft	80	
400.4489	Cranskshaft holding tool (Auto Transmission)	45	



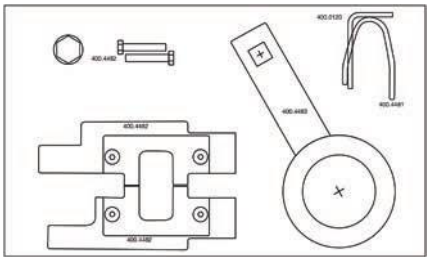


Engine adjustment tool set for Opel

- For the professional engine repair
- For changing the timing chain
- Very high degree of accuracy
- In durable steel storage case

Application range: Opel Cascada (2013 - 2016), Astra J (2013 - 2016), Zafira C (2013 - 2016) and Insignia (2013 - 2016) with 1.6 l SIDI Turbo engines (engine code: LVP/A16XHT, LWC/A16SHT, LVP/B16XHT, LWC/B16SHT, LWC/B16SHL)





			kg	
400.4480	11 pcs	Engine adjustment tool set for Opel	2,06	

consists of:

	X		g	
400.4481	2	Balance shaft sprocket locking	10	
400.0120	2	Tensioner pin for valve control chain	3	
400.4482	1	Camshaft holding and alignment tools with screws (6)	960	
400.4483	1	Crankshaft pulley holding tool	1100	

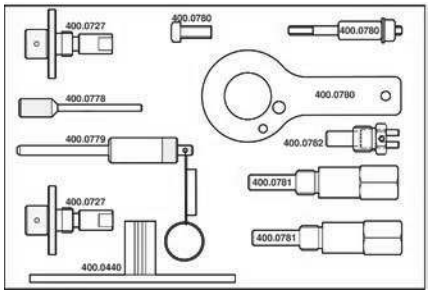
Engine Timing Tool Set for GM / Opel / Saab

- For the professional engine repair
- For locking the cam shaft
- For changing the timing belt or the chain
- Very high degree of accuracy
- In durable steel storage case

Application range: Opel Agila, Corsa-C, Combo-C (2003-2007), Tigra-B, Meriva, Astra-H (2004-2007), Corsa-D (2006-2007)with 1.3 CDTi engines (engine code: Z13DT / Z13DTH / Z13DTJ), **Opel** Astra-H, Vectra-C, Signum, Zafira-B with 1.9 CDTi engines (engine code: Z19DT / Z19DTL), **Saab** 9-3, 905 with 1.9 CDTi engines (engine code: Z19DT / Z19DTH)







			kg	
400.0775	11 pcs	Engine Timing Tool Set for GM / Opel / Saab	1,29	

consists of:

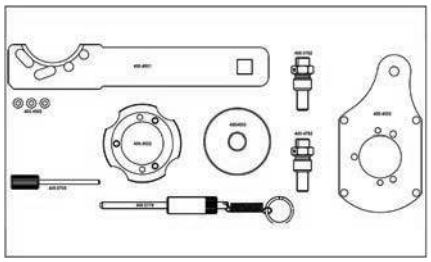
		g	
400.0440	Flywheel locking tool 135 x 40 mm	136	
400.0727	Camshaft locking tool (2) Ø 45 mm	130	
400.0778	Locking pin, 80 mm	20	
400.0779	Crankshaft locking tool Ø 6 mm	80	
400.0780	Crankshaft pulley setting tool (3)	260	
400.0781	Camshaft timing pin set (2)	180	
400.0782	Camshaft alignment screw	40	

Engine adjustment tool set for Opel

- For the professional engine repair
- For changing the timing chain
- Very high degree of accuracy
- In durable steel storage case

Application range: Opel Corsa-E (2015 - 2017) with 1.3 l CDTi engines (engine code: LKU/B13DTE, LKU/B13DTR, LKV/B13DTC)

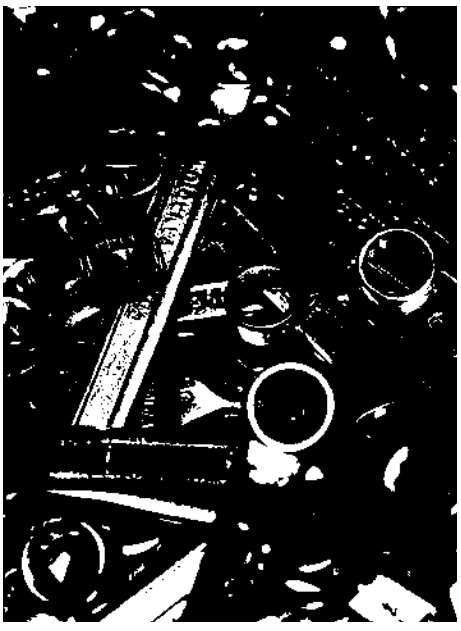




			kg	
400.4500	11 pcs	Engine adjustment tool set for Opel	1,93	

consists of:

	X		g	
400.0705	1	Tensioner retaining pin, Ø4,0mm	5	
400.0779	1	Crankshaft locking tool Ø 6 mm	80	
400.0782	2	Camshaft alignment screw	40	
400.4501	1	Crankshaft pulley hub holding tool	570	
400.4502	1	Camshaft position sensor disc setting tool with screws (5)	420	
400.4503	1	Timing chain front cover alignment	350	

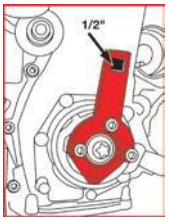




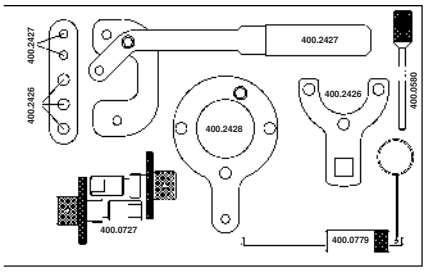
Engine Timing Tool Kit for Fiat / Ford / Opel / Suzuki

- For the professional engine repair
- Especially for chain-driven engines
- For changing the steering chain
- Very high degree of accuracy
- In durable steel storage case

Application range: Fiat 1.3 JTD, **Opel** 1.3 CDTI, **Ford** 1.3 TDCi, **Suzuki** (engine code: Z13DT)







			kg	
400.2425	12 pcs	Engine Timing Tool Kit for Fiat / Ford / Opel / Suzuki	1,12	

consists of:

		g	
400.0580	Crankshaft locking pin Ø 8,0 mm, 70 mm	30	
400.0727	Camshaft locking tool (2) Ø 45 mm	130	
400.0779	Crankshaft locking tool Ø 6 mm	80	
400.2426	Cranshaft pulley flange holding tool (4)	88	
400.2427	Timing chain tensioning tool (3)	171	
400.2428	Flywheel timing position tool	398	

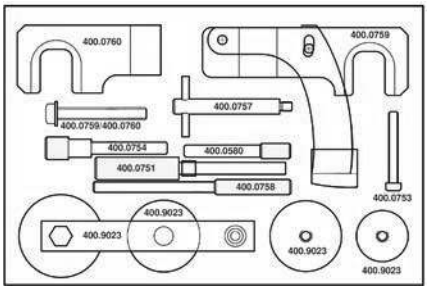
Engine adjustment tool kit for Nissan / Opel / Renault

- For the professional engine repair
- For locking the cam shaft
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Renault Clio 1.5 / 1.9 / 2.3 / 2.5 dCi, Laguna II, Espace, Trafic, Master with 2.2 DTI (2000-2005) G9 engines, **Opel** Movano 2.2 Tdi, **Nissan** Kubistar, Primastar, Interstar and Micra with 1.5 / 2.2 / 2.5 dCi engines







			kg	
400.0750	15 pcs	Engine adjustment tool kit for Nissan / Opel / Renault	1,69	

consists of:

		g	
400.0580	Crankshaft locking pin Ø 8,0 mm, 70 mm	30	
400.0751	Crankshaft locking pin Ø 7,5 mm	102	
400.0752	Washers M8	1	
400.0753	Locking screw M6 x 30.0 mm	10	
400.0754	Camshaft locking pin	51	
400.0757	Hi-Pressure pump locking pin	43	
400.0758	Flywheel locking pin Ø 7 mm	55	
400.0759	Camshaft setting tool (exhaust) (2)	20	
400.0760	Camshaft setting tool (inlet)	223	
400.9023	Cam belt tensioning tool for Renault	669	

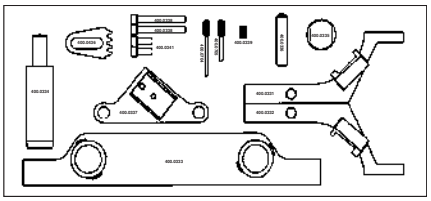


Engine Timing Tool Set for Opel / Saab / Chevrolet

- For the professional engine repair
- For locking the cam shaft
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Opel Astra, Insignia, Antara with 2.0 l and 2.4 l engines (engine code: LHU/A20NFT/LTG/A20N-HT/162(220)5300); **Saab** 9-5 with 2.0 l engines (engine code: LHU/A20NFT/LE5/LE9) and **Chevrolet** Captiva, HHR, Malibu with 2.0 l engines (engine code: LHU/A20NFT)





			kg	
400.0330	18 pcs	Engine Timing Tool Set for Opel / Saab / Chevrolet	3,68	

consists of:

	x		g	
400.0331	1	Cam shaft locking device left	360	
400.0332	1	Cam shaft locking device right	360	
400.0333	1	Cam shaft adjustment holding tool, 310 mm	459	
400.0334	1	Crankshaft locking pin Ø 15 mm	55	
400.0335	1	Piston holder tension pin, 11 mm	162	
400.0336	1	Piston holder remover, 16 mm	36	
400.0337	1	Fly wheel holding tool bottom	502	
400.0338	2	Screw M6x50, 55,0 mm	13	
400.0339	4	Washers M6	2	
400.0341	2	Screw M6x16, 22,0 mm	10	
400.0436	1	Flywheel locking tool, 28 x 45 mm	135	
400.0704	1	Tensioner retaining pin, Ø2,5mm	5	
400.0705	1	Tensioner retaining pin, Ø4,0mm	5	



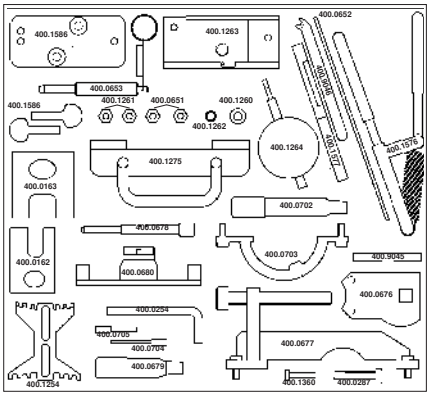
Engine Timing Tool Kit for Isuzu / GM / Opel / Saab

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Opel Agila, Ascona, Astra-F, Astra-G, Corsa-B, Corsa-C, Frontera, Kadett-E, Midi, Monterey, Omega-B, Sintra, Vectra-A, Vectra-B, Vectra-C, Zafira and similar **Isuzu** and **Saab** vehicles







400.1575	32 pcs	Engine Timing Tool Kit for Isuzu / GM / Opel / Saab	3,91

consists of:

400.0162	Camshaft locking tool for Opel / Saab, blue	186	
400.0163	Camshaft locking tool for GM / Opel, gold	143	
400.0254	Locking pin Ø 9.5 mm	60	
400.0287	Screw M8 x 40,0 mm	18	
400.0652	Flywheel TDC indicator	80	
400.0653	Flywheel locking pin with spring on ring, 103 mm	79	
400.0676	Camshaft turning tool	7	
400.0677	Bracket for timing adjustment wrench	111	
400.0678	Injection pump locking pin, Ø 6 mm, 110 mm	41	
400.0679	Flywheel TDC locking pin Ø 12 mm, 86 mm	160	
400.0680	Camshaft locking tool 120 mm	322	
400.0702	Flywheel TDC locking pin Ø 12 mm, 113 mm	205	
400.0703	Camshaft position (CMP) sensor disc setting tool	110	
400.0704	Tensioner retaining pin, Ø2,5mm	5	
400.0705	Tensioner retaining pin, Ø4,0mm	5	
400.1254	Flywheel locking tool, 70 x 54 mm	23	

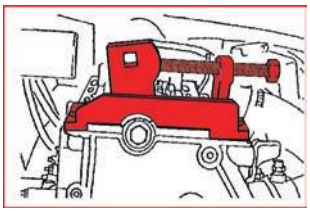
consists of:

400.1260	Screw for 400.1263	9	
400.1261	Locking screw M6 x 10.0 mm	4	
400.1262	Special tip	10	
400.1263	Mounting bracket assy	330	
400.1275	Camshaft setting strap (TDC)	404	
400.1360	Flywheel locking tool Ø 7 mm	82	
400.1576	Belt tensioner adjuster	297	
400.1577	Camshaft setting strap 140 mm	99	
400.1586	Camshaft position locking tool (5)	170	
400.9045	Flywheel locking tool, 62 x 30 mm	80	
400.9046	Flywheel locking tool, 130 mm	80	
400.1264	Dial gauge Ø 51 (10 x 0.01 mm) 103 mm	161	

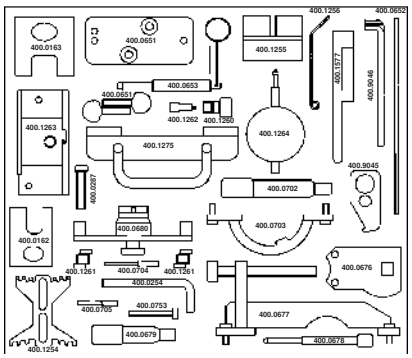
Engine Timing Tool Set for GM / Isuzu / Opel / Saab

- For the professional engine repair
- For locking the cam shaft
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Opel Agila, Ascona, Astra-F, Astra-G, Astramax, Belmont, Cavalier, Corsa-B, Corsa-C, Frontera, Kadett-E, Midi, Monterey, Omega-B, Sintra, Vectra-A, Vectra-B, Vectra-C, Zafira with petrol and diesel engines including Eco-Tec engines and similar **Isuzu** and **Saab** engines







400.1250	36 pcs	Engine Timing Tool Set for GM / Isuzu / Opel / Saab	6,18

consists of:

	x		
400.0162	1	Camshaft locking tool for Opel / Saab, blue	186
400.0163	1	Camshaft locking tool for GM / Opel, gold	143
400.0254	1	Locking pin Ø 9.5 mm	60
400.0287	1	Screw M8 x 40,0 mm	18
400.0651	1	Camshaft locking tool (3), 110 x 50 mm	169
400.0652	1	Flywheel TDC indicator	80
400.0653	1	Flywheel locking pin with spring on ring, 103 mm	79
400.0676	1	Camshaft turning tool	7
400.0677	1	Bracket for timing adjustment wrench	111
400.0678	1	Injection pump locking pin, Ø 6 mm, 110 mm	41
400.0679	1	Flywheel TDC locking pin Ø 12 mm, 86 mm	160
400.0680	1	Camshaft locking tool 120 mm	322
400.0702	1	Flywheel TDC locking pin Ø 12 mm, 113 mm	205
400.0703	1	Camshaft position (CMP) sensor disc setting tool	110
400.0704	1	Tensioner retaining pin, Ø2,5mm	5
400.0705	1	Tensioner retaining pin, Ø4,0mm	5
400.0753	1	Locking screw M6 x 30.0 mm	10
400.1254	1	Flywheel locking tool, 70 x 54 mm	23
400.1255	1	Camshaft locking tool for Opel (2), red	56
400.1256	1	Tensioner locking pin for 400.1250	3
400.1260	1	Screw for 400.1263	9
400.1261	4	Locking screw M6 x 10.0 mm	4
400.1262	1	Special tip	10
400.1263	1	Mounting bracket assy	330
400.1264	1	Dial gauge Ø 51 (10 x 0.01 mm) 103 mm	161
400.1275	1	Camshaft setting strap (TDC)	404
400.9045	1	Flywheel locking tool, 62 x 30 mm	80
400.9046	1	Flywheel locking tool, 130 mm	80
400.1577	1	Camshaft setting strap 140 mm	99

Diesel pump adjustment tool

- Secure stand for the pump wheel when assembling and disassembling the high pressure pump
- exact positioning of the pump wheel
- no need to disassemble the tooth belt
- saves work of making further adjustments to the pump
- Saves a lot of time
- Special tool steel

Application range: Diesel engines F9Q for **Opel**, **Renault**, and **Nissan** vehicles



400.9051	Diesel pump adjustment tool	420



PSA

High pressure fuel pump alignment mandrel for PSA

- For the professional engine repair
- ideally suited for aligning the high-pressure fuel pump at Citroen and Peugeot with Blue Technology
- Simple handling
- Very high degree of accuracy

Application range: Citroën Berlingo III (2014 - 2017), C3 (2014 - 2017), C4 (2014 - 2017), C4 Picasso/Grand Picasso II (2014 - 2017), C-Elysee (2014 - 2017), DS3/DS3 Convertible (2014 - 2015), DS4 (2014 - 2015), DS5 (2014 - 2015), **Peugeot** 2008 (2014 - 2017), 208 (2014 - 2017), 3008 (2014 - 2016), 301 (2014 – 2017), 308 (2014 – 2017), 5008 (2014 – 2017), 508 (2014 – 2017), Partner III (2014 – 2017) for 1.6 l diesel engines (engine code: BHW (DV6FE) / BHY (DV6FD) / BHZ (DV6FC) / BHX (DV6FC) / DV6FC (BHX) / DV6FC (BHZ) / DV6FD (BHY) / DV6FE (BHW) / DV6FD)



		g
400.0011	High pressure fuel pump alignment mandrel for PSA	30

Timing belt tensioning tool for PSA

- For the professional engine repair
- 8.0 mm square
- Suitable for pre-tensioning timing belt tensioner on the automatic pulley
- Chrome vanadium
- Very high degree of accuracy

Application range: universal usage on many **Peugeot** vehicles





	Suitable for	Length mm	g
150.3014	PSA	157,0	100

Timing belt tensioning tool for PSA / Toyota

- For the professional engine repair
- 7.0 mm square
- Suitable for pre-tensioning timing belt tensioner on the automatic pulley
- Chrome vanadium
- Very high degree of accuracy

Application range: universal usage on many **Peugeot** and **Toyota** vehicles



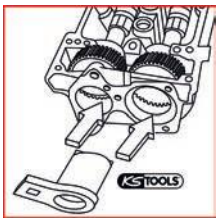


	Suitable for	Length mm	g
150.3011	PSA, Toyota	157,0	80

Camshaft locking tool for PSA

- For the professional engine repair
- To counter hold when loosening and tightening the cam shaft wheel screws
- Square drive 1/2”
- Very high degree of accuracy

Application range: Citroën, **Peugeot**, **Fiat**, **Ford**, **Alfa Romeo** with 1.3 JTD engines





1/2"

		g
400.2429	Camshaft locking tool for PSA	485

Valve spring compressor for PSA

- For the professional engine repair
- For retaining the valve springs
- Universal usage
- Includes 8 screws with pressure cone and 2 locking screws
- Chrome vanadium
- Very high degree of accuracy

Application range: Citroën Berlingo, Xsara petrol engines with 1.0, 1.1, 1.4, 1.6l, and **Peugeot** 106, 205, 206, 306, 307, 405 with petrol engines





	Suitable for	Length mm	kg
400.9001	PSA	390,0	3,80



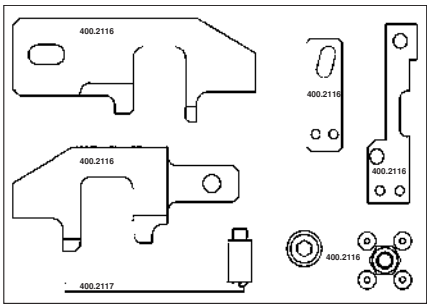


Engine Timing Tool Set for PSA

- For the professional engine repair
- For blocking the cam and crank shaft
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Citroën, Peugeot with 1.0 and 1.2 petrol engines (engine code: ZMZ (EBO)/HMZ (EB2)/HMY (EB2M)/EB2 (HMZ)/EBO (ZMZ)/EB2 (HMW)/EB2DTS (HNY)





			kg	
400.2115	11 pcs	Engine Timing Tool Set for PSA	1,99	

consists of:

		g	
400.2116	Cam shaft adjustment tool	740	
400.2117	Crank shaft locking pin, 105 mm	70	

Assembly tool set for Citroën / Ford / Land Rover / Mitsubishi / Peugeot

- For the professional engine repair
- For locking the cam shaft
- Secure hold thanks to optimal positioning
- Very high degree of accuracy
- In durable plastic storage case

Application range: Land Rover Discovery (2009 – 2015), Discovery Sport (2009 – 2015), Freelander 2 (2009 – 2015), eD4 (2009 – 2015), TD4 (2009 – 2015), TD4e (2009 - 2015), **Citroën** C5 (2002 – 2015), C5 II (2002 – 2015) , C5 III (2002 – 2015), C6 (2002 – 2015), C8 (2002 – 2015), C-Crosse (2002 - 2015), **Mitsubishi** Outlander DI-D (2007 – 2013), DI-DC (2007-2013), **Peugeot** 4007 (2000 – 2015), 407 (2000- 2015), 607 (2000 – 2015), 807 (2000 – 2015), 406 (2000 – 2015), 508 (2000 – 2015), 607 (2000 – 2015), GT (2000-2015), **Ford** Galaxy (2008 - 2015), Mondeo (2008 - 2015), S-Max (2008 - 2015) for 2.2 l diesel engines (engine codes: 224DT / DW12CTED4 224DT / DW12BTED4 224DT /4HX (DW12CT-ED4) / 4HP (DW12BTED4) / 4HX (DW12TED4) / 4HW (DW12TED4/L4) / 4HK, 4HN / DW12MTED4 (4HK) / DW12MT-ED4 (4HN) / DW12BTED4 (4HP) / DW12BTED4 (4HR) / DW-12BTED4 (4HT) / DW12TED4/L4 (4HW) / DW12BTED4 (4HS) / DW12ATED (4HZ) / DW12ATED4 (4HX) / DW12ATED (4HZ) / DW12CTED4 (4HL), KNBB, KNBA, KNWA, Q4BA)



400.4450	3 pcs	Assembly tool set for Citroën / Ford / Land Rover / Mitsubishi / Peugeot	680

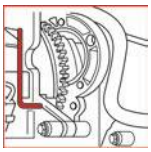
consists of:

400.4451	Balance shaft locking tool	190
400.4452	Balance shaft tool	140
400.4453	Balance shaft adjustment tool	230

Engine Timing Tool Set for Ford / Land Rover / PSA / Volvo

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy

Application range: Ford, **Land Rover**, **PSA**, **Volvo** vehicles with 2,0 / 2,2 DOHC Common-Rail Diesel engines





400.1625	6 pcs	Engine Timing Tool Set for Ford / Land Rover / PSA / Volvo	473

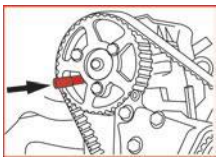
consists of:

400.0580	Crankshaft locking pin Ø 8,0 mm, 70 mm	30
400.0609	Flywheel locking tool 133 x 40 mm	308
400.0903	Crankshaft locking pin	85

Engine Timing Tool Set for Fiat / GM / Opel / PSA / Renault

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy

Application range: Fiat, **PSA**, **Renault**, **Opel** vehicles with 2.5 / 2.8D engines

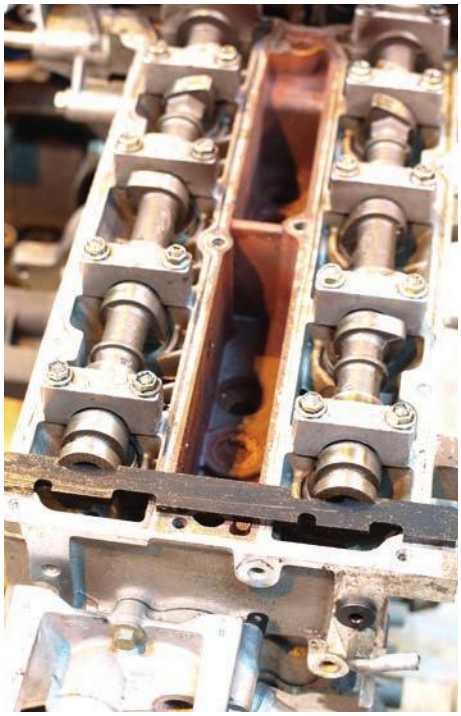


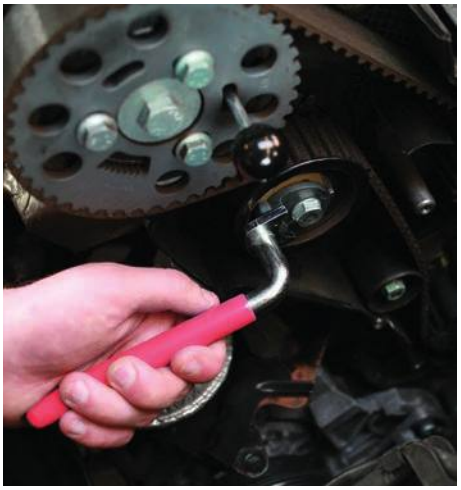


400.1775	4 pcs	Engine Timing Tool Set for Fiat / GM / Opel / PSA / Renault	143

consists of:

	x		
400.0165	2	Camshaft locking pin 5.0 mm	19
400.0754	1	Camshaft locking pin	51
400.1388	1	Tensioner adjuster Ø 30 mm	41





Universal fly wheel locking tool set

- For the professional engine repair
- For locking the fly wheels
- Secure hold thanks to optimal positioning
- Special plastic
- Very high degree of accuracy

A Fly wheel Locking device for:Citroën: Synergie 2.0/Turbo. ZX 1.9D/TD, Xantia 1.9D/TD, Berlingo 1.9D, Dispatch 1.9D/TD, Synergie1.9D, Relay 1.9D/TD, **Fiat:** Ulysse, 2.0/Turbo Ducato 2.0, FSO: 1.9D, LDV: 200 1.9D, Pilot 1.9D, **Peugeot:** 205 1.6/1.9, 305 1.6/1.9, 309 1.6/1.9, 405 1.6/1.9, 405 1.8/2.0 (92-), 605 2.0, Boxer 2.0, c205 1.8/1.9D, 305 1.8/1.9D, 306 1.8/1.9D/TD, 309 1.8/1.9D 1.8TD, 405 1.8TD, 405 1.9D, 406 1.9D, Partner 1.9D, Talbot / Horizon / Solara 1.9D, J5/Talbot Express 1.9D, 605D/TD, 806 1.9TD, Expert 1.9D, Boxer 1.9D/TD, **Renault:** R5, 1.6D, R9 1.6D, 411 1.6D Express/Extra 1.6D-F8M diesel engines, Clio, Express/Extra, 1.9D earlier F8Q diesel engines, Espace 2.1D, R21 2.1D, R25 2.1D, Trafic/Master 2.1D-J8S diesel engines, Clio 1.2/1.4, Express/Extra, R19 1.4, Megane/Scenic 1.4/1.6-E7F/E7J petrol engines, R5 1.7, Clio 1.7/1,8, R19 1.7, R21 1.7 1.7 Megane/Scenic 2.0, Laguna 1.8/2.0, Trafic 1.7-F3N/F3P/F2R petrol engines, Clio, Williams, R19, Megane 2.0 16V Twin-Cam F7P/F7R engines, Laguna/ Safrane 2.0 16V Twin-Cam N7Q/N7U engines

B Fly wheel Locking device for:Renault: Clio, Twingo, Kangoo, Megane/Scenic, 1.2/1.6 D7F + K7M Petrol engine, Megane/Scenic, Kangoo 1.9D FBQ + F9Q Diesel engine (direct injection)

C Fly wheel Locking device for:Citroën: Xsara, Xantia 1.8/2.0XU7 JP/JB petrol engines, Xsara 1.8 16V XU7 JP4 twin cam shaft engines, ZX.Xantia, XM2.0 16V XU10J4 twin cam shaft engines, Xantia 1.9D/TD XUD9BTF diesel engines, Xantia, XM2.1TD XUD 11BTE diesel engines, **Peugeot:** 406, 1.8/2.0 XU7 JP/JB Petrol engine, 406 1.8 16V XU7 JP4 Double cam shaft engines, 306, 405, 605 2.0 16V XU10J4 Double cam shaft engines, 406, 1.9D/TD XUD9BTF Diesel engines, 406, 605 2.1 TD XUD 11BTE Diesel engines

D Fly wheel Locking device forVauxhall/Opel: 1.2, 1.4, 1.6, 1.8, 2.0 OHC Petrol engines, 1.6D & 1.7, OHC Diesel engines, 1.5 & 1.7 OHE Diesel(Isuzu)-Engines



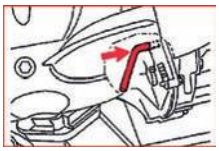


150.3025	4 pcs	Universal fly wheel locking tool set	30

Crankshaft locking tool set for PSA

- For the professional engine repair
- For fixing the crank shaft
- Contains special square wrench for adjusting the timing belt on the automatic pulley
- For changing the timing belt
- Secure hold for changing the timing belt or engine repairs
- Very high degree of accuracy

Application range: Citroën AX with 1.0/1.1 and 1.4 engines, BX 16, BX 19, BX 16 valve, **Peugeot** 106, 205, 405 with 1.0/1.1 and 1.4 engines, **Peugeot** 205, 305, 309, 405 with 1.6 and 1.9 engines, 309 GTI, 405 Mi1,6





			g	
400.0200	6 pcs	Crankshaft locking tool set for PSA	235	

consists of:

		g	
400.0153	Tensioner adjuster, square 8.0 mm	6	
400.0156	Crankshaft timing pin Ø 6,0 mm	23	
400.0157	Crankshaft locking pin Ø 10.0 mm, short (2)	120	
400.0158	Crankshaft locking pin (2) Ø 8,5 mm	30	

Engine Timing Tool Kit for Fiat / Iveco / PSA

- For the professional engine repair
- For locking the cam shaft or fly wheels
- Very high degree of accuracy
- In durable steel storage case

Application range: Fiat Ducato 2.8 TD, JTD, **Iveco** 2.8 D, TDI, **Citroën** Relay, Jumper, **Peugeot** Boxer, Boxer II (engine code: 8140,43 / 8140.43N / 8140.43S / 8140,63)



			g	
400.3000	5 pcs	Engine Timing Tool Kit for Fiat / Iveco / PSA	200	

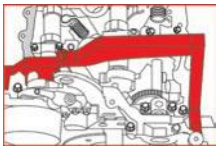
consists of:

		g	
400.0165	Camshaft locking pin 5.0 mm	19	
400.1377	Tensioning locking pin Ø 8 mm	35	
400.1388	Tensioner adjuster Ø 30 mm	41	
400.3001	Flywheel holding tool, 45 mm	106	

Engine Timing Tool Set for BMW / Mini / PSA

- For the professional engine repair
- For locking the cam shaft
- For changing the timing chain
- Very high degree of accuracy

Application range: BMW Mini with 1.4 / 1.6 Valvetronic engines (engine code: N12), **Peugeot** 207, 308 with 1.4 / 1.6 engines (engine code: EP3 / EP6), **Citroën** with 1.4 / 1.6 engines (engine code: EP3 / EP6)





			kg	
400.0850	7 pcs	Engine Timing Tool Set for BMW / Mini / PSA	1,40	

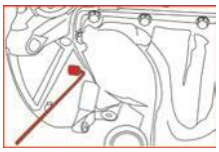
consists of:

	X		g	
400.0851	1	Crankshaft locking pin Ø 8 mm	52	
400.0852	1	Camshaft locking tool inlet (2)	812	
400.0853	1	Camshaft locking tool (EX)	358	
400.1181	3	Bolt M6x30	8	

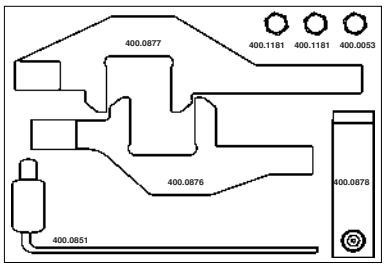
Engine Timing Tool Kit for BMW / Mini / PSA

- In durable steel storage case
- For the professional engine repair
- Very high degree of accuracy
- For locking the cam shaft
- For changing the timing chain

Application range: BMW Mini with 1.6 engines (engine code: N14 / R56), **Peugeot** 207, 308 with 1.6 engines (engine code: EP6 / EP6DT / DTS), **Citroën** with 1.6 engines (engine code: EP6 / EP6DT / DTS)







			kg	
400.0875	7 pcs	Engine Timing Tool Kit for BMW / Mini / PSA	1,49	

consists of:

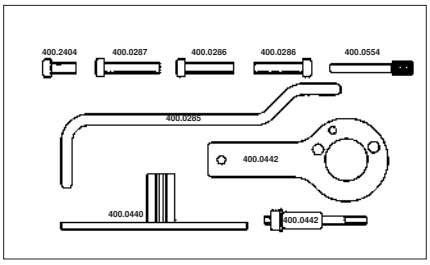
	X		g	
400.0851	1	Crankshaft locking pin Ø 8 mm	52	
400.0878	1	Support clamp	93	
400.0877	1	Camshaft alignment tool (exhaust)	423	
400.0876	1	Camshaft alignment tool (inlet)	270	
400.1181	2	Bolt M6x30	8	
400.0053	1	Screw M6 x 20,0 mm	6	

Engine Timing Tool Set for Fiat / Peugeot

- For the professional engine repair
- For locking the crank shaft and cam shaft
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Fiat Brava, Bravo, Marea, Marea (sic) and **Peugeot** with 1.9 D/TD engines (> 1996)





			kg	
400.0550	9 pcs	Engine Timing Tool Set for Fiat / Peugeot	1,25	

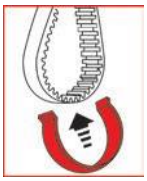
consists of:

		g	
400.0285	Crankshaft locking pin Ø 8,0 mm 200 mm	97	
400.0286	Screw M8 x 35 mm (2)	16	
400.0287	Screw M8 x 40,0 mm	18	
400.0440	Flywheel locking tool 135 x 40 mm	136	
400.0442	Crankshaft timing tool (2) 130 mm	154	
400.0554	Locking pin Ø 6.0 mm	19	
400.2404	Socket head screw M8 x 20 mm	13	

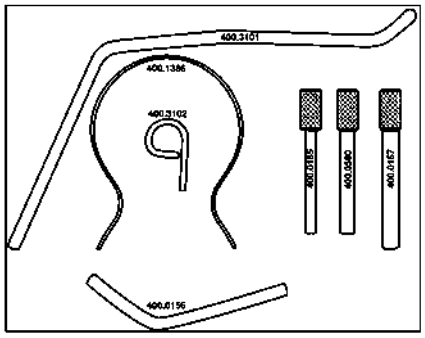
Engine Timing Tool Set for PSA

- For the professional engine repair
- For locking the crank shaft or cam shaft
- For changing the timing belt
- Very high degree of accuracy

Application range: PSA vehicles with 1.4 8V and 16V engines (engine code: KFU)







			g	
400.3100	8 pcs	Engine Timing Tool Set for PSA	362	

consists of:

		g	
400.0156	Crankshaft timing pin Ø 6,0 mm	23	
400.0157	Crankshaft locking pin Ø 10.0 mm, short (2)	120	
400.0165	Camshaft locking pin 5.0 mm	19	
400.0580	Crankshaft locking pin Ø 8,0 mm, 70 mm	30	
400.1386	Belt retaining tool, Ø 70 mm	50	
400.3101	Flywheel locking pin Ø 6.0 mm, long	58	
400.3102	Tensioner locking pin, 37 mm	4	

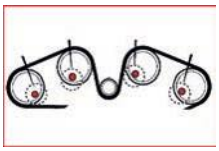




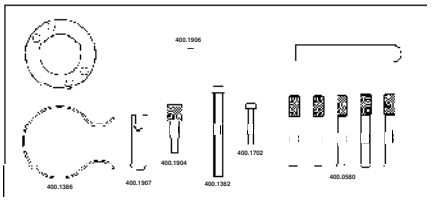
Engine adjustment tool set for PSA / Renault

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Citroën XM, **Peugeot** 605, **Renault** Safrane, Espace (engine code: L7X 700 / 701 / 713 / 727 / 731 / XFZ / ES9J4)







			kg	
400.1900	11 pcs	Engine adjustment tool set for PSA / Renault	2,31	

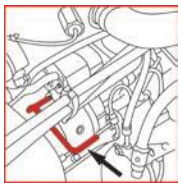
consists of:

	x		g	
400.0580	5	Crankshaft locking pin Ø 8,0 mm, 70 mm	30	
400.1362	1	Locking screw M8 x 80.0 mm	31	
400.1386	1	Belt retaining tool, Ø 70 mm	50	
400.1702	1	Locking screw set M8 x 35mm, 2 pcs	17	
400.1904	1	Gauge pin	14	
400.1906	1	Camshaft locking tool	896	
400.1907	1	Tensioning fork	35	

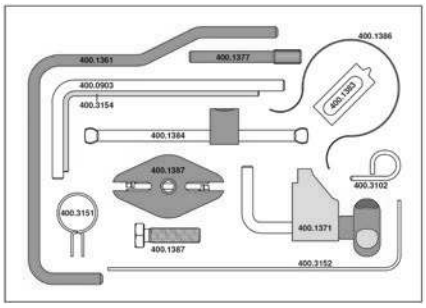
Engine Timing Tool Kit for Fiat / PSA

- For the professional engine repair
- For adjusting the valve controls
- For twin cam shaft systems with timing belt/chain combinations
- Very high degree of accuracy
- In durable steel storage case

Application range: Citroën and **Fiat** with 2.0 / 2.2 SOHC and DOHC engines (engine code: DW10 / DW12)







			g	
400.3150	15 pcs	Engine Timing Tool Kit for Fiat / PSA	814	

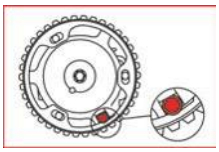
consists of:

		g	
400.0903	Crankshaft locking pin	85	
400.1361	Flywheel locking tool Ø 8 mm	146	
400.1371	Belt retaining tool Ø 25 mm	99	
400.1377	Tensioning locking pin Ø 8 mm	35	
400.1383	Flywheel locking tool 50 mm	30	
400.1384	Tensioner adjuster Ø 9 mm, 155 x 20 mm	118	
400.1386	Belt retaining tool, Ø 70 mm	50	
400.1387	Crankshaft pulley remover (4)	153	
400.3102	Tensioner locking pin, 37 mm	4	
400.3151	Crankshaft pulley centralisation tool	2	
400.3152	Tensioner locking pin, 210 mm	7	
400.3154	Auxiliary drive belt tensioner locking pin Ø 4.0 mm	18	

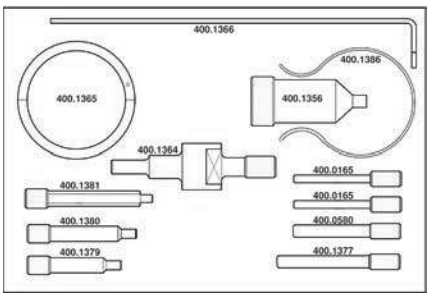
Engine adjustment tool set for PSA

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Citroën Xsara, Picasso, C5, C4, Evasion, Synergie, C8, Jumpy, Dispatch, **Peugeot** 206, 307, 406, 607, 806, 807, Expert (engine code: EW12J4(3FC) / EW10D-HPI(RLZ) / EW10J4S(RFK) / EW10J4(RFN/RFR) / EW7J4(6FZ)







			kg	
400.1750	12 pcs	Engine adjustment tool set for PSA	1,26	

consists of:

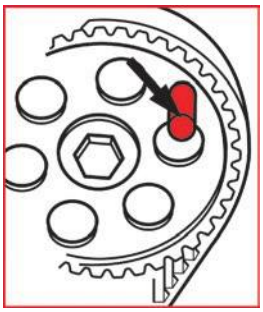
	x		g	
400.0165	2	Camshaft locking pin 5.0 mm	19	
400.0580	1	Crankshaft locking pin Ø 8,0 mm, 70 mm	30	
400.1356	1	Flywheel locking tool Ø 8 mm x 28 mm	252	
400.1364	1	Flywheel locking pin Ø 9 mm x 15 mm	215	
400.1365	1	Tensioner pulley adjusting tool	330	
400.1366	1	Tensioner adjuster, square, 4.0 mm	44	
400.1377	1	Tensioning locking pin Ø 8 mm	35	
400.1379	1	Camshaft locking pin Ø 6 mm	37	
400.1380	1	Camshaft locking pin, 71,0 mm	43	
400.1381	1	Camshaft locking pin (VTC)	50	
400.1386	1	Belt retaining tool, Ø 70 mm	50	



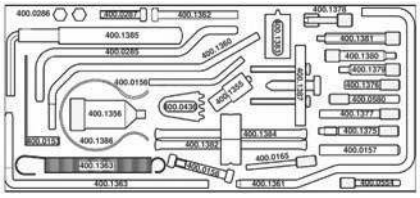
Engine Timing Tool Set for PSA

- In durable steel storage case
- For the professional engine repair
- Very high degree of accuracy
- For changing the timing belt

Application range: Citroën, **Peugeot** vehicles with HPi and HDi engines







			kg	
400.1650	39 pcs	Engine Timing Tool Set for PSA	2,17	

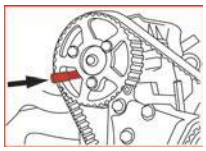
consists of:

		g	
400.0153	Tensioner adjuster, square 8.0 mm	6	
400.0156	Crankshaft timing pin Ø 6,0 mm	23	
400.0157	Crankshaft locking pin Ø 10.0 mm, short (2)	120	
400.0158	Crankshaft locking pin (2) Ø 8,5 mm	30	
400.0165	Camshaft locking pin 5.0 mm	19	
400.0285	Crankshaft locking pin Ø 8,0 mm 200 mm	97	
400.0286	Screw M8 x 35 mm (2)	16	
400.0287	Screw M8 x 40,0 mm	18	
400.0436	Flywheel locking tool, 28 x 45 mm	135	
400.0554	Locking pin Ø 6.0 mm	19	
400.0580	Crankshaft locking pin Ø 8,0 mm, 70 mm	30	
400.1355	Flywheel locking pin	80	
400.1356	Flywheel locking tool Ø 8 mm x 28 mm	252	
400.1360	Flywheel locking tool Ø 7 mm	82	
400.1361	Flywheel locking tool Ø 8 mm	146	
400.1362	Locking screw M8 x 80.0 mm	31	
400.1363	Flywheel locking pin with spring (2)	126	
400.1375	Injection pump timing pin, M8	32	
400.1376	Camshaft locking pin Ø 8 mm	24	
400.1377	Tensioning locking pin Ø 8 mm	35	
400.1378	Camshaft locking pin (2) Ø 6 mm	21	
400.1379	Camshaft locking pin Ø 6 mm	37	
400.1380	Camshaft locking pin, 71,0 mm	43	
400.1381	Camshaft locking pin (VTC)	50	
400.1382	Tensioner adjuster Ø 9 mm, 155 x 30 mm	115	
400.1383	Flywheel locking tool 50 mm	30	
400.1384	Tensioner adjuster Ø 9 mm, 155 x 20 mm	118	
400.1385	Tensioner adjuster, hex 8.0 mm	177	
400.1386	Belt retaining tool, Ø 70 mm	50	
400.1387	Crankshaft pulley remover (4)	153	

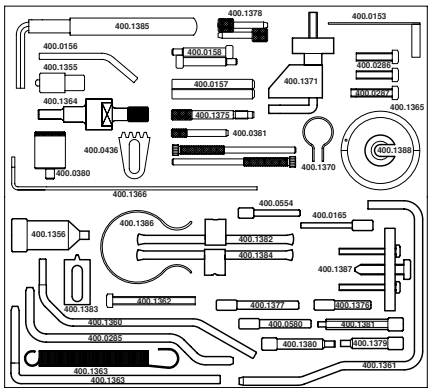
Engine Timing Tool Set for PSA

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: PSA vehicles including 2nd generation with EW 16V and 2.5 / 2.7 / 2.8 diesel engines







			kg	
400.1350	49 pcs	Engine Timing Tool Set for PSA	5,93	

consists of:

	x		g	
400.0153	1	Tensioner adjuster, square 8.0 mm	6	
400.0156	1	Crankshaft timing pin Ø 6,0 mm	23	
400.0157	1	Crankshaft locking pin Ø 10.0 mm, short (2)	120	
400.0158	1	Crankshaft locking pin (2) Ø 8,5 mm	30	
400.0165	2	Camshaft locking pin 5.0 mm	19	
400.0285	1	Crankshaft locking pin Ø 8,0 mm 200 mm	97	
400.0286	1	Screw M8 x 35 mm (2)	16	
400.0287	1	Screw M8 x 40,0 mm	18	
400.0377	1	Camshaft sprocket locking pin (2)	68	
400.0380	1	Flywheel locking tool Ø 30 mm	222	
400.0381	1	Coolant Pump tensioning locking pin	30	
400.0436	1	Flywheel locking tool, 28 x 45 mm	135	
400.0554	1	Locking pin Ø 6.0 mm	19	
400.0580	1	Crankshaft locking pin Ø 8,0 mm, 70 mm	30	
400.1355	1	Flywheel locking pin	80	
400.1356	1	Flywheel locking tool Ø 8 mm x 28 mm	252	
400.1360	1	Flywheel locking tool Ø 7 mm	82	

consists of:

	x		
400.1361	1	Flywheel locking tool Ø 8 mm	146
400.1362	1	Locking screw M8 x 80.0 mm	31
400.1363	1	Flywheel locking pin with spring (2)	126
400.1364	1	Flywheel locking pin Ø 9 mm x 15 mm	215
400.1365	1	Tensioner pulley adjusting tool	330
400.1366	1	Tensioner adjuster, square, 4.0 mm	44
400.1370	1	Crankshaft sprocket centraliser	2
400.1371	1	Belt retaining tool Ø 25 mm	99
400.1375	1	Injection pump timing pin, M8	32
400.1376	1	Camshaft locking pin Ø 8 mm	24
400.1377	1	Tensioning locking pin Ø 8 mm	35
400.1378	1	Camshaft locking pin (2) Ø 6 mm	21
400.1379	1	Camshaft locking pin Ø 6 mm	37
400.1380	1	Camshaft locking pin, 71,0 mm	43
400.1381	1	Camshaft locking pin (VTC)	50
400.1382	1	Tensioner adjuster Ø 9 mm, 155 x 30 mm	115
400.1383	1	Flywheel locking tool 50 mm	30
400.1384	1	Tensioner adjuster Ø 9 mm, 155 x 20 mm	118
400.1385	1	Tensioner adjuster, hex 8.0 mm	177
400.1386	1	Belt retaining tool, Ø 70 mm	50
400.1387	1	Crankshaft pulley remover (4)	153
400.1388	1	Tensioner adjuster Ø 30 mm	41

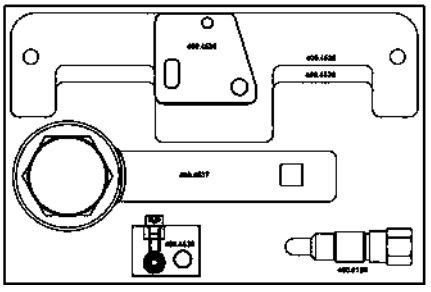
PORSCHE

Engine adjustment tool set for VAG

- For the professional engine repair
- For changing the timing chain
- Very high degree of accuracy
- In durable steel storage case

Application range: Audi A8 (2002 – 2011), S8 (2001 – 2015), Q7 (2003 – 2010), A3 (2005 – 2015), TT (2011 – 2012), **Porsche** Cayenne (2001 – 2004), **Škoda** Superb 2 (2010 – 2016), **Volkswagen** Phaeton (2007 – 2015), Touareg (2003 – 2012), Passat (2005 – 2014), Passat CC (2010 – 2014), Eos (2010 – 2014), Golf 4 (2001 – 2004), Golf 5 (2006 – 2009), Bora (2001 – 2004), Sharan (2000 – 2010) and T4 (2000 – 2003) with 2.8 l, 3.2 l, 3.6 l, 4.0 l, 6.0 l and 6.3 l petrol engines (engine code: BDE / AYL / AMV / CBRA / AXZ / BDB / BMJ / BUB / M55/02 / M55/01 / CDVA / BWS / CHNA / BHK / BHL / CGRA / CMTA / BDN / BDP / BAN / BAP / BRN / BRP / BTT / BJN / CEJA / CTNA)





400.4535	6 pcs	Engine adjustment tool set for VAG	3,20

consists of:

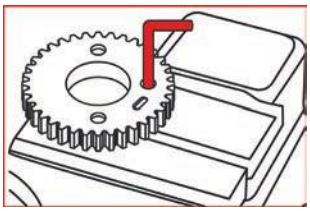
	x		
400.0159	1	Crankshaft timing pin	120
400.4536	2	Camshaft alignment plates	400
400.4537	1	Crankshaft pulley holding tool	870
400.4538	1	Fuel pump sprocket locking tool (with mech fuel pump)	170
400.4539	1	Fuel pump sprocket locking tool (without mech fuel pump)	110

RENAULT

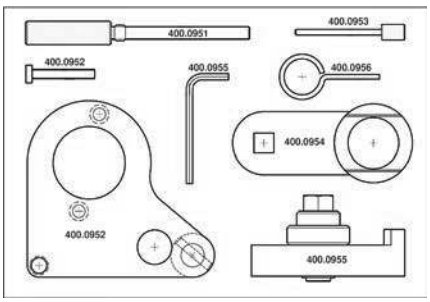
Engine Timing Tool Kit for Nissan / Renault

- For the professional engine repair
- For locking the cam shaft
- For changing the timing chain
- Very high degree of accuracy
- In durable steel storage case

Application range: Renault Megane, Vel Satis, Espace, Scenic, Trafic, Laguna, Koleos, **Nissan** Qashqai, **Opel** Vivaro with 2.0 dCi engine (engine code: M9R)







400.0950	8 pcs	Engine Timing Tool Kit for Nissan / Renault	2,73

consists of:

400.0951	Crankshaft locking pin Ø 8 mm, 144 mm	103
400.0952	Camshaft locking tool	398
400.0953	Auxilliary drive belt tensioning locking pin	13
400.0954	Crankshaft pulley holding tool	424
400.0955	Camshaft gear alignment tool (2)	593
400.0956	Timing chain tensioner locking pin Ø 3 mm, 65 mm	6
400.0957	Key hex, 4.0 mm	1
400.0958	Locking screw M6 x 40.0 mm	18

V belt wrench Torx T45 for Renault

- suitable for assembly and disassembly of the fan belt
- necessary to relieve the automatic tension pulley for pulling the fan belt
- For hard to reach places
- With plastic-coated handle
- Chrome vanadium

Application range: Renault 2.2 L Diesel engines (G8T), e.g. Safrane, Laguna, Espace etc.





150.1226	2 pcs	V belt wrench Torx T45 for Renault	460

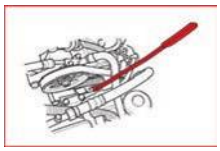
consists of:

150.1227	Special wrench with 8.0 mm hexagonal drive, 450 mm	440
150.1228	Bit with 8.0 mm hexagonal drive for Torx screws T45	20

Guide roller wrench for Renault Torx T50

- Suitable for the installation and removal of the guide rollers
- Required when changing the timing belt
- For hard to reach places
- With plastic-coated handle
- Chrome vanadium

Application range: Renault 1.4 and 1.6 petrol engines (K4J, K4M), e.g.. Clio III, Meganee, Scenic II

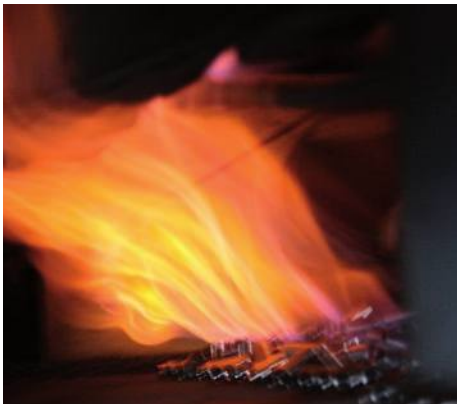




150.1302	2 pcs	Guide roller wrench for Renault Torx T50	460

consists of:

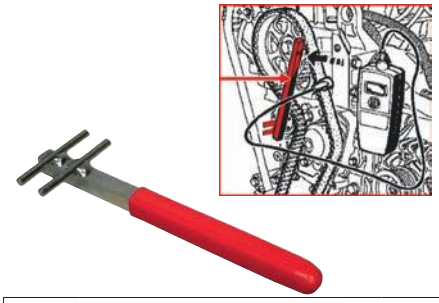
150.1227	Special wrench with 8.0 mm hexagonal drive, 450 mm	440
150.1306	Bit with 8.0 mm hexagonal drive for Torx screws T50	20



Automatic pulley wrench for Renault

- For the professional engine repair
- Suitable for the assembly and disassembly of the timing belt
- For adjusting the timing belt tension on the automatic pulley
- With plastic-coated handle
- Chrome vanadium
- Very high degree of accuracy

Application range: universal usage on many **Renault** vehicles

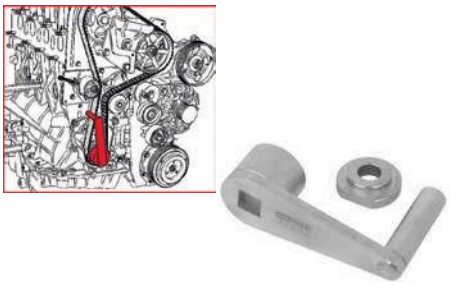


400.9021	Automatic pulley wrench for Renault	168

Timing belt tensioning tool for Renault

- For the professional engine repair
- Suitable for pre-tensioning timing belt tensioner on the automatic pulley
- Chrome vanadium
- Very high degree of accuracy

Application range: Renault Twingo, Clio, Kangoo 1995 - 2006, engine code: D7F

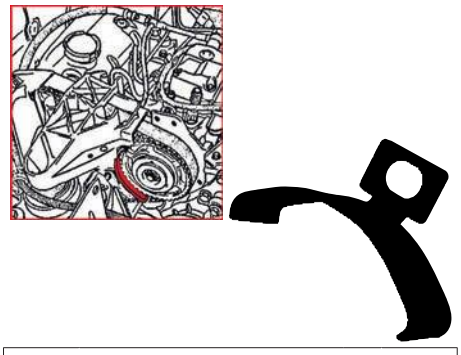


	Suitable for	Length mm	
150.1259	Renault	105,0	340

Injection pump impeller fixing tool for Renault

- For the professional engine repair
- Ideal for locking the sprocket wheel of the injection pump
- Simple handling
- Very high degree of accuracy
- Special tool steel

Application range: Renault Clio, Mégane, Laguna, Kangoo with 1.9 dTi engines (engine code: F9Q)

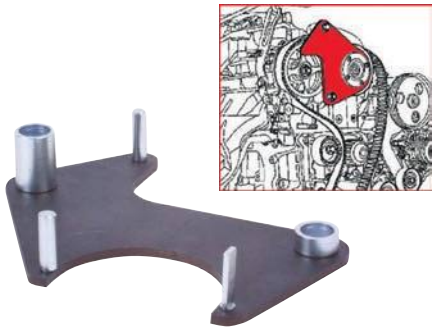


400.9016	Injection pump impeller fixing tool for Renault	166

Camshaft fixing tool for Renault

- For the professional engine repair
- For locking the cam shafts
- Allows for correct engine adjustment
- Very high degree of accuracy

Application:Renault Clio II and III, Kangoo, Laguna, Mégane II, Modus, Scénic, Scénic II 2001 - 2010 with 1.4 and 1.6 16V engines (engine code: K4M)

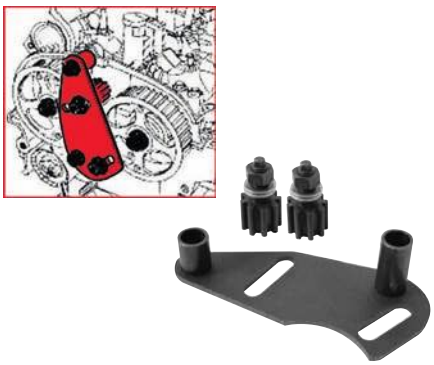


400.9022	Camshaft fixing tool for Renault	592

Camshaft fixing tool for Renault

- For the professional engine repair
- For locking the cam shafts
- Allows for correct engine adjustment
- Very high degree of accuracy

Application:Renault Laguna II, Mégane II, Scénic II 2002 - 2008 with 2.0T engines (engine code: F4R770/771, F4Rt776, F4Rt784, F4Rt786, F4Rt787)

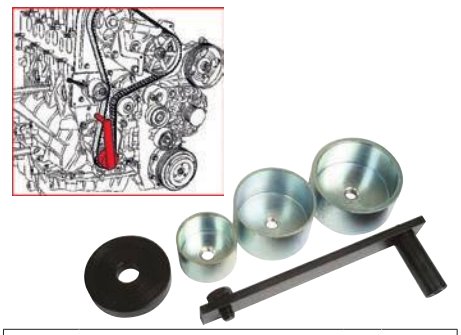


400.9025	Camshaft fixing tool for Renault	840

Timing belt tensioning tool for Renault

- For the professional engine repair
- Contains adapter and tensioning device
- For adjusting the belt tension
- For putting on the crank shaft wheel
- Very high degree of accuracy

Application: Renault Mégane, Laguna, Laguna II and Espace with 1.9 dCi engines

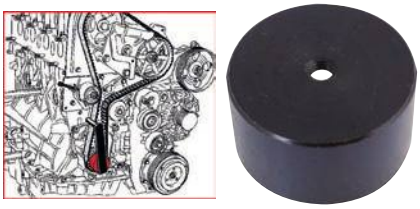


400.9023	Timing belt tensioning tool for Renault	669

Extension sleeve for timing belt tensioning tool for Renault

- For the professional engine repair
- Adapter for expanding the use for the sets 400.9023 and 400.0750
- For adjusting the belt tension
- For putting on the crank shaft wheel
- Very high degree of accuracy

Application:Renault Kangoo, Clio II, Megane II, Scenic II, Laguna, Laguna II, Espace III, Espace iV, Acantime, Trafic II, Master II (engine code: F9Q, X56, X64, X65, X66-J66, X66-J66/F9Q, X70, X74, X76, X81, X83 and X84)

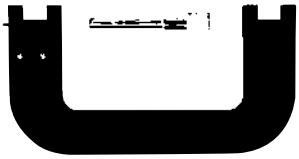


400.9024	Extension sleeve for timing belt tensioning tool for Renault	182

Engine Timing Tool Set for Renault

- For the professional engine repair
- For locking the cam shaft
- Very high degree of accuracy

Application range: Renault Laguna, Megane (engine code: F5R)



400.1925	2 pcs	Engine Timing Tool Set for Renault	567

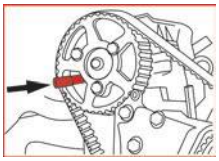
consists of:

400.0754	Camshaft locking pin	51
400.1926	Camshaft timing tool, 190 mm	459

Engine Timing Tool Set for Fiat / GM / Opel / PSA / Renault

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy

Application range: Fiat, **PSA**, **Renault**, **Opel** vehicles with 2.5 / 2.8D engines

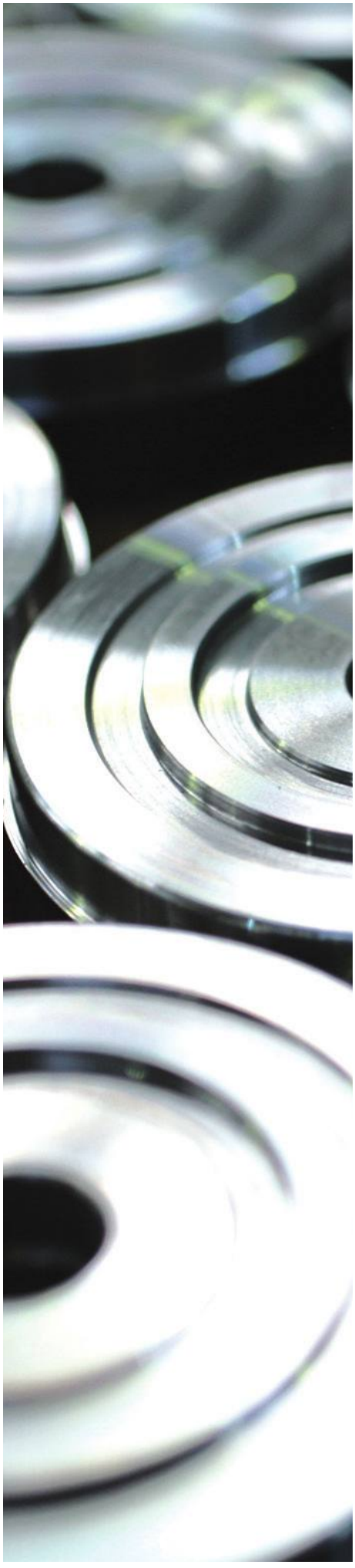




400.1775	4 pcs	Engine Timing Tool Set for Fiat / GM / Opel / PSA / Renault	143

consists of:

	X		
400.0165	2	Camshaft locking pin 5.0 mm	19
400.0754	1	Camshaft locking pin	51
400.1388	1	Tensioner adjuster Ø 30 mm	41



Universal fly wheel locking tool set

- For the professional engine repair
- For locking the fly wheels
- Secure hold thanks to optimal positioning
- Special plastic
- Very high degree of accuracy

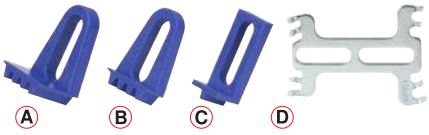
A Fly wheel Locking device for:Citroën: Synergie 2.0/Turbo. ZX 1.9D/TD, Xantia 1.9D/TD, Berlingo 1.9D, Dispatch 1.9D/TD, Synergie1.9D, Relay 1.9D/TD, **Fiat:** Ulysse, 2.0/Turbo Ducato 2.0, FSO: 1.9D, LDV: 200 1.9D, Pilot 1.9D, **Peugeot:** 205 1.6/1.9, 305 1.6/1.9, 309 1.6/1.9, 405 1.6/1.9, 405 1.8/2.0 (92-), 605 2.0, Boxer 2.0, c205 1.8/1.9D, 305 1.8/1.9D, 306 1.8/1.9D/TD, 309 1.8/1.9D 1.8TD, 405 1.8TD, 405 1.9D, 406 1.9D, Partner 1.9D, Talbot / Horizon / Solara 1.9D, J5/Talbot Express 1.9D, 605D/TD, 806 1.9TD, Expert 1.9D, Boxer 1.9D/TD, **Renault:** R5, 1.6D, R9 1.6D, 411 1.6D Express/Extra 1.6D-F8M diesel engines, Clio, Express/Extra, 1.9D earlier F8Q diesel engines, Espace 2.1D, R21 2.1D, R25 2.1D, Trafic/Master 2.1D-J8S diesel engines, Clio 1.2/1.4, Express/Extra, R19 1.4, Megane/Scenic 1.4/1.6-E7F/E7J petrol engines, R5 1.7, Clio 1.7/1,8, R19 1.7, R21 1.7 1.7 Megane/Scenic 2.0, Laguna 1.8/2.0, Trafic 1.7-F3N/F3P/F2R petrol engines, Clio, Williams, R19, Megane 2.0 16V Twin-Cam F7P/F7R engines, Laguna/ Safrane 2.0 16V Twin-Cam N7Q/N7U engines

B Fly wheel Locking device for:Renault: Clio, Twingo, Kangoo, Megane/Scenic, 1.2/1.6 D7F + K7M Petrol engine, Megane/Scenic, Kangoo 1.9D FBQ + F9Q Diesel engine (direct injection)

C Fly wheel Locking device for:Citroën: Xsara, Xantia 1.8/2.0XU7 JP/JB petrol engines, Xsara 1.8 16V XU7 JP4 twin cam shaft engines, ZX.Xantia, XM2.0 16V XU10J4 twin cam shaft engines, Xantia 1.9D/TD XUD9BTF diesel engines, Xantia, XM2.1TD XUD 11BTE diesel engines, **Peugeot:** 406, 1.8/2.0 XU7 JP/JB Petrol engine, 406 1.8 16V XU7 JP4 Double cam shaft engines, 306, 405, 605 2.0 16V XU10J4 Double cam shaft engines, 406, 1.9D/TD XUD9BTF Diesel engines, 406, 605 2.1 TD XUD 11BTE Diesel engines

D Fly wheel Locking device forVauxhall/Opel: 1.2, 1.4, 1.6, 1.8, 2.0 OHC Petrol engines, 1.6D & 1.7, OHC Diesel engines, 1.5 & 1.7 OHE Diesel(Isuzu)-Engines





150.3025	4 pcs	Universal fly wheel locking tool set	30



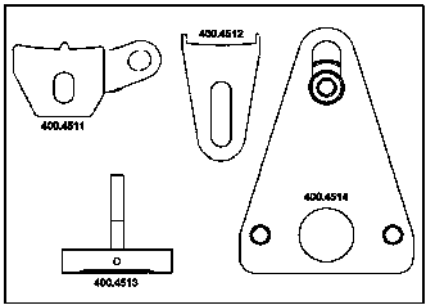


Flywheel locking tool set for Renault / Nissan

- For the professional engine repair
- For locking the fly wheels
- Secure hold thanks to optimal positioning
- Very high degree of accuracy
- In durable plastic storage case

Application range: Renault Espace V (2015 - 2016), Clio (2006 – 2016), Fluence (2009 – 2015), Laguna (2005 – 2015), Latitude (2010 – 2016), Megane (2006 -2015), Scenic/Grand Scenic (2006 – 2015), Espace/Grand Espace IV (2002 -2015), Koleos (2008 - 2016), Trafic II (2007 - 2015), Vel Satis (2000 – 2010), Master III (2010 – 2016), **Nissan** Primastar (2006 – 2015), Qashqai/Qashqai+2 (2007 -2014), X-Trail (2007 – 2014), NP300 Navara (2015 – 2016) and NV400 (2011 – 2016) with 1.4 l, 1.6 l, 2.0 l, 2.3 l, 2.5 l and 3.5 l petrol engines (engine code: H4JT 700 / M5M 400 / M5M / M5M 450 / M4R 700 / M4R 701 / M4R 714 / M4R 750 / M4R 751 / M4R 752 / M4R 753 / M4R 737 / M4R 704 / M4R 726 / M4R 730 / M4R 735 / M4R 746 / M4R / M4R 711 / M4R 713 / M9R 740 / M9R 760 / M9R 761 / M9R 812 / M9R 814 / M9R 815 / M9R 830 / M9R 832 / M9R 833 / M9R 834 / M9R 835 / M9R 836 / M9R 838 / M9R 855 / M9R 856 / M9R 865 / M9R 866 / M9R 742 / M9R 800 / M9R 805 / M9R 700 / M9R 721 / M9R 722 / M9R 724 / M9R 613 / M9R 615 / M9R 610 / M9R 630 / M9R 780 / M9R 782 / M9R 750 / M9R 762 / M9R 763 / M9R 858 / M9R 859 / M9R 8 / M9R 744 / M9R 746 / M9R 748 / M9R 754 / M9R 802 / M9R 803 / M9R 806 / M9R 808 / M9R 809 / M9R 820 / M9R 828 / M9R 845 / M9R 849 / M9R 854 / M9R 857 / M9R 816 / M9R 756 / M9R 804 / M9R 811 / M9R 817 / M9R 824 / M9R 839 / M9R 844 / M9R 846 / M9R 692 / M9R 784 / M9R 786 / M9R 788 / M9R M9T 670 / M9T 672 / M9T 676 / M9T 678 / M9T 680 / M9T 686 / M9T 690 / M9T 692 / M9T 694 / M9T 696 / M9T 698 / M9T 700 / M9T 702 / M9T 870 / M9T 880 / M9T 890 / M9T 896 / M9T 898 / M9T C6 / YS23DDT / YS23DDTT / M9T 706 / M9T 708 / 2TR 700 / 2TR 700 / 2TR 702 / 2TR 703 / 2TR 704 / 2TR 705 / 2ZV 604 / V4U 604 / VQ25 V4Y 711 / V4Y 715 / V4Y 701 / V4Y 713)





400.4510	4 pcs	Flywheel locking tool set for Renault / Nissan	1,27

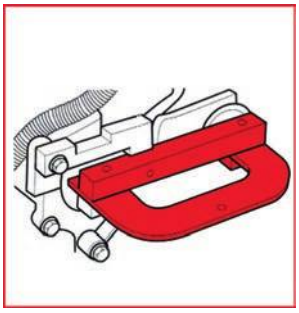
consists of:

400.4511	Flywheel locking tool, 80 mm	250
400.4512	Flywheel locking tool, 90 mm	180
400.4513	Sump separator tool	180
400.4514	Crankshaft pulley holding tool	840

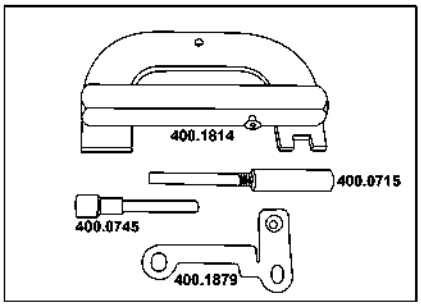
Engine Timing Tool Set for Renault

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Renault vehicles (engine code: K4J / K4M / F4P / F4R)







			kg	
400.1875	4 pcs	Engine Timing Tool Set for Renault	1,20	

consists of:

		g	
400.0751	Crankshaft locking pin Ø 7,5 mm	102	
400.0754	Camshaft locking pin	51	
400.1814	Camshaft timing tool 165 mm	897	
400.1879	Mounting bracket	80	

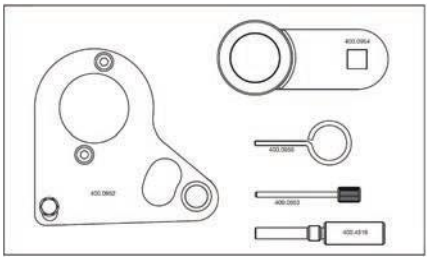


Engine adjustment Tool Set for Mercedes / Opel / Renault / Nissan

- For the professional engine repair
- For changing the timing chain
- Very high degree of accuracy
- In durable steel storage case

Application range: Mercedes C-Klasse (2014 – 2016), Vito (2014 – 2016), **Opel** Vivaro B (2013 – 2016), **Renault** Scenic / Grand Scenic 3 (2011 – 2016), Megane 3 (2012 – 2015), Trafic 3 (2014 – 2016), Espace 5 (2015 – 2016), **Nissan** Qashqai (2011 – 2016), X-Trail (2014 – 2016) with 1.6 l C180 BlueTEC, C200 BlueTEC, CDTi, CDTi BiTurbo, XMOD dCi, dCi Diesel engines (engine code: 626.951 (R9M) / 622.951 / LWX/ R9M 408 / LWZ/R9M 408 / LWU/R9M 450 / LWY/R9M 450 / R9M / R9M 410 / R9M 402 / R9M 404 / R9M 408 / R9M 450 / R9M 409 / R9M 452 / R9M 413)





			kg	
400.4515	6 pcs	Engine adjustment Tool Set for Mercedes / Opel / Renault / Nissan	2,12	

consists of:

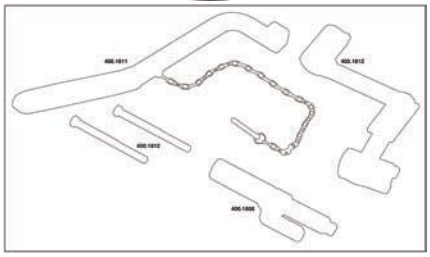
		g	
400.0952	Camshaft locking tool	398	
400.0954	Crankshaft pulley holding tool	424	
400.0956	Timing chain tensioner locking pin Ø 3 mm, 65 mm	6	
400.0953	Auxilliary drive belt tensioning locking pin	13	
400.4516	Locking pin for crankshaft	70	

Engine Timing Tool Set for Renault

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Renault Laguna, Safrane (engine code: N7U / N7Q)





			kg	
400.1850	5 pcs	Engine Timing Tool Set for Renault	1,41	

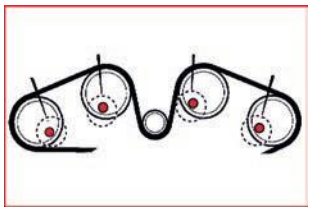
consists of:

		g	
400.1808	Flywheel locking pin 112 mm	225	
400.1811	Tensioner adjuster 245 mm	239	
400.1812	Camshaft locking tool (3)	498	

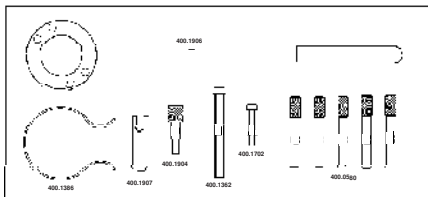
Engine adjustment tool set for PSA / Renault

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Citroën XM, **Peugeot** 605, **Renault** Safrane, Espace (engine code: L7X 700 / 701 / 713 / 727 / 731 / XFZ / ES9J4)







			kg	
400.1900	11 pcs	Engine adjustment tool set for PSA / Renault	2,31	

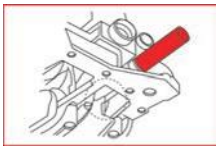
consists of:

	X		g	
400.0580	5	Crankshaft locking pin Ø 8,0 mm, 70 mm	30	
400.1362	1	Locking screw M8 x 80.0 mm	31	
400.1386	1	Belt retaining tool, Ø 70 mm	50	
400.1702	1	Locking screw set M8 x 35mm, 2 pcs	17	
400.1904	1	Gauge pin	14	
400.1906	1	Camshaft locking tool	896	
400.1907	1	Tensioning fork	35	

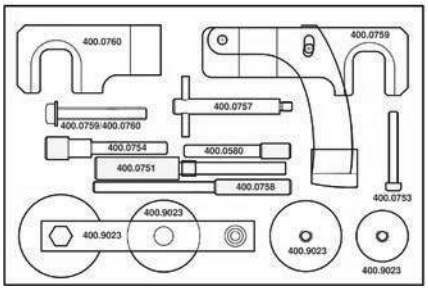
Engine adjustment tool kit for Nissan / Opel / Renault

- For the professional engine repair
- For locking the cam shaft
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Renault Clio 1.5 / 1.9 / 2.3 / 2.5 dCi, Laguna II, Espace, Trafic, Master with 2.2 DTI (2000-2005) G9 engines, **Opel** Movano 2.2 Tdi, **Nissan** Kubistar, Primastar, Interstar and Micra with 1.5 / 2.2 / 2.5 dCi engines







			kg	
400.0750	15 pcs	Engine adjustment tool kit for Nissan / Opel / Renault	1,69	

consists of:

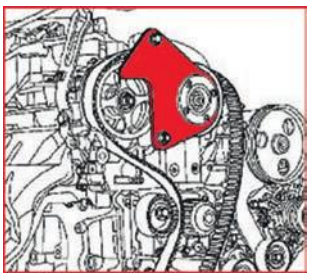
		g	
400.0580	Crankshaft locking pin Ø 8,0 mm, 70 mm	30	
400.0751	Crankshaft locking pin Ø 7,5 mm	102	
400.0752	Washers M8	1	
400.0753	Locking screw M6 x 30.0 mm	10	
400.0754	Camshaft locking pin	51	
400.0757	Hi-Pressure pump locking pin	43	
400.0758	Flywheel locking pin Ø 7 mm	55	
400.0759	Camshaft setting tool (exhaust) (2)	20	
400.0760	Camshaft setting tool (inlet)	223	
400.9023	Cam belt tensioning tool for Renault	669	



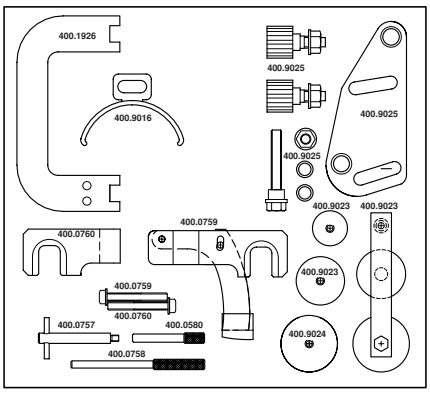
Engine Timing Tool Set for Renault

- For the professional engine repair
- Expansion set for use in connection with 400.1800
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Renault vehicles with dCi engines







			kg	
400.1450	15 pcs	Engine Timing Tool Set for Renault	5,82	

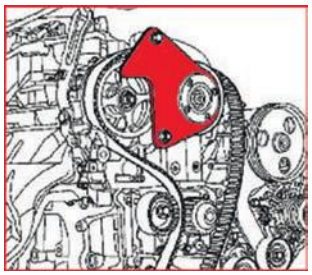
consists of:

		g	
400.0580	Crankshaft locking pin Ø 8,0 mm, 70 mm	30	
400.9025	Camshaft wheel fixing tool	840	
400.9024	Tensioning device additional adapter	182	
400.9023	Cam belt tensioning tool for Renault	669	
400.9016	Injection pump wheel fixing tool	166	
400.0757	Hi-Pressure pump locking pin	43	
400.0758	Flywheel locking pin Ø 7 mm	55	
400.0759	Camshaft setting tool (exhaust) (2)	20	
400.0760	Camshaft setting tool (inlet)	223	
400.1926	Camshaft timing tool, 190 mm	459	

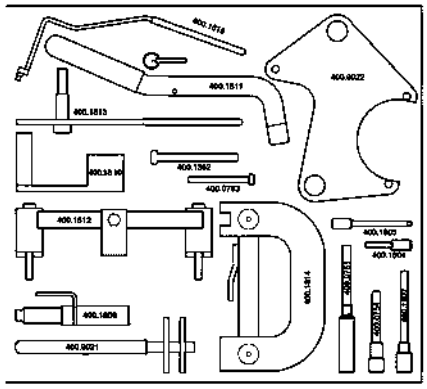
Engine Timing Tool Set for Renault

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Renault with 1.2 / 1.4 / 1.6 / 1.7 / 1.8 / 2.0 16V / 2.2 8V / 2.5 20V petrol engines and 1.2 / 1.4 / 1.7 / 1.4 / 1.6 / 1.8 / 2.0 16V / 2.2 8V / 2.5 20V diesel engines







			kg	
400.1800	18 pcs	Engine Timing Tool Set for Renault	4,01	

consists of:

		g	
400.0751	Crankshaft locking pin Ø 7,5 mm	102	
400.0753	Locking screw M6 x 30.0 mm	10	
400.0754	Camshaft locking pin	51	
400.1362	Locking screw M8 x 80.0 mm	31	
400.1804	Flywheel locking pin 45 mm, Ø 5 mm	16	
400.1805	Injection pump locking pin	20	
400.1807	Flywheel locking pin 95 mm, Ø 7 mm	57	
400.1808	Flywheel locking pin 112 mm	225	
400.1810	Tensioner adjuster	50	
400.1811	Tensioner adjuster 245 mm	239	
400.1812	Camshaft locking tool (3)	498	
400.1813	Tensioner adjuster	188	
400.1814	Camshaft timing tool 165 mm	897	
400.1815	Tensioner adjuster 217 mm	138	
400.9021	Tensioner adjuster for Renault	168	
400.9022	Camshaft locking tool for Renault	592	

Diesel pump adjustment tool

- Secure stand for the pump wheel when assembling and disassembling the high pressure pump
- exact positioning of the pump wheel
- no need to disassemble the tooth belt
- saves work of making further adjustments to the pump
- Saves a lot of time
- Special tool steel

Application range: Diesel engines F9Q for **Opel**, **Renault**, and **Nissan** vehicles



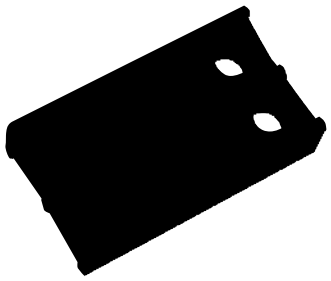
		g
400.9051	Diesel pump adjustment tool	420

ROVER

Camshaft Sprocket Locking Tool for Rover

- For the professional engine repair
- Clamping device for a secure hold to change the timing belt
- Aluminium
- Very high degree of accuracy

Application range: Rover 214, 216, 400, 25, Streetwise, 75 and MGF Trophy with 1.6 and 1.8 K16 engines with and without PG1 transmission housing

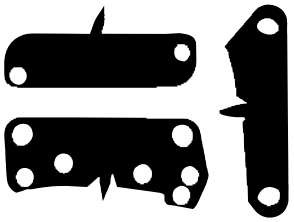


	Length mm	Width mm	g
400.0151	60,0	32,0	125

Engine Timing Tool Kit for Land Rover / Rover

- For the professional engine repair
- For locking the crank shaft or fly disc
- For changing the timing belt
- Very high degree of accuracy

Application range: Land Rover Freelander 1.8 , **Rover** Metro, 214, 216, 218 16V, 414, 416 16V, 216, 416 GTi, **Rover** Diesel 218, 418



		kg
400.2600	3 pcs Engine Timing Tool Kit for Land Rover / Rover	1,50

consists of:

		g
400.2601	Flywheel locking tool 133 x 43,5 mm	470
400.2602	Flywheel locking tool 140 mm	480
400.2603	Flywheel locking tool 130 mm	460

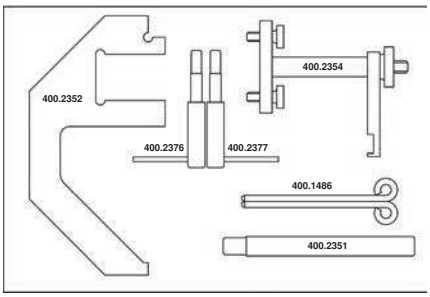
Engine Timing Tool Kit for BMW / Land Rover / Rover

- For the professional engine repair
- For locking the crank shaft or cam shaft
- For changing the timing belt or the timing chain
- Very high degree of accuracy
- In durable steel storage case

Application range: BMW 1, 3, 5, X3, **Land Rover** Freelander, **Rover** 75 (engine code: M47)







			kg
400.2350	7 pcs	Engine Timing Tool Kit for BMW / Land Rover / Rover	1,03

consists of:

		g
400.2351	Crankshaft TDC locking pin 130 mm	108
400.2352	Camshaft locking tool 167 x 90 mm	461
400.2354	Camshaft locking holding tool	240
400.1486	Tensioner locking pin (2)	29
400.2376	Crankshaft timing tool 73 mm	52
400.2377	Crankshaft timing tool 78,5 mm	55



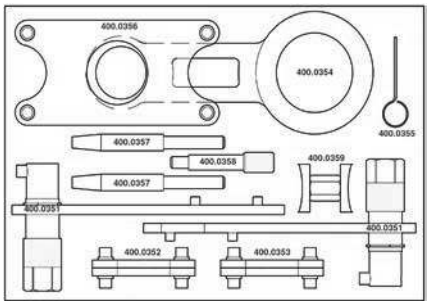


Engine Timing Tool Set for Land Rover / MG / Rover

- For the professional engine repair
- For locking the cam shaft of all KV6 variants
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Rover 825, 45, 75, **Land Rover** Freelander 2.5, **MG** ZS, ZT, ZT-T 160, 180, 190 with 2.0 / 2.5 V6 Quad-Cam petrol engines





			kg
400.0350	12 pcs	Engine Timing Tool Set for Land Rover / MG / Rover	3,62

consists of:

		g
400.0351	Crankshaft timing tool (2) Ø 34 mm, 180 mm	500
400.0352	Camshaft locking adaptor set, capacity 2.0 L (2)	76
400.0353	Camshaft locking adaptor set, capacity 2.5 L (2)	80
400.0354	Rear camshaft sprocket setting tool 190 mm	480
400.0355	Tensioner pushrod retension pin	1
400.0356	Rear camshaft sprocket setting tool Ø 39 mm	390
400.0357	Rear camshaft sprocket guide pin	50
400.0358	Crankshaft locking pin 67 mm	40
400.0359	Rear cam sprocket spreader	80

SAAB

Flywheel locking tool for GM / Opel / Saab

- For locking the fly wheels
- Secure hold thanks to optimal positioning
- Special tool steel

Application range: Opel and **Saab** vehicles (1996 - 2005, engine code: Z18XE)





400.9046	Flywheel locking tool for GM / Opel / Saab	80

Camshaft locking device for GM / Isuzu / Opel / Saab

- For the professional engine repair
- Clamping device for a secure hold to change the timing belt
- Aluminium
- Very high degree of accuracy

Application range: Opel Tigra 2004 - 2008 (engine code: Z18XE) with 1.8 engines, Frontera, Frontera-B and Sintra-A, Omega-B 1995 - 2004 (engine code: X22SE, X33XE, YEESE, Y22XE Z22XE) with 2.2 16V engines. **Saab** 9-3 1996 - 2005 with 1.8 engines (engine code: Z18XE) and similar **Isuzu** and **Saab** engines



400.0162	Camshaft locking device for GM / Isuzu / Opel / Saab	186



Camshaft locking tool for Subaru

- For the professional engine repair
- Clamping device for a secure hold to change the timing belt
- Very high degree of accuracy
- Special tool steel

Application range: Subaru Impreza (STI) 2.0 / 2.5 (>2002), Forester XT (2004-2011), Outback (2005-2010), Legacy GT (2005-2010), Baja (2004-2006), Phase 1 (1996-1998), **Saab** 9-2 X Aero (2005-2006)



400.0055	2 pcs	Camshaft locking tool for Subaru	554

consists of:

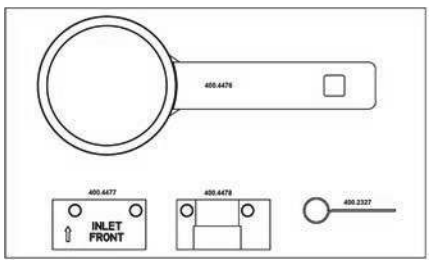
400.0057	Camshaft locking tool for Subaru with external hexagon	250
400.0058	Camshaft locking tool for Subaru with internal hexagon	304

Engine adjustment tool set for Opel / Saab

- For the professional engine repair
- For changing the timing chain
- Very high degree of accuracy
- In durable steel storage case

Application range: Opel Signum Turbo (2002 - 2008), Vectra C Turbo (2002 - 2008), **Saab** 9-3 1.8 Turbo (2002 - 2011), 9-3 1.8 Turbo BioPower (2002 - 2011), 9-3 2.0 Turbo (2002 - 2012), 9-3 2.0 Turbo BioPower (2010 - 2012) and 9-3XT (2009 - 2011) with petrol engines (engine code: Z20NET / B207E / B207L / B207)





400.4475	4 pcs	Engine adjustment tool set for Opel / Saab	0,78

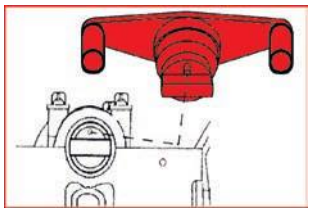
consists of:

400.2327	Timing chain tensioner locking pin	1
400.4476	Crankshaft holding tool	550
400.4477	Camshaft alignment block - inlet	90
400.4478	Camshaft alignment block - exhaust	90

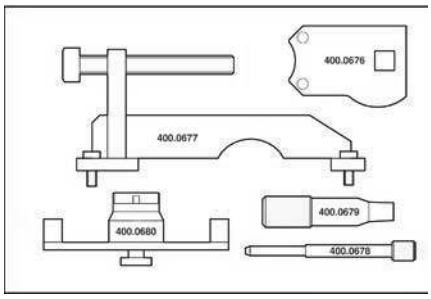
Engine Timing Tool Set for GM / Opel / Saab

- For the professional engine repair
- For locking the cam shaft
- For changing the timing belt or the chain
- Very high degree of accuracy
- In durable steel storage case

Application range: Opel Astra-G (1998-2006), Vectra-B, Vectra-C (1997 - 2005), Signum (2003-2005), Omega-B (1998-2003), Zafira-A (1999-2005), Sintra (1998-1999), Frontera-B (1998-2004) with 2.0 / 2.2 DTi engines (engine code: Z20DTH / Z20DTL / Z22DTH / Z22DTR) and **Saab** 9-3 (1998-2004) with 2.2 TID, 9-5 (2002-2007) with 2.2 TID engines (engine code: D223L)







400.0675	5 pcs	Engine Timing Tool Set for GM / Opel / Saab	1,36

consists of:

400.0676	Camshaft turning tool	7
400.0677	Bracket for timing adjustment wrench	111
400.0678	Injection pump locking pin, Ø 6 mm, 110 mm	41
400.0679	Flywheel TDC locking pin Ø 12 mm, 86 mm	160
400.0680	Camshaft locking tool 120 mm	322

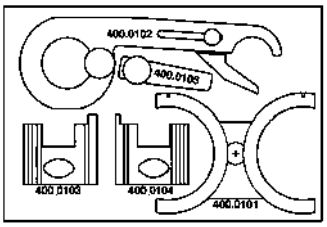


Engine Timing Tool Set for GM / Opel / Saab

- For the professional engine repair
- For engines with bevel on the automatic pulley
- Very high degree of accuracy
- In durable steel storage case

Application range: Opel Vectra-B, Omega-B, Sintra, Calibra with 2.5 / 2.6 / 3.0 V6 engines (1998-2003) (engine code: X25XE, X30XE, Y26SE, Y32SE), **Saab** 9-5 with 3.0 V6 engines (engine code: B308E)





			kg	
400.0100	5 pcs	Engine Timing Tool Set for GM / Opel / Saab	2,44	

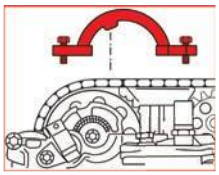
consists of:

		g	
400.0101	Crankshaft locking tool 137 mm	812	
400.0102	Camshaft locking tool Ø 29-50 mm	585	
400.0103	Opel Camshaft locking tool (right)	119	
400.0104	Camshaft locking tool left	120	
400.0105	Belt holding wedge	100	

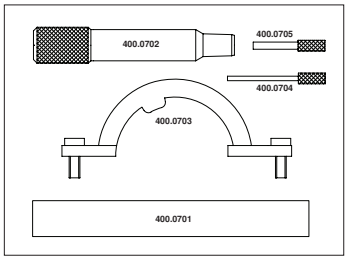
Engine Timing Tool Set for GM / Isuzu / Opel / Saab

- For the professional engine repair
- Especially for chain-driven vehicles
- For locking dual cam shafts
- Very high degree of accuracy
- In durable steel storage case

Application range: Opel Agila, Astra-G, Astra-H, Combo-C, Corsa-B, Corsa-C, Corsa-D, Meriva-A, Tigra-B (1993-2010) with 1.0 12V / 1.2 16V engines (engine code: X10XE / Z10XE / Z10 XEP / X12XE / Z12XE / Z12 XEP / Z14XEL / Z14XEA) and similar **Isuzu**- and **Saab**-engines







			g	
400.0700	5 pcs	Engine Timing Tool Set for GM / Isuzu / Opel / Saab	1060	

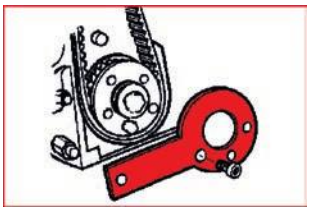
consists of:

		g	
400.0701	Camshaft timing tool 155 mm	120	
400.0702	Flywheel TDC locking pin Ø 12 mm, 113 mm	205	
400.0703	Camshaft position (CMP) sensor disc setting tool	110	
400.0704	Tensioner retaining pin, Ø2,5mm	5	
400.0705	Tensioner retaining pin, Ø4,0mm	5	

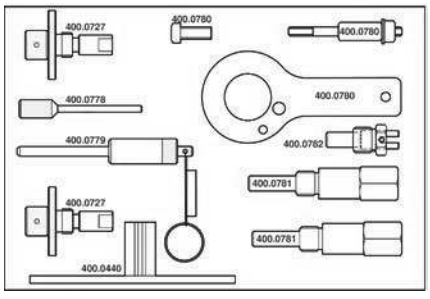
Engine Timing Tool Set for GM / Opel / Saab

- For the professional engine repair
- For locking the cam shaft
- For changing the timing belt or the chain
- Very high degree of accuracy
- In durable steel storage case

Application range: Opel Agila, Corsa-C, Combo-C (2003-2007), Tigra-B, Meriva, Astra-H (2004-2007), Corsa-D (2006-2007)with 1.3 CDTi engines (engine code: Z13DT / Z13DTH / Z13DTJ), **Opel** Astra-H, Vectra-C, Signum, Zafira-B with 1.9 CDTi engines (engine code: Z19DT / Z19DTL), **Saab** 9-3, 905 with 1.9 CDTi engines (engine code: Z19DT / Z19DTH)







			kg	
400.0775	11 pcs	Engine Timing Tool Set for GM / Opel / Saab	1,29	

consists of:

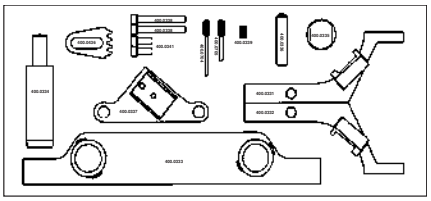
		g	
400.0440	Flywheel locking tool 135 x 40 mm	136	
400.0727	Camshaft locking tool (2) Ø 45 mm	130	
400.0778	Locking pin, 80 mm	20	
400.0779	Crankshaft locking tool Ø 6 mm	80	
400.0780	Crankshaft pulley setting tool (3)	260	
400.0781	Camshaft timing pin set (2)	180	
400.0782	Camshaft alignment screw	40	

Engine Timing Tool Set for Opel / Saab / Chevrolet

- For the professional engine repair
- For locking the cam shaft
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Opel Astra, Insignia, Antara with 2.0 l and 2.4 l engines (engine code: LHU/A20NFT/LTG/A20N-HT/162(220)5300); **Saab** 9-5 with 2.0 l engines (engine code: LHU/A20NFT/LE5/LE9) and **Chevrolet** Captiva, HHR, Malibu with 2.0 l engines (engine code: LHU/A20NFT)





			kg	
400.0330	18 pcs	Engine Timing Tool Set for Opel / Saab / Chevrolet	3,68	

consists of:

	x		g	
400.0331	1	Cam shaft locking device left	360	
400.0332	1	Cam shaft locking device right	360	
400.0333	1	Cam shaft adjustment holding tool, 310 mm	459	
400.0334	1	Crankshaft locking pin Ø 15 mm	55	
400.0335	1	Piston holder tension pin, 11 mm	162	
400.0336	1	Piston holder remover, 16 mm	36	
400.0337	1	Fly wheel holding tool bottom	502	
400.0338	2	Screw M6x50, 55,0 mm	13	
400.0339	4	Washers M6	2	
400.0341	2	Screw M6x16, 22,0 mm	10	
400.0436	1	Flywheel locking tool, 28 x 45 mm	135	
400.0704	1	Tensioner retaining pin, Ø2,5mm	5	
400.0705	1	Tensioner retaining pin, Ø4,0mm	5	



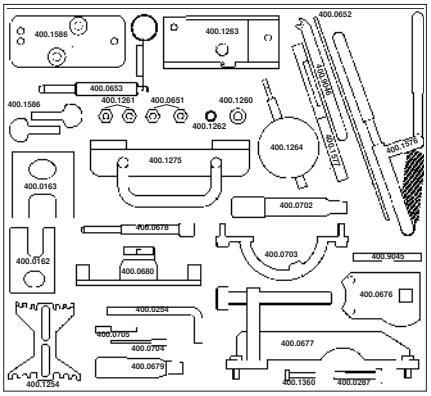
Engine Timing Tool Kit for Isuzu / GM / Opel / Saab

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Opel Agila, Ascona, Astra-F, Astra-G, Corsa-B, Corsa-C, Frontera, Kadett-E, Midi, Monterey, Omega-B, Sintra, Vectra-A, Vectra-B, Vectra-C, Zafira and similar **Isuzu** and **Saab** vehicles







			kg	
400.1575	32 pcs	Engine Timing Tool Kit for Isuzu / GM / Opel / Saab	3,91	

consists of:

		g	
400.0162	Camshaft locking tool for Opel / Saab, blue	186	
400.0163	Camshaft locking tool for GM / Opel, gold	143	
400.0254	Locking pin Ø 9.5 mm	60	
400.0287	Screw M8 x 40,0 mm	18	
400.0652	Flywheel TDC indicator	80	
400.0653	Flywheel locking pin with spring on ring, 103 mm	79	
400.0676	Camshaft turning tool	7	
400.0677	Bracket for timing adjustment wrench	111	
400.0678	Injection pump locking pin, Ø 6 mm, 110 mm	41	
400.0679	Flywheel TDC locking pin Ø 12 mm, 86 mm	160	
400.0680	Camshaft locking tool 120 mm	322	
400.0702	Flywheel TDC locking pin Ø 12 mm, 113 mm	205	
400.0703	Camshaft position (CMP) sensor disc setting tool	110	
400.0704	Tensioner retaining pin, Ø2,5mm	5	
400.0705	Tensioner retaining pin, Ø4,0mm	5	
400.1254	Flywheel locking tool, 70 x 54 mm	23	
400.1260	Screw for 400.1263	9	
400.1261	Locking screw M6 x 10.0 mm	4	
400.1262	Special tip	10	
400.1263	Mounting bracket assy	330	
400.1275	Camshaft setting strap (TDC)	404	
400.1360	Flywheel locking tool Ø 7 mm	82	

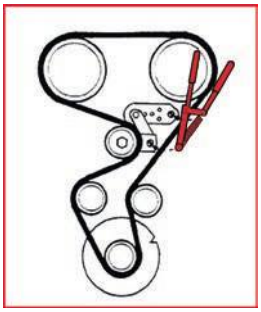
consists of:

		g	
400.1576	Belt tensioner adjuster	297	
400.1577	Camshaft setting strap 140 mm	99	
400.1586	Camshaft position locking tool (5)	170	
400.9045	Flywheel locking tool, 62 x 30 mm	80	
400.9046	Flywheel locking tool, 130 mm	80	
400.1264	Dial gauge Ø 51 (10 x 0.01 mm) 103 mm	161	

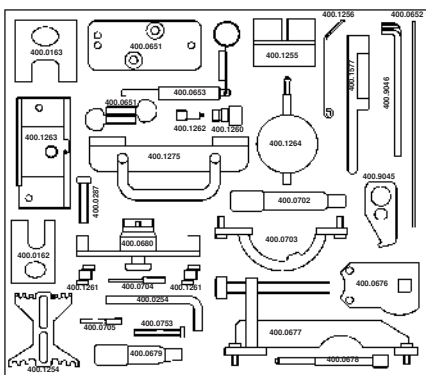
Engine Timing Tool Set for GM / Isuzu / Opel / Saab

- For the professional engine repair
- For locking the cam shaft
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Opel Agila, Ascona, Astra-F, Astra-G, Astramax, Belmont, Cavalier, Corsa-B, Corsa-C, Frontera, Kadett-E, Midi, Monterey, Omega-B, Sintra, Vectra-A, Vectra-B, Vectra-C, Zafira with petrol and diesel engines including Eco-Tec engines and similar **Isuzu** and **Saab** engines







			kg	
400.1250	36 pcs	Engine Timing Tool Set for GM / Isuzu / Opel / Saab	6,18	

consists of:

	x		g	
400.0162	1	Camshaft locking tool for Opel / Saab, blue	186	
400.0163	1	Camshaft locking tool for GM / Opel, gold	143	
400.0254	1	Locking pin Ø 9.5 mm	60	
400.0287	1	Screw M8 x 40,0 mm	18	
400.0651	1	Camshaft locking tool (3), 110 x 50 mm	169	
400.0652	1	Flywheel TDC indicator	80	
400.0653	1	Flywheel locking pin with spring on ring, 103 mm	79	
400.0676	1	Camshaft turning tool	7	
400.0677	1	Bracket for timing adjustment wrench	111	
400.0678	1	Injection pump locking pin, Ø 6 mm, 110 mm	41	
400.0679	1	Flywheel TDC locking pin Ø 12 mm, 86 mm	160	
400.0680	1	Camshaft locking tool 120 mm	322	
400.0702	1	Flywheel TDC locking pin Ø 12 mm, 113 mm	205	
400.0703	1	Camshaft position (CMP) sensor disc setting tool	110	
400.0704	1	Tensioner retaining pin, Ø2,5mm	5	
400.0705	1	Tensioner retaining pin, Ø4,0mm	5	
400.0753	1	Locking screw M6 x 30.0 mm	10	
400.1254	1	Flywheel locking tool, 70 x 54 mm	23	
400.1255	1	Camshaft locking tool for Opel (2), red	56	
400.1256	1	Tensioner locking pin for 400.1250	3	
400.1260	1	Screw for 400.1263	9	
400.1261	4	Locking screw M6 x 10.0 mm	4	
400.1262	1	Special tip	10	
400.1263	1	Mounting bracket assy	330	
400.1264	1	Dial gauge Ø 51 (10 x 0.01 mm) 103 mm	161	
400.1275	1	Camshaft setting strap (TDC)	404	
400.9045	1	Flywheel locking tool, 62 x 30 mm	80	
400.9046	1	Flywheel locking tool, 130 mm	80	
400.1577	1	Camshaft setting strap 140 mm	99	



SUBARU

Camshafts pulley retainer for Subaru

- 12 point
- ideally suited for holding the pulleys in place when loosening the fastening screw
- Maximum holding force
- Very high degree of accuracy

Application range: Subaru Impreza, Legacy and Forester



	mm	Length mm	g	
400.0021	69	400,0	730	

Camshafts pulley retainer for Subaru

- ideally suited for holding the pulleys in place when loosening the fastening screw
- With four pins
- Maximum holding force
- Very high degree of accuracy

Application range: Subaru Impreza and Forester (engine code: EJ20J/EJ202)



	Length mm	g	
400.0022	770,0	1737	

Crankshaft pulley retainer for Subaru

- ideally suited for holding the pulleys in place when loosening the fastening screw
- • With 4 support rollers
- Maximum holding force
- Very high degree of accuracy

Application range: Subaru Impreza with 1.8 l petrol engine



	Length mm	kg	
400.0023	480,0	0,93	

Camshaft locking tool for Subaru

- For the professional engine repair
- Clamping device for a secure hold to change the timing belt
- Very high degree of accuracy
- Special tool steel

Application range: Subaru Impreza (STI) 2.0 / 2.5 (>2002), Forester XT (2004-2011), Outback (2005-2010), Legacy GT (2005-2010), Baja (2004-2006), Phase 1 (1996-1998), **Saab** 9-2 X Aero (2005-2006)



			g	
400.0055	2 pcs	Camshaft locking tool for Subaru	554	

consists of:

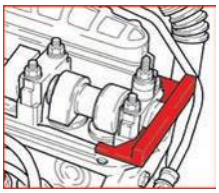
		g	
400.0057	Camshaft locking tool for Subaru with external hexagon	250	
400.0058	Camshaft locking tool for Subaru with internal hexagon	304	

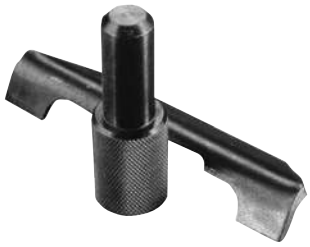
VOLVO

Engine Timing Tool Set for VAG / Volvo

- For the professional engine repair
- For locking the crank shaft or cam shaft
- For changing the timing belt
- Very high degree of accuracy

Application range: Audi, **Seat**, **Volkswagen**, **Volvo** vehicles





			g	
400.1725	2 pcs	Engine Timing Tool Set for VAG / Volvo	251	

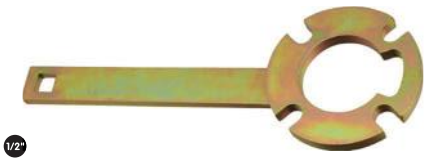
consists of:

		g	
400.9015	Injection pump locking pin Ø 15.4 mm	126	
400.9017	Camshaft setting strap for VAG	120	

Vibration damper wrench for Volvo and Ford

- For clamping the crank shaft when loosening and tightening the crankshaft central screw
- Prevents slipping whilst holding
- The handle can be lengthened via the 1/2" internal square
- Matt finish
- Chrome vanadium

Application range: Volvo C30, C70, S40, S60, S70, S80, V40, V50, V60, V70, XC60, XC70, XC90, XC90 (1.6 / 1.8 / 1.9 / 2.0 / 2.3 / 2.4 / 2.5 / 2.8 / 2.9 with 4- and 5-cylinder petrol and diesel engines as well as 2.0 and 2.4 with 5-cylinder diesel engines), **Ford** Focus, Galaxy, Kuga, Mondeo, S-Max with 2.5 Duratec (VI5) petrol engine (>2004)



1/2"

	Total length mm	g	
400.9070	255,0	550	

Engine Timing Tool Set for Hyundai / Mitsubishi / Volvo

- For the professional engine repair
- For actuating belt tensioners
- Very high degree of accuracy

Application range: universal usage on many **Hyundai**, **Mitsubishi**, **Volvo** vehicles



			g	
400.0075	2 pcs	Engine Timing Tool Set for Hyundai / Mitsubishi / Volvo	131	

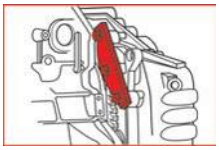
consists of:

		g	
400.0076	Tensioning locking pin, 250 mm	630	
400.0077	Belt tensioner wrench	210	

Engine Timing Tool Set for Ford / Land Rover / PSA / Volvo

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy

Application range: Ford, **Land Rover**, **PSA**, **Volvo** vehicles with 2,0 / 2,2 DOHC Common-Rail Diesel engines





			g	
400.1625	6 pcs	Engine Timing Tool Set for Ford / Land Rover / PSA / Volvo	473	

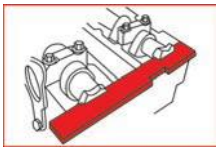
consists of:

		g	
400.0580	Crankshaft locking pin Ø 8,0 mm, 70 mm	30	
400.0609	Flywheel locking tool 133 x 40 mm	308	
400.0903	Crankshaft locking pin	85	

Engine Timing Tool Set for Ford / Volvo

- For the professional engine repair
- For locking the crank shaft or cam shaft
- For changing the timing belt
- Very high degree of accuracy

Application range: Ford, **Volvo** with petrol engines





			g	
400.1525	4 pcs	Engine Timing Tool Set for Ford / Volvo	291	

consists of:

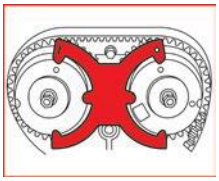
		g	
400.0155	Crankshaft locking pin Ø 5 mm	25	
400.0603	Crankshaft timing pin, 83 mm	51	
400.0905	Crankshaft locking pin, Ø 8 mm, 58 mm	33	
400.1101	Camshaft setting strap, 200 mm	140	



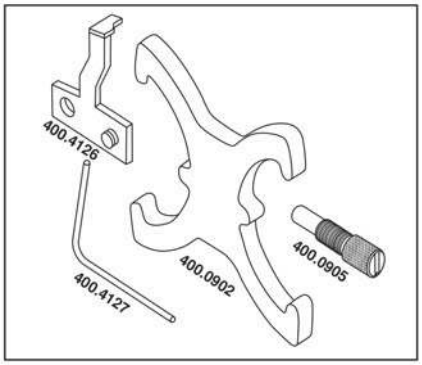
Engine Timing Tool Set for Ford / Volvo

- For the professional engine repair
- For locking the crank shaft and cam shaft
- For changing the timing belt
- Very high degree of accuracy

Application range: Ford B-Max (2012), C-Max (2010), Focus (2011), Galaxy (2010), Grand-C-Max (2010-2011), Mondeo (2010), S-Max (2010), **Volvo** S60 (2001), S80 (2010-2011), V60 (2011), V70 (2010-2011) with 1.6 Ti-VCT, 2.0 TDCI engines (engine code: IQJA / JQDA / JQDB / JQDA / JTDB / JQDA / JQDB / JTWA / JTWB / JQDA / JTDA / JTDB / JTBA / JTBB / B4164T3 / B4164T / B41464T2)







			kg	
400.4125	4 pcs	Engine Timing Tool Set for Ford / Volvo	498	

consists of:

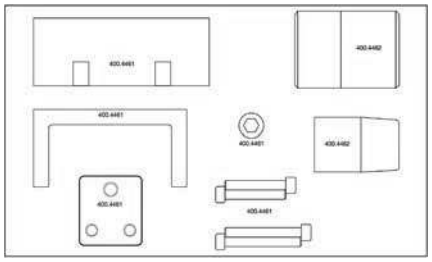
		kg	
400.0902	Camshaft locking tool	384	
400.0905	Crankshaft locking pin, Ø 8 mm, 58 mm	33	
400.4126	Crank shaft discs adjustment tool	50	
400.4127	Pin for chain tensioner	10	

Engine Timing Tool Set for Ford / Volvo

- For the professional engine repair
- for holding the camshaft
- Very high degree of accuracy
- In durable steel storage case

Application range: Ford Focus (2005 – 2011), Galaxy (2006 – 2010), Kuga (2009 – 2013), Mondeo (2007 – 2010), S-Max (2006 – 2010), **Volvo** C30 (2006 – 2013), C70 (2006 – 2013), S40 (2003 – 2012), S60 (2003 – 2016), S80 (2003 – 2012), V40 (2012 – 2015), V50 (2004 – 2012), V70 (2002 – 2012), XC60 (2014 – 2016), XC70 (2002 – 2007) and XC90 (2002 – 2014) with 2.5 l petrol engines (engine code: HYDA / HYDB / HUBA / B5254T10 / B5254T11 / B5254T12 / B5254T14 / B5254T2 / B5254T3 / B5254T4 / B5254T5 / B5254T6 / B5254T7 / B5254T8 / B5254T9)

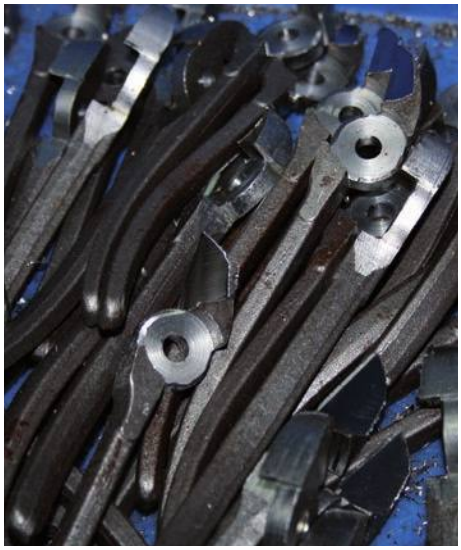




			kg	
400.4460	10 pcs	Engine Timing Tool Set for Ford / Volvo	1,99	

consists of:

		kg	
400.4461	Camshaft holding bracket	490	
400.4462	Crankshaft front oil sealer cup	650	

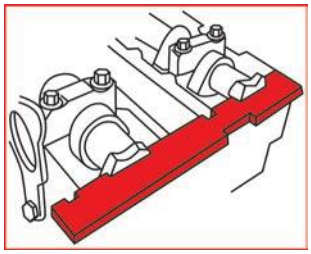




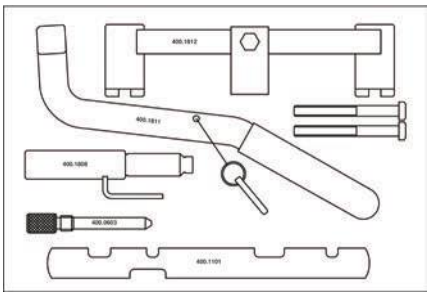
Engine Timing Tool Set for Volvo

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Volvo C30, S40, V50, S60, S70, S80, V70







			kg	
400.1825	7 pcs	Engine Timing Tool Set for Volvo	1,28	

consists of:

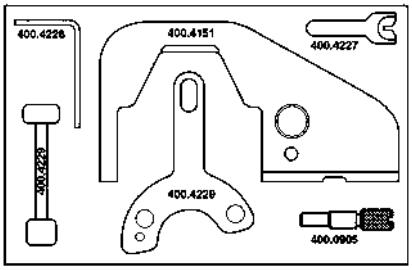
		kg	
400.0603	Crankshaft timing pin, 83 mm	51	
400.1101	Camshaft setting strap, 200 mm	140	
400.1808	Flywheel locking pin 112 mm	225	
400.1811	Tensioner adjuster 245 mm	239	
400.1812	Camshaft locking tool (3)	498	

Engine Timing Tool Set for Volvo

- For the professional engine repair
- For locking the crank shaft
- Very high degree of accuracy
- In durable steel storage case

Application range: Volvo C70 (>2006), S40 (>2004), S60 (>2005), S80 (>2006), V50 (>2004), V60 (>2010), V70 (>2008), V70 XC (>2001), XC60 (>2008), XC70 (>2008), XC90 (>2002), C30 (>2006) with 2.0 GTDi engines (engine code: D5204T2 / D5204T3 / D5204T5 / D5244T / D5244T10 / D5244T11 / D5244T13 / D5244T14 / D5244T15 / D5244T16 / D5244T17 / D5244T18 / D5244T19 / D5244T2 / D5244T3 / D5244T4 / D5244T5 / D5244T6 / D5244T7 / D5244T8 / D5244T9 / D5204T / D4164T / D4162T / D4164T2 / D4192T3 / D4192T4 / D4204T / D4204T2 / D4164T)

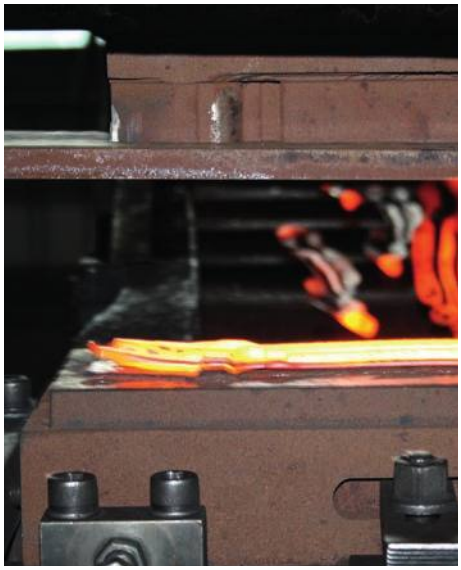




			kg	
400.4225	6 pcs	Engine Timing Tool Set for Volvo	1,14	

consists of:

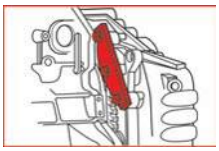
		g	
400.0905	Crankshaft locking pin, Ø 8 mm, 58 mm	33	
400.4226	Nockenwellen Ausrichtungsplatte für 400.4225	700	
400.4227	Crank shaft sensor alignment tool	30	
400.4228	Tension pin 3.0 mm	10	
400.4229	Crank shaft pulley wheel adjustment tool (2)	290	



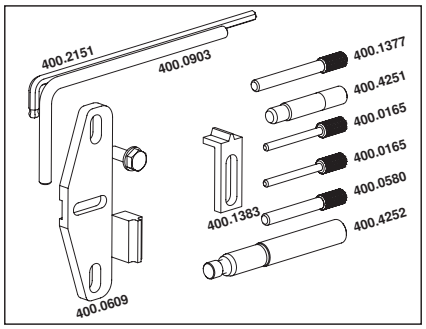
Engine Timing Tool Set for Volvo

- For the professional engine repair
- For locking the crank shaft or cam shaft
- Very high degree of accuracy
- In durable steel storage case

Application range: Volvo C70 (>2006), S40 (>2004), S60 (>2005), S80 (>2006), V50 (>2004), V60 (>2010), V70 (>2008), V70 XC (>2001), XC60 (>2008), XC70 (>2008), XC90 (>2002), C30 (>2006) (engine code: D5204T2 / D5204T3 / D5204T5 / D5244T / D5244T10 / D5244T11 / D5244T13 / T5244T14 / D5244T15 / D5244T16 / D5244T17 / D5244T18 / D5244T19 / D5244T2 / D5244T3 / D5244T4 / D5244T5 / D5244T6 / D5244T7 / D5244T8 / D5244T9 / D5204T / D4164T / D4162T / D4164T2 / D4192T3 / D4192T4 / D4204T / D4204T2 / D4164T)







			kg	
400.4250	13 pcs	Engine Timing Tool Set for Volvo	1,14	

consists of:

	x		g	
400.0165	2	Camshaft locking pin 5.0 mm	19	
400.0580	1	Crankshaft locking pin Ø 8,0 mm, 70 mm	30	
400.0609	1	Flywheel locking tool 133 x 40 mm	308	
400.0752	1	Washers M8	1	
400.0903	1	Crankshaft locking pin	85	
400.1009	1	Locking screw M8 x 20.0 mm	11	
400.1377	1	Tensioning locking pin Ø 8 mm	35	
400.1383	1	Flywheel locking tool 50 mm	30	
400.2151	1	Tensioner adjuster 6.0 mm, 200 mm	20	
400.4251	1	Crankshaft locking pin 65 mm	102	
400.4252	1	Cam shaft locking pin	160	
400.4253	1	Flywheel locking tool 118 mm	10	

UNIVERSAL COUNTER HOLD TOOL

Universal counter holder for V ribbed belt discs

- With strong belt that has an adjustable flexible diameter
- For securing belt discs
- Ideal for water pumps, alternators, drive pulleys for pumps, fans etc.
- Can be used for discs with a diameter 50.00-200.00 mm





	Length mm	Replacement belt	g	
150.3152	360,0	150.3153	506	

Universal counter holder for V ribbed discs

- With strong belt that has an adjustable flexible diameter
- 5.0 mm groove spacing
- For securing toothed-belt discs
- Ideal for water pumps, alternators, drive pulleys for pumps, fans etc.
- Can be used for discs with a diameter 50.00-200.00 mm





	L mm	Replacement belt	g	
150.3150	360,0	150.3151	542	

Universal belt pulley rotary lever

- Universal adjustable lever
- For the spinning of the endine by means of the belt pulley
- With plastic-coated handle
- Chrome vanadium





	Length mm	g	
150.3029	325,0	650	

Universal locking tool / counter tool for crank shaft wheels

- Ideally suited to almost all vehicle types
- For working areas with gear diameters 45 - 190 mm
- With quick adjustment for setting the working area
- Universally used tool for locking, turning and securing locked pulley wheels
- Allows the crank shaft drive wheels to turn or for releasing the securing screws on the pulley wheel
- Ideal leverage thanks to 390 mm total length
- Very narrow tool for maximum access
- Quick and easy usage
- Maximum holding force
- With plastic-coated handle
- Special tool steel

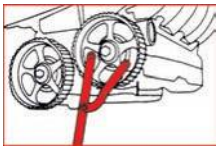




	Ø mm	Length mm	g	
150.2990	45-190	390,0	500	

Pulley wheel counter hold wrench

- Suitable for counter holding the timing belt wheel on the cam shaft
- Hole distance can be varied
- Adjustable, universal usage
- With plastic-coated handle
- Chrome vanadium

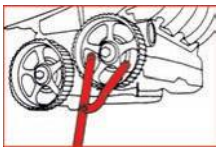




	Length mm	g	
400.9007	410,0	525	

Universal timing gear holder set

- Ideally suited to almost all vehicle types
- Universally used tool for locking, turning and securing locked pulley wheels
- The overall length of 520 mm guarantees an optimal lever for loosening the timing belts reinforcement screws
- Stepless adjustment of Ø 40 - 220 mm - pin height: 35 mm
- Includes 4 pairs of screw on plugs
- With plastic-coated handle
- Special tool steel





			kg	
150.3000	11 pcs	Universal timing gear holder set	2,20	

consists of:

		kg	
150.3001	Adjustable lever f.150.3000, 520 mm	1,12	
150.3002	Locking pin f.150.3000, 2 pcs, 6-10 mm	0,10	
150.3003	Locking pin f.150.3000, 2 pcs, 8-11 mm	0,05	
150.3004	Locking pin f.150.3000, 2 pcs, 10-12 mm	0,04	
150.3005	Locking pin f.150.3000, 2 pcs, 11-16 mm	0,04	
150.3006	Knurled nut f.locking pin,150.3000, 2 pcs	0,02	

Pin-type face wrench set, seamlessly adjustable with interchangeable pins

- Universal application for common two-hole nuts
- With interchangeable pins
- Each double pin wrench is replacing 4 single key sizes
- Adjustable in diameter
- Phosphate finish
- Special tool steel
- In durable plastic storage case





			kg	
150.3205	20 pcs	Pin-type face wrench set, seamlessly adjustable with interchangeable pins	1,56	

consists of:

		g	
150.3206	Pin-type face wrench, adjustable, 263 mm	485	
150.3207	Pin-type face wrench, adjustable, 215 mm	293	
150.3208	Pin-type face wrench, adjustable, 161 mm	155	
150.3209	Pin-type face wrench, adjustable, 115 mm	57	
150.3210	Pin pair, Ø 2.37 mm	2	
150.3211	Pin pair, Ø 2.90 mm	2	
150.3212	Pin pair, Ø 4.87 mm	5	
150.3213	Pin pair, Ø 5.91 mm	7	
150.3214	Pin pair, Ø 6.87 mm	13	
150.3215	Pin pair, Ø 7.92 mm	15	
150.3216	Pin pair, Ø 9.87 mm	28	
150.3217	Pin pair, Ø 11.90 mm	37	



VISCO FAN TOOL

Universal Visco ventilator wrench

- For removing the hubs and bleeding with viscous couplings
- Especially slim design
- Enables easy access
- With PVC dipped handle
- Special tool steel





	mm	Suitable for	g	
150.3022	32	for clamping the viscous coupling drive shaft on BMW, Ford	300	
150.3027	36	For counter holding the Visco coupling drive shaft BMW, Ford, GM	340	
150.3023	41	for twisting the water pump on Opel and GM	422	
150.3024	46	for twisting the water pump on Opel and GM	405	

Ventilator hub wrench set

- For counter holding the Visco coupling drive shaft
- Makes it possible to secure the pulley wheel of the water pump and at the same time release the heating filter
- Also suitable for the removal of the viscous connecting socket on the cooler ventilator
- Special tool steel
- In durable plastic storage case





			g	
150.3320	12 pcs	Ventilator hub wrench set	1,89	

consists of:

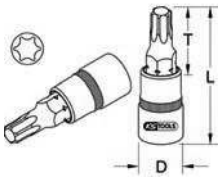
		g	
150.3008	Visco ventilator wrench	370	
150.3009	Ventilator coupling counter hold for Mercedes	105	
150.3022	Universal Visco ventilator wrench, 32mm	300	
150.3024	Universal Visco ventilator wrench, 46mm	405	
150.3027	Universal Visco ventilator wrench, 36mm	340	
150.3301	Visco ventilator wrench	472	
150.3306	Holding wrench for Visco ventilator	330	
150.3321	Adaptor, short, Ø 20 mm	5	
150.3322	Adaptor, Ø 8 mm	22	
150.3323	Adaptor, Ø 10 mm	29	
150.3324	1/2" Holding wrench	635	
151.26025	Hexagon key wrench, phosphate finish, short, 2,5mm	10	

TENSION PULLEY WRENCH V/V RIBBED BELTS

Bit socket for Torx screws

- suitable for assembly and disassembly of the fan belt
- For operating the tension pulley securing screws
- Torx
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- with press-fitted nickel-plated bit
- For manual operation
- Matt finish
- Chrome vanadium







1/2"

		D mm	L mm	T mm	g	
911.1361	T20	22,0	55,0	17,0	70	
911.1362	T25	22,0	55,0	17,0	700	
911.1363	T27	22,0	55,0	17,0	710	
911.1364	T30	22,0	55,0	17,0	710	
911.1365	T40	22,0	55,0	17,0	730	
911.1366	T45	22,0	55,0	17,0	90	
911.1367	T50	22,0	55,0	17,0	90	
911.1368	T55	22,0	55,0	17,0	770	
911.1369	T60	22,0	55,0	17,0	90	

V-belt and tooth belt wrenches

- 12 point
- For loosening the automatic clamping device
- Problem free changing of the belt
- Saves the cooling unit service on VAG
- For hard to reach places
- With plastic-coated handle
- Chrome vanadium

Application range:Audi A4, **Volkswagen** Passat > 97 with TDI or pump injector engines **Opel**, DOHC 4- / 6 cylinder (e.g.. Astra F with cooling), **Saab** V6 engines, **Mitsubish**i





	mm	Length mm	g	
150.1206	10	460,0	320	
150.1207	11	460,0	320	
150.1208	12	460,0	320	
150.1201	13	460,0	320	
150.1209	14	460,0	320	
150.1202	15	460,0	320	
150.1203	16	460,0	320	
150.1204	17	460,0	320	
150.1213	18	460,0	320	
150.1205	19	460,0	320	

Universal wedge and timing belt wrench set

- 12 point
- For loosening the automatic clamping device
- Problem free changing of the belt
- Saves the cooling unit service on VAG
- For hard to reach places
- With plastic-coated handle
- Chrome vanadium

Application range: Audi A4, **Volkswagen** Passat after 97 with TDI or Pump-Nozzle Engine **Opel** DOHC 4- / 6-Cylinder (e.g. Astra F with air conditioning), **Saab** V6-Engines, **Mitsubishi**





			kg	
150.1200	5 pcs	Universal wedge and timing belt wrench set	2,18	

consists of:

		g	
150.1201	V-belt+tooth belt wrench, 13mm, L=460mm	320	
150.1202	V-belt+tooth belt wrench, 15mm, L=460mm	320	
150.1203	V-belt+tooth belt wrench, 16mm, L=460mm	320	
150.1204	V-belt+tooth belt wrench, 17mm, L=460mm	320	
150.1205	V-belt+tooth belt wrench, 19mm, L=460mm	320	

Universal V-belt and tooth belt wrenches

- Torx-E-Profile
- For loosening the automatic clamping device
- Problem free changing of the belt
- For hard to reach places
- With plastic-coated handle
- Chrome vanadium





		Length mm	g	
150.1214	E8	460,0	320	
150.1216	E10	460,0	320	
150.1217	E12	460,0	320	
150.1218	E14	460,0	320	
150.1219	E16	460,0	320	
150.1221	E18	460,0	320	
150.1222	E20	460,0	320	
150.1223	E22	460,0	320	

BELT TENSION CHECKER

Timing belt tensions test instrument

- For inspection of the timing post tensioning
- For the timing belt on the combustion engine
- With mm scale
- 10N (~1kp corresponds a revolution)
- Special tool steel

Application range: Can be used everywhere there is the technical data for the allowable through bend of the timing belt in mm in a certain power in N or kp revolutions





Technical data:

Scale division:	in mm
Measurement mode:	mechanical (spring)
Adjusting nut revolution around 360°	1,0
Adjusting nut pitch:	1,0/10,0 mm

	Length mm		g	
150.3015	100,0	0,0-20,0 mm	260	

Electronic timing belt tension tester

- For testing the tension of toothed belts and V-ribbed belts
- Measurement using the latest method = frequency measurement in Hertz
- With data log, setting values and correct position of the measuring sensor on the belt drive
- One man operation, easy to use
- LED display and acoustic measuring signal
- Automatic shutdown after 120 seconds
- In durable plastic storage case

Application range: Maintenance of vehicles, replacement of belts, suitable for passenger cars up to commercial vehicles





Technical data:

Power requirement:	9V block battery
Working range:	30-520 Hz
Cable length:	1,2 m

			kg	
150.3165	8 pcs	Electronic timing belt tension tester	1,13	

UNIVERSAL

TDC finder set

- For quickly establishing the TDC point
- Suitable for both petrol and diesel engines
- Is used e.g. when changing the timing belt or when disassembling the cylinder head (seal change)
- Display unit with measuring tube, piston and magnet bracket
- Connection hose with ignition or glow plug thread adapters and universal cone adapter
- Aluminium lengthening for deep ignition chambers
- In durable plastic storage case





			g
152.2055	11 pcs	TDC finder set	180

consists of:

		g
152.2056	Hose	31
152.2057	Hooks with magnet	5
152.2058	Measuring pipe	13
152.2059	Lengthener with connection pipe	26
152.2062	Adaptor set, 6 pcs, Ø 8-10-12-14-18 mm and cone adaptor	13

TDC determining pin / dial indicator bracket M14 x 1.25

- For the professional engine repair
- For adjusting the crank shaft to the top dead centre (TDC) point
- Used in place of spark plugs
- To be used alongside dial indicator 400.9004
- Special tool steel
- Very high degree of accuracy



	mm	Ø mm	Length mm	g
400.9026	M14 x 1,25	2,0	262,0	288

TDC determining pin / dial indicator bracket M14 x 1.25

- For the professional engine repair
- For adjusting the crank shaft to the top dead centre (TDC) point
- Used in place of spark plugs
- To be used alongside dial indicator 400.9004
- Special tool steel
- Very high degree of accuracy



	mm	Ø mm	L mm	g
400.9027	M14 x 1,25	5,0	260,0	288

TDC determining pin M14 x 1,25

- For the professional engine repair
- For adjusting the crank shaft to the top dead centre (TDC) point
- Used in place of spark plugs
- Grooves indicate when the piston is at the TDC point
- Special tool steel
- Very high degree of accuracy



	mm	Ø mm	Length mm	g
400.9006	M14 x 1,25	2,0	262,0	288

TDC determining pin / dial indicator bracket M14 x 2.0

- For adjusting the crank shaft to the top dead centre (TDC) point
- Used in place of spark plugs
- To be used alongside dial indicator 400.9004
- Special tool steel



	mm	Ø mm	Length mm	g
400.0304	M14 x 2,0	16,0	130,0	135

Precision-dial indicator gauge 0 - 10 mm

- For the professional engine repair
- In accordance with DIN 878
- With securing screw and turnable dial face
- Shockproof
- Splash proofed
- For use alongside with TDC determining pins
- For adjusting the crank shaft to the top dead centre (TDC) point
- Spindle and clamping shaft made from stainless steel
- Very high degree of accuracy



	Measuring range mm	Display accuracy mm	Pointer revolution mm	g
400.9004	0 - 10	+/- 0,01	1,0	78

Universal locking pin and marking pin set

- For the professional engine repair
- Versitile usage
- For sage locking of the tensioning element
- Very high degree of accuracy

Application range: Alfa Romeo, **Audi**, **Chrysler**, **Ford**, **Honda**, **Hyundai**, **Lexus**, **Mazda**, **Mitsubishi**, **Peugeot**, **Renault**, **Seat**, **Škoda**, **Toyota**, **Volkswagen**, **Volvo** etc.

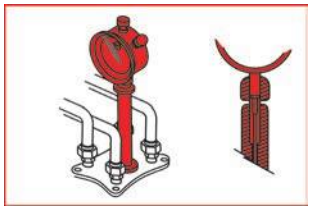


	Ø mm	g
150.3019	0,8 - 1,25 - 1,4 - 1,5 - 1,7 - 1,9	20

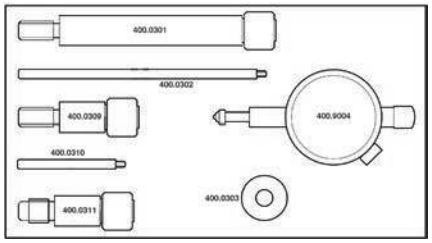
Diesel fuel pump timing set

- For the professional engine repair
- Precise measuring device
- Very high degree of accuracy
- In durable steel storage case

Application range: Alfa Romeo, **Audi**, **BMW**, **Daihatsu**, **Fiat**, **Ford**, **Isuzu**, **Iveco**, **Lancia**, **Land Rover**, **Mazda**, **Mitsubishi**, **Nissan**, **Renault**, **Rover** and **Volkswagen** vehicles with Bosch, Kikki, Nippon Denso injection pumps with threads of M8, M10 and M12, with new M10 Adapter in particular for **Ford** Transit







		g
400.0325	7 pcs	Diesel fuel pump timing set	301

consists of:

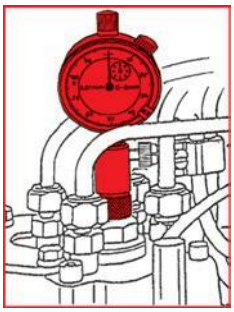
		g
400.0301	Dial gauge adapter M8 (Bosch), long	71
400.0302	Dial gauge extension, long 99 mm	9
400.0303	Convertor M8 x M12	12
400.9004	Precision-dial indicator gauge 0-10 mm, Ø 40 mm	78
400.0309	Dial gauge adapter M8 (Bosch) short, silver	37
400.0310	Dial gauge extension short	4
400.0311	Dial gauge adapter M10 (Bosch) short, black	40



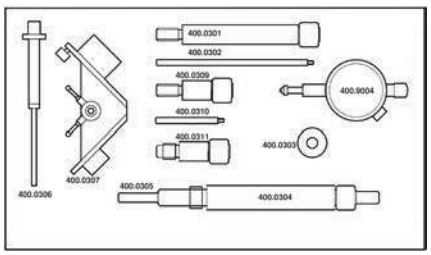
Diesel fuel pump timing set

- For the professional engine repair
- Precise measuring device for the upper entry hole
- For resetting the injection time on diesel engines
- Very high degree of accuracy
- In durable steel storage case

Application range: Alfa Romeo, **Audi**, **BMW**, **Daihatsu**, **Fiat**, **Ford**, **Isuzu**, **Iveco**, **Lancia**, **Land Rover**, **Mazda**, **Mitsubishi**, **Nissan**, **PSA** (XUD), **Renault**, **Rover**, **Volkswagen** vehicles with Bosch, EP/VE Rotary, Niki, Nippon Denso, CAV RotoDiesel, Top injection fuel pumps







			g	
400.0300	11 pcs	Diesel fuel pump timing set	710	

consists of:

		g	
400.0301	Dial gauge adapter M8 (Bosch), long	71	
400.0302	Dial gauge extension, long 99 mm	9	
400.0303	Convertor M8 x M12	12	
400.0304	TDC determining pin / dial indicator bracket M14 x 2.0 mm	135	
400.0305	Extension	460	
400.0306	Dial gauge probe for Lucas-CAV-Roto	17	
400.0307	Dial gauge assy for Lucas-CAV-Roto	125	
400.0309	Dial gauge adapter M8 (Bosch) short, silver	37	
400.0310	Dial gauge extension short	4	
400.0311	Dial gauge adapter M10 (Bosch) short, black	40	
400.9004	Precision-dial indicator gauge 0-10 mm, Ø 40 mm	78	



Universal twin Camshaft Sprocket Locking Tool

- For the professional engine repair
- For locking cam shafts that are next to each other
- Universal usage for engines with 1, 2 or 4 cam shafts
- Also suitable for chain wheels with flanges
- Enables cam belt change with mounted locking tool
- Ideal for locking of diesel injection pump wheels
- The distance of the timing wheels to each other make no difference
- Also usable in gear cam wheels with different tooth form
- Prevents the timing belt being altered
- Universal tooth profile fits on all current camshafts
- Special metal
- Very high degree of accuracy
- In durable plastic storage case





			kg	
150.3190	5 pcs	Universal twin Camshaft Sprocket Locking Tool	1,20	

consists of:

		g	
150.3171	Cam shaft locking tool, 11 mm	110	
150.3172	Long bridges	70	
150.3196	Cornet screws (2)	40	
150.3197	Cam shaft marking device	95	

Universal - Engine Timing Tool Set

- For the professional engine repair
- Ideal range of common locking tools
- For locking the fly wheels
- For locking of the crank shaft
- For locking the cam shaft
- Secure hold thanks to optimal positioning
- Aluminium
- Very high degree of accuracy

Application range: Audi, Citroën, Peugeot, Fiat, Isuzu, Peugeot, Rover, Saab, Seat, Škoda, Opel, Volkswagen vehicles





			kg	
400.2650	9 pcs	Universal - Engine Timing Tool Set	1,46	

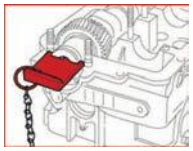
consists of:

		g	
400.0103	Opel Camshaft locking tool (right)	119	
400.0104	Camshaft locking tool left	120	
400.0151	Camshaft locking tool, 60 x 32 x 14 mm	125	
400.0162	Camshaft locking tool for Opel / Saab, blue	186	
400.0163	Camshaft locking tool for GM / Opel, gold	143	
400.0436	Flywheel locking tool, 28 x 45 mm	135	
400.0615	Crankshaft pulley setting tool, 60 mm	190	
400.1254	Flywheel locking tool, 70 x 54 mm	23	

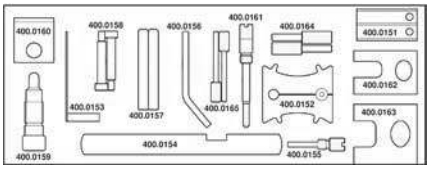
Universal - Engine Timing Tool Set

- For the professional engine repair
- For locking the crank shaft or cam shaft
- For changing the timing belt
- Also for locking twin-cam, dual cam shaft
- Very high degree of accuracy
- In durable steel storage case

Application range: universal usage on many vehicles, in particular **Audi**, **Citroën**, **Ford**, **Honda**, Land Rover, **Mazda**, MG, **Peugeot**, Rover, **Opel** with petrol and diesel engines with single or twin cams







			kg	
400.0150	20 pcs	Universal - Engine Timing Tool Set	1,38	

consists of:

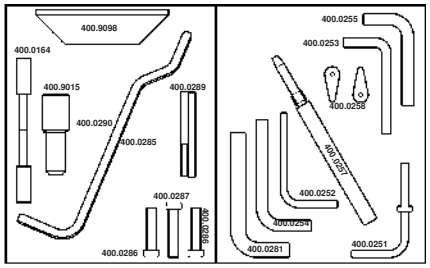
	x		g	
400.0151	1	Camshaft locking tool, 60 x 32 x 14 mm	125	
400.0152	1	Camshaft locking tool 70 mm	150	
400.0153	1	Tensioner adjuster, square 8.0 mm	6	
400.0154	1	Camshaft setting strap 200 mm	130	
400.0155	1	Crankshaft locking pin Ø 5 mm	25	
400.0156	1	Crankshaft timing pin Ø 6,0 mm	23	
400.0157	1	Crankshaft locking pin Ø 10.0 mm, short (2)	120	
400.0158	1	Crankshaft locking pin (2) Ø 8,5 mm	30	
400.0159	1	Crankshaft timing pin	120	
400.0160	1	Camshaft timing tool (2), 38 x 44 mm	118	
400.0161	1	Crankshaft TDC locking pin, 102 mm	75	
400.0162	1	Camshaft locking tool for Opel / Saab, blue	186	
400.0163	1	Camshaft locking tool for GM / Opel, gold	143	
400.0164	1	Timing pin Ø 6,6 mm (2)	74	
400.0165	2	Camshaft locking pin 5.0 mm	19	

Universal - Engine Timing Tool Set

- For the professional engine repair
- For locking the crank shaft or cam shaft
- For changing the timing belt
- Also for servicing the injector pump
- Very high degree of accuracy
- In durable steel storage case

Application range: universal usage on many **Audi**, **Citroën**, **Ford**, **Peugeot**, **Renault**, Rover, **Volvo**, **Volkswagen** vehicles





			kg	
400.0275	20 pcs	Universal - Engine Timing Tool Set	1,84	

consists of:

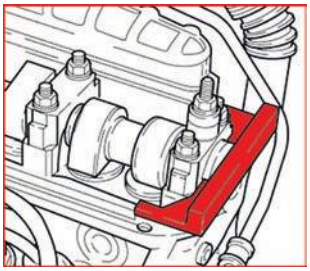
		g	
400.0164	Timing pin Ø 6,6 mm (2)	74	
400.0251	Injection pump locking pin Ø 6.0 mm	30	
400.0252	Camshaft locking pin 6.0 mm	26	
400.0253	Locking pin Ø 8.0 mm	41	
400.0254	Locking pin Ø 9.5 mm	60	
400.0255	Locking pin Ø 10.0 mm	60	
400.0257	Crankshaft TDC locking pin Ø 5 mm, 160 mm	124	
400.0258	Shim tool (2)	3	
400.0281	Timing pin Ø 12,7 mm	569	
400.0285	Crankshaft locking pin Ø 8,0 mm 200 mm	97	
400.0286	Screw M8 x 35 mm (2)	16	
400.0287	Screw M8 x 40,0 mm	18	
400.0289	Injector pump locking pin (2), Ø 6 mm, 70 mm	14	
400.0290	Crankshaft setting pin Ø 6,0 mm	55	
400.9015	Injection pump locking pin Ø 15.4 mm	126	
400.9098	Alignment ruler	86	



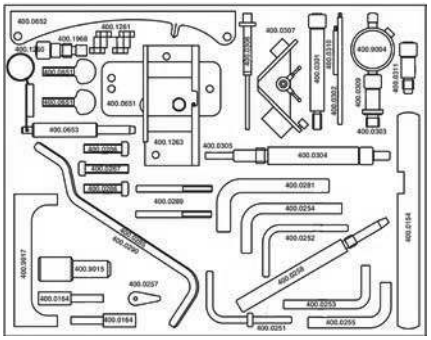
Universal - Engine Timing Tool Set for diesel engines

- For the professional engine repair
- Special set for adjusting and locking diesel engines
- Very high degree of accuracy
- In durable steel storage case

Application range: Audi, **Citroën**, **Ford**, **Opel**, **Peugeot**, **Renault**, **Rover**, **Volvo**, **Volkswagen** vehicles with diesel engines







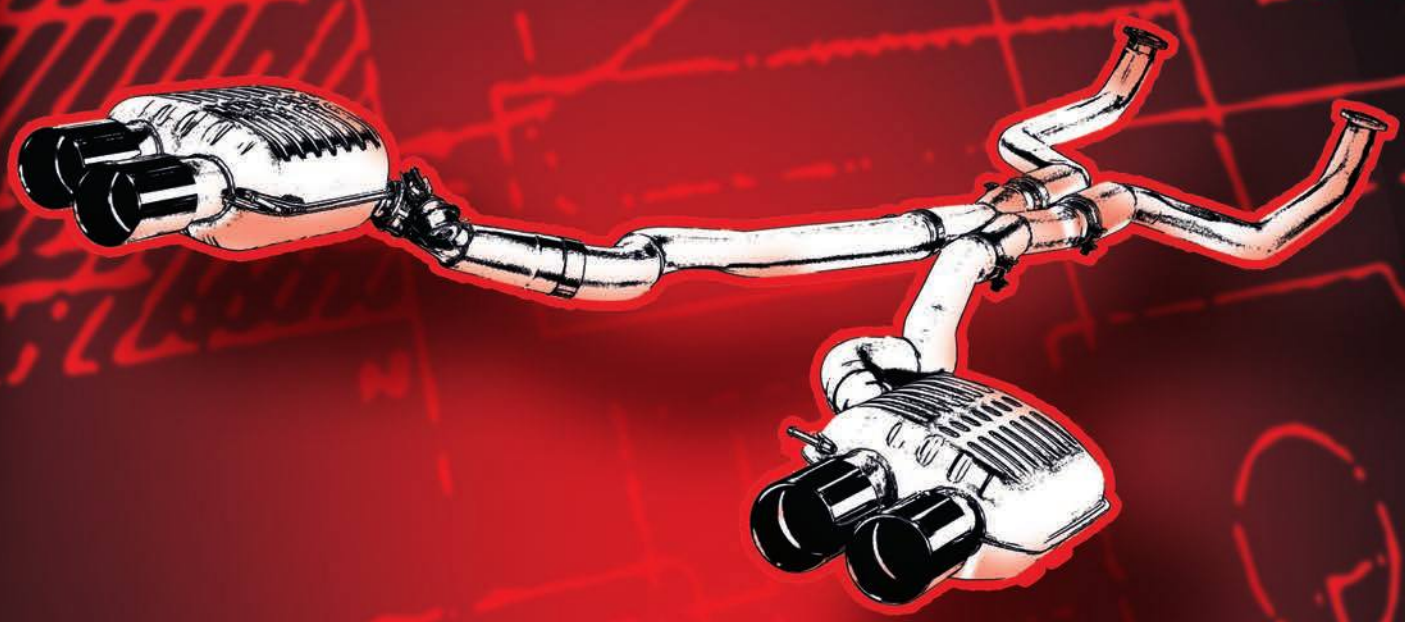
			kg	
400.1950	41 pcs	Universal - Engine Timing Tool Set for diesel engines	4,74	

consists of:

		g	
400.0154	Camshaft setting strap 200 mm	130	
400.0164	Timing pin Ø 6,6 mm (2)	74	
400.0251	Injection pump locking pin Ø 6.0 mm	30	
400.0252	Camshaft locking pin 6.0 mm	26	
400.0253	Locking pin Ø 8.0 mm	41	
400.0254	Locking pin Ø 9.5 mm	60	
400.0255	Locking pin Ø 10.0 mm	60	
400.0257	Crankshaft TDC locking pin Ø 5 mm, 160 mm	124	
400.0258	Shim tool (2)	3	
400.0281	Timing pin Ø 12,7 mm	569	
400.0285	Crankshaft locking pin Ø 8,0 mm 200 mm	97	
400.0286	Screw M8 x 35 mm (2)	16	
400.0287	Screw M8 x 40,0 mm	18	
400.0289	Injector pump locking pin (2), Ø 6 mm, 70 mm	14	
400.0290	Crankshaft setting pin Ø 6,0 mm	55	
400.0301	Dial gauge adapter M8 (Bosch), long	71	
400.0302	Dial gauge extension, long 99 mm	9	
400.0303	Convertor M8 x M12	12	
400.0304	TDC determining pin / dial indicator bracket M14 x 2.0 mm	135	
400.0305	Extension	460	
400.0306	Dial gauge probe for Lucas-CAV-Roto	17	
400.0307	Dial gauge assy for Lucas-CAV-Roto	125	
400.0309	Dial gauge adapter M8 (Bosch) short, silver	37	
400.0310	Dial gauge extension short	4	
400.0311	Dial gauge adapter M10 (Bosch) short, black	40	
400.0651	Camshaft locking tool (3), 110 x 50 mm	169	
400.0652	Flywheel TDC indicator	80	
400.0653	Flywheel locking pin with spring on ring, 103 mm	79	
400.1260	Screw for 400.1263	9	
400.1261	Locking screw M6 x 10.0 mm	4	
400.1263	Mounting bracket assy	330	
400.1968	Special tip	16	
400.9004	Precision-dial indicator gauge 0-10 mm, Ø 40 mm	78	
400.9015	Injection pump locking pin Ø 15.4 mm	126	
400.9017	Camshaft setting strap for VAG	120	



EXHAUST SYSTEM / CATALYSERS





KS TOOLS

Innovation is our mission!

	FROM PAGE
TOOLS FOR EXHAUST SENSORS	392
THREAD REPAIR	393
PLIERS FOR EXHAUST SYSTEMS	394
EXHAUST PIPE SEPARATING AND CUTTING TOOLS	395
EXHAUST PIPE HOOK TOOLS	397
SPECIAL TOOL EGR/PRESSURE SENSOR	397
EXHAUST PRESSURE DETECTOR	397

TOOLS FOR EXHAUST SENSORS

Lambda sensor socket 17,0 mm, long

- 6 point
- Special socket for the assembly and dismantling of Lambda sensors that are difficult to access
- For almost all vehicle types
- Time-saving to work with, even for hard-to-reach Lambda sensors
- Prevents disassembly and assembly of protective shield
- Long and narrowly-opened design
- For professional and damage-free use
- Universal application and highly durable
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Chrome molybdenum





1/2"

	mm	L mm	g
150.2095	17,0	78,0	220

Lambda sensor socket 22.0 mm, long

- 6 point
- Special socket for the assembly and dismantling of Lambda sensors that are difficult to access
- For almost all vehicle types
- Time-saving to work with, even for hard-to-reach Lambda sensors
- Prevents disassembly and assembly of protective shield
- Long and narrowly-opened design
- For professional and damage-free use
- Universal application and highly durable
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Chrome molybdenum





3/8"

	mm	L mm	g
150.2127	22,0	81,0	260

Lambda sensor socket 22.0 mm, long

- 6 point
- Special socket for the assembly and dismantling of Lambda sensors that are difficult to access
- For almost all vehicle types
- Time-saving to work with, even for hard-to-reach Lambda sensors
- Prevents disassembly and assembly of protective shield
- Long and half-opened design
- For professional and damage-free use
- Universal application and highly durable
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Chrome molybdenum





3/8"

	mm	L mm	g
150.2128	22,0	90,0	240

Lambda probe socket for Ford 22.0 mm, long

- 6 point
- Special socket for the assembly and disassembly of Lambda sensors with heat protection that are hard to reach
- Time-saving to work with, even for hard-to-reach Lambda sensors
- Long, thin open and graded design
- For professional and damage-free use
- Suitable for universal use
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- For manual operation
- Matt finish
- Chrome vanadium





1/2"

	mm	L mm	g
150.2120	22,0	110,0	280

Lambda sensor socket 22.0 mm, extra-long

- 6 point
- Special socket for the assembly and dismantling of Lambda sensors that are difficult to access
- For almost all vehicle types
- Time-saving to work with, even for hard-to-reach Lambda sensors
- Prevents disassembly and assembly of protective shield
- Extra-long and half-opened design
- For professional and damage-free use
- Universal application and highly durable
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Chrome molybdenum





1/2"

	mm	L mm	g
150.2101	22,0	150,0	354



Lambda sensor socket 22.0 mm, flat

- 6 point
- Special socket for the assembly and dismantling of Lambda sensors that are difficult to access
- For almost all vehicle types
- Time-saving to work with, even for hard-to-reach Lambda sensors
- Prevents disassembly and assembly of protective shield
- Flat and half-opened design
- For professional and damage-free use
- Universal application and highly durable
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Chrome molybdenum





1/2"

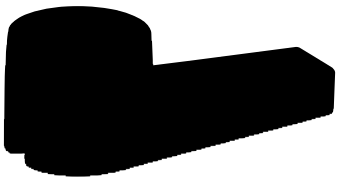
	mm	L mm	g
150.2125	22,0	48,0	170



Lambda sensor socket 22.0 mm, extra flat

- 6 point
- Special socket for the assembly and dismantling of Lambda sensors that are difficult to access
- For almost all vehicle types
- Time-saving to work with, even for hard-to-reach Lambda sensors
- Prevents disassembly and assembly of protective shield
- Extra-flat and half-opened design
- For professional and damage-free use
- Universal application and highly durable
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Chrome molybdenum





3/8"

	mm	L mm	g
150.2126	22,0	31,0	220

Articulated lever Lambda sensor socket 22.0 mm, flat

- Optional 6 and 12 point (duplicate socket)
- Special socket for assembling and dismantling of stuck Lambda sensors that are difficult to access
- For almost all vehicle types
- 180° freely-revolving joint
- Time-saving to work with, even for hard-to-reach Lambda sensors
- Prevents disassembly and assembly of protective shield
- Flat and half-opened design
- For professional and damage-free use
- Universal application and highly durable
- Chrome vanadium





1/2"

	mm	L mm	g	
150.2121	22,0	240,0	540	

Impact lambda sensor hinged wrench 22.0 mm

- 6 point
- Specialist loosening tool for the simple assembly and dismantling of stuck Lambda sensors
- Enables highly-corroded Lambda sensors to be released easily
- Industry standard percussion hammer (10.0 mm holder) creates a strong impact impulse with a high frequency
- The vibration increases the release torque and increases the effectiveness of rust-remover products
- For almost all vehicle types
- Time-saving to work with
- Avoids costs resulting from damaged threads
- Prevents disassembly and assembly of protective shield
- Flat and half-opened design
- For professional and damage-free use
- Universal application and highly durable
- External hexagon drive 30.0 mm
- Chrome molybdenum





1/2"

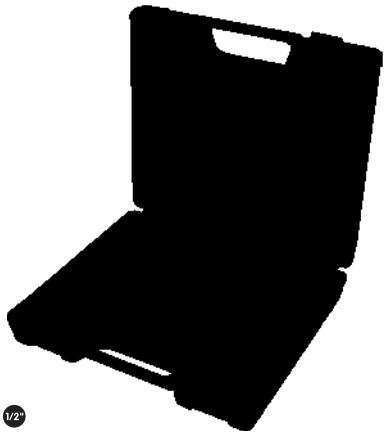
	mm	L mm	g	
150.2113	22,0	200,0	540	



Lambda sensors/temperature switches/injection nozzles and socket set

- For most current vehicle types
- Special socket set for assembling and dismantling Lambda sensors, oil pressure switches, temperature switches and injection nozzles in all installation positions
- Time-saving to work with, even for hard-to-reach sensors
- For professional and damage-free use
- Prevents damage of the fuel return pipe
- Universal application and highly durable
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Chrome molybdenum
- In durable plastic storage case





3/8" 1/2"

			kg	
150.2100	7 pcs	Lambda sensors/temperature switches/injection nozzles and socket set	2,16	

consists of:

		g	
150.2122	3/8" Oil pressure switch socket, 1+1.1/16"	220	
150.2123	Thermal switch socket, 29mm, 90mm, 1/2"	500	
150.2124	Fuel injection socket 12 point, 27mm, 1/2"	220	
150.2125	1/2" Lambda sensor socket, slotted, 6 point, 22 mm	170	
150.2126	Lambda sensor socket, 22mm,flat, 3/8"	220	
150.2127	Lambda sensor socket, 22mm,deep 3/8"	260	
150.2128	Lambda sensor socket, 22mm, extra deep	240	

THREAD REPAIR

Stainless steel repair set M12 x 1.5 for lambda sensors

- Unique assortment for the repair of worn or damaged threads
- Ideal for Lambda sensors
- Simple handling and correct repair
- Provides an entirely firm and gastight seat of the inserts
- Extremely thin walled inserts made from stainless steel
- Includes thread tap and assembly tool
- Fast repair option without costly warehousing of components
- In durable steel storage case



			g	
150.6120	14 pcs	Stainless steel repair set M12 x 1.5 for lambda sensors	456	

consists of:

		g	
150.6104	Mounting tool M12	104	
150.6105	Insertion pin breaker M12	46	
150.6121	Thread insert M12x1,5, 16,5mm, pack of 5	100	
150.6122	Twist drill, M12, Ø 12,4mm	88	
150.6123	Spare threaded tap for M12x1,5 tap adaptor	67	

Stainless steel repair set M12 x 1.0 x 17

- Unique assortment for the repair of worn or damaged threads
- Simple handling and correct repair
- Provides an entirely firm and gastight seat of the inserts
- Extremely thin walled inserts made from stainless steel
- Includes thread tap and assembly tool
- Fast repair option without costly warehousing of components
- In durable steel storage case



			g	
150.6100	14 pcs	Stainless steel repair set M12 x 1.0 x 17	445	

consists of:

		g	
150.6101	Thread insert M12x1,0, 17mm, pack of 5	67	
150.6102	Twist drill, M12, Ø 12,3mm	84	
150.6103	Spare threaded tap for M12x1,0 tap adaptor	69	
150.6104	Mounting tool M12	104	
150.6105	Insertion pin breaker M12	46	

THREADfix repair set M12 x 1.5 for lambda sensors

- Unique assortment for the repair of worn or damaged threads
- Ideal for Lambda sensors
- Simple handling and correct repair
- Provides an entirely firm and gastight seat of the inserts
- Extremely thin walled inserts with rustproofing protection
- Includes thread tap and assembly tool
- Fast repair option without costly warehousing of components
- In durable plastic storage case

M12 x 1.5 x 115 mm



			g	
150.5070	9 pcs	THREADfix repair set M12 x 1.5 for lambda sensors	710	

consists of:

		g	
150.5071	Threaded drill with guide pin,M12x-1,5,L=50mm	33	
150.5072	Threaded drill with guide pin,M14x-1,5,L=50mm	36	
150.5073	Reamer with guide pin f.150.5070, L=50mm	35	
150.5074	Screw f.bushes, l=93mm,M12x-1,5,GL=108mm	235	
150.5076	Threaded bush + collar L=9mm,IG=M12x1.5/AG=M14x1.5, pack of 5	20	

Cleaning tool and repair tool for lambda sensor threads

- For recutting edges and cleaning of damaged outside threads on lambda sensor threads
- Especially short execution
- Ideal for confined spaces
- Special tool steel



		mm	□	L mm	g
150.2129	M18x1,5	21,0	3/8"	50,0	95

THREADfix repair set M18 x 1.5 for lambda sensors

- Unique assortment for the repair of worn or damaged threads
- Ideal for Lambda sensors
- Simple handling and correct repair
- Provides an entirely firm and gastight seat of the inserts
- Extremely thin walled inserts with rustproofing protection
- Includes thread tap and assembly tool
- Fast repair option without costly warehousing of components
- In durable plastic storage case

M18 x 1.5 x 110 mm



			g
150.5090	9 pcs	THREADfix repair set M18 x 1.5 for lambda sensors	760

consists of:

		g
150.5091	Threaded drill with guide pin,M18x-1,5,L=50mm	75
150.5092	Threaded drill with guide pin,M20x-1,5,L=50mm	77
150.5093	Reamer with guide pin f.150.5090, L=50mm	76
150.5094	Screw f.bushes, l=81mm,M18x-1,5,GL=102mm	443
150.5096	Threaded bush + collar L=9mm,IG=M18x1.5/AG=M20x1.5, pack of 5	20



Thread repair set

- For the repair of internal and external threads
- Ideal for drive shafts, oxygen sensors, wheel bolts, shaft ends etc.
- Correct thread repair for damaged or sliced threads
- Suitable for a wide range of applications
- Can be used with a drive handle or socket with ratchet
- In durable plastic storage case





			kg
150.1470	9 pcs	Thread repair set	1,37

consists of:

		g
150.1466	T bar, 8x80mm	30
150.1471	Thread chaser for M14 x 1.5 for male and female threads	150
150.1472	Thread chaser for M16 x 1.5 for male and female threads	80
150.1473	Thread chaser for M18 x 1.5 for male and female threads	90
150.1474	Thread chaser for M20 x 1.5 for male and female threads	120
150.1475	Thread chaser for M22 x 1.5 for male and female threads	150
150.1476	Thread chaser for M24 x 1.5 for male and female threads	170
150.1477	Thread chaser for M27 x 2.0 for male and female threads	180
150.1478	Thread chaser for M28 x 1.5 for male and female threads	200

Thread bottom tap for external thread M4 - M45

- For re-cutting and cleaning damaged outer threads
- No damage of the thread
- Suitable for right and left-handed thread
- steplessly adjustable via knurled screw
- The chaser is well-guided due to the width of the jaw and does not tilt
- Can be used everywhere regardless of the thread length
- Simple handling
- cutting of HSS steel with hardness 55-60





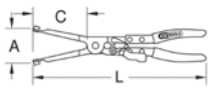
	Thread	Thread	Length mm	Width mm	Replacement blades	g
150.1467	M4 - M45	5/32"- 1.3/4"	77,0	22,0	150.1468	290

PLIERS FOR EXHAUST SYSTEMS

Exhaust clamp pliers

- for mounting and dismounting of reusable exhaust clamps with board
- With PVC dipped handle
- Includes locking mechanism
- With self-opening mechanism
- Plier points-guide sleeve prevents slippage
- 4 locking levels prevent loss of tension when holding
- Chrome molybdenum





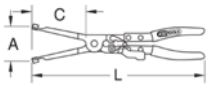


	A mm	C mm	L mm	g
150.1535	0-55	95,0	310,0	430

Exhaust clamp pliers

- For the assembly and dismantling of reusable exhaust clamps
- Includes locking mechanism
- With self-opening mechanism
- Special plier tips prevent slippage
- No loss of tension when stopping, thanks to several locking mechanism stages
- Chrome molybdenum







	A mm	C mm	L mm	g
150.1560	0-50	70,0	310,0	400

Exhaust rubber dismantling tool

- easy and professional disassembly of thick-walled exhaust suspension rubbers
- also for rusty and difficult to access holders
- with self-centring pressure pin
- no injury due to slipping with lever tools
- the undamaged rubber can be reused
- A 25° angle
- For all common vehicle types
- With PVC dipped handle
- Chrome vanadium



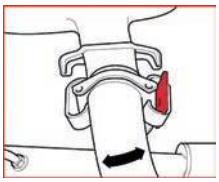


	L mm	g
150.1245	280,0	345

Sound absorber tensioning wedge set for Volkswagen

- For assembling and dismantling steel clamps with and without location bore
- For steel clamps on the swivel of Volkswagen exhaust systems
- Easy handling
- Special tool steel

Application range: all **Volkswagen** diesel engines with steel clamps





			g
115.1360	3 pcs	Sound absorber tensioning wedge set for Volkswagen	750

consists of:

	X		g
115.1366	1	Sound absorber tensioning wedge, large	300
115.1367	2	Sound absorber tensioning wedge, small	150

Spring compressor for VAG exhaust steel clamps

- For the dismantling and assembly of the steel clamps at exhaust ball flange connections
- Chrome vanadium

Application range: VAG Vehicles





	mm	L mm	g
150.1540	17,0	145,0	440

Spring compressor for VAG exhaust steel clamps, long execution

- Especially for T4 with 5 cylinder diesel engines
- For the assembly and dismantling of the steel clamps at exhaust ball flange connections
- Extra-long for easily reaching steel clamps via the gearbox bearing
- Very time-saving, unlike other methods
- Very safe; the steel clamps will not spring away
- Easy handling
- Special tool steel

Application range: Volkswagen, **Audi**, **Seat**, **Škoda**, particularly **Volkswagen** Transporter T4







	L mm	kg
500.8220	790,0	2,00

EXHAUST PIPE SEPARATING AND CUTTING TOOLS

Exhaust pipe former

- Can be used with the partial replacement of the exhaust system to bring deformed exhaust pipe ends into shape
- Spare part can then be easily inserted into the old part or pushed over the old part
- Pipe ends are formed circular again, which ensures a good sealing of the spare part with the old part.





	Ø mm	L mm	g
150.1520	28,0-44,0	130,0	390
150.1525	38,0-62,0	160,0	720
150.1530	54,0-87,0	215,0	1510

Exhaust pipe separating tool

- For separated inserted, tight fitting exhaust pipes
- Broad pipe clamping jaws (40 mm) of solid cast steel
- Ribbed inner surfaces - secure attachment to pipe outer wall
- In durable plastic storage case
- 6 point drive





3/8"

Technical data:

Ø:	35-56 mm
Gripping width max:	120 mm
Threaded spindles:	M12x1,75
External hexagon drive in mm:	17 mm

			kg
150.1545	8 pcs	Exhaust pipe separating tool	4,91

consists of:

		g
150.1546	Flange puller	1772
150.1547	Flange holder	1825
150.1548	Spindle, M10 x 185 mm	276
150.1549	Reducing adaptor set, 4 pcs	280

Exhaust chain pipe cutter

- Small working angle through forward and backward movements
- Plastic coated handles
- Easy to operate
- Special tool steel





	Ø mm	Chain length	Replacement chain	g
150.1500	19,0-83,0	330 mm	150.1501	600

Exhaust chain pipe cutter for stainless steel pipes

- For stainless steel (Inox) of exhaust pipes
- Small working angle through forward and backward movements
- Plastic coated handles
- Easy to operate
- Special tool steel





	Ø mm	Chain length	Replacement chain	g
150.1505	19,0-83,0	330 mm	150.1502	600

Grip chain pipe cutter

- With the possibility to adjust the tension through wing nut
- Small working angle through forward and backward movements
- Easy to operate
- Special tool steel





	Ø mm	Chain length	Replacement chain	g
150.1510	19,0-83,0	330 mm	150.1501	800

Stainless Steel Grip Chain Tube Cutter

- For stainless steel (Inox) of pipes
- With the possibility to adjust the tension through wing nut
- Small working angle through forward and backward movements
- Easy to operate
- Special tool steel





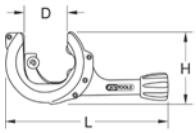
	Ø mm	Chain length	Replacement chain	g
150.1515	19,0-83,0	330 mm	150.1502	800



Ratchet pipe cutter

- for the fast and problem free cutting off of pipes with 2 support rolls and 3-handle ratchet mechanism
- very good parallel cutting due to the width-accurate cutting is guaranteed
- Cutting depth max. 3 mm
- V²A cutter can be retrofitted
- Ideal for confined spaces
- Robust ratchet mechanism
- With large knurled knob
- Plastic housing
- Ratchet mechanism from special steel







	D mm	H mm	L mm	Metal	V²A	Plastic	kg
104.5050	28,0 - 67,0	110,0	250,0	104.5052	104.5054	104.5051	1,03

SlimPOWER mini-pneumatic long-disc cutter

- Air exhaust through the handle rear end
- For cutting wheels up to Ø 75.0 x 1.35 x 9.56 mm
- Ideal for loosening worn down and/or rusted connections
- Fixed sparkguard
- For working in inaccessible places
- Long service life
- Secure operation lever with locking device
- Stepless speed regulation
- Vibration dampened
- Very compact construction
- Includes 1/4" coupling connector
- Robust housing







Technical data:

Tool holder:	9,6 mm
Capacity:	220 Watt
No load current:	18000 r.p.m.
Vibration acceleration:	< 2,8 m/s²
Noise performance level:	98,7 dbA
Noise pressure level:	87,7 dbA
Air consumption:	283 l/min
Operating pressure:	max. 6,3 bar (90 psi)
Min. tube diameter:	3/8" - 10 mm
Connection thread:	1/4"NPT

	B mm	L mm	g
515.5555	50,0	230,0	500



SlimPOWER mini-pneumatic disc cutter, long

- Air exhaust through the handle rear end
- For cutting wheels up to Ø 75.0 x 1.35 x 9.56 mm
- Ideal for loosening worn down and/or rusted connections
- Fixed sparkguard
- For working in inaccessible places
- Long service life
- Secure operation lever with locking device
- Stepless speed regulation
- Vibration dampened
- Very compact construction
- Includes 1/4" coupling connector
- Robust housing







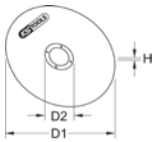
Technical data:

Tool holder:	9,6 mm
Capacity:	220 Watt
No load current:	18000 r.p.m.
Vibration acceleration:	< 3,2 m/s²
Noise performance level:	98,4 dbA
Noise pressure level:	87,4 dbA
Air consumption:	283 l/min
Operating pressure:	max. 6,3 bar (90 psi)
Min. tube diameter:	3/8" - 10 mm
Connection thread:	1/4"NPT

	B mm	L mm	g
515.5560	50,0	275,0	700

High performances thin cutting disk

- Exact and clean cut
- No deburring necessary
- Very short cutting times
- Machine load reduced
- Inox stainless steel





	RPM max	D1 mm	D2 mm	H mm	Content	g
515.5057	20100	75,0	10	1,5	50	710

Pneumatic short disc cutter

- Air exhaust through the handle rear end
- With practical clockwise and anticlockwise switch
- For cut-off wheels up to Ø 100 x 1.0 x 10mm
- Ideal for loosening worn down and/or rusted connections
- Adjustable sparkguard
- For working in inaccessible places
- Long service life
- Secure operation lever with locking device
- Stepless speed regulation
- Number of revolutions adjustable through regulation wheel
- Vibration dampened
- Cold insulated handle
- Includes 1/4" coupling connector
- Ultra light robust housing special plastic







Technical data:

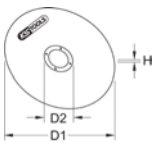
No load current:	15000 r.p.m.
Vibration acceleration:	< 5,8 m/s²
Noise performance level:	104,8 dbA
Noise pressure level:	93,8 dbA
Air consumption:	350 l/min
Operating pressure:	max. 6,3 bar (90 psi)
Tool holder:	6,3 mm
Min. tube diameter:	3/8" - 10 mm
Connection thread:	1/4"NPT

	B mm	L mm	Replacement cut off wheels	kg
515.5475	60,0	345,0	337.2010	1,41

High performances thin cutting disk

- Exact and clean cut
- No deburring necessary
- Very short cutting times
- Machine load reduced
- Inox stainless steel

Ideal for use in very thin materials until 2.5 mm, tool steel, sheet metal, thin walled pipes and profiles all type suited for locksmiths, car body building, sanitary and heating fitting, plumbing, sheet metal processing, carpentry, joinery, roofing, metal processing and all motor vehicles businesses.





	RPM max	D1 mm	D2 mm	H mm	Content	kg
337.2010	15250	100,0	16,0	1,6	25	1,20

Pneumatic chisel hammer

- With non slip soft grip handle
- Air exhaust through the handle
- Ergonomic designed handle
- Universal application for work on exhaust systems
- With stepless impact regulation
- Vibration dampened
- Cold insulated handle
- Ultra light housing from two component plastic



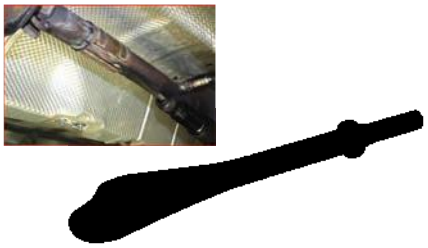
Technical data:

Chisel holder:	10,2 mm
Number of blows:	2200 strokes/min
Vibration acceleration:	< 11,55 m/s²
Noise performance level:	100 dbA
Noise pressure level:	100 dbA
Air consumption:	114 l/min
Operating pressure:	max. 6,3 bar (90 psi)
Min. tube diameter:	3/8"
Connection thread:	1/4"NPT

	L mm	kg	
515.3881	292,0	2,17	

Vibro-Impact exhaust chisel

- Suitable for use with industry-standard percussion hammers (10.0 mm holder)
- Universal application for work on exhaust systems
- Specially designed sounds enable the exhaust pipe (inner or outer) to be replaced to be correctly separated from the remaining one, without damaging it.
- Rotatable
- Extension of the working range
- Exploits the vibration and impact impulses of the vibro-impact air pressure hammer
- Robust chisel forged out of one piece
- Special tool steel



	Suitable for	Width mm	Length mm	g	
515.3962	Internal pipe	23,0	215,0	190	
515.3963	External pipe	23,0	215,0	190	

EXHAUST PIPE HOOK TOOLS

Specially exhaust hook tool for exhaust rubber mountings

- T handle with plastic cover
- Hook has a 10° angle
- For the dismantling and assembly of exhaust rubber stop ring
- For vehicles with rubber ring mountings
- Chrome vanadium

Application range: Volkswagen, **Opel** etc.



	Form	L mm	g	
150.1241	90°	200,0	80	

Specially exhaust hook tool for exhaust profile rubber mountings

- T handle with plastic cover
- Hook has a 100° angle
- For the dismantling and assembly of exhaust rubber stop ring
- For vehicles with profile rubber mountings
- Chrome vanadium

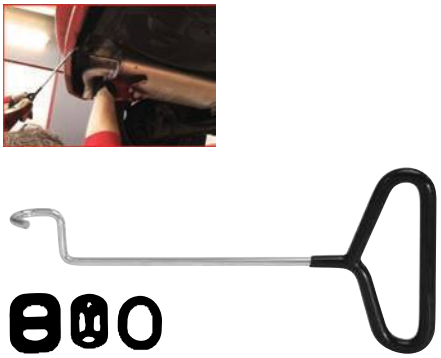
Application range: Ford, **BMW** etc.



	Form	L mm	g	
150.1242	100°	200,0	80	

Specially exhaust hook tool for exhaust rubbers

- T handle with plastic cover
- For the dismantling and assembly of exhaust rubber stop ring
- For all types of exhaust rubbers
- Grasps two rings and presses this towards the top
- Chrome vanadium



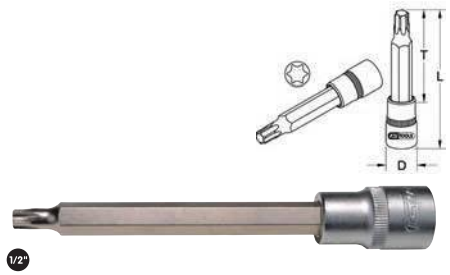
	L mm	g	
150.1240	200,0	230	

SPECIAL TOOL EGR/PRESSURE SENSOR

Exhaust regulation valve socket for Opel

- For assembling and dismantling the EGR valve on the linear exhaust return system
- Extra long execution
- with press-fitted nickel-plated bit
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- For manual operation
- Matt finish
- Chrome vanadium

Application range: Opel 1.4/1.8 16V DOHC engines



1/2"

	D mm	L mm	T mm	g	
911.1938	T45	22,0	140,0	72,0	125

Cleaning tool for Mercedes exhaust return systems casing

- Ideal for cost-efficient cleaning of drilled holes in the exhaust gas back pressure sensor
- Custom-fit drill with drilling guide
- Includes spacer for further engines
- Makes it possible to repair the exhaust return system casing, instead of replacing it
- Avoids considerable work assembling and dismantling the exhaust return system casing
- Enables the complete and damage-free removal of burnt-on deposits
- Special tool steel

Application range: Mercedes Common-Rail engines OM 651, 646 etc.





		L mm	Ø mm	g	
150.1522	4 pcs	120,0	24,0	140	

consists of:

		g	
150.1524	Special drill, Ø 4 mm	5	
150.1528	Drilling guide, inner diameter 5 mm	60	
150.1529	Spacer sleeve, 28 mm	8	
150.1531	Drive head for 150.1522, inner diameter 4 mm	43	

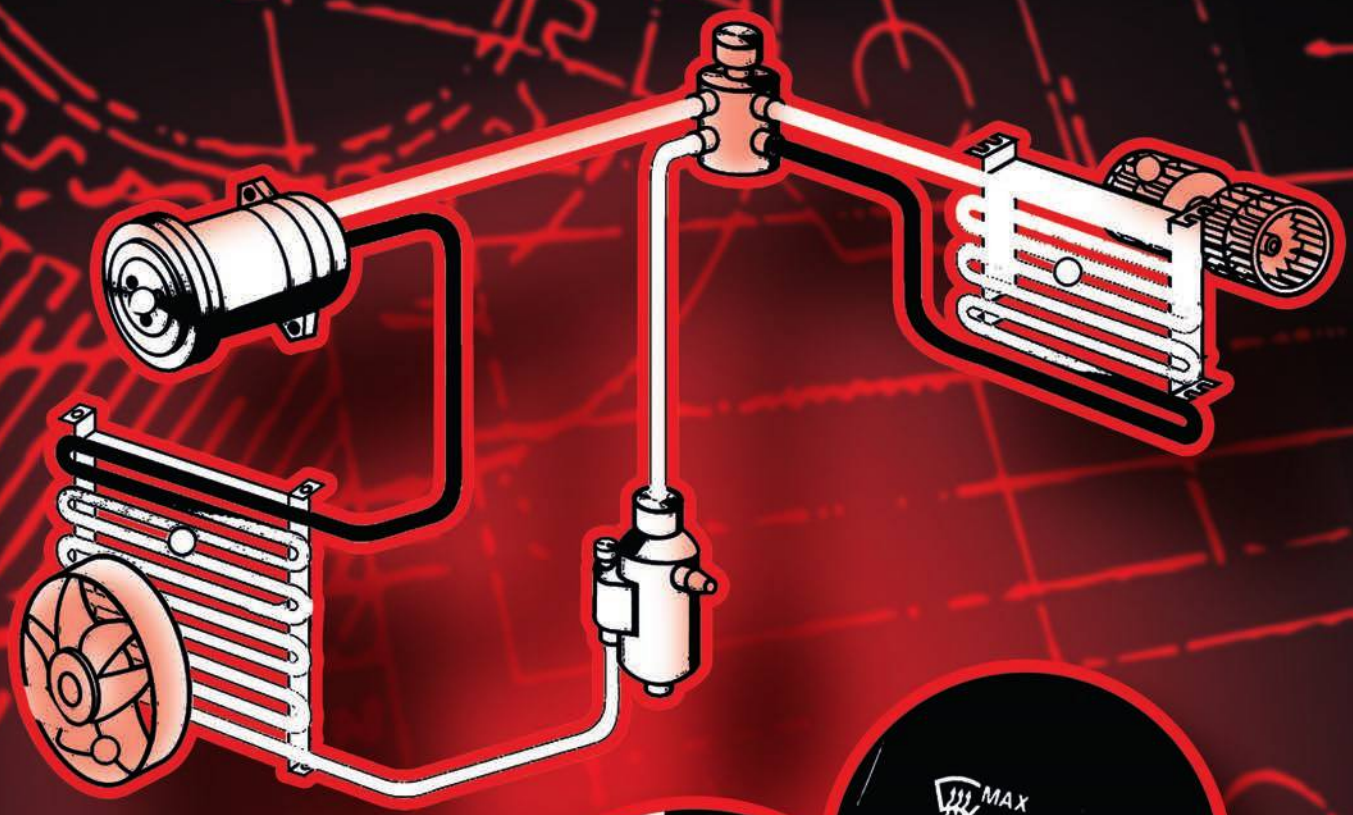
EXHAUST PRESSURE DETECTOR

Exhaust pressure detector -1 to +3 bar

- Quick and easy catalyst diagnosis
- Used in place of Lambda sensors
- Precise testing of exhaust pressure
- Professional troubleshooting
- Universal usage
- In durable plastic storage case



		Manometer	tube length mm	kg	
150.1523	M18x1,5	Ø 63 mm	3000	1,90	







KS TOOLS®

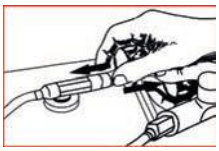
Innovation is our mission!

	FROM PAGE
WIRE CONNECTOR UNLOCKING DEVICE	400
THERMOMETER	401
UV LEAK DETECTION LAMPS	402
LEAK DETECTION DEVICES	402
DIAGNOSTIC KITS	403
WASHERS	405
WASHER HOOK TOOLS	405
CLEANING DEVICES	406
BOTTLE TROLLEY	406

WIRE CONNECTOR UNLOCKING DEVICE

Pipe connection release clip set for CLIC spring closing pipe coupling

- For the assembly and disassembly of hard to open CLIC spring closure pipe coupling for fuel, air-conditioning, air and hydraulic pipes
- No damage to the compression coupling, fuel pipes and fuel hoses
- Quick and easy separation of the pipes
- Ideal for use with passenger cars, vans and saloon cars
- Suitable for metric couplings
- Special plastic

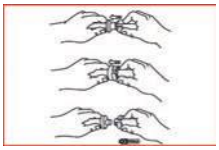




		Ø mm	g	
115.1095	6 pcs	6 - 8 - 10 - 12 - 15 - 16	60	

Pipe connection release clip set for CLIC spring closing pipe coupling

- For the assembly and disassembly of hard to open CLIC spring closure pipe coupling for fuel, air-conditioning, air and hydraulic pipes
- No damage to the compression coupling, fuel pipes and fuel hoses
- Quick and easy separation of the pipes
- Ideally suited to passenger cars, transporters, MPVs, commercial vehicles, tractors, agricultural and construction machinery
- For almost all pipe connections on European, Asian and American vehicle types
- Suitable for metric and imperial couplings
- Special plastic





		Ø mm	g	
115.1089	7 pcs	6,35 (1/4") - 7,9 (5/16") - 9,5 (3/8") - 12,7 (1/2") - 15,9 (5/8") - 19,0 (3/4") - 22,2 (7/8")	90	

Disassembly tool set for CLIC spring closure pipe coupling

- For the disassembly of hard to open CLIC spring closure pipe coupling for fuel, air-conditioning, air and hydraulic pipes
- No damage to the compression coupling, fuel pipes and fuel hoses
- Quick and easy separation of the pipes
- Ideally suited to passenger cars, transporters, MPVs, commercial vehicles, tractors, agricultural and construction machinery
- For almost all pipe connections on European, Asian and American vehicle types
- Suitable for metric and imperial couplings
- Aluminium





		Ø mm	g	
115.1285	7 pcs	7,9 (5/16") - 9,5 (3/8") - 12,7 (1/2") - 15,9 (5/8") - 19,0 (3/4") - 22,2 (7/8")	250	

consists of:

		g	
115.1274	Unlocking ring, gold, 5/16"	35	
115.1275	Unlocking ring, blue, 3/8"	36	
115.1276	Unlocking ring, yellow, 1/2"	36	
115.1277	Unlocking ring, green, 5/8"	41	
115.1278	Unlocking ring, black, 3/4"	42	
115.1279	Unlocking ring, red, 7/8"	43	
115.1282	Replacement rubber ring set, 6 pcs	1	





MASTER pipe connector release clip set for CLIC spring clamp pipe coupling

- For the assembly and disassembly of hard to open CLIC spring closure pipe coupling for fuel, air-conditioning, air and hydraulic pipes
- No damage to the compression coupling, fuel pipes and fuel hoses
- Quick and easy separation of the fuel pipes
- Ideally suited to passenger cars, transporters, MPVs, commercial vehicles, tractors, agricultural and construction machinery
- For almost all pipe connections on European, Asian and American vehicle types
- Suitable for metric and imperial couplings
- Special plastic

Application range: Air-conditioning, fuel and air lines as well as hydraulics lines





			kg	
115.1260	22 pcs	MASTER pipe connector release clip set for CLIC spring clamp pipe coupling	1,00	

consists of:

		g	
115.1261	Unlocking clip white, 1/4"	1	
115.1262	Unlocking clip white, 5/16"	1	
115.1263	Unlocking clip white, 3/8"	1	
115.1264	Unlocking clip white, 1/2"	5	
115.1265	Unlocking clip white, 5/8"	7	
115.1266	Unlocking clip white, 3/4"	8	
115.1267	Unlocking clip white, 7/8"	9	
115.1268	Unlocking clip, open, 5/16"	37	
115.1269	Barrel unlocking with spring, red, 3/8"	12	
115.1270	Barrel unlocking with spring, blue, 1/2"	13	
115.1271	Barrel unlocking + spring, black, 5/8"	12	
115.1272	Barrel unlocking + spring, white, 3/4"	12	
115.1273	Double unlocking ring, 5/16"x3/8"	54	
115.1274	Unlocking ring, gold, 5/16"	35	
115.1275	Unlocking ring, blue, 3/8"	36	
115.1276	Unlocking ring, yellow, 1/2"	36	
115.1277	Unlocking ring, green, 5/8"	41	
115.1278	Unlocking ring, black, 3/4"	42	
115.1279	Unlocking ring, red, 7/8"	43	
115.1280	Lever, release open, 5/16"	84	
115.1281	Fork plug, unlocking, black	15	
115.1282	Replacement rubber ring set, 6 pcs	1	

THERMOMETER

Rod thermometer

- Controls temperature of air streams through air channels
- Controls the water temperature
- With long and narrow measuring instruments
- Scale with °C and °F measurements





	Length mm	Working range °C	Working range °F	g
150.1963	210,0	0 - 200	0 - 400	27



Digital rod thermometer

- Controls temperature of air streams through air channels
- Controls the water temperature
- With long, narrow measuring instruments
- Good readability
- Includes 9V block battery
- Includes hold function
- Includes LCD display





	Length mm	Working range °C	g
150.1968	125,5	-50 - +150	145

Infrared thermometer

- Laser pistol for non contact temperature measurement
- Ideally suited for the automotive sector, industrial, and construction usage Chemical and foodsuffs industry
- Laser measuring beam with a red measuring point
- Illuminating Display
- LCD Digital display
- Automatic swiching off
- Includes 9V block battery
- Sturdy plastic housing

Application range: In turning motors, difficult to access places, fluids, under current line directions, in heating appliances, gas and, air-conditioning, coolent systems, brake discs aggressive chemicals and groceries





Technical data:

Switchable:	°C / °F
Working range:	-20°C - 500°C
Emission factor:	adjust to 0.95
Power output max:	1mW
Power requirement:	9V block battery

		g
150.3040	Infrared thermometer	135



Thermal imaging camera with UV light

- Compact thermal imaging camera for applications in construction, electrical engineering, mechanical engineering, automotive industry, etc.
- Reliably measure temperature and store images and data for reports
- Accurate readings can be taken from safer distances
- Colour display for the safe evaluation and analysis of temperature conditions
- With a laser pointer for precise positioning
- Three selectable colour palettes for image display: hot iron, rainbow and grey
- Selectable measuring range between Celsius °C or Fahrenheit °F
- Integrated LED lights support working in dark areas
- The integrated UV lamps are ideal for the detection of leaks in cooling or air conditioning systems
- Adjustable automatic switch-off
- Date and time can be set for accurate data acquisition
- Integrated micro USB interface
- On and off switch is also used to protect the camera
- Includes 3xAA batteries
- In durable plastic storage case
- for replacing the silent bearing from the longitudinal control arm and cross control arm on the front and rear axles

Advantages:
- Measure temperatures more accurately
- Result report with integrated images
- Quick fault diagnosis
- Safety and greater distance for the employee

Contents:
- Basic unit
- 2 GB micro SD memory cards
- Batteries 3xAA

Technical data:
- Accuracy: ±1.5% or 1.5°C
- Measurement range: -30°C to 650°C (-22°F to 1202°F)
- Emissivity: 4 pre-set values, user adjustments between ε 0.10 and 1.00 are possible
- Distance-to-spot ratio (D:S): 30:1
- Measurement value resolution: 0.1°C/°F
- Response time: >125 ms
- Spectral range: 8 to 14 µmv
- Laser: a laser cross-hair encircles the area being measured
- Detector: IR-EX™ technology (integrated IR array sensor with CMOS sensor)
- Screen resolution (H x W): 16,384 pixels (128 x 128)
- Field of view (H x W): 30.0°
- Upper range: 650°C
- Thermal sensitivity: 150 mK
- Screen refresh rate: <9 Hz
- Colour range: 3 (iron, rainbow and grey)
- Picture storage format: image in bitmap format (BMP) with temperature and emissivity
- Screen: 1.77" TFT colour screen (pixel resolution 128 x 160)
- Battery: 3 x AA
- Battery life with laser and light: 12 hours
- Memory: 2 GB micro SD card
- Working temperature: 0°C to 50°C (31°F to 122°F)





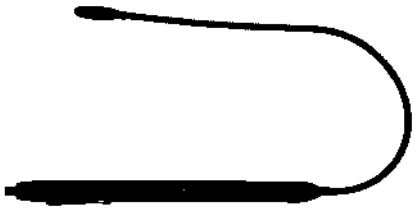
	Length mm	Width mm	Height mm	g
150.3220	185,0	54,0	104,0	300

UV LEAK DETECTION LAMPS

Flexible UV inspection lamp

- Ideal for very long network independent working
- LED UV lamp
- Flexible shaft
- Localizes leaks in air conditioning systems
- Clip for the breast pocket
- Approx. 60 hours lamp duration
- Impact proof housing





	Ø mm	Length mm	Spare bulb	g	
550.1165	7,5	450,0	550.1167	150	

Cordless UV leak detection light set

- Wireless design
- LED UV lamp
- Extremely high light power
- Ideal for locating leaks in air conditioning pipes
- Great for detecting leaks at close range
- Includes UV glasses
- Compatible with all industry-standard leak detection additives
- Includes 3 x AAA batteries
- Impact proof housing





			g	
550.1190	2 pcs	Cordless UV leak detection light set	400	

consists of:

		g	
550.1191	Battery-powered UV leak detection lamp	150	
550.1182	UV glasses	42	

UV leak detection light set

- UV lamp
- Extremely high light power
- Ideal for locating leaks in air conditioning pipes
- Great for detecting leaks at close range
- Revolving head
- Self-powering by attaching crocodile clips to a 12V battery
- With long cable for flexible use
- Includes UV glasses
- Compatible with all industry-standard leak detection additives
- Impact proof housing





			g	
550.1180	2 pcs	UV leak detection light set	460	

consists of:

		g	
550.1181	UV leak detection lamp	360	
550.1182	UV glasses	42	

LEAK DETECTION DEVICES

Air condition leak detector

- Ideal for locating leaks in air conditioning pipes
- Detects cooling agent concentration in the surrounding air
- Reacts to R134a, R12, R11, R500, R503, R22, R123, R124, R502, R404a, R125, AZ-50, HP62 and MP39
- No cross-sensitivity in the presence of carrier gas and air movement
- With flexible stainless steel tube neck (355 mm) for places that are hard to access
- Visual and aural signal upon detection of a leak
- Adjustable sensitivity
- Leak detection rate up to 5 g/year
- Approximately 10 seconds waiting time
- Service life of the sensor is approximately 100 hours
- Impact proof housing
- Includes 2 x D batteries
- Includes replacement sensor





	Length mm	Height mm	Width mm	replacement sensor	g	
550.1192	229,0	65,0	65,0	550.1194	560	

Leak detector for flammable gases

- ideal for locating forming gas during leak detection in air conditioning systems
- detects flammable and non-flammable gases such as butane, chlorine, petrol, ethanol, hydrogen etc.
- with flexible probe neck (393 mm) for hard-to-reach places
- Visual and aural signal upon detection of a leak
- Adjustable sensitivity
- maximum sensitivity 50 - 1000 ppm
- approx. 60 seconds lead time
- Service life of the sensor is approx. 2000 hours
- Impact proof housing
- 2 x C batteries included
- including leak test vial
- In durable plastic storage case



	Length mm	Height mm	Width mm	replacement sensor		g	
550.1454	270,0	50,0	65,0	550.1458	550.1459	495	

Forming gas leak detection kit

- ideally suited for fast and reliable detection of leaks in the refrigerant circuit
- the forming gas escapes at the leaks and can be located with an electronic leak detector
- environmentally friendly as it is non-toxic, non-corrosive and non-combustible
- consists of 95% nitrogen and 5% hydrogen
- Combined leak detection and pressure tightness test with realistic pressure conditions in the system
- the forming gas binds any moisture residues present in the system
- including pressure reducer, pressure cylinder, pressure gauge, hose

Application range: Air conditioners with R134A



1/4"

			kg	
550.1410	8 pcs	Forming gas leak detection kit	4,47	

consists of:

		kg	
550.1421	Pressure cylinder	1,39	
550.1422	Pressure reducer for pressure cylinder	0,89	
550.1423	Pressure gauge with shut-off valve	0,38	
550.1424	Hose, 1.5 m	0,17	
550.1426	Adapter for pressure reducer	0,11	
550.1427	Service connection, red	0,13	
550.1428	Adapter for pressure gauge	0,11	

DIAGNOSTIC KITS

A/C Diagnostic sight glass

- Ideal for rapid diagnosis and the almost complete replacement of the a/c oil
- Simple handling
- Easy adaption of a/c diagnostic tool
- Built-in filter keeps debris back in the glass
- Diagnosis at rest , visually check for any water , debris and quality of a/c oil
- Emptying the greenhouse gas on the low pressure side
- In durable plastic storage case





			kg	
550.1195	3 pcs	A/C Diagnostic sight glass	3,00	

consists of:

		kg	
550.1196	Main unit with transparent sight glass	1,10	
550.1197	Low pressure hose	0,56	
550.1198	High pressure hose	0,27	

4in1 Air conditioning ratchet spanner, reversing

- For 3/16", 1/4", 5/16" + 3/8"
- Clockwise and anticlockwise switch
- Special tool steel





	H1 mm	H2 mm	L mm	g	
130.0122	22,0	22,0	140,0	120	

5 in 1 Air conditioning ratchet, reversing

- For square 1/4" + 5/16" on the ratchet head with reversing switch
- For square 8.5, 3/8" + 13.0 mm on the ratchet handle
- For use with stop valves
- Reversible
- Chrome vanadium





	H1 mm	H2 mm	L mm	g	
130.0222	30,0	25,0	157,0	120	

Air conditioning socket set

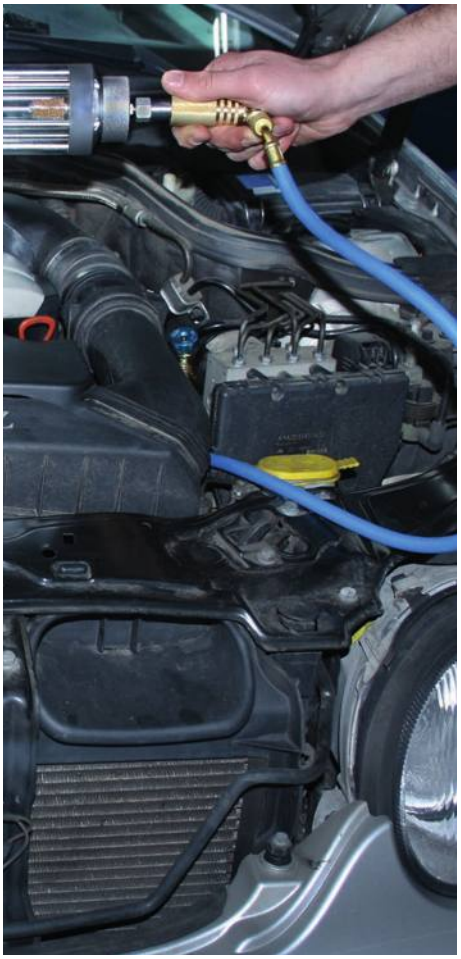
- Metric sizes
- Suitable for all current lock valves
- Ideal set of compilation for air conditioning
- Size 1/4" + 5/16" at ratchet head
- Siye 8.5 + 13.0 mm, 3/8" at ratchet handle
- Matt finish
- Chrome vanadium
- In durable plastic storage case



1/4"

			g	
130.0300	19 pcs	Air conditioning socket set	865	
1 x		1/4" - 5/16" - 8,5 - 3/8" - 13 mm		
10 x		1/4": 3,4 - 4 - 4,5 - 5 - 6 - 7 - 8 - 9 - 10 mm - 1/4"		
3 x		1/4": 7 - 8 - 10 mm		
1 x		1/4"		
1 x		1/4"		
1 x		125 mm		
1 x		150 mm		
1 x				





Air condition service socket set

- 8-point
- Ideally suited for assembly of 8-edge service valves (R 134a) for low and high pressure
- Can be used for factory-fitted air conditioning systems
- Extra-thin
- Internal square drive to DIN 3120 / ISO 1174
- For manual operation
- Mirror polished
- Chrome vanadium





1/4"

			g	
550.1170	2 pcs	Air condition service socket set	116	

consists of:

		g	
550.1171	Air conditioning system low pressure valve socket, 12 mm	50	
550.1172	Air conditioning system high pressure valve socket, 15 mm	67	

Air conditions valve bit socket set

- Ideally suited for the assembly and dismantling of the throttle valve for low pressure and high pressure
- Can be used for factory-fitted air conditioning systems
- Extra-thin
- Internal square drive to DIN 3120 / ISO 1174
- For manual operation
- Phosphate finish
- Chrome molybdenum





			g
550.1175	2 pcs	Air conditions valve bit socket set	46

consists of:

		g
550.1176	Throttle valve bit socket, 2.2 mm	22
550.1177	Throttle valve bit socket, 3.2 mm	23

Bit socket for fixed restrictor for air conditioning systems

- ideally suited for mounting and dismounting the fixed restrictor
- for low pressure and high pressure
- Can be used for factory-fitted air conditioning systems
- Extra-thin
- with external hexagon drive to DIN 3126 / ISO 1173 - E 6.3 for manual operation
- Phosphate finish
- Chrome molybdenum



	Length mm	g
550.1109	65,0	16

Torque valve screwdriver 0,25 Ncm, long

- Ideal for short or long rubber sealing valve usage (VG5)
- Prevents the over tightening and damage of the rubber seal
- When torques is acheived.skips and can also be held audabaly
- Also suitable for use as a socket cap driver
- One component handle





	Ncm	Length mm	g
150.2029	0,25	120,0	50

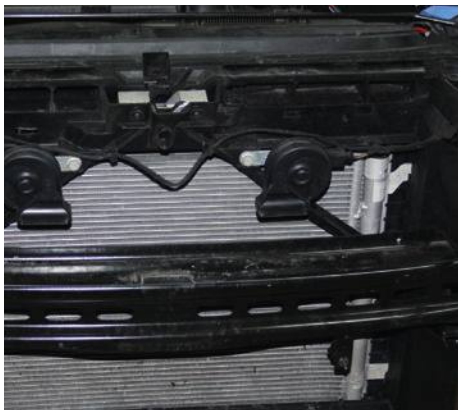
Slide hammer puller for dryer cores

- Ideally suited for the removal of sealing plugs for dryer inserts
- Necessary tool for the new condenser constructions
- The removal of the dryer is impossible due to strong oxidation
- The complete capacitor must be dismantled.
- Universally applicable for plugs with 5.0mm internal thread
- Enormous time and cost saving
- Two component handle
- Special tool steel





	Length mm	Ø mm	g
550.1178	370,0	5,0	500



Bit socket set for tamperproof five star screws

- Five star, tamperproof
- For the assembly and disassembly of safety bolts on temperature sensors and air volume measuring instruments
- For modern diesel injection systems (pump-nozzle device, pump and electricity nozzle, common rail), e.g. Bosch injection systems
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- For manual operation
- Matt finish
- Chrome vanadium
- Includes storage rail

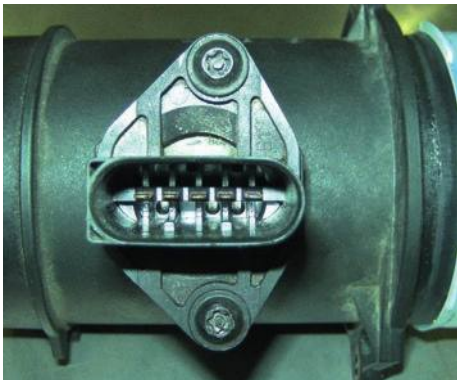
Application range: Control units, alternator, air flow meter, exterior mirrors, plug-in pumps for pump line nozzle system (also for **Mercedes** Atego and Actros), door lock fastening screws for **Volkswagen**, **Audi**, **Ford**, **Mercedes**, **Rover**, **Seat**, **Škoda**, **Volvo** etc.





1/4"

				g
911.1470	7 pcs	TS10 - TS15 - TS20 - TS25 - TS27 - TS30 - TS40	160	



Bit set for tamperproof five star screws

- Five star, tamperproof
- For the assembly and disassembly of safety bolts on temperature sensors and air volume measuring instruments
- For modern diesel injection systems (pump-nozzle device, pump and electricity nozzle, common rail), e.g. Bosch injection systems
- External hexagon drive to DIN 3126 / ISO 1173 - E 6,3
- Can be used by hand or with an electric screwdriver
- 1/4" Bit adaptor socket
- Ideally suited for fittings in trade and industry
- Nickel plated
- Special tool steel

Application range: Control devices, alternator, air quantity meter, exterior mirror, insertion pumps for pump-line-nozzle system, door lock fastening screw for **Volkswagen**, **Audi**, **Ford**, **Mercedes**, **Rover**, **Seat**, **Škoda**, **Volvo** etc.



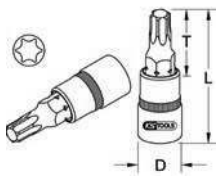


1/4"

			g
911.1480	8 pcs	TS10 - TS15 - TS20 - TS25 - TS27 - TS30 - TS40	50

Special socket for expansion valves

- Ideally suited for the assembly and dismantling of expansion valves
- Can be used for factory-fitted air conditioning systems
- Torx
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- with press-fitted nickel-plated bit
- For manual operation
- Matt finish
- Chrome vanadium





3/8"

		D mm	L mm	T mm	g
911.3885	T45	18,0	50,0	24,0	50

Five star profile tamperproof key wrench set

- Long execution
- Bore hole at the short and long end
- Continuous hardened
- Matt chrome
- Special tool steel

Application range: Control devices, alternator, air quantity meter, exterior mirror, insertion pumps for pump-line-nozzle system, door lock fastening screw for **Volkswagen, Audi, Ford, Mercedes, Rover, Seat, Škoda, Volvo** etc.



151.2470	9 pcs	TS10 - TS15 - TS20 - TS25 - TS27 - TS30 - TS40 - TS45 - TS50	330

WASHERS

O-rings assortment for HNBR air-conditioning

- In accordance with DIN 3771
- Made from HNBR: Specially for use on air conditioning lines
- In plastic storage case



970.0260	225 pcs	O-rings assortment for HNBR air-conditioning	120

20 x	3,0x1,0 mm / DIN 3771
20 x	4,0x1,0 mm / DIN 3771
20 x	4,5x2,0 mm / DIN 3771
20 x	5,0x2,0 mm / DIN 3771
20 x	6,0x2,0 mm / DIN 3771
20 x	6,0x2,5 mm / DIN 3771
20 x	6,0x3,0 mm / DIN 3771
20 x	7,0x2,0 mm / DIN 3771
20 x	8,0x2,0 mm / DIN 3771
5 x	9,0x2,0 mm / DIN 3771
5 x	10,0x2,0 mm / DIN 3771
5 x	12,0x3,0 mm / DIN 3771
5 x	13,0x3,0 mm / DIN 3771
5 x	14,0x2,5 mm / DIN 3771
5 x	17,0x2,5 mm / DIN 3771
5 x	18,0x4,0 mm / DIN 3771
5 x	20,0x2,0 mm / DIN 3771
5 x	22,0x2,0 mm / DIN 3771

O-rings assortment for HNBR air conditioning

- Made from HNBR: Specially for use in air conditioning lines
- In plastic storage case



970.0340	270 pcs	O-rings assortment for HNBR air conditioning	150

20 x	5,29x1,78 mm
20 x	6,07x1,78 mm
20 x	6,80x1,90 mm
20 x	7,65x1,78 mm
40 x	7,80x1,90 mm
20 x	8,80x1,90 mm
20 x	10,00x2,00 mm
15 x	10,70x2,62 mm
15 x	11,00x2,00 mm
15 x	11,00x1,78 mm
15 x	12,90x2,00 mm
10 x	13,90x1,78 mm
10 x	14,00x2,00 mm
10 x	17,00x1,78 mm
10 x	17,00x2,00 mm
10 x	17,00x3,53 mm

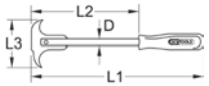


WASHER HOOK TOOLS

Gasket ring dismantling tool

- sickle-shaped
- For the removal of washers
- Long durability through hardened leverage
- Universal usage
- One component handle
- Burnished
- Chrome vanadium







	L1 mm	L2 mm	L3 mm	D mm		
550.1060	300,0	195,0	85,0	12,0	380	

Hook tool set

- Ideal for removing and use of O rings and seals
- Special tool steel



550.1040	2 pcs	Hook tool set	30

consists of:

550.1041	Hook, 90° short, 180° short bent	11
550.1042	Hook, 45° long, 90° long	11

Magnet and hook tool set

- Ideal for removing and use of O rings and seals
- With telescopic magnet attachment and replaceable hook
- Storage compartment in the handle for the various attachments
- Special tool steel





550.1080	6 pcs	Magnet and hook tool set	70

consists of:

		g	
550.1081	Basic unit	35	
550.1082	Telescopic magnet attachment, 90-390 mm	13	
550.1083	Hook attachment, straight, 75 mm	5	
550.1084	Hook attachment, 90°, 75 mm	5	
550.1085	Hook attachment, 120°, 75 mm	5	
550.1086	Hook attachment, lateral bend, 75 mm	5	

Hook tool set

- Ideal for removing and use of O rings and seals
- Two component handle
- Special tool steel





			g	
550.1045	4 pcs	Hook tool set	120	

consists of:

		g	
550.1046	Hook, straight	27	
550.1047	Hook, 45° offset	27	
550.1048	Hook, 90° offset	27	
550.1049	Hook, 135° bent	27	

Master hook tool set

- Ideal for removing and use of O rings and seals
- Special tool steel





			g	
550.1070	9 pcs	Master hook tool set	680	

consists of:

		g	
550.1046	Hook, straight	27	
550.1047	Hook, 45° offset	27	
550.1048	Hook, 90° offset	27	
550.1049	Hook, 135° bent	27	
550.1071	Hook, large, straight	91	
550.1072	Hook, large, 90° bent	105	
550.1073	Hook, large, sickle	88	
550.1074	T hook, S form small, 120mm	42	
550.1075	T hook, S form large, 165mm	96	

CLEANING DEVICES

Plasma air-cleaner with ionisator technology

- Eliminates odours and disinfects the interior of the vehicle
- Compact, lightweight, and high ozone emission
- For use in closed passenger compartments
- In odour elimination mode, it switches off automatically after 60 minutes
- In disinfection mode, it automatically switches off after 30 minutes and immediately switches to odour elimination mode for 30 minutes
- Works without chemical additives , guaranteed to leave no residue
- It leaves no traces, even on sensitive surfaces
- Removes mould, bacteria, fungus and mites
- Includes an active carbon HEPA technology replacement filter
- Simple operation





Technical data:

Dimensions:	173x122x49 mm
Battery technologie:	Lithium-ion
Rechargeable battery:	850 mAh
Operational voltage:	DC 12-24V / AC 100-240V / 50/60 Hz
Power consumption:	5 W
Ozone transformation:	5 mg/h
Negative Ion concentration:	3000000 pcs/cm²
Covering scope:	15m²

	Replacement filter	Scented cube	g	
550.1183	550.1199	550.1189	360	



BOTTLE TROLLEY

Bottle trolley

- Steel tubular structure with deep-welded joints
- Ideal for the storage of 10 litre nitrogen bottles
- With safety chain for transport
- Includes hose attachment
- Integrated tray for accessories
- Stable fully-rubber wheels
- Secure and easy to use
- Special tool steel





	Length mm	Width mm	Height mm	kg	
160.0247	275,0	305,0	1170,0	4,46	



THE INFOMOBIL FLEET

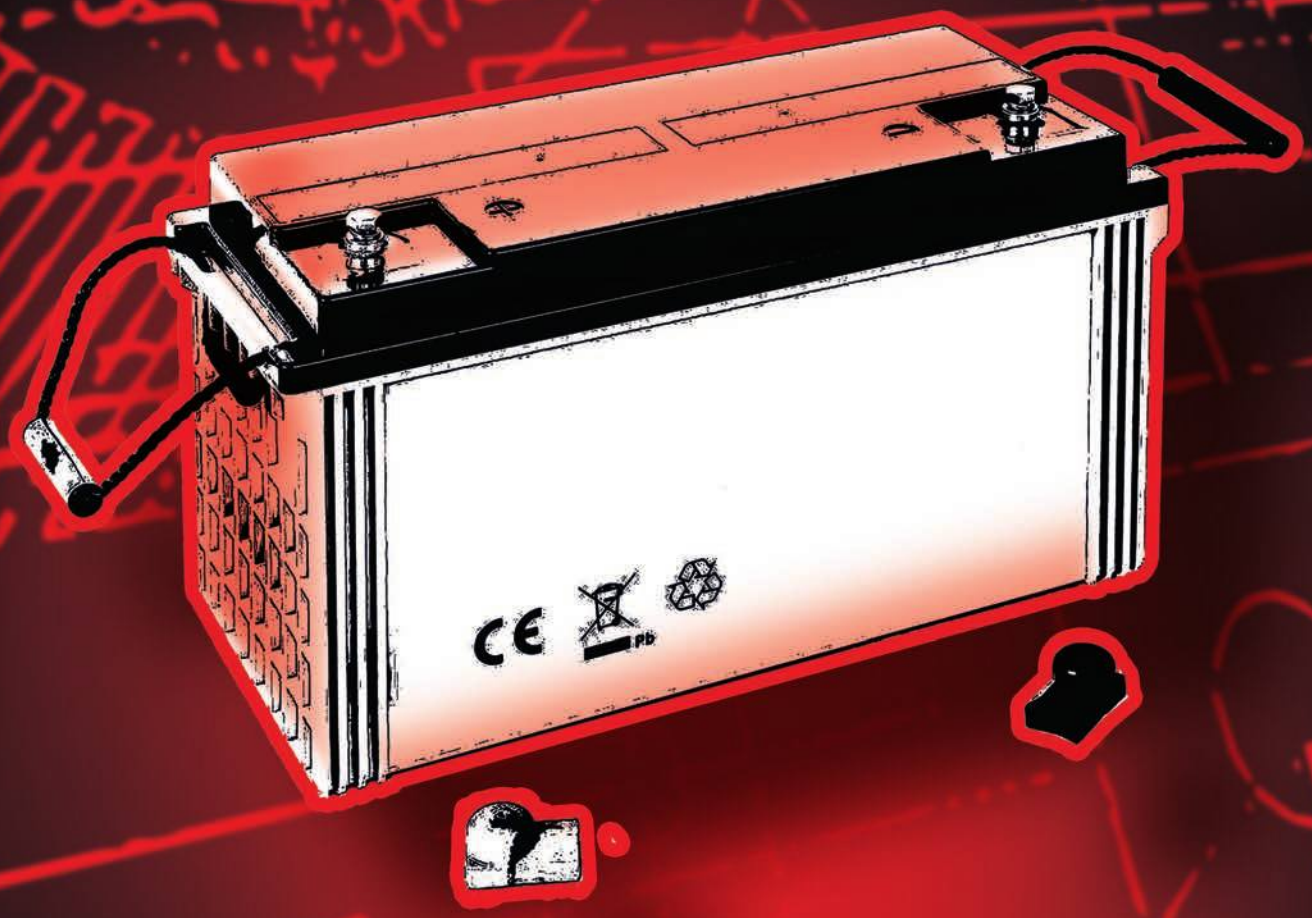




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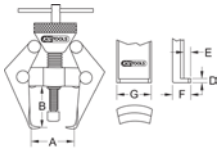
	FROM PAGE
POLE TERMINAL EXTRACTOR	410
POLE TERMINAL CLEANING	410
BATTERY PLUG TOOLS	411
BATTERY CELL FILLING	411
BATTERY CARRYING HANDLES	412
VEHICLE POWER SUPPLY VOLTAGE RETAINER	412
BATTERY TESTER	412
SURGE PROTECTION	416
BATTERY CHARGERS	416
JUMP LEADS	417
BATTERY BOOSTER MOBILE STARTING AID	417
CONDENSER BOOSTER / MOBILE STARTING AID	419

POLE TERMINAL EXTRACTOR

Universal pole terminal and wiper arm puller 2-arm pattern

- 2-jaw
- ideally suited for removing the battery terminal and wiper arms
- Locking handle
- With conical tension screw for proportional tension force distribution
- Self-centring jaw puller
- Extremely robust spindle with inductively hardened thread
- Special tool steel





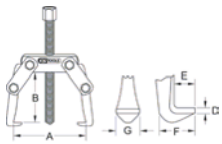


	A mm	B mm	max t	mm	D mm	E mm	F mm	G mm	g	
700.1190	15	32	1,2	M8 x 50	2,5	9	10,5	11	300	

Pole clamp 2-jaw puller

- 2-jaw
- Ideally suited for removing the battery pole terminal
- Automatic pressure on the legs
- Extremely robust spindle with inductively hardened thread
- Screwed
- Sturdy hook
- Special tool steel





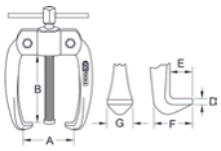


	A mm	B mm	max t	mm	mm	D mm	E mm	F mm	G mm	g	
620.3101	10-60	40	1	M8x85	10	1	5	12	8	160	
620.3102	10-70	44/74	1,2	M8x85	10	1	5	12	8	200	
620.3103	10-90	84	2	M10x105	12	1,8	10	20	12	340	

Universal pole terminal and wiper arm puller 2-arm pattern

- 2-jaw
- ideally suited for removing the battery terminal and wiper arms
- Locking handle
- Automatic pressure on the legs
- Extremely robust spindle with inductively hardened thread
- Screwed
- Sturdy hook
- Special tool steel





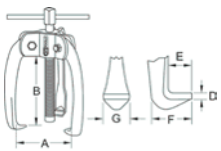


	A mm	B mm	max t	mm	D mm	E mm	F mm	G mm	g	
700.1164	10-60	40	0,5	M10 x 60	2,6	5,5	12,8	10,0	145	
700.1165	10-60	60	0,5	M10 x 80	3,7	5,8	12,4	10,1	173	
700.1166	10-70	80	0,5	M10 x 100	4,0	9,2	16,8	14,0	245	

3-jaw pole terminal extractor with t-bar

- 3-jaw
- Ideally suited for removing the battery pole terminal
- Locking handle
- Automatic pressure on the legs
- Extremely robust spindle with inductively hardened thread
- Screwed
- Sturdy hook
- Special tool steel







	A mm	B mm	max t	mm	D mm	E mm	F mm	G mm	g	
700.1167	10-60	40	0,75	M10 x 60	2,3	5,5	12,3	10,0	181	
700.1168	10-60	60	1,0	M10 x 80	3,0	5,5	12,5	10,0	215	
700.1169	10-70	80	1,0	M10 x 100	3,0	8,0	15,2	14,1	323	

POLE TERMINAL CLEANING

Battery pole and clamp cleaning brush

- For the removal of contact corrosion and acid deposits on battery poles and pole terminals
- Can be used for internal and external cleaning of the poles
- Improves contacts
- Reduces the susceptibility of start-up difficulties
- External brush diameter equates to 20 mm
- Internal brush diameter equates to 18 mm
- Bristles made of metal
- Plastic housing





	Length mm	g	
700.1197	120,0	64	

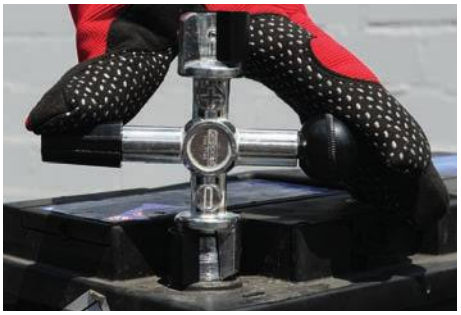
Battery pole and terminal cleaning mill cross

- For milling contact corrosion and acid deposits on battery poles and pole terminals
- Can be used for internal and external cleaning of the poles
- Improves contacts
- Reduces the susceptibility of start-up difficulties
- Conical milling insert made of steel
- Cast light alloy body material





		g	
700.1195	Battery pole and terminal cleaning mill cross	150	



BATTERY PLUG TOOLS

Battery plug turner

- For the damage-free screwing in and out of battery plugs
- Special slot profile for battery plug
- Universal application also with short overall height
- Two component handle
- Mirror polished
- Chrome vanadium





	mm	L mm	g	
550.1681	14,5 x 1,7	95,0	72	

Battery plug turner with T-handle

- For the damage-free screwing in and out of battery plugs
- Special slot profile for battery plug
- Universal application also with short overall height
- With T-handle
- Mirror polished
- Chrome vanadium





	mm	Length mm	g	
550.1682	14,5 x 1,7	95,0	62	

Screw plug screwdriver with gag

- for damage-free insertion and removal of battery plugs and vent plugs on the radiator
- Special cross profile
- Universal application also with short overall height
- Locking handle
- Mirror polished
- Chrome vanadium





	Blade thickness mm	shank Ø mm	Blade height mm	Length mm	g	
550.1686	1,3	12,0	13,0	90,0	87	

Screw plug screwdriver with gag

- for damage-free insertion and removal of battery plugs and vent plugs on the radiator
- Special cross profile
- Universal application also with short overall height
- Locking handle
- Mirror polished
- Chrome vanadium





	Blade thickness mm	shank Ø mm	Blade height mm	Length mm	g	
550.1687	1,8	12,0	13,0	90,0	87	

BATTERY CELL FILLING

Measuring cup set

- Configuration of practical measuring cup sizes
- For a wide range of uses
- Transparent
- Break-resistant
- Red primed scale division
- Resistant to oil, petrol and acid
- With handle and spout
- PE (polyethylene)

Scales: L/ml, cups, Oz, quart







			g	
150.9205	3 pcs	250 - 500 - 1.000 ml	227	

Funnel set

- Configuration of practical funnel sizes
- For a wide range of uses
- Red
- Break-resistant
- Resistant to oil, petrol and acid
- Grip strap for convenient use
- HDPE (high density polyethylene)

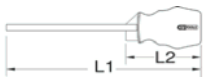


			g	
150.9240	5 pcs	Ø 50 - Ø 75 - Ø 95 - Ø 115 - Ø 150 mm	251	

Suction and filling bottle

- ideal aid for drip-free filling or extraction of the brake fluid and battery acid
- suitable for brake fluid, battery acid and distilled water
- Resistant to oil, petrol and acid
- With rubber ball and rubber pipe
- Special plastic







	L1 mm	L2 mm	g	
160.0738	245,0	130,0	92	

Battery filler bottle

- Ideal aid for drip-free filling
- Suitable for battery acid and distilled water
- Acid-resistant
- With flexible rubber tube
- Special plastic





		g	
550.1701	1 l	300	

Automatic battery cell filler, 2 litres

- Ideal aid for drip-free filling
- Stops automatically if the optimal filling level is reached
- With automatic closure
- The built-in special valve in the cylinder head automatically stops the flow when the fill level is reached
- Suitable for battery acid and distilled water
- Acid-resistant
- Special plastic





		g	
550.1683	2 l	300	

Mini transfer pump

- Ideal tool for refilling in case of emergencies
- Suitable for battery acid, fuels, oils and distilled water
- The hoses are attached to the balloon lifter using the supplied hose clamps
- Special plastic





	Tube inner Ø mm	Hose length mm	g	
150.1665	8,0	2 x 900	320	

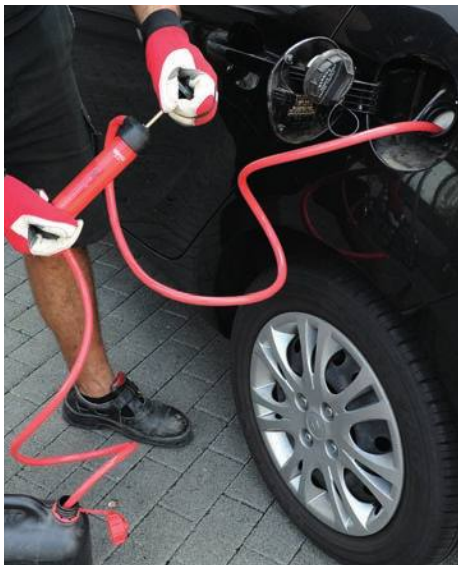
Transfer pump

- Ideal aid for easy transferring and pumping
- Suitable for battery acid, fuels, antifreeze, oils and distilled water
- Acid-resistant
- With high quality pump body and reinforced pump handle
- Through a rubber tube can also be used as an air pump
- Includes rubber tubes and reduce piece
- Special plastic





	Tube inner Ø mm	Hose length mm	g	
150.1660	12,0	2 x 1.300	465	



BATTERY CARRYING HANDLES

Battery carrying handle

- Allows for the easy removal and carrying of all batteries
- With rubber-coated clamping jaws
- Size adjustable clamp
- Ergonomic weight distribution
- With rubber grip





	Span width mm	g	
700.1196	120 - 190	560	



VEHICLE POWER SUPPLY VOLTAGE RETAINER

12V OBD II Eletrical system suspense keeper

- Supplies the vehicle with voltage while replacing the battery so that various settings, such as radio codes, seat memory etc., are preserved
- Prevents data loss in the on-board electronics while replacing the battery
- Connection takes place via the OBD II bushing and cigarette lighter connection of a battery-powered start-up aid
- Readiness indicator checks and indicates safe connection establishment





	Cable length mm	g	
550.1705	2300	200	

12V OBD II Eletrical system suspense keeper

- Supplies the vehicle with voltage while replacing the battery so that various settings, such as radio codes, seat memory etc., are preserved
- Prevents data loss in the on-board electronics while replacing the battery
- The connection takes place via the OBD II bushing and crocodile pole clamps of an external battery
- Readiness indicator checks and indicates safe connection establishment





	Cable length mm	g	
550.1706	5000	350	

12V vehicle power supply voltage retainer

- Supplies the vehicle with voltage while replacing the battery so that various settings, such as radio codes, seat memory etc., are preserved
- Prevents data loss in the on-board electronics while replacing the battery
- Dual connection option via cigarette lighter connection or battery terminals
- Includes surge protection at the outlet
- Audible voltage spike indicator
- Display in the event of polarity confusion
- Readiness indicator checks and indicates safe connection establishment





	Cable length mm	g	
550.1723	3600	540	

BATTERY TESTER

Acidimeter for battery fluid

- For the inspection of the acidity of the battery fluid
- Easy to use: Suction, read, release
- Glass cylinder length is 11 cm
- With suction bellows
- Acid density can be read directly with a hydrometer



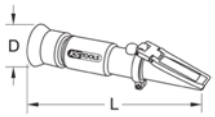


	L mm	g	
550.1680	280,0	107	

Refractometer - optical tester for battery fluid and antifreeze

- For the quick and accurate testing of acidity in the battery fluid and the antifreeze content
- Can also be used for coolant and windscreen wiper fluid
- Adjustable eye piece with rubber viewing rest
- With automatic temperature compensation (ATC)
- Also suitable in ambient temperatures of less than 10 °C
- Reading correction function by means of bimetallic measurement
- High quality design made from aluminium
- Good readability due to defined dividing lines
- Recalibration possible
- Includes calibration screwdriver and pipette
- In practical plastic case







Technical data:

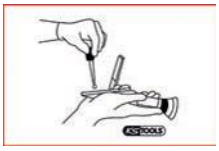
Battery acid:	acid density (measuring range 1.1 to 1.4 kg/l)
Coolant water Propylene:	temperature resistance (measuring range 0 ° to -50 °C)
Coolant water Ethylene:	temperature resistance (measuring range 0 ° to -50 °C)
Windscreen water:	antifreeze (measuring range 0 ° to -40 ° C)

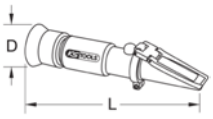
	D mm	L mm	Glass face mm	g	
550.1290	40,0	149,0	40 x 13	630	

Refractometer - optical tester for battery fluid, antifreeze and AdBlue® additives

- For the quick and accurate testing of the acidity of the battery fluid, the antifreeze content and the AdBlue® additives
- Can also be used for coolant and windscreen wiper fluid
- Adjustable eye piece with rubber viewing rest
- With automatic temperature compensation (ATC)
- Also suitable in ambient temperatures of less than 10 °C
- Reading correction function by means of bimetallic measurement
- High quality design made from aluminium
- Good readability due to defined dividing lines
- Recalibration possible
- Includes calibration screwdriver and pipette
- In practical plastic case

*AdBlue® is a registered trademark of the Verband der Automobilindustrie e.V (VDA).







Technical data:

Battery acid:	acid density (measuring range 1.1 to 1.3 kg/l)
Coolant water Propylene:	temperature resistance (measuring range -25 ° to -50 °C)
Coolant water Ethylene:	temperature resistance (measuring range -25 ° to -50 °C)
Windscreen water:	antifreeze (measuring range -10 ° to -40 ° C)
For AdBlue® additives (VRA):	urea content (measuring range 30% - 35%)

	D mm	L mm	Glass face mm	g	
550.1285	40,0	160,0	40 x 13	480	

Digital Multimeter incl. test probes

- Specially developed professional multimeter for automotive and commercial electrics and electronics
- Dual LCD display with digital display and bar diagram display (32 segment bar graph)
- With automatic overflow and polarity indication
- With safety mechanism for V, µA/mA/A, therefore incorrect connection is impossible
- Central 19-digit rotary switch
- Large LCD display with 3.1/2-digit, high-contrast display with background lighting
- Charge state shown in display
- With integrated glass fuse 250mA / 600V, 10A / 600V – 32 x 6 mm to protect the circuits
- Includes measuring line set with probes
- With on/off switch and automatic temperature shutdown
- With fold out adjustable foot in protective rubber holster
- Sturdy plastic housing

Functions:

- DC and AC voltage measurement
- DC and AC current measurement
- Resistance measurement
- Diode test (with acoustic signal)
- Continuity test (with acoustic signal)
- Data hold function
- Battery check indicator





Technical data:

Co-current flow:	20 µA - 10 A
DC voltage:	200 mV - 600 V
AC voltage:	200 V - 600 V
Resistance measurement:	200 Ohm - 2 MOhm
Power requirement:	9V block battery
Fuse protection S1 (fine flow):	250mA/600V; 10A/600V
Storage temperature:	-10 ° to +50 ° C (14 ° to 122 ° F)
Working temperature:	0 ° to +40 ° C (32 ° to 104 ° F)

	Width mm	Length mm	Depth mm	g	
150.1495	69,0	138,0	31,0	342	





Digital multimeter, including test prods and crocodile clamps

- Specially developed high quality multimeter for automotive and commercial electrics and electronics
- Dual LCD display with digital display and bar diagram display (32 segment bar graph)
- With automatic overflow and polarity indication
- With safety mechanism for V, µA/mA/A, therefore incorrect connection is impossible
- central 11-digit rotary switch
- Automatic measuring range selection
- Large LCD display with 3.1/2-digit, high-contrast display with background lighting
- with integrated glass fuse 300mA/600V; 10A/600V - 32 x 6 mm to protect the circuits
- including double test lead set with test prods and crocodile clips
- With fold out adjustable foot in protective rubber holster
- Sturdy plastic housing

Functions:

- Continuity test (with acoustic signal)
- Temperature measurement
- Diode test (with acoustic signal)
- Capacity
- Frequency measurement
- Data hold function
- Automatic measuring range selection





Technical data:

Co-current flow:	326µV - 10A
Alternating current :	326µV - 10A
DC voltage:	326 mV - 600 V
AC voltage:	3,26 V - 600 V
Resistance measurement:	326 Ohm - 32,6 MOhm
Capacity measurement:	326 nF - 32,6 µF
Frequency measurement:	32,60 - 150kHz
Temperature measurement:	-55 °C ~ 1000 °C
Power requirement:	9V block battery
Fuse protection S1 (fine flow):	300mA/600V
Fuse protection S2 (power-test socket):	10A/600V
Storage temperature:	-10 ° to +50 ° C (14 ° to 122 ° F)
Working temperature:	0 ° to +40 ° C (32 ° to 104 ° F)

	Width mm	Length mm	Depth mm	g	
150.1480	91,0	189,0	31,5	834	

Multimeter, including test prods, crocodile clamps, inductive clamp and temperature probe

- Specially developed high quality multimeter for automotive and commercial electrics and electronics
- With enhanced function for rpm measurement
- Ignition timing ascertainment up to 8-cylinder engines possible (Dwell function)
- Dual LCD display with digital display and bar diagram display (32 segment bar graph)
- With automatic overflow and polarity indication
- With safety mechanism for V, µA/mA/A, therefore incorrect connection is impossible
- Central 23-digit rotary switch
- With automatic area selection
- Large LCD display with 3.1/2-digit, high-contrast display with background lighting
- With integrated glass fuse 250V (500 mA) – 20 x 5 mm to protect the circuits
- Includes measuring line set with test prods, crocodile clamps, inductive clamp and temperature probe
- With on/off switch and automatic temperature shutdown
- With fold out adjustable foot in protective rubber holster
- Sturdy plastic housing

Functions:
- DC and AC voltage measurement
- DC and AC current measurement
- Resistance measurement
- Dwell
- Diode test (with acoustic signal)
- RPM measurement
- Temperature-automatic shutdown
- Frequency measurement
- Battery check indicator





Technical data:

Co-current flow:	326 µA - 10 A
Alternating current :	326 µA - 10 A
DC voltage:	326 mV - 1000 V
AC voltage:	3,26 V - 750 V
Resistance measurement:	32 - 32000 ohm
Frequency measurement:	32,60 - 200 kHz
Speed measurement:	300 - 12000 rpm
Temperature accuracy :	23° C ± 5° C
Power requirement:	9V block battery
Fuse protection S1 (fine flow):	500mA/350V (20x5mm)
Fuse protection S2 (power-test socket):	10A/250V (30x5mm)
Storage temperature:	-10° to +50° C (14° to 122° F)
Working temperature:	0° to +40° C (32° to 104° F)
Temperature measurement:	-20° to +760° C (-4° to 1400° F)

	Width mm	Length mm	Depth mm	g	
150.2040	91,0	189,0	31,5	500	

6 + 12V Battery tester

- Suitable for 6 and 12 volt batteries (lead acid, gel, wet cell, MF, VRLA, calcium, AGM and deep cycle batteries)
- For the quick and simple determination of battery efficiency
- With verification function for the starter battery, starter and load circuit measurement
- With on/off toggle switch
- Connection to the battery takes place via two plastic-coated crocodile pole clamps
- Verification possible, even with prevailing load
- Measurement results are displayed via a precise analogue measuring element
- Scale for various battery sizes and types
- Analogue display 0-16 volts
- Suitable for starter batteries from 30 Ah (12 V) and 15 Ah (6 V)
- Support for pole terminals on the device
- Sturdy steel plate housing





	Load current 12 V	Load current 6 V	g	
550.1690	100 Ampere	50 Ampere	500	

12V Digital battery tester

- Suitable for 12 volt batteries (lead acid, gel, wet cell, MF, VRLA, calcium, AGM and deep cycle batteries)
- For the quick and simple determination of battery efficiency
- Automatic control of the entire testing process after one-time actuation of the start button
- The connection to the battery takes place via two plastic-coated crocodile pole clamps
- With verification function for the starter battery, starter and load circuit measurement
- Verification possible, even with prevailing load
- The measurement results are shown via an accurate 3-digit LCD display
- The result can be read via the digital LCD display after 10 seconds
- Suitable for starter batteries from 30 Ah (12 V)
- Support for crocodile pole terminals on the device
- Sturdy steel plate housing





	Load current 12 V	g	
550.1685	100 Ampere	500	

12V Digital Battery-Analyzer

- Suitable for 12 volt batteries (lead acid, gel, wet cell, MF, VRLA, calcium, AGM and deep cycle batteries)
- Automatic control of the entire test procedure through menu navigation
- For the quick and simple determination of battery efficiency while taking the temperature compensation into account
- Checks the battery condition, charge status, internal resistance, cold start current value
- With verification function for the starter battery
- The measurement results are shown via an accurate LCD display
- The connection to the battery takes place via two plastic-coated crocodile pole clamps
- Avoidance of an overload of the battery through too long of a measurement time
- Illuminated and very easy to read LCD display
- 0,45 metre long cable allows for flexible work
- Resistant rubber cup casing





Technical data:

Work area SAE:	200-900 CCA
Work area DIN:	120-550 CCA
Work area IEC:	120-550 CCA
Work area EN:	200-900 CCA
Work area CCA:	200-850 CCA
Voltage range:	7,6-17 V
Operating temperature:	-18°C up to 55°C
Display accuracy:	+/- 0,5 mΩ
Frequency range:	100

	Measuring range	kg	
550.1648	7,6-17 V	1,00	





12V Battery-, Charging- and Starting System Analyzer

- Suitable for 12 volt batteries (lead acid, gel, wet cell, MF, VRLA, calcium, AGM and deep cycle batteries)
- Automatic control of the entire test procedure through menu navigation
- For the quick and simple determination of battery efficiency while taking the temperature compensation into account
- Checks the battery condition, charge status, internal resistance, cold start current value
- With verification function for the starter battery, starter and load circuit measurement
- The measurement results are shown via an accurate 5-digit LCD display
- In addition, the measurement results are displayed via coloured symbols: OK, charge and poor
- The connection to the battery takes place via two plastic-coated crocodile pole clamps
- Avoidance of an overload of the battery through too long of a measurement time
- Illuminated and very easy to read LCD display
- 0,45 metre long cable allows for flexible work
- Resistant rubber cup casing





Technical data:

Work area SAE:	100-1.400 CCA
Work area DIN:	100-800 CCA
Work area IEC:	100-800 CCA
Work area EN:	100-1.400 CCA
Work area CCA:	100-1.400 CCA
Voltage range:	7,6-17 V
Operating temperature:	-18°C up to 55°C
Display accuracy:	+/- 0,5 mΩ
Frequency range:	100

	Measuring range	kg
550.1645	7,6-17 V	1,00

12V Battery-, Charging- and Starting System Analyzer with integrated printer

- Suitable for 12 volt batteries (lead acid, gel, wet cell, MF, VRLA, calcium, AGM and deep cycle batteries)
- Menu-driven, intuitive operation
- With integrated thermal printer
- Automatic control of the entire test procedure through menu navigation
- For the quick and simple determination of battery efficiency while taking the temperature compensation into account
- Checks the battery condition, charge status, internal resistance, cold start current value
- Battery selection takes place quickly and precisely via printing protocol
- With verification function for the starter battery, starter and load circuit measurement
- Printing protocol supports the argumentation for workshop customers
- The connection to the battery takes place via two plastic-coated crocodile pole clamps
- Avoidance of an overload of the battery through too long of a measurement time
- Illuminated and very easy to read digital display
- 0,43 metre long cable allows for flexible work
- Includes thermal paper roll
- Resistant rubber cup casing





Technical data:

Work area SAE:	50-1.400 CCA
Work area DIN:	50-800 CCA
Work area IEC:	50-800 CCA
Work area EN:	50-1.400 CCA
Work area CCA:	50-1.400 CCA
Voltage range:	1,5-17 V
Operating temperature:	-18°C up to 55°C
Display accuracy:	+/- 0,5 mΩ
Frequency range:	100 Hz

	Measuring range	Spare thermal roll	kg	
550.1646	1,5-17 V	550.1647	1,50	



12V / 24V Battery-, Charging- and Starting System Analyzer with integrated printer

- suitable for 12 Volt batteries (lead acid, gel, wet cell, MF, VRLA, EFB, AGM flat, AGM spiral and deep cycle batteries)
- Menu-driven, intuitive operation
- With integrated thermal printer
- Automatic control of the entire test procedure through menu navigation
- For the quick and simple determination of battery efficiency while taking the temperature compensation into account
- Checks the battery condition, charge status, internal resistance, cold start current value
- Battery selection takes place quickly and precisely via printing protocol
- With verification function for the starter battery, starter and load circuit measurement
- Printing protocol supports the argumentation for workshop customers
- The connection to the battery takes place via two plastic-coated crocodile pole clamps
- Avoidance of an overload of the battery through too long of a measurement time
- Illuminated and very easy to read digital display
- 1,60 metre long cable allows for flexible work
- including 3 thermal paper rolls, memory card and USB data cable
- In a practical storage case







Technical data:

Work area SAE:	40-2.000 CCA
Work area DIN:	40-2.000 CCA
Work area IEC:	40-2.000 CCA
Work area EN:	40-2.000 CCA
Work area CCA:	40-2.000 CCA
Work area CA / MCA:	40-2.000 CCA
Work area JIS#:	40-2.000 CCA
Voltage range:	9-36 V
Operating temperature:	+0°C to +55°C
Display accuracy:	+/- 0,5 mΩ
Frequency range:	100 Hz

	Measuring range	Spare thermal roll	g	
550.1649	9-36 V	550.1647	750	

SURGE PROTECTION

Electronic surge protection

- Constantly suppresses emerging voltage peaks to safe levels and therefore protects the vehicle power supply against overvoltages
- Prevents damage to the on-board electronics when charging the built-in battery or even during welding work
- Maximum load 200 A (8/20 µs)
- With fuse protection
- Visibility and tone signal in the event of voltages peaks
- With reverse polarity protection
- The connection to the battery takes place via two plastic-coated crocodile pole clamps
- Sturdy workshop design





		Cable length mm	g	
150.3080	12 V	195	480	
150.3045	12/24V	195	480	

BATTERY CHARGERS

12V SMARTcharger high-frequency battery charger 2A

- Designed for continuous long-term use, even with built-in battery
- For lead acid, gel, wet cell, MF, VRLA, calcium, AGM and deep cycle batteries
- Fully automatic 3-stage charging cycle
- With integrated overload and reverse polarity protection against misuse
- Pulse charge preservation
- Ingress protection according to IP44
- Includes 3 connection cables (cigarette lighter, M6 ring eyelet contact, crocodile pole terminals)
- Connection cable can be changed via plug connection
- LED display
- The latest technology for the highest demands
- Impact resistant polyethylene housing

Application range: Motorcycles, passenger cars, vans and boats







Technical data:

Voltage range:	220-240V AC, 50/60HZ
Charging voltage:	14,4V - 2A (12V)
Battery capacity:	3 - 40 Ah
Cable:	H03VVH2-F 2x0,5mm²

	Length mm	Width mm	Height mm	g	
550.1730	134,5	74,4	40,1	560	

6V + 12V Hiqh-Frequency Battery charger 4A

- Can be switched between 6 and 12 volts
- Designed for continuous long-term use, even with built-in battery
- For lead acid, gel, wet cell, MF, VRLA, calcium, AGM and deep cycle batteries
- Precise load control with microprocessor prevents overcharging and automatically switches to preservation mode after a completed charge process and prevents a “swelling” or even “explosion” of the battery
- Allows regeneration and recovery of deeply discharged batteries
- Fully automatic 9-stage charging cycle
- With integrated overload and reverse polarity protection against misuse
- Pulse charge preservation
- Ingress protection according to IP44
- Includes 3 connection cables (cigarette lighter, M6 ring eyelet contact, crocodile pole terminals)
- Connection cable can be changed via plug connection
- LED display
- The latest technology for the highest demands
- Impact resistant polyethylene housing

Application range: Motorcycles, passenger cars, vans and boats











Technical data:

Voltage range:	220-240V AC, 50/60HZ
Charging voltage:	7,2V - 4A / 14.4V - 1A / 14.4V - 4A / 14.7V - 4A (6V/12V)
Battery capacity:	3 - 80 Ah
Cable:	H03VVH2-F 2x0,5mm²

	Length mm	Width mm	Height mm	g	
550.1735	165,5	74,4	40,1	700	

SMARTcharger quick contact cable with crocodile pole terminals

- With plug connection
- With 2 crocodile pole terminals for a quick connection





	Length mm	g	
550.1730-1	375,0	70	

SMARTcharger quick contact cable with 2 ring eyelets

- With plug connection
- With M6 ring eyelets





	Length mm	g	
550.1730-2	325,0	15	

SMARTcharger quick contact cable with cigarette lighter plug

- With plug connection
- With cigarette lighter plug
- Only in function if the cigarette lighter is switched to steady plus





	Length mm	g	
550.1730-3	415,0	40	

12V + 24V SMARTcharger High frequency battery charger 25A/12.5A

- Can be switched between 12 and 24 volts
- Designed for continuous long-term use, even with built-in battery
- For lead acid, gel, wet cell, MF, VRLA, calcium, AGM and deep cycle batteries
- Precise load control with microprocessor prevents overcharging and automatically switches to preservation mode after a completed charge process and prevents a “swelling” or even “explosion” of the battery
- With integrated supply function for the power supply when the battery is removed
- Perfect charging and charge preservation
- Allows regeneration and recovery of deeply discharged batteries
- Fully automatic 9-stage charging cycle
- With integrated overload and reverse polarity protection against misuse
- Pulse charge preservation
- Ingress protection according to IP20
- With crocodile pole terminals
- With temperature sensor to take the temperature compensation into consideration
- 3-digit LED display
- The latest technology for the highest demands
- Impact resistant polyethylene housing





Technical data:

Voltage range:	220-240V AC, 50/60HZ
Charging voltage:	14,4V - 25A (12V), 28,8V - 12,5A (24V)
Battery capacity:	12V: 75-500Ah - 24V: 45-250Ah
Cable:	H05RN-F 2x1,0 mm²

	Length mm	Width mm	Height mm	kg	
550.1745	250,0	170,0	75,0	2,00	



JUMP LEADS

Jump leads set

- High quality design for tough daily use in a workshop
- Suitable for 12 and 24 volts
- Ideal for petrol and diesel engines in passenger cars and commercial cars
- With insulated stable battery terminals for optimal conductivity
- CCA (copper-coated aluminium)
- The handy carrying case allows for easy storage after use

Application range: Motorcycles, passenger cars, vans, caravans, boats, forklifts, commercial vehicles and agricultural machinery





	Cross Section mm²	Cable length m	Max. usage 30 sec.	Standard	Petrol max. cm³	Diesel max. cm³	kg
550.1751	16,0	3,0	220 A	DIN ISO 72553	2.500	2.000	1,40
550.1752	25,0	3,5	350 A	DIN ISO 72553	5.500	3.000	2,10
550.1753	35,0	4,5	480 A	DIN ISO 72553	7.000	4.000	3,40
550.1754	25,0	4,0	350 A	DIN ISO 72553	5.500	3.000	2,40
550.1755	35,0	4,5	490 A	DIN ISO 72553	7.000	4.000	3,40
550.1756	50,0	5,0	1.000 A	DIN ISO 72553	10.000	5.500	5,30

Jump leads set with surge protection

- The surge protection constantly suppresses emerging voltage peaks to safe levels and therefore protects the vehicle power supply against overvoltages
- High quality design for tough daily use in a workshop
- Suitable for 12 and 24 volts
- Ideal for petrol and diesel engines in passenger cars and commercial cars
- With insulated stable battery terminals for optimal conductivity
- CCA (copper-coated aluminium)
- The handy carrying case allows for easy storage after use

Application range: Motorcycles, passenger cars, vans, caravans, boats, forklifts, commercial vehicles and agricultural machinery





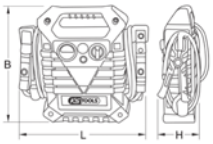
	Cross Section mm²	Cable length m	Max. usage 30 sec.	Standard	Petrol max. cm³	Diesel max. cm³	kg
550.1757	16,0	3,0	220 A	DIN ISO 72553	2.500	2.000	1,60
550.1758	25,0	3,5	350 A	DIN ISO 72553	5.500	3.000	2,30
550.1759	35,0	4,5	480 A	DIN ISO 72553	7.000	4.000	3,60

BATTERY BOOSTER MOBILE STARTING AID

12 V Battery Booster - mobile starting aid 700 A

- Ideal for petrol and diesel engines in cars through to transporters
- Fully insulated terminal clamps (1000 A)
- Integrated electronics protection
- Charge control indicator at press of button
- Accoustic warning tone if the polarity is reversed
- 1.6 m cable length
- With sturdy 35 mm² cable cross section
- Current-free cable connection to the vehicle battery
- Supplied with battery charger and cable set
- Cable can be conveniently stored on the housing
- Impact-resistant housing with rubberised base area







Technical data:

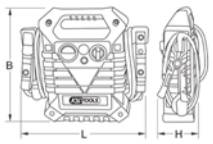
Battery:	12 Volt / 22 Ah
Starting current:	700 A
Peak current:	2200 A
Cable cross section:	35 mm²
Battery charger:	12V DC / 4 A

	L mm	B mm	H mm	Charger spare	Charging cable	kg
550.1710	405,0	380,0	160,0	550.1711	550.1712	10,00

12 V Battery Booster - mobile starting aid 850 A

- Ideal for petrol and diesel engines in cars through to transporters
- Fully insulated terminal clamps (1000 A)
- Integrated electronics protection
- With external safety fuse
- Charge control indicator
- Accoustic warning tone if the polarity is reversed
- 1.6 m cable length
- With sturdy 35 mm² cable cross section
- Current-free cable connection to the vehicle battery
- Supplied with battery charger and cable set
- Cable can be conveniently stored on the housing
- Impact proof housing







Technical data:

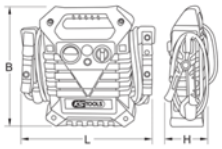
Battery:	12 Volt / 22 Ah
Starting current:	850 A
Peak current:	2500 A
Cable cross section:	35 mm²
Battery charger:	12V DC / 1,5 A

	L mm	B mm	H mm	Charger spare	Charging cable	kg
550.1810	380,0	410,0	160,0	550.1811	550.1812	12,10

12 V + 24 V Battery Booster - mobile starting aid 1400 A

- Ideal for petrol and diesel engines in cars through to transporters
- Fully insulated terminal clamps (1000 A)
- Integrated electronics protection
- Charge control indicator at press of button
- Accoustic warning tone if the polarity is reversed
- 1.6 m cable length
- With sturdy 35 mm² cable cross section
- Current-free cable connection to the vehicle battery
- Automatic mains charger and cable set included in scope of supply
- Cable can be conveniently stored on the housing
- Impact-resistant housing with rubberised base area







Technical data:

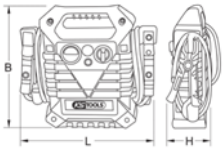
Battery:	2 x 12 Volt / 22 Ah
Starting current:	1400 / 700 A
Peak current:	4400 / 2200 A
Cable cross section:	35 mm²
Battery charger:	12V DC / 4 A

	L mm	B mm	H mm	Charger spare	Charging cable	kg
550.1720	405,0	380,0	180,0	550.1721	550.1712	18,00

12 V + 24 V Battery Booster - mobile starting aid 1700 A

- Ideal for petrol and diesel engines in cars through to transporters
- Fully insulated terminal clamps (1000 A)
- Integrated electronics protection
- With external safety fuse
- Charge control indicator
- Accoustic warning tone if the polarity is reversed
- 1.72 m cable length
- With sturdy 50 mm² cable cross section
- Current-free cable connection to the vehicle battery
- Battery charger, cable set and safety fuse included in the delivery
- Cable can be conveniently stored on the housing
- Impact proof housing







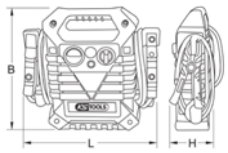
Technical data:

Battery:	2 x 12 Volt / 22 Ah
Starting current:	1700/850 A
Peak current:	5000/2500 A
Cable cross section:	50 mm²
Battery charger:	12V DC / 4 A
Safety fuse:	500 A

	L mm	B mm	H mm	Charger spare	Replacement fuse	Charging cable	kg
550.1820	390,0	410,0	200,0	550.1826	550.1821	550.1812	24,18

12 V + 24 V battery booster - mobile emergency starter 2340 A

- Ideal for petrol and diesel engines in cars through to transporters
- Fully insulated terminal clamps (1000 A)
- Integrated electronics protection
- With external safety fuse
- Charge control indicator
- Accoustic warning tone if the polarity is reversed
- 1.65 m cable length
- With sturdy 50 mm² cable cross section
- Current-free cable connection to the vehicle battery
- Supplied with battery charger and cable set
- Cable can be conveniently stored on the housing
- Robust, movable housing







Technical data:

Battery:	2 x 12 Volt / 25 Ah
Starting current:	2340/1170 A
Peak current:	6200/3100 A
Cable cross section:	50 mm²
Battery charger:	12V DC / 4 A

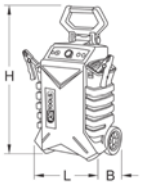
	L mm	B mm	H mm	Charger spare	Charging cable	kg
550.1825	390,0	535,0	285,0	550.1826	550.1812	24,18



12 V + 24 V Battery Booster - mobile starting aid 3000 A

- Ideal for petrol and diesel engines in cars through to transporters
- Fully insulated terminal clamps (1000 A)
- Integral electronics protection (voltage peak protected)
- Heavy-duty copper cable, cross-section 75 mm²
- 2.0 m cable length
- Intelligent, fully-integrated 3-stage automatic charging unit
- Multi-function display with coloured LED bars
- Intelligent protective circuits
- Polarity protection optical/acoustic
- Current-free cable connection to the vehicle battery
- Robust, wheeled housing with cable storage compartments
- Delivery scope includes vehicle charging cable









Technical data:

Battery:	2 x 12 Volt / 50 Ah
Starting current:	3000 / 1500 A
Peak current:	7200 / 3400 A
Cable cross section:	75 mm²

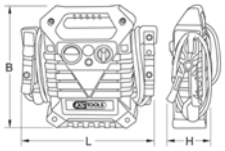
	L mm	B mm	H mm	kg
550.1725	450,0	300,0	750,0	47,00

CONDENSER BOOSTER / MOBILE STARTING AID

12 V capacitor booster – mobile emergency starter 720 A

- Based on super capacitor technology
- Battery-free emergency starter
- Maintenance-free
- Can be stored for unlimited periods without re-charging
- Ideal for petrol and diesel engines in cars through to transporters
- Fully insulated terminal clamps (1000 A)
- Integrated electronics protection
- With integrated automatic fuse protection
- Charge control indicator
- Acoustic and optical warning tone if the polarity is reversed
- 1.6 m cable length
- With sturdy 35 mm² cable cross section
- Current-free cable connection to the vehicle battery
- Supplied with battery charger and cable set
- Cable can be conveniently stored on the housing
- Impact proof housing







Technical data:

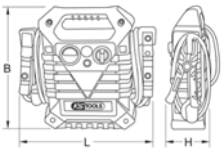
Capacitor:	12 Volt / 288 FARAD
Starting current:	720 A
Peak current:	2250 A
Cable cross section:	35 mm²
Battery charger:	12V DC / 2 A
Safety fuse:	500 A

	L mm	B mm	H mm	Charger spare	Replacement fuse	kg	
550.1830	380,0	410,0	160,0	550.1831	550.1832	4,20	

12 V capacitor booster – mobile emergency starter 1800 A

- Based on super capacitor technology
- Battery-free emergency starter
- Maintenance-free
- Can be stored for unlimited periods without re-charging
- Ideal for petrol and diesel engines in cars through to transporters
- Fully insulated terminal clamps (1000 A)
- Integrated electronics protection
- With integrated automatic fuse protection
- Charge control indicator
- Acoustic and optical warning tone if the polarity is reversed
- 1.6 m cable length
- With sturdy 50 mm² cable cross section
- Current-free cable connection to the vehicle battery
- Supplied with battery charger and cable set
- Cable can be conveniently stored on the housing
- Impact proof housing







Technical data:

Capacitor:	12 Volt / 500 FARAD
Starting current:	1800 A
Peak current:	9000 A
Cable cross section:	50 mm²
Battery charger:	12V DC / 3 A
Safety fuse:	1000 A

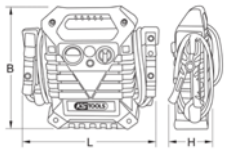
	L mm	B mm	H mm	Charger spare	Replacement fuse	kg	
550.1840	380,0	410,0	160,0	550.1841	550.1842	8,20	



12 V / 24 V capacitor booster – mobile emergency starter 4700 A / 3700 A

- Based on super capacitor technology
- Battery-free emergency starter
- Maintenance-free
- Can be stored for unlimited periods without re-charging
- Ideal for petrol and diesel engines in cars through to transporters
- Fully insulated terminal clamps (1000 A)
- Integrated electronics protection
- With integrated automatic fuse protection
- Charge control indicator
- Acoustic and optical warning tone if the polarity is reversed
- 1.6 m cable length
- With sturdy 50 mm² cable cross section
- Current-free cable connection to the vehicle battery
- Supplied with battery charger and cable set
- Cable can be conveniently stored on the housing
- Impact proof housing



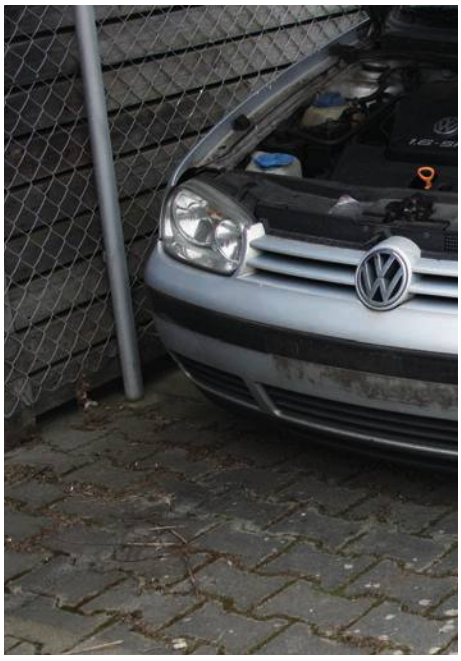




Technical data:

Capacitor:	12 Volt / 24 Volt / 3400 FARAD
Starting current:	4700/3700 A
Peak current:	20.000/10.000 A
Cable cross section:	50 mm²
Battery charger:	12V DC / 3 A
Safety fuse:	1000 A

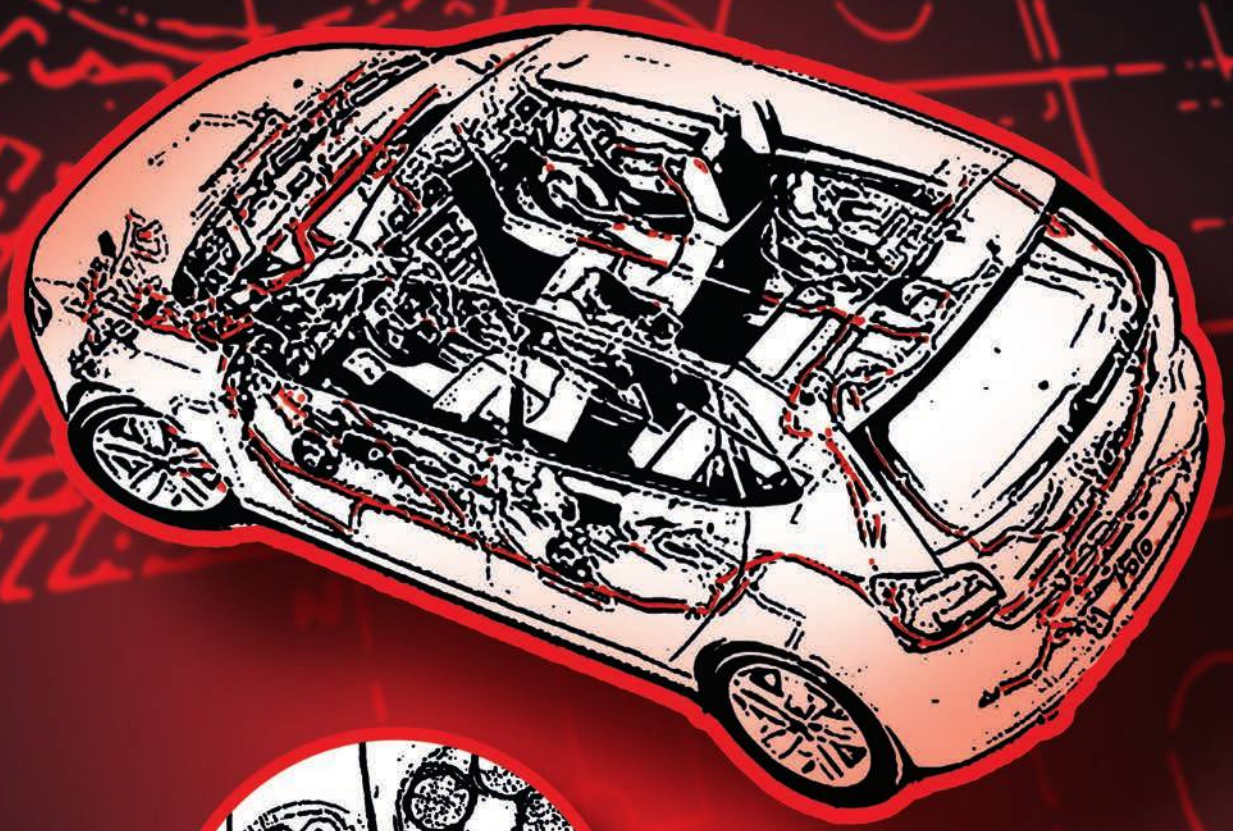
	L mm	B mm	H mm	Charger spare	Replacement fuse	kg	
550.1850	380,0	410,0	160,0	550.1841	550.1842	16,50	

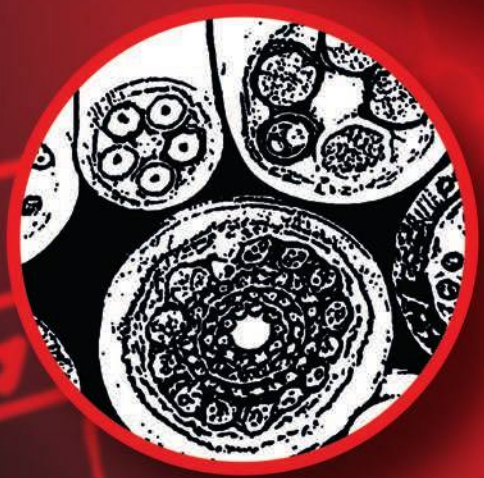




15

ELECTRICAL / ELECTRONIC TOOLS





KS TOOLS®

Innovation is our mission!

	FROM PAGE
RELAY TESTER	422
KEY TESTER	422
VOLTAGE TESTERS	422
DIGITAL AMPERE METER	423
CIRCUIT BREAKERS	425
TRAILER SOCKET TESTER	425
CIGARETTE LIGHTER SOCKET TESTER	425
MULTIMETER	425
MULTIMETER ACCESSORIES	426
DISASSEMBLY AND ASSEMBLY TOOLS	428
CLEANING TOOLS	429
UNIVERSAL UNLOCKING TOOLS	429
UNLOCKING TOOLS FOR RECEPTACLES/FLAT PLUGS	430
UNLOCKING TOOLS FOR CIRCULAR SOCKET/ROUND PLUGS	435
UNLOCKING TOOLS FOR HOUSING	437
UNLOCKING TOOL SETS	437
STRIPPING TOOLS	439
CUTTING TOOLS	440
CRIMPING PLIERS	441
INSTALLATION AID	444
GROMMETS	445
FUSES	445
CABLE SPLICES	446
SHRINK TUBING	447
ELECTRICAL INSULATING TAPE	448
SOLDERING TOOLS	448
PRECISION TOOL SETS	449

RELAY TESTER

12 V relay tester

- Simple, quick and professional testing of vehicle relay
- Easy handling
- Detection of defective relay through fully automatic test
- The result is signalled via a red or green light
- Contact resistance of 200 milliohm/0.2 ohm
- Applicable with 12 V
- Sturdy ABS plastic





		g
150.1755	12 V relay tester	290

KEY TESTER

12 V infrared and high frequency key tester

- Easy, quick and professional testing of infrared and radio (433 + 868 MHz) keys
- The keys should be checked at each inspection or servicing, because a new battery or a flashing LED is no guarantee for 100% functionality
- Easy handling
- The result is signalled via a light or sound
- Applicable with 12 V
- Includes 9V block battery
- Sturdy ABS plastic





		g
150.0999	12 V infrared and high frequency key tester	320

12-42 V detector for locating short circuits, cable breaks and leakage current

- For the quick, easy and proper searching for short circuits, cable faults and leakage current without having to puncture wires
- Saves a great deal of time, because removing interior lining, carpeting and trim on the vehicle can be reduced to the essentials
- Short circuiting is eliminated
- For tracking cable guides
- For locating electrical components in the vehicle
- For detecting broken circuits or cable breaks
- For locating the cause of severe battery charge losses
- For testing and detecting temporarily interrupted connections ("loose connections")
- The transmitter is connected to the circuit to be tested with the insulated crocodile clamps via the fuse box
- The output signal is received by the receiver and indicated acoustically as well as through a directional LED
- The error can be localised by following the line
- If the receiver no longer receives a signal, the short circuit has been found
- The transmitter can be optionally expanded to include head-phones via the built-in port
- Can be used for circuits from 12 V to 42 V
- The detection sensitivity can be variably adjusted
- Includes 2 x 9 V block battery
- In plastic bag





			g
150.3075	2 pcs	12-42 V detector for locating short circuits, cable breaks and leakage current	400

consists of:

		g
150.3076	Receiver	200
150.3077	Transmitter with crocodile clamps	200

VOLTAGE TESTERS

Test lamp 6 - 24 V

- Test tip protected through a cap
- Ideal for helping to locate short circuits and breaks
- With shielded crocodile clamp
- Stainless steel probe
- Brass housing and cap





	Length mm	g
550.1504	125,0	30

Polarity and voltage tester 3 - 48 V

- Universal test device for the vehicle electrics and electronics to test the voltage and polarity
- To troubleshoot electronic components and prevent damage caused by incorrectly coupled lines
- Two light-emitting diodes indicate voltage as well as polarity
- Test tip with push mechanics to tap into the cable
- With shielded crocodile clamp
- Test tip and reproducing stylus tip made of stainless steel

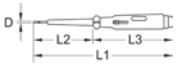




	Length mm	g
550.1503	140,0	70

Tension verifier with protection insulation 150 - 250 V

- In accordance to DIN ISO 0680
- Slot blade with hollow grinding
- Blade nickel plated
- Clip for the breast pocket
- With inspection panel



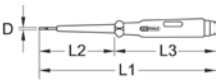


	D mm	L1 mm	L2 mm	L3 mm	g
911.2188	3,0	145,0	65,0	80,0	14

Tension verifier with protection insulation 100 - 500 V

- In accordance to DIN ISO 0680
- Slot blade with hollow grinding
- Blade nickel plated
- Clip for the breast pocket
- With inspection panel





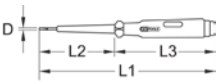


	D mm	L1 mm	L2 mm	L3 mm	g
911.2176	3,0	140,0	64,0	75,0	15

Tension verifier with protection insulation 100 - 500 V

- In accordance to DIN ISO 0680
- Slot blade with hollow grinding
- Blade nickel plated
- With inspection panel







	D mm	L1 mm	L2 mm	L3 mm	g
911.2177	3,5	180,0	97,0	83,0	27

Polarity and voltage tester with protective insulation 6 - 400 V

- In accordance to DIN ISO 0680
- For the professional, multi-stage voltage and polarity test
- Light-emitting diodes indicate voltage as well as polarity
- For direct and alternating voltage
- With rotating field and phase display
- Shielded test tips
- Stainless steel probe



Technical data:

Readout:	light-emitting diodes/LE
Power requirement:	140 mA
Allowable duty cycle:	30 s
Frequency range:	0 - 100 Hz
Protection class:	IP40
AC voltage range alternating voltage:	6 - 50 - 120 - 230 - 400 V
DC voltage range direct voltage:	6 - 50 - 120 - 230 - 400 V

550.1501	Polarity and voltage tester with protective insulation 6 - 400 V		180

Voltage tester with protective insulation, double pole 12 - 1000 V

- Tested and accredited in accordance with international standard
- Insulated to IEC IEN 61243-3 (DIN VDE 0682-401)
- Voltage class B
- DC and AC voltage shown by LED indicators
- Rotary field and phase display via LCD
- Single-pole external conductor test (phase)
- Rotating field test
- Polarity test
- Deliberate tripping of a 30 mA ELCB
- With vibration alarm



Technical data:

Readout:	LED/LCD
Display level:	12 - 1000 V
Power requirement:	200 mA
Allowable duty cycle:	30 s
Frequency range:	0 - 500 Hz
Protection class:	IP64
AC voltage range alternating voltage:	12 - 24 - 50 - 120 - 230 - 400 - 690 - 1000 V
DC voltage range direct voltage:	12 - 24 - 50 - 120 - 230 - 400 - 690 - 1000 V

117.1503	Voltage tester with protective insulation, double pole 12 - 1000 V		210



Voltage test ball with protective insulation, double pole 50 - 1000 V

- Tested and accredited in accordance with international standard
- Insulated to IEC EN 61243-3 (DIN VDE 0682-401)
- Corresponds to EMC requirements in accordance with DIN EN 61326
- DC and AC voltage shown by LED indicators
- Rotating field and phase displayed via LEDs
- With display of rotating field direction (clockwise and anti-clockwise)
- Deliberate tripping of a 30 mA ELCB



Readout:	LED/LCD
Power requirement:	300 mA
Allowable duty cycle:	30 s
Frequency range:	0 - 100 Hz
Protection class:	IP65
Overvoltage category:	CAT IV 600 V CAT III 1000 V
Test voltage:	6 kV
AC voltage range alternating voltage:	120 - 200 - 300 - 350 - 400 - 450 - 500 - 550 - 600 - 650 - 700 - 750 - 800 - 850 - 900 - 950 - 1000 V
DC voltage range direct voltage:	120 - 200 - 300 - 350 - 400 - 450 - 500 - 550 - 600 - 650 - 700 - 750 - 800 - 850 - 900 - 950 - 1000 V

117.4266	Voltage test ball with protective insulation, double pole 50 - 1000 V		620

Electronic multifunctional tester 6 - 24 V with 5 metres of cable

- Ideal standard lamp with many test functions
- With replaceable probe for the optional expansion with commercially available inspection and test components
- High speed functional testing without removal of components
- Via toggle switches can be plus or minus given to the probe
- Built in bi metal short circuit protection
- No protection wear for troubleshooting
- Version with replaceable probe and alligator clip
- Immediate continuity test of switches, relays, diodes, fuses, wiring harnesses etc.
- For the operation of electronic components, such as relays, fuel pumps, window motors, switches, lamps etc.
- For determining poor ground connections
- Immediate polarity determination via red/green LED display
- Changing acoustic signals depending on the polarity
- Power can be supplied immediately at the push of a button with the tester
- Built-in bimetallic short circuit fuse (7.5 A), therefore no fuse wear during troubleshooting
- Cable with shielded crocodile clamp and pole terminals
- 5 metre cable length
- Stainless steel probe





Technical data:

Cable length:	5 m
Test probe diameter:	4 mm

	Application area	Replacement test tip		
150.1670	6 - 24 V DC	150.1671	500	

Electronic multifunctional tester 6 - 24 V with 25 metres of cable

- Ideal standard lamp with many test functions
- With replaceable probe for the optional expansion with commercially available inspection and test components
- High speed functional testing without removal of components
- Via toggle switches can be plus or minus given to the probe
- Built in bi metal short circuit protection
- No protection wear for troubleshooting
- Version with replaceable probe and alligator clip
- Immediate continuity test of switches, relays, diodes, fuses, wiring harnesses etc.
- For the operation of electronic components, such as relays, fuel pumps, window motors, switches, lamps etc.
- For determining poor ground connections
- Immediate polarity determination via red/green LED display
- Changing acoustic signals depending on the polarity
- Power can be supplied immediately at the push of a button with the tester
- Built-in bimetallic short circuit fuse (7.5 A), therefore no fuse wear during troubleshooting
- Cable with shielded crocodile clamp and pole terminals
- 25 metre cable length
- Stainless steel probe





Technical data:

Cable length:	25 m
Test probe diameter:	4 mm

	Application area	Replacement test tip		
150.1655	6 - 24 V DC	150.1671	1,26	

DIGITAL AMPERE METER

12V - 48V Automotive current tester 20A

- For the quick measurement of direct current through the plug contact of automotive fuses directly on the fuse box with ignition on or off
- Ideal for detecting quiescent current consumers
- The measuring circuit is protected during the current measurement, as the existing fuse is laterally inserted into the tester
- Can be used for circuits from 12 V to VIV with 0.1 to 19.9 A
- 20 A separate protection
- With large 75 mm LCD display





	Connector type	Length mm	Volt max	Ampere max		
150.3096	mini	900,0	48	20	70	
150.3095	standard	900,0	48	20	100	

Digital amp pliers 200 A

- Due to the small pliers' diameter, a high level of accuracy and safe working in previously hard-to-reach places is a given
- They measure current with a resolution of 0.01 A to max. 200 A
- The built-in multimeter with a bar graph means there is no need for any additional measuring instruments
- Ideal for locating hidden consumers
- Very easy to read display
- Ideal for direct and alternating current tests
- Max. pliers opening of 30.0 mm
- LCD display
- Includes measuring line set with probes
- In a practical storage case
- direct current

Functions:
- Direct current
- DC and AC voltage
- Resistance
- Diode test
- Continuity test
- Temperature measurement
- Data hold function
- Peak hold function





Technical data:

Co-current flow:	0,01 - 200 A
Alternating current :	0,01 - 200 A
DC voltage:	0,1 - 400 V
AC voltage:	0,1- 400 V
Resistance measurement:	32 - 32000 ohm
Temperature accuracy :	23° C ± 5° C
Power requirement:	3x 1,5V AAA (not in the delivery)
Storage temperature:	-10° to +60° C (-4° to 140° F)
Working temperature:	-10° to +50° C (14° to 122° F)

	Length mm	Width mm	Depth mm	g	
150.1745	185,0	42,0	30,0	160	





Digital amp pliers 600 A

- Very easy to read display
- Ideal to use for alternating current tests
- Max. pliers opening of 27.0 mm
- Max. measurable conductor diameter of 29.0 mm
- including automatic switch-off after approx. 15 min
- LED display
- Includes probes and temperature gauge
- In a practical storage case

Functions:
- DC and AC voltage
- Resistance
- Diode test
- Continuity test
- Temperature measurement
- Data hold function
- Peak hold function





Technical data:

Alternating current :	200 A, 600 A
DC voltage:	600 V
AC voltage:	600 V
Resistance measurement:	2 megaohm
Temperature accuracy :	23° C ± 5° C
Power requirement:	9V block battery
Storage temperature:	0° to +50° C (14° to 122° F)
Working temperature:	-20° to +60° C (30° to 140° F)

			g	
150.0925	3 pcs	Digital amp pliers 600 A	655	

consists of:

		g	
150.0926	Digital amp pliers 600 V	370	
150.0927	Probe set, 600 A	75	
150.0928	Temperature gauge	20	

Digital amp pliers 1000 A

- Very easy to read display
- Ideal for direct and alternating current tests
- Max. pliers opening of 45.0 mm
- Max. measurable conductor diameter of 40.0 mm
- including automatic switch-off after approx. 15 min
- LED display
- Includes probes and temperature gauge
- Includes 3 x AAA batteries
- In a practical storage case

Functions:
- DC and AC voltage
- Resistance
- Diode test
- Continuity test
- Capacity measurement
- Frequency measurement
- Frequency measurement with pliers
- Temperature measurement
- Duty cycle
- Data hold function
- Peak hold function



Technical data:

Co-current flow:	400 A, 1000 A
Alternating current :	400 A, 1000 A
DC voltage:	1000 V
AC voltage:	700 V
Resistance measurement:	32 megaohm
Capacity measurement:	40 UF
Frequency measurement:	100 kHz
Temperature accuracy :	-40°C / +750°C
Power requirement:	3x 1,5V AAA batteries
Storage temperature:	10° to +50° C (50° to 122° F)
Working temperature:	5° to +35° C (41° to 95° F)

			g	
150.0929	3 pcs	Digital amp pliers 1000 A	480	

consists of:

		g	
150.0928	Temperature gauge	20	
150.0938	Probe set, 1000 A	65	
150.0934	Digital amp pliers 1000A	260	



CIRCUIT BREAKERS

Circuit breaker set (10 A - 15 A - 20 A)

- Ideal for easy and time-saving troubleshooting without stopping work
- No thermal load of the fuse box
- No constant replacement of blown fuses
- The search can be continued immediately by simply resetting the interrupt button
- Long extension cable (3 metres) for easy use
- Suitable for flat and mini fuses with duo adapter
- In durable plastic storage case





Technical data:

Safety fuse:	10 - 15 - 20 A
Nominal voltage:	10 - 14 V DC
Working temperature:	5° - 43°C

			g	
150.0990	4 pcs	Circuit breaker set (10 A - 15 A - 20 A)	945	

consists of:

		g	
150.0991	Automatic circuit breaker 10 A	81	
150.0992	Automatic circuit breaker 15 A	81	
150.0993	Automatic circuit breaker 20 A	81	
150.0994	Extension cable 3 m	254	

TRAILER SOCKET TESTER

12 V towing vehicle tester/tester for trailer receptacle 13-pole

- For DIN 72570 trailer receptacles
- Ideal for easy and time-saving checking of the trailer receptacle function
- The tester can also be used on vehicles without CAN BUS technology
- Suitable for vehicles with CAN BUS technology due to the integrated load resistors
- LEDs with corresponding labelling offer optimal testing properties
- Brake lights, indicators, fog lamps, back-up lights, tail lamps are checked
- Essential for TÜV
- with additional adapter also 7-pin possible
- Sturdy and handy device
- Includes 9V block battery



	Length mm	g	
150.0933	215,0	215	

12 V towing vehicle tester/tester for trailer receptacle set 7 + 13-pole

- For DIN 72570 trailer receptacles
- Ideal for easy and time-saving checking of the trailer receptacle function
- The tester can also be used on vehicles without CAN BUS technology
- Suitable for vehicles with CAN BUS technology due to the integrated load resistors
- LEDs with corresponding labelling offer optimal testing properties
- A 5-metre long cable for easy handling from the driver's seat
- The tester is also suitable for vehicles with electronic trailer controllers due to the load resistors for shutting off fog lamps and for the right/left indicators, which can be activated via the rocker switch on the tester
- Brake lights, indicators, fog lamps, back-up lights, tail lamps are checked
- Function consists of a built-in load being activated with a thermal fuse
- Essential for TÜV
- Includes 13 to 7-pole adapter
- Sturdy and handy device





			g	
150.0995	2 pcs	12 V towing vehicle tester/tester for trailer receptacle set 7 + 13-pole	732	

consists of:

		g	
150.0936	Test device for trailer sockets 13-pole	648	
150.0937	DIN 72570 adapter 13 to 7-pole	93	

CIGARETTE LIGHTER SOCKET TESTER

12 V/24 V cigarette lighter receptacle tester

- The standardised connection ensures a quick and easy connection in the cockpit, front and boot
- This tester makes it possible to check the cigarette lighter receptacle to ensure it is short-circuit-proof
- Suitable for 12 and 24 volts
- Figure height on LED display 9.1 mm
- Safe to use
- The result of the voltage test is displayed via LED
- Sturdy ABS plastic





Technical data:

Display accuracy:	+/- 1 %
Readout:	3 digit
DC voltage range direct voltage:	DC 8 V -30 V
Operating temperature:	-5°C to +60°C

	ϟ	g	
150.0997	8 - 30 V	40	

MULTIMETER

Digital Multimeter incl. test probes

- Specially developed professional multimeter for automotive and commercial electrics and electronics
- Dual LCD display with digital display and bar diagram display (32 segment bar graph)
- With automatic overflow and polarity indication
- With safety mechanism for V, µA/mA/A, therefore incorrect connection is impossible
- Central 19-digit rotary switch
- Large LCD display with 3.1/2-digit, high-contrast display with background lighting
- Charge state shown in display
- With integrated glass fuse 250mA / 600V, 10A / 600V – 32 x 6 mm to protect the circuits
- Includes measuring line set with probes
- With on/off switch and automatic temperature shutdown
- With fold out adjustable foot in protective rubber holster
- Sturdy plastic housing

Functions:
- DC and AC voltage measurement
- DC and AC current measurement
- Resistance measurement
- Diode test (with acoustic signal)
- Continuity test (with acoustic signal)
- Data hold function
- Battery check indicator





Technical data:

Co-current flow:	20 µA - 10 A
DC voltage:	200 mV - 600 V
AC voltage:	200 V - 600 V
Resistance measurement:	200 Ohm - 2 MOhm
Power requirement:	9V block battery
Fuse protection S1 (fine flow):	250mA/600V; 10A/600V
Storage temperature:	-10° to +50° C (14° to 122° F)
Working temperature:	0° to +40° C (32° to 104° F)

	Width mm	Length mm	Depth mm	g	
150.1495	69,0	138,0	31,0	342	



Digital multimeter, including test prods and crocodile clamps

- Specially developed high quality multimeter for automotive and commercial electrics and electronics
- Dual LCD display with digital display and bar diagram display (32 segment bar graph)
- With automatic overflow and polarity indication
- With safety mechanism for V, µA/mA/A, therefore incorrect connection is impossible
- central 11-digit rotary switch
- Automatic measuring range selection
- Large LCD display with 3.1/2-digit, high-contrast display with background lighting
- with integrated glass fuse 300mA/600V; 10A/600V - 32 x 6 mm to protect the circuits
- including double test lead set with test prods and crocodile clips
- With fold out adjustable foot in protective rubber holster
- Sturdy plastic housing

Functions:

- Continuity test (with acoustic signal)
- Temperature measurement
- Diode test (with acoustic signal)
- Capacity
- Frequency measurement
- Data hold function
- Automatic measuring range selection

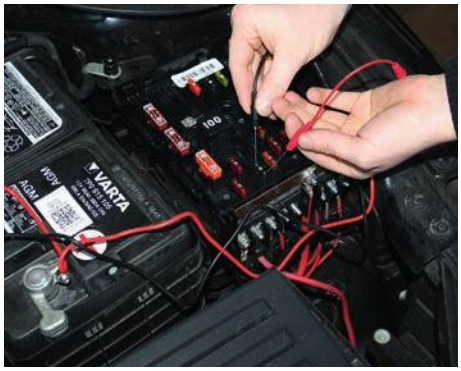




Technical data:

Co-current flow:	326µV - 10A
Alternating current :	326µV - 10A
DC voltage:	326 mV - 600 V
AC voltage:	3,26 V - 600 V
Resistance measurement:	326 Ohm - 32,6 MOhm
Frequency measurement:	32,60 - 150kHz
Temperature measurement:	-55°C ~ 1000°C
Power requirement:	9V block battery
Fuse protection S1 (fine flow):	300mA/600V
Fuse protection S2 (power-test socket):	10A/600V
Storage temperature:	-10° to +50° C (14° to 122° F)
Working temperature:	0° to +40° C (32° to 104° F)

	Width mm	Length mm	Depth mm	g	
150.1480	91,0	189,0	31,5	834	



Multimeter, including test prods, crocodile clamps, inductive clamp and temperature probe

- Specially developed high quality multimeter for automotive and commercial electrics and electronics
- With enhanced function for rpm measurement
- Ignition timing ascertainment up to 8-cylinder engines possible (Dwell function)
- Dual LCD display with digital display and bar diagram display (32 segment bar graph)
- With automatic overflow and polarity indication
- With safety mechanism for V, µA/mA/A, therefore incorrect connection is impossible
- Central 23-digit rotary switch
- With automatic area selection
- Large LCD display with 3.1/2-digit, high-contrast display with background lighting
- With integrated glass fuse 250V (500 mA) – 20 x 5 mm to protect the circuits
- Includes measuring line set with test prods, crocodile clamps, inductive clamp and temperature probe
- With on/off switch and automatic temperature shutdown
- With fold out adjustable foot in protective rubber holster
- Sturdy plastic housing

Functions:

- DC and AC voltage measurement
- DC and AC current measurement
- Resistance measurement
- Dwell
- Diode test (with acoustic signal)
- RPM measurement
- Temperature-automatic shutdown
- Frequency measurement
- Battery check indicator





Technical data:

Co-current flow:	326 µA - 10 A
Alternating current :	326 µA - 10 A
DC voltage:	326 mV - 1000 V
AC voltage:	3,26 V - 750 V
Resistance measurement:	32 - 32000 ohm
Frequency measurement:	32,60 - 200 kHz
Speed measurement:	300 - 12000 rpm
Temperature accuracy :	23° C ± 5° C
Power requirement:	9V block battery
Fuse protection S1 (fine flow):	500mA/350V (20x5mm)
Fuse protection S2 (power-test socket):	10A/250V (30x5mm)
Storage temperature:	-10° to +50° C (14° to 122° F)
Working temperature:	0° to +40° C (32° to 104° F)
Temperature measurement:	-20° to +760° C (-4° to 1400° F)

	Width mm	Length mm	Depth mm	g	
150.2040	91,0	189,0	31,5	500	

MULTIMETER ACCESSORIES

12/24 V diagnostic testing and measuring cable set

- To use with function test lamps and multimeters on consumers and circuits
- Easy and safe signal pick-up through direct contacting
- High-quality checking and testing accessory components for different test leads, test cables and test strips for the professional mechanic
- For daily use in diagnostics and error detection
- Small set composition for versatile use, e.g. for checking poor ground connections, continuity test trials, polarity testing or for operating electrical units, such as starters, wiper motors, electrical window lifters, electrical antennas etc.
- Includes polarity tester with duo LED for checking hall sensors, photo sensors or whether injector plus or earth are controlled. Varies depending on the direction of current flow: red for positive voltage or green for negative voltage
- Flexible silicone cable
- Extra-thin probe
- Applicable up to a maximum of 24 V (10 A)
- Bi-colour test leads for polarity indication





			g
150.1675	13 pcs	12/24 V diagnostic testing and measuring cable set	300

consists of:

	x	Colour code		g
150.1667	1	●	Measuring line extension with double plug and additional socket 1,100 mm (red)	30
150.1668	1	●	Measuring line extension with double plug and additional socket 1,100 mm (black)	30
150.1669	1	●	Injector test probe	30
150.1672	2		Polarity tester with 4.0 mm banana plug connection and duo LED	10
150.1673	2	●	4,0 mm Needle-shaped probe, black	10
150.1674	2	●	4,0 mm Needle-shaped probe, red	10
150.1676	1	●	4,0 mm Test probe, black	10
150.1677	1	●	4,0 mm Test probe, red	10
150.1678	1	●	4,0 mm Crocodile clamp, red	20
150.1679	1	●	4,0 mm Crocodile clamp, black	20

12/24V Master diagnostic test and measurement lead set

- To use with function test lamps and multimeters on consumers and circuits
- Easy and safe signal pick-up through direct contacting
- High-quality checking and testing accessory components for different test leads, test cables and test strips for the professional mechanic
- For daily use in diagnostics and error detection
- Large set composition for versatile use, e.g. for checking poor ground connections, continuity test trials, polarity testing or for operating electrical units, such as starters, wiper motors, electrical window lifters, electrical antennas etc.
- Includes potentiometer with adjustable resistor (0 to 5 kiloohms) for testing temperature sensors or position sensors, such as in throttle valves, tank sensors, intake manifold flap actuators and air control valves of air conditioning systems
- Includes 2 ohm SRS test measuring resistor for diagnosing airbag sensors
- Includes polarity tester with duo LED for checking hall sensors, photo sensors or whether injector plus or earth are controlled. Varies depending on the direction of current flow: red for positive voltage or green for negative voltage
- Flexible silicone cable
- Extra-thin probe
- Applicable up to a maximum of 24 V (10 A)
- Bi-colour test leads for polarity indication





150.0950	92 pcs	12/24V Master diagnostic test and measurement lead set	790

consists of:

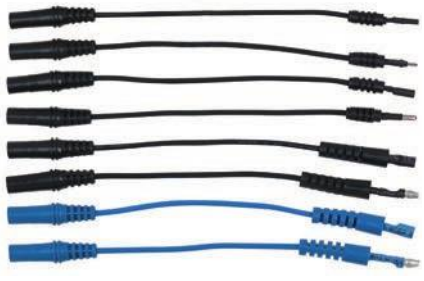
	x	Colour code		
150.1667	2	●	Measuring line extension with double plug and additional socket 1,100 mm (red)	30
150.1668	2	●	Measuring line extension with double plug and additional socket 1,100 mm (black)	30
150.1672	2		Polarity tester with 4.0 mm banana plug connection and duo LED	10
150.1673	2	●	4,0 mm Needle-shaped probe, black	10
150.1674	2	●	4,0 mm Needle-shaped probe, red	10
150.1676	1	●	4,0 mm Test probe, black	10
150.1677	1	●	4,0 mm Test probe, red	10
150.1678	1	●	4,0 mm Crocodile clamp, red	20
150.1679	1	●	4,0 mm Crocodile clamp, black	20
150.0951	2		Potentiometer with adjustable resistance	27
150.0952	2		SRS airbag test measuring resistor (2 ohm)	13
150.0953	2		Plug distributor with input socket on double banana plug connection	13
150.0957	3	●	4.0 mm input socket on 1.5 mm test adapter socket, round (black)	6
150.0974	3	●	4.0 mm input socket on 1.5 mm test adapter plug, round (black)	6
150.0956	3	●	4.0 mm input socket on 2.0 mm test adapter socket, round (black)	6

consists of:

	x	Colour code		
150.0975	3	●	4.0 mm input socket on 2.0 mm test adapter plug, round (black)	6
150.0955	3	●	4.0 mm input socket on 3.5 mm test adapter socket, round (black)	6
150.0976	3	●	4.0 mm input socket on 3.5 mm test adapter plug, round (black)	6
150.0954	3	●	4.0 mm input socket on 4.0 mm test adapter socket, round (blue)	6
150.0977	3	●	4.0 mm input socket on 4.0 mm test adapter plug, round (blue)	6
150.0958	3	●	4.0 mm input socket on 0.8 mm test adapter socket, flat (yellow)	6
150.0973	3	●	4.0 mm input socket on 0.8 mm test adapter plug, flat (yellow)	6
150.0959	4	●	4.0 mm input socket on 1.2 mm test adapter socket, flat (red)	6
150.0972	4	●	4.0 mm input socket on 1.2 mm test adapter plug, flat (red)	6
150.0961	4	●	4.0 mm input socket on 2.0 mm test adapter socket, flat (red)	6
150.0971	4	●	4.0 mm input socket on 2.0 mm test adapter plug, flat (red)	6
150.0962	3	●	4.0 mm input socket on 2.5 mm test adapter socket, flat (blue)	6
150.0969	3	●	4.0 mm input socket on 2.5 mm test adapter plug, flat (blue)	6
150.0964	4	●	4.0 mm input socket on 3.0 mm test adapter socket, flat (yellow)	6
150.0968	4	●	4.0 mm input socket on 3.0 mm test adapter plug, flat (yellow)	6
150.0965	3	●	4.0 mm input socket on 5.0 mm test adapter socket, flat (yellow)	6
150.0967	3	●	4.0 mm input socket on 5.0 mm test adapter plug, flat (yellow)	6
150.0963	3	●	4.0 mm input socket on 6.0 mm test adapter socket, flat (blue)	6
150.0966	3	●	4.0 mm input socket on 6.0 mm test adapter plug, flat (blue)	6

Circular sockets measuring line

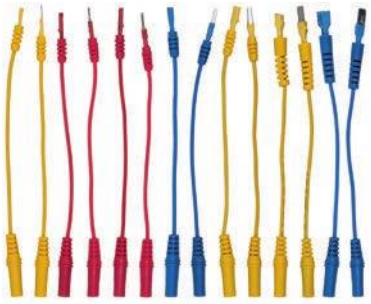
- Insulated
- Universal usage
- Round designs
- With 4.0 mm input socket
- Flexible silicone cable
- Applicable up to a maximum of 24 V (10 A)
- Overall length 175.0 mm



	Colour code		
150.0957	●	4.0 mm input socket on 1.5 mm test adapter socket, round	6
150.0974	●	4.0 mm input socket on 1.5 mm test adapter plug, round	6
150.0956	●	4.0 mm input socket on 2.0 mm test adapter socket, round	6
150.0975	●	4.0 mm input socket on 2.0 mm test adapter plug, round	6
150.0955	●	4.0 mm input socket on 3.5 mm test adapter socket, round	6
150.0976	●	4.0 mm input socket on 3.5 mm test adapter plug, round	6
150.0954	●	4.0 mm input socket on 4.0 mm test adapter socket, round	6
150.0977	●	4.0 mm input socket on 4.0 mm test adapter plug, round	6

Receptacle measuring line

- Insulated
- Universal usage
- Round designs
- With 4.0 mm input socket
- Flexible silicone cable
- Applicable up to a maximum of 24 V (10 A)
- Overall length 175.0 mm



	Colour code		
150.0958	●	4.0 mm input socket on 0.8 mm test adapter socket, flat	6
150.0973	●	4.0 mm input socket on 0.8 mm test adapter plug, flat	6
150.0959	●	4.0 mm input socket on 1.2 mm test adapter socket, flat	6
150.0972	●	4.0 mm input socket on 1.2 mm test adapter plug, flat	6
150.0961	●	4.0 mm input socket on 2.0 mm test adapter socket, flat	6
150.0971	●	4.0 mm input socket on 2.0 mm test adapter plug, flat	6
150.0962	●	4.0 mm input socket on 2.5 mm test adapter socket, flat	6
150.0969	●	4.0 mm input socket on 2.5 mm test adapter plug, flat	6
150.0964	●	4.0 mm input socket on 3.0 mm test adapter socket, flat	6
150.0968	●	4.0 mm input socket on 3.0 mm test adapter plug, flat	6
150.0965	●	4.0 mm input socket on 5.0 mm test adapter socket, flat	6
150.0967	●	4.0 mm input socket on 5.0 mm test adapter plug, flat	6
150.0963	●	4.0 mm input socket on 6.0 mm test adapter socket, flat	6
150.0966	●	4.0 mm input socket on 6.0 mm test adapter plug, flat	6

Measuring line extension 1,100 mm

- Insulated
- Universal usage
- Untwisted cable extension
- With double 4.0 mm banana plug connection and each additional 4.0 mm input socket
- Applicable up to a maximum of 24 V (10 A)
- Flexible silicone cable
- Overall length 1,100 mm



	Colour code		
150.1667	●	Measuring line extension with double plug and additional socket 1,100 mm	30
150.1668	●	Measuring line extension with double plug and additional socket 1,100 mm	30

Duo plug distributor

- Insulated
- Universal usage
- With double 4.0 mm banana plug connection and a 4.0 mm input socket
- Applicable up to a maximum of 24 V (10 A)
- Overall length 50.0 mm



150.0953	Plug distributor with input socket on double banana plug connection	13

SRS airbag test measuring resistor (2 ohm)

- Insulated
- For checking the voltage supply in the SRS airbag system before the installation of a new airbag and for the general diagnosis of the airbag sensors
- With double 4.0 mm banana plug connection
- Applicable up to a maximum of 24 V (10 A)
- Overall length 125.0 mm



150.0952	SRS airbag test measuring resistor (2 ohm)	13

Potentiometer with adjustable resistance

- Insulated
- Quick and easy way to adjust the resistance without a multimeter during a simulation in a circuit with resistance
- With adjustable resistor (0 to 5 kiloohms) for testing temperature sensors or position sensors, such as in throttle valves, tank sensors, intake manifold flap actuators and air control valves of air conditioning systems
- With 4.0 mm banana plug connection
- Applicable up to a maximum of 24 V (10 A)
- Overall length 125.0 mm



150.0951	Potentiometer with adjustable resistance	27

Measuring line extension 6,000 mm

- Insulated
- Universally applicable and ideal as an extension
- With compact and practical Ø 143.0 mm magazine
- Easy to wind up and unwind
- Untwisted cable extension
- With straight 4.0 mm banana plug connection on angled 4.0 mm banana plug connection
- Applicable up to a maximum of 24 V (10 A)
- Flexible silicone cable
- Overall length 6,000 mm



Colour code		
150.0931	●	Measuring line extension 6,000 mm 180
150.0932	●	Measuring line extension 6,000 mm 180

Measuring line extension set

- Insulated
- Universally applicable and ideal as an extension
- With compact and practical Ø 143.0 mm magazine
- Easy to wind up and unwind
- Untwisted cable extension
- With straight 4.0 mm banana plug connection on angled 4.0 mm banana plug connection
- Applicable up to a maximum of 24 V (10 A)
- Flexible silicone cable
- Overall length 6,000 mm



150.0930	2 pcs	Measuring line extension set	360

consists of:

150.0932	Test lead extension 6000mm, red	180
150.0931	Test lead extension 6000mm, black	180

Measuring line extension 30,000 mm

- Insulated
- Universally applicable and ideal as an extension
- Drum with hand knob on both sides
- Easy to wind up and unwind
- Untwisted cable extension
- With angled 4.0 mm banana plug connection and 4.0 mm input socket
- Applicable up to a maximum of 24 V (10 A)
- Flexible silicone cable
- Overall length 30,000 mm





	H mm	B mm	T mm	
150.0935	260,0	195,0	115,0	1,35

Injection probe

- Insulated
- Universal usage
- Allows for the measurement of lines without having to strip the connection at the point to be measured
- For puncturing cables up to 4.0 mm in diameter
- With 4.0 mm input socket
- Applicable up to a maximum of 24 V (10 A)
- Overall length 170.0 mm



150.1669	Injection probe	30

Crocodile clamp

- Insulated
- Universal usage
- With 4.0 mm input socket
- Applicable up to a maximum of 24 V (10 A)
- Overall length 85.0 mm



Colour code			
150.1678	●	4.0 mm input socket on narrow crocodile clamp	20
150.1679	●	4.0 mm input socket on narrow crocodile clamp	20

Test probe

- Insulated
- Universal usage
- Removable probes allow for easy cable extension during testing
- With 4.0 mm input socket
- Applicable up to a maximum of 24 V (10 A)
- Overall length 125.0 mm



Colour code			
150.1676	●	4.0 mm input socket on probe	10
150.1677	●	4.0 mm input socket on probe	10

Needle-shaped probe

- Insulated
- Universal usage
- Ideal for testing narrower and thinner cables, e.g. display units
- With 4.0 mm input socket
- Applicable up to a maximum of 24 V (10 A)
- Cable length 200.0 mm



Colour code			
150.1673	●	4.0 mm input socket on needle-shaped probe	10
150.1674	●	4.0 mm input socket on needle-shaped probe	10

Polarity tester with duo LED

- Insulated
- With duo LED for checking hall sensors, photo sensors or whether injector plus or earth are controlled. Varies depending on the direction of current flow: red for positive voltage or green for negative voltage
- With 4.0 mm banana plug connection
- Applicable up to a maximum of 24 V (10 A)
- Cable length 120.0 mm



150.1672	Polarity tester with 4.0 mm banana plug connection and duo LED	10

DISASSEMBLY AND ASSEMBLY TOOLS

Central cable plug - grooved nut key

- 3-stage adjustable groove nut key
- For the disassembly and assembly of difficult to access central cable connectors on the A-pillar (installed in door frame)
- Easy to use
- Sturdy design

Application range: Ford (Galaxy), **Seat** (Alhambra), **Škoda** and **Volkswagen** (Polo, Sharan)





115.1306	Central cable plug - grooved nut key	240

Relay pliers

- For the secure, straight and damage-free fitting and insertion of the relay
- Can also be used for the new shortened relay
- Easy to use
- Self opening
- Sturdy gripper jaws
- Full plastic body







	Format	Total length mm	g	
115.1307	straight	200	130	

Relay pliers bent at 45°

- Particularly suitable for closely inserted relays that are not accessible in a straight line
- For the secure and damage-free fitting and insertion of the relay
- Can also be used for the new shortened relay
- Easy to use
- Self opening
- Sturdy gripper jaws
- Full plastic body





	Format	Total length mm	g	
115.1308	45° angle	200	130	



CLEANING TOOLS

Contact cleaner tweezers set

- Ideal for professional cleaning at the corroded plug housing
- Suitable for flat and spade-shaped flat plugs as well as for flat plug sockets
- Damage to the sensitive contacts is prevented by the special tweezers shape
- No more unnecessary troubleshooting
- Avoidance of bad connections
- With three different shapes
- Diamond-coated on the tweezers tip and at the end of the tweezers
- Stainless steel
- In a practical storage case







			g	
118.0030	3 pcs	Contact cleaner tweezers set	60	

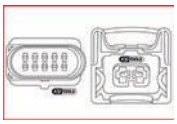
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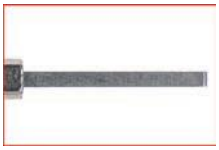
		g	
118.0031	Cleaning tweezers, pointed for small plug	20	
118.0033	Cleaning tweezers, pointed/flat for medium-sized plug	20	
118.0034	Cleaning tweezers, flat for large plug	20	

UNIVERSAL UNLOCKING TOOLS

Universal cable unlocking tool for flat plugs and receptacles

- For the professional and non-destructive release of contacts
- **for manufacturers AMP Tyco JPT, AMP Tyco JT, AMP Tyco SPT, AMP Tyco ST**
- For plug design of flat plug and receptacle
- For plug widths of 2.8 mm, 4.8 mm, 5.8 mm, 6.3 mm
- Unlocking according to principle 2+5
- Universal usage
- With tool tips made of high-quality spring band steel





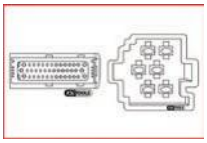




	Plug width mm	Plug type	Release principle	Length mm	g	
154.0011	2,8 / 4,8 / 5,8 / 6,3	Blade terminal / Blade terminal sleeve	2 + 5	117,0	20	

Universal cable unlocking tool for flat plugs and receptacles

- For the professional and non-destructive release of contacts
- **for manufacturers AMP Tyco MT I, AMP Tyco MT II**
- For plug design of flat plug and receptacle
- For plug widths of 1.6 mm
- Unlocking according to principle 2+5
- Universal usage
- With tool tips made of high-quality spring band steel





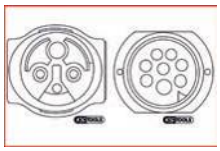




	Plug width mm	Plug type	Release principle	Length mm	g	
154.0012	1,6	Blade terminal / Blade terminal sleeve	2 + 5	117,0	18	

Universal cable unlocking tool for round plugs and circular sockets

- For the professional and non-destructive release of contacts
- **For manufacturers AMP Tyco CI2, AMP Tyco Mate-N-Lok, GHW RAM, GHW RSA2**
- For plug design of round plugs and circular sockets
- For plug diameters of 1.5 mm, 3.5 mm
- Unlocking according to principle 1
- Universal usage
- With tool tips made of high-quality spring band steel







	Plug Ø mm	Plug type	Release principle	Length mm	g	
154.0013	1,5 / 3,5	Round connector / Round connector sleeve	2 + 5	107,0	16	



Unlocking tool

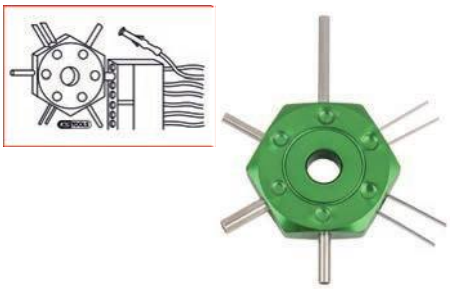
- Universal application in the field of electrics in passenger vehicles
- Precision tool to repair a breakdown or failure electrical links
- Ideal for Pack Con and Weather Pack connection terminals on GM C3 systems
- With six different unlocking connections
- Professional and non destructive release of contacts



		g
150.1231	Unlocking tool	60

Unlocking tool

- Universal application in the field of electrics in passenger vehicles
- Precision tool to repair a breakdown or failure electrical links
- The barbed hooks are pressed onto the connecting terminal via the forks of the tool during the unlocking process
- Cables with plugs can then pulled out easily
- With six different unlocking connections
- Professional and non destructive release of contacts



		g
150.1232	Unlocking tool	60

UNLOCKING TOOLS FOR RECEPTACLES/FLAT PLUGS

Cable unlocking tool for receptacles

- For the professional and non-destructive release of contacts
- **for manufacturer KOSTAL MQ**
- For plug design receptacle
- for plug-in widths 0.6 mm
- Unlocking according to Principle 8
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel



	Plug width mm	Plug type	Release principle	Length mm	g
154.0113	0,6	Blade terminal sleeve	8	115,0	22

Cable unlocking tool for flat plugs and receptacles

- For the professional and non-destructive release of contacts
- **for manufacturer Delphi Ducon**
- For plug design of flat plug and receptacle
- For plug widths of 0.8 mm, 1.5 mm
- Unlocking according to principle 5
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

Application range: Opel, **Renault** etc.



	Plug width mm	Plug type	Release principle	Length mm	g
150.1299	0,8 / 1,5	Blade terminal / Blade terminal sleeve	5	139,0	20

Cable unlocking tool for flat plugs

- For the professional and non-destructive release of contacts
- **for manufacturer KOSTAL MLK**
- For plug design of flat plug
- For plug widths of 1.2 mm
- Unlocking according to principle 2B
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel



	Plug width mm	Plug type	Release principle	Length mm	g
154.0115	1,2	Blade terminal	2B	141,0	30

Cable unlocking tool for receptacles

- For the professional and non-destructive release of contacts
- **for manufacturer KOSTAL MLK**
- For plug design receptacle
- For plug widths of 1.2 mm
- Unlocking according to principle 5
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel



	Plug width mm	Plug type	Release principle	Length mm	g
154.0102	1,2	Blade terminal sleeve	5	139,0	28

Cable unlocking tool for receptacles

- For the professional and non-destructive release of contacts
- **for manufacturer KOSTAL MLK**
- For plug design receptacle
- For plug widths of 1.2 mm
- Unlocking according to principle 2B
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel



	Plug width mm	Plug type	Release principle	Length mm	g
154.0114	1,2	Blade terminal sleeve	2B	140,0	39

Cable unlocking tool for receptacles

- For the professional and non-destructive release of contacts
- **for manufacturer KOSTAL MLK USC**
- For plug design receptacle
- For plug widths of 1.2 mm
- Unlocking according to principle 5
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel



	Plug width mm	Plug type	Release principle	Length mm	g
154.0116	1,2	Blade terminal sleeve	5	151,0	25

Cable unlocking tool for flat plugs

- For the professional and non-destructive release of contacts
- **for manufacturer KOSTAL MLK**
- For plug design of flat plug
- For plug widths of 1.2 mm
- Unlocking according to principle 1
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel



	Plug width mm	Plug type	Release principle	Length mm	g
154.0103	1,2	Blade terminal	1	138,0	17

Cable unlocking tool for flat plugs and receptacles

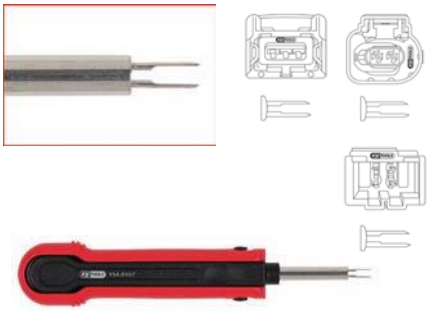
- For the professional and non-destructive release of contacts
- **For manufacturers AMP Tyco MCP**
- For plug design of flat plug and receptacle
- For plug widths of 1.2 mm
- Unlocking according to principle 5
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel



	Plug width mm	Plug type	Release principle	Length mm	g
154.0104	1,2	Blade terminal / Blade terminal sleeve	5	139,0	16

Cable unlocking tool for receptacles

- For the professional and non-destructive release of contacts
- **For manufacturers AMP Tyco MCP**
- For plug design receptacle
- For plug widths of 1.5 mm
- Unlocking according to principle 2
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel



	Plug width mm	Plug type	Release principle	Length mm	g
154.0107	1,5	Blade terminal sleeve	2	139,0	20

Cable unlocking tool for receptacles

- For the professional and non-destructive release of contacts
- **For manufacturer AMP Tyco MT I**
- For plug design of flat plug and receptacle
- For plug widths of 1.6 mm
- Unlocking according to principle 5
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel



	Plug width mm	Plug type	Release principle	Length mm	g
150.1268	1,6	Blade terminal sleeve	5	137,0	30

Cable unlocking tool for flat plugs and receptacles

- For the professional and non-destructive release of contacts
- **For manufacturers AMP Tyco MQS**
- For plug design of flat plug and receptacle
- For plug widths of 1.2 mm
- Unlocking according to principle 1
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel



	Plug width mm	Plug type	Release principle	Length mm	g
154.0105	1,2	Blade terminal / Blade terminal sleeve	1	123,0	14

Cable unlocking tool for flat plugs and receptacles

- For the professional and non-destructive release of contacts
- **For manufacturers AMP Tyco Superseal**
- For plug design of flat plug and receptacle
- For plug widths of 1.5 mm
- Unlocking according to principle 5
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel



	Plug width mm	Plug type	Release principle	Length mm	g
154.0108	1,5	Blade terminal / Blade terminal sleeve	5	137,0	16

Cable unlocking tool for receptacles

- For the professional and non-destructive release of contacts
- **For manufacturer Delphi AF2**
- For plug design receptacle
- For plug widths of 1.6 mm
- Unlocking according to principle 2
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel



	Plug width mm	Plug type	Release principle	Length mm	g
154.0111	1,6	Blade terminal sleeve	2	139,0	35

Cable unlocking tool for flat plugs and receptacles

- For the professional and non-destructive release of contacts
- **For manufacturers AMP Tyco MQS**
- For plug design of flat plug and receptacle
- For plug widths of 1.2 mm
- Unlocking according to the lateral principle
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel



	Plug width mm	Plug type	Release principle	Length mm	g
154.0106	1,2	Blade terminal / Blade terminal sleeve	side-wise	134,0	25

Cable unlocking tool for flat plugs and receptacles

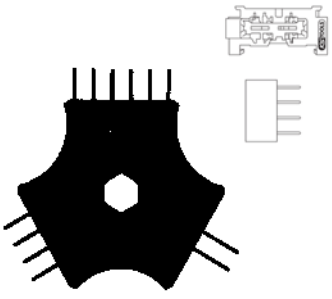
- For the professional and non-destructive release of contacts
- **For manufacturer AMP Tyco MT II**
- For plug design of flat plug and receptacle
- For plug widths of 1.6 mm
- Unlocking according to principle 2
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel



	Plug width mm	Plug type	Release principle	Length mm	g
150.1265	1,6	Blade terminal / Blade terminal sleeve	2	131,0	30

Cable unlocking tool for flat plugs

- For the professional and non-destructive release of contacts
- **For manufacturer GHW GSK**
- For plug design of flat plug
- For plug widths of 1.6 mm
- Unlocking according to principle 2
- With tool tips made of high-quality spring band steel



	Plug width mm	Plug type	Release principle	Length mm	g
154.0112	1,6	Blade terminal / Blade terminal sleeve	2	65,0	27

Cable unlocking tool for receptacles

- For the professional and non-destructive release of contacts
- **For manufacturer AMP Tyco E-95**
- For plug design receptacle
- For plug widths of 1.65 mm
- Unlocking according to principle 2
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel



	Plug width mm	Plug type	Release principle	Length mm	g	
150.1289	1,65	Blade terminal sleeve	2	137,0	30	

Cable unlocking tool for flat plugs

- For the professional and non-destructive release of contacts
- **For manufacturers AMP Tyco JT, AMP Tyco JPT asy**
- For plug design of flat plug
- For plug widths of 2.8 mm
- Unlocking according to principle 3
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel



	Plug width mm	Plug type	Release principle	Length mm	g	
150.1275	2,8	Blade terminal	3	137,0	30	

Cable unlocking tool for receptacles

- For the professional and non-destructive release of contacts
- **For manufacturer KOSTAL SLK**
- For plug design receptacle
- For plug widths of 2.8 mm
- Unlocking according to principle 2
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel



	Plug width mm	Plug type	Release principle	Length mm	g	
154.0119	2,8	Blade terminal sleeve	2	135,0	43	

Cable unlocking tool for flat plugs and receptacles

- For the professional and non-destructive release of contacts
- **For manufacturers AMP Tyco JT, AMP Tyco ST, Deutsch DT**
- For plug design of flat plug and receptacle
- For plug widths of 2.8 mm
- Unlocking according to principle 5
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel



	Plug width mm	Plug type	Release principle	Length mm	g	
150.1264	2,8	Blade terminal / Blade terminal sleeve	5	137,0	30	

Cable unlocking tool for receptacles

- For the professional and non-destructive release of contacts
- **For manufacturer GHW MDK**
- For plug design receptacle
- For plug widths of 2.8 mm
- Unlocking according to principle 3
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel



	Plug width mm	Plug type	Release principle	Length mm	g	
154.0117	2,8	Blade terminal sleeve	3	138,0	16	

Cable unlocking tool for flat plugs and receptacles

- For the professional and non-destructive release of contacts
- **For manufacturer KOSTAL SLK**
- For plug design of flat plug and receptacle
- For plug widths of 2.8 mm
- Unlocking according to principle 2/primary and secondary
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel



	Plug width mm	Plug type	Release principle	Length mm	g	
154.0120	2,8	Blade terminal / Blade terminal sleeve	2 Primarily- and Secondary	165,0	54	

Cable unlocking tool for flat plugs

- For the professional and non-destructive release of contacts
- Universal usage
- For plug design of flat plug
- For plug widths of 2.8 mm
- Unlocking according to principle 2
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel



	Plug width mm	Plug type	Release principle	Length mm	g	
150.1288	2,8	Blade terminal	2	137,0	20	

Cable unlocking tool for flat plugs and receptacles

- For the professional and non-destructive release of contacts
- **For manufacturer KOSTAL SLK**
- For plug design of flat plug and receptacle
- For plug widths of 2.8 mm
- Unlocking according to principle 2/primary and secondary
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel



	Plug width mm	Plug type	Release principle	Length mm	g	
154.0118	2,8	Blade terminal / Blade terminal sleeve	2 Primarily- and Secondary	166,0	53	

Cable unlocking tool for flat plugs and receptacles

- For the professional and non-destructive release of contacts
- **For manufacturers AMP Tyco MCP**
- For plug design of flat plug and receptacle
- For plug widths of 2.8 mm
- Unlocking according to principle 2
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel



	Plug width mm	Plug type	Release principle	Length mm	g	
154.0121	2,8	Blade terminal / Blade terminal sleeve	2	139,0	20	

Cable unlocking tool for flat plugs and receptacles

- For the professional and non-destructive release of contacts
- **For manufacturer AMP Tyco SPT**
- For plug design of flat plug and receptacle
- For plug widths of 4.8 mm, 5.8 mm, 6.3 mm
- Unlocking according to principle 2
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel



	Plug width mm	Plug type	Release principle	Length mm	g
154.0122	4,8 / 5,8 / 6,3	Blade terminal / Blade terminal sleeve	2	139,0	18

Cable unlocking tool for flat plugs and receptacles

- For the professional and non-destructive release of contacts
- **For manufacturers AMP Tyco MCP**
- For plug design of flat plug and receptacle
- For plug widths of 4.8 mm
- Unlocking according to principle 2
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel



	Plug width mm	Plug type	Release principle	Length mm	g
154.0125	4,8	Blade terminal / Blade terminal sleeve	2	139,0	36

Cable unlocking tool for flat plugs and receptacles

- For the professional and non-destructive release of contacts
- **For manufacturer KOSTAL SLK**
- For plug design of flat plug and receptacle
- For plug widths of 5.8 mm
- Unlocking according to principle 1
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel



	Plug width mm	Plug type	Release principle	Length mm	g
154.0128	5,8	Blade terminal	1	167,0	71

Cable unlocking tool for flat plugs and receptacles

- For the professional and non-destructive release of contacts
- **for manufacturers AMP Tyco JPT, AMP Tyco SPT, AMP Tyco TAB, Delphi HVF2, GHW DFK, GHW MDK 3**
- For plug design of flat plug and receptacle
- For plug widths of 2.8 mm, 4.8 mm, 5.8 mm, 6.3 mm
- Unlocking according to principle 2
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel



	Plug width mm	Plug type	Release principle	Length mm	g
150.1269	2,8 / 4,8 / 5,8 / 6,3	Blade terminal / Blade terminal sleeve	2	139,0	30

Cable unlocking tool for flat plugs and receptacles

- For the professional and non-destructive release of contacts
- **for manufacturer Delphi Ducon**
- For plug design of flat plug and receptacle
- For plug widths of 4.8 mm, 6.3 mm
- Unlocking according to principle 2
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel



	Plug width mm	Plug type	Release principle	Length mm	g
150.1285	4,8 / 6,3	Blade terminal / Blade terminal sleeve	2	139,0	30

Cable unlocking tool for receptacles

- For the professional and non-destructive release of contacts
- **For manufacturer KOSTAL SLK**
- For plug design receptacle
- For plug widths of 5.8 mm
- Unlocking according to principle 2
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel



	Plug width mm	Plug type	Release principle	Length mm	g
154.0129	5,8	Blade terminal sleeve	2	169,0	69

Cable unlocking tool for flat plugs

- For the professional and non-destructive release of contacts
- **For manufacturer AMP Tyco 4.8 asy**
- For plug design of flat plug
- For plug widths of 4.8 mm
- Unlocking according to principle 3
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel



	Plug width mm	Plug type	Release principle	Length mm	g
150.1276	4,8	Blade terminal	3	139,0	20

Cable unlocking tool for flat plugs and receptacles

- For the professional and non-destructive release of contacts
- **For manufacturer AMP Tyco ST**
- For plug design of flat plug and receptacle
- For plug widths of 5.8 mm
- Unlocking according to principle 5
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel



	Plug width mm	Plug type	Release principle	Length mm	g
150.1273	5,8	Blade terminal / Blade terminal sleeve	5	137,0	30

Cable unlocking tool for flat plugs and receptacles

- For the professional and non-destructive release of contacts
- **For manufacturer KOSTAL LSK 8 primary**
- For plug design of flat plug and receptacle
- For plug widths of 6.3 mm
- Unlocking according to principle 2
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel



	Plug width mm	Plug type	Release principle	Length mm	g
154.0130	6,3	Blade terminal / Blade terminal sleeve	2	139,0	34

Cable unlocking tool for flat plugs and receptacles

- For the professional and non-destructive release of contacts
- **For manufacturer KOSTAL LSK**
- For plug design of flat plug and receptacle
- For plug widths of 6.3 mm, 8.0 mm
- Unlocking according to principle 2/primary and secondary
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel





	Plug width mm	Plug type	Release principle	Length mm	g
154.0131	6,3 / 8,0	Blade terminal / Blade terminal sleeve	2 Primar- ily- and Second- ary	149,0	39

Cable unlocking tool for flat plugs and receptacles

- For the professional and non-destructive release of contacts
- **For manufacturer AMP Tyco MPT**
- For plug design of flat plug and receptacle
- For plug widths of 9.5 mm
- Unlocking according to principle 2
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel





	Plug width mm	Plug type	Release principle	Length mm	g
154.0134	9,5	Blade terminal / Blade terminal sleeve	2	135,0	16

Cable unlocking tool for receptacles

- For the professional and non-destructive release of contacts
- **For manufacturer KOSTAL PLK**
- For plug design receptacle
- For plug widths of 14.5 mm
- Unlocking according to principle 5
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel





	Plug width mm	Plug type	Release principle	Length mm	g
154.0123	14,5	Blade terminal sleeve	5	137,0	27

Cable unlocking tool for receptacles

- For the professional and non-destructive release of contacts
- **For manufacturer GHW 6.3**
- For plug design receptacle
- For plug widths of 6.3 mm
- Unlocking according to principle 6
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel





	Plug width mm	Plug type	Release principle	Length mm	g
150.1267	6,3	Blade terminal sleeve	6	139,0	30

Cable unlocking tool for receptacles

- For the professional and non-destructive release of contacts
- **For manufacturer AMP Tyco MPT**
- For plug design receptacle
- For plug widths of 9.5 mm
- Unlocking according to principle 2
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel





	Plug width mm	Plug type	Release principle	Length mm	g
154.0135	9,5	Blade terminal sleeve	2	139,0	34

Unlocking tool

- For the professional and non-destructive release of contacts
- **For manufacturer KOSTAL PLK**
- For plug widths of 14.5 mm



	Plug width mm	Length mm	g
154.0124	14,5	200,0	274

Cable unlocking tool for flat plugs and receptacles

- For the professional and non-destructive release of contacts
- **for manufacturer Delphi Ducon**
- For plug design of flat plug and receptacle
- For plug widths of 9.5 mm
- Unlocking according to principle 2
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel





	Plug width mm	Plug type	Release principle	Length mm	g
150.1287	9,5	Blade terminal / Blade terminal sleeve	2	143,0	30

Cable unlocking tool for receptacles

- For the professional and non-destructive release of contacts
- **For manufacturers AMP Tyco MPT, GHW Maxi-DFK**
- For plug design receptacle
- For plug widths of 9.5 mm
- Unlocking according to principle 2
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

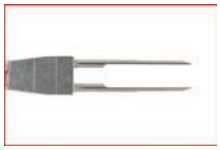




	Plug width mm	Plug type	Release principle	Length mm	g
150.1266	9,5	Blade terminal sleeve	2	156,0	30

Cable unlocking tool for receptacles

- For the professional and non-destructive release of contacts
- **For manufacturer KOSTAL PLK**
- For plug design receptacle
- For plug widths of 14.5 mm
- Unlocking according to principle 2
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

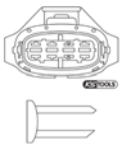




	Plug width mm	Plug type	Release principle	Length mm	g
154.0137	14,5	Blade terminal sleeve	2	156,0	36

Cable unlocking tool for receptacles

- For the professional and non-destructive release of contacts
- **for manufacturers AMP Tyco SensorTime, Bosch BDK**
- For plug design receptacle
- For plug widths of 2.8 mm
- Unlocking according to principle 2
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel


	Plug width mm	Plug type	Release principle	Length mm	g	
154.0138	2,8	Blade terminal sleeve	2	139,0	21	

UNLOCKING TOOLS FOR CIRCULAR SOCKET/ROUND PLUGS

Cable unlocking tool for round plugs and circular sockets

- For the professional and non-destructive release of contacts
- **For manufacturer AMP Tyco 1.5**
- For plug design of round plugs and circular socket
- For plug diameters of 1.2 mm
- Unlocking according to principle 1
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel





	Plug Ø mm	Plug type	Release principle	Length mm	g	
154.0201	1,2	Round connector / Round connector sleeve	1	155,0	51	

Replacement sleeve:

		g	
154.0202	Sleeve Ø 1.2 mm (AMP Tyco 1.5)	4	

Cable unlocking tool for round plugs

- For the professional and non-destructive release of contacts
- **For manufacturer KOSTAL LKS**
- For plug design of round plug
- For plug diameters of 1.5 mm
- Unlocking according to principle 1
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel





	Plug Ø mm	Plug type	Release principle	Length mm	g	
154.0203	1,5	Round connector	1	160,0	37	

Replacement sleeve:

		g	
150.1247	Sleeve Ø 1.5 mm (KOSTAL LKS)	1	

Cable unlocking tool for circular sockets

- For the professional and non-destructive release of contacts
- **For manufacturer KOSTAL LKS**
- For plug design of circular socket
- For plug diameters of 1.5 mm
- Unlocking according to principle 1
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel





	Plug Ø mm	Plug type	Release principle	Length mm	g	
154.0205	1,5	Round connector sleeve	1	152,0	36	

Replacement sleeve:

		g	
154.0206	Sleeve Ø 1.5 mm (KOSTAL LKS)	1	

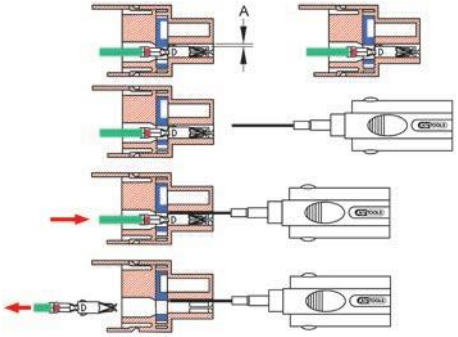
Cable unlocking tool for circular sockets

- For the professional and non-destructive release of contacts
- **For manufacturer LBK**
- For plug design of circular socket
- For plug diameters of 1.5 mm
- Unlocking according to principle 5
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel





	Plug Ø mm	Plug type	Release principle	Length mm	g	
154.0207	1,5	Round connector sleeve	5	139,0	20	



Cable unlocking tool for circular sockets

- For the professional and non-destructive release of contacts
- **For manufacturer AMP Tyco 1.5**
- For plug design of circular socket
- For plug diameters of 1.5 mm
- Unlocking according to principle 1
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel




	Plug Ø mm	Plug type	Release principle	Length mm	g	
154.0208	1,5	Round connector sleeve	1	157,0	36	

Replacement sleeve:

		g	
154.0209	Sleeve Ø 1.5 mm (AMP Tyco 1.5)	1	

Cable unlocking tool for round plugs and circular sockets

- For the professional and non-destructive release of contacts
- **For manufacturers AMP Tyco 2.3, Delphi 2.3, GHW 2.3**
- For plug design of round plugs and circular socket
- For plug diameters of 2.5 mm
- Unlocking according to principle 1
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel



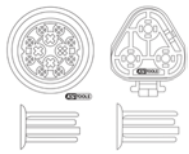

	Plug Ø mm	Plug type	Release principle	Length mm	g	
150.1263	2,3	Round connector / Round connector sleeve	1	164,0	30	

Replacement sleeve:

		g	
150.1270	Sleeve Ø 1.5 mm (AMP Tyco 1.5)	10	

Cable unlocking tool for circular sockets

- For the professional and non-destructive release of contacts
- **For manufacturers GHW MKS, GHW MKR**
- For plug design of circular socket
- For plug diameters of 1.5 mm
- Unlocking according to principle 2
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel


	Plug Ø mm	Plug type	Release principle	Length mm	g	
150.1290	1,5	Round connector sleeve	2	139,0	30	

Cable unlocking tool for circular sockets

- For the professional and non-destructive release of contacts
- **For manufacturer KOSTAL LKS**
- For plug design of circular socket
- For plug diameters of 1.5 mm
- Unlocking according to principle 1
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel



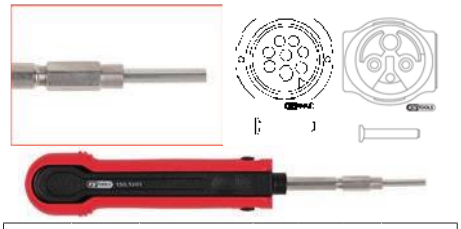
	Plug width mm	Plug type	Release principle	Length mm	g	
154.0132	1,5	Round connector sleeve	1	151,0	29	

Replacement sleeve:

		g	
154.0133	Sleeve Ø 4.0 mm (KOSTAL LKS 4.0)	3	

Cable unlocking tool for round plugs

- For the professional and non-destructive release of contacts
- **For manufacturer AMP Tyco 1.5**
- For plug design of round plug
- For plug diameters of 1.5 mm
- Unlocking according to principle 1
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel



	Plug Ø mm	Plug type	Release principle	Length mm	g	
150.1261	1,5	Round connector	1	160,0	30	

Replacement sleeve:

		g	
150.1272	Sleeve Ø 2.3 mm (AMP Tyco 2.3, Delphi 2.3, GHW 2.3)	10	

Cable unlocking tool for round plugs and circular sockets

- For the professional and non-destructive release of contacts
- **For manufacturer KOSTAL RK**
- For plug design of round plugs and circular socket
- For plug diameters of 2.5 mm
- Unlocking according to principle 4
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel



	Plug Ø mm	Plug type	Release principle	Length mm	g	
150.1249	2,5	Round connector / Round connector sleeve	4	138,0	16	

Cable unlocking tool for round plugs and circular sockets

- For the professional and non-destructive release of contacts
- **For manufacturer GHW VKR Plus**
- For plug design of round plugs and circular socket
- For plug diameters of 2.5 mm
- Unlocking according to principle 2
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel



	Plug Ø mm	Plug type	Release principle	Length mm	g	
150.1291	2,5	Round connector / Round connector sleeve	2	138,0	30	

Cable unlocking tool for round plugs and circular sockets

- For the professional and non-destructive release of contacts
- **For manufacturer AMP Tyco 2.5**
- For plug design of round plugs and circular socket
- For plug diameters of 2.5 mm
- Unlocking according to principle 1
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel



	Plug Ø mm	Plug type	Release principle	Length mm	g	
150.1257	2,5	Round connector / Round connector sleeve	1	150,0	33	

Replacement sleeve:

		g	
154.0218	Sleeve Ø 2.5 mm (AMP Tyco 2.5)	1	

Cable unlocking tool for round plugs and circular sockets

- For the professional and non-destructive release of contacts
- **For manufacturer AMP Tyco 3.5**
- For plug design of round plugs and circular socket
- For plug diameters of 3.5 mm
- Unlocking according to principle 1
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel



	Plug Ø mm	Plug type	Release principle	Length mm	g	
150.1262	3,5	Round connector / Round connector sleeve	1	150,0	30	

Replacement sleeve:

		g	
150.1271	Sleeve Ø 3.5 mm (AMP Tyco 3.5)	10	

Cable unlocking tool for round plugs and circular sockets

- For the professional and non-destructive release of contacts
- **For manufacturer KOSTAL RK**
- For plug design of round plugs and circular socket
- For plug diameters of 4.0 mm
- Unlocking according to principle 1
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel



	Plug Ø mm	Plug type	Release principle	Length mm	g	
154.0221	4,0	Round connector / Round connector sleeve	1	156,0	70	

Replacement sleeve:

		g	
154.0222	Sleeve Ø 4.0 mm (KOSTAL RK 4.0)	1	

Cable unlocking tool for round plugs and circular sockets

- For the professional and non-destructive release of contacts
- **For manufacturer KOSTAL RK**
- For plug design of round plugs and circular socket
- For plug diameters of 4.0 mm
- Unlocking according to principle 4
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel



	Plug Ø mm	Plug type	Release principle	Length mm	g	
150.1248	4,0	Round connector / Round connector sleeve	4	138,0	17	

Cable unlocking tool for round plugs and circular sockets

- For the professional and non-destructive release of contacts
- **For manufacturer ABS**
- For plug design of round plugs and circular socket
- For plug diameters of 4.0 mm
- Unlocking according to principle 1
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel



	Plug Ø mm	Plug type	Release principle	Length mm	g	
150.1292	4,0	Round connector / Round connector sleeve	1	172,0	30	

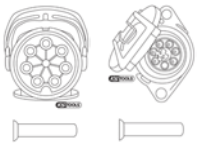
Replacement sleeve:

		g
154.0225	Sleeve Ø 4.0 mm (ABS 4.0)	3

Cable unlocking tool for round plugs and circular sockets

- For the professional and non-destructive release of contacts
- **For manufacturer ABS**
- For plug design of round plugs and circular socket
- For plug diameters of 5.5 mm
- Unlocking according to principle 1
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel







	Plug Ø mm	Plug type	Release principle	Length mm	g
150.1256	5,5	Round connector / Round connector sleeve	1	172,0	38

Replacement sleeve:

		g
154.0227	Sleeve Ø 5.5 mm (ABS 5.5)	2

UNLOCKING TOOLS FOR HOUSING

Unlocking tool for housing

- For the professional and non-destructive release of housing
- Universal
- For plug design of the housing
- For secondary lock
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel







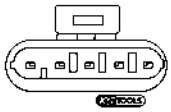
	Plug type	Length mm	g
154.0139	Housing	151,0	22



Unlocking tool for housing

- For the professional and non-destructive release of housing
- For manufacturers AMP Tyco Superseal, Deutsch DT
- For plug design of the housing
- For secondary lock
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel







	Plug width mm	Plug type	Release principle	Length mm	g
154.0228	1,6	Housing	2	140,0	25

UNLOCKING TOOL SETS

Passenger vehicle unlocking tool set for the new generation of vehicles

- Specially designed for BMW, Mercedes, Opel, Renault, Volkswagen, Audi, Seat, Škoda, NKW etc. plug-in contacts
- For the professional and non-destructive release of contacts
- For manufacturers AMP Tyco (JT, JPT, MCP, ST,SPT, TAB), Delphi (HVF2, Ducon), Deutsch DT, GHW (DFK, MDK3), KOSTAL (MLK, RK)
- Contains the most common unlocking tools for the new generation of vehicles



			g
154.0140	8 pcs	Passenger vehicle unlocking tool set for the new generation of vehicles	1180

consists of:

		g
150.1264	Unlocking Tool for blade terminal/blade terminal sleeve 2,8 mm (AMP Tyco JT, AMP Tyco ST, Deutsch DT)	30
154.0107	Unlocking Tool for blade terminal sleeve 1,5 mm (AMP Tyco MCP)	20
150.1269	Unlocking Tool for blade terminal/blade terminal sleeve 2,8 mm, 4,8 mm, 5,8 mm, 6,3 mm (AMP Tyco JPT, AMP Tyco SPT, AMP Tyco, TAB, Delphi HVF2, GHW DFK, GHW MDK 3)	30
150.1265	Unlocking Tool for blade terminal sleeve 1,5 mm (AMP Tyco MT II)	30
154.0102	Unlocking Tool for blade terminal sleeve 1,2 mm (KOSTAL MLK)	28
150.1248	Unlocking Tool for round plug/round connector sleeve 4,0 mm (KOSTAL RK)	17
150.1299	Unlocking Tool for blade terminal/blade terminal sleeve 0,8 mm, 1,5 mm (Delphi Ducon)	20
154.0104	Unlocking Tool for blade terminal/blade terminal sleeve 1,2 mm (AMP Tyco MCP)	16

Passenger vehicle unlocking tool set for the older generation of vehicles

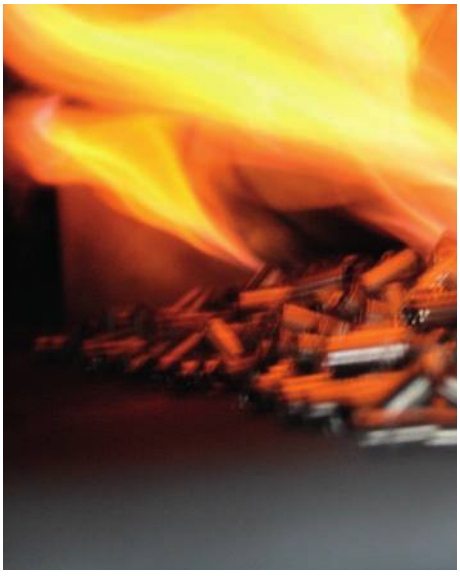
- Specially designed for BMW, Mercedes, Opel, Renault, Volkswagen, Audi, Seat, Škoda, NKW etc. plug-in contacts
- For the professional and non-destructive release of contacts
- For manufacturers AMP Tyco (MT1, MPT, Superseal, 1,5 and 3,5), GHW 6,3, KOSTAL RK
- Contains the most common unlocking tools for the older generation of vehicles



			g
154.0145	8 pcs	Passenger vehicle unlocking tool set for the older generation of vehicles	1180

consists of:

		g
150.1263	Unlocking Tool for round plug/round connector sleeve 2,3 mm (AMP Tyco 2,3, Delphi 2,3, GHW 2,3)	30
154.0203	Unlocking Tool for round plug 1,5 mm (KOSTAL LKS)	37
154.0108	Unlocking Tool for blade terminal/blade terminal sleeve 1,5 mm (AMP Tyco Superseal)	16
150.1268	Unlocking Tool for blade terminal/blade terminal sleeve 1,6 mm (AMP Tyco MT I)	30
154.0134	Unlocking Tool for blade terminal/blade terminal sleeve 9,5 mm (AMP Tyco MPT)	16
150.1267	Unlocking Tool for blade terminal sleeve 6,3 mm (GHW 6,3)	30
150.1248	Unlocking Tool for round plug/round connector sleeve 4,0 mm (KOSTAL RK)	17
150.1262	Unlocking Tool for round plug/round connector sleeve 3,5 mm (AMP Tyco 3,5)	30



Unlocking tool set for Renault/PSA plug-in contacts

- Specially designed for Renault / PSA plug-in contacts
- For the professional and non-destructive release of contacts
- For manufacturers AMP Tyco (JT, MT1, MPT, ST, 2 and 3), Delphi (Ducon, 2 and 3), Deutsch DT, GHW (2,3 and 6,3)
- Contains the most common unlocking tools for the new generation of vehicles



			g	
154.0160	7 pcs	Unlocking tool set for Renault/PSA plug-in contacts	1150	

consists of:

		g	
150.1268	Unlocking Tool for blade terminal/blade terminal sleeve 1,6 mm (AMP Tyco MT I)	30	
150.1264	Unlocking Tool for blade terminal/blade terminal sleeve 2,8 mm (AMP Tyco JT, AMP Tyco ST, Deutsch DT)	30	
150.1285	Unlocking Tool for blade terminal/blade terminal sleeve 4,8 mm, 6,3 mm (Delphi Ducon)	30	
154.0134	Unlocking Tool for blade terminal/blade terminal sleeve 9,5 mm (AMP Tyco MPT)	16	
150.1267	Unlocking Tool for blade terminal sleeve 6,3 mm (GHW 6,3)	30	
150.1261	Unlocking Tool for round plug 1,5 mm (AMP Tyco 1,5)	30	
150.1299	Unlocking Tool for blade terminal/blade terminal sleeve 0,8 mm, 1,5 mm (Delphi Ducon)	20	

Unlocking tool set for Opel/GM plug-in contacts

- Specially aligned for Opel / GM plug in contacts
- For the professional and non-destructive release of contacts
- For manufacturers AMP Tyco (JT, JPT, MT I, MT II, MQS, ST, SPT), Delphi (AF2, Ducon, HVF2), Deutsch DT, GHW (DFK, MDK3, 6,3)
- Contains the most common unlocking tools for the new generation of vehicles



			g	
154.0155	10 pcs	Unlocking tool set for Opel/GM plug-in contacts	1255	

consists of:

		g	
150.1299	Unlocking Tool for blade terminal/blade terminal sleeve 0,8 mm, 1,5 mm (Delphi Ducon)	20	
150.1268	Unlocking Tool for blade terminal/blade terminal sleeve 1,6 mm (AMP Tyco MT I)	30	

consists of:

		g	
150.1265	Unlocking Tool for blade terminal sleeve 1,5 mm (AMP Tyco MT II)	30	
154.0106	Unlocking Tool for blade terminal/blade terminal sleeve 1,2 mm (AMP Tyco MQS)	25	
154.0111	Unlocking Tool for blade terminal sleeve 1,6 mm (Delphi AF2)	35	
150.1264	Unlocking Tool for blade terminal/blade terminal sleeve 2,8 mm (AMP Tyco JT, AMP Tyco ST, Deutsch DT)	30	
150.1269	Unlocking Tool for blade terminal/blade terminal sleeve 2,8 mm, 4,8 mm, 5,8 mm, 6,3 mm (AMP Tyco JPT, AMP Tyco SPT, AMP Tyco, TAB, Delphi HVF2, GHW DFK, GHW MDK 3)	30	
150.1285	Unlocking Tool for blade terminal/blade terminal sleeve 4,8 mm, 6,3 mm (Delphi Ducon)	30	
150.1287	Unlocking Tool for blade terminal/blade terminal sleeve 9,5 mm (Delphi Ducon)	30	
150.1267	Unlocking Tool for blade terminal sleeve 6,3 mm (GHW 6,3)	30	

Unlocking tool set for VAG plug-in contacts

- Specially designed for Volkswagen, Audi, Seat, Škoda etc. plug-in contacts
- For the professional and non-destructive release of contacts
- For manufacturers AMP Tyco (JT, JPT asy, MCP, MPT, MQS, MT I, MT II, TAB, ST, SPT, Sensortime, Superseal and 1,5) Bosch, Delphi HVF2, Deutsch DT, GHW (DFK, MDK3), KOSTAL SLK
- Contains the most common unlocking tools for the new generation of vehicles



			g	
154.0165	20 pcs	Unlocking tool set for VAG plug-in contacts	1650	

consists of:

		g	
154.0104	Unlocking Tool for blade terminal/blade terminal sleeve 1,2 mm (AMP Tyco MCP)	16	
154.0107	Unlocking Tool for blade terminal sleeve 1,5 mm (AMP Tyco MCP)	20	
150.1265	Unlocking Tool for blade terminal sleeve 1,5 mm (AMP Tyco MT II)	30	
154.0105	Unlocking Tool for blade terminal/blade terminal sleeve 1,2 mm (AMP Tyco MQS)	14	
154.0108	Unlocking Tool for blade terminal/blade terminal sleeve 1,5 mm (AMP Tyco Superseal)	16	
150.1268	Unlocking Tool for blade terminal/blade terminal sleeve 1,6 mm (AMP Tyco MT I)	30	
154.0106	Unlocking Tool for blade terminal/blade terminal sleeve 1,2 mm (AMP Tyco MQS)	25	
150.1275	Unlocking Tool for blade terminal 2,8 mm (AMP Tyco JT, AMP Tyco JPT asy)	30	
150.1264	Unlocking Tool for blade terminal/blade terminal sleeve 2,8 mm (AMP Tyco JT, AMP Tyco ST, Deutsch DT)	30	
154.0121	Unlocking Tool for blade terminal/blade terminal sleeve 2,8 mm (AMP Tyco MCP)	20	
150.1276	Unlocking Tool for blade terminal 4,8 mm (AMP Tyco 4,8 asy)	20	
154.0122	Unlocking Tool for blade terminal/blade terminal sleeve 4,8 mm, 5,8 mm, 6,3 mm (AMP Tyco SPT)	18	
154.0125	Unlocking Tool for blade terminal/blade terminal sleeve 4,8 mm (AMP Tyco MCP)	36	
154.0128	Unlocking Tool for blade terminal/blade terminal sleeve 5,8 mm (KOSTAL SLK)	71	
150.1269	Unlocking Tool for blade terminal/blade terminal sleeve 2,8 mm, 4,8 mm, 5,8 mm, 6,3 mm (AMP Tyco JPT, AMP Tyco SPT, AMP Tyco, TAB, Delphi HVF2, GHW DFK, GHW MDK 3)	30	
154.0129	Unlocking Tool for blade terminal sleeve 5,8 mm (KOSTAL SLK)	69	
154.0134	Unlocking Tool for blade terminal/blade terminal sleeve 9,5 mm (AMP Tyco MPT)	16	
154.0138	Unlocking Tool for blade terminal sleeve 2,8 mm (AMP Tyco SensorTime, Bosch BDK)	21	
154.0201	Unlocking Tool for round plug/round connector sleeve 1,2 mm (AMP Tyco 1,5)	51	
150.1263	Unlocking Tool for round plug/round connector sleeve 2,3 mm (AMP Tyco 2,3, Delphi 2,3, GHW 2,3)	30	

Unlocking tool set for BMW/Mercedes plug-in contacts

- Specially aligned for BMW / Mercedes plug in contacts
- For the professional and non-destructive release of contacts
- For manufacturers AMP Tyco (E-95, JT, JPT, MPT, MT I, TAB, Sensortime, ST, SPT, 2,5 and 3,5), Bosch, Delphi HVF2, GHW (DFK, MDK3), KOSTAL (LSK8, MLK, RK, SLK)
- Contains the most common unlocking tools for the new generation of vehicles



			g	
154.0150	22 pcs	Unlocking tool set for BMW/ Mercedes plug-in contacts	1730	

consists of:

		g	
154.0102	Unlocking Tool for blade terminal sleeve 1,2 mm (KOSTAL MLK)	28	
150.1268	Unlocking Tool for blade terminal/blade terminal sleeve 1,6 mm (AMP Tyco MT I)	30	
154.0103	Unlocking Tool for blade terminal 1,2 mm (KOSTAL MLK)	17	
150.1264	Unlocking Tool for blade terminal/blade terminal sleeve 2,8 mm (AMP Tyco JT, AMP Tyco ST, Deutsch DT)	30	
150.1269	Unlocking Tool for blade terminal/blade terminal sleeve 2,8 mm, 4,8 mm, 5,8 mm, 6,3 mm (AMP Tyco JPT, AMP Tyco SPT, AMP Tyco, TAB, Delphi HVF2, GHW DFK, GHW MDK 3)	30	
154.0118	Unlocking Tool for blade terminal/blade terminal sleeve 2,8 mm (KOSTAL SLK) 1-stage adjustment	53	
150.1289	Unlocking Tool for blade terminal sleeve 1,65 mm (AMP Tyco E-95)	30	
154.0119	Unlocking Tool for blade terminal sleeve 2,8 mm (KOSTAL SLK)	43	
154.0120	Unlocking Tool for blade terminal/blade terminal sleeve 2,8 mm (KOSTAL SLK) 2-stage adjustment	54	
150.1273	Unlocking Tool for blade terminal/blade terminal sleeve 5,8 mm (AMP Tyco ST)	30	
154.0128	Unlocking Tool for blade terminal/blade terminal sleeve 5,8 mm (KOSTAL SLK)	71	
154.0129	Unlocking Tool for blade terminal sleeve 5,8 mm (KOSTAL SLK)	69	
154.0130	Unlocking Tool for blade terminal/blade terminal sleeve 6,3 mm (KOSTAL LSK 8)	34	
154.0131	Unlocking Tool for blade terminal/blade terminal sleeve 6,3 mm, 8,00 mm (KOSTAL)	39	
154.0134	Unlocking Tool for blade terminal/blade terminal sleeve 9,5 mm (AMP Tyco MPT)	16	
154.0138	Unlocking Tool for blade terminal sleeve 2,8 mm (AMP Tyco SensorTime, Bosch BDK)	21	
154.0205	Unlocking Tool for round connector sleeve 1,5 mm (KOSTAL LKS)	36	
154.0203	Unlocking Tool for round plug 1,5 mm (KOSTAL LKS)	37	
150.1249	Unlocking Tool for round plug/round connector sleeve 2,5 mm (KOSTAL RK)	16	
150.1257	Unlocking Tool for round plug/round connector sleeve 2,5 mm (AMP Tyco 2,5)	33	
150.1262	Unlocking Tool for round plug/round connector sleeve 3,5 mm (AMP Tyco 3,5)	30	
150.1248	Unlocking Tool for round plug/round connector sleeve 4,0 mm (KOSTAL RK)	17	

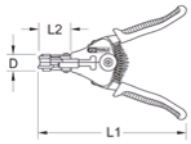


STRIPPING TOOLS

Automatic wire stripper

- Allows for stripping of any cable length, therefore ideal for retrofitting auxiliary heating systems, gas systems and other electrical consumers
- Automatically adjusts to the respective diameters
- For the professional and damage-free stripping of electric wires, stranded conductors and cables
- For copper and aluminium wires
- Plastic handle
- Durable clamping jaw for the adherence of the wire
- With return spring
- Smooth running mechanics
- Sturdy design





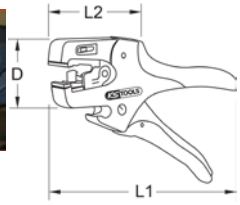


	Ø mm	AWG	D mm	L1 mm	L2 mm	g
115.1028	0,5-2,0	20-14	20,0	170,0	35,0	280
115.1029	1,0-3,2	18-8	20,0	170,0	35,0	280

Self regulating wire stripper

- Easily interchangeable knife modules
- Suitable for single and multi-core cable with popular standard insulation
- Exact adjustment possible for safe stripping
- For the professional and damage-free stripping of electric wires, stranded conductors and cables
- With different length stops from 3.0 – 18.0 mm
- For copper and aluminium wires
- With cutting function
- Lightweight
- Smooth running mechanics



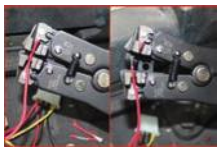




	mm²	AWG	D mm	L1 mm	L2 mm	Replacement blades	g
115.1244	0,1-4	28-12	48,0	190,0	73,0	115.1247	130
115.1245	0,02-10	34-8	48,0	190,0	73,0	115.1246	130
115.1249	4-16	10-5	48,0	190,0	73,0	115.1248	130

Automatic wire stripper

- Allows for stripping of any cable length, therefore ideal for retrofitting auxiliary heating systems, gas systems and other electrical consumers
- These wire strippers handle all common wire cross sections in passenger and commercial vehicle electrical equipment
- Automatically adjusts to the diameters 0.2 mm² - 6.0 mm²
- With crimping function for insulated and non-insulated lugs
- Suitable for single and multi-core cable with popular standard insulation
- For the professional and damage-free stripping of electric wires, stranded conductors and cables
- For copper and aluminium wires
- With wire cutting function
- With return spring
- Smooth running mechanics
- Sturdy design

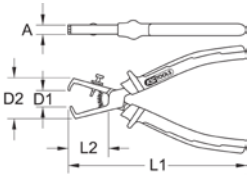




	mm²	AWG	Length mm	g
115.1254	0,2-6	10-24	210,0	280

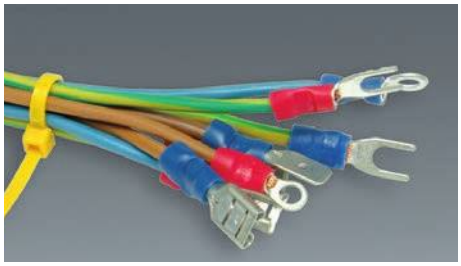
Wire stripper

- In accordance to DIN ISO 5232
- Locking jaw opening
- Adjusting screw and spring
- With PVC dipped handle
- For wires from 0,5 - 4.0 mm²
- Matt chrome
- Special tool steel



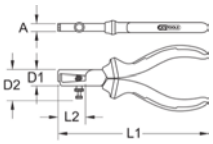


	A mm	D1 mm	D2 mm	L1 mm	L2 mm	g
115.1314	9,0	20,5	33,0	176,0	39,0	170



ERGOTORQUE® wire stripper

- In accordance to DIN ISO 5232
- Locking jaw opening
- Adjusting screw and spring
- Two component handle
- For wires from 0,5 - 4.0 mm²
- Matt chrome
- Special tool steel

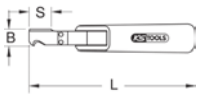




	A mm	D1 mm	D2 mm	L1 mm	L2 mm	g
115.1014	9,0	20,5	33,0	179,0	39,0	300

Universal cable knife

- For the slitting and stripping of round cable
- Hook blade for the stripping of insulated and flat cable
- Internal knife with adjustable cutting depth, rotating mouting

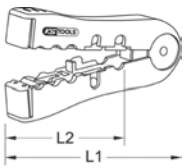




	Ø mm	B mm	L mm	S mm	g
907.2184	28,0	18,0	175,0	24,0	100

Stripping tool for data cable

- Round cut
- For the stripping of flat and flat oval data cables
- Safety locking device for safe storage





	mm²	L1 mm	L2 mm	g
115.1241	2,5-12,0	105,0	72,0	40

Multifunction stripping tool

- Round- and length cutting function
- Stripping function
- Cutting function
- For the stripping of flexible and large wire
- Safety locking device for safe storage
- Includes replacement knife set



	mm²	AWG	L1 mm	L2 mm	g
115.1251	0,2-0,8	30-20	117,0	85,5	96
115.1252	0,8-2,6	20-10	117,0	85,5	96

Insulation stripping knife

- For stripping all standard round cables
- Cutting depth can be adjusted exactly to thickness of sheath
- The knife automatically switches from round to longitudinal cutting
- Retaining bracket adjustable
- Complete stripping of insulation



	mm²	Ø Wire mm	AWG	L mm	g
115.1003	0,5-6,0	4,0-28,0	20-10	143,0	120

Insulation stripping knife

- For stripping external insulation layers
- Stripping insulation from single- and multiple-wire conductors
- Round and longitudinal cutting



	mm²	Ø Wire mm	L mm	g
115.1007	0,5-16,0	4,0-12,0	137,0	81

Insulation stripping knife

- Basic stripping of insulation from conductors
- The scanning system automatically adapts to the conductor cross-section
- The stranded conductor can then be twisted



	mm²	AWG	L mm	g
115.1001	0,5-6,0	20-10	158,0	116

Round cable insulation stripper

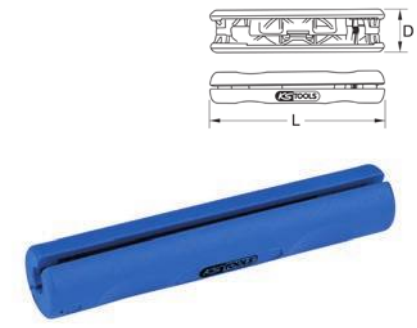
- For round cables and damp-proof cables
- Flush stripping of insulation even in areas that are hard to access, e.g. in ceilings and walls, in junction and distribution boxes and switch cabinets



	Ø Wire mm	L mm	g
115.1006	8,0-13,0	125,0	43

Coaxial cable insulation strippers

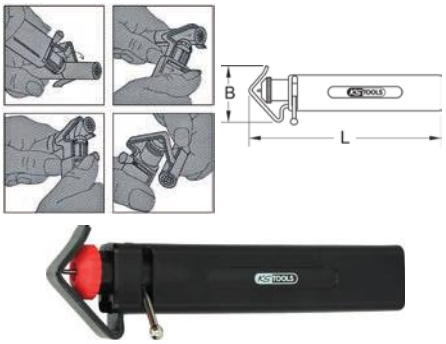
- Gradual stripping of insulation from all coaxial cables with an outer diameter of 4.8 - 7.5 mm
- Equally suitable for flexible cables and 3 x 0.75 mm², 10 mm² and 16 mm² cables



	Ø Wire mm	L mm	g
115.1002	4,8-7,5	110,0	30

Universal stripping tool

- With round cutting and longitudinal cutting function
- Suited for spiral cutting of hard insulation
- Variable cut depth adjustment through thumb wheel
- For a maximum insulation strength of up to 4,5 mm



	mm²	B mm	L mm	Replacement blades	g
115.1256	6-25	41,0	138,0	115.1257	138

CUTTING TOOLS

Electricians pen knife

- Blade folds away
- With sickle blade and downward curved tip that ensures a powerful cut
- Sturdy, practical and very sharp
- Moulded handle made out of wood
- Rust-proof
- Stainless steel



	B mm	L mm	S mm	g
907.2185	37,0	185,0	70,0	60

Electricians pen knife

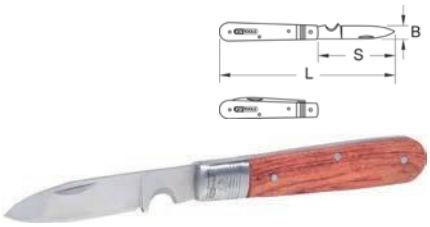
- Retractable blades
- With straight blade
- With sickle blade and downward curved tip that ensures a powerful cut
- Sturdy, practical and very sharp
- Moulded handle made out of wood
- Rust-proof
- Stainless steel



	B mm	L mm	S mm	g
907.2186	37,0	185,0	70,0	90

Electricians pen knife

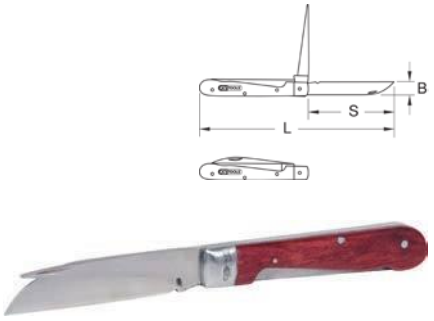
- Blade folds away
- With a straight blade that ensures a powerful cut
- With stripping function for cables
- Sturdy, practical and very sharp
- Moulded handle made out of wood
- Rust-proof
- Stainless steel



	B mm	L mm	S mm	g	
907.2187	15,0	195,0	85,0	60	

Electricians pen knife

- Retractable blades
- With straight blade and extra narrow pointed blade that provides for a powerful cut
- Sturdy, practical and very sharp
- Moulded handle made out of wood
- Rust-proof
- Stainless steel



	B mm	L mm	S mm	g	
907.2188	19,0	198,0	90,0	60	

Universal workshop shear

- Robust short shears
- With screw on blade
- Various applications
- Stainless steel blade



	L mm	S mm	g	
118.0010	140,0	43,0	100	

Universal workshop shear

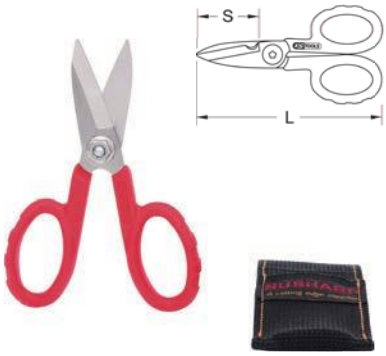
- Robust short shears
- With screw on blade
- Various applications
- Stainless steel blade
- Two component handle



	L mm	S mm	g	
118.0013	143,0	46,0	100	

Universal workshop shear

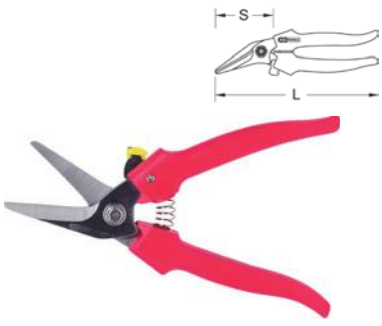
- Robust short shears
- For various application areas
- With cable cutter
- Practical and very sharp
- Includes belt bag with cut protection



	Ø mm	L mm	S mm	g	
118.0060	24,0	140,0	42,0	170	

Universal Workshop Shears, angled

- Self opening
- Safety locking device
- Practical and very sharp
- Angled design
- Ergonomic moulded plastic handle
- Ideal for seals and cables



	Ø mm	L mm	S mm	g	
118.0072	35,0	185,0	42,0	190	

Universal cable shear

- Self opening
- Safety locking device
- Hardened blades with precision cut
- No bruising, slight shaping of the cable
- Ergonomic moulded plastic handle
- Ideal for soft cables
- Not suited for steel wire and hard pulled copper cables



	Ø mm	L mm	g	
118.0073	10,0	165,0	180	

CRIMPING PLIERS

Wire end ferrule pliers

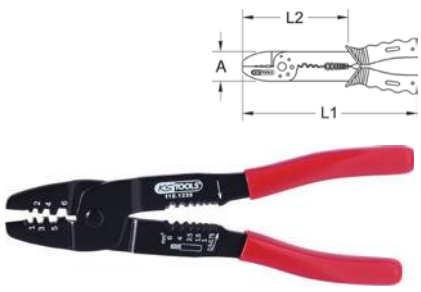
- For cable cutting and wire stripping
- For the proper crimping of lugs and plug connectors
- Suitable for insulated and non-insulated cable end sleeves
- Ideal leverage
- Easy solderless pressing on in one work step
- With PVC dipped handle
- Pliers body made of flat steel



	Ø mm	Length mm	g	
115.1236	0,25 - 2,5	155,0	165	
115.1237	0,5 - 16,0	220,0	240	

Crimp pliers for not insulated, opened cable connector

- Ideally suited for converting not insulated contacts
- For stripping of wires from 0.5 - 6.0 mm²
- Cut wires up to 6.0 mm²
- For crimping blade terminals 2.8 / 4.8 / 6.3 mm and other contacts with open crimp sleeve
- With PVC dipped handle
- Plier body from special steel
- Material strength 3 mm

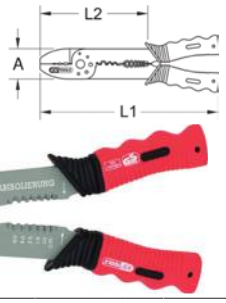


	A mm	L1 mm	L2 mm	g	
115.1235	38,0	220,0	120,0	196	

Multifunction pliers for insulated and non insulated cable terminals

- For professional cable cutting and stripping wires from 0,75 - 6,0 mm²
- For crimping cable terminals and connectors from 1,5 - 6,0 mm²
- Cutting function
- Two component handle
- Pliers body made of flat steel





	A mm	L1 mm	L2 mm	g
115.1231	40,0	220,0	130,0	230

Multifunction crimping pliers set

- For insulated and un-insulated cable terminals
- Includes 270 pcs consumables
- For professional cable cutting and stripping wires from 0,75 - 6,0 mm²
- For crimping cable terminals and connectors from 1,5 - 6,0 mm²
- Cutting function
- Two component handle
- Pliers body made of flat steel
- In durable plastic storage case



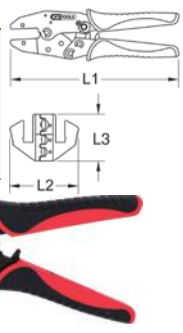


			g
115.1230	271 pcs	Multifunction crimping pliers set	560

Crimping pliers for non insulated terminals

- Extremely robust and reliable
- Safety lock
- Inserts lock and to they click to prevent possible misuse
- Optimal crimping through precision profile
- Ratchet function
- Adjustment of the crimping pressure
- Easy to change the crimp heads through quick locking device
- Two component handle
- Burnished
- Pliers body made of flat steel





	mm²	AWG	L1 mm	L2 mm	L3 mm		g
115.1425	0,5-1,0/1,5-2,5/4,0-6,0	22-18/16-14/12-10	220,0	50,0	34,0	115.1415	491

Crimping pliers for insulated flat angle sockets

- Extremely robust and reliable
- Safety lock
- Inserts lock and to they click to prevent possible misuse
- Optimal crimping through precision profile
- Ratchet function
- Adjustment of the crimping pressure
- Easy to change the crimp heads through quick locking device
- Two component handle
- Burnished
- Pliers body made of flat steel

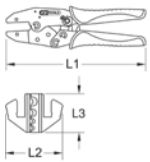


	mm²	AWG	L1 mm	L2 mm	L3 mm		g
115.1495	0,5-1,0 / 1,5-2,5	22-18/16-14	220,0	50,0	34,0	115.1428	512

Crimping pliers for insulated terminals

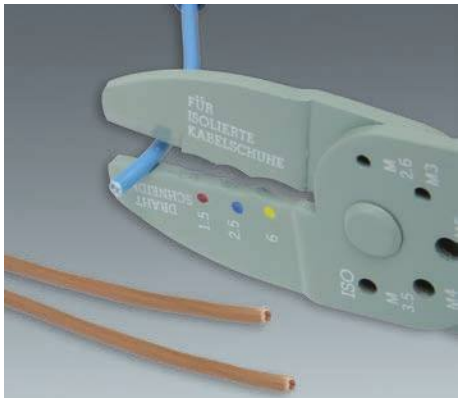
- Extremely robust and reliable
- Safety lock
- Inserts lock and to they click to prevent possible misuse
- Optimal crimping through precision profile
- Ratchet function
- Adjustment of the crimping pressure
- Easy to change the crimp heads through quick locking device
- Two component handle
- Burnished
- Pliers body made of flat steel

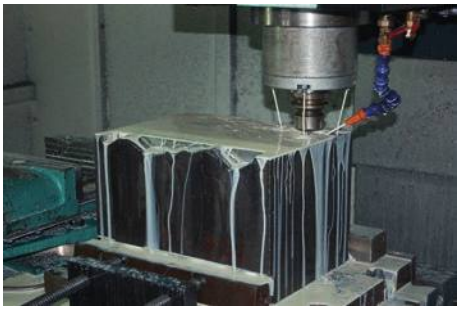






	mm²	AWG	L1 mm	L2 mm	L3 mm		g
115.1430	1,5/2,5/6,0/10,0	20-18/16-14/12-10/8	220,0	50,0	34,0	115.1416	487

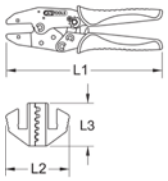




Crimping pliers for pin terminals

- Extremely robust and reliable
- Safety lock
- Inserts lock and to they click to prevent possible misuse
- Optimal crimping through precision profile
- Ratchet function
- Adjustment of the crimping pressure
- Easy to change the crimp heads through quick locking device
- Two component handle
- Burnished
- Pliers body made of flat steel





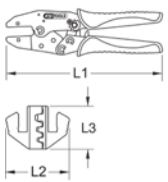


	mm²	AWG	L1 mm	L2 mm	L3 mm		g
115.1440	0,5/0,75/1,0/1,5/2,5/4,0	22/20/18/16-14/12-10	220,0	50,0	34,0	115.1418	499
115.1450	6,0/10,0/16,0	10/8/6	220,0	50,0	34,0	115.1420	499

Crimping pliers for spade terminals

- Extremely robust and reliable
- Safety lock
- Inserts lock and to they click to prevent possible misuse
- Optimal crimping through precision profile
- Ratchet function
- Adjustment of the crimping pressure
- Easy to change the crimp heads through quick locking device
- Two component handle
- Burnished
- Pliers body made of flat steel







	mm²	AWG	L1 mm	L2 mm	L3 mm		g
115.1435	0,5-1,0/1,5-2,5/4,0-6,0	20-18/16-14/12-10	220,0	50,0	34,0	115.1417	499
115.1455	2,5/0,5/8,0/10,0	14-22/8-6	220,0	50,0	34,0	115.1421	505

Crimping tool for GERMAN DTP

- Extremely robust and reliable
- Safety lock
- Inserts lock and to they click to prevent possible misuse
- Optimal crimping through precision profile
- Ratchet function
- Adjustment of the crimping pressure
- Easy to change the crimp heads through quick locking device
- Two component handle
- Burnished
- Pliers body made of flat steel



	mm²	AWG	L1 mm	L2 mm	L3 mm		g
115.1595	6,0 / 5,0	10/12	220,0	50,0	34,0	115.1437	500

Crimping pliers for GERMAN DT and GERMAN DTP

- Extremely robust and reliable
- Safety lock
- Inserts lock and to they click to prevent possible misuse
- Optimal crimping through precision profile
- Ratchet function
- Adjustment of the crimping pressure
- Easy to change the crimp heads through quick locking device
- Two component handle
- Burnished
- Pliers body made of flat steel



	mm²	AWG	L1 mm	L2 mm	L3 mm		g
115.1120	4,0 / 2,5 / 1,5	16/14/12	220,0	50,0	34,0	115.1443	490
115.1585	2,5 / 4,0	14/12	220,0	50,0	34,0	115.1436	500





Crimping pliers for GERMAN DT and GERMAN DTM

- Extremely robust and reliable
- Safety lock
- Inserts lock and to they click to prevent possible misuse
- Optimal crimping through precision profile
- Ratchet function
- Adjustment of the crimping pressure
- Easy to change the crimp heads through quick locking device
- Two component handle
- Burnished
- Pliers body made of flat steel



	mm²	AWG	L1 mm	L2 mm	L3 mm		g
115.1115	1,5 / 1,0 / 0,75	20/18-16	220,0	50,0	34,0	115.1442	490
115.1255	1,5 / 1,0 / 0,75	20/18/16	220,0	50,0	34,0	115.1441	490
115.1205	2,5 / 1,5 / 1,0	18/16/14	220,0	50,0	34,0	115.1438	490

Crimping pliers for insulated butt connectors with heat shrinkable tubing

- Extremely robust and reliable
- Safety lock
- Inserts lock and to they click to prevent possible misuse
- Optimal crimping through precision profile
- Ratchet function
- Adjustment of the crimping pressure
- Easy to change the crimp heads through quick locking device
- Two component handle
- Burnished
- Pliers body made of flat steel



	mm²	AWG	L1 mm	L2 mm	L3 mm		g
115.1475	0,5-1,0 / 1,5-2,5 / 4,0-6,0 / 10,0	22-18/16-14/12-10/8	220,0	50,0	34,0	115.1426	510

Crimping pliers for insulated terminals and end connectors with heat shrinkable tubing

- Extremely robust and reliable
- Safety lock
- Inserts lock and to they click to prevent possible misuse
- Optimal crimping through precision profile
- Ratchet function
- Adjustment of the crimping pressure
- Easy to change the crimp heads through quick locking device
- Two component handle
- Burnished
- Pliers body made of flat steel



	mm²	AWG	L1 mm	L2 mm	L3 mm		g
115.1485	0,5-1,5 / 1,5-2,5 / 4,0-6,0	22-16/16-14/12-10	220,0	50,0	34,0	115.1427	480

Crimping Pliers for AMP Superseal Type 1.5

- Extremely robust and reliable
- Safety lock
- Inserts lock and to they click to prevent possible misuse
- Optimal crimping through precision profile
- Ratchet function
- Adjustment of the crimping pressure
- Easy to change the crimp heads through quick locking device
- Two component handle
- Burnished
- Pliers body made of flat steel



	mm²	AWG	L1 mm	L2 mm	L3 mm		g
115.1515	0,75 / 1,0	18/17	220,0	50,0	34,0	115.1431	490



Crimping Pliers for Delphi Metri-Pack Series with seal

- Extremely robust and reliable
- Safety lock
- Inserts lock and to they click to prevent possible misuse
- Optimal crimping through precision profile
- Ratchet function
- Adjustment of the crimping pressure
- Easy to change the crimp heads through quick locking device
- Two component handle
- Burnished
- Pliers body made of flat steel



	mm²	AWG	L1 mm	L2 mm	L3 mm		g	
115.1570	0,35 / 0,5-0,8	22/20-18	220,0	50,0	34,0	115.1432	490	
115.1575	1,0 - 2,0 / 3,0	16-14/12	220,0	50,0	34,0	115.1433	500	

Crimping tool for 12V ignition cable

- Extremely robust and reliable
- Safety lock
- Inserts lock and to they click to prevent possible misuse
- Optimal crimping through precision profile
- Ratchet function
- Adjustment of the crimping pressure
- Easy to change the crimp heads through quick locking device
- Two component handle
- Burnished
- Pliers body made of flat steel



	mm²	AWG	L1 mm	L2 mm	L3 mm		g	
115.1510	1,0	1	220,0	50,0	34,0	115.1429	500	



Electricians crimping pliers set

- Ideal configuration for electricians
- Extremely robust and reliable
- Safety lock
- Inserts lock and to they click to prevent possible misuse
- Optimal crimping through precision profile
- Ratchet function
- Adjustment of the crimping pressure
- Easy to change the crimp heads through quick locking device
- In durable plastic storage case
- Two component handle
- Burnished
- Pliers body made of flat steel



			g
115.1480	3 pcs	Electricians crimping pliers set	910

consists of:

		g
115.1401	Crimping tool	440
115.1415	Crimp head for insulated terminals	60
115.1416	Crimp head for non-insulated terminals	60

Net working crimping pliers set

- Ideal configuration for network cabling
- Extremely robust and reliable
- Safety lock
- Inserts lock and to they click to prevent possible misuse
- Optimal crimping through precision profile
- Ratchet function
- Adjustment of the crimping pressure
- Easy to change the crimp heads through quick locking device
- In durable plastic storage case
- Two component handle
- Burnished
- Pliers body made of flat steel



			kg
115.1490	5 pcs	Net working crimping pliers set	1,05

consists of:

		g
115.1401	Crimping tool	440
115.1421	Crimp head for non-insulated terminalsfor non insulated contact with open surface, Ø 0.5 - 2.5 - 8/10 mm²	60
115.1422	Crimp head for non shielded WE plugs 4P, RJ 22	60
115.1423	Crimp head for non shielded WE plugs 6P2K, 6P4K/RJ11, 6P6K/RJ12	71
115.1424	Crimp head for non shielded WE plugs 8P8K / RJ45	65

Universal crimping tool set with automatic wire stripper

- Extremely robust and reliable crimping tool
- Safety lock
- Inserts lock and to they click to prevent possible misuse
- Optimal crimping through precision profile
- Ratchet function
- Adjustment of the crimping pressure
- Easy to change the crimp heads through quick locking device
- Two component handle
- Burnished
- Pliers body made of flat steel
- Including self-closing and damage-free automatic wire stripper





			kg
115.1400	283 pcs	Universal crimping tool set with automatic wire stripper	2,37

consists of:

		g
115.1401	Crimping tool	440
115.1029	Automatic wire stripper, red, 1-3.2mm	280
115.1402	Terminal set 271 pcs	270
115.1415	Pair of crimp inserts for insulated cable lugs, Ø 0.5 - 6 mm	60
115.1416	Pair of crimp inserts for uninsulated cable lugs, Ø 0.5 - 10 mm	60
115.1417	Pair of crimp inserts for flat plugs 4.8 und 6.3 mm, Ø 0.5 - 6.0 mm	60
115.1418	Pair of crimp inserts for wire end ferrules, Ø 0.5 - 4 mm	60
115.1419	Pair of crimp inserts for coaxial plugs, Ø 6.50 / 5.41 / 1.72 mm	60

INSTALLATION AID

Cable retraction wire

- ideal for retraction or laying of cables or lines
- with rounded off metal head, the retraction aid can be easily pushed through the tubes
- with eye for fastening the cable or line
- Perlon wire



	Ø mm	Length m	g	
150.0960	3,0	10,00	140	
150.0970	4,0	20,00	270	

cable pull aid

- low friction and high strength
- flexible head attachment
- for navigating in pipes with several bends
- Robust plastic housing



	Length m	g
115.1113	30,00	1,20

GROMMETS

Rubber grommets assortment

- For secure guiding of cables into bore holes
- In plastic storage case



			g
970.0050	110 pcs	Rubber grommets assortment	180
25 x		Ø 8,3 mm	
20 x		Ø 10,3 mm	
20 x		Ø 13,5 mm	
20 x		Ø 15,0 mm	
10 x		Ø 15,4 mm	
5 x		Ø 20,2 mm	
5 x		Ø 27,0 mm	
5 x		Ø 32,5 mm	



FUSES

Automotive mini fuses assortment

- According to ISO 8820-3
- Fuses colour-coded according to ampere sizes
- In plastic storage case



			g
970.0740	100 pcs	Automotive mini fuses assortment	120
10 x		2 A / ISO 8820-3	
10 x		3 A / ISO 8820-3	
10 x		4 A / ISO 8820-3	
10 x		5 A / ISO 8820-3	
10 x		7.5 A / ISO 8820-3	
10 x		10 A / ISO 8820-3	
10 x		15 A / ISO 8820-3	
10 x		20 A / ISO 8820-3	
10 x		25 A / ISO 8820-3	
10 x		30 A / ISO 8820-3	

Automotive mini fuses assortment

- According to ISO 8820-3
- Fuses colour-coded according to ampere sizes
- In plastic storage case



			g
970.0280	120 pcs	Automotive mini fuses assortment	190
20 x		5 A / ISO 8820-3	
20 x		10 A / ISO 8820-3	
20 x		15 A / ISO 8820-3	
20 x		20 A / ISO 8820-3	
20 x		25 A / ISO 8820-3	
20 x		30 A / ISO 8820-3	

Automotive fuses assortment

- According to ISO 8820-3
- Fuses colour-coded according to ampere sizes
- In plastic storage case



			g
970.0730	36 pcs	Automotive fuses assortment	250
6 x		20 A / ISO 8820-3	
6 x		30 A / ISO 8820-3	
6 x		40 A / ISO 8820-3	
6 x		50 A / ISO 8820-3	
3 x		60 A / ISO 8820-3	
3 x		70 A / ISO 8820-3	
3 x		80 A / ISO 8820-3	
3 x		100 A / ISO 8820-3	

Automotive fuses assortment

- According to ISO 8820-3
- Fuses colour-coded according to ampere sizes
- In plastic storage case



			g
970.0250	120 pcs	Automotive fuses assortment	210
20 x		5 A / ISO 8820-3	
20 x		10 A / ISO 8820-3	
20 x		15 A / ISO 8820-3	
20 x		20 A / ISO 8820-3	
20 x		25 A / ISO 8820-3	
20 x		30 A / ISO 8820-3	

Glass fuses assortment

- Trigger characteristics: Idle
- In plastic storage case



970.0270	120 pcs	Glass fuses assortment	220

20 x		5 A
20 x		10 A
20 x		15 A
20 x		20 A
20 x		25 A
20 x		30 A

Automotive mini fuses assortment

- According to ISO 8820-3
- Fuses colour-coded according to ampere sizes
- In plastic storage case



970.0280	120 pcs	Automotive mini fuses assortment	190

20 x		5 A / ISO 8820-3
20 x		10 A / ISO 8820-3
20 x		15 A / ISO 8820-3
20 x		20 A / ISO 8820-3
20 x		25 A / ISO 8820-3
20 x		30 A / ISO 8820-3

CABLE SPLICES

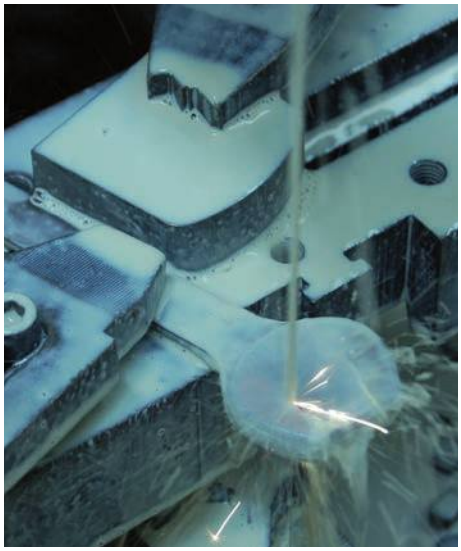
Crimp connectors assortment

- Suitable for wire cross sections: Red 0.5-1.5 mm², blue 1.5-2.5 mm², yellow 2.5-6.0 mm²
- In plastic storage case



970.0300	360 pcs	Crimp connectors assortment	450

10 x		0,5-1,5 mm²
30 x		0,5-1,5 mm²
30 x		1,5-2,5 mm²
10 x		1,5-2,5 mm²
15 x		2,5-6,0 mm²
30 x		1,5-2,5 mm² M5
20 x		1,5-2,5 mm² M6
20 x		1,5-2,5 mm² M10
20 x		2,5-6,0 mm² M5
15 x		2,5-6,0 mm² M6
15 x		2,5-6,0 mm² M10
25 x		1,5-2,5 mm²
25 x		1,5-2,5 mm²
30 x		1,5-2,5 mm² M5
20 x		2,5-6,0 mm² M5
25 x		1,5-2,5 mm²
10 x		1,5-2,5 mm²
10 x		1,5-2,5 mm²



Assortment wire end ferrules with crimping pliers

- suitable for cable cross-sections: 0.25 - 6.0 mm²
- In plastic storage case



970.0840	1001 pcs	Assortment wire end ferrules with crimping pliers	900

125 x		0,25 mm²
125 x		0,50 mm²
125 x		0,75 mm²
125 x		1,00 mm²
125 x		1,50 mm²
125 x		2,50 mm²
125 x		4,00 mm²
125 x		6,00 mm²
1 x		0,25 - 6,0 mm

Branch connectors assortment

- Suitable for wire cross sections: Red 0.5-1.5 mm², blue 1.5-2.5 mm²
- In plastic storage case





970.0570	50 pcs	Branch connectors assortment	145

25 x		0,5-1,5 mm²
25 x		1,5-2,5 mm²

Assortment shrink butt connectors

- suitable for cable cross-sections: red 0.5 - 1.5 mm², blue 1.5 - 2.5 mm², yellow 4.0 - 6.0 mm²
- In plastic storage case



970.0790	200 pcs	Assortment shrink butt connectors	370
90 x		Ø 0,5 - 1,5 mm²	
90 x		Ø 1,5 - 2,5 mm²	
20 x		Ø 4,0 - 6,0 mm²	

SHRINK TUBING

Shrink tubing assortment

- Shrinkage ratio 2:1
- In plastic storage case



970.0540	100 pcs	Shrink tubing assortment	130
30 x		1,5x100 mm	
30 x		2,5x100 mm	
20 x		4,0x100 mm	
10 x		6,0x100 mm	
6 x		10,0x100 mm	
4 x		13,0x100 mm	

Shrink-on tubes assortment

- Shrinkage ratio 2:1
- In plastic storage case



970.0230	127 pcs	Shrink-on tubes assortment	100
30 x		2,0x40 mm	
25 x		2,5x40 mm	
20 x		3,5x40 mm	
20 x		5,0x40 mm	
16 x		7,0x80 mm	
8 x		10,0x80 mm	
8 x		13,0x85 mm	

Range of insulated crimp connectors

- suitable for cable cross-sections: red 0.5 - 1.5 mm², blue 1.5 - 2.5 mm², yellow 4.0 - 6.0 mm²
- Shrinkage ratio 3:1
- with heat-shrinkable hoses for optimum insulation
- Water-proofed
- In plastic storage case



		AWG	Cross Section mm²	Colour code	Format	
970.0640	6 pcs	22 - 16	0,5 - 1,5	red	Plug	15,7
970.0650	6 pcs	16 - 14	1,5 - 2,5	blue	Plug	16,4
970.0660	6 pcs	12 - 10	4,0 - 6,0	yellow	Plug	18,6

Range of insulated crimp connectors

- suitable for cable cross-sections: red 0.5 - 1.5 mm², blue 1.5 - 2.5 mm², yellow 4.0 - 6.0 mm²
- Shrinkage ratio 3:1
- with heat-shrinkable hoses for optimum insulation
- Water-proofed
- In plastic storage case



		AWG	Cross Section mm²	Colour code	Format	
970.0670	6 pcs	22 - 16	0,5 - 1,5	red	Socket	13,6
970.0680	6 pcs	16 - 14	1,5 - 2,5	blue	Socket	13,7
970.0690	6 pcs	12 - 10	4,0 - 6,0	yellow	Socket	15,3

Range of insulated butt connectors

- suitable for cable cross-sections: red 0.5 - 1.5 mm², blue 1.5 - 2.5 mm², yellow 4.0 - 6.0 mm²
- Shrinkage ratio 3:1
- with heat-shrinkable hoses for optimum insulation
- Water-proofed
- In plastic storage case



970.0710	36 pcs	Range of insulated butt connectors	100
18 x		0,5 - 1,5 mm², AWG 22 - 16	
12 x		1,5 - 2,5 mm², AWG 16 - 14	
6 x		4,0 - 6,0 mm², AWG 12 - 10	

Assortment of insulated soldering sockets

- suitable for cable cross-sections: white 0.25 - 0.34 mm2red 0.5 - 1.0 mm², blue 1.5 - 2.5 mm², yellow 4.0 - 6.0 mm²
- Shrinkage ratio 2:1
- with heat-shrinkable hoses for optimum insulation
- Water-proofed
- In plastic storage case



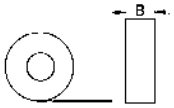
970.0720	30 pcs	Assortment of insulated soldering sockets	60
8 x		1,8 x 25,0 mm	
12 x		2,8 x 40,0 mm	
6 x		4,8 x 40,0 mm	
4x		6,2 x 40,0 mm	

ELECTRICAL INSULATING TAPE

PVC insulation tape set

- Good resistance to abrasion and corrosion and/or moisture
- High di-electric strength and good mechanical protection
- Excellent ability to adapt to different forms
- Conforms to BS3924
- Temperature resistance of 0°C to +90°
- Multicoloured assortment



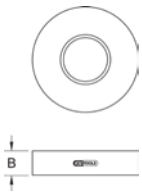


		B mm	Length m	g	
141.6010	8 pcs	19,0	10,00	150	

Self welding repair tape

- Excellent weather resistance
- Easy to apply due to high elasticity
- Insulates air and water tight, due to self welding characteristics
- Temperature resistance of -40°C to +90°C
- With a tape thickness of 0,5 mm
- Made from Polyisobutylene tape
- For a range of applications in electrical, plumbing and automotive





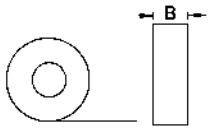


	Colour code	B mm	Length m	g	
141.6000	●	18,0	10,00	100	
141.6001	●	38,0	10,00	210	

Adhesive tape with protective insulation

- For working enviroment of voltages AC 1000 V and DC 1500 V
- On a roll





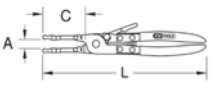
	Colour code	B mm	Length m		g	
117.4231	●	52,0	10,00		105	
117.4232	●	102,0	10,00		190	
117.4233	●	102,0	10,00		190	

SOLDERING TOOLS

Soldering wire pliers

- For the safe fixing of braded wire
- Prevents kinking of the solder connection
- The locking device of the pliers means that these can be stored so that both hands are free for soldering
- No more burning fingers
- Slim design for hard-to-access areas
- Adjustable arm for optimal application
- With self opening internal spring
- Includes locking mechanism
- With PVC dipped handle
- Chrome molybdenum







	A mm	C mm	L mm	g	
115.1052	9-74	65,0	245,0	260	

Precision mechanics lifter

- removes stuck components from printed circuit boards
- Two component handle
- through hardened blade
- Matt finish
- Chrome molybdenum



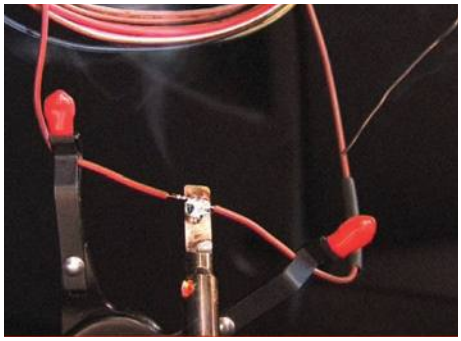
	L1 mm	L2 mm	g	
500.7775	150,0	50,0	16	

Desoldering pump

- double seal
- Dirt-repellent



	Length mm	g	
500.7780	200,0	580	



Mini pocket soldering torch

- Gas operated micro soldering device up to 1,300°C / 2,450°F
- With piezo ignition
- Optimal for light soldering
- Filled with standard lighter gas / ISO butan gas
- Compact construction
- With safety lock





	Length mm	Height mm	g	
960.1110	70,0	115,0	130	

Mini pocket soldering torch

- Gas operated micro soldering device up to 1,300°C / 2,450°F
- With piezo ignition
- For melting, hard soldering, small soldering jobs
- Filled with standard lighter gas / ISO butan gas
- Compact construction
- With child-proofing and switch-off function





	Length mm	Height mm	g	
960.1215	75,0	110,0	112	

Small soldering torch

- Gas operated micro soldering device up to 1,300°C / 2,450°F
- With piezo ignition
- Optimal for fine soldering
- Filled with standard lighter gas / ISO butan gas
- With table stand



	Height mm	Length mm	g	
960.1200	135,0	110,0	350	

Small soldering torch with flame reflector

- Gas operated micro soldering device up to 1,300 °C / 2,450 °F
- With piezo ignition
- Optimal for fine soldering
- With shrink mirror/flame reflector
- Filled with standard lighter gas / ISO butan gas
- With table stand



	Length mm	Height mm	g	
960.1210	110,0	135,0	350	

Micro soldering terminal set

- Gas operated micro soldering device up to 1,300 °C / 2,450 °F
- without piezo ignition
- can be started with an external ignition source (e.g. with a lighter or mini pocket soldering device)
- Perfect for fine working
- Gas supply totally adjustable
- Filled with standard lighter gas / ISO butan gas
- Includes different attachments soldering wire and soldering sponge
- In durable plastic case





		g	
960.1265	8 pcs	Micro soldering terminal set	210	

consists of:

		g	
960.1163	Soldering tip 3.5mm, chisel	3	
960.1164	Soldering tip 4.5mm, diagonal	3	
960.1165	Soldering tip knife	3	
960.1167	Soldering sponge, round	12	
960.1168	Solder wire coil, 95mm	25	
960.1266	Soldering iron without Piezo ignition	50	
960.1267	Soldering head,screwed-in soldering tips	12	
960.1268	Soldering tip	3	

Micro soldering terminal set

- Gas operated micro soldering device up to 1,300 °C / 2,450 °F
- With piezo ignition
- Perfect for fine working
- Gas supply totally adjustable
- Filled with standard lighter gas / ISO butan gas
- Includes different attachments soldering wire and soldering sponge
- In durable plastic case





			g	
960.1160	11 pcs	Micro soldering terminal set	370	

consists of:

		g	
960.1161	Soldering iron with Piezo ignition	80	
960.1162	Soldering head,screwed-in soldering tips	9	
960.1163	Soldering tip 3.5mm, chisel	3	
960.1164	Soldering tip 4.5mm, diagonal	3	
960.1165	Soldering tip knife	3	
960.1166	Flame adaptor	3	
960.1167	Soldering sponge, round	12	
960.1168	Solder wire coil, 95mm	25	
960.1169	Protective cap for 960.1160	14	
960.1170	Housing for additional adaptors, for 960.1160	7	
960.1268	Soldering tip	3	

Soldering iron with bracket/holder

- Electrically-operated micro soldering device
- With ceramic heating core
- Copper bit for rapid heating and good heat transfer
- Supply cable with anti-kink device
- Includes holder





Technical data:

Working temperature:	0 - 600 °C
Operational voltage:	220-240V AC, 50HZ
Connection cable length:	1,3 m
Protection class:	I

	Capacity	Length mm	g	
960.1255	30 Watt	220,0	220	
960.1130	60 Watt	230,0	225	

PRECISION TOOL SETS

Precision screwdriver set Torx

- Twist end cap
- Ergonomically shaped electronic screwdriver handle
- Two component handle
- Hardened blade
- Chrome finish with burnished tips
- Blade made of chrome vanadium
- In durable ABS storage case



			g	
500.7160	7 pcs	Precision screwdriver set Torx	100	
7 x		T6 - T7 - T8 - T9 - T10 - T15 - T20		

Precision screwdriver set PH and slotted

- Twist end cap
- Ergonomically shaped electronic screwdriver handle
- Two component handle
- Hardened blade
- Chrome finish with burnished tips
- Blade made of chrome vanadium
- In durable ABS storage case



			g	
500.7165	7 pcs	Precision screwdriver set PH and slotted	100	
3 x		PH00 - PH0 - PH1		
4 x		1,4 - 2,0 - 2,4 - 3,0 mm		

Precision screwdriver set PH, slotted and Torx

- Twist end cap
- Ergonomically shaped electronic screwdriver handle
- Two component handle
- Hardened blade
- Chrome finish with burnished tips
- Blade made of chrome vanadium
- In durable plastic storage case





500.7170	14 pcs	Precision screwdriver set PH, slotted and Torx	200

3 x		PH00 - PH0 - PH1
4 x		1,4 - 2,0 - 2,4 - 3,0 mm
7 x		T6 - T7 - T8 - T9 - T10 - T15 - T20

Precision screwdriver set

- Twist end cap
- Ergonomically shaped electronic screwdriver handle
- Two component handle
- Hardened blade
- Chrome finish with burnished tips
- Blade made of chrome vanadium
- In durable plastic storage case



500.7150	37 pcs	Precision screwdriver set	1,80

6 x		PH000 - PH00 - PH0 x 3,0 - PH0 x 2,0 - PH1 x 3,5 - PH1 x 4,0
7 x		1,0 - 2,0 - 3,0 - 4,0 mm - 1/16“ - 3/32“ - 9/64“
2 x		T5 - T6
7 x		1,5 - 2,0 - 2,5 - 3,0 - 1/16“ - 3/32“ - 1/8“
10 x		2,0 - 2,5 - 3,0 - 3,2 - 3,5 - 4,0 - 3/32“ - 7/64“ - 9/64“ - 1.1/64“
5 x		TB7 - TB8 - TB9 - TB10 - TB15

Precision pliers set

- Electro static discharge - electrostatically protect
- Suitable for wire
- Serrated execution
- Induction-hardened precision cutting
- Self opening double spring
- Two component handle
- Black chrome
- Special tool steel



500.7020	5 pcs	Precision pliers set	420

1 x		130 mm
1 x		120 mm
1 x		110 mm
1 x		120 mm
1 x		160 mm

Precision tool set

- Electrical working
- Includes precision screwdrivers and tweezers
- Suitable for wire
- Serrated execution
- Induction-hardened precision cutting
- Self opening double spring
- Twist end cap
- Ergonomically shaped electronic screwdriver handle
- Hardened blade
- Chrome finish with burnished surface
- Two component handle
- Black chrome
- Blades made from special steel



500.7180	10 pcs	Precision tool set	400

1 x		125 mm
1 x		100 mm
1 x		145 mm
3 x		PH00 - PH0 - PH1
4 x		1,4 - 2,0 - 2,4 - 3,0 mm

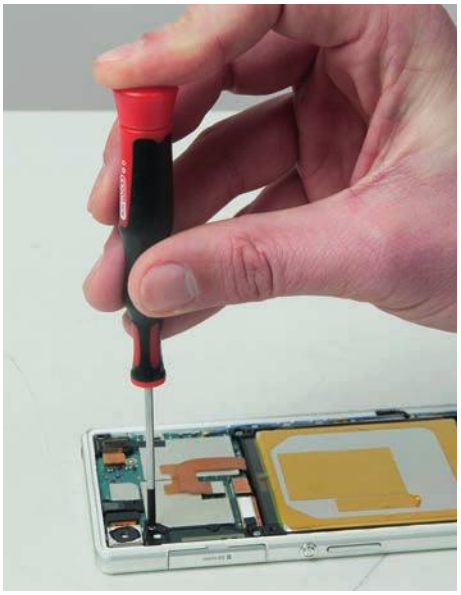
Precision tool set

- Electrical working
- Includes precision screwdrivers and tweezers
- Suitable for wire
- Serrated execution
- Induction-hardened precision cutting
- Self opening double spring
- Twist end cap
- Ergonomically shaped electronic screwdriver handle
- Hardened blade
- Chrome finish with burnished surface
- Two component handle
- Black chrome
- Blades made from special steel



500.7190	21 pcs	Precision tool set	1,40

2 x		125 - 130 mm
1 x		100 mm
1 x		100 mm
1 x		125 mm
1 x		150 mm
1 x		145 mm
3 x		PH00 - PH0 - PH1
4 x		1,4 - 2,0 - 2,4 - 3,0 mm
7 x		T6 - T7 - T8 - T9 - T10 - T15 - T20



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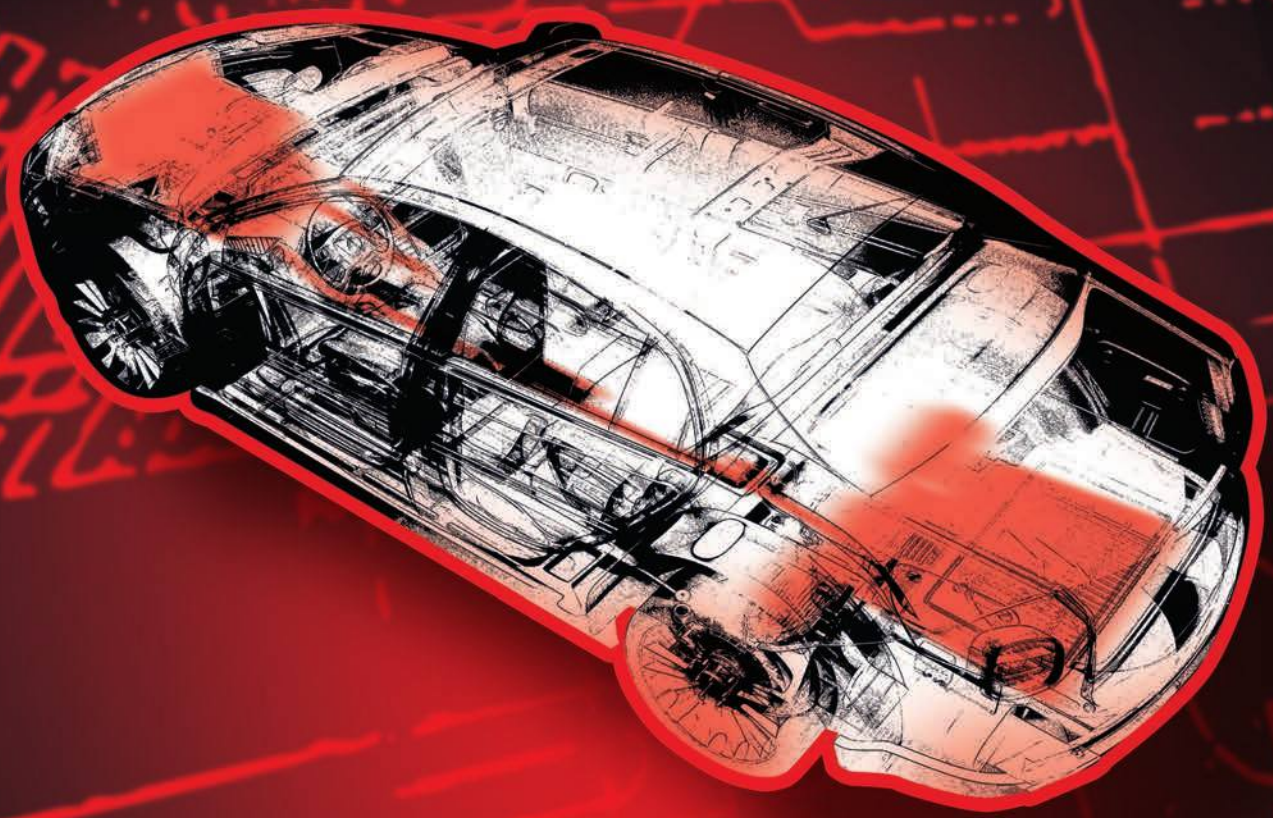
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	FROM PAGE
INDUSTRIAL SAFETY	454
CABLE PROTECTION	456
TWEEZERS & SEARCH MIRROR WITH PROTECTIVE INSULATION	456
TORQUE WRENCHES WITH PROTECTIVE INSULATION	457
SPANNER WITH PROTECTIVE INSULATION	457
1/4" RANGE WITH PROTECTIVE INSULATION	460
1/4" SETS WITH PROTECTIVE INSULATION	461
3/8" RANGE WITH PROTECTIVE INSULATION	461
3/8" SETS WITH PROTECTIVE INSULATION	465
1/2" RANGE WITH PROTECTIVE INSULATION	466
1/2" SETS WITH PROTECTIVE INSULATION	469
3/4" RANGE WITH PROTECTIVE INSULATION	469
SCREWDRIVERS WITH PROTECTIVE INSULATION	469
SCREWDRIVER SETS WITH PROTECTIVE INSULATION	471
KEY WRENCHES WITH PROTECTIVE INSULATION	471
PLIERS WITH PROTECTIVE INSULATION	472
PLIERS WITH TOOL SAFETY MECHANISM & PROTECTIVE INSULATION	476
PLIERS SETS WITH PROTECTIVE INSULATION	477
CABLE CUTTING	478
ELECTRICIAN'S KNIVES	481
COUNTERHOLDER WITH PROTECTIVE INSULATION	483
ALIGNING TOOLS WITH PROTECTIVE INSULATION	483
SAWS WITH PROTECTIVE INSULATION	483
HAMMER WITH PROTECTIVE INSULATION	484
PLASTIC PLIERS / CLAMPS WITH PROTECTIVE INSULATION	484
BRUSH WITH PROTECTIVE INSULATION	485
SEALS & HOODS WITH PROTECTIVE INSULATION	485
EX+LED PROTECTED LAMPS	486
EXPANSION WEDGES WITH PROTECTIVE INSULATION	486
FOLDING RULES	487
RELEASE TOOLS	487
CRIMPING TOOLS	487
INSULATED TOOL SETS	489
LIFT TECHNOLOGY	492

INDUSTRIAL SAFETY

Work protective hardhat

- DIN EN 397
- Special plastic



	Colour code	L mm	B mm	H mm	g
117.1608		290,0	225,0	175,0	370
117.1609		290,0	225,0	175,0	370
117.1610		290,0	225,0	175,0	370

Electrician's face shield

- DIN EN 397
- Fault arc tested to DGUV GS-ET-29, test level W(LBP) = 158 kJ (corresponds to prospective test short-circuit current 4 kA/0.5 s) EN 166
- Personal eye protection equipment
- Also fault arc tested to ASTM F2178, ATPV: 7.0 cal/cm²
- Colour rendering index > 90%
- Light transmission: > 88%
- Suitable for standard electrician's hardhat
- Face shield for 117.1608-117.1610



	Arc fault	⚡	g
117.1780	class 1	1000V	278

Electrician's face shield

- DIN EN 166
- Fault arc tested to DGUV GS-ET-29, test level W(LBP) = 318 kJ (corresponds to prospective test short-circuit current 7 kA/0.5 s) EN 166
- Personal eye protection equipment
- Also fault arc tested to ASTM F2178, ATPV: 7.0 cal/cm²
- Colour rendering index > 90%
- Colour rendering index > 90%
- Suitable for standard electrician's hardhat
- Suitable for standard electrician's hardhat
- Anti-mist protective gel supplied



	Arc fault	⚡	g
117.1796	class 2	1000V	525

Carrying bag for work helmet

- Made out of red leather
- With carrying strap





	B mm	H mm	g
117.1612	500,0	480,0	500

Safety rubber boots with protective insulation

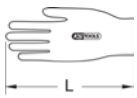
- For working enviroment of voltages AC 1000 V and DC 1500 V
- In accordance with new standard EN 50321
- With steel bar



	Size mm	⚡	kg
117.1613	39	1000V	3,00
117.1614	40	1000V	3,00
117.1615	41	1000V	3,00
117.1616	42	1000V	3,00
117.1617	43	1000V	3,00
117.1618	44	1000V	3,00
117.1619	45	1000V	3,00
117.1620	46	1000V	3,00
117.1621	47	1000V	3,00

Under gloves

- Made out of fine mutton cloth





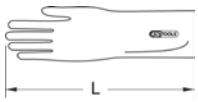
	L mm	g
117.1660	260,0	225

Electrician protective glove with natural latex insulation

- Dielectric latex gloves
- Insulated to DIN EN 60903
- With anatomical fit
- Anti-allergy treated
- With straight edge
- UV-resistant packaging

The use of glove liners is recommended for absorbing skin moisture and for better ventilation.

Attention: Over-gloves are necessary for mechanical protection!





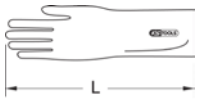
	Thickness mm	Electrosoft Class	Size mm	L mm	⚡	g
117.1663	1,0	0	9	360,0	1000V	215
117.1664	1,0	0	10	360,0	1000V	215
117.1132	2,0	1	10	360,0	7500V	250
117.1133	2,0	3	10	410,0	26500V	690
117.1134	2,5	4	10	410,0	36000V	890

Electrician protective glove with natural latex insulation

- Dielectric latex gloves
- Insulated to DIN EN 60903
- With anatomical fit
- Anti-allergy treated
- With straight edge
- UV-resistant packaging

The use of glove liners is recommended for absorbing skin moisture and for better ventilation.

Attention: Over-gloves are necessary for mechanical protection!





	Thickness mm	Size mm	Electrosoft Class	L mm	⚡	g
117.2315	1,0	8	0	400,0	500V	215
117.1661	1,0	9	0	400,0	1000V	215
117.1662	1,0	10	0	400,0	1000V	215
117.1762	2,0	10	0	410,0	1000V	470
117.2316	1,0	11	0	400,0	500V	215
117.1756	1,0	9	00	410,0	500V	168
117.1757	1,0	10	00	410,0	500V	189

Pneumatic electrician protective glove tester

- For the testing of insulated gloves
- Always carry out before starting work



	D mm	L mm	g
117.1666	110,0	140,0	800

Protection pocket for electricians gloves

- Belt pocket made out of canvas
- For the storage and protection of the electricians gloves



	B mm	H mm	g
117.1665	180,0	200,0	200

Pull-on gloves for electrician's protective gloves

- Waterproof
- Treated with silicone
- Leather gloves for dielectric gloves
- Velcro fastening on the back of the hand
- Split leather cuff
- For protecting against mechanical risks
- Full-grain calf leather

Caution: This insulating-glove cover is required for mechanical protection (rubbing, cuts, pricks) in conjunction with dielectric gloves!



	Size mm	L mm	g
117.1560	10	320,0	175

Rubber cover sheet with protective insulation, transparent

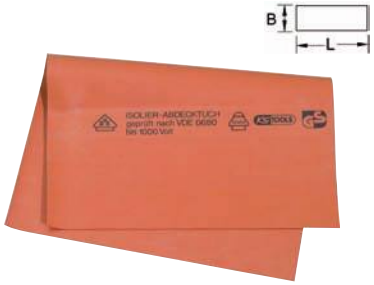
- Insulation according to DIN EN 61112
- transparent cloth
- cold-resistant and highly flexible



	Thickness mm	B mm	L mm		kg
117.2303	0,5	130,0	130,0	1000V	0,03
117.2304	0,5	200,0	200,0	1000V	0,10
117.2305	0,5	250,0	350,0	1000V	0,12
117.2306	0,5	500,0	500,0	1000V	0,18
117.2307	0,5	600,0	600,0	1000V	0,22
117.2308	0,5	1000,0	1000,0	1000V	0,68
117.2309	0,5	1200,0	1200,0	1000V	0,80
117.2311	0,5	1300,0	50000,0	1000V	40,00

Rubber cover with protective insulation

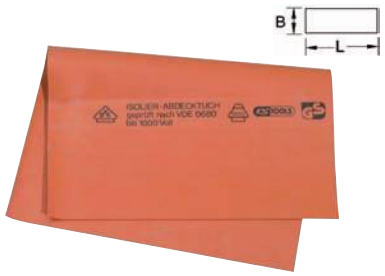
- Tested to VDE 0680/1
- Insulated to DIN EN 60903
- Extensively tear and water resistant
- Particularly suitable for external usage



	Thickness mm	B mm	L mm		kg
117.1651	1,0	130,0	130,0		0,04
117.1652	1,0	250,0	350,0		0,21
117.1653	1,0	500,0	500,0		0,43
117.1654	1,0	600,0	600,0		0,70
117.1655	1,0	1000,0	1000,0		1,80
117.1656	1,0	1200,0	1000,0		2,95
117.1657	1,0	1000,0	10000,0		16,75
117.1658	1,0	1200,0	10000,0		20,10

Rubber cover with protective insulation

- Tested to VDE 0680/1
- Insulated to DIN EN 60903
- Extensively tear and water resistant
- Particularly suitable for external usage



	Thickness mm	B mm	L mm		kg
117.1746	1,6	130,0	130,0		0,03
117.1747	1,6	250,0	250,0		0,22
117.1748	1,6	500,0	500,0		0,44
117.1749	1,6	600,0	600,0		0,72
117.1750	1,6	1000,0	1000,0		1,90
117.1751	1,6	1200,0	1200,0		3,10
117.1752	1,6	1000,0	10000,0		18,60
117.1753	1,6	1200,0	10000,0		25,60

Insulating mat

- Insulation in accordance with IEC 61111 Class 2



	Thickness mm	B mm	L mm		kg
117.3819	3,0	1000,0	1000,0	1000V	3,42
117.1398	3,0	1000,0	10000,0	1000V	40,00
117.1754	4,5	1000,0	1000,0	1000V	6,00
117.1755	4,5	1000,0	10000,0	1000V	60,00

Protective bag for insulating mat

- Made out of red leather
- With carrying strap



	B mm	L mm	g
117.1399	230,0	1000,0	900

Red/white diagonal striped foil barrier tape

- For safeguarding and indicating hazard areas
- In accordance with ASR A1.3 and BGV A8
- High tear resistance
- Block diagonal stripes in red/white
- For outdoor and indoor use
- Polyethylene
- In stable unwinding box



	Width mm	Length mm	kg
917.3899	80,0	500,0	2,50

Barrier post set with chain

- Ideal for cordoning off areas with restricted access
- the base can be filled with water or sand for safe standing
- Barrier post height approx. 950 mm with 2 eyes for hanging the chain
- including base and chain
- Made from plastic



			kg
117.1540	9 pcs	Barrier post set with chain	3,22

consists of:

	x		kg
117.1541	4	Bollard with base	0,50
117.1542	1	Chain	1,11

Hybrid warning sign - flash for working on hybrid and electric vehicles

- Warning against hazardous voltage
- For safety in the workplace
- For outdoor and indoor use
- For company premises and workshops
- Sturdy quality with laminate coating
- Resistant to abrasion and chemicals
- Aluminium/plastic composite



	Thickness mm	Height mm	g
917.3898	5	200,0	66

Hybrid warning sign - switch for working on hybrid and electric vehicles

- Do not switch on, work is currently in progress
- For safety in the workplace
- For outdoor and indoor use
- For company premises and workshops
- Sturdy quality with laminate coating
- Resistant to abrasion and chemicals
- Aluminium/plastic composite



	Thickness mm	Ø mm	g
917.3897	5	200	84

Warning and information signs

- For safety in the workplace
- For outdoor and indoor use
- For company premises and workshops
- Sturdy quality with laminate coating
- Resistant to abrasion and chemicals
- Aluminium/plastic composite









		Width mm	Height mm	Thickness mm	g
117.2478	Sign to VDE requirements	660,0	1000,0	1,5	160
117.2479	First Aid sign notice	410,0	595,0	1,5	384
117.2481	Fire-fighting sign	410,0	595,0	1,5	384
117.2482	Earthed warning sign	200,0	120,0	1,6	178

CABLE PROTECTION

cable protection wedge

- separates a cut cable from the adjacent cable
- made of nylon



	L1 mm	L2 mm		g
117.2321	122,0	48,0	1000V	57

TWEEZERS & SEARCH MIRROR WITH PROTECTIVE INSULATION

Tweezers with protective insulation, curved

- Insulated handle to IEC 60900
- Wrap insulation
- Chrome vanadium



	B mm	L mm		g
117.1623	11,5	145,0	GS	35
117.1624	15,5	200,0	1000V	72

Tweezers with protective insulation, straight

- Insulated handle to IEC 60900
- Wrap insulation
- Chrome vanadium

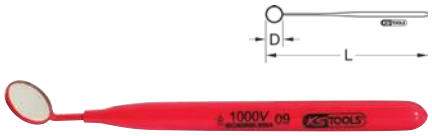




	B mm	L mm		g
117.1626	11,0	130,0	1000V	30
117.1627	13,5	130,0	1000V	30
117.1628	15,0	145,0	GS	55
117.1629	15,5	200,0	1000V	72

Search mirror with protective insulation

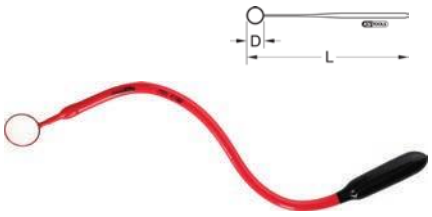
- Insulated handle to IEC 60900
- Insulated
- Chrome vanadium



	Ø mm	Length mm		g
117.1630	22	175,0	1000V	20

Search mirror with protective insulation

- Insulated handle to IEC 60900
- Flexible
- Insulated



		Ø mm	Length mm		g
117.2408	0 x	40	590,0	1000V	334
117.2409	0 x	58	590,0	1000V	350
117.2411	4 x	54	590,0	1000V	350

Flexible magnetic jack with protective insulation

- Insulated handle to IEC 60900
- Flexible shaft
- Special tool steel

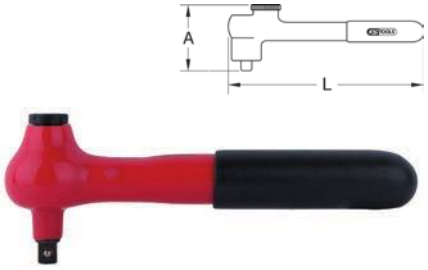


	Load capacity kg	Ø mm	Length mm		g
117.2322	0,25	14,0	420,0	1000V	23
117.2323	1,0	15,0	470,0	1000V	180
117.2324	1,8	16,5	520,0	1000V	325

TORQUE WRENCHES WITH PROTECTIVE INSULATION

Fixed torque wrench with protective insulation

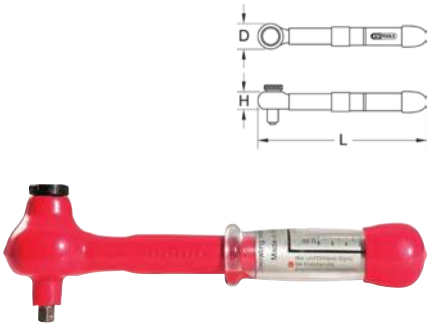
- Actuation accuracy: ±4 % tolerance of the set scale value
- Precise reading accuracy for a minimum 5.000 tightening cycles
- For controlled fastening in a clockwise direction
- Can untighten without any torque restraint thanks to the anticlockwise latch
- An audible and palpable signal when the desired torque value is achieved
- Without scale - with a fixed adjustable value
- Hexagon socket holder in accordance with DIN 3126 - E6,3
- Individually marked with serial number - unique product identification
- including calibration declaration of conformity according to DIN EN ISO 6789:2017(E) - traceable to national standards



	■	N·m	A mm	L mm		g
117.3922	3/8"	5-35	78,0	210,0	1000V	420
117.1001	1/2"	5-35	78,0	250,0	1000V	420

Mini torque wrench with protective insulation and reversible ratchet head

- Insulated handle to IEC 60900
- For working enviroment of voltages AC 1000 V and DC 1500 V
- Release accuracy: ±4 % tolerance from the set scale value and better
- Precise reading accuracy for a minimum 5.000 tightening cycles
- For controlled fastening in a clockwise direction
- Can untighten without any torque restraint thanks to the anticlockwise latch
- An audible and palpable signal when the desired torque value is achieved
- Exact gearing 30 teeth ratchet mechanism
- Ergonomic designed handle provides secure transmission of the torque
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- Individually marked with serial number - unique product identification
- including calibration declaration of conformity according to DIN EN ISO 6789:2017(E) - traceable to national standards



	■	N·m	D mm	H mm	L mm		g
117.1400	1/4"	2-12	40,0	41,0	200,0	1000V	400
117.1402	1/4"	5-25	40,0	41,0	200,0	1000V	420
117.1184	3/8"	5-25	40,0	42,0	200,0	1000V	440
117.1185	1/2"	5-25	40,0	42,0	200,0	1000V	440

Torque wrench with protective insulation and reversible ratchet head

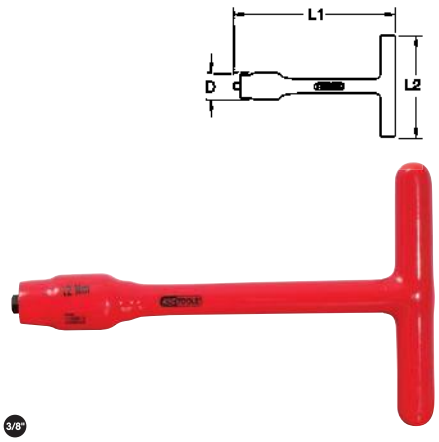
- Insulated handle to IEC 60900
- For working enviroment of voltages AC 1000 V and DC 1500 V
- Release accuracy: ±4 % tolerance from the set scale value and better
- Precise reading accuracy for a minimum 5.000 tightening cycles
- For controlled fastening in a clockwise direction
- Can untighten without any torque restraint thanks to the anticlockwise latch
- Scale in Nm divisions for precise adjustment
- Large vision panel for precise adjustment
- An audible and palpable signal when the desired torque value is achieved
- Exact gearing 30 teeth ratchet mechanism
- Torque setting is quick and easy using the locking knob in the handle end
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- Individually marked with serial number - unique product identification
- including calibration declaration of conformity according to DIN EN ISO 6789:2017(E) - traceable to national standards



	■	N·m	H mm	L mm		kg
117.3805	3/8"	2-27	51,0	280,0	1000V	0,92
117.3810	3/8"	5-50	51,0	370,0	1000V	1,07
117.1301	1/2"	2-27	61,0	280,0	1000V	0,93
117.1300	1/2"	5-50	61,0	370,0		1,10
117.1302	1/2"	20-100	61,0	460,0	1000V	1,20
117.1303	1/2"	40-220	61,0	530,0	1000V	1,30

Fixed T-handle torque limiter with protective insulation

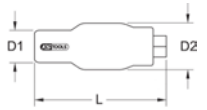
- Insulated handle to IEC 60900
- For working enviroment of voltages AC 1000 V and DC 1500 V
- High accuracy
- For controlled fastening in a clockwise direction
- Clearly noticeable torque release signal through ratchet
- It is not possible to over tighten the set value
- Without scale - with a fixed adjustable value
- Can untighten without any torque restraint thanks to the anticlockwise latch
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock



	■	N·m	D mm	L mm	l mm		g
117.3806	3/8"	12	36,5	270,0	165,0	1000V	540
117.3807	3/8"	18	36,5	270,0	165,0	1000V	540
117.3808	3/8"	25	36,5	270,0	165,0	1000V	540

Fixed torque limiter with protective insulation

- Insulated handle to IEC 60900
- For working enviroment of voltages AC 1000 V and DC 1500 V
- High accuracy
- For controlled fastening in a clockwise direction
- Clearly noticeable torque release signal through ratchet
- It is not possible to over tighten the set value
- Without scale - with a fixed adjustable value
- Can untighten without any torque restraint thanks to the anticlockwise latch
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock



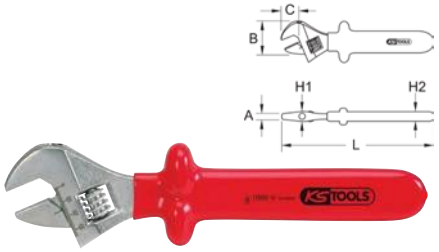


	■	■	N·m	D1 mm	D2 mm	L mm		g
117.3802	3/8"	3/8"	12	23,0	27,5	92,0	1000V	310
117.3803	3/8"	3/8"	18	23,0	27,5	92,0	1000V	310
117.3804	3/8"	3/8"	25	23,0	27,5	92,0	1000V	310

SPANNER WITH PROTECTIVE INSULATION

Sliding spanner with protective insulation

- In accordance to DIN 3117
- Insulated handle to IEC 60900
- Jaw 15° offset
- Swedish type design
- With mm scale
- Matt finish
- Chrome vanadium



	mm	A mm	B mm	C mm	H1 mm	H2 mm	L mm		g
117.1250	24,0	12,0	55,0	30,0	8,0	14,0	200,0	1000V	310
117.1253	30,0	14,0	77,0	40,0	14,0	19,0	250,0	1000V	540
117.1254	34,0	17,5	78,0	48,0	17,5	18,0	300,0	1000V	830

Sliding spanner with protective insulation

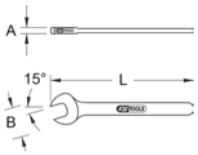
- In accordance to DIN 3117
- Insulated handle to IEC 60900
- Jaw 15° offset
- Swedish type design
- With mm scale
- Matt finish
- Burnished
- Chrome vanadium



	mm	A mm	B mm	C mm	H1 mm	H2 mm	L mm		g
117.4270	27	13,0	57,5	20,0	13,0	18,5	210,0	1000V	329
117.4271	31	15,0	68,5	30,0	15,0	20,0	260,0	1000V	530
117.4272	34	17,5	79,0	36,0	17,5	23,0	315,0	1000V	800

open-end wrench with protective insulation

- In accordance to DIN 7446
- Insulated handle to IEC 60900
- Jaw 15° offset
- Chrome vanadium





	mm		A mm	B mm	L mm		g
117.1506	6		12,0	23,5	70,1		30
117.1507	7		12,0	25,0	77,0		30
117.1508	8		12,5	27,2	84,0		30
117.1509	9		12,5	29,2	90,0		40
117.1510	10		13,0	31,2	97,0		40
117.1511	11		13,4	33,3	104,0		50
117.1512	12		13,5	35,2	110,0		50
117.1513	13		13,9	37,4	117,0		70
117.1514	14		14,2	39,5	124,0		80
117.1515	15		14,4	41,2	130,0		90
117.1516	16		14,7	42,7	137,0		120
117.1517	17		14,9	44,5	144,0		120
117.1518	18		15,2	46,7	150,0		120
117.1519	19		15,4	48,7	157,0		150
117.1522	22		16,2	54,9	174,0		190
117.1524	24		16,7	58,4	190,0		300
117.1527	27		17,4	63,7	210,0		390
117.1530	30		18,1	69,8	230,0		510
117.1532	32		18,4	65,8	244,0		550
117.2208		5/16"	8,0	17,3	120,0	1000V	34
117.2209		3/8"	8,8	23,3	108,0	1000V	40
117.2251		7/16"	9,9	25,6	115,7	1000V	46
117.2252		1/2"	10,7	30,0	136,0	1000V	65
117.2253		9/16"	10,6	33,1	145,0	1000V	80
117.2254		5/8"	10,2	34,4	156,0	1000V	114
117.2255		11/16"	9,7	38,1	170,0	1000V	116
117.2256		3/4"	11,1	41,6	173,0	1000V	150
117.2257		13/16"	12,7	44,8	186,0	1000V	180
117.2258		7/8"	13,2	49,0	193,0	1000V	190
117.2259		15/16"	12,7	52,4	215,0	1000V	300
117.2261		1"	13,2	59,1	210,0	1000V	330

Ratchet ring spanner with protective insulation

- FlankTraction profile
- In accordance to DIN 7446
- Insulated handle to DIN 60900
- Straight form
- Exact gearing with 72 teeth
- Chrome vanadium

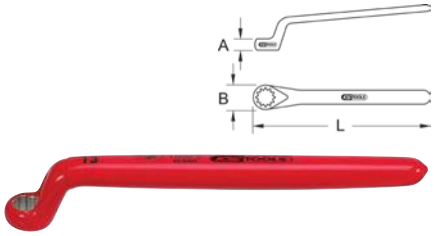


	mm		A mm	B mm	L mm		kg
117.4206	6		6,7	14,4	126,0	1000V	0,03
117.4207	7		6,9	17,2	137,0	1000V	0,04
117.4208	8		6,9	17,2	140,0	1000V	0,04
117.4209	9		7,3	19,2	150,0	1000V	0,04
117.4210	10		7,7	21,2	159,0	1000V	0,06
117.4211	11		8,1	22,2	165,0	1000V	0,06
117.4212	12		8,6	23,2	172,0	1000V	0,08
117.4213	13		9,0	25,2	178,0	1000V	0,09
117.4214	14		9,4	28,2	191,0	1000V	0,12
117.4215	15		9,8	29,2	200,0	1000V	0,13
117.4216	16		10,3	31,2	208,0	1000V	0,16
117.4217	17		10,7	32,2	226,0	1000V	0,19
117.4218	18		11,1	33,2	237,0	1000V	0,23
117.4219	19		11,6	34,2	248,0	1000V	0,25
117.4221	21		13,4	40,4	274,0	1000V	0,36
117.4222	22		13,4	40,4	290,0	1000V	0,34

	mm		A mm	B mm	L mm		kg
117.4224	24		14,9	46,4	323,0	1000V	0,49
117.4227	27		15,9	52,4	331,0	1000V	0,61
117.4228	30		17,4	59,2	389,0	1000V	0,90
117.4229	32		17,9	62,4	415,0	1000V	1,10
117.4230	34		17,9	62,4	460,0	1000V	1,25
117.2283		5/16"	9,2	18,2	124,0	1000V	0,05
117.2284		3/8"	11,2	22,9	141,0	1000V	0,05
117.2285		7/16"	11,5	24,4	143,8	1000V	0,06
117.2286		1/2"	12,9	27,7	150,0	1000V	0,08
117.2287		9/16"	12,2	29,8	164,0	1000V	0,09
117.2288		5/8"	13,2	33,9	177,0	1000V	0,14
117.2289		11/16"	12,9	34,3	185,0	1000V	0,18
117.2291		3/4"	13,7	36,8	205,0	1000V	0,21
117.2292		7/8"	16,2	44,2	248,0	1000V	0,22
117.2293		15/16"	14,0	50,3	277,0	1000V	0,42

Ring spanner with protective insulation, cranked

- FlankTraction profile
- In accordance to DIN 7447
- Insulated handle to IEC 60900
- Ring head 75° offset
- Chrome vanadium

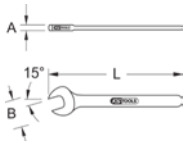


	mm		A mm	B mm	L mm		g
117.1306	6		6,1	13,6	160,0		55
117.1307	7		6,7	12,6	160,0		55
117.1308	8		7,1	14,0	170,0		60
117.1309	9		7,4	15,5	170,0		65
117.1310	10		7,8	17,0	170,0		80
117.1311	11		8,1	18,4	180,0		90
117.1312	12		10,2	19,9	190,0		100
117.1313	13		10,9	21,3	190,0		110
117.1314	14		11,3	22,8	210,0		160
117.1315	15		11,9	24,1	215,0		170
117.1316	16		12,2	25,7	220,0		200
117.1317	17		12,6	27,1	225,0		250
117.1318	18		13,2	28,6	230,0		270
117.1319	19		13,6	30,1	240,0		290
117.1322	22		13,9	34,4	260,0		320
117.1324	24		15,4	36,2	280,0		490
117.1327	27		16,4	40,4	295,0		540
117.1330	30		17,4	44,4	310,0		580
117.1332	32		18,4	47,4	330,0		590
117.2269		5/16"	7,9	16,6	155,0	1000V	60
117.2271		3/8"	7,7	16,6	173,0	1000V	80
117.2272		7/16"	10,5	20,3	175,0	1000V	86
117.2273		1/2"	10,3	21,7	195,0	1000V	110
117.2274		9/16"	10,8	24,5	202,0	1000V	160
117.2275		5/8"	11,9	27,2	210,0	1000V	204
117.2276		11/16"	12,7	28,4	216,0	1000V	260
117.2277		3/4"	13,9	31,0	235,0	1000V	294
117.2278		13/16"	12,5	32,0	255,0	1000V	300
117.2279		7/8"	15,3	36,0	255,0	1000V	320
117.2281		15/16"	15,2	38,5	280,0	1000V	500
117.2282		1"	15,1	42,3	280,0	1000V	510



Ratchet open-end wrench with protective insulation

- In accordance to DIN 3113 / ISO 3318
- Insulated handle to IEC 60900
- Jaw 15° offset
- Chrome vanadium

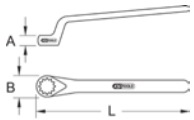




	mm	A mm	B mm	L mm		g
117.2262	10	7,1	22,7	105,0	1000V	28
117.2263	11	8,2	25,6	115,0	1000V	34
117.2264	12	7,7	27,1	127,0	1000V	38
117.2265	13	8,5	28,9	135,0	1000V	46
117.2266	14	9,3	31,8	145,0	1000V	54
117.2267	17	10,7	38,4	160,0	1000V	74
117.2268	19	11,8	42,1	175,0	1000V	100

Ratchet gear with protective insulation

- FlankTraction profile
- Insulated handle to DIN 60900
- Exact gearing with 32 teeth
- extremely stable
- Reversible
- Chrome vanadium

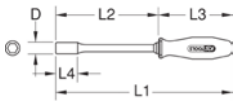




	mm	A mm	B mm	L mm		kg
117.2294	13x17	44,2	34,2	283,0	1000V	0,35
117.2295	17x19	48,1	42,1	287,0	1000V	0,58
117.2296	19x24	55,1	51,5	365,0	1000V	0,91
117.2297	24x30	63,0	65,0	445,0	1000V	1,57

Socket screwdriver with protective insulation

- 6 point
- In accordance to DIN 7445
- Insulated to IEC 60900
- Chrome vanadium





	mm	D mm	L1 mm	L2 mm	L3 mm	L4 mm		g
117.1177	3	10,0	215,0	125,0	90,0	37,0	1000V	65
117.1178	3,5	10,0	215,0	125,0	90,0	37,0	1000V	70
117.1179	4	10,0	215,0	125,0	90,0	37,0	1000V	70
117.1181	4,5	10,0	215,0	125,0	90,0	37,0	1000V	70
117.1235	5	11,5	215,0	125,0	90,0	37,0		75
117.1182	5,5	15,5	215,0	125,0	90,0	37,0		70
117.1236	6	12,5	215,0	125,0	90,0	37,0		75
117.1237	7	14,5	225,0	125,0	100,0	37,0		115
117.1238	8	15,5	225,0	125,0	100,0	37,0		115
117.1239	9	16,5	225,0	125,0	100,0	37,0		155
117.1240	10	17,0	225,0	125,0	100,0	37,0		120
117.1241	11	19,5	235,0	125,0	110,0	37,0		160
117.1242	12	20,5	235,0	125,0	110,0	37,0		170
117.1243	13	21,5	235,0	125,0	110,0	37,0		170
117.1244	14	23,5	235,0	125,0	110,0	37,0		170
117.1247	17	26,5	235,0	125,0	110,0	37,0		190

Tool set with insulated tools

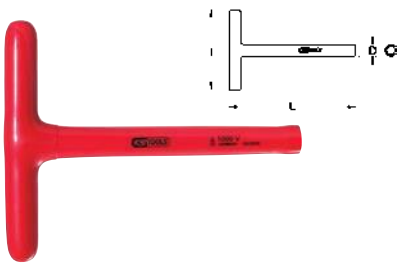
- 6 point
- In accordance to DIN 7445
- Insulated handle to IEC 60900
- Chrome vanadium



117.1255	5 pcs	5,5 - 7 - 8 - 10 - 13 mm	630

T-handle socket wrench with protective insulation

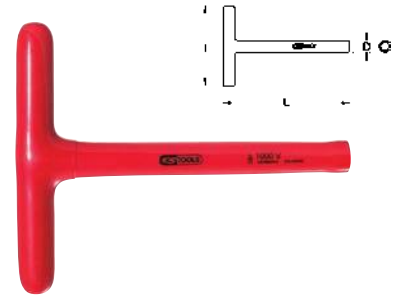
- 6 point
- In accordance to DIN 7440
- Insulated handle to IEC 60900
- For use of especially long threaded bolts
- Made from precision steel tube
- Chrome vanadium



	mm	D mm	l mm	L mm		
117.1771	10	17,0	165,0	200,0	1000V	320
117.1772	11	19,0	165,0	200,0	1000V	380
117.1773	12	19,0	165,0	200,0	1000V	370
117.1774	13	20,0	165,0	200,0	1000V	370
117.1775	14	24,0	165,0	200,0	1000V	370
117.1776	16	26,0	165,0	200,0	1000V	420
117.1777	17	26,0	165,0	200,0	1000V	430
117.1778	18	29,0	165,0	200,0	1000V	460
117.1779	19	30,0	165,0	200,0	1000V	440
117.1781	20	32,0	165,0	200,0	1000V	460
117.1782	22	33,0	165,0	200,0	1000V	570
117.1783	24	35,0	165,0	200,0	1000V	590

T-handle socket wrench with protective insulation, long

- 6 point
- In accordance to DIN 7440
- Insulated handle to IEC 60900
- For use of especially long threaded bolts
- Made from precision steel tube
- Chrome vanadium

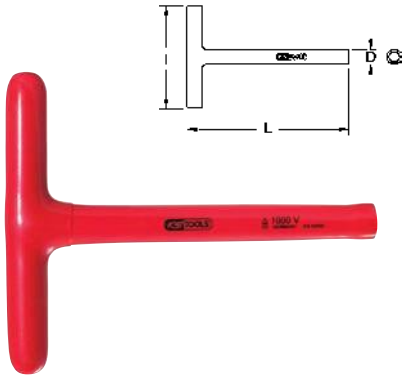


	mm	D mm	l mm	L mm		
117.1725	8	17,0	165,0	300,0	1000V	350
117.1726	10	20,0	165,0	300,0	1000V	380

	mm	D mm	l mm	L mm		
117.1727	11	20,0	165,0	300,0	1000V	430
117.1728	12	20,0	165,0	300,0	1000V	430
117.1729	13	20,0	165,0	300,0	1000V	420
117.1730	14	23,0	165,0	300,0	1000V	440
117.1731	17	28,0	165,0	300,0	1000V	520
117.1732	19	32,0	165,0	300,0	1000V	590
117.1733	22	33,0	165,0	300,0	1000V	690
117.1734	24	33,5	165,0	300,0	1000V	780

T-handle socket wrench with protective insulation

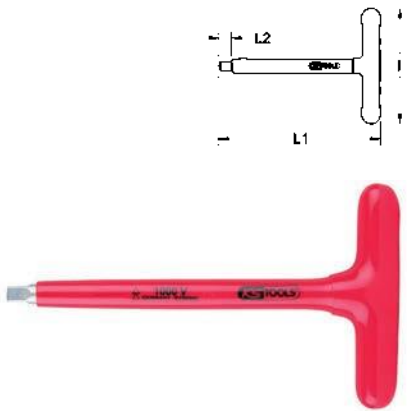
- Insulated to IEC 60900
- Magnetic
- For bits to DIN 3126 - C 6,3
- Chrome vanadium



	mm	D mm	l mm	L mm		
117.2422	4	8,1	95,0	210,0	1000V	164
117.2423	5	8,5	95,0	210,0	1000V	166
117.2424	6	11,7	95,0	210,0	1000V	170
117.2425	7	13,5	95,0	210,0	1000V	172
117.2426	8	15,0	95,0	210,0	1000V	173
117.2427	9	11,2	95,0	210,0	1000V	182
117.2428	10	18,0	95,0	210,0	1000V	190
117.2429	11	19,8	95,0	210,0	1000V	200
117.2431	12	19,8	95,0	210,0	1000V	204
117.2432	13	20,5	95,0	210,0	1000V	208
117.2433	14	23,2	95,0	210,0	1000V	224

T-handle socket wrench with protective insulation

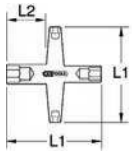
- Square drive adaptor to DIN 3120 / 1174 with ball lock
- In accordance to DIN 7436
- Insulated handle to IEC 60900
- Chrome vanadium



	■	l mm	L1 mm	L2 mm		
117.3919	1/4"	92,0	160,0	8,0	1000V	151
117.3920	3/8"	155,0	200,0	11,0	1000V	350
117.3921	1/2"	155,0	200,0	15,0	1000V	490

Cross wrench with protective insulation

- 6 point
- Insulated handle to IEC 60900
- No contact between the steel hexagon drive
- Made from impact resistant plastic
- Chrome vanadium

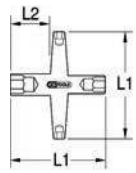




	mm	L1 mm	L2 mm		
117.1701	10x11x12x13	140,0	55,0	1000V	230
117.1702	10x11x13x17	140,0	55,0	1000V	230
117.1704	10x12x14x17	140,0	55,0	1000V	230
117.1705	10x13x14x17	140,0	55,0	1000V	230
117.1706	11x12x13x17	140,0	55,0	1000V	230
117.1707	11x13x14x17	140,0	55,0	1000V	230
117.1708	13x17x19x22	140,0	55,0	1000V	340
117.1709	14x17x19x22	140,0	55,0	1000V	340

Cross wrench with protective insulation

- 6 point
- Insulated handle to IEC 60900
- No contact between the steel hexagon drive
- Made from impact resistant plastic
- Centre cross reinforced with hard fibre
- Chrome vanadium



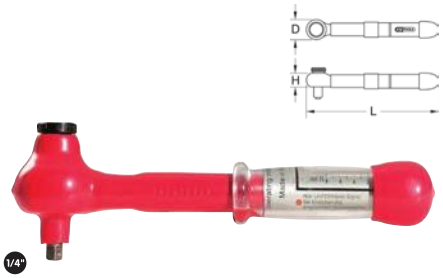


	mm	L1 mm	L2 mm		
117.1720	10x13x14x17	220,0	92,0	1000V	430

1/4" RANGE WITH PROTECTIVE INSULATION

Mini torque wrench with protective insulation and reversible ratchet head

- Insulated handle to IEC 60900
- For working enviroment of voltages AC 1000 V and DC 1500 V
- Release accuracy: ±4 % tolerance from the set scale value and better
- Precise reading accuracy for a minimum 5.000 tightening cycles
- For controlled fastening in a clockwise direction
- Can untighten without any torque restraint thanks to the anticlockwise latch
- An audible and palpable signal when the desired torque value is achieved
- Exact gearing 30 teeth ratchet mechanism
- Ergonomic designed handle provides secure transmission of the torque
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- Individually marked with serial number - unique product identification
- including calibration declaration of conformity according to DIN EN ISO 6789:2017(E) - traceable to national standards

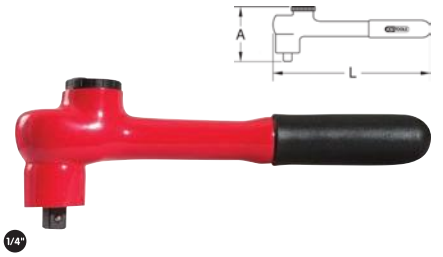


1/4"

	■	N·m	D mm	H mm	L mm	1000V	g
117.1400	1/4"	2-12	40,0	41,0	200,0	1000V	400
117.1402	1/4"	5-25	40,0	41,0	200,0	1000V	420

Reversible ratchet with protective insulation

- Square drive adaptor to DIN 3120 / 1174 with ball lock
- In accordance to DIN 7449
- Insulated handle to IEC 60900
- With reversible 32-teeth ratchet head
- With frictional contact square drive with locking device
- Chrome vanadium



1/4"

	■	A mm	L mm	1000V	g
117.1401	1/4"	54,5	141,0	1000V	128

Extension with protective insulation

- In accordance to DIN 7434
- Insulated handle to IEC 60900
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- With frictional contact square drive with locking device
- Chrome vanadium

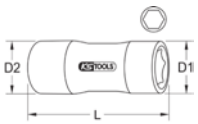


1/4"

	■	L mm	1000V	g
117.1451	1/4"	50,0	1000V	40
117.1452	1/4"	75,0	1000V	45
117.1453	1/4"	100,0	1000V	56
117.1454	1/4"	150,0	1000V	68

socket with protective insulation

- 6 point
- In accordance to DIN 7448
- Insulated handle to IEC 60900
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Chrome vanadium



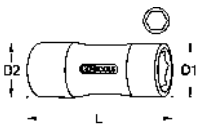


1/4"

	■ mm	D1 mm	D2 mm	L mm	1000V	g
117.1404	4	16,0	10,0	37,0	1000V	14
117.1405	5	16,5	11,5	37,0	1000V	12
117.1406	6	16,5	12,0	37,0	1000V	12
117.1407	7	16,5	13,5	37,0	1000V	15
117.1408	8	16,5	15,5	37,0	1000V	15
117.1409	9	16,5	16,5	37,0	1000V	16
117.1410	10	16,5	17,5	37,0	1000V	18
117.1411	11	16,5	20,0	37,0	1000V	18
117.1412	12	16,5	21,0	37,0	1000V	24
117.1413	13	16,5	22,0	37,0	1000V	26
117.1414	14	16,5	24,0	37,0	1000V	29

Socket with protective insulation, long

- 6 point
- In accordance to DIN 7448
- Insulated handle to IEC 60900
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Chrome vanadium



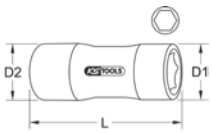


1/4"

	■ mm	D1 mm	D2 mm	L mm	1000V	g
117.2341	4	16,5	9,5	55,0	1000V	22
117.2342	5	16,5	9,5	55,0	1000V	24
117.2343	6	16,5	9,5	55,0	1000V	28
117.2344	7	16,5	9,5	55,0	1000V	30
117.2345	8	16,5	9,5	55,0	1000V	31
117.2346	9	16,5	9,5	55,0	1000V	38
117.2347	10	16,5	9,5	55,0	1000V	48
117.2348	11	16,5	9,5	55,0	1000V	57
117.2349	12	16,5	9,5	55,0	1000V	60
117.2351	13	16,5	9,5	55,0	1000V	64
117.2352	14	16,5	9,5	55,0	1000V	78

socket with protective insulation

- 6 point
- In accordance to DIN 7448
- Insulated handle to IEC 60900
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Chrome vanadium



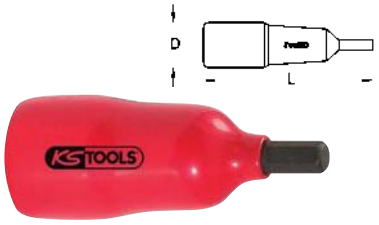


1/4"

	■	D1 mm	D2 mm	L mm	1000V	g
117.2401	3/16"	16,5	11,7	38,0	1000V	12
117.2402	1/4"	16,5	13,0	38,0	1000V	12
117.2403	5/16"	16,5	15,1	38,0	1000V	15
117.2404	3/8"	16,5	17,8	38,0	1000V	18
117.2405	7/16"	16,5	19,8	38,0	1000V	18
117.2406	1/2"	16,5	21,6	38,0	1000V	26
117.2407	9/16"	16,5	24,0	38,0	1000V	28

Bit socket with protective insulation for hexagon socket screws

- Hexagon socket
- Insulated handle to IEC 60900
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Burnished
- Chrome vanadium

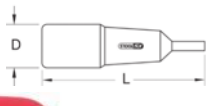


1/4"

	■ mm	D mm	L mm	1000V	g
117.1415	3	16,5	44,0	1000V	13
117.1416	4	16,5	44,0	1000V	13
117.1417	5	16,5	44,0	1000V	14
117.1418	6	16,5	44,0	1000V	15
117.1419	8	16,5	44,0	1000V	19

Bit socket with protective insulation for Torx screws

- Torx
- Insulated handle to IEC 60900
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Burnished
- Chrome vanadium





1/4"

		D mm	L mm	1000V	g
117.2471	T8	15,0	45,0	1000V	13
117.2472	T10	15,0	45,0	1000V	13
117.2473	T15	15,0	45,0	1000V	13
117.2474	T20	15,0	45,0	1000V	14
117.2475	T25	15,0	45,0	1000V	15
117.2476	T27	15,0	45,0	1000V	15
117.2477	T30	15,0	45,0	1000V	19

Bit holder with protective insulation

- Insulated handle to IEC 60900
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Magnetic
- For bits to DIN 3126 / C 6,3
- Chrome vanadium





1/4"

			D1 mm	D2 mm	L mm		
117.1420	1/4"	1/4"	16,0	16,5	40,0	1000V	240

1/4" SETS WITH PROTECTIVE INSULATION

Socket-set with insulated tools

- Insulated handle to IEC 60900
- Chrome vanadium
- In durable plastic storage case



1/4"

117.1877	22 pcs	Socket-set with insulated tools	1,60

1 x	1/4"
4 x	1/4": 50 - 75 - 100 - 150 mm
1 x	1/4"
1 x	1/4"
10 x	1/4": 5 - 6 - 7 - 8 - 9 - 10 - 11 - 12 - 13 14 mm
5 x	1/4": 3 - 4 - 5 - 6 - 8 mm

Socket-set with insulated tools

- Insulated handle to IEC 60900
- Chrome vanadium
- In durable plastic storage case



1/4"

117.1876	21 pcs	Socket-set with insulated tools	1,00

1 x	1/4": 5 - 25 Nm
3 x	1/4": 75 - 100 - 150 mm
2 x	1/4"
5 x	1/4": 6 - 8 - 10 - 13 - 14 mm
3 x	1/4": 5 - 6 - 8 mm
3 x	1/4": 4 - 5,5 - 6,5 mm
2 x	1/4": PH1 - PH2
2 x	1/4": PZ1 - PZ2

Socket-set with insulated tools

- Insulated handle to IEC 60900
- Chrome vanadium
- In durable plastic storage case



1/4"

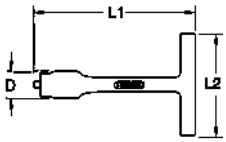
117.1878	21 pcs	Socket-set with insulated tools	1,90

1 x	1/4": 5 - 25 Nm
4 x	1/4": 50 - 75 - 100 - 150 mm
1 x	1/4"
10 x	1/4": 5 - 6 - 7 - 8 - 9 - 10 - 11 - 12 - 13 14 mm
5 x	1/4": 3 - 4 - 5 - 6 - 8 mm

3/8" RANGE WITH PROTECTIVE INSULATION

Fixed T-handle torque limiter with protective insulation

- Insulated handle to IEC 60900
- For working enviroment of voltages AC 1000 V and DC 1500 V
- High accuracy
- For controlled fastening in a clockwise direction
- Clearly noticeable torque release signal through ratchet
- It is not possible to over tighten the set value
- Without scale - with a fixed adjustable value
- Can untighten without any torque restraint thanks to the anticlockwise latch
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock



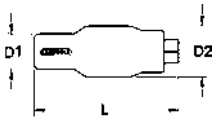


3/8"

		N·m	D mm	L mm	l mm		
117.3806	3/8"	12	36,5	270,0	165,0	1000V	540
117.3807	3/8"	18	36,5	270,0	165,0	1000V	540
117.3808	3/8"	25	36,5	270,0	165,0	1000V	540

Fixed torque limiter with protective insulation

- Insulated handle to IEC 60900
- For working enviroment of voltages AC 1000 V and DC 1500 V
- High accuracy
- For controlled fastening in a clockwise direction
- Clearly noticeable torque release signal through ratchet
- It is not possible to over tighten the set value
- Without scale - with a fixed adjustable value
- Can untighten without any torque restraint thanks to the anticlockwise latch
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock





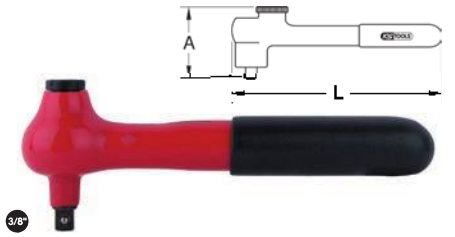
3/8"

			N·m	D1 mm	D2 mm	L mm		
117.3802	3/8"	3/8"	12	23,0	27,5	92,0	1000V	310
117.3803	3/8"	3/8"	18	23,0	27,5	92,0	1000V	310
117.3804	3/8"	3/8"	25	23,0	27,5	92,0	1000V	310



Fixed torque wrench with protective insulation

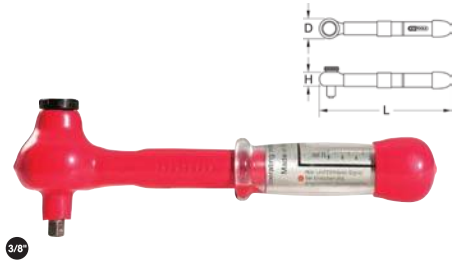
- Actuation accuracy: ±4 % tolerance of the set scale value
- Precise reading accuracy for a minimum 5.000 tightening cycles
- For controlled fastening in a clockwise direction
- Can untighten without any torque restraint thanks to the anticlockwise latch
- An audible and palpable signal when the desired torque value is achieved
- Without scale - with a fixed adjustable value
- Hexagon socket holder in accordance with DIN 3126 - E6,3
- Individually marked with serial number - unique product identification
- including calibration declaration of conformity according to DIN EN ISO 6789:2017(E) - traceable to national standards



	■	N·m	A mm	L mm	ϟ	g
117.3922	3/8"	5-35	78,0	210,0	1000V	420

Mini torque wrench with protective insulation and reversible ratchet head

- Insulated handle to IEC 60900
- For working enviroment of voltages AC 1000 V and DC 1500 V
- Release accuracy: ±4 % tolerance from the set scale value and better
- Precise reading accuracy for a minimum 5.000 tightening cycles
- For controlled fastening in a clockwise direction
- Can untighten without any torque restraint thanks to the anticlockwise latch
- An audible and palpable signal when the desired torque value is achieved
- Exact gearing 30 teeth ratchet mechanism
- Ergonomic designed handle provides secure transmission of the torque
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- Individually marked with serial number - unique product identification
- including calibration declaration of conformity according to DIN EN ISO 6789:2017(E) - traceable to national standards

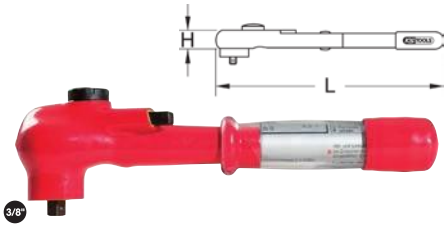


	■	N·m	D mm	H mm	L mm	ϟ	g
117.1184	3/8"	5-25	40,0	42,0	200,0	1000V	440



Torque wrench with protective insulation and reversible ratchet head

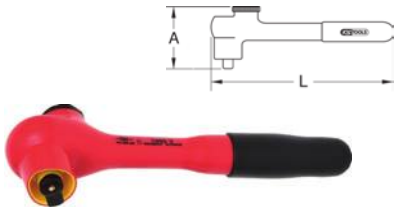
- Insulated handle to IEC 60900
- For working enviroment of voltages AC 1000 V and DC 1500 V
- Release accuracy: ±4 % tolerance from the set scale value and better
- Precise reading accuracy for a minimum 5.000 tightening cycles
- For controlled fastening in a clockwise direction
- Can untighten without any torque restraint thanks to the anticlockwise latch
- Scale in Nm divisions for precise adjustment
- Large vision panel for precise adjustment
- An audible and palpable signal when the desired torque value is achieved
- Exact gearing 30 teeth ratchet mechanism
- Torque setting is quick and easy using the locking knob in the handle end
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- Individually marked with serial number - unique product identification
- including calibration declaration of conformity according to DIN EN ISO 6789:2017(E) - traceable to national standards



	■	N·m	H mm	L mm	ϟ	kg
117.3805	3/8"	2-27	51,0	280,0	1000V	0,92
117.3810	3/8"	5-50	51,0	370,0	1000V	1,07

Reversible ratchet with protective insulation

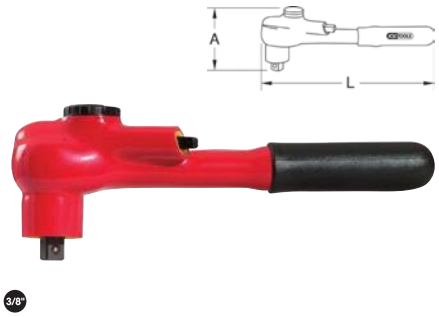
- Square drive adaptor to DIN 3120 / 1174 with ball lock
- In accordance to DIN 7449
- Insulated handle to IEC 60900
- With reversible 32-teeth ratchet head
- With frictional contact square drive with locking device
- Chrome vanadium



	■	A mm	L mm	ϟ	g
117.3801	3/8"	73,0	200,0	1000V	350

Reversible ratchet with protective insulation

- Square drive adaptor to DIN3120 / ISO 1174 with ball lock
- In accordance to DIN 7449
- Insulated handle to IEC 60900
- With reversible 32-teeth ratchet head
- Secure locking function on the square drive
- Chrome vanadium



	■	A mm	L mm	ϟ	g
117.3800	3/8"	78,0	205,0		370

Extension with protective insulation

- In accordance to DIN 7434
- Insulated handle to IEC 60900
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- With frictional contact square drive with locking device
- Chrome vanadium



	■	L mm	ϟ	g
117.2301	3/8"	75,0	1000V	85
117.3851	3/8"	125,0	1000V	140
117.3852	3/8"	250,0	1000V	280

Extension with protective insulation and screw locking

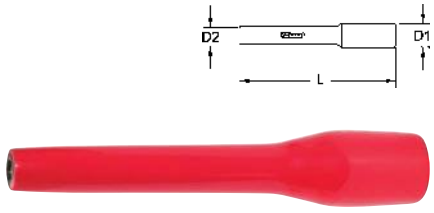
- In accordance to DIN 7434
- Insulated handle to IEC 60900
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- With screw adjustment on the square drive
- Chrome vanadium



	■	L mm	ϟ	g
117.3823	3/8"	125,0		140
117.3825	3/8"	250,0		280

Bit holder with protective insulation

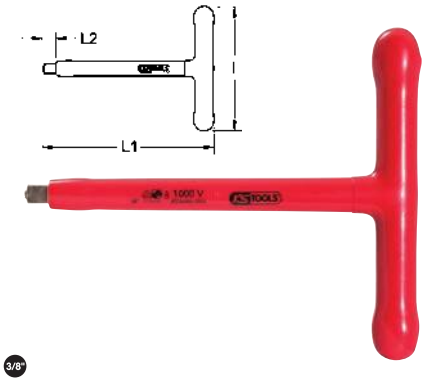
- Insulated handle to IEC 60900
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Magnetic
- For bits to DIN 3126 / C 6,3
- Chrome vanadium



	■	○	D1 mm	D2 mm	L mm	ϟ	g
117.3811	3/8"	1/4"	25,0	13,0	125,0	1000V	165
117.3812	3/8"	1/4"	25,0	13,0	250,0	1000V	250

T-handle socket wrench with protective insulation and screw lock

- Square drive adaptor to DIN 3120 / 1174 with ball lock
- In accordance to DIN 7436
- Insulated handle to IEC 60900
- With screw adjustment
- Chrome vanadium



3/8"

	■	l mm	L1 mm	L2 mm		g
117.3820	3/8"	165,0	200,0	15,0		250

socket with protective insulation

- 12 point
- FlankTraction profile
- In accordance to DIN 7448
- Insulated handle to IEC 60900
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Chrome vanadium





3/8"

	mm	■	D1 mm	D2 mm	L mm		g
117.3831	6		23,0	14,0	48,0		30
117.3832	7		23,0	15,0	48,0		30
117.3833	8		23,0	16,0	48,0		30
117.3834	9		23,0	17,0	48,0		35
117.3835	10		23,0	19,5	48,0		35
117.3836	11		23,0	19,5	48,0		35
117.3837	12		23,0	20,5	48,0		40
117.3838	13		23,0	23,0	48,0		40
117.3839	14		23,0	23,5	48,0		40
117.3840	15		23,0	26,0	48,0		45
117.3841	16		23,0	26,5	48,0		45
117.3842	17		23,0	28,0	48,0		50
117.3843	18		23,0	30,0	48,0		50
117.3844	19		23,0	30,0	48,0		60
117.3845	20		23,0	32,0	48,0		60
117.3846	21		23,0	33,5	48,0		60
117.3847	22		23,0	37,5	48,0		60
117.3813	23		22,5	34,0	48,0		91
117.3848	24		23,0	38,5	48,0		60
117.1020		1/4"	22,0	13,0	48,0		30
117.1021		5/16"	22,0	15,5	48,0		30
117.1022		3/8"	22,0	19,0	48,0		31
117.1023		7/16"	22,0	20,0	48,0		32
117.1024		1/2"	22,0	23,0	48,0		40
117.1025		9/16"	22,0	24,5	48,0		40
117.1026		5/8"	22,0	26,5	48,0		42
117.1027		11/16"	22,0	29,0	48,0		50
117.1028		3/4"	22,0	30,0	48,0		60
117.1029		13/16"	22,0	32,0	48,0		60
117.1030		7/8"	22,0	36,0	48,0		60
117.1031		15/16"	22,0	37,0	48,0		91

Socket with protective insulation, long

- FlankTraction profile
- In accordance to DIN 7448
- Insulated handle to IEC 60900
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Chrome vanadium



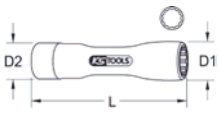


3/8"

	Profile	mm	D1 mm	D2 mm	L mm		g
117.1090		10	22,0	18,0	80,0		60
117.1091		11	22,0	19,5	80,0		60
117.1092		12	22,0	21,0	80,0		70
117.1093		13	22,0	23,0	80,0		70
117.1094		14	22,0	24,0	80,0		80
117.1095		15	22,0	26,0	80,0		80
117.1096		16	22,0	27,0	80,0		110
117.1097		17	22,0	28,0	80,0		110
117.3881		18	22,0	29,5	80,0		138
117.3882		19	22,0	30,5	80,0		180
117.3883		22	22,0	34,5	80,0		180
117.3884		24	22,0	37,5	80,0		213

Socket with protective insulation, extra long

- 12 point
- FlankTraction profile
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Insulated handle to IEC 60900
- Chrome vanadium





3/8"

	mm	D1 mm	D2 mm	L mm		g
117.3853	10	23,0	19,0	135,0		180
117.3854	11	23,0	20,0	135,0		185
117.3855	12	23,0	22,0	135,0		200
117.3856	13	23,0	22,0	135,0		210
117.3857	14	23,0	26,0	135,0		220
117.3858	17	23,0	29,0	135,0		240
117.3859	19	23,0	31,0	135,0		260
117.3860	22	23,0	35,0	135,0		280

Torx E socket with protective insulation

- Torx E
- Insulated handle to IEC 60900
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- For manual operation
- Chrome vanadium





3/8"

		D1 mm	D2 mm	L mm		g
117.2376	E4	23,0	10,8	45,0		40
117.2377	E5	23,0	12,3	45,0		40
117.2378	E6	23,0	13,5	45,0		40
117.2379	E7	23,0	13,7	45,0		45
117.2381	E8	23,0	15,5	45,0		45
117.2382	E10	23,0	17,2	45,0		48
117.2383	E11	23,0	18,0	45,0		50
117.2384	E12	23,0	19,0	45,0		50
117.2385	E14	23,0	20,5	45,0		54
117.2386	E16	23,0	23,1	45,0		56
117.2387	E18	23,0	25,0	45,0		58
117.2388	E20	23,0	27,0	45,0		58

Torx E socket with protective insulation, long

- Torx E
- Insulated handle to IEC 60900
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- For manual operation
- Chrome vanadium





3/8"

		D1 mm	D2 mm	L mm		g
117.2363	E4	23,0	9,4	72,0		50
117.2364	E5	23,0	10,9	72,0		50
117.2365	E6	23,0	12,3	72,0		50
117.2366	E7	23,0	13,1	72,0		55
117.2367	E8	23,0	14,5	72,0		55
117.2368	E10	23,0	16,2	72,0		58
117.2369	E11	23,0	17,0	72,0		60
117.2371	E12	23,0	18,0	72,0		60
117.2372	E14	23,0	20,6	72,0		64
117.2373	E16	23,0	23,0	72,0		66
117.2374	E18	23,0	24,8	72,0		68
117.2375	E20	23,0	26,0	72,0		68

Bit socket with protective insulation for PZ screws

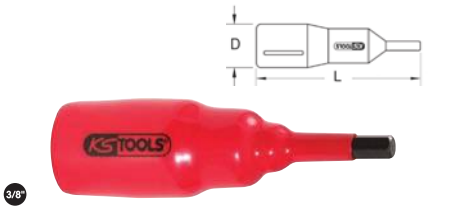
- PZ
- Insulated handle to IEC 60900
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Burnished
- Chrome vanadium



		D mm	L mm	1000V	g
117.1739	PZ 1	22,0	95,0	1000V	60
117.1740	PZ 2	22,0	95,0	1000V	58
117.1741	PZ 3	22,0	95,0	1000V	70

Bit socket with protective insulation for hexagon socket screws

- Hexagon socket
- Insulated handle to IEC 60900
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Burnished
- Chrome vanadium



	mm	D mm	L mm	1000V	g
117.1735	4	22,0	54,0	1000V	40
117.1736	5	22,0	54,0	1000V	40
117.1737	6	22,0	54,0	1000V	40
117.1738	8	22,0	54,0	1000V	40

Bit socket with protective insulation for hexagon socket screws, long

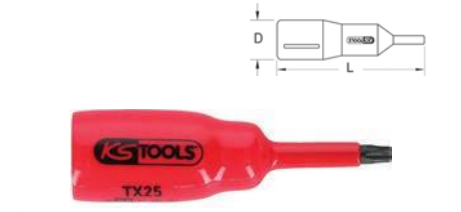
- Hexagon socket
- Insulated handle to IEC 60900
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Burnished
- Chrome vanadium



	mm	D mm	L mm	1000V	g
117.3861	4	23,0	82,0	1000V	45
117.3862	5	23,0	82,0	1000V	50
117.3863	6	23,0	82,0	1000V	50
117.3864	8	23,0	82,0	1000V	65
117.3865	10	23,0	82,0	1000V	80
117.3866	12	23,0	82,0	1000V	85
117.3867	4	23,0	116,0	1000V	70
117.3868	5	23,0	116,0	1000V	75
117.3869	6	23,0	116,0	1000V	76
117.3870	8	23,0	116,0	1000V	75
117.3871	10	23,0	116,0	1000V	80
117.3872	12	23,0	116,0	1000V	85
117.3873	5	23,0	180,0	1000V	100
117.3874	6	23,0	180,0	1000V	100
117.3875	5	23,0	270,0	1000V	115
117.3876	6	23,0	270,0	1000V	120
117.3877	8	23,0	270,0	1000V	140
117.3878	10	23,0	270,0	1000V	170

Bit socket with protective insulation for Torx screws, short

- Torx
- Insulated handle to IEC 60900
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Burnished
- Chrome vanadium



		D mm	L mm	1000V	g
117.2454	T10	20,0	65,0	1000V	40
117.2455	T15	20,0	65,0	1000V	40
117.2456	T20	20,0	65,0	1000V	45
117.2457	T25	20,0	65,0	1000V	45
117.2458	T27	20,0	65,0	1000V	50
117.2459	T30	20,0	65,0	1000V	55
117.2461	T40	20,0	65,0	1000V	58

Bit socket with protective insulation for Torx screws, long

- Torx
- Insulated handle to IEC 60900
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Burnished
- Chrome vanadium



		D mm	L mm	1000V	g
117.2462	T10	20,0	100,0	1000V	65
117.2463	T15	20,0	100,0	1000V	68
117.2464	T20	20,0	100,0	1000V	70
117.2465	T25	20,0	100,0	1000V	74
117.2466	T27	20,0	100,0	1000V	75
117.2467	T30	20,0	100,0	1000V	78
117.2468	T40	20,0	100,0	1000V	82

Bit socket with protective insulation for multi-tooth (XZN®) screws

- Spline (XZN®)
- Insulated handle to IEC 60900
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Burnished
- Chrome vanadium



	mm	D mm	L mm	1000V	g
117.3893	M8	23,0	95,0	1000V	85
117.3894	M10	23,0	95,0	1000V	90
117.3895	M12	23,0	95,0	1000V	95

Bit holder with protective insulation

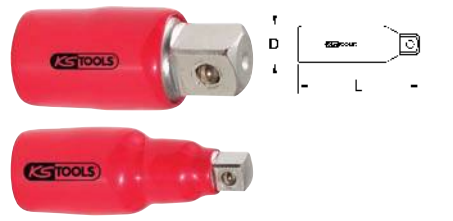
- Insulated handle to IEC 60900
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Magnetic
- For bits to DIN 3126 / C 6,3
- Chrome vanadium



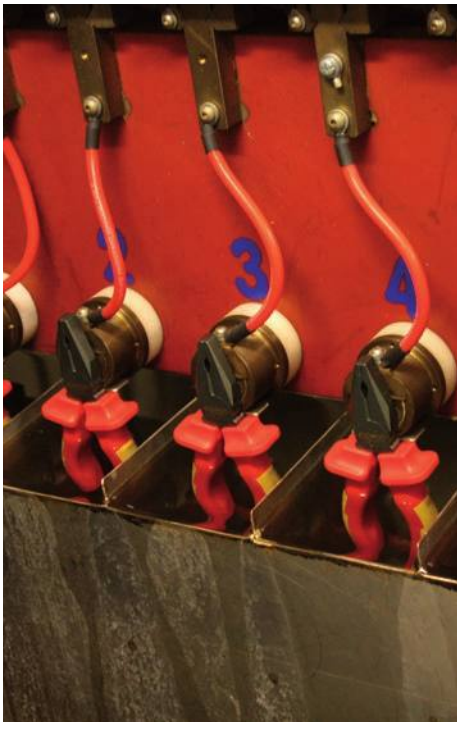
	□	○	D mm	L mm	1000V	g
117.2313	3/8"	1/4"	55,0	45,0	1000V	34
117.2314	3/8"	8 mm	55,0	50,0	1000V	36

Reducing adapter with protective insulation

- In accordance to DIN 3123 / ISO 3316
- Insulated handle to IEC 60900
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- Matt chrome
- Chrome vanadium



	□	■	D mm	L mm	1000V	g
117.1189	1/4"	3/8"	17,0	39,0	1000V	60
117.3885	3/8"	1/2"	23,0	52,0	1000V	80
117.1190	3/8"	1/4"	22,0	86,0	1000V	60
117.1285	1/2"	3/8"	20,0	75,0	1000V	220



3/8" SETS WITH PROTECTIVE INSULATION

Socket-set with insulated tools

- Insulated handle to IEC 60900
- Chrome vanadium
- In durable plastic storage case



3/8"

				kg
117.1882	16 pcs	Socket-set with insulated tools		3,80
1 x		3/8"		
2 x		3/8": 125 - 250 mm		
1 x		3/8"		
8 x		3/8": 10 - 11 - 12 - 13 - 14 - 17 - 19 22 mm		
3 x		3/8": 5 - 6 - 8 mm		
1 x		25 Nm		

Socket-set with insulated tools

- Insulated handle to IEC 60900
- Chrome vanadium
- In durable plastic storage case



3/8"

				kg
117.1850	16 pcs	Socket-set with insulated tools		4,00
1 x		3/8"		
2 x		3/8": 125 - 250 mm		
1 x		3/8"		
8 x		3/8": 10 - 11 - 12 - 13 - 14 - 17 - 19 - 22 mm		
3 x		3/8":5 - 6 - 8 mm		
1 x		3,5 mm		

Socket-set with insulated tools

- Insulated handle to IEC 60900
- Chrome vanadium
- In durable plastic storage case



3/8"

				kg
117.1885	16 pcs	Socket-set with insulated tools		3,40
1 x		3/8"		
2 x		3/8": 125 - 250 mm		
3 x		3/8": 13 - 17 - 19 mm		
4 x		3/8": 5 - 6 - 8 - 10 mm		
1 x		3/8": 5 mm		
1 x		2,5 mm		
2 x		5 - 6 mm		
1 x		Ø 25mm		
1 x		160 mm		

Socket-set with insulated tools

- Insulated handle to IEC 60900
- Chrome vanadium
- In durable plastic storage case



3/8"

				kg
117.1881	14 pcs	Socket-set with insulated tools		3,87
1 x		3/8": 5 - 50 Nm		
2 x		3/8": 125 - 250 mm		
5 x		3/8": 10 - 13 - 14 - 17 - 19 mm		
5 x		3/8": 4 - 5 - 6 - 8 - 10 mm		
1 x		3/8": 95 - 150 mm		

Socket-set with insulated tools

- Insulated handle to IEC 60900
- Chrome vanadium
- In durable plastic storage case



3/8"

				kg
117.1888	13 pcs	Socket-set with insulated tools		2,40
1 x		3/8"		
2 x		3/8": 125 - 250 mm		
1 x		3/8"		
5 x		3/8": 8 - 10 - 13 - 17 - 19 mm		
4 x		3/8": 4 - 5 - 6 - 8 mm		

Socket-set with insulated tools

- Insulated handle to IEC 60900
- Chrome vanadium
- In durable plastic storage case



3/8"

				kg
117.1886	13 pcs	Socket-set with insulated tools		2,56
1 x		3/8"		
2 x		3/8": 125 - 250 mm		
1 x		3/8"		
5 x		3/8": 8 - 10 - 13 - 17 - 19 mm		
4 x		3/8": 4 - 5 - 6 - 8 mm		

Socket-set with insulated tools

- Insulated handle to IEC 60900
- Chrome vanadium
- In durable plastic storage case



3/8"

			kg
117.1887	11 pcs	Socket-set with insulated tools	1,80
1 x		3/8“	
1 x		3/8“: 125 mm	
5 x		3/8“: 8 - 10 - 13 - 17 - 19 mm	
4 x		3/8“: 4 - 5 - 6 - 8 mm	

Socket-set with insulated tools

- Insulated handle to IEC 60900
- Chrome vanadium
- In durable plastic storage case



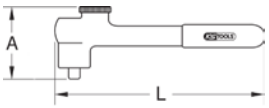
3/8"

			kg
117.1889	11 pcs	Socket-set with insulated tools	1,75
1 x		3/8“	
1 x		3/8“: 125 mm	
5 x		3/8“: 8 - 10 - 13 - 17 - 19 mm	
4 x		3/8“: 4 - 5 - 6 - 8 mm	

1/2” RANGE WITH PROTECTIVE INSULATION

Fixed torque wrench with protective insulation

- Actuation accuracy: ±4 % tolerance of the set scale value
- Precise reading accuracy for a minimum 5.000 tightening cycles
- For controlled fastening in a clockwise direction
- Can untighten without any torque restraint thanks to the anticlockwise latch
- An audible and palpable signal when the desired torque value is achieved
- Without scale - with a fixed adjustable value
- Hexagon socket holder in accordance with DIN 3126 - E6,3
- Individually marked with serial number - unique product identification
- including calibration declaration of conformity according to DIN EN ISO 6789:2017(E) - traceable to national standards





1/2"

	■	N·m	A mm	L mm	ϟ	g
117.1001	1/2”	5-35	78,0	250,0	≙ 1000V	420

Torque wrench with protective insulation and reversible ratchet head

- Insulated handle to IEC 60900
- For working enviroment of voltages AC 1000 V and DC 1500 V
- Release accuracy: ±4 % tolerance from the set scale value and better
- Precise reading accuracy for a minimum 5.000 tightening cycles
- For controlled fastening in a clockwise direction
- Can untighten without any torque restraint thanks to the anticlockwise latch
- Scale in Nm divisions for precise adjustment
- Large vision panel for precise adjustment
- An audible and palpable signal when the desired torque value is achieved
- Exact gearing 30 teeth ratchet mechanism
- Torque setting is quick and easy using the locking knob in the handle end
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- Individually marked with serial number - unique product identification
- including calibration declaration of conformity according to DIN EN ISO 6789:2017(E) - traceable to national standards



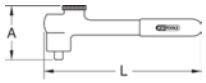


1/2"

	■	N·m	H mm	L mm	ϟ	kg
117.1301	1/2”	2-27	61,0	280,0	≙ 1000V	0,93
117.1300	1/2”	5-50	61,0	370,0	≙ 1000V	1,10
117.1302	1/2”	20-100	61,0	460,0	≙ 1000V	1,20
117.1303	1/2”	40-220	61,0	530,0	≙ 1000V	1,30

Reversible ratchet with protective insulation

- Square drive adaptor to DIN 3120 / 1174 with ball lock
- In accordance to DIN 7449
- Insulated handle to IEC 60900
- With reversible 32-teeth ratchet head
- With frictional contact square drive with locking device
- Chrome vanadium



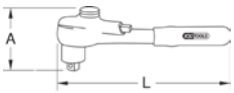


1/2"

	■	A mm	L mm	ϟ	g
117.1201	1/2”	90,0	245,0	≙ 1000V	700

Reversible ratchet with protective insulation

- Square drive adaptor to DIN3120 / ISO 1174 with ball lock
- In accordance to DIN 7449
- Insulated handle to IEC 60900
- With reversible 32-teeth ratchet head
- Secure locking function on the square drive
- Special tool steel



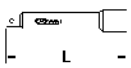


1/2"

	■	A mm	L mm	ϟ	g
117.1200	1/2”	88,0	245,0		750

Extension with protective insulation

- In accordance to DIN 7434
- Insulated handle to IEC 60900
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- With frictional contact square drive with locking device
- Chrome vanadium





1/2"

	■	L mm	ϟ	g
117.2302	1/2”	75,0	≙ 1000V	88
117.1251	1/2”	125,0	≙ 1000V	212
117.1252	1/2”	250,0	≙ 1000V	395

Extension with protective insulation and screw locking

- In accordance to DIN 7434
- Insulated handle to IEC 60900
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- 250mm with screw locking on the outside square
- 125mm with screw locking also from closed hexagon socket, Torx, XZN Sockets from below through the inside square of the extension
- Chrome vanadium



1/2"

	■	L mm		g
117.1202	1/2"	125,0		211
117.1203	1/2"	250,0		406

Extension with protective insulation

- In accordance to DIN 7434
- Insulated handle to IEC 60900
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- With frictional contact square drive with locking device
- Chrome vanadium

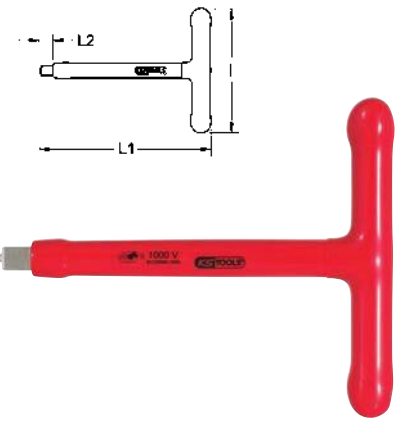


1/2"

	■	L mm		g
117.1229	1/2"	125,0	1000V	198
117.1231	1/2"	250,0	1000V	374

T-handle socket wrench with protective insulation and screw lock

- Square drive adaptor to DIN 3120 / 1174 with ball lock
- In accordance to DIN 7436
- Insulated handle to IEC 60900
- With screw adjustment
- Chrome vanadium



1/2"

	■	l mm	L1 mm	L2 mm		g
117.1205	1/2"	165,0	200,0	15,0		490

socket with protective insulation

- 6 point
- In accordance to DIN 7448
- Insulated handle to IEC 60900
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Chrome vanadium



1/2"

	mm	D1 mm	D2 mm	L mm		g
117.1208	8	26,0	17,0	55,0		65
117.1209	9	26,0	19,0	55,0		65
117.1210	10	26,0	20,0	55,0		70
117.1211	11	26,0	21,0	55,0		75
117.1212	12	26,0	22,0	55,0		75
117.1213	13	26,0	23,5	55,0		75
117.1214	14	26,0	25,0	55,0		80
117.1215	15	26,0	26,0	55,0		80
117.1216	16	26,0	26,5	55,0		85
117.1217	17	26,0	28,5	55,0		90
117.1218	18	26,0	31,0	55,0		85
117.1219	19	26,0	31,5	55,0		100
117.1220	20	26,0	33,0	55,0		100
117.1221	21	26,0	34,5	55,0		120
117.1222	22	26,0	35,0	55,0		120
117.1223	23	26,0	36,0	55,0		125
117.1224	24	26,0	37,0	55,0		140
117.1226	26	26,0	39,0	61,0		175
117.1227	27	26,0	41,0	61,0		195
117.1228	28	26,0	44,0	61,0		190
117.1230	30	26,0	46,0	61,0		230
117.1232	32	26,0	49,5	61,0		280

Socket with protective insulation, long

- 6 point
- In accordance to DIN 7448
- Insulated handle to IEC 60900
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Chrome vanadium



1/2"

	mm	D1 mm	D2 mm	L mm		g
117.1333	8	26,0	19,0	94,0	1000V	105
117.1334	10	26,0	21,0	94,0	1000V	110
117.1335	11	26,0	21,0	94,0	1000V	130
117.1336	12	26,0	22,0	94,0	1000V	145
117.1337	13	26,0	23,5	94,0	1000V	145
117.1338	14	26,0	25,5	94,0	1000V	145
117.1339	15	26,0	27,0	94,0	1000V	145
117.1340	16	26,0	28,0	94,0	1000V	160
117.1341	17	26,0	29,0	94,0	1000V	180
117.1342	18	26,0	30,0	94,0	1000V	190
117.1343	19	26,0	30,5	94,0	1000V	210
117.1344	21	26,0	35,0	94,0	1000V	215
117.1345	22	26,0	35,5	94,0	1000V	230
117.1346	23	26,0	36,0	94,0	1000V	235
117.1347	24	26,0	39,0	94,0	1000V	250
117.1348	27	26,0	42,0	94,0	1000V	390
117.1349	30	26,0	46,5	94,0	1000V	420
117.1350	32	26,0	48,5	94,0	1000V	460

Socket with protective insulation, extra long

- 6 point
- In accordance to DIN 7448
- Insulated handle to IEC 60900
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Chrome vanadium



1/2"

	mm	D1 mm	D2 mm	L mm		g
117.1371	13	26,0	23,5	145,0	1000V	250
117.1372	14	26,0	25,5	145,0	1000V	260
117.1373	17	26,0	29,0	145,0	1000V	280
117.1374	19	26,0	30,5	145,0	1000V	295
117.1375	22	26,0	35,5	145,0	1000V	310
117.1376	24	26,0	29,0	145,0	1000V	330
117.1377	27	26,0	42,0	145,0	1000V	350
117.1378	30	26,0	46,5	145,0	1000V	380
117.1379	32	26,0	48,5	145,0	1000V	410

Socket with protective insulation, extra long

- 6 point
- In accordance to DIN 7448
- Insulated handle to IEC 60900
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Chrome vanadium



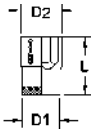
1/2"

	mm	D1 mm	D2 mm	L mm		g
117.1381	13	26,0	23,5	255,0	1000V	485
117.1382	14	26,0	25,5	255,0	1000V	500
117.1383	17	26,0	29,0	255,0	1000V	530
117.1384	19	26,0	30,5	255,0	1000V	550
117.1385	22	26,0	35,5	255,0	1000V	580
117.1386	24	26,0	39,0	255,0	1000V	605
117.1387	27	26,0	42,0	255,0	1000V	635
117.1388	30	26,0	46,5	255,0	1000V	660
117.1389	32	26,0	48,5	255,0	1000V	670



Socket with protective insulation, imperial

- 12 point
- FlankTraction profile
- In accordance to DIN 7448
- Insulated handle to IEC 60900
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Chrome vanadium



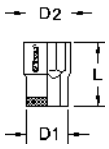


1/2"

		D1 mm	D2 mm	L mm	1000V	g
117.1351	5/16"	26,0	18,0	55,0	1000V	70
117.1352	3/8"	26,0	19,5	55,0	1000V	70
117.1353	7/16"	26,0	21,0	55,0	1000V	75
117.1354	15/32"	26,0	21,5	55,0	1000V	75
117.1355	1/2"	26,0	24,5	55,0	1000V	75
117.1356	9/16"	26,0	25,0	55,0	1000V	80
117.1357	5/8"	26,0	26,5	55,0	1000V	85
117.1358	11/16"	26,0	29,0	55,0	1000V	90
117.1359	25/32"	26,0	29,5	55,0	1000V	85
117.1361	3/4"	26,0	30,0	55,0	1000V	100
117.1362	13/16"	26,0	34,5	55,0	1000V	110
117.1363	7/8"	26,0	35,5	59,0	1000V	120
117.1364	15/16"	26,0	38,0	59,0	1000V	140
117.1368	1"	26,0	39,5	59,0	1000V	175
117.1369	1.1/8"	26,0	45,0	59,0	1000V	190
117.1367	1.1/4"	26,0	49,0	59,0	1000V	280

Torx E socket with protective insulation

- Torx E
- Insulated handle to IEC 60900
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- For manual operation
- Chrome vanadium



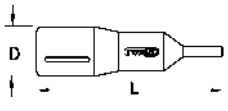


1/2"

		D1 mm	D2 mm	L mm	1000V	g
117.2353	E10	23,0	17,0	55,0	1000V	70
117.2354	E11	23,0	20,0	55,0	1000V	70
117.2355	E12	23,0	20,0	55,0	1000V	75
117.2356	E14	23,0	21,0	55,0	1000V	80
117.2357	E16	23,0	24,0	55,0	1000V	85
117.2358	E18	23,0	26,0	55,0	1000V	88
117.2359	E20	23,0	28,0	55,0	1000V	90
117.2361	E22	23,0	29,0	55,0	1000V	100
117.2362	E24	23,0	32,0	55,0	1000V	100

Bit socket with protective insulation for hexagon socket screws

- Hexagon socket
- Insulated handle to IEC 60900
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Burnished
- Chrome vanadium



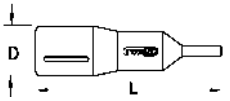


1/2"

	mm	D mm	L mm	1000V	g
117.1151	4	26,0	95,0	1000V	80
117.1152	5	26,0	95,0	1000V	80
117.1153	6	26,0	95,0	1000V	85
117.1154	8	26,0	95,0	1000V	95
117.1155	10	26,0	95,0	1000V	105
117.1156	12	26,0	95,0	1000V	125
117.1157	14	26,0	95,0	1000V	170
117.1158	17	26,0	95,0	1000V	185
117.1159	19	26,0	95,0	1000V	195

Bit socket with protective insulation for hexagon socket screws, long

- Hexagon socket
- Insulated handle to IEC 60900
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Burnished
- Chrome vanadium



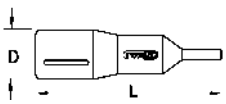


1/2"

	mm	D mm	L mm	1000V	g
117.1161	4	26,0	118,0	1000V	95
117.1162	5	26,0	118,0	1000V	100
117.1163	6	26,0	118,0	1000V	100
117.1164	8	26,0	118,0	1000V	110
117.1165	10	26,0	118,0	1000V	110
117.1166	12	26,0	118,0	1000V	160

Bit socket with protective insulation for hexagon socket screws, extra long

- Hexagon socket
- Insulated handle to IEC 60900
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Burnished
- Chrome vanadium





1/2"

	mm	D mm	L mm	1000V	g
117.1171	5	26,0	156,0	1000V	110
117.1172	6	26,0	156,0	1000V	110
117.1173	5	26,0	267,0	1000V	125
117.1174	6	26,0	267,0	1000V	145
117.1175	8	26,0	267,0	1000V	155
117.1176	10	26,0	267,0	1000V	190

Bit socket with protective insulation for Torx screws, short

- Torx
- Insulated handle to IEC 60900
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Burnished
- Chrome vanadium





1/2"

		D mm	L mm	1000V	g
117.2434	T20	25,0	75,0	1000V	70
117.2435	T25	25,0	75,0	1000V	75
117.2436	T27	25,0	75,0	1000V	77
117.2437	T30	25,0	75,0	1000V	78
117.2438	T40	25,0	75,0	1000V	80
117.2439	T45	25,0	75,0	1000V	84
117.2441	T50	25,0	75,0	1000V	90
117.2442	T55	25,0	75,0	1000V	94
117.2443	T60	25,0	75,0	1000V	98

Bit socket with protective insulation for Torx screws, long

- Torx
- Insulated handle to IEC 60900
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Burnished
- Chrome vanadium





1/2"

		D mm	L mm	1000V	g
117.2444	T20	25,0	100,0	1000V	88
117.2445	T25	25,0	100,0	1000V	92
117.2446	T27	25,0	100,0	1000V	94
117.2447	T30	25,0	100,0	1000V	95
117.2448	T40	25,0	100,0	1000V	98
117.2449	T45	25,0	100,0	1000V	100
117.2451	T50	25,0	100,0	1000V	100
117.2452	T55	25,0	100,0	1000V	106
117.2453	T60	25,0	100,0	1000V	114

Reducing adapter with protective insulation

- In accordance to DIN 3123 / ISO 3316
- Insulated handle to IEC 60900
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- Matt chrome
- Chrome vanadium





1/2" 3/8"

	□	■	D mm	L mm	1000V	g
117.1285	1/2"	3/8"	20,0	75,0	1000V	220

1/2" SETS WITH PROTECTIVE INSULATION

Socket-set with insulated tools

- Insulated handle to IEC 60900
- Chrome vanadium
- In durable plastic storage case



1/2"

			kg
117.1883	15 pcs	Socket-set with insulated tools	3,99

1 x		1/2"
2 x		1/2": 125 - 250 mm
1 x		1/2"
8 x		1/2": 10 - 12 - 13 - 14 - 17 - 19 - 22 24 mm
3 x		1/2": 5 - 6 - 8 mm

Socket-set with insulated tools

- In accordance to DIN 7448 / 7434 / 7449
- Insulated handle to IEC 60900
- Square drive adaptor to DIN 3120
- In durable plastic storage case



1/2"

			kg
117.0600	9 pcs	Socket-set with insulated tools	2,07

1 x		270 mm
7 x		10 - 13 - 14 - 16 - 17 - 19 - 21 mm
1 x		125 mm

Socket-set with insulated tools

- Insulated handle to IEC 60900
- In durable plastic storage case



1/2"

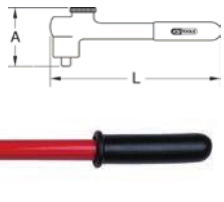
			kg
117.1860	16 pcs	Socket-set with insulated tools	4,50

1 x		1/2"
2 x		1/2": 125 - 250 mm
1 x		1/2"
8 x		1/2": 10 - 12 - 13 - 14 - 17 - 19 - 22 - 24 mm
3 x		1/2": 5 - 6 - 8 mm
1 x		3,5 mm

3/4" RANGE WITH PROTECTIVE INSULATION

Reversible ratchet with protective insulation

- Square drive adaptor to DIN 3120 / 1174 with ball lock
- In accordance to DIN 7449
- Insulated handle to IEC 60900
- With reversible 32-teeth ratchet head
- With frictional contact square drive with locking device
- Chrome vanadium



3/4"

		A mm	L mm		kg
117.1187	3/4"	111,5	500,0	1000V	2,00

socket with protective insulation

- 6 point
- In accordance to DIN 7448
- Insulated handle to IEC 60900
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Chrome vanadium





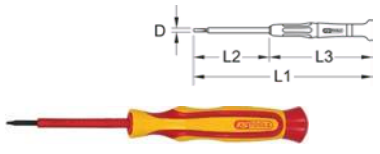
3/4"

	mm	D1 mm	D2 mm	L mm		kg
117.3930	19	38,0	26,0	68,0	1000V	200
117.3931	21	38,0	39,0	68,0	1000V	210
117.3932	22	38,0	40,0	70,0	1000V	230
117.3933	24	38,0	43,0	70,0	1000V	230
117.3934	26	38,0	45,0	72,0	1000V	240
117.3935	27	38,0	47,0	72,0	1000V	270
117.3936	28	38,0	48,0	72,0	1000V	290
117.3937	30	38,0	50,0	74,0	1000V	310
117.3938	32	38,0	52,0	74,0	1000V	320
117.3939	36	38,0	58,0	82,0	1000V	460
117.3940	38	38,0	60,0	82,0	1000V	500
117.3941	41	38,0	62,0	82,0	1000V	540
117.3942	46	38,0	70,0	82,0	1000V	630
117.3943	50	38,0	75,0	82,0	1000V	750
117.3944	55	38,0	82,0	88,0	1000V	860
117.3945	60	38,0	90,0	88,0	1000V	910

SCREWDRIVERS WITH PROTECTIVE INSULATION

Precision screwdriver with protective insulation for slotted screws

- Slotted
- Insulated to IEC 60900
- Twist end cap
- Colour coding
- Hardened blade
- Burnished tip
- Blades made from special steel

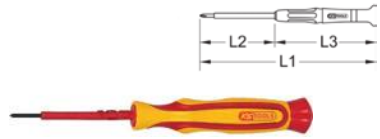


	D mm	L1 mm	L2 mm	L3 mm		kg
500.6138	1,5	132,0	40,0	92,0	1000V	16
500.6139	1,8	132,0	40,0	92,0	1000V	16
500.6140	2,0	132,0	40,0	92,0	1000V	16
500.6141	2,5	152,0	60,0	92,0	1000V	18
500.6142	3,0	152,0	60,0	92,0	1000V	21
500.6143	3,5	152,0	60,0	92,0	1000V	21



Precision screwdriver with protective insulation for Phillips screws PH

- PH
- Insulated to IEC 60900
- Twist end cap
- Color coding
- Hardened blade
- Burnished tip
- Blades made from special steel

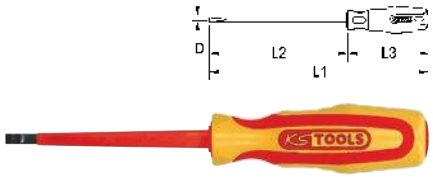


		L1 mm	L2 mm	L3 mm		g
500.6136	PH 00	132,0	40,0	92,0		16
500.6137	PH 0	152,0	60,0	92,0		16
500.6144	PH 1	152,0	60,0	92,0		21



ERGOTORQUE® VDE screwdriver for slotted screws

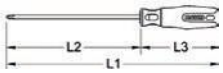
- Slotted
- In accordance to DIN 5264 / DIN ISO 2380
- Insulated to IEC 60900
- Two component handle
- Burnished
- S2 special steel



	D mm	L1 mm	L2 mm	L3 mm		g
117.0541	2	140,0	60,0	80,0		30
117.0502	2,5	155,0	75,0	80,0		32
117.0504	3,0	180,0	100,0	80,0		35
117.0506	3,5	180,0	100,0	80,0		38
117.0508	4,0	180,0	100,0	80,0		41
117.0542	4,5	230,0	125,0	105,0		92
117.0543	4,5	290,0	175,0	115,0		164
117.0544	4,5	315,0	200,0	115,0		230
117.0512	5,5	230,0	125,0	105,0		92
117.0545	5,5	290,0	175,0	115,0		164
117.0514	6,5	255,0	150,0	105,0		111
117.0516	8,0	290,0	175,0	115,0		164
117.0518	10,0	315,0	200,0	115,0		230

ERGOTORQUE® VDE screwdriver for phillips screws PH

- PH
- In accordance to DIN 7438 / DIN ISO 8764
- Insulated to IEC 60900
- Two component handle
- Burnished
- S2 special steel

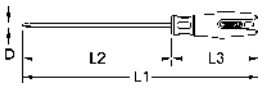




		L1 mm	L2 mm	L3 mm		g
117.0522	PH 0	140,0	60,0	80,0		32
117.0524	PH 1	185,0	80,0	105,0		38
117.1521	PH 1	265,0	150,0	115,0		152
117.0526	PH 2	205,0	100,0	105,0		95
117.1523	PH 2	315,0	200,0	115,0		230
117.0528	PH 3	265,0	150,0	115,0		152
117.1526	PH 4	315,0	200,0	115,0		230

ERGOTORQUE® VDE screwdriver for pozidriv screws PZ

- PZ
- In accordance to DIN 7438 / DIN ISO 8764
- Insulated to IEC 60900
- Two component handle
- Burnished
- S2 special steel

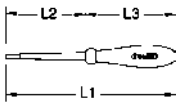




		L1 mm	L2 mm	L3 mm		g
117.0532	PZ 0	140,0	60,0	80,0		32
117.0534	PZ 1	185,0	80,0	105,0		38
117.1533	PZ 1	265,0	150,0	115,0		152
117.0536	PZ 2	205,0	100,0	105,0		95
117.1534	PZ 2	315,0	200,0	115,0		230
117.0538	PZ 3	265,0	150,0	115,0		152
117.1535	PZ 4	315,0	200,0	115,0		230

Hexagon socket screwdriver with protective insulation

- Hexagon socket
- In accordance to DIN 7439
- Insulated to IEC 60900
- Burnished
- Chrome vanadium

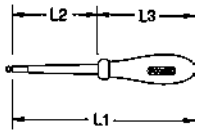




	mm	L1 mm	L2 mm	L3 mm		g
117.1631	1,5	156,0	75,0	81,0	1000V	16
117.1632	2,0	156,0	75,0	81,0	1000V	18
117.1633	2,5	181,0	100,0	81,0	1000V	34
117.1634	3,0	181,0	100,0	81,0		36
117.1635	4,0	231,0	125,0	106,0		43
117.1636	5,0	256,0	150,0	106,0		67
117.1637	6,0	291,0	175,0	116,0		83
117.1638	8,0	316,0	200,0	116,0		116

Insulated screwdriver for internal Torx screws

- Torx
- Insulated to IEC 60900
- Burnished
- Special tool steel

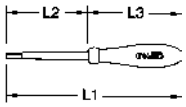




		L1 mm	L2 mm	L3 mm		g
117.2235	T5	140,0	60,0	80,0	1000V	32
117.2236	T6	140,0	60,0	80,0	1000V	33
117.2237	T7	140,0	60,0	80,0	1000V	33
117.2238	T8	140,0	60,0	80,0	1000V	35
117.2239	T9	140,0	60,0	80,0	1000V	36
117.0551	T10	170,0	80,0	90,0	1000V	27
117.0552	T15	170,0	80,0	90,0	1000V	28
117.0553	T20	190,0	100,0	90,0	1000V	36
117.0554	T25	190,0	100,0	90,0	1000V	61
117.0555	T27	230,0	125,0	105,0	1000V	86
117.0556	T30	205,0	115,0	90,0	1000V	93
117.0557	T40	290,0	175,0	115,0	1000V	155
117.0558	T45	290,0	175,0	115,0	1000V	163

ERGOTORQUE VDE Screwdriver for square socket screws

- Internal square
- In accordance to DIN 7438 / DIN ISO 8764
- Insulated to IEC 60900
- Two component handle
- Burnished
- S2 special steel

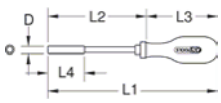




	■	L1 mm	L2 mm	L3 mm		g
117.0591	#1	160,0	80,0	80,0	1000V	27
117.0592	#1	255,0	150,0	105,0	1000V	92
117.0593	#2	180,0	100,0	80,0	1000V	41
117.0594	#2	315,0	200,0	115,0	1000V	230
117.0595	#3	265,0	150,0	115,0	1000V	115

Bit screwdriver with protective insulation and magazine

- Insulated to IEC 60900
- Magnetic
- For bits to DIN 3126 - C 6,3
- Chrome vanadium





1/4"

	■	D mm	L1 mm	L2 mm	L3 mm	L4 mm		g
117.1625	1/4"	12,5	230,0	120,0	110,0	50,0	1000V	170

SCREWDRIVER SETS WITH PROTECTIVE INSULATION

Precision screwdriver set with protective insulation

- Insulated to IEC 60900
- Twist end cap
- Color coding
- Hardened blade
- Burnished tip
- Blade made of chrome vanadium
- In durable ABS storage case



500.6165	7 pcs	Precision screwdriver set with protective insulation	310

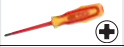
2 x		PH 0 - PH 00
5 x		1,5 - 1,8 - 2,0 - 2,5 - 3,0 mm

ERGOTORQUE® VDE screwdriver set

- In accordance to DIN 5264 / 7437 / 7438 / 8764
- Insulated to IEC 60900
- Two component handle
- Burnished
- S2 special steel



117.0540	5 pcs	ERGOTORQUE® VDE screwdriver set	200

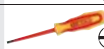
1 x		PH1
3 x		2,5 - 4,0 - 5,5 mm
1 x		3,0 mm

ERGOTORQUE® VDE screwdriver set

- In accordance to DIN 5264 / 7437 / 7438 / 8764
- Insulated to IEC 60900
- Two component handle
- Burnished
- Special tool steel



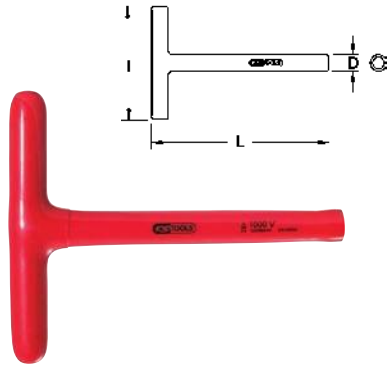
117.0550	8 pcs	ERGOTORQUE® VDE screwdriver set	430

3 x		PH0 - PH1 - PH2
4 x		2,5 - 4,0 - 5,5 - 6,5 mm
1 x		3,0 mm

KEY WRENCHES WITH PROTECTIVE INSULATION

T-handle socket wrench with protective insulation

- Insulated to IEC 60900
- Magnetic
- For bits to DIN 3126 - C 6,3
- Chrome vanadium

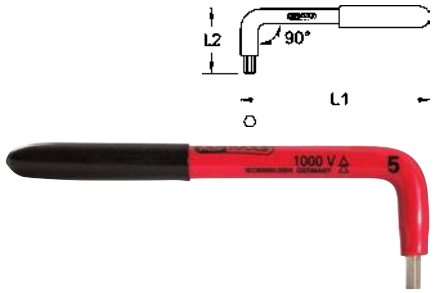


		D mm	L mm	I mm		
117.1743	1/4"	14,0	120,0	110,0	1000V	166
117.1744	1/4"	14,0	160,0	110,0	1000V	242
117.1745	1/4"	14,0	250,0	165,0	1000V	310



Allen key with protective insulation

- Hexagon socket
- In accordance to DIN 7439
- Insulated handle to IEC 60900
- Specially for cable branch clamp ring
- Matt chrome
- Chrome vanadium



	mm	L1 mm	L2 mm		
117.1601	3	130,0	24,0	1000V	20
117.1602	4	120,0	40,0	1000V	25
117.1603	5	140,0	47,0	1000V	45
117.1604	6	140,0	50,0	1000V	60
117.1605	8	150,0	50,0	1000V	110
117.1606	10	235,0	51,0	1000V	230
117.1607	12	265,0	60,0	1000V	350

Allen key with protective insulation

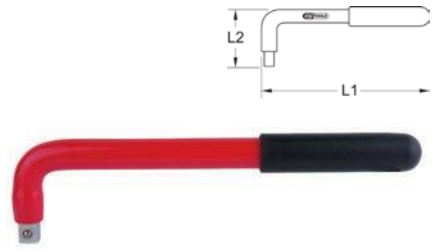
- Hexagon socket
- In accordance to DIN 7439
- Insulated handle to IEC 60900
- Specially for cable branch clamp ring
- Matt chrome
- Chrome vanadium



		L1 mm	L2 mm		
117.2484	1/8"	105,0	34,0	1000V	20
117.2485	5/32"	105,0	38,0	1000V	22
117.2486	3/16"	135,0	41,0	1000V	35
117.2487	7/32"	140,0	46,0	1000V	50
117.2488	1/4"	140,0	47,0	1000V	65
117.2489	5/16"	150,0	51,0	1000V	100
117.2491	3/8"	240,0	56,0	1000V	230
117.2492	1/2"	245,0	59,0	1000V	350

Angle socket wrench with protective insulation

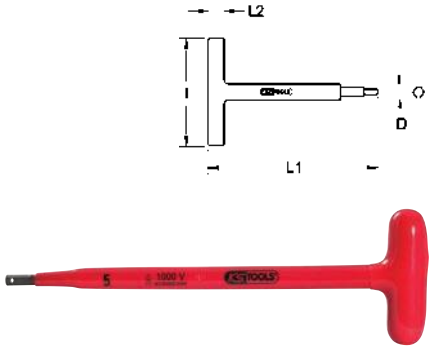
- Square drive adaptor to DIN 3120 / 1174 with ball lock
- In accordance to DIN 7436
- Insulated handle to IEC 60900
- With screw adjustment
- Chrome vanadium



		L1 mm	L2 mm		
117.1403	1/2"	280,0	70,0	1000V	470

T-handle Allen key with protective insulation

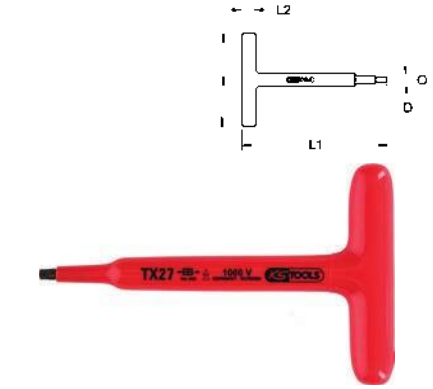
- Hexagon socket
- Insulated handle to IEC 60900
- Extremly versatile
- Burnished
- Chrome vanadium



	mm	l mm	D mm	L1 mm	L2 mm		g	
117.1671	3	65,0	5,0	120,0	17,5		80	
117.1673	4	65,0	10,0	120,0	19,0		85	
117.1674	4	104,0	15,0	160,0	22,0		145	
117.1675	4	64,0	10,0	200,0	18,0		150	
117.1676	4	94,0	13,0	250,0	19,0		168	
117.1677	5	65,0	11,0	120,0	20,0		85	
117.1678	5	105,0	15,0	160,0	21,0		250	
117.1679	5	65,0	10,0	200,0	18,0		150	
117.1681	5	105,0	15,0	250,0	20,0		168	
117.1682	6	90,0	11,0	120,0	20,0		110	
117.1683	6	105,0	15,0	160,0	21,0		250	
117.1684	6	65,0	11,0	200,0	19,0		150	
117.1742	6	105,0	8,0	250,0	20,0		307	
117.1685	8	105,0	15,0	160,0	21,0		260	
117.1686	8	160,0	13,0	200,0	22,0		325	
117.1687	8	100,0	17,0	250,0	22,0		360	
117.1688	10	160,0	15,0	200,0	20,0		390	
117.1689	10	160,0	15,0	250,0	20,0		420	
117.1691	10	160,0	15,0	300,0	20,0		450	
117.1692	11	160,0	15,0	200,0	20,0		400	
117.1693	12	160,0	16,0	200,0	20,0		420	
117.1694	13	160,0	16,0	200,0	21,0		450	
117.1695	14	160,0	17,0	200,0	21,0		490	
117.1696	17	160,0	20,0	200,0	21,0		640	

T-Handle Torx L-key with protective insulation

- Insulated handle to IEC 60900
- Extremly versatile
- Burnished
- Chrome vanadium



		l mm	D mm	L1 mm	L2 mm		g	
117.2412	T10	63,0	4,0	120,0	13,0		85	
117.2413	T15	63,0	4,0	120,0	13,0		90	
117.2414	T20	103,0	5,0	120,0	13,0		90	
117.2415	T25	103,0	5,0	160,0	15,0		135	
117.2416	T27	103,0	6,0	160,0	15,0		150	
117.2417	T30	103,0	6,0	160,0	15,0		160	
117.2418	T40	103,0	7,0	200,0	15,0		210	
117.2419	T45	103,0	7,0	200,0	15,0		330	
117.2421	T50	103,0	8,0	200,0	15,0		410	

PLIERS WITH PROTECTIVE INSULATION

ERGOTORQUE® VDE combination pliers

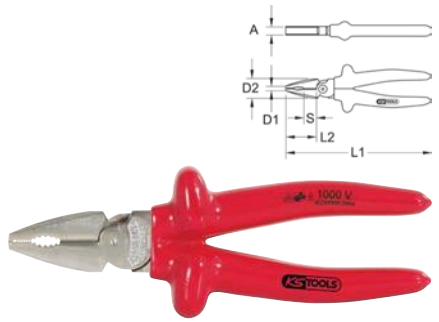
- In accordance to DIN ISO 5748
- Wrap around insulation to IEC 60900
- Two component handle
- Suitable for wire
- Induction-hardened precision cutting
- Matt chrome
- Special tool steel



	A mm	D1 mm	D2 mm	L1 mm	L2 mm	S mm		g	
117.1111	10,0	6,0	24,0	170,0	35,0	2,4		310	
117.1112	11,0	7,0	27,0	185,0	38,5	2,5		380	
117.1113	12,0	7,0	30,0	210,0	42,5	3,0		400	

1000V high leverage combination pliers

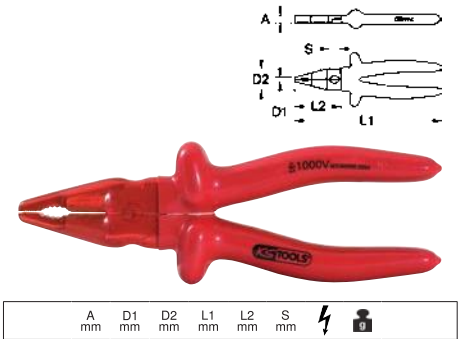
- In accordance to DIN ISO 5746
- Insulated handle to IEC 60900
- Also suitable for hard wire
- Extra heavy execution
- Induction-hardened precision cutting
- Matt chrome
- Special tool steel



	A mm	D1 mm	D2 mm	L1 mm	L2 mm	S mm		g	
117.1278	8,5	6,0	25,0	160,0	36,5	13,0		230	
117.1275	11,0	7,5	28,0	185,0	40,0	16,5		290	
117.1276	11,5	8,0	28,0	205,0	43,0	18,0		390	
117.1279	13,0	8,0	35,0	250,0	53,0	21,5		570	

1000V combination pliers

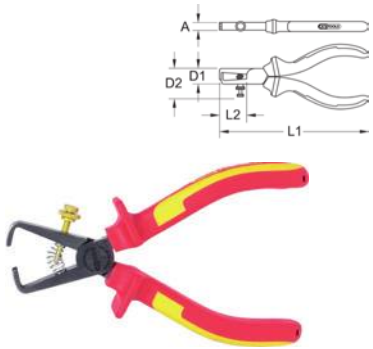
- In accordance to DIN ISO 5244
- Insulated handle to IEC 60900
- With coated working head
- Also suitable for hard wire
- Extra heavy execution
- Induction-hardened precision cutting
- Matt chrome
- Special tool steel



	A mm	D1 mm	D2 mm	L1 mm	L2 mm	S mm		g	
117.1711	16,0	8,0	30,0	185,0	38,0	16,0		280	
117.1712	16,0	8,5	32,5	205,0	44,0	18,5		350	

ERGOTORQUE® VDE cable stripper

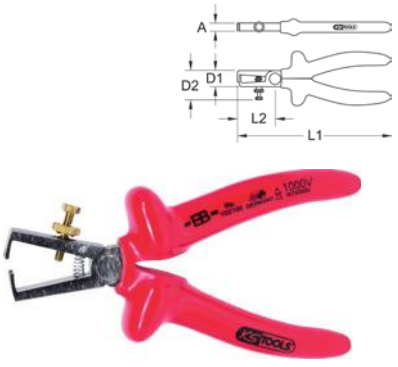
- In accordance to DIN ISO 5232
- Wrap around insulation to IEC 60900
- Locking jaw opening
- Adjusting screw and spring
- Two component handle
- For wires from 0,8 - 6,0 mm²
- Matt chrome
- Special tool steel



	A mm	D1 mm	D2 mm	L1 mm	L2 mm		g	
117.1114	10,0	17,5	31,5	160,0	36,0		210	

1000V wire strippers

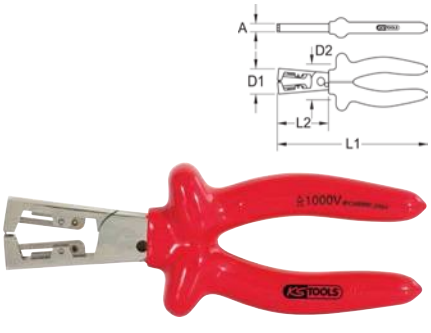
- In accordance to DIN ISO 5232
- Insulated handle to IEC 60900
- Locking jaw opening
- Adjusting screw and spring
- For wires from 0,8 - 6,0 mm²
- Matt chrome
- Special tool steel



	A mm	D1 mm	D2 mm	L1 mm	L2 mm		g	
117.1271	9,5	18,5	31,5	160,0	44,0		180	

1000V wire strippers

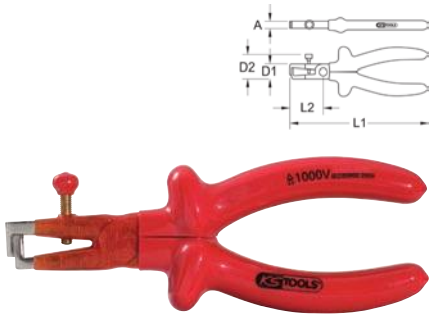
- Insulated handle to IEC 60900
- Self-adjusting
- With replaceable knives
- For wires from 0,5 - 5,0 mm²
- Cutting holes for the separation of cables and wires
- Matt chrome
- Special tool steel



	A mm	D1 mm	D2 mm	L1 mm	L2 mm	Replacement blades	g	
117.1272	10,5	28,5	47,5	160,0	20,0	117.1258	220	

1000V wire strippers

- In accordance to DIN ISO 5232
- Insulated handle to IEC 60900
- With coated working head
- Locking jaw opening
- Adjusting screw and spring
- For wires from 0,8 - 6,0 mm²
- Matt chrome
- Special tool steel



	A mm	D1 mm	D2 mm	L1 mm	L2 mm		
117.1713	11,0	18,5	20,0	160,0	34,0	1000V	180

1000V drawing pliers

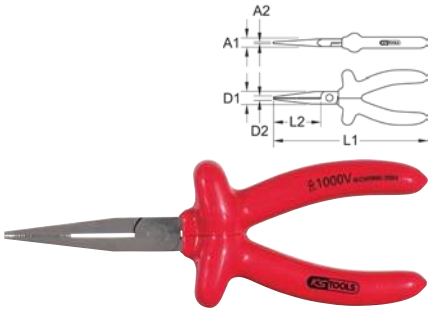
- In accordance to DIN ISO 5745
- Insulated handle to IEC 60900
- With flat and smooth gripping jaws
- Rounded edges
- Matt chrome
- Special tool steel



	A1 mm	A2 mm	D1 mm	D2 mm	L1 mm	L2 mm		
117.1280	7,5	6,5	17,0	4,5	200,0	65,0	1000V	220

1000V flat pliers

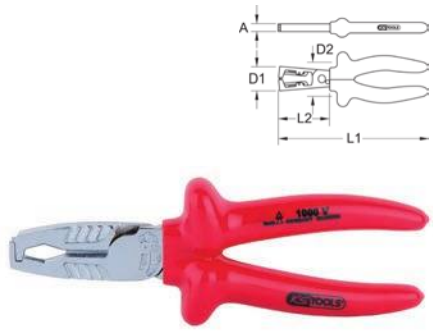
- In accordance to DIN ISO 5745
- Insulated handle to IEC 60900
- With long jaws
- Serrated execution
- Matt chrome
- Special tool steel



	A1 mm	A2 mm	D1 mm	D2 mm	L1 mm	L2 mm		
117.1289	8,5	5,5	15,0	3,5	160,0	50,0	1000V	210

1000V wire strippers

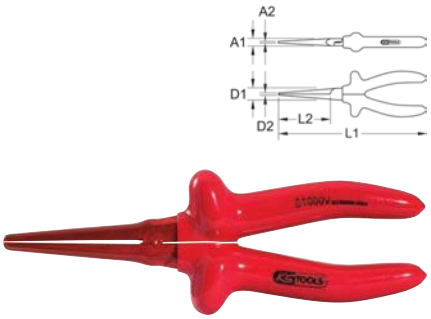
- Insulated handle to IEC 60900
- Multifunctional wire strippers
- Self-adjusting
- With replaceable knives
- For wires from 0,5 - 5,0 mm²
- Cutting holes for the separation of cables and wires
- Matt chrome
- Special tool steel



	A mm	D1 mm	D2 mm	L1 mm	L2 mm		
117.1225	10,0	24,0	40,0	185,0	61,0	1000V	260

1000V drawing pliers

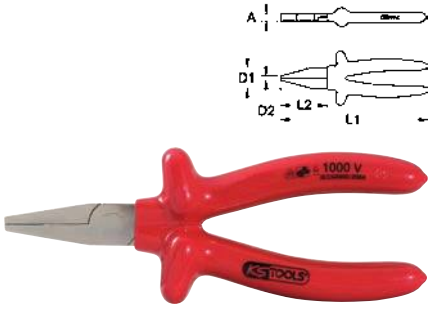
- In accordance to DIN ISO 5745
- Insulated handle to IEC 60900
- With coated working head
- With flat and smooth gripping jaws
- Rounded edges
- Matt chrome
- Special tool steel



	A1 mm	A2 mm	D1 mm	D2 mm	L1 mm	L2 mm		
117.1714	7,5	6,5	19,0	4,5	200,0	65,0	1000V	220

1000V flat pliers

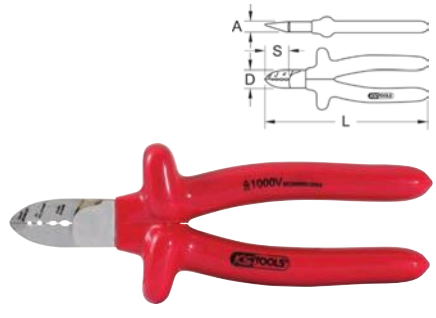
- In accordance to DIN ISO 5745
- Insulated handle to IEC 60900
- Short and powerful jaws
- Serrated execution
- Matt chrome
- Special tool steel



	A mm	D1 mm	D2 mm	L1 mm	L2 mm		
117.1298	9,0	17,0	4,5	160,0	34,0	GS	200

1000V electrical side cutters

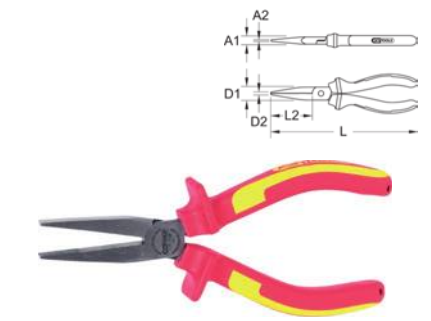
- Insulated handle to DIN / EN 60900
- For cutting, stripping and crimping
- Wire stippers for wires from 1,5 mm² + 2,5 mm²
- For crimping of insulated cable lugs with Ø 1,5 mm + 2,5 mm
- Induction-hardened precision cutting
- Matt chrome
- Special tool steel



	A mm	D mm	L mm	S mm		
117.1281	10,5	22,0	175,0	27,0	1000V	320

ERGOTORQUE® VDE flat pliers

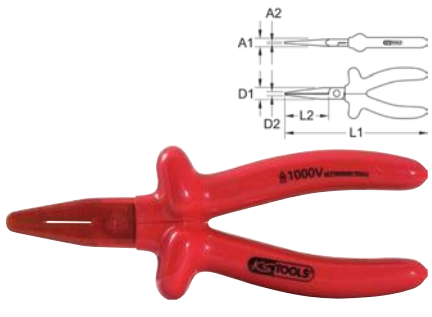
- In accordance to DIN ISO 5745
- Wrap around insulation to IEC 60900
- Two component handle
- Serrated execution
- Matt chrome
- Special tool steel



	A1 mm	A2 mm	D1 mm	D2 mm	L1 mm	L2 mm		
117.1125	9,0	3,8	18,0	3,0	170,0	49,5	GS	210

1000V flat pliers

- In accordance to DIN ISO 5745
- Insulated handle to IEC 60900
- With coated working head
- Short and powerful jaws
- Serrated execution
- Matt chrome
- Special tool steel



	A1 mm	A2 mm	D1 mm	D2 mm	L1 mm	L2 mm		
117.1715	11,0	11,0	19,0	5,0	160,0	36,0	1000V	190

1000V long jaw flat pliers

- In accordance to DIN ISO 5745
- Insulated handle to IEC 60900
- With long jaws
- Matt chrome
- Special tool steel



	A1 mm	A2 mm	D1 mm	D2 mm	L1 mm	L2 mm		g
117.1299	7,0	8,5	16,0	4,0	160,0	51,0	1000V	210

1000V long jaw flat pliers

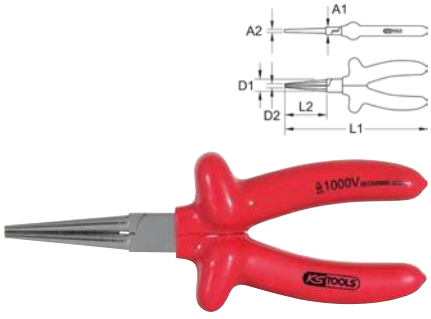
- In accordance to DIN ISO 5745
- Insulated handle to IEC 60900
- With coated working head
- With long jaws
- Matt chrome
- Special tool steel



	A1 mm	A2 mm	D1 mm	D2 mm	L1 mm	L2 mm		g
117.1716	13,0	7,5	18,5	4,5	160,0	50,0	1000V	130

1000V long jaw round pliers

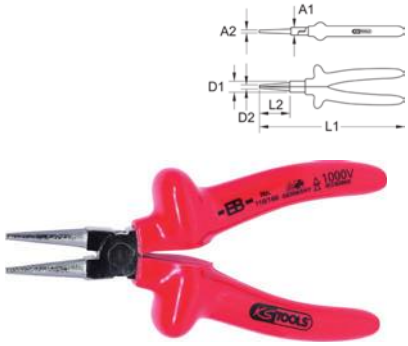
- In accordance to DIN ISO 5745
- Insulated handle to IEC 60900
- With round and long jaws
- With smooth tips
- Serrated execution
- Matt chrome
- Special tool steel



	A1 mm	A2 mm	D1 mm	D2 mm	L1 mm	L2 mm		g
117.1290	9,0	2,5	14,0	5,5	160,0	47,5	1000V	205

1000V round pliers

- In accordance to DIN ISO 5745
- Insulated handle to IEC 60900
- With round, short and strong jaws
- With smooth tips
- Serrated execution
- Matt chrome
- Special tool steel



	A1 mm	A2 mm	D1 mm	D2 mm	L1 mm	L2 mm		g
117.1297	10,0	3,5	14,0	6,0	160,0	33,0		180

ERGOTORQUE® VDE long nosed pliers

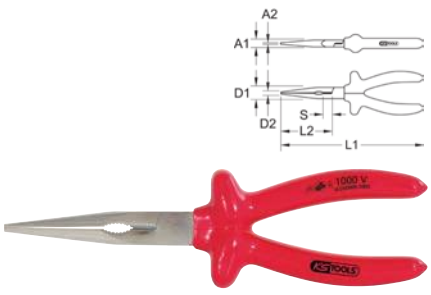
- In accordance to DIN ISO 5745
- Wrap around insulation to IEC 60900
- Two component handle
- Long jaws
- Suitable for medium and hard wire
- Induction-hardened precision cutting
- Matt chrome
- Special tool steel



	A1 mm	A2 mm	D1 mm	D2 mm	L1 mm	L2 mm	S mm		g
117.1117	9,0	2,9	18,0	3,2	165,0	48,0	2,5		177
117.1118	11,0	3,5	22,0	4,5	215,0	69,0	2,5		291

1000V long nosed pliers

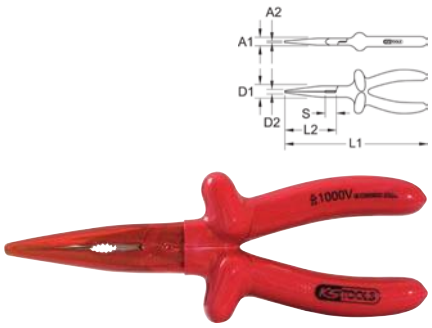
- In accordance to DIN ISO 5745
- Insulated handle to IEC 60900
- Long jaws
- For soft and medium wire
- Induction-hardened precision cutting
- Matt chrome
- Special tool steel



	A1 mm	A2 mm	D1 mm	D2 mm	L1 mm	L2 mm		g
117.1291	9,5	2,5	16,0	4,0	200,0	74,0		230
117.1293	9,0	2,0	15,5	3,0	160,0	55,0	1000V	170

1000V long nosed pliers

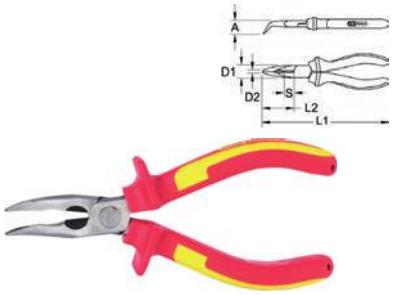
- In accordance to DIN ISO 5745
- Insulated handle to IEC 60900
- With coated working head
- Long jaws
- For soft and medium wire
- Induction-hardened precision cutting
- Matt chrome
- Special tool steel



	A1 mm	A2 mm	D1 mm	D2 mm	L1 mm	L2 mm	S mm		g
117.1717	10,0	3,5	17,5	4,0	160,0	55,0	10,0	1000V	180
117.1718	10,5	3,5	18,0	5,0	200,0	74,0	14,0	1000V	230

ERGOTORQUE® VDE long nosed pliers, curved

- In accordance to DIN ISO 5745
- Wrap around insulation to IEC 60900
- Two component handle
- Curved jaws
- For soft and medium wire
- Induction-hardened precision cutting
- Matt chrome
- Special tool steel



	A mm	D1 mm	D2 mm	L1 mm	L2 mm	S mm		g
117.1120	9,0	18,0	3,2	165,0	48,0	2,5		210
117.1121	11,0	22,0	5,0	205,0	70,0	2,5		310

1000V long nosed pliers, curved

- In accordance to DIN ISO 5745
- Insulated handle to IEC 60900
- Curved jaws
- For soft and medium wire
- Induction-hardened precision cutting
- Matt chrome
- Special tool steel



	A mm	D1 mm	D2 mm	L1 mm	L2 mm	S mm		g
117.1292	9,5	17,0	4,0	200,0	78,0	14,0		210
117.1294	9,5	15,5	4,0	160,0	51,0	11,0	1000V	170

1000V long nosed pliers, curved

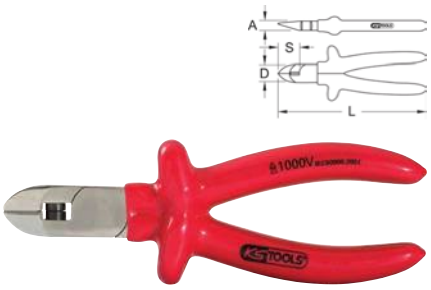
- In accordance to DIN ISO 5745
- Insulated handle to IEC 60900
- With coated working head
- Curved jaws
- For soft and medium wire
- Induction-hardened precision cutting
- Matt chrome
- Special tool steel



	A mm	D1 mm	D2 mm	L1 mm	L2 mm	S mm	1000V	g
117.1719	12,0	5,0	19,0	200,0	79,0	14,0	1000V	220

1000V lead sealing pliers

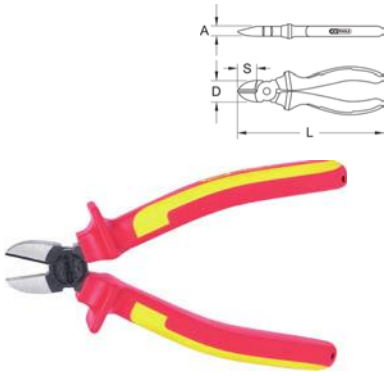
- Insulated handle to DIN / EN 60900
- Combined with side cutter
- Induction-hardened precision cutting
- Matt chrome
- Special tool steel



	A mm	D mm	L mm	S mm	1000V	g
117.1268	10,0	20,0	160,0	15,0	1000V	220

ERGOTORQUE® VDE diagonal side cutters

- In accordance to DIN ISO 5749
- Wrap around insulation to IEC 60900
- Two component handle
- For soft and medium wire
- Induction-hardened precision cutting
- Matt chrome
- Special tool steel



	A mm	D mm	L mm	S mm		g
117.1119	10,0	20,0	160,0	20,0		210

1000V side cutters

- In accordance to DIN ISO 5232
- Insulated handle to IEC 60900
- For soft and hard wire
- Induction-hardened precision cutting
- Matt chrome
- Special tool steel



	A mm	D mm	L mm	S mm		g
117.1277	11,0	21,5	160,0	24,0		270
117.1288	11,0	21,5	180,0	24,0		330

1000V side cutters

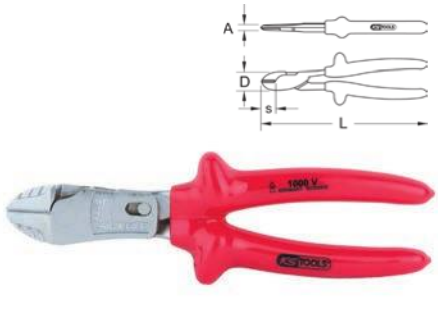
- In accordance to DIN ISO 5232
- Insulated handle to IEC 60900
- Working head coated
- For soft and hard wire
- Induction-hardened precision cutting
- Matt chrome
- Special tool steel



	A mm	D mm	L mm	S mm	1000V	g
117.1721	26,0	25,5	160,0	22,0	1000V	230
117.1722	27,0	27,0	180,0	25,0	1000V	330

1000V high leverage side cutter

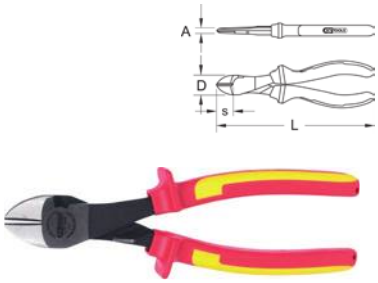
- In accordance to DIN ISO 5749
- Insulated handle to IEC 60900
- For all types of wire
- Especially for overhead line construction
- Lower power usage
- 40% power saving
- Induction-hardened precision cutting
- Matt chrome
- Special tool steel



	A mm	D mm	L mm	S mm		g
117.1234	12,0	28,5	200,0	25,0	1000V	380

ERGOTORQUE® VDE high leverage side cutters

- In accordance to DIN ISO 5749
- Wrap around insulation to IEC 60900
- Two component handle
- For all types of wire
- Lower power usage
- Induction-hardened precision cutting
- Matt chrome
- Special tool steel



	A mm	D mm	L mm	S mm		g
117.1115	12,0	30,0	190,0	22,5		330
117.1116	12,5	30,0	205,0	22,5		370

1000V high leverage side cutter

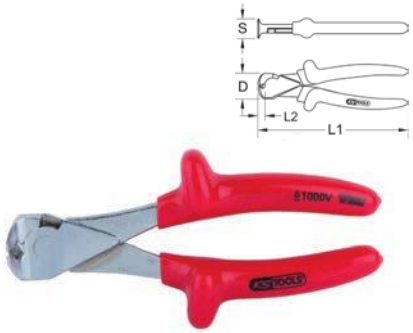
- In accordance to DIN ISO 5749
- Insulated handle to IEC 60900
- For all types of wire
- Especially for overhead line construction
- Lower power usage
- Induction-hardened precision cutting
- Matt chrome
- Special tool steel



	A mm	D mm	L mm	S mm	1000V	g
117.1282	12,0	26,0	180,0	21,0	1000V	320
117.1283	12,5	29,0	205,0	24,0	1000V	370
117.1284	13,5	33,0	260,0	30,0		580

1000V cutting pliers

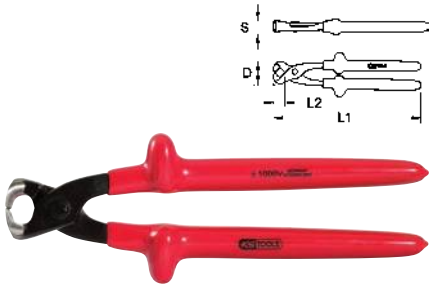
- In accordance to DIN ISO 5748
- Insulated handle to IEC 60900
- For soft and hard wire
- Induction-hardened precision cutting
- Matt chrome
- Special tool steel



	D mm	L mm	L2 mm	S mm	1000V	g
117.1198	30,0	160,0	6,5	23,0	1000V	280

1000V rabitz pliers

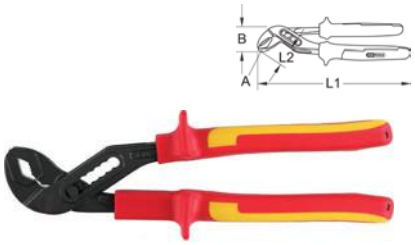
- Insulated handle to DIN / EN 60900
- For soft wire
- For the cutting and twisting of tie wire
- Induction-hardened precision cutting
- Phosphate finish
- Special tool steel



	D mm	L1 mm	L2 mm	S mm	1000V	
117.1204	36,0	250,0	16,0	25,0	1000V	480

ERGOTORQUE® VDE water pump pliers

- In accordance to DIN ISO 8976
- Wrap around insulation to IEC 60900
- Two component handle
- Toothed gripping surfaces
- Substaintial through joint
- Optimum power transfer
- With grooved adjustment
- With zip fatener
- With inductively hardened handle areas
- Matt chrome
- Special tool steel



	A mm	B mm	L1 mm	L2 mm		
117.2000	33,0	42,0	240,0	32,0		420

1000V water pump pliers

- In accordance to DIN ISO 8976
- Insulated handle to IEC 60900
- Toothed gripping surfaces
- Substaintial through joint
- Optimum power transfer
- With grooved adjustment
- With zip fatener
- With inductively hardened handle areas
- Matt chrome
- Special tool steel



	A mm	B mm	L1 mm	L2 mm	1000V	
117.1273	39,0	35,0	250,0	51,0	1000V	350
117.1274	65,0	47,0	300,0	65,0	1000V	690

1000V water pump pliers

- In accordance to DIN ISO 8976
- Insulated handle to IEC 60900
- Toothed gripping surfaces
- Heavy execution
- Through flexible head with flat-die thread rolling
- Optimum power transfer
- With zip fatener
- With inductively hardened handle areas
- Matt chrome
- Special tool steel



	A mm	B mm	L1 mm	L2 mm	1000V	
117.1207	54,0	56,0	260,0	35,0	1000V	560

PLIERS WITH TOOL SAFETY MECHANISM & PROTECTIVE INSULATION

1000V power combination pliers with safety eyelet for safety line

- In accordance to DIN ISO 5746
- integrated safety eyelet for safety line
- Insulated handle to IEC 60900
- Also suitable for hard wire
- Induction-hardened precision cutting
- Matt chrome
- Special tool steel



	A mm	D1 mm	D2 mm	L1 mm	L2 mm	S mm	1000V	
117.2201	11,5	8,0	28,0	205,0	43,0	18,0	1000V	400

1000V Wire Stripper with safety line safety eyelet

- In accordance to DIN ISO 5232
- integrated safety eyelet for safety line
- Insulated handle to IEC 60900
- Locking jaw opening
- Adjusting screw and spring
- For wires from 0,5 - 5,0 mm²
- Matt chrome
- Special tool steel



	A mm	D1 mm	D2 mm	L1 mm	L2 mm	1000V	
117.2202	9,5	18,5	31,5	160,0	44,0	1000V	190

1000V Diagonal cutter with safety eyelet for safety rope

- In accordance to DIN ISO 5232
- integrated safety eyelet for safety line
- Insulated handle to IEC 60900
- For soft and hard wire
- Induction-hardened precision cutting
- Matt chrome
- Special tool steel



	A mm	D mm	L mm	S mm	1000V	
117.2204	11,0	21,5	160,0	24,0	1000V	270

1000V flat nose pliers with safety eyelet for safety line

- In accordance to DIN ISO 5745
- integrated safety eyelet for safety line
- Insulated handle to IEC 60900
- Long jaws
- For soft and medium wire
- Induction-hardened precision cutting
- Matt chrome
- Special tool steel



	A1 mm	A2 mm	D1 mm	D2 mm	L1 mm	L2 mm	1000V	
117.2203	9,5	2,5	16,0	4,0	200,0	74,0	1000V	230

1000V Single hand cable cutter with safety eyelet for safety line

- integrated safety eyelet for safety line
- Insulated handle to IEC 60900
- For and on multi strand copper and aluminium cable
- Extremly versatile
- Suitable for wire up to 25 mm²
- Suitable for multi-strand wire up to 50 mm²
- Suitable for ultra-wire up to 70 mm²
- Not suited for steel wire and hard pulled copper cables
- Phosphate finish
- Special tool steel



	Ø mm	A mm	D mm	L mm	S mm	1000V	
117.2206	22,0	18,0	31,0	215,0	32,0	1000V	360

1000V water pump pliers with safety eyelet for safety line

- In accordance to DIN ISO 8976
- integrated safety eyelet for safety line
- Insulated handle to IEC 60900
- Toothed gripping surfaces
- Substaintial through joint
- Optimum power transfer
- With grooved adjustment
- With zip fatener
- With inductively hardened handle areas
- Matt chrome
- Special tool steel



	A mm	B mm	L1 mm	L2 mm	1000V	
117.2205	39,0	35,0	240,0	51,0	1000V	390

lifeline

- for attaching to trousers and tools
- easy to fasten
- ideal for work at great heights
- Universal usage
- aluminium carabiner



	Length mm	
117.2207	480 - 1500	50

PLIERS SETS WITH PROTECTIVE INSULATION

ERGOTORQUE® VDE pliers set

- Wrap around insulation to IEC 60900
- Two component handle
- Matt chrome
- Special tool steel



			kg
117.1100	4 pcs	ERGOTORQUE® VDE pliers set	1,44
1 x		175 mm	
1 x		165 mm	
1 x		150 mm	
1 x		250 mm	

1000V pliers set

- Insulated handle to IEC 60900
- Matt chrome
- Special tool steel



			kg
117.1700	4 pcs	1000V pliers set	1,55
1 x		150 mm	
1 x		175 mm	
1 x		200 mm	
1 x		250 mm	



ERGOTORQUE® VDE pliers set

- Wrap around insulation to IEC 60900
- Two component handle
- Matt chrome
- Special tool steel



			kg
117.1110	3 pcs	ERGOTORQUE® VDE pliers set	930
1 x		175 mm	
1 x		165 mm	
1 x		150 mm	

1000V pliers set

- Insulated handle to IEC 60900
- Matt chrome
- Special tool steel



			kg
117.1710	3 pcs	1000V pliers set	0,82
1 x		185 mm	
1 x		200 mm	
1 x		160 mm	

ERGOTORQUE® VDE pliers set

- Wrap around insulation to IEC 60900
- Two component handle
- Matt chrome
- Chrome vanadium



			kg
117.1160	4 pcs	ERGOTORQUE® VDE pliers set	1,20
1 x		200 mm	
1 x		160 mm	
1 x		180 mm	
1 x		160 mm	

1000V pliers set

- Insulated handle to IEC 60900
- Matt chrome
- Special tool steel



			kg
117.1760	4 pcs	1000V pliers set	0,95
1 x		200 mm	
1 x		160 mm	
1 x		185 mm	
1 x		160 mm	

ERGOTORQUE® VDE plier and screwdriver set

- Wrap around insulation to IEC 60900
- Two component handle
- Matt chrome / burnished
- Special tool steel



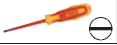
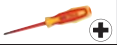
			kg
117.1170	5 pcs	ERGOTORQUE® VDE plier and screwdriver set	0,86
1 x		200 mm	
1 x		160 mm	
2 x		4 - 5,5 mm	
1 x		PH2	

ERGOTORQUE® VDE pliers and screwdriver set

- Wraped and insulated handle to IEC 60900
- Pliers dip insulated
- Screwdrivers with two component handle
- Matt chrome / burnished
- Special tool steel



117.1770	5 pcs	ERGOTORQUE® VDE pliers and screwdriver set	0,69

1 x		200 mm
1 x		160 mm
2 x		4 - 5,5 mm
1 x		PH2

1000V electronic set

- Insulated handle to IEC 60900
- Matt chrome
- Special tool steel



117.1104	9 pcs	1000V electronic set	930

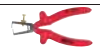
1 x		115 mm
1 x		115 mm
1 x		115 mm
1 x		115 mm
1 x		115 mm
1 x		115 mm
1 x		145 mm
1 x		145 mm
1 x		175 mm

1000V pliers and screwdriver set

- Insulated handle to IEC 60900
- Matt chrome
- Special tool steel



117.1875	10 pcs	1000V pliers and screwdriver set	2000

1 x		185 mm
1 x		160 mm
1 x		160 mm
1 x		160 mm
1 x		3,0 mm
4 x		2,5 - 4 - 5,5 - 6,5 mm
1 x		PH1

1000V pliers set

- Insulated handle to IEC 60900
- Matt chrome
- Special tool steel
- Force variant



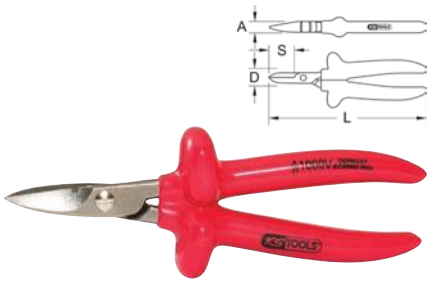
117.1873	6 pcs	1000V pliers set	2,50

1 x		185 mm
1 x		160 mm
1 x		200 mm
1 x		200 mm
1 x		160 mm
1 x		260 mm

CABLE CUTTING

1000V electrical shear

- Insulated handle to IEC 60900
- Only suitable for copper and aluminium wire
- For the cutting of thin wires and sheet metals
- Matt chrome
- Special tool steel



	A mm	D mm	L mm	S mm		g
117.1206	9,0	14,0	180,0	38,0	1000V	170

1000V cable shear

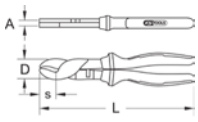
- Insulated handle to IEC 60900
- For and on multi strand copper and aluminium cable
- For lead cable up to max. Ø 50 mm²
- Lower power usage
- Not suited for steel wire and hard pulled copper cables
- Matt chrome
- Special tool steel



	Ø mm	Cutting ratio mm²	A mm	D mm	L mm	S mm		g
117.4277	6,0	22,0	11,0	24,0	160,0	15,0	1000V	238
117.4278	10,0	38,0	13,0	29,0	210,0	18,0	1000V	370
117.4279	20,0	60,0	15,0	32,0	250,0	26,0	1000V	600

ERGOTORQUE® VDE cable shear

- Wrap around insulation to IEC 60900
- For lead cable up to max. Ø 50 mm²
- For squeeze free cutting of and on more wiry copper and aluminium cables
- Lower power usage
- Not suited for steel wire and hard pulled copper cables
- Phosphate finish
- Two component handle
- Special tool steel

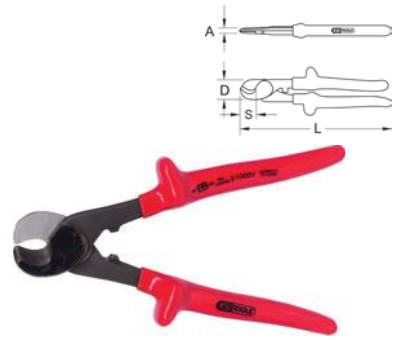




	Ø mm	A mm	D mm	L mm	S mm		g
117.1122	10,0	10,8	24,5	165,0	15,0		200
117.1123	12,5	13,0	29,0	215,0	17,5		270
117.1124	15,0	13,5	45,0	245,0	31,0		550

1000V cable shear

- Insulated handle to IEC 60900
- For and on multi strand copper and aluminium cable
- For lead cable up to max. Ø 50 mm²
- Lower power usage
- Not suited for steel wire and hard pulled copper cables
- Matt chrome
- Special tool steel



	Ø mm	Cutting ratio mm²	A mm	D mm	L mm	S mm	1000V	g
117.1269	15,0	50,0	13,5	38,0	240,0	25,0	1000V	455

1000V single handed cable shear

- Insulated handle to IEC 60900
- For and on multi strand copper and aluminium cable
- For lead cable up to max. Ø 50 mm²
- Lower power usage
- Not suited for steel wire and hard pulled copper cables
- Matt chrome
- Special tool steel



	Ø mm	Cutting ratio mm²	A mm	D mm	L mm	S mm	1000V	g
117.1107	15,0	50,0	10,0	23,5	165,0	24,0	1000V	250
117.1108	20,0	60,0	12,0	28,5	200,0	27,0	1000V	350

1000V single handed cable shear

- Insulated handle to IEC 60900
- For and on multi strand copper and aluminium cable
- Extremly versatile
- No bruising, slight shaping of the cable
- With precision screw joint
- Suitable for wire up to 16 mm²
- Suitable for multi strand wire up to 25 mm²
- Suitable for ultra wire up to 50 mm²
- Not suited for steel wire and hard pulled copper cables
- Special tool steel



	Ø mm	A mm	D mm	L mm	S mm	1000V	g
117.1286	15,0	12,0	25,0	160,0	20,0	1000V	250

1000V single handed cable shear

- Insulated handle to IEC 60900
- For and on multi strand copper and aluminium cable
- With after adjustable screw joint
- With zip fatener
- Not suited for steel wire and hard pulled copper cables
- Phosphate finish
- Special tool steel



	Ø mm	Cutting ratio mm²	A mm	D mm	L mm	S mm	1000V	g
117.1287	17,0	35,0	15,0	27,0	165,0	25,0	1000V	240

1000V single handed cable shear

- Insulated handle to IEC 60900
- With coated working head
- For and on multi strand copper and aluminium cable
- With after adjustable screw joint
- With zip fatener
- Not suited for steel wire and hard pulled copper cables
- Phosphate finish
- Special tool steel



	Ø mm	Cutting ratio mm²	A mm	D mm	L mm	S mm	1000V	g
117.1103	17,0	35,0	13,0	31,0	165,0	20,5	1000V	280
117.1109	20,0	50,0	18,0	33,5	210,0	34,0	1000V	400

1000V single handed cable shear

- Insulated handle to IEC 60900
- For and on multi strand copper and aluminium cable
- Extremly versatile
- Suitable for wire up to 25 mm²
- Suitable for multi-strand wire up to 50 mm²
- Suitable for ultra-wire up to 70 mm²
- Not suited for steel wire and hard pulled copper cables
- Phosphate finish
- Special tool steel



	Ø mm	A mm	D mm	L mm	S mm	1000V	g
117.1259	22,0	18,0	31,0	215,0	32,0	1000V	360

1000V two cut cable shear

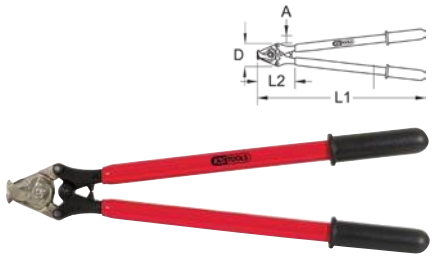
- Insulated handle to IEC 60900
- For and on multi strand copper and aluminium cable
- Precision blade for easy and clean cut
- With before and after cut
- With after adjustable screw joint
- Not suited for steel wire and hard pulled copper cables
- Matt chrome
- Special tool steel



	Ø mm	Cutting ratio mm²	A mm	D mm	L1 mm	L2 mm	S mm	1000V	g
117.1270	20,0	50,0	13,5	33,0	200,0	83,0	48,0	1000V	365

Cable shears with protective insulation

- Insulated handle to IEC 60900
- For bruise free cutting of copper and aluminiums cables
- With interchangeable cutter head
- Knife head made out of special alloyed steel
- Lower power usage
- Not suited for steel wire and hard pulled copper cables
- Matt chrome
- Special tool steel



	Ø mm	Cutting ratio mm²	A mm	D mm	L1 mm	L2 mm	Replacement cutter head	1000V	kg
117.1260	26,0	150,0	16,0	80,0	600,0	80,0	117.1258	1000V	2,70
117.1261	33,0	180,0	17,0	86,0	700,0	105,0	117.1263	1000V	3,30

Storage bag for cable shears with protective insulation

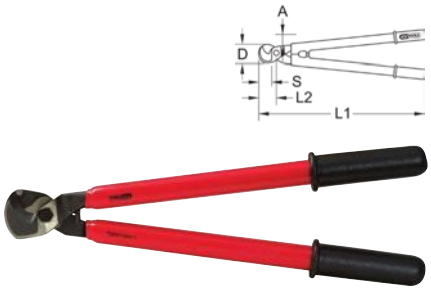
- From black synthetic leather
- For storage and protection of insulated cable shears



	L mm	B mm		g
117.1262	650,0	95 - 190	➡ 117.1260 + 117.1261	241

Cable shears with protective insulation

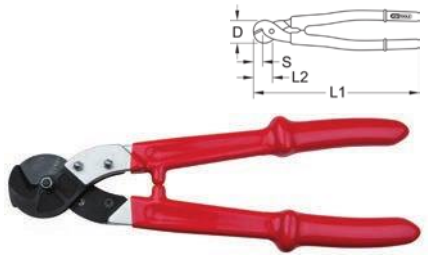
- Insulated handle to IEC 60900
- For bruise free cutting of copper and aluminium cables
- Clean cut through new cutting edge geometry
- With after adjustable screw joint
- Lower power usage
- Not suited for steel wire and hard pulled copper cables
- Matt chrome
- Special tool steel



	Ø mm	Cutting ratio mm²	A mm	D mm	L1 mm	L2 mm	S mm	1000V	kg
117.1264	27,0	150,0	15,0	59,0	500,0	58,0	37,0	1000V	1,48

Cable shears with protective insulation

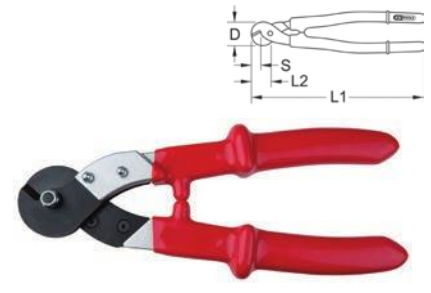
- Insulated handle to IEC 60900
- For bruise free cutting of copper and aluminium cables
- Clean cut through new cutting edge geometry
- With after adjustable screw joint
- Lower power usage
- Not suited for steel wire and hard pulled copper cables
- Matt chrome
- Special tool steel



	Cutting ratio mm²	D mm	L1 mm	L2 mm	S mm	1000V	kg
117.4281	95,0	58,0	310,0	35,0	25,0	1000V	0,82
117.4282	150,0	66,0	460,0	41,0	30,0	1000V	1,40
117.4283	325,0	90,0	600,0	55,0	46,0	1000V	2,50
117.4284	500,0	90,0	800,0	75,0	54,0	1000V	3,80

Wire rope cable shears with protective insulation

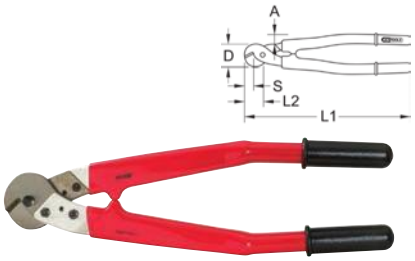
- Insulated handle to IEC 60900
- Above average cutting edge achieved
- For bruise free cutting for steel and aluminium rope, copper and aluminium cable
- Angular cutting edge tip for cutting single rope cords
- With interchangeable cutter head
- Cutter head made of high quality special steel
- Lower power usage
- Matt chrome
- Special tool steel



	Cutting edge steel mm²	Cutting edge wire mm²	D mm	L1 mm	L2 mm	S mm	1000V	kg
117.4285	7,0	60,0	58,0	310,0	30,0	20,0	1000V	0,95
117.4286	10,0	100,0	66,0	450,0	34,0	21,0	1000V	1,40
117.4287	14,0	150,0	91,0	600,0	45,0	24,0	1000V	2,60

Wire rope cable shears with protective insulation

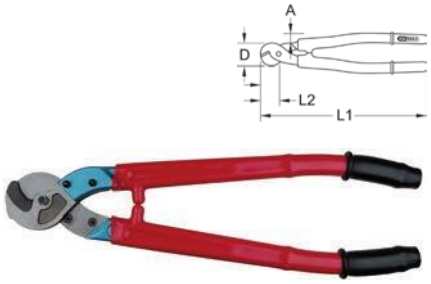
- Insulated handle to IEC 60900
- Above average cutting edge achieved
- For bruise free cutting for steel and aluminium rope, copper and aluminium cable
- Angular cutting edge tip for cutting single rope cords
- With interchangeable cutter head
- Cutter head made of high quality special steel
- Lower power usage
- Matt chrome
- Special tool steel



	Ø mm	Cutting ratio mm²	A mm	D mm	L1 mm	L2 mm	S mm	Replacement cutter head	1000V	kg
117.1266	20,0	120,0	19,0	90,0	600,0	84,0	17,0	117.1267	1000V	1,80

Wire rope cable shears with protective insulation

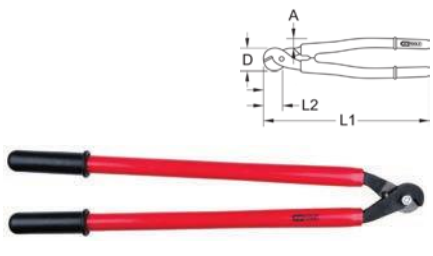
- Insulated handle to IEC 60900
- Above average cutting edge achieved
- For bruise free cutting for steel and aluminium rope, copper and aluminium cable
- Angular cutting edge tip for cutting single rope cords
- With interchangeable cutter head
- Cutter head made of high quality special steel
- Lower power usage
- Matt chrome
- Special tool steel



	D mm	Cutting ratio mm²	A mm	L1 mm	L2 mm	1000V	kg
117.4280	35 - 50	500,0	30,0	800,0	80,0	1000V	3,90

Wire rope shears with protective insulation

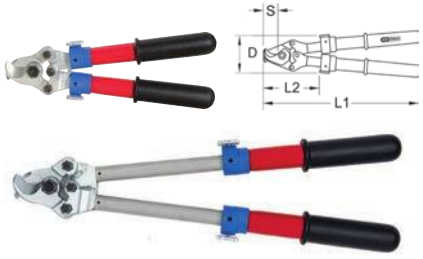
- Insulated handle to IEC 60900
- Above average cutting edge achieved
- For bruise free cutting for steel and aluminium rope, copper and aluminium cable
- Angular cutting edge tip for cutting single rope cords
- With interchangeable cutter head
- Cutter head made of high quality special steel
- Lower power usage
- Matt chrome
- Special tool steel



	Cutting edge steel mm²	Cutting edge wire mm²	D mm	A mm	L1 mm	L2 mm	1000V	kg
117.1101	9,0	16,0	54,0	37,0	700,0	45,0	1000V	2,40

Cable shears with protective insulation, telescopic handle

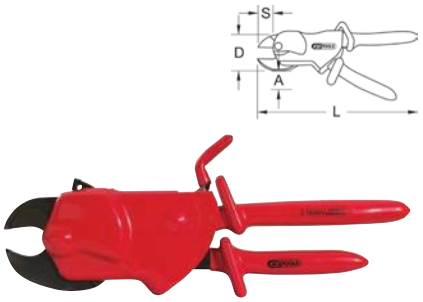
- Insulated handle to IEC 60900
- For and on multi strand copper and aluminium cable
- With telescopic handle
- With interchangeable cutter head
- Lower power usage
- Not suited for steel wire and hard pulled copper cables
- Matt chrome
- Special tool steel



	Ø mm	Cutting ratio mm²	D mm	L1 mm	L2 mm	S mm	Replacement cutter head	1000V	kg
117.1233	31,0	185,0	82,0	360-520	63,0	35,0	117.2234	1000V	2,00

One-hand ratchet cable shears with protective insulation

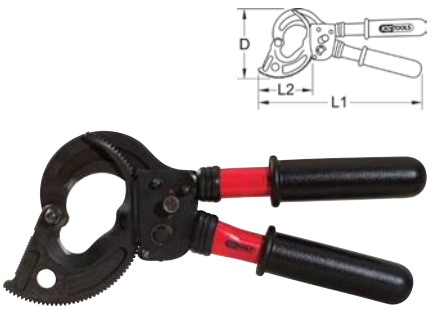
- Insulated handle to IEC 60900
- For and on multi strand copper and aluminium cable
- Working head coated
- Automatic reserve through spring return
- Cutting edge process can be interrupted in every position
- Matt chrome
- Special tool steel



	A mm	D mm	L mm	S mm	1000V	kg
117.1245	40,0	80,0	290,0	35,0	1000V	1,00
117.1246	40,0	85,0	310,0	40,0	1000V	1,15

Ratchet cable shears with protective insulation

- Insulated handle to IEC 60900
- For and on multi strand copper and aluminium cable
- With double supported eccentric drive
- Almost break proof gearing
- Thin cutting steel sheet casing
- Ratchet function
- Not suitable for hardened steel wire
- Phosphate finish
- Special tool steel



	Ø mm	Cutting ratio mm²	D mm	L1 mm	L2 mm	1000V	kg
117.1248	62,0	840,0	150,0	400,0	90,0	1000V	2,20
117.1249	80,0	1000,0	190,0	530,0	110,0	1000V	3,15

Ratchet cable shears with protective insulation

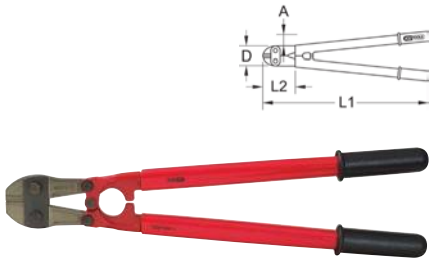
- Insulated handle to IEC 60900
- For and on multi strand copper and aluminium cable
- With double supported eccentric drive
- Almost break proof gearing
- Thin cutting steel sheet casing
- Ratchet function
- Not suitable for hardened steel wire
- Phosphate finish
- Special tool steel



	Ø mm	Ø mm	D mm	L1 mm	L2 mm	kg
117.1102	52,0	25,0	135,0	310,0	110,0	0,92

Bolt cutter with protective insulation

- Insulated handle to IEC 60900
- With steel tube legs and eccentric adjustment
- With interchangeable cutter head
- Cutter head made of high quality special steel
- Induction-hardened precision cutting
- Phosphate finish
- Special tool steel



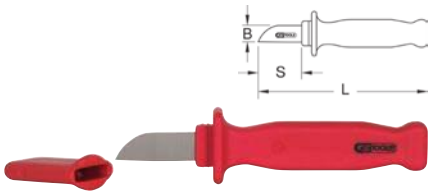
	A mm	D mm	L1 mm	L2 mm	Replacement cutter head	1000V	kg
117.1256	8,0	79,0	610,0	115,0	117.1257		2,70



ELECTRICIAN'S KNIVES

Cable knife with protective insulation

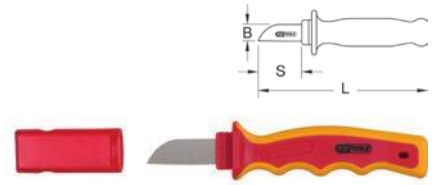
- Insulated to IEC 60900
- With durable and straight blade
- Straight blade
- Safety handle made out of tough elastic and impact resistant plastic
- With safety cover



	B mm	S mm	L mm	1000V	kg
117.1295	18,5	50,0	210,0		105

Cable knife with protective insulation

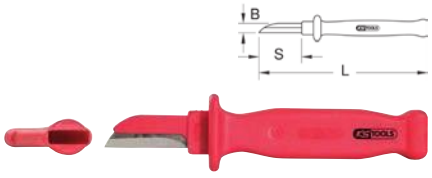
- Insulated to IEC 60900
- Two component handle
- With durable and straight blade
- Straight blade
- Safety handle made out of tough elastic and impact resistant plastic
- With safety cover



	B mm	S mm	L mm	1000V	kg
117.1397	16,7	53,0	205,0		90

Cable knife with protective insulation

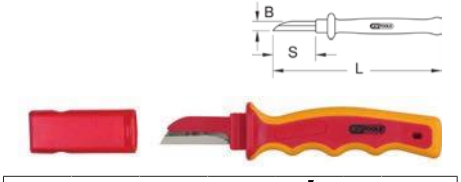
- Insulated to IEC 60900
- With durable, part insulated and straight blade
- Straight blade
- Safety handle made out of tough elastic and impact resistant plastic
- With safety cover



	B mm	S mm	L mm	1000V	kg
117.1390	18,5	50,0	210,0		115

Cable knife with protective insulation

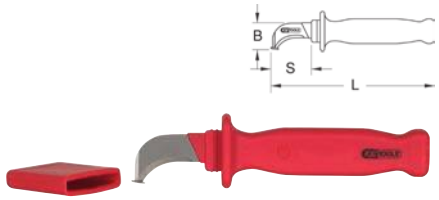
- Insulated to IEC 60900
- Two component handle
- With durable, part insulated and straight blade
- Straight blade
- Safety handle made out of tough elastic and impact resistant plastic
- With safety cover



	B mm	S mm	L mm	1000V	kg
117.1304	20,3	53,0	205,0		99

Cable knife with protective insulation and hook blade

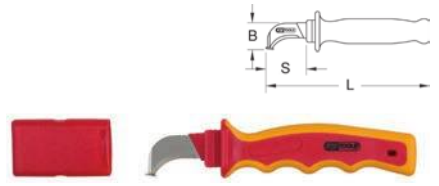
- Insulated to IEC 60900
- With durable blade
- Hook shaped cutting edge
- For slitting and stripping cable
- Safety handle made out of tough elastic and impact resistant plastic
- With safety cover



	B mm	S mm	L mm	1000V	kg
117.1296	28,0	40,0	200,0		100

Cable knife with protective insulation and hook blade

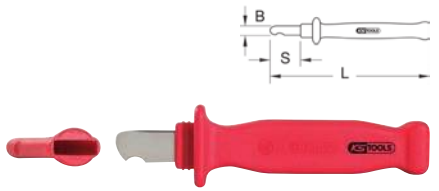
- Insulated to IEC 60900
- Two component handle
- With durable blade
- Hook shaped cutting edge
- For slitting and stripping cable
- Safety handle made out of tough elastic and impact resistant plastic
- With safety cover



	B mm	S mm	L mm	1000V	kg
117.1331	30,0	47,0	200,0		92

Dismantling knife with protective insulation

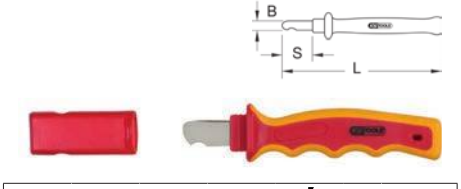
- Insulated to IEC 60900
- With durable and straight blade
- Hook shaped cutting edge
- Safety handle made out of tough elastic and impact resistant plastic
- With safety cover



	B mm	S mm	L mm	1000V	kg
117.1391	19,0	35,0	182,0		95

Dismantling knife with protective insulation

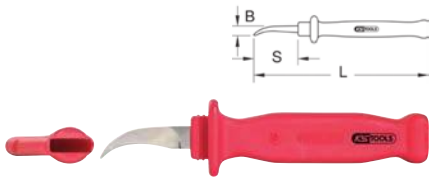
- Insulated to IEC 60900
- Two component handle
- With durable and straight blade
- Hook shaped cutting edge
- Safety handle made out of tough elastic and impact resistant plastic
- With safety cover



	B mm	S mm	L mm	1000V	kg
117.1305	19,0	35,0	185,0		92

Paper section knives with protective insulation

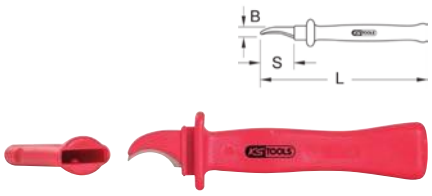
- Insulated to IEC 60900
- With durable blade
- Hook shaped cutting edge
- Suitable for sector cable
- Safety handle made out of tough elastic and impact resistant plastic
- With safety cover



	B mm	S mm	L mm		g
117.1392	19,0	50,0	205,0		90

Settling knife with protective insulation

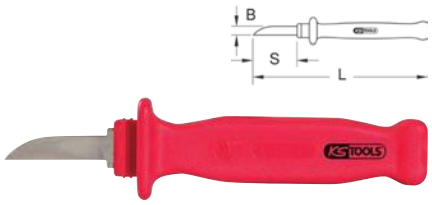
- Insulated to IEC 60900
- With durable blade
- Hook shaped and part isolated cutting edge
- Safety handle made out of tough elastic and impact resistant plastic
- With safety cover



	B mm	S mm	L mm		g
117.1394	21,0	35,0	165,0		75

Cable stripping blades with protective insulation

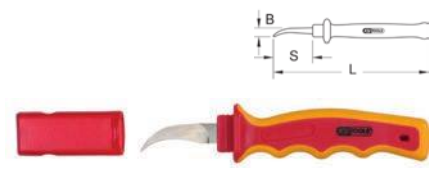
- Insulated to IEC 60900
- With durable blade
- Narrow and straight cutting edge
- Safety handle made out of tough elastic and impact resistant plastic
- With safety cover



	B mm	S mm	L mm		g
117.1396	11,0	50,0	200,0		95

Paper section knives with protective insulation

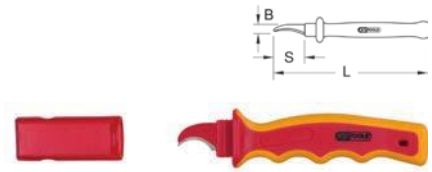
- Insulated to IEC 60900
- Two component handle
- With durable blade
- Hook shaped cutting edge
- Suitable for sector cable
- Safety handle made out of tough elastic and impact resistant plastic
- With safety cover



	B mm	S mm	L mm		g
117.1320	17,0	56,0	210,0	1000V	83

Settling knife with protective insulation

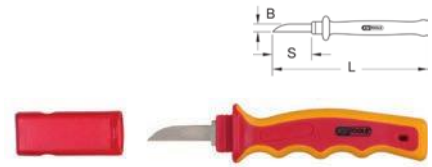
- Insulated to IEC 60900
- Two component handle
- With durable blade
- Hook shaped and part isolated cutting edge
- Safety handle made out of tough elastic and impact resistant plastic
- With safety cover



	B mm	S mm	L mm		g
117.1328	21,2	30,0	180,0	1000V	87

Cable stripping blades with protective insulation

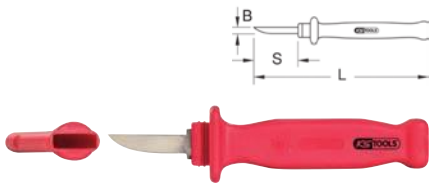
- Insulated to IEC 60900
- Two component handle
- With durable blade
- Narrow and straight cutting edge
- Safety handle made out of tough elastic and impact resistant plastic
- With safety cover



	B mm	S mm	L mm		g
117.1360	11,0	50,0	200,0	1000V	86

Gutta percha knife with protective insulation

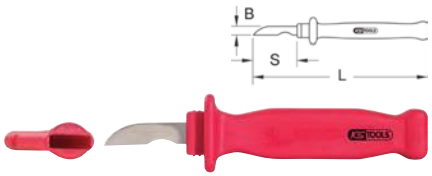
- Insulated to IEC 60900
- With durable blade
- Arched cutting edge
- Safety handle made out of tough elastic and impact resistant plastic
- With safety cover



	B mm	S mm	L mm		g
117.1393	12,0	50,0	200,0		95

Cable stripping blades with protective insulation

- Insulated to IEC 60900
- With durable blade
- Short and bent cutting edge for fine cable working
- Safety handle made out of tough elastic and impact resistant plastic
- With safety cover



	B mm	S mm	L mm		g
117.1395	13,0	45,0	195,0		95

Cable sheath cutter with protective insulation

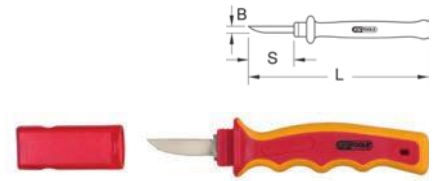
- Insulated to IEC 60900
- With durable and straight blade
- For stripping all insulation layers from cables
- Replaceable double knife
- Cutting depth adjustable
- Suitable for longitudinal and round cutting



	L mm	Ø Wire mm	Replacement blades		g
117.3901	240,0	> 25,0	117.3902	1000V	250

Gutta percha knife with protective insulation

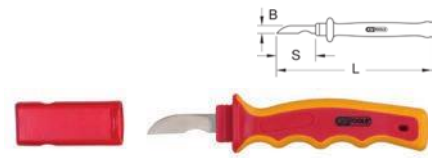
- Insulated to IEC 60900
- Two component handle
- With durable blade
- Arched cutting edge
- Safety handle made out of tough elastic and impact resistant plastic
- With safety cover



	B mm	S mm	L mm		g
117.1326	12,0	50,0	250,0	1000V	85

Cable stripping blades with protective insulation

- Insulated to IEC 60900
- Two component handle
- With durable blade
- Short and bent cutting edge for fine cable working
- Safety handle made out of tough elastic and impact resistant plastic
- With safety cover



	B mm	S mm	L mm		g
117.1329	13,0	45,0	200,0	1000V	83

Cable knife with protective insulation and replaceable blade

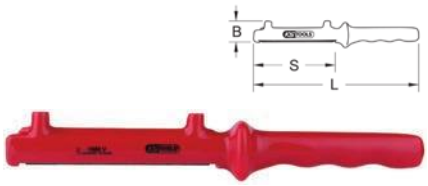
- Insulated to IEC 60900
- With durable, partially insulated and replaceable blade
- Straight blade
- Safety handle made out of tough elastic and impact resistant plastic
- With built-in protective cap



	B mm	S mm	L mm		Replacement blades	g
117.1148	21,5	45,0	189,0	1000V	117.1149	67

Cable sheath saw with protective insulation

- Insulated handle to IEC 60900
- Extremly versatile
- Adjustable and replaceable saw blade



	B mm	L mm	S mm			g
117.4273	40,0	330,0	175,0	117.4274	1000V	570

Insulation stripping pliers

- For cutting and stripping the cable sheath
- Limited cutting depth
- No damage to internal conductor



	Ø mm	D mm	L mm	g
117.1370	25-52	140,0	300,0	670
117.1366	45-75	150,0	300,0	878

Dismantling pliers with protective insulation

- Insulated to IEC 60900
- For cutting and stripping the cable sheath
- Limited cutting depth
- No damage to internal conductor

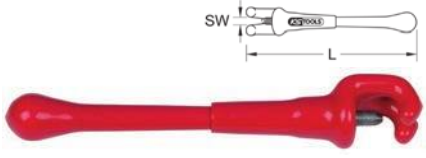


	Ø mm	D mm	L mm		g
117.1365	25-52	140,0	300,0	1000V	690

COUNTERHOLDER WITH PROTECTIVE INSULATION

Counterholder with protective insulation

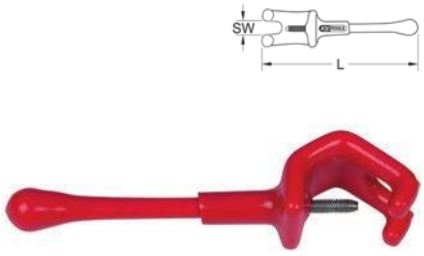
- Insulated handle to IEC 60900
- For better handling of screw connectors during assembly of sleeves
- Infinitely variable
- Can also be used for streetlights
- For screw connections of 0 - 15 mm



	mm	L mm		g
117.1168	0-15	240,0	1000V	280

Counterholder with protective insulation

- Insulated handle to IEC 60900
- For better handling of screw connectors during assembly of sleeves
- Infinitely variable
- Can also be used for streetlights
- For screw connections of 15 - 40 mm



	mm	L mm		g
117.1169	15-40	220,0	1000V	380

Counterholder with protective insulation

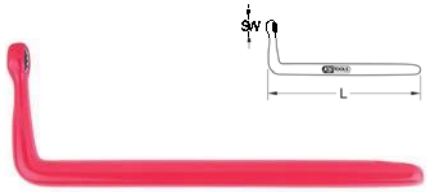
- Insulated handle to IEC 60900
- For better handling of screw connectors during assembly of sleeves
- Infinitely variable
- Can also be used for streetlights
- For screw connections of 25 - 50 mm



	mm	L mm		g
117.1183	25-50	300,0	1000V	610

Counterholder with protective insulation

- FlankTraction profile
- Insulated handle to IEC 60900
- Chrome vanadium
- For better handling of screw connectors during assembly of sleeves
- Infinitely variable
- Can also be used for streetlights



	mm	L mm		g
117.3960	10	210,0	1000V	100
117.3961	12	210,0	1000V	110
117.3962	13	220,0	1000V	110
117.3963	14	220,0	1000V	130
117.3964	15	220,0	1000V	160
117.3965	16	260,0	1000V	220
117.3966	17	260,0	1000V	240
117.3967	18	260,0	1000V	280
117.3968	19	260,0	1000V	290
117.3969	20	260,0	1000V	290
117.3970	22	280,0	1000V	310
117.3971	24	280,0	1000V	360

ALIGNING TOOLS WITH PROTECTIVE INSULATION

Aligning tool

- For sector-shaped conductors
- Made from impact resistant plastic
- For aligning 3- or 4-wire sector-shaped conductors

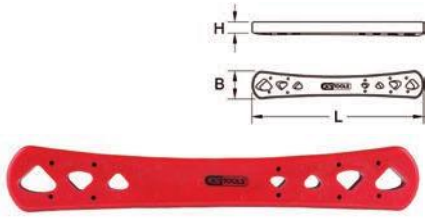


3/8"

	Conductor	L mm	B mm		g
117.3915	95-150	80,0	35,0	1000V	69
117.3916	185-240	80,0	43,0	1000V	113

Aligning tool

- For 50/70/95/150/185/240 mm² sector-shaped conductors
- Made from impact resistant plastic
- For aligning sector-shaped conductors



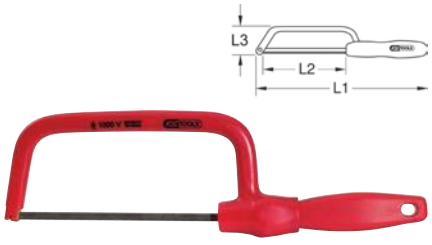
3/8"

	L mm	B mm	H mm		g
117.1723	248,0	40,0	15,0	1000V	132

SAWS WITH PROTECTIVE INSULATION

Hacksaw with protective insulation

- Insulated handle to IEC 60900
- Frame out of reinforced flat iron 10 x 5 mm
- With insulated handle for tensioning the saw blade



	L1 mm	L2 mm	L3 mm			g
117.1321	280,0	150,0	80,0	997.1216	1000V	225

Hacksaw with protective insulation

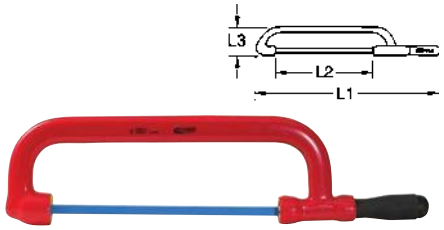
- Insulated handle to IEC 60900
- With plastic screw for tensioning the saw blade



	L1 mm	L2 mm	L3 mm			g
117.1265	265,0	145,0	100,0	997.1216	1000V	180

Hacksaw with protective insulation, heavy-duty version

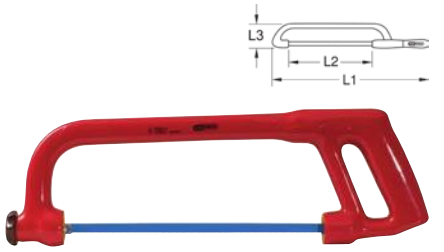
- Insulated handle to IEC 60900
- Frame out of reinforced flat iron 10 x 5 mm
- Heavy execution
- With insulated handle for tensioning the saw blade



	L1 mm	L2 mm	L3 mm			g
117.1323	520,0	330,0	130,0	129.6620-24	1000V	770

Hacksaw with protective insulation

- Insulated handle to IEC 60900
- Heavy execution
- With plastic screw for tensioning the saw blade

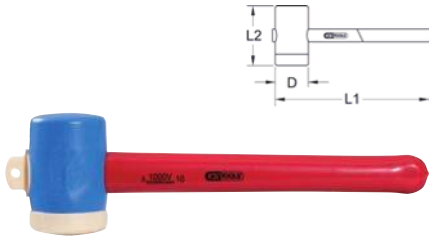


	L1 mm	L2 mm	L3 mm			g
117.1325	450,0	275,0	140,0	129.6620-24	1000V	700

HAMMER WITH PROTECTIVE INSULATION

Plastic hammer with protective insulation

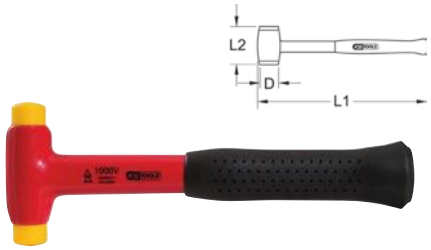
- Insulated to IEC 60900
- Made from plastic
- Without metal parts



	D mm	L1 mm	L2 mm		g
117.1131	55,0	300,0	82,0	1000V	325

Soft-face hammer with protective insulation

- Insulated to IEC 60900
- Shock absorbing effect through steel shot in the head
- Shatterproof and wear resistant
- Polyamid heads interchangeable
- For safer working with less recoil

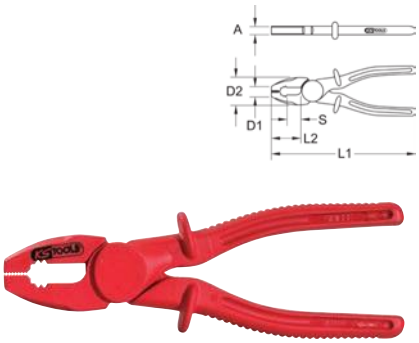


	D mm	L1 mm	L2 mm	head,spare		g
117.1126	25,0	300,0	105,0	117.1128	1000V	560
117.1127	35,0	310,0	115,0	117.1129	1000V	790

PLASTIC PLIERS / CLAMPS WITH PROTECTIVE INSULATION

Plastic combination pliers with protective insulation and cutting function

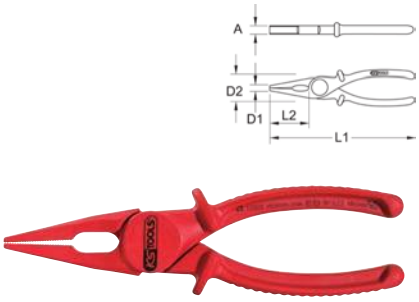
- Insulated to IEC 60900
- With machined cutting edge
- Made out of extremely durable plastic



	A mm	D1 mm	D2 mm	L1 mm	L2 mm	S mm		g
117.1639	15,0	15,0	37,0	200,0	39,0	14,0	1000V	152

Plastic flat nose pliers with protective insulation

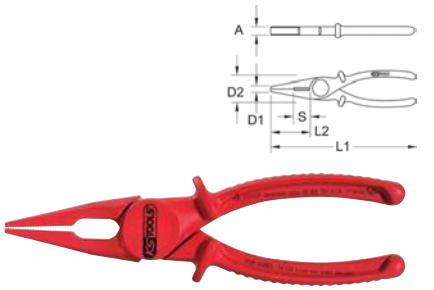
- Insulated to IEC 60900
- Made out of extremely durable plastic



	A mm	D1 mm	D2 mm	L1 mm	L2 mm		g
117.1640	9,0	6,0	32,0	200,0	55,0	1000V	106

Plastic flat nose pliers with protective insulation

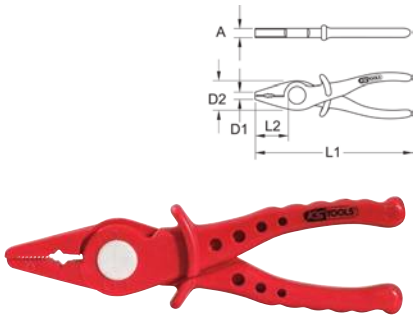
- Insulated to IEC 60900
- With machined cutting edge
- Made out of extremely durable plastic



	A mm	D1 mm	D2 mm	L1 mm	L2 mm	S mm		g
117.1641	9,0	6,0	32,0	190,0	55,0	14,0	1000V	108

Plastic flat nose pliers with protective insulation

- Insulated to IEC 60900
- Suitable for meter assembly and closure
- Made out of extremely durable plastic



	A mm	D1 mm	D2 mm	L1 mm	L2 mm		g
117.1642	11,0	10,0	38,0	180,0	37,0	1000V	85

Plastic combination pliers with protective insulation

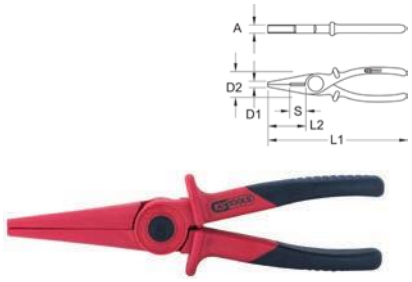
- Two component handle
- Fully insulated pliers
- Reduces the risk of short-circuit
- For assembling counters and locking
- Glass-fibre reinforced plastic
- With soft plastic area on the handle
- For firm hold



	A mm	D1 mm	D2 mm	L1 mm	L2 mm	S mm		g
117.1765	11,5	6,0	32,0	185,0	33,0	19,0		130

Plastic combination pliers with protective insulation

- Two component handle
- Fully insulated pliers
- Reduces the risk of short-circuit
- For assembling counters and locking
- Glass-fibre reinforced plastic
- With soft plastic area on the handle
- For firm hold



	A mm	D1 mm	D2 mm	L1 mm	L2 mm	S mm		
117.1766	5,0	10,0	32,0	225,0	72,0	20,0		140

Plastic combination pliers with protective insulation

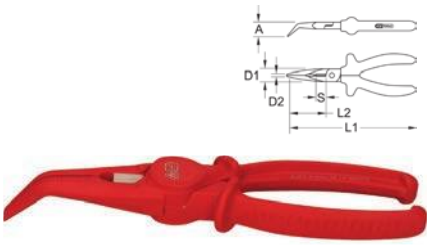
- Two component handle
- Fully insulated pliers
- Reduces the risk of short-circuit
- For assembling counters and locking
- Glass-fibre reinforced plastic
- With soft plastic area on the handle
- For firm hold



	A mm	D1 mm	D2 mm	L1 mm	L2 mm	S mm		
117.1767	5,0	10,0	32,0	230,0	110,0	20,0		140

Plastic telephone pliers with protective insulation

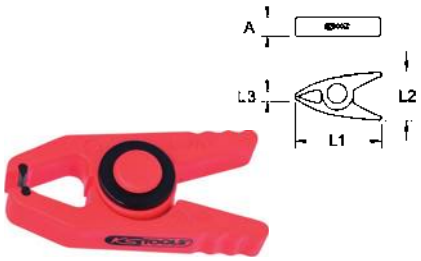
- Insulated to IEC 60900
- Fully insulated pliers
- Reduces the risk of short-circuit
- For assembling counters and locking
- Glass-fibre reinforced plastic
- For firm hold



	A mm	D1 mm	D2 mm	L1 mm	L2 mm	S mm		
117.2318	29,0	32,6	6,6	195,0	70,0	47,0	1000V	112

Plastic clamp with protective insulation, small

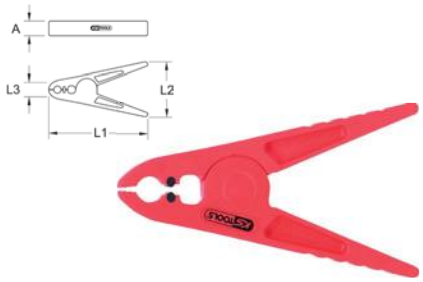
- Insulated to IEC 60900
- Extra small execution
- With inserted steel spring
- For clamping of uncovered cable
- Made from plastic



	A mm	L1 mm	L2 mm	L3 mm		
117.1643	15,0	80,0	44,0	10,0		30

Plastic clamp with protective insulation, large

- Insulated to IEC 60900
- In large execution
- With inserted steel spring
- For clamping of uncovered cable
- Made from plastic

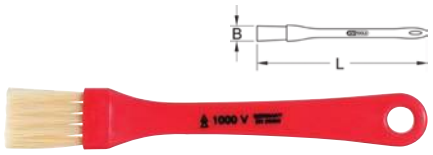


	A mm	L1 mm	L2 mm	L3 mm		
117.1644	16,0	160,0	94,0	27,0		70

BRUSH WITH PROTECTIVE INSULATION

Dust brush with protective insulation, straight

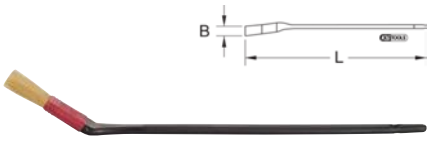
- Insulated to IEC 60900
- With hanging hole
- Short execution
- No electric run
- Made from plastic



	B mm	L mm		
117.1645	25,0	180,0	1000V	11

Dust brush with protective insulation, curved

- Insulated to IEC 60900
- With hanging hole
- Long and angled execution
- No electric run
- Made from plastic



	B mm	L mm		
117.1646	25,0	400,0	1000V	70
117.1647	35,0	400,0	1000V	75
117.1648	50,0	400,0	1000V	80

SEALS & HOODS WITH PROTECTIVE INSULATION

Grommet with protective insulation and clamping cap

- Insulated handle to IEC 60900
- For isolating of cable heads and single conductors
- With cross cut cover
- Made out of tough elastic insulating material



	D mm	L mm		
117.4234	10,0	40,0	1000V	10
117.4235	10,0	100,0	1000V	11
117.4236	15,0	100,0	1000V	16
117.4241	10,0	75,0	1000V	10
117.4237	20,0	100,0	1000V	30
117.4242	20,0	100,0	1000V	20
117.4243	30,0	115,0	1000V	40
117.4238	40,0	135,0	1000V	68
117.4239	50,0	155,0	1000V	99
117.4240	60,0	140,0	1000V	140

Grommet with protective insulation

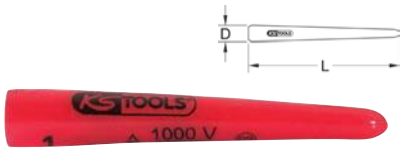
- Insulated handle to IEC 60900
- For isolating of cable heads and single conductors
- Made out of tough elastic insulating material



	D mm	L mm		
117.1784	2,0	40,0	1000V	1
117.1785	3,0	40,0	1000V	1
117.1786	4,0	40,0	1000V	1
117.1787	5,0	40,0	1000V	1
117.1788	7,0	50,0	1000V	1
117.1789	10,0	70,0	1000V	5
117.1790	15,0	110,0	1000V	17
117.1791	20,0	110,0	1000V	21
117.1792	25,0	110,0	1000V	22
117.1793	30,0	120,0	1000V	38
117.1794	35,0	140,0	1000V	49
117.1795	40,0	140,0	1000V	62

Counter nozzle with protective insulation

- Insulated handle to IEC 60900
- For isolating of cable single conductors
- Beveled
- Made out of tough elastic insulating material



		D mm	L mm		
117.4244	#1	12,0	80,0	1000V	6
117.4245	#2	12,0	80,0	1000V	6
117.4246	#3	12,0	80,0	1000V	6

Push-on grommet with protective insulation

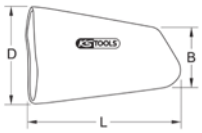
- Insulated handle to IEC 60900
- For isolating of cable single conductors
- Beveled
- Made out of tough elastic insulating material



	D mm	L mm	1000V	g
117.4247	6,0	40,0	1000V	1
117.4248	6,0	60,0	1000V	1
117.4249	8,0	40,0	1000V	1
117.4250	10,0	30,0	1000V	1
117.4251	10,0	40,0	1000V	1
117.4252	10,0	60,0	1000V	1
117.4253	12,0	90,0	1000V	6
117.4254	15,0	110,0	1000V	14
117.4255	20,0	110,0	1000V	20
117.4256	25,0	110,0	1000V	20
117.4257	30,0	110,0	1000V	37
117.4258	40,0	110,0	1000V	37

Push-on grommet with protective insulation

- Insulated handle to IEC 60900
- For isolating of cable single conductors
- Made out of tough elastic insulating material





	D mm	B mm	L mm	1000V	g
117.1768	30,0	60,0	140,0	1000V	77
117.1769	40,0	80,0	140,0	1000V	113

EX+LED PROTECTED LAMPS

LED lamp with protective insulation

- Insulated handle to IEC 60900
- For the illumination of cable ducts and switch cabinets
- White illuminant
- Includes AA-Lithium batteries

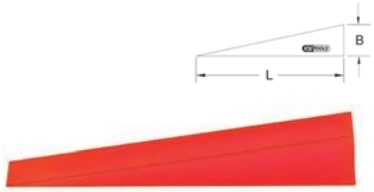


	D mm	L mm	Replacement battery	1000V	g
117.1650	28,0	90,0	AA-Lithium	1000V	80

EXPANSION WEDGES WITH PROTECTIVE INSULATION

Plastic expansion wedge

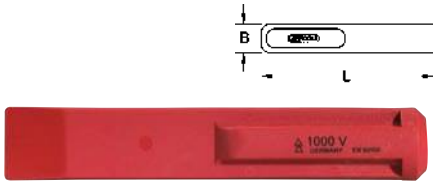
- For working enviroment of voltages AC 1000 V and DC 1500 V
- Without flute
- Made from impact resistant plastic



	L mm	B mm	1000V	g
117.4267	160,0	15,0	1000V	60

Plastic wedge

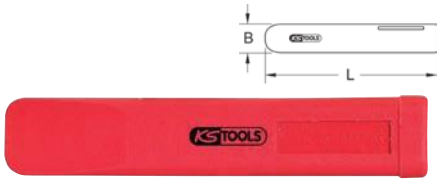
- For working enviroment of voltages AC 1000 V and DC 1500 V
- With sharp edges
- With large impact head
- Made from impact resistant plastic



	B mm	L mm	1000V	g
117.1667	28,0	170,0	1000V	90

Plastic expansion wedge

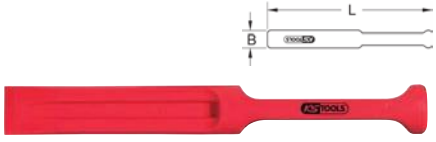
- For working enviroment of voltages AC 1000 V and DC 1500 V
- Without flute
- Oval form without sharp edges
- Short execution
- Made from impact resistant plastic



	B mm	L mm	1000V	g
117.1668	30,0	150,0	1000V	40

Plastic expansion wedge

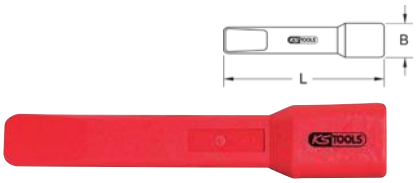
- For working enviroment of voltages AC 1000 V and DC 1500 V
- With wide groove for all current cable scissors
- Oval form without sharp edges
- Made from impact resistant plastic



	B mm	L mm	1000V	g
117.1669	20,0	170,0	1000V	100

Plastic expansion wedge

- For working enviroment of voltages AC 1000 V and DC 1500 V
- For the assembly of cable branch clamps
- No slipping in the cutting of cable strand
- Made from impact resistant plastic



	B mm	L mm	1000V	g
117.1670	38,0	197,0	1000V	55

Plastic expansion wedge

- For working enviroment of voltages AC 1000 V and DC 1500 V
- Without flute
- Oval form without edges
- Long execution with large impact head
- Made from impact resistant plastic



	B mm	L mm	1000V	g
117.1680	53,0	225,0	1000V	225

Plastic expansion wedge

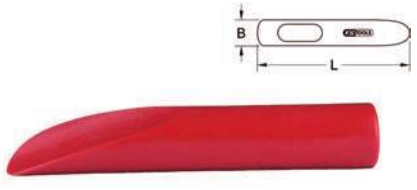
- For working enviroment of voltages AC 1000 V and DC 1500 V
- Specially for assembly of cable branch terminals
- Groove width 22 mm
- Made from impact resistant plastic
- As an aid for cutting cable wires



	A mm	L mm	B mm	1000V	g
117.4268	20,0	270,0	50,0	1000V	170

Beading chisels

- For NKBA cables
- 70 mm chamfer
- 30 mm radius
- Made from impact resistant plastic

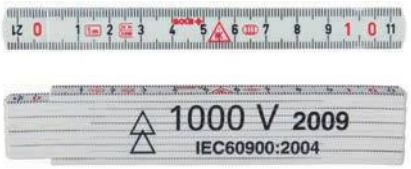


	L mm	B mm	1000V	g
117.4269	140,0	25,0	1000V	58

FOLDING RULES

Plastic folding rule, white

- Insulated in accordance with IEC 60900:2004
- Made from glass-fibre reinforced plastic
- Without metal parts



	Length m		g
300.0066	1,00	1000V	600

RELEASE TOOLS

Unlocking tool

- For the professional and non-destructive release of contacts
- **For manufacturer KOSTAL PLK**
- For plug widths of 14.5 mm



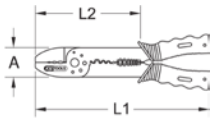
	Plug width mm	Length mm	g
154.0124	14,5	200,0	274

CRIMPING TOOLS

Multifunction pliers for insulated and non insulated cable terminals

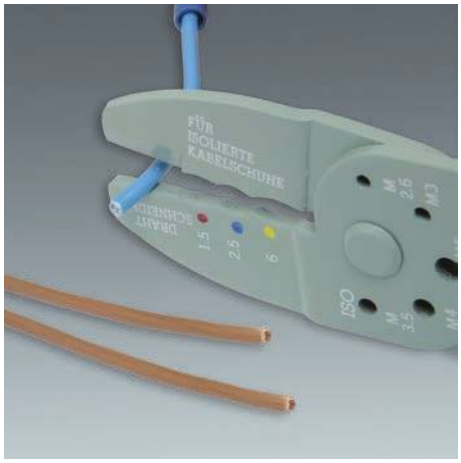
- For professional cable cutting and stripping wires from 0,75 - 6,0 mm²
- For crimping cable terminals and connectors from 1,5 - 6,0 mm²
- Cutting function
- Two component handle
- Pliers body made of flat steel







	A mm	L1 mm	L2 mm	g
115.1231	40,0	220,0	130,0	230



Multifunction crimping pliers set

- For insulated and un-insulated cable terminals
- Includes 270 pcs consumables
- For professional cable cutting and stripping wires from 0,75 - 6,0 mm²
- For crimping cable terminals and connectors from 1,5 - 6,0 mm²
- Cutting function
- Two component handle
- Pliers body made of flat steel
- In durable plastic storage case

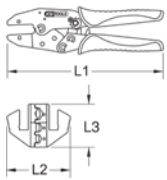


			g
115.1230	271 pcs	Multifunction crimping pliers set	560

Crimping pliers for non insulated terminals

- Extremely robust and reliable
- Safety lock
- Inserts lock and to they click to prevent possible misuse
- Optimal crimping through precision profile
- Ratchet function
- Adjustment of the crimping pressure
- Easy to change the crimp heads through quick locking device
- Two component handle
- Burnished
- Pliers body made of flat steel



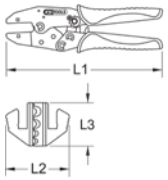




	mm²	AWG	L1 mm	L2 mm	L3 mm		g
115.1425	0,5-1,0/1,5-2,5/4,0-6,0	22-18/16-14/12-10	220,0	50,0	34,0	115.1415	491

Crimping pliers for insulated terminals

- Extremely robust and reliable
- Safety lock
- Inserts lock and to they click to prevent possible misuse
- Optimal crimping through precision profile
- Ratchet function
- Adjustment of the crimping pressure
- Easy to change the crimp heads through quick locking device
- Two component handle
- Burnished
- Pliers body made of flat steel

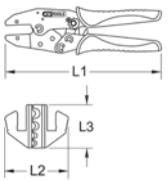




	mm²	AWG	L1 mm	L2 mm	L3 mm		g
115.1430	1,5/2,5/6,0/10,0	20-18/16-14/12-10/8	220,0	50,0	34,0	115.1416	487

Crimping pliers for pin terminals

- Extremely robust and reliable
- Safety lock
- Inserts lock and to they click to prevent possible misuse
- Optimal crimping through precision profile
- Ratchet function
- Adjustment of the crimping pressure
- Easy to change the crimp heads through quick locking device
- Two component handle
- Burnished
- Pliers body made of flat steel





	mm²	AWG	L1 mm	L2 mm	L3 mm		g
115.1440	0,5/0,75/1,0/1,5/2,5/4,0	22/20/18/16-14/12-10	220,0	50,0	34,0	115.1418	499
115.1450	6,0/10,0/16,0	10/8/6	220,0	50,0	34,0	115.1420	499



Crimping pliers for spade terminals

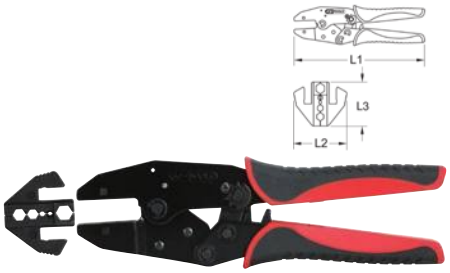
- Extremely robust and reliable
- Safety lock
- Inserts lock and to they click to prevent possible misuse
- Optimal crimping through precision profile
- Ratchet function
- Adjustment of the crimping pressure
- Easy to change the crimp heads through quick locking device
- Two component handle
- Burnished
- Pliers body made of flat steel



	mm²	AWG	L1 mm	L2 mm	L3 mm		g
115.1435	0,5-1,0/1,5-2,5/4,0-6,0	20-18/16-14/12-10	220,0	50,0	34,0	115.1417	499
115.1455	2,5/0,5/8,0/10,0	14-22/8-6	220,0	50,0	34,0	115.1421	505

Crimping pliers for coaxial terminals

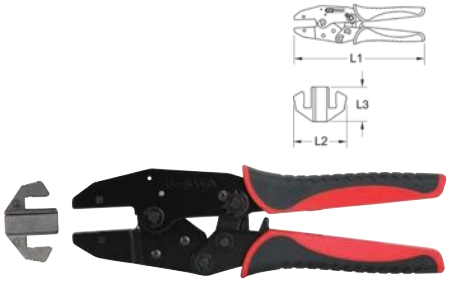
- Extremely robust and reliable
- Safety lock
- Inserts lock and to they click to prevent possible misuse
- Optimal crimping through precision profile
- Ratchet function
- Adjustment of the crimping pressure
- Easy to change the crimp heads through quick locking device
- Two component handle
- Burnished
- Pliers body made of flat steel



	mm²	AWG	L1 mm	L2 mm	L3 mm		g
115.1445	1,72/2,50/5,40/6,48/8,23	RG58/RG59/RG62	220,0	50,0	34,0	115.1419	491

Crimping pliers for Western terminals

- Extremely robust and reliable
- Safety lock
- Inserts lock and to they click to prevent possible misuse
- Optimal crimping through precision profile
- Ratchet function
- Adjustment of the crimping pressure
- Easy change of crimp inserts
- Through quick locking device
- Two component handle
- Burnished
- Pliers body made of flat steel



	mm²	AWG	L1 mm	L2 mm	L3 mm		g
115.1460	RJ22	22-24	220,0	50,0	34,0	115.1422	500
115.1465	RJ11/RJ12	22-24	220,0	50,0	34,0	115.1423	505
115.1470	RJ45	22-24	220,0	50,0	34,0	115.1424	505

Electricians crimping pliers set

- Ideal configuration for electricians
- Extremely robust and reliable
- Safety lock
- Inserts lock and to they click to prevent possible misuse
- Optimal crimping through precision profile
- Ratchet function
- Adjustment of the crimping pressure
- Easy to change the crimp heads through quick locking device
- In durable plastic storage case
- Two component handle
- Burnished
- Pliers body made of flat steel



			g
115.1480	3 pcs	Electricians crimping pliers set	910

1 x		220 mm
1 x		Ø 0,5 - 4,0 mm, H
1 x		Ø 1,5 - 10,0 mm, B

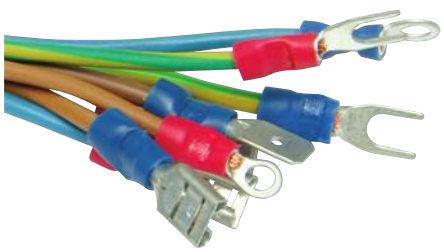
Net working crimping pliers set

- Ideal configuration for network cabling
- Extremely robust and reliable
- Safety lock
- Inserts lock and to they click to prevent possible misuse
- Optimal crimping through precision profile
- Ratchet function
- Adjustment of the crimping pressure
- Easy to change the crimp heads through quick locking device
- In durable plastic storage case
- Two component handle
- Burnished
- Pliers body made of flat steel



			kg
115.1490	5 pcs	Net working crimping pliers set	1,05

1 x		220 mm
1 x		AWG: 22 - 14 - 6 - 8, H
1 x		AWG: 22 - 24, G1
1 x		AWG: 22 - 24, G2
1 x		AWG: 22 - 24, G3



Crimping pliers for Solarlok

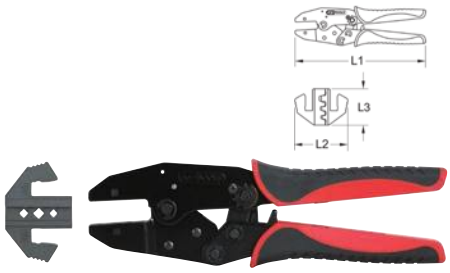
- Extremely robust and reliable
- Safety lock
- Inserts lock and to they click to prevent possible misuse
- Optimal crimping through precision profile
- Ratchet function
- Adjustment of the crimping pressure
- Easy to change the crimp heads through quick locking device
- Two component handle
- Burnished
- Pliers body made of flat steel



	mm²	AWG	L1 mm	L2 mm	L3 mm		g
115.1520	6,0 / 4,0 / 2,5 / 1,5	10 - 15	220,0	50,0	34,0	115.1412	540

Crimping plier for solar coupler MC 3

- Extremely robust and reliable
- Safety lock
- Inserts lock and to they click to prevent possible misuse
- Optimal crimping through precision profile
- Ratchet function
- Adjustment of the crimping pressure
- Easy to change the crimp heads through quick locking device
- Two component handle
- Burnished
- Pliers body made of flat steel



	mm²	AWG	L1 mm	L2 mm	L3 mm		g
115.1521	4,0 / 6,0 / 2,5	12 / 10 / 14	220,0	50,0	34,0	115.1413	545

Crimping pliers for solar coupler MC 4

- Extremely robust and reliable
- Safety lock
- Inserts lock and to they click to prevent possible misuse
- Optimal crimping through precision profile
- Ratchet function
- Adjustment of the crimping pressure
- Easy to change the crimp heads through quick locking device
- Two component handle
- Burnished
- Pliers body made of flat steel



	mm²	AWG	L1 mm	L2 mm	L3 mm		g
115.1522	2,5 / 4,0 / 6,0	14 / 12 / 10	220,0	50,0	34,0	115.1414	550

Universal crimping tool set with automatic wire stripper

- Extremely robust and reliable crimping tool
- Safety lock
- Inserts lock and to they click to prevent possible misuse
- Optimal crimping through precision profile
- Ratchet function
- Adjustment of the crimping pressure
- Easy to change the crimp heads through quick locking device
- Two component handle
- Burnished
- Pliers body made of flat steel
- Including self-closing and damage-free automatic wire stripper



			kg
115.1400	283 pcs	Universal crimping tool set with automatic wire stripper	2,37

1 x		220 mm
1 x		Ø 0,5 - 4,0 mm, H
1 x		Ø 1,5 - 10,0 mm, B
1 x		Ø 0,5 - 6,0 mm, C
1 x		Ø 0,5 - 4,0 mm, D
1 x		RG 58 - RG 71, E
1 x		1,0 - 3,2 mm
1 x		

INSULATED TOOL SETS

Socket-set with insulated tools

- Insulated handle to IEC 60900
- Chrome vanadium
- In durable plastic storage case



1/4"

			kg
117.1877	22 pcs	Socket-set with insulated tools	1,60

1 x		1/4“
4 x		1/4“: 50 - 75 - 100 - 150 mm
1 x		1/4“
1 x		1/4“
10 x		1/4“: 5 - 6 - 7 - 8 - 9 - 10 - 11 - 12 - 13 14 mm
5 x		1/4“: 3 - 4 - 5 - 6 - 8 mm

Socket-set with insulated tools

- Insulated handle to IEC 60900
- Chrome vanadium
- In durable plastic storage case



1/4"

			kg
117.1876	21 pcs	Socket-set with insulated tools	1,00

1 x		1/4“: 5 - 25 Nm
3 x		1/4“: 75 - 100 - 150 mm
2 x		1/4“
5 x		1/4“: 6 - 8 - 10 - 13 - 14 mm
3 x		1/4“: 5 - 6 - 8 mm
3 x		1/4“: 4 - 5,5 - 6,5 mm
2 x		1/4“: PH1 - PH2
2 x		1/4“: PZ1 - PZ2

Socket-set with insulated tools

- Insulated handle to IEC 60900
- Chrome vanadium
- In durable plastic storage case



1/4"

			kg
117.1878	21 pcs	Socket-set with insulated tools	1,90

1 x		1/4“: 5 - 25 Nm
4 x		1/4“: 50 - 75 - 100 - 150 mm
1 x		1/4“
10 x		1/4“: 5 - 6 - 7 - 8 - 9 - 10 - 11 - 12 - 13 14 mm
5 x		1/4“: 3 - 4 - 5 - 6 - 8 mm

Socket-set with insulated tools

- Insulated handle to IEC 60900
- Chrome vanadium
- In durable plastic storage case



3/8"

			kg
117.1882	16 pcs	Socket-set with insulated tools	3,80

1 x		3/8“
2 x		3/8“: 125 - 250 mm
1 x		3/8“
8 x		3/8“: 10 - 11 - 12 - 13 - 14 - 17 - 19 22 mm
3 x		3/8“: 5 - 6 - 8 mm
1 x		25 Nm

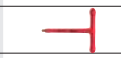
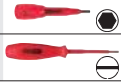
Socket-set with insulated tools

- Insulated handle to IEC 60900
- Chrome vanadium
- In durable plastic storage case



3/8"

			kg
117.1850	16 pcs	Socket-set with insulated tools	4,00

1 x		3/8“
2 x		3/8“: 125 - 250 mm
1 x		3/8“
8 x		3/8“: 10 - 11 - 12 - 13 - 14 - 17 - 19 - 22 mm
3 x		3/8“:5 - 6 - 8 mm
1 x		3,5 mm

Socket-set with insulated tools

- Insulated handle to IEC 60900
- Chrome vanadium
- In durable plastic storage case



3/8"

			kg
117.1885	16 pcs	Socket-set with insulated tools	3,40
1 x		3/8"	
2 x		3/8": 125 - 250 mm	
3 x		3/8": 13 - 17 - 19 mm	
4 x		3/8": 5 - 6 - 8 - 10 mm	
1 x		3/8": 5 mm	
1 x		2,5 mm	
2 x		5 - 6 mm	
1 x		Ø 25mm	
1 x		160 mm	

Socket-set with insulated tools

- Insulated handle to IEC 60900
- Chrome vanadium
- In durable plastic storage case



3/8"

			kg
117.1888	13 pcs	Socket-set with insulated tools	2,40
1 x		3/8"	
2 x		3/8": 125 - 250 mm	
1 x		3/8"	
5 x		3/8": 8 - 10 - 13 - 17 - 19 mm	
4 x		3/8": 4 - 5 - 6 - 8 mm	

Socket-set with insulated tools

- Insulated handle to IEC 60900
- Chrome vanadium
- In durable plastic storage case



3/8"

			kg
117.1887	11 pcs	Socket-set with insulated tools	1,80
1 x		3/8"	
1 x		3/8": 125 mm	
5 x		3/8": 8 - 10 - 13 - 17 - 19 mm	
4 x		3/8": 4 - 5 - 6 - 8 mm	

Socket-set with insulated tools

- Insulated handle to IEC 60900
- Chrome vanadium
- In durable plastic storage case



3/8"

			kg
117.1881	14 pcs	Socket-set with insulated tools	3,87
1 x		3/8": 5 - 50 Nm	
2 x		3/8": 125 - 250 mm	
5 x		3/8": 10 - 13 - 14 - 17 - 19 mm	
5 x		3/8": 4 - 5 - 6 - 8 - 10 mm	
1 x		3/8": 95 - 150 mm	

Socket-set with insulated tools

- Insulated handle to IEC 60900
- Chrome vanadium
- In durable plastic storage case



3/8"

			kg
117.1886	13 pcs	Socket-set with insulated tools	2,56
1 x		3/8"	
2 x		3/8": 125 - 250 mm	
1 x		3/8"	
5 x		3/8": 8 - 10 - 13 - 17 - 19 mm	
4 x		3/8": 4 - 5 - 6 - 8 mm	

Socket-set with insulated tools

- Insulated handle to IEC 60900
- Chrome vanadium
- In durable plastic storage case



3/8"

			kg
117.1889	11 pcs	Socket-set with insulated tools	1,75
1 x		3/8"	
1 x		3/8": 125 mm	
5 x		3/8": 8 - 10 - 13 - 17 - 19 mm	
4 x		3/8": 4 - 5 - 6 - 8 mm	

Socket-set with insulated tools

- Insulated handle to IEC 60900
- Chrome vanadium
- In durable plastic storage case



1/2"

			kg
117.1883	15 pcs	Socket-set with insulated tools	3,99
1 x		1/2“	
2 x		1/2“: 125 - 250 mm	
1 x		1/2“	
8 x		1/2“: 10 - 12 - 13 - 14 - 17 - 19 - 22 24 mm	
3 x		1/2“: 5 - 6 - 8 mm	

Socket-set with insulated tools

- Insulated handle to IEC 60900
- In durable plastic storage case



1/2"

			kg
117.1860	16 pcs	Socket-set with insulated tools	4,50
1 x		1/2“	
2 x		1/2“: 125 - 250 mm	
1 x		1/2“	
8 x		1/2“: 10 - 12 - 13 - 14 - 17 - 19 - 22 - 24 mm	
3 x		1/2“: 5 - 6 - 8 mm	
1 x		3,5 mm	

Tool set with insulated tools

- Insulated handle to IEC 60900
- Plastic case with foam protection material
- Special tool steel



			kg
117.1870	20 pcs	Tool set with insulated tools	4,50
1 x		205 mm	
1 x		160 mm	
1 x		200 mm	
1 x		180 mm	
1 x		160 mm	
1 x		160 mm	
1 x		6 - 400 V	
3 x		8 - 10 - 13 mm	
6 x		2,5 - 3,5 - 5,5 - 6,5 - 8,0 - 10,0 mm	
2 x		PH1 - PH2	
1 x		210 mm	
1 x		182 mm	

Tool set with insulated tools

- Insulated handle to IEC 60900
- Foam material inserts in durable plastic case
- Special tool steel



1/2"

			kg
117.1840	26 pcs	Tool set with insulated tools	5,00
1 x		205 mm	
1 x		160 mm	
1 x		200 mm	
1 x		1/2“	
1 x		250 mm	
1 x		210 mm	
1 x		182 mm	
7 x		10 - 11 - 12 - 13 - 14 - 17 - 19 mm	
7 x		10 - 11 - 12 - 13 - 14 - 17 - 19 mm	
1 x		6 - 400 V	
4 x		3,5 - 5,5 - 6,5 - 8,0 mm	



Tool set with insulated tools

- Insulated handle to IEC 60900
- Made out of red leather
- With carrying strap
- Special tool steel



			kg
117.1872	14 pcs	Tool set with insulated tools	4,50
1 x		185 mm	
1 x		160 mm	
1 x		200 mm	
1 x		210 mm	
3 x		2,5 - 4,0 - 5,5 mm	
4 x		7 - 8 - 9 - 10 mm	
1 x		Gr. 10	
1 x		200 mm	
1 x		12 - 750 V	

Tool set with insulated tools for hybrid and electric vehicles

- Insulated to IEC 60900
- In a classy aluminium case
- Special tool steel



3/8"

			kg
117.1890	43 pcs	Tool set with insulated tools for hybrid and electric vehicles	13,93

4 x		2,5 - 3 - 3,5 - 4 mm
3 x		PH1 - PH2 - PH3
3 x		T20 - T25 - T30
1 x		210 mm
1 x		185 mm
1 x		165 mm
1 x		215 mm
1 x		165 mm
1 x		240 mm
2 x		10 - 25 mm
1 x		180 mm
1 x		3/8“
15 x		3/8“: 6 - 7 - 8 - 9 - 10 - 11 - 12 - 13 - 14 - 16 - 17 - 18 - 19 - 20 - 22 mm
2 x		3/8“: 150 - 250 mm
3 x		3/8“: M8 - M10 - M12
1 x		
1 x		
1 x		500 m





Hard shell toolcase, empty

- Strong hard protective case made from impact resistant plastic with hardened aluminium frame
- Document compartment in upper lid
- 2 removable tool boards for indvidual tool mounting
- Lower case shell is on divisible through internal dividers
- Lockable through two locking fastening catches
- Carrying handle with telescopic removable frame
- Capacity up to 30 kg



		kg
117.1810-99	Hard shell toolcase, empty	5,00

Toolcase, empty

- Made out of red leather
- With carrying strap
- Front and middle wall can be folded down
- Robust design to hold approx. 50 tools and protective parts of your choice
- Chromed fittings



		kg
117.1820-99	Toolcase, empty	4,30

Toolcase, empty

- Made out of red leather
- With carrying strap
- Front wall removable
- Durable sheet metal base
- Tool holders for 40 VDE tools and choice of protection
- Specially for meter assembly



			kg
117.1830-99	Toolcase, empty	3,40	

LIFT TECHNOLOGY

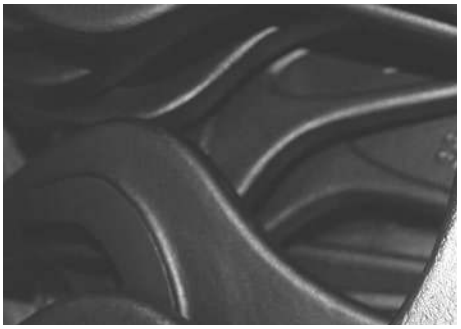
Mobile hydraulic deposit table, 450 kg

- solid frames and scissors made of welded sectional steel
- ideal for parking and transporting heavy vehicle parts
- ergonomic and back-friendly work by lifting the platform with a hydraulic foot pump
- stepless drain valve with sensitive manual lowering
- two swivel castors with brakes for safe standing on site
- two fixed rollers



Technical data:
Platform: L 850 x W 500 mm

	Max load kg	min lift height mm	max lift height mm	Length mm	Total depth mm	kg
460.5525	450,0	280,0	860,0	880,0	945	76,00



YOUR POWERFUL PARTNER FOR HYBRID AND ELECTRIC VEHICLE EXPERTS!

SAFE TOOLS FOR EVERY JOB!



The specialist tools are specially designed for the mechanics of electric and hybrid vehicles. They are manufactured and individually tested in accordance with the BGV A3 regulations (VBG-4) by KS Tools. Some systems in these vehicles have up to 500 volts running through them. This is enough volts to cause serious bodily harm when working with normal tools and can also lead to death.

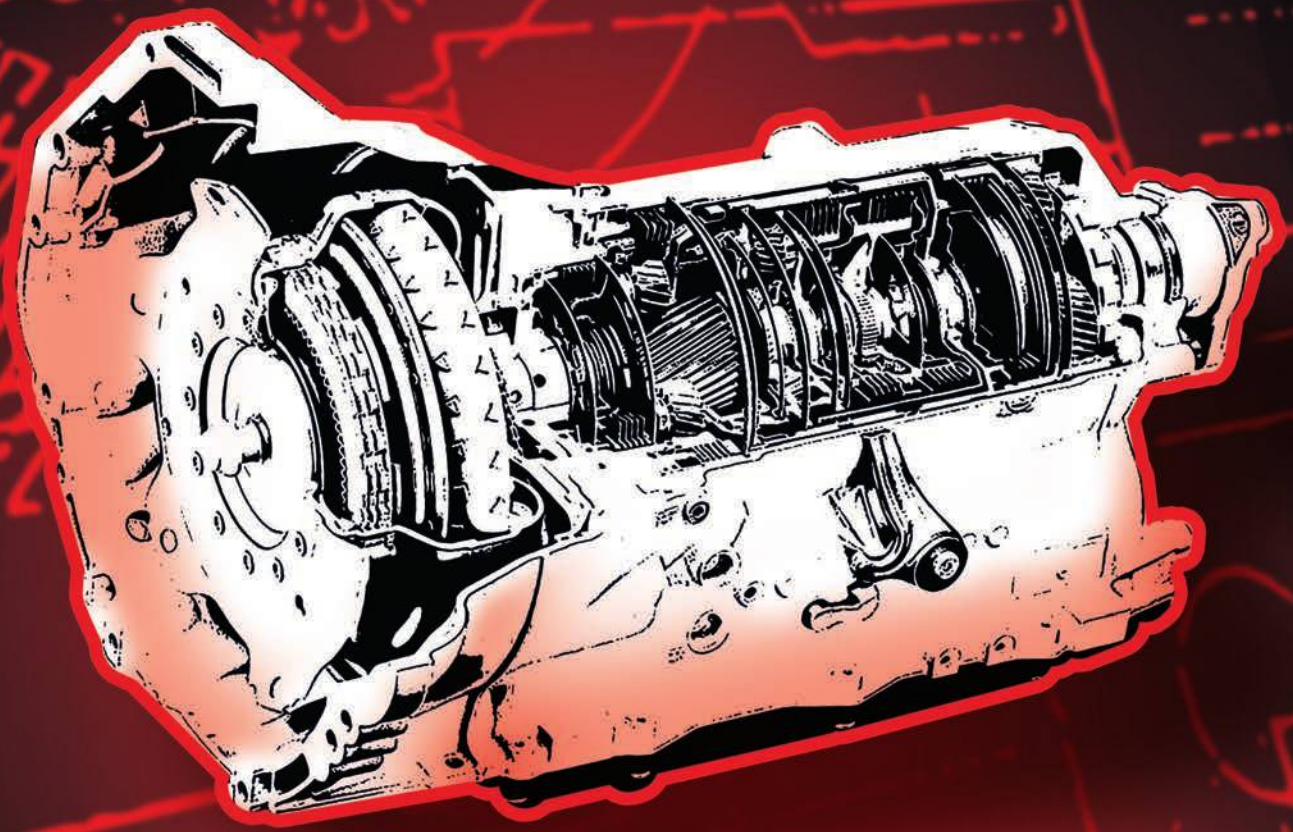
The KS Tools specialist tools for hybrid and electric vehicles are manufactured to the most recent and international regulations from high-quality materials and offer maximum protection for every user!



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Innovation is our mission!



KS TOOLS®

Innovation is our mission!



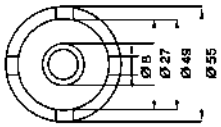
	FROM PAGE
PIN WRENCH	496
BOX SPANNERS	496
RELEASE TOOLS	497
PLIERS	498
SECURING BOLTS	498
PRY BAR	499
SUPPORT DEVICES	500
HOOK WRENCH	501
PULLERS	502
PRISMS	505
OIL SERVICE TOOLS	505
HAND PUMPS	509
FILLING	509
DRIP PANS	511
OLD OIL FALL ARRESTERS	512

PIN WRENCH

Pin wrench for rear axle shaft flange

- Ideal for actuating the rear axle shaft flange on Mercedes
- For a professional repair
- Special profile
- Internal square drive to DIN 3120 - ISO 1174
- Special tool steel

Application range: Mercedes W116, W123, W126



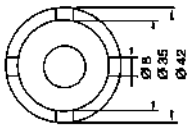


3/4"

	D mm	L mm	g	
450.0108	55,0	80,0	420	

Pin wrench for transmission flange

- Ideal for actuating the transmission flange on Mercedes
- For a professional repair
- Special profile
- Internal square drive to DIN 3120 - ISO 1174
- Special tool steel



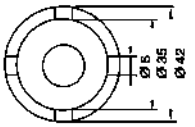


3/4"

	D mm	L mm	g	
450.0109	42,0	70,0	440	

Pin wrench for differential flange

- Ideal for actuating the differential flange on Mercedes
- For a professional repair
- Special profile
- Internal square drive to DIN 3120 - ISO 1174
- Special tool steel





3/4"

	D mm	L mm	g	
450.0111	42,0	70,0	370	

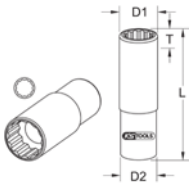
BOX SPANNERS

12 Point socket, deep

- Ideal for releasing and screwing in securing nuts, e.g. front and rear axle drive shafts, on the wheel bearings as well as wheel bearings or transmission or differential flanges
- 12 point
- FlankTraction profile
- Internal square to DIN 3120 / ISO 1174 with ball reception
- Long execution
- For manual operation
- Matt finish
- Chrome vanadium

Application range: Volkswagen Golf VI, VII, Scirocco, Tiguan, Touran, Passat (3C), Passat CC; **Audi** A3, TT; **Seat** Leon, Altea; **Škoda** Oktavia (1Z), Superb (3T) etc.







1/2"

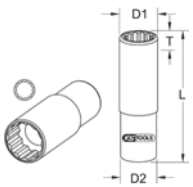
	○ mm	D1 mm	D2 mm	L mm	T mm	g	
917.1272	24,0	33,0	29,0	82,0	26,0	250	

12 Point socket, deep

- Ideal for releasing and screwing in securing nuts, e.g. front and rear axle drive shafts, on the wheel bearings as well as wheel bearings or transmission or differential flanges
- ideally suited for mounting and dismounting the nozzle holder
- 12 point
- FlankTraction profile
- Internal square to DIN 3120 / ISO 1174 with ball reception
- Long execution
- For manual operation
- Matt finish
- Chrome vanadium

Application range: BMW 1 series (F20)/3 series (E36, E46, E90), **Citroën** Saxo/C2, **Dacia** Sandero, **Ford** Galaxy, **Fiat** Seicento, **Mercedes** A class (W168)/C class (W203)/E-class (W211)/SL (W129)/W123/W124/W126 /W201, **Opel** Astra F/Astra G, **Renault** Scenic/Clio/Kangoo, **Toyota** Avensis/Picnic, **Volkswagen** Golf III/Golf IV/Lupo/Touareg/T5 etc.







1/2"

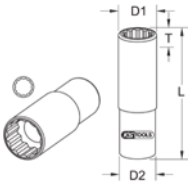
	○ mm	D1 mm	D2 mm	L mm	T mm	g	
917.1274	30,0	41,0	33,0	82,0	33,0	333	

12 Point socket, deep

- Ideal for releasing and screwing in securing nuts, e.g. front and rear axle drive shafts, on the wheel bearings as well as wheel bearings or transmission or differential flanges
- 12 point
- FlankTraction profile
- Internal square to DIN 3120 / ISO 1174 with ball reception
- Long execution
- For manual operation
- Matt finish
- Chrome vanadium

Application range: Fiat Punto/Seicento, **Ford** Fiesta/Fusion/Mondeo, **Mercedes** C class (W204)/S class (W140), **Nissan** Almera, **Opel** Astra H/Vivaro, **Subaru** Outback etc.







1/2"

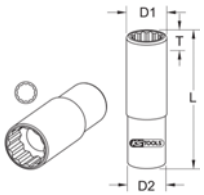
	○ mm	D1 mm	D2 mm	L mm	T mm	g	
917.1275	32,0	43,0	35,0	82,0	36,0	371	

12 Point socket, deep

- Ideal for releasing and screwing in securing nuts, e.g. front and rear axle drive shafts, on the wheel bearings as well as wheel bearings or transmission or differential flanges
- 12 point
- Internal square to DIN 3120 / ISO 1174 with ball reception
- Long execution
- For manual operation
- Matt finish
- Chrome vanadium

Application range: Mercedes S class (W140), **Škoda** Fabia, **Volkswagen** Polo







1/2"

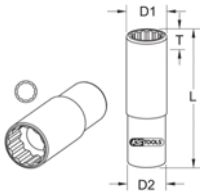
	○ mm	D1 mm	D2 mm	L mm	T mm	g	
911.4354	36,0	48,0	38,0	82,0	38,0	430	

Special torsion bar socket

- Ideal for releasing and securing the nut of the torsion bar, e.g. when removing the transmission, changing the wheel bearings or when disassembling the brake force compensator
- Time-saving assembly and disassembly
- For exact calibration
- Internal square to DIN 3120 / ISO 1174 with ball reception
- Bored deep
- Specially determined lengths
- Matt finish
- Chrome vanadium

Application range: Volkswagen T4







1/2"

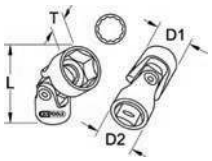
	mm	L mm	D1 mm	D2 mm	T mm	g	
911.4356	27,0	140,0	36,0	30,0	30,0	520	

12-sided socket with joint for gearbox

- Perfect for releasing gear screw connections that are hard to reach
- 12 point
- With flexible head
- Internal square to DIN 3120 / ISO 1174 with ball reception
- For manual operation
- Mirror polished
- Chrome vanadium

Application range: Audi A4, A5, A6, A7, A8, Q5, Q7 (from 2008)







3/8"

	mm	D1 mm	D2 mm	T mm	L mm	g	
150.1716	16	22,0	19,0	10,5	49,0	60	
150.1718	18	24,5	19,0	11,5	51,0	65	

Drive shaft bit socket with joint for spline (XZN®) screws

- Ideally suited to assembly and disassembly of screws on drive shaft flange (transmission side) from the wheel casing
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Extra long execution
- With sand blasted bit insert
- Matt finish
- Chrome vanadium



3/8"

		Length mm	g	
150.1717	M10	143,0	123	

Transmission housing drive socket

- Suitable for hard to reach transmission housing screws
- Allows for secure mounting and makes it reachable
- Secure fix
- Weight-loading universal joint
- Compact shape
- Mirror polished
- Chrome vanadium



1/2"

		Length mm	g	
150.9201	E18	70,0	144	

Drive shaft bit socket for spline (XZN®) screws

- Ideally suited to assembly and disassembly of screws on drive shaft flange (transmission side) from the wheel casing
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Extra long execution
- With sand blasted bit insert
- Matt finish
- Chrome vanadium



1/2"

		Length mm	g	
150.1720	M8	800,0	580	
150.1725	M10	800,0	580	
150.1730	M12	800,0	580	
150.1735	M14	800,0	580	

Drive shaft-bit socket-set for spline (XZN®)-Screws

- Ideally suited to assembly and disassembly of screws on drive shaft flange (transmission side) from the wheel casing
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Extra long execution
- With sand blasted bit insert
- Matt finish
- Chrome vanadium



1/2"

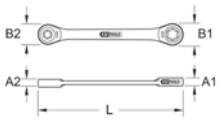
			kg	
150.1740	4 pcs	M8 - M10 - M12 - M14	2,50	



GEARplus® Double ring ratchet spanner for Torx E profile

- Ideally suited for the assembly and disassembly in tight-fitting areas and changing the transmission
- Torx E
- Straight form
- Exact gearing with 72 teeth
- Mirror polished
- Chrome vanadium







		A1 mm	A2 mm	B1 mm	B2 mm	L mm	g	
503.4351	E6 x E8	6,5	6,9	16,8	20,2	128,0	70	
503.4353	E10 x E12	7,3	7,7	20,2	21,8	150,0	60	
503.4355	E14 x E18	9,0	9,9	26,5	29,5	190,0	150	
503.4357	E20 x E24	10,3	11,2	31,5	33,5	230,0	230	

GEARplus® Double ring ratcheting spanner set for Torx E profile

- Ideally suited for the assembly and disassembly in tight-fitting areas and changing the transmission
- Torx E
- Straight form
- Exact gearing with 72 teeth
- Mirror polished
- Chrome vanadium



			g	
503.4364	4 pcs	E6xE8 - E10xE12 - E14xE18 - E20xE24	475	

RELEASE TOOLS

Transmission oil cooler unlocking tool for BMW

- for professional unlocking of the gear oil cooler coupling
- no damage to the plug-in couplings and cables
- Quick and easy separation of the pipes
- Special tool steel

Application range: BMW 3 Series (2006 - 2011) and X5



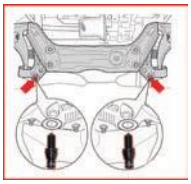
		g	
150.3232	Transmission oil cooler unlocking tool for BMW	24	

SECURING BOLTS

VAG subframe locating pin set

- Ideally suited for adjustment of the subframe (chassis) when assembling
- It is necessary to renew the rubber bushes as well as for all work when the subframe is disassembled
- Allows for great time saving, since a the axle does not need to be measured
- Simple assembly
- Special tool steel
- In durable plastic storage case

Application range: Volkswagen Scirocco (>2009), Eos (>2006), Golf (>2009), Golf Plus (>2005), Jetta (2004 – 2006), Polo (>2002), Fox (>2006), Passat (>2006)





			g
150.2675	4 pcs	VAG subframe locating pin set	300

consists of:

	X		g
150.2676	4	VAG securing bolt for subframe, M12 X 1.5	42

VAG M14 subframe locating pin set

- Ideally suited for adjustment of the subframe (chassis) when assembling
- It is necessary to renew the rubber bushes as well as for all work when the subframe is disassembled
- Allows for great time saving, since a the axle does not need to be measured
- Simple assembly
- Special tool steel
- In durable plastic storage case

Application range: Audi A3 (>2004), TT (>2007), A4 (>2001) **Volkswagen** Passat (>2009), Crafter, T5, Touareg 2.5 l TDI (>2004)





			g
150.2680	4 pcs	VAG M14 subframe locating pin set	300

consists of:

	X		g
150.2681	4	VAG securing bolt for subframe, M14 X 1.5	42

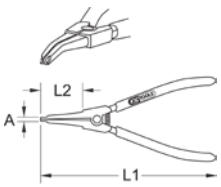
PLIERS

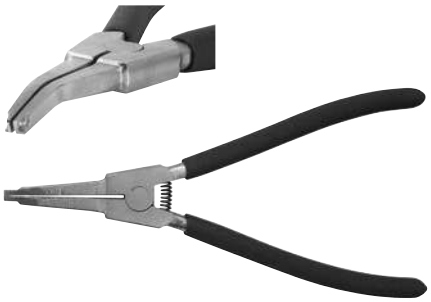
Drive shaft securing ring teeth with 30° angled tips

- 30° angled
- With PVC dipped handle
- Self-closing
- Plier head with cut out and ring stop body
- For the disassembly and assembly of nut caps without lug retainer
- Chrome vanadium

Application range: For the dismantling of the external (bellow joints in the exchange of the axle boots and / or the drive shaft sleeves). e.g.: for **Audi**, **Opel**, **Volkswagen** (Golf, T4), **Fiat**, **Mitsubishi**.







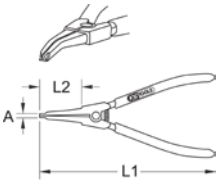
	A mm	L1 mm	L2 mm	g	
115.0991	0-33	210,0	50,0	215	

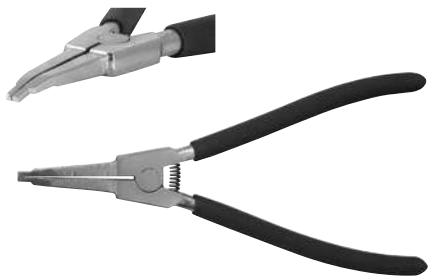
Drive shaft securing ring teeth with slightly angled tips

- Slightly angled
- With PVC dipped handle
- Self-closing
- Checkered plier head
- For the disassembly and assembly of nut caps without lug retainer
- Slip proof
- Chrome vanadium

Application range: For the removal of external circlips e.g. on synchronisation joints







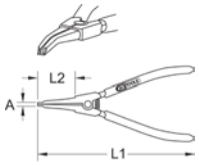
	A mm	L1 mm	L2 mm	g	
115.0992	0-37	210,0	50,0	256	

Drive shaft securing ring teeth with straight tips

- Straight form
- With PVC dipped handle
- Self-closing
- Checkered plier head
- For the disassembly and assembly of nut caps without lug retainer
- Slip proof
- Chrome vanadium

Application range: For the removal of external circlips e.g. on drive shafts, transmissions, etc







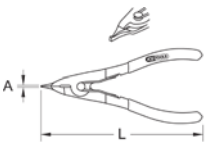
	A mm	L1 mm	L2 mm	g	
115.0993	0-37	210,0	48,0	220	

Lockring pliers, serrated

- With PVC dipped handle
- Serrated and angular tip
- With self closing mechanism
- For the dismantling and assembly lockring
- For external security rings
- No sliping due to the serrated tips
- Chrome molybdenum

Ideally suited for the dismantling and assembly of lockring on drive shafts on for example **Volkswagen**, **Mercedes** and **Opel**.







	A mm	L mm	g	
115.1048	0-20	210,0	220	

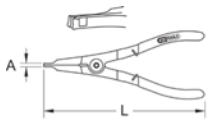


Lockring pliers, fully formed tips

- With PVC dipped handle
- Fully formed tips
- With self closing mechanism
- For the dismantling and assembly lockring
- For external security rings
- No sliping due to the serrated tips
- Chrome molybdenum

Ideally suited for the dismantling and assembly of lockring on drive shafts on for example **Volkswagen**, **Mercedes**, **Opel**, **BMW** and **Ford**.







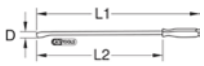
	A mm	L mm	g	
115.1049	0-20	240,0	600	

PRY BAR

Pry bar

- Best suited for and breakdown and installation work
- For pressure testing securely-fitted parts
- Ergonomic single component handle
- Hardened through the whole length
- Chrome molybdenum







	D mm	L1 mm	L2 mm	g	
911.8101	11,0	200,0	115,0	130	
911.8102	15,0	300,0	185,0	220	
911.8103	18,0	450,0	320,0	420	
911.8104	18,0	600,0	470,0	560	

Pry bar sets

- Best suited for and breakdown and installation work
- For pressure testing securely-fitted parts
- Ergonomic single component handle
- Hardened through the whole length
- Chrome molybdenum





			kg	
911.8100	4 pcs	11 x 115 mm - 15 x 185 mm - 18 x 320 mm - 18 x 470 mm	1,33	

Flexible roll head pry bar

- Extremely versitile and robust execution
- Varible adjustable roll head
- Maximum power transmission in the narrowest area
- Optimal leverage in minimal work area
- Special tool steel





	Length mm	Assembly levels	kg	
911.8176	250,0	5	0,39	
911.8177	300,0	5	0,46	
911.8178	400,0	5	0,57	

Flexible roll head pry bar set

- Extremely versitile and robust execution
- Varible adjustable roll head
- Maximum power transmission in the narrowest area
- Optimal leverage in minimal work area
- Special tool steel





			kg	
911.8175	3 pcs	Flexible roll head pry bar set	1,50	

consists of:

		g	
911.8176	Flexible roll head pry bar, 250 mm	385	
911.8177	Flexible roll head pry bar, 300 mm	455	
911.8178	Flexible roll head pry bar, 400 mm	565	



Pry bar

- Angular lever end guarantees non slip surface
- Ideally suited for and breakdown and installation work
- Go through blade and hammer cap
- Suitable for the testing of defective bearings
- Two component handle
- Special tool steel
- In durable plastic storage case





	Bend radius	Length mm	kg	
911.8411	0°	900,0	1,70	
911.8412	45°	900,0	1,75	
911.8413	75°	600,0	1,17	
911.8414	90°	600,0	1,20	

Pry bar

- Angular lever end guarantees non slip surface
- Ideally suited for and breakdown and installation work
- Go through blade and hammer cap
- Suitable for the testing of defective bearings
- Two component handle
- Special tool steel
- In durable plastic storage case





	Bend radius	Length mm	kg	
911.8415	45°	1150,0	4,75	

Pry bar sets

- Angular lever end guarantees non slip surface
- Ideally suited for and breakdown and installation work
- Go through blade and hammer cap
- Suitable for the testing of defective bearings
- Two component handle
- Special tool steel
- In durable plastic storage case





			kg	
911.8410	4 pcs	Pry bar sets	8,70	

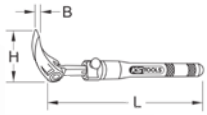
consists of:

		kg	
911.8411	Pry bar, 0°, 900mm	1,70	
911.8412	Pry bar, 45°, 900mm	1,75	
911.8413	Pry bar, 75°, 600mm	1,17	
911.8414	Pry bar, 90°, 600mm	1,20	

Telescopic flexible roll head pry bar

- Lever extension with push-button in steps
- Roller head adjustable in steps
- Extra narrow, with recessed push button
- Maximum power transmission in the narrowest area
- Optimal leverage in minimal work area
- Special tool steel







	L mm	H mm	B mm	g
911.8186	325-460	90,0	12,0	780
911.8187	600-915	120,0	20,0	1900
911.8188	865-1350	145,0	24,0	4260

Telescopic flexible roll head pry bar set

- Lever extension with push-button in steps
- Roller head adjustable in steps
- Extra narrow, with recessed push button
- Maximum power transmission in the narrowest area
- Optimal leverage in minimal work area
- Special tool steel



			kg
911.8185	3 pcs	325-460 - 600-915 - 865-1350 mm	6,94

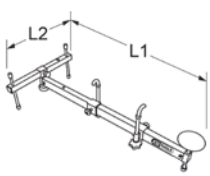
SUPPORT DEVICES

Universal engine supporting beam

- Highest flexibility thanks to adjustable and flexibly positionable construction
- Universal usage
- Simple handling and quick repair
- Hooks rotatable and adjustable in longitudinal direction
- Supporting plates height adjustable with non slip feet
- Secure supporting of engine or transmission
- Assembly and access unhindered below possible, through it to the engine compartment
- Special tool steel

Application range: Timing belt changing, clutch changing etc.







	L1 mm	L2 mm	H mm	kg
160.0090	1020,0	510,0	300,0	1,07

Universal engine supporting beam set

- Highest flexibility thanks to adjustable and flexibly positionable construction
- Easy lifting by scissors lift
- Universal usage
- Simple handling and quick repair
- Hooks rotatable and adjustable in longitudinal direction
- Supporting plates height adjustable with non slip feet
- Secure supporting of engine or transmission
- Assembly and access unhindered below possible, through it to the engine compartment
- Also suitable for light commercial vehicles
- Special tool steel

Application range: Timing belt changing, clutch changing etc.





			kg
160.0095	4 pcs	Universal engine supporting beam set	10,26

consists of:

		kg
160.0096	Universal engine supporting beam, L= 1007 mm	8,76
160.0097	Extension pin set for light commercial vehicles, 2 pcs	0,78
160.0098	Engine supporting beam belt	0,72

Underhoist stand with pedal

- Ideal for all work when extra support is needed
- Stable trapeze threaded spindle
- Secure stand thanks to the large foot
- Infinitely variable
- Smooth-operating with axial bearings
- Foot pedal for precise adjustments (20 mm)
- The ideal work shop assistant in many situations





	Load capacity kg	Min total height mm	Max total height mm	kg
160.0342	750	1360,0	2030,0	15,00

Hydraulic transmission jack

- Ideal for installing and removing motors, transmissions, couplings etc.
- Uncomplicated lifting with hydraulic foot pump
- Continuous adjustment allows for precise positioning
- Slow release of the load possible with hand wheel
- Includes overload valve
- With integrated safety stop handle
- High stability due to wide wheel spacing
- Good manoeuvrability through four oil and acid resistant nylon direct castors
- Extra-large covering for lifting
- Wide wheel spacing ensures more stability and manoeuvrability when loaded
- Robust shape





	Max load kg	min lift height mm	max lift height mm	Width mm	kg
160.0327	300	1200,0	2040,0	610,0	32,00
160.0324	500	1200,0	2040,0	610,0	34,00
160.0329	1000	1200,0	2040,0	610,0	48,00

Hydraulic transmission jack

- Ideal for safe installation
- Heavy execution
- Uncomplicated lifting with hydraulic foot pump
- Continuous adjustment allows for precise positioning
- Especially wide working area
- Slow release of the load possible with the foot pump
- Includes overload valve
- With integrated safety stop handle
- Ground plate can be inclined and adjusted into position/horizontal + 40 mm/inclination -10°/+20°
- Includes 420 mm wide support rail with support chains for secure tensioning
- Chains can be adjusted from 130-430 mm
- Transmission holder attached to the piston rod
- Includes transmission holder
- Good manoeuvrability through four oil and acid resistant nylon direct castors
- Extra-large covering for lifting
- Wide wheel spacing ensures more stability and manoeuvrability when loaded
- Robust shape



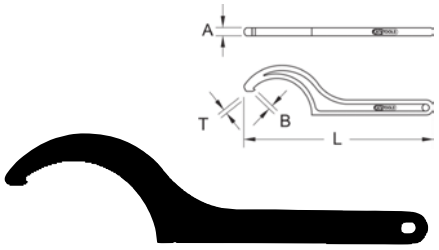


	Max load kg	min lift height mm	max lift height mm	Length mm	Width mm	kg
160.0334	500	880,0	1870,0	700,0	800,0	67,00

HOOK WRENCH

Fixed hook wrench with nose

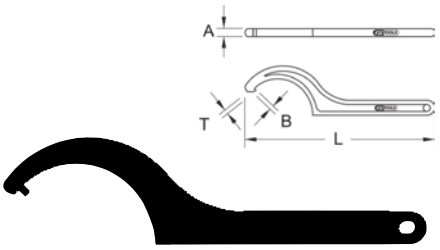
- In accordance to DIN 1810 Form A
- With hanging hole
- For slotted nuts
- Burnished
- Chrome vanadium



	mm	A mm	B mm	L mm	T mm	g	
517.1370	12 - 14	2,5	2,0	109,5	1,5	22	
517.1371	16 - 20	2,5	2,0	109,5	1,5	22	
517.1372	25 - 28	4,0	2,5	135,9	2,0	36	
517.1373	30 - 32	4,0	2,5	135,9	2,0	36	
517.1374	34 - 36	5,0	3,0	170,2	2,0	82	
517.1375	40 - 42	5,0	3,0	170,3	2,0	76	
517.1376	45 - 50	6,0	3,5	195,0	2,0	132	
517.1377	52 - 55	7,0	3,5	220,0	2,5	176	
517.1378	58 - 62	7,0	4,0	240,0	2,5	224	
517.1379	68 - 75	7,6	4,0	260,0	3,0	280	
517.1380	80 - 90	8,0	5,0	280,0	3,5	368	
517.1381	92 - 100	8,0	5,0	280,0	3,5	394	
517.1382	110 - 115	9,5	5,0	334,9	4,0	590	
517.1383	120 - 130	9,5	5,0	334,9	4,0	540	

Fixed hook wrench with pin

- In accordance to DIN 1810 Form B
- With hanging hole
- For pin type round nuts
- Burnished
- Chrome vanadium

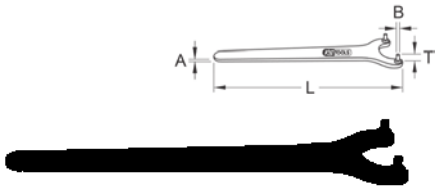


	mm	A mm	B mm	L mm	T mm	g	
517.1471	12 - 14	3,0	2,0	110,0	2,0	25	
517.1472	16 - 18	3,0	2,5	110,0	2,5	25	
517.1473	20 - 22	3,0	2,5	110,0	2,5	25	
517.1474	25 - 28	4,0	3,0	136,0	3,0	55	
517.1488	30 - 32	5,0	4,0	136,0	3,0	55	
517.1476	34 - 36	5,0	4,0	170,0	3,5	100	
517.1477	40 - 42	5,0	4,0	170,0	3,5	100	
517.1478	45 - 50	6,0	5,0	206,0	4,0	165	
517.1479	52 - 55	6,0	5,0	206,0	4,0	165	
517.1480	58 - 62	7,0	5,0	240,0	5,0	270	
517.1481	68 - 75	7,0	6,0	240,0	5,0	270	
517.1482	80 - 90	8,0	6,0	280,0	6,0	410	
517.1483	95 - 100	8,0	8,0	280,0	6,0	410	
517.1484	110 - 115	8,0	8,0	335,0	8,0	610	
517.1485	120 - 130	8,0	8,0	335,0	8,0	610	
517.1486	135 - 145	8,0	8,0	380,0	8,0	790	
517.1487	155 - 165	8,0	8,0	380,0	8,0	790	



Pin-type face wrench

- DIN 3,116 A
- Phosphate finish
- Special tool steel



	mm	A mm	B mm	L mm	T mm	g	
517.2013	13	3,0	2,5	90,0	3,0	27	
517.2015	15	3,0	3,0	90,0	4,0	27	
517.2020	20	4,0	3,0	122,0	5,0	50	
517.2025	25	4,0	3,0	137,0	4,0	65	
517.2030	30	4,0	4,0	164,0	5,0	85	
517.2035	35	5,0	5,0	180,0	6,0	120	
517.2040	40	5,0	4,0	167,0	5,0	120	
517.2045	45	5,0	4,0	187,0	5,0	145	
517.2050	50	5,0	5,0	198,0	6,0	175	
517.2060	60	6,0	5,0	213,0	6,0	220	
517.2075	75	6,0	6,0	243,0	7,0	330	
517.2090	90	6,0	7,0	270,0	7,5	410	

Pin-type face wrench set, seamlessly adjustable with interchangeable pins

- Universal application for common two-hole nuts
- With interchangeable pins
- Each double pin wrench is replacing 4 single key sizes
- Adjustable in diameter
- Phosphate finish
- Special tool steel
- In durable plastic storage case





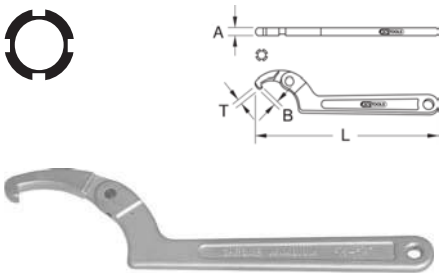
			kg
150.3205	20 pcs	Pin-type face wrench set, seamlessly adjustable with interchangeable pins	1,56

consists of:

		g
150.3206	Pin-type face wrench, adjustable, 263 mm	485
150.3207	Pin-type face wrench, adjustable, 215 mm	293
150.3208	Pin-type face wrench, adjustable, 161 mm	155
150.3209	Pin-type face wrench, adjustable, 115 mm	57
150.3210	Pin pair, Ø 2.37 mm	2
150.3211	Pin pair, Ø 2.90 mm	2
150.3212	Pin pair, Ø 4.87 mm	5
150.3213	Pin pair, Ø 5.91 mm	7
150.3214	Pin pair, Ø 6.87 mm	13
150.3215	Pin pair, Ø 7.92 mm	15
150.3216	Pin pair, Ø 9.87 mm	28
150.3217	Pin pair, Ø 11.90 mm	37

Hook wrench with nose

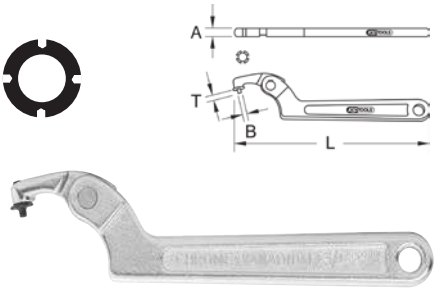
- In accordance to DIN 1810 Form A
- With flexible head
- With hanging hole
- For slotted nuts
- Matt finish
- Chrome vanadium



	mm		A mm	B mm	L mm	T mm	g	
517.1302	19-50	3/4-2"	9,0	3,5	162,0	2,9	100	
517.1303	32-76	1.1/4-3"	11,5	4,5	205,0	3,7	210	
517.1304	50-120	2-4.3/4"	12,4	6,5	295,0	4,6	420	
517.1305	114-158	4.1/2-6.1/4"	12,4	9,8	315,0	8,3	440	

Flexible hook wrench with pin

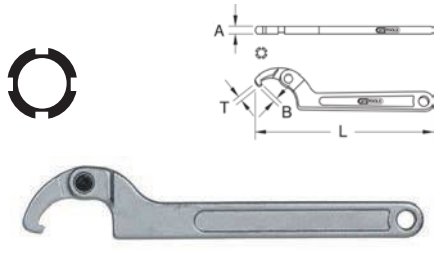
- In accordance to DIN 1810 Form B
- With flexible head
- With hanging hole
- For pin type round nuts
- Matt finish
- Chrome vanadium



	mm		A mm	B mm	L mm	T mm	g	
517.1312	19-50	3/4-2"	9,2	4,0	165,0	4,0	110	
517.1313	32-76	1.1/4-3"	11,3	5,0	210,0	4,7	220	
517.1314	50-120	2-4.3/4"	12,5	6,0	295,0	5,5	420	
517.1315	114-158	4.1/2-6.1/4"	12,6	8,0	320,0	7,6	440	

Hook wrench with nose

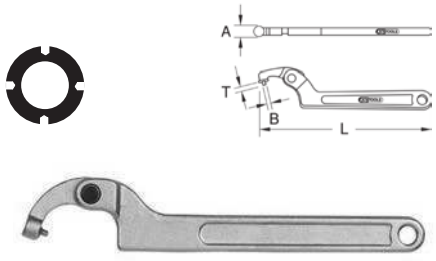
- In accordance to DIN 1810 Form A
- With flexible head
- With hanging hole
- For slotted nuts
- Matt finish
- Chrome vanadium



	mm	A mm	B mm	L mm	T mm	g	
517.1316	13 - 35	5,2	3,2	175,0	3,2	96	
517.1317	35 - 50	5,9	4,0	202,0	4,2	186	
517.1318	50 - 80	7,5	4,9	280,0	5,2	392	
517.1319	80 - 120	8,2	5,3	345,0	5,8	656	
517.1320	120 - 180	10,8	8,9	465,0	7,8	1286	

Flexible hook wrench with pin

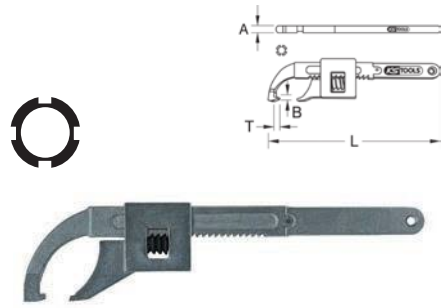
- In accordance to DIN 1810 Form B
- With flexible head
- With hanging hole
- For pin type round nuts
- Matt finish
- Chrome vanadium



	mm	A mm	B mm	L mm	T mm	g
517.1323	15 - 35	9,8	2,8	177,0	2,8	96
517.1324	35 - 50	10,7	3,8	202,0	3,6	186
517.1325	50 - 80	14,0	4,8	280,0	5,0	380
517.1326	80 - 120	17,2	5,8	345,0	7,0	652
517.1327	120 - 180	19,2	7,8	465,0	9,0	1318

Hook wrench with nose

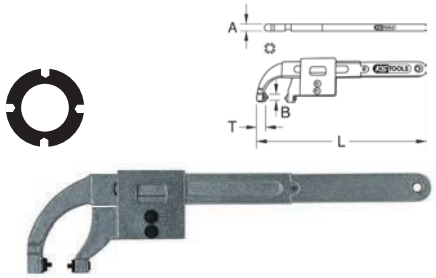
- In accordance to DIN 1810 Form A
- With flexible head
- With hanging hole
- For slotted nuts
- Infinitely variable
- Matt finish
- Chrome vanadium



	mm	A mm	B mm	L mm	T mm	g
517.1397	10 - 50	7,6	4,2	210,0	4,5	380
517.1398	20 - 100	8,2	6,8	360,0	5,5	840
517.1399	30 - 200	10,6	9,4	570,0	7,0	2250

Flexible hook wrench with pin

- In accordance to DIN 1810 Form B
- With flexible head
- With hanging hole
- For pin type round nuts
- Infinitely variable
- Matt finish
- Chrome vanadium



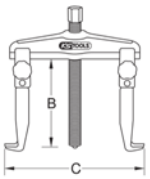
	mm	A mm	B mm	L mm	T mm	g
517.1328	10-50	8,3	2,6	210,0	2,5	380
517.1329	20-100	12,3	4,0	360,0	4,5	840
517.1330	30-200	17,3	5,8	570,0	4,8	2250

PULLERS

Quick adjustment universal puller set

- Quick release function
- Ideal for confined spaces
- Through reversing the arms internal and external applications are possible
- Wide range of arms and hydraulic spindles available
- Extremely robust spindle with inductively hardened thread
- Special tool steel
- In durable plastic storage case







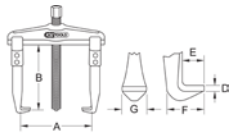
		A mm	B mm	mm	max t	kg
625.1701	7 pcs	20 - 90	100	M14 x 1,5	5,5	2,30

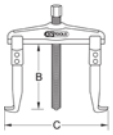
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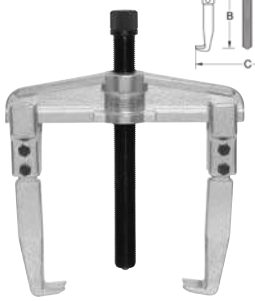
		kg
620.1701	Quick release universal 2 arm puller, 20-90mm	1,00
630.1701	Quick release 3 arm puller, 20-90mm	1,30
980.1090	Special thread grease, tube	0,01

Universal 2 arm puller

- Through reversing the arms internal and external applications are possible
- Hydraulic spindles available for thread G1/2" / G3/4" / G1"
- Extremely robust spindle with inductively hardened thread
- Special tool steel





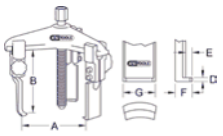


	A mm	B mm	C mm	max t	mm	mm	D mm	E mm	F mm	G mm	kg
620.0101	20-90	100	70-130	4,5	M14x1,5 x 140	17	3	13	25	20	1,00
620.0102	25-130	100	80-180	4,5	M14x1,5 x 140	17	3	13	25	20	1,20
620.0103	50-160	150	105-220	6,5	G1/2"x14g x 210	22	4	16	35	25	3,00
620.0104	60-200	150	120-270	6,5	G1/2"x14g x 210	22	4	16	35	25	3,30
620.0105	80-250	200	160-330	11	G3/4"x14g x 280	27	5	25	54	35	7,40
620.0106	80-350	200	160-420	11	G3/4"x14g x 280	27	5	25	54	35	8,50
620.0107	110-520	200	195-600	13	G3/4"x14g x 280	27	5	25	54	35	13,00
620.0108	170-640	225	250-720	18	G1"x11g x 310	36	10	33	55	50	23,70

Quick release 3 arm puller set with narrow legs

- Quick release
- Ideal for confined spaces
- Uniform load distribution and centered tightening
- Through reversing the arms internal and external applications are possible
- Hydraulic spindles available for thread G1/2"
- Extremely robust spindle with inductively hardened thread
- Special tool steel







	A mm	B mm	max t	mm	mm	D mm	E mm	F mm	G mm	kg
630.1101	20-90	100	5	M14x1,5 x 130	17	3,6	6	13	27	1,30

Universal 2 + 3 arm puller set

- Slim hooks
- Ideal for confined spaces
- Uniform load distribution and centered tightening
- Through reversing the arms internal and external applications are possible
- Wide range of arms and hydraulic spindles available
- Extremely robust spindle with inductively hardened thread
- Excellent power transfer
- Special tool steel
- In durable plastic storage case



			kg
700.1300	12 pcs	Universal 2 + 3 arm puller set	6,69

consists of:

		g
700.1311	Spindle, M14x1,5	180
700.1312	Two armed traverse	485
700.1313	Three armed traverse	675
700.1314	Draw-off arm, 100mm	250
700.1315	Draw-off arm, 210mm	530
700.1316	Draw-off arm, 260mm	640

Universal clamping yoke

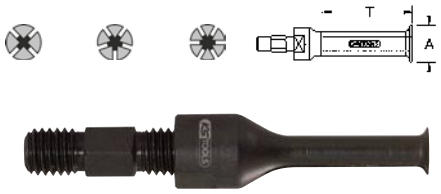
- For universal 2 arm puller
- Clamping yoke compresses the legs firmly
- Prevents slipping
- Special tool steel



	A mm	g
615.5101	10-130	800

Precision internal extractor

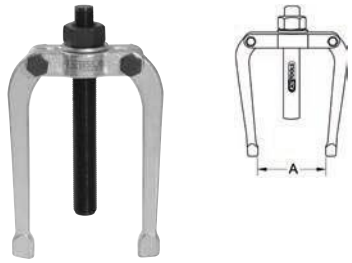
- Centering shaft
- For the removal of secure bearings and bushes
- Special tool steel



	A mm		mm	mm	T mm	max N·m	kg
660.0101	5-7	M10	10	13	30,0	3	0,05
660.0102	6-8	M10	10	13	30,0	3	0,05
660.0103	7-9	M10	10	13	30,0	7	0,05
660.0104	8-10	M10	10	13	30,0	7	0,05
660.0105	9-12	M10	10	13	30,0	12	0,05
660.0106	10-13	M10	10	13	30,0	15	0,05
660.0107	12-15	M10	10	13	30,0	15	0,05
660.0108	13-17	M10	10	13	50,0	24	0,07
660.0109	14-19	M10	10	13	60,0	28	0,09
660.0111	15-20	M10	10	13	60,0	28	0,09
660.0112	16-21	M10	10	13	60,0	32	0,09
660.0113	18-23	M10	10	17	60,0	40	0,11
660.0114	20-25	M10	10	17	60,0	40	0,11
660.0115	22-27	M10	10	17	60,0	40	0,11
660.0116	25-30	M10	10	17	60,0	40	0,12
660.0117	25-40	M10	13	19	45,0	45	0,26
660.0118	28-35	M10	10	17	60,0	45	0,28
660.0119	30-37	M10	17	22	70,0	45	0,28
660.0121	35-42	M10	17	22	70,0	45	0,28
660.0122	38-45	M10	17	22	70,0	45	0,29
660.0123	40-47	M10	17	22	70,0	45	0,30
660.0124	43-50	M10	17	22	70,0	45	0,31
660.0125	40-75	G 3/8"	17	27	100,0	45	0,76
660.0126	45-55	G 3/8"	19	27	100,0	45	0,65
660.0127	50-60	G 3/8"	19	27	100,0	45	0,68
660.0128	70-115	G 3/8"	19	27	130,0	45	1,40

Double ended support for internal extractor

- Extremely robust spindle with inductively hardened thread
- Special tool steel

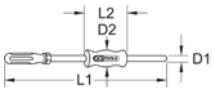


	A mm	max N·m	mm	Internal extractors	mm	kg
660.0601	35-75	30	12	M10	M16x1,5 x 136	0,70
660.0602	60-130	60	19	M10xG3/8"	M24x1,5 x 160	1,60
660.0603	60-130	60	19	G3/8"	M24x1,5 x 160	1,50
660.0605	55-205	100	22	G3/8"	G1/2"x14g x 210	3,80

Slide hammer

- Flexible removal tool
- Internal thread for holding various pullers, bolts and hooks
- Ideal for removing ball bearings, wheel hubs etc.
- Ideal for limited access areas
- Special tool steel







	L1 mm	L2 mm	D1 mm	D2 mm		kg
660.0501	170	40,0	10,0	30,0	M10	0,40
660.0502	170	80,0	10,0	50,0	M10	0,90
660.0503	250	100,0	16,0	45,0	M10	1,30
660.0504	250	100,0	16,0	45,0	M10+G3/8"	1,40
660.0505	250	100,0	16,0	60,0	G3/8"	2,60

Universal ball bearing puller set

- For simple and fast removing of ball bearings without removal of the shaft
- Pulling power influences uniformly on the interior and outside ring
- Special tool steel
- In durable plastic storage case
- Suited for ISO bearings: 6004-6010, 6201-6206, 6300-6304

Ideal for use in SKF, FAG, Timken, NTN bearings etc.
Adaptor diameter: 5.5 - 6 - 8 mm



			kg
700.1500	21 pcs	Universal ball bearing puller set	0,82

consists of:

		g
700.1501	Extension set long, 2 pcs, for 700.1500	110
700.1502	Centre point, for 700.1500	30
700.1503	Tie rod set, 2 pcs, for 700.1500	60
700.1504	Ball head bearing adaptor set, 2 pcs, Ø 5.5 mm	24
700.1505	Ball head bearing adaptor set, 2 pcs, Ø 6.0 mm	24
700.1506	Ball head bearing adaptor set, 2 pcs, Ø 8.0 mm	26
700.1507	Extension set short, 2 pcs, for 700.1500	30
700.1508	U disc for tie rod, pack of 4, for 700.1500	10
700.1509	Spindle, for 700.1500	164
700.1510	Traverse, for 700.1500	202
700.1511	Nut set for tie rod, 2 pcs, for 700.1500	10

Universal ball bearing puller set

- For simple and fast removing of ball bearings without removal of the shaft
- Pulling power influences uniformly on the interior and outside ring
- Special tool steel
- In durable plastic storage case
- Suited for ISO bearings: 6207-6211, 6205-6208, 6303-6305

Ideal for use in SKF, FAG, Timken, NTN bearings etc.
Adaptor diameter: 11 - 12.5 - 15 mm



			kg
700.1600	21 pcs	Universal ball bearing puller set	1,69

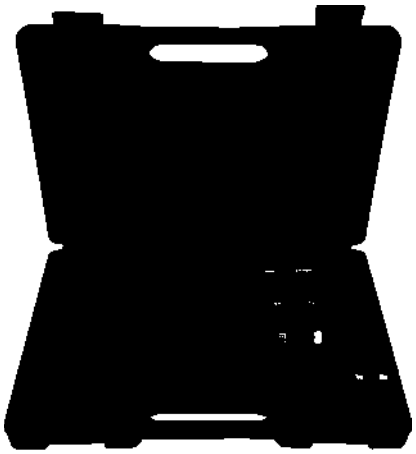
consists of:

		g
700.1601	Extension set long, 2 pcs, for 700.1600	204
700.1602	Centre point, for 700.1600	50
700.1603	Tie rod set, 2 pcs, for 700.1600	178
700.1604	Ball head bearing adaptor set, 2 pcs, Ø 11.0 mm	88
700.1605	Ball head bearing adaptor set, 2 pcs, Ø 12.5 mm	96
700.1606	Ball head bearing adaptor set, 2 pcs, Ø 15.0 mm	110
700.1607	Extension set short, 2 pcs, for 700.1600	88
700.1608	U disc for tie rod, pack of 4, for 700.1600	10
700.1609	Spindle, for 700.1600	130
700.1610	Traverse, for 700.1600	345
700.1611	Nut set for tie rod, 2 pcs	10

Universal puller set for differential gear

- ideally suited for the removal of bearing parts in differential gears
- Clamping yoke compresses the legs firmly
- Prevents slipping
- Universal usage
- Special tool steel
- In durable plastic storage case

Application range: Cars, vans and trucks



			kg
150.3240	15 pcs	Universal puller set for differential gear	3,33

consists of:

	x		g	
150.3346	1	Traverse with guide pins, length 180 mm, 3 pcs.	692	
150.3347	2	Draw-off arm	254	
150.3348	1	Clamp with nuts	192	
150.3359	1	Pressure spindle	344	
150.3349	1	Pressure sleeve, 57 mm	78	
150.3351	1	Pressure sleeve, 57 mm	107	
150.3352	1	Pressure sleeve, 57 mm	120	
150.3353	1	Pressure sleeve, 57 mm	141	
150.3354	1	Pressure sleeve, 57 mm	186	
150.3356	1	Pressure sleeve, 57 mm	219	
150.3357	1	Pressure sleeve, 57 mm	296	
150.3358	1	Pressure sleeve, 57 mm	455	

Brass and aluminium punch

- For extracting bearing, bolts and bushes etc.
- Rimed handle for better control
- Brass / Aluminium



	Material	Ø mm	Length mm	kg	
156.0415	brass	20,0	300,0	1,13	
156.0416	aluminium	30,0	300,0	1,89	

Bearing punch set Ø 25.0 mm

- In durable plastic storage case



			g	
156.0425	7 pcs	Bearing punch set Ø 25.0 mm	640	

consists of:

		g	
156.0426	Punch holder without impact	360	
156.0447	Polyamide punch adaptor set, 2 pcs, Ø 25mm	20	
156.0455	Aluminium punch adaptor set, 2 pcs, Ø 25mm	50	
156.0463	Brass punch adaptor set, 2 pcs, Ø 25mm	150	

Bearing punch set Ø 10.0 - 14.0 mm

- In durable plastic storage case



			g	
156.0440	10 pcs	Bearing punch set Ø 10.0 - 14.0 mm	240	

consists of:

		g	
156.0436	Punch holder	100	
156.0441	Punch attachable head 2 pcs, polyamide, Ø 10 mm	10	
156.0442	Punch attachable head 2 pcs, polyamide, Ø 12 mm	10	
156.0443	Punch attachable head 2 pcs, polyamide, Ø 14 mm	10	
156.0449	Punch attachable head 2 pcs, aluminium, Ø 10 mm	10	
156.0450	Aluminium punch set, 2 pcs., Ø 12 mm	10	
156.0451	Punch attachable head 2 pcs, aluminium, Ø 14 mm	20	
156.0457	Punch attachable head 2 pcs, brass, Ø 10 mm	20	

Universal bearing and bush driver set

- Universal applicable range
- Can be used manually with a hammer or workshop press
- Applications from 18.0 - 65.0 mm
- Pressure plates are for the two driving spindles
- Special tool steel
- In durable plastic storage case





			kg	
700.1350	51 pcs	Universal bearing and bush driver set	8,00	

consists of:

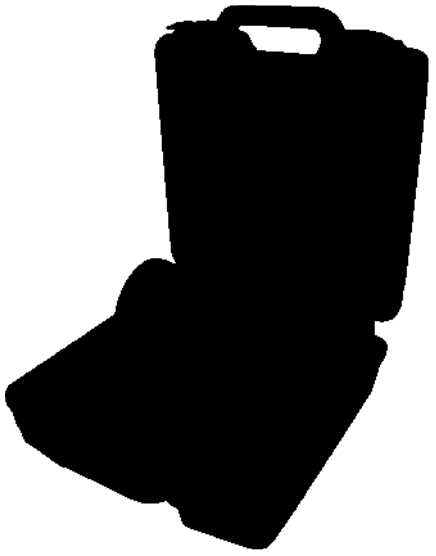
		g	
700.1348	Reception adaptor, 45mm	500	
700.1349	Impact drive knurled grip, 220mm	42	
700.1351	Pressure plate, 18mm	12	
700.1352	Pressure plate, 19mm	14	
700.1353	Pressure plate, 20mm	16	
700.1354	Pressure plate, 21mm	20	
700.1355	Pressure plate, 22mm	22	
700.1356	Pressure plate, 23mm	27	
700.1357	Pressure plate, 24mm	30	
700.1358	Pressure plate, 25mm	34	
700.1359	Pressure plate, 26mm	38	
700.1360	Pressure plate, 27mm	43	
700.1361	Pressure plate, 28mm	47	
700.1362	Pressure plate, 29mm	50	
700.1363	Pressure plate, 30mm	53	
700.1364	Pressure plate, 31mm	59	
700.1365	Pressure plate, 32mm	65	
700.1366	Pressure plate, 33mm	68	
700.1367	Pressure plate, 34mm	72	
700.1368	Pressure plate, 35mm	77	
700.1369	Pressure plate, 36mm	82	
700.1370	Pressure plate, 37mm	89	
700.1371	Pressure plate, 38mm	94	
700.1372	Pressure plate, 39mm	97	
700.1373	Pressure plate, 40mm	105	
700.1374	Pressure plate, 41mm	111	
700.1375	Pressure plate, 42mm	119	
700.1376	Pressure plate, 43mm	125	
700.1377	Pressure plate, 44mm	132	

consists of:

		g	
700.1378	Pressure plate, 45mm	138	
700.1379	Pressure plate, 46mm	144	
700.1380	Pressure plate, 47mm	153	
700.1381	Pressure plate, 48mm	159	
700.1382	Pressure plate, 49mm	165	
700.1383	Pressure plate, 50mm	172	
700.1384	Pressure plate, 51mm	181	
700.1385	Pressure plate, 52mm	188	
700.1386	Pressure plate, 53mm	196	
700.1387	Pressure plate, 54mm	205	
700.1388	Pressure plate, 55mm	213	
700.1389	Pressure plate, 56mm	221	
700.1390	Pressure plate, 57mm	231	
700.1391	Pressure plate, 58mm	238	
700.1392	Pressure plate, 59mm	247	
700.1393	Pressure plate, 60mm	258	
700.1394	Pressure plate, 61mm	266	
700.1395	Pressure plate, 62mm	276	
700.1396	Pressure plate, 63mm	284	
700.1397	Pressure plate, 64mm	294	
700.1398	Pressure plate, 65mm	305	
700.1399	Support plate, 75mm	500	

Universal bearing and bush driver set

- for gentle driving of bearing and radial sealing rings
- Universal applicable range
- Can be used manually with a hammer or workshop press
- Applications from 70.0 - 150.0 mm
- Pressure plates are for the two driving spindles
- Special tool steel
- In durable plastic storage case



			kg	
150.9710	21 pcs	Universal bearing and bush driver set	19,13	

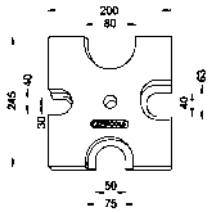
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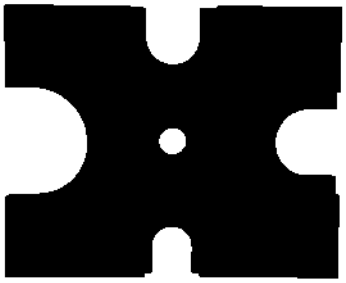
		kg	
150.9712	Adaptor for Hydraulic thrust bolt, 45,5 mm	0,04	
150.9713	Retaining adapter, 55 mm	0,22	
150.9714	Repellent spike with knurling, 273,0 mm	1,08	
150.9715	Pressure plate, 70 mm	0,35	
150.9716	Pressure plate, 75 mm	0,41	
150.9717	Pressure plate, 80 mm	0,47	
150.9718	Pressure plate, 85 mm	0,52	
150.9719	Pressure plate, 90 mm	0,59	
150.9720	Pressure plate, 95 mm	0,66	
150.9721	Pressure plate, 100 mm	0,73	
150.9722	Pressure plate, 105 mm	0,81	
150.9723	Pressure plate, 110 mm	0,89	
150.9724	Pressure plate, 115 mm	0,98	
150.9725	Pressure plate, 120 mm	1,07	
150.9726	Pressure plate, 125 mm	1,16	
150.9727	Pressure plate, 130 mm	1,26	
150.9728	Pressure plate, 135 mm	1,35	
150.9729	Pressure plate, 140 mm	1,46	
150.9730	Pressure plate, 145 mm	1,56	
150.9731	Pressure plate, 150 mm	1,68	
151.2603	Hexagon key wrench phosphate finish, short, 3mm	0,01	

PRISMS

Universal prism plate Ø 40.0/63.0/75.0/80 mm

- Universally usable plates
- For the pressing on and off of bearing on rear axles, engines and transmissions
- Special tool steel

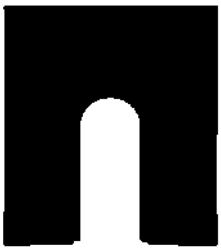


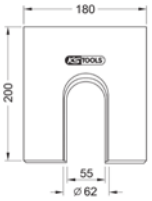


	Length mm	Width mm	kg
700.1738	245,0	200,0	7,32

Prism plate Ø 62,0 mm

- Universally usable plates
- For pressing on and off bearings or cogs on bearing shafts, e.g. on engines, transmissions etc.
- in connection with workshop presses
- Special tool steel

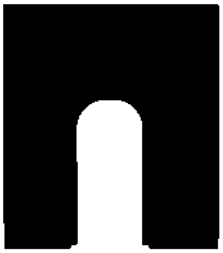


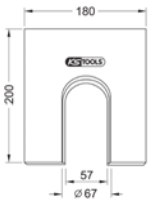


	Length mm	Width mm	kg
700.1739	200,0	180,0	4,36

Prism plate Ø 67,0 mm

- Universally usable plates
- For pressing on and off bearings or cogs on bearing shafts, e.g. on engines, transmissions etc.
- in connection with workshop presses
- Special tool steel

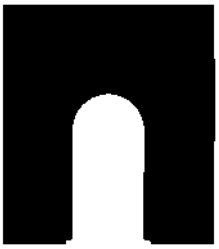




	Length mm	Width mm	kg
700.1742	200,0	180,0	4,28

Prism plate Ø 72,0 mm

- Universally usable plates
- For pressing on and off bearings or cogs on bearing shafts, e.g. on engines, transmissions etc.
- in connection with workshop presses
- Special tool steel



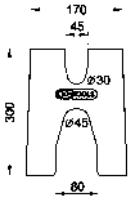


	Length mm	Width mm	kg
700.1743	200,0	180,0	4,14

Prism plate extra narrow, Ø 30,0/45.0 mm

- Universally usable plates
- Especially suitable for tight spaces (up to 4 mm)
- For pressing on and off bearings or cogs on bearing shafts, e.g. on engines, transmissions etc.
- Special tool steel







	Length mm	Width mm	kg
700.1744	300,0	170,0	1,10

Universal press support

- Universal adjustable support
- Through the height adjustable bolts a fixture and vibration safe 3 level points construction is created
- The amount and arrangement at thread enable the conformity to almost every component surface
- Includes lateral safety device





	max t	Length mm	Width mm	Height mm	Replacement bolt & nut set	kg
700.1740	20	245,0	200,0	40,0	700.1741	8,10

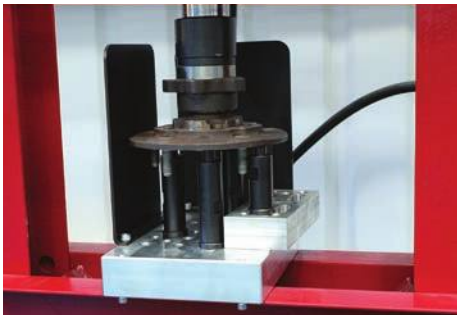
Universal press support

- Universal adjustable support
- Through the height adjustable bolts a fixture and vibration safe 3 level points construction is created
- The amount and arrangement at thread enable the conformity to almost every component surface
- Includes lateral safety device





	max t	Length mm	Width mm	Height mm	Replacement bolt & nut set	kg
700.1770	50	286,0	200,0	50,0	700.1771	16,94



OIL SERVICE TOOLS

Transmission oil dipstick

- Universal usages for many vehicle types
- Ideal for the easy, quick and correct control of transmission oil levels
- Saves a lot of time
- No other tools necessary
- Precise calculation of the oil level with the installed scale
- Even when the transmission oil control screw is hard to reach the check is no problem
- Two component handle

Application range: Audi 80, 100, A4, A6, S4, RS4 for transmissions: 012/01, 01E, 012, Multitronic transmission **Volkswagen** Passat, T4 Syncro for transmission: 012/01, 02G etc.





	L mm	Scale length	Scale division	g
150.9266	360,0	15,0 mm	0.01 mm	90

Oil control rod for Mercedes

- Ideal for the easy, quick and correct control of engine and automatic transmission oil levels
- Essential following an oil change, since vehicles are shipped without a measuring device and only have a plug
- Time-saving and reliable measurements
- With plastic hand grip





			g
150.9280	4 pcs	Oil control rod for Mercedes	380

consists of:

		Transmission gear ID	g
150.9281	Oil control rod 1220mm	772.6_L, G, P, V	160
150.9282	Oil control rod 920mm	772.7_P, 772.8_P, 716.5_V	120
150.9283	Oil control rod 930mm	103, 104, 111, 119, 120, 137, 603	40
150.9284	Oil control rod 930mm	M112, 113, 646, 647, 648	40

Flexible oil service bit socket for internal hexagon screws

- Hexagon socket
- Special flexible bit socket for actuating the transmission oil control screw on manual and automatic transmissions
- For hard to reach places
- Internal square drive adaptor to DIN 3120 / ISO 1174
- With press fitted insert bit
- For machinery usage
- Phosphate finish
- Chrome molybdenum

Application range: Audi, **Seat**, **Volkswagen** with manual and automatic transmissions





3/8"

	mm	Length mm	g
150.9257	17,0	48,2	110

Oil drain bit socket for spline (XZN®) screws

- Multi-tooth (XZN®) with tamper proof screws
- Special bit socket for assembly and disassembly of oil drain and transmission oil control screw
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- with press-fitted nickel-plated bit
- Perfect profile for correct actuation
- For manual operation
- Mirror polished
- Chrome vanadium

Application range: Audi A2, A3, A4, A6/ **Škoda** Fabia, Octavia, Superb/ **Volkswagen** Passat, Golf IV, LT etc.





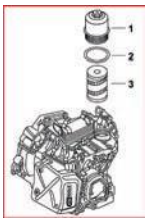
3/8" 1/2"

	■		L mm	g
150.1437	3/8"	M16	37,0	55
150.9364	1/2"	M16	50,0	140

Oil filter wrench for DSG gear oil change with Common Rail Engine, short

- Special length and design
- For the assembly and disassembly of the difficult to reach oil filter of DSG gear
- For cars with Common Rail engines
- Allows for simple and time-saving oil filter change
- No removal of batteries, new training of electronic memories are no longer necessary
- 12 point
- Internal square drive to DIN 3120 / ISO 1174
- Matt finish
- Chrome vanadium

Application range: Audi, **Seat**, **Škoda** and **Volkswagen** with Common Rail engines





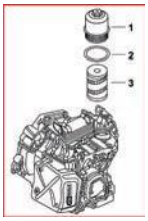
1/2"

	mm	Length mm	g
150.9202	24	101,0	280

Oil filter wrench for DSG gear oil change, long

- Special length and design
- For the assembly and disassembly of the difficult to reach oil filter of DSG gear
- Allows for simple and time-saving oil filter change
- No removal of batteries, new training of electronic memories are no longer necessary
- 12 point
- Internal square drive to DIN 3120 / ISO 1174
- Matt finish
- Chrome vanadium

Application range: Audi, **Seat**, **Škoda** and **Volkswagen**





1/2"

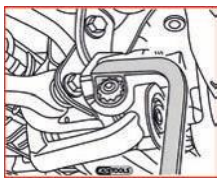
	mm	Length mm	g
150.9353	24	136,0	320



Oil filter wrench for Haldex transmission

- Special length and design
- For the assembly and disassembly of the difficult to reach oil filter of the Haldex transmission
- Allows for simple and time-saving oil filter change
- 12 point
- Matt finish
- Chrome vanadium

Application range: Volkswagen Golf/Passat/Sharan/Caddy/ Tiguan/Transporter T5 (4MOTION Models), **Škoda** Yeti/Octavia II/Superb II with all-wheel transmission shift





	mm	Length mm	g
150.2098	46,0	390,0	770

Oil service wrench hexagonal point for Fiat/Alfa Romeo

- For the quick and correct assembly and disassembly of the reduction screws on the oil sump, transmissions and differential
- Hexagon socket
- Specially shaped for use
- For manual operation
- Matt finish
- Chrome vanadium



	mm	Length mm	g
150.9227	12	225,0	280

Oil service wrench square socket for PSA

- For the quick and correct assembly and disassembly of the reduction screws on the oil sump, transmissions and differential
- Internal square
- Specially shaped for use
- For manual operation
- Matt finish
- Chrome vanadium





	mm	Length mm	g
150.9228	8x10	270,0	275

Oil service hexagon wrench for Mercedes and BMW

- For the quick and correct assembly and disassembly of the oil filling screw on the transmission
- Hexagon socket
- External hexagon
- Specially shaped for use
- For manual operation
- Matt finish
- Chrome vanadium

Application range: Mercedes W107, W123, W124, W126, W129, W163, W170, W201, W202, W203, W208, W210, W215, W220 Gearbox: 100, 110, 115, 116, 117, 615, 616, 617; **BMW**





	mm	mm	Length mm	g
150.9231	14,0	17,0	235,0	230

Oil service hexagon wrench for Mercedes and BMW

- For the quick and correct assembly and disassembly of the oil filling screw on the transmission
- Hexagon socket
- External hexagon
- Specially shaped for use
- For manual operation
- Matt finish
- Chrome vanadium

Application range: Mercedes Gearbox: 102, 103, 104, 110, 115, 116, 117, 119, 120, 123; **BMW**





	mm	mm	Length mm	g
150.9232	14,0	13,0	290,0	230

Oil service wrench for VAG

- For the quick and correct assembly and disassembly of the oil filling screw on the transmission and the oil sump drain plug on the oil sump
- Hexagon socket
- External hexagon
- Specially shaped for use
- For manual operation
- Matt finish
- Chrome vanadium





	mm	mm	Length mm	g
150.9233	21,0	17,0	250,0	240

Oil service internal hexagon wrench

- For the quick and correct assembly and disassembly of the reduction screws on the oil sump, transmissions and differential
- Hexagon socket
- With flexible head
- For manual operation
- Matt finish
- Chrome vanadium





	mm	Length mm	g
150.9225	10x14	256,0	280

8 in 1 Oil service wrench

- For the quick and correct assembly and disassembly of the oil reduction and oil filling screws on transmission, the oil sump and differential
- Special wrench with 8 gear profiles
- Profile change by turning the wrench head
- For manual operation
- Special tool steel

Profile and wrench widths:
4-point: 10.0 - 11.0 - 12.0 - 13.0 - 14.0 - 15.0 mm
8-point: 14.0 - 17.0 mm





	Ø mm	Length mm	g
150.9237	45,5	155,0	330

8 in 1 Oil service wrench

- For the quick and correct assembly and disassembly of the oil reduction and oil filling screws on transmission, the oil sump and differential
- Special wrench with 8 gear profiles
- Profile change by turning and snapping the wrench head
- For manual operation
- Matt chrome
- Special tool steel

Profile and wrench widths:
4-point: 8.0 - 10.0 mm - 3/8" - 1/2"
6-point: 10.0 - 12.0 - 14.0 - 17.0 mm







	L mm	D1 mm	D2 mm	g
150.9302	270,0	40,0	50,0	620

Oil Service Bit Socket for Torx Screws for Mini

- With 6 point drive
- For Torx screws
- Special bit socket for mounting and dismounting the ATF oil drain plug and gear oil check screw
- very flat design
- For working in hard to access areas
- with guide collar as protection against unintentional slipping
- Enormous time and cost saving
- with press-fitted nickel-plated bit
- Perfect profile for correct actuation
- For manual operation
- Mirror polished
- Chrome vanadium

Application range: MINI R52, R53, R55, R56, R57, R58, R59, R60 and R61 with 6-speed automatic transmission



		mm	Length mm	g	
150.9247	T55	17,0	38,0	64	

Oil service hexagonal socket with magnet

- 6 point
- FlankTraction profile
- Special socket for assembly and disassembly of oil drain and transmission oil control screw
- With strong, integrated magnets
- The magnets prevent the screws from falling down into the collection pans
- Internal square drive to DIN 3120 / ISO 1174
- Perfect profile for correct actuation
- For manual operation
- Matt finish
- Chrome vanadium





3/8"

	mm	Ø mm	Length mm	g	
150.1404	13	19,0	20,5	23	
150.1405	14	20,0	20,5	23	
150.1406	17	24,0	34,0	34	
150.1407	18	25,0	23,5	40	
150.1408	19	26,0	44,0	44	
150.1409	21	29,0	23,5	60	





Oil service Torx socket with magnet

- Torx with pins
- Special socket for assembly and disassembly of oil drain and transmission oil control screw
- With strong, integrated magnets
- The magnets prevent the screws from falling down into the collection pans
- Internal square drive to DIN 3120 / ISO 1174
- Perfect profile for correct actuation
- For manual operation
- Matt finish
- Chrome vanadium





3/8"

		Ø mm	Length mm	g	
150.1415	T45	19,0	34,0	31	

Oil service bit socket for internal square screws with magnet

- Internal square
- Special socket for assembly and disassembly of oil drain and transmission oil control screw
- With strong, integrated magnets
- The magnets prevent the screws from falling down into the collection pans
- Internal square drive to DIN 3120 / ISO 1174
- Perfect profile for correct actuation
- For manual operation
- Matt finish
- Chrome vanadium





3/8"

	mm	Ø mm	Length mm	g	
150.1416	8	19,0	30,0	32	
150.1438	9,5	19,0	30,0	34	
150.1417	10	19,0	30,0	35	
150.1429	10,5	19,0	30,0	38	
150.1433	11	19,0	30,0	40	
150.1434	13,1	19,0	30,0	42	

Oil service bit socket for internal hexagon screws with magnet

- Hexagon socket
- Special socket for assembly and disassembly of oil drain and transmission oil control screw
- With strong, integrated magnets
- The magnets prevent the screws from falling down into the collection pans
- Internal square drive to DIN 3120 / ISO 1174
- Perfect profile for correct actuation
- For manual operation
- Matt finish
- Chrome vanadium





3/8"

	mm	Ø mm	Length mm	g	
150.1436	8	19,0	30,0	32	
150.1439	9	19,0	30,0	34	
150.1441	10	19,0	30,0	35	
150.1442	12	19,0	30,0	38	
150.1443	13	19,0	30,0	40	
150.1444	14	19,0	30,0	42	
150.1446	17	19,0	30,0	52	

Oil service square socket

- 4 point
- Special socket for assembly and disassembly of oil drain and transmission oil control screw
- Internal square drive to DIN 3120 / ISO 1174
- Perfect profile for correct actuation
- For manual operation
- Matt finish
- Chrome vanadium





3/8"

	mm	Ø mm	Length mm	g	
150.1426	10	19,0	36,0	47	

Oil service bit socket for internal triangle

- Internal triangle
- Special socket for assembly and disassembly of oil drain and transmission oil control screw
- Internal square drive to DIN 3120 / ISO 1174
- Perfect profile for correct actuation
- For manual operation
- Matt finish
- Chrome vanadium





3/8"

	Ø mm	Length mm	g	
150.1427	10	19,0	36,0	38	

Oil service wrench set

- For conical screws on the oil sump, transmission differential etc.
- Special wrench set for the assembly and disassembly of most oil drains and transmission oil control screws
- External drive hexagonal socket 21.0 mm
- Perfect profile for correct actuation
- For manual operation
- Matt finish
- Chrome vanadium
- In durable steel storage case





			g	
150.9390	6 pcs	Oil service wrench set	800	

consists of:

150.9391	Drain plug key, 8+10mm hex	110	
150.9392	Drain plug key, 5/16+3/8" hex	110	
150.9393	Drain plug key, 8mm+3/8" square	110	
150.9394	Drain plug key, 12mm hex+11mm square	110	
150.9395	Drain plug key, 14mm hex+13mm square	110	
150.9396	Hex oil drain plug key, 17mm+1/2" hex	110	

MASTER oil service bit socket set

- For screws on oil sumps, transmission, differential etc.
- Special wrench set for the assembly and disassembly of most oil drains and transmission oil control screws
- In parts with strong, integrated magnets
- The magnets prevent the screws from falling down into the collection pans
- Internal square drive adaptor to DIN 3120 / ISO 1174
- Perfect profile for correct actuation
- For manual operation
- Matt finish
- Chrome vanadium
- Includes storage rail





3/8"

			g	
150.1445	23 pcs	MASTER oil service bit socket set	960	

consists of:

150.1404	Oil service hexagonal socket with magnet, 13 mm	23
150.1405	Oil service hexagonal socket with magnet, 14 mm	23
150.1406	Oil service hexagonal socket with magnet, 17 mm	34
150.1407	Oil service hexagonal socket with magnet, 18 mm	40
150.1408	Oil service hexagonal socket with magnet, 19 mm	44
150.1409	Oil service hexagonal socket with magnet, 21 mm	60
150.1436	3/8" Oil service bit socket for internal hexagon screws with magnet, 8 mm	32
150.1439	3/8" Oil service bit socket for internal hexagon screws with magnet, 9 mm	34
150.1441	3/8" Oil service bit socket for internal hexagon screws with magnet, 10 mm	35
150.1442	3/8" Oil service bit socket for internal hexagon screws with magnet, 12 mm	38
150.1443	3/8" Oil service bit socket for internal hexagon screws with magnet, 13 mm	40
150.1444	3/8" Oil service bit socket for internal hexagon screws with magnet, 14 mm	42
150.1446	3/8" Oil service bit socket for internal hexagon screws with magnet, 17 mm	52
150.1416	3/8" Oil service bit socket for internal square screws with magnet, 8 mm	32
150.1438	3/8" Oil service bit socket for internal square screws with magnet, 10,5 mm	34
150.1417	3/8" Oil service bit socket for internal square screws with magnet, 10 mm	35
150.1429	3/8" Oil service bit socket for internal square screws with magnet, 10,5 mm	38
150.1433	3/8" Oil service bit socket for internal square screws with magnet, 11 mm	40
150.1434	3/8" Oil service bit socket for internal square screws with magnet, 13,1 mm	42
150.1437	3/8" Oil service XZN socket with tamper proof screws, M16	55
150.1415	Oil service Torx socket with magnet, T45	31
150.1426	Oil service square socket, 10 mm	47
150.1427	3/8" Oil service bit socket for internal triangle, 10 mm	38

HAND PUMPS

Syringe for fluid change 0.2 litre

- Ideal tool for decanting, removing or dosing liquids to transmissions, power steering, hydraulics, engines etc.
- Suitable for fuel oil, water and antifreeze
- Fine dosing
- Overflowing material can be pumped back problem-free
- Includes rubber hose
- Robust metal execution





		Tube inner Ø mm	Hose external-Ø mm	tube length mm	housing length mm	
150.1684	0,2	8	10	290	290	365



Syringe for fluid change 0.2 litre

- Ideal tool for decanting, removing or dosing liquids to transmissions, power steering, hydraulics, engines etc.
- Suitable for fuel oil, water and antifreeze
- Fine dosing
- Overflowing material can be pumped back problem-free
- Includes rubber hose with flow stop cap
- Robust PP design



		Tube inner Ø mm	Hose external-Ø mm	tube length mm	housing length mm	
150.9221	0,2	6	8	210	210	245

Syringe for fluid change 1.5 litre

- Ideal tool for decanting, removing or dosing liquids to transmissions, power steering, hydraulics, engines etc.
- Suitable for fuel oil, water and antifreeze
- Fine dosing
- Overflowing material can be pumped back problem-free
- Includes rubber hose with flow stop cap
- Robust PP design





		Tube inner Ø mm	Hose external-Ø mm	tube length mm	housing length mm	
150.9222	1,5	14	16	320	320	900

FILLING

DSG transmission oil filling hose for VAG

- Ideal for problem-free, simple and clean filling and refilling
- Exact dosing
- For different direct shift gearboxes
- The return valve prevents dirtying from unintentional oil spills
- The oil fill adapter is screwed directly onto the 1 litre oil container tank
- Suitable for many manufacturers and industry standard oil container tanks (VAG G 052 182 A2)
- Robust aluminium connection adapter

Application range: Audi, **Seat**, **Škoda** and **Volkswagen** with DSG transmission





	Transmission thread	tube length mm	
150.9220	M24x1,5mm	1500	270

DSG transmission oil filling hose for Audi

- Ideal for problem-free, simple and clean filling and refilling
- Exact dosing
- For different direct shift gearboxes
- The return valve prevents dirtying from unintentional oil spills
- The oil fill adapter is screwed directly onto the 1 litre oil container tank
- Suitable for many manufacturers and industry standard oil container tanks (VAG G 052 529 A2)
- Robust aluminium connection adapter

Application range: Audi (>2008) with DSG transmission





	Transmission thread	tube length mm	
150.9229	M24x1,5mm	2000	360

CVT transmission oil filling hose for VAG

- Ideal for problem-free, simple and clean filling and refilling
- Exact dosing
- For different stage-free transmission
- The return valve prevents dirtying from unintentional oil spills
- The oil fill adapter is screwed directly onto the 1 litre oil container tank
- Suitable for many manufacturers and industry standard oil container tanks (VAG G 052 180 A2)
- Robust aluminium connection adapter

Application range: Audi, **Seat**, **Škoda** and **Volkswagen** with CVT transmission (Multitronic)





	Transmission thread	tube length mm	
150.9223	M22x1,5mm	2000	360

Haldex transmission filling hose for VAG

- Ideal for problem-free, simple and clean filling and refilling
- Exact dosing
- For various Haldex transmissions
- The return valve prevents dirtying from unintentional oil spills
- The oil fill adapter is screwed directly onto the 1 litre oil container tank
- Suitable for many manufacturers and industry standard oil container tanks (VAG G 055 175 A2)
- Robust aluminium connection adapter

Application range: Audi, **Seat**, **Škoda** and **Volkswagen** with Haldex transmission





	Transmission thread	tube length mm	
150.9224	M10x1,0mm	2000	260

Oilservice set for Mercedes 9G-Tronic drive

- ideal zum Ablassen und Befüllen des Mercedes 9G-Tronic-Getriebes (Baureihe 725.0)
- dieses Getriebe ist ohne dieses Werkzeug nicht zu befüllen
- das Füllwerkzeug kann in 4 Positionen ver- und entriegelt werden
- in Verbindung mit Befülladapter für Mercedesgetriebe 722.9, M12 x 1,5 und Getriebeölfüllgerät
- OE-Anweisungen sind zu beachten
- Optimal for narrow places or hard-to-reach places
- für fachgerechtes und wirtschaftliches Befüllen

			g	
150.9695	3 pcs	Oilservice set for Mercedes 9G-Tronic drive	70	

consists of:

		g	
150.9698	Paint Bucket	25	
150.9696	Oil pump adapter	13	
150.9697	Oil drain plug wrench, hexagonal, 8 mm	32	

Universal transmission oil filling system set incl. 15 piece adapter set

- Ideal for filling transmission, distributor transmission and differentials of different vehicle manufacturers with oil
- Large coverage of many vehicle manufacturers in particular with universal adapter
- Many transmission cannot be filled without this tool
- Optimal for narrow places or hard-to-reach places
- Includes 15 piece adapter set with various angle tails for correct and economic filling
- Quick filling by unscrewing the pump units is possible
- Precise hand pump
- Includes return flow function
- For difficult to access areas
- Secure stand thanks to large base
- Container with filling level scale
- Easy to use and saves time





Technical data:

Capacity:	6 l
Tube length:	2000,0 mm
Tube diameter:	1/2"-14 mm
Viscosity:	- SAE 140

			kg	
150.9675	16 pcs	Universal transmission oil filling system set incl. 15 piece adapter set	2,90	

consists of:

		kg	
150.9671	Transmission oil filling device with hand pump without an adapter	1,57	
150.9690	Transmission oil filling adapter set 15 pcs	1,30	

Universal transmission oil filling adapter set

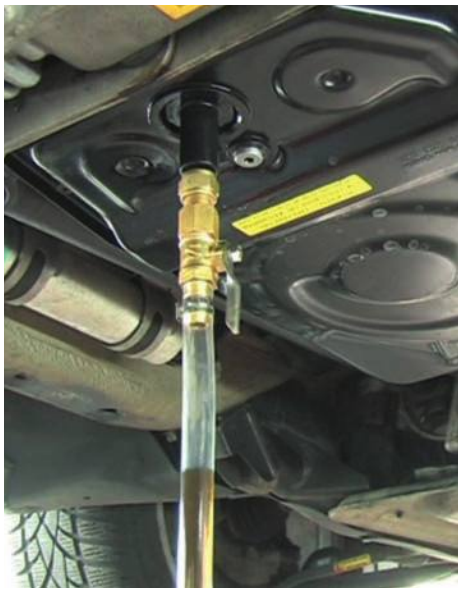
- Ideal for filling transmission, distributor transmission and differentials of different vehicle manufacturers with oil
- Large coverage of many vehicle manufacturers in particular with universal adapter
- Many transmission cannot be filled without this tool
- Optimal for narrow places or hard-to-reach places
- With various angle tails for correct and economic filling
- For difficult to access areas
- Easy to use and saves time
- Fiberglas
- In durable plastic storage case



			kg	
150.9690	15 pcs	Universal transmission oil filling adapter set	1,30	

consists of:

		g	
150.9672	Fibre glass filling adapter straight for Ford 1/8" - 27 NPT	6	
150.9673	Fibre glass filling adapter 15° angled, Universal	8,5	
150.9674	Fibre glass filling adapter short, 29° angled for VAG	7,5	
150.9676	Fibre glass filling adapter long, 29° angled for VAG and Porsche	8	
150.9677	Fibre glass filling adapter straight for VAG, BMW and Mini M10 x 1.0	4,5	
150.9678	Fibre glass filling adapter for Mercedes gearbox 722.9, M12 x 1.5	7	
150.9679	Fibre glass filling adapter for VAG DSG M24 x 1.5	13	
150.9681	Fibre glass filling adapter for VAG CVT M22 x 1.5	12	
150.9682	Fibre glass filling adapter for Škoda M18 x 1.5	8,5	
150.9683	Fibre glass filling adapter for VAG and Škoda M30 x 1.5	14,5	
150.9684	Fibre glass filling adapter flexible, Universal, 300 mm	7,5	
150.9686	Fibre glass filling adapter straight for Volvo 5/16" - 24 UNF	2,5	
150.9687	Fibre glass filling adapter 90° angled for Toyota and Lexus M18 x 1.5	52,5	
150.9688	Fibre glass filling adapter straight for Nissan and Infinity M8 x 1.0	3,5	
150.9689	Fibre glass filling adapter 90° angled for VW Passat and Tiguan	39	



Universal transmission oil filling system set incl. 20 piece adapter set

- Ideal for filling transmission, distributor transmission and differentials of different vehicle manufacturers with oil
- Large coverage of many vehicle manufacturers in particular with universal adapter
- Many transmission cannot be filled without this tool
- Optimal for narrow places or hard-to-reach places
- Includes 20 piece adapter set with various angle tails for correct and economic filling
- Quick filling by unscrewing the pump units is possible
- Precise hand pump
- Includes return flow function
- For difficult to access areas
- Secure stand thanks to large base
- Container with filling level scale
- Easy to use and saves time



Technical data:

Capacity:	7,5
Tube length:	1600,0 mm
Tube diameter:	1/2"-14
Quantity per stroke:	80 cc
Viscosity:	- SAE 140

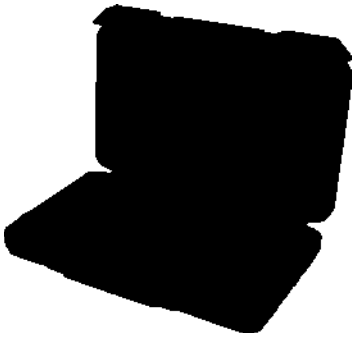
			kg	
150.9275	21 pcs	Universal transmission oil filling system set incl. 20 piece adapter set	5,06	

consists of:

		kg	
150.9258	Transmission oil filling device without adapter	3,50	
150.9680	Transmission oil filling adapter set 20 pcs	1,56	

Universal transmission oil filling adapter set

- Ideal for filling transmission, distributor transmission and differentials of different vehicle manufacturers with oil
- Large coverage of many vehicle manufacturers in particular with universal adapter
- Many transmission cannot be filled without this tool
- Optimal for narrow places or hard-to-reach places
- With various angle tails for correct and economic filling
- For difficult to access areas
- Easy to use and saves time
- In durable plastic storage case



			kg	
150.9680	20 pcs	Universal transmission oil filling adapter set	1,56	

consists of:

150.9261	Filling adapter straight for Ford 1/8" - 27 NPT	43
150.9262	Filling adapter 15° angled, universal	65
150.9263	Filling adapter short, 29° angled for VAG	58
150.9264	Filling adapter long, 29° angled for VAG and Porsche	61
150.9265	Filling adapter straight for VAG, BMW and Mini M10 x 1.0	33
150.9267	Filling adapter for Mercedes transmission 722.9, M12 x 1.5	53
150.9268	Filling adapter for VAG DSG M24 x 1.5	110
150.9269	Filling adapter for VAG CVT M22 x 1.5	90
150.9271	Filling adapter for Škoda M18 x 1.5	65
150.9272	Filling adapter for VAG and Škoda M30 x 1.5	150
150.9273	Filling adapter flexible, universal, 300 mm	35
150.9274	Filling adapter straight for Volvo 5/16" - 24 UNF	22
150.9276	Filling adapter 90° angled for Toyota and Lexus M18 x 1.5	89
150.9277	Filling adapter straight for Nissan and Infinity M8 x 1.0	25
150.9278	ATF filling adapter 90° angled for VW Passat and Tiguan	93
150.9562	Filling adapter for Nissan Juke M12 x 1.25	55
150.9563	Filling adapter for Mini Cooper M14 x 1.5	52
150.9564	Filling adapter for Nissan M10 x 1.5	26
150.9566	Filling adapter for GM M12 x 1.75	52
150.9567	Filling adapter for Mercedes 725-9G	70

Drive oil discharge system set

- ideal for full emptying of automatic drives
- for regular oil service, up to 2.6 litres of oil remains in the drive
- with pressure reducer and stop valve
- including 3 drive-specific adapters
- Easy to use and saves time
- In durable plastic storage case

Application range: BMW automatic transmission 6HP and 8 HP, **Mercedes** automatic transmission 722.6 and 722.9





150.9555	5 pcs	Drive oil discharge system set	1,74

consists of:

150.9556	Drain fitting with pressure reducer	464
150.9557	Shut-off valve	132
150.9558	Gearbox adapter for BMW 6 HP	110
150.9559	Gearbox adapter for BMW 8 HP	94
150.9561	Gearbox adapter for Mercedes 722.6 / 722.9	74

Flexible funnel with aluminium body

- Ideally suited to a clean and control draining of all fluids, e.g. oil, coolant, brake fluid, fuel etc.
- Resistant to petrol, diesel, oil, coolant, hydraulic and brake fluid
- Also suitable as a funnel for filling
- Shape is maintained and can be altered at any time
- Free malleable, therefore can be adapted for extremely tight spaces
- Problems with draining fluids are a thing of the past
- The heavy-duty construction can be fit to any desired shape and used again
- Easy to clean
- Temperature resistance of -34 to +232 °C
- Aluminium frame
- Outer skin made from nitrile rubber







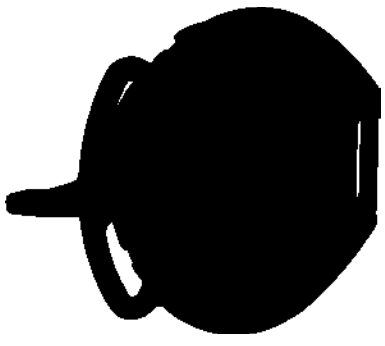
	Length mm	Width mm	
150.9303	372,0	170,0	240

DRIP PANS

Drain pan 7.5 litres

- With three carry handles
- Safe and clean pouring with the self-contained overflow edge and spout
- Ideally suited to collecting different fluids
- Suitable for oil, chemicals, petrol, acid and anti-freeze fluid
- Also suitable for cleaning parts
- Practical, quick and friendly to the environment
- Shock and impact resistant





	Ø mm	H mm	
150.9359	385,0	130,0	620

Drain pan 8 litres

- With three carry handles
- Safe and clean pouring with the spout
- Ideally suited to collecting different fluids
- Suitable for oil, chemicals, petrol, acid and anti-freeze fluid
- Also suitable for cleaning parts
- Practical, quick and friendly to the environment
- Screwed connection with rubber seal for safe transport
- Shock and impact resistant





	B mm	H mm	L mm	
150.9357	340,0	120,0	600,0	1,06

Drain pan 17 litres

- With three carry handles
- Safe and clean pouring with the self-contained overflow edge and spout
- Ideally suited to collecting different fluids
- Suitable for oil, chemicals, petrol, acid and anti-freeze fluid
- Also suitable for cleaning parts
- Practical, quick and friendly to the environment
- Shock and impact resistant





	Ø mm	H mm	
150.9360	445,0	145,0	1,07

Drain pan 17 litres

- With three carry handles
- Safe and clean pouring with the self-contained overflow edge and spout
- Ideally suited to collecting different fluids
- Suitable for oil, chemicals, petrol, acid and anti-freeze fluid
- Also suitable for cleaning parts
- Practical, quick and friendly to the environment
- Shock and impact resistant





	Ø mm	H mm	
150.9361	445,0	145,0	1,16

Mobile drain pan, 30 litres, extra flat with castors

- With five carry handles
- 12.0 cm high, extra flat edges
- Safe and clean pouring with the closed contained and spout
- Ideally suited to collecting different fluids
- Suitable for oil, chemicals, petrol, acid and anti-freeze fluid
- Also suitable for cleaning parts
- With four steerable castors
- Practical, quick and friendly to the environment
- Includes removable sieve
- Screwed connection with rubber seal for safe transport
- Shock and impact resistant





	B mm	H mm	L mm	kg
150.9354	600,0	120,0	850,0	5,60

Drain pan 55 litres, extra flat

- With four carry handles
- 11.0 cm high, extra flat edges
- Safe and clean pouring with the self-contained overflow edge and spout
- Ideally suited to collecting different fluids
- Suitable for oil, chemicals, petrol, acid and anti-freeze fluid
- Also suitable for cleaning parts
- Practical, quick and friendly to the environment
- Shock and impact resistant
- Polyethylene





	L mm	B mm	H mm	kg
150.9358	1030,0	724,0	110,0	6,80



OLD OIL FALL ARRESTERS

Vacuum fluid extractor suction pump 9.5 litre

- Ideal for quick, clean and simple suction, intake and emptying of fluids
- Suitable for engine oil, transmission oil, hydraulic oil, brake fluid, water etc.
- For pneumatic use with a compressor or manual use with the integrated hand pump
- Select a suitable probe and suck easily using the vacuum principle
- Suction process automatically stopped when housing is full, preventing fluids from spilling over
- With integrated pressure relief valve for more safety
- With high-quality pump housing and strengthened pump head
- Includes 4 probes for different uses
- Ideally suited to hard-to-reach places thanks to the included, long suction hose
- The suction hose is resistant to petrol and oil
- Polyethylene





Technical data:

Work pressure:	5-11,5 bar
Capacity:	9,5 l
Operating temperature:	+0 °C to +55 °C
Filling tube length:	1,5 m
Max. flow rate:	125 l/min

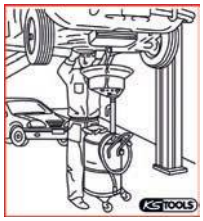
			kg
160.0790	5 pcs	Vacuum fluid extractor suction pump 9.5 litre	5,00

consists of:

		g
160.0791	Vacuum fluid extractor suction pump 9.5 litre	3708
160.0792	Adaptor and tube 4x8mm x1,5m	200
160.0793	Main probe 7.8 x 9.8 mm x 1 m	200
160.0794	Probe 5.3 x 6.7 mm x 1 m	200
160.0795	Probe 3.5 x 4.5 mm x 1 m	200

Mobile oil draining device 60 litre

- Basic unit for old oil capture and re-filling
- Pneumatic pressure emptying with manometer and safety valve
- Emptying takes approximately 3 minutes at 0.8 bar
- Heavy deposits can also be removed via a plate on the underside
- Mobile and connectible container with extra-large plastic wheels
- With carry handle
- Stop cock and clamping screws to release pressure
- Extremely manoeuvrable and ideal for workshop design
- Centrally mounted and height-adjustable round drip pan
- Side filling display with measuring scales
- Includes clear fabric hose for draining





Technical data:

Capacity of container:	60 l
Capacity of catch:	ca,16 l
Collection container dimensions:	490 x 580 x 1040 mm
Collection pan dimensions:	Ø 380 mm
Height adjustment:	1040 - 1700 mm

	l	kg
160.0001	60	32,00



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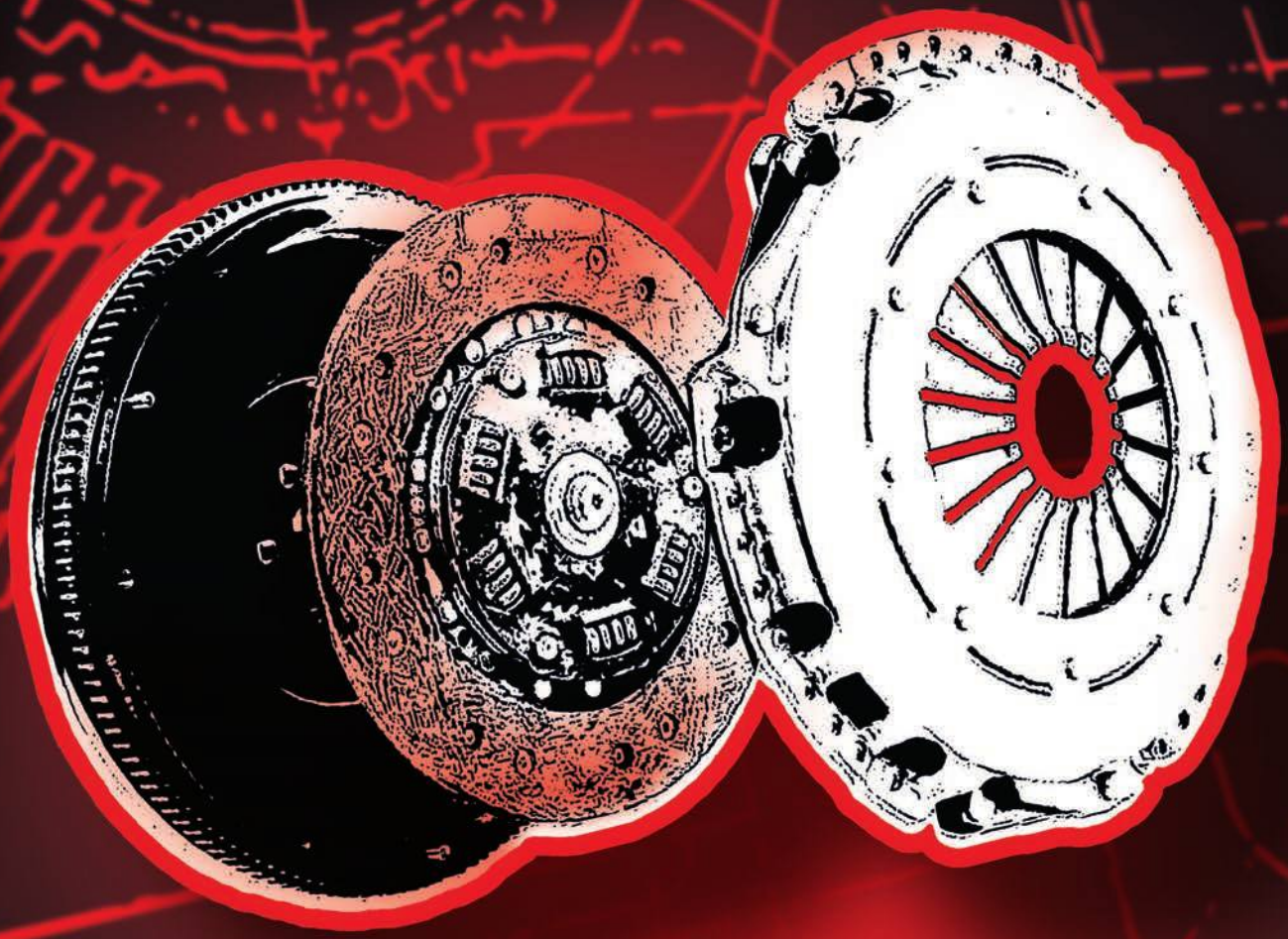
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	FROM PAGE
CENTRING TOOLS	518
SAC CLUTCH TOOLS	519
DSG CLUTCH TOOLS	522
DCT CLUTCH TOOLS	522
DUAL MASS FLYWHEEL DEGREE TEST TOOLS	522
GENERAL CLUTCH TOOLS	523

SAC clutch removal



1. Select the appropriate centring pin depending on the pilot bearing diameter and screw onto the clamping mandrel with the receiving thread M8.



2. Equip the clamping mandrel with the appropriate clamping sleeve, depending on the hub diameter of the clutch disc.



3. Insert the fully equipped clamping mandrel (relaxed clamping sleeve) into the pilot bearing.



4. Guide the new clutch disc over the centring device and insert into the flywheel receptacle. **Attention:** It is important for an optimal guiding that the centring pin is close-fitting in the pilot bearing.



5. Now the clamping sleeve is braced in the hub of the clutch disc by securing the clamping mandrel with one hand and using the other hand to actuate the drive on the mandrel end so that the clamping sleeve spreads in the hub (finger tightening is sufficient).



6. Place the new clutch pressure plate on the flywheel (note centring pins). Select the matching threaded bolts and screw 3 threaded bolts into the flywheel hand-tight offset by 120°. Offset by 90° for 4-pitch! (e.g. Mercedes W169 A-class from MJ 2004).
Attention: Always screw the short thread end into the flywheel.



7. **Attention:** Pressure plate does not abut!



8. **Correct:** Pressure plate abuts!



9. Insert the cover fastening screws into the open threaded receptacles of the flywheel and tighten.



10. Guide the SAC clamping device over the threaded bolts.



11. Screw on hexagonal nuts by hand until these are flush with the threaded bolts (parallel mounting of the SAC clutch tool set).
Attention: The pressure spindle must be completely screwed back.



12. Screw the pressure spindle onto the catch until the disc spring is actuated.
Attention: Only turn until the cover of the pressure plate touches the support of the disc flywheel.



13. Tension disc springs.



14. Completely turn back the pressure spindle - disc spring will release tension.



15. Loosen hexagonal nuts - remove clamping device.



16. Remove threaded bolts.



17. Screw the missing cover fastening screws into the now free threaded receptacles on the flywheel hand-tight. At the end, tighten all fastening screws with the torque stipulated according to the manufacturer's specifications.



18. Remove the clutch centring pin.

SAC clutch installation

During the controlled removal, the work steps take place in the reverse order from the installation, whereby the use of the centring device is not required here.

CENTRING TOOLS

Clutch aligner tool set Ø 15,0 - 26,6 mm

- Universally applicable for vehicles with a hub diameter of 15.0 - 26.6 mm
- For the professional and quick assembly of single-disc dry clutches
- For the custom-fit centring and affixing of the clutch disc to the clutch pressure plate
- It is not necessary to centre the clutch disc via the guide bearing
- For passenger vehicles and light commercial vehicles with guide bearing
- Variably adjustable in diameter from 15.0 - 18.0 mm or 20.0 - 26.6 mm





150.2285	2 pcs	Clutch aligner tool set Ø 15,0 - 26,6 mm	455	

consists of:

150.2286	Clutch centring pin Ø 15.0-18.0 mm	115	
150.2287	Clutch centring pin Ø 20.0-26.6 mm	200	

Clutch centring tool set Ø 15.0 - 28.0 mm

- Universally applicable for vehicles with a hub diameter of 15.0 - 28.0 mm
- For the professional and quick assembly of single-disc dry clutches
- For the custom-fit centring and affixing of the clutch disc to the clutch pressure plate
- It is not necessary to centre the clutch disc via the guide bearing
- Also for vehicles without guide bearings
- For passenger vehicles and light commercial vehicles
- Variably adjustable in diameter from 15,0 – 21,0 mm / 17,0 – 25,0 mm / 22,0 – 28,0 mm
- With reinforced knurled metal clamping screw





150.2180	4 pcs	Clutch centring tool set Ø 15.0 - 28.0 mm	200	

consists of:

150.2181	Centring device with clamping cone Ø 22.0-28.0 mm	182	
150.2182	Clamping cone Ø 15.0-21.0 mm	6	
150.2183	Clamping cone Ø 17.0-25.0 mm	9	



Universal clutch aligner tool set Ø 15,0 - 26,0 mm

- Universally applicable for vehicles with a hub diameter of 15.0 - 26.0 mm
- Includes 10 centring sleeves
- Sturdy design
- For the professional and quick assembly of single and two-disc dry clutches
- For the custom-fit centring and affixing of the clutch disc to the clutch pressure plate or via the guide bearing to the fly wheel
- Also for vehicles without guide bearings
- Also for front-wheel drive vehicles with a transversely mounted engine
- For passenger vehicles and light commercial vehicles





455.0170	19 pcs	Universal clutch aligner tool set Ø 15,0 - 26,0 mm	149	

consists of:

455.0171	Spindle M16 x 1.5 L= 55mm	55	
455.0172	Spindle M16 x 1.5 L= 100mm	72	
455.0173	Spindle M16 x 1.5 L= 150mm	120	
455.0174	Expander for clutch disc hubs 15-19 mm	63	
455.0175	Expander for clutch disc hubs 19.5-26 mm	106	
455.0176	Cone IG M15 x 1.5 working range 19-30 mm	125	

consists of:

455.0177	Cone IG M15 x 1.5 working range 26-35 mm	170	
455.0178	Biconical plate IG M15 x 1.5	380	
455.0180	Pilot bearing extension, 20 mm	24	
455.0181	Centring sleeve for guide bearing Ø 10.0 mm, 22 mm	11	
455.0182	Centring sleeve for guide bearing Ø 12.0 mm, 22 mm	15	
455.0183	Centring sleeve for guide bearing Ø 14.0 mm, 22 mm	21	
455.0184	Centring sleeve for guide bearing Ø 15.0 mm, 22 mm	24	
455.0185	Centring sleeve for guide bearing Ø 16.0 mm, 24 mm	27	
455.0186	Centring sleeve for guide bearing Ø 17.0 mm, 24 mm	31	
455.0187	Centring sleeve for guide bearing Ø 19.0 mm, 24 mm	38	
455.0188	Centring sleeve for guide bearing Ø 25.0 mm	64	
455.0189	Centring sleeve for guide bearing Ø 27.0 mm	74	
455.0190	Centring sleeve for guide bearing Ø 30.0 mm	90	

Clutch centring tool set Ø 15.0 - 28.0 mm with centring sleeves

- Universally applicable for vehicles with a hub diameter of 15.0 - 28.0 mm
- Includes 8 centring sleeves
- For the professional and quick assembly of single-disc dry clutches
- Parallel clamping technology with self-centring
- Precise centring process is exactly in the axis of the clutch disc hub
- For the custom-fit centring and affixing of the clutch disc to the clutch pressure plate or via the guide bearing to the fly wheel
- Also for vehicles without guide bearings
- For passenger vehicles and light commercial vehicles
- Also for front-wheel drive vehicles with a transversely mounted engine
- Variably adjustable in diameter from 15.0 - 21.0 mm or 21.0 - 28.0 mm
- With reinforced knurled metal clamping screw





150.2290	11 pcs	Clutch centring tool set Ø 15.0 - 28.0 mm with centring sleeves	820	

consists of:

150.2281	Centring tool without clamping segment set	180	
150.2282	Clamping segment set Ø 19.0 mm	10	
150.2283	Clamping segment set Ø 24.0 mm	20	
455.2291	Centring sleeve for guide bearing Ø 10.0 mm, 38 mm	20	
455.2292	Centring sleeve for guide bearing Ø 12.0 mm	20	
455.2293	Centring sleeve for guide bearing Ø 14.0 mm, 30 mm	20	
455.2294	Centring sleeve for guide bearing Ø 15.0 mm, 30 mm	30	
455.2295	Centring sleeve for guide bearing Ø 16.0 mm, 30 mm	40	
455.2296	Centring sleeve for guide bearing Ø 17.0 mm, 30 mm	40	
455.2297	Centring sleeve for guide bearing Ø 19.0 mm, 30 mm	60	
455.2298	Centring sleeve for guide bearing Ø 26.0 mm	80	

Clutch centring tool set Ø 24.0 - 36.0 mm with centring sleeves

- Universally applicable for light commercial vehicles with a hub diameter of 24.0 - 36.0 mm
- Includes 6 centring sleeves
- Sturdy design
- For the professional and quick assembly of single and two-disc dry clutches
- For the custom-fit centring of the clutch disc via the guide bearing in the crankshaft
- For vans and small lorries
- Variably adjustable in diameter from 24.0 - 36.0 mm
- With reinforced knurled metal clamping screw





150.2380	9 pcs	Clutch centring tool set Ø 24.0 - 36.0 mm with centring sleeves	700

consists of:

150.2381	Centring pin without clamping segment set Ø 24,0 mm	400
150.2382	Clamping segment set Ø 24.0 mm	40
455.2383	Threaded bolts for centring sleeve M8 x 1.25	20
455.2384	Centring sleeve for guide bearing Ø 15.0 mm, 28 mm	20
455.2385	Centring sleeve for guide bearing Ø 16.0 mm	30
455.2386	Centring sleeve for guide bearing Ø 17.0 mm, 27 mm	30
455.2387	Centring sleeve for guide bearing Ø 18.0 mm	40
455.2388	Centring sleeve for guide bearing Ø 19.0 mm, 27 mm	40
455.2389	Centring sleeve for guide bearing Ø 20.0 mm	60

Clutch centring tool set Ø 23.0 - 35.0 mm with centring sleeves for Renault

- Universally applicable for light commercial vehicles with a hub diameter of 23.0 - 35.0 mm
- Includes 6 centring sleeves
- Sturdy design
- For the professional and quick assembly of single and two-disc dry clutches
- For the custom-fit centring of the clutch disc via the guide bearing in the crankshaft
- For vans and small lorries, especially Renault
- Variably adjustable in diameter from 23.0 - 35.0 mm
- With reinforced knurled metal clamping screw





150.2390	9 pcs	Clutch centring tool set Ø 23.0 - 35.0 mm with centring sleeves for Renault	700

consists of:

150.2383	Centring pin without clamping segment set Ø 23,0 mm	400
150.2359	Clamping segment set Ø 23.0 mm	40
455.2383	Threaded bolts for centring sleeve M8 x 1.25	20
455.2384	Centring sleeve for guide bearing Ø 15.0 mm, 28 mm	20
455.2385	Centring sleeve for guide bearing Ø 16.0 mm	30
455.2386	Centring sleeve for guide bearing Ø 17.0 mm, 27 mm	30
455.2387	Centring sleeve for guide bearing Ø 18.0 mm	40
455.2388	Centring sleeve for guide bearing Ø 19.0 mm, 27 mm	40
455.2389	Centring sleeve for guide bearing Ø 20.0 mm	60

Clutch centring plate for VAG

- For the centring of the clutch drive plate to the disc fly wheel
- For the clutch disc mounted within the fly wheel
- Adjustment is not possible without this tool, since the outer diameter of the centring disc is decisive

Application range: Volkswagen, **Audi**, **Seat** and **Škoda** engines with 1.5 to 1.8 litres





	Outer Ø mm	Inner Ø mm	Rim diameter Ø mm	Height mm	
150.2392	131,8	17,3	21,4	19,6	24

Clutch centring plate for VAG

- For the centring of the clutch drive plate to the disc fly wheel
- For the clutch disc mounted within the fly wheel
- Adjustment is not possible without this tool, since the outer diameter of the centring disc is decisive

Application range: Volkswagen, **Audi**, **Seat** and **Škoda** engines with 16 valves



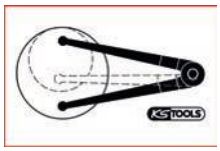


	Outer Ø mm	Inner Ø mm	Rim diameter Ø mm	Height mm	
150.2393	131,8	20,2	21,4	21,5	25

SAC CLUTCH TOOLS

Adjustable pin wrench Ø 14 - 100 mm with 5,0 mm pin

- To remove the pretension ring when installing a SAC clutch
- Variably adjustable in diameter from 14.0 - 100.0 mm
- With firmly connected pivot Ø 5.0 mm (not interchangeable)
- Burnished
- Special tool steel





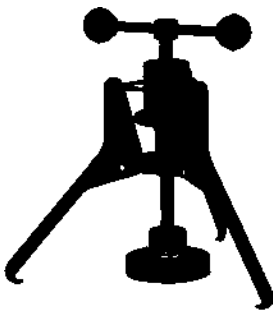
	Ø mm	Stud Ø mm	Zapfenhöhe mm	Length mm	
150.2407	14-100	5,0	6,0	215,0	300

Clutch preloader for SAC clutches for BMW / Volvo

- Required for the tension-free assembly and disassembly of SAC clutches
- For the quick, clean and safe removal and installation or replacement
- Avoids a distortion of the clutch housing, which can occur without this special tool
- Allows for the resetting of the adjusting ring in the zero position with the resetting device 150.2396
- Knurled spindle wheel for tensioning the gripper arms
- Ball bearing pressure piece

Application range:
BMW: E34, E36, E38, E39, E46, E52, E53, E60, E61, E81, E83, E85, E86, E87, E88, E90 and E91
VOLVO: C70 2.4 20V Turbo, S70 2.3 Turbo, S70 2.5 20V Turbo, S70 2.5 TDI, V70 2.3 Turbo, V70 2.5 20V Turbo, V70 2.5 TDI





	Suitable for	
150.2395	BMW, Volvo	1,68

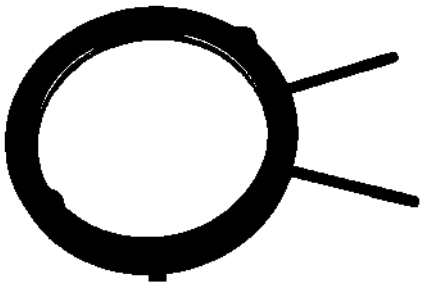


Clutch preloader for SAC clutches for BMW / Volvo

- Required for the professional assembly and disassembly of SAC clutches
- For attachment to the clutch before pre-tensioning the SAC clutch
- During the pre-tensioning in connection with the pre-tension jack 150.2395, it allows for an automatic resetting of the adjusting disc located in the SAC clutch to its zero or new position
- With knurled locking screws and adjusting lever

Application range:
BMW: E34, E36, E38, E39, E46, E52, E53, E60, E61, E81, E83, E85, E86, E87, E88, E90 and E91
VOLVO: C70 2.4 20V Turbo, S70 2.3 Turbo, S70 2.5 20V Turbo, S70 2.5 TDI, V70 2.3 Turbo, V70 2.5 20V Turbo, V70 2.5 TDI





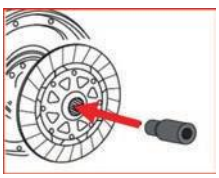
	Suitable for	g	
150.2396	BMW, Volvo	460	



Clutch centring pin Ø 23.0 mm for SAC clutches for BMW

- For hub diameter 23.0 mm
- For centring the clutch disc before the installation or reassembly of the pre-tensioned SAC clutch pressure plate
- In order to centre new, already pre-tensioned SAC clutches
- After assembly, the centring pin is removed with the attached bolts

Application range:
BMW: E36, E38, E39, E46, E87, **Mini** R50, **Mini** R53
Gearbox: S5D 200G, S5D 250G, S5D 260Z, S5D 310Z



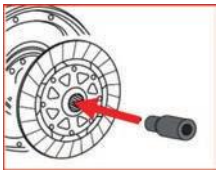


	Ø mm	Length mm	g	
150.2401	15,0/23,0	72,0	190	

Clutch centring pin Ø 26.5 mm for SAC clutches for BMW

- For hub diameter 26.5 mm
- For centring the clutch disc before the installation or reassembly of the pre-tensioned SAC clutch pressure plate
- In order to centre new, already pre-tensioned SAC clutches
- After assembly, the centring pin is removed with the attached bolts

Application range:
BMW: E36, E38, E39, E46, E87, **Mini** R50, **Mini** R53
Gearbox: S5D 200G, S5D 250G, S5D 260Z, S5D 310Z



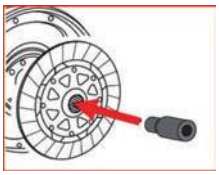


	Ø mm	Length mm	g	
150.2402	15,0/26,5	80,0	230	

Clutch centring pin Ø 26.5 mm for SAC clutches for BMW

- For hub diameter 26.5 mm
- For centring the clutch disc before the installation or reassembly of the pre-tensioned SAC clutch pressure plate
- In order to centre new, already pre-tensioned SAC clutches
- After assembly, the centring pin is removed with the attached bolts

Application range:
BMW: E36, E38, E39, E46, E87, **Mini** R50, **Mini** R53
Gearbox: GS6-37BZ, GS6-51BZ, GS6-51DZ (H-gearbox)



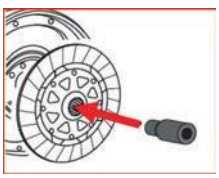


	Ø mm	Length mm	g	
150.2403	15,0/26,5	72,0	230	

Clutch centring pin Ø 28.0 mm for SAC clutches for BMW

- For hub diameter 28.0 mm
- For centring the clutch disc before the installation or reassembly of the pre-tensioned SAC clutch pressure plate
- In order to centre new, already pre-tensioned SAC clutches
- After assembly, the centring pin is removed with the attached bolts

Application range:
BMW: E36, E38, E39, E46, E87, **Mini** R50, **Mini** R53
Gearbox: S6S 420G, S6S 560G



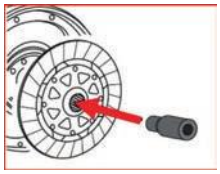


	Ø mm	Length mm	g	
150.2404	15,0/28,0	72,0	260	

Clutch centring pin Ø 32.5 mm for SAC clutches for BMW

- For hub diameter 32.5 mm
- For centring the clutch disc before the installation or reassembly of the pre-tensioned SAC clutch pressure plate
- In order to centre new, already pre-tensioned SAC clutches
- After assembly, the centring pin is removed with the attached bolts

Application range:
BMW: E92 (M3), E60 (M5), E63 (M6) with S65 (V8), S85 (V10) engines
Gearbox: GS6-53DG



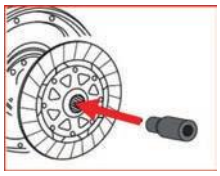


	Ø mm	Length mm	g	
150.2405	15,0/32,5	72,0	310	

Clutch centring pin Ø 34.0 mm for SAC clutches for BMW

- For hub diameter 34.0 mm
- For centring the clutch disc before the installation or reassembly of the pre-tensioned SAC clutch pressure plate
- In order to centre new, already pre-tensioned SAC clutches
- After assembly, the centring pin is removed with the attached bolts

Application range:
BMW: E36, E38, E39, E46, E87, **Mini** R50, **Mini** R53
Gearbox: S6S 420G, S6S 560G



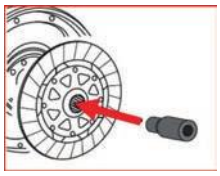


	Ø mm	Length mm	g	
150.2408	15,0/34,0	72,0	360	

Clutch centring sleeve Ø 32.5 mm for SAC clutches for BMW

- For hub diameter 32.5 mm
- For centring the clutch disc before the installation or reassembly of the pre-tensioned SAC clutch
- In order to centre new, already pre-tensioned SAC clutches
- After assembly, the centring pin is removed with the attached bolts

Application range:
BMW: E90, E91, E92, E93 (335i)
Engine: N54B30 (3.5 litre)





	Outer Ø mm	Inner Ø mm	Length mm	g	
150.2406	32,5	15,0	72,0	180	

SAC clutch tool set (3-hole pitch)

- For nearly all SAC (self-adjusting) clutches with 3-hole pitch
- Optionally expandable with 4-hole pressure plate set
- For the quick and professional assembly and disassembly of SAC clutches
- Accuracy of fit through high-precision CNC components
- For the custom-fit centring and affixing of the clutch disc to the clutch pressure plate or via the guide bearing to the fly wheel
- Even clutches for engines with larger crankshaft bore diameters than clutch discs or clutch disc hub diameters can be centred cleanly and precisely
- Resetting the adjusting ring in conjunction with the attached resetting tool
- Avoids a distortion of the clutch housing, which can occur without this special tool
- Ideal for damage-free working on the pressure plate
- Malfunctions (poor separation, sliding or picking) are avoided
- Sturdy design
- Also for vehicles without guide bearings
- For passenger vehicles and light commercial vehicles
- Chrome plated
- Special tool steel
- In durable plastic storage case





			kg	
150.2105	32 pcs	SAC clutch tool set (3-hole pitch)	6,50	

consists of:

	x		g	
150.2167	1	Aligning pin, 12mm	25	
150.2166	1	Aligning pin, 14mm	36	
150.2165	1	Aligning pin, 15mm	43	
150.2164	1	Aligning pin, 16mm	50	
150.2163	1	Aligning pin, 17mm	57	
150.2162	1	Aligning pin, 18mm	65	
150.2161	1	Aligning pin, 19mm	74	
150.2401	1	Coupling mandrel Ø 23.0 mm for SAC couplings for BMW	190	
150.2404	1	Coupling centring mandrel Ø 28.0 mm for SAC couplings for BMW	260	
150.2408	1	Coupling centring mandrel Ø 34.0 mm for SAC couplings for BMW	360	
150.2173	1	Pressure spindle	712	
150.2174	1	Resetting tool	98	
150.2176	1	3 Arm beam	1536	
150.2177	1	Locking bolt	305	
150.2178	3	Fixing bolt, M6	185	
150.2179	3	Fixing bolt, M7	192	
150.2188	3	Fixing bolt, M8	200	
150.2169	3	Nut for fixing bolt, M8	113	
150.2106	1	Centring pin receptacle	184	
150.2107	1	Centring basic tool spindle with cone operation	46	
150.2108	1	Centring basic tool clamping number	54	
150.2109	1	Centring basic tool receptacle sleeve	83	
150.2111	1	Small clamping cone	6	
150.2112	1	Large clamping cone	11	

Supplement set for SAC clutch tool set (4-hole pitch)

- Accuracy of fit through high-precision CNC components
- Required for pre-tensioning the pressure plate before removing and installing SAC clutches with 4-hole pitch
- Sturdy design
- Chrome plated
- Special tool steel

Application range: 4-hole pressure plate necessary for e.g. **Mercedes** (169) from the year of manufacture 2004 (A-class), **Opel** Insignia etc.



			kg	
150.2115	5 pcs	Supplement set for SAC clutch tool set (4-hole pitch)	2,08	

consists of:

		kg	
150.2175	4 Arm beam	1,92	
150.2178	Fixing bolt, M6	0,19	
150.2179	Fixing bolt, M7	0,19	
150.2188	Fixing bolt, M8	0,20	
150.2169	Nut for fixing bolt, M8	0,11	



SAC clutch tool set (3-hole and 4-hole pitch)

- For nearly all SAC (self-adjusting) clutches with 3-hole and 4-hole pitch
- For the quick and professional assembly and disassembly of SAC clutches
- Accuracy of fit through high-precision CNC components
- For the custom-fit centring and affixing of the clutch disc to the clutch pressure plate or via the guide bearing to the fly wheel
- Even clutches for engines with larger crankshaft bore diameters than clutch discs or clutch disc hub diameters can be centred cleanly and precisely
- Resetting the adjusting ring in conjunction with the attached resetting tool
- Avoids a distortion of the clutch housing, which can occur without this special tool
- Ideal for damage-free working on the pressure plate
- Malfunctions (poor separation, sliding or picking) are avoided
- Sturdy design
- Also for vehicles without guide bearings
- For passenger vehicles and light commercial vehicles
- Chrome plated
- Special tool steel
- In durable plastic storage case

Application range: 4-hole pressure plate necessary for e.g. **Mercedes** (169) from the year of manufacture 2004 (A-class), **Opel** Insignia etc.





			kg	
150.2160	37 pcs	SAC clutch tool set (3-hole and 4-hole pitch)	8,47	

consists of:

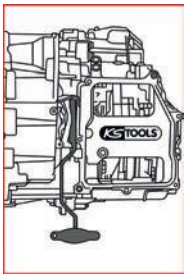
	x		g	
150.2167	1	Aligning pin, 12mm	25	
150.2166	1	Aligning pin, 14mm	36	
150.2165	1	Aligning pin, 15mm	43	
150.2164	1	Aligning pin, 16mm	50	
150.2163	1	Aligning pin, 17mm	57	
150.2162	1	Aligning pin, 18mm	65	
150.2161	1	Aligning pin, 19mm	74	
150.2173	1	Pressure spindle	712	
150.2174	1	Resetting tool	98	
150.2175	1	4 Arm beam	1920	
150.2176	1	3 Arm beam	1536	
150.2177	1	Locking bolt	305	
150.2178	4	Fixing bolt, M6	185	
150.2179	4	Fixing bolt, M7	192	
150.2188	4	Fixing bolt, M8	200	
150.2169	4	Nut for fixing bolt, M8	113	
150.2106	1	Centring pin receptacle	184	
150.2107	1	Centring basic tool spindle with cone operation	46	
150.2108	1	Centring basic tool clamping number	54	
150.2109	1	Centring basic tool receptacle sleeve	83	
150.2111	1	Small clamping cone	6	
150.2112	1	Large clamping cone	11	
150.2401	1	Coupling mandrel Ø 23.0 mm for SAC couplings for BMW	190	
150.2404	1	Coupling centring mandrel Ø 28.0 mm for SAC couplings for BMW	260	
150.2408	1	Coupling centring mandrel Ø 34.0 mm for SAC couplings for BMW	360	

DSG CLUTCH TOOLS

DSG assembly tool for VAG

- Ideal for actuating the engagement lever during assembly and disassembly of the mechatronics
- For 7-speed dual-clutch gearbox 0AM
- Special length and design
- One component T-handle
- Matt finish
- Chrome vanadium

Application range: Audi A3 (>2004), **Volkswagen** Golf (>2004), Golf (>2009), Golf Plus (>2005), Touran (>2004), Eos (>2006), Passat (>2006), Passat CC (>2009), Scirocco (>2009)



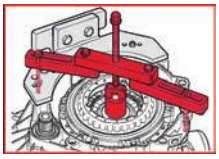


		Length mm	g	
150.2457		270,0	130	

DSG clutch tool set

- Required for the assembly and disassembly of DSG clutches (double clutch gearbox)
- Required for repair of the clutch assembly
- For the quick, clean and safe removal and installation or replacement
- Avoids a distortion of the clutch housing, which can occur without this special tool
- Sturdy design
- In durable plastic storage case

Application range:
7-speed gearbox in **Audi**, **Seat**, **Škoda** and **Volkswagen**
Gearbox: 0AM and 08D

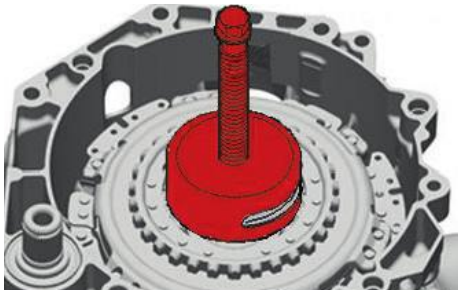




			kg	
150.2420	4 pcs	DSG clutch tool set	5,90	

consists of:

		kg	
150.2421	Support bridge	2,00	
150.2422	Pullers	2,10	
150.2423	Gauge block	0,86	
150.2424	Pressure piece, 63 mm	0,28	



Gauge block for DSG gearbox

- suitable for adjusting the position of the indenting bearings
- for K1 and K2 couplings
- Sturdy design

Application range: 7-speed transmission in **Audi**, **Seat**, **Škoda** and **Volkswagen**
Gearbox: 0AM >06.2011



	Inner Ø mm	Outer Ø mm	Height mm	kg	
150.2412	64,0	123,0	60,0	3,97	

DCT CLUTCH TOOLS

DCT clutch tool set for Ford / Volvo

- required for the assembly and disassembly of DCT clutches (double clutch transmission)
- Required for repair of the clutch assembly
- the coupling is released by jerking counter-clockwise rotation
- For the quick, clean and safe removal and installation or replacement
- Sturdy design
- Chrome vanadium

Application range: 6-speed transmission in **Ford** Focus >2004, C-Max, S-Max, Galaxy, Mondeo >2007, Kuga >2013, **Volvo** C30, C70 >2006, S40 >2004, S60 >2011, S80 >2007, V40 >2013, V50, V60, V70 >2008, XC60, **Dodge** Avenger, Journey and **Chrysler** Sebering



3/8"

			kg	
150.2415	6 pcs	DCT clutch tool set for Ford / Volvo	1,15	

consists of:

	x		g	
150.2416	1	Primary body with 3/8" drive	900	
150.2417	1	Traverse	230	
150.2418	2	Hook	2	
150.2419	2	Wing nuts	2	

DUAL MASS FLYWHEEL DEGREE TEST TOOLS

Dual mass flywheel inspection tool without angular degree disc and dial gauge

- Required for the proper and quick wear test of the dual mass flywheel degree (ZMS)
- The test may be performed on the vehicle when the clutch is removed
- The clearance angle is tested via the number of teeth
- The dual mass flywheel must be checked with every clutch replacement
- Without verification, there is the risk of damaging the new clutch assembly, gearbox or the drive train
- Saves a lot of time
- For quick, precise and professional work
- Sturdy design
- In durable plastic storage case







			kg	
150.2435	15 pcs	Dual mass flywheel inspection tool without angular degree disc and dial gauge	3,30	

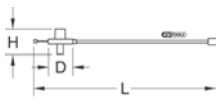
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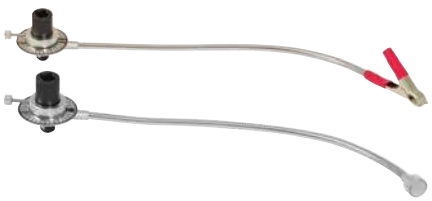
		kg	
150.2426	Lever with protective handle	1,10	
150.2427	Spacer screw M6 (2 pieces)	0,06	
150.2428	Spacer screw M7 (2 pieces)	0,06	
150.2429	Spacer screw M8 (2 pieces)	0,08	
150.2430	Union nut M8 (4 pieces)	0,04	
150.2431	Threaded pin M8 x 80 (pointer)	0,06	
150.2433	Flywheel locking tool (2 pieces), 65 mm	0,16	
150.2432	Measurement stand	0,41	

Rotary angle disc

- For fastening screws at an angle
- Device for angle regulated fastening with a torque wrench
- Flexible arm
- Range 0° - 360°
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- Optionally with a magnetic arm or claw arm







	□	■	Arm	Pitch	D mm	H mm	L mm	g	
516.1195	1/2"	1/2"	magnet	2°	67,0	63,0	480,0	170	
516.1196	1/2"	1/2"	claw	2°	67,0	63,0	538,0	60	
516.1197	3/4"	3/4"	magnet	2°	80,0	63,0	500,0	170	
516.1198	3/4"	3/4"	claw	2°	80,0	87,0	698,0	60	

Digital rotation protractor with magnet

- For fastening screws at an angle
- Magnetic
- digital angle display
- acoustic signal and LED display refer to reaching the set angle
- Right- and left-hand suit
- Angle precision: ± 2%
- Resolution: 0.1 °
- Includes 2 AAA 1,5 V batteries
- including calibration declaration of conformity according to DIN EN ISO 6789:2017(E) - traceable to national standards
- In durable plastic storage case







	Ø mm	g
516.1191	55,0	720

Precision dial indicator gauge 0 - 10 mm

- In accordance with DIN 878
- With securing screw and turnable dial face
- Shockproof
- Splash proofed
- Measuring tip protected against contamination by a bellowed sleeve
- Clamping shaft Ø 8 mm H6
- With 2 measuring scales
- Spindle and clamping shaft made from stainless steel
- In durable plastic case







	Measuring range mm	D mm	Display accuracy mm	Pointer revolution mm	g
300.0560	0 - 10	60,0	+/- 0,01	1,0	260

Digital precision dial indicator gauge 0 - 10 mm

- mm/imperial switching
- Reset (to zero) in every position
- Large LCD display figure height 6,0 mm
- Clamping shaft Ø 8 mm H6
- With automatic switching off
- Spindle and clamping shaft made from stainless steel
- In durable wooden case



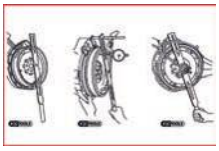




	Measuring range mm	D mm	Display accuracy mm	g
300.0565	0 - 10	60,0	+/- 0,02	280

Dual mass flywheel inspection tool with angular degree disc and dial gauge

- Required for the proper and quick wear test of the dual mass flywheel degree (ZMS)
- The test may be performed on the vehicle when the clutch is removed
- The clearance angle is checked via the number of teeth or degree wheel (rotation of the secondary disc to the primary disc until the onset of the spring pressure) and the tilting tolerance via the dial gauge (axial bearing clearance)
- The dual mass flywheel must be checked with every clutch replacement
- Without verification, there is the risk of damaging the new clutch assembly, gearbox or the drive train
- Saves a lot of time
- For quick, precise and professional work
- Sturdy design
- In durable plastic storage case







			kg
150.2425	17 pcs	Dual mass flywheel inspection tool with angular degree disc and dial gauge	3,90

consists of:

		g
150.2426	Lever with protective handle	1100
150.2427	Spacer screw M6 (2 pieces)	60
150.2428	Spacer screw M7 (2 pieces)	60
150.2429	Spacer screw M8 (2 pieces)	80
150.2430	Union nut M8 (4 pieces)	40
150.2431	Threaded pin M8 x 80 (pointer)	60
150.2432	Measurement stand	414
150.2433	Flywheel locking tool (2 pieces), 65 mm	160
516.1196	Torque angle gauge, 1/2", claw	60
300.0560	Precision dial indicator gauge 0 - 10 mm	260

GENERAL CLUTCH TOOLS

Clutch cable bracket

- Before removing the clutch, the self-adjusting clutch cable is to be secured with the bracket
- Allows the use of the old clutch cable
- Without the use of this bracket, the clutch cable can no longer be used following disassembly
- Sturdy design

Application range: Volkswagen Golf starting in the 1989 year of manufacture





	Length mm	g
150.2436	73,0	76

Retaining bracket set

- For holding the pre-tensioned clutch pressure plate during assembly and disassembly of the clutch
- Sturdy design

Application range: Opel with front-wheel drive





			g
150.2437	3 pcs	Retaining bracket set	83

Pre-tension jack

- For clutch pressure plates
- No distortion of the clutch pressure plates
- Special tool steel



	Ø mm	kg	
150.2399	160,0	2,86	

Auxiliary assembly ring

- In order to secure the pre-tensioned diaphragm spring to the clutch pressure plate
- for Ø 110-140 mm
- Plastic





	Ø mm	Total depth mm	g	
150.2434	110-140	10,0	100	

Precision inner bearing extraction set Ø 10 - 30 mm

- Includes 8 collets Ø 10 - 30 mm
- Centering shaft
- For the quick and clean replacement of close fitting pilot/guide bearings
- Universal usage
- Extremely robust spindle with inductively hardened thread
- Special tool steel



			kg	
660.0009	11 pcs	Precision inner bearing extraction set Ø 10 - 30 mm	1,92	

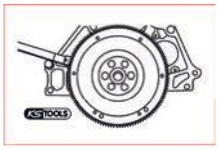
consists of:

		g	
660.0129	Expanding mandrel 5 mm	315	
660.0131	Expanding mandrel 6 mm	360	
660.0132	Striking weight	850	
660.0133	Precision internal extractor collet Ø 10 mm	44	
660.0134	Precision internal extractor collet Ø 12 mm	52	
660.0135	Precision internal extractor collet Ø 15 mm	65	
660.0136	Precision internal extractor collet Ø 17 mm	84	
660.0137	Precision internal extractor collet Ø 20 mm	92	
660.0138	Precision internal extractor collet Ø 25 mm	137	
660.0139	Precision internal extractor collet Ø 27 mm	159	
660.0141	Precision internal extractor collet Ø 30 mm	180	

Flywheel holding key

- To lock the flywheel
- Required for the removal and installation of disc flywheels, clutch pressure plates and belt pulleys
- Sturdy design

Application range: Opel with front-wheel drive



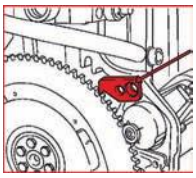


	Length mm	Width mm	Total depth mm	g	
150.2438	255,0	26,0	26,0	500	

Flywheel locking tool for GM / Opel

- For locking the fly wheels
- For easily attaching to one of the small fixing pins next to the fly wheel
- Special tool steel

Application range: for all **Opel** and **GM** 4 and 6 cylinder CIH, 24V and OHC engines





	Suitable for	g	
400.9045	GM, Opel	80	

Variable flywheel locking tool set

- For locking the flywheel when the gearbox is removed
- Required for the removal and installation of disc flywheels, clutch pressure plates and belt pulleys
- Axially and radially adjustable
- For use with the gearbox screw and the attached spacers
- The number of spacers can be extended to any amount for the required distance with the washers
- Universal usage
- Sturdy design





			g	
150.2439	6 pcs	Variable flywheel locking tool set	172	

consists of:

		g	
150.2448	Flywheel locking tool (2 pieces), 65 mm	160	
150.2441	Spacer sleeve Ø 28.0 mm x 3.0 mm tall	12	
150.2442	Spacer sleeve Ø 28.0 mm x 6.0 mm tall	22	
150.2443	Spacer sleeve Ø 28.0 mm x 9.0 mm tall	34	
150.2444	Spacer sleeve Ø 26.0 mm x 15.0 mm tall	20	

Flywheel locking tool set for VAG

- For locking the flywheel when the gearbox is removed
- Required for the removal and installation of disc flywheels, clutch pressure plates and belt pulleys
- For use with the gearbox screw and the attached spacers
- Sturdy design

Application range: 02A, 02J and 6-speed transmission in **VAG**



			g	
150.2445	2 pcs	Flywheel locking tool set for VAG	377	

consists of:

		g	
150.2446	Locking tool	263	
150.2447	Spacer sleeve, length 40 mm	115	

XXL wobble extension

- Internal square to DIN 3120 / ISO 1174 with ball reception
- Wobble extension with ball lock
- 8° tilt angle to each side
- For manual operation
- Matt finish
- Chrome vanadium





1/2"

	Length mm	kg	
911.1487	450,0	0,75	
911.1488	600,0	1,00	
911.1489	750,0	1,25	

Drive shaft bit socket with joint for spline (XZN®) screws

- Ideally suited to assembly and disassembly of screws on drive shaft flange (transmission side) from the wheel casing
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Extra long execution
- With sand blasted bit insert
- Matt finish
- Chrome vanadium



3/8"

		Length mm	g	
150.1717	M10	143,0	123	

Drive shaft bit socket for spline (XZN®) screws

- Ideally suited to assembly and disassembly of screws on drive shaft flange (transmission side) from the wheel casing
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Extra long execution
- With sand blasted bit insert
- Matt finish
- Chrome vanadium



1/2"

		Length mm	g	
150.1720	M8	800,0	580	
150.1725	M10	800,0	580	
150.1730	M12	800,0	580	
150.1735	M14	800,0	580	

Drive shaft-bit socket-set for spline (XZN®)-Screws

- Ideally suited to assembly and disassembly of screws on drive shaft flange (transmission side) from the wheel casing
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Extra long execution
- With sand blasted bit insert
- Matt finish
- Chrome vanadium

1/2"

			kg	
150.1740	4 pcs	M8 - M10 - M12 - M14	2,50	

Clutch pressure plate bit socket for multi-teeth (XZN®) screws

- For the quick and professional assembly and disassembly of the clutch pressure plate
- Spline (XZN®)
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- with press-fitted nickel-plated bit
- For manual operation
- Matt finish
- Chrome vanadium



1/2"

		D mm	L mm	T mm	g	
911.1347	M7	22,0	55,0	17,0	69	

Clutch pressure plates 12 point force socket

- For the quick and professional assembly and disassembly of the clutch pressure plate and the flywheel
- 12 point
- Internal square drive to DIN 3121 / ISO 1174
- Short execution
- For machinery usage
- Phosphate finish
- Chrome molybdenum



1/2"

	○ mm	L mm	D1 mm	D2 mm	T mm	g	
515.0988	9,0	38,0	15,8	25,0	12,0	160	

RIBE® impact socket

- For tamperproof RIBE® profile
- zum Lösen und Anziehen von Zylinderkopf- und Kupplungsverschraubungen
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- For machinery usage
- Phosphate finish
- Chrome vanadium

Application range: Nissan and **Renault**

1/2"

		L mm	g	
911.0896	M6S	38,0	49	
911.0897	M8S	38,0	50	
911.0898	M12S	38,0	71	

RIBE® impact socket set

- For tamperproof RIBE® profile
- zum Lösen und Anziehen von Zylinderkopf- und Kupplungsverschraubungen
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- For machinery usage
- Phosphate finish
- Chrome vanadium

Application range: Nissan and **Renault**

1/2"

			g	
911.0895	3 pcs	M6S - M8S - M12S	190	

Oil filter wrench for Haldex transmission

- Special length and design
- For the assembly and disassembly of the difficult to reach oil filter of the Haldex transmission
- Allows for simple and time-saving oil filter change
- 12 point
- Matt finish
- Chrome vanadium

Application range: Volkswagen Golf/Passat/Sharan/Caddy/Tiguan/Transporter T5 (4MOTION Models), **Škoda** Yeti/Octavia II/Superb II with all-wheel transmission shift

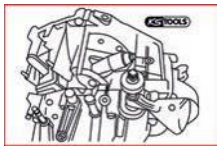


	mm	Length mm	g	
150.2098	46,0	390,0	770	

Puller for disengaging shaft for Fiat Ducato

- For the quick and professional extraction of the clutch release shaft
- Required for clutch replacement and gearbox repair
- Sturdy design

Application range: Fiat Ducato, **Citroën** Jumper, **Peugeot** Boxer from the year of manufacture 1994 with pull-type clutch.



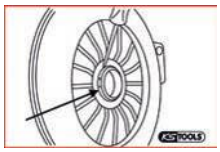


	Length mm	Width mm	Total depth mm	g	
911.2440	240,0	110,0	50,0	950	

Dismantling mandrel for release bearing

- Required to pre-tension the circlip
- For the quick and professional removal of the release bearing from the pressure plate

Application range: Fiat Ducato, **Peugeot** Boxer, **Citroën** Jumper, **Peugeot** 406 with pull-type clutch



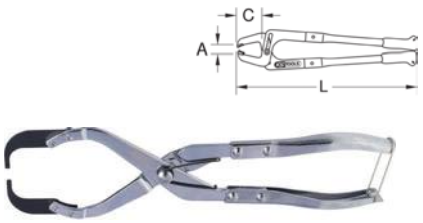


	Length mm	Width mm	Total depth mm	g	
911.2445	240,0	110,0	50,0	530	

Clutch master cylinder collet

- Suitable for the installation and removal of the pedal bearing block
- Required for releasing the clutch master piston rod from the clutch pedal
- Quick and easy application
- Special tool steel

Application range: Opel Astra J, Signum C, Vectra C; **Audi** A1 (8X), A3 (8P), A4 (B7), A6 (C6); **Volkswagen** Golf (1K1), Passat (3B6), Eos (1F) etc.



	A mm	C mm	L mm	g	
150.1309	85,0	95,0	295,0	265	



KS TOOLS®

Innovation is our mission!

	FROM PAGE
RELEASE TOOLS	528
SPLAY TOOLS	531
SUPPORT DEVICES	532
CAMBER ADJUSTMENT TOOLS	532
SPRING FEET BRACKET	534
MCPHERSON SPRING COMPRESSOR	534
INTERNAL SPRING COMPRESSOR	537
STATIONARY SPRING COMPRESSOR	538

RELEASE TOOLS

Shock absorber external hexagonal counter holder socket

- 6 point
- Ideal for the assembly and disassembly of the rear shock absorber
- For correct and damage-free use please pay attention to manufacturer's torque values
- With open window
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Phosphate finish
- Chrome vanadium





1/2"

		mm	L mm	Suitable for	g
150.9493	◯	22,0	90,0	Audi, VW	206

Socket for external 12-sided counter-holder

- 12 point
- ideally suited for mounting and dismounting injection nozzles and the rear shock absorbers
- Internal square to DIN 3120 / ISO 1174 with ball reception
- With a side window for guiding the cable of the motion sensor and the return pipe
- For manual operation
- Phosphate finish
- Chrome molybdenum





1/2"

		mm	L mm	Suitable for	g
150.9541	◯	21,0	90,0	VW Golf II, Golf III, Jetta, Vento, Passat	300

Shock absorber hexagon socket counter holder angled screwdriver

- Hexagon socket
- Ideal for counter holding front shock absorber piston rods during assembly and disassembly
- For professional and damage-free use
- For repair work in the spring area (shock absorber, spring strut, coil springs etc.)
- Angled design
- With milled metal handle
- Matt finish
- Chrome vanadium





		mm	L mm	g
150.9494	◉	7,0	150,0	100

Shock absorber external hexagonal counter holder socket

- 6 point
- Ideal for counter holding shock absorber piston rods during assembly and disassembly
- For correct and damage-free use please pay attention to manufacturer's torque values
- For repair work in the spring area (shock absorber, spring strut, coil springs etc.)
- External hexagon drive
- Matt finish
- Chrome vanadium





	mm	mm	L mm	Suitable for	g
150.9414	19,0	14,0	83,0	Honda, Nissan	130
150.9416	19,0	16,0	83,0	VW, Audi, Seat, Fiat	140
150.9417	19,0	17,0	83,0	Ford, VW, Audi, Seat, Fiat	140
150.9418	22,0	18,0	83,0	Ford, VW, Audi, Seat, Fiat, Rover, Opel, Peugeot, Renault, Japanese vehicles	180
150.9419	22,0	19,0	83,0	VW, Audi, Seat, Citroën, Fiat, Opel, Peugeot, Toyota	180
150.9421	22,0	21,0	83,0	Mercedes, Chrysler, VW, Audi, Ford, japanische Fahrzeuge	200
150.9422	22,0	22,0	83,0	VW, Audi, Seat, Fiat, Citroën, Opel, Peugeot, Renault, BMW	220
150.9424	22,0	24,0	83,0	Volvo	250
150.9427	22,0	27,0	83,0	VW, Audi, Citroën, Peugeot	320

Special shock absorber counter holder wrench

- Special profile
- Ideal for counter holding rear shock absorber piston rods during assembly and disassembly
- Thanks to the perfect fit on the shock absorber piston it is almost impossible to slide over
- For professional and damage-free use
- For repair work in the spring area (shock absorber, spring strut, coil springs etc.)
- Special tool steel





		mm	L mm	Suitable for	g
150.9476	◯	5,2x8,0x-6,3x9	175,0	VW, Audi, Ford, Opel, Honda	182



Universal shock absorber counter holder bit socket

- 10.0 bit holder for all bits on the market
- Ideal for counter holding the shock absorber piston rods whilst at the same time releasing of tightening the piston rod nuts
- For correct and damage-free use please pay attention to manufacturer's torque values
- For repair work in the spring area (shock absorber, spring strut, coil springs etc.)
- External drive hexagonal socket 10.0 mm
- Sand-blasted
- Chrome vanadium





10 mm

		mm	L mm		g
150.9460	◯	10,0	92,5	universal	100

Shock absorber special profile counter holder bit socket

- Special profile
- Ideal for counter holding the shock absorber piston rods whilst at the same time releasing of tightening the piston rod nuts
- For correct and damage-free use please pay attention to manufacturer's torque values
- For repair work in the spring area (shock absorber, spring strut, coil springs etc.)
- External drive hexagonal socket 10.0 mm
- Sand-blasted
- Chrome vanadium





10 mm

		mm	L mm	Suitable for	g
150.9434	◯	4,0x7,0	92,5	Nissan	90
150.9435	◯	5,2x8,0	92,5	VW, Audi, Nissan	90
150.9436	◯	6,0x9,0	92,5	VW, Audi, Renault	100
150.9437	◯	6,3x9,0	92,5	Nissan	100
150.9438	◯	7,0x10,0	92,5	VW, Audi, Seat, Fiat	100
150.9439	◯	8,0x11,0	92,5	Seat, Fiat	100
150.9440	◯	9,0x12,0	92,5	Japanese vehicles	110
150.9441	◯	10,0x13,0	92,5	Seat, Fiat, Volvo	110
150.9442	◯	12,0x15,0	92,5	Seat, Fiat	110

Shock absorber half-crescent counter holder bit socket

- Half-crescent profile
- Ideal for counter holding the shock absorber piston rods whilst at the same time releasing of tightening the piston rod nuts
- For correct and damage-free use please pay attention to manufacturer's torque values
- For repair work in the spring area (shock absorber, spring strut, coil springs etc.)
- External drive hexagonal socket 10.0 mm
- Sand-blasted
- Chrome vanadium





10 mm

		mm	L mm	Suitable for	g
150.9445	◯	5,0x6,0	92,5	Nissan	90
150.9450	◯	10,0x12,0	92,5	VW, Audi, Nissan	110

Shock absorber external hexagon counter holder bit socket

- 6 point
- Ideal for counter holding the shock absorber piston rods whilst at the same time releasing of tightening the piston rod nuts
- For correct and damage-free use please pay attention to manufacturer's torque values
- For repair work in the spring area (shock absorber, spring strut, coil springs etc.)
- External drive hexagonal socket 10.0 mm
- Sand-blasted
- Chrome vanadium




10 mm

		mm	L mm	Suitable for	g	
150.9458	⬡	8,0	92,5	Mercedes	90	
150.9459	⬡	9,0	92,5	Opel, Chrysler	90	
150.9460	⬡	10,0	92,5	Chrysler, Ford	100	
150.9461	⬡	11,0	92,5	Japanese vehicles	100	

Shock absorber Internal hexagon counter holder bit socket

- Hexagon socket
- Ideal for counter holding the shock absorber piston rods whilst at the same time releasing of tightening the piston rod nuts
- For correct and damage-free use please pay attention to manufacturer's torque values
- For repair work in the spring area (shock absorber, spring strut, coil springs etc.)
- External drive hexagonal socket 10.0 mm
- Sand-blasted
- Chrome vanadium




10 mm

		mm	L mm	Suitable for	g	
150.9465	◉	5,0	92,5	Honda	100	
150.9466	◉	6,0	92,5	Seat, Fiat, Citroën, Peugeot, Ford, Opel, Renault, BMW, japanische Fahrzeuge	100	
150.9467	◉	7,0	92,5	VW, Audi, Seat, Fiat, Citroën, Peugeot, Mercedes, Renault	100	
150.9468	◉	8,0	92,5	Mercedes	100	

Shock absorber slotted counter holder bit socket

- Slotted
- Ideal for counter holding the shock absorber piston rods whilst at the same time releasing of tightening the piston rod nuts
- For correct and damage-free use please pay attention to manufacturer's torque values
- For repair work in the spring area (shock absorber, spring strut, coil springs etc.)
- External drive hexagonal socket 10.0 mm
- Sand-blasted
- Chrome vanadium




10 mm

		mm	L mm	Suitable for	g	
150.9473	⊖	3,0x10,0	92,5	Mercedes, Opel, Renault	80	
150.9474	⊖	3,5x10,0	92,5	Chrysler, Ford, Citroën, Peugeot	80	
150.9475	⊖	4,0x10,0	92,5	Citroën, Peugeot	80	

Shock absorber spline (XZN®) counter holder bit socket

- Spline
- Ideal for counter holding the shock absorber piston rods whilst at the same time releasing of tightening the piston rod nuts
- For correct and damage-free use please pay attention to manufacturer's torque values
- For repair work in the spring area (shock absorber, spring strut, coil springs etc.)
- External drive hexagonal socket 10.0 mm
- Sand-blasted
- Chrome vanadium




10 mm

		D	L mm	Suitable for	g	
150.9481	◉	M12	100,0	Opel	100	

Shock absorber Torx counter holder bit socket

- Torx
- Ideal for counter holding the shock absorber piston rods whilst at the same time releasing of tightening the piston rod nuts
- For correct and damage-free use please pay attention to manufacturer's torque values
- For repair work in the spring area (shock absorber, spring strut, coil springs etc.)
- External drive hexagonal socket 10.0 mm
- Sand-blasted
- Chrome vanadium




10 mm

			L mm	Suitable for	g	
150.9542	✱	T40	92,5	VW, Porsche	100	
150.9482	✱	T50	92,5	Ford, Nissan	100	
150.9483	✱	T60	92,5	Ford	100	

Special shock absorber counter holder wrench for screwing in spring foot connections of the Mercedes A class

- 12 point
- Ideal for counter holding the lower shock absorber spring foot connections during assembly and disassembly
- For professional and damage-free use
- For repair work in the spring area (shock absorber, spring strut, coil springs etc.)
- Particularly useful for measurement and adjusting work
- Matt finish
- Chrome vanadium




		mm	L mm	Suitable for	g	
150.3021	⬡	21,0	90,0	Mercedes A class type 169 (>2004)	120	

Special counter-holding wrench for spring VAG foot connections

- Double-sided usage for 6-point and 8-point nuts
- Ideal for counter holding the securing nut on the spring strut
- For professional and damage-free use
- For repair work in the spring area (shock absorber, spring strut, coil springs etc.)
- With flexible head
- Matt finish
- Chrome vanadium



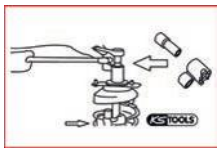


	mm	Length mm	g	
150.9457	13,0	126,0	152	
150.9462	14,0	126,0	152	

Special bumper counter holder tool set for Volvo

- For repair work in the spring area (shock absorber, spring strut, coil springs etc.)
- For counter holding the piston rod and at the same time releasing the securing nuts on the piston rod
- For exact torque tightening of the shock absorber piston rods
- Chrome vanadium

Application range: Volvo C70 Coupe (<2002), C70 Convertible (<2005), S70, V70 (<2000), V70XC (<2000), 850, XC90, V70 (2000-2008), V70 XC (>2001), XC70 (<2007), S60, 850, C70 Convertible (<2005), S70, S80 (<2006)




1/2"

			g	
150.9425	2 pcs	Special bumper counter holder tool set for Volvo	422	

consists of:

		g	
150.9447	Groove nut spanner	282	
150.9448	Shock absorber counter holder socket	140	





Special shock absorber release tool for Mercedes V class

- Ideal tool for the assembly and disassembly of shock absorbers on V class vehicles
- Extra long
- Internal square drive to DIN 3120 / ISO 1174 for counter holding the piston rod
- With 21 mm operation for opening the cap nut
- 7 mm internal square for securing the piston rod
- External drive hexagonal socket 18.0 mm
- Simple handling
- Matt finish
- Chrome vanadium

Application range: Mercedes Type 639 (Viana and Vito)



	mm	mm	L mm	Suitable for	g	
150.3097	18,0	7,0	280,0	Mercedes V class	420	

Shock absorber piston rod line wrench

- Ideally suited for assembling springs, since the piston rod of the shock absorber can be held in the correct position
- Makes the installation of the spring easier
- For professional and damage-free use
- For repair work in the spring area (shock absorber, spring strut, coil springs etc.)
- Locking handle
- Special tool steel



	mm	L mm	Suitable for	g	
150.9451	M10x1	280,0	Renault	420	
150.9452	M10x1,5	280,0	BMW	420	
150.9453	M12x1,25	280,0	BMW	420	
150.9454	M12x1,5	280,0	Audi	420	
150.9455	M14x1,5	280,0	Audi, Opel, VW	420	
150.9456	M15x1,5	280,0	GM, Opel	420	

Special groove nut wrench

- Ideal for the easy release of slotted nuts on the shock absorber piston rod of the rear axle
- Perfectly sized for a secure fit
- Correct assembly and disassembly
- With two pins
- External drive hexagonal socket 22.0 mm
- Chrome vanadium





	mm	Suitable for	g	
150.9401	10,5x3,5	VW rear axle	60	
150.9402	12,5x3,5	VW front axle	50	
150.9403	14,5x5,0	Audi 80, Seat, Škoda, VW Polo, Golf, Passat	50	
150.9404	14,5x3,0	Austin Maestro	50	
150.9405	14,0x2,5	Mercedes C class W203, CLK W209	60	

Special slotted nut wrench set for VAG

- Especially for Audi and Volkswagen
- Ideal for the easy release of slotted nuts on the shock absorber piston rod
- Perfectly sized for a secure fit
- Correct assembly and disassembly
- With two pins
- External drive hexagonal socket 22.0 mm
- Chrome vanadium





			g	
150.9410	3 pcs	Special slotted nut wrench set for VAG	170	

consists of:

		g	
150.9401	Strut entrainer socket, 10.5mm, VW	60	
150.9402	Strut entrainer socket, 12.5mm, VW	50	
150.9403	Strut entrainer socket, 14.5mm, VAG	50	



Special shock absorber assembly help set for shock absorbers with rebound buffer springs

- For assembly and disassembly of shock absorbers with rebound buffer springs
- Simply remove the entire rebound buffer spring and align securely
- Simple handling
- One-man operation
- Minimum time needed
- Significantly reduces risks when changing springs or shock absorbers
- In durable plastic storage case





			kg	
150.9545	7 pcs	Special shock absorber assembly help set for shock absorbers with rebound buffer springs	3,17	

consists of:

		g	
151.8135	T-handle ball ended hexagon key wrench, 6mm	140	
150.9498	Universal clamp to 150.9495 incl. screws, short	126	
150.9499	Screws for universal clamp, long	55	
150.9546	Telescopic tube to 150.9545	865	
150.9547	Intermediate bearing to 150.9545	700	
150.9548	Lever for 150.9545	400	

Universal shock absorber tool set

- For repair work in the spring area (shock absorber, spring strut, coil springs etc.)
- Suitable for all common vehicles
- For counter holding the piston rod and at the same time releasing the securing nuts on the piston rod
- For exact torque tightening of the shock absorber piston rods
- Chrome vanadium
- In durable plastic storage case





			kg	
150.9430	18 pcs	Universal shock absorber tool set	2,73	

consists of:

150.9416	Shock absorber external hexagonal counter holder socket 16mm	140	
150.9417	Shock absorber external hexagonal counter holder socket 17mm	140	
150.9418	Shock absorber external hexagonal counter holder socket 18mm	180	
150.9419	Shock absorber external hexagonal counter holder socket 19mm	180	
150.9421	Shock absorber external hexagonal counter holder socket 21mm	200	
150.9422	Shock absorber external hexagonal counter holder socket 22mm	220	
150.9435	10mm Shock absorber special profile counter holder bit socket,5,2x8mm	90	
150.9436	10mm Shock absorber special profile counter holder bit socket,6x9mm	100	
150.9438	10mm Shock absorber special profile counter holder bit socket,7x10mm	100	
150.9466	10 mm Shock absorber Internal hexagon counter holder bit socket, 6 mm	100	
150.9467	10 mm Shock absorber Internal hexagon counter holder bit socket, 7 mm	100	
150.9468	10 mm Shock absorber Internal hexagon counter holder bit socket, 8 mm	100	
150.9481	10 mm Shock absorber spline (XZN) counter holder bit socket, M12	100	
150.9482	10 mm Shock absorber Torx counter holder bit socket, T50	100	
150.9483	10 mm Shock absorber Torx counter holder bit socket, T60	100	
503.4210	GEARplus Combination ratchet spanner, 10mm	50	
503.4219	GEARplus Combination ratchet spanner, 19mm	240	
503.4222	GEARplus Combination ratchet spanner, 22mm	345	

MASTER shock absorber tool set

- For repair work in the spring area (shock absorber, spring strut, coil springs etc.)
- Suitable for all common vehicles
- For counter holding the piston rod and at the same time releasing the securing nuts on the piston rod
- For exact torque tightening of the shock absorber piston rods
- Chrome vanadium
- In durable plastic storage case





150.9400	39 pcs	MASTER shock absorber tool set	6,30	

consists of:

150.9401	Strut entrainer socket, 10.5mm, VW	60	
150.9402	Strut entrainer socket, 12.5mm, VW	50	
150.9403	Strut entrainer socket, 14.5mm, VAG	50	
150.9404	Strut entrainer socket, 14.5mm, Austin	50	
150.9405	Strut entrainer socket, 14mm, Mercedes W203	60	
150.9414	Shock absorber external hexagonal counter holder socket 14mm	130	
150.9416	Shock absorber external hexagonal counter holder socket 16mm	140	
150.9417	Shock absorber external hexagonal counter holder socket 17mm	140	
150.9418	Shock absorber external hexagonal counter holder socket 18mm	180	
150.9419	Shock absorber external hexagonal counter holder socket 19mm	180	
150.9421	Shock absorber external hexagonal counter holder socket 21mm	200	
150.9422	Shock absorber external hexagonal counter holder socket 22mm	220	

consists of:

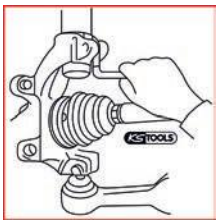
150.9424	Shock absorber external hexagonal counter holder socket 24mm	250	
150.9427	Shock absorber external hexagonal counter holder socket 27mm	320	
150.9434	10mm Shock absorber special profile counter holder bit socket,4x7mm	90	
150.9435	10mm Shock absorber special profile counter holder bit socket,5,2x8mm	90	
150.9436	10mm Shock absorber special profile counter holder bit socket,6x9mm	100	
150.9437	10mm Shock absorber special profile counter holder bit socket,6,3x9mm	100	
150.9438	10mm Shock absorber special profile counter holder bit socket,7x10mm	100	
150.9439	10mm Shock absorber special profile counter holder bit socket,8x11mm	100	
150.9440	10mm Shock absorber special profile counter holder bit socket,9x12mm	110	
150.9441	10mm Shock absorber special profile counter holder bit socket,10x13mm	110	
150.9442	10mm Shock absorber special profile counter holder bit socket,12x15mm	110	
150.9445	10mm Shock absorber half-crescent counter holder bit socket, 5x6mm	90	
150.9450	10mm Shock absorber half-crescent counter holder bit socket, 10x12mm	110	
150.9458	10mm Shock absorber external hexagon counter holder bit socket, 8mm	90	
150.9459	10mm Shock absorber external hexagon counter holder bit socket, 9mm	90	
150.9460	10mm Shock absorber external hexagon counter holder bit socket, 10mm	100	
150.9461	10mm Shock absorber external hexagon counter holder bit socket, 11mm	100	
150.9465	10 mm Shock absorber Internal hexagon counter holder bit socket, 5 mm	100	
150.9466	10 mm Shock absorber Internal hexagon counter holder bit socket, 6 mm	100	
150.9467	10 mm Shock absorber Internal hexagon counter holder bit socket, 7 mm	100	
150.9468	10 mm Shock absorber Internal hexagon counter holder bit socket, 8 mm	100	
150.9473	10mm Shock absorber slotted counter holder bit socket, 3x10mm	80	
150.9474	10mm Shock absorber slotted counter holder bit socket, 3,5x10mm	80	
150.9475	10mm Shock absorber slotted counter holder bit socket, 4x10mm	80	
150.9481	10 mm Shock absorber spline (XZN) counter holder bit socket, M12	100	
150.9482	10 mm Shock absorber Torx counter holder bit socket, T50	100	
150.9483	10 mm Shock absorber Torx counter holder bit socket, T60	100	



SPLAY TOOLS

Flange spreader for the spring foot mounting

- Ideal for time-saving and damage-free splaying of the axle joint clamp boreholes or ball joint attachments
- Makes the assembly and disassembly easier
- For most current vehicle types
- 90° angled
- Continuous hardened
- Matt chrome
- Special tool steel





	Spread dim mm	Width mm	L mm		
150.9407	7,0	5,0	205,0	65	

Flange splayed bit socket set for the spring foot mounting

- Ideal for time-saving and damage-free splaying of the axle joint clamp boreholes or ball joint attachments
- Makes the assembly and disassembly easier
- For most current vehicle types
- Continuous hardened
- Matt chrome
- Special tool steel





1/2"

150.9490	2 pcs	Flange splayed bit socket set for the spring foot mounting	120

consists of:

150.9491	1/2" Flange spreading socket, 5,0 x 7,0 mm	60	
150.9492	1/2" Flange spreading socket, 5,5 x 8,2 mm	60	

Ball joint spliter set

- Ideal for splaying the axle joint clamp boreholes, or ball joint attachments
- It is necessary to remove the secured spring absorber unit from the axle joint clamp boreholes
- Makes the assembly and disassembly easier
- Damage to the axle joint housing (cast or aluminium) is avoided
- Universal usage due to 2 pairs of different splay clamps and securing bolts
- Without compressing the thread ends, e.g. when pressing together
- Optimal adjustment, therefore slips are almost impossible
- Exact centring due to the screw-on and toughened bore jigs
- External drive hexagonal socket 13.0 mm
- Special tool steel





700.5650	11 pcs	Ball joint spliter set	750

consists of:

	x		g
700.5651	1	Basic unit for clamp bore holes splay tool, short	100
700.5652	1	Guide bolt set, 8 x 10 mm, 2 pcs	100
700.5653	1	Guide bolt set, 10 x 12 mm, 2 pcs	100
700.5654	1	Splay wedge black, 5 mm	100
700.5655	1	Splay wedge silver, 8 mm	100
700.5656	1	Hexagon key wrench, 3mm	100
700.5658	1	Spindle to 700.5650	50
700.5659	2	Arm to 700.5650	100

MASTER clamp bore hole splay tool set

- An additional bridge allows for the use of two wedges at the same time
- Especially for Audi and Volkswagen 4 wheel steering axle
- Ideal for splaying the axle joint clamp boreholes, or ball joint attachments
- It is necessary to remove the secured spring absorber unit from the axle joint clamp boreholes
- Makes the assembly and disassembly easier
- Damage to the axle joint housing (cast or aluminium) is avoided
- Universal usage due to 2 pairs of different splay clamps and securing bolts
- Without compressing the thread ends, e.g. when pressing together
- Optimal adjustment, therefore slips are almost impossible
- Exact centring due to the screw-on and toughened bore jigs
- External drive hexagonal socket 13.0 mm
- Special tool steel





			g
700.5660	15 pcs	MASTER clamp bore hole splay tool set	855

consists of:

	x		g
700.5651	1	Basic unit for clamp bore holes splay tool, short	100
700.5661	1	Basic unit for clamp bore hole splay tool, long	196
700.5652	1	Guide bolt set, 8 x 10 mm, 2 pcs	100
700.5653	1	Guide bolt set, 10 x 12 mm, 2 pcs	100
700.5654	2	Splay wedge black, 5 mm	100
700.5655	2	Splay wedge silver, 8 mm	100
700.5656	1	Hexagon key wrench, 3mm	100
700.5658	2	Spindle to 700.5650	50
700.5659	2	Arm to 700.5650	100

SUPPORT DEVICES

Axle joint support device

- Universal usage
- Ideally suited for supporting the axle joint with a transmission jack
- The support is carried out via the wheel hub
- The axle joint can be lowered or raised as desired to the required position
- Secure fix
- Necessary, e.g. when fitting or removing the shock absorber
- Various adjustments
- Special tool steel





	Drive	Length mm	g
150.9409	Ø 30 mm	200,0	980

CAMBER ADJUSTMENT TOOLS

Camber adjustment tool

- Ideally suited to setting the camber on vehicles with separated spring feet
- One-man operation
- The tool is tensioned between the rim and the bodywork (wings)
- Clear reduction in time required
- Adjustment is carried out by turning the sturdy hexagonal nut
- External drive hexagonal socket 22.0 mm
- Special tool steel





	Clamping range mm	kg
150.9415	135,0 - 175,0	1,16

Camber adjustment tool

- Ideally suited to setting the camber on vehicles with separated spring feet
- One-man operation
- The tool is tensioned between the rim and the bodywork (wings)
- Clear reduction in time required
- Adjustment is carried out by turning the sturdy hexagonal nut
- External drive hexagonal socket 22.0 mm
- Special tool steel





	Clamping range mm	kg
150.9420	135,0 - 200,0	1,21

Camber setting tool for BMW

- Ideally suited to setting the camber on the front axle
- It is used after knocking out the locating bolt of the strut bearing in a downwards direction via the spring strut bearing
- Quick and correct work without a great amount of effort
- One-man operation
- The adjustment process is carried out via the exact alignment of the upper spring strut bearing
- Without this tool the correct and exact adjustment of the camber is almost impossible
- Aluminium

Application range: BMW 1 series (E81, E82, E87, E88), 3 series (E46, E90, E91, E92, E93), X3 (E83), X5 (E53), Z4 (E85, E86)





	Ø mm	Height mm	g
150.1821	82,0	25,0	347

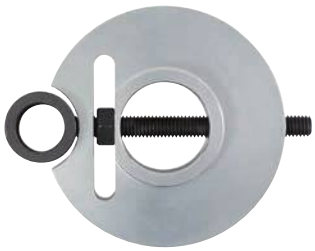


Camber setting tool for BMW

- Ideally suited to setting the camber on the front axle
- It is used after knocking out the locating bolt of the strut bearing in a downwards direction via the spring strut bearing
- Quick and correct work without a great amount of effort
- One-man operation
- The adjustment process is carried out via the exact alignment of the upper spring strut bearing
- Without this tool the correct and exact adjustment of the camber is almost impossible
- Aluminium

Application range: BMW 5 series, (E39, E60, E61), 6 series (E63, E64), 7 series (E38, E65, E66, E67)





	Ø mm	Height mm	g	
150.1822	83,0	17,0	343	

BMW camber setting tool set

- Ideally suited to setting the camber on the front axle
- It is used after knocking out the locating bolt of the strut bearing in a downwards direction via the spring strut bearing
- Quick and correct work without a great amount of effort
- One-man operation
- The adjustment process is carried out via the exact alignment of the upper spring strut bearing
- Without this tool the correct and exact adjustment of the camber is almost impossible
- Aluminium

Application range: BMW 1 series (E81, E82, E87, E88), 3 series (E46, E90, E91, E92, E93), 5 series, (E39, E60, E61), 6 series (E63, E64), 7 series (E38, E65, E66, E67), X3 (E83), X5 (E53), Z4 (E85, E86)







			g	
150.1820	2 pcs	BMW camber setting tool set	689	

consists of:

		g	
150.1821	BMW camber setting tool 1, 1er, 3er, X3, X5, Z4	347	
150.1822	BMW camber setting tool 2, 5er, 6er, 7er	343	

Camber adjustment tool for BMW rear axles

- Ideally suited for adjusting the camber on the rear axle
- The rear wishbones can moved with this therefore setting the camber
- Quick and correct work without a great amount of effort
- One-man operation
- Without this tool the correct and exact adjustment of the camber is almost impossible
- Special tool steel

Application range: BMW 3 series, (E36, E46)





			g	
150.1895	2 pcs	Camber adjustment tool for BMW rear axles	630	

consists of:

		g	
150.1897	Camber adjustment tool for BMW E36	414	
150.1898	Adaptor ring for BMW E46	213	



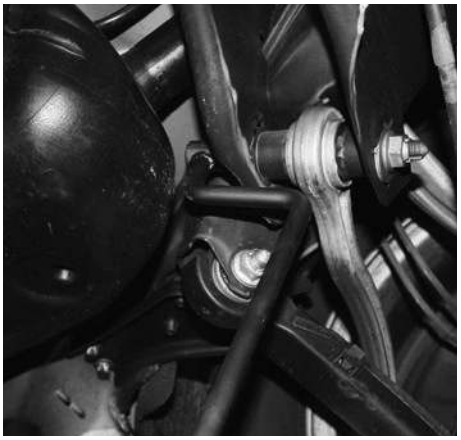
Axle tracking adjustment tool for VAG passenger cars with 4 wheel drive

- Ideally suited to tracking adjustments to the rear axle
- Suitable for the hard-to-reach adjustment screws
- Quick and correct work without a great amount of effort
- One-man operation
- 90° angled
- Two component handle
- Matt finish
- Chrome vanadium

Application range: all **Audi** and **Volkswagen** vehicles with all-wheel drive, e.g. **Audi** A4 Quattro, **Volkswagen** Passat 4motion etc.



		Total length mm	g	
150.9426	M12	310,0	340	



Axle tracking adjustment tool for Mercedes

- Ideally suited to tracking adjustments to the rear axle
- Suitable for the hard-to-reach adjustment screws
- Quick and correct work without a great amount of effort
- One-man operation
- twice angled
- Without this tool the correct and exact adjustment of the tracking is almost impossible
- Includes interchangeable spline bits
- Two component handle
- Matt finish
- Chrome vanadium

Application range: Mercedes C class and S class, also for older models with under body panels and vehicles with level sensors





			g	
150.9470	3 pcs	Axle tracking adjustment tool for Mercedes	440	

consists of:

		g	
150.9471	Basic adjustment tool for Mercedes	410	
150.9472	10 mm attachment XZN bit, M10	14	
150.9443	10 mm attachment XZN bit, M12	16	

Tracking adjustment cam nut for BMW

- Ideal for adjusting the tracking on the rear axle as well as camber adjustment on the wishbone
- For adjustment the screws must be removed from the lower wishbone
- By putting in and turning the cam nut on the securing screw the wishbone is moved to the required camber adjustment
- Internal square drive adaptor to DIN 3120 / ISO 1174
- Special tool steel

Application range: BMW E36 E46 E83 E85



1/2"

	Length mm	g	
700.1671	40,0	300	

Tracking adjustment cam nut for Mini

- Ideal for adjusting the tracking on the rear axle as well as camber adjustment on the wishbone
- For adjustment the screws must be removed from the lower wishbone
- By putting in and turning the cam nut on the securing screw the wishbone is moved to the required camber adjustment
- Internal square drive adaptor to DIN 3120 / ISO 1174
- Special tool steel

Application range: Mini (2002 - 2006)



		Length mm	g
1/2"	150.9700	40,0	462

Tracking adjustment tool for Mercedes

- Ideally suited to tracking adjustments to the rear axle
- Removes mounting of the exhaust system
- Saves a lot of time
- No adjustment of the cam screw when removing the counter nut
- External double-hex drive 21 mm with integrated Torx 55 use and internal hexagon drive 17 mm
- Special tool steel

Application range: Mercedes W211, **Mercedes** C219 and **Mercedes** W209



	○ mm		mm	Length mm	g
700.1672	21,0	T55	17	260,0	280

Camber level

- Ideally suited to adopting the prescribed camber adjustment values before removing the shock absorbers
- The level is secured with the magnetic side on the brake discs or wheel hubs and the value can be read
- Following the repair the adjustment value is easily restored
- Quick and correct work without a great amount of effort
- Saves measuring the axle
- With adjustment wheel to allow for a zero setting
- Includes strong magnetic feet
- In durable plastic storage case



	Total length mm	g
150.9431	125,0	450

SPRING FEET BRACKET

Universal spring foot bracket

- For a secure and comfortable clamping of the spring feet
- Ensures a secure assembly and disassembly
- Eliminates damage
- With rubber clamp jaws
- Includes mounting brackets for a secure assembly on the work bench
- Special tool steel





		kg
500.8709	Universal spring foot bracket	3,17

MCPHERSON SPRING COMPRESSOR

Safety arrester cable for spring compressor

- Ideal for securing the spring to the shock absorber during assembly and disassembly
- Additional safety features
- Adaptable for McPherson spring compressor
- With snap hooks



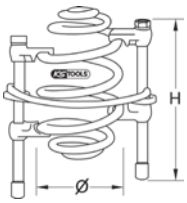


	Total length mm	g
500.8407	215,0	203



Coil spring compressor with safety latch

- Ideally suited for assembly and disassembly of coil springs
- Necessary for changing shock absorbers or coil spring
- Change without removing the shock absorber strut
- Variable safety bar prevents slipping
- For vehicles up to max. 2000 kg
- Meets the requirements of the professional (ZH1/454)
- GS approved
- Special tool steel

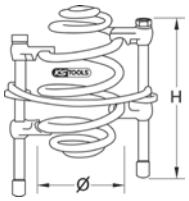




	Ø mm	H mm	max N·m	Max travel mm	max t	mm	mm	kg
670.0021	110-180	240	70	200	3,5	M18x2x280	19	2,40
670.0041	110-180	300	60	300	1,8	M16x2x380	17	2,80

Coil spring compressor with safety latch and plastic coated hook

- Ideally suited for assembly and disassembly of coil springs
- Necessary for changing shock absorbers or coil spring
- Change without removing the shock absorber strut
- Variable safety bar prevents slipping
- Plastic-coated hooks allow for optimal grip
- For vehicles up to max. 2000 kg
- Meets the requirements of the professional (ZH1/454)
- GS approved
- Special tool steel





	Ø mm	H mm	max N·m	Max travel mm	max t	mm	mm	kg
670.0031	110-180	240	70	200	3,5	M18x2x280	19	2,50
670.0051	110-180	300	60	300	1,8	M16x2x380	17	2,90

Universal shock absorber holder

- ideally suited for safe assembly and disassembly of coil springs with a few turns
- For use alongside spring tensioner 500.8625
- Universal for 90% of all common types of vehicles
- Necessary for changing shock absorbers or coil spring
- Spring bracket adapters are secured with strong bolts
- Forged and tempered
- Special tool steel



		kg
500.8541	Universal shock absorber holder	1,81

Coil spring compressor set

- Contains safety arrester cable as an additional safety feature
- Universal for 90% of all common types of vehicles
- With two standard pairs of spring holders
- Simple and secure clamping in the vise
- With protective polyurethane inserts to protect the spring
- Ergonomic high-tech polyurethane handle
- Working spindle that can be used with an impact wrench
- Jaw holders plastic coated
- Jaws are fitted with a nose that locks the spring during stretching to increase security and safety
- In accordance with the TÜV approval, it can bear extraordinarily high loads with a maximum capacity of 1800 kg
- A shear pin protects against overload
- Special tool steel





Technical data:

Spring force max:	1800 kg
Opening of jaws min:	65,0
Jaw width max:	375,0
Spring capacity:	80,0 - 200,0 mm

			kg
500.8625	6 pcs	Coil spring compressor set	11,55

consists of:

	x		kg
500.8626	1	Main body spring tensioner, max. load 1800 kg	5,20
500.8523	2	Standard spring holder with protective insert, Ø 80.0 to 120.0 mm	1,16
500.8524	2	Standard spring holder with protective insert, Ø 80.0 to 200.0 mm	1,64
500.8519	1	Safety arrester cable for spring tensioner 500.8625	0,08

Universal spring bracket for McPherson spring compressor

- Ideally suited for assembly and disassembly of McPherson spring feet
- For use alongside spring tensioner 500.8625
- Universal for 90% of all common types of vehicles
- Necessary for changing shock absorbers or coil spring
- Spring bracket adapters are secured with strong bolts
- Forged and tempered
- Special tool steel



		Ø mm	Suitable for	kg
500.8503	A	80-120	universal	3,36
500.8507	B	80-145	universal	1,44
500.8508	D	145-195	universal	1,58
500.8523	F	80-120	universal	1,16
500.8524	G	80-200	universal	1,64

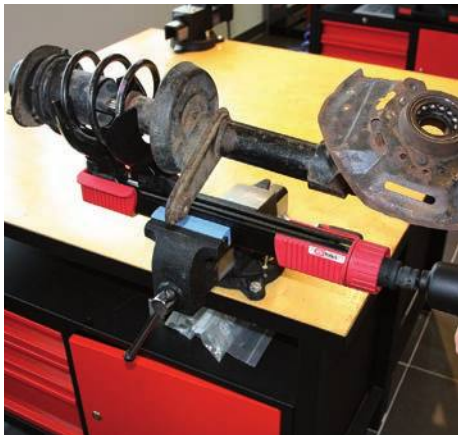
Spring bracket for left-turning springs

- Ideally suited for assembly and disassembly of McPherson spring feet
- For use alongside spring compressor 500.8625
- Necessary for changing shock absorbers or coil spring
- Spring bracket adapters are secured with strong bolts
- Forged and tempered
- Special tool steel

Application range: Honda CR-V, HR-V, **Nissan** Maxima QS, Patrol, Qashqai, for left-turning springs Ø 145-195 mm



	Suitable for	kg
500.8517	Left-turning springs	1,70



Spring bracket for Mercedes

- Ideally suited for assembly and disassembly of McPherson spring feet
- For use alongside spring compressor 500.8625
- Necessary for changing shock absorbers or coil spring
- Spring bracket adapters are secured with strong bolts
- Forged and tempered
- Special tool steel

Application range: Mercedes C class (W204-205), E class (W207)



	Suitable for	kg
500.8516	Mercedes	2,70

Spring bracket for Mercedes C class

- Ideally suited for assembly and disassembly of McPherson spring feet
- For use alongside spring compressor 500.8625
- Necessary for changing shock absorbers or coil spring
- Spring bracket adapters are secured with strong bolts
- Forged and tempered
- Special tool steel



	Suitable for	g
500.8510	Mercedes	800

Spring bracket for Mercedes/Renault

- Ideally suited for assembly and disassembly of McPherson spring feet
- For use alongside spring compressor 500.8625
- Necessary for changing shock absorbers or coil spring
- Spring bracket adapters are secured with strong bolts
- Forged and tempered
- Special tool steel



	Suitable for	kg
500.8513	Mercedes, Renault	2,40

Spring bracket for Peugeot/Citroën

- Ideally suited for assembly and disassembly of McPherson spring feet
- For use alongside spring compressor 500.8625
- Necessary for changing shock absorbers or coil spring
- Spring bracket adapters are secured with strong bolts
- Forged and tempered
- Special tool steel



	Suitable for	kg	
500.8514	Peugeot, Citroën	2,32	



Penholder for BMW / Mini

- Ideally suited for assembly and disassembly of McPherson spring feet
- For use alongside spring compressor 500.8625
- Necessary for changing shock absorbers or coil spring
- Spring bracket adapters are secured with strong bolts
- Forged and tempered
- Special tool steel

Application range: BMW 1 Series, 2 Series, 3 Series, 4 Series (F Series) and **Mini** One, Cooper, Cooper S



		kg	
500.8540	Penholder for BMW / Mini	3,00	

Spring bracket for BMW/Renault/Toyota

- Ideally suited for assembly and disassembly of McPherson spring feet
- For use alongside spring compressor 500.8625
- Necessary for changing shock absorbers or coil spring
- Spring bracket adapters are secured with strong bolts
- Forged and tempered
- Special tool steel

Application range: BMW E39, E46, **Toyota** Avensis, **Renault** Megane 2



	Suitable for	kg	
500.8509	BMW, Renault, Toyota	2,40	



Spring bracket set for Mercedes/BMW/Renault/Toyota

- Ideally suited for assembly and disassembly of McPherson spring feet
- For use alongside spring compressor 500.8625
- Necessary for changing shock absorbers or coil spring
- Spring bracket adapters are secured with strong bolts
- Forged and tempered
- Special tool steel

Application range: Toyota Avensis, **Renault** Megane 2, **Mercedes** C class, E class, **BMW** 3 series E46, E90, **BMW** 5er E39, E60, E61





			kg	
500.8525	2 pcs	Spring bracket set for Mercedes/ BMW/Renault/Toyota	3,20	

consists of:

		kg	
500.8509	Spring holder, for BMW and Renault	2.40	
500.8510	Spring holder, for MERCEDES C classe type 203	0.80	

Universal coil spring compressor set

- Ideally suited for assembly and disassembly of McPherson spring feet
- Necessary for changing shock absorbers or coil spring
- Universal for 90% of common vehicle springs in passenger cars and transporters
- Cost effective and robust alternative to conventional spring compressor
- With 2 forged standard spring bracket pairs
- Also suitable for conical and ball springs
- Ergonomic high-tech polyurethane handle
- Working spindle is suitable for the impact screws
- Shear pin on the drive nut protects from overloading
- Spring brackets are fitted with a safety nose that locks the spring during stretching to increase security and safety
- Spring bracket adapters are secured with strong bolts
- With MOT certification
- Extremely high load - max. load of 2,600 kg
- Special tool steel
- Includes safety arrester rope





Technical data:

Spring force max:	2600 kg
Jaw width max:	355,0 mm
Spring capacity:	80,0 - 195,0 mm

			kg	
500.8400	5 pcs	Universal coil spring compressor set	13,50	

consists of:

		kg	
500.8401	Spring compressor based unit, max. 2,600kg	8,20	
500.8403	Safety pin set, 15 pcs 3,5-6mm	0,10	
500.8405	Spring holder pair,dbl.holding func.Ø80-160mm	3,50	
500.8406	Spring holder pair,dbl.holding func.Ø140-195mm	4,00	
500.8407	Safety arrester rope	0,20	



Universal McPherson spring compressor set with safety arrester cable and vice holders

- Contains safety arrester cable as an additional safety feature
- With vice assembly bracket to simply and safely tension in the vice
- Ideally suited for assembly and disassembly of McPherson spring feet
- Necessary for changing shock absorbers or coil spring
- Universal for 90% of common vehicle springs in passenger cars and transporters
- With 2 forged standard spring bracket pairs
- Also suitable for conical and ball springs
- Ergonomic high-tech polyurethane handle
- Working spindle is suitable for the impact screws
- Shear pin on the drive nut protects from overloading
- Spring brackets are fitted with a safety nose that locks the spring during stretching to increase security and safety
- Spring bracket adapters are secured with strong bolts
- With MOT certification
- Extremely high load - max. load of 2,600 kg
- Special tool steel





Technical data:

Spring force max:	2600 kg
Opening of jaws min:	50,0 mm
Jaw width max:	310,0 mm
Spring capacity:	80,0 - 195,0 mm

			kg
500.8475	6 pcs	Universal McPherson spring compressor set with safety arrester cable and vice holders	15,20

consists of:

		kg
500.8401	Spring compressor based unit, max. 2,600kg	8,20
500.8403	Safety pin set, 15 pcs 3,5-6mm	0,10
500.8404	Holder for spring compressor 500mm	1,50
500.8405	Spring holder pair,dbl.holding func.Ø80-160mm	3,50
500.8406	Spring holder pair,dbl.holding func.Ø140-195mm	4,00
500.8407	Safety arrester rope	0,20



Spring bracket adapter set for Mercedes/BMW

- Ideally suited for assembly and disassembly of McPherson spring feet
- For use alongside spring compressor 500.8700
- Necessary for changing shock absorbers or coil spring
- Forged and tempered
- Special tool steel

Application range: BMW 3 series E46, E90, 5 series E39, E60, **Mercedes** C class (203), E class (211, 219)

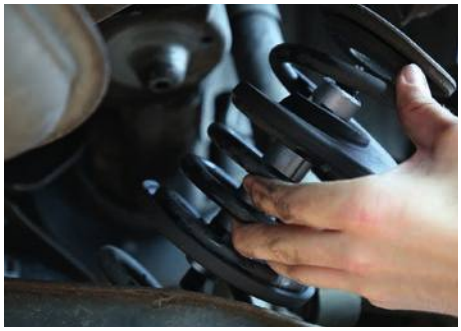




			g
500.8410	2 pcs	Spring bracket adapter set for Mercedes/BMW	500

consists of:

		g
500.8411	Large adaptor	350
500.8412	Small adaptor	150



Spring bracket adapter for BMW

- Ideally suited for assembly and disassembly of McPherson spring feet
- For use alongside spring compressor 500.8700
- Necessary for changing shock absorbers or coil spring
- Forged and tempered
- Special tool steel

Application range: BMW 3 series E81, E82, E87, E88, 3er E90, E91, E92, E93

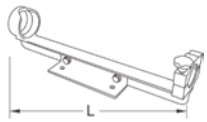


		kg
500.8413	Spring bracket adapter for BMW	1,34

Spring compressor vice assembly bracket

- Can be used alongside with the spring compressor 500.8400
- Makes working on suspension struts easy and safe
- Ensures a secure assembly and disassembly
- Includes a mounting bracket for horizontal or vertical use
- Special tool steel







	L mm	kg
500.8404	500,0	1,50

INTERNAL SPRING COMPRESSOR

Universal telescopic centre compressor set for internal springs

- For removal/installation of spiral springs on spring strut and independent multilink suspensions
- Safe removal and installation without dismantling the axle
- Saves a lot of time
- New, revised version with longer clamping stroke
- Suitable cup springs for reliable holding of the spiral spring
- Clamps the spring reliably in the middle of the spring
- Good positioning thanks to compact form
- Overload protection with torsion drive element
- Suitable for use on vehicles with very small access bores
- Spring holder with special geometry
- In durable plastic storage case





Technical data:

Spring force max:	1600 kg
Opening of jaws min:	95,0 mm
Jaw width max:	220,0 mm
Square drive:	1/2"

			kg
500.8755	9 pcs	Universal telescopic centre compressor set for internal springs	4,14

consists of:

	x		g
500.8756	1	Spring compressor based unit, 3990 kg	605
500.8757	1	Torsion drive 1/2"x1/2", 100 Nm	245
500.8758	2	Spring holder Ø 75-115 mm	640
500.8759	2	Spring holder Ø 90-140 mm	950
500.8761	2	Securing mechanism spring holder	16
500.8762	1	Assembly pin for securing mechanism	37

STATIONARY SPRING COMPRESSOR

Pressurised air stand spring compressor

- Working pressure 735 kg by 6 bar, 1200 kg by 10 bar
- Ideal for tensioning spring feet
- Pressurised air support allows for extremely comfortable working
- Secure assembly and disassembly of the shock absorbers with McPherson spring feet system
- Suitable for 95% of all vehicles on the market
- Robust safety cage to prevent accidents
- Sturdy foot for optimal stability
- Secure and easy to use
- Special tool steel





Technical data:

Operating pressure max:	10 bar
Connection thread:	1/4"
Air consumption:	250 l/min
Compression force max:	2.400 kg
Total length:	400,0 mm
Compression stroke:	450,0 mm
Width	500,0 mm
Height:	1200,0 mm

		kg
500.8800	Pressurised air stand spring compressor	65,00



Pressurised air spring tensioner with double cylinder

- Working pressure 1,200 kg by 5 bar, 2,400 kg by 10 bar
- Through double cylinder with up to 2,400 kg also suitable for strong springs (transporters, SUV, etc.)
- Ideal for tensioning spring feet
- Pressurised air support allows for extremely comfortable working
- Secure assembly and disassembly of the shock absorbers with McPherson spring feet system
- Suitable for 95% of all vehicles on the market
- Robust safety cage to prevent accidents
- Sturdy foot for optimal stability
- Secure and easy to use
- Special tool steel



Technical data:

Operating pressure max:	10 bar
Connection thread:	1/4"
Compression force max:	2.400 kg
Compression stroke:	450,0 mm
Width	500,0 mm
Air consumption:	250 l/min
Height:	1200,0 mm
Total length:	400,0 mm

		kg
500.8810	Pressurised air spring tensioner with double cylinder	91,00

Adapter plate for pressured air stand spring compressor

- Universal adapter plate for pressurised air stand spring compressor 500.8800
- Ideal for attaching spring feet
- Optimal for a secure stand when assembling and disassembling
- With 4 securing bolts and 4 threaded bolts
- Delivered with 2 snap rings for assembly
- Simple handling
- Special tool steel







	Length mm	Width mm	Height mm	kg
500.8801	355,0	260,0	120,0	7,57

Safety stand for pressurised air spring compressor

- Sturdy safety stand to adapt the working height
- Simple assembly with straps and screws
- 4-point tubular frame with secure stand
- Special tool steel





	Length mm	Width mm	Height mm	kg
500.8802	470,0	450,0	300,0	10,24

Replacement wheel set for the pressurised air stand spring compressor

- For use with the pressurised air spring compressor 500.8800
- 2 rubber tyres at 120 mm
- Ideal for transport

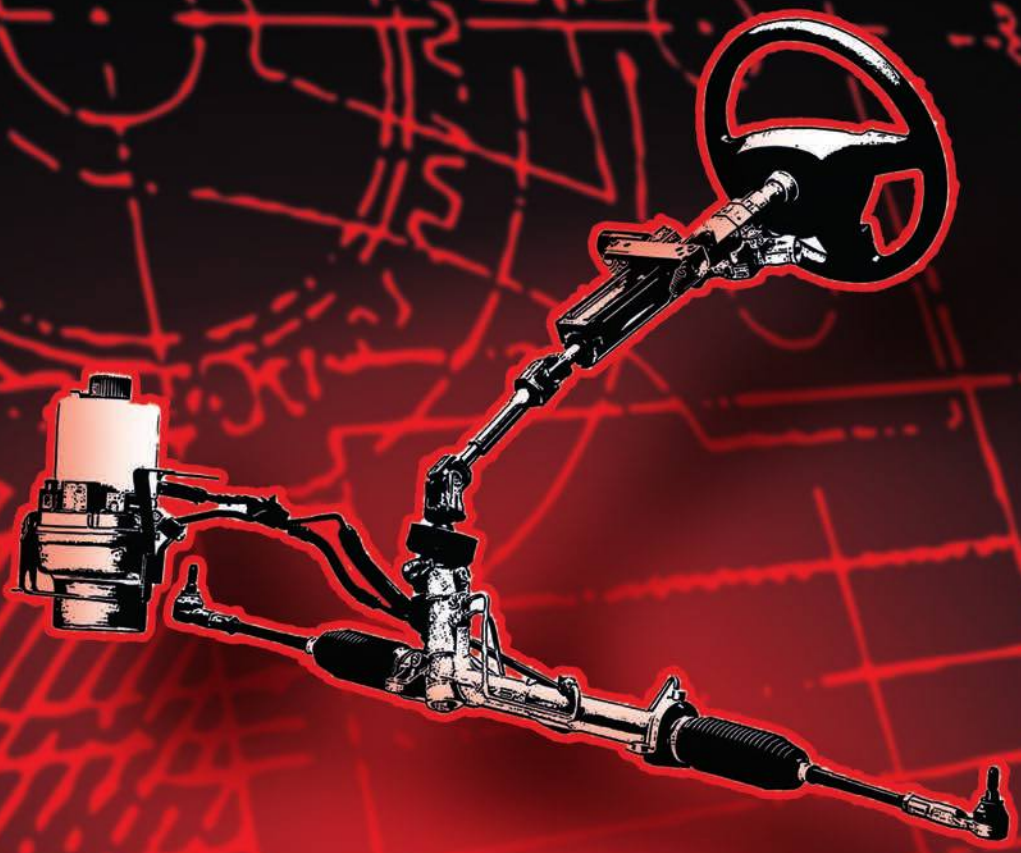


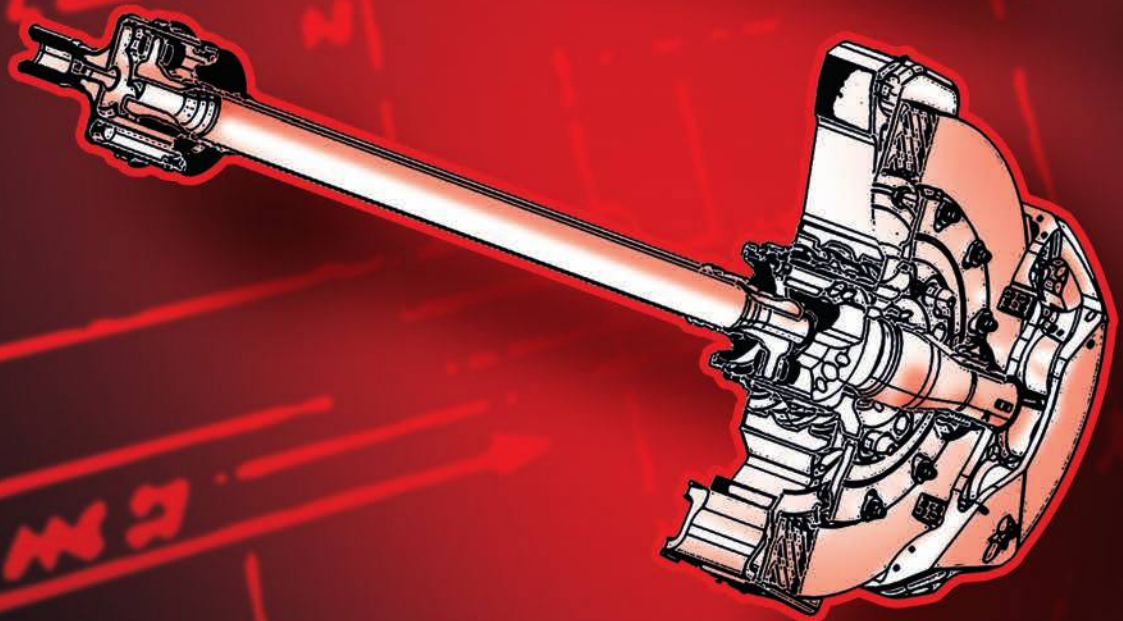


		kg
500.8803	Replacement wheel set for the pressurised air stand spring compressor	1,73

KSTOOLS APP


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PROTRACTOR
WASSERWAAGE
LEVEL
MESSSCHIEBER
CALIPER
RECHNER
CALCULATOR
SENKLOT
PLUMB LINE
DEZIBELMESSER
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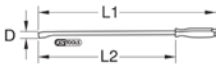
	FROM PAGE
LEVER / PRY BARS	542
AXLE PLAY TEST TOOL	543
INDUCTION TOOLS	544
SPLAY TOOLS	545
WISHBONE DISASSEMBLY	546
VEHICLE-SPECIFIC BALL JOINT EXTRACTORS	547
UNIVERSAL PIVOT PIN EJECTOR	547
UNIVERSAL BALL JOINT EJECTOR WITH LEVER	547
BALL PIN PULLER VIBRO IMPACT	549
CLAMP SCREWS EJECTOR	550
WORKBENCHES	551
HYDRAULIC AXLE TOOLS	551
ADAPTER	553
HYDRAULIC AXLE TOOLS - HINGE TOOLS	554
HYDRAULIC AXLE TOOLS - WHEEL BEARING TOOLS	556
DISASSEMBLY OF WHEEL BEARINGS	557
WHEEL BEARING ASSEMBLY	559
WHEEL BEARING ASSEMBLY AND DISASSEMBLY	559
HYDRAULIC AXLE TOOLS - SILENT BEARING TOOLS	563
MECHANICAL AXLE TOOLS - STEERING	567
CAMBER ADJUSTMENT TOOLS	571
MECHANICAL AXLE TOOLS - CARRYING JOINT	573
SOCKET SET FOR CHASSIS BOLTING	575
VIBRO IMPACT	576
SEPARATION AND ASSEMBLY FORK	577
DRIVE SHAFT FITTINGS	578
BEARING RING TOOL	582
PLIERS FOR SECURING RINGS	582
PROP SHAFT TOOL	584
AXLE BOOTS	585
MECHANICAL AXLE TOOLS - WHEEL BEARINGS	588
ABS ROTOR TOOL	589
MECHANICAL AXLE TOOLS - SILENT BEARING	592
PRESS AND PULL SLEEVE SET	593

LEVER / PRY BARS

Pry bar

- Best suited for and breakdown and installation work
- For pressure testing securely-fitted parts
- Ergonomic single component handle
- Hardened through the whole length
- Chrome molybdenum







	D mm	L1 mm	L2 mm	g	
911.8101	11,0	200,0	115,0	130	
911.8102	15,0	300,0	185,0	220	
911.8103	18,0	450,0	320,0	420	
911.8104	18,0	600,0	470,0	560	

Pry bar sets

- Best suited for and breakdown and installation work
- For pressure testing securely-fitted parts
- Ergonomic single component handle
- Hardened through the whole length
- Chrome molybdenum





			kg	
911.8100	4 pcs	11 x 115 mm - 15 x 185 mm - 18 x 320 mm - 18 x 470 mm	1,33	

Flexible roll head pry bar

- Extremely versitile and robust execution
- Varible adjustable roll head
- Maximum power transmission in the narrowest area
- Optimal leverage in minimal work area
- Special tool steel





	Length mm	Assembly levels	kg	
911.8176	250,0	5	0,39	
911.8177	300,0	5	0,46	
911.8178	400,0	5	0,57	

Flexible roll head pry bar set

- Extremely versitile and robust execution
- Varible adjustable roll head
- Maximum power transmission in the narrowest area
- Optimal leverage in minimal work area
- Special tool steel





			kg	
911.8175	3 pcs	Flexible roll head pry bar set	1,50	

consists of:

		g	
911.8176	Flexible roll head pry bar, 250 mm	385	
911.8177	Flexible roll head pry bar, 300 mm	455	
911.8178	Flexible roll head pry bar, 400 mm	565	

Pry bar

- Angular lever end guarantees non slip surface
- Ideally suited for and breakdown and installation work
- Go through blade and hammer cap
- Suitable for the testing of defective bearings
- Two component handle
- Special tool steel
- In durable plastic storage case





	Bend radius	Length mm	kg	
911.8411	0°	900,0	1,70	
911.8412	45°	900,0	1,75	
911.8413	75°	600,0	1,17	
911.8414	90°	600,0	1,20	





Pry bar sets

- Angular lever end guarantees non slip surface
- Ideally suited for and breakdown and installation work
- Go through blade and hammer cap
- Suitable for the testing of defective bearings
- Two component handle
- Special tool steel
- In durable plastic storage case





			kg	
911.8410	4 pcs	Pry bar sets	8,70	

consists of:

		kg	
911.8411	Pry bar, 0°, 900mm	1,70	
911.8412	Pry bar, 45°, 900mm	1,75	
911.8413	Pry bar, 75°, 600mm	1,17	
911.8414	Pry bar, 90°, 600mm	1,20	

Pry bar

- Angular lever end guarantees non slip surface
- Ideally suited for and breakdown and installation work
- Go through blade and hammer cap
- Suitable for the testing of defective bearings
- Two component handle
- Special tool steel
- In durable plastic storage case



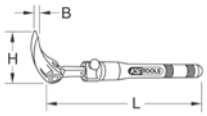


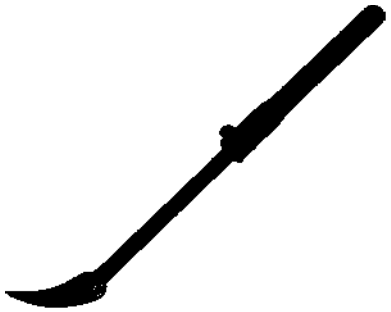
	Bend radius	Length mm	kg	
911.8415	45°	1150,0	4,75	

Telescopic flexible roll head pry bar

- Lever extension with push-button in steps
- Roller head adjustable in steps
- Extra narrow, with recessed push button
- Maximum power transmission in the narrowest area
- Optimal leverage in minimal work area
- Special tool steel







	L mm	H mm	B mm	kg
911.8186	325-460	90,0	12,0	0,78
911.8187	600-915	120,0	20,0	1,90
911.8188	865-1350	145,0	24,0	4,26

Telescopic flexible roll head pry bar set

- Lever extension with push-button in steps
- Roller head adjustable in steps
- Extra narrow, with recessed push button
- Maximum power transmission in the narrowest area
- Optimal leverage in minimal work area
- Special tool steel



			kg
911.8185	3 pcs	325-460 - 600-915 - 865-1350 mm	6,94



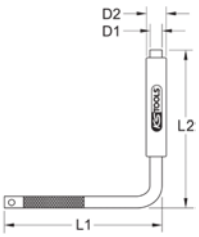
AXLE PLAY TEST TOOL

Axle play detector bar

- For localising sources of faults in the vehicle axle area
- Testing under load
- Large time savings during fault diagnostics
- Suitable for all passenger cars up to 3.5 t
- Special tool steel

Application range: Dome bearings / silent bearings / carrier joint / track rod end / coupling rod / wheel bearings / axial joint / steering gear / stabiliser etc.







	L1 mm	L2 mm	D1 mm	D2 mm	kg
700.1465	400,0	400,0	25,0	50,0	1,90

Movement test device

- Universal usage tool for the determination of sign of wear
- By means of the universal wheel hub flange the lever is secured directly to the wheel hub and serves therefore as an extended arm to the absolutely sensitive locating of excess mobilty or changes in the area
- Ideal suited for wheel housings, Silent baerings, ball joints (Tie rod joints) suspension joints/coupling rods etc





	Ø mm	L mm	kg
700.1455	36,0	840,0	6,00

consists of:

		kg
700.1411	Wheel hub puller without spindle	2,55
700.1450	Axle suspension movement retainer, AG 1.1/2"x16G	3,24

Mechanics stethoscope

- Very flexible
- Serves the acoustic test and judgment of a component under load
- Quick and precise error detection from the sound
- With steel tip

Application range:
Engine: Valves, bearings, piston pins
Alternator: Bearing sounds
Differential: Barrel sounds
Bodywork: Creak and squeak sounds





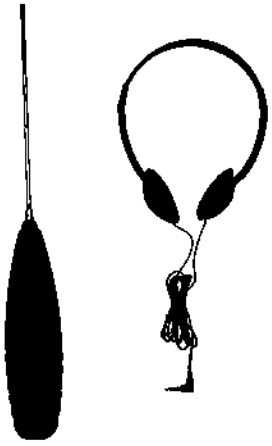
	Length mm	g
150.1645	1120,0	200

Mechanic's stethoscope, electronic

- Very flexible
- Serves the acoustic test and judgment of a component under load
- Quick and precise error detection from the sound
- Includes 9V block battery
- With steel tip

Application range:
Engine: Valves, bearings, piston pins
Alternator: Bearing sounds
Differential: Barrel sounds
Bodywork: Creak and squeak sounds





	Cable length mm	Length mm	g
150.1410	1160,0	190,0	100

Electronic professional stethoscope

- For the professional defect diagnosis
- Serves the acoustic test and judgment of a component under load
- Delivers fast, absolutely clear and unambiguous test results over sounds
- Contains 6 independent sensors that can mounted for example on the vehicle floor or in the engine compartment for ease
- Simple coordination of the defect source through colour coded cable and colour table on the box
- In durable plastic storage case

Application range:
Engine: Valves, baerings, piston pins
Alternator: Bearing sounds
Differential: Barrel sounds
Bodywork: Creak and squeak sounds





			kg	
150.1695	18 pcs	Electronic professional stethoscope	2,50	

consists of:

		g	
150.1695-1	Headset	350	
150.1695-2	Amplifier	115	
150.1695-3	Hand held stethoscope	165	
150.1695-4	Velcro strap, 8 pcs	9	
150.1695-5	Sensor	10	
150.1695-6	Coulour coded cable, 6 pcs	755	

Ultrasound leak detector

- Acoustic locating of leaks on bodywork
- Receiver is passed externally along the bodywork
- Simplifies cause investigation for wind noise and water leaks
- In a practical storage case





		g	
150.1690	Ultrasound leak detector	460	

INDUCTION TOOLS

MASTER Induction Heat Gun Set

- For loosening rusted and seized connections
- For loosening “insoluble” glued connections
- Induction principle
- Pinpoint heating in seconds
- Heating of components to max. 780 °C (red hot)

Application range: Screws, nuts and bolts, exhaust clamps and pipes, lambda probes, running gear, stuck bearings, ball joints, steering (e.g. tracking adjustment screws), chemically micro-encapsulated threaded connections (bonded), warming of bearing housings during dismantling and assembly





Technical data:
Capacity: 1500 Watt

			kg	
500.8415	12 pcs	MASTER Induction Heat Gun Set	3,88	

consists of:

		kg	
500.8420-1	Induction heat gun	1,83	
500.8431	Induction coils 15mm, standard	0,05	
500.8432	Induction coils 19mm, standard	0,05	
500.8433	Induction coils 22mm, standard	0,05	
500.8434	Induction coils 26mm, standard	0,05	
500.8435	Induction coils 32mm, standard	0,06	
500.8436	Induction coils 38mm, standard	0,07	
500.8423	Induction coils 22mm, extra long	0,08	
500.8424	Induction coils 26mm, extra long	0,08	
500.8450	Induction coil, cable, fully flexible, standard	0,06	
500.8445	Induction coil, semi-rigid, deformable, universal	0,04	
500.8440	Induction pad	0,18	



Standard Induction coils

- For loosening rusted and seized connections
- For loosening “insoluble” glued connections
- Induction principle
- Pinpoint heating in seconds
- Heating of components to max. 780 °C (red hot)
- Can be used together with induction heat pistol 500.8420-1

Application range: Screws, nuts and bolts, exhaust clamps and pipes, lambda probes, running gear, stuck bearings, ball joints, steering (e.g. tracking adjustment screws), chemically micro-encapsulated threaded connections (bonded), warming of bearing housings during dismantling and assembly





	Ø mm	Length mm	g	
500.8431	15	220,0	48	
500.8432	19	220,0	53	
500.8433	22	220,0	54	
500.8434	26	220,0	54	
500.8435	32	220,0	64	
500.8436	38	220,0	70	
500.8437	45	220,0	77	

Induction coils, extra long

- For loosening rusted and seized connections
- For loosening “insoluble” glued connections
- Induction principle
- Pinpoint heating in seconds
- Heating of components to max. 780 °C (red hot)
- Extra long
- Can be used together with induction heat pistol 500.8420-1

Application range: Screws, nuts and bolts, exhaust clamps and pipes, lambda probes, running gear, stuck bearings, ball joints, steering (e.g. tracking adjustment screws), chemically micro-encapsulated threaded connections (bonded), warming of bearing housings during dismantling and assembly





	Ø mm	Length mm	g	
500.8421	15	330,0	50	
500.8422	19	330,0	72	
500.8423	22	330,0	76	
500.8424	26	330,0	81	
500.8425	32	330,0	84	
500.8426	38	330,0	88	
500.8427	45	330,0	96	

Induction pad

- Heat-resistant material
- Gentle on painted surfaces
- Flat and flexible surface
- Simple handling
- Can be used together with induction heat pistol 500.8420-1

Application range: Removal of stickers, type plates, emblems, decorative strips, self-adhesive films and small trims on painted surfaces





	mm	Length mm	g	
500.8440	100 x 100	260,0	175	



Semi-rigid deformable induction coil

- Preformed, extra long execution, max. 330 mm
- Ideal for deep applications
- Can be used together with induction heat pistol 500.8420-1

Application range:
Screws, nuts and bolts, exhaust clamps and pipes, lambda probes, running gear, stuck bearings, ball joints, steering (e.g. tracking adjustment screws), chemically micro-encapsulated threaded connections (bonded), warming of bearing housings during dismantling and assembly





	Length mm	g	
500.8445	595,0	42	

Fully flexible induction coil cable

- Flexibel like a cable
- Ideal for deep applications
- Perfect adaption to the application
- Can be used together with induction heat pistol 500.8420-1

Application range: Screws, nuts and bolts, exhaust clamps and pipes, lambda probes, running gear, stuck bearings, ball joints, steering (e.g. tracking adjustment screws), chemically micro-encapsulated threaded connections (bonded), warming of bearing housings during dismantling and assembly



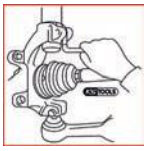


	Length mm	g	
500.8450	800,0	62	

SPLAY TOOLS

Flange spreader for the spring foot mounting

- Ideal for time-saving and damage-free splaying of the axle joint clamp boreholes or ball joint attachments
- Makes the assembly and disassembly easier
- For most current vehicle types
- 90° angled
- Continuous hardened
- Matt chrome
- Special tool steel





	L mm	Width mm	Spread dim mm	g	
150.9407	205,0	5,0	7,0	65	

Flange splayed bit socket set for the spring foot mounting

- Ideal for time-saving and damage-free splaying of the axle joint clamp boreholes or ball joint attachments
- Makes the assembly and disassembly easier
- For most current vehicle types
- Continuous hardened
- Matt chrome
- Special tool steel







1/2"

			g	
150.9490	2 pcs	Flange splayed bit socket set for the spring foot mounting	120	

consists of:

		g	
150.9491	1/2" Flange spreading socket, 5,0 x 7,0 mm	60	
150.9492	1/2" Flange spreading socket, 5,5 x 8,2 mm	60	



Ball joint spliter set

- Ideal for splaying the axle joint clamp boreholes, or ball joint attachments
- It is necessary to remove the secured spring absorber unit from the axle joint clamp boreholes
- Makes the assembly and disassembly easier
- Damage to the axle joint housing (cast or aluminium) is avoided
- Universal usage due to 2 pairs of different splay clamps and securing bolts
- Without compressing the thread ends, e.g. when pressing together
- Optimal adjustment, therefore slips are almost impossible
- Exact centring due to the screw-on and toughened bore jigs
- External drive hexagonal socket 13.0 mm
- Special tool steel







			g	
700.5650	11 pcs	Ball joint spliter set	750	

consists of:

	X		g	
700.5651	1	Basic unit for clamp bore holes splay tool, short	100	
700.5652	1	Guide bolt set, 8 x 10 mm, 2 pcs	100	
700.5653	1	Guide bolt set, 10 x 12 mm, 2 pcs	100	
700.5654	1	Splay wedge black, 5 mm	100	
700.5655	1	Splay wedge silver, 8 mm	100	
700.5656	1	Hexagon key wrench, 3mm	100	
700.5658	1	Spindle to 700.5650	50	
700.5659	2	Arm to 700.5650	100	

MASTER clamp bore hole splay tool set

- An additional bridge allows for the use of two wedges at the same time
- Especially for Audi and Volkswagen 4 wheel steering axle
- Ideal for splaying the axle joint clamp boreholes, or ball joint attachments
- It is necessary to remove the secured spring absorber unit from the axle joint clamp boreholes
- Makes the assembly and disassembly easier
- Damage to the axle joint housing (cast or aluminium) is avoided
- Universal usage due to 2 pairs of different splay clamps and securing bolts
- Without compressing the thread ends, e.g. when pressing together
- Optimal adjustment, therefore slips are almost impossible
- Exact centring due to the screw-on and toughened bore jigs
- External drive hexagonal socket 13.0 mm
- Special tool steel





			g	
700.5660	15 pcs	MASTER clamp bore hole splay tool set	855	

consists of:

	x		g	
700.5651	1	Basic unit for clamp bore holes splay tool, short	100	
700.5661	1	Basic unit for clamp bore hole splay tool, long	196	
700.5652	1	Guide bolt set, 8 x 10 mm, 2 pcs	100	
700.5653	1	Guide bolt set, 10 x 12 mm, 2 pcs	100	
700.5654	2	Splay wedge black, 5 mm	100	
700.5655	2	Splay wedge silver, 8 mm	100	
700.5656	1	Hexagon key wrench, 3mm	100	
700.5658	2	Spindle to 700.5650	50	
700.5659	2	Arm to 700.5650	100	



WISHBONE DISASSEMBLY

Universal axle lever

- Special lever for the correct and protective dismantling and assembly of axle parts
- Through multiple adjustability of the breadth most different designs it lets itself move without large power expense required
- Protective and certain installation and extension
- The injury risk minimizes
- No second person required
- Universal application by revolving and adjustable claw
- High power, firm seat and time savings also
- Stable construction - optimal stop
- Special tool steel





	L mm	kg	
700.1460	1000,0	4,36	



Universal axle lever with chain

- Special lever for the correct and protective dismantling and assembly of axle parts
- Different design of wishbones can be pressed down with low effort, safe with flexible chain
- Support surface with non-slip pad
- Protective and certain installation and extension
- The injury risk minimizes
- No second person required
- Universal application by revolving chain
- High power, firm seat and time savings also
- Stable construction - optimal stop
- Special tool steel





	L mm	kg	
700.1495	960,0	6,42	

Universal slide hammer

- Extra heavy and solid execution
- For universal use for automobiles + trucks
- Enormous impact delivery of up to 11 tonnes
- With 6 kg impact weight
- Includes 3 kg additional weight
- With M 20 x 1.5 mm connection thread
- Additional weights can be screwed together
- Special tool steel





	L mm	kg	
700.1415	850,0	12,00	

accessories:

		kg	
700.1411	Wheel hub puller without spindle	2,55	
700.1421	Adaptor, Ext. UN 1.1/2" x Int. M20 x 1,5	0,72	
700.1423	Adaptor, p.e. double hook /pull hook	0,27	
700.1424	Universal hook, M20x1,5 for ball joints	2,40	
700.1425	Double hook	0,75	
700.1428	Adaptor, Ext. M20x1,5xInt. M16x2	0,72	
700.1430	Adaptor, Ext. M20x1,5xInt. M18x1,5	0,72	
152.1056	Adaptor, M17	0,24	

Universal hook

- For disassembly of the wishbone from the ball joint clamp bore
- Special shape allows it to be placed very close to the ball joint
- For use alongside a slide hammer
- Internal thread M20 x 1.5
- Special tool steel





		kg	
700.1424	M20x1,5	2,40	

VEHICLE-SPECIFIC BALL JOINT EXTRACTORS

ball joint pusher

- for pushing out support and guide joints as well as tie rod joint pins from steering levers
- Compact and stable design
- Extremely robust spindle with inductively hardened thread and pressure ball
- In durable plastic storage case

Application range: BMW E46 and **Mercedes** W211, W220



	A mm	B mm	max t	mm	mm	kg
670.0110	24	45	1	M16x1,5x50	17	0,65

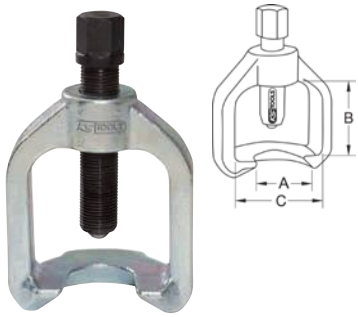
accessories:

		g
670.0110-1	Replacement spindle for 670.0110	168

UNIVERSAL PIVOT PIN EJECTOR

Universal ball joint separator

- For many automobiles and commercial vehicles
- Special tool steel



	A mm	B mm	C mm	max N·m	mm	mm	kg
670.0101	18	40	40	50	M14x1,5x60	17	0,30
670.0102	25	50	50	120	M16x1,5x60	17	0,70
670.0103	29	60	60	160	M18x1,5x75	19	1,00
670.0104	40	80	80	280	G1/2"x14gx110	22	2,10
670.0105	45	100	90	400	G3/4"x14gx125	27	2,80
670.0106	56	80	100	280	G1/2"x14gx110	22	2,10



Universal ball joint ejector

- For many automobiles and commercial vehicles
- Special tool steel



	A mm	B mm	max t	mm	mm	g
670.0061	23	55	4	17	M16x1,5x60	800
670.0062	28	55	4	17	M16x1,5x60	800
670.0063	34	63	4	19	M18x1,5x70	900

Universal ball joint extractor

- Tools for pushing out support and guide joints as well as
- Tie rod joint pin consisting of steering lever, axle beam/arm and stabilizers
- Universally applicable in the range of passenger cars to vans
- Compact and stable design
- Extremely robust spindle with inductively hardened thread and pressure ball
- In durable plastic storage case





			kg
670.0060	3 pcs	Universal ball joint extractor	2,90

consists of:

		g
670.0061	Universal ball joint ejector, 23mm	800
670.0062	Universal ball joint ejector, 28mm	800
670.0063	Universal ball joint ejector, 34mm	900

Universal ball joint extractor

- Robust model for loosening the track heads and push pole heads
- Optimal positioning through compact design and slim fork piece
- Special tool steel

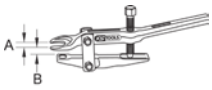


	A mm	B mm	C mm	mm	mm	kg
450.0075	45	75	63	24	M22 x 135	1,63
450.0076	55	100	76	24	M22 x 135	1,84

UNIVERSAL BALL JOINT EJECTOR WITH LEVER

Universal ball joint separator

- Extra flat execution
- Forged
- Special tool steel

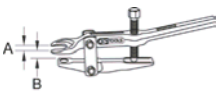




	A mm	B mm	mm	mm	g
700.5620	18	20-37	M14 x 85	16	970

Universal ball joint separator

- Extra strong execution
- Forged
- Special tool steel





	A mm	B mm	mm	mm	kg
700.5625	20	20-37	M12 x 85	16	1,07

Universal ball joint separator 2 stage adjustable

- Separator 2 stage adjustable
- Ideal for confined spaces
- Spindle hexagonal with additional drive point
- Forged
- Special tool steel





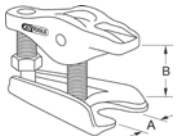


	A mm	B mm	mm	mm	kg	
700.5610	24	0-55	M16 x 90	20	1,05	

Universal ball joint separator

- For separating the ball plug when removing the ball joints
- Suitable for many vehicles
- Special tool steel



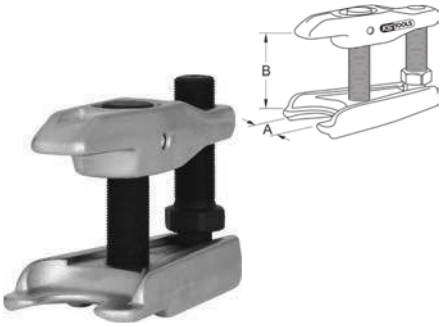




	A mm	B mm	max t	mm	mm	g	
670.0111	18-22	50	3,5	19	M14x1,5x48	900	

Universal ball joint extractor

- Robust model for loosening the track heads and push pole heads
- Optimal positioning through compact design and slim fork piece
- Adjustment of the clamp by means of the spindle
- Special tool steel

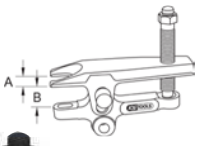


	A mm	B mm	mm	mm	kg	
450.0070	32	75	M22 x 90	30	2,49	
450.0071	45	80	M22 x 90	30	2,61	

Universal ball joint separator 4 stage adjustable

- Separator 4 stage adjustable
- Spindle hexagonal with additional drive point
- Forged
- Special tool steel
- Stage 1: 24 mm
- Stage 2: 30 mm
- Stage 3: 40 mm
- Stage 4: 45 mm





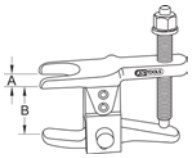


	A mm	B mm	mm	mm	kg	
700.5630	20	24-45	M14 x 105	18	1,50	

Universal ball joint separator 2 stage adjustable

- Separator 2 stage adjustable
- Ideal for confined spaces
- Extremely high clamping range
- Spindle hexagonal with additional drive point
- Forged
- Special tool steel



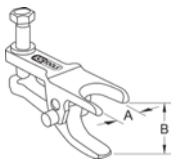


	A mm	B mm	mm	mm	kg	
700.5615	18-24	23-110	M16 x 130	16	1,20	

Universal ball joint separator

- For separating the ball plug when removing the ball joints
- Suitable for many vehicles + transporter
- Also suitable for aluminum undercarriages
- Special tool steel

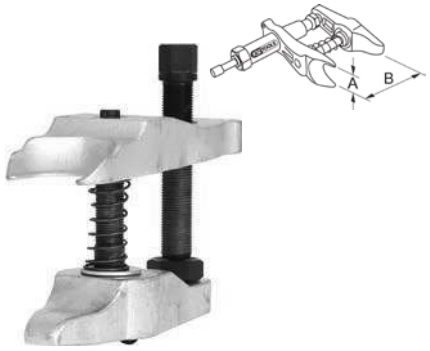




	A mm	B mm	max t	mm	mm	kg	
670.0121	24	50	3,5	17	M16x1,5x70	1,40	
670.0122	24	60-80	3,5	17	M15x1,5x90	1,80	

Universal ball joint separator

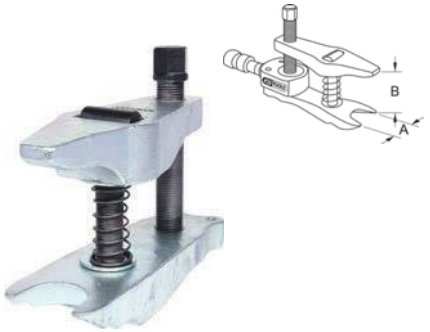
- For separating the ball plug when removing the ball joints
- Suitable for many vehicles + moderately heavy trucks
- Special tool steel



	A mm	B mm	max t	mm	mm	kg	
670.0131	36	90	10	22	G1/2"x14gx110	3,70	

Universal ball joint separator without hydraulic cylinder

- For separating the ball plug when removing the ball joints
- Suitable for many vehicles + moderately heavy trucks
- For bolts Ø 27.0 - 36.0 mm
- Special tool steel
- For use with 640.0140



	A mm	B mm	max t	Adjusting screw mm	Ambos spindle mm	mm	kg	
670.0151	36	90	10	M18x1,5x120	G1/2"x14x110	22	3,50	

Universal ball joint remover set with changeable forks

- With interchangeable forks Ø 20/22/24/27/30 mm
- For separating the ball plug when removing the ball joints
- Quick changes of the individual pressure forks due to the spring breaker system
- Maximum separation height: 125.0 mm
- In durable plastic storage case





			kg	
450.0970	7 pcs	Universal ball joint remover set with changeable forks	6,00	

consists of:

		kg	
450.0971	Universal ball pin ejector device	2,00	
450.0972	Pressure spindle	0,38	
450.0973	Fork, Ø 20 mm	0,52	
450.0974	Fork, Ø 22 mm	0,52	
450.0975	Fork, Ø 24 mm	0,52	
450.0976	Fork, Ø 27 mm	0,52	
450.0977	Fork, Ø 30 mm	0,52	

BALL PIN PULLER VIBRO IMPACT

Vibro-Impact Universal Ball Joint Puller Bell 30 x 58 mm

- Pressure pieces in the spindle rotating mouted
- Trapezoidal spindle
- High release force due to rotary shock pulse with impact wrench
- Impact screws create pressure and vibration at the same time, through which the secure ball joint connections and quickly and safely removed
- Less space required
- Cast forged execution
- With inspection panel
- Special tool steel





	A mm	B mm	mm	mm	kg	
450.0060	30	58	22	18	1,10	

Vibro-Impact Universal Ball Joint Puller Bell 32 x 90 mm

- Pressure pieces in the spindle rotating mouted
- Trapezoidal spindle
- High release force due to rotary shock pulse with impact wrench
- Impact screws create pressure and vibration at the same time, through which the secure ball joint connections and quickly and safely removed
- Less space required
- Cast forged execution
- With inspection panel
- Special tool steel



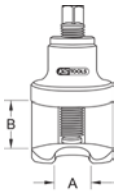


	A mm	B mm	mm	mm	kg	
450.0061	32	90	24	25	2,51	

Vibro-Impact Universal Ball Joint Puller Bell 35 x 60 mm

- Ball mounted rotatably in the spindle
- Trapezoidal spindle
- High release force due to rotary shock pulse with impact wrench
- Impact screws create pressure and vibration at the same time, through which the secure ball joint connections and quickly and safely removed
- Less space required
- Cast forged execution
- With inspection panel
- Special tool steel





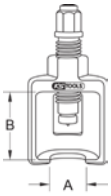


	A mm	B mm	mm	mm	kg	
450.0085	35	60	M27 x 130	24	2,52	

Vibro-Impact Universal Ball Joint Puller Bell 39 x 58 mm

- Pressure pieces in the spindle rotating mouted
- Trapezoidal spindle
- High release force due to rotary shock pulse with impact wrench
- Impact screws create pressure and vibration at the same time, through which the secure ball joint connections and quickly and safely removed
- Less space required
- Cast forged execution
- Without inspection panel
- Special tool steel





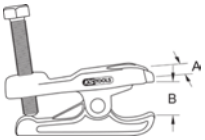


	A mm	B mm	mm	mm	kg	
450.0062	39	58	24	25	2,83	

Ball joint puller for commercial vehicle, mechanical

- Massive execution for loosening the track heads and push pole heads
- Enormous power through lever transmission
- Special tool steel





	A mm	B mm	mm	mm	kg	
450.0051	36	70	M24x3x160	34	4,34	

Hydraulic universal ball joint separator

- Massive execution for loosening the track heads and push pole heads
- for fork-opening diameters of up to 36 mm
- Enormous power through lever transmission
- Excellent power transfer
- Special tool steel



	A mm	B mm	max t	mm	mm	kg	
450.0050	36	70	10	17	1.1/2"x16G	6,55	

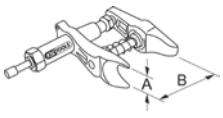
consists of:

		kg	
450.0051	Ball joint puller commercial vehicle, mechanical	4,34	
450.0052	Adaptor f.hydraulic thrust bolt, M24x3	0,66	
700.1400-1	Hydraulic spindle 10 t, AG 1.1/2"x16G	1,34	

Hydraulic universal ball joint separator

- For separating the ball plug when removing the ball joints
- Suitable for many vehicles + moderately heavy trucks
- For bolts Ø 27.0 - 36.0 mm
- Special tool steel

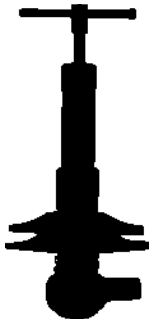




	A mm	B mm	max t	mm	mm	kg	
670.0141	36	90	10	17	1.1/2"x16G	4,70	

Hydraulic universal ball joint remover set

- For separating the ball plug when removing the ball joints
- Fork Ø 25.0 and 32.0 mm
- Includes hydraulic thrust spindle
- Suitable for many vehicles + transporter
- Excellent power transfer
- Special tool steel



		Min span width mm	Max span width mm	Min span depth mm	Max span depth mm	kg	
450.0965	3 pcs	25,0	32,0	16,0	75,0	3,84	

consists of:

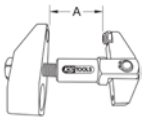
		kg	
450.0966	Universal ball joint extractor, 32mm	3,65	
700.1400-1	Hydraulic spindle 10 t, AG 1.1/2"x16G	1,34	

CLAMP SCREWS EJECTOR

Clamp screw ejector set

- For loosening seized clamping screws (M10) on 4-link axles
- For right and left wishbone clamping screws
- For aluminium and steel four link axles
- Release force up to max. 12 t
- Universally applicable hydraulic spindle (mounting thread 1.1/2"x16 start)
- Fine adjustment for optimum efficiency
- In durable plastic storage case







		A mm	kg	
670.0075	4 pcs	65 - 125	4,17	

consists of:

		kg	
615.0001	Hydraulic compression spindle, 17mm, UN 1.1/2"x16Gx260mm	1,60	
670.0074	Clamp screw ejector, basic unit	0,50	
670.0077	Flat thrust piece	0,03	
670.0078	Mandrel thruster	0,03	

Four link drift set

- For removing the clamp screws in the four-wheel front axle on VAG vehicles
- Saves a lot of time
- Warming is no longer necessary, therefore preventing damage to the aluminium axle body
- For use with pneumatic chisel hammers on the market with a 10 mm attachment
- Special tool steel





			g	
700.5635	3 pcs	Four link drift set	168	

consists of:

		g	
700.5635-01	Release mandrel pneumatic chisel	100	
700.5635-02	Ejector, short	40	
700.5635-03	Guide sleeve	40	

Reaming set for clamping screw on 4 link axles

- For exact centre drilling of the M10 clamping screw
- Without compressing the thread ends, e.g. when pressing together
- Removal without damage to the axle body
- Exact centering thanks to screw-on, hardened drilling gauges
- Also suitable for new alloy screw type





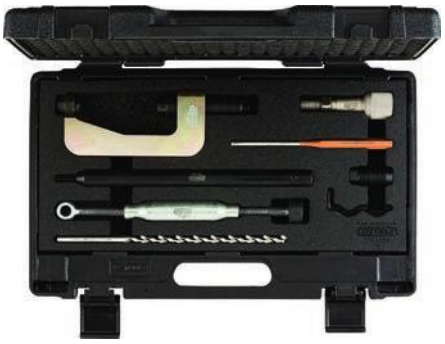
			g	
700.5640	5 pcs	Reaming set for clamping screw on 4 link axles	43,7	

consists of:

		g	
700.5641	Drilling gauge for Ø 4.5 mm	140	
700.5642	Drilling gauge for Ø 7.3 mm	140	
700.5643	Special drill HSS-E TIN Ø 4.5 mm	10	
700.5644	Special drill HSS-E TIN Ø 7.3 mm	30	
700.5645	Pressure mandrel 9.8 x 63 mm	20	

Boring set for clamping screw for VAG

- for exactly central drilling of the upper clamping screw on aluminium steering knuckles
- Without compressing the thread ends, e.g. when pressing together
- Removal without damage to the axle body
- Enormous time and cost saving
- In durable plastic storage case



			kg	
700.5665	8 pcs	Boring set for clamping screw for VAG	3,70	

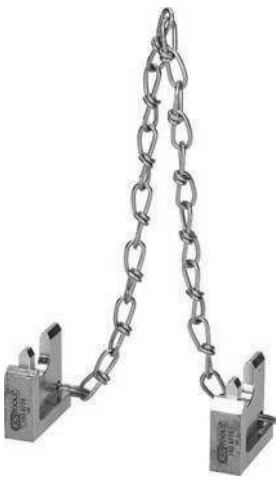
consists of:

		kg	
700.5666	Primary tool	1,52	
700.5667	Centering socket, Ø 16 mm	0,10	
700.5668	Ball screw, M12	0,26	
700.5669	Extension for twist drill	0,61	
700.5672	Twist drill, Ø9.5 x 250 mm	0,10	
162.0395	Pin punch, 8 point, long, Ø 8mm	0,14	
151.2023	Hexagon key wrench, short, 3mm	0,01	
700.5671	Tensioner	0,37	

Pair of spacers for VAG

- ideally suited as spacer when removing the clamping screw on the 4-link axle
- Prevents the screw feed-through from breaking off the axle beam
- no tilting of the clamping screw
- Enormous time and cost saving
- carbon steel

Application range: Audi A4, A6, A8, **Volkswagen** Passat, **Seat** Exeo, **Škoda** Superb



		g	
150.9778	Pair of spacers for VAG	800	

WORKBENCHES

MODULO mobile workbench

- Very stable steel construction with 0,75 mm sheet steel - distortion resistant
- Extreme high level of stability
- Drawer double locking system prevents unintentional opening
- Central locking system on all drawers through the cylinder lock
- Ball bearing drawer runners
- Drawers are 110% extendable
- Beech worktop 25 mm
- Full width metal handle
- Two fixed wheels Ø 125 mm
- Two castor wheels Ø 125 mm with rolling and turning brake
- Side mounted handle
- Electrostatic powder coating



Technical data:

Total load capacity:	450,0 kg
Load capacity of each drawer:	80,0 kg

	Total depth mm	Width mm	Depth mm	kg	
899.0004	900,0	1200,0	600,0	125,00	

HYDRAULIC AXLE TOOLS

Pressure and pull hydraulic cylinder set, 8.5t

- For the assembly and disassembly of silent bearings, steering pin bolts, wheel bearings etc.
- Can be used in the narrowest of spaces
- With adjustable pressure rods and impact body
- With automatic piston return
- Special tool steel







Technical data cylinder

Capacity:	8.5 t
Connection thread:	Cejn quick coupling
Piston:	industrial forged execution
Piston-inner thread:	M22
Outer thread:	1.1/2"
Stroke:	25,0 mm

			kg	
440.0020	4 pcs	Pressure and pull hydraulic cylinder set, 8.5t	2,19	

consists of:

		kg	
440.0021	Hydraulic cylinder, 8.5 t	1,80	
440.0022	Impact body with washer	0,14	
440.0023	Adjustable pressure rod M22, L = 100 mm	0,24	
440.0024	(CEJN-) Nipple hydraulic for connection thread 1/8"	0,01	



Pressure and pull hydraulic cylinder set 16t

- For the dismantling and assembly of silent support, steering pin, track rod ends, wheel bearings etc.
- Suitable for both pressure and train uses
- With magnetic centring adapter
- With impact body for screwing in
- Extremely high and uniform power construction
- Universal usage with reduction M10-M22
- With automatic piston return
- Special tool steel
- In durable steel storage case







Technical data cylinder

Capacity:	16 t
Connection thread:	Cejn quick coupling
Piston:	industrial forged execution
Piston-inner thread:	M22
Outer thread:	1.1/2"
Stroke:	67,0 mm

			kg	
440.0005	10 pcs	Pressure and pull hydraulic cylinder set 16t	5,48	

consists of:

		kg	
440.0001	Hydraulic cylinder, 16 t	3,38	
440.0002	Pressure axle, M24 x 3 mm, L = 129.5 mm	0,60	
440.0003	Pressure foot, M24 x 3 mm	0,09	
440.0004	Adjustable pressure rod M24, L = 92 mm	0,24	
440.0006	Protective ring for thread, 2.1/4"	0,10	
440.0007	Collar nut, M18	0,08	
440.0008	Pressure rod, M18/M22, L = 250 mm	0,44	
440.0011	Impact body, M22 x 2.5 mm	0,22	
440.0012	Adjustable pressure sleeve, M24, L = 132 mm	0,32	
440.0009	(CEJN-) Nipple hydraulic for connection thread 1/4"	0,01	
440.0901	Centering adapter with magnet, 270g	0,27	

Pressure and pull hydraulic cylinder set 22t

- For the dismantling and assembly of silent support, steering pin, track rod ends, wheel bearings etc.
- Suitable for both pressure and train uses
- With magnetic centring adapter
- With impact body for screwing in
- Extremely high and uniform power construction
- Universal usage with reduction M10-M22
- With automatic piston return
- Special tool steel
- In durable steel storage case







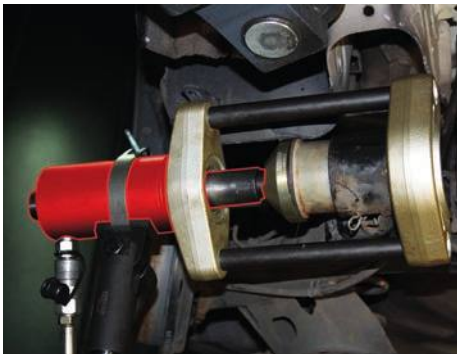
Technical data cylinder

Capacity:	22 t
Connection thread:	Cejn quick coupling
Piston:	industrial forged execution
Piston-inner thread:	M22
Outer thread:	1.1/2"
Stroke:	70,0 mm

			kg	
440.0010	10 pcs	Pressure and pull hydraulic cylinder set 22t	6,90	

consists of:

		kg	
440.0013	Hydraulic cylinder, 22 t	4,64	
440.0011	Impact body, M22 x 2.5 mm	0,22	
440.0003	Pressure foot, M24 x 3 mm	0,09	
440.0004	Adjustable pressure rod M24, L = 92 mm	0,24	
440.0006	Protective ring for thread, 2.1/4"	0,10	
440.0014	Pressure axle, M24 x 3, L = 151 mm	0,74	
440.0016	Adjustable pressure sleeve, M24, L = 109 mm	0,34	
440.0007	Collar nut, M18	0,08	
440.0008	Pressure rod, M18/M22, L = 250 mm	0,44	
440.0009	(CEJN-) Nipple hydraulic for connection thread 1/4"	0,01	
440.0901	Centering adapter with magnet, 270g	0,27	



Pressure and pull hydraulic cylinder set 32t

- Optimal for universal use in car garages
- Suitable for both pressure and train uses
- With magnetic centring adapter
- Extremely high and uniform power construction
- Industrial execution with forged piston
- Pressure of the hydraulic cylinders can be combined with the impact body with impact force during use
- Universal usage with reduction M10-M22
- Ideally used with transporters and commercial vehicles
- With automatic piston return
- Special tool steel
- In durable steel storage case



Technical data cylinder

Capacity:	32 t
Connection thread:	Cejn quick coupling
Piston:	industrial forged execution
Piston-inner thread:	M24
Outer thread:	2.1/2"
Stroke:	113,0 mm

			kg	
440.0025	6 pcs	Pressure and pull hydraulic cylinder set 32t	9,35	

consists of:

		kg	
440.0026	Hydraulic cylinder, 32 t	8,02	
440.0016	Adjustable pressure sleeve, M24, L = 109 mm	0,34	
440.0027	Protective ring for thread, 2.5	0,20	
440.0028	Collar nut, M22	0,16	
440.0029	Pressure rod, M22, L = 250 mm	0,62	
440.0009	(CEJN-) Nipple hydraulic for connection thread 1/4"	0,01	
440.0902	Centering adapter with magnet, 240g	0,24	

Short-stroke hydraulic cylinder set 14t

- For the assembly and disassembly of silent bearings, steering pin bolts, wheel bearings etc.
- With adjustable pressure rod
- Maximum pressure with little effort
- Especially for use with press tool and press stand 440.0190 and 440.0180
- With automatic piston return
- Special tool steel



Technical data cylinder

Capacity:	14 t
Connection thread:	Cejn quick coupling
Piston:	industrial forged execution
Piston-inner thread:	M24
Outer thread:	1.1/2"
Stroke:	55,0 mm

			kg	
440.0015	3 pcs	Short-stroke hydraulic cylinder set 14t	2,67	

consists of:

		kg	
440.0017	Hydraulic cylinder, 14 t	2,42	
440.0004	Adjustable pressure rod M24, L = 92 mm	0,24	
440.0009	(CEJN-) Nipple hydraulic for connection thread 1/4"	0,01	

Manometer

- With Cejn quick coupling for direct coupling to all KS Tools hydraulic pumps
- With easy-to-read scale in psi and bar

Caution: The maximum pressure values for the hydraulic cylinder and given in the appropriate operator's manual





		g	
440.0063	Manometer	500	

Hydraulic foot pump set

- For simply agent press cylinders
- Safety valve for overload protection
- With automatic return
- Includes hydraulic hose with quick coupling



Technical data:

Connection thread:	Cejn quick coupling
Volume:	0,75 l
Operating pressure:	700 bar
Tube length:	2200 mm

			kg	
440.0060	4 pcs	Hydraulic foot pump set	7,83	

consists of:

		kg	
440.0057	Hydraulic hose, 2200 mm	0,90	
440.0058	Cejn quick coupling	0,20	
440.0061	Hydraulic foot pump	6,72	
440.0070	Seal set	0,01	

Pneumatic hydraulic pump set

- Pneumatic working
- For simply agent press cylinders
- Safety valve for overload protection
- With automatic return
- Includes hydraulic hose with quick coupling



Technical data:

Connection thread:	Cejn quick coupling
Volume:	1,4 l
Operating pressure:	700 bar
Tube length:	2200 mm

			kg	
440.0055	3 pcs	Pneumatic hydraulic pump set	6,32	

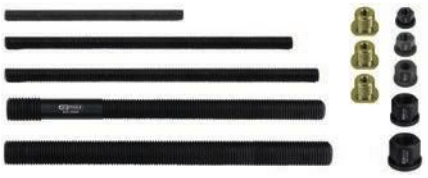
consists of:

		kg	
440.0056	Pneumatic hydraulic pump	5,22	
440.0057	Hydraulic hose, 2200 mm	0,90	
440.0058	Cejn quick coupling	0,20	

Pull rod, collar nut, adapter set

- Universal usage
- Extremely robust spindle with inductive hardened thread (M10-M22)
- Optimal use with trucks, transporters and commercial vehicle tools with corresponding reduction
- Ideally suited to hydraulic cylinders 440.0005, 440.0010 and 440.0020
- Special tool steel

Caution: The spindles must be greased before first use!



			kg	
440.0040	13 pcs	Pull rod, collar nut, adapter set	1,98	

consists of:

		g	
440.0041	Pressure rod, M10	80	
440.0042	Pressure rod, M12	180	
440.0043	Pressure rod, M14	240	
440.0008	Pressure rod, M18/M22, L = 250 mm	440	
440.0029	Pressure rod, M22, L = 250 mm	620	
440.0044	Adaptor, M22-M10	50	
440.0045	Adaptor, M22-M12	50	
440.0046	Adaptor, M22-M14	40	
440.0047	Collar nut, M10	20	
440.0048	Collar nut, M12	20	
440.0049	Collar nut, M14	60	
440.0007	Collar nut, M18	80	
440.0028	Collar nut, M22	160	

Hydraulic cylinder holder set

- Ideally suited as hand holder or suited for any hydraulic transmission jack in combination with hydraulic cylinder
- Simple handling and quick assembly allow calibration and fixing directly on the vehicle
- Suitable for transmission jacks with an attachment diameter of 25, 30 and 42 mm
- Ideally suited to hydraulic cylinders 440.0005, 440.0010, 440.0015 and 440.0025
- Also usable with hydraulic cylinders with a diameter of 65 - 100 mm



			kg	
440.0475	4 pcs	Hydraulic cylinder holder set	1,54	

consists of:

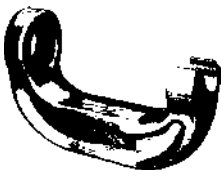
		kg	
440.0476	Holding device	1,16	
440.0477	Clamp Ø 65-70mm	0,12	
440.0478	Clamp Ø 70-85mm	0,12	
440.0479	Clamp Ø 85-100mm	0,14	

Press tool

- Forged press tool for removing the ball joints and stabiliser ball pins
- Maximum force 16 t
- Ideal for use with a hydraulic cylinder
- Optimally used with ball joint sets 440.0230 and 440.0240 as well as stabiliser ball pin set 440.0235
- Secure and easy to use
- Minimum work time
- Special tool steel

Recommended hydraulic cylinder: 8.5 t (440.0020), 14 t (440.0015), 16 t (440.0005), 22 t (440.0010)





		kg	
440.0190	Press tool	5,78	

Pressing tool holder for joint

- ideal as a hand holder or with a drive lifter for the C shaft
- Simple handling and quick assembly allow calibration and fixing directly on the vehicle
- Suitable for transmission jacks with an attachment diameter of 25, 30 and 42 mm
- ideal for press tool 440.0190





	Length mm	kg	
440.0700	140,0	2,77	

Universal press stand

- With open stand plate and adapter ring set
- Ideal for replacing ball joints and rear-axle bushes
- Can be used directly on the vehicle
- Adjustable with ball joint press sleeves from KS Tools
- For use with hydraulic cylinder
- Secure and easy to use
- Special tool steel

Recommended hydraulic cylinder: 14 t (440.0015), 16 t (440.0005), 22 t (440.0010)





			kg	
440.0180	9 pcs	Universal press stand	5,62	

consists of:

	x		kg	
440.0176	1	Upper traverse with internal thread 1.1/2"	2,04	
440.0178	2	Connecting strut, 185,0 mm	0,44	
440.0179	4	Screw M16 x 40 mm	0,08	
440.0185	1	Insert ring	0,34	
440.0204	1	Lower traverse with open side	2,04	

Set of struts

- Ideal for expanding the universal press stand (440.0180)



		Length mm	kg	
440.0536	2 pcs	350,0	1,85	

ADAPTER

Klann hydraulic to KS PP2-tool

- For using the Klann hydraulic cylinder (17 t) with KS Tools tool 1.1/2" internal thread
- Adapter 2.1/4"-14 UNS (Klann thread) to 1.1/2" PP2
- Special tool steel



		kg	
440.0038	Klann hydraulic to KS PP2-tool	1,08	

KS hydraulic PP2 to Klann tools

- For use with the KS Tools hydraulic cylinder PP2 (8.5-22 t) with Klann special tool
- Adapter 1.1/2" PP2 to 2.1/4"-14 UNS (Klann thread)
- Special tool steel



		g	
440.0036	KS hydraulic PP2 to Klann tools	200	

KS hydraulic PP2 to Klann (commercial vehicles-special tools)

- For using the KS tools hydraulic cylinder PP2 (32t) with the Klann special tool (connection 2.3/4"-16 UNS)
- Adapter 2.1/2" PP2 to 2.3/4"-16 UNS (Klann thread)
- Special tool steel



		g	
440.0409	KS hydraulic PP2 to Klann (commercial vehicles-special tools)	140	

KS hydraulic PP2 to Sauer, Müller, KS PP1 tools

- For use of the KS Tools hydraulic cylinder PP2 (8,5-22 t) with Sauer-, Müller-, KS PP1 special tools
- Adapter 1.1/2" PP2 to 2.1/4"-16 UN (Sauer, Müller, KS PP1)
- Special tool steel



		g	
440.0034	KS hydraulic PP2 to Sauer, Müller, KS PP1 tools	230	

Paschke hydraulic to KS PP2 tools

- For using the Paschke hydraulic cylinder with KS Tools special tools PP2
- Adapter M68x2 mm (Paschke thread) to 1.1/2" PP2
- Special tool steel



		kg	
440.0407	Paschke hydraulic to KS PP2 tools	1,24	

KS hydraulic to Paschke tools

- For using the Paschke KS Tools hydraulic cylinder PP2 (8,5-22 t) with Paschke special tools
- Adapter 1.1/2" PP2 auf M68x2 mm (Paschke thread)
- Special tool steel



		g
440.0408	KS hydraulic to Paschke tools	330

KS hydraulic PP2 to KS commercial vehicles-special tools

- For use with hydraulic cylinder PP2 (16 and 22 t) to KS Tools tools PP2 with 2.1/2" thread
- Adapter 1.1/2" PP2 to 2.1/2" thread PP2 (large traverse - commercial vehicles)
- Special tool steel



		g
440.0037	KS hydraulic PP2 to KS commercial vehicles-special tools	570

HYDRAULIC AXLE TOOLS - HINGE TOOLS

Pressure sleeve set for BMW E30/E36, internal

- For the assembly and disassembly of the internal ball joint (ball pins)
- For use with the universal press stand (440.0180)
- Can be used directly on the vehicle
- Saves a lot of time
- Special tool steel

Application range: Internal ball joint for **BMW** E30 and E36





			kg
440.0420	3 pcs	Pressure sleeve set for BMW E30/E36, internal	1,55

consists of:

		g
440.0184	Pressure sleeve, Ø 33 mm	500
440.0186	Pressure sleeve, Ø 54 mm	430
440.0187	Pressure sleeve, Ø 58 mm	620

Pressure sleeve set for BMW E30/E36, external

- For the assembly and disassembly of the external ball joint (ball pins)
- For use with the universal press stand (440.0180)
- Can be used directly on the vehicle
- Saves a lot of time
- Special tool steel

Application range: External ball joint for **BMW** E30 and E36





			kg
440.0425	3 pcs	Pressure sleeve set for BMW E30/E36, external	1,52

consists of:

		g
440.0181	Pressure sleeve, Ø 68 mm	860
440.0182	Pressure sleeve, Ø 47 mm	340
440.0183	Pressure sleeve, Ø 60 mm	320

Pressure sleeve set for Hyundai

- For the assembly and disassembly of the ball joint (ball pins)
- For use with the universal press stand (440.0180)
- Can be used directly on the vehicle
- Saves a lot of time
- Special tool steel

Application range: Ball joint **Hyundai** Trajet, Santa Fe





			kg
440.0470	3 pcs	Pressure sleeve set for Hyundai	1,70

consists of:

		g
440.0194	Pressure sleeve, Ø 40x68 mm	720
440.0197	Pressure sleeve, Ø 50x54 mm	560
440.0202	Pressure sleeve, Ø 70 mm x 40 mm	420

Ball joint set for Ford

- Ideal for the assembly and disassembly of ball joints together with press tool 440.0190
- Secure and easy to use
- Sturdy design
- Special tool steel

Application range: Ford Transit





			kg
440.0240	4 pcs	Ball joint set for Ford	1,51

consists of:

		g
440.0241	Pressure sleeve, Ø 75 mm	540
440.0242	Assembly/disassembly cover	620
440.0243	Assembly sleeve, 28 mm	210
440.0244	Disassembly sleeve, 23 mm	140

Stabiliser ball joint set for Mercedes

- Ideal for the assembly and disassembly of stabiliser ball joints together with press tool 440.0190
- Removal of shock absorbers not necessary
- Secure and easy to use
- Minimum work time
- Special tool steel

Application range:Mercedes E-class type 211, S-class type 220





			g
440.0235	2 pcs	Stabiliser ball joint set for Mercedes	630

consists of:

		g
440.0236	Pressure sleeve, Ø 47 mm	320
440.0237	Pressure sleeve, Ø 45 mm	310

Ball joint disassembly sleeve for Mercedes

- Expansion sleeve for ball joint set 440.0230
- Ideal for the assembly and disassembly of ball joints together with press tool 440.0190
- Secure and easy to use
- Sturdy design
- Special tool steel

Application range: Mercedes ML 163




			g
440.0238	Ball joint disassembly sleeve for Mercedes	300	

Ball joint set for Mercedes

- Ideal for the assembly and disassembly of ball joints together with press tool 440.0190
- Secure and easy to use
- Sturdy design
- With ball joint disassembly sleeve (440.0238) also suitable for Mercedes ML 163
- Special tool steel

Application range: Mercedes E-class type 211/219, S-class type 220, SL-class type 230




			kg
440.0230	4 pcs	Ball joint set for Mercedes	1,06

consists of:

		g
440.0231	Pressure sleeve, Ø 39 mm	320
440.0232	Assembly ring, Ø 60 mm	120
440.0233	Disassembly sleeve, Ø 63 mm	300
440.0012	Adjustable pressure sleeve, M24, L = 132 mm	320



Pressure sleeve set for Mercedes Sprinter and Volkswagen LT 35

- For the assembly and disassembly of the ball joint (ball pins)
- For use with the universal press stand (440.0180)
- Can be used directly on the vehicle
- Saves a lot of time
- Special tool steel

Application range: Ball joint **Mercedes** Sprinter, ball joint on **Volkswagen** LT 35




				kg
440.0435	2 pcs	Pressure sleeve set for Mercedes Sprinter and Volkswagen LT 35	1,04	

consists of:

		g
440.0191	Pressure sleeve, Ø 43 mm	520
440.0192	Pressure sleeve, Ø 70 mm	520

Pressure sleeve set for Mercedes Sprinter > 2007 and Volkswagen Crafter

- For the assembly and disassembly of the ball joint (ball pins)
- For use with the universal press stand (440.0180)
- Can be used directly on the vehicle
- Saves a lot of time
- Special tool steel

Application range: Ball joint **Mercedes** Sprinter > 2007, ball joint on **Volkswagen** Crafter




				kg
440.0440	3 pcs	Pressure sleeve set for Mercedes Sprinter > 2007 and Volkswagen Crafter	1,81	

consists of:

		g
440.0198	Pressure sleeve, Ø 70 mm x 65 mm	760
440.0199	Pressure sleeve, Ø 71 mm	520
440.0201	Pressure sleeve, Ø 43 mm x 55 mm	530

Pressure sleeve set for Mercedes W 124

- For the assembly and disassembly of the ball joint (ball pins)
- For use with the universal press stand (440.0180)
- Can be used directly on the vehicle
- Saves a lot of time
- Special tool steel

Application range: Ball joint on **Mercedes** W 124




			kg
440.0430	3 pcs	Pressure sleeve set for Mercedes W 124	1,71

consists of:

		g
440.0184	Pressure sleeve, Ø 33 mm	500
440.0186	Pressure sleeve, Ø 54 mm	430
440.0189	Pressure sleeve, Ø 62 mm	780

Pressure sleeve set for Renault/Nissan/Opel

- For the assembly and disassembly of the upper and lower ball joint (ball pins)
- For use with the universal press stand (440.0180)
- Can be used directly on the vehicle
- Saves a lot of time
- Special tool steel

Application range: Upper and lower ball joint **Renault** Master, **Nissan** Interstar, **Opel** Movano




			kg
440.0455	4 pcs	Pressure sleeve set for Renault/ Nissan/Opel	2,66

consists of:

		g
440.0188	Pressure sleeve, Ø 59 mm	600
440.0193	Pressure sleeve, Ø 69 mm	820
440.0194	Pressure sleeve, Ø 40x68 mm	720
440.0196	Pressure sleeve, Ø 43x50 mm	520

Pressure sleeve set for Renault

- For the assembly and disassembly of the ball joint (ball pins)
- For use with the universal press stand (440.0180)
- Can be used directly on the vehicle
- Saves a lot of time
- Special tool steel

Application range: Ball joint **Renault** Laguna 1, Megane 2 and Scenic 2





			kg	
440.0450	3 pcs	Pressure sleeve set for Renault	1,48	

consists of:

		g	
440.0184	Pressure sleeve, Ø 33 mm	500	
440.0202	Pressure sleeve, Ø 70 mm x 40 mm	420	
440.0203	Pressure sleeve, Ø 55 mm	560	

Pressure sleeve set for Volkswagen T4

- For the assembly and disassembly of the ball joint (ball pins)
- For use with the universal press stand (440.0180)
- Can be used directly on the vehicle
- Saves a lot of time
- Special tool steel

Application range: Ball joint on **Volkswagen** T4



			kg	
440.0445	2 pcs	Pressure sleeve set for Volkswagen T4	1,34	

consists of:

		g	
440.0191	Pressure sleeve, Ø 43 mm	520	
440.0193	Pressure sleeve, Ø 69 mm	820	



HYDRAULIC AXLE TOOLS - WHEEL BEARING TOOLS

Impact hammer

- Ergonomic handle
- Ideal for use alongside the adapter (440.0119) and the drive shaft press out device set (440.0115) or the wheel hub disassembly set (440.0110)





			Impact weight kg	kg	
440.0080	M18		5,20	7,60	

Adapter for impact hammer

- Ideally used for adapting the drive shaft press out device set (440.0115) and the impact hammer (440.0080)
- Special tool steel



		g	
440.0119	M18	430	

Drive shaft ejector set for 4- and 5-hole hubs with impact hammer

- Ideally suited to pressing out rusty and stuck drive shafts
- For all passenger cars and transporters with 4 and 5 hold hubs
- For hole diameters up to 120 mm
- ideal for dismantling the wheel hub
- including adapter (440.0119) and impact hammer (440.0080)
- No damage to the drive shaft or other parts
- Secure and easy to use
- Minimum work time
- Special tool steel



			kg	
440.0720	4 pcs	Drive shaft ejector set for 4- and 5-hole hubs with impact hammer	12,55	

consists of:

		kg	
440.0080	Impact hammer, 5.2kg	7,60	
440.0115	Drive shaft press out device set, 4 and 5 hole, 2 pcs	4,52	
440.0119	Adaptor M18 for impact hammer 440.0080	0,43	



Wheel hub disassembly set

- Ideally suited to the disassembly of the wheel hub with impact hammer (440.0080)
- Special tool steel



			g	
440.0110	6 pcs	Wheel hub disassembly set	640	

consists of:

		g	
440.0076	Hub screw, Ø 32 mm	30	
440.0077	Hub screw, Ø 40 mm	70	
440.0078	Hub screw, Ø 45 mm	100	
440.0079	Hub screw, Ø 52 mm	130	
440.0007	Collar nut, M18	80	
440.0118	Pressure rod, M18, L = 150 mm	230	

Wheel hub set, front for Renault

- Expansion for wheel bearing set (440.0160)
- Ideal for the removal of wheel hubs and wheel bearings
- Secure and easy to use
- Optimal usage for brake disks mounted behind the wheel hub
- Pressing out the hub with the help of the wheel hub tool (440.0124)
- Minimum work time
- Special tool steel

Recommended hydraulic cylinder: 32 t (440.0025)
Application range: Renault Master, models with the brake disks mounted behind the wheel hub



			kg	
440.0170	7 pcs	Wheel hub set, front for Renault	3,44	

consists of:

	X		kg	
440.0171	3	Pressure piece, 43 mm	0,98	
440.0172	1	Press cone	1,00	
440.0173	1	Cover	0,74	
440.0174	1	Disassembly ring, 20 mm	0,64	
440.0007	1	Collar nut, M18	0,08	

Wheel hub puller set for Iveco

- Special tool for expressing the joint hubs or drawing-off of the wheel hub
- Ideal for use with a hydraulic cylinder
- Easy installation and easy handling
- Special tool steel

Recommended hydraulic cylinder: 16 t (440.0005), 22 t (440.0010)
Application range: Iveco Daily 29-50



			kg
440.0140	4 pcs	Wheel hub puller set for Iveco	1,42

consists of:

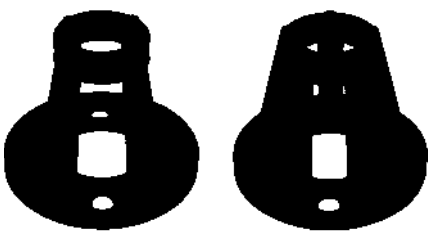
	x		kg
440.0114	3	Screw M14 x 40	0,06
440.0168	1	Plate, 1.1/2", Ø 120 mm	1,24

Drive shaft press out device set, 4 and 5 hole

- Ideally suited to pressing out rusty and stuck drive shafts
- For all passenger cars and transporters with 4 and 5 hold hubs
- For hole diameters up to 120 mm
- Optimal for the disassembly of the wheel hub with a hydraulic cylinder or adapter (440.0119) and the impact hammer (440.0080)
- No damage to the drive shaft or other parts
- Secure and easy to use
- Minimum work time
- Special tool steel

Recommended hydraulic cylinder: 16 t (4400005) and 22 t (440.0010)





			kg
440.0115	2 pcs	Drive shaft press out device set, 4 and 5 hole	4,52

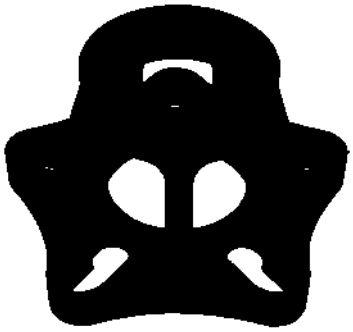
consists of:

		kg
440.0116	Drive shaft 4 hole, hole 98-120 mm	2,28
440.0117	Drive shaft 5 hole, hole 100-120 mm	2,24

Drive shaft press out device, 5 hole

- Specially for the removal of rusty and stuck drive shafts directly on the vehicle
- Suitable for all transport vehicles with 5 hole hubs
- For hole diameters of 100-170 mm
- Ideal for the disassembly of the wheel hub with hydraulic cylinder
- No damage to the drive shaft or other parts
- Secure and easy to use
- Minimum work time
- Special tool steel

Recommended hydraulic cylinder: 32 t (440.0025)



		kg
440.0124	Drive shaft press out device, 5 hole	4,08

Special nut set, M14x2,0

- For the removal of rear wheel bearings
- Suitable for pressing out of the front drive shaft
- Can be used in connection with drive shaft press out device 440.0124

Application range: Ford Transit



			g
440.0136	5 pcs	Special nut set, M14x2,0	450

Special nut set, M16x1,5

- For the removal of rear wheel bearings
- Suitable for pressing out of the front drive shaft
- Can be used in connection with drive shaft press out device 440.0124
- **Application range: Citroën** Jumper, **Peugeot** Boxer, **Fiat** Ducato and **Renault** Master



			g
440.0530	5 pcs	Special nut set, M16x1,5	800

DISASSEMBLY OF WHEEL BEARINGS

Mechanical spindle set

- Universally usable pressure rod including collar nut and pressure piece
- Extremely robust spindle with inductively hardened thread
- Ideally suited to tool sets 440.0075, 440.0065, 440.0095, 440.0100, 440.0073 and 440.0105
- Special tool steel

Caution: The spindles must be greased before first use!



			kg
440.0035	4 pcs	Mechanical spindle set	1,11

consists of:

		g
440.0031	Pressure rod with collar nut, M18, 330 mm	660
440.0032	Ring washer	60
440.0033	Pressure disk, Ø 65 mm	310
440.0007	Collar nut, M18	80

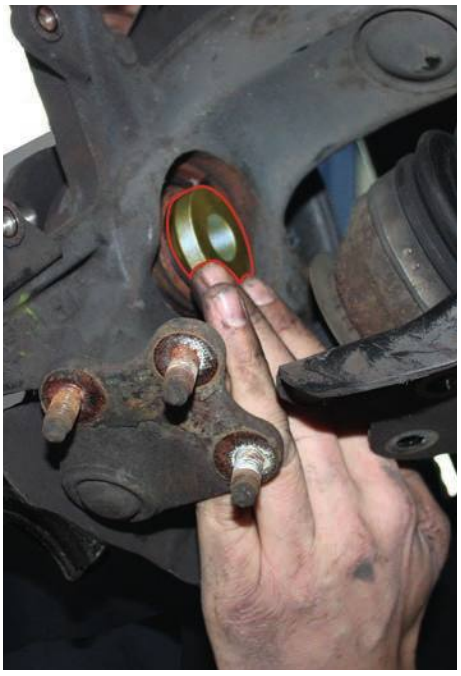
Universal disassembly disk, conical

- Conical disk for the assembly of compact wheel bearings
- Suitable for all sizes
- Special tool steel





			g
440.0074	Universal disassembly disk, conical	110	



Universal tool for compact wheel bearing assembly

- For the disassembly of compact wheel bearings with or without securing ring
- Correct disassembly directly on the vehicle
- Max. load 22 t
- Adjustability ensures use on all compact bearing types
- Can be used with hydraulic cylinders or mechanical spindles
- Minimum work time
- Secure and easy to use
- Can be used alongside 440.0074
- Special tool steel

Recommended hydraulic cylinder: 16 t (4400005) and 22 t (440.0010)



		kg	
440.0630	Universal tool for compact wheel bearing assembly	7,32	

consists of:

		kg	
440.0501	Locking screw M14	0,20	
440.0631	Traverse	2,78	
440.0634	Disassembly - pressure foot set for compact wheel bearings, 2 pcs.	4,20	
440.0636	Guide nut	0,16	

Universal tool for screwed wheel bearing assembly

- For the disassembly of screwed wheel bearings with 4 bolts at the front and rear axle
- Correct disassembly directly on the vehicle
- Max. load 22 t
- Using both sides of the pressure feet ensures easy and quick adjustment at axle joint
- Adjustability ensures use on all market available screwed and compact wheel bearings
- Can be used with hydraulic cylinders or mechanical spindles
- Minimum work time
- Secure and easy to use
- Can be used alongside 440.0074
- Special tool steel

Recommended hydraulic cylinder: 16 t (440.0005) and 22 t (440.0010)



			kg	
440.0655	7 pcs	Universal tool for screwed wheel bearing assembly	6,00	

consists of:

	x		kg	
440.0501	2	Locking screw M14	0,20	
440.0631	1	Traverse	2,78	
440.0632	1	Disassembly - pressure foot set for bolted wheel bearing units with 4 pin, 2 pcs	2,70	
440.0636	2	Guide nut	0,16	

Universal tool for screwed wheel bearing assembly

- For the disassembly of screwed wheel bearings with 3 bolts at the front and rear axle
- Correct disassembly directly on the vehicle
- Max. load 22 t
- Using both sides of the pressure feet ensures easy and quick adjustment at axle joint
- Adjustability ensures use on all market available screwed and compact wheel bearings
- Can be used with hydraulic cylinders or mechanical spindles
- Minimum work time
- Secure and easy to use
- Can be used alongside 440.0074
- Special tool steel

Recommended hydraulic cylinder: 16 t (440.0005) and 22 t (440.0010)



			kg	
440.0660	7 pcs	Universal tool for screwed wheel bearing assembly	6,84	

consists of:

	x		kg	
440.0501	2	Locking screw M14	0,20	
440.0631	1	Traverse	2,78	
440.0633	1	Disassembly - pressure foot set for bolted wheel bearing units with 3 pin, 2 pcs	1,78	
440.0636	2	Guide nut	0,16	

Universal tool for screwed and compact wheel bearing assembly

- For the disassembly of screwed and compact wheel bearings with 3 and 4 bolts at the front and rear axle
- Correct disassembly directly on the vehicle
- Max. load 22 t
- Using both sides of the pressure feet ensures easy and quick adjustment at axle joint
- Adjustability ensures use on all market available screwed and compact wheel bearings
- Can be used with hydraulic cylinders or mechanical spindles
- Minimum work time
- Secure and easy to use
- Special tool steel

Recommended hydraulic cylinder: 16 t (440.0005) and 22 t (440.0010)



			kg	
440.0645	17 pcs	Universal tool for screwed and compact wheel bearing assembly	14,23	

consists of:

		kg	
440.0074	Universal disassembly disk, conical	0,11	
440.0076	Hub screw, Ø 32 mm	0,03	
440.0077	Hub screw, Ø 40 mm	0,07	
440.0078	Hub screw, Ø 45 mm	0,10	
440.0079	Hub screw, Ø 52 mm	0,13	
440.0087	Bearing screw, Ø 63 mm	0,30	
440.0630	Universal tool for compact wheel bearing assembly	7,32	
440.0632	Disassembly - pressure foot set for bolted wheel bearing units with 4 pin, 2 pcs	2,70	
440.0633	Disassembly - pressure foot set for bolted wheel bearing units with 3 pin, 2 pcs	1,78	

Universal tool for screwed and compact wheel bearing assembly and disassembly

- For the assembly and disassembly of screwed and compact wheel bearings with 3 and 4 bolts at the front and rear axle
- Enables de -and assembly directly on the vehicle
- Max. load 22 t
- Using both sides of the pressure feet ensures easy and quick adjustment at axle joint
- Adjustability ensures use on all market available screwed and compact wheel bearings
- Can be used with hydraulic cylinders or mechanical spindles
- Minimum work time
- Secure and easy to use
- Special tool steel

Recommended hydraulic cylinder: 16 t (440.0005) and 22 t (440.0010)





			kg	
440.0650	33 pcs	Universal tool for screwed and compact wheel bearing assembly and disassembly	8,41	

consists of:

		kg	
440.0074	Universal disassembly disk, conical	0,11	
440.0076	Hub screw, Ø 32 mm	0,03	
440.0077	Hub screw, Ø 40 mm	0,07	
440.0078	Hub screw, Ø 45 mm	0,10	
440.0079	Hub screw, Ø 52 mm	0,13	
440.0087	Bearing screw, Ø 63 mm	0,30	
440.0065	Universal tool set for compact wheel bearing assembly	7,26	
440.0072	Assembly retainer plate for Ford/Mazda/Volvo	1,42	
440.0069	Assembly ring for Ford/Mazda/Volvo	0,06	
440.0071	Assembly retainer plate for VW	2,08	
440.0064	Assembly retainer plate for Volkswagen/Audi/Seat/Škoda	1,20	
440.0630	Universal tool for compact wheel bearing assembly	7,32	
440.0632	Disassembly - pressure foot set for bolted wheel bearing units with 4 pin, 2 pcs	2,70	
440.0633	Disassembly - pressure foot set for bolted wheel bearing units with 3 pin, 2 pcs	1,78	

WHEEL BEARING ASSEMBLY

Universal tool set for compact wheel bearing assembly

- For the assembly of compact wheel bearings with and without securing ring
- Enables use directly on the vehicle
- Max. load 22 t
- Adjustability allows for use on all compact bearing types
- Can be used with hydraulic cylinders or mechanical spindles
- Minimum work time
- Secure and easy to use
- Can be used alongside 440.0072, 440.0069, 440.0071 and 440.0064
- Special tool steel

Recommended hydraulic cylinder: 16 t (4400005) and 22 t (440.0010)





			kg	
440.0065	9 pcs	Universal tool set for compact wheel bearing assembly	7,26	

consists of:

	x		kg	
440.0066	1	Securing plate	2,08	
440.0067	4	Press foot	1,24	
440.0068	4	Screw, M14 x 30	0,06	

Retainer plate assembly for Volkswagen

- Ideal for retaining during wheel bearing assembly
- Simple handling
- Suitable for spindle M20
- Special tool steel

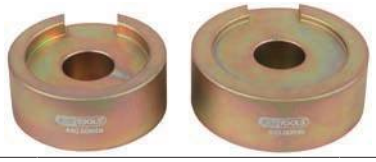


		Inner Ø mm	kg	
440.0071		19,5	2,08	

Assembly retainer plate for Volkswagen/Audi/Seat/Škoda

- Ideal for compact bearing insertion as a retainer
- Simple handling
- Suitable for spindle M20
- Special tool steel





		Inner Ø mm	kg	
440.0064		20,3	1,20	

Assembly retainer plate for Ford/Mazda/Volvo

- Ideal for compact bearing insertion as a retainer
- Secure and easy to use
- Optimal fit
- Suitable for spindle M20
- Special tool steel



		Inner Ø mm	kg	
440.0072		19,5	1,42	

Assembly ring for Ford/Mazda/Volvo

- Ideal for pressing in compact bearings
- Special tool steel



			g	
440.0069		Assembly ring for Ford/Mazda/Volvo	60	

Universal tool set for compact wheel bearing assembly

- For the assembly of compact wheel bearings with and without securing ring
- Enables use directly on the vehicle
- Max. load 22 t
- Adjustability allows for use on all compact bearing types
- Can be used with mechanical spindles
- Minimum work time
- Secure and easy to use
- Including spindle set and two assembly retainer plates
- Special tool steel

Recommended hydraulic cylinder: 16 t (4400005) and 22 t (440.0010)





			kg	
440.0535	17 pcs	Universal tool set for compact wheel bearing assembly	9,72	

consists of:

			kg	
440.0065		Universal tool set for compact wheel bearing assembly	7,26	
440.0064		Assembly retainer plate for Volkswagen/ Audi/Seat/Škoda	1,20	
440.0071		Assembly retainer plate for VW	2,08	
440.0035		Mechanical spindle set, 4 pcs	1,11	

WHEEL BEARING ASSEMBLY AND DISASSEMBLY

Universal tool set for compact wheel bearing assembly, disassembly and for pressing out drive shafts

- Ideal set for the assembly and disassembly of compact wheel bearings with and without securing ring
- Also suitable for pressing out drive shafts
- Enables use directly on the vehicle
- Max. load 22 t
- Adjustability allows for use on all compact bearing types
- Can be used with hydraulic cylinders or mechanical spindles
- Minimum work time
- Secure and easy to use
- With different retainer plates for compact wheel bearing indentation
- Includes conical disk for the disassembly of compact wheel bearings of all sizes
- Also ideally suited for pressing out rusty and stuck drive shafts
- For all passenger cars and transporters with 4 and 5 hold hubs
- For hole diameters up to 120 mm
- Optimal for the disassembly of the wheel hub with a hydraulic cylinder or adapter (440.0119) and the impact hammer (440.0080)
- No damage to the drive shaft or other parts
- Special tool steel



			kg	
440.0640	20 pcs	Universal tool set for compact wheel bearing assembly, disassembly and for pressing out drive shafts	23,97	

consists of:

		kg	
440.0064	Assembly retainer plate for Volkswagen/ Audi/Seat/Škoda	1,20	
440.0065	Universal tool set for compact wheel bearing assembly	7,26	
440.0069	Assembly ring for Ford/Mazda/Volvo	0,06	
440.0071	Assembly retainer plate for VW	2,08	
440.0072	Assembly retainer plate for Ford/Mazda/ Volvo	1,42	
440.0074	Universal disassembly disk, conical	0,11	
440.0115	Drive shaft press out device set, 4 and 5 hole, 2 pcs	4,52	
440.0630	Universal tool for compact wheel bearing assembly	7,32	



Universal tool set for compact wheel bearing assembly and disassembly

- Ideal set for the assembly and disassembly of compact wheel bearings with and without securing ring
- Also suitable for pressing out drive shafts
- Enables use directly on the vehicle
- Max. load 22 t
- Adjustability allows for use on all compact bearing types
- Can be used with hydraulic cylinders or mechanical spindles
- Minimum work time
- Secure and easy to use
- With different retainer plates for compact wheel bearing indentation
- Includes conical disk for the disassembly of compact wheel bearings of all sizes
- With separator screws for Volkswagen models
- Special tool steel



			kg	
440.9998	33 pcs	Universal tool set for compact wheel bearing assembly and disassembly	17,22	

consists of:

		kg	
440.0064	Assembly retainer plate for Volkswagen/Audi/Seat/Škoda	1,20	
440.0065	Universal tool set for compact wheel bearing assembly	7,26	
440.0069	Assembly ring for Ford/Mazda/Volvo	0,06	
440.0150	Separator screw set for Volkswagen wheel bearing, 9 pcs	0,48	
440.0071	Assembly retainer plate for VW	2,08	
440.0072	Assembly retainer plate for Ford/Mazda/Volvo	1,42	
440.0074	Universal disassembly disk, conical	0,11	
440.0630	Universal tool for compact wheel bearing assembly	7,32	

Wheel bearing set for Volkswagen/Audi/Porsche

- For assembly and disassembly on compact bearings on the front and rear axle
- Enables de -and assembly directly on the vehicle
- Minimum work time
- Secure and easy to use
- No damage to the ABS sender
- Special tool steel

Recommended hydraulic cylinder: 16 t (440.0005), 22 t (440.0010) and 32 t (440.0025)
Application range: Audi Q7, **Volkswagen** Touareg, **Porsche** Cayenne





			kg	
440.0105	10 pcs	Wheel bearing set for Volkswagen/Audi/Porsche	10,33	

consists of:

		kg	
440.0084	Pressure tube, Ø 54 mm	0,50	
440.0106	Pressure tube, 90 mm	1,78	
440.0107	Pressure tube, 28 mm	2,50	
440.0108	Bearing disk, 19 mm	0,87	
440.0109	Bearing disk, 19 mm	0,93	
440.0113	Bearing disk for wheel bearing set, front for Citroën/Fiat/Ford/Peugeot	0,47	
440.0111	Hub disk, Ø 44 mm	0,11	
440.0112	Pressure disk, Ø 167 mm	3,17	

Wheel bearing set, front for Citroën/Fiat/Peugeot

- For the assembly and disassembly of compact bearings on the front axle
- Only for use alongside the bearing disk (440.0113) and hub disk (440.0123)
- Enables de -and assembly directly on the vehicle
- Minimum work time
- Secure and easy to use
- No damage to the ABS sender
- For all models >2007 the press ring (440.0085) must be used
- Special tool steel

Recommended hydraulic cylinder: 32 t (440.0025)
Application range: Citroën Jumper, **Fiat** Ducato, **Peugeot** Boxer, < 2007





			kg	
440.0125	8 pcs	Wheel bearing set, front for Citroën/Fiat/Peugeot	11,71	

consists of:

		kg	
440.0126	Press ring	1,29	
440.0112	Pressure disk, Ø 167 mm	3,17	
440.0127	Pressure tube, Ø 170 mm	3,62	
440.0128	Bearing disk, Ø 90 mm	0,97	
440.0129	Retainer, Ø 108 mm	1,61	
440.0098	Pressure tube, Ø 55 mm	0,69	
440.0099	Hub disk, Ø 48 mm	0,16	
440.0104	Drive nut, M22	0,20	

Wheel bearing set, rear for Citroën/Fiat/Ford/Peugeot

- For assembly and disassembly on compact bearings on the rear axle
- Ideally suited as a drive shaft tool for all 5 hole hubs
- Enables de -and assembly directly on the vehicle
- Minimum work time
- Secure and easy to use
- No damage to the ABS sender
- Suitable for all transport vehicles
- Special tool steel

Recommended hydraulic cylinder: 32 t (440.0025)
Application range: Citroën Jumper, **Fiat** Ducato, **Peugeot** Boxer, **Ford** Transit



			kg	
440.0120	6 pcs	Wheel bearing set, rear for Citroën/Fiat/Ford/Peugeot	7,06	

consists of:

		kg	
440.0011	Impact body, M22 x 2.5 mm	0,22	
440.0113	Bearing disk for wheel bearing set, front for Citroën/Fiat/Ford/Peugeot	0,47	
440.0121	Pressure sleeve, Ø 105 mm	1,62	
440.0122	Adaptor ring	0,45	
440.0123	Hub disk for wheel bearing set, front Citroën/Fiat/Ford/Peugeot	0,22	
440.0124	Drive shaft press out device, 5 hole	4,08	

Bearing disk for wheel bearing set, front for Citroën/Fiat/Ford/Peugeot

- For expanding the wheel bearing set, front (440.0125), if the wheel bearing set, rear (440.0120) is not available
- Special tool steel



		g	
440.0113	Bearing disk for wheel bearing set, front for Citroën/Fiat/Ford/Peugeot	470	

Hub disk for wheel bearing set, front Citroën/Fiat/Ford/Peugeot

- For expanding the wheel bearing set, front (440.0125), if the wheel bearing set, rear (440.0120) is not available
- Special tool steel



		g	
440.0123	Hub disk for wheel bearing set, front Citroën/Fiat/Ford/Peugeot	220	

Press ring set for wheel bearing set, front

- Press ring for expansion of the various wheel bearing sets (440.0125 and 440.0160)
- Special tool steel

Application range: Citroën Jumper, **Fiat** Ducato, **Peugeot** Boxer > 2007, **Renault** > 2010, **Nissan** > 2010, **Opel** > 2010



			kg	
440.0085	4 pcs	Press ring set for wheel bearing set, front	2,76	

Pressure sleeve, front for Renault/Nissan/Opel

- Press sleeve for wheel bearing set (440.0160)
- Ideally suited to expanding the set for the wheel bearing assembly on models >2010
- Special tool steel



		kg	
440.0166	Pressure sleeve, front for Renault/Nissan/Opel	1,06	

Wheel bearing set, front for Renault/Nissan/Opel 2002-2010

- For the assembly and disassembly of compact bearings on the front axle
- Enables de -and assembly directly on the vehicle
- Minimum work time
- Secure and easy to use
- No damage to the ABS sender
- For all models >2010 the press sleeve (440.0166) and the press ring set (440.0085) must be used
- Special tool steel

Recommended hydraulic cylinder: 16 t (440.0005), 22 t (440.0010), 32 t (440.0025)
Application range: Nissan Interstar, **Opel** Movano, **Renault** Master 2002-2010





			kg	
440.0160	9 pcs	Wheel bearing set, front for Renault/Nissan/Opel 2002-2010	13,93	

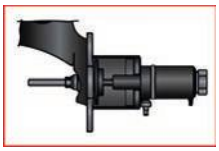
consists of:

		kg	
440.0085	Pressure ring set for wheel bearing set, front, 4 pcs	2,76	
440.0098	Pressure tube, Ø 55 mm	0,69	
440.0111	Hub disk, Ø 44 mm	0,11	
440.0112	Pressure disk, Ø 167 mm	3,17	
440.0113	Bearing disk for wheel bearing set, front for Citroën/Fiat/Ford/Peugeot	0,47	
440.0127	Pressure tube, Ø 170 mm	3,62	
440.0161	Bearing shell, Ø 98 mm	1,54	
440.0162	Pressure disk, Ø 89 mm	0,93	
440.0163	Pressure disk, Ø 83 mm	0,64	

Bearing and hub shell set

- Expansion for universal wheel bearing drive axle hub set (440.0075)
- Ideal for the assembly and disassembly of wheel bearings and hubs
- Secure and easy to use
- Special tool steel

Application range: Ford C-Max, **Mazda** 3, **Volvo** S40/V50, as well as certain models from **Citroën**, **Peugeot**, **Renault** and **VAG** with separated wheel bearings/hubs





			kg	
440.0095	2 pcs	Bearing and hub shell set	4,98	

consists of:

		kg	
440.0096	Pressure disk, large	2,20	
440.0097	Pressure pipe, large	2,78	

Adjustable wheel bearing plate

- Ideally used when disassembling wheel bearings which are removed from the inside
- Allows for a flat press surface with 3 installation screws
- The wheel bearings do not tilt
- Used together with the universal wheel bearing axle drive hub set (440.0075)
- Secure and easy to use
- Special tool steel





			kg	
440.0100	4 pcs	Adjustable wheel bearing plate	1,98	

consists of:

	x		kg	
440.0102	3	Screw	0,12	
440.0103	1	Plate, Ø 131 mm	1,66	

Wheel bearing set, front for Ford

- For the assembly and disassembly of compact bearings on the front axle
- Enables de -and assembly directly on the vehicle
- Wheel bearing replacement direct on the vehicle with minimal time required
- Replacing the brake disks or destroyed wheel bearings
- Secure and easy to use
- For use with hydraulic cylinder
- Special tool steel

Recommended hydraulic cylinder: 32 t (440.0025)
Application range: Ford Transit > 2000





			kg	
440.0130	6 pcs	Wheel bearing set, front for Ford	9,25	

consists of:

		kg	
440.0096	Pressure disk, large	2,20	
440.0097	Pressure pipe, large	2,78	
440.0111	Hub disk, Ø 44 mm	0,11	
440.0131	Hub tool, Ford Transit	3,00	
440.0113	Bearing disk for wheel bearing set, front for Citroën/Fiat/Ford/Peugeot	0,47	
440.0098	Pressure tube, Ø 55 mm	0,69	

Wheel bearing set, rear for Ford

- For assembly and disassembly on compact bearings on the rear axle
- Enables de -and assembly directly on the vehicle
- M14 x 2 special nuts for the best centring
- Ideal for 5 hole hubs
- Secure and easy to use
- For use with hydraulic cylinder
- Special tool steel

Recommended hydraulic cylinder: 32 t (440.0025)
Application range: Ford Transit > 2000





			kg	
440.0135	6 pcs	Wheel bearing set, rear for Ford	4,53	

consists of:

		kg	
440.0124	Drive shaft press out device, 5 hole	4,08	
440.0136	Special nut set, 5 pcs, M14 x 2	0,45	

Wheel bearing set, front for Renault/Nissan/Opel

- For the assembly and disassembly of compact bearings on the front axle
- Enables de -and assembly directly on the vehicle
- Minimum work time
- Secure and easy to use
- No damage to the ABS sender
- Special tool steel

Recommended hydraulic cylinder: 32 t (440.0025)
Application range: Renault Master, **Nissan** Interstar, **Opel** Movano > 2010





			kg	
440.0165	8 pcs	Wheel bearing set, front for Renault/ Nissan/Opel	12,81	

consists of:

		kg	
440.0166	Pressure sleeve, front for Renault/Nissan/ Opel	1,06	
440.0111	Hub disk, Ø 44 mm	0,11	
440.0112	Pressure disk, Ø 167 mm	3,17	
440.0113	Bearing disk for wheel bearing set, front for Citroën/Fiat/Ford/Peugeot	0,47	
440.0127	Pressure tube, Ø 170 mm	3,62	
440.0098	Pressure tube, Ø 55 mm	0,69	
440.0085	Pressure ring set for wheel bearing set, front, 4 pcs	2,76	
440.0162	Pressure disk, Ø 89 mm	0,93	

Wheel bearing set, front for Nissan/Opel/Renault

- For the assembly and disassembly of compact bearings on the front axle
- Enables de -and assembly directly on the vehicle
- Minimum work time
- Secure and easy to use
- No damage to the ABS sender
- Special tool steel

Recommended hydraulic cylinder: 16 t (440.0005), 22 t (440.0010), 32 t (440.0025)
Application range: Nissan Primastar, **Opel** Vivaro, **Renault** Trafic





			kg	
440.0155	8 pcs	Wheel bearing set, front for Nissan/ Opel/Renault	9,62	

consists of:

		kg	
440.0083	Retainer, 122 mm	0,81	
440.0084	Pressure tube, Ø 54 mm	0,50	
440.0139	Bearing disk Ø 57 mm	0,25	
440.0093	Bearing screw, Ø 83 mm	0,55	
440.0138	Bearing disk Ø 88 mm	0,61	
440.0111	Hub disk, Ø 44 mm	0,11	
440.0112	Pressure disk, Ø 167 mm	3,17	
440.0127	Pressure tube, Ø 170 mm	3,62	

Separator screw set for Volkswagen wheel bearing

- Expansion for universal wheel bearing drive axle hub set (440.0075)
- Ideal for the assembly and disassembly of wheel bearings and hubs
- Special for Volkswagen models, front and rear
- Secure and easy to use
- Special tool steel

Application range: Volkswagen T5, Touareg



			g	
440.0150	9 pcs	Separator screw set for Volkswagen wheel bearing	480	

consists of:

	x		g	
440.0132	2	Spacer screw, front	20	
440.0133	1	Spacer bolt, front	200	
440.0134	3	Spacer screw rear, drum brake	40	
440.0137	3	Spacer screw, rear	40	

Universal wheel bearing drive axle hub set

- Universal front-wheel bearing set with combined wheel hub/ drive shaft frame
- Ideal for use alongside hydraulic cylinders or mechanical spindles
- For the assembly and disassembly of wheel bearings, hubs and drive shafts directly on the vehicle
- No removal of the ABS sender, axle joint, spring feet or track rod joint
- Saves a lot of time since the axle does not need to be measured again
- Secure and easy to use
- Can be used alongside 440.0095, 440.0150 and 440.0100
- Special tool steel

Recommended hydraulic cylinder: 16 t (4400005) and 22 t (440.0010)





			kg	
440.0075	16 pcs	Universal wheel bearing drive axle hub set	11,14	

consists of:

		kg	
440.0076	Hub screw, Ø 32 mm	0,03	
440.0077	Hub screw, Ø 40 mm	0,07	
440.0078	Hub screw, Ø 45 mm	0,10	
440.0079	Hub screw, Ø 52 mm	0,13	
440.0081	Pressure disk, 18 mm	0,55	
440.0082	Adaptor for 440.0075	0,15	
440.0083	Retainer, 122 mm	0,81	
440.0084	Pressure tube, Ø 54 mm	0,50	
440.0086	Bearing shell, 77 mm	0,78	
440.0087	Bearing screw, Ø 63 mm	0,30	
440.0088	Bearing screw, Ø 68 mm	0,35	
440.0089	Bearing screw, Ø 71 mm	0,40	
440.0091	Bearing screw, Ø 74 mm	0,44	
440.0092	Bearing screw, Ø 78 mm	0,48	
440.0093	Bearing screw, Ø 83 mm	0,55	
440.0094	Press frame for drive shaft and hub	5,50	

Wheel bearing set, rear for Mercedes

- For assembly and disassembly on compact bearings on the rear axle
- Enables de -and assembly directly on the vehicle
- Minimum work time
- Secure and easy to use
- No damage to the ABS sender
- Special tool steel

Recommended hydraulic cylinder: 16 t (4400005) and 22 t (440.0010)
Application range: Mercedes Vito, Viano (W639) 2003-2010





			kg	
440.0090	11 pcs	Wheel bearing set, rear for Mercedes	8,31	

consists of:

	x		kg	
440.0071	1	Assembly retainer plate for VW	2,08	
440.0078	1	Hub screw, Ø 45 mm	0,10	
440.0081	1	Pressure disk, 18 mm	0,55	
440.0084	1	Pressure tube, Ø 54 mm	0,50	
440.0087	1	Bearing screw, Ø 63 mm	0,30	
440.0092	1	Bearing screw, Ø 78 mm	0,48	
440.0094	1	Press frame for drive shaft and hub	5,50	
440.0137	3	Spacer screw, rear	0,04	



Universal tool set for disassembly/assembly of axle parts

- Ideal set for the assembly and disassembly of axle parts
- Universal front-wheel bearing set with combined wheel hub/drive shaft frame
- Ideal for the assembly and disassembly of wheel bearings and hubs
- Can also be used when disassembling wheel bearings which are removed from the inside
- Allows for a flat press surface with 3 installation screws
- Ideal for use alongside hydraulic cylinders or mechanical spindles
- For the assembly and disassembly of wheel bearings, hubs and drive shafts directly on the vehicle
- No removal of the ABS sender, axle joint, spring feet or track rod joint
- Saves a lot of time since the axle does not need to be measured again
- Ideally suited to pressing out rusty and stuck drive shafts
- For all passenger cars and transporters with 4 and 5 hold hubs
- For hole diameters up to 120 mm
- Optimal for the disassembly of the wheel hub with a hydraulic cylinder or adapter (440.0119) and the impact hammer (440.0080)
- No damage to the drive shaft or other parts
- Secure and easy to use
- Special tool steel

Recommended hydraulic cylinder: 16 t (440.0005) and 22 t (440.0010)
Application range: Ford C-Max, **Mazda** 3, **Volvo** S40/V50, as well as certain models from **Citroën**, **Peugeot**, **Renault** and **VAG** with separated wheel bearings/hubs



			kg	
440.9992	24 pcs	Universal tool set for disassembly/assembly of axle parts	22,62	

consists of:

		kg	
440.0115	Drive shaft press out device set, 4 and 5 hole, 2 pcs	4,52	
440.0075	Universal wheel bearing drive axle hub set, 16 pcs	11,14	
440.0095	Bearing and hub shell set, 2 pcs	4,98	
440.0100	Adjustable wheel bearing plate	1,98	



Drive shaft insertion tool set for BMW

- Ideally suited to pulling in the drive shaft to the wheel hub
- Pulling tool with hardened spindle
- Includes 2 pulling sleeves with various threads
- Sturdy design
- Simple handling
- Special tool steel

Recommended hydraulic cylinder: 8,5 t (440.0020)

Application range: BMW E81 - 88 (1er), E84 (X1), E46, E90 - 93, F30 - 31 (3er), E83, F25 (X3), E85 - 89 (Z4), E39, E60-61, F10 - 18 (5er), E53, E70 (X5), E63 - 64, F12 - 13 (6er), E71 - 72 (X6), E38, E65 - 66, F01 - 04 (7er)





			kg	
440.0520	6 pcs	Drive shaft insertion tool set for BMW	1,27	

consists of:

		g	
440.0313	Press pipe 44.7 x 44.7 x 37.2 mm	260	
440.0521	Pulling sleeve, M24 x 1.5 mm	60	
440.0522	Pulling sleeve, M27 x 1.5 mm	80	
440.0028	Collar nut, M22	160	
440.0523	Pressure disk	60	
440.0029	Pressure rod, M22, L = 250 mm	620	

HYDRAULIC AXLE TOOLS - SILENT BEARING TOOLS

Silent bearing tool set for BMW rear axles

- For the assembly and disassembly of the rear axle silent bearings
- Ideal for secure bearings
- Secure and easy to use
- For use with hydraulic cylinder
- Special tool steel

Recommended hydraulic cylinder: 16 t (440.0005), 22 t (440.0010)
Application range: BMW E60- 65 (5 series, 6 series, 7 series), E81-E88 (1 series), E90 (3 series)

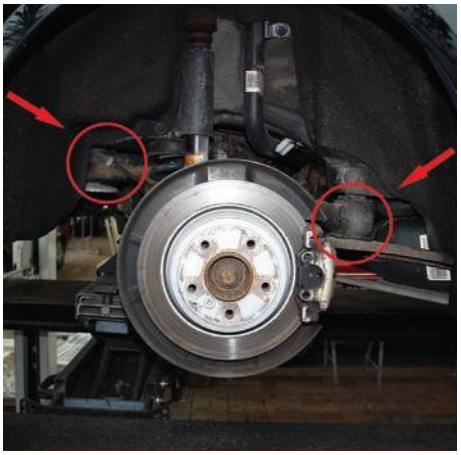




			kg	
440.0255	21 pcs	Silent bearing tool set for BMW rear axles	12,87	

consists of:

		kg	
440.0153	Pressure pipe Touring	1,46	
440.0154	Pressure disk Touring	1,31	
440.0256	Assembly disk E32/E34	0,74	
440.0121	Pressure sleeve, Ø 105 mm	1,62	
440.0254	Pressure disk, Ø 97 mm	0,48	
440.0257	Retainer ring E32/E34	0,32	
440.0252	Retainer ring, Ø 130 mm	0,66	
440.0253	Assembly disk, Ø 105 mm	1,04	
440.0008	Pressure rod, M18/M22, L = 250 mm	0,44	
440.0258	Pressure rod, M18/M22, 180 mm	0,32	
440.0259	Assembly ring, 12 mm	0,16	
440.0261	Retainer, 16 mm	0,44	
440.0262	Disk with thread, 42 mm	0,48	
440.0263	Disk with thread, 30 mm	0,38	
440.0264	Pressure disk, 17 mm	0,52	
440.0266	Retainer ring, 30 mm	0,64	
440.0267	Assembly ring, 10 mm	0,10	
440.0268	Disk with thread, 24 mm	0,74	
440.0046	Adaptor, M22-M14	0,04	
440.0043	Pressure rod, M14	0,24	
440.0269	Retainer plate E32/E34	0,74	



Silent bearing tool set for BMW X5 rear axles

- For the assembly and disassembly of the rear axle silent bearings
- Ideal for secure bearings
- Secure and easy to use
- For use with hydraulic cylinder
- Special tool steel

Recommended hydraulic cylinder: 16 t (440.0005), 22 t (440.0110)
Application range: BMW X5 (E53)





			kg	
440.0250	8 pcs	Silent bearing tool set for BMW X5 rear axles	7,77	

consists of:

		kg	
440.0251	Disk with thread, Ø 95mm	0,76	
440.0252	Retainer ring, Ø 130 mm	0,66	
440.0253	Assembly disk, Ø 105 mm	1,04	
440.0121	Pressure sleeve, Ø 105 mm	1,62	
440.0254	Pressure disk, Ø 97 mm	0,48	
440.0153	Pressure pipe Touring	1,46	
440.0154	Pressure disk Touring	1,31	
440.0008	Pressure rod, M18/M22, L = 250 mm	0,44	

Wishbone bush set for Ford Transit, front

- For the assembly and disassembly of the rear wishbone bushes on the front wishbone
- Enables de -and assembly directly on the vehicle
- Ideal for use on secure bearing bushes
- For use with hydraulic cylinder
- Secure and easy to use
- Special tool steel

Recommended hydraulic cylinder: 16 t (440.0005), 22 t (440.0010)
Application range: Ford Transit > 2000





			kg	
440.0285	5 pcs	Wishbone bush set for Ford Transit, front	1,94	

consists of:

		g	
440.0286	Pressure sleeve, Ø 66 mm	0,50	
440.0287	Pressure tube, Ø 78 mm	1,10	
440.0043	Pressure rod, M14	0,24	
440.0046	Adaptor, M22-M14	0,04	
440.0049	Collar nut, M14	0,06	

Wishbone bush set, read for Ford/Mazda/Volvo

- For assembly and disassembly of the rear axle bushes
- For use with the universal press stand (440.0180)
- Ideal for use directly on the vehicle
- Simple handling
- Saves a lot of time
- Special tool steel

Application range: Ford Focus >1999, **Mazda** 3 >2004, **Volvo** V50/S40 >2004





			kg	
440.0225	4 pcs	Wishbone bush set, read for Ford/ Mazda/Volvo	1,82	

consists of:

		g	
440.0226	Disassembly/assembly sleeve	800	
440.0227	Assembly disk, Ø 90 mm	500	
440.0228	Retainer ring, Ø 90 mm	320	
440.0229	Pressure disk, Ø 52 mm	200	

Silent bearing tool set for Ford / Volvo

- For the assembly and disassembly of the rear axle silent bearings
- Ideal for secure bearings
- Required for the correct installation
- Secure and easy to use
- For use with hydraulic cylinder
- Special tool steel

Recommended hydraulic cylinder: 14 t (440.0015), 16 t (440.0005), 22 t (440.0010)
Application range: Ford Mondeo, S-Max, Galaxy >2007, **Volvo** S60, S80, V60, V70, XC60, XC70 >2007





			kg	
440.0245	7 pcs	Silent bearing tool set for Ford / Volvo	6,76	

consists of:

	X		kg	
440.0246	1	Adaptor ring	0,18	
440.0247	1	Press frame, 225x180 mm	2,46	
440.0248	1	Pressure tube, Ø 102 mm	1,32	
440.0249	1	Pressure plate, Ø 81 mm	0,60	
440.0176	1	Upper traverse with internal thread 1.1/2"	2,04	
440.0179	2	Screw M16 x 40 mm	0,08	

Silent bearing tool set for Hyundai rear axles

- For the assembly and disassembly of the rear axle silent bearings
- Ideal for replacing all four bushes on the rear axle
- Work directly on the vehicle
- For use with hydraulic cylinder
- Secure and easy to use
- Special tool steel

Recommended hydraulic cylinder: 16 t (440.0005), 22 t (440.0010)
Application range: Hyundai Santa Fe 2006-2012





			kg	
440.0275	8 pcs	Silent bearing tool set for Hyundai rear axles	5,08	

consists of:

		g	
440.0276	Pressure tube, Ø 110 mm	960	
440.0277	Pressure disk, Ø 110 mm	880	
440.0278	Disassembly disk, Ø 78 mm	420	
440.0279	Pressure disk, Ø 92 mm	660	
440.0281	Assembly disk, Ø 98 mm	980	
440.0282	Disassembly ring, Ø 113 mm x 18 mm	420	
440.0283	Disassembly ring, Ø 113 mm x 11 mm	260	
440.0084	Pressure tube, Ø 54 mm	500	

Steering bushes set for Mercedes, rear

- For the assembly and disassembly of the rear, lower bushes in the axle body
- Correct assembly and disassembly directly on the vehicle
- For use with hydraulic cylinder
- Secure and easy to use
- Special tool steel

Recommended hydraulic cylinder: 16 t (440.0005), 22 t (440.0010)
Application range: Mercedes C, E and S class





			kg	
440.0270	7 pcs	Steering bushes set for Mercedes, rear	1,62	

consists of:

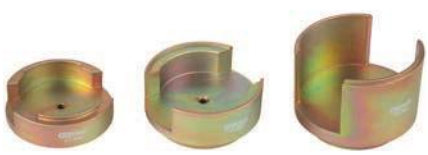
		g	
440.0271	Disassembly ring, Ø 39 mm	80	
440.0272	Assembly sleeve, Ø 43 mm	160	
440.0273	Pressure tube, Ø 50 mm	980	
440.0274	Retainer ring, installation	60	
440.0043	Pressure rod, M14	240	
440.0046	Adaptor, M22-M14	40	
440.0049	Collar nut, M14	60	

Rear axle bushes set for Renault

- Ideal for the assembly and disassembly of rear axle bushes
- For use with the universal press stand (440.0180)
- Can be used directly on the vehicle
- Simple handling
- Saves a lot of time
- Special tool steel

Application range: Renault Laguna 2





			kg	
440.0205	3 pcs	Rear axle bushes set for Renault	2,60	

consists of:

		kg	
440.0206	Pressure piece, 33 mm	0,54	
440.0207	Pressure piece, 38 mm	0,90	
440.0208	Pressure piece, 66 mm	1,16	

Double silent bearing set for VAG

- For the assembly and disassembly of the double silent bearings on VAG
- Secure and easy to use
- In conjunction with a workshop press
- Special tool steel

Application range: Volkswagen Caddy 2004-2010, Eos > 2006, Golf V 2003-2009, Scirocco > 2005, Jetta 2005-2010, Passat 2005-2010, Tiguan > 2007, Touran > 2003, **Seat** Altea > 2004, Leon > 2005, Toledo 2004-2009, **Škoda** Octavia 2004-2010, **Audi** A3 > 2005, TT 2006-2010





			kg	
440.0290	3 pcs	Double silent bearing set for VAG	1,44	

consists of:

		kg	
440.0291	Pressure tube, Ø 105 mm	1,22	
440.0292	Pressure disk, Ø 88 mm	0,66	
440.0293	Assembly pipe	0,56	

Silent bearing set for Volkswagen/Audi/Seat/Škoda

- For the assembly and disassembly of the rear, lower bushes in the double wishbone
- Robust spindle with inductive hardened thread
- Ideal for manual use
- Secure and easy to use
- Special tool steel

Application range: Volkswagen Polo 9N, Fox, **Audi** A2 2000-2005, **Seat** Ibiza, Altea, Cordoba 2003-2005, **Škoda** Fabia 2000-2004 and similarly constructed vehicles





			kg	
440.0295	7 pcs	Silent bearing set for Volkswagen/ Audi/Seat/Škoda	1,46	

consists of:

	x		g	
440.0049	2	Collar nut, M14	60	
440.0234	1	Pressure rod M14, L = 150 mm	140	
440.0296	1	Disassembly/assembly disk	280	
440.0297	1	Pressure tube, Ø 80 mm	340	
440.0298	1	Assembly disk, Ø 78 mm	440	
440.0299	1	Disassembly disk, Ø 61 mm	200	

Wishbone bushes set for Volkswagen T5, front

- For the assembly and disassembly of the rear wishbone bushes on the front wishbone
- Enables de -and assembly directly on the vehicle
- Ideal for use on secure bearing bushes
- For use with hydraulic cylinder
- Secure and easy to use
- Special tool steel

Recommended hydraulic cylinder: 16 t (440.0005), 22 t (440.0010)
Application range: Volkswagen T5 2004-2013





			kg	
440.0415	5 pcs	Wishbone bushes set for Volkswagen T5, front	1,46	

consists of:

		g	
440.0416	Pressure rod, L = 250 mm	240	
440.0417	Pressure plate, Ø 59 mm	340	
440.0418	Sleeve	780	
440.0049	Collar nut, M14	60	
440.0046	Adaptor, M22-M14	40	

Rear axle bushes set for Volkswagen/Audi/Seat/Škoda

- For the assembly and disassembly of the rear axle bushes
- For use with the universal press stand (440.0180)
- Ideal for use directly on the vehicle
- Simple handling
- Saves a lot of time
- Special tool steel

Application range: Audi A3, **Volkswagen** Golf 4, **Seat** Ibiza, **Škoda** Fabia





			kg	
440.0210	4 pcs	Rear axle bushes set for Volkswagen/Audi/Seat/Škoda	1,65	

consists of:

	x		g	
440.0213	1	Disassembly sleeve, Ø 68 mm	600	
440.0214	1	Disassembly ring, Ø 90 mm	300	
440.0216	1	Assembly sleeve, Ø 82 mm	570	
440.0217	1	Assembly ring, Ø 90 mm	160	

Universal press tool set

- For the assembly and disassembly of bearings, bushes and ball joints
- Adapter and pressure crank allow for use with the universal press stand (440.0180)
- 24 press sleeves in different sizes
- 61 various internal and external diameters between 30.5 mm and 79.7 mm
- Universal usage for passenger cars and transporters
- Excellent usage also with work bench press
- Special tool steel



			kg	
440.0300	26 pcs	Universal press tool set	9,67	

consists of:

		g	
440.0348	Adaptor plate	250	
440.3049	Adjustable pressure rod M24 x 90 mm	280	
440.0301	Press sleeve 40.7 x 42.5 x 35.2 mm	200	
440.0302	Press sleeve 43.7 x 45.5 x 38.2 mm	220	
440.0303	Press sleeve 46.7 x 48.5 x 41.2 mm	260	
440.0304	Press sleeve 49.7 x 51.5 x 44.2 mm	280	
440.0305	Press sleeve 52.7 x 54.5 x 47.2 mm	320	
440.0306	Press sleeve 55.7 x 57.5 x 50.2 mm	360	
440.0307	Press sleeve 58.7 x 69.5 x 53.2 mm	400	
440.0308	Press sleeve 61.7 x 63.5 x 56.2 mm	440	
440.0309	Press sleeve 65.7 x 67.5 x 60.2 mm	500	
440.0310	Press sleeve 69.7 x 71.5 x 64.2 mm	560	
440.0311	Press pipe 38.7 x 44.7 x 30.5 mm	260	
440.0312	Press pipe 41.7 x 44.7 x 34 mm	260	
440.0313	Press pipe 44.7 x 44.7 x 37.2 mm	260	
440.0314	Press pipe 47.7 x 55 x 40.2 mm	320	
440.0315	Press pipe 50.7 x 55 x 43.2 mm	320	
440.0316	Press pipe 53.7 x 55 x 46.2 mm	320	
440.0317	Press pipe 56.7 x 55 x 49.2 mm	340	
440.0318	Press pipe 59.7 x 70 x 52.2 mm	480	
440.0319	Press pipe 62.7 x 70 x 55.2 mm	480	
440.0320	Press pipe 65.7 x 70 x 58.2 mm	480	
440.0321	Press pipe 68.7 x 70 x 61.2 mm	480	
440.0322	Press pipe 71.7 x 70 x 64.2 mm	500	
440.0323	Press pipe 75.7 x 75.7 x 68.2 mm	540	
440.0324	Press pipe 79.7 x 79.7 x 72.2 mm	560	



Universal press tool expansion set

- Ideal sleeve assortment for expanding the press tool set (440.0300)
- For use with the universal press stand (440.0180)
- For use on passenger cars and transporters
- 11 press rings in different sizes
- Excellent usage also with work bench press
- Optimal for bushes, bearings and ball joints
- Special tool steel



			kg	
440.0325	12 pcs	Universal press tool expansion set	4,42	

consists of:

			kg	
440.0204		Lower traverse with open side	2,04	
440.0326		Press ring 59 x 70 x 52.2 mm	0,18	
440.0327		Press ring 62 x 70 x 55.5mm	0,16	
440.0328		Press ring 65 x 70 x 58.2 mm	0,14	
440.0329		Press ring 68 x 70 x 61.2 mm	0,12	
440.0331		Press ring 71 x 90 x 64.2 mm	0,30	
440.0332		Press ring 74 x 90 x 67.2 mm	0,28	
440.0333		Press ring 77 x 90 x 70.2 mm	0,26	
440.0334		Press ring 80 x 90 x 73.2 mm	0,24	
440.0336		Press ring 84 x 90 x 77.2 mm	0,20	
440.0337		Press ring 88 x 90 x 81.2 mm	0,16	
440.0338		Adaptor	0,34	

Master universal press tool set for axle parts

- Ideal set for the assembly and disassembly of bearings, bushings and ball joints
- 24 press sleeves in different sizes and 61 various internal and external diameters between 30.5 mm and 79.7 mm
- 11 press rings in different sizes between 59.0 mm and 90.0 mm
- With open stand plate and adapter ring set
- Can be used directly on the vehicle
- For use with hydraulic cylinder
- Secure and easy to use
- Universal usage for passenger cars and transporters
- Special tool steel

Recommended hydraulic cylinder: 14 t (440.0015), 16 t (440.0005), 22 t (440.0010)





			kg	
440.0555	47 pcs	Master universal press tool set for axle parts	19,71	

consists of:

			kg	
440.0180		Universal press stand, 9 pcs	5,62	
440.0300		Universal press tool set, 26 pcs	9,67	
440.0325		Universal press tool expansion set, 12 pcs	4,42	

Universal press tool set for axle parts

- For the assembly and disassembly of bearings, bushes and ball joints
- Adapter and adapter ring allow for use with the universal press stand
- 22 press sleeves with internal and external diameters between 34.0 mm and 90.0 mm
- Universal usage for passenger cars and transporters
- Outstanding to use also in connection with workshop press or hydraulic cylinder
- Special tool steel

Caution: The spindles must be greased before first use! Overloading leads to unwanted material stresses or breakage Always check the power settings on the drive with a torque wrench Not to be combined with other systems

Maximum allowable torque moments:
Spindle (ACME) M10xP1.5 60 Nm
Spindle (ACME) M12xP2.0 120 Nm
Spindle (ACME) M14xP2.0 150 Nm
Spindle (ACME) M16xP2.5 250 Nm

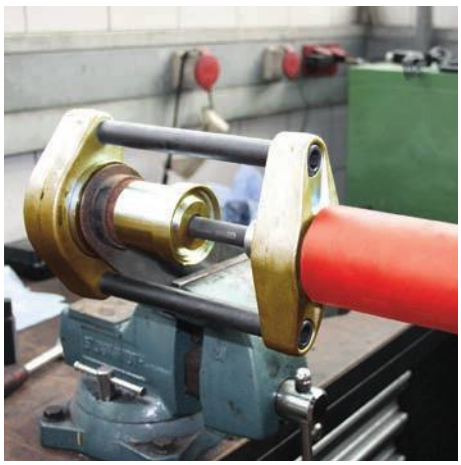




			kg	
440.9997	38 pcs	Universal press tool set for axle parts	23,29	

consists of:

	x		kg	
700.1550	1	Press and pull sleeve kit, 37 pcs	17,00	
440.0176	1	Upper traverse with internal thread 1.1/2"	2,04	
440.0179	4	Screw M16 x 40 mm	0,08	
440.0204	1	Lower traverse with open side	2,04	
440.0536	1	Set of struts, 2 pcs., 350.0 mm	1,85	
440.0537	1	Adapter ring PPII Ø 90.0 mm	0,47	
440.0538	1	Adapter with lock function Ø 35.0 mm	0,16	





Adapter ring PPII

- For using the KS Tools PP 2 press frame with KS Tools press and pull sleeve set
- Only suitable for KS Tools press and pull sleeve set 700.1550
- Can be used in conjunction with adapter with lock function 440.0538
- Specially designed for KS Tools PP 2 press frame (stepped)
- Special tool steel





	Ø mm	g	
440.0537	90,0	468	

Adapter with lock function

- For using the KS Tools PP 2 press frame with KS Tools press and pull sleeve set
- Only suitable for KS Tools press and pull sleeve set 700.1550
- Can be used in conjunction with adapter ring 440.0537
- With magnet for better grip on hydraulic cylinder
- Lock function for optimal adjustment of the stepped plate





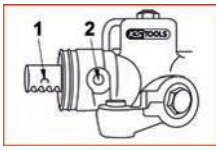
	Ø mm	g	
440.0538	35,0	160	

MECHANICAL AXLE TOOLS - STEERING

Locking screw to the gear rack centring for VAG

- Ideally suited to the correct gear rack centre positioning of the steering in order to also carry out the camber initial installation
- Insert screws after ensuring floor consistency of the steering with the housing boreholes
- Special tool steel

Application range: Audi A4, A6, **Volkswagen** Passat from 1997 onwards



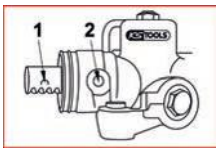


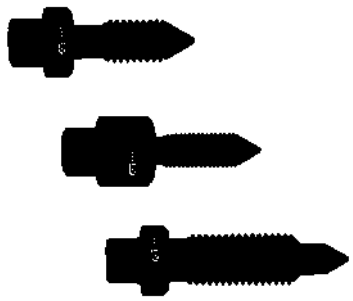
		g
700.1694	Locking screw to the gear rack centring for VAG	20

Locking screw set for gear rack centring

- Ideally suited to the correct gear rack centre positioning of the steering in order to also carry out the camber initial installation
- Insert screws after ensuring floor consistency of the steering with the housing boreholes
- Special tool steel

Application range: Mercedes W107, W114, W115, W116





			g
700.1690	3 pcs	Locking screw set for gear rack centring	100

consists of:

		g
700.1691	Locking screw 1	33
700.1692	Locking screw 2	33
700.1693	Locking screw 3	33



Push rod gauge set

- Ideally suited to changing track rod heads
- No further measurement of the axle required
- Saves times and reduces costs
- Special tool steel
- In durable plastic storage case





			kg
700.1685	9 pcs	Push rod gauge set	2,80

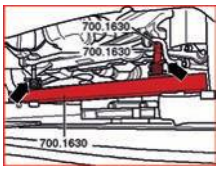
consists of:

	x		g
700.1686	1	Device with guide bolts for joint head fixing	325
700.1687	2	Clamp jaws for device	182
700.1688	1	Joint head fixing, long, Ø 12 mm	280
700.1689	1	Joint head fixing, short, Ø 12 mm	190
700.1695	1	Joint head fixing, Ø 10 mm	170
700.1696	1	Joint head fixing, Ø 17.5 mm	222
700.1697	1	Adaptor for device and joint head fixing	261
700.1698	1	Depth gauge for four-wheel drive axles (VAG)	203

Multilink wheel alignment auxiliary bridge set for VAG

- Ideally suited to front track centring
- Also suitable for installation
- Includes six adapter pairs
- Can also be used on lowered vehicles
- Sturdy design
- Aluminium bridge
- Adapter made from special steel

Application range: Audi A4, A6, A8 and **Volkswagen** Passat as well as all **Volkswagen** group vehicles with multi-drive axles





			kg
700.1630	13 pcs	Multilink wheel alignment auxiliary bridge set for VAG	29,10

consists of:

		kg
700.1631	Axle gauge auxiliary bridge	24.20
700.1632	Adaptor set with thread, Audi A8, long, 2 pcs	1.35
700.1633	Adaptor set with thread, Audi A8, short, 2 pcs	0.22
700.1634	Adaptor set without thread, Audi A8, long, 2 pcs	0.75
700.1635	Adaptor set with thread, Audi A4, long, 2 pcs	1.02
700.1636	Adaptor set with thread, Audi A4, short, 2 pcs	0.82
700.1637	Adaptor set without thread, Audi A4, short, 2 pcs	0.49

Eccentric clamping and turning device

- Universally applicable one sided opening
- To remove and turning the tie rod joints (steering and wheel end)
- Due to the knurled eccentric cam it allows from optimal grip even at the joints without drive (round)
- Square drive 1/2"
- For use on the workbench or directly on the vehicle
- Special tool steel



1/2"

	Ø mm	Ø mm	g
150.1635	1-50	1-42	300

Eccentric clamping and turning device

- For the removal and rotation of the round or hexagonal track rod joints (steering and wheel end)
- Due to the knurled eccentric cam it allows from optimal grip even at the joints without drive (round)
- For use on the workbench or directly on the vehicle
- Additional stopper prevents slipping during the splitting process
- Special tool steel





1/2"

	Ø mm	Ø mm	g
150.1642	25-55	25-46	800



Eccentric clamping and turning device

- For the removal and rotation of the round or hexagonal track rod joints (steering and wheel end)
- Due to the knurled eccentric cam it allows from optimal grip even at the joints without drive (round)
- For use on the workbench or directly on the vehicle
- Additional stopper prevents slipping during the splitting process
- Special tool steel





	Ø mm	Ø mm	g
150.1640	23-45	31-35	300

Special axial joint wrench

- For removal and installation of axial joints on track rods
- For use on square, hexagonal, octagonal and round outside profile
- Gentle removal and installation without damaging the joint outer surface
- Positive connection
- For narrow spaces
- Special tool steel







	mm	Ø mm	L mm	kg
150.1600	30	35 - 45	420,0	1,82

Special axial joint wrench set

- For the disassembly of axle joints on the track rods
- 3 special parts from 30-45 mm
- For use on square, hexagonal, octagonal and round outside profile
- Gentle removal without damaging the external joint surfaces
- Positive connection
- For narrow spaces
- Special tool steel
- In durable plastic storage case





			kg
150.1125	4 pcs	Special axial joint wrench set	4,72

consists of:

		kg
150.1126	Drive special wrench, 360 mm	1,16
150.1127	Special piece, 30-35 mm	0,75
150.1128	Special piece, 35-40 mm	0,76
150.1129	Special piece, 40-45 mm	1,06

Ball joint puller for Land Rover steering column lever

- robust model for releasing the steering column lever from the steering gear
- Prevention of damage to the steering gear
- Optimal positioning through compact design and slim fork piece
- Special tool steel

Application range: Land Rover Defender, 90, 110, 130 (1987 - 2006)



	Span width mm	mm	mm	Length mm	g
670.0012	43,0	19	M12	65,0	732



Ball joint puller for Land Rover steering column lever

- robust model for releasing the steering column lever from the steering gear
- Prevention of damage to the steering gear
- Optimal positioning through compact design and slim fork piece
- Special tool steel

Application range: Land Rover 2, 2A and 3



	Span width mm	mm	mm	Length mm	kg
670.0011	56,6	24	M16	80,0	1,77

Adjustable pliers for push rods

- For releasing and adjusting secure or hard-to-reach push rods with a diameter of 14-23 mm
- Special flat shape on the clamp jaw to prevent damage to the rush rod
- Optimal force distribution
- With two handles
- Special tool steel





	Ø mm	Length mm	kg
150.1602	14-23	260 / 390	1,00

Tie rod end socket

- For simple installation and removal of push rod bodies
- Universal usage
- Internal square drive adaptor to DIN 3120 / ISO 1174
- Special tool steel



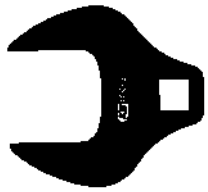


1/2"

	Length mm	U opening mm	Inner Ø mm	g
150.1627	57,0	35x19	23,8	490

Insertable open-ended wrench

- For tightening and loosening pipe connections
- For manual operation
- Internal square drive adaptor to DIN 3120 / ISO 1174
- Special tool steel



	□	mm	g	
913.1941	3/8”	18	140	
913.1942	3/8”	22	150	
913.1943	3/8”	24	160	
913.1944	1/2”	27	170	
913.1945	1/2”	32	180	
913.1946	1/2”	34	220	
913.1947	1/2”	36	230	
913.1948	1/2”	37	240	
913.1949	1/2”	38	280	
913.1950	1/2”	41	380	

12 point crawfoot wrench

- 12 point
- For tightening and loosening pipe connections
- For manual operation
- Slim execution
- For difficult to access areas
- Burnished
- Special tool steel
- In durable plastic storage case

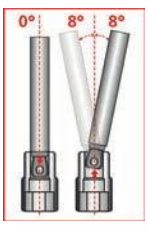




	□	mm	g	
913.1301	3/8”	19	62	
913.1302	1/2”	21	94	
913.1303	1/2”	22	112	
913.1304	1/2”	24	120	
913.1305	1/2”	27	153	
913.1306	1/2”	30	170	
913.1307	1/2”	32	168	
913.1308	3/4”	36	337	
913.1309	3/4”	41	400	
913.1310	3/4”	46	632	

XXL wobble extension

- Internal square to DIN 3120 / ISO 1174 with ball reception
- Wobble extension with ball lock
- 8° tilt angle to each side
- For manual operation
- Matt finish
- Chrome vanadium





	Length mm	g	
911.1548	350,0	150	
911.1549	600,0	260	

XXL wobble extension

- Internal square to DIN 3120 / ISO 1174 with ball reception
- Wobble extension with ball lock
- 8° tilt angle to each side
- For manual operation
- Matt finish
- Chrome vanadium





	Length mm	kg	
911.1487	450,0	0,75	
911.1488	600,0	1,00	
911.1489	750,0	1,25	

One handed multi function spanner

- Multi function spanner with ratchet function
- For complete screw working
- Adapts itself automatically to the screw size
- Self-clamping on flat pipes, bots, shafts, and unscrewed bodies of hexagonal, multitooth, Spline and TX screws
- No sliping due to the coarse teeth
- Chrome vanadium





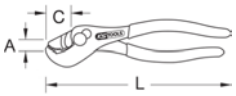


	mm	L mm	g	
114.0055	8-17/14-32	260,0	530	

Special pipe wrench

- 2-stage adjustment
- With PVC dipped handle
- Ideal for round turned pipe fittings
- Polished surface
- Chrome vanadium



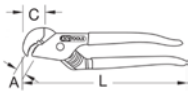




	A mm	L mm	C mm	g	
115.1361	0-16	178,0	23,0	180	

Special pipe wrench

- 4 stage industrial adjustment
- With PVC dipped handle
- Optimum power transfer
- With grooved handle adjustment
- Polished surface
- Ideally suited for twisting both thrust and track rods
- Usably on axle joints and exhaust pipes
- Chrome vanadium



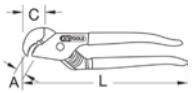


	A mm	L mm	g	
115.1362	0-30	242,0	470	

Special pipe wrench

- 6 stage industrial adjustment
- With PVC dipped handle
- Optimum power transfer
- With grooved handle adjustment
- Polished surface
- Ideally suited for twisting both thrust and track rods
- Usably on axle joints and exhaust pipes
- Chrome vanadium





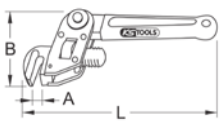


	A mm	L mm	C mm	kg	
115.1363	0-51	345,0	41,0	1,10	

Pipe wrench with adjustable head

- Type “Stillson”
- Aluminium cast body
- Stepless adjustment via milled nut
- 160° revolving handle
- Aluminium handle







	A mm	B mm	L mm	g	
111.3550	38,1	97,0	250,0	650	

Stillson-type pipe wrench with adjustable head

- Type “Stillson”
- steplessly adjustable via quick tensioning mechanics
- Serrated execution
- With loosening lever
- upper jaw chrome-molybdenum
- lower jaw chrome vanadium
- Aluminium handle



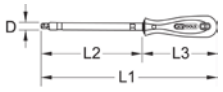


	Clamping range mm	Length mm	g	
111.3540	8 - 31	260,0	610	

ERGOTORQUE*plus*® socket screwdriver

- Two component handle
- 6 point
- Flexible
- Limited torque
- Double spiral shaft
- Plastic protective coating
- Chrome vanadium





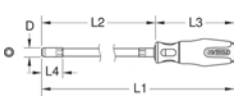


	mm	D mm	L1 mm	L2 mm	L3 mm	L4 mm	g	
159.1126	6,0	10,8	259,0	150,0	109,0	9,3	155	
159.1127	7,0	11,7	259,0	150,0	109,0	10,0	155	
159.2128	8,0	11,9	259,0	150,0	109,0	10,0	155	
159.1125	10,0	12,5	279,0	170,0	109,0	14,3	170	

ERGOTORQUE*plus*® socket screwdriver, extra long

- Two component handle
- 6 point
- Flexible
- Ideal for deep seated screw-hose clamps
- Limited torque
- Double spiral shaft
- Plastic protective coating
- Chrome vanadium







	mm	D mm	L1 mm	L2 mm	L3 mm	L4 mm	g	
911.1175	5	11,9	614,0	500,0	114,0	8,9	270	
911.1176	6	10,9	614,0	500,0	114,0	11,3	280	
911.1177	7	11,7	614,0	500,0	114,0	11,3	280	
911.1178	8	11,7	614,0	500,0	114,0	11,3	280	

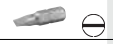
ERGOTORQUE*plus*® screwdriver set

- Two component handle
- Flexible blade with double spiral shaft
- Limited torque
- Plastic protective coating
- Contains also the most current 1/4” bits and sockets
- In display box





			kg	
911.1180	16 pcs	ERGOTORQUE*plus*® screwdriver set	1,30	

1 x		1/4“
1 x		1/4“
1 x		7 mm
3 x		5 - 6 - 8 mm
2 x		5.5 - 6.5 mm
2 x		PH1 - PH2
6 x		T10 - T15 - T20 - T25 - T27 - T30

Hose strap cutter, angled

- For cutting off earless hose clamps
- For connections on axle boots, cooler and fuel hoses
- Insulated handle
- Chrome vanadium





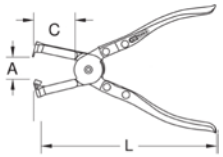
	Length mm	g	
115.1186	220,0	345	



Hose strap cutter, angled

- For cutting off earless hose clamps
- 45° angled head
- For connections on axle boots, cooler and fuel hoses
- Damage-free opening of clamps and tubing bands
- Universal usage
- Nickel-plated finish







	A mm	C mm	L mm	g	
115.1191	0 - 30,0	50,0	230,0	330	

Hose clamp pliers

- Work side
- For compressing locking hose clips
- With PVC dipped handle
- Chrome vanadium



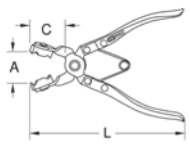


	Length mm	g	
115.1185	240,0	335	

Clic and Clic-R hose clamp pliers

- Suitable for the correct assembly and disassembly of Click, Click-R and Cobra clamps
- Also suitable for self-tensioning hose clamps with flat 3 pinch ends
- With moveable jaws to enable the use of hose clamp pliers on fuel lines that are hard to reach
- 45° angled head
- Suitable for narrow spaces
- Self opening
- Chrome molybdenum







	A mm	C mm	L mm	g	
115.1057	0-30	45,0	200,0	180	

Stainless steel ball-lock cable ties

- Ideal for fastening axle boots, steering joints etc.
- Adjustable as desired
- Stainless steel 304





	Length mm	Width mm	Content	g
115.1591	200,0	4,6	100	200
115.1592	250,0	4,6	100	300
115.1593	350,0	4,6	100	400
115.1594	500,0	4,6	100	500

Clamping and cutting tool for tubing bands

- Straps for attaching to CV joint boots
- Integrated clamping and cutting device
- Suitable for prefabricated and endless band clamps up to 9.5 mm
- Special tool steel



	Length mm	g
115.1059	163,0	437

CAMBER ADJUSTMENT TOOLS

Camber level

- Ideally suited to adopting the prescribed camber adjustment values before removing the shock absorbers
- The level is secured with the magnetic side on the brake discs or wheel hubs and the value can be read
- Following the repair the adjustment value is easily restored
- Quick and correct work without a great amount of effort
- Saves measuring the axle
- With adjustment wheel to allow for a zero setting
- Includes strong magnetic feet
- In durable plastic storage case





	Total length mm	g
150.9431	125,0	450

Camber adjustment tool

- Ideally suited to setting the camber on vehicles with separated spring feet
- One-man operation
- The tool is tensioned between the rim and the bodywork (wings)
- Clear reduction in time required
- Adjustment is carried out by turning the sturdy hexagonal nut
- External drive hexagonal socket 22.0 mm
- Special tool steel





	Clamping range mm	kg
150.9420	135,0 - 200,0	1,21

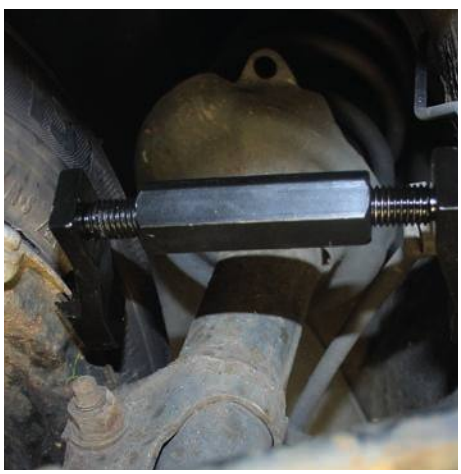
Camber adjustment tool

- Ideally suited to setting the camber on vehicles with separated spring feet
- One-man operation
- The tool is tensioned between the rim and the bodywork (wings)
- Clear reduction in time required
- Adjustment is carried out by turning the sturdy hexagonal nut
- External drive hexagonal socket 22.0 mm
- Special tool steel





	Clamping range mm	kg
150.9415	135,0 - 175,0	1,16





Camber setting tool for BMW

- Ideally suited to setting the camber on the front axle
- It is used after knocking out the locating bolt of the strut bearing in a downwards direction via the spring strut bearing
- Quick and correct work without a great amount of effort
- One-man operation
- The adjustment process is carried out via the exact alignment of the upper spring strut bearing
- Without this tool the correct and exact adjustment of the camber is almost impossible
- Aluminium

Application range: BMW 1 series (E81, E82, E87, E88), 3 series (E46, E90, E91, E92, E93), X3 (E83), X5 (E53), Z4 (E85, E86)





	Ø mm	Height mm	g
150.1821	82,0	25,0	347

Camber setting tool for BMW

- Ideally suited to setting the camber on the front axle
- It is used after knocking out the locating bolt of the strut bearing in a downwards direction via the spring strut bearing
- Quick and correct work without a great amount of effort
- One-man operation
- The adjustment process is carried out via the exact alignment of the upper spring strut bearing
- Without this tool the correct and exact adjustment of the camber is almost impossible
- Aluminium

Application range: BMW 5 series, (E39, E60, E61), 6 series (E63, E64), 7 series (E38, E65, E66, E67)





	Ø mm	Height mm	g
150.1822	83,0	17,0	343

BMW camber setting tool set

- Ideally suited to setting the camber on the front axle
- It is used after knocking out the locating bolt of the strut bearing in a downwards direction via the spring strut bearing
- Quick and correct work without a great amount of effort
- One-man operation
- The adjustment process is carried out via the exact alignment of the upper spring strut bearing
- Without this tool the correct and exact adjustment of the camber is almost impossible
- Aluminium

Application range: BMW 1 series (E81, E82, E87, E88), 3 series (E46, E90, E91, E92, E93), 5 series, (E39, E60, E61), 6 series (E63, E64), 7 series (E38, E65, E66, E67), X3 (E83), X5 (E53), Z4 (E85, E86)





			g
150.1820	2 pcs	BMW camber setting tool set	689

consists of:

		g
150.1821	BMW camber setting tool 1, 1er, 3er, X3, X5, Z4	347
150.1822	BMW camber setting tool 2, 5er, 6er, 7er	343

Camber adjustment key for VAG

- Ideally suited for adjusting the camber on the rear axle
- Suitable for the hard-to-reach adjustment screws
- Quick and correct work without a great amount of effort
- One-man operation
- Without this tool the correct and exact adjustment of the camber is almost impossible
- External bi-hexagonal drive 18 mm
- Matt finish
- Chrome vanadium

Application range: Caddy (>2004), Eos (>2006), Golf (>2004), Golf (>2009), Golf Plus (>2005), Jetta (>2006), Passat (>2006), Passat CC (>2009), Polo (>2002), Polo (>2010), Scirocco (>2009), Sharan (>1996), Tiguan (>2008), Touran (>2004), **Audi** A3 (>2004), A4 (>2001), A6 (>2005), A8 (>2003), **Audi** TT (>2007), **Škoda** Octavia II (>2004), Octavia III (>2013), Superb II (>2008), Yeti (>2009), Citigo (>2011), **Seat** Alhambra (>2011), Altea (>2005), Toledo (>2005), Ibiza II (>1999), Cordoba III (<2002), Leon (>2006), Altea XL (>2007), Altea Freetrack (>2007), Ibiza (>2008), Altea (>2009), Leon (>2009), Altea XL (>2009), Altea Freetrack (>2009), Toledo (>2013), Leon (>2013), Ateca





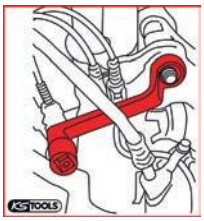
1/2"

	mm	Length mm	g
700.2385	18	110,0	164

Camber adjustment key

- Ideally suited to setting the camber on the front axle
- suitable for the hard-to-reach screw connection
- Quick and correct work without a great amount of effort
- One-man operation
- Without this tool the correct and exact adjustment of the camber is almost impossible
- External bi-hexagonal drive 21 mm
- Matt finish
- Chrome vanadium

Application range: Mercedes Sprinter, **Volkswagen** Crafter





1/2"

	mm	Length mm	g
700.2375	21	140,0	321

Axle tracking adjustment tool for VAG passenger cars with 4 wheel drive

- Ideally suited to tracking adjustments to the rear axle
- Suitable for the hard-to-reach adjustment screws
- Quick and correct work without a great amount of effort
- One-man operation
- 90° angled
- Two component handle
- Matt finish
- Chrome vanadium

Application range: all **Audi** and **Volkswagen** vehicles with all-wheel drive, e.g. **Audi** A4 Quattro, **Volkswagen** Passat 4motion etc.



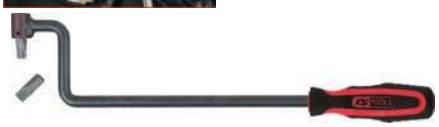
		Total length mm	g
150.9426	M12	310,0	340

Axle tracking adjustment tool for Mercedes

- Ideally suited to tracking adjustments to the rear axle
- Suitable for the hard-to-reach adjustment screws
- Quick and correct work without a great amount of effort
- One-man operation
- twice angled
- Without this tool the correct and exact adjustment of the tracking is almost impossible
- Includes interchangeable spline bits
- Two component handle
- Matt finish
- Chrome vanadium

Application range: Mercedes C class and S class, also for older models with under body panels and vehicles with level sensors





		g
150.9470	3 pcs	Axle tracking adjustment tool for Mercedes	440

consists of:

		g
150.9471	Basic adjustment tool for Mercedes	410
150.9472	10 mm attachment XZN bit, M10	14
150.9443	10 mm attachment XZN bit, M12	16

Tracking adjustment cam nut for BMW

- Ideal for adjusting the tracking on the rear axle as well as camber adjustment on the wishbone
- For adjustment the screws must be removed from the lower wishbone
- By putting in and turning the cam nut on the securing screw the wishbone is moved to the required camber adjustment
- Internal square drive adaptor to DIN 3120 / ISO 1174
- Special tool steel

Application range: BMW E36 E46 E83 E85



1/2"

	Length mm	g
700.1671	40,0	300

Tracking adjustment cam nut for Mini

- Ideal for adjusting the tracking on the rear axle as well as camber adjustment on the wishbone
- For adjustment the screws must be removed from the lower wishbone
- By putting in and turning the cam nut on the securing screw the wishbone is moved to the required camber adjustment
- Internal square drive adaptor to DIN 3120 / ISO 1174
- Special tool steel

Application range: Mini (2002 - 2006)



1/2"

	Length mm	g
150.9700	40,0	462

Tracking adjustment tool for Mercedes

- Ideally suited to tracking adjustments to the rear axle
- Removes mounting of the exhaust system
- Saves a lot of time
- No adjustment of the cam screw when removing the counter nut
- External double-hex drive 21 mm with integrated Torx 55 use and internal hexagon drive 17 mm
- Special tool steel

Application range: Mercedes W211, **Mercedes** C219 and **Mercedes** W209





	○ mm		mm	Length mm	g
700.1672	21,0	T55	17	260,0	280

MECHANICAL AXLE TOOLS - CARRYING JOINT

Universal press frame, 5 pcs without hydraulic spindle

- For the use in connection with the pressure and pull sleeve set 700.1700 for pressing out and pressing on of silent bearings, hydro bearings, bushings etc.
- enables mounting and dismounting directly on the vehicle
- Through the long trailing arm also especially high housings release themselves without problem on and pressing out
- Special tool steel



			kg	
700.1751	5 pcs	Universal press frame, 5 pcs without hydraulic spindle	8,90	

accessories:

		kg	
700.1751-1	Connection bar 205 mm for 700.1751 (1 piece)	0,71	
700.1751-2	Connection bar 350 mm for 700.1751 (1 piece)	1,20	

KS hydraulic PP2 to Sauer, Müller, KS PP1 tools

- For use of the KS Tools hydraulic cylinder PP2 (8,5-22 t) with Sauer-, Müller-, KS PP1 special tools
- Adapter 1.1/2" PP2 to 2.1/4"-16 UN (Sauer, Müller, KS PP1)
- Special tool steel



		g	
440.0034	KS hydraulic PP2 to Sauer, Müller, KS PP1 tools	230	

Hydraulic pressure spindle for press frame

- Ideal for enlarging the press frame
- Compact shape with extremely high pressure (10 t)
- Extremely high and uniform power construction
- Pre-tensioning and positioning via the outer thread on the cylinder
- For a controlled and safe removal
- The hydraulics are set into motion via a hydraulic pump (3/8" NPT)
- Extremely robust spindle with hardened thread
- Special tool steel



	Total length mm	Screw extension mm	Width mm	max. t	Stroke mm	Ø mm	kg	
700.1785	300,0	240,0	170,0	10	200,0	54,0	5,52	

Hydraulic pressure spindle for press frame

- Ideal for enlarging the press frame
- Compact shape with extremely high pressure (10 t)
- The hydraulic pistons move in a linear way which prevents rubbing on the pressure tip
- Maximum pressure with little effort
- Pre-tensioning and positioning via the outer thread on the cylinder
- For a controlled and safe removal
- The hydraulics are set in motion with the knob or the external hexagon drive
- Extremely robust spindle with hardened thread
- Special tool steel



		Screw extension mm	Total length mm	max. t	Stroke mm	mm	kg	
700.1400-1	AG 1.1/2"-16 UN	92,0	260,0	10	15,0	17	1,34	

Pressure sleeve for Mercedes

- For the assembly and disassembly of the external ball joint (ball pins)
- Can be used directly on the vehicle
- Saves a lot of time
- For use with the universal press frame 700.1751 and spindle
- Special tool steel

Application range: Mercedes W124, W129, W201 on the external ball joint (ball pins)



			kg	
700.2300	3 pcs	Pressure sleeve for Mercedes	1,43	

consists of:

		g	
700.2301	Pressure sleeve 52 x 52 mm	770	
700.2302	Pressure sleeve 40 x 48 mm	390	
700.2303	Pressure sleeve 70 x 20 mm	270	

Press sleeve set for Renault Master and Opel Movano

- For the assembly and disassembly of the ball joint (ball pins) on the upper front-axle
- Can be used directly on the vehicle
- Saves a lot of time
- For use with the universal press frame 700.1751 and spindle
- Special tool steel

Application range: Renault Master and **Opel** Movano ball joint (ball pins) on the upper front axle



			kg	
700.2275	4 pcs	Press sleeve set for Renault Master and Opel Movano	3,15	

consists of:

		kg	
700.2276	Pressure sleeve, Ø 42 x 60 mm	0,46	
700.2277	Pressure sleeve straight, Ø 71 x 60 mm	0,69	
700.2278	Pressure sleeve with recess, Ø 71 x 60 mm	0,88	
700.2279	Pressure sleeve slopes, Ø 79.5 mm	1,12	

Press sleeve set for Renault Master and Opel Movano

- For the assembly and disassembly of the ball joint (ball pins) on the lower front-axle
- Can be used directly on the vehicle
- Saves a lot of time
- For use with the universal press frame 700.1751 and spindle
- Special tool steel

Application range: Renault Master and **Opel** Movano ball joint (ball pins) on the lower front axle



			kg	
700.2270	4 pcs	Press sleeve set for Renault Master and Opel Movano	2,33	

consists of:

		g	
700.2271	Pressure sleeve with recess, Ø 71 x 50 mm	620	
700.2272	Pressure sleeve, Ø 58 x 80 mm	710	
700.2273	Pressure sleeve, Ø 52 x 55 mm	480	
700.2274	Pressure sleeve without recess, Ø 71 x 50 mm	520	

Pressure sleeve set for Volkswagen T4

- For the assembly and disassembly of the ball joint (ball pins) on the upper wishbones
- Can be used directly on the vehicle
- Saves a lot of time
- For use with the universal press frame 700.1751 and spindle
- Special tool steel

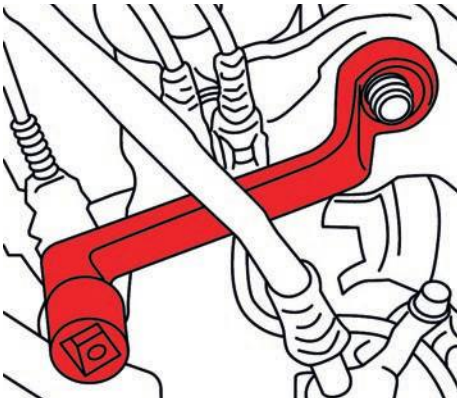
Application range: Volkswagen T4 from 1992 onwards, ball joint (ball pin) on upper wishbones



			g	
700.2290	4 pcs	Pressure sleeve set for Volkswagen T4	2,32	

consists of:

		g	
700.2291	Pressure sleeve 51 x 78 mm	653	
700.2292	Pressure sleeve 73 x 31 mm	520	
700.2293	Pressure sleeve 39 x 78 mm	650	
700.2294	Pressure sleeve 73 x 43 mm	500	



C-clamp and adaptor set, short

- Very robust execution
- Valuable supplement to the pressure set and hub sheath set 700.1700
- The drive can be used alternatively mechanically or hydraulically
- Suitable for impact wrenches
- Through use of trapezoid spindle and Impact screw maximum power can be tranferred (Hammer impact effect)
- Removeable spindle and clamping device with staged reception plate
- Silent bearings, sheaths, bushings etc. lets it incorporated itself in that or expanded condition on and compressed
- Trapezoid thread spindle Tr.27 with ball stored pressure tip
- Special tool steel



		Max span width mm	Max span depth mm	Length mm	Width mm	kg	
700.1780	4 pcs	170,0	65,0	320,0	150,0	6,42	

consists of:

		kg	
700.1781	Uni C-clamp	5,50	
700.1782	Spindle with trapazoid thread Tr.27	0,90	
700.1783	C attachment set for stepped puller, 2 pcs	0,02	

C-clamp and adaptor set, long

- Very robust execution
- Valuable supplement to the pressure set and hub sheath set 700.1700
- The drive can be used alternatively mechanically or hydraulically
- Suitable for impact wrenches
- Through use of trapezoid spindle and Impact screw maximum power can be tranferred (Hammer impact effect)
- Removeable spindle and clamping device with staged reception plate
- Silent bearings, sheaths, bushings etc. lets it incorporated itself in that or expanded condition on and compressed
- Trapezoid thread spindle Tr.27 with ball stored pressure tip
- Special tool steel



		Max span width mm	Max span depth mm	Length mm	Width mm	kg	
700.1755	5 pcs	245,0	95,0	380,0	180,0	7,82	

consists of:

		kg	
700.1754	Threaded adaptor+ Ext.1.1/2"x16G	0,60	
700.1756	Uni C-clamp	7,00	
700.1757	Spindle with trapazoid thread Tr.27	2,00	
700.1758	Spindle reception adaptor f.staged discs	0,80	
700.1759	C-Clamp reception adaptor f.staged discs	0,60	

Pressure sleeve set Volkswagen and Mercedes

- For the assembly and disassembly of the ball joint (ball pins) Ø 45 mm
- Can be used directly on the vehicle
- Saves a lot of time
- For use with the universal press frame 700.1751 and spindle
- Special tool steel

Application range: Mercedes Sprinter from 1996-2007, **Volkswagen** LT and Crafter from 1996-2007



			kg	
700.2305	4 pcs	Pressure sleeve set Volkswagen and Mercedes	5,70	

consists of:

		kg	
700.2306	Pressure sleeve for installation	1.54	
700.2307	Pressure sleeve for removal, Ø 60 mm	1.64	
700.2308	Pressure sleeve for removal, Ø 62 mm	1.40	
700.2309	Press sleeve for installation and removal	0.42	

accessories:

		kg	
700.2310	Pressure sleeve for removal on models after 2007	1,46	

Pressure sleeve set for Mercedes ball joint

- Quick and problem-free assembly and disassembly of the ball joint
- For use alongside C frame 700.1780
- Special tool steel

Application range: Mercedes W211 and W220



			kg	
700.1620	4 pcs	Pressure sleeve set for Mercedes ball joint	1,42	

consists of:

		Length mm	g	
700.1621	Pressure sleeve, 57 mm	45.0	400	
700.1622	Pressure sleeve, 51 mm	75.0	390	
700.1623	Pressure sleeve, 60 mm	90.0	470	
700.1624	Pressure sleeve, 33 mm	41.0	150	

Pressure sleeve set for Mercedes torsion bar joint

- Quick and problem-free assembly and disassembly of the torsion bar joint
- For use alongside C frame 700.1755
- Special tool steel

Application range: Mercedes W211 and W220



			g	
700.1625	3 pcs	Pressure sleeve set for Mercedes torsion bar joint	900	

consists of:

		Length mm	g	
700.1626	Pressure sleeve, 34 mm	86.0	300	
700.1627	Pressure sleeve, 48 mm	78.5	420	
700.1628	Pressure sleeve, 37 mm	39.0	180	



Carrier joint tool set for Volkswagen

- For the dismantling and assembly of upper carrier joints without removing the wishbone
- Hardened spindle with ball lock for pressure sleeves
- 3 pressure sleeves adaptor for spindle
- 2 forks for installation with locking mechanism for basic unit
- Colour coding in dismantling and/or assembly tools
- In durable plastic storage case

Application range: Volkswagen T4 bus / Multivan / California / pickup etc.



			kg	
700.1640	6 pcs	Carrier joint tool set for Volkswagen	3,82	

consists of:

		kg	
700.1641	Basic unit with window H=135mm	1,93	
700.1642	Spindle TR24, 24mm, L=110mm	0,35	
700.1643	Thrust sleeve installation, gold, Ø52xH41mm	0,26	
700.1644	Thrust sleeve removal no.1, black, Ø40x-H30mm	0,19	
700.1645	Thrust sleeve removal no.2, black, Ø40xH30mm	0,20	
700.1646	Fork removal, black, 55.5mm	0,10	
700.1647	Fork installation, gold, 51mm	0,12	
700.1648	Retaining ring for spindle	0,00	

Hinge set for Volvo

- For the assembly and disassembly of the ball joint (ball pins) on the lower front-axle
- Can be used directly on the vehicle
- Saves a lot of time
- Special tool steel

Application range: Volvo S60 (2000 - 2009), S80 (1998 - 2006), V70 (1999 - 2007), XC70 (1999 - 2007) and XC90 (2002 - 2014)



			kg	
700.1615	6 pcs	Hinge set for Volvo	2,73	

consists of:

	x		kg	
700.1612	1	Basic unit	1,40	
700.1617	2	Guide bolts	0,17	
700.1613	1	Adapter for impact hammer M12x-1.75mm	0,12	
700.1614	1	Adapter for impact hammer M14x-1.5mm	0,11	
700.1618	2	Adapter for impact hammer M14x-2.0mm	0,11	

Ball joint dismantling tool

- for damage-free removal of fixed ball joints (ball studs) on the front axle
- Spindle with M12 x 1.25 mm internal thread for screwing onto the ball joint
- Can be used directly on the vehicle
- Saves a lot of time

Application range: Subaru Outback (1994 - 2014), Forester (1998 - 2015), Impreza (1993 - 2014), Legacy (1994 - 2014), Tribeca (2006 - 2014), Baja (2003 - 2006), **Saab** 9-2X (2005 - 2006)



			g	
700.1665	3 pcs	Ball joint dismantling tool	772	

consists of:

		g	
700.1666	Removal sleeve	416	
700.1667	Spindle, length 90 mm	248	
700.1668	Nut, 8G 1“ thread, 37mm	108	

Ball joint pin wrench for Mercedes M-class

- For releasing and securing the securing screws on the ball joint
- Perfectly sized for damage-free assembly
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Special tool steel

Application range: Mercedes M-class W163





1/2"

	Outer Ø mm	Inner Ø mm	Stud width mm	g	
700.1660	63,0	53,0	7,5	280	



Ball joint pin wrench for Citroën and Peugeot

- For releasing and securing the screwed in ball joint
- Perfectly sized for damage-free assembly
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Special tool steel

Application range: Citroën BX from 09/1982 to 1994, **Citroën** C5, **Citroën** Xantia, **Peugeot** 305 from 07/1982 to 1990, **Peugeot** 405 >06/1987, **Peugeot** 406, **Peugeot** 605, **Peugeot** 607





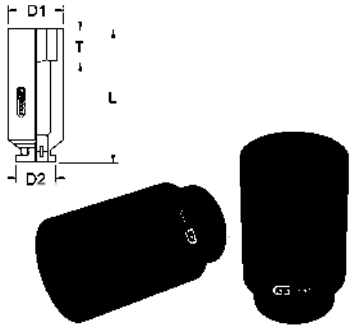
1/2"

	Outer Ø mm	Inner Ø mm	Stud width mm	g	
700.1661	52,0	42,5	5,5	500	

Ball joint socket for Citroën and Peugeot

- 12 point
- For releasing and securing the screwed in ball joint
- Perfectly sized for damage-free assembly
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Special tool steel

Application range: Peugeot 307, **Peugeot** 308, **Peugeot** 3008, **Peugeot** 5008, **Peugeot** Partner, **Peugeot** RCZ, **Citroën** Berlingo, **Citroën** C4



1/2"

	mm	D1 mm	D2 mm	L mm	T mm	g	
700.1662	41	54,0	43,0	90,0	23,0	700	

Ball joint socket for Renault Master and Opel Movano

- 12 point
- For releasing and securing the screwed in ball joint
- Perfectly sized for damage-free assembly
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Special tool steel

Application range: Renault Master and **Opel** Movano from 2010 onwards



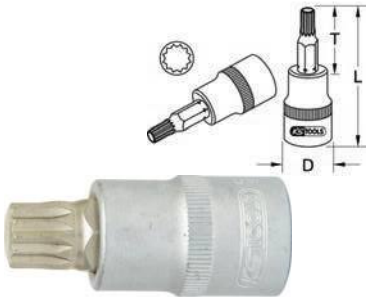
1/2"

	mm	D1 mm	D2 mm	L mm	T mm	g	
700.1663	46	66,0	38,0	85,0	44,0	880	

Bit socket for spline (XZN®) screws

- Necessary for the removal of the lower ball joint
- Spline (XZN®)
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- with press-fitted nickel-plated bit
- For manual operation
- Matt finish
- Chrome vanadium

Application range: Volkswagen T4 and **Volkswagen** T5



1/2"

		D mm	L mm	T mm	g	
911.1345	M14	24,0	55,0	17,0	105	

Special Hinge Socket VAG

- Ideally suited to assembly and disassembly of ball joints
- Special profile
- Internal square in accordance with DIN 3120/ISO 1174 or outer hexagonal drive 27.00 mm
- Very robust execution
- Special tool steel

Application range: Audi A4, A5, A6, A7 > 2005, **Volkswagen**





1/2"

	mm	Total length mm	g	
150.1712	27,0	37,0	135	

SOCKET SET FOR CHASSIS BOLTING

Impact bit socket for spline (XZN®) screws

- Spline (XZN®)
- Internal square drive to DIN 3121 / ISO 1174
- Short execution
- For machinery usage
- Phosphate finish
- Chrome molybdenum





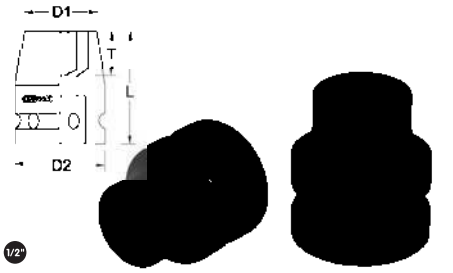


1/2"

		L mm	D mm	T mm	g	
515.1171	M14	45,0	25,0	20,0	110	
515.1173	M16	45,0	25,0	20,0	120	
515.1175	M18	45,0	25,0	20,0	130	

Hexagon impact socket, extra short

- 6 point
- Very flat design
- According to DIN 3129 / ISO 2725-2
- Internal square drive to DIN 3121 / ISO 1174
- Short execution
- For machinery usage
- Phosphate finish
- Chrome molybdenum



1/2"

	mm	L mm	D1 mm	D2 mm	T mm	g
515.0056	10,0	28,0	18,0	25,0	6,0	50
515.0057	11,0	28,0	18,0	25,0	6,0	50
515.0058	12,0	28,0	19,0	25,0	6,0	50
515.0059	13,0	28,0	20,0	25,0	6,0	51
515.0061	14,0	28,0	22,0	25,0	6,0	52
515.0062	15,0	28,0	23,0	25,0	6,0	55
515.0063	16,0	28,0	25,0	25,0	6,0	60
515.0064	17,0	28,0	26,0	26,0	6,0	65
515.0066	18,0	28,0	28,0	28,0	6,0	81
515.0067	19,0	28,0	28,0	28,0	11,0	74
515.0068	20,0	28,0	30,0	30,0	11,0	89
515.0069	21,0	28,0	30,0	30,0	11,0	85
515.0071	22,0	28,0	32,0	30,0	11,0	93
515.0072	23,0	28,0	34,0	30,0	11,0	100
515.0073	24,0	28,0	34,0	30,0	10,0	100

Hexagon impact socket set, extra short

- 6 point
- Very flat design
- According to DIN 3129 / ISO 2725-2
- Internal square drive to DIN 3121 / ISO 1174
- Short execution
- For machinery usage
- Phosphate finish
- Chrome molybdenum
- Includes storage rail



1/2"

			kg
515.0055	15 pcs	Hexagon impact socket set, extra short	1,20

consists of:

		g
515.0056	1/2" hexagon impact socket, extra short, 10.0 mm	50
515.0057	1/2" hexagon impact socket, extra short, 11.0 mm	50
515.0058	1/2" hexagon impact socket, extra short, 12.0 mm	50
515.0059	1/2" hexagon impact socket, extra short, 13.0 mm	51
515.0061	1/2" hexagon impact socket, extra short, 14.0 mm	52
515.0062	1/2" hexagon impact socket, extra short, 15.0 mm	55
515.0063	1/2" hexagon impact socket, extra short, 16.0 mm	60
515.0064	1/2" hexagon impact socket, extra short, 17.0 mm	65
515.0066	1/2" hexagon impact socket, extra short, 18.0 mm	81
515.0067	1/2" hexagon impact socket, extra short, 19.0 mm	74
515.0068	1/2" hexagon impact socket, extra short, 20.0 mm	89
515.0069	1/2" hexagon impact socket, extra short, 21.0 mm	85
515.0071	1/2" hexagon impact socket, extra short, 22.0 mm	93
515.0072	1/2" hexagon impact socket, extra short, 23.0 mm	100
515.0073	1/2" hexagon impact socket, extra short, 24.0 mm	100

VIBRO IMPACT

Vibro impact pneumatic chisel hammer set

- With non slip soft grip handle
- Air exhaust through the handle
- Ergonomic designed handle
- Ideal for industry
- Efficient, gentle loosening of screw fittings
- With stepless impact regulation
- Vibration dampened
- Cold insulated handle
- Includes 1/4" coupling connector
- Ultra light housing from two component plastic





			kg
515.3880	6 pcs	Vibro impact pneumatic chisel hammer set	5,70

consists of:

		kg
515.3881	Pneumatic chisel hammer	2,17
515.3882	Handle f. pneumatic-chisel hammer	1,55
515.3886	Pneumatic chisel track rod loosener, 110 mm	0,14
515.3887	Pneumatic chisel hammer, 110 mm	0,15
515.3888	Pneumatic chisel loosening adapter, 130 mm	0,16
515.3889	Pneumatic chisel loosening mandrel, 100x25x12 mm	0,19

Vibro-Impact ball joint releaser

- Vibration supported release on ball joints
- Adjustable, e.g. conical seat connections to wheel bearing houses and wishbones
- Pneumatic chisel adapter (10 mm) for use with pneumatic chisel hammers on the market
- Utilisation of vibration and shock pulse of Vibro Power pneumatic hammer
- Special tool steel



	Length mm	Width mm	Height mm	Drive	g
515.3884	68,0	40,0	130,0	Ø 10 mm	340

Vibro-Impact punch

- Suitable for use with industry-standard percussion hammers (10.0 mm holder)
- Universal use for bodywork and chassis repair
- Extension of the working range
- Utilisation of vibration and shock pulse of Vibro Power pneumatic hammer
- Robust chisel forged out of one piece
- Special tool steel

Application: Cutting exhausts, loosening of ball joint, extracting bolts and cutting metal sheets



	Ø mm	g
515.3961	6,5	95

Vibro-Impact exhaust chisel

- Suitable for use with industry-standard percussion hammers (10.0 mm holder)
- Universal application for work on exhaust systems
- Specially designed sounds enable the exhaust pipe (inner or outer) to be replaced to be correctly separated from the remaining one, without damaging it.
- Rotatable
- Extension of the working range
- Exploits the vibration and impact impulses of the vibro-impact air pressure hammer
- Robust chisel forged out of one piece
- Special tool steel





	Suitable for	g
515.3962	Internal pipe	190
515.3963	External pipe	190

Vibro-Impact sheet metal cutting tool with anti-rotation device

- Suitable for use with industry-standard percussion hammers (10.0 mm holder)
- Universal use for bodywork and chassis repair
- Extension of the working range
- Utilisation of vibration and shock pulse of Vibro Power pneumatic hammer
- Robust chisel forged out of one piece
- Special tool steel

Application: Cutting exhausts, loosening of ball joint, extracting bolts and cutting metal sheets



	Width mm	g
515.3964	20,0	160

Vibro-Impact flat chisel with anti-rotation device

- Suitable for use with industry-standard percussion hammers (10.0 mm holder)
- Universal use for bodywork and chassis repair
- Extension of the working range
- Utilisation of vibration and shock pulse of Vibro Power pneumatic hammer
- Robust chisel forged out of one piece
- Special tool steel

Application: Cutting exhausts, loosening of ball joint, extracting bolts and cutting metal sheets





		Width mm	g	
515.3965		19,0	220	

Vibro-Impact half-round chisel with anti-rotation device

- Suitable for use with industry-standard percussion hammers (10.0 mm holder)
- Universal use for bodywork and chassis repair
- Extension of the working range
- Utilisation of vibration and shock pulse of Vibro Power pneumatic hammer
- Robust chisel forged out of one piece
- Special tool steel

Application: Cutting exhausts, loosening of ball joint, extracting bolts and cutting metal sheets



		Width mm	g	
515.3966		26,0	210	

Vibro-Impact Separating Fork

- Suitable for use with industry-standard percussion hammers (10.0 mm holder)
- Universal use for bodywork and chassis repair
- Extension of the working range
- Utilisation of vibration and shock pulse of Vibro Power pneumatic hammer
- Robust chisel forged out of one piece
- Special tool steel

Application: Cutting exhausts, loosening of ball joint, extracting bolts and cutting metal sheets





		g	
515.3967	Vibro Power fork separator 20mm	295	
515.3968	Vibro Power fork separator 24mm	375	
515.3969	Vibro Power fork separator 35mm	395	

Vibro-Impact chisel set

- For loosening seized screw joints and loosening components
- Gentle peeling and driving
- Vibration is transmitted directly to the screw connections
- Impact mandrel attachment as ingenious aid to any removal operation
- For hexagonal and round 10 mm machine mountings
- Including pressure plate adapter for driving out bearings, sleeves, bushings

Caution: Use only in conjunction with a pneumatic hammer chisel!





			g	
515.3885	4 pcs	Vibro-Impact chisel set	774	

consists of:

		g	
515.3886	Pneumatic chisel track rod loosener, 110 mm	138	
515.3887	Pneumatic chisel hammer, 110 mm	148	
515.3888	Pneumatic chisel loosening adapter, 130 mm	159	
515.3889	Pneumatic chisel loosening mandrel, 100x25x12 mm	190	

Impact tie rod tool

- Vibration supported release of tracking rods, contoured screws or screws in the axle area etc.
- Adjustable in connection with a pneumatic chisel hammer
- Thanks to the special vibrating mandrel, an impact impulse is given to the screws to be released
- which loosens the rust and aids the release process
- Pneumatic chisel adapter (10 mm) for use with pneumatic chisel hammers on the market
- Utilisation of vibration and shock pulse of Vibro Power pneumatic hammer
- Special tool steel





		Width mm	Length mm	opening mm	kg	
150.1608		50,0	290,0	27,0	2,36	

SEPARATION AND ASSEMBLY FORK

Separation and assembly fork set

- With interchangeable fork heads
- With a manual handle grip (200 mm) for use with hammer
- Pneumatic chisel adapter (10 mm) for use with pneumatic chisel hammers on the market
- For quick loosening of track and steering rod ends steering arms and additional controlling parts
- Ideal for confined spaces
- Special tool steel
- In durable plastic storage case





			kg	
670.0090	5 pcs	Separation and assembly fork set	1,90	

consists of:

		kg	
670.0085	Handle grip, 200 mm	420	
670.0086	Pneumatic chisel adapter	160	
670.0087	Forked head 17.5 x 70 mm	290	
670.0088	Forked head 23.5 x 70 mm	300	
670.0089	Forked head 28.5 x 70 mm	370	

Separating and assembly fork

- For quick loosening of track and steering rod ends steering arms and additional controlling parts
- Ideal for confined spaces
- Special tool steel

Caution: The separating and mounting fork damages the dust sleeve







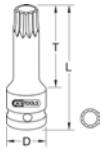
		A mm	L mm	kg	
670.0091		18	330,0	0,90	
670.0092		23	330,0	0,90	
670.0093		31	330,0	1,10	
670.0094		35	330,0	1,30	
670.0095		45	330,0	1,50	

DRIVE SHAFT FITTINGS

Impact bit socket for spline(XZN®) screws

- Spline (XZN®)
- Internal square drive to DIN 3121 / ISO 1174
- Long execution
- For machinery usage
- Phosphate finish
- Chrome molybdenum







1/2"

		L mm	D mm	T mm	g	
515.1172	M14	75,0	25,0	50,0	150	
515.1174	M16	75,0	25,0	50,0	170	
515.1176	M18	75,0	25,0	50,0	190	

Special drive shaft bit socket

- Hexagon socket
- Internal square to DIN 3120 / ISO 1174 with ball reception
- For use in a 1/2" impact wrench
- For machinery usage
- Phosphate finish
- Chrome molybdenum

Application e.g.: Brake pads, brake disks, drive shaft connections etc.





	mm	Length mm	g	
150.1708	14	43,0	80	
150.1709	17	43,0	100	
150.1710	19	43,0	110	

Drive shaft special socket

- 6 point
- To operate the drive shaft center bolt
- Internal square to DIN 3120 / ISO 1174 with ball reception
- Very robust execution
- Chrome molybdenum

Application range: Land Rover + Range Rover



1/2"

	mm	Ø mm	Length mm	g	
150.1719	52,0	70	77,0	210	

Special socket, long

- 12 point
- For Prop shafts, transmission flange shafts, fuel injectors etc
- Internal square to DIN 3120 / ISO 1174 with ball reception
- Very robust execution
- Special tool steel

Application range: Mercedes Truck Transmissions G2/24/26, **Mercedes** Actros etc.





1/2"

	mm	Ø mm	Length mm	g	
150.1711	33,0	44,5	85,0	490	

Special drive shaft impact socket, long

- 12 point
- Internal square to DIN 3120 / ISO 1174 with ball reception
- For use in a 1/2" impact wrench
- For machinery usage
- Phosphate finish
- Chrome molybdenum

Application range: Drive shafts, flange shafts, fuel injectors, **Mercedes** Truck Transmissions G2/24/26, **Mercedes** Actros etc.





1/2"

	mm	Ø mm	Length mm	g	
150.1703	27,0	40,5	85,0	350	
150.1705	30,0	42	85,0	450	
150.1706	32,0	44	85,0	490	
150.1704	34,0	46	85,0	430	
150.1707	36,0	50	85,0	520	

Special prop shaft impact socket set

- For loosening and tightening screws on drive shafts
- Square drive as per DIN 3121/ISO 1174 with backstop groove
- Very robust execution
- Special tool steel
- Includes storage rail





1/2"

			kg	
150.1750	8 pcs	Special prop shaft impact socket set	4,20	

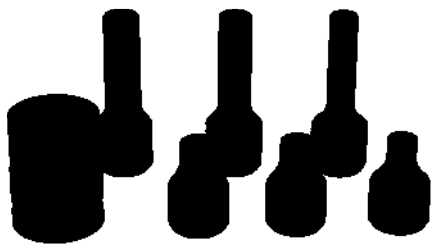
consists of:

		g	
150.1703	Special drive shaft impact socket, 1/2", 27mm	350	
150.1704	Special drive shaft impact socket, 1/2", 34mm	430	
150.1705	Special drive shaft impact socket, 1/2", 30mm	450	
150.1706	Special drive shaft impact socket, 1/2", 32mm	490	
150.1707	Special drive shaft impact socket, 1/2", 36mm	520	
150.1708	Drive shaft bit socket hex, 1/2", 14mm	80	
150.1709	Drive shaft bit socket hex, 1/2", 17mm	100	
150.1710	Drive shaft bit socket hex, 1/2", 19mm	110	

Impact bit socket set for spline (XZN®) screws, long

- Ideal set compilation for motor vehicles
- Spline (XZN®)
- Internal square drive to DIN 3121 / ISO 1174
- Long execution
- For machinery usage
- Phosphate finish
- Chrome molybdenum





1/2" 3/4"

			kg	
515.1160	7 pcs	Impact bit socket set for spline (XZN®) screws, long	1,05	

consists of:

		g	
515.1167	3/4" Impact socket, 24mm	280	
515.1161	1/2" DUODRIVE Special Impact Socket XZN, M14,43mm short	83	
515.1162	1/2" DUODRIVE Special Impact Socket XZN, M14,78mm long	120	
515.1163	1/2" DUODRIVE Special Impact Socket XZN, M16,43mm short	85	
515.1164	1/2" DUODRIVE Special Impact Socket XZN, M16,78mm long	83	

consists of:

515.1165	1/2" DUODRIVE Special Impact Socket XZN, M18,43mm short	120	
515.1166	1/2" DUODRIVE Special Impact Socket XZN, M18,78mm long	160	

Impact bit socket for spline (XZN®) screws

- Spline (XZN®)
- Internal square drive to DIN 3121 / ISO 1174
- Short execution
- For machinery usage
- Phosphate finish
- Chrome molybdenum

Application range: Wheel hubs and wheel bearing units on the **Audi** A3, **Volkswagen** Golf 5, Touran and **Škoda** Octavia





3/4"

	L mm	D mm	T mm	g	
150.1701	80,0	44,0	45,0	430	

Drive shaft impact socket

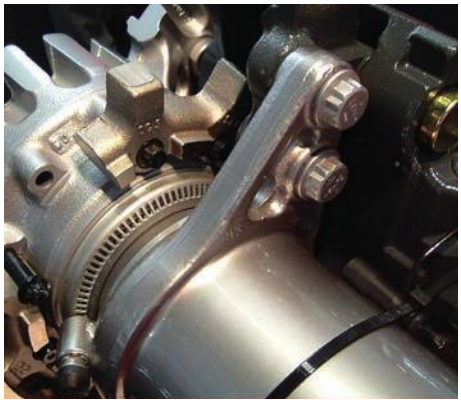
- 12 point
- Internal square to DIN 3120 / ISO 1174 with ball reception
- Very robust execution
- To operate the drive shaft center bolt
- Special tool steel





3/4"

	mm	Ø mm	Length mm	g	
150.1702	24,0	34	51,5	370	



12-point Drive shaft impact socket, long

- 12 point
- Internal square to DIN 3120 / ISO 1174 with ball reception
- Very robust execution
- To operate the drive shaft center bolt on the front and rear axle
- For machinery usage
- Phosphate finish
- Chrome molybdenum

Application range **: Audi** A3, TT, **Seat** Leon, Altea, **Škoda** Octavia (1Z), Superb (3T), **Volkswagen** Golf 6 and 7, Scirocco, Tiguan, Passat 3C and CC etc.





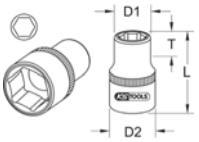
3/4"

	mm	Ø mm	Length mm	g	
150.1724	24,0	40	90,0	520	

Drive shaft socket multi-toothed for PSA

- 6 point
- To operate the drive shaft center bolt
- Internal square to DIN 3120 / ISO 1174 with ball reception
- Short execution
- Matt finish
- Chrome vanadium

Application range: PSA





3/4"

	mm	D1 mm	D2 mm	L mm	T mm	g	
911.4113	44,0	60,0	48,0	66,0	31,0	695	

Special cardan socket for VAG

- 12 point
- FlankTraction profile
- According to DIN 3124 / ISO 2725
- Internal square to DIN 3120 / ISO 1174 with ball reception
- To operate the drive shaft center bolt
- For machinery usage
- Phosphate finish
- Chrome molybdenum

Application range: Audi A4 >2001, **Audi** A6 >2005 etc.



3/4"

	mm	Ø mm	Length mm	g	
150.9709	46,0	55	125,0	970	

Special pto shaft socket

- 12 point
- FlankTraction profile
- According to DIN 3124 / ISO 2725
- Internal square to DIN 3120 / ISO 1174 with ball reception
- Short execution
- For manual operation
- Mirror polished
- Chrome vanadium

Application range: Ford Transit



3/4"

	mm	Ø mm	Length mm	g	
150.9775	57,0	76,2	76,0	981	

Impact bit socket set

- Torx tamperproof
- Spline tamperproof
- Internal square drive to DIN 3121 / ISO 1174
- Short execution
- For machinery usage
- Matt finish
- Chrome molybdenum
- In durable steel storage case



3/4"

			kg	
515.0010	6 pcs	Impact bit socket set	2,20	

consists of:

		g	
515.0012	3/4" impact bit socket XZN tamperproof, M16	270	
515.0013	3/4" impact bit socket XZN tamperproof, M18	270	
515.0016	3/4" impact bit socket, Torx tamperproof, TB70	270	
515.0017	3/4" impact bit socket, Torx tamperproof, TB80	270	
515.0018	3/4" impact bit socket, Torx tamperproof, TB90	280	
515.0019	3/4" impact bit socket, Torx tamperproof, TB100	290	

universal joint wrench for Toyota

- for loosening and tightening the bolted angular contact roller bearing on the front axle
- Perfectly sized for damage-free assembly
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Special tool steel

Application range: Toyota Hiace (>2006)



1/2"

	Outer Ø mm	Inner Ø mm	Stud width mm	g	
150.9776	66,0	50,5	5,0	672	

Axle nut wrench for Mercedes

- for tightening and loosening the groove nut on the rear axle
- required for axle repair or wheel bearing replacement
- with 1/2" female square drive
- High accuracy of fit
- For manual operation
- Special tool steel

Application range: Mercedes Sprinter W901, W905 rear axle 741.407, 741.409, 741.409



1/2"

	Inner Ø mm	Stud Ø mm	Length mm	Stud	Stud width mm	g
150.9704	65,5	58,0	170,0	2	7,9	385

Wheel hub retainer key

- ideally suited for secure counterholding during assembly and disassembly of the drive shaft central screw
- Hole distance can be varied
- Universal usage
- suitable for almost all cars and vans
- Special tool steel



	Length mm	kg
150.9708	620,0	2,95

Drive shaft bit socket with joint for spline (XZN®) screws

- Ideally suited to assembly and disassembly of screws on drive shaft flange (transmission side) from the wheel casing
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Extra long execution
- With sand blasted bit insert
- Matt finish
- Chrome vanadium



3/8"

		Length mm	g
150.1717	M10	143,0	123

Drive shaft bit socket for spline (XZN®) screws

- Ideally suited to assembly and disassembly of screws on drive shaft flange (transmission side) from the wheel casing
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Extra long execution
- With sand blasted bit insert
- Matt finish
- Chrome vanadium



		Length mm	g
150.1720	M8	800,0	580
150.1725	M10	800,0	580
150.1730	M12	800,0	580
150.1735	M14	800,0	580

Drive shaft-bit socket-set for spline (XZN®)-Screws

- Ideally suited to assembly and disassembly of screws on drive shaft flange (transmission side) from the wheel casing
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Extra long execution
- With sand blasted bit insert
- Matt finish
- Chrome vanadium

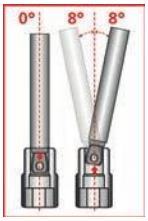


1/2"

			kg
150.1740	4 pcs	M8 - M10 - M12 - M14	2,50

XXL wobble extension

- Internal square to DIN 3120 / ISO 1174 with ball reception
- Wobble extension with ball lock
- 8° tilt angle to each side
- For manual operation
- Matt finish
- Chrome vanadium





1/4"

	Length mm	g
911.1548	350,0	150
911.1549	600,0	260

XXL wobble extension

- Internal square to DIN 3120 / ISO 1174 with ball reception
- Wobble extension with ball lock
- 8° tilt angle to each side
- For manual operation
- Matt finish
- Chrome vanadium





1/2"

	Length mm	kg
911.1487	450,0	0,75
911.1488	600,0	1,00
911.1489	750,0	1,25

Drive shaft dismantling tool for BMW

- suitable for removing the drive shaft from the front axle of four-wheel drive vehicles
- With plastic-coated handle
- Chrome vanadium

Application range: BMW 525ix, X3 and X5



	Length mm	g
150.9795	390,0	420

Wheel hub impact puller

- suitable for removing 4 and 5-hole wheel hubs
- Holes from 100 to 150 mm
- With 1.2 kg impact force
- Optimal grip with plastic handle
- Ideally used when replacing wheel bearings
- Simple handling
- Special tool steel



	Rim diameter Ø mm	Bolt Ø mm	Hammer Ø mm	Slide rail Ø mm	Adaptor thread mm	kg
670.0001	100-150	max. 14	60	60	M16 x 1,5	3,70

Universal wheel hub extractor set

- Extra heavy and solid execution
- For the extension of the wheel hub
- Ideal for passenger cars and small vans
- Enormous impact delivery of up to 11 t
- With 6 kg impact weight
- Includes 3 kg additional weight
- With M 20 x 1.5 mm connection thread
- Weights variably attachable and removable
- Special tool steel





	Rim diameter Ø mm	Bolt Ø mm	mm	Length mm	kg
700.1420	98-138	max. M14	AG M20x1,5	930,0	15,27

consists of:

		kg
700.1411	Wheel hub puller without spindle	2,55
700.1415	Universal slide hammer 6+3kg, 850mm	12,00
700.1421	Adaptor, Ext. UN 1.1/2" x Int. M20 x 1,5	0,72

Wheel hub and bearing dismantling set

- Special tool for expressing the joint hubs or drawing off of the wheel hub
- Massive tool, made out of a one piece
- Special tool steel





			kg	
700.1410	7 pcs	Wheel hub and bearing dismantling set	4,80	

consists of:

		kg	
700.1411	Wheel hub puller without spindle	2,55	
700.1400-1	Hydraulic spindle 10 t, AG 1.1/2"x16G	1,34	
700.1412	Conical ring set, 5 pcs	0,15	

Wheel hub and bearing extractor supplement set

- By means of this supplement assortment wheel hubs with a hub alliance of more than Ø 75 mm can be correctly dismantled
- The wheel hub- and joint cover dismantling flange is through long thread bolts and Distance sheath is a slight distance away so the hub alliance can be placed
- Special bevelled edge which the hub can easily be replaced with contamination to the wheel hub housings
- Includes wall holder





			kg	
700.1435	21 pcs	Wheel hub and bearing extractor supplement set	2,88	

consists of:

	X		g	
700.1436	1	Wall holder	600	
700.1437	5	Spacer sleeve, length 40 mm	115	
700.1438	5	Threaded bolt M12x1.5 mm, length 80 mm	90	
700.1439	5	Threaded bolt M14x1.5 mm, length 40 mm	90	
700.1440	5	Threaded bolt M14x1.5 mm, length 80 mm	90	

Universal wheel bearing puller and drive shaft puller, hydraulic

- Special tool for expressing the joint hubs or drawing off of the wheel hub
- Massive tool, made out of a one piece
- Special tool steel
- In durable plastic storage case





			kg	
700.1400	11 pcs	Universal wheel bearing puller and drive shaft puller, hydraulic	9,34	

consists of:

		kg	
700.1400-1	Hydraulic spindle 10 t, AG 1.1/2"x16G	1,34	
700.1400-2	Disc traverse, 100mm	0,92	
700.1400-3	Puller pull arm set, 5 pcs	0,50	
700.1400-4	Impact socket 30mm, L=200mm	0,94	
700.1400-5	Impact spindle	2,02	
700.1400-7	Extension small	0,06	

Universal wheel hub extractor set

- For bolt circle diameter up to 250 mm
- Clamp foot hole for bolts 14 mm, 18 mm + 22 mm
- Special tool steel



			kg	
670.0013	5 pcs	Universal wheel hub extractor set	3,60	

consists of:

	X		kg	
670.0018	3	Puller leg +reception ring Ø14mm + Ø18mm	0,54	
670.0017	1	Traverse bar for weehl hub extractor set	0,82	
610.2701	1	Spindle, 27mm, G3/4"x14Gx180mm	1,00	

Universal wheel hub extractor set

- For bolt circle diameter up to 250 mm
- Clamp foot hole for bolts 14 mm, 18 mm + 22 mm
- Special tool steel



			kg	
670.0014	6 pcs	Universal wheel hub extractor set	4,10	

consists of:

	X		kg	
670.0018	4	Puller leg +reception ring Ø14mm + Ø18mm	0,54	
670.0017	1	Traverse bar for weehl hub extractor set	0,82	
610.2701	1	Spindle, 27mm, G3/4"x14Gx180mm	1,00	

Universal wheel hub extractor set

- For bolt circle diameter up to 250 mm
- Clamp foot hole for bolts 14 mm, 18 mm + 22 mm
- Special tool steel



			kg	
670.0015	7 pcs	Universal wheel hub extractor set	4,60	

consists of:

	X		kg	
670.0018	5	Puller leg +reception ring Ø14mm + Ø18mm	0,54	
670.0017	1	Traverse bar for weehl hub extractor set	0,82	
610.2701	1	Spindle, 27mm, G3/4"x14Gx180mm	1,00	

accessories:

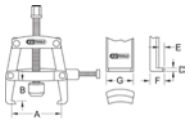
		kg	
670.0017	Traverse bar for weehl hub extractor set	0,82	
670.0018	Puller leg +reception ring Ø14mm + Ø18mm	0,54	
670.0019	Reception ring Ø 14mm	0,02	
670.0020	Reception ring Ø 18mm	0,02	
610.2701	Spindle, 27mm, G3/4"x14Gx180mm	1,00	

BEARING RING TOOL

Universal bearing ring puller 2 arm with clamping yoke

- Clamping yoke compresses the legs firmly
- Prevents slipping
- Pressure peak centers itself optimally in the cone of the hub boring
- Extremely robust spindle with inductively hardened thread
- Special tool steel





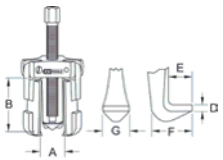


	A mm	B mm	max t	mm	mm	D mm	E mm	F mm	G mm	kg
700.1260	90	100	1,2	M16 x 150	17	6,5	8,5	22,5	27,1	1,76

Bearing ring puller 3-arm with clamping cone

- Ideally suited to the disassembly for the bearing internal shell
- With conical tension screw for proportional tension force distribution
- Self-centring jaw puller
- Central adjustment screw for different radii
- Ideal for confined spaces
- Extremely robust spindle with inductively hardened thread
- Special tool steel
- In durable plastic storage case







	A mm	B mm	mm	mm	D mm	E mm	F mm	G mm	kg
700.1270	10-125	96	21	M20x1,5 x 235	0,6	6	22	35	3,51

Bearing ring lever

- For removing tight fitting bearing housings
- Ideally suited for the external rings of the split cone roll bearings
- Conventional tools are no longer required
- Rimed handle for better control
- Universal applications
- Special tool steel





		Length mm	kg
450.0030	◯	300,0	1,13
450.0031	⬡	500,0	1,89



PLIERS FOR SECURING RINGS

Securing ring tool set

- For assembly and disassembly of the securing rings on wheel bearings
- Strengthens the adjusting screw with 1/4" ratchet
- Simple handling
- Ideal for passenger cars and transporters
- Very easy to replace the stud
- Special tool steel





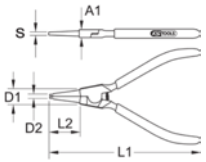
			g
440.0340	7 pcs	Securing ring tool set	770

consists of:

		g
440.0344	Securing ring tool	740
440.0341	Replacement pins, Ø 2.5 mm, 2 pcs	10
440.0342	Replacement pins, Ø 3.0 mm, 2 pcs	10
440.0343	Replacement pins, Ø 3.5 mm, 2 pcs	10

Circlip pliers for external circlips

- In accordance to DIN 5254
- Slip inhibiting machined precision tips
- Durable, straight version
- Self-closing
- With rubber grip
- Power version
- Die forged
- Chrome vanadium

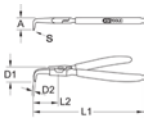




		Ø mm	A1 mm	S mm	D1 mm	D2 mm	L1 mm	L2 mm	g
119.2051	A1	10-25	8,0	1,0	13,5	3,5	135,0	30,0	80
119.2056	A2	19-60	9,0	1,5	15,0	4,5	175,0	40,0	150
119.2061	A3	40-100	10,0	2,5	20,0	6,0	230,0	50,0	250

Circlip pliers for external circlips, angled

- In accordance to DIN 5254
- Slip inhibiting machined precision tips
- 90° angled version
- Self-closing
- With rubber grip
- Power version
- Die forged
- Chrome vanadium

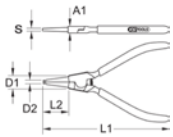




		Ø mm	A mm	S mm	D1 mm	D2 mm	L1 mm	L2 mm	g
119.2052	A11	10-25	20,0	1,0	15,0	3,0	125,0	20,0	80
119.2057	A21	19-60	25,0	1,5	20,0	4,5	165,0	32,0	150
119.2062	A31	40-100	30,0	2,0	25,0	6,0	210,0	40,0	250

Circlip pliers for internal circlips

- In accordance to DIN 5256
- Slip inhibiting machined precision tips
- Durable, straight version
- With rubber grip
- Power version
- Die forged
- Chrome vanadium

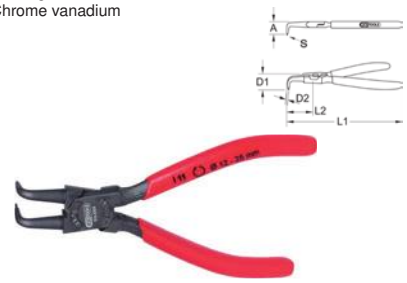




		Ø mm	A1 mm	S mm	D1 mm	D2 mm	L1 mm	L2 mm	g
119.2053	J1	12-25	7,5	1,2	15,0	2,7	135,0	30,0	80
119.2058	J2	19-60	9,5	1,6	18,0	5,0	180,0	40,0	150
119.2063	J3	40-100	10,0	2,5	20,0	6,0	230,0	50,0	250

Circlip pliers for internal circlips, angled

- In accordance to DIN 5256
- Slip inhibiting machined precision tips
- 90° angled tips
- With rubber grip
- Power version
- Die forged
- Chrome vanadium



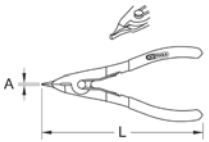
	Ø mm	A mm	S mm	D1 mm	D2 mm	L1 mm	L2 mm	g	
119.2054	J11	12-25	16,5	1,0	14,5	2,5	125,0	20,0	80
119.2059	J21	19-60	21,0	1,5	18,0	3,0	165,0	25,0	150
119.2064	J31	40-100	25,0	2,0	20,0	5,0	210,0	35,0	250

Lockring pliers, serrated

- With PVC dipped handle
- Serrated and angular tip
- With self closing mechanism
- For the dismantling and assembly lockring
- For external security rings
- No sliping due to the serrated tips
- Chrome molybdenum

Ideally suited for the dismantling and assembly of lockring on drive shafts on for example **Volkswagen**, **Mercedes** and **Opel**.







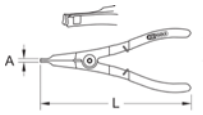
	A mm	L mm	g	
115.1048	0-20	210,0	220	

Lockring pliers, fully formed tips

- With PVC dipped handle
- Fully formed tips
- With self closing mechanism
- For the dismantling and assembly lockring
- For external security rings
- No sliping due to the serrated tips
- Chrome molybdenum

Ideally suited for the dismantling and assembly of lockring on drive shafts on for example **Volkswagen**, **Mercedes**, **Opel**, **BMW** and **Ford**.





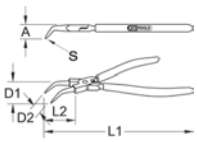


	A mm	L mm	g	
115.1049	0-20	240,0	600	

Wheel bearing circlip pliers, angled

- Durable precision tips
- Slip inhibiting machined precision tips
- 45° angled version
- With PVC dipped handle
- For assembly and disassembly of wheel bearing securing rings
- Can be used on the front and rear axle
- for all common wheel bearing retaining rings
- Chrome vanadium







	Ø mm	A mm	S mm	D1 mm	D2 mm	L1 mm	L2 mm	g	
500.1038	J22	19-60	22,0	2,5	23,0	2,3	240,0	32,0	250

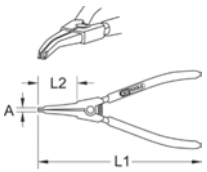


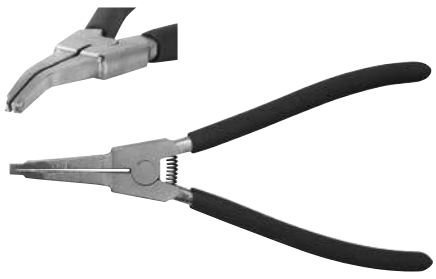
Drive shaft securing ring teeth with 30° angled tips

- 30° angled
- With PVC dipped handle
- Self-closing
- Plier head with cut out and ring stop body
- For the disassembly and assembly of nut caps without lug retainer
- Chrome vanadium

Application range: For the dismantling of the external (bellow joints in the exchange of the axle boots and / or the drive shaft sleeves). e.g.: for **Audi**, **Opel**, **Volkswagen** (Golf, T4), **Fiat**, **Mitsubishi**.







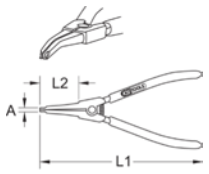
	A mm	L1 mm	L2 mm	g	
115.0991	0-33	210,0	50,0	215	

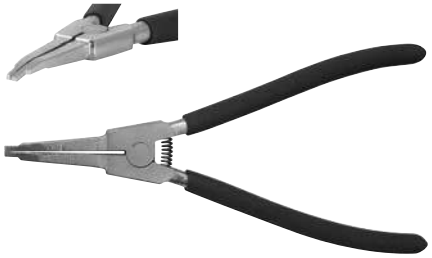
Drive shaft securing ring teeth with slightly angled tips

- Slightly angled
- With PVC dipped handle
- Self-closing
- Checkered plier head
- For the disassembly and assembly of nut caps without lug retainer
- Slip proof
- Chrome vanadium

Application range: For the removal of external circlips e.g. on synchronisation joints







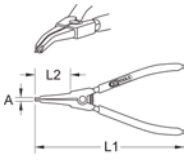
	A mm	L1 mm	L2 mm	g	
115.0992	0-37	210,0	50,0	256	

Drive shaft securing ring teeth with straight tips

- Straight form
- With PVC dipped handle
- Self-closing
- Checkered plier head
- For the disassembly and assembly of nut caps without lug retainer
- Slip proof
- Chrome vanadium

Application range: For the removal of external circlips e.g. on drive shafts, transmissions, etc





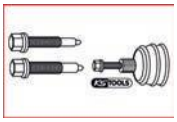


	A mm	L1 mm	L2 mm	g	
115.0993	0-37	210,0	48,0	220	

PROP SHAFT TOOL

Pressure screw set for drive shaft for VAG

- For correct removal of the constant velocity joint on the drive shaft
- Ideal for swapping the rubber collar or joint
- Six sided drive 19 mm
- Sturdy design
- Simple handling
- Special tool steel





			g	
150.9705	2 pcs	Pressure screw set for drive shaft for VAG	310	

consists of:

		g	
150.9706	Pressure screw M14 x 1.5 mm	130	
150.9707	Pressure screw M16 x 1.5 mm	180	

PTO shaft adapter for Fiat

- For correct removal of the constant velocity joint on the drive shaft
- Ideal for swapping the rubber collar or joint
- With hexagon drive 32.0 mm
- Sturdy design
- Simple handling
- With M 18 x 1.5 mm connection thread
- Can be used with slide hammer (M20 x 1.5)
- Special tool steel

Application range: Fiat Ducato



		mm	Length mm	g	
150.9702	M28 x 1,5 mm	32	65,0	380	
150.9703	M33 x 1,5 mm	32	65,0	440	

Thread bottom tap for external thread M4 - M45

- For re-cutting and cleaning damaged outer threads
- No damage of the thread
- Suitable for right and left-handed thread
- steplessly adjustable via knurled screw
- The chaser is well-guided due to the width of the jaw and does not tilt
- Can be used everywhere regardless of the thread length
- Simple handling
- cutting of HSS steel with hardness 55-60





		Thread	Thread	Length mm	Width mm	Replacement blades	g	
150.1467	M4 - M45	5/32"- 1.3/4"		77,0	22,0	150.1468	290	

Thread repair set

- For the repair of internal and external threads
- Ideal for drive shafts, oxygen sensors, wheel bolts, shaft ends etc.
- Correct thread repair for damaged or sliced threads
- Suitable for a wide range of applications
- Can be used with a drive handle or socket with ratchet
- In durable plastic storage case





			kg	
150.1470	9 pcs	Thread repair set	1,37	

consists of:

		g	
150.1466	T bar, 8x80mm	30	
150.1471	Thread chaser for M14 x 1.5 for male and female threads	150	
150.1472	Thread chaser for M16 x 1.5 for male and female threads	80	
150.1473	Thread chaser for M18 x 1.5 for male and female threads	90	
150.1474	Thread chaser for M20 x 1.5 for male and female threads	120	
150.1475	Thread chaser for M22 x 1.5 for male and female threads	150	
150.1476	Thread chaser for M24 x 1.5 for male and female threads	170	
150.1477	Thread chaser for M27 x 2.0 for male and female threads	180	
150.1478	Thread chaser for M28 x 1.5 for male and female threads	200	



Thread chaser for outside thread Ø 25 - 140 mm

- For re-cutting and cleaning damaged outer threads Ø 25 - 140 mm
- Very large application range due to 6 supplied plates
- No damage of the thread due to the soft holding guides
- Suitable for right and left-handed thread
- Infinitely variable
- Can be used everywhere regardless of the thread length
- The chaser is well-guided due to the width of the jaw and does not tilt
- Quick cutting jaw modification possible from the magazine
- Special tool steel

Metric: 1.0 - 1.25 - 1.5 - 1.75 - 2.0 - 2.5 - 3.0 - 3.5 mm
Imperial: 24 - 20 - 18 - 16 - 14 - 12 - 11,5 - 11 - 10 - 9 - 8 - 7,5 - 7 - 6 - 5 - 4 pitch/imperial





	Ø mm	Replacement jaws mm	Replacement jaws inch	kg	
150.1430	25,0 - 140,0	150.1431	150.1432	1,40	

Thread repair kit for internal and external threads

- For re-cutting and cleaning of internal and external threads
- Suitable for right and left handed threads up to Ø 140mm
- Quick cutting jaw modification possible from the magazine
- No damage of the thread due to the soft holding guides
- With 3 x die for commercial vehicle hub nut threads
- Special tool steel
- In durable plastic storage case

Chaser metric: 1.0 - 1.25 -1.5 -1.75 -2.0 -2.5 -3.0 -3.5 mm
Chaser imperial: 24-20-18-16-14-12-11.5-11-10-9-8-7.5-7-6-5-4 pitch
Thread file metric 0.8-1.0-1.25 -1.5-1.75-2.0-2.5-3.0 mm
Thread file, imperial 24-20-18-16-14-12 -11-10
Die: M18x1.5 / M20x1.5 / M22x1.5

Application: Trucks, land and construction machines, municipally and forestery technology on e.g. axle threads, hydraulic cylinder screw joints, steering and push rods





		Ø mm	kg	
150.1435	6 pcs	25,0 - 140,0	1,60	

consists of:

		kg	
150.1430	Thread repairer for external thread Ø 25-140mm	1,40	
150.1340	Thread repair file, metric, 230mm	0,13	
150.1345	Thread repair file, imperial, 230mm	0,13	

Universal CV joint removal puller

- For correct removal of the constant velocity joint on the drive shaft
- Extra wide frame for large joints
- Anti-slip and adjustable jaws
- Ideal for swapping the rubber collar or joint
- Sturdy design
- Simple handling
- Special tool steel





	Ø mm	Length mm	Width mm	kg	
150.1850	30,0	260,0	97,0	2,25	

Universal cardan shaft puller set

- For correct removal of the constant velocity joint on the drive shaft
- open frame also allows work on large joints
- adjustable jaws
- Ideal for swapping the rubber collar or joint
- including various guide sleeves and hexagon nuts
- Sturdy design
- Simple handling
- Special tool steel





			kg	
150.9875	11 pcs	Universal cardan shaft puller set	3,88	

consists of:

		kg	
150.9876	Primary body with guide holes	1,41	
150.9877	Clamp jaw for primary body	0,94	

consists of:

		kg	
150.9878	Guide sleeve internal-Ø 32.5 mm, extra long	0,16	
150.9879	Guide sleeve internal-Ø 16.5 mm	0,25	
150.9881	Guide sleeve internal-Ø 27.5 mm	0,16	
150.9882	Guide sleeve internal-Ø 32.5 mm	0,11	
150.9883	Ring washer internal-Ø 31.0 mm	0,05	
150.9884	Hexagonal nut M20 x 1.5 mm	0,18	
150.9886	Hexagonal nut M22 x 1.5 mm	0,17	
150.9887	Hexagonal nut M24 x 1.5 mm	0,16	
150.9888	Hexagonal nut M27 x 1.5 mm	0,14	

Special socket, long

- 6 point
- for actuating the drive shaft fixing nut
- Angular degree marking of 0°, 5° and 60° allows exact tightening
- Square drive as per DIN 3121/ISO 1174 with backstop groove
- Very robust execution
- Phosphate finish
- Chrome molybdenum

Application range: Citroën Jumpy, **Peugeot** 806, Expert and **Opel** Corsa D



3/4"

	mm	Ø mm	Length mm	g	
150.1713	36,0	50,7	59,0	414	

Drive shaft insertion tool set

- Ideally suited to pulling in the drive shaft to the wheel hub
- Pulling tool with hardened spindle
- Includes 10 pulling sleeves with various threads
- Sturdy design
- Simple handling
- Special tool steel
- In durable plastic storage case

Application range: BMW, **Mercedes**, **Porsche**, **Volkswagen**, **Audi** etc.





			g	
150.2750	16 pcs	Drive shaft insertion tool set	3,02	

consists of:

		g	
150.2751	Pulling sleeve, M20x1.25 mm	36	
150.2752	Pulling sleeve, M22x1.0 mm	70	
150.2753	Pulling sleeve, M27x1.5 (Volkswagen, Porsche)	114	
150.2754	Pulling sleeve, M22x1.5 (BMW E30, E46)	74	

consists of:

		g	
150.2755	Pulling sleeve, M20x1.5 (Volkswagen, Porsche)	38	
150.2756	Pulling sleeve, M18 x 1.5 mm	48	
150.2757	Pulling sleeve, M16 x 1.5 (Subaru)	34	
150.2758	Pulling sleeve, M20x1.0 mm	41	
150.2759	Pulling sleeve, M30x1.5 (BMW E34)	210	
150.2771	Pulling sleeve, M24x1.5 (BMW E36, Mercedes W203)	87	
150.2772	Spindle, M16 x 2.0, 230 mm with pulling sleeve for bolts	240	
150.2773	Thrust bolt, M16x2.0 mm	32	
150.2774	Bush, Ø 39 mm, 80 mm	348	
150.2775	Bush, Ø 49.9 mm, 110 mm	714	
150.2776	Bolts, M14 x 1.5, 80 mm	95	
150.2777	Bolts, M16 x 1.5, 80 mm	109	



AXLE BOOTS

Pneumatic assembly tool for CV joint boots

- Air exhaust through the handle rear end
- Suitable for all universal and original vehicle axle boots
- Also suitable for all-wheel vehicles and small transporters
- For drive shaft joint diameters from 25 - 115mm
- With 8 extremely robust spreader arms
- Spreading of the articulated arms by compressed air
- Air pressure is regulated through a button
- No additional lubricant necessary
- With integrated safety valve
- Includes 1/4" coupling connector
- Robust aluminium design





Technical data:

max. Expansion diameter:	25 - 115 mm
Operating pressure:	max. 8 bar
Min. tube diameter:	3/8" - 10 mm
Connection thread:	1/4"PT

	Width mm	Length mm	kg	
515.3100	200,0	450,0	2,27	



Universal CV joint boot kit, small, crimping 23-30 mm, joint 70-105 mm

- For almost all car types
- Low storage costs and fast availability due to the versitility
- Quick and easy installation
- Exchange directly on the vehicle is possible without disassembling the prop shaft in conjunction with mounting cones or pneumatic fitting tool 515.3100
- Neoprene joint boots with a longer life
- With a large grip area for wide clamps
- Includes stainless steel clamps and grease





Technical data:

Suitable for crimping:	23,0 - 30,0 mm
Suitable for joints	70,0 - 105,0 mm
Temperature constancy:	-40°C - +110°C

		g
515.3115	Universal CV joint boot kit, small, crimping 23-30 mm, joint 70-105 mm	240

Universal CV joint boot kit, large, crimping 28-40 mm, joint 80-125 mm

- For almost all car types with larger diameter as vans
- Low storage costs and fast availability due to the versitility
- Quick and easy installation
- Exchange directly on the vehicle is possible without disassembling the prop shaft in conjunction with mounting cones or pneumatic fitting tool 515.3100
- Neoprene joint boots with a longer life
- With a large grip area for wide clamps
- Includes stainless steel clamps and grease





Technical data:

Suitable for crimping:	28,0 - 40,0 mm
Suitable for joints	80,0 - 125,0 mm
Temperature constancy:	-40°C - +110°C

		g
515.3120	Universal CV joint boot kit, large, crimping 28-40 mm, joint 80-125 mm	360

Stainless steel band

- For CV joint boots
- Sizes adjustable
- Stainless steel



	Ø mm	Content	kg	
515.3170	21,0-60,0	100	0,60	
515.3175	75,0-112,0	100	1,20	

circlip collet chuck

- Straight form
- With PVC dipped handle
- Self-closing
- For the disassembly and assembly of nut caps without lug retainer
- Slip proof
- Chrome vanadium



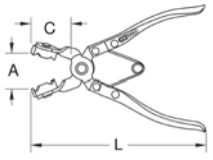
	Min span width mm	Max span width mm	Length mm	g	
115.0905	5,0	34,0	290,0	350	

Clic and Clic-R hose clamp pliers

- Suitable for the correct assembly and disassembly of Click, Click-R and Cobra clamps
- Also suitable for self-tensioning hose clamps with flat 3 pinch ends
- With moveable jaws to enable the use of hose clamp pliers on fuel lines that are hard to reach
- 45° angled head
- Suitable for narrow spaces
- Self opening
- Chrome molybdenum







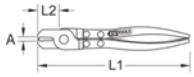


	A mm	C mm	L mm	g	
115.1057	0-30	45,0	200,0	180	

Hose clamp pliers, ear type

- Knurled handle
- To the dismantling and assembly of “ear type” hose clamp
- For connections on axle boots, coolers and fuel hoses
- Universal usage
- Chrome molybdenum







	A mm	L1 mm	L2 mm	g	
115.1039	0-60	230,0	25,0	320	



Hose clip pliers for earless hose bands

- With PVC dipped handle
- For working of earless clamps
- Also suitable for thermoplastic axle boots
- Uniform compressing of the ear piece
- No damage to the sleeve
- With lever translation
- Nickel-plated finish
- Chrome molybdenum

Application range: Axle boots for **Audi**, **BMW**, **Chrysler**, **Ford**, **GM**, **Honda**, **Mazda**, **Mercedes**, **Nissan**, **Opel**, **Porsche**, **Volkswagen** etc.



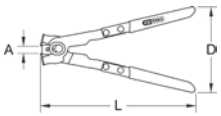


	Ø mm	Length mm	g	
115.1210	100	248,0	330	

Hose clamp pliers, ear type

- With PVC dipped handle
- For the fitting of ear clamps
- No sticking up of the ears during the press process
- Uniform compressing of the ear piece
- No damage to the sleeve
- Nickel-plated finish
- Chrome molybdenum

Application range: Axle boots, coolant and fuel hoses for **Volkswagen**, **Audi**, **Opel**, **BMW**, **Mercedes**, **Honda**, **Nissan** and **Mazda**

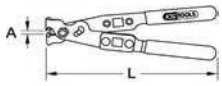





	A mm	L mm	g	
115.1050	0-22	260,0	380	

Hose clamp pliers

- With PVC dipped handle
- With 3/8" drive for use with a torque wrench
- For the fitting and clamping of ear clamps
- 1/2" 4-point recess in the handle for use with torque wrench
- Chrome molybdenum



	A mm	L mm	g	
115.1053	0-17	240,0	540	

Hose clamp pliers

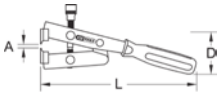
- Work side
- For compressing locking hose clips
- With PVC dipped handle
- Chrome vanadium




	Length mm	g	
115.1185	240,0	335	

Hose clamp pliers for torque wrench

- Black plastic handle
- With 3/8" drive for use with a torque wrench
- Enables clamping and/or copressing of the hose clamps
- Suitable for the stainless steel hose clamps on drive shafts
- Robust cast steel construction



	A mm	L mm	g	
115.1056	0-45	270,0	880	

Stainless steel ball-lock cable ties

- Ideal for fastening axle boots, steering joints etc.
- Adjustable as desired
- Stainless steel 304




	Length mm	Width mm	Content	g	
115.1591	200,0	4,6	100	200	
115.1592	250,0	4,6	100	300	
115.1593	350,0	4,6	100	400	
115.1594	500,0	4,6	100	500	

Clamping and cutting tool for tubing bands

- Straps for attaching to CV joint boots
- Integrated clamping and cutting device
- Suitable for prefabricated and endless band clamps up to 9.5 mm
- Special tool steel




	Length mm	g	
115.1059	163,0	437	

Plier for stainless steel ball-lock cable ties

- Ideal for working stainless steel cable binders
- Can be used up to a tape width of 12 mm
- Controlled tensioning and precise cutting off of the cable binder in a single step
- Tensile force is determined by the operator
- Suitable for steel, stainless steel and epoxy cable binder
- Special tool steel




	Length mm	g	
115.1590	210,0	650	

Hose strap cutter, angled

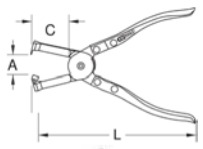
- For cutting off earless hose clamps
- For connections on axle boots, cooler and fuel hoses
- Insulated handle
- Chrome vanadium




	Length mm	g	
115.1186	220,0	345	

Hose strap cutter, angled

- For cutting off earless hose clamps
- 45° angled head
- For connections on axle boots, cooler and fuel hoses
- Damage-free opening of clamps and tubing bands
- Universal usage
- Nickel-plated finish



	A mm	C mm	L mm	g	
115.1191	0 - 30,0	50,0	230,0	330	

MECHANICAL AXLE TOOLS - WHEEL BEARINGS

Tool set for compact wheel hub/bearing unit

- Includes spindle M18/M20
- Enables use directly on the vehicle
- Minimum labour - high time savings
- Secure and easy to use
- Use also in connection with workshop press
- Possible expansion for bearing Ø 62+66 mm
- Special tool steel

Application area: Audi A2 from MY 00, Skoda Fabia from MY 00, **Volkswagen** Polo from MY 02 / Fox from MY 05, **Seat** Ibiza from MY 02 etc.





		Ø mm	kg	
150.2145	10 pcs	72,0	9,74	

consists of:

	X		kg	
150.2146	1	Drive unit, 3 pcs	0.54	
150.2134	1	Pressure bell universal with bore hole M22	2.10	
150.2133	1	Half cup pair black for bearing Ø72mm	1.71	
150.2149	1	Thrust piece for 150.2143	0.43	
150.2138	3	Fixing screw for half cup, M14x1,5	0.05	



Drive spindle

- As complement to wheel bearing puller 150.2145-1
- Special tool steel



Technical data:

Thread:	M20
Drive spindle:	External hexagon 22,0 mm
Drive nut:	External hexagon 30,0 mm

		Length mm	g	
150.2146	3 pcs	300,0	540	

Wheel bearing tool set for VAG

- For the new VAG models with wheel housings/hub unit
- Required for the correct installation
- High time saving - faster execution at workshop press than at the vehicle
- Ideally suited for Wheel bearing diameters 62 mm / 66 mm / 72 mm (13 "/ 14 "/ 15 „-undercarriages)
- The extension of the wheel housing takes place by means of the available workshop facility

Application range: Volkswagen-Polo new, **Audi** A2, Skoda Fabia, **Seat** Ibiza





			kg	
150.2130	14 pcs	Wheel bearing tool set for VAG	17,20	

consists of:

	X		kg	
150.2131	1	Half cup pair anodised for bearing Ø62mm	1.99	
150.2132	1	Half cup pair chrome for bearing Ø66mm	1.46	
150.2133	1	Half cup pair black for bearing Ø72mm	1.71	
150.2134	1	Pressure bell universal with bore hole M22	2.10	
150.2135	1	Thrust bearing, 66/72mm,L=160mm	4.20	
150.2136	1	Thrust bearing, 62mm, L=160mm	4.03	
150.2137	2	Fixing screw for half cup, M12x1,5	0.03	
150.2138	3	Fixing screw for half cup, M14x1,5	0.05	

Half cup auxiliary kit Ø 62 mm

- To expand 150.2145
- Special tool steel

Application range: Volkswagen Lupo, **Audi** A2 1,2L etc.



		Ø mm	kg	
150.2141	5 pcs	62,0	3,00	

consists of:

	X		kg	
150.2147	1	Thrust piece for 150.2141	0,43	
150.2131	1	Half cup pair anodised for bearing Ø62mm	1,99	
150.2137	2	Fixing screw for half cup, M12x1,5	0,03	

Half cup auxiliary kit Ø 66 mm

- To expand 150.2145
- Special tool steel

Application range: Volkswagen Polo from MY 02, **Škoda** Fabia from MY 00 etc.



		Ø mm	kg	
150.2142	6 pcs	66,0	3,10	

consists of:

	X		kg	
150.2148	1	Thrust piece for 150.2142	0,43	
150.2132	1	Half cup pair chrome for bearing Ø66mm	1,46	
150.2138	3	Fixing screw for half cup, M14x1,5	0,05	

Half cup auxiliary kit Ø 72 mm

- To expand 150.2145
- Special tool steel

Application range: Audi A2 from MY 00, **Škoda** Fabia from MY 00, **Volkswagen** Polo from MY 02 / Fox from MY 05, **Seat** Ibiza from MY 02 etc.



		Ø mm	kg	
150.2143	6 pcs	72,0	2,90	

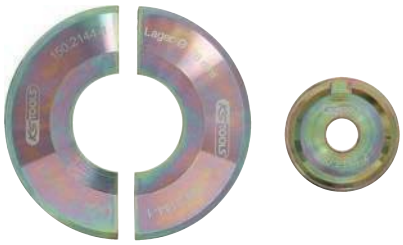
consists of:

	X		kg	
150.2149	1	Thrust piece for 150.2143	0,43	
150.2133	1	Half cup pair black for bearing Ø72mm	1,71	
150.2138	3	Fixing screw for half cup, M14x1,5	0,05	

Half-shell expansion set Ø 78 mm

- To expand 150.2145
- Special tool steel

Application range: Ford Focus, **Volvo**



			kg	
150.2144	3 pcs	Half-shell expansion set Ø 78 mm	2,50	

consists of:

		kg	
150.2144-2	Pressure piece, 80 x 20 x 22 mm	0,61	
150.2144-1	Half-shell set, 2 pcs (gold)	1,84	

Universal car wheel bearing tool set

- For the dismantling and assembly of wheel housings and hub directly on the vehicle
- Extension of the suspension strut and axle joint is no longer required
- Suited for axle tube and for axle with the housing adjoining at an alliance
- High time savings as reactive axle alignment is not necessarily required
- With 300 mm gear pulling spindle
- Through enclosed bolts (M12 + M14) wheel hubs can be removed
- Extra long execution 65 mm pressure nut for better load distribution
- Pressure bearing protects against increased friction during the process
- Special steel
- In durable plastic storage case

Application range: Volkswagen, Audi, Opel, Mercedes, Peugeot, Citroen, Renault, Ford, Honda, Mazda, Mitsubishi, Nissan, Toyota, Austin-Maestro, BMW





			kg	
150.2075	19 pcs	Universal car wheel bearing tool set	7,51	

consists of:

		g	
150.2076	Bearing adaptor, 55,5mm	175	
150.2077	Bearing adaptor, 59mm	200	
150.2078	Bearing adaptor, 62mm	220	
150.2079	Bearing adaptor, 65mm	245	
150.2080	Bearing adaptor, 66mm	250	
150.2081	Bearing adaptor, 71,5mm	315	
150.2082	Bearing adaptor, 73mm	335	
150.2083	Bearing adaptor, 78mm	380	
150.2084	Bearing adaptor, 84mm	470	
150.2085	Reducer, 76mm	270	
150.2086	Housing, 86mm	850	
150.2087	Housing, 91mm	920	
150.2089	Spindle includes nut, bearing, discs and sheaths	540	
150.2092	Threaded bolt, M12x1,5 pack of 3	100	
150.2093	Threaded bolt, M14x1,5 pack of 3	120	





Wheel bearing tool kit for Ford Transit

- For the disassembly of the compact wheel hub/bearing unit
- Enables de -and assembly directly on the vehicle
- Minimum work time
- Secure and easy to use
- Special tool steel
- In durable plastic storage case

Application range: Front axle **Ford** Transit from 2006





			kg	
150.2370	17 pcs	Wheel bearing tool kit for Ford Transit	8,77	

consists of:

		kg	
150.2371	Counter bracket for wheel hub flange	0,57	
150.2372	Wheel hub flange with threaded adaptor 1.1/2" x 16G	2,31	
150.2373	Pressure plate big	0,35	
150.2374	Pressure plate small	0,16	
150.2375	Locking pin for wheel hub flange, 5 pcs	0,26	
150.2376	Thrust bolt 1.1/2" x 16G	2,03	
150.2377	Half shell coupling for bearing ring, 2 pcs	0,91	
150.2378	Trailing arm for half shell coupling, 3 pcs	0,41	
150.2379	Locking pin for half shell coupling, 2 pcs	0,06	

Wheel bearing tool set

- Removal and installation of the compact wheel hubs / bearing unit
- Enables de -and assembly directly on the vehicle
- Minimum work time
- Secure and easy to use
- Special tool steel
- In durable plastic storage case

Application range: Volkswagen T5 Transporter





			kg	
150.2350	13 pcs	Wheel bearing tool set	20,00	

consists of:

		kg	
150.2351	Cross member with threaded ring	2,60	
150.2352	Tie rod set, 2 pcs	1,10	
150.2353	Half cup mounting, 2 pcs	4,95	
150.2354	Half cup set, 2 pcs Removal	1,70	
150.2355	Half cup set, 2 pcs Installation	1,90	
150.2356	Thrust piece removal	0,55	
150.2357	Thrust piece installation	0,95	
150.2358	Trapezoidal threaded spindle with 2x thrust beating and nut	1,25	
980.1085	Special thread grease, gun	0,02	

ABS ROTOR TOOL

Special nut for ABS rotor, Jaguar

- Ideally suited to the assembly and disassembly of the ABS rotors, e.g. when changing the wheel bearings
- Internal square drive to DIN 3121 / ISO 1174
- Special profile
- For manual operation
- Matt finish
- Chrome vanadium

Application range: Jaguar XK8 and XKR (X100) 3.5/XK8 and XKR (X100) 5.0/**Jaguar** XJ8 and XJR (X308) 3.2 and 4.0/all S Type V8/all XF V8/all XJ (X351) V8





3/4"

	Height mm	Ø mm	g	
150.2490	62,0	70,0	760	



Universal car wheel bearing tool set

- For the dismantling and assembly of wheel housings and hub directly on the vehicle
- Extension of the suspension strut and axle joint is no longer required
- Correct and protective installation of the housings through the correct pressure point at the bearing outer ring
- Suited for axle tube and for axle with the housing adjoining at an alliance
- High time savings as reactive axle alignment is not necessarily required
- With 300 mm gear pulling spindle
- Through enclosed bolts (M12 + M14) wheel hubs can be removed
- Pressure bearing protects against increased friction during the process
- Special steel
- In durable plastic storage case

Application range: Volkswagen, Audi, Opel, Mercedes, Peugeot, Citroen, Renault, Ford, Honda, Mazda, Mitsubishi, Nissan, Toyota, Austin-Maestro, BMW





150.2250	31 pcs	Universal car wheel bearing tool set	11,24

consists of:

		g
150.2092	Threaded bolt, M12x1,5 pack of 3	100
150.2093	Threaded bolt, M14x1,5 pack of 3	120
150.2251	Bearing plate #1	525
150.2252	Bearing plate #2	458
150.2253	Bearing plate #3	432
150.2254	Bearing plate #4	386
150.2255	Bearing plate #5	358
150.2256	Bearing plate #6	340
150.2257	Bearing plate #7	304
150.2258	Bearing plate #8	344
150.2259	Bearing plate #9	304
150.2260	Bearing plate #10	282
150.2261	Bearing plate #11	247
150.2262	Bearing plate #12	200
150.2263	Bearing plate #13	217
150.2264	Bearing plate #14	203

consists of:

		g
150.2265	Stepped plate, small,Ø77+68mm	608
150.2266	Stepped plate, large,Ø92+81mm	879
150.2267	Puller sleeve, 68mm	399
150.2268	Puller sleeve, 77mm	552
150.2269	Puller sleeve, 81mm	639
150.2270	Puller sleeve, 92mm	707
150.2271	Spindle sleeve	227
150.2272	Thrust bolt, 60 mm	230
150.2273	Washer	20
150.2274	Spindle, 310 mm	911
150.2275	Bearing	55



Wheel bearing tool set for Iveco

- for mounting and dismounting compact wheel bearings on the front axle of rear-wheel drive vehicles
- Applicable in connection with a workshop press
- required for professional removal and installation
- Secure and easy to use
- Special tool steel

Application range: Iveco Daily (>2014)



150.2810	9 pcs	Wheel bearing tool set for Iveco	12,57

consists of:

		g
150.2811	Reception adaptor	0,55
150.2812	Pressure piece Ø 47.0 mm	0,75
150.2813	Pressure sleeve Ø 7,.0 mm	0,41
150.2814	Pressure piece Ø 90.0 mm	0,35
150.2815	Retention device	3,41
150.2816	Pressure sleeve Ø 88.0 mm - 80.0 mm	0,50
150.2818	Protective plate with screws M6 x 45.0mm, 3 pcs.	6,60

Adjustable bearing ring and radial seal ring driver

- ideally suited for the assembly of bearings, bearing shells, Simmerrings, etc.
- Adjustable in diameter
- With easy locking action
- Universal usage
- Special tool steel



	Ø mm	Length mm	kg
150.9796	18,5 - 89,0	210,0	0,83
150.9797	9,5 - 50,0	176,0	0,29

Brass and aluminium punch

- For extracting bearing, bolts and bushes etc.
- Rimed handle for better control
- Brass / Aluminium



	Material	Ø mm	Length mm	kg	
156.0415	brass	20,0	300,0	1,13	
156.0416	aluminium	30,0	300,0	1,89	

Bearing punch set Ø 25.0 mm

- In durable plastic storage case



			g	
156.0425	7 pcs	Bearing punch set Ø 25.0 mm	640	

consists of:

		g
156.0426	Punch holder without impact	360
156.0447	Polyamide punch adaptor set, 2 pcs, Ø 25mm	20
156.0455	Aluminium punch adaptor set, 2 pcs, Ø 25mm	50
156.0463	Brass punch adaptor set, 2 pcs, Ø 25mm	150

Bearing punch set Ø 10.0 - 14.0 mm

- In durable plastic storage case



			g	
156.0440	10 pcs	Bearing punch set Ø 10.0 - 14.0 mm	240	

consists of:

		g
156.0436	Punch holder	100
156.0441	Punch attachable head 2 pcs, polyamide, Ø 10 mm	10
156.0442	Punch attachable head 2 pcs, polyamide, Ø 12 mm	10
156.0443	Punch attachable head 2 pcs, polyamide, Ø 14 mm	10
156.0449	Punch attachable head 2 pcs, aluminium, Ø 10 mm	10
156.0450	Aluminium punch set, 2 pcs., Ø 12 mm	10
156.0451	Punch attachable head 2 pcs, aluminium, Ø 14 mm	20

Universal bearing and bush driver set

- Universal applicable range
- Can be used manually with a hammer or workshop press
- Applications from 18.0 - 55.0 mm
- Pressure plates are for the two driving spindles
- Special tool steel
- In durable plastic storage case





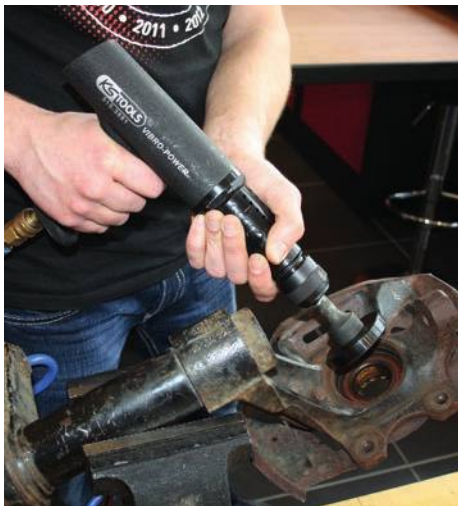
700.1350	51 pcs	Universal bearing and bush driver set	8,00

consists of:

700.1348	Reception adaptor, 45mm	500
700.1349	Impact drive knurled grip, 220mm	42
700.1351	Pressure plate, 18mm	12
700.1352	Pressure plate, 19mm	14
700.1353	Pressure plate, 20mm	16
700.1354	Pressure plate, 21mm	20
700.1355	Pressure plate, 22mm	22
700.1356	Pressure plate, 23mm	27
700.1357	Pressure plate, 24mm	30
700.1358	Pressure plate, 25mm	34
700.1359	Pressure plate, 26mm	38
700.1360	Pressure plate, 27mm	43
700.1361	Pressure plate, 28mm	47
700.1362	Pressure plate, 29mm	50
700.1363	Pressure plate, 30mm	53
700.1364	Pressure plate, 31mm	59
700.1365	Pressure plate, 32mm	65
700.1366	Pressure plate, 33mm	68
700.1367	Pressure plate, 34mm	72
700.1368	Pressure plate, 35mm	77
700.1369	Pressure plate, 36mm	82
700.1370	Pressure plate, 37mm	89
700.1371	Pressure plate, 38mm	94
700.1372	Pressure plate, 39mm	97
700.1373	Pressure plate, 40mm	105
700.1374	Pressure plate, 41mm	111
700.1375	Pressure plate, 42mm	119
700.1376	Pressure plate, 43mm	125
700.1377	Pressure plate, 44mm	132
700.1378	Pressure plate, 45mm	138
700.1379	Pressure plate, 46mm	144
700.1380	Pressure plate, 47mm	153
700.1381	Pressure plate, 48mm	159
700.1382	Pressure plate, 49mm	165
700.1383	Pressure plate, 50mm	172
700.1384	Pressure plate, 51mm	181
700.1385	Pressure plate, 52mm	188
700.1386	Pressure plate, 53mm	196
700.1387	Pressure plate, 54mm	205
700.1388	Pressure plate, 55mm	213
700.1389	Pressure plate, 56mm	221
700.1390	Pressure plate, 57mm	231
700.1391	Pressure plate, 58mm	238
700.1392	Pressure plate, 59mm	247
700.1393	Pressure plate, 60mm	258
700.1394	Pressure plate, 61mm	266
700.1395	Pressure plate, 62mm	276
700.1396	Pressure plate, 63mm	284
700.1397	Pressure plate, 64mm	294

consists of:

700.1398	Pressure plate, 65mm	305
700.1399	Support plate, 75mm	500



Universal bearing and bush driver set

- for gentle driving of bearing and radial sealing rings
- Universal applicable range
- Can be used manually with a hammer or workshop press
- Applications from 70.0 - 150.0 mm
- Pressure plates are for the two driving spindles
- Special tool steel
- In durable plastic storage case



150.9710	21 pcs	Universal bearing and bush driver set	19,13

consists of:

150.9712	Adaptor for Hydraulic thrust bolt, 45,5 mm	0,04
150.9713	Retaining adapter, 55 mm	0,22
150.9714	Repellent spike with knurling, 273,0 mm	1,08
150.9715	Pressure plate, 70 mm	0,35
150.9716	Pressure plate, 75 mm	0,41
150.9717	Pressure plate, 80 mm	0,47
150.9718	Pressure plate, 85 mm	0,52
150.9719	Pressure plate, 90 mm	0,59
150.9720	Pressure plate, 95 mm	0,66
150.9721	Pressure plate, 100 mm	0,73
150.9722	Pressure plate, 105 mm	0,81
150.9723	Pressure plate, 110 mm	0,89
150.9724	Pressure plate, 115 mm	0,98
150.9725	Pressure plate, 120 mm	1,07
150.9726	Pressure plate, 125 mm	1,16
150.9727	Pressure plate, 130 mm	1,26
150.9728	Pressure plate, 135 mm	1,35
150.9729	Pressure plate, 140 mm	1,46
150.9730	Pressure plate, 145 mm	1,56
150.9731	Pressure plate, 150 mm	1,68
151.2603	Hexagon key wrench phosphate finish, short, 3mm	0,01

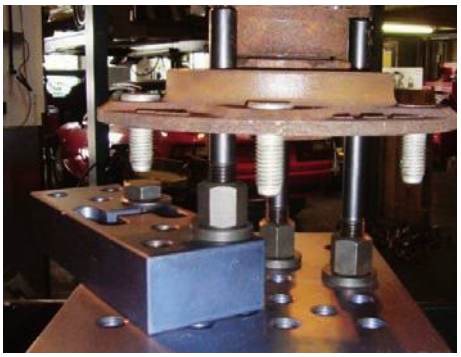
Universal press support

- Universal adjustable support
- Through the height adjustable bolts a fixture and vibration safe 3 level points construction is created
- The amount and arrangement at thread enable the conformity to almost every component surface
- Includes lateral safety device





	max t	Length mm	Width mm	Height mm	Replacement bolt & nut set	kg
700.1740	20	245,0	200,0	40,0	700.1741	8,10



Universal press support

- Universal adjustable support
- Through the height adjustable bolts a fixture and vibration safe 3 level points construction is created
- The amount and arrangement at thread enable the conformity to almost every component surface
- Includes lateral safety device



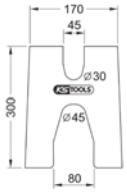


	max t	Length mm	Width mm	Height mm	Replacement bolt & nut set	kg
700.1770	50	286,0	200,0	50,0	700.1771	16,94

Prism plate extra narrow, Ø 30,0/45.0 mm

- Universally usable plates
- Especially suitable for tight spaces (up to 4 mm)
- For pressing on and off bearings or cogs on bearing shafts, e.g. on engines, transmissions etc.
- Special tool steel



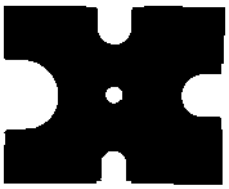


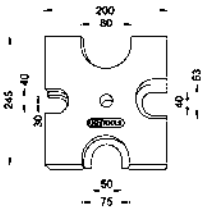


	Length mm	Width mm	kg
700.1744	300,0	170,0	1,10

Universal prism plate Ø 40.0/63.0/75.0/80 mm

- Universally usable plates
- For the pressing on and off of bearing on rear axles, engines and transmissions
- Special tool steel

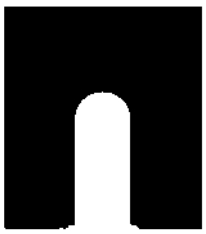


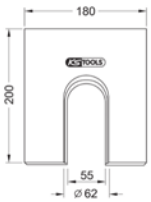


	Length mm	Width mm	kg
700.1738	245,0	200,0	7,32

Prism plate Ø 62,0 mm

- Universally usable plates
- For pressing on and off bearings or cogs on bearing shafts, e.g. on engines, transmissions etc.
- in connection with workshop presses
- Special tool steel

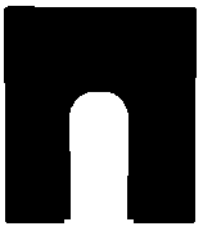


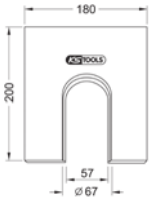


	Length mm	Width mm	kg
700.1739	200,0	180,0	4,36

Prism plate Ø 67,0 mm

- Universally usable plates
- For pressing on and off bearings or cogs on bearing shafts, e.g. on engines, transmissions etc.
- in connection with workshop presses
- Special tool steel

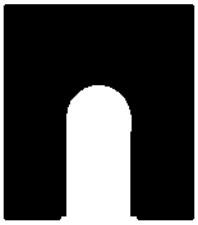




	Length mm	Width mm	kg
700.1742	200,0	180,0	4,28

Prism plate Ø 72,0 mm

- Universally usable plates
- For pressing on and off bearings or cogs on bearing shafts, e.g. on engines, transmissions etc.
- in connection with workshop presses
- Special tool steel





	Length mm	Width mm	kg
700.1743	200,0	180,0	4,14

MECHANICAL AXLE TOOLS - SILENT BEARING

Universal press frame, 5 pcs without hydraulic spindle

- For the use in connection with the pressure and pull sleeve set 700.1700 for pressing out and pressing on of silent bearings, hydro bearings, bushings etc.
- enables mounting and dismounting directly on the vehicle
- Through the long trailing arm also especially high housings release themselves without problem on and pressing out
- Special tool steel



			kg
700.1751	5 pcs	Universal press frame, 5 pcs without hydraulic spindle	8,90

accessories:

		kg
700.1751-1	Connection bar 205 mm for 700.1751 (1 piece)	0,71
700.1751-2	Connection bar 350 mm for 700.1751 (1 piece)	1,20

KS hydraulic PP2 to Sauer, Müller, KS PP1 tools

- For use of the KS Tools hydraulic cylinder PP2 (8,5-22 t) with Sauer-, Müller-, KS PP1 special tools
- Adapter 1.1/2" PP2 to 2.1/4"-16 UN (Sauer, Müller, KS PP1)
- Special tool steel



		g
440.0034	KS hydraulic PP2 to Sauer, Müller, KS PP1 tools	230

Hydraulic pressure spindle for press frame

- Ideal for enlarging the press frame
- Compact shape with extremely high pressure (10 t)
- Extremely high and uniform power construction
- Pre-tensioning and positioning via the outer thread on the cylinder
- For a controlled and safe removal
- The hydraulics are set into motion via a hydraulic pump (3/8" NPT)
- Extremely robust spindle with hardened thread
- Special tool steel

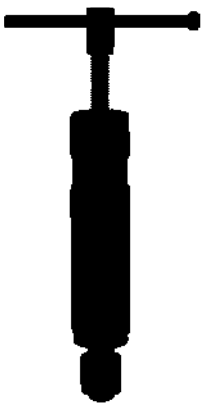


	Total length mm	Screw extension mm	Width mm	max. t	Stroke mm	Ø mm	kg
700.1785	300,0	240,0	170,0	10	200,0	54,0	5,52

Hydraulic pressure spindle for press frame

- Ideal for enlarging the press frame
- Compact shape with extremely high pressure (10 t)
- The hydraulic pistons move in a linear way which prevents rubbing on the pressure tip
- Maximum pressure with little effort
- Pre-tensioning and positioning via the outer thread on the cylinder
- For a controlled and safe removal
- The hydraulics are set in motion with the knob or the external hexagon drive
- Extremely robust spindle with hardened thread
- Special tool steel





		Screw extension mm	Total length mm	max t	Stroke mm	mm	kg
700.1400-1	AG 1.1/2"-16 UN	92,0	260,0	10	15,0	17	1,34

PRESS AND PULL SLEEVE SET

700.1701 - 700.1704



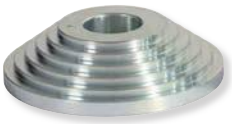
700.1800-19



700.1800-10 - 700.1800-11



700.1706 - 700.1709



700.1710 - 700.1713



700.1800-17



700.1714 - 700.1733



980.1085 - 980.1090



	Description	700.1760 20 pcs	700.2355 22 pcs	700.1700 36 pcs	700.1735 12 pcs
	Pressure nut				
700.1701	Thrust bolt, M10		2 x	2 x	2 x
700.1702	Thrust bolt, M12	2 x	2 x	2 x	2 x
700.1703	Thrust bolt, M14			2 x	2 x
700.1704	Thrust bolt, M16	2 x		2 x	2 x
700.1800-19	Thrust bolt TR 20 with bearing 2 pcs		1 x		
700.1800-10	Check nut M 10		1 x		
700.1800-11	Check nut M 12		1 x		
	Step plate				
700.1706	Stepped plate, #1	1 x	1 x	1 x	
700.1707	Stepped plate, #2	1 x	1 x	1 x	
700.1708	Stepped plate, #3	1 x	1 x	1 x	
700.1709	Stepped plate, #4	1 x	1 x	1 x	
	Spindles				
700.1710	Spindle, M10, 350 mm		1 x	1 x	1 x
700.1711	Spindle, M12, 350 mm	1 x	1 x	1 x	1 x
700.1712	Spindle, M14, 350 mm			1 x	1 x
700.1713	Spindle, M16, 350 mm	1 x		1 x	1 x
700.1800-17	Spindle TR 20, short		1 x		
	Step pressure sleeve				
700.2356	Step pressure sleeve, internal Ø 14 mm, external Ø 24 mm		1 x		
700.2357	Step pressure sleeve, internal Ø 16 mm, external Ø 26 mm		1 x		
700.2358	Step pressure sleeve, internal Ø 18 mm, external Ø 28 mm		1 x		
700.2359	Step pressure sleeve, internal Ø 20 mm, external Ø 30 mm		1 x		
700.2361	Step pressure sleeve, internal Ø 22 mm, external Ø 32 mm		1 x		
700.2362	Step pressure sleeve, internal Ø 24 mm, external Ø 34 mm		1 x		
700.2363	Step pressure sleeve, internal Ø 26 mm, external Ø 36 mm		1 x		
700.2364	Step pressure sleeve, internal Ø 28 mm, external Ø 38 mm		1 x		
700.2365	Step pressure sleeve, internal Ø 30 mm, external Ø 40 mm		1 x		
700.2366	Step pressure sleeve, internal Ø 32 mm, external Ø 42 mm		1 x		
	Pressure sleeve				
700.1714	Pressure sleeve, internal Ø 34 mm, external Ø 44 mm	1 x		1 x	
700.1715	Pressure sleeve, internal Ø 36 mm, external Ø 46 mm			1 x	
700.1716	Pressure sleeve, internal Ø 38 mm, external Ø 48 mm			1 x	
700.1717	Pressure sleeve, internal Ø 40 mm, external Ø 50 mm			1 x	
700.1718	Pressure sleeve, internal Ø 42 mm, external Ø 52 mm	1 x		1 x	
700.1719	Pressure sleeve, internal Ø 44 mm, external Ø 54 mm	1 x		1 x	
700.1720	Pressure sleeve, internal Ø 46 mm, external Ø 56 mm	1 x		1 x	
700.1721	Pressure sleeve, internal Ø 48 mm, external Ø 58 mm			1 x	
700.1722	Pressure sleeve, internal Ø 50 mm, external Ø 60 mm			1 x	
700.1723	Pressure sleeve, internal Ø 52 mm, external Ø 62 mm	1 x		1 x	
700.1724	Pressure sleeve, internal Ø 54 mm, external Ø 64 mm			1 x	
700.1725	Pressure sleeve, internal Ø 56 mm, external Ø 66 mm			1 x	
700.1726	Pressure sleeve, internal Ø 58 mm, external Ø 68 mm			1 x	
700.1727	Pressure sleeve, internal Ø 60 mm, external Ø 70 mm			1 x	
700.1728	Pressure sleeve, internal Ø 62 mm, external Ø 72 mm			1 x	
700.1729	Pressure sleeve, internal Ø 64 mm, external Ø 74 mm	1 x		1 x	
700.1730	Pressure sleeve, internal Ø 66 mm, external Ø 76 mm			1 x	
700.1731	Pressure sleeve, internal Ø 68 mm, external Ø 78 mm			1 x	
700.1732	Pressure sleeve, internal Ø 70 mm, external Ø 80 mm	1 x		1 x	
700.1733	Pressure sleeve, internal Ø 72 mm, external Ø 82 mm	1 x		1 x	
	Thread width				
980.1090	Special thread grease, tube	2 x			
980.1085	Special thread grease, gun				1 x

Press and pull sleeve set

- For the assembly and disassembly of bearings
- Ideally for silent bearings, hydro bearings, bushings, ball bearings, simmer rings etc.
- Universal use for passenger cars, trucks, communal, agricultural and forest vehicles
- Outstanding to use also in connection with workshop press or hollow piston cylinder
- According to use application the sheaths individually can be reworked
- Pressure bearing protects against increased friction during the process
- In durable plastic storage case

Attention: the spindles need to be greased with a good lubricant for each application! Do not overload spindles, otherwise the thread lengthens and the pitch of the nut and spindle no longer match. The result: the nuts will seize up. Always check the applied force at the drive with a torque wrench!

Maximum permitted torque:
Spindle M10x1,5 60 Nm
Spindle M12x1,5 100 Nm





			kg	
700.2355	22 pcs	Press and pull sleeve set	8,74	

consists of:

		g	
700.1701	Thrust bolt, M10	125	
700.1702	Thrust bolt, M12	124	
700.1706	Stepped plate, #1	350	
700.1707	Stepped plate, #2	390	
700.1708	Stepped plate, #3	420	
700.1709	Stepped plate, #4	450	
700.1710	Spindle, M10, 350 mm	170	
700.1711	Spindle, M12, 350 mm	253	
700.1800-10	Check nut M 10	350	
700.1800-11	Check nut M 12	350	
700.1800-17	Spindle TR 20, short	350	
700.1800-19	Thrust bolt TR 20 with bearing 2 pcs	350	
700.2356	Step pressure sleeve, internal Ø 14 mm, external Ø 24 mm	260	
700.2357	Step pressure sleeve, internal Ø 16 mm, external Ø 26 mm	280	
700.2358	Step pressure sleeve, internal Ø 18 mm, external Ø 28 mm	300	
700.2359	Step pressure sleeve, internal Ø 20 mm, external Ø 30 mm	320	
700.2361	Step pressure sleeve, internal Ø 22 mm, external Ø 32 mm	360	
700.2362	Step pressure sleeve, internal Ø 24 mm, external Ø 34 mm	380	
700.2363	Step pressure sleeve, internal Ø 26 mm, external Ø 36 mm	400	
700.2364	Step pressure sleeve, internal Ø 28 mm, external Ø 38 mm	420	
700.2365	Step pressure sleeve, internal Ø 30 mm, external Ø 40 mm	440	
700.2366	Step pressure sleeve, internal Ø 32 mm, external Ø 42 mm	460	

Press and pull sleeve kit

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- Ideally for silent bearings, hydro bearings, bushings, ball bearings, simmer rings etc.
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- Outstanding to use also in connection with workshop press or hollow piston cylinder
- According to use application the sheaths individually can be reworked
- Pressure bearing protects against increased friction during the process
- In durable plastic storage case

Caution: The spindles must be greased before first use! Overloading leads to unwanted material stresses or breakage Always check the power settings on the drive with a torque wrench Not to be combined with other systems

Maximum allowable torque moments:
Spindle (ACME) M10 x P1.5 60 Nm
Spindle (ACME) M12 x P2.0 120 Nm
Spindle (ACME) M14 x P2.0 150 Nm
Spindle (ACME) M16 x P2.5 250 Nm





			kg
700.1550	37 pcs	Press and pull sleeve kit	17,00

consists of:

	x		g	
700.1550-34	1	Pull sleeve,internal Ø 34mm,external Ø 44mm, of 700.1550	250	
700.1550-36	1	Pull sleeve,internal Ø 36mm,external Ø 46mm, of 700.1550	260	
700.1550-38	1	Pull sleeve,internal Ø 38mm,external Ø 48mm, of 700.1550	280	
700.1550-40	1	Pull sleeve,internal Ø 40mm,external Ø 50mm, of 700.1550	290	
700.1550-42	1	Pull sleeve,internal Ø 42mm,external Ø 52mm, of 700.1550	300	
700.1550-44	1	Pull sleeve,internal Ø 44mm,external Ø 54mm, of 700.1550	320	
700.1550-46	1	Pull sleeve,internal Ø 46mm,external Ø 56mm, of 700.1550	330	
700.1550-48	1	Pull sleeve,internal Ø 48mm,external Ø 58mm, of 700.1550	340	
700.1550-50	1	Pull sleeve,internal Ø 50mm,external Ø 60mm, of 700.1550	350	
700.1550-52	1	Pull sleeve,internal Ø 52mm,external Ø 62mm, of 700.1550	360	
700.1550-54	1	Pull sleeve,internal Ø 54mm,external Ø 64mm, of 700.1550	380	
700.1550-56	1	Pull sleeve,internal Ø 56mm,external Ø 66mm, of 700.1550	390	
700.1550-58	1	Pull sleeve,internal Ø 58mm,external Ø 68mm, of 700.1550	410	
700.1550-60	1	Pull sleeve,internal Ø 60mm,external Ø 70mm, of 700.1550	420	
700.1550-62	1	Pull sleeve,internal Ø 62mm,external Ø 72mm, of 700.1550	430	
700.1550-64	1	Pull sleeve,internal Ø 64mm,external Ø 74mm, of 700.1550	440	
700.1550-66	1	Pull sleeve,internal Ø 66mm,external Ø 76mm, of 700.1550	460	
700.1550-68	1	Pull sleeve,internal Ø 68mm,external Ø 78mm, of 700.1550	470	
700.1550-70	1	Pull sleeve,internal Ø 70mm,external Ø 80mm, of 700.1550	480	
700.1550-72	1	Pull sleeve,internal Ø 72mm,external Ø 82mm, of 700.1550	490	
700.1550-75	1	Pull sleeve,internal Ø 75mm,external Ø 85mm, of 700.1550	500	
700.1550-80	1	Pull sleeve,internal Ø 80mm,external Ø 90mm, of 700.1550	520	
700.1551	1	Spindle M10x1.5	170	
700.1552	1	Spindle M12x2.0	200	
700.1553	1	Spindle M14x2.0	350	
700.1554	1	Spindle M16x2.5	380	

consists of:

	x		g	
700.1555	1	Pressure adapter for step panel commercial vehicle	350	
700.1556	2	Step panel adaptor with 3 holes, A+B side	350	
700.1551-01	1	Pressure nut with lock function for spindle M10 x P1,5	140	
700.1551-02	1	Pressure nut with bearing for spindle M10xP1,5	160	
700.1552-01	1	Pressure nut with lock function for spindle M12 x P1,75	120	
700.1552-02	1	Pressure nut with bearing for spindle M12xP1,75	160	
700.1553-01	1	Pressure nut with lock function for spindle M14 x P2,0	120	
700.1553-02	1	Pressure nut with bearing for spindle M14xP2,0	140	
700.1554-01	1	Pressure nut with lock function for spindle M16 x P2,0	100	
700.1554-02	1	Pressure nut with bearing for spindle M16xP2,0	140	

Press and pull sleeve set

- For the assembly and disassembly of bearings
- Ideally for silent bearings, hydro bearings, bushings, ball bearings, simmer rings etc.
- Universal use for passenger cars, trucks, communal, agricultural and forest vehicles
- Outstanding to use also in connection with workshop press or hollow piston cylinder
- According to use application the sheaths individually can be reworked
- Pressure bearing protects against increased friction during the process
- In durable plastic storage case

Attention: the spindles need to be greased with a good lubricant for each application! Do not overload spindles, otherwise the thread lengthens and the pitch of the nut and spindle no longer match. The result: the nuts will seize up. Always check the applied force at the drive with a torque wrench!

Maximum permitted torque:
Spindle M10x1,5 60 Nm
Spindle M12x1,5 100 Nm
Spindle M14x1,5 180 Nm
Spindle M16x1,5 250 Nm





			kg	
700.1760	20 pcs	Press and pull sleeve set	8,32	

consists of:

	x		g	
700.1702	2	Thrust bolt, M12	124	
700.1704	2	Thrust bolt, M16	130	
700.1706	1	Stepped plate, #1	350	
700.1707	1	Stepped plate, #2	390	
700.1708	1	Stepped plate, #3	420	
700.1709	1	Stepped plate, #4	450	
700.1714	1	Pressure sleeve, internal Ø 34 mm, external Ø 44 mm	250	
700.1718	1	Pressure sleeve, internal Ø 42 mm, external Ø 52 mm	300	
700.1719	1	Pressure sleeve, internal Ø 44 mm, external Ø 54 mm	320	
700.1711	1	Spindle, M12, 350 mm	253	
700.1713	1	Spindle, M16, 350 mm	473	
700.1720	1	Pressure sleeve, internal Ø 46 mm, external Ø 56 mm	330	
700.1723	1	Pressure sleeve, internal Ø 52 mm, external Ø 62 mm	370	
700.1729	1	Pressure sleeve, internal Ø 64 mm, external Ø 74 mm	440	
700.1732	1	Pressure sleeve, internal Ø 70 mm, external Ø 80 mm	480	
700.1733	1	Pressure sleeve, internal Ø 72 mm, external Ø 82 mm	490	
980.1090	2	Special thread grease, tube	5	

Press and pull sleeve set

- For the assembly and disassembly of bearings
- Ideally for silent bearings, hydro bearings, bushings, ball bearings, simmer rings etc.
- Universal use for passenger cars, trucks, communal, agricultural and forest vehicles
- Outstanding to use also in connection with workshop press or hollow piston cylinder
- According to use application the sheaths individually can be reworked
- Pressure bearing protects against increased friction during the process
- In durable plastic storage case

Attention: the spindles need to be greased with a good lubricant for each application! Do not overload spindles, otherwise the thread lengthens and the pitch of the nut and spindle no longer match. The result: the nuts will seize up. Always check the applied force at the drive with a torque wrench!

Maximum permitted torque:
Spindle M10x1,5 60 Nm
Spindle M12x1,5 100 Nm
Spindle M14x1,5 180 Nm
Spindle M16x1,5 250 Nm





			kg	
700.1700	36 pcs	Press and pull sleeve set	14,80	

consists of:

		g	
700.1701	Thrust bolt, M10	125	
700.1702	Thrust bolt, M12	124	
700.1703	Thrust bolt, M14	130	
700.1704	Thrust bolt, M16	130	
700.1706	Stepped plate, #1	350	
700.1707	Stepped plate, #2	390	
700.1708	Stepped plate, #3	420	
700.1709	Stepped plate, #4	450	
700.1710	Spindle, M10, 350 mm	170	
700.1711	Spindle, M12, 350 mm	253	
700.1712	Spindle, M14, 350 mm	350	
700.1713	Spindle, M16, 350 mm	473	
700.1714	Pressure sleeve, internal Ø 34 mm, external Ø 44 mm	250	
700.1715	Pressure sleeve, internal Ø 36 mm, external Ø 46 mm	260	
700.1716	Pressure sleeve, internal Ø 38 mm, external Ø 48 mm	280	
700.1717	Pressure sleeve, internal Ø 40 mm, external Ø 50 mm	290	
700.1718	Pressure sleeve, internal Ø 42 mm, external Ø 52 mm	300	
700.1719	Pressure sleeve, internal Ø 44 mm, external Ø 54 mm	320	
700.1720	Pressure sleeve, internal Ø 46 mm, external Ø 56 mm	330	
700.1721	Pressure sleeve, internal Ø 48 mm, external Ø 58 mm	340	
700.1722	Pressure sleeve, internal Ø 50 mm, external Ø 60 mm	350	
700.1723	Pressure sleeve, internal Ø 52 mm, external Ø 62 mm	370	
700.1724	Pressure sleeve, internal Ø 54 mm, external Ø 64 mm	380	
700.1725	Pressure sleeve, internal Ø 56 mm, external Ø 66 mm	390	
700.1726	Pressure sleeve, internal Ø 58 mm, external Ø 68 mm	410	
700.1727	Pressure sleeve, internal Ø 60 mm, external Ø 70 mm	420	
700.1728	Pressure sleeve, internal Ø 62 mm, external Ø 72 mm	430	
700.1729	Pressure sleeve, internal Ø 64 mm, external Ø 74 mm	440	
700.1730	Pressure sleeve, internal Ø 66 mm, external Ø 76 mm	460	
700.1731	Pressure sleeve, internal Ø 68 mm, external Ø 78 mm	470	
700.1732	Pressure sleeve, internal Ø 70 mm, external Ø 80 mm	480	
700.1733	Pressure sleeve, internal Ø 72 mm, external Ø 82 mm	490	

Silent bearing set for BMW and Mini front axle

- For the assembly and disassembly of the front silent bearings (hydro bearing) in the wishbone
- Saves a lot of time since the replacement is carried out as it is
- Special tool steel

Application range: BMW Mini R50 **Mini** One, One D and Cooper from 2001-2006 and R53 **Mini** Cooper S from 2002-2006

Caution: The spindles must be greased before first use! Overloading leads to unwanted material stresses or breakage Always check the power settings on the drive with a torque wrench





			kg	
700.2135	7 pcs	Silent bearing set for BMW and Mini front axle	3,40	

consists of:

		g	
700.2136	Spindle M14, 205mm	250	
700.2137	Nut with bearing	160	
700.2138	Pulling sleeve	608	
700.2139	Bush with serrated edge	633	
700.2140	Disassembly bush with thread	317	
700.2141	Assembly bush with thread	391	
700.2142	Assembly bush without thread	393	

Silent bearing tool set for BMW rear axles

- For assembly and disassembly of the lower silent bearings on the rear axle
- No removal of the wheel mounts
- With pre-tensioning tool suitable for slit silent bearings
- For damage-free installation
- Special tool steel

Application range: BMW E81/E82/E87/E88 and **BMW** E90/E91/E92/E93 silent bearings on the rear axle





			kg	
700.2145	10 pcs	Silent bearing tool set for BMW rear axles	3,84	

consists of:

		g	
700.2146	Spindle M12 x 1.75 mm	143	
700.2147	Nut, M12 x 1.75 mm	105	
700.2148	Tension wrench with t-handle	687	
700.2149	Press piece 1 x 57.0 mm	468	
700.2150	Press piece 2 x 45.0 mm	232	
700.2151	Press piece 3 x 43.0 mm	194	
700.2152	Press piece 4 x 58.0 mm	388	
700.2153	Press piece 5 x 58.0 mm	420	
700.2154	Press piece 6 x 54.7 mm	240	
700.2155	Press piece 7 x 53.9 mm	300	

Silent bearing tool set for BMW rear axles

- For assembly and disassembly of the front and rear spherical bearings
- For all rear axle supports
- For assembly in built in condition
- With pre-tensioning tool suitable for rubber bearings
- For damage-free installation and removal
- Special tool steel

Application range: BMW E81/E82/E87/E88 and **BMW** E90/E91/E92/E93 spherical bearings on the rear axle





			kg	
700.2160	13 pcs	Silent bearing tool set for BMW rear axles	7,20	

consists of:

		X	kg	
700.2161	1	Spindle, M16 x 2.0 mm	0,35	
700.2162	1	Ring, Ø 32.4 mm	0,03	
700.2163	2	Nut, M16 x 2.0 mm	0,07	
700.2164	1	Pre-tensioning tool	1,93	
700.2165	1	Pressure piece, 58.0 x 38.0 mm	0,22	
700.2166	1	Pressure piece, 42.0 x 62.7 mm	0,20	
700.2167	1	Pressure piece, 123.0 x 95.0 mm	1,11	
700.2168	1	Pressure piece, 128.0 x 100.0 mm	1,19	
700.2169	1	Pressure piece, 84.0 mm	0,64	
700.2170	1	Pressure piece, 89.0 mm	0,53	
700.2171	1	Pressure piece, 87.0 mm	0,42	
700.2172	1	Pressure piece, 99.0 mm	0,50	



Silent bearing tool set for BMW rear axle

- for mounting and dismounting the rear silent bearing on the rear axle carrier
- For assembly in built in condition
- For damage-free installation and removal
- Saves a lot of time
- Special tool steel

Application range: BMW F01, F02, F04, F06, F07, F10, F13, F18 silent bearing at rear axle





150.9865	7 pcs	Silent bearing tool set for BMW rear axle	4,63	

consists of:

150.9856	Spindle M12 x 1.75 mm	0,16	
150.9857	Press nut, M12 x 1.75 mm	0,10	
150.9783	Pressure plate Ø 84.0 mm	0,38	
150.9869	Pressure piece Ø 83.0 mm	0,43	
150.9870	Pressure piece Ø 78.0 mm	0,56	
150.9871	Pressure piece with thread Ø 67.0 mm	0,37	
150.9872	Sleeve with inspection window Ø 84.0 mm	1,23	

Silent bearing tool set for BMW rear axle

- for assembly and dismantling of the front silent bearings on the rear axle carrier
- For assembly in built in condition
- For damage-free installation and removal
- Saves a lot of time
- Special tool steel

Application range: BMW F01, F02, F04, F06, F07, F10, F13, F18 silent bearing at rear axle





150.9855	8 pcs	Silent bearing tool set for BMW rear axle	3,49	

consists of:

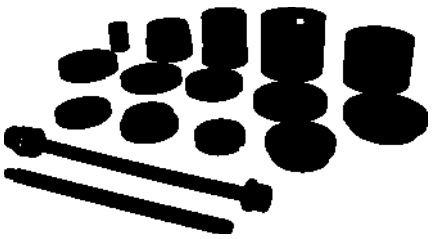
150.9856	Spindle M12 x 1.75 mm	161	
150.9857	Press nut, M12 x 1.75 mm	103	
150.9783	Pressure plate Ø 84.0 mm	379	
150.9859	Pressure piece Ø 69.0 mm	351	
150.9860	Pressure piece Ø 60.0 mm	337	
150.9861	Pressure piece with thread Ø 59.0 mm	282	
150.9862	Mounting ring conical Ø 74.0 mm	269	
150.9863	Sleeve with inspection window Ø 71.0 mm	650	

Axle beam bearing tool set for BMW rear axle

- for mounting and dismounting the axle beam bearings on the rear axle
- Ideal for secure bearings
- Secure and easy to use
- For damage-free installation and removal
- Special tool steel

Application range: BMW E81, E82, E83, E84, E85, E86, E87, E88, E90, E91, E92 and E93





150.9825	19 pcs	Axle beam bearing tool set for BMW rear axle	6,54	

consists of:

	X		
150.9826	1	Pressure piece ø 64.2 mm	400
150.9827	1	Pressure sleeve with slot ø 63.9 mm	326
150.9828	1	Pressure piece ø 48.5 mm	140
150.9829	1	Pressure sleeve conical Ø 69.9 mm	379
150.9830	1	Pressure sleeve ø 59.0 mm	221
150.9831	1	Pressure piece ø 59.0 mm x 10.0 mm	196
150.9832	1	Pressure piece ø 28.0 mm	152
150.9833	1	Pressure piece ø 84.0 mm	709
150.9834	1	Pressure sleeve with slot ø 81.9 mm	623
150.9835	1	Pressure piece ø 81.9 mm	414
150.9836	1	Pressure piece ø 67.5 mm	324
150.9837	1	Pressure sleeve ø 76.9 mm	400
150.9838	1	Pressure sleeve conical Ø 81.8 mm	620
150.9839	1	Pressure sleeve ø 75.9 mm	560
150.9840	1	Ball bearing Ø 22 mm	31
150.9841	1	Spindle 210.0 mm	145
150.9842	1	Spindle 250.0 mm	170
150.9843	2	Nuts M12	74



Silent bearing tool set for Fiat rear axle

- For the assembly and disassembly of the rear axle silent bearings
- Ideal for secure bearings
- Saves a lot of time since the replacement is carried out as it is
- Secure and easy to use
- Ideal for manual use
- Special tool steel

Application range: Fiat Panda (2003 - 2012)

Caution: The spindles must be greased before first use! Overloading leads to unwanted material stresses or breakage Always check the power settings on the drive with a torque wrench



700.2380	7 pcs	Silent bearing tool set for Fiat rear axle	1,46	

consists of:

	X		
700.2386	1	Mounting ring Ø 68.0mm	359
700.2384	1	Mounting and demounting ring, length 17.0 mm, Ø 50.0 mm	155
700.2383	1	Demounting ring small Ø 50.0 mm	131
700.2387	1	Demounting sleeve Ø 44.0 mm	375
700.2381	1	Spindle, length 280.0 mm	196
700.2382	2	Press nut with bearing	245

Silent bearing tool set for rear axle Ford and Mazda

- For assembly and disassembly of the lower silent bearings on the rear axle
- Ideal for secure bearings
- Saves a lot of time since the replacement is carried out as it is
- Secure and easy to use
- Ideal for manual use
- Special tool steel

Application range: Ford Fiesta MK6 (>2008), **Mazda** 2 MK3 (>2007)

Caution: The spindles must be greased before first use! Overloading leads to unwanted material stresses or breakage Always check the power settings on the drive with a torque wrench



700.2390	7 pcs	Silent bearing tool set for rear axle Ford and Mazda	3,65	

consists of:

	x		
700.2396	1	Guide sleeve, internal-Ø 79 mm	764
700.2393	1	Pressure piece Ø 75.0 mm	681
700.2397	1	Pressure plate Ø 90.0 mm	404
700.2391	2	Press nut with bearing	248
700.2394	1	Spindle, 304.0 mm	144
700.2392	1	Guide sleeve slotted Ø 68.0 mm	588

Silent bearing tool set for Ford and Volvo rear wheel mounting

- For assembly and disassembly of silent bearings both on and off the vehicle
- Removes the necessity to remove the brake pipes and securing plate
- Saves a lot of time
- Special tool steel

Application range: Ford Galaxy from 2006-2010, **Ford** Mondeo from 2007-2013, **Ford** S-May from 2006-2013, **Volvo** S60 from 2010-2013, **Volvo** V70 from 2007-2013

Caution: The spindles must be greased before first use! Overloading leads to unwanted material stresses or breakage Always check the power settings on the drive with a torque wrench





700.2210	5 pcs	Silent bearing tool set for Ford and Volvo rear wheel mounting	7,80

consists of:

	x		
700.2211	1	Press screw M24 with bearing	0.53
700.2212	1	Press frame 275 mm	4.35
700.2213	1	Beaker for installation and removal	2.00
700.2214	1	Separator ring	0.30
700.2215	1	Step ring	0.40

Silent bearing tool set for Land Rover wishbone

- For assembly and disassembly of silent bearings both on and off the vehicle
- Minimises the normally necessary disassembly work hugely
- Removes the complete removal of the wishbone
- Saves a lot of time
- Special tool steel

Application range: Land Rover Discovery 3 and Range Rover Sport

Caution: The spindles must be greased before first use! Overloading leads to unwanted material stresses or breakage Always check the power settings on the drive with a torque wrench



700.2220	11 pcs	Silent bearing tool set for Land Rover wishbone	4,37

consists of:

700.2221	Spindle M16 x 1.5	0,05
700.2222	Press bull	0,75
700.2223	Assembly plate	0,80
700.2224	Assembly disk	0,58
700.2225	Press bell, large, 85 mm	1,27
700.2182	Press nut M16	0,15
700.2183	Counter nut M16	0,05
700.2228	Half-shell pair with screws and nuts, 4 pcs	0,73

Silent bearing tool set for Land Rover rear axle

- For assembly and disassembly of silent bearings both on and off the vehicle
- For the upper silent bearings on the rear wheel mounting
- Saves a lot of time
- Special tool steel

Application range: Land Rover Discovery 3, **Land Rover** Discovery 4, Range Rover Sport and **Land Rover** L322

Caution: The spindles must be greased before first use! Overloading leads to unwanted material stresses or breakage Always check the power settings on the drive with a torque wrench



700.2230	5 pcs	Silent bearing tool set for Land Rover rear axle	1,19

consists of:

700.2201	Spindle M12 x 1.75	191
700.2232	Press bell, large, 55 mm	497
700.2233	Press bell, small, 34 mm	200
700.2202	Press nut M12, 35 mm	171
700.2203	Counter nut, M12 x 1.75	20

Silent bearing tool set for Land Rover rear wheel mounting

- For assembly and disassembly of silent bearings both on and off the vehicle
- For the lower silent bearings on the rear wheel mounting
- Saves a lot of time
- Special tool steel

Application range: Land Rover Discovery 3, **Land Rover** Discovery 4, Range Rover Sport and **Land Rover** L322

Caution: The spindles must be greased before first use! Overloading leads to unwanted material stresses or breakage Always check the power settings on the drive with a torque wrench



700.2240	6 pcs	Silent bearing tool set for Land Rover rear wheel mounting	1,77

consists of:

700.2201	Spindle M12 x 1.75	191
700.2242	Bush slit	700
700.2243	Press bell, large, 30 mm	340
700.2244	Press bell, small, 30 mm	235
700.2202	Press nut M12, 35 mm	171
700.2203	Counter nut, M12 x 1.75	20

Silent bearing tool set for Mitsubishi Lancer wishbone

- For assembly and disassembly of silent bearings both on and off the vehicle
- Removes work on ball joints
- Saves a lot of time
- Special tool steel

Application range: Mitsubishi Lancer EVO 4/5/6 from 1996-2001

Caution: The spindles must be greased before first use! Overloading leads to unwanted material stresses or breakage Always check the power settings on the drive with a torque wrench



700.2200	5 pcs	Silent bearing tool set for Mitsubishi Lancer wishbone	975

consists of:

700.2201	Spindle M12 x 1.75	191
700.2202	Press nut M12, 35 mm	171
700.2203	Counter nut, M12 x 1.75	20
700.2204	Pressure sleeve, 63 mm	505
700.2205	Pressure piece, 18 mm	88

Silent bearing cutting set for Nissan, Renault and Opel front axles

- For the disassembly of silent bearings on and off the vehicle
- Simple removal of the outer ring of the silent bearing
- Due to the construction of the help frame and the silent bearings with heightened external ring of the silent bearing must be cut
- Once the external ring has been cur the rest of the silent bearing can be pressed in with 700.2180
- Removes removal of the help frame
- Saves a lot of time since the replacement is carried out as it is
- Special tool steel

Application range: Renault Trafic, **Nissan** Primaster, **Opel** Vivaro 2001-2013



700.2190	4 pcs	Silent bearing cutting set for Nissan, Renault and Opel front axles	393

consists of:

700.2191	Hole saw attachment bracket	53
700.2192	Hole saw Ø 54 mm	129
700.2193	Conical brass silent bearing guide	91
700.2194	1/4" centring shank	120



Silent bearing tool set for Nissan, Renault and Opel front axle

- For assembly and disassembly of silent bearings both on and off the vehicle
- Removes the removal of the help frame in connection with 700.1290
- Saves a lot of time since the replacement is carried out as it is
- Special tool steel

Application range: Renault Trafic, **Nissan** Primaster, **Opel** Vivaro 2001 – 2013

Caution: The spindles must be greased before first use! Overloading leads to unwanted material stresses or breakage Always check the power settings on the drive with a torque wrench



			kg	
700.2180	7 pcs	Silent bearing tool set for Nissan, Renault and Opel front axle	2,42	

consists of:

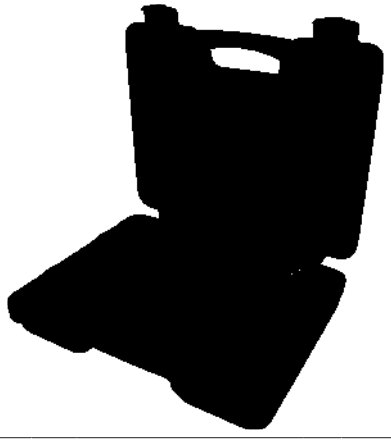
		g	
700.2181	Spindle M16	280	
700.2182	Press nut M16	151	
700.2183	Counter nut M16	51	
700.2184	Press sleeve, large	847	
700.2185	Pressure plate	330	
700.2186	Conical press sleeve	220	
700.2187	Press sleeve, small	543	

Silent bearing tool set for rear axle Opel

- For the assembly and disassembly of the rear axle silent bearings
- Ideal for secure bearings
- Saves a lot of time since the replacement is carried out as it is
- Secure and easy to use
- Ideal for manual use
- Special tool steel

Application range: Opel Astra H (2004 - 2014), Meriva B (>2010), Zafira B (2005 - 2014)

Caution: The spindles must be greased before first use! Overloading leads to unwanted material stresses or breakage Always check the power settings on the drive with a torque wrench



			kg	
700.2370	7 pcs	Silent bearing tool set for rear axle Opel	5,40	

consists of:

	x		kg	
700.2377	1	Pressure sleeve interior-Ø 86.0 mm	1,53	
700.2374	1	Pressure piece Ø 84.0 mm	0,68	
700.2373	1	Pressure piece small Ø 68.0 mm	0,39	
700.2376	1	Pressure piece, large Ø 93.5 mm	1,14	
700.2394	1	Spindle, 304.0 mm	0,14	
700.2391	2	Press nut with bearing	0,25	

Silent bearing tool set for Mercedes

- For assembly and disassembly of silent bearings both on and off the vehicle
- for replacing the silent bearing from the longitudinal control arm and cross control arm on the front and rear axles
- For use alongside mechanical spindle
- Saves a lot of time
- Special tool steel
- In durable plastic storage case

Application range: Mercedes W203, W204, W209, W211 and W220

Caution: The spindles must be greased before first use! Overloading leads to unwanted material stresses or breakage Always check the power settings on the drive with a torque wrench





			kg	
150.9780	14 pcs	Silent bearing tool set for Mercedes	8,37	

consists of:

		g	
150.9783	Pressure plate Ø 84.0 mm	379	
150.9781	Drive spindle M14 x 3.0 mm	275	
150.9782	Bearing sleeve	379	
150.9784	Sleeve with inspection window Ø 81.0 mm	716	
150.9785	Pressure piece Ø 69.0 mm	320	
150.9786	Pressure piece Ø 82.0 mm, length 35.0 mm	582	
150.9787	Pressure piece Ø 82.0 mm, length 33.0 mm	662	
150.9788	Collar nut M14 x 3.0 mm	75	
150.9789	Pressure piece Ø 82.0 mm, length 36.0 mm	767	
150.9790	Pressure piece Ø 69.0 mm, length 30.0 mm	383	
150.9791	Sleeve Ø 80.0 mm	632	
150.9792	Pressure piece Ø 50.0 mm	174	
150.9793	Pre-tensioning tool	449	
150.9794	Pressure piece Ø 59.0 mm	314	





Double silent bearing tool set for VAG

- For the assembly and disassembly of the double silent bearings on VAG
- Enables use directly on the vehicle
- Measurement of the axle is not required
- Enormous time and cost saving
- Secure and easy to use
- Special tool steel
- In durable plastic storage case

Application range: Volkswagen Caddy 2004–2010, Eos > 2006, Golf V 2003–2009, Scirocco > 2005, Jetta 2005–2010, Passat 2005–2010, Tiguan > 2007, Touran > 2003, **Seat** Altea > 2004, Leon > 2005, Toledo 2004–2009, **Škoda** Octavia 2004–2010, **Audi** A3 > 2005, TT 2006–2010





			kg	
700.2250	19 pcs	Double silent bearing tool set for VAG	8,56	

consists of:

		kg	
700.2251	Spindle installation, M12x1.75 mm	0,35	
700.2252	Pressure piece, installation and removal Ø 83 mm	0,87	
700.2253	Bello, removal Ø 106 mm	1,43	
700.2254	Pressure piece, removal Ø 89 mm	0,37	
700.2255	Conical ring, installation Ø 106 mm	0,60	
700.2256	Pressure piece, installation Ø 82 mm	0,63	
700.2257	Mounting holder, 280x22x22 mm	0,92	
700.2258	Mounting piece, 22x45.5x31.8 mm	0,20	
700.2259	Adjusting holder, 16x49x72 mm	0,25	
700.2266	Fixing block, 18x33.7x56 mm	0,18	
700.2267	Spindle removal, M16x2.0 to M12x1.75 mm	0,19	
700.2268	Nut, M12x1.75 mm	0,04	
700.2269	Screw, M6x1.0 mm	0,01	
700.2284	Nut with thrust bearing, M12x1.75 mm	0,13	
700.2286	Nut with thrust bearing, M16x2.0 mm	0,10	

Silent bearing tool set for Audi and Volkswagen

- For the assembly and disassembly of silent bearings, hydro and plastic bearings
- Can be used directly on the vehicle
- Saves a lot of time
- For use with the universal press frame 700.1751 and spindle
- Special tool steel

Application range: Audi A2, A3, **Volkswagen** Golf 4



			kg	
700.2340	9 pcs	Silent bearing tool set for Audi and Volkswagen	4,20	

consists of:

		kg	
700.2341	Counter bearing with recess	0,72	
700.2342	Separating device	1,88	
700.2343	Internal hexagon screw M12 x 50, 2 pcs	0,05	
700.2344	Press bolts with nut M12 x 200	0,20	
700.2347	Pressure piece, 25 mm	0,64	
700.2348	Press piece with opening	0,52	
700.2349	Press piece for hydro bearings	0,62	
700.2350	Press piece for plastic bearings	0,65	

Silent bearing tool set for VAG Front axle consoles

- With this tool the plastic silent bearing of the front axle console can be correctly and quickly dismantled and mounted
- By means of the specially pressure piece the plastic housing is safely accepted by what means a damage-free assembly is enabled
- With this the tool it can incorporated the condition and can the costly correction of the axle alingment and the dismantling of often strongly console-reinforcements-screws that cam be corroded
- Simple handling
- Enables use directly on the vehicle
- Saves a lot of time
- Adapter with protective axle-pressure thrust bearing -spindle
- Axle alignment can been omitted
- In durable plastic storage case

Application range: Volkswagen Polo (9N), **Seat** Ibiza IV, Cordoba (from model 2002), Altea, **Škoda** Fabia, Roomster, **Audi** A2 + structurally identical group vehicles





			kg	
700.1650	8 pcs	Silent bearing tool set for VAG Front axle consoles	3,20	

consists of:

		kg	
700.1651	Working spindle M10x1,25, 180 mm	0,17	
700.1652	Spindle extension M10x1,25, 200 mm	0,14	
700.1653	Special nut with cone shaft 45mm	0,08	
700.1654	Special adaptor with thrust bearing	0,16	
700.1655	Thrust plate stepped Ø74mm, installation	0,39	
700.1656	Special thrust piece Ø74mm, installation	1,07	
700.1657	Distance piece with knurled, extension	0,24	
700.1658	Distance piece with collar, extension	0,24	

Silent bearing tool set for VAG rear axles

- For assembly and disassembly of bearings both on and off the vehicle
- For the replacement of silent bearings from the wheel bearing housing, axle guide/trailing arm, wishbone lower/internal as built in, push rod and the upper wishbone not built-in
- For use alongside mechanical spindle
- Special tool steel
- In durable plastic storage case

Application range: Volkswagen Golf 5 Plus/Variant/4 Motion from 2005-2012; **Volkswagen** Scirocco 2009-2012; **Volkswagen** Beetle >2012; **Volkswagen** EOS 2006-2012; **Seat** Altea from 2004-2012; **Seat** Leon from 2006-2012; **Seat** Toledo from 2005-2009; **Audi** A3/S3 from 2004-2012; **Audi** TT/TTS Coupe/Roadster from 2007-2012

Caution: The spindles must be greased before first use! Overloading leads to unwanted material stresses or breakage Always check the power settings on the drive with a torque wrench





			kg	
700.2110	18 pcs	Silent bearing tool set for VAG rear axles	4,24	

consists of:

		g	
700.2111	Pressure piece, 35.7 mm	60	
700.2112	Pressure piece, 37.6 mm, 19 mm	160	
700.2113	Pressure piece, 37.6 mm, 16 mm	80	
700.2114	Pressure piece, 39.5 mm	100	
700.2115	Pressure piece, 41.3 mm	100	
700.2116	Pressure piece, 42.0 mm	60	
700.2117	Pressure piece, 49.0 mm	300	
700.2118	Pressure piece, 49.9 mm	60	
700.2119	Pressure piece, 50.0 mm	220	
700.2120	Pressure piece, 59.4 mm	220	
700.2121	Pressure piece, 67.0 mm	300	
700.2122	Pressure piece, 80.0 mm, 13 mm	160	
700.2123	Pressure piece, 80.0 mm, 13 mm	320	
700.2124	Pressure piece, 80.4 mm	840	
700.2108	Ring, Ø 40.0 mm	60	
700.2130	Drive spindle M12 x 1.5, including press nut and nuts	310	

Silent bearing tool set for VAG rear axles

- For assembly and disassembly of the rubber meta or rubber plastic bearings on the rear axle
- For use alongside mechanical spindle
- For secure bearings a hollow piston cylinder may also be used
- Special tool steel
- In durable plastic storage case

Application range: Audi A3; **Volkswagen** Golf 4; **Škoda** Octavia >1997, **Seat** Leon; Toledo >2001

Caution: The spindles must be greased before first use! Overloading leads to unwanted material stresses or breakage. Always check the power settings on the drive with a torque wrench.





			kg	
700.2100	11 pcs	Silent bearing tool set for VAG rear axles	4,98	

consists of:

		kg	
700.2101	Pressure piece, 68.7 mm	0,34	
700.2102	Pressure piece, 76.6 mm	0,58	
700.2103	Pressure piece, 83.8 mm	0,78	
700.2104	Pressure piece, 90.0 mm	0,30	
700.2105	Pressure piece, 90.3 mm	1,03	
700.2106	Pressure piece, 96.3 mm	0,62	
700.2107	Pressure piece, 97.9 mm	0,10	
700.2108	Ring, Ø 40.0 mm	0,06	
700.2130	Drive spindle M12 x 1.5, including press nut and nuts	0,31	

Drive spindle

- Pressure bearing protects against increased friction during the process
- Spindle M12 x 1.5
- Double sided press bearing for quick installation and removal of bushes
- Includes press nut and nuts
- Chrome molybdenum

Caution: The spindles must be greased before first use! Overloading leads to unwanted material stresses or breakage Always check the power settings on the drive with a torque wrench



			g	
700.2130	3 pcs	Drive spindle	310	

consists of:

		g	
700.2126	Spindle M12	180	
700.2125	Press nut M12, 24mm	120	
700.2109	Thrust bolt M12	20	









KS TOOLS®

Innovation is our mission!

	FROM PAGE
WIPER ARM DISASSEMBLY	602
WASHER NOZZLE TOOL AND MAGNET LIFTER	605
DASHBOARD PANEL	606
INTERIOR AND WING MIRROR	607
SENSORS	608
PLASTIC WEDGES	609
TRANSPORT AND STORAGE	611
PLATFORM	612
REMOVAL TOOL - NON GLUED CAR WINDSCREENS	612
PANEL BAG	614
REMOVAL TOOL - GLUED CAR WINDSCREENS	614
SUCTION PADS	618
GLASS REPAIR	619
SCRAPERS	620
NOZZLE CARTRIDGE PLIERS	623
HAND PISTOL CARTRIDGES	623
BATTERY CARTRIDGE PISTOL	624
PRESSURISED AIR PISTOL CARTRIDGES	624
ASSEMBLY SPATULA	625
AID	625

WIPER ARM DISASSEMBLY

Wiper arm bit socket for tamper-proof Torx screws for BMW

- For tamperproof Torx
- Ideally suited to the assembly and disassembly of windscreen wiper arms
- Also ideal for setting the contact pressure, e.g. after replacing the windscreen
- Tamper-proof for the seating of the windscreen wiper bearing axle
- Chrome vanadium

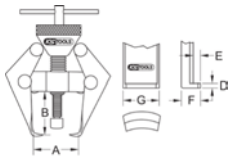
Application range: BMW E31, E32, E34, E38, E39



		Length mm	g	
911.1387	TB80	55,0	150	

Universal pole terminal and wiper arm puller 2-arm pattern

- 2-jaw
- ideally suited for removing the battery terminal and wiper arms
- Locking handle
- With conical tension screw for proportional tension force distribution
- Self-centring jaw puller
- Extremely robust spindle with inductively hardened thread
- Special tool steel

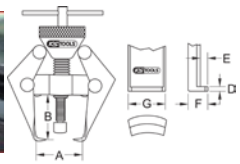


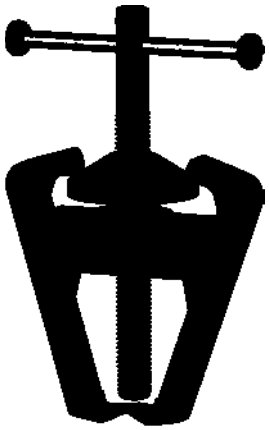
	A mm	B mm	max t	mm	D mm	E mm	F mm	G mm	g	
700.1190	15	32	1,2	M8 x 50	2,5	9	10,5	11	300	



Universal windscreen wiper arm puller 2-jaw with t-bar

- Heavy execution
- 2-jaw
- Ideally suited to the protective removal of windscreen wiper arms
- Locking handle
- With narrow socket for tight spaces
- With conical self-tensioning clamping screws for proportional tension force distribution
- Self-centring jaw puller
- Extremely robust spindle with inductively hardened thread
- Special tool steel

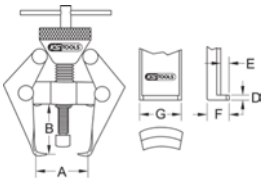



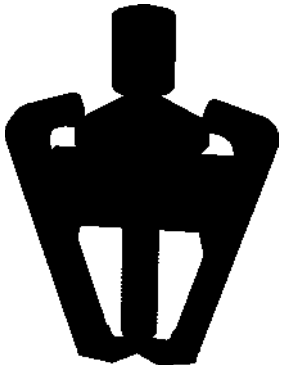


	A mm	B mm	max t	mm	D mm	E mm	F mm	G mm	g	
700.1179	45	37	1,2	M10 x 105	5	8	16	8	284	

Universal windscreen wiper arm puller 2-jaw with t-bar

- Ideally suited to the protective removal of windscreen wiper arms
- With narrow socket for tight spaces
- With conical self-tensioning clamping screws for proportional tension force distribution
- Self-centring jaw puller
- Extremely robust spindle with inductively hardened thread
- Internal square drive adaptor to DIN 3120 / ISO 1174
- Special tool steel

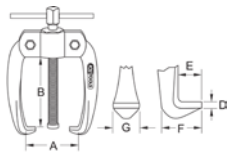




	A mm	B mm	mm	mm	D mm	E mm	F mm	G mm	g	
700.1176	45	37	16	M10 x 105	5	8	16	8	284	

Universal pole terminal and wiper arm puller 2-arm pattern

- 2-jaw
- ideally suited for removing the battery terminal and wiper arms
- Locking handle
- Automatic pressure on the legs
- Extremely robust spindle with inductively hardened thread
- Screwed
- Sturdy hook
- Special tool steel

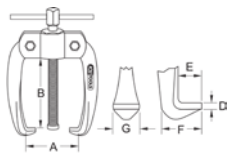





	A mm	B mm	max t	mm	D mm	E mm	F mm	G mm	g	
700.1164	10-60	40	0,5	M10 x 60	2,6	5,5	12,8	10,0	145	

Universal pole terminal and wiper arm puller 2-arm pattern

- 2-jaw
- ideally suited for removing the battery terminal and wiper arms
- Locking handle
- Automatic pressure on the legs
- Extremely robust spindle with inductively hardened thread
- Screwed
- Sturdy hook
- Special tool steel



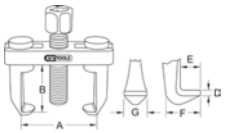
	A mm	B mm	max t	mm	D mm	E mm	F mm	G mm	g	
700.1165	10-60	60	0,5	M10 x 80	3,7	5,8	12,4	10,1	173	
700.1166	10-70	80	0,5	M10 x 100	4,0	9,2	16,8	14,0	245	

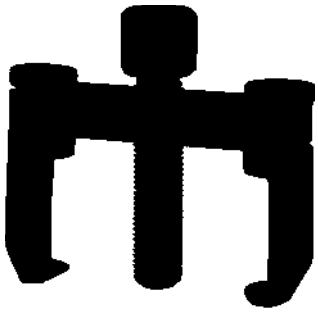
Universal windscreen wiper arm puller 2 arm

- 2-jaw
- Ideally suited to the protective removal of windscreen wiper arms
- Hollow puller spindle for damage-free support on the wiper arm shaft with washer nozzle
- Extremely robust spindle with inductively hardened thread
- Prevents damage to the bodywork and the windscreen wiper arm
- Internal square drive adaptor to DIN 3120 / ISO 1174
- Special tool steel

Application range: especially for **VAG** rear windscreen wiper with integrated washer nozzle





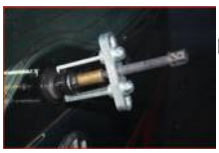


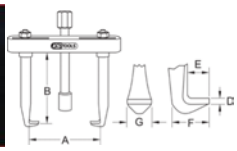
	A mm	B mm	mm	mm	D mm	E mm	F mm	G mm	kg
700.1185	10-60	34	17	M12x1,25 x 34	3	5	14	15	1,00

Wiper arm puller 2-arm pattern for VAG / Ford / Mercedes

- 2-jaw
- Ideally suited to the protective removal of windscreen wiper arms
- Hollow puller spindle with brass cover for damage-free support on the wiper arm shaft with washer nozzle
- Ball bearing mounted centring point
- Extremely robust spindle with inductively hardened thread
- Spindle guidance is carried out in a moving sleeve
- Prevents damage to the bodywork and the windscreen wiper arm
- Internal square drive to DIN 3120 - ISO 1174
- Special tool steel

Application range: especially for **VAG**, **Ford** Galaxy, **Seat** Alhambra, **Mercedes** A and B class rear windscreen wiper with integrated washer nozzle





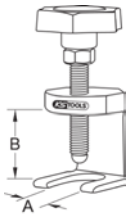


	A mm	B mm	mm	mm	D mm	E mm	F mm	G mm	g
700.1189	20-60	50	13	M10x115	4	4	9	12	243

Universal windscreen wiper arm puller with pulling yoke

- With pulling yoke
- Ideally suited to the protective removal of windscreen wiper arms
- Pulling spindle for damage-free support to the rear wiper blades
- Extremely robust spindle with inductively hardened thread
- Prevents damage to the bodywork and the windscreen wiper arm
- With adjustment dial for manual operation
- With narrow socket for tight spaces
- Special tool steel



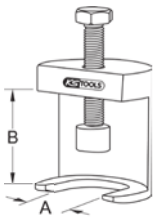




	A mm	B mm	mm	mm	g
700.1193	16	28	11	M8 x 45	140

Universal Windshield Wiper Arm Puller with Pull Fork

- Heavy execution
- With pulling yoke
- Ideally suited to the protective removal of windscreen wiper arms
- Pulling spindle with brass cap for damage-free support on the washer arm shaft
- Extremely robust spindle with inductively hardened thread
- Spindle guidance is carried out in a moving sleeve
- Prevents damage to the bodywork and the windscreen wiper arm
- With narrow socket for tight spaces
- Special tool steel



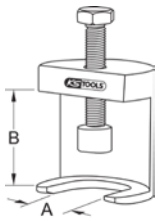


	A mm	B mm	mm	mm	g
700.1177	18	34	14	M8 x 23	177

Universal windscreen wiper arm puller with pulling yoke

- Heavy execution
- With pulling yoke
- Ideally suited to the protective removal of windscreen wiper arms
- Spindle end with brass cap to prevent damage to the windscreen wiper arm
- Extremely robust spindle with inductively hardened thread
- Spindle guidance is carried out in a moving sleeve
- Prevents damage to the bodywork and the windscreen wiper arm
- With narrow socket for tight spaces
- Special tool steel





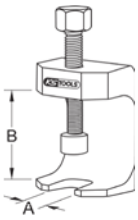


	A mm	B mm	mm	mm	g
700.1191	26	48	13	M8 x 75	450

Universal windscreen wiper arm puller with pulling yoke

- Heavy execution
- With pulling yoke
- Ideally suited to the protective removal of windscreen wiper arms
- Spindle end with brass cap to prevent damage to the windscreen wiper arm
- Extremely robust spindle with inductively hardened thread
- Spindle guidance is carried out in a moving sleeve
- Prevents damage to the bodywork and the windscreen wiper arm
- With narrow socket for tight spaces
- Special tool steel







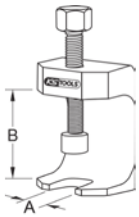
	A mm	B mm	mm	mm	g
700.1192	16	41	17	M10 x 80	510

Universal windscreen wiper arm puller with adjustable puller fork

- With adjustable pulling yoke with spring mechanism
- Ideally suited to the protective removal of windscreen wiper arms
- Pulling spindle with brass cap for damage-free support on the washer arm shaft
- Extremely robust spindle with inductively hardened thread
- Spindle guidance is carried out in a moving sleeve
- Prevents damage to the bodywork and the windscreen wiper arm
- With narrow socket for tight spaces
- Special tool steel

Application range: BMW 3, 5, 6, 7 and 8 series, Z4, Z8 Roadster, X5 and **Rolls Royce** Phantom





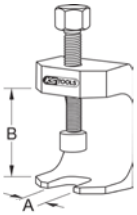


	A mm	B mm	mm	mm	g
700.1178	16-38	42	17	M10 x 85	500

Universal windscreen wiper arm puller with fork

- With pulling yoke
- Ideally suited to the protective removal of windscreen wiper arms
- Pulling spindle with brass cap for damage-free support on the washer arm shaft
- Extremely robust spindle with inductively hardened thread
- Spindle guidance is carried out in a moving sleeve
- Prevents damage to the bodywork and the windscreen wiper arm
- With narrow socket for tight spaces
- Special tool steel







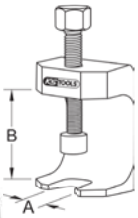
	A mm	B mm	mm	g
700.1198	23,5	48	8	240

Audi Q7 windscreen wiper arm puller with fork

- With pulling yoke
- Ideally suited to the protective removal of windscreen wiper arms
- Pulling spindle for damage-free support to the rear wiper blades
- Extremely robust spindle with inductively hardened thread
- Prevents damage to the bodywork and the windscreen wiper arm
- With narrow and flat socket for tight spaces
- Special tool steel

Application range: Audi Q7







	A mm	B mm	mm	g
700.1194	26,5	16	16	173

Universal windscreen wiper arm puller set 2/4-jaws

- 2/4-jaws
- each with 2 extra-slim size and pairs of arms with varying width
- Ideally suited to removal of windscreen wiper arms
- Pulling spindle for damage-free support to the rear wiper blades
- Option of working with wide or narrow arms
- Ball bearing mounted centring point
- With narrow socket for tight spaces
- Extremely robust spindle with inductively hardened thread
- Prevents damage to the bodywork and the windscreen wiper arm
- External drive hexagonal socket 13.0 mm
- Special tool steel





			g
700.1242	6 pcs	Universal windscreen wiper arm puller set 2/4-jaws	690

consists of:

		g
700.1246	Traverse arm, 6 point	100
700.1245	Spindle M12 x 90 mm for 700.1242	150
700.1247	Pair of legs – slim type	100
700.1248	Pair of legs – wide type	100

Windscreen wiper arm puller set

- Ideally suited to disassembly of windscreen wiper arms
- Suited for a multitude of vehicle types and car brands
- Self-stiffening or recessed built-in washer arms are quickly disassembled with this set
- Prevents damage to the bodywork and the windscreen wiper arm
- Spindle guidance is carried out in a moving sleeve
- Special tool steel
- In durable plastic storage case





			kg
700.1155	6 pcs	Windscreen wiper arm puller set	2,86

consists of:

		g
700.1194	Audi Q7 windscreen wiper arm puller with fork, 26,5mm	173
700.1189	Windscreen wiper arm puller 2-jaw, 20-60mm	243
700.1191	Universal windscreen wiper arm puller type 2, 13mm	450
700.1192	Universal windscreen wiper arm puller type 3, 17mm	510
700.1198	Universal wiper arm puller with fork, 23mm	240
700.1179	Universal windscreen wiper arm puller 2-jaw with t-bar, 45mm	284

Universal windscreen wiper arm puller set

- Ideally suited to disassembly of windscreen wiper arms
- Includes impact hammer puller
- Universally fitting puller set suitable for approx. 450 windscreen wipers, 300 vehicles and 30 car brands
- Self-stiffening or recessed built-in washer arms are quickly disassembled with this set
- Washers with washer nozzle in the centre of the wiper arm can be worked on either with the impact hammer or with the hollow spindle attachment
- Alternatively can be used mechanically or with an impact spindle
- Prevents damage to the bodywork and the windscreen wiper arm
- Special tool steel
- In durable plastic storage case





			kg
700.1240	13 pcs	Universal windscreen wiper arm puller set	3,81

consists of:

700.1232	Spindle, 95mm, M12	170
700.1233	Fork #1, opening 22mm, H=50mm	110
700.1234	Fork #2, opening 25mm, H=50mm	140
700.1235	Fork #3, opening 16mm, H=60mm	150
700.1236	Fork #4, opening 25mm, H=41mm	110
700.1237	Fork #5, opening 30mm, H=50mm	150
700.1238	Fork #6, opening 20mm, H=50mm	100
700.1239	Fork #7, opening 17mm, H=55mm	100
700.1241	Fork #8, opening 16mm, H=80mm	170
700.1242	Universal 2 arm wiper arm puller set, 6 pcs	690
700.1243	Spindel extension for 700.1232 and 700.1242	20
700.1244	Hollow spindle adaptor for 700.1232 and 700.1242	20

WASHER NOZZLE TOOL AND MAGNET LIFTER

Windscreen nozzle adjusting tool for Mercedes

- From damage-free setting of fan nozzles of the windscreen washer
- Accurate profile for the interchanging of nozzle heads
- Universal usage
- External drive hexagonal socket 6 mm
- Special tool steel

Application range: Mercedes W204, W207, W212, W218



	Length mm	
140.2326	67,0	200

Windscreen nozzle adjusting tool for Opel

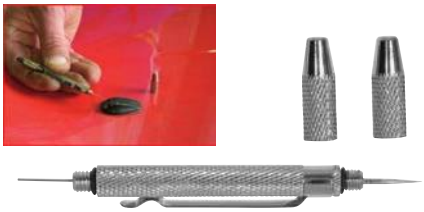
- For damage-free adjustment of flat nozzles on rear windscreens and windscreen wiper systems
- Accurate profile for the interchanging of nozzle heads
- Universal usage
- With PVC dipped handle
- Special tool steel



	Length mm	
140.2359	145,0	63

Washer nozzle cleaning and adjusting tool

- Practical service tool
- With sturdy, scriber-like centre
- With narrow cleaning rod
- Ideally suited to the cleaning and adjustment of windscreen washer nozzles
- Also suited to the adjustment of headlight washer nozzles
- With mounting clip for breast pocket
- Includes protective covers
- Aluminium



	L mm	
550.1022	95,0	40

2in1 telescopic magnetic holder with washing nozzle cleaning and adjustment tool

- Load capacity to 0.5 kg
- With telescopic function
- Practical service tool
- With sturdy, scriber-like centre
- With narrow cleaning rod
- Ideally suited to the cleaning and adjustment of windscreen washer nozzles
- Also suited to the adjustment of headlight washer nozzles
- With mounting clip for breast pocket
- Includes protective covers
- Aluminium





	Head Ø mm	Length mm		
550.1001	8,0	150,0 - 675,0	25	

2in1 telescopic magnetic jack with washing nozzle cleaning and adjustment tool

- Load capacity to 2.5 kg
- With telescopic function
- With flexible magnetic head
- Practical service tool
- With sturdy, scriber-like centre
- With narrow cleaning rod
- Ideally suited to the cleaning and adjustment of windscreen washer nozzles
- Also suited to the adjustment of headlight washer nozzles
- With mounting clip for breast pocket
- Includes protective covers
- Aluminium





	Head Ø mm	Length mm		
550.1023	11,0	150,0 - 590,0	60	

Flexible magnetic holder

- Load capacity to 200 g
- Flexible shaft
- 4 mm with a very thin magnetic seat
- One component handle





	Head Ø mm	Length mm		
550.1032	4,0	400,0	20	

Telescopic magnetic lifter

- Load capacity to 2 kg
- With telescopic function
- Clip for the breast pocket
- Special tool steel



	Head Ø mm	Length mm		
550.1000	13,0	130,0 - 630,0	30	

Telescopic magnetic lifter

- Load capacity to 1.5 kg
- Magnet power raised 35% due to energy safety cap
- Stainless steel



	Head Ø mm	Length mm		
550.1004	13,0	178,0 - 675,0	70	

Telescopic magnetic lifter

- Load capacity to 1.5 kg
- With telescopic function
- Magnet power raised 35% due to energy safety cap
- Stainless steel



	Head Ø mm	Length mm		
550.1002	18,0	178,0 - 675,0	80	

Telescopic magnetic lifter

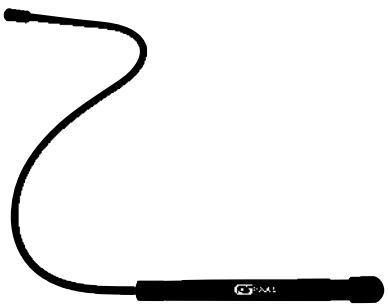
- Load capacity to 5 kg
- With rotary head
- With telescopic function
- Magnet power raised 35% due to energy safety cap
- Stainless steel



	Head Ø mm	Length mm		
550.1003	18,0	200,0 - 700,0	90	

Flexible magnet lifter

- Load capacity to 2 kg
- Detachable inner cover
- Magnet power raised 35% due to energy safety cap
- Special tool steel



	Head Ø mm	Length mm		
550.1010	10,0	585,0	130	

Flexible magnet lifter

- Flexible shaft
- Two component handle
- Special tool steel





	Load capacity kg	Head Ø mm	Length mm	g
550.1025	1	15,0	510,0	185
550.1026	2	17,0	510,0	200
550.1027	3	19,0	510,0	200



Flexible pick up tool

- Flexible
- Circular diameter max. 20.0 mm
- Stainless steel





	Ø mm	Length mm	g
550.1301	20	600,0	150

DASHBOARD PANEL

Professional dashboard protective panel with straight edges, 270 x 200 mm

- Ideal for protecting the dashboard, interior trim and roof lining from damage when removing windscreen
- Protective panel with straight front edges
- Ensures clean and professional work
- For different areas
- Incorporated handle for exact placement and secure grip
- High-strength plastic





	L mm	B mm	g
140.2323	270,0	200,0	230

Professional dashboard protective panel with slightly angled edges, 270 x 200 mm

- Ideal for protecting the dashboard, interior trim and roof lining from damage when removing windscreen
- Protective panel with slightly angled front edge
- Ensures clean and professional work
- For different areas
- Incorporated handle for exact placement and secure grip
- High-strength plastic





	L mm	B mm	g
140.2324	270,0	200,0	230





Professional dashboard protective panel with straight edges, 450 x 300 mm

- Ideal for protecting the dashboard, interior trim and roof lining from damage when removing windscreen
- Protective panel with straight front edges
- Ensures clean and professional work
- For different areas
- Incorporated handle for exact placement and secure grip
- High-strength plastic





	L mm	B mm	g
140.2321	450,0	300,0	450

Professional dashboard protective panel with slightly angled edges, 450 x 300 mm

- Ideal for protecting the dashboard, interior trim and roof lining from damage when removing windscreen
- Protective panel with slightly angled front edge
- Ensures clean and professional work
- For different areas
- Incorporated handle for exact placement and secure grip
- High-strength plastic





	L mm	B mm	g
140.2322	450	300,0	450

Professional dashboard protective panel set

- Ideal for protecting the dashboard, interior trim and roof lining from damage when removing windscreen
- Each with two protective panels with straight and slightly angled front edges
- Ensures clean and professional work
- For different areas
- Incorporated handle for exact placement and secure grip
- High-strength plastic





			kg	
140.2320	4 pcs	Professional dashboard protective panel set	1,36	

consists of:

		g	
140.2321	Professional protection board straight 450 x 300 mm	450	
140.2322	Professional protection board angled 450 x 300 mm	450	
140.2323	Professional protection board straight 270 x 200 mm	230	
140.2324	Professional protection board angled 270 x 200 mm	230	

INTERIOR AND WING MIRROR

ERGOTORQUE*plus*® screwdriver for Torx screws, tamperproof

- Perfectly suited to assembly and disassembly of wing mirrors
- Two component handle
- Optimal power transmission
- Hardened blade
- Chrome finish with burnished tips
- Blade made of chrome vanadium

Application range: Mercedes W203 (C Class) and W204 (E Class)





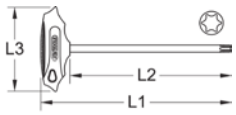
		L1 mm	L2 mm	L3 mm	g	
159.1054	TB20	205,0	100,0	105,0	50	





T-handle Torx key wrench, long

- Extra long execution
- Two component handle
- Continuous hardened
- Matt chrome
- Special tool steel





		L1 mm	L2 mm	L3 mm	g	
158.8051	T10	403,0	373,0	80,0	30	
158.8052	T15	403,0	373,0	80,0	30	
158.8053	T20	403,0	373,0	100,0	40	
158.8054	T25	408,0	373,0	100,0	40	
158.8055	T27	408,0	373,0	100,0	40	
158.8056	T30	408,0	373,0	100,0	45	

T-handle Torx key wrench set

- Extra long execution
- Two component handle
- Continuous hardened
- Matt chrome
- Special tool steel



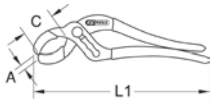


			g	
158.8050	6 pcs	T10 - T15 - T20 - T25 - T27 - T30	375	

Siphon pliers

- Ideally suited to a clean and damage-free removal of the interior mirror
- With 4 adjustable steps
- Isolated mouth for non-destructive working
- For screw fittings up to max. Ø 65 mm
- With PVC dipped handle
- For loosening pipe fittings
- Interchangeable jaw protector
- For hard to reach places
- Mirror polished
- Chrome vanadium







	A mm	C mm	L mm	Replacement jaws	g	
116.1200	20,0 - 65,0	45,0	225,0	116.1201	320	

Interior mirror unlocking tool for Ford

- For the correct and non-destructive disassembly of interior mirrors
- Perfect when replacing the windscreen
- Special shape
- Matt finish
- Chrome vanadium

Application range: Ford Maverick from 2004, Kuga from 2012, Transit from 2013, Tourneo Connect from 2013, Mondeo from 2014, Mustang from 2014, C-Max from 2015, Edge from 2015 etc.



	Length mm	g	
115.1309	255,0	100	

Double ended mirror screwdriver

- Clip for the breast pocket
- Knurled grip
- Aluminium



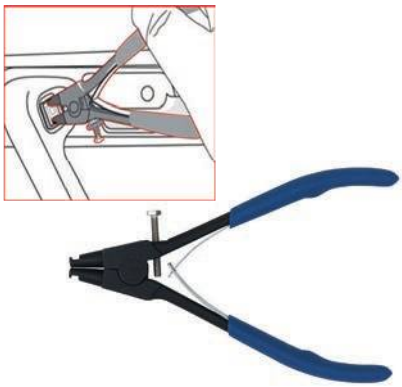
	D	L mm	g	
140.2216	T15 x PH0	120,0	50	
140.2217	2,0 mm x 3/32"	120,0	50	
140.2218	T15 x T20	120,0	50	



Exterior mirror pliers for BMW

- Perfectly suited to assembly and disassembly of wing mirrors
- Locking jaw opening
- Adjusting screw and spring
- With PVC dipped handle
- Special tool steel

Application range: Wing mirrors for **BMW** E12, E21, E24, E28, E30, E31, E32, E34, E36, E38 and E39



	Length mm	g	
115.1305	165,0	180	

Mini vacuum suction cup

- For lifting, carrying and holding
- For flat and non-porous surfaces
- Max. 15 kg carrying capacity - perpendicular to sucker
- Suitable for adjusting and insertion of shower trays
- Solid rubber



	Suction cup Ø mm	Height mm	g	
140.1004	80,0	55,0	100	

Suction pad with folding clamps

- With sturdy handle
- Creates a vacuum by folding the clamps
- For lifting, carrying and holding or flattening small dents
- For flat and non-porous surfaces
- Quick, easy and correct work on small objects
- Well-suited to transporting bulky items
- Load capacity up to 40 kg
- Special plastic

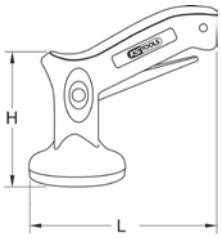


	Suction cup Ø mm	Height mm	g	
140.1005	118,0	40,0	370	

One handed mini suction cup

- Convenient one handed operation by lever
- For lifting, carrying and holding
- Special plastic
- Quick, easy and correct work on small objects
- Well-suited to adjusting and inserting mirror glass
- Load capacity up to 8 kg
- With release button







	Suction cup Ø mm	H mm	L mm	g	
140.1015	70,0	92,0	115,0	168	

SENSORS

Rain and light sensor release tool

- Ideally suited to quick and easy removal of the SOR-199 sensor optic on the windscreen
- A damage-free disassembly is ensured with this tool by completely surrounding the sensor
- Once the sensor has been surrounded it is simply pulled out to the side
- By warming the windscreen from the outside, the adhesive for the sensor is easier to remove
- With rounded inner edges
- With plastic handle
- Special tool steel





	Length mm	Width mm	g	
140.2366	200,0	80,0	130	

Rain and light sensor release tool

- Ideally suited to quick and easy removal of the SOR-193x sensor optic (all versions) on the windscreen
- A damage-free disassembly is ensured with this tool by completely surrounding the sensor
- Once the sensor has been surrounded it is simply pulled out to the side
- By warming the windscreen from the outside, the adhesive for the sensor is easier to remove
- With cornered inner edges
- With plastic handle
- Special tool steel

Application range: All **BMW** models from 09/2001 onwards





	Length mm	Width mm	g	
140.2367	200,0	83,0	135	

Rain and light sensor release tool

- Ideally suited to quick and easy removal of the SOR-197x sensor optic (all versions) on the windscreen
- A damage-free disassembly is ensured with this tool by completely surrounding the sensor
- Once the sensor has been surrounded it is simply pulled out to the side
- By warming the windscreen from the outside, the adhesive for the sensor is easier to remove
- With rounded internal edges with 5 nuts
- With plastic handle
- Special tool steel

Application range: Mercedes E class, CLK from 2002 onwards, C class from 2003 onwards and S class from 2003 onwards





	Length mm	Width mm	g	
140.2368	230,0	83,0	145	

Windscreen rain or light sensor removal tool set

- Ideally suited to quick and easy removal of the SOL-193x sensor optic, SOL-197x (all versions) and SOR-199 on the windscreen
- A damage-free disassembly is ensured with this tool by completely surrounding the sensor
- Once the sensor has been surrounded it is simply pulled out to the side
- By warming the windscreen from the outside, the adhesive for the sensor is easier to remove
- With plastic handle
- Special tool steel





140.2365	3 pcs	Windscreen rain or light sensor removal tool set	410

consists of:

140.2366	Rain and light sensor release tool, rounded internal edges	130
140.2367	Rain and light sensor release tool, cornered inner edges	135
140.2368	Rain and light sensor release tool, rounded inner edges	145

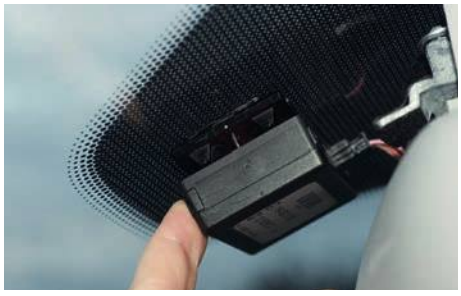
PLASTIC WEDGES

Standard clip remover

- With wedge shaped end
- With lifting and wedge function
- Ideal for loosening panels without damage to the paintwork
- Special plastic



	L mm	B mm	
911.8125	210,0	20,0	80



Trim removal wedge

- With wedge shaped end
- Narrow execution
- With 2 different levering angles
- Angled sides have a 90° and 30° angle
- Ideal for loosening panels without damage to the paintwork
- Special plastic



	L mm	B mm	
911.8122	180,0	20,0	40

Double clip remover

- With wedge shaped end
- Very robust execution
- With 2 different lever angles at 75° and 30°
- Special plastic



	L mm	B mm	
911.8123	200,0	30,0	70

Bumper trim removal wedge

- With wedge shaped end
- Wide execution
- With 90° angled side
- Ideal for loosening panels without damage to the paintwork
- Special plastic



	L mm	B mm	
911.8121	160,0	60,0	80

Clip remover with pulling eye

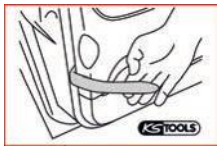
- With wedge shaped end
- Pulling eye for removal
- With 90° angled side
- Ideal for loosening panels without damage to the paintwork
- Special plastic



	L mm	B mm	
911.8124	180,0	30,0	70

Plastic lever wedge set

- Ideal for loosening miscellaneous cover parts
- Practical assortment of different wedge and clip removal tools
- Slim and robust design
- Ideal for avoiding paint damage and damage-free release of interior trims, panels etc.
- For delicate work on fragile cover parts
- Special plastic





911.8120	5 pcs	Plastic lever wedge set	300

consists of:

911.8121	Bumper trim removal wedge, 160 mm	80
911.8122	Tim removal wedge, 180 mm	40
911.8123	Double clip wedge, 200 mm	70
911.8124	Clip lever, with wedge shaped end, 180 mm	70
911.8125	Standard clip wedge, with wedge shaped end, 210 mm	80

Dual clip remover, offset

- Flat shaped back
- Durable design
- With straight- and sharp chisel end
- Ideal for loosening panels without damage to the paintwork
- With hanging hole
- Special plastic





	L mm	B mm	
911.8106	200,0	30,0	40

Dual clip remover, straight profiled

- Flat shaped back
- Durable design due to straight profile
- Blunt chisel end
- Ideal for loosening panels without damage to the paintwork
- With hanging hole
- Special plastic





	L mm	B mm	
911.8107	200,0	30,0	40

Double ended clip lever narrow

- Flat shaped back
- Narrow execution
- Wedge end tips pointed and chisel formed
- Ideal for loosening panels without damage to the paintwork
- With hanging hole
- Special plastic



	L mm	B mm	g	
911.8110	200,0	15,0	20	

Double ended pointed and rounded head lever

- Flat shaped back
- Flattened and flexible radius side
- Blunt chisel side
- Ideal for loosening clips
- With hanging hole
- Special plastic





	L mm	B mm	g	
911.8108	200,0	25,0	20	

Double ended sword and rounded head lever

- Flat oval on the front and back side
- Both ends chisel edged formed
- Flexible
- Ideal for loosening clips
- With hanging hole
- Special plastic





	L mm	B mm	g	
911.8109	200,0	20,0	20	

Adhesive weight remover with saw blade

- Ideal for protective disassembly of adhesive wheel weights on aluminium rims
- With flexible flat scraper and cutting edge
- Lever back flat side chisel form, cutting side with teeth
- Special lever for the removal of wheel weights
- Also suitable for the removal of labels, adhesive and type plates
- Surfaces are not damaged
- Sharpened with a file
- Solvent-resistant
- Special plastic





	Length mm	Width mm	Radius dimensions in mm	g	
911.8111	200,0	25,0	38,0	20	

Plastic wedge and glass scraper set

- Ideal for loosening miscellaneous cover parts
- Practical range of different wedge and glass scrapers
- Slim and robust design
- Ideal for avoiding paint damage and damage-free release of interior trims, panels etc.
- For delicate work on fragile cover parts
- Special plastic





			g	
911.8210	4 pcs	Plastic wedge and glass scraper set	120	

consists of:

		g	
911.8211	Glass scraper, straight, 175 mm	20	
911.8212	Glass scraper, angled, 175 mm	30	
911.8213	Wedge, cornered, 175 mm	30	
911.8214	Wedge, curved tip, 175 mm	30	

Interior panelling removal tool set

- Ideal for loosening miscellaneous cover parts
- Practical assortment of different wedge and clip removal tools
- Slim and robust design
- Ideal for avoiding paint damage and damage-free release of interior trims, panels etc.
- For delicate work on fragile cover parts
- With hanging hole
- Special plastic





			g	
911.8105	6 pcs	Interior panelling removal tool set	280	

consists of:

		g	
911.8106	Double ended-clip remover, offset	40	
911.8107	Dual-clip remover, straight profiled, 200 mm	40	
911.8108	Double ended pointed and rounded head lever	20	
911.8109	Double ended sword and rounded head lever, 200 mm	20	
911.8110	Double ended-wedge lever, slim	20	
911.8111	Adhesive weight removal lever and cutting edge Length 200 mm, width 25 mm	20	

Plastic lever wedge set

- Ideal for loosening miscellaneous cover parts
- Practical assortment of different wedge and clip removal tools
- Slim and robust design
- Ideal for avoiding paint damage and damage-free release of interior trims, panels etc.
- For delicate work on fragile cover parts
- Special plastic
- In a practical storage case





			g	
911.8205	11 pcs	Plastic lever wedge set	530	

consists of:

		g	
911.8106	Double ended-clip remover, offset	40	
911.8107	Dual-clip remover, straight profiled, 200 mm	40	
911.8108	Double ended pointed and rounded head lever	20	
911.8109	Double ended sword and rounded head lever, 200 mm	20	
911.8110	Double ended-wedge lever, slim	20	
911.8111	Adhesive weight removal lever and cutting edge Length 200 mm, width 25 mm	20	
911.8121	Bumper trim removal wedge, 160 mm	80	
911.8122	Tim removal wedge, narrow version, with wedge shaped end, 180 mm	40	
911.8123	Double clip wedge, with wedge shaped end, 200 mm	70	
911.8124	Clip lever, with wedge shaped end, 180 mm	70	
911.8125	Standard clip wedge, with wedge shaped end, 210 mm	80	

Moulding wedge with felt

- With felt trimming
- For the careful assembly by pressing in trim mouldings
- The flat surface protects components
- Suitable for the aligning of car doors or to force them open
- Special plastic



	L mm	B mm	g	
911.8141	250,0	20,0	70	

Plastic lever and beveled wedge

- The flat surface protects components
- Ideally suited for working on trims, door panels, rubber seals etc.
- Special plastic



	L mm	B mm	g	
911.8142	250,0	20,0	30	

Trim plastic wedge

- Ideal for the aligning of car doors or to force them open
- The flat surface protects components
- Suitable for working on trims, door panels, rubber seals etc.
- Special plastic





	L mm	B mm	g	
911.8138	195,0	30,0	90	
911.8139	195,0	60,0	150	

Trim removal combination wedge

- Ideally suitable for the dismantling and assembly of trims Door mouldings, door accessories etc
- Swallow tail opening 45° angled
- The flat surface protects components
- Optimal leverage with the short wedge and long lever
- Optimal usage for removal and refitting trims and mouldings cutting edges on the ends
- Special plastic





	L mm	B mm	g	
911.8140	210,0	26,0	90	

Plastic lever wedge set

- Ideal for the aligning of car doors or to force them open
- The flat surface protects components
- Suitable for working on trims, door panels, rubber seals etc.
- Impact resistant special plastic





			g	
911.8160	5 pcs	Plastic lever wedge set	430	

consists of:

		g	
911.8138	Trim plastic wedge, L=195mm x B=30mm	90	
911.8139	Trim plastic wedge, L=195mm x B=60mm	150	
911.8140	Trim plastic wedge, L=210mm x B=26mm	90	
911.8141	Moulding wedge with felt, L=250mm x B=20mm	70	
911.8142	Plastic lever and beveled wedge, L=250mm x B=20mm	30	

Removal wedge

- Ideally suited for the dismantling of sensitive components
- The flat surface protects damaging laquer
- Ideal for hard to access areas
- Special plastic







	L1 mm	L2 mm	L3 mm	B mm	g	
911.8119	600,0	340,0	200,0	30,0	340	

TRANSPORT AND STORAGE

Universal storage table with rollers

- Ideally suited to holding the windscreen when removing, or removing adhesive material
- Holding tube with non-slip, coated padding offer optimal grip and prevent scratches
- For nearly all windscreen sizes
- Foldable to save space during storage
- 4 substaintial wheels, 2 with locking brakes
- Simple handling
- Capacity up to 100 kg
- Robust construction from steel pipe





Technical data:
max. Load: 100 kg

	Length mm	Width mm	Height mm	Pad	kg	
140.2227	900,0	760,0	930,0	140.2228	8,00	

Universal storage table

- Ideally suited to holding the windscreen when removing, or removing adhesive material
- Holding tube with non-slip, coated padding offer optimal grip and prevent scratches
- Fully adjustably
- For nearly all windscreen sizes
- Foldable to save space during storage
- Robust construction
- Capacity up to 80 kg
- Made from zinc coated steel tube





Technical data:
max. Load: 80 kg

	Length mm	Width mm	Height mm	Pad	kg	
140.2226	1030,0	900,0	940,0	140.2226-1	6,60	

Windscreen table with rubber protective pads

- Ideally suited to holding the windscreen when removing, or removing adhesive material
- four movable rubber suction cups hold the disc securely in position and protect it from scratches
- Fully adjustably
- For nearly all windscreen sizes
- Foldable to save space during storage
- Robust construction
- Capacity up to 50 kg with rubber suction cup
- Capacity up to 300 kg without rubber suction cup
- Made from zinc coated steel tube





	Rubber pad	Length mm	Height mm	Width mm	Suction cup Ø mm	kg	
140.2225	140.2225-1	1030,0	1040,0	50,0	125,0	8,40	

Universal Telescopic-Multi-purpose trolley with rollers

- Ideally suited to bodywork restoration, in the painting area or for filing screens when removing, or applying adhesive material etc.
- Holding tube with non-slip, coated padding offer optimal grip and prevent scratches
- The multi-talented universal use, since width and height are fully adjustable and lockable
- For nearly all windscreen sizes
- Can also be used as a work bench or for carrying parts
- Collapsible to save space during storage
- With 4 stable castors, 2 with locking brakes
- Simple handling
- Capacity up to 100 kg
- Robust construction made from square tube





	Height min in mm	Height max in mm	min. width mm	Max width mm	Length mm	kg	
500.8100	845,0	1320,0	257,0	1380,0	1320,0	23,50	

PLATFORM

Aluminium work platform

- Skid proof profile on the platform stage
- Chequer plate profile on the steps
- No tipping over through obliquely placed standing feet
- Double-sided access
- Large platform for safe standing
- Safety clips for added security
- Beams and step made from aluminium
- Easy to store as the unit is fully collapsible
- The gripped plastic feet protect the surface and add stability
- Secure stand makes working easier
- Can be used to assemble screens, engine bay work, work on the roof, commercial vehicle pit work etc.
- Universal suitable in very high vehicles e.g. motor homes, small vehicles, truck and buses, terrain vehicles
- Heavy aluminium construction





Technical data:

Platform dimensions:	1000 x 300 mm
Height:	480,0 mm
Total load capacity:	150 kg

	L mm	B mm	kg	
800.0960	1345,0	405,0	7,30	

Safety assembly step

- No tipping over through obliquely placed standing feet
- Anti slip, hot dip galvanised, with the frame riveted lattice rustproof
- Step to DIN 50976
- Massive and distortion stiff steel tube construction
- Base frame plastic coated
- The gripped plastic feet protect the surface and add stability
- Applicable e.g. panel assembly, engine compartment works, roof works truck pit working
- Universal suitable in very high vehicles e.g. motor homes, small vehicles, truck and buses, terrain vehicles





Technical data:

Height 2nd step:	450,0 mm
Surface area:	690 x 620
Steel grating:	590 x 290
Total load capacity:	300 kg

		kg	
450.0960	Safety assembly step	14,00	

REMOVAL TOOL - NON GLUED CAR WINDSCREENS

Windscreen trim remover

- Ideally suited to levering off trims on windscreens or other similar trims
- With flat, blade-like lever head
- With the special lever shape there is high leverage force, which easily loosen the parts to be removed
- Also suitable for the removal of screens mounted with solid rubber
- Insulated handle
- Chrome vanadium



	L mm	g	
140.2285	240,0	140	

Mould release tool set

- With rubber underside to prevent damage from scratches
- For removing the clips on bonded car screens
- Ideally suited to removing double clips, which are barbed on both sides
- Can be used for all clip types that must be tightened with the windscreen
- Overall length 220.0 mm
- With hanging hole
- Insulated handle



			g	
140.2202	2 pcs	Mould release tool set	280	

consists of:

		g	
140.2351	Trim and air ventilation remover right handed	140	
140.2352	Trim and air ventilation remover left handed	140	

Ventilation grille and cladding release for VAG

- ideal for removing ventilation grilles, interior lighting, interior panelling, etc.
- with 90° angled blade
- 1 component handle

Application range: Volkswagen Bora (>1999), Golf (>1998), Golf Plus (>2005), Jetta (>2006), Crafter (>2006), Tiguan (>2008), Passat (>2006), Scirocco (>2009), **Audi** A2, A3, A4, A5, A6, A8, Q5, Q7, R8



	Length mm	g	
140.2329	220,0	86	

Glass hook with ball end, extra long

- Extra long execution
- For the dismantling and assembly of rubber sealings and trim strips
- For protective lifting or cleaning of sealings
- With hanging hole
- One component handle



	L mm	g	
140.2229	295,0	160	

Glass hook with long shaft

- Pointed execution
- For rubber bonded vehicle windscreens
- With hanging hole
- One component handle



	L mm	g	
140.2233	270,0	120	

Ball head with short shaft

- For rubber bonded vehicle windscreens
- With hanging hole
- One component handle



	L mm	g	
140.2235	210,0	120	

Glass hook with short shaft

- Pointed execution
- For rubber bonded vehicle windscreens
- With hanging hole
- One component handle



	L mm	g	
140.2234	200,0	110	

Locking strip insertion tool

- For non bonded vehicle windscreens
- With 6 interchangeable yoke heads
- Quick insertion of the different rubber profiles is possible
- With hanging hole
- One component handle



	L mm	Yoke heads	g	
140.2236	160,0	140.2236-1	220	

Locking tool

- 6 m nylon cord
- For the professional dismantling of vehicle rubbered non bonded windscreens
- With hanging hole
- One component handle



	L mm	g	
140.2237	170,0	120	

Windscreen installation set

- For problem-free assembly of front windscreens with traditional rubber seals and for inserting trim
- Universal usage
- Includes inserter with 6 yoke heads for various seal profiles
- Contains different tools for cleaning the internal seal profile
- Tool with hanging hole
- One component handle





			g	
140.2240	5 pcs	Windscreen installation set	890	

consists of:

		g	
140.2233	Glass hook, for rubber windscreen inserts 270 mm	120	
140.2234	Glass hook, for rubber windscreen inserts 200 mm	110	
140.2235	Glass hook, for rubber windscreen inserts 210 mm	120	
140.2236	Tapered tool for strip insertion, 160 mm	220	
140.2237	Locking tool with 6 m pull nylon cord, 170 mm	120	

Screen rubber assembly tool

- Ideally suited to the introducing beading in the conventional windscreen sealant
- Not suitable for adhered screens
- Includes 2 eyelets for different bead sizes
- One component handle
- Special tool steel





	Length mm	g	
140.2253	210,0	155	

Hook tool set

- Ideal for removing and use of O rings and seals
- Special tool steel



			g	
550.1040	2 pcs	Hook tool set	30	

consists of:

		g	
550.1041	Hook, 90° short, 180° short bent	11	
550.1042	Hook, 45° long, 90° long	11	

Magnet and hook tool set

- Ideal for removing and use of O rings and seals
- With telescopic magnet attachment and replaceable hook
- Storage compartment in the handle for the various attachments
- Special tool steel





			g	
550.1080	6 pcs	Magnet and hook tool set	70	

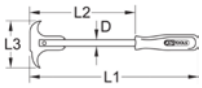
consists of:

		g	
550.1081	Basic unit	35	
550.1082	Telescopic magnet attachment, 90 - 390 mm	13	
550.1083	Hook attachment, straight, 75 mm	5	
550.1084	Hook attachment, 90°, 75 mm	5	
550.1085	Hook attachment, 120°, 75 mm	5	
550.1086	Hook attachment, lateral bend, 75 mm	5	

Gasket ring dismantling tool

- sickle-shaped
- For the removal of washers
- Long durability through hardened leverage
- Universal usage
- One component handle
- Burnished
- Chrome vanadium







	L1 mm	L2 mm	L3 mm	D mm	g	
550.1060	300,0	195,0	85,0	12,0	380	

Hook tool set

- Ideal for removing and use of O rings and seals
- Two component handle
- Special tool steel





			g	
550.1045	4 pcs	Hook tool set	120	

consists of:

		g	
550.1046	Hook, straight	27	
550.1047	Hook, 45° offset	27	
550.1048	Hook, 90° offset	27	
550.1049	Hook, 135° bent	27	

Master hook tool set

- Ideal for removing and use of O rings and seals
- Special tool steel





			g	
550.1070	9 pcs	Master hook tool set	680	

consists of:

550.1046	Hook, straight	27	
550.1047	Hook, 45° offset	27	
550.1048	Hook, 90° offset	27	
550.1049	Hook, 135° bent	27	
550.1071	Hook, large, straight	91	
550.1072	Hook, large, 90° bent	105	
550.1073	Hook, large, sickle	88	
550.1074	T hook, S form small, 120mm	42	
550.1075	T hook, S form large, 165mm	96	

PANEL BAG

Panel bag with hand pump

- Universal usage for positioning, fixing and separating body parts
- Ideal for the damage-free opening of car doors
- Levelling tool for the installation of door and window frames
- Extremely high pressure power
- Easy to pump with the hand pump
- Robust panel bag





	L mm	B mm		
116.1035	200,0	150,0	190	

Panel bag set with hand pump

- Universal usage for positioning, fixing and separating body parts
- Ideal for the damage-free opening of vehicle doors
- Levelling tool for the installation of door and window frames
- For separating interior trim
- Pumping via a hand pump with valve connector
- Release valve on the bellows
- Extremely high pressure power





150.1685	4 pcs	Panel bag set with hand pump	300	

consists of:

150.1686	Hand bellows	84	
150.1687	Panel bag 180 x 40mm	23	
150.1688	Panel bag 190 x 60mm	27	
150.1689	Panel bag 160 x 160mm	47	

REMOVAL TOOL - GLUED CAR WINDSCREENS

Long knife for trim seals

- For the use with conventional trapezoid blades and hook blades
- Includes a replacement blade in the handle
- Non slip handle
- Aluminium





	L mm			
140.2284	230,0	907.2206	300	
140.2290	470,0	907.2206	320	
140.2291	620,0	907.2206	380	

Pull knife

- With flexible pull handle
- Ideal for the removal of adhered vehicle screens
- Also suitable for hard-to-reach places or corners
- Includes 25 mm blade
- Practical one-man operation
- Also suitable for use as a scraper
- Aluminium





	L mm	Replacement handle		
140.2241	130,0	140.2247	240	

Pull knife

- PVC dipped stop and pull handle
- With flexible pull handle
- Ideal for the removal of adhered vehicle screens
- Also suitable for hard-to-reach places or corners
- Includes 25 mm blade
- Practical one-man operation
- Also suitable for use as a scraper
- Aluminium





	L mm	Replacement handle		
140.2244	130,0	140.2246	310	

Pull knife with quick change system

- PVC dipped stop and pull handle
- With flexible pull handle
- Ideal for the removal of adhered vehicle screens
- Also suitable for hard-to-reach places or corners
- Includes 25 mm blade
- Quick blade changing system with a push button
- Practical one-man operation
- Also suitable for use as a scraper
- Aluminium





	L mm	Replacement handle		
140.2248	130,0	140.2246	350	

Pull knife set with quick change system

- PVC dipped stop and pull handle
- With flexible pull handle
- Ideal for the removal of adhered vehicle screens
- Also suitable for hard-to-reach places or corners
- Quick blade changing system with a push button
- Practical one-man operation
- Also suitable for use as a scraper
- Insert made from high quality foam
- Aluminium





140.2239	10 pcs	Pull knife set with quick change system	1,55	

consists of:

140.2248	Pull knife, quick change system, 130mm	350	
140.2356	Stainless steel pull blade set, blade length 25 mm, 3 pcs	45	
140.2357	Stainless steel pull blade set, blade length 38 mm, 3 pcs	50	
140.2358	Seam scraper blade set, blade length 19 mm, 3 pcs	115	

Stainless steel pull knife blade

- Blade length 38 mm
- Blade tip tapered
- Extra slim design
- Stainless steel





	Content		
140.2271	1	20	
140.2272	6	120	

Pull knife blade

- Blade length 19 mm
- Blade tip tapered
- Slim execution
- Special tool steel



	Content		
140.2273	1	20	
140.2274	6	120	

Stainless steel standard pull knife blade

- Blade length 25 mm
- Blade in sword form
- Attachment length 13 mm
- Not for quick change system
- Stainless steel



	Content		
140.2296	1	20	
140.2297	6	120	



Stainless steel standard pull knife blade

- Blade length 30 mm
- Blade in sword form
- Attachment length 13 mm
- Not for quick change system
- Stainless steel



	Content		
140.2298	1	20	
140.2299	6	120	

Stainless steel pull knife blade

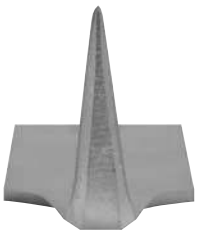
- Blade length 25 mm
- Blade tip tapered
- Extra slim design
- Stainless steel



	Content		
140.2269	1	20	
140.2270	6	120	

Stainless steel pull knife blade

- Blade length 19 mm
- Blade tip tapered
- Extra slim design
- Stainless steel



	Content		
140.2267	1	20	
140.2268	6	120	

Pull knife blade

- Blade length 25 mm
- Blade tip tapered
- Slim execution
- Special tool steel



	Content		
140.2275	1	20	
140.2276	6	120	

Pull knife blade

- Blade length 38 mm
- Blade tip tapered
- Slim execution
- Special tool steel



	Content		
140.2277	1	20	
140.2278	6	100	

Standard pull knife blade

- Blade length 25 mm
- Blade in sword form
- Attachment length 13 mm
- Not for quick change system
- Special tool steel



	Content		
140.2292	1	20	
140.2293	6	120	

Standard pull knife blade

- Blade length 32 mm
- Blade in sword form
- Attachment length 13 mm
- Not for quick change system
- Special tool steel



	Content		
140.2294	1	20	
140.2295	6	120	

Special pull knife blade

- Blade length 20 mm
- Precise and easy cutting
- Newly developed toothed cutting edge
- Extremely substaintial and resilient
- Precise guide on the blade and the cutting edge
- Knife blade can be repeatably sharpened
- Ideally suited in all standard practice hand cutting knives
- High quality chrome-nickel-nirostasteel



	Content		
140.2340	1	15	
140.2341	5	90	

Universal Sharpening stone

- For the sharpening of pull knife blades and universal knife blades machine blades etc
- With hanging hole
- One component handle



	L mm	g	
140.2238	170,0	60	

Windscreen cutting wire pull handle set

- Cutting edge wire is attached by means of a cone in the handle
- Ergonomically designed hand grip
- With one component handle



			g	
140.2210	2 pcs	Windscreen cutting wire pull handle set	110	

consists of:

	X		g	
140.2353	2	Windscreen wire pull handle, single	65	

Wire feeder starter tool

- For powerful piercing through the glue trim and inserting the cutting edge wire
- Slotted probe end for inserting the cutting wire
- With spring steel blade
- One component handle





	L mm	g	
140.2206	327,0	80	

Cuttting wire insertion tool

- Ideal for confined spaces
- For the optimal usage against stop of the cutting edge wire in the inner area
- Ideal for particularly heavily bonded joints
- Without inner stop to reduce any chance of damage
- One component handle





	L mm	g	
140.2205	350,0	220	

T-handle wire inserting tool

- For piercing the glue trim and inserting the cutting edge wire
- With steel tube hollow needle
- Aluminium



	L mm	g	
140.2207	125,0	60	

Wire cutting set with square cutting wire

- For cutting working
- For cutting of accessible glue pinch welds
- With steel tube hollow needle
- Ergonomically designed hand grip
- Stainless steel wire



			g	
140.2250	4 pcs	Wire cutting set with square cutting wire	270	

consists of:

		g	
140.2207	T-handle wire inserting tool	60	
140.2210	Windscreen cutting wire pull handle-set, 2 pcs	110	
140.2214	Square windscreen cutting wire	100	

Wire cutting set with knotted cutting wire

- Very flexible
- Operates like a saw
- Best suited for cutting of wide and hard glue bondings
- With steel tube hollow needle
- Ergonomically designed hand grip



			g	
140.2245	4 pcs	Wire cutting set with knotted cutting wire	680	

consists of:

		g	
140.2207	T-handle wire inserting tool	60	
140.2210	Windscreen cutting wire pull handle-set, 2 pcs	110	
140.2211	Braided Windscreen cutting wire, 22,5 m	80	

Square windscreen cutting wire

- Best cutting edge effect
- For cutting working
- Best suited to cutting through easily accessible adhesive beading
- Stainless steel wire



	Length m	g	
140.2214	22,50	100	
140.2215	50,00	200	

Windscreen cutting wire, braided

- Very flexible
- Operates like a saw
- Best suited for cutting of wide and hard glue bondings in hard to access areas
- Ø 0.8 mm
- Stainless steel wire



	Length m	g	
140.2211	22,50	80	
140.2212	50,00	160	

Screen cutting wire, 3 point

- Best cutting edge effect
- For cutting working
- Best suited to cutting through easily accessible adhesive beading
- Ø 0.8 mm
- Stainless steel wire





	Length m	g	
140.2213	21,00	93	

High strength polyethylene line (PE)

- Best cutting edge effect
- For cutting working
- Best suited to cutting through easily accessible adhesive beading
- Max. Ø 1,0 mm
- Surface is provided with a sliding layer to less resistance during cutting process
- no danger of damage of the paint or interior of the vehicle
- can be used up to 4 times
- braid construction
- Tensile force of 1.6kN = 160kg
- high strength PE fiber



	Length m	g	
140.2309	25,00	20	

Universal one-man operation windscreen removal device

- Universal usage
- Ideal for the correct and careful removal of adhered front windscreens as well as most rear and side screens
- With large guide rollers, which require less power and minimise the danger of wire snapping
- Wire lead directly in front of the windscreen, therefore omitting the costly disassembly of trim parts in most cases
- Easy one-man operation
- Especially high-quality pump suction for secure windscreen holding
- Suction power per disc up to 110 kg
- Moveable suction disk also for heavily cambered screens
- In durable plastic storage case





			kg	
140.2360	5 pcs	Universal one-man operation windscreen removal device	3,88	

consists of:

		g	
140.2334	Reamer for 140.2234	0,06	
140.2335	Wire for 140.2330	0,10	
140.2331	Windsceen removal tool, 2 suction heads+wire drive	5,20	
140.2336	Wire holder and single suction	0,58	
140.2309	High strength Polyethylene Line (PE), 25 m	0,02	
310.0176	Glasses - transparent with ear plugs	0,03	

Windscreen dismantling set

- Ideal for the correct disassembly of adhered front windscreens as well as most rear and side screens
- The set contains everything needed to remove adhered screens
- Easy operation
- In durable plastic storage case





			kg	
140.1040	8 pcs	Windscreen dismantling set	2,78	

consists of:

		g	
140.2231	Trim and air grill remover, 246mm	70	
911.8126	Scraper, 38mm	90	
911.8150	Release lever for the disassembly of plastic hub caps with protective insulation, 300mm	190	
140.2206	Wire feeder/starter tool, 327mm	80	
140.2213	Screen cutting wire, 3 point, 21,0 m	93	
140.2241	Pull knife, 130mm	240	
140.2210	Windscreen wire cutter, 2 pcs	110	

Windscreen repair kit

- Ideal for the correct disassembly of adhered front windscreens as well as most rear and side screens
- The set contains everything needed to remove adhered screens
- Includes suction cup and trim
- Easy operation
- In durable plastic storage case





			kg	
140.1065	13 pcs	Windscreen repair kit	6,00	

consists of:

	X		g	
140.1006	2	Double suction holder, max 80kg	730	
140.1021	2	Suction holder for trim mounting, Ø 85mm	40	
140.2205	1	Cutting wire insertion tool, 350mm	220	
140.2206	1	Wire feeder/starter tool, 327mm	80	
140.2211	1	Windscreen cutting wire braided, 22,5 m	80	
140.2215	1	Windscreen cutting wire, 4 point, 50m	200	
140.2220	1	Mastic cartridge cutters, 210mm	420	
140.2353	2	Windscreen wire pull handle, single	65	
907.2215	1	Pinch weld scraper set, 11 pcs	100	
911.8126	1	Scraper, 38mm	90	

Pneumatic oscillating cutter

- Angled design
- Air exhaust through the handle rear end
- For one handed operation with ergonomic design
- For the professional dismantling of vehicle discs
- Universal blade reception for all standard blades
- Stepless speed regulation
- Cold insulated handle
- Includes 1/4" coupling connector and blade changing spanner
- Ultra light robust housing special plastic





Technical data:

Oscillating speed:	20000
No load current:	20000 r.p.m.
Vibration acceleration:	< 14,8
Noise performance level:	103,7 dbA
Noise pressure level:	92,7 dbA
Air consumption:	350 l/min
Operating pressure:	max. 6,3 bar (90 psi)
Min. tube diameter:	3/8" - 10 mm
Connection thread:	1/4"NPT

	B mm	L mm	kg	
515.5451	66,0	208,0	0,92	

Cutting / scraper blades

- For the pneumatic oscillating cutter
- Special tool steel



		g	
140.2252	Scraper blade, offset, blade width 16 mm	20	
140.2255	Cutting blade, straight, offset, length 50 mm	20	
140.2256	Cutting blade, straight, offset, length 90 mm	30	
140.2261	Cutting blade, angled, offset, cutting depth 55 mm	20	
140.2263	Cutting blade, straight, cutting depth 35 mm	10	

Cutting / scraper blades

- For the pneumatic oscillating cutter
- Special tool steel



		g
515.5093	Scraper blade, curved, curved, blade length 18 mm	13
515.5094	Scraper blade, curved, curved, blade length 36 mm	13
515.5095	Scraper blade, curved, curved, blade length 63 mm	13
515.5096	Scraper blade, curved, curved, blade length 90 mm	25
515.5097	Scraper blade, curved, straight, blade length 24 mm	12

Pneumatic oscillating cutter set

- Angled design
- Air exhaust through the handle rear end
- For one handed operation with ergonomic design
- For the professional dismantling of vehicle discs
- Universal blade reception for all standard blades
- Stepless speed regulation
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Technical data:

Oscillating speed:	20000
No load current:	20000 r.p.m.
Vibration acceleration:	< 14,8 m/s²
Noise performance level:	103,7 dbA
Noise pressure level:	92,7 dbA
Air consumption:	350 l/min
Operating pressure:	max. 6,3 bar (90 psi)
Min. tube diameter:	3/8" - 10 mm
Connection thread:	1/4"NPT

			kg
515.5450	6 pcs	Pneumatic oscillating cutter set	2,05

consists of:

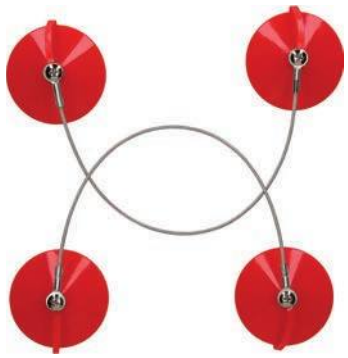
		g
515.5451	Pneumatic oscillating cutter, 208mm	920
140.2252	Scraping blade offset, width 16mm	20
140.2255	Cutting blade straight, offset, 50mm	20
140.2256	Cutting blade straight, offset, 90mm	30
140.2261	Cutting blade angled, offset, depth 55mm	20
140.2263	Cutting blade straight, depth 35mm	10

SUCTION PADS

Suction holder set

- Plastic-coated steel cable with PVC suction cups
- For fixing side windows during work to and on the doors
- Secures freshly adhered windows against slipping
- With suction cups and steel band for optimal hold
- Easy to operate





			g
140.1060	2 pcs	Suction holder set	540

Trim and window mounting set

- For fixing and holding trims, emblems and windscreen mountings
- Wide side can also be used as a scraper or lever
- With suction cup
- Quick and easy mounting
- Simple to remove by lifting the tab
- Dosing of the contact pressure with the wing nut





		Length mm	Suction cup Ø mm	g
140.1020	6 pcs	180,0	85,0	250

consists of:

	x		g
140.1021	6	Suction holder for trim mounting, Ø 85mm	40

Mini vacuum suction cup

- For lifting, carrying and holding
- For flat and non-porous surfaces
- Max. 15 kg carrying capacity - perpendicular to sucker
- Suitable for adjusting and insertion of shower trays
- Solid rubber



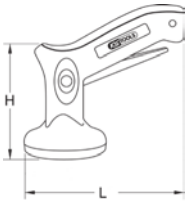


	Suction cup Ø mm	Height mm	g
140.1004	80,0	55,0	100

One handed mini suction cup

- Convenient one handed operation by lever
- For lifting, carrying and holding
- Special plastic
- Quick, easy and correct work on small objects
- Well-suited to adjusting and inserting mirror glass
- Load capacity up to 8 kg
- With release button







	Suction cup Ø mm	H mm	L mm	g
140.1015	70,0	92,0	115,0	168

Suction pad with folding clamps

- With sturdy handle
- Creates a vacuum by folding the clamps
- For lifting, carrying and holding or flattening small dents
- For flat and non-porous surfaces
- Quick, easy and correct work on small objects
- Well-suited to transporting bulky items
- Load capacity up to 40 kg
- Special plastic





	Suction cup Ø mm	Height mm	g
140.1005	118,0	40,0	370

Double suction holder

- With sturdy handle
- The suckers fit to every flat surface and are easy to use with two quick release handles
- Ideal for cambered car windows
- For lifting, carrying and holding
- For flat and non-porous surfaces
- Quick, simple and correct work
- Well-suited to transporting bulky items
- Load capacity up to 80 kg
- Special plastic





	Suction cup Ø mm	Load capacity kg	g	
140.1006	120,0	80,0	730	

Double suction cup

- With sturdy handle
- The suckers fit to every flat surface and are easy to use with two quick release handles
- Ideal for cambered car windows
- For lifting, carrying and holding
- Suitable for all materials with gas-tight surfaces
- All metal parts made from rust-free steel, making use in swimming pools, outdoor construction sites or in coastal areas possible
- Quick, simple and correct work
- Well-suited to transporting bulky items
- Load capacity up to 80 kg
- Special plastic





	Suction cup Ø mm	Load capacity kg	kg	
140.1008	150,0	80,0	1,01	



Double suction cup set

- With sturdy handle
- The suckers fit to every flat surface and are easy to use with two quick release handles
- Ideal for cambered car windows
- For lifting, carrying and holding
- For flat and non-porous surfaces
- Quick, simple and correct work
- Well-suited to transporting bulky items
- Load capacity up to 80 kg
- Ratchet belt for fixing the freshly adhered car windscreen
- Special plastic





			kg	
140.1010	3 pcs	Double suction cup set	1,75	

consists of:

	x		g	
140.1006	2	Double suction holder, max 80kg	730	
140.1003	1	Ratchet tie down strap	310	

Three way suction holder

- With sturdy handle
- The three suckers fit to every flat surface and are easy to use with two quick release handles
- Ideal for cambered car windows
- For lifting, carrying and moving large parts
- For flat and non-porous surfaces
- Quick, simple and correct work
- Well-suited to transporting bulky items
- Load capacity up to 70 kg
- Special plastic



	Suction cup Ø mm	Load capacity kg	kg	
140.1007	120,0	70,0	1,13	

Quadruple suction pad with movable suckers

- Ideally suited to the assembly and disassembly of large front windscreens
- The four suckers with a handy vacuum pump allow for a secure fit on every flat surface.
- Ideal for cambered car windows
- For lifting, carrying and moving large parts
- For flat and non-porous surfaces
- Quick, simple and correct work
- Well-suited to transporting bulky items
- Load capacity up to 100 kg
- Special plastic
- Aluminium frame





	Length mm	Height mm	Suction cup Ø mm	Load capacity kg	kg	
140.1009	1310,0	280,0	150,0	100	5,80	

GLASS REPAIR

Rockfail repair set

- Ideal for repairing rock fall in the windscreen
- minimises the occurrence of cracks
- no UV lamp is required
- suitable for several repairs
- including artificial resin and curing strips

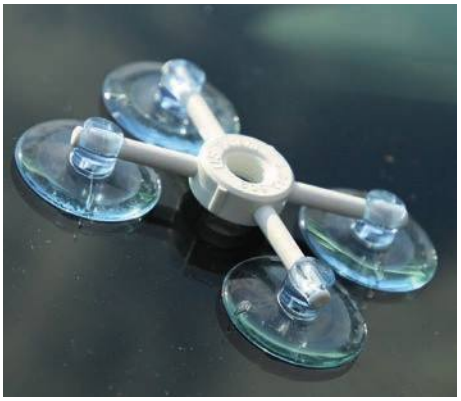




			g	
140.2530	15 pcs	Rockfail repair set	40	

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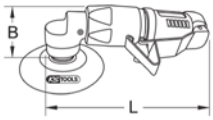
		g	
140.2532	Basic unit with 4 suction cups	20	
140.2533	Artificial resin hammer	4,5	
140.2536	Artificial resin, 1.5g	4	
140.2537	Curing strips, 10 pack	4,5	
911.8127-1	Replacement scraper blade	8	



SlimPOWER mini-pneumatic burnisher

- Angled design
- Air exhaust through the handle rear end
- For one hand operation
- Ideal for curved cutting
- For working in hard to access areas
- Secure operation lever with locking device
- Stepless speed regulation
- Vibration dampened
- Very compact construction
- Receiver: External thread
- Includes 3 Velcro receivers
- Includes 1/4” coupling connector
- Robust housing







Technical data:

Capacity:	186 Watt
No load current:	5000 r.p.m.
Sponge diameter:	50 + 75 mm
Polishing sponge diameter:	46 mm
Vibration acceleration:	< 3,3 m/s²
Noise performance level:	96,9 dbA
Noise pressure level:	85,9 dbA
Air consumption:	240 l/min
Min. tube diameter:	3/8” - 10 mm
Operating pressure:	max. 6,3 bar (90 psi)
Connection thread:	1/4”NPT

	B mm	L mm	g
515.5590	55,0	140,0	600

Grinding disc

- With Velcro receiver
- With internal thread receiver



	Ø mm	Material	Content	g
515.5101	46,0	flexible	5	275
515.5102	75,0	flexible	5	125
515.5103	46,0	rigid	5	55

Burnishing pads

- For burnishing of smooth surfaces



	Ø mm	Material	Colour code	Content	g
515.5126	50,0	plastic	yellow	5	10
515.5122	85,0	plastic	yellow	5	55
515.5127	50,0	plastic	white	5	10
515.5123	85,0	plastic	white	5	55
515.5128	50,0	plastic	black	5	10
515.5129	50,0	leather		5	48
515.5124	80,0	leather		5	80

Mini pneumatic burnisher set

- For hard to reach places and improvement work
- With non slip soft grip handle
- Angled design
- Air exhaust through the handle rear end
- For one hand operation
- Ideal for curved cutting
- For working in hard to access areas
- Vibration dampened
- Very compact construction
- Grinding disc with Velcro
- Includes 1/4” coupling connector
- Receiver: Internal thread
- Robust housing
- In durable plastic storage case





Technical data:

No load current:	2500 r.p.m.
Vibration acceleration:	< 0,77 m/s²
Noise performance level:	94 dbA
Noise pressure level:	81 dbA
Air consumption:	113 l/min
Operating pressure:	max. 5,2 bar
Min. tube diameter:	3/8” - 10 mm
Connection thread:	1/4”

			kg
515.5120	5 pcs	Mini pneumatic burnisher set	1,80

consists of:

		g
515.5121	1/4” mini burnishing machine	1000
515.5122	Burnishing pads yellow, Ø 85,0mm, pack of 5	55
515.5123	Burnishing pads white, Ø 85,0mm, pack of 5	55
515.5124	Burnishing pads lambskin Ø 80,0mm, pack of 5	80
515.5112	Grinding disc Ø76.5 mm	20

Grinding disc

- With Velcro receiver
- With external thread receiver



	Ø mm	Material	Content	g
515.5113	46,0	flexible	5	13
515.5112	76,5	flexible	5	20

Burnishing pads

- For burnishing of smooth surfaces



	Ø mm	Material	Colour code	Content	g
515.5126	50,0	plastic	yellow	5	10
515.5122	85,0	plastic	yellow	5	55
515.5127	50,0	plastic	white	5	10
515.5123	85,0	plastic	white	5	55
515.5128	50,0	plastic	black	5	10
515.5129	50,0	leather		5	48
515.5124	80,0	leather		5	80

SCRAPERS

Scraper

- Ideal for removing of stickers, seal and glue residues
- With easily interchangeable and retractable blades
- With reinforcement eyelet
- Scraper blade retractable via spline end for protection
- With metal housing





	Length mm	Width mm		g
907.2240	110,0	39,0	911.8127	90

Scraper

- Ideal for removing of stickers, seal and glue residues
- With easily interchangeable blades
- With reinforcement eyelet
- Soft grip handle





	Length mm	Width mm		g
911.8126	160,0	38,0	911.8127	90

Scraper

- With easily interchangeable and retractable blades
- With reinforcement eyelet
- With metal housing
- Two component handle

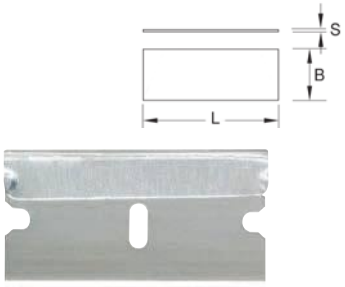


	Width mm	Length mm		g	
907.2242	40,0	145,0	911.8127	103	

Replacement scraper blades

- For all standard scrapers
- SK steel
- In a carton

Application range: for the removal of labels on bumpers, front windscreens etc.



	Content	L mm	B mm	S mm	g	
911.8127	5	40,0	19,5	0,29	40	

Replacement plastic scraper blades

- For all standard scrapers
- Particularly gentle on materials, since no scratches can be made
- Dual-sided adjustment
- Plastic
- In a carton

Application range: for the removal of labels on bumpers, front windscreens etc.





	Content	L mm	B mm	S mm	g	
911.8128	10	40,0	18,5	1,10	2	

Pinch weld scraper set

- Ideal for removing of stickers, seal and glue residues
- Simple blade change by loosening the knurled thumb screw on the chuck
- With 10 straight scraper blades 16 mm
- Scraper with two component handle





			g	
907.2215	11 pcs	Pinch weld scraper set	100	

consists of:

		g	
907.2201	Dual component scraper handle with chuck holder for blades	60	
907.2203	Replacement blades 16 mm wide/straight, 10 pcs.	20	

Knife scraper set

- Ideal for removing of stickers, seal and glue residues
- Simple blade change by loosening the knurled thumb screw on the chuck
- Practical storage system for changeable blades
- Suitable for many different application due to the wide range of blades
- Scraper with two component handle
- Professional universal knife with aluminium housing
- In durable plastic storage case





			g	
907.2200	27 pcs	Knife scraper set	600	

consists of:

		g	
907.2170	Professional universal knife, with trapezoid blades	90	
907.2201	2 component scraper handle	60	

Replacement blades:

	Width mm	Form	Content	g	
907.2202	12,0	straight	10	20	
907.2203	16,0	straight	10	20	
907.2204	16,0	53° angled	10	20	
907.2205	20,0	straight	10	40	
907.2206	19,0	torpedo form	10	60	

Glassfibre chisel

- For paint preserving removal of ornament and window strips and wheel weights on aluminium rims
- With impact cap for light impacts
- Special shape of the bit handle ensures safe work
- With flexible flat scraper and cutting edge
- Also suitable for the removal of labels, adhesive and type plates
- Surfaces are not damaged
- Sharpened with a file
- Solvent-resistant
- Special plastic





	Schneidenbreite mm	g	
911.8131	19,0	130	
911.8132	22,0	140	
911.8133	26,0	150	
911.8134	38,0	180	

Glassfibre chisel set

- For paint preserving removal of ornament and window strips and wheel weights on aluminium rims
- With impact cap for light impacts
- Special shape of the bit handle ensures safe work
- With flexible flat scraper and cutting edge
- Also suitable for the removal of labels, adhesive and type plates
- Surfaces are not damaged
- Sharpened with a file
- Solvent-resistant
- Special plastic





			g	
911.8130	4 pcs	19 - 22 - 26 - 38 mm	570	

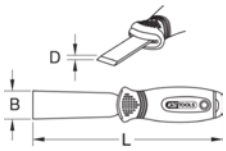
consists of:

		g	
911.8131	Glass fibre chisel, 19mm	130	
911.8132	Glass fibre chisel, 22mm	140	
911.8133	Glass fibre chisel, 26mm	150	
911.8134	Glass fibre chisel, 38mm	180	

STAINLESS STEEL Chisel scraper

- Ideal for removing of stickers, seal and glue residues
- Also suitable for the removal and chiselling of plates or welding spots
- Continuous stainless steel blade that can be re sharpened
- With reinforcement eyelet
- With hammer cap on the handle
- With ergonomic moulded two component handle
- Suitable for use at extremely low temperatures
- Extreme resistance to intergranular corrosion and oxidation
- Extremely long service life
- Autoclavable (heating of the tools to over 100°C to kill germs)
- Rust-proof and acid resistant
- Stainless steel







	B mm	D mm	L mm	g
907.2211	32,0	1,2	190,0	160
907.2213	25,0	1,2	165,0	100
907.2212	32,0	2,5	190,0	160
907.2214	25,0	2,5	165,0	110

STAINLESS STEEL Chisel scraper set

- Ideal for removing of stickers, seal and glue residues
- Also suitable for the removal and chiselling of plates or welding spots
- Continuous stainless steel blade that can be re sharpened
- With reinforcement eyelet
- With hammer cap on the handle
- With ergonomic moulded two component handle
- Suitable for use at extremely low temperatures
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- Extremely long service life
- Autoclavable (heating of the tools to over 100°C to kill germs)
- Rust-proof and acid resistant
- Stainless steel





			g
907.2210	4 pcs	32 x 1,2; 32 x 2,5; 25 x 1,2; 25 x 2,5 mm	580

Pinch weld scraper

- Ideal for removing of stickers, seal and glue residues
- With interchangeable spring steel blade
- Working length max. 115 mm
- Aluminium handle





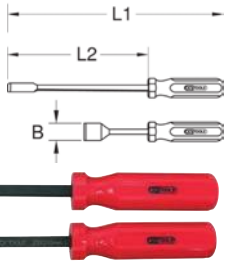


	B mm	L mm		g
140.2282	13,0	240,0	140.2283	200
140.2286	16,0	240,0	140.2287	200
140.2288	19,0	240,0	140.2289	200

Gasket scraper

- Ideal for removing of stickers, seal and glue residues
- Blades can be re-sharpened
- Blade 10° angled
- Extra long execution for reaching inaccessible areas
- For removing extremely stubborn gaskets and seals
- With ergonomic moulded one component handle





	B mm	L1 mm	L2 mm	g
907.2231	12,5	200,0	100,0	120
907.2232	25,0	200,0	100,0	140
907.2233	12,5	300,0	200,0	180
907.2234	25,0	300,0	200,0	200

Gasket scraper set

- Ideal for removing of stickers, seal and glue residues
- Blades can be re-sharpened
- Blade 10° angled
- Extra long execution for reaching inaccessible areas
- For removing extremely stubborn gaskets and seals
- With ergonomic moulded one component handle

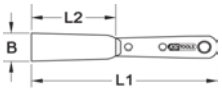




			kg
907.2230	4 pcs	12,5 x 200; 25 x 200; 12,5 x 300; 25 x 300 mm	1,28

Chisel scraper

- Ideal for removing stickers, seal and glue residues
- Also for removing extremely stubborn impurities and seal residue
- Blade 10° angled
- Blades can be re-sharpened
- Rust-proof and acid resistant
- Wooden handle





	B mm	L1 mm	L2 mm	g
907.2266	15,0	175,0	50.0	42
907.2267	20,0	185,0	60.0	50
907.2268	30,0	190,0	65.0	57

Chisel scraper set

- Ideal for removing stickers, seal and glue residues
- Also for removing extremely stubborn impurities and seal residue
- Blade 10° angled
- Blades can be re-sharpened
- Rust-proof and acid resistant
- Wooden handle



			g
907.2270	3 pcs	Chisel scraper set	150

consists of:

		g
907.2266	Chisel scraper, 15 x 175 mm	42
907.2267	Chisel scraper, 20 x 185 mm	50
907.2268	Chisel scraper, 30 x 190 mm	57

carbide scraper

- ideal for removing stubborn impurities, sealant residues and surface treatment
- for burnt on pads on the exhaust, brakes etc.
- with a very hard-wearing carbide cutting element
- a solid blade with two scraping edges
- Extremely long service life
- works as a compression and a pulling blade
- With an ergonomic, moulded, one component handle
- With reinforcement eyelet





	Length mm	Width mm	g
907.2237	210,0	32,0	129

Gasket scraper set

- For removing seal residue, e.g. cylinder head seals
- With replacement blade
- Extra long execution for reaching inaccessible areas
- Angled blade head
- With ergonomic moulded two component handle
- Special tool steel





			g
907.2280	2 pcs	Gasket scraper set	180

consists of:

		g
907.2281	Scraper, 270 mm	155
907.2282	Scraper blade	5

Scraper blades

- 5 replacement blades for seal scraper 907.2280
- For removing seal residue, e.g. cylinder head seals
- For angled blade head
- Special tool steel



	Content	Length mm	Width mm	Height mm	g
907.2285	5	22,0	12,0	21,0	25

NOZZLE CARTRIDGE PLIERS

Cartridge tip pliers

- Ideally suited to cut the ejection nozzle of cartridges or bags as required
- With toothed cutting blade made from solid steel
- Safety locking device
- Allows for the required V cut for windscreen seals and therefore optimised adhesive trim
- Easy to use
- With PVC dipped handle
- Chrome vanadium







	A mm	L mm	S mm	g
140.2220	33,0	210,0	20,0	420

HAND PISTOL CARTRIDGES

Hand gun for double cartridges

- For two component adhesives
- For gluing front windscreens as well as most rear and side windows
- Also suitable for double cartridge systems with epoxy hardeners
- Exact dosing
- Cornered cartridge seating
- Robust metal execution

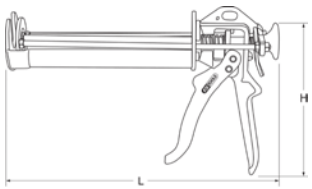




	Length mm	Height mm	g
980.1080	300,0	170,0	500

2-component manual cartridge pistol

- with 2 guide rods
- For working with cartridges
- Quick and easy cartridge replacement
- also applicable for adhesives, sealants, lubricants etc.
- Ergonomically designed handle
- with pressure relief, prevents repressing of the pressure stamp
- with eye for attachment of carabiner or to the rope
- Sturdy design





Technical data:

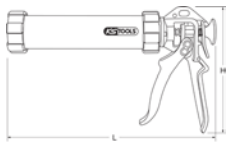
Capacity of the unit: 310 ml

	Ø Spindle mm	L mm	H mm	g
980.2010	40,0	335,0	210,0	660
980.2000	55,0	340,0	220,0	615

Hand cartridge gun

- For working with cartridges and soft packs
- Quick and easy cartridge replacement
- For gluing front windscreens as well as most rear and side windows
- Can also be used for bodywork sealant, seam adhesive etc.
- With a sturdy aluminium cylinder
- Plastic housing
- Robust end part







	L mm	H mm	Replacement nozzle	g
980.1000	340,0	210,0	980.1001	750

Hand cartridge gun

- For working with cartridges and soft packs
- Quick and easy cartridge replacement
- For gluing front windscreens as well as most rear and side windows
- Can also be used for bodywork sealant, seam adhesive etc.
- With a sturdy aluminium cylinder
- Plastic housing
- Robust end part







	L mm	H mm	Replacement nozzle	kg
980.3000	480,0	210,0	980.1001	1,10



Rodless cartridge gun 310 ml

- No protruding push rod and therefore very suitable for confined working environments
- For working with cartridges
- Quick and easy cartridge replacement
- For gluing front windscreens as well as most rear and side windows
- Can also be used for bodywork sealant, seam adhesive etc.
- Centralised grip for optimal load distribution
- With integrated steel spring band
- Includes level indicator display
- With belt connector
- Metal cartridge holder
- Soft grip handle







	L mm	H mm	g	
980.3050	340,0	200,0	825	

BATTERY CARTRIDGE PISTOL

Cordless cartridge gun 310 ml

- Handy and ergonomic dual component housing
- Ideal for glue, silicone or acrylic based cartridges
- For gluing front windscreens as well as most rear and side windows
- Can also be used for bodywork sealant, seam adhesive etc.
- Drip-free mechanism
- Step-free controllable feed
- Carbon brushes interchangeable
- High performance lithium-ion battery
- Processing capacity per battery charge at ~ 20 °C, up to 15 cartridges
- Longer running time through higher load capacity
- Fast charging function (1 hour)
- Automatic turn off charging station
- With a sturdy aluminium cylinder
- Blow mould plastic housing
- In durable plastic storage case







Technical data:

Electrical Voltage:	10,8 V
Capacity of the unit:	310 ml
Propulsion without load:	6,1 mm / sec
Output pressure:	392 kgf
Charging time:	1 hour
Rechargeable battery:	10,8 V - 2,0 Ah

	L mm	B mm	H mm	Spare carbon brushes set	Battery pack	Number of Charger batteries		kg	
515.3569	410,0	138,0	245,0	515.3595	515.3592	0	0	3,60	
515.3570	410,0	138,0	245,0	515.3595	515.3592	1	1	4,50	
515.3571	410,0	138,0	245,0	515.3595	515.3592	2	1	4,70	

Cordless cartridge gun 400 ml

- Handy and ergonomic dual component housing
- Ideal for glue, silicone or acrylic based cartridges
- For gluing front windscreens as well as most rear and side windows
- Can also be used for bodywork sealant, seam adhesive etc.
- Drip-free mechanism
- Step-free controllable feed
- Carbon brushes interchangeable
- High performance lithium-ion battery
- Processing capacity per battery charge at ~ 20 °C, up to 15 cartridges
- Longer running time through higher load capacity
- Fast charging function (1 hour)
- Automatic turn off charging station
- With a sturdy aluminium cylinder
- Blow mould plastic housing
- In durable plastic storage case







Technical data:

Electrical Voltage:	10,8 V
Capacity of the unit:	400 ml
Propulsion without load:	6,1 mm / sec
Output pressure:	392 kgf
Charging time:	1 hour
Rechargeable battery:	10,8 V - 2,0 Ah

	L mm	B mm	H mm	Spare carbon brushes set	Battery pack	Number of Charger batteries		kg	
515.3574	450,0	138,0	245,0	515.3596	515.3592	0	0	3,70	
515.3575	450,0	138,0	245,0	515.3596	515.3592	1	1	4,60	
515.3576	450,0	138,0	245,0	515.3596	515.3592	2	1	4,80	

Cordless cartridge gun 600 ml

- Handy and ergonomic dual component housing
- Ideal for glue, silicone or acrylic based cartridges
- For gluing front windscreens as well as most rear and side windows
- Can also be used for bodywork sealant, seam adhesive etc.
- Drip-free mechanism
- Step-free controllable feed
- Carbon brushes interchangeable
- High performance lithium-ion battery
- Processing capacity per battery charge at ~ 20 °C, up to 15 cartridges
- Longer running time through higher load capacity
- Fast charging function (1 hour)
- Automatic turn off charging station
- With a sturdy aluminium cylinder
- Blow mould plastic housing
- In durable plastic storage case





Technical data:

Electrical Voltage:	10,8 V
Capacity of the unit:	600 ml
Propulsion without load:	6,1 mm / sec
Output pressure:	392 kgf
Charging time:	1 hour
Rechargeable battery:	10,8 V - 2,0 Ah

	L mm	B mm	H mm	Spare carbon brushes set	Battery pack	Number of Charger batteries		kg	
515.3579	560,0	138,0	245,0	515.3595	515.3592	0	0	4,10	
515.3580	560,0	138,0	245,0	515.3595	515.3592	1	1	5,10	
515.3581	560,0	138,0	245,0	515.3595	515.3592	2	1	5,20	

PRESSURISED AIR PISTOL CARTRIDGES

Pneumatic cartridge pistols 310 ml

- For working with cartridges and soft packs
- Ideal for glue, silicone or acrylic based cartridges
- For gluing front windscreens as well as most rear and side windows
- Can also be used for bodywork sealant, seam adhesive etc.
- Perfect run in the cartridge cylinder with the telescopic principle and therefore no cylinder tipping or air intake
- Drip-free mechanism
- Step-free controllable feed
- With two adapters for cartridges and bags
- With safety pressure release valve
- Includes pneumatic regulator for discharge speed
- Handy and ergonomic dual component housing
- Aluminium housing
- Plastic handle





Technical data:

Compressive force:	90 kg
Operating pressure:	max. 6,3 bar (90psi)
Max. flow rate:	40 l/min
Noise pressure level:	70 dbA
Connection thread:	1/4"PT

	Length mm	Height mm	Replacement nozzle	kg	
515.1975	400,0	200,0	980.1001	1,00	



Pneumatic cartridge pistols 600 ml

- For working with cartridges and soft packs
- Ideal for glue, silicone or acrylic based cartridges
- For gluing front windscreens as well as most rear and side windows
- Perfect run in the cartridge cylinder with the telescopic principle and therefore no cylinder tipping or air intake
- Drip-free mechanism
- Step-free controllable feed
- With two adapters for cartridges and bags
- With safety pressure release valve
- Includes pneumatic regulator for discharge speed
- Handy and ergonomic dual component housing
- Aluminium housing
- Plastic handle





Technical data:

Compressive force:	90 kg
Operating pressure:	max. 6,3 kg/cm³ (90psi)
Max. flow rate:	40 l/min
Noise pressure level:	70 dbA
Connection thread:	1/4"PT

	Length mm	Height mm	Replacement nozzle	kg	
515.1985	620,0	200,0	980.1001	1,30	

ASSEMBLY SPATULA

Plastic assembly spatula flat/round

- Universal usage
- For careful assembly and disassembly
- For lifting and adjusting rubber gaskets
- Optimal removal of glue residue
- Special plastic



	Length mm	Width mm	g	
911.8116	200,0	17,0	20	

Plastic assembly spatula round/round

- Universal usage
- For careful assembly and disassembly
- For lifting and adjusting rubber gaskets
- Optimal removal of glue residue
- Special plastic



	Length mm	Width mm	g	
911.8117	200,0	17,0	20	

AID

Clamping device for gas pressure shock absorbers

- ideally suited for clamping weak or defective gas pressure dampers
- can be used on bonnets or boots
- for gas pressure shock absorbers up to 30 mm piston rod diameter
- Aluminium



	Length mm	g	
140.2327	80,0	86	

Telescopic engine compartment and tail gate supports

- Ideal for working on the engine compartment or tail gate, e.g. when replacing the dampers
- Tail gate can be locked into any position required
- Infinitely variable
- With practical fastening mechanism
- Special tool steel





	Length mm	kg	
140.2199	650 - 1500	1,80	

Telescopic engine compartment and tail gate supports

- Ideally for supporting the engine compartment or tail gate
- Also suitable for blocking the pedals
- Rubber surfaces protect against scratches
- Allows for a constant brake pressure over a longer time
- Infinitely adjustable





	Length mm	g	
140.2178	640,0 - 1090,0	920	

Pannel gap gauge set

- For the adaptation and installation of car windows and body parts
- Adaptation to body due to pivoting, ball-bearing construction
- The gap gauge can be adjusted 3-dimensionally and can be easily positioned according to the respective requirements
- The 10 spacer plates allow a precise determination of the gap dimension
- Original size can be removed from an undamaged side with gauge beforehand
- No damage or scratching of already painted parts
- With mounting suction cup
- With flexible gooseneck
- Plastic





		Length mm	Width mm	Height mm	g	
150.1570	3 pcs	110,0	20,0	45,0	100	

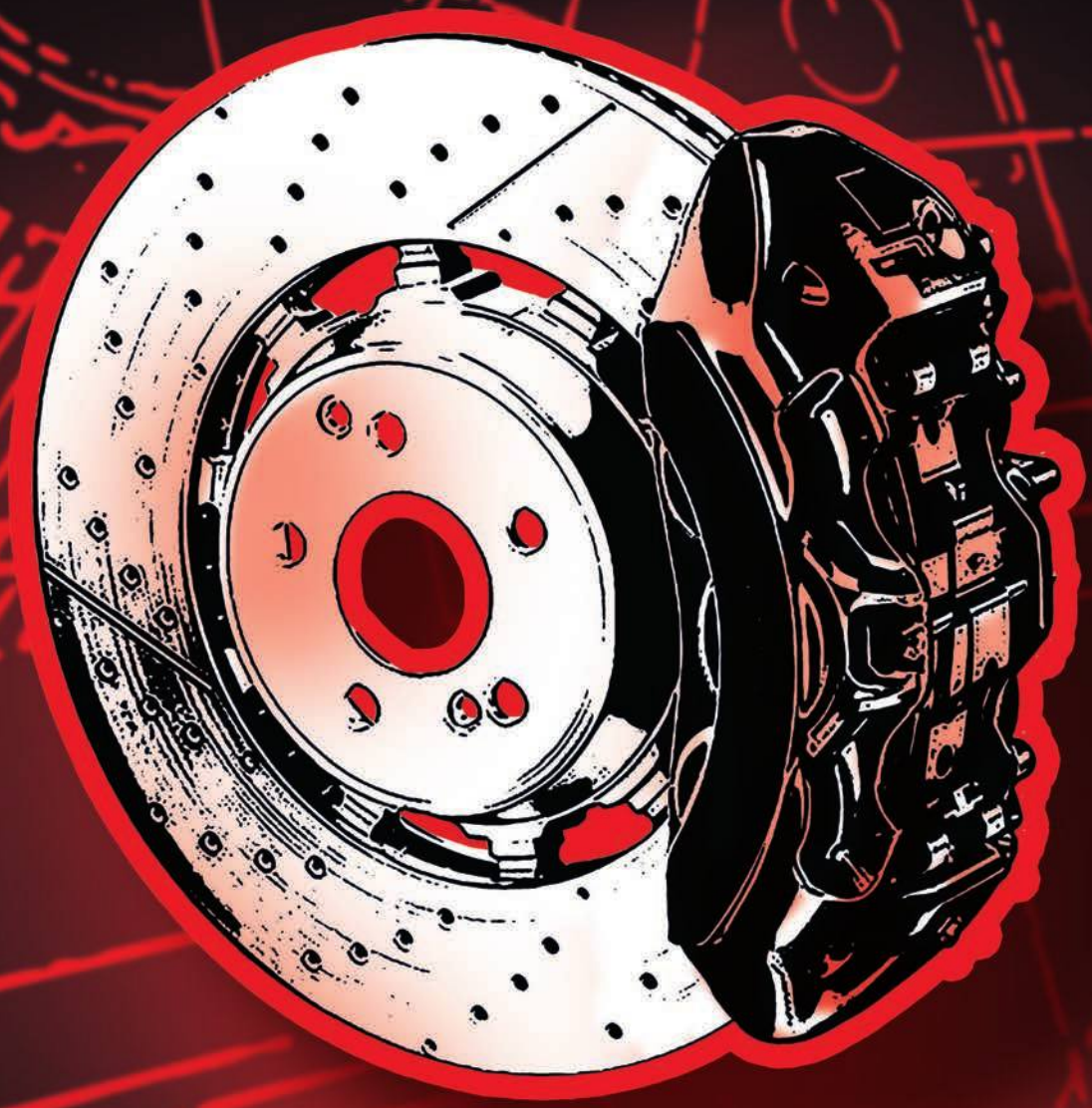
Ultrasound leak detector

- Acoustic locating of leaks on bodywork
- Receiver is passed externally along the bodywork
- Simplifies cause investigation for wind noise and water leaks
- In a practical storage case





		g	
150.1690	Ultrasound leak detector	460	



KS TOOLS®

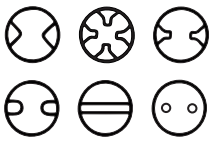
Innovation is our mission!

	FROM PAGE
BRAKE PISTON RESET TOOL	628
BRAKE SENSOR CLEANING TOOL	632
BRAKE CALLIPER TOOL	633
BRAKE DISC TOOLS	636
COTTER PIN DRIVES	636
BRAKE PIPE TESTER	639
BRAKE SPRING TOOL	639
BRAKE SPRING PLIERS	640
BRAKE PEDAL LOCKING DEVICE	641
BRAKE PEDAL UNLOCKING TOOL	641
BRAKE CALLIPER CLEANING	641
WHEEL HUB CLEANING	643
BRAKE DISC SCRAPER	645
ASSEMBLY SLEEVES	646
PIPE STOPPER	646
BRAKE PIPE CUTTER	646
BRAKE LINE SCRAPER	646
BRAKE PIPE DEBURRER	647
BRAKE PIPE BENDING TOOL	647
BRAKE PIPE FLARING TOOL	647
BRAKE CALLIPER REPAIR TOOL	649
BRAKE FLUID TESTER	649
BRAKE BLEED WRENCHES	650
BRAKE BLEEDER	652
BRAKE MAINTENANCE TOOL	655
BRAKE MEASURING TOOL	656

BRAKE PISTON RESET TOOL

Universal brake piston resetting dice

- Universal usage: suitable for almost all common vehicles
- Ideally suited to pulling back the brake piston on the braking system with hand brake securer
- Internal square drive adaptor to DIN 3120 / ISO 1174
- Special tool steel





3/8"

	Length mm	Width mm	Height mm	g	
150.2222	35,0	30,0	25,0	90	

Brake piston resetting tool, small

- Universal usage: suitable for almost all common vehicle types without integrated hand brake securing device
- Ideally suited to damage-free resetting of the brake disc piston
- Lower force output due to spindle operation
- Allows for a central resetting of the brake piston without tilting
- No damage to sleeves, pistons of piston holes in the brake calliper
- Removes misuse of other tools
- Whilst carrying out maintenance work and when changing the brake pads it is necessary to push the brake pistons back into the brake calliper
- Ideally suited to floating callipers with a single piston and fixed callipers with two pistons
- High stability and closing tightness thanks to the hardened plates and guide bolts
- High precision guarantees an easy and durable use
- Special tool steel





	Min span width mm	Max span width mm	Height mm	Length mm	kg	
150.2056	13,0	80,0	110,0	135,0	0,96	

Brake piston resetting tool, large

- Universal usage: suitable for almost all common vehicle types without integrated hand brake securing device
- Ideally suited to damage-free resetting of the brake disc piston
- Lower force output due to spindle operation
- Allows for a central resetting of the brake piston without tilting
- No damage to sleeves, pistons of piston holes in the brake calliper
- Removes misuse of other tools
- Whilst carrying out maintenance work and when changing the brake pads it is necessary to push the brake pistons back into the brake calliper
- Ideally suited to floating callipers with a single piston and fixed callipers with four pistons
- High stability and closing tightness thanks to the hardened plates and guide bolts
- High precision guarantees an easy and durable use
- Special tool steel





	Min span width mm	Max span width mm	Height mm	Length mm	kg	
150.2057	13,0	100,0	115,0	200,0	1,50	

Brake piston re-setter gun

- Universal usage: suitable for almost all common vehicle types without integrated hand brake securing device
- Ideally suited to damage-free resetting of the brake disc piston
- Lower force output with one-hand operation
- Rotatable 360°
- Allows for a central resetting of the brake piston without tilting
- No damage to sleeves, pistons of piston holes in the brake calliper
- Removes misuse of other tools
- Whilst carrying out maintenance work and when changing the brake pads it is necessary to push the brake pistons back into the brake calliper
- Ideally suited to floating callipers with a single piston and fixed callipers with two pistons
- High stability and closing tightness thanks to the hardened plates and guide bolts
- High precision guarantees an easy and durable use
- Special tool steel





	Min span width mm	Max span width mm	Height mm	Length mm	kg	
150.2193	27,0	75,0	220,0	260,0	1,35	

Ratchet brake piston re-setter, reversible

- Universal usage: suitable for almost all common vehicle types without integrated hand brake securing device
- Ideally suited to damage-free resetting of the brake disc piston
- Lower force output due to spindle operation with reversible ratchet mechanism
- Allows for a central resetting of the brake piston without tilting
- No damage to sleeves, pistons of piston holes in the brake calliper
- Removes misuse of other tools
- Whilst carrying out maintenance work and when changing the brake pads it is necessary to push the brake pistons back into the brake calliper
- Ideally suited to floating callipers and fixed callipers: adjustable to brake calliper shape and number of pistons
- High stability and closing tightness thanks to the hardened plates
- High precision guarantees an easy and durable use
- With PVC dipped handle
- Special tool steel





	Length mm	Operation range mm	g	
150.2194	280,0	40,0 - 68,0	830	

Left-turning spindle for brake piston adapter

- With left handed thread
- Complementary for brake pistons, pressure and turning device adapters
- With universal pin adapter
- Without retaining plates
- Special tool steel





	L mm	g	
150.2036	155,0	360	



Right-turning spindle for brake piston adapter

- With right handed thread
- Complementary for brake pistons, pressure and turning device adapters
- With universal pin adapter
- Without retaining plates
- Special tool steel





	L mm	g	
150.2001	155,0	360	



2 in 1 right and left-turning spindle for brake piston adapter

- By reinserting with left or right thread
- Complementary for brake pistons, pressure and turning device adapters
- With universal square attachment
- With retaining plate
- Special tool steel





		Length mm	g	
150.1966	3 pcs	155,0	650	

consists of:

		g	
150.1964	2 in 1 right and left-turning spindle with t-handle	410	
150.2064	Counter plate 11, Ø 90mm	91	
150.2007	Brake piston tool adaptor 5,Ø 35mm	60	

Pneumatic spindle for brake piston adaptor

- Ideally suited to damage-free resetting of the brake piston
- Right and left-turning
- The turning direction is set by the user via the angle piece at the end of the spindle
- Automatic balancing of different thread slopes with the continuous spindle
- Comfortable and fast working through pneumatic spindle
- With universal pin adapter with magnetic spindle adapter plate
- Optimal grip due to rubber coated control lever
- Allows for a central resetting of the brake piston without tilting
- No damage to sleeves, pistons of piston holes in the brake calliper
- Removes misuse of other tools
- Whilst carrying out maintenance work and when changing the brake pads it is necessary to push the brake pistons back into the brake calliper
- Aluminium housing
- Special steel spindle
- Includes 1/4" coupling connector





	L mm	3/8" Extension square adaptor	kg	
150.2039	260,0	150.2041	2,85	

Pneumatic spindle for brake piston adaptor for confined spaces

- ideal for confined spaces due to optimised counter holding plate
- Ideally suited to damage-free resetting of the brake piston
- Right and left-turning
- The turning direction is set by the user via the angle piece at the end of the spindle
- Automatic balancing of different thread slopes with the continuous spindle
- Comfortable and fast working through pneumatic spindle
- With universal pin adapter with magnetic spindle adapter plate
- Optimal grip due to rubber coated control lever
- Allows for a central resetting of the brake piston without tilting
- No damage to sleeves, pistons of piston holes in the brake calliper
- Removes misuse of other tools
- Whilst carrying out maintenance work and when changing the brake pads it is necessary to push the brake pistons back into the brake calliper
- Aluminium housing
- Special steel spindle
- Includes 1/4" coupling connector

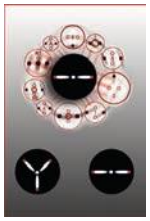




	L mm	3/8" Extension square adaptor	kg	
150.2237	260,0	150.2041	2,85	

Universal brake piston reset tool adapter set

- With individually adjustable 2-pin and 3-pin universal brake piston adapter and 3/8" adapter with magnet
- Ideally suited to damage-free resetting of the brake piston
- No damage to sleeves, pistons of piston holes in the brake calliper
- Whilst carrying out maintenance work and when changing the brake pads it is necessary to push the brake pistons back into the brake calliper
- can be combined with conventional brake piston restorers
- In durable plastic storage case





			g	
150.2295	3 pcs	Universal brake piston reset tool adapter set	392	

consists of:

		g	
150.2297	Universal adapter, adjustable with 2 pins for 150.2295	99,5	
150.2298	Universal adapter, adjustable with 3 pins for 150.2295	121	
150.2296	3/8" brake piston tool adapter with magnet	40	

Universal brake piston re-setter tool set

- With individually adjustable 2-pin universal brake piston adapter
- Ideally suited to pulling pack (pulling or pushing) the brake piston on floating brake calliper systems with or without hand brake securing devices
- With 2-way spindle via reinserting with left and right thread
- Lower force output due to spindle operation
- Allows for a central resetting of the brake piston without tilting
- No damage to sleeves, pistons of piston holes in the brake calliper
- Removes misuse of other tools
- Whilst carrying out maintenance work and when changing the brake pads it is necessary to push the brake pistons back into the brake calliper
- Spindle with universal square attachment
- Includes universal pin adapter
- Insert made from high quality foam





			g	
150.1965	4 pcs	Universal brake piston re-setter tool set	800	

consists of:

		g	
150.1964	2 in 1 right and left-turning spindle with t-handle	410	
150.2064	Counter plate 11, Ø 90mm	91	
150.2007	Brake piston tool adaptor 5,Ø 35mm	60	
150.1967	Universal adapterwith 2 pins	100	

Universal brake piston re-setter tool set with pneumatic spindle

- With individually adjustable 2-pin and 3-pin universal brake piston adapter
- Ideally suited to damage-free resetting of the brake piston
- Right and left-turning
- The turning direction is set by the user via the angle piece at the end of the spindle
- Automatic balancing of different thread slopes with the continuous spindle
- Comfortable and fast working through pneumatic spindle
- With universal pin adapter with magnetic spindle adapter plate
- Optimal grip due to rubber coated control lever
- Allows for a central resetting of the brake piston without tilting
- No damage to sleeves, pistons of piston holes in the brake calliper
- Removes misuse of other tools
- Whilst carrying out maintenance work and when changing the brake pads it is necessary to push the brake pistons back into the brake calliper
- Aluminium housing
- Special steel spindle
- Includes 1/4" coupling connector





			kg	
150.1925	3 pcs	Universal brake piston re-setter tool set with pneumatic spindle	1,66	

consists of:

		g	
150.2039	Pneumatic brake piston windback tool, 260mm	2850	
150.1926	Universal 2 pin adaptor	117	
150.1927	Universal 3 pin adaptor	161	



Brake piston re-setter tool set

- Clockwise
- Ideally suited to pulling back the brake piston
- Adapter plates with carriers for borings in the brake piston
- Numerical adapter plates enable good allocation
- Magnetic spindle attachment plate
- Includes stepped adapter plate for front axles
- Priority usage on disk braking rear axles
- Sandblasted surface
- Special tool steel
- In durable plastic storage case

Application range:
0 - **General Motors**
2 - **Citroën** XM, Xantia etc.
3 - **Alfa Romeo**, **Audi**, **Austin**, **BMW**, **Ford**, **Honda**, **Jaguar**
4 - **Alfa Romeo** 164 2.0, **Ford**, **Mazda**, **Saab** 9000, **Subaru**
5 - Adaptor with 3/8" square drive
6 - **Nissan** Primera, **Volkswagen** Golf IV
7 - **Audi** 80/90/100/V8, **Ford** Sierra ABS + Scorpio after 85, **Honda** Prelude,
Nissan Silvia 1.8 Turbo, **Rover**
8 - **General Motors**
9 - **General Motors**
G - **Opel** Astra
Z - **Renault**
M - **Ford**
N - **Saab Honda**





			kg	
150.2015	15 pcs	Brake piston re-setter tool set	2,00	

consists of:

		g	
150.2001	Clockwise spindle,155mm	360	
150.2002	Piston windback adaptor#0, Ø 63mm	105	
150.2003	Brake piston adaptor tool 1	180	
150.2004	Brake piston tool adaptor 2, Ø 51mm	40	
150.2005	Brake piston tool adaptor 3, Ø 54mm	45	
150.2006	Brake piston tool adaptor 4, Ø 32mm	60	
150.2007	Brake piston tool adaptor 5, Ø 35mm	60	
150.2008	Brake piston tool adaptor 6, Ø 42mm	68	
150.2009	Brake piston tool adaptor 7, Ø 42mm	84	
150.2010	Piston windback adaptor#8, Ø 47mm	46	
150.2011	Piston windback adaptor#9, Ø 54mm	46	
150.2013	Brake piston adaptor tool G, Ø 30mm	84	
150.2016	Brake piston adaptor tool M, Ø 32mm	60	
150.2017	Piston windback adaptor#4, Ø 32mm	60	
150.2012	Piston windback adaptor#Z, Ø 30mm	80	

Brake piston re-setter tool set

- Right and left-turning
- Ideally suited to pulling back the brake piston
- Adapter plates with carriers for borings in the brake piston
- Numerical adapter plates enable good allocation
- Magnetic spindle attachment plate
- Includes stepped adapter plate for front axles
- Priority usage on disk braking rear axles
- Sandblasted surface
- Special tool steel
- In durable plastic storage case

Application range:
0 - **General Motors**
2 - **Citroën** XM, Xantia etc.
3 - **Alfa Romeo**, **Audi**, **Austin**, **BMW**, **Ford**, **Honda**, **Jaguar**, **Mercedes**, **Mitsubishi**, **Nissan**,
Rover, **Toyota**, **Volkswagen**
4 - **Alfa Romeo** 164 2.0, **Ford**, **Mazda**, **Saab** 9000, **Subaru**
5 - Adaptor with 3/8" square drive
6 - **Nissan** Primera, **Volkswagen** Golf IV
7 - **Audi** 80/90/100/V8, **Ford** Sierra ABS + Scorpio after 85, **Honda** Prelude, **Nissan**,
Silvia 1.8 Turbo, **Rover** 8000, **Saab** 9000, Subaro L+Z, **Volkswagen** Golf + Passat
8 - **General Motors**
9 - **General Motors**
G - **Opel** Astra
Z - **Renault**
M - **Ford**
N - **Saab Honda**
K - **Citroën**
E - **Nissan** Maxima





			kg	
150.2035	18 pcs	Brake piston re-setter tool set	2,10	

consists of:

		g	
150.2001	Clockwise spindle,155mm	360	
150.2036	Anti-clockwise spindle,155mm	360	
150.2002	Piston windback adaptor#0, Ø 63mm	105	
150.2003	Brake piston adaptor tool 1	180	
150.2004	Brake piston tool adaptor 2,Ø 51mm	40	
150.2005	Brake piston tool adaptor 3,Ø 54mm	45	
150.2006	Brake piston tool adaptor 4,Ø 32mm	60	
150.2007	Brake piston tool adaptor 5,Ø 35mm	60	
150.2008	Brake piston tool adaptor 6,Ø 42mm	68	
150.2009	Brake piston tool adaptor 7,Ø 42mm	84	
150.2010	Piston windback adaptor#8, Ø 47mm	46	
150.2011	Piston windback adaptor#9, Ø 54mm	46	
150.2019	Brake piston adaptor tool E	60	
150.2013	Brake piston adaptor tool G,Ø 30mm	84	
150.2018	Piston windback adaptor#K Citroën	60	
150.2016	Brake piston adaptor tool M,Ø 32mm	60	
150.2017	Piston windback adaptor#4, Ø 32mm	60	
150.2012	Piston windback adaptor#Z, Ø 30mm	80	

Brake piston re-setter tool set with pneumatic spindle

- Right and left-turning
- Ideally suited to damage-free resetting of the brake piston
- The turning direction is set by the user via the angle piece at the end of the spindle
- Automatic balancing of different thread slopes with the continuous spindle
- Comfortable and fast working through pneumatic spindle
- Adapter plates with carriers for borings in the brake piston
- Numerical adapter plates enable good allocation
- With universal pin adapter with magnetic spindle adapter plate
- Priority usage on disk braking rear axles
- Sandblasted surface
- Special tool steel
- In durable plastic storage case

Application range:
0 - **General Motors**
2-**Citroën** XM, Xantia, among others.
3 - **Alfa Romeo**, **Audi**, **Austin**, **BMW**, **Ford**, **Honda**, **Jaguar**, **Mercedes**, **Mitsubishi**, **Nissan**, Rover, **Toyota**, **Volkswagen**
4 - **Alfa Romeo** 164 2.0, **Ford**, **Mazda**, **Saab** 9000, **Subaru**
5-Adapter wit 3/8" internal square
6 - **Nissan** Primera, **Volkswagen** Golf IV
7 - **Audi**, **Ford**, **Honda** Prelude, **Nissan** Silvia 1.8 Turbo, **Rover** 8000, **Saab** 9000, Subaro L+Z,**Volkswagen** Golf + Passat
8 - **General Motors**
9 - **General Motors**
G - **Opel** Astra
Z - **Renault**
M - **Ford**
N - **Saab Honda**
K - **Citroën**
E - **Nissan** Maxima
K1 - **Citroën**
K2 - **Citroën** / **Renault**





150.2000	18 pcs	Brake piston re-setter tool set with pneumatic spindle	3,35

150.2039	Pneumatic brake piston windback tool, 260mm	2850
150.2002	Piston windback adaptor#0, Ø 63mm	105
150.2004	Brake piston tool adaptor 2,Ø 51mm	40
150.2005	Brake piston tool adaptor 3,Ø 54mm	45
150.2006	Brake piston tool adaptor 4,Ø 32mm	60
150.2007	Brake piston tool adaptor 5,Ø 35mm	60
150.2008	Brake piston tool adaptor 6,Ø 42mm	68
150.2009	Brake piston tool adaptor 7,Ø 42mm	84
150.2010	Piston windback adaptor#8, Ø 47mm	46
150.2011	Piston windback adaptor#9, Ø 54mm	46
150.2012	Piston windback adaptor#Z, Ø 30mm	80
150.2013	Brake piston adaptor tool G,Ø 30mm	84

150.2016	Brake piston adaptor tool M,Ø 32mm	60
150.2017	Piston windback adaptor#4, Ø 32mm	60
150.2018	Piston windback adaptor#K Citroën	60
150.2019	Brake piston adaptor tool E	60
150.2037	Brake piston adaptor tool K1,Ø 54mm	60
150.2038	Brake piston adaptor tool K2,Ø 45mm	50

Brake piston re-setter tool set

- Right and left-turning
- Ideally suited to pulling back the brake piston
- Adapter plates with carriers for borings in the brake piston
- Numerical adapter plates enable good allocation
- Magnetic spindle attachment plate
- Includes stepped adapter plate for front axles
- Priority usage on disk braking rear axles
- Sandblasted surface
- Special tool steel
- In durable plastic storage case

Application range:
0 - **General Motors**
1-Retaining plate closed angled
2-**Citroën** XM, Xantia, among others.
3 - **Alfa Romeo**, **Audi**, **Austin**, **BMW**, **Ford**, **Honda**, **Jaguar**, **Mercedes**, **Mitsubishi**, **Nissan**, Rover, **Toyota**, **Volkswagen**
4 - **Alfa Romeo** 164 2.0, **Ford**, **Mazda**, **Saab** 9000, **Subaru**
5-Adapter wit 3/4" internal square
6 - **Nissan** Primera, **Volkswagen** Golf IV
7-**Audi** 80/90/100/V8, **Ford** Sierra ABS + Scorpio from 85, **Honda** Prelude, **Nissan**, Silvia 1.8 Turbo, **Rover** 8000, **Saab** 9000, Subaro L+Z, **Volkswagen** Golf + Passat
G - **Opel** Astra
12 -Retaining plate open cornered
M - **Ford**
E - **Nissan** Maxima
B - **Ford** USA; **Lincoln** Continental; **Subaru**
K1 - **Citroën**
K2-**Audi** A8, S8 (from 99-)
C-**Nissan** Primera; **Opel** Vectra (from 02-); **Toyota** Avensis
D-**Citroën** BX (from 83), BX 16V (from 88-)
F-**Peugeot** 206 (from 03)
J - **Alfa Romeo**; **Audi**; **Citroën**; **Fiat**; **Ford**; **Honda**; **Jaguar**; **Lancia**; **Nissan**; **Peugeot**; **Renault**; Rover; **Saab**; **Seat**; **Subaru**; **Volkswagen**
X - **Alfa Romeo** 164 2.0 Twin Spark, 2.0 Turbo, 3.0 V6; **Audi** 200; **Ford** Mondeo 2.0 Ghia; **Lancia** Thamaalte
P - **Citroën** C3
Q-**Alfa Romeo** 164 2.0; **Fiat** Uno, Turbo ie-Barchetta; **Ford** Escort MK, Orion; **Honda**; Rover; **Subaru**
11-Retaining plate open angled
R - **Ford** Australia; **Mazda** 323 Gti, GTX, 929, RX7, 626 16V, 626 GT, 929 V6; **Mitsubishi** Galant GL Si; **Toyota** Celicia, Corolla GT, MR2
S-**Audi** 100; **BMW** 740i (from 91); **Lancia** Delta 1.9TD; Proton 416; **Renault** Laguna, Safrane; **Rover** 623 Si; **Volkswagen** Golf Gti Mk, Passat VR6, Vento GT
T-**Rover** 220 C Turbo (from 95)
V-**Rover** 216 Gti 16V, 820 Si 2.0 (from 93), 825 SD 2.5 (from 93)
A - **Nissan** Primera 2.0 Bluebird; **Opel** Astra C, Zafira; **Toyota**
Z - **BMW** Mini





150.2030	30 pcs	Brake piston re-setter tool set	3,30

150.2001	Clockwise spindle,155mm	360
150.2036	Anti-clockwise spindle,155mm	360
150.2064	Counter plate 11, Ø 90mm	91
150.2014	Counter plate 12, Ø 80mm	110
150.2003	Brake piston adaptor tool 1	180
150.2004	Brake piston tool adaptor 2,Ø 51mm	40
150.2005	Brake piston tool adaptor 3,Ø 54mm	45
150.2006	Brake piston tool adaptor 4,Ø 32mm	60
150.2007	Brake piston tool adaptor 5,Ø 35mm	60
150.2008	Brake piston tool adaptor 6,Ø 42mm	68
150.2009	Brake piston tool adaptor 7,Ø 42mm	84
150.2074	Brake piston adaptor tool A,Ø 42mm	80
150.2034	Brake piston adaptor tool B,Ø 38mm	70
150.2048	Brake piston adaptor tool C,Ø 38mm	40
150.2051	Brake piston adaptor tool D,Ø 52mm	200
150.2019	Brake piston adaptor tool E	60
150.2013	Brake piston adaptor tool G,Ø 30mm	84
150.2052	Brake piston adaptor tool F,Ø 35mm	90
150.2053	Brake piston adaptor tool J,Ø 42mm	80
150.2037	Brake piston adaptor tool K1,Ø 54mm	60
150.2038	Brake piston adaptor tool K2,Ø 45mm	50
150.2016	Brake piston adaptor tool M,Ø 32mm	60
150.2059	Brake piston adaptor tool P,Ø 52mm	70
150.2062	Brake piston adaptor tool Q,Ø 30mm	40
150.2069	Brake piston adaptor tool R,Ø 35mm	50
150.2071	Brake piston adaptor tool S,Ø 40mm	50
150.2072	Brake piston adaptor tool T,Ø 25mm	60
150.2073	Brake piston adaptor tool V,Ø 40mm	90
150.2054	Piston windback adaptor#X, Ø 30mm	50
150.2099	Brake piston adaptor tool Z,Ø 28mm	40



Brake piston re-setter tool set

- Right and left-turning
- Ideally suited to pulling back the brake piston
- Adapter plates with carriers for borings in the brake piston
- Numerical adapter plates enable good allocation
- Magnetic spindle attachment plate
- Includes adapter attachment for 3/8" ratchet
- Includes stepped adapter plate for front axles
- Priority usage on disk braking rear axles
- Suitable for Bendix, Girling and Smart braking systems
- With 3 interchangeable retaining plates, 2 of which are open, for use with very worn brake pads or tight spaces; with the plates it is possible to construct together in the brake calliper
- Sandblasted surface
- Special tool steel
- In durable plastic storage case

Application range:
0 - **General Motors**
1-Retaining plate closed angled
2-**Citroën** XM, Xantia, among others.
3 - **Alfa Romeo**, **Audi**, **Austin**, **BMW**, **Ford**, **Honda**, **Jaguar**, **Mercedes**, **Mitsubishi**, **Nissan**, Rover, **Toyota**, **Volkswagen**
4 - **Alfa Romeo** 164 2.0, **Ford**, **Mazda**, **Saab** 9000, **Subaru**
5-Adapter wit 3/4" internal square
6 - **Nissan** Primera, **Volkswagen** Golf IV
7-**Audi** 80/90/100/V8, **Ford** Sierra ABS + Scorpio from 85, **Honda** Prelude, **Nissan**, Silvia 1.8 Turbo, **Rover** 8000, **Saab** 9000, Subaro L+Z, **Volkswagen** Golf + Passat
8 - **General Motors**
9 - **General Motors**
11-Retaining plate open angled
12 -Retaining plate open cornered
A - **Nissan** Primera 2.0 Bluebird; **Opel** Astra C, Zafira; **Toyota**
B - **Ford** USA; **Lincoln** Continental; **Subaru**
C-**Nissan** Primera; **Opel** Vectra (from 02-); **Toyota** Avensis
D-**Citroën** BX (from 83), BX 16V (from 88-)
E - **Nissan** Maxima
F-**Peugeot** 206 (from 03)
G - **Opel** Astra
J - **Alfa Romeo**; **Audi**; **Citroën**; **Fiat**; **Ford**; **Honda**; **Jaguar**; **Lancia**; **Nissan**; **Peugeot**; **Renault**; Rover; **Saab**; **Seat**; **Subaru**; **Volkswagen**
K - **Citroën** C5
K1 - **Citroën** C5
K2-**Audi** A8, S8 (from 99-)
M-**Nissan** Primera (from 03-)
N - **Alfa Romeo** 164 2.0 Twin Spark; **Audi** 200, **Ford** Mondeo; **Lancia** Themaalte; **Volkswagen** Golf GTI (from 83-87), Scirocco 16V (from 84)
P - **Citroën** C3
Q-**Alfa Romeo** 164 2.0; **Fiat** Uno, Turbo ie-Barchetta; **Ford** Escort MK, Orion; **Honda**; Rover; **Subaru**
R - **Ford** Australia; **Mazda** 323 Gti, GTX, 929, RX7, 626 16V, 626 GT, 929 V6; **Mitsubishi** Galant GL Si; **Toyota** Celicia, Corolla GT, MR2
S-**Audi** 100; **BMW** 740i (from 91); **Lancia** Delta 1.9TD; Proton 416; **Renault** Laguna, Safrane; **Rover** 623 Si; **Volkswagen** Golf Gti Mk, Passat VR6, Vento GT
T-**Rover** 220 C Turbo (from 95)
V-**Rover** 216 Gti 16V, 820 Si 2.0 (from 93), 825 SD 2.5 (from 93)
IV - **Iveco**
Z - **BMW** Mini





150.1970	41 pcs	Brake piston re-setter tool set	5,10

150.2001	Clockwise spindle,155mm	360
150.2036	Anti-clockwise spindle,155mm	360
150.2064	Counter plate 11, Ø 90mm	91
150.2014	Counter plate 12, Ø 80mm	110
150.1974	Brake piston adaptor tool 0-disc	65
150.1973	Brake piston adaptor tool 0	114
150.2003	Brake piston adaptor tool 1	180
150.2004	Brake piston tool adaptor 2,Ø 51mm	40
150.2005	Brake piston tool adaptor 3,Ø 54mm	45
150.2006	Brake piston tool adaptor 4,Ø 32mm	60
150.2007	Brake piston tool adaptor 5,Ø 35mm	60
150.2008	Brake piston tool adaptor 6,Ø 42mm	68
150.2009	Brake piston tool adaptor 7,Ø 42mm	84
150.1971	Brake piston adaptor tool 8	62
150.1972	Brake piston adaptor tool 9	81
150.2074	Brake piston adaptor tool A,Ø 42mm	80
150.2034	Brake piston adaptor tool B,Ø 38mm	70
150.2048	Brake piston adaptor tool C,Ø 38mm	40
150.2051	Brake piston adaptor tool D,Ø 52mm	200
150.2019	Brake piston adaptor tool E	60
150.2052	Brake piston adaptor tool F,Ø 35mm	90
150.2013	Brake piston adaptor tool G,Ø 30mm	84
150.1978	Brake piston tool adapter #H6	145
150.9494	Hexagon socket angled screwdriver 7,0 mm	100
150.2053	Brake piston adaptor tool J,Ø 42mm	80
150.1975	Brake piston adaptor tool K, Citroën C5	82
150.2037	Brake piston adaptor tool K1,Ø 54mm	60
150.2038	Brake piston adaptor tool K2,Ø 45mm	50
150.2016	Brake piston adaptor tool M,Ø 32mm	60
150.1976	Brake piston adaptor tool N	30
150.2059	Brake piston adaptor tool P,Ø 52mm	70
150.1988	Brake piston tool adapter #P3.0	70
150.1989	Brake piston tool adapter #P5.5	68
150.2062	Brake piston adaptor tool Q,Ø 30mm	40
150.2069	Brake piston adaptor tool R,Ø 35mm	50
150.2071	Brake piston adaptor tool S,Ø 40mm	50
150.2072	Brake piston adaptor tool T,Ø 25mm	60
150.2073	Brake piston adaptor tool V,Ø 40mm	90
150.2099	Brake piston adaptor tool Z,Ø 28mm	40
150.2042	Brake piston adaptor tool f.IVECO	50
150.1993	Thread oil from kit 150.1970	105



BRAKE SENSOR CLEANING TOOL

Reamer for ABS sensor with bendable ratchet for VAG

- Suitable for cleaning all guide holes of the ABS sensor in the wheel bearing casing from rust, dirt and corrosions etc.
- No damage to the new sensor due to improper insertion or pressing in etc.
- Ensures exact measurement values due to clean and correct positioning of the new sensor
- With integrated, bendable, finely toothed special wrench turning to the right is only possible
- Special tool steel

Application range: Audi A3 (8P), Q3 (8U), TT (8J) / **Seat** Altea + XL, Leon, Toledo 3 / **Škoda** Octavia (1Z), Superb (3T), Yeti >2010 / **Volkswagen** Golf 6, Beetle >2011, Golf 5, Jetta 3 + 4, Passat (3C), Scirocco >2009, Sharan >2010, Tiguan (5N), Touran >2005





	Ø mm	Reamer height mm	Total depth mm	Length mm	
150.1982	11,0	30,0	82,0	150,0	175

Reamer for ABS sensor with bendable ratchet

- Suitable for cleaning all guide holes of the ABS sensor in the wheel bearing casing from rust, dirt and corrosions etc.
- No damage to the new sensor due to improper insertion or pressing in etc.
- Ensures exact measurement values due to clean and correct positioning of the new sensor
- With integrated, bendable, finely toothed special wrench turning to the right is only possible
- Special tool steel





	Ø mm	Reamer height mm	Total depth mm	Length mm	
150.1981	10,0	20,0	154,0	150,0	218
150.1985	15,0	23,0	33,0	150,0	180
150.1986	18,0	23,0	33,0	150,0	190
150.1987	18,0	34,0	44,0	150,0	205

Reamer set for ABS sensor with bendable ratchet

- Suitable for cleaning all guide holes of the ABS sensor in the wheel bearing casing from rust, dirt and corrosions etc.
- No damage to the new sensor due to improper insertion or pressing in etc.
- Ensures exact measurement values due to clean and correct positioning of the new sensor
- With integrated, bendable, finely toothed special wrench turning to the right is only possible
- Special tool steel





			g
150.1980	2 pcs	Reamer set for ABS sensor with bendable ratchet	415

			g
150.1981	Reamer for ABS sensor with bendable ratchet, Ø 10,0 mm	218	
150.1984	Special drill with roll-pin, 8mm	64	

MASTER ABS sensor reamer set

- Suitable for cleaning all guide holes of the ABS sensor in the wheel bearing casing from rust, dirt and corrosions etc.
- No damage to the new sensor due to improper insertion or pressing in etc.
- Ensures exact measurement values due to clean and correct positioning of the new sensor
- With the integrated, bendable, fine-toothed special ratchet with quick change function only turning to the right is possible
- Included special borer M10 x 133 mm for boring out corroded and therefore securely fitting sensors
- With various reamers
- Special tool steel
- In durable plastic storage case

Application range: Audi A3 (8P), Q3 (8U), TT (8J) / **Opel** Insignia / **Seat** Altea + XL, Ibiza, Leon, Toledo3 / **Škoda** Fabia, Octavia (1Z), Superb (3T), Yeti >2010 / **Volkswagen** Golf 6 Beetle >2011, Golf 5, Jetta 3 + 4, Passat (3C), Lupo, Polo 9N, Scirocco >2009, Sharan >2010, T5, Tiguan (5N), Touran >2005





1/4"

			kg
150.2410	8 pcs	MASTER ABS sensor reamer set	1,57

	Suitable for	Ø mm	Length mm	g
150.2481	VW Golf V, Polo 9N, Lupo, Passat, T5, Škoda Fabia, Seat Ibiza, Opel Insignia	10	150,0	84
150.2482	BMW E38, E39, E52, E60, E61, E63, E64, E65, E66, E67, E70, E71	14	32,0	27
150.2483	Mercedes A class, Mazda, Ford, Daewoo	15	23,0	22
150.2485	Audi, VW, Seat, Škoda, NFZ	18	34,0	54
150.2486	Borer for boring ABS sensors	10	133,0	50
150.2487	1/4" special joint reamer		120,0	142
150.2484	Audi, VW, BMW E36 + E46, Seat, Škoda	18	23,0	33
150.2411	VAG	11	70,0	60

BRAKE CALLIPER TOOL

Internal square angled pin wrench for brake callipers

- Ideal for the assembly and disassembly of brake callipers
- Universally suited to many vehicle types
- Long execution
- Phosphate finish
- Special tool steel
- With ribbed aluminium handle





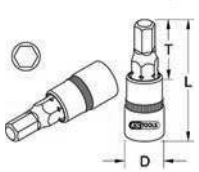
	mm	L1 mm	L2 mm	g
150.1978	6,0	117,0	226,0	145
150.1979	7,0	117,0	226,0	155

Bit socket for internal hexagon screws on the brake calliper

- Hexagon socket
- Ideal for the assembly and disassembly of brake callipers
- Internal square drive to DIN 3120 / ISO 1174
- Short execution
- For manual operation
- Matt finish
- Chrome vanadium

Application range: Renault Laguna rear axle







3/8"

	mm	D mm	L mm	T mm	g
911.3926	7,0	29,0	38,0	11,0	40

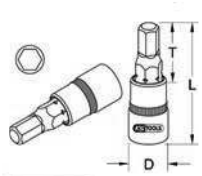


Bit socket for internal hexagon screws on the brake calliper

- Hexagon socket
- Ideal for the assembly and disassembly of brake callipers
- Internal square drive to DIN 3120 / ISO 1174
- Extra slim design
- Short execution
- For manual operation
- Matt finish
- Chrome vanadium

Application range: for releasing and tightening the hard-to-reach brake calliper screws on **Mercedes** with SBC braking systems, e.g. E class, SL, CLS etc. when changing the brake pads

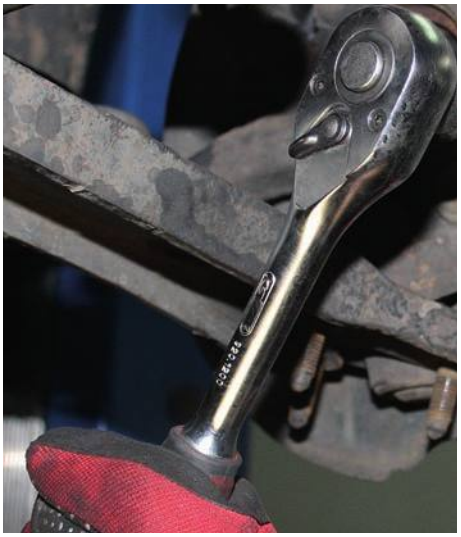






3/8"

	mm	D mm	L mm	T mm	g
911.3928	7,0	20,0	43,0	13,0	40

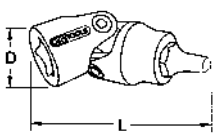


Bit socket with joint for internal hexagon screws on the brake calliper

- Hexagon socket
- Ideal for the assembly and disassembly of brake callipers
- Internal square to DIN 3120 / ISO 1174 with ball reception
- Screwed joints
- For manual operation
- Matt finish
- Chrome vanadium

Application range: BMW 3 series, **BMW** 5 series, **BMW** 8 series, **Opel**







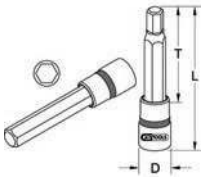
3/8"

	mm	D mm	L mm	g
911.3904	7,0	19,0	61,0	37

Bit socket for internal hexagon screws on the brake calliper

- Hexagon socket
- Extra long execution
- Ideal for the assembly and disassembly of brake callipers
- In accordance with DIN 7422
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- with press-fitted nickel-plated bit
- For manual operation
- Matt finish
- Chrome vanadium







1/2"

	mm	D mm	L mm	T mm	g
911.5327	7,0	22,0	170,0	10,0	140

Bit socket for internal hexagon screws on the brake calliper

- Hexagon socket
- Ideal for the assembly and disassembly of brake callipers
- Internal square drive to DIN 3120 / ISO 1174
- Short execution
- For manual operation
- Matt finish
- Chrome vanadium

Application range: Mercedes ML (W166)







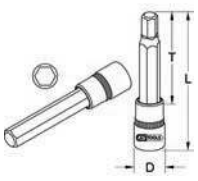
1/2"

	mm	D mm	L mm	T mm	g
911.3927	11,0	22,0	55,0	14,0	90

Bit socket for internal hexagon screws on the brake calliper

- Hexagon socket
- Ideal for the assembly and disassembly of brake callipers
- In accordance with DIN 7422
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Long execution
- with press-fitted nickel-plated bit
- For manual operation
- Matt finish
- Chrome vanadium







1/2"

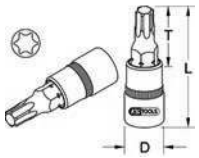
	mm	D mm	L mm	T mm	g
911.1326	6,0	22,0	110,0	72,0	106
911.1327	7,0	22,0	110,0	72,0	108
911.1328	8,0	22,0	110,0	72,0	108
911.1329	9,0	22,0	110,0	72,0	110

Bit socket for Torx screws on the brake calliper

- Torx
- Ideal for the assembly and disassembly of brake callipers
- Internal square drive to DIN 3120 / ISO 1174
- Extra slim design
- Short execution
- For manual operation
- Matt finish
- Chrome vanadium

Application range: for releasing and tightening the hard-to-reach brake calliper screws on **Mercedes** with SBC braking systems, e.g. E class, SL, CLS etc. when changing the brake pads







3/8"

		D mm	L mm	T mm	g
911.3929	T40	20,0	43,0	13,0	40

Special bit socket for Torx screws

- for loosening and tightening the screw connection of the anchor plate
- required for removing and installing the anchor plate on the steering knuckle
- Internal square drive adaptor to DIN 3120 / ISO 1174
- Extra long execution
- For manual operation
- Chrome vanadium

Application range: Smart fortwo (>2007)



3/8"

		Total length mm	g
150.2781	T30	200,0	70

Bit socket set for internal hexagon screws on the brake calliper with bendable ratchet

- Ideally suited to the assembly and disassembly of guide bolts in narrow spaces around the brake calliper
- Ideally suited to the guide bolts on fixed callipers
- Universal usage with all common sizes
- With flexible locking head
- 180° revolving head
- Allows for safe and comfortable working
- Chrome vanadium





			g
918.3500	5 pcs	Bit socket set for internal hexagon screws on the brake calliper with bendable ratchet	250

consists of:

		g
918.3501	Internal square socket wrench insert, 6 mm	25
918.3502	Internal square socket wrench insert, 7 mm	29
918.3503	Internal square socket wrench insert, 8 mm	33
918.3504	Internal square socket wrench insert, 9 mm	35
918.3507	Joint reset ratchet, 13.0 mm	81

Bit socket for internal hexagon screws on the brake calliper

- Hexagon socket
- Ideal for the assembly and disassembly of brake callipers
- Internal square drive adaptor to DIN 3120 / ISO 1174
- Short execution
- For manual operation
- Phosphate finish
- Chrome vanadium

Application range: Mercedes W204 (C class)





3/8"

	mm	D mm	L mm	T mm	g
150.2227	7	20,0	25,0	6,0	30

Bit socket for internal hexagon screws on the brake calliper

- Hexagon socket
- Ideal for the assembly and disassembly of brake callipers
- Internal square drive adaptor to DIN 3120 / ISO 1174
- Short execution
- For manual operation
- Phosphate finish
- Chrome vanadium

Application range: Audi TT (>2007), **Audi** A4 (>2001), **Audi** A6(>2005), **Audi** A8





3/8"

	mm	D mm	L mm	T mm	g
150.2228	8	20,0	25,0	6,0	30

Bit socket for internal hexagon screws on the brake calliper

- Hexagon socket
- Ideal for the assembly and disassembly of brake callipers
- Internal square drive adaptor to DIN 3120 / ISO 1174
- Short execution
- For manual operation
- Phosphate finish
- Chrome vanadium

Application range: Mercedes W164 (M class), **Mercedes** W251 (R class), **BMW**, **Volkswagen** T5





3/8"

	mm	D mm	L mm	T mm	g
150.2229	9	20,0	25,0	6,0	30

Bit socket set for internal square screws on the brake calliper

- Hexagon socket
- Ideal for the assembly and disassembly of brake callipers
- Internal square drive adaptor to DIN 3120 / ISO 1174
- Short execution
- For manual operation
- Phosphate finish
- Chrome vanadium

Application range: Mercedes W204 (C class), **Audi** TT (>2007), **Audi** A4 (>2001), **Audi** A6 (>2005), **Audi** A8, **Mercedes** W164 (M class), W251 (R class), **BMW**, **Volkswagen** T5





3/8"

			g	
150.2225	3 pcs	Bit socket set for internal square screws on the brake calliper	90	

	mm	Suitable for	g	
150.2227	7	Mercedes W204 (C class)	30	
150.2228	8	Audi TT (>2007), Audi A4 (>2001), Audi A6(>2005), Audi A8	30	
150.2229	9	Mercedes W164 (M class), W251 (R class), BMW, VW T5	30	

Bit socket for pentagon screws on the brake calliper

- Internal pentagon
- Ideally suited to the disassembly of brake callipers
- Internal square to DIN 3120 / ISO 1174 with ball reception
- Short execution
- For manual operation
- Phosphate finish
- Chrome vanadium





1/2"

	Profile	mm	L mm	g	
150.2153	⬟	10	56,0	90	

Socket for pentagon screws on brake calliper

- 5-point
- Ideally suited to the disassembly of brake callipers
- Internal square to DIN 3120 / ISO 1174 with ball reception
- Short execution
- For manual operation
- Phosphate finish
- Chrome vanadium





1/2"

	Profile	mm	L mm	g	
150.2154	⬡	14	40,0	70	
150.2155	⬡	19	40,0	120	

Brake calliper special socket set

- Internal pentagon
- 5-point
- Ideally suited to the disassembly of brake callipers
- Internal square to DIN 3120 / ISO 1174 with ball reception
- Short execution
- For manual operation
- Phosphate finish
- Chrome vanadium





1/2"

			g	
150.2140	3 pcs	Brake calliper special socket set	365	

		g	
150.2153	Brake calliper bit socket, pentagon, 10mm	90	
150.2154	Brake calliper socket, pentagon, 14mm	70	
150.2155	Brake calliper socket, pentagon, 19mm	120	

Socket for pentagon screws on brake callipers

- 5-point
- Ideally suited to the assembly and disassembly on brake callipers or pistons
- For the installation and removal of the guide pins, if it is rusty
- Internal square drive adaptor to DIN 3120 / ISO 1174
- Long and thin design
- For manual operation
- Phosphate finish
- Chrome vanadium

Application range: Smart Fortwo (lower brake calliper securing screws on the front axle)/**Opel** Astra G, **Opel** Zafira (brake calliper system on rear axle)







1/2"

	mm	D1 mm	D2 mm	L mm	T mm	g	
515.1101	14	18,3	24,8	70,0	9,0	70	



Socket for Torx screws on the brake disc

- Torx
- Ideally suited to the assembly and disassembly of brake disks
- Internal square drive to DIN 3121 / ISO 1174
- Long execution
- For manual operation
- Phosphate finish
- Chrome molybdenum





3/8"

		D mm	L mm	g	
515.1581	T40	22,0	52,0	130	
515.1582	T45	22,0	52,0	130	
515.1583	T50	22,0	52,0	130	

Special break calliper socket

- 10-point
- Ideal for the assembly and disassembly of the brake calliper
- For connecting the multi-piston brake calliper
- For manual operation
- Phosphate finish
- Chrome molybdenum

Application range: Audi A8, S6, **Porsche** Cayenne etc.



1/2"

	mm	Ø mm	Length mm	g	
150.2192	20	25	39,0	82	

Special break calliper socket

- 7-point rounded
- Ideal for the assembly and disassembly of the brake calliper
- For connecting the multi-piston brake calliper
- For manual operation
- Phosphate finish
- Chrome molybdenum

Application range: Audi A5, A6 and A7





1/2"

	mm	Ø mm	Length mm	g	
150.2236	AS 22	28	47,0	130	

Special break calliper socket

- 10-point
- Ideal for the assembly and disassembly of the brake calliper
- For connecting the multi-piston brake calliper
- For manual operation
- Phosphate finish
- Chrome molybdenum

Application range: Audi Q7 and S8, **Porsche** Macan and Cayman





1/2"

	mm	Ø mm	Length mm	g
150.2234	11,5	25	50,0	90

Special break calliper socket

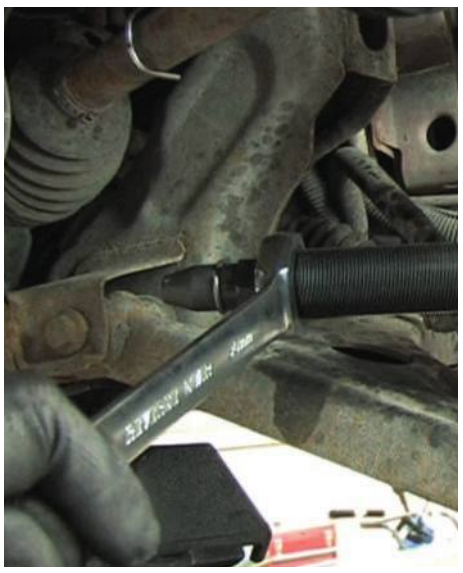
- 10-point
- Ideal for the assembly and disassembly of the brake calliper
- For connecting the multi-piston brake calliper
- For manual operation
- Phosphate finish
- Chrome molybdenum

Application range: Audi Q7, S8, **Porsche** Macan, Cayenne, Cayman etc.



3/8"

	mm	Ø mm	Length mm	g
150.2191	15	19	30,0	45



BRAKE DISC TOOLS

Wheel bearing tool kit for Ford Transit

- For the disassembly of the compact wheel hub/bearing unit
- Enables de -and assembly directly on the vehicle
- Minimum work time
- Secure and easy to use
- Special tool steel
- In durable plastic storage case

Application range: Front axle **Ford** Transit from 2006





			kg
150.2370	17 pcs	Wheel bearing tool kit for Ford Transit	8,77

consists of:

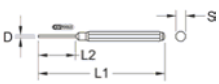
		g
150.2371	Counter bracket for wheel hub flange	570
150.2372	Wheel hub flange with threaded adaptor 1.1/2" x 16G	2310
150.2373	Pressure plate big	350
150.2374	Pressure plate small	160
150.2375	Locking pin for wheel hub flange, 5 pcs	260
150.2376	Thrust bolt 1.1/2" x 16G	2030
150.2377	Half shell coupling for bearing ring, 2 pcs	910
150.2378	Trailing arm for half shell coupling, 3 pcs	405
150.2379	Locking pin for half shell coupling, 2 pcs	60

COTTER PIN DRIVES

Pin punch

- 8-point
- Quenched and tempered
- Mirror polished
- Highly polished
- Chrome vanadium



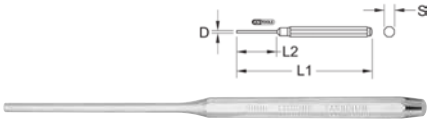




	D mm	L1 mm	L2 mm	S mm	Handle number	g
156.0111	2,0	115,0	30,0	8,0	-	40
156.0112	3,0	125,0	40,0	8,0	-	40
156.0113	4,0	150,0	50,0	9,5	-	60
156.0114	5,0	165,0	50,0	9,5	-	70
156.0115	6,0	180,0	55,0	12,7	-	140
156.0116	8,0	180,0	55,0	12,7	-	150

Pin punch, extra long

- 8-point
- Quenched and tempered
- Mirror polished
- Highly polished
- Chrome vanadium



	D mm	L1 mm	L2 mm	S mm	Handle number	g
156.0121	3,0	200,0	80,0	9,5	-	70
156.0122	4,0	200,0	85,0	9,5	-	70
156.0123	5,0	200,0	90,0	9,5	-	80
156.0124	6,0	200,0	93,0	9,5	-	80
156.0125	8,0	200,0	93,0	12,7	-	150
156.0126	10,0	200,0	93,0	12,7	-	170

Pin punch set

- Quenched and tempered
- Mirror polished
- Highly polished
- Chrome vanadium
- In plastic support bracket



			g
156.0150	6 pcs	115x2 - 125x3 - 150x4 - 165x5 - 180x6 - 180x8 mm	520

Pin punch set

- 8-point
- Quenched and tempered
- Mirror polished
- Highly polished
- Chrome vanadium
- In metal stand with the possibility of wall hanging



			kg
156.0180	17 pcs	Pin punch set	1,00

consists of:

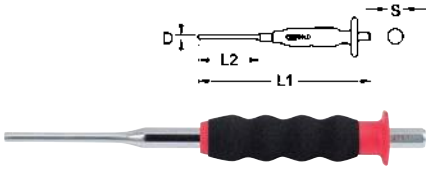
		g
156.0111	Pin punch octagonal shaft, mirror polished, Ø 2mm	40
156.0112	Pin punch octagonal shaft, mirror polished, Ø 3mm	40
156.0113	Pin punch octagonal shaft, mirror polished, Ø 4mm	60

consists of:

156.0114	Pin punch octagonal shaft, mirror polished, Ø 5mm	70
156.0115	Pin punch octagonal shaft, mirror polished, Ø 6mm	140
156.0116	Pin punch octagonal shaft, mirror polished, Ø 8mm	150
156.0121	Pin punch octagonal shaft, mirror polished, extra long, Ø 3mm	70
156.0122	Pin punch octagonal shaft, mirror polished, extra long, Ø 4mm	70
156.0123	Pin punch octagonal shaft, mirror polished, extra long, Ø 5mm	80
156.0124	Pin punch octagonal shaft, mirror polished, extra long, Ø 6mm	80
156.0125	Pin punch octagonal shaft, mirror polished, extra long, Ø 8mm	150
156.0126	Pin punch octagonal shaft, mirror polished, extra long, Ø 10mm	170
156.0130	Pin punch, Ø 2mm	60
156.0131	Pin punch, Ø 3mm	60
156.0132	Pin punch, Ø 4mm	60
156.0133	Pin punch, Ø 5mm	60
156.0134	Pin punch, Ø 6mm	60

Pin punch, cylindrical shaft

- Quenched and tempered
- Tip can be re-sharpened
- Highly polished
- Chrome molybdenum



	D mm	L1 mm	L2 mm	S mm	
156.0231	3,0	150,0	50,0	8,0	52
156.0232	4,0	180,0	61,0	10,0	93
156.0233	5,0	200,0	61,0	10,0	109
156.0234	6,0	210,0	71,0	12,0	160
156.0235	8,0	220,0	85,0	12,0	172

Punch set, cylindrical shaft

- Quenched and tempered
- Tip can be re-sharpened
- Highly polished
- Chrome molybdenum



156.0230	5 pcs	3 - 4 - 5 - 6 - 8 mm	715

Brake pad cotter pin drive with guide tip

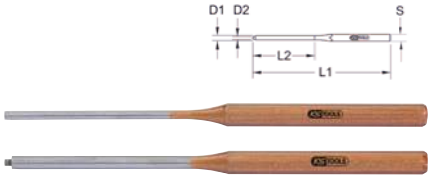
- 8-point
- Extra long execution
- Quenched and tempered
- With guide pin for locking pins
- Suitable for locking pins on vehicles with disk brakes
- Shaft with gold coated lacquer
- Highly polished
- Chrome molybdenum



	D1 mm	D2 mm	L1 mm	L2 mm	S mm	Handle number	
162.0411	4,0	2,7	175,0	85,0	10,0	-	60
162.0412	6,0	3,8	175,0	85,0	10,0	-	70

Brake pad cotter pin drive with guide tip

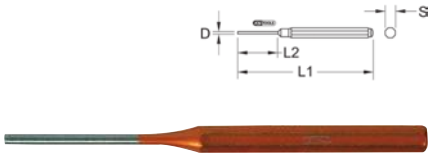
- 6 point
- Extra long execution
- Quenched and tempered
- 150.2151 with guide pin for locking pins
- Suitable for locking pins on vehicles with disk brakes
- Shaft with gold coated lacquer
- Highly polished
- Chrome molybdenum



	D1 mm	D2 mm	L1 mm	L2 mm	S mm	Handle number	
150.2150	4,0		180,0	80,0	10,0	-	70
150.2151	5,8	3,1	175,0	80,0	10,0	-	70

Pin punch

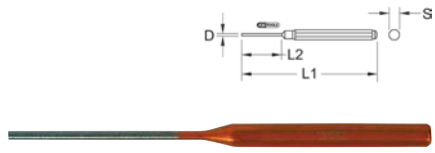
- DIN 6450 form C
- 8-point
- Tip can be re-sharpened
- Quenched and tempered
- Shaft with gold coated lacquer
- Highly polished
- Chrome molybdenum



	D mm	L1 mm	L2 mm	S mm	Handle number	
162.0371	2,0	150,0	35,0	10,0	-	60
162.0372	2,5	150,0	40,0	10,0	-	60
162.0373	3,0	150,0	40,0	10,0	-	60
162.0374	3,5	150,0	40,0	10,0	-	65
162.0375	4,0	150,0	50,0	10,0	-	65
162.0376	4,5	150,0	50,0	10,0	-	65
162.0377	5,0	150,0	50,0	10,0	-	65
162.0378	6,0	150,0	50,0	10,0	-	70
162.0379	7,0	150,0	55,0	10,0	-	95
162.0380	8,0	150,0	55,0	12,0	-	100
162.0381	9,0	150,0	55,0	12,0	-	110
162.0382	10,0	150,0	55,0	12,0	-	115
162.0383	12,0	150,0	55,0	16,0	-	170

Cotter pin drive, long

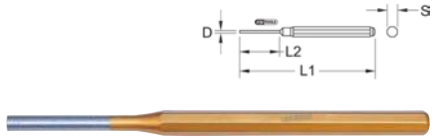
- 8-point
- Quenched and tempered
- Tip can be re-sharpened
- Shaft with gold coated lacquer
- Highly polished
- Chrome molybdenum



	D mm	L1 mm	L2 mm	S mm	Handle number	
162.0391	3,0	175,0	80,0	10,0	-	60
162.0392	4,0	175,0	80,0	10,0	-	70
162.0393	5,0	175,0	80,0	10,0	-	80
162.0394	6,0	175,0	80,0	10,0	-	90
162.0395	8,0	175,0	80,0	12,0	-	140
162.0396	10,0	175,0	80,0	12,0	-	150

Pin punch, extra long

- 8-point
- Quenched and tempered
- Tip can be re-sharpened
- Shaft with gold coated lacquer
- Highly polished
- Chrome molybdenum



	D mm	L1 mm	L2 mm	S mm	Handle number	
162.0401	2,0	200,0	40,0	10,0	-	82
162.0402	3,0	200,0	50,0	10,0	-	90
162.0403	4,0	200,0	55,0	10,0	-	92
162.0404	5,0	200,0	55,0	10,0	-	96
162.0405	6,0	200,0	55,0	12,0	-	100
162.0406	8,0	200,0	55,0	12,0	-	150
162.0407	10,0	200,0	55,0	12,0	-	165

Pin punch set

- Quenched and tempered
- Tip can be re-sharpened
- Shaft with gold coated lacquer
- Highly polished
- Chrome molybdenum
- In a plastic bag



162.2122	6 pcs	150x10x3 - 150x10x4 - 150x10x5 - 150x10x6 - 150x12x8 - 150x12x10 mm	470

Pin punch set

- Quenched and tempered
- Tip can be re-sharpened
- Shaft with gold coated lacquer
- Highly polished
- Chrome vanadium
- In plastic support bracket



162.2123	6 pcs	150x10x3 - 150x10x4 - 150x10x5 - 150x10x6 - 150x12x8 - 150x12x10 mm	470

Pin punch set

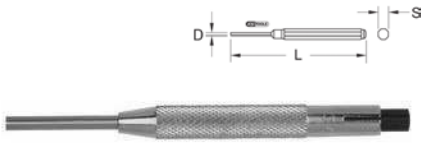
- Quenched and tempered
- Tip can be re-sharpened
- Shaft with gold coated lacquer
- Highly polished
- Chrome molybdenum
- In metal storage box



162.0370	6 pcs	150x10x3 - 150x10x4 - 150x10x5 - 150x10x6 - 150x12x8 - 150x12x10mm	750

Cotter pin drive with guide sleeve

- Guide sleeve, coded
- Ø 0.9 to 4.9 mm with loose guide sleeve
- Ø 5.9 mm with fixed sleeve
- Highly polished
- Chrome vanadium



	D mm	L mm	S mm	
162.2249	0,9	70,0	5,0	15
162.2250	1,4	80,0	6,0	21
162.2251	1,8	83,0	6,0	21
162.2252	2,4	92,0	7,0	30
162.2253	2,8	94,0	7,0	30
162.2254	3,4	100,0	8,0	35
162.2255	3,9	100,0	8,0	35
162.2256	4,9	110,0	10,0	45
162.2257	5,9	115,0	12,0	68

Cotter pin drive set with guide sleeve

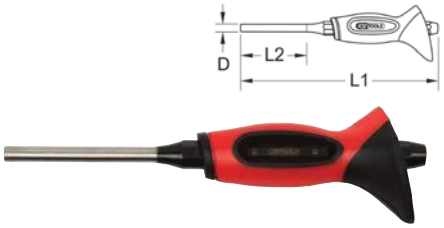
- Guide sleeve, coded
- Ø 0.9 to 4.9 mm with loose guide sleeve
- Ø 5.9 mm with fixed sleeve
- Highly polished
- Chrome vanadium
- In a plastic bag



162.2310	8 pcs	70x0,9 - 80x1,4 - 83x1,8 - 92x2,4 - 94x2,8 - 100x3,4 - 100x3,9 - 115x5,9 mm	240

Pin punches with hand grip

- Round
- Quenched and tempered
- Two component handle
- Tip can be re-sharpened
- Tip polished, shaft burnished
- Chrome vanadium



	D mm	L1 mm	L2 mm	S mm	
156.0211	2,0	150,0	30,0	10,0	100
156.0212	3,0	150,0	40,0	10,0	100
156.0213	4,0	150,0	55,0	10,0	100
156.0214	5,0	150,0	60,0	10,0	100
156.0215	6,0	150,0	60,0	10,0	100
156.0216	7,0	150,0	60,0	12,0	110
156.0217	8,0	150,0	60,0	12,0	110
156.0218	9,0	150,0	60,0	12,0	110
156.0219	10,0	150,0	60,0	12,0	130

Pin punch set with hand protection grip

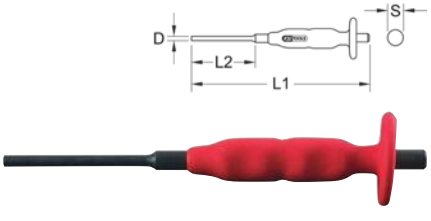
- Round
- Quenched and tempered
- Two component handle
- Tip can be re-sharpened
- Tip polished, shaft burnished
- Chrome vanadium



156.0220	5 pcs	3 - 4 - 5 - 6 - 8 mm	800

Pin punch with hand protection grip

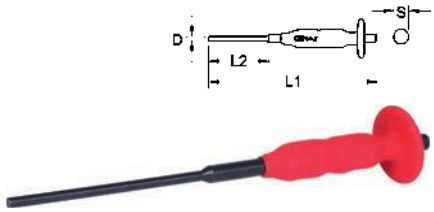
- Round
- Quenched and tempered
- Tip can be re-sharpened
- Burnished
- Chrome vanadium



	D mm	L1 mm	L2 mm	S mm	
156.0002	3,0	130,0	30,0	8,0	50
156.0003	3,0	145,0	40,0	8,0	60
156.0004	4,0	180,0	50,0	8,0	100
156.0005	5,0	180,0	60,0	10,0	100
156.0006	6,0	205,0	80,0	10,0	130
156.0008	8,0	225,0	85,0	12,0	150
156.0010	10,0	225,0	90,0	12,0	200

Pin punches with hand grip

- Round
- Quenched and tempered
- Tip can be re-sharpened
- Burnished
- Chrome vanadium



	D mm	L1 mm	L2 mm	S mm	
156.0026	6,0	270,0	110,0	10,0	130
156.0028	8,0	300,0	130,0	12,0	220
156.0030	10,0	300,0	140,0	12,0	250
156.0032	12,0	300,0	140,0	14,0	340
156.0034	14,0	300,0	140,0	16,0	450

Pin punch set with hand protection grip

- With wall mounting possibility
- Tip can be re-sharpened
- Quenched and tempered
- Burnished
- Chrome vanadium
- In metal stand



156.0000	5 pcs	145x3 - 180x4 - 180x5 - 205x6 - 225x8 mm	650

Pin punch set with hand protection grip

- Quenched and tempered
- Tip can be re-sharpened
- Burnished
- Chrome vanadium
- In metal stand with the possibility of wall hanging



156.0020	5 pcs	270x6 - 300x8 - 300x10 - 300x12 - 300x14 mm	2,70

BRAKE SPRING TOOL

Brake spring clip tool

- Ideally suited to the assembly and disassembly of brake springs on drum brakes
- With secure clamping screw
- The return spring in placed into the hook head and tightened by turning the handle
- It is hung by turning the spring into the correct position
- Two component handle



	Length mm	g	
150.2218	220,0	70	

Hand brake retention clip tool

- Ideal for the assembly and disassembly of the retaining clip on the hand brake jaws of the disk brake
- Guide slots in the function area
- Used for cylindrical and conical retaining clips
- With hanging hole
- One component handle

Application range: Mercedes parking brakes





	Length mm	g	
150.2206	145,0	115	

Brake spring clip tool

- Ideal for disassembling the retaining clamp
- Press guide slots into the provided notch
- Then turn the handle by 90° in order to release the clamp from the nail
- Two component handle

Application range: European vehicles with brake jaw retaining clamps





	Length mm	g	
150.2207	190,0	133	

Brake spring clip tool

- Ideal for the assembly and disassembly of brake jaw retaining clips on drum brakes
- Quick, easy and correct assembly and disassembly of the spring clip
- Two component handle





	Ø mm	Length mm	g	
150.2212	13,0 - 22,0	175,0	130	

Brake spring clip tool

- Ideal for the assembly and disassembly of brake jaw retaining clips on drum brakes
- Quick, easy and correct assembly and disassembly of the spring clip
- Two component handle





	Ø mm	Length mm	g	
150.2213	12,0 - 16,0	160,0	130	

Brake clip tool

- Ideal for the assembly and disassembly of brake jaw retaining springs on drum brakes
- Quick, easy and correct assembly and disassembly of the retaining spring
- Angled
- Special tool steel
- With T-handle





	Height mm	Length mm	g	
150.2208	80,0	155,0	50	

Hex socket for adjusting the handbrake lever travel

- 6 point
- ideally suited for adjusting the handbrake lever travel
- Internal square drive adaptor
- Extra-long design for actuating the screw via the threaded rod
- For manual operation
- Matt finish
- Chrome vanadium

Application range: Audi A3, A4, A6, TT, **BMW** 1er, 3er, **Ford** Fiesta, Focus, Mondeo, **Opel** Adam, Corsa, Astra, Vectra, **Seat**, **Škoda**, **Volkswagen** Polo, Golf, Passat etc.



3/8"

	mm	Total length mm	g	
917.1453	10	120,0	168	

BRAKE PIPE TESTER

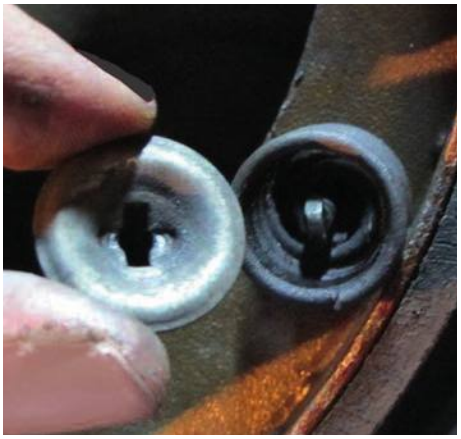
Brake pipe cleaning tool

- Quick and easy to check brake pipes
- With two scraper surfaces for the removal of dirt and corrosion
- Easy manual operation when testing the brake pipes without risk of damage
- A level and angled edge allow it to reach all installation points
- The shaped point allow it to remove crusted dirt quickly and to clean the surfaces of the pipes
- Also suitable for detecting hidden corrosion in the brake pipes
- Special plastic





	Length mm	g	
150.2209	165,0	12	

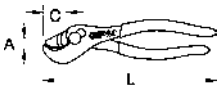


BRAKE SPRING PLIERS

Special pipe wrench

- 2-stage adjustment
- With PVC dipped handle
- Ideal for round turned pipe fittings
- Polished surface
- Chrome vanadium







	A mm	L mm	C mm	g	
115.1361	0-16	178,0	23,0	180	

Round jaw locking pliers with wire cutter

- For safe gripping of nuts and screw heads
- 3 level points prevents slipping and rounding
- With loosening lever
- With easy locking action
- Size adjustment using the adjustment wheel
- Good adaptation to existing surfaces
- With wire cutting function
- No flaring under the strongest loads
- Loosening under continuous pressure of a national
- Nickel plated
- Chrome molybdenum





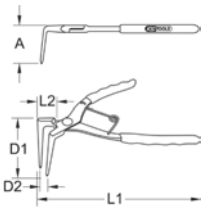
	mm	L mm	g	
115.1175	11-19	175,0	370	
115.1176	16-27	240,0	700	



Long arm circlip pliers for external circlips, angled

- Durable, extra long precision points
- 90° angled tips
- Self opening
- With PVC dipped handle
- Ideal for brake calliper and transmission work
- Chrome vanadium





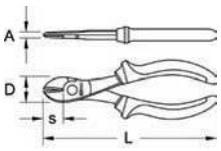


	A mm	D1 mm	D2 mm	L1 mm	L2 mm	g	
500.1037	63,0	18,0	4,0	185,0	18,0	190	

ERGOTORQUE® High leverage side cutter

- In accordance to DIN ISO 5749
- Long cutting edge
- Suitable for various types of wire
- Induction-hardened precision cutting
- Extremely robust version
- Two component handle
- Matt chrome
- Special tool steel



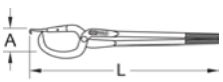




	A mm	D mm	L mm	S mm	g	
115.1025	13,0	32,0	260,0	31,0	390	

Car brake spring pliers

- For attaching and dismantaling the brake shoes retaining spring
- For glued and riveted brake shoes
- Special surround
- Chrome vanadium





	A mm	L mm	g	
150.2211	130,0	325,0	335	

Car brake spring pliers

- For attaching and dismantaling the brake shoes retaining spring
- For glued and riveted brake shoes
- Special surround
- With moveable wheel clamp
- Chrome vanadium





	A mm	L mm	g	
150.2116	130	220,0	340	

Brake block retaining clip pliers

- Ideally suited to the assembly of spring clamps on drum brakes
- For both brake block retaining spring designs
- Special tool steel
- Aluminium handle
- Special jaws for pre-tensioning the brake block retaining clip

Application range: Mercedes A class(A140), **Citroën**, **Renault**, **Peugeot** with Lucas drum brakes





	Length mm	g	
150.2214	220,0	220	

Brake spring pliers

- Ideally suited to the assembly and disassembly of hand brake cables on drum brakes
- With holding lever for safe working
- With PVC dipped handle
- Chrome vanadium





	Length mm	g	
150.2118	225,0	175	

BRAKE PEDAL LOCKING DEVICE

Brake pedal locking device

- Ideally suited to setting the brake pedal in the desired position
- For obstructing the seat or the steering wheel
- Allows for a constant brake pressure over a long time thanks to internal springs
- Ideally used when testing the tightness on hydraulic braking systems, testing and adjusting brake force regulators or brake force limiters
- Easy and correct use
- Sturdy design





	Length mm	g
150.2216	460-660	1,80

Telescopic engine compartment and tail gate supports

- Ideally for supporting the engine compartment or tail gate
- Also suitable for blocking the pedals
- Rubber surfaces protect against scratches
- Allows for a constant brake pressure over a longer time
- Infinitely adjustable





	Length mm	g
140.2178	640,0 - 1090,0	920

BRAKE PEDAL UNLOCKING TOOL

Brake Pedal Release Pliers for VAG

- for unlocking the pressure rod of the brake booster from the brake pedal
- required when replacing the master brake cylinder
- Simple handling
- can be used with T45 bit
- Chrome molybdenum



	Length mm	g
150.2778	190,0	440

Brake pedal release tool for VAG

- for unlocking the pressure rod of the brake booster from the brake pedal
- with special bent handle
- Simple handling
- Chrome vanadium

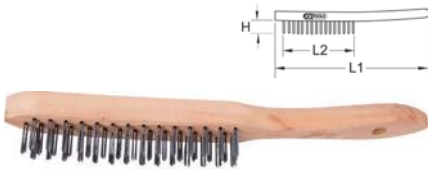


	Length mm	g
150.2779	375,0	415

BRAKE CALLIPER CLEANING

Steel hand wire brush 3 rowed

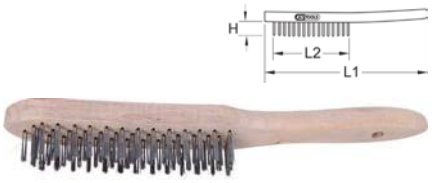
- 3 rowed
- Universal usage
- wooden handle
- For surface preparation
- With steel bristles



	H mm	L1 mm	L2 mm	g
201.2305	32,0	290,0	138,0	120

Steel hand wire brush 4 rowed

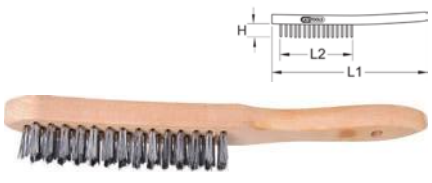
- 4 rowed
- Universal usage
- wooden handle
- For surface preparation
- With steel bristles



	H mm	L1 mm	L2 mm	g
201.2311	32,0	290,0	138,0	120

Stainless steel hand wire hand brush 3 rowed

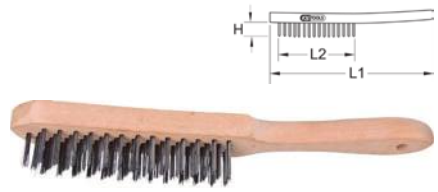
- 3 rowed
- Universal usage
- wooden handle
- For surface preparation
- With stainless steel bristles



	H mm	L1 mm	L2 mm	g
201.2310	32,0	290,0	138,0	120

Stainless steel hand wire hand brush 4 rowed

- 4 rowed
- Universal usage
- wooden handle
- For surface preparation
- With stainless steel bristles



	H mm	L1 mm	L2 mm	g
201.2306	32,0	290,0	138,0	100

Steel wire hand brush 4 rowed

- 4 rowed
- Universal usage
- Plastic hand grip casing
- For surface preparation
- Smooth steel wire



	H mm	L1 mm	L2 mm	g
201.2325	25,0	285,0	130,0	120

Brass wire hand brush 3 rowed

- 3 rowed
- Universal usage
- Plastic hand grip casing
- For surface preparation
- Straight brass wire

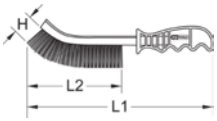


	H mm	L1 mm	L2 mm	g
201.2326	25,0	285,0	130,0	105

Steel wire all purpose wire brush

- With plastic handle
- For surface preparation
- Crimped steel wire





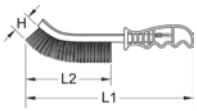


	H mm	L1 mm	L2 mm	g
201.2300	28,0	250,0	145,0	90

Stainless steel wire all purpose wire brush

- With plastic handle
- For surface preparation
- Curled and rust free steel wire





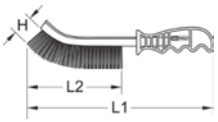


	H mm	L1 mm	L2 mm	g	
201.2301	28,0	250,0	145,0	90	

Brass steel all purpose wire brush

- With plastic handle
- For surface preparation
- Curved brass wire





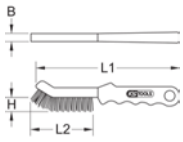


	H mm	L1 mm	L2 mm	g	
201.2302	28,0	250,0	145,0	90	

Steel wire brake saddle wire brush 2 rowed, straight

- 2 rowed
- With hanging hole
- Very narrow execution
- For narrow brake saddle shafts
- Robust stock
- Two component handle
- For removing of stubborn brake dust
- For surface preparation
- Smooth steel wire





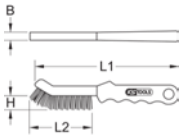


	B mm	H mm	L1 mm	L2 mm	g	
201.2320	12,0	22,0	225,0	90,0	90	

Steel wire brake saddle wire brush 2 rowed, straight and tapered point

- 2 rowed
- With hanging hole
- Tapered point
- Very narrow execution
- For narrow brake saddle shafts
- Robust stock
- Two component handle
- For removing of stubborn brake dust
- For surface preparation
- Smooth steel wire





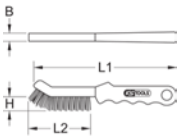


	B mm	H mm	L1 mm	L2 mm	g	
201.2321	12,0	14,0 - 22,0	225,0	90,0	90	

Brass wire brake saddle wire brush 2 rowed, straight

- 2 rowed
- Very narrow execution
- For narrow brake saddle shafts
- Robust stock
- With hanging hole
- Two component handle
- For removing of stubborn brake dust
- For surface preparation
- Curved brass wire







	B mm	H mm	L1 mm	L2 mm	g	
201.2322	12,0	22,0	225,0	90,0	90	

Hone brush for brake calliper casing

- For corroded attachment bore holes in the brake calliper casing
- For east assembly of the new guide sleeves
- Universal usage
- Usable with hand-operated bore machine
- Only to be used clockwise and with a maximum turning speed on 500 rpm
- Special tool steel



	Ø mm	Length mm	g	
150.1182	9,0	200,0	15	
150.1183	19,0	200,0	20	

carbide scraper

- ideal for removing stubborn impurities, sealant residues and surface treatment
- for burnt on pads on the exhaust, brakes etc.
- with a very hard-wearing carbide cutting element
- a solid blade with two scraping edges
- Extremely long service life
- works as a compression and a pulling blade
- With an ergonomic, moulded, one component handle
- With reinforcement eyelet

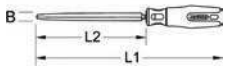




	Length mm	Width mm	g	
907.2237	210,0	32,0	129	

Triangular hollow scraper

- Ideally suited to treating surfaces
- 3 cutting edges for clean deburring
- Work areas ground
- In accordance with DIN 8350 Shape C
- Wooden handle
- Special tool steel



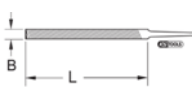


	L1 mm	L2 mm	g	
150.2241	270,0	150,0	120	
150.2242	320,0	205,0	160	

Brake saddle file inset extra narrow without handle

- Especially suited for Japanese vehicles
- With vehicles with disk brakes
- Bevelled edges
- Extra narrow execution
- Insert unilaterally coarsely diagonally milled
- With blunt scraper on the forehead side
- For cleaning the brake saddle
- For removing of coarse residues
- Special tool steel





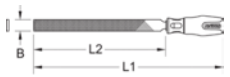


	B mm	L mm		g	
161.0960	10,0	150,0	161.0010	60	

Brake saddle file extra narrow

- Especially suited for Japanese vehicles
- With vehicles with disk brakes
- Two component handle
- Extra narrow execution
- Bevelled edges
- Insert unilaterally coarsely diagonally milled
- With blunt scraper on the forehead side
- For cleaning the brake saddle
- For removing of coarse residues
- Special tool steel







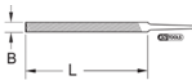
	B mm	L1 mm	L2 mm	File blade	g	
157.0960	10,0	270,0	150,0	161.0960	140	

WHEEL HUB CLEANING

Brake saddle file without handle

- Especially suited for European vehicles
- With vehicles with disk brakes
- Bevelled edges
- Insert unilaterally coarsely diagonally milled
- With blunt scraper on the forehead side
- For cleaning the brake saddle
- For removing of coarse residues
- Special tool steel





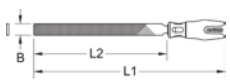


	B mm	L mm		g	
161.0950	12,0	150,0	161.0010	90	

Brake saddle file

- Especially suited for European vehicles
- With vehicles with disk brakes
- Two component handle
- Bevelled edges
- Insert unilaterally coarsely diagonally milled
- With blunt scraper on the forehead side
- For cleaning the brake saddle
- For removing of coarse residues
- Special tool steel





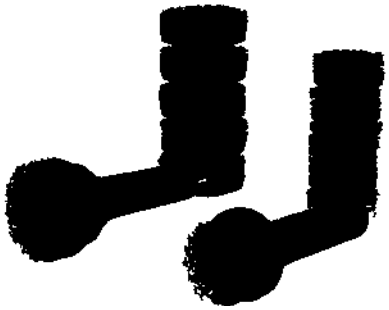


	B mm	L1 mm	L2 mm	File blade	g	
157.0950	12,0	270,0	150,0	161.0950	170	

Wheel hub bolt grinder set, Ø 40 / 50 mm

- For the optimal cleaning of wheel hubs and brake discs
- Ideally used for passenger cars, vans and saloon car wheel hubs with stud bolts up to Ø 40 or Ø 50 mm in diameter
- Grinding disc with 10 mm pin receptacle with 3 contact surfaces
- for use with drills or cordless screwdrivers (max. speed 1500 RPM)
- Velcro fastening for quick replacement of the cleaning disc
- No flying sparks
- Low wear - maximum service life (about 50 vehicles per disc)
- Clean contact surfaces prevent falsification of the wheel tightening torques
- Minimum dust development due to open-pore grinding medium and cup-shaped grinding disc





10 mm

			g	
100.4080	14 pcs	Wheel hub bolt grinder set, Ø 40 / 50 mm	470	

consists of:

		g	
100.4081	Wheel hub grinder	50	
100.4085	Wheel hub bolt grinding disc,small,5 pcs	230	
100.4088	Wheel hub bolt grinding disc,large,5 pcs	200	

Wheel hub bolt grinding discs Ø 40 mm

- 5 replacement discs Ø 40 mm
- For the optimal cleaning of wheel hubs and brake discs
- Ideally used for passenger cars, vans and saloon car wheel hubs with stud bolts up to Ø 40 mm in diameter
- Grinding disc with 10 mm pin receptacle with 3 contact surfaces
- for use with drills or cordless screwdrivers (max. speed 1500 RPM)
- Velcro fastening for quick replacement of the cleaning disc
- No flying sparks
- Low wear - maximum service life (about 50 vehicles per disc)
- Clean contact surfaces prevent falsification of the wheel tightening torques
- Minimal dust development due to open-pore grinding medium
- supplied without grinding disc



		Ø mm	g	
100.4085	5 pcs	40	230	

Wheel hub bolt grinding discs Ø 50 mm

- 5 replacement discs Ø 50 mm
- For the optimal cleaning of wheel hubs and brake discs
- Ideally used for passenger cars, vans and saloon car wheel hubs with stud bolts up to Ø 50 mm in diameter
- Grinding disc with 10 mm pin receptacle with 3 contact surfaces
- for use with drills or cordless screwdrivers (max. speed 1500 RPM)
- Velcro fastening for quick replacement of the cleaning disc
- No flying sparks
- Low wear - maximum service life (about 50 vehicles per disc)
- Clean contact surfaces prevent falsification of the wheel tightening torques
- Minimal dust development due to open-pore grinding medium
- supplied without grinding disc



		Ø mm	g	
100.4088	5 pcs	50	200	

Wheel hub grinding disc set Ø 65 / 105 mm

- For the optimal cleaning of wheel hubs and brake discs
- Ideal for use with passenger cars, vans and saloon car wheel hubs
- Grinding disc with 1/2" receptacle
- For use with impact wrenches or cordless impact wrenches (max. speed 7,000 rpm)
- No flying sparks
- Low wear - maximum service life (about 50 vehicles per disc)
- Clean contact surfaces prevent falsification of the wheel tightening torques
- Minimal dust development due to open-pore grinding medium





1/2"

			g	
100.4035	2 pcs	Wheel hub grinding disc set Ø 65 / 105 mm	300	

consists of:

		g	
100.4038	Wheel hub grinder Ø 65 mm	100	
100.4039	Wheel hub grinder Ø 105 mm	200	



Wheel hub grinding disc set Ø 65 mm

- For the optimal cleaning of wheel hubs and brake discs
- Ideal for use with passenger cars, vans and saloon car wheel hubs
- Grinding disc with 1/2" receptacle
- For use with impact wrenches or cordless impact wrenches (max. speed 7,000 rpm)
- No flying sparks
- Low wear - maximum service life (about 50 vehicles per disc)
- Clean contact surfaces prevent falsification of the wheel tightening torques
- Minimal dust development due to open-pore grinding medium





1/2"

		Ø mm	g	
100.4036	5 pcs	65	575	

consists of:

	X		g	
100.4038	5	Wheel hub grinder Ø 65 mm	100	

Wheel hub grinding disc set Ø 105 mm

- For the optimal cleaning of wheel hubs and brake discs
- Ideal for use with passenger cars, vans and saloon car wheel hubs
- Grinding disc with 1/2" receptacle
- For use with impact wrenches or cordless impact wrenches (max. speed 7,000 rpm)
- No flying sparks
- Low wear - maximum service life (about 50 vehicles per disc)
- Clean contact surfaces prevent falsification of the wheel tightening torques
- Minimal dust development due to open-pore grinding medium





1/2"

		Ø mm	g	
100.4037	5 pcs	105	625	

consists of:

	X		g	
100.4039	5	Wheel hub grinder Ø 105 mm	200	



Wheel hub grinder set Ø 150 mm, internal Ø 90 mm

- For the optimal cleaning of wheel hubs and brake discs
- ideal for use on large truck, van and large limousine wheel hubs up to Ø 150 mm
- Optimised for the latest wheel hubs with larger inner diameter (Ø 90 mm)
- Grinding disc with 1/2" receptacle
- For use with impact wrenches or cordless impact wrenches (max. speed 500 rpm)
- Velcro fastening for quick replacement of the cleaning disc
- No flying sparks
- Low wear - maximum service life (about 50 vehicles per disc)
- Clean contact surfaces prevent falsification of the wheel tightening torques
- Minimal dust development due to open-pore grinding medium





			g	
100.5075	2 pcs	Wheel hub grinder set Ø 150 mm, internal Ø 90 mm	460	

consists of:

		g	
100.5076	Wheel hub grinder, without disc, Ø 150 mm	390	
100.5077	Replacement disk for wheel hub grinder, Ø 150 mm	70	

Wheel hub grinder set Ø 160 mm, internal Ø 60 mm

- For the optimal cleaning of wheel hubs and brake discs
- ideal for use on large truck, van and large limousine wheel hubs up to Ø 160 mm
- Optimised for the latest wheel hubs with larger inner diameter (Ø 60 mm)
- Grinding disc with 10 mm pin receptacle with 3 contact surfaces
- for use with drills or cordless screwdrivers (max. speed 1500 RPM)
- Velcro fastening for quick replacement of the cleaning disc
- No flying sparks
- low-wear – maximum standing time (per disc approx. 100 vehicles)
- Clean contact surfaces prevent falsification of the wheel tightening torques
- Minimum dust development due to open-pore grinding medium and cup-shaped grinding disc





10 mm

			g	
100.4070	4 pcs	Wheel hub grinder set Ø 160 mm, internal Ø 60 mm	800	

consists of:

		g	
100.4071	Wheel hub grinder, without disc, Ø 160 mm	270	
100.4075	Replacement screen set for wheel hub grinder, Ø 160 mm, internal Ø 60 mm, 3 pcs.	530	

Spare disc set for wheel hub grinder, Ø 160 mm, inner-Ø 60 mm

- 3 replacement discs Ø 160 mm
- For the optimal cleaning of wheel hubs and brake discs
- ideal for use on large truck, van and large limousine wheel hubs up to Ø 160 mm
- Optimised for the latest wheel hubs with larger inner diameter (Ø 60 mm)
- For use with boring machines and cordless spanners (max. speed 1,000 rpm)
- Velcro fastening for quick replacement of the cleaning disc
- No flying sparks
- low-wear – maximum standing time (per disc approx. 100 vehicles)
- Clean contact surfaces prevent falsification of the wheel tightening torques
- Minimal dust development due to open-pore grinding medium
- supplied without grinding disc





		Ø mm	g	
100.4075	3 pcs	160	530	

Wheel hub grinder set Ø 160 mm, internal Ø 75 mm

- For the optimal cleaning of wheel hubs and brake discs
- ideal for use on large truck, van and large limousine wheel hubs up to Ø 160 mm
- Optimised for the latest wheel hubs with larger inner diameter (Ø 75 mm)
- Grinding disc with 10 mm pin receptacle with 3 contact surfaces
- for use with drills or cordless screwdrivers (max. speed 1500 RPM)
- Velcro fastening for quick replacement of the cleaning disc
- No flying sparks
- low-wear – maximum standing time (per disc approx. 100 vehicles)
- Clean contact surfaces prevent falsification of the wheel tightening torques
- Minimum dust development due to open-pore grinding medium and cup-shaped grinding disc





10 mm

			g	
100.5070	4 pcs	Wheel hub grinder set Ø 160 mm, internal Ø 75 mm	800	

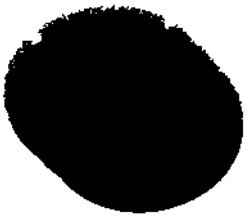
consists of:

100.4071	Wheel hub grinder, without disc, Ø 160 mm	270	
100.5071	Replacement screen set for wheel hub grinder, Ø 160 mm, internal Ø 75 mm, 3 pcs.	530	

Spare disc set for wheel hub grinder, Ø 160 mm, inner-Ø 75 mm

- 3 replacement discs Ø 160 mm
- For the optimal cleaning of wheel hubs and brake discs
- ideal for use on large truck, van and large limousine wheel hubs up to Ø 160 mm
- Optimised for the latest wheel hubs with larger inner diameter (Ø 75 mm)
- for use with drills or cordless screwdrivers (max. speed 1500 RPM)
- Velcro fastening for quick replacement of the cleaning disc
- No flying sparks
- low-wear – maximum standing time (per disc approx. 100 vehicles)
- Clean contact surfaces prevent falsification of the wheel tightening torques
- Minimal dust development due to open-pore grinding medium
- supplied without grinding disc





		Ø mm		
100.5071	3 pcs	160	530	

consists of:

100.4091	Wheel hub grinder, without disc, Ø 200 mm	470	
100.4095	Wheel hub grinder replacement screen set, Ø 200 mm, internal Ø 85 mm, 2 pcs.	530	

Wheel hub grinder spare disc set, Ø 200 mm, inner-Ø 85 mm

- 2 replacement discs Ø 200 mm
- For the optimal cleaning of wheel hubs and brake discs
- Ideally used for passenger cars, vans and saloon car wheel hubs up to Ø 200 mm
- For use with boring machines and cordless spanners (max. speed 1,000 rpm)
- Velcro fastening for quick replacement of the cleaning disc
- No flying sparks
- low-wear – maximum standing time (per disc approx. 100 vehicles)
- Clean contact surfaces prevent falsification of the wheel tightening torques
- Minimal dust development due to open-pore grinding medium
- supplied without grinding disc





		Ø mm		
100.4095	2 pcs	200	530	

Wheel hub centring bore grinder set, Ø 160 mm, inner-Ø 50 mm

- with a centre guide and integrated grinder for wheel centring cleaning
- for optimal cleaning of the inside rim bearing surface
- ideal for use on large truck, van and large limousine wheel hubs up to Ø 160 mm
- for minimum wheel centring diameter 51 mm
- Grinding disc with 10 mm pin receptacle with 3 contact surfaces
- for use with drills or cordless screwdrivers (max. speed 1500 RPM)
- Velcro fastening for quick replacement of the cleaning disc
- No flying sparks
- low-wear – maximum standing time (per disc approx. 100 vehicles)
- Clean contact surfaces prevent falsification of the wheel tightening torques
- Minimum dust development due to open-pore grinding medium and cup-shaped grinding disc





10 mm

100.5065	2 pcs	Wheel hub centring bore grinder set, Ø 160 mm, inner-Ø 50 mm	470

consists of:

100.4071	Wheel hub grinder, without disc, Ø 160 mm	270	
100.5066	Replacement screen for wheel hub centring bore grinder, Ø 160 mm, internal Ø 50 mm	200	

Spare disc set for wheel hub centring bore grinder, Ø 160 mm, inner-Ø 50 mm

- 3 replacement discs Ø 160 mm
- with a centre guide and integrated grinder for wheel centring cleaning
- for optimal cleaning of the inside rim bearing surface
- ideal for use on large truck, van and large limousine wheel hubs up to Ø 160 mm
- for minimum wheel centring diameter 51 mm
- for use with drills or cordless screwdrivers (max. speed 1500 RPM)
- Velcro fastening for quick replacement of the cleaning disc
- No flying sparks
- low-wear – maximum standing time (per disc approx. 100 vehicles)
- Clean contact surfaces prevent falsification of the wheel tightening torques
- Minimal dust development due to open-pore grinding medium
- supplied without grinding disc





		Ø mm		
100.5067	3 pcs	160	600	

consists of:

100.5066	Replacement screen for wheel hub centring bore grinder, Ø 160 mm, internal Ø 50 mm	200	

Wheel hub grinder set Ø 200 mm, internal Ø 85 mm

- For the optimal cleaning of wheel hubs and brake discs
- Ideally used for passenger cars, vans and saloon car wheel hubs up to Ø 200 mm
- Grinding disc with 10 mm pin receptacle with 3 contact surfaces
- For use with boring machines and cordless spanners (max. speed 1,000 rpm)
- Velcro fastening for quick replacement of the cleaning disc
- No flying sparks
- low-wear – maximum standing time (per disc approx. 100 vehicles)
- Clean contact surfaces prevent falsification of the wheel tightening torques
- Minimum dust development due to open-pore grinding medium and cup-shaped grinding disc





10 mm

100.4090	3 pcs	Wheel hub grinder set Ø 200 mm, internal Ø 85 mm	1,01	

BRAKE DISC SCRAPER

Brake disk scraper

- Ideally suited to removing rust on the external sides of the brake disk
- As well as the coating of the brake calliper
- Recommendation: Use crank 440.0335 to turn the brake disk
- Use for cleaning
- Two component handle





	Length mm		
440.0330	215,0	200	

Crank for brake disc

- For turning the brake disc when using the scraper 440.0330
- For removing rust from the outer edges
- Angled handle
- Special tool steel





	L1 mm	L2 mm	g	
440.0335	180,0	100,0	240	



ASSEMBLY SLEEVES

Brake assembly sleeve set

- Avoids damage by tilting the wheel bearings on the axle journal
- For mounting brake discs or brake drums with integrated wheel bearing
- Quick and safe assembly without hammer
- Mirror polished
- Chrome vanadium

Application range: universal, but particularly for **PSA**





			g	
700.2320	8 pcs	Brake assembly sleeve set	885	

consists of:

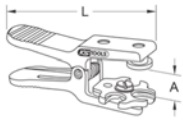
		g	
700.2321	Assembly sleeve, 24/35 x 50 mm	193	
700.2322	Assembly sleeve, 24/30 x 50 mm	30	
700.2323	Assembly sleeve, 20/25 x 50 mm	93	
700.2324	Assembly sleeve, 22/25 x 50 mm	122	
700.2325	Assembly sleeve, 28/30 x 50 mm	148	
700.2326	Assembly sleeve, 22/30 x 50 mm	130	
700.2327	Assembly sleeve, 20/30 x 50 mm	38	
700.2328	Assembly sleeve, 20/29 x 50 mm	64	

PIPE STOPPER

ALLinONE Hose clamp pliers set

- Simple sealing of pipe lines, 4.75 mm (3/16“) to 14.0 mm (9/16“)
- Rotary magazine with 4 slots for the corresponding pipe size
- Ideal for maintenance work with gasoline, oil, water and antifreeze
- Prevents moisture and foreign objects from entering
- Ideal for use in passenger cars, vans and large vans, commercial vehicles, tractors, agricultural machinery, construction machinery and industrial applications
- Special plastic







		Ø mm	A mm	L mm	g	
122.1295	3 pcs	4,75-14	38,0	120,0	149	

consists of:

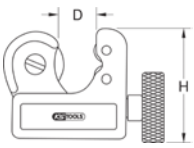
	x		g	
122.1296	2	ALLinONE Fluidstopper Ø 4,75-14 mm	60	
122.1297	1	Replaceable plastic plugs for 122.1296 pipe stopper pliers	50	

BRAKE PIPE CUTTER

Mini pipe cutter

- For copper, brass and thin walled steel tubes
- With 2 support rollers
- V²A cutter can be retrofitted
- With hard chrome plated knurled knob
- Metal housing
- Special tool steel





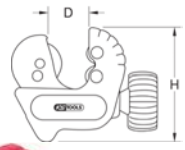


	D mm	H mm	Metal	V²A	Plastic	g	
101.1000	3,0 - 16,0	35,0	101.1001	101.1002	-	100	
101.2000	3,0 - 22,0	40,0	101.1001	101.1002	-	120	

Mini pipe cutter

- Ergonomically designed
- For copper, brass and thin walled steel tubes
- With 2 support rollers
- With large knurled knob
- V²A cutter can be retrofitted
- Metal housing
- Special tool steel



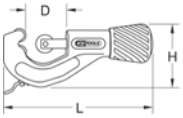




	D mm	H mm	Metal	V²A	Plastic	g	
101.5000	3,0 - 28,0	55,0	101.1001	101.1002	-	260	
101.5016	3,0 - 16,0	41,0	101.1001	101.1002	-	120	
101.5022	3,0 - 22,0	50,0	101.1001	101.1002	-	120	

Telescopic pipe cutter

- With removeable internal deburrer
- Includes spare wheel under the cover cap on the rotary handle
- With 2 support rollers
- With large knurled knob
- Metal housing
- Special tool steel





	D mm	H mm	L mm	Metal	V²A	Plastic	g	
103.5000	6,0 - 38,0	60,0	156,0	103.5001	-	-	500	

BRAKE LINE SCRAPER

Brake pipe scraper

- Ideal for removing additional coating in the case of new brake pipes
- Allows for better flange quality
- 2 scraping edges
- With a stop for exact positioning of the brake pipe
- Ergonomically designed
- For copper, aluminium and steel pipes
- With knurled knob
- Metal housing
- Special tool steel

Application range: Audi, **BMW**, **Opel**, **Seat**, **Škoda** and **Volkswagen** with coated brake lines





	Ø mm	Height mm	g	
150.2226	3,0 - 16,0	46,0	175,0	

BRAKE PIPE DEBURRER

Internal deburrer

- 3 cutting edges for clean deburring
- Cutting jaws from HSS steel
- Ensures chatter-free working
- For copper, aluminum and soft steel piping
- Two component handle

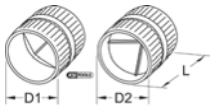


	Material	⊖ mm	L mm	g
105.3010	HSS	3,0 - 12,0	105,0	40

Internal and external deburrer

- 3 cutting edges for clean deburring
- Insertable blades made from allow HSS steel
- Ensures chatter-free working
- For copper, aluminum and soft steel piping
- Housing made out of plastic







	Material	○ mm	⊖ mm	L mm	g
105.2000	plastic	3,0 - 42,0	6,0 - 42,0	50,0	240

Internal and external deburrer

- 3 cutting edges for clean deburring
- Cutting jaws from alloy HSS steel
- Insertable blades made from allow HSS steel
- Retractable point for internal burring (protects from injury)
- Ensures chatter-free working
- For copper, aluminum and soft steel piping
- Aluminium housing





	Material	○ mm	⊖ mm	L mm	g
105.3015	HSS	3,0 - 12,0	4,0 - 14,0	125,0	175

BRAKE PIPE BENDING TOOL

Mini brake pipe bend tool

- Easy and handy to use
- For 3.00 + 4.75 + 6.00 mm brake pipes
- Bending doesn't change the diameter of the pipe
- For exact two handed bending up to 90°
- For copper, aluminum, brass and soft steel piping
- For 3 dimensions without exchange of bending segments
- Enables use directly on the vehicle
- Undersize and bend radius on the bending form
- Special tool steel



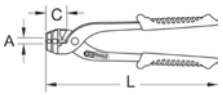


	Ø mm	Ø	L mm	g
120.1050	3,0 + 4,75 + 6,0	1/8" + 3/16" + 1/4"	140,0	150

Brake pipe bending pliers, 2 in 1

- For 4.75 and 6.00mm brake lines
- Bending doesn't change the diameter of the pipe
- Ideally suited for cable assembly
- For copper, aluminium, brass, soft steel and plastic coated cables
- One component handle
- Burnished
- Special tool steel







	A mm	L mm	C mm	g
120.2000	0-27,5	240,0	37,0	400

Brake pipe flaring pliers

- For 4.75 + 6.00 = 8.00 + 10.00 mm brake pipes
- Bending doesn't change the diameter of the pipe
- For exact two handed bending up to 90°
- For copper, aluminum, brass and soft steel piping
- Undersize and bend radius on the bending form
- With two pivoted flaring segments
- With plastic handle
- Special tool steel





	○ mm	Length mm	g
120.1003	4,75 + 6,0 + 8,0 + 10,0	260,0	530

Brake line bending tool set

- for clamping the old and new brake line during the bending process
- enables exact reproduction of the old brake line
- Clamping does not change the diameter of the cable
- suitable for steel, copper and plastic coated brake lines
- for 4.75mm (3/16") or 6.3 mm (1/4")
- Aluminium



			g
150.2795	4 pcs	Brake line bending tool set	201

consists of:

	X		g
150.2798	2	Brake line terminal 15 mm	40
150.2799	2	Brake line terminal 25 mm	60

BRAKE PIPE FLARING TOOL

Universal brake flaring tool set

- Metric sizes
- Easy and handy to use
- Prevents damages of the coated surfaces
- For the manufacture of convex and double flared joints
- For the universal use in vehicle workshops
- Ideally suited for brakes and hydraulic connections
- For thin walled steel-, Aluminium and copper conductions
- Automatic mandral return
- Fast and precise practical working
- Straight flaring
- No rotating prevents the pipe from splitting
- In durable plastic storage case





			kg
122.1250	12 pcs	Universal brake flaring tool set	4,27

consists of:

122.1244	Universal flange tool	3270	
122.1231	Clamping jaw set, 3/16"+4,75mm	50	
122.1251	Clamping jaw set, 5mm	50	
122.1252	Clamping jaw set, 6mm	50	
122.1236	Flaring cone, OP-0	50	
122.1254	Flaring cone, 4,75-5mm, OP1, DIN	50	
122.1255	Flaring cone, 4,75mm, OP1, SAE	50	
122.1256	Flaring cone, 5mm, OP1	50	
122.1257	Flaring cone, 6mm, OP1, SAE with thread	50	
122.1258	Flaring cone, 4,75-5-6mm, OP2	50	
122.1259	Flaring cone, 6mm, OP1, DIN	50	
122.1245	Flaring cone holder	250	

Universal brake flaring tool set

- Imperial sizes
- Easy and handy to use
- Prevents damages of the coated surfaces
- For the manufacture of convex and double flared joints
- For the universal use in vehicle workshops
- Ideally suited for brakes and hydraulic connections
- For thin walled steel-, Aluminium and copper conductions
- Automatic mandral return
- Fast and precise practical working
- Straight flaring
- No rotating prevents the pipe from splitting
- In durable plastic storage case





122.1230	14 pcs	Universal brake flaring tool set	4,27

consists of:

122.1244	Universal flange tool	3270	
122.1231	Clamping jaw set, 3/16"+4,75mm	50	
122.1232	Clamping jaw set, 1/4"	50	
122.1233	Clamping jaw set, 5/16"	50	
122.1234	Clamping jaw set, 3/8"	50	
122.1236	Flaring cone, OP-0	50	
122.1237	Flaring cone, 4,75mm, OP1, DIN	50	
122.1238	Flaring cone, 3/16", OP1	50	
122.1239	Flaring cone, 1/4", OP1	50	
122.1240	Flaring cone, 3/16"+1/4", OP2	50	
122.1241	Flaring cone, 5/16", OP1	50	
122.1242	Flaring cone, 3/8", OP1	50	
122.1243	Flaring cone, 5/16"+3/8", OP2	50	
122.1245	Flaring cone holder	250	



FLAREFIX*eco* 4.75 mm universal brake pipe flaring tool set

- Easy and handy to use
- Enables use directly on the vehicle
- Prevents damages of the coated surfaces
- For the universal use in vehicle workshops
- For thin walled steel-, Aluminium and copper conductions
- Fast and precise work results through straight flaring tool action
- No rotating prevents the pipe from splitting
- Accurate positioning of the brake pipe in the device thanks to positioning bolts





122.1215	4 pcs	FLAREFIX*eco* 4.75 mm universal brake pipe flaring tool set	365	

consists of:

122.1216	Main body with handle	276	
122.1217	Flared arbour 4.75 mm	31	
122.1218	Positioning bolts for 122.1215	28	
122.1219	Special grease for 122.1215	10	

FLAREFIX*eco* 4,75 mm / 3/16"SAE Universal Brake Line and Flaring Tool Set for DIN and SAE

- Easy and handy to use
- Enables use directly on the vehicle
- Prevents damages of the coated surfaces
- For the universal use in vehicle workshops
- For thin walled steel-, Aluminium and copper conductions
- Fast and precise work results through straight flaring tool action
- No rotating prevents the pipe from splitting
- Accurate positioning of the brake pipe in the device thanks to positioning bolts





122.1315	5 pcs	FLAREFIX*eco* 4,75 mm / 3/16"SAE Universal Brake Line and Flaring Tool Set for DIN and SAE	250	

consists of:

122.1316	Main body for 122.1315	170	
122.1217	Flared arbour 4.75 mm	31	
122.1317	Flaring pin 3/16" SAE	22	
122.1218	Positioning bolts for 122.1215	28	
122.1219	Special grease for 122.1215	10	



FLAREFIX 1 universal brake pipe flaring tool set with hydraulic spindle

- Easy and handy to use
- With hydraulic pressure spindle
- Enables use directly on the vehicle
- Prevents damages of the coated surfaces
- For the universal use in vehicle workshops
- Ideally suited to the use at brake connections and/or hydraulics conections
- For thin walled steel-, Aluminium and copper conductions
- For the manufacture of convex and double flared joints
- Fast and precise work results through straight flaring tool action
- No rotating prevents the pipe from splitting
- Including cutter, bender and pipe deburring tool for professional flaring
- In durable plastic storage case





122.1290	16 pcs	FLAREFIX 1 universal brake pipe flaring tool set with hydraulic spindle	3,13	

consists of:

101.1000	Mini pipe cutter, 3-16mm	100	
105.3010	Internal deburrer, 3-12mm	40	
120.1050	Mini brake pipe bend tool, 3-6mm	150	
122.1271	Locking screw,M12x1,25	50	
122.1272	Basic body incl. handle	625	
122.1273	Clamping jaw set, 4,75 mm, 3/16"	50	
122.1274	Clamping jaw set, 5mm	50	
122.1275	Clamping jaw set, 6mm	50	
122.1281	Hydraulic spindle	500	
122.1283	Locking bolt for hydraulic spindle	82	
122.1264	Flaring cone,4,75-5,0mm SAE	50	
122.1265	Flaring cone, 6,0mm SAE	50	
122.1266	Flaring cone, 4,75, 5,0 and 6,0mm, 90° SAE	50	
122.1267	Flaring cone, 4,75, 5,0 mm DIN	50	
122.1268	Flaring cone, 6,0 mm DIN	50	

FLAREFIX 2 universal brake pipe flaring tool set with hydraulic spindle

- Easy and handy to use
- With hydraulic pressure spindle
- Enables use directly on the vehicle
- Prevents damages of the coated surfaces
- For the universal use in vehicle workshops
- Ideally suited to the use at brake connections and/or hydraulics conections
- For thin walled steel-, Aluminium and copper conductions
- For the manufacture of convex and double flared joints
- Fast and precise work results through straight flaring tool action
- No rotating prevents the pipe from splitting
- In durable plastic storage case





			kg	
122.1260	11 pcs	FLAREFIX 2 universal brake pipe flaring tool set with hydraulic spindle	3,19	

consists of:

		g	
122.1264	Flaring cone,4,75-5,0mm SAE	50	
122.1265	Flaring cone, 6,0mm SAE	50	
122.1266	Flaring cone, 4,75, 5,0 and 6,0mm, 90° SAE	50	
122.1267	Flaring cone, 4,75, 5,0 mm DIN	50	
122.1268	Flaring cone, 6,0 mm DIN	50	
122.1269	Locking screw,M12x1,25	50	
122.1273	Clamping jaw set, 4,75 mm, 3/16"	50	
122.1274	Clamping jaw set, 5mm	50	
122.1275	Clamping jaw set, 6mm	50	
122.1285	Hydraulic spindle for 122.1260	790	
122.1286	Basic unit for 122.1260	720	



BRAKE CALLIPER REPAIR TOOL

Thread repair set M9 x 1,25 for brake calliper guide bolts

- For the professional restoration
- Ideal for defective interior threads for brakes guide bolts in wheel hub housings to repair
- The interior thread in the wheel hub housing M9 x 1.25 serves to the reinforcement of the Brake guide bolts
- Due to the Special drill and the drilling template the defective thread is cleared
- In the second section a highly resilient, corrosion-resistant stainless steel threaded sleeve can then be inserted
- In durable plastic storage case

Application range: Golf 4, Golf Variant, Beetle, **Audi** A3 as well as structurally identical vehicles of that group **VAG** e.g. **Audi**, **Škoda**, **Seat**, **Opel** Astra G and **Ford** Focus





			kg	
122.1300	16 pcs	Thread repair set M9 x 1,25 for brake calliper guide bolts	1,03	

consists of:

		g	
122.1301	Special spiral reamer	55	
122.1302	Thread drill, M9x1.25	15	
122.1303	Replacement brush, 10 pcs, M9x1.25	50	
122.1304	Drilling template, VAG	190	
122.1305	Drilling template, Opel Astra	190	
122.1306	Drilling template, Ford Focus	215	

Universal Hook Set, rigid

- Universal usage
- rigid form, therefore, holds shape extremely well
- these hooks prevent the weight of the brake calliper from damaging the brake hoses
- the fluorescent colour of the signal hose is easily detectable and prevents from leaving the tool on the vehicle
- dip-coated surface





		g	
150.2235	2 pcs	Universal Hook Set, rigid	90	

Universal Hook Set, adaptable

- Universal usage
- adaptable form (flexible)
- these hooks prevent the weight of the brake calliper from damaging the brake hoses
- the fluorescent colour of the signal hose is easily detectable and prevents from leaving the tool on the vehicle
- Shape is maintained and can be altered at any time
- dip-coated surface





			g	
150.1935	2 pcs	Universal Hook Set, adaptable	90	

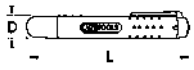


BRAKE FLUID TESTER

Brake fluid tester

- For checking the H2O content in the brake fluid
- With automatic switching off after 12 minutes
- Handy pin form with clip for the breast pocket
- With safety cover
- Plastic housing







Technical data:

Readout:	optical/5LED
Battery type:	1xAAA
Compatable for brake fluid:	DOT4
Norm:	IEC/EN 61010-1
Protection class:	IP 44

	D mm	L mm	g	
150.2199	20,0	150,0	70	



Digital brake fluid tester

- For fast and accurate alignment of the steering wheel during the wheel alignment
- Exact measurement of the boiling point possible
- For measuring all brake fluids on glycol content (DOT3, DOT4, DOT 5.1)
- Portable can be used anywhere just connect to a 12 V vehicle battery
- Measurement possible through a sample goblet and dropper also means testing outside of the vehicle
- Enormous time savings through testing directly in the fluid container
- No loss of fluids
- Easy intelligible multilingual menu navigation
- Very easy to read display
- Acknowledged by leading vehicle manufacturers
- Exceeds the requirements of the TÜV Austria
- Displays and eventual change of the brake fluid
- Plastic housing





Technical data:

Readout:	LCD display
Compatable for brake fluid:	DOT3, DOT4, DOT4 Plus, DOT4 Pro, DOT4 HP, DOT5.1
Maximum testing temparture:	320 °C (608 °F)
Output-version:	°C / °F
Operational voltage:	12 V
Dropper with test container	150.2195-1

		kg	
150.2195	Digital brake fluid tester	1,25	

Digital brake fluid tester set with printer

- Includes printer with integrated software
- For fast and accurate alignment of the steering wheel during the wheel alignment
- Exact measurement of the boiling point possible
- For measuring all brake fluids on glycol content (DOT3, DOT4, DOT 5.1)
- Portable can be used anywhere just connect to a 12 V vehicle battery
- Measurement possible through a sample goblet and dropper also means testing outside of the vehicle
- Enormous time savings through testing directly in the fluid container
- No loss of fluids
- Easy intelligible multilingual menu navigation
- Very easy to read display
- Acknowledged by leading vehicle manufacturers
- Exceeds the requirements of the TÜV Austria
- Displays and eventual change of the brake fluid
- Plastic housing





Technical data:

Readout:	LCD display
Compatable for brake fluid:	DOT3, DOT4, DOT4 Plus, DOT4 Pro, DOT4 HP, DOT5.1
Maximum testing temparture:	320 °C (608 °F)
Output-version:	°C / °F
Operational voltage:	12 V

		kg	
150.2198	Digital brake fluid tester set with printer	1,55	

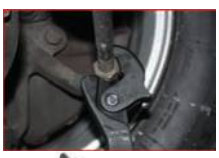
consists of:

150.2196	Digital brake fluid tester	1255	
150.2197	Printer f.digital brake fluid tester	187	

BRAKE BLEED WRENCHES

One handed multi function spanner

- Multi function spanner with ratchet function
- For complete screw working
- Adapts itself automatically to the screw size
- Self-clamping on flat pipes, bots, shafts, and unscrewed bodies of hexagonal, multitooth, Spline and TX screws
- No sliping due to the coarse teeth
- Chrome vanadium

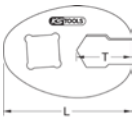


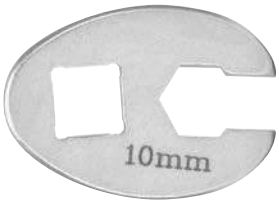


	mm	L mm	
114.0055	8-17/14-32	260,0	530

Crawfoot wrench, hexagonal

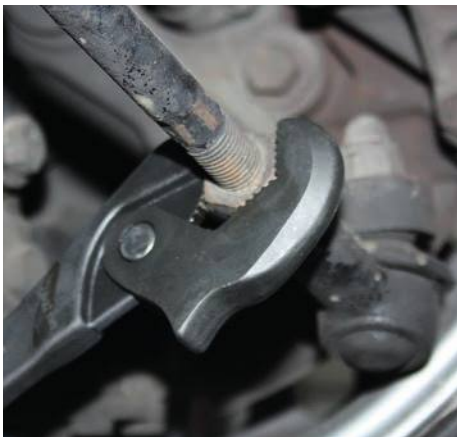
- 6 point
- Internal square drive
- For manual operation
- Matt finish
- Chrome vanadium





3/8"

	mm	L mm	T mm		
913.3810	10,0	40,0	16,0	40	
913.3811	11,0	37,0	13,0	40	
913.3812	12,0	37,0	15,0	40	
913.3813	13,0	36,0	14,0	40	
913.3814	14,0	43,0	18,0	60	
913.3815	15,0	42,0	20,0	60	
913.3816	16,0	43,0	22,0	60	



Joint ring wrench socket

- Hexagon (open)
- Special construction allows for the removal and tightening of hard-to-reach screws
- Universal usage
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- For manual operation
- Mirror polished
- Chrome vanadium
- In durable plastic storage case

Application range: universally suited to all pipe screws on injection systems, brake systems etc.





3/8"

	mm	
911.1711	11,0	60
911.1712	12,0	70
911.1713	14,0	80
911.1714	16,0	140
911.1715	17,0	150
911.1716	18,0	160
911.1717	19,0	170

Joint ring wrench socket set (open)

- Hexagon (open)
- Special construction allows for the removal and tightening of hard-to-reach screws
- Universal usage
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- For manual operation
- Mirror polished
- Chrome vanadium
- In durable plastic storage case

Application range: universally suited to all pipe screws on injection systems, brake systems etc.





3/8"

			g	
911.1710	7 pcs	Joint ring wrench socket set (open)	900	

consists of:

		g	
911.1711	3/8" Joint ring wrench socket, 11 mm	60	
911.1712	3/8" Joint ring wrench socket, 12 mm	70	
911.1713	3/8" Joint ring wrench socket, 14 mm	80	
911.1714	3/8" Joint ring wrench socket, 16 mm	140	
911.1715	3/8" Joint ring wrench socket, 17 mm	150	
911.1716	3/8" Joint ring wrench socket, 18 mm	160	
911.1717	3/8" Joint ring wrench socket, 19 mm	170	

Brake bleeding combination spanner

- For pipe screws and screws
- Ideally suited to brake pipe and brake bleed screws
- Special hexagon profile
- Combination wrench
- Matt finish
- Chrome vanadium



	mm	Length mm	g	
518.0341	7,0	115,0	20	
518.0342	8,0	125,0	26	
518.0343	9,0	135,0	34	
518.0344	11,0	155,0	44	
518.0345	12,0	165,0	52	
518.0346	14,0	185,0	78	

Brake bleeding combination spanner set

- For pipe screws and screws
- Ideally suited to brake pipe and brake bleed screws
- Special hexagon profile
- Combination wrench
- Matt finish
- Chrome vanadium





			g	
518.0340	6 pcs	Brake bleeding combination spanner set	300	

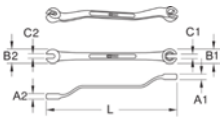
consists of:

		g	
518.0341	Brake bleeding combination spanner 7mm	20	
518.0342	Brake bleeding combination spanner 8mm	26	
518.0343	Brake bleeding combination spanner 9mm	34	
518.0344	Brake bleeding combination spanner 11mm	44	
518.0345	Brake bleeding combination spanner 12mm	52	
518.0346	Brake bleeding combination spanner 14mm	78	

CHROME*plus*® Open double ring spanner set, offset

- 6 point
- Ring head 30° offset
- Spanner has double sized head
- Heavy duty head
- For brake pipe couplers
- No slippage
- Mirror polished
- Chrome vanadium





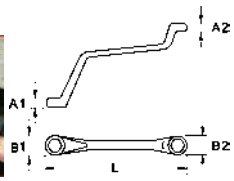


	mm	A1 mm	A2 mm	B1 mm	B2 mm	C1 mm	C2 mm	L mm	g	
517.0270	10x11	10,5	11,2	17,8	20,0	6,0	6,1	175,0	80	

Brake bleeding spanner

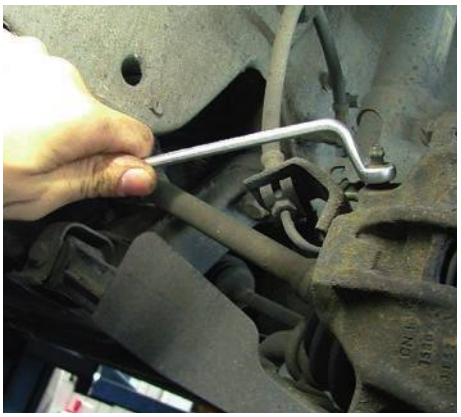
- 6 point
- Ideally suited to brake bleed screws
- Ring head cranked and offset
- For bleeding the brakes without dismantling of the wheels
- Matt finish
- Chrome vanadium







	mm	A1 mm	A2 mm	B1 mm	B2 mm	L mm	g	
518.0307	7	5,3	5,6	12,9	12,1	190,0	60	
518.0308	8	7,5	7,0	16,0	15,8	211,0	130	
518.0309	9	7,4	6,9	16,0	15,9	211,0	130	
518.0310	10	7,3	7,1	17,5	16,9	236,0	135	
518.0311	11	7,2	7,0	17,3	16,9	236,0	135	



Brake bleeding spanner set

- 6 point
- Ideally suited to brake bleed screws
- Ring head cranked and offset
- For bleeding the brakes without dismantling of the wheels
- Matt finish
- Chrome vanadium
- Supplied in a leather pouch





			kg	
518.0300	5 pcs	Brake bleeding spanner set	1,20	

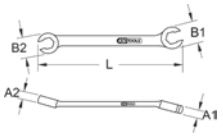
consists of:

		g	
518.0307	Brake bleeding spanneret, 7mm	60	
518.0308	Brake bleeding spanneret, 8mm	130	
518.0309	Brake bleeding spanneret, 9mm	130	
518.0310	Brake bleeding spanneret, 10mm	135	
518.0311	Brake bleeding spanneret, 11mm	135	

Open double ring spanner, offset

- 6 point
- DIN 3118
- Jaw 15° offset
- Opening 15° cranked
- Chrome vanadium







	mm	A1 mm	A2 mm	B1 mm	B2 mm	L mm	g	
517.0252	8x10	6,6	6,7	17,6	19,8	143,0	45	
517.0253	9x11	7,6	7,4	21,3	22,9	152,0	50	
517.0254	10x11	7,6	7,4	21,3	22,9	152,0	60	
517.0255	10x12	7,6	7,4	21,3	22,9	152,0	80	
517.0257	12x13	8,8	9,0	23,1	23,8	156,0	100	
517.0258	12x14	10,0	9,9	25,3	27,6	178,0	110	
517.0260	14x15	11,4	11,5	30,0	32,1	196,0	120	
517.0261	14x17	11,4	11,5	30,0	32,1	196,0	140	
517.0263	16x18	11,4	11,5	30,0	32,1	196,0	160	

CHROME*plus*® Open double ring spanner, offset

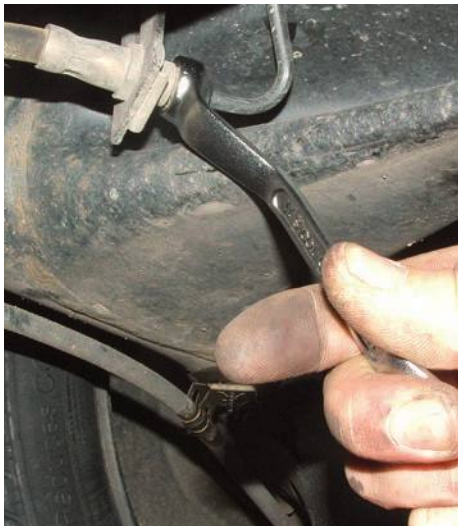
- 6 point
- DIN 3118
- Jaw 15° offset
- Opening 15° cranked
- Mirror polished
- Chrome vanadium







	mm	A1 mm	A2 mm	B1 mm	B2 mm	L mm	g	
518.0511	6x8	6,6	6,7	17,6	19,8	143,0	50	
518.0512	8x12	6,7	7,4	19,8	21,3	147,0	50	
518.0513	9x11	7,6	7,4	21,3	22,9	152,0	60	
518.0523	10x11	7,6	7,4	21,3	22,9	152,0	60	
518.0514	10x12	7,6	7,4	21,3	22,9	152,0	60	
518.0524	12x13	8,8	9,0	23,1	23,8	156,0	80	
518.0515	13x14	10,0	9,9	25,3	25,3	178,0	120	
518.0525	14x15	11,4	11,5	30,0	30,0	196,0	170	
518.0526	14x17	11,4	11,5	30,0	30,0	196,0	170	
518.0516	15x17	11,4	11,5	30,0	30,0	196,0	170	
518.0517	16x18	11,4	11,5	30,0	30,0	196,0	170	

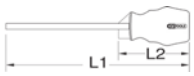


BRAKE BLEEDER

Suction and filling bottle

- ideal aid for drip-free filling or extraction of the brake fluid and battery acid
- suitable for brake fluid, battery acid and distilled water
- Resistant to oil, petrol and acid
- With rubber ball and rubber pipe
- Special plastic







	L1 mm	L2 mm	g	
160.0738	245,0	130,0	92	



Brake bleeding refill bottle

- Practical refill device
- While ventilation of the hydraulic brake system it is possible to refill brake fluid in reservoir
- Prevent the complete emptiness of the brake fluid reservoir and prevent the air gets into hydraulic brake system
- Universal clamping device for different reservoir openings
- Mount on the bottle on the brake fluid reservoir - open the valve - automatic level of control





		g	
150.2302	1	450	

One-man brake bleed adapter

- With return valve, which prevents used brake fluid from running back as well as air that has been pumped out
- Ideal for hard-to-reach places when bleeding the brakes
- Completely sealed connection of bleeding and filling devices
- For manual brake bleeds on hydraulic brake systems
- Especially suited for coupling systems
- Used fluids are led directly into the drip pan (optional) and stored environmentally
- One-man operation
- Short set-up time
- Simple operation
- Universal usage
- No need to adapt the balance container





	Length mm	Width mm	g	
150.2304	77,0	52,0	60	

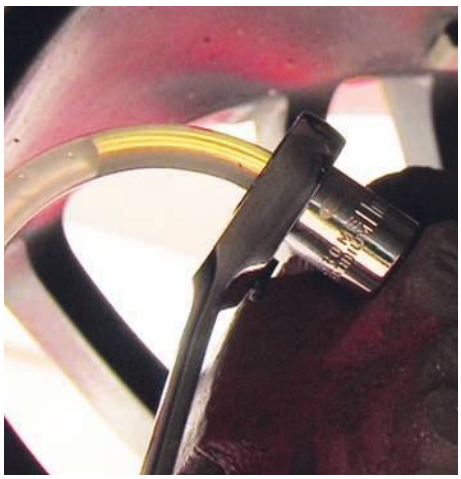
Special Brake Bleeding Wrench for VAG

- Ideal for hard-to-reach places when bleeding the brakes
- For bleeding the brakes without dismantling of the wheels
- extra long 6-edged socket
- Matt finish
- Chrome vanadium





	mm	Length mm	g	
160.0757	11	76,0	88	



Brake bleeding spanner set

- Ideal for hard-to-reach places when bleeding the brakes
- For bleeding the brakes without dismantling of the wheels
- Silicone bleeder hose (120cm) remains on bleeder nipple when loosening and tightening
- With return valve, which prevents used brake fluid from running back as well as air that has been pumped out
- Also suitable for bleeding the coupling system
- Colour coded identifies the socket size
- Extra short 12-point socket
- Matt finish
- Chrome vanadium





			g	
160.0725	6 pcs	Brake bleeding spanner set	315	

consists of:

		g	
160.0726	Brake bleeding spanneret, extra-short, 7 mm, Green	50	
160.0727	Brake bleeding spanneret, extra-short, 8 mm, Blue	48	
160.0728	Brake bleeding spanneret, extra-short, 9 mm, Purple	50	
160.0729	Brake bleeding spanneret, extra-short, 10 mm, gold	46	
160.0733	Brake bleeding spanneret, extra-short, 11 mm, Red	50	
160.0734	Silicone hose	64	

Brake bleeding spanner set

- Ideally suited to brake bleed screws
- For bleeding the brakes without dismantling of the wheels
- Reversible ratchet wrench makes releasing and tightening easier
- Include fine-toothed and reversible ratchet with angled head
- Silicone bleed hose remains when releasing and tightening bleed valve
- Contains short and long hexagon through sockets
- Matt finish
- Chrome vanadium





			g	
518.0390	6 pcs	Brake bleeding spanner set	335	

consists of:

		L mm	g	
518.0390-01	Silicone hose	1500,0	70	
518.0390-02	9/16" ratchet for brake bleed	140,0	90	
518.0390-03	10mm Socket, short, L=29mm	29,0	30	
518.0390-04	11mm Socket, short, L=29mm	29,0	30	
518.0390-05	10mm Socket, long, L=75mm	75,0	75	
518.0390-06	11mm Socket, long, L=75mm	75,0	60	



Brake bleeder with reception bottle

- With universal adapter
- Includes bendable silicone hose (400 mm)
- Ideal for containing the brake fluid when bleeding
- With robust hooks
- Special plastic





		g	
160.0735	1	272	

One-man brake bleeder with drip pan

- With non-return valve, to avoid the backflow of old brake fluid or exhausted air
- Especially suited for coupling systems
- Old brake fluid is piped directly in the reception bottle and recycled
- One-man operation
- Very short setup time - simple operation
- Universal usage
- No need to adapt the balance container
- Low priced in the acquirement





		kg	
150.2305	1	1,18	

Pressure and vacuum pump set

- For ventilating of smaller brake parts and for inspection of different areas including Low pressure and pressure functions
- Suitable for almost all current vehicles
- Robust metal execution
- Compact pistol form, one man operation
- Shock proof pressure and low pressure manometer with double scale
- Includes extensive adaptor assortment
- Readable in bar or psi
- In durable plastic storage case

Application range: Brake bleeding, test of the low pressure attitude the fuel pressure regulator, turbo charger valve, exhaust gas return valve and brake servos





Technical data:

Working range:	vacuum up to -0,7 bar -20 Hg pressure up to +1.5 bar 43,5 psi

			kg	
150.1900	7 pcs	Pressure and vacuum pump set	1,80	

consists of:

		g	
150.1901	Pressure and vacuum pump	730	
150.1902	Drip measuring beaker, 120 ml	44	
150.1903	Supply measuring beaker, 120ml	44	
150.1904	Adaptor set, 14 pcs	15	
150.1905	Connection hose and sucker	23	
150.1906	Connection point set, 4 pcs	9	
150.1907	Connection hose set, 2 pcs	45	





Pneumatic brake fluid bleeder set

- For the bleeding and filling of motor vehicle brake systems
- One-man operation
- Suitable for all current vehicles
- Vacuum production over pneumatic air through special “Venturi” -effect
- Bubble development is prevented efficiently
- Includes vacuum pistol and fill up container
- 1 lt fill up container 1 lt with automatic control mechanism
- The pneumatic operated pistol draws the old brake fluid through
- By means of fill up container this balances the new fluid container that becomes sucked through the Vacuum pistol system
- Includes 1/4” coupling connector





Technical data:

Operating pressure:	min. 5,0 - max. 12,0 bar
Connection thread:	1/4”PT
Operating temperature:	-18°C up to max. 60°C
Exhaust tube length:	1 m
Collecting container volume:	2,0 l
Waste container volume:	1,0 l

			kg	
150.2058	3 pcs	Pneumatic brake fluid bleeder set	1,81	

consists of:

		g	
150.2301	Brake bleeder unit	950	
150.2302	Brake bleeding refill bottle	450	
150.2303	Replacement tube	410	

Vacuum fluid extractor suction pump 9.5 litre

- Ideal for quick, clean and simple suction, intake and emptying of fluids
- Suitable for engine oil, transmission oil, hydraulic oil, brake fluid, water etc.
- For pneumatic use with a compressor or manual use with the integrated hand pump
- Select a suitable probe and suck easily using the vacuum principle
- Suction process automatically stopped when housing is full, preventing fluids from spilling over
- With integrated pressure relief valve for more safety
- With high-quality pump housing and strengthened pump head
- Includes 4 probes for different uses
- Ideally suited to hard-to-reach places thanks to the included, long suction hose
- The suction hose is resistant to petrol and oil
- Polyethylene





Technical data:

Work pressure:	5-11,5 bar
Capacity:	9,5 l
Operating temperature:	+0°C to +55°C
Filling tube length:	1,5 m
Max. flow rate:	125 l/min

			kg	
160.0790	5 pcs	Vacuum fluid extractor suction pump 9.5 litre	5,00	

consists of:

		g	
160.0791	Vacuum fluid extractor suction pump 9.5 litre	3708	
160.0792	Adaptor and tube 4x8mm x1,5m	200	
160.0793	Main probe 7.8 x 9.8 mm x 1 m	200	
160.0794	Probe 5.3 x 6.7 mm x 1 m	200	
160.0795	Probe 3.5 x 4.5 mm x 1 m	200	



BRAKE MAINTENANCE TOOL

Brake maintenance device KS5

- Portable brake maintenance device
- Also suitable for ABS systems
- One-man operation
- Very good and user-friendly processing
- Mode of operation for use with original containers up to 5 litres
- Will not over-fill the amount of brake fluid required
- Pressure-free uncoupling on the vehicle
- Pulsing fluid flow ensures that even the smallest air pockets are removed from the brake system
- Fast, clean and environmentally friendly working
- Pressure regulator and analogous pressure notice shows on the device front
- Automatic end switching off in empty container
- No bleeding of the device when changing containers is necessary
- Manual on switch and empty switch
- Includes optimised suction hose with universal cone for original container and Euro adapter E20
- Not suited for mineral oil
- Steel housing





Technical data:

max. Container size:	5 L
Work pressure:	0.5-3.5 bar
Operational voltage:	230 V
Filling tube length:	3,5 m
Dimensions:	400 x 200 x 300 mm

		kg	
160.0700	Brake maintenance device KS5	7,00	



Brake maintenance device KS20

- Portable brake maintenance device
- One-man operation
- Very good and user-friendly processing
- Integrated suction for extracting the old brake fluid
- Prevents damage to the ABS system
- Mode of operation for use with original containers up to 20 litres
- Will not over-fill the amount of brake fluid required
- Pressure-free uncoupling on the vehicle
- Pulsing fluid flow ensures that even the smallest air pockets are removed from the brake system
- Fast, clean and environmentally friendly working
- Pressure regulator and analogous pressure notice shows on the device front
- Automatic end switching off in empty container
- No bleeding of the device when changing containers is necessary
- Manual on switch and empty switch
- Includes optimised suction hose with universal cone for original container and Euro adapter E20
- Not suited for mineral oil
- Steel housing





Technical data:

max. Container size:	20 l
Work pressure:	approx. 0.4-3.5 bar
Operational voltage:	230 V
Filling tube length:	3,5 m
Dimensions:	1000 x 400 x 400 mm

		kg	
160.0705	Brake maintenance device KS20	20,00	

Universal bleed nozzle adapter with chain for brake bleeding

- Universal bottle adapter with securing chain
- Ideal for brake maintenance when installing on the reservoir
- Quick and easy to use
- For reservoir Ø 20 mm to Ø 78 mm
- Special seal for brake fluid
- With connection nipple for quick coupling
- Suitable for many vehicle types, especially those not suited for the Euro adapter
- Made of aluminium



		g	
160.0708	Universal bleed nozzle adapter with chain for brake bleeding	270	

Bleed nozzle adapter Ø 55 mm for brake bleeding

- Bayonet connection
- Ideal for brake maintenance when installing on the reservoir
- Quick and easy to use
- For reservoirs with internal Ø 34 mm and second seal for internal Ø 35 mm
- Special seal for brake fluid
- With connection nipple for quick coupling
- Suitable for many vehicle types with bayonet connection
- Made of aluminium



		g	
160.0709	Bleed nozzle adapter Ø 55 mm for brake bleeding	175	

Bleed nozzle adapter E 20 with moveable accessory hose for brake bleeding

- Standard adapter
- Also for hard-to-reach reservoirs
- Ideal for brake maintenance when installing on the reservoir
- Quick and easy to use
- Special seal for brake fluid
- With connection nipple for quick coupling
- Suitable for many vehicle types
- Made of aluminium





		g	
160.0713	Bleed nozzle adapter E 20 with moveable accessory hose for brake bleeding	118	

Bleed nozzle adapter Ø 90 mm for brake bleeding

- Thread adapter
- Ideal for brake maintenance when installing on the reservoir
- Quick and easy to use
- Special seal for brake fluid
- With connection nipple for quick coupling
- Suitable for many vehicle types
- Made of aluminium



		g	
160.0715	Bleed nozzle adapter Ø 90 mm for brake bleeding	215	

Bleed nozzle adaptor set for brake bleeding

- Usable in connection with brake maintenance devices
- Valuable supplement
- Including a selection of adapters for brake fluid reservoir
- Quick and easy to use
- With connection nipple for quick coupling
- Special seal for brake fluid
- Suitable for >98% of all vehicle types
- Indispensable for all vehicle work shops
- Aluminium adapter
- In durable plastic storage case





160.0710	4 pcs	Bleed nozzle adaptor set for brake bleeding	840

consists of:

160.0708	Universal bleed nozzle adapter with chain for brake bleeding	270
160.0709	Bleed nozzle adapter Ø 55 mm for brake bleeding	175
160.0713	Bleed nozzle adapter E 20 with moveable accessory hose for brake bleeding	118
160.0715	Bleed nozzle adapter Ø 90 mm for brake bleeding	215

BRAKE MEASURING TOOL

Brake lining wear indicator set

- For quick assessment of the brake force strength on disk brakes
- With colour coding
- With mm display on the wear gauge
- Can measure from 2 mm to 12 mm





Technical data:

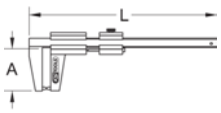
Red:	lining thickness poor, replacement necessary
Gold:	lining thickness good to satisfactory
Green:	lining thickness very good to good - replacement not necessary

300.0570	8 pcs	Brake lining wear indicator set	265

Brake disk vernier calliper 0 - 90 mm

- In accordance with DIN 862
- Locking screw
- Scale division in black
- Precision scale division in mm
- Drag nonius for fixation of measured values
- Vernier and scale satin finish
- Stainless steel
- In durable case





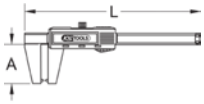


	Measuring range mm	A mm	L mm	Display accuracy mm		
300.0535	0 - 60	55,0	162,0	+/- 0,01	130	
300.0536	0 - 90	120,0	255,0	+/- 0,01	135	

Digital brake disk vernier calliper 0 - 60 mm

- In accordance with DIN 862
- Locking screw
- For internal measurements
- Scale division in black
- Measuring bar in mm and imperial divisions
- mm/imperial switching
- Hold button for fixing measured value
- Reset (to zero) in every position possible
- Large LCD display - figure height 10.0 mm
- With automatic switching off
- Entirely hardened, finely engineered
- Stainless steel
- In durable plastic case





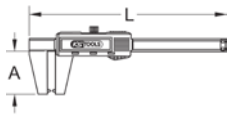


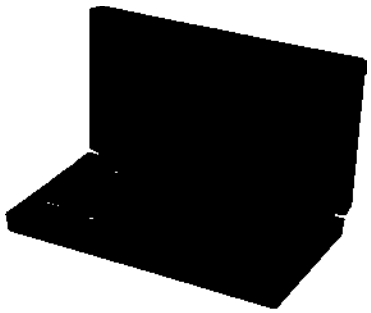
	Measuring range mm	A mm	L mm	Display accuracy mm	
300.0540	0 - 60	55,0	160,0	+/- 0,03	130

Digital brake drum vernier calliper 0 - 100 mm

- In accordance with DIN 862
- mm/imperial switching
- Hold button for fixing measured value
- Reset (to zero) in every position possible
- LCD display - figure height 6,0 mm
- With automatic switching off
- Stainless steel, hardened
- In durable plastic case



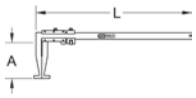




	Measuring range mm	A mm	L mm	Display accuracy mm	
300.0539	0 - 100	95,0	207,0	+/- 0,03	155

Brake drum calliper 0 - 500 mm

- In accordance with DIN 862
- Locking screw
- For external and internal measurements
- Scale division in black
- Fine adjustment
- Measuring bar in mm divisions
- Thread table
- Internal measure has direct reading
- Entirely hardened, finely engineered
- Stainless steel





	Inner measuring range mm	Outer measuring range mm	A mm	L mm	Display accuracy mm	
300.0525	0 - 300	40 - 340	95,0	410,0	+/- 0,02	500
300.0530	0 - 500	60 - 560	150,0	660,0	+/- 0,05	1380



Brake disc calliper gauge 200 - 400 mm

- Allows identification of the brake disc diameter without disassembling the wheels
- Universal usage
- Quick identification of the braking system
- No wrong ordering of brake pads or brake discs
- Quick and efficient
- Saves a lot of time





	Measuring range mm	Length mm	kg	
300.0506	200 - 400	455,0	1,52	

Brake disc measurement caliper

- Allows identification of the brake disc width without disassembling the wheels
- Quick and efficient
- Saves a lot of time
- Body made of aluminium
- Clips made of plastic



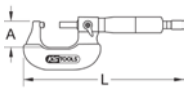


	Measuring range mm	Length mm	g	
300.0507	0 - 35	410,0	116	

Micrometer

- In accordance with DIN 863
- With measurement locking screw
- Measuring force rule through ratchet sensation
- Spindle made out of hardened steel
- Measuring surfaces with hard metal tips
- With hand warmth insulation
- Stainless steel
- In durable plastic case







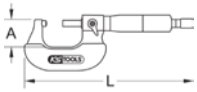
	Measuring range mm	A mm	L mm	Display accuracy mm	Ø Spindle mm	Ø Drum mm	Ø Spindle pitch mm	g	
300.0555	0-25	30,0	130,0	+/- 0,01	6,5	17,0	0,5	300	



Digital outside micrometre

- DIN 863
- With measured value locating screw
- Measuring force rule through ratchet sensation
- Measuring surfaces with hard metal tips
- With hand warmth insulation
- Stainless steel
- 2 mm feed enables quick measurement
- IP54
- Large LCD display
- With automatic switching off
- In durable plastic case







	Measuring range mm	A mm	L mm	Display accuracy mm	Ø Spindle mm	Ø Drum mm	Ø Spindle pitch mm	g	
300.0580	0-25	24,0	160,0	+/- 0,01	6,5	17,0	0,5	310	

Precision dial indicator gauge 0 - 10 mm

- In accordance with DIN 878
- With securing screw and turnable dial face
- Shockproof
- Splash proofed
- Measuring tip protected against contamination by a bellowed sleeve
- Clamping shaft Ø 8 mm H6
- With 2 measuring scales
- Spindle and clamping shaft made from stainless steel
- In durable plastic case







	Measuring range mm	D mm	Display accuracy mm	Pointer revolution mm	g	
300.0560	0 - 10	60,0	+/- 0,01	1,0	260	

Digital precision dial indicator gauge 0 - 10 mm

- mm/imperial switching
- Reset (to zero) in every position
- Large LCD display figure height 6,0 mm
- Clamping shaft Ø 8 mm H6
- With automatic switching off
- Spindle and clamping shaft made from stainless steel
- In durable wooden case







	Measuring range mm	D mm	Display accuracy mm	g	
300.0565	0 - 10	60,0	+/- 0,02	280	



Magnetic measurement stand with 2 joints

- For clamping of the dial indicator
- Revolving base
- Transverse arm with joint and fine adjustment
- With on and off switchable magnetic base
- High adhesive force on burnished steel and cast areas
- Also adhesive on convolutions
- Foot with prismatic base and stop area mounted edges
- With dial guage reception Ø 8 mm





	Radius mm	Magnet foot L x W x H mm	Total depth mm	Adhesive force n	Stand Ø mm	kg	
300.0625	180,0	60x50x55	280,0	600,0	16,0	1,80	

Magnetic measurement stand with 3 joints

- For clamping of the dial indicator
- Revolving base
- Transverse arm with joint and fine adjustment
- With on and off switchable magnetic base
- High adhesive force on burnished steel and cast areas
- Also adhesive on convolutions
- Foot with prismatic base and stop area mounted edges
- With dial guage reception Ø 8 mm





	Radius mm	Magnet foot L x W x H mm	Total depth mm	Adhesive force n	Stand Ø mm	kg	
300.0623	280,0	50x55x60	380,0	600,0	12,0	1,70	

Brake disc measuring tool set

- For measuring the radial and axial runout of wheel hubs and brake discs
- Exact positioning of the dial gauge on the test object with magnetic dial gauge holder
- Quick and easy attachment of stand with prismatic support and activated magnets
- Precise setting of the measuring scale with adjustable tolerance marks
- With rotating, knurled outer ring
- Suitable for measuring the brake disc thickness, and for detection of irregularities and distortion
- With measured value fixing lever and measuring force control with ratchet function
- In durable plastic storage case





			kg	
150.2230	3 pcs	Brake disc measuring tool set	4,00	

consists of:

		kg	
300.0625	Magnetic measurement stand with 2 joints	1,80	
300.0560	Precision dial indicator gauge 0 - 10 mm	0,26	
300.0556	Micrometer, 0-50mm	0,32	



Brake disc measuring tool set

- For measuring the radial and axial runout of wheel hubs and brake discs
- Exact positioning of the dial gauge on the test object with magnetic dial gauge holder
- Transverse arm with three-point clamp for exact mounting on shock absorbers
- Precise setting of the measuring scale with adjustable tolerance marks
- With rotating, knurled outer ring
- Suitable for measuring the brake disc thickness, and for detection of irregularities and distortion
- With measured value fixing lever and measuring force control with ratchet function
- In durable plastic storage case

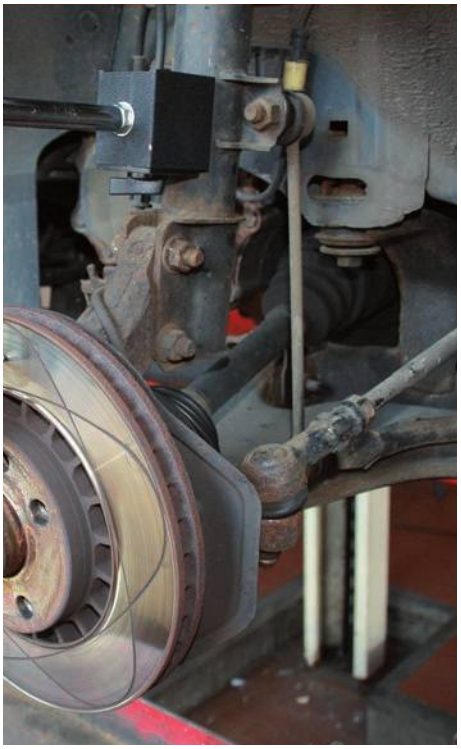




			kg	
300.0690	4 pcs	Brake disc measuring tool set	2,26	

consists of:

		g	
300.0691	3-point connection	660	
300.0692	Stand	600	
300.0560	Precision dial indicator gauge 0 - 10 mm	260	
300.0555	Micrometer, 0-25mm	300	




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	FROM PAGE
OIL SUMP DRAIN PLUG RELEASE TOOL	662
UNIVERSAL REPAIR SOLUTION	665
OIL DRAINAGE SCREWS FOR VAG	665
OIL SUMP DRAIN PLUG FOR ALFA ROMEO	666
OIL SUMP DRAIN PLUG FOR BMW	667
OIL SUMP DRAIN PLUG FOR CHRYSLER	668
OIL SUMP DRAIN PLUG FOR DACIA	669
OIL SUMP DRAIN PLUG FOR DAEWOO	669
OIL SUMP DRAIN PLUG FOR DAIHATSU	669
OIL SUMP DRAIN PLUG FOR FIAT	669
OIL SUMP DRAIN PLUG FOR FORD	670
OIL SUMP DRAIN PLUG FOR GM	671
OIL SUMP DRAIN PLUG FOR HONDA	672
OIL SUMP DRAIN PLUG FOR HYUNDAI	672
OIL SUMP DRAIN PLUG FOR ISUZU	672
OIL SUMP DRAIN PLUG FOR JAGUAR	672
OIL SUMP DRAIN PLUG FOR JEEP	673
OIL SUMP DRAIN PLUG FOR KIA	673
OIL SUMP DRAIN PLUG FOR LADA	673
OIL SUMP DRAIN PLUG FOR LANCIA	673
OIL SUMP DRAIN PLUG FOR LAND ROVER	673
OIL SUMP DRAIN PLUG FOR LEXUS	674
OIL SUMP DRAIN PLUG FOR MAZDA	674
OIL SUMP DRAIN PLUG FOR MERCEDES	674
OIL SUMP DRAIN PLUG FOR MITSUBISHI	675
OIL SUMP DRAIN PLUG FOR NISSAN	675
OIL SUMP DRAIN PLUG FOR OPEL	676
OIL DRAINAGE SCREW FOR PSA	676
OIL SUMP DRAIN PLUG FOR PORSCHE	678
OIL SUMP DRAIN PLUG FOR RENAULT	678
OIL DRAINAGE SCREWS FOR ROVER	679
OIL SUMP DRAIN PLUG FOR ROVER MINI	679
OIL SUMP DRAIN PLUG FOR SAAB	679
OIL SUMP DRAIN PLUG FOR SMART 451	680
OIL SUMP DRAIN PLUG FOR SMART FOR FOUR	681
OIL SUMP DRAIN PLUG FOR SUBARU	681
OIL SUMP DRAIN PLUG FOR SUZUKI	681
OIL SUMP DRAIN PLUG FOR TOYOTA	682
OIL SUMP DRAIN PLUG FOR VOLVO	682
OIL SUMP TOOL	684
TRANSMISSION OIL COOLANT TOOL	684
OIL DRAINAGE SCREW REPAIR	684
OIL SUMP DRAIN PLUG THREAD REPAIRER	685
OIL FILTER TENSION WRENCH	687
SPECIAL OIL FILTER WRENCH	688
OIL FILTER CAP WRENCH	691
OIL FILTER CAP WRENCH SET	697
OIL FILTER CUTTER	699
OIL DIP STICK	699
OIL FILLING AND EMPTYING PUMP	699
OIL FILLING CONTAINER	702
OIL COLLECTION PAN	706

OIL SUMP DRAIN PLUG RELEASE TOOL

Oil service wrench square socket for PSA

- For the quick and correct assembly and disassembly of the reduction screws on the oil sump, transmissions and differential
- Internal square
- Specially shaped for use
- For manual operation
- Matt finish
- Chrome vanadium





	mm	Length mm	g	
150.9228	8x10	270,0	275	

Oil service internal hexagon wrench

- For the quick and correct assembly and disassembly of the reduction screws on the oil sump, transmissions and differential
- Hexagon socket
- Specially shaped for use
- For manual operation
- Matt finish
- Chrome vanadium





	mm	Length mm	g	
150.9628	10x12	215,0	245	

Oil service wrench hexagonal point for Fiat/Alfa Romeo

- For the quick and correct assembly and disassembly of the reduction screws on the oil sump, transmissions and differential
- Hexagon socket
- Specially shaped for use
- For manual operation
- Matt finish
- Chrome vanadium



	mm	Length mm	g	
150.9227	12	225,0	280	

Oil service wrench square

- For the quick and correct assembly and disassembly of the reduction screws on the oil sump, transmissions and differential
- Internal and external square
- Also suitable for the assembly and disassembly of the oil filter
- Specially shaped for use
- For manual operation
- Matt finish
- Chrome vanadium



	mm	Length mm	g	
150.9627	10x10	238,0	340	

Oil service internal hexagon wrench

- For the quick and correct assembly and disassembly of the reduction screws on the oil sump, transmissions and differential
- Hexagon socket
- With flexible head
- For manual operation
- Matt finish
- Chrome vanadium





	mm	Length mm	g	
150.9225	10x14	256,0	280	

Oil service hexagon wrench for Mercedes and BMW

- For the quick and correct assembly and disassembly of the oil filling screw on the transmission
- Hexagon socket
- External hexagon
- Specially shaped for use
- For manual operation
- Matt finish
- Chrome vanadium

Application range: Mercedes W107, W123, W124, W126, W129, W163, W170, W201, W202, W203, W208, W210, W215, W220 Gearbox: 100, 110, 115, 116, 117, 615, 616, 617; **BMW**





	mm	mm	Length mm	g	
150.9231	14,0	17,0	235,0	230	



Oil service hexagon wrench for Mercedes and BMW

- For the quick and correct assembly and disassembly of the oil filling screw on the transmission
- Hexagon socket
- External hexagon
- Specially shaped for use
- For manual operation
- Matt finish
- Chrome vanadium

Application range: Mercedes Gearbox: 102, 103, 104, 110, 115, 116, 117, 119, 120, 123; **BMW**





	mm	mm	Length mm	g	
150.9232	14,0	13,0	290,0	230	

Oil service wrench for VAG

- For the quick and correct assembly and disassembly of the oil filling screw on the transmission and the oil sump drain plug on the oil sump
- Hexagon socket
- External hexagon
- Specially shaped for use
- For manual operation
- Matt finish
- Chrome vanadium





	mm	mm	Length mm	g	
150.9233	21,0	17,0	250,0	240	

8 in 1 Oil service wrench

- For the quick and correct assembly and disassembly of the oil reduction and oil filling screws on transmission, the oil sump and differential
- Special wrench with 8 gear profiles
- Profile change by turning the wrench head
- For manual operation
- Special tool steel

Profile and wrench widths:
4-point: 10.0 - 11.0 - 12.0 - 13.0 - 14.0 - 15.0 mm
8-point: 14.0 - 17.0 mm





	Ø mm	Length mm	g	
150.9237	45,5	155,0	330	

8 in 1 Oil service wrench

- For the quick and correct assembly and disassembly of the oil reduction and oil filling screws on transmission, the oil sump and differential
- Special wrench with 8 gear profiles
- Profile change by turning and snapping the wrench head
- For manual operation
- Matt chrome
- Special tool steel

Profile and wrench widths:
4-point: 8.0 - 10.0 mm - 3/8" - 1/2"
6-point: 10.0 - 12.0 - 14.0 - 17.0 mm







	L mm	D1 mm	D2 mm	g
150.9302	270,0	40,0	50,0	620

Special oil service wrench for Toyota and Honda

- For quick and correct assembly and disassembly of the draining screw on the oil sump
- With 3/8" square drive
- For manual operation
- For a long life in robust workshop use
- Special tool steel





3/8"

	mm	L mm	g
150.9305	14,0	94,0	100

Flexible oil service bit socket for internal hexagon screws

- Hexagon socket
- Special flexible bit socket for actuating the transmission oil control screw on manual and automatic transmissions
- For hard to reach places
- Internal square drive adaptor to DIN 3120 / ISO 1174
- With press fitted insert bit
- For machinery usage
- Phosphate finish
- Chrome molybdenum

Application range: Audi, **Seat**, **Volkswagen** with manual and automatic transmissions





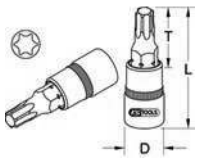
3/8"

	mm	Length mm	g
150.9257	17,0	48,2	110

Oil service Torx socket

- Torx
- Special socket for assembly and disassembly of oil drain and transmission oil control screw
- Internal square drive to DIN 3120 / ISO 1174
- Perfect profile for correct actuation
- For manual operation
- Matt finish
- Chrome vanadium







1/2"

		D mm	L mm	T mm	g
911.1366	T45	22,0	55,0	17,0	90

Oil service hexagonal socket with magnet

- 6 point
- FlankTraction profile
- Special socket for assembly and disassembly of oil drain and transmission oil control screw
- With strong, integrated magnets
- The magnets prevent the screws from falling down into the collection pans
- Internal square drive to DIN 3120 / ISO 1174
- Perfect profile for correct actuation
- For manual operation
- Matt finish
- Chrome vanadium





3/8"

	mm	Ø mm	Length mm	g
150.1404	13	19,0	20,5	23
150.1405	14	20,0	20,5	23
150.1406	17	24,0	34,0	34
150.1407	18	25,0	23,5	40
150.1408	19	26,0	44,0	44
150.1409	21	29,0	23,5	60

Oil service Torx socket with magnet

- Torx with pins
- Special socket for assembly and disassembly of oil drain and transmission oil control screw
- With strong, integrated magnets
- The magnets prevent the screws from falling down into the collection pans
- Internal square drive to DIN 3120 / ISO 1174
- Perfect profile for correct actuation
- For manual operation
- Matt finish
- Chrome vanadium





3/8"

		Ø mm	Length mm	g
150.1415	T45	19,0	34,0	31

Oil service bit socket for internal square screws with magnet

- Internal square
- Special socket for assembly and disassembly of oil drain and transmission oil control screw
- With strong, integrated magnets
- The magnets prevent the screws from falling down into the collection pans
- Internal square drive to DIN 3120 / ISO 1174
- Perfect profile for correct actuation
- For manual operation
- Matt finish
- Chrome vanadium





3/8"

	mm	Ø mm	Length mm	g
150.1416	8	19,0	30,0	32
150.1438	9,5	19,0	30,0	34
150.1417	10	19,0	30,0	35
150.1429	10,5	19,0	30,0	38
150.1433	11	19,0	30,0	40
150.1434	13,1	19,0	30,0	42

Oil service bit socket for internal hexagon screws with magnet

- Hexagon socket
- Special socket for assembly and disassembly of oil drain and transmission oil control screw
- With strong, integrated magnets
- The magnets prevent the screws from falling down into the collection pans
- Internal square drive to DIN 3120 / ISO 1174
- Perfect profile for correct actuation
- For manual operation
- Matt finish
- Chrome vanadium





3/8"

	mm	Ø mm	Length mm	g
150.1436	8	19,0	30,0	32
150.1439	9	19,0	30,0	34
150.1441	10	19,0	30,0	35
150.1442	12	19,0	30,0	38
150.1443	13	19,0	30,0	40
150.1444	14	19,0	30,0	42
150.1446	17	19,0	30,0	52

Oil service square socket

- 4 point
- Special socket for assembly and disassembly of oil drain and transmission oil control screw
- Internal square drive to DIN 3120 / ISO 1174
- Perfect profile for correct actuation
- For manual operation
- Matt finish
- Chrome vanadium





3/8"

	mm	Ø mm	Length mm	g
150.1426	10	19,0	36,0	47

Oil service bit socket for internal triangle

- Internal triangle
- Special socket for assembly and disassembly of oil drain and transmission oil control screw
- Internal square drive to DIN 3120 / ISO 1174
- Perfect profile for correct actuation
- For manual operation
- Matt finish
- Chrome vanadium





3/8"

		Ø mm	Length mm	g	
150.1427	10	19,0	36,0	38	

Oil drain bit socket for spline (XZN®) screws

- Multi-tooth (XZN®) with tamper proof screws
- Special bit socket for assembly and disassembly of oil drain and transmission oil control screw
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- with press-fitted nickel-plated bit
- Perfect profile for correct actuation
- For manual operation
- Mirror polished
- Chrome vanadium

Application range: Audi A2, A3, A4, A6/ **Škoda** Fabia, Octavia, Superb/ **Volkswagen** Passat, Golf IV, LT etc.





3/8" 1/2"

	■		L mm	g	
150.1437	3/8"	M16	37,0	55	
150.9364	1/2"	M16	50,0	140	

MASTER oil service bit socket set

- For screws on oil sumps, transmission, differential etc.
- Special wrench set for the assembly and disassembly of most oil drains and transmission oil control screws
- In parts with strong, integrated magnets
- The magnets prevent the screws from falling down into the collection pans
- Internal square drive adaptor to DIN 3120 / ISO 1174
- Perfect profile for correct actuation
- For manual operation
- Matt finish
- Chrome vanadium
- Includes storage rail





3/8"

			g	
150.1445	23 pcs	MASTER oil service bit socket set	960	

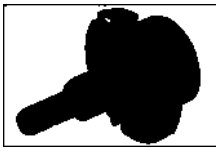
consists of:

		g	
150.1404	Oil service hexagonal socket with magnet, 13 mm	23	
150.1405	Oil service hexagonal socket with magnet, 14 mm	23	
150.1406	Oil service hexagonal socket with magnet, 17 mm	34	
150.1407	Oil service hexagonal socket with magnet, 18 mm	40	
150.1408	Oil service hexagonal socket with magnet, 19 mm	44	
150.1409	Oil service hexagonal socket with magnet, 21 mm	60	
150.1436	3/8" Oil service bit socket for internal hexagon screws with magnet, 8 mm	32	
150.1439	3/8" Oil service bit socket for internal hexagon screws with magnet, 9 mm	34	
150.1441	3/8" Oil service bit socket for internal hexagon screws with magnet, 10 mm	35	
150.1442	3/8" Oil service bit socket for internal hexagon screws with magnet, 12 mm	38	
150.1443	3/8" Oil service bit socket for internal hexagon screws with magnet, 13 mm	40	
150.1444	3/8" Oil service bit socket for internal hexagon screws with magnet, 14 mm	42	
150.1446	3/8" Oil service bit socket for internal hexagon screws with magnet, 17 mm	52	
150.1416	3/8" Oil service bit socket for internal square screws with magnet, 8 mm	32	
150.1438	3/8" Oil service bit socket for internal square screws with magnet, 10,5 mm	34	
150.1417	3/8" Oil service bit socket for internal square screws with magnet, 10 mm	35	
150.1429	3/8" Oil service bit socket for internal square screws with magnet, 10,5 mm	38	
150.1433	3/8" Oil service bit socket for internal square screws with magnet, 11 mm	40	
150.1434	3/8" Oil service bit socket for internal square screws with magnet, 13,1 mm	42	
150.1437	3/8" Oil service XZN socket with tamper proof screws, M16	55	
150.1415	Oil service Torx socket with magnet, T45	31	
150.1426	Oil service square socket, 10 mm	47	
150.1427	3/8" Oil service bit socket for internal triangle, 10 mm	38	

Oil service special profile bit for BMW

- Special profile
- Developed specifically for assembly and disassembly of the oil sump drain plug on plastic oil sumps
- External hexagon drive to DIN 3126 / ISO 1173 - C 6,3
- Perfect profile for correct actuation
- For manual operation
- Phosphate finish
- Chrome molybdenum

Application range: BMW 125i, 220, 320i, 328, 420i, 428i, 520, 528, X16i, X20i, Z4





1/4"

		mm	g	
150.1023		10	21	



Oil service special profile socket for PSA

- Special profile
- Developed specifically for assembly and disassembly of the oil sump drain plug on plastic oil sumps
- External hexagon drive to DIN 3126 / ISO 1173 - C 6,3
- Perfect profile for correct actuation
- For manual operation
- Phosphate finish
- Chrome molybdenum





3/8"

		g	
150.1026	Oil service special profile socket for PSA	54	

Oil service special profile bit for VAG

- Special profile
- Developed specifically for assembly and disassembly of the oil sump drain plug on plastic oil sumps
- External hexagon drive to DIN 3126 / ISO 1173 - C 6,3
- Perfect profile for correct actuation
- For manual operation
- Phosphate finish
- Chrome molybdenum

Application range: Audi, **Seat**, **Škoda**, **Volkswagen** from MY 13 with 1.2, 1.4, 1.8, 2.0 TFSI petrol engines and 1.6, 2,0 TDI diesel engines at **Audi** A1, A3, A4, A5, Q5, **Volkswagen** Golf MK VII, VII, **Seat** Leon etc.





1/4"

		g	
150.1440	Oil service special profile bit for VAG	20	

Oil Service Special Profile Set for Plastic Oil Drain Screws

- Special profile
- Special Bits for Assembly and Disassembly of Plastic Oil Drain Screws on Plastic Oil Sump
- External hexagon drive to DIN 3126 / ISO 1173 - C 6,3
- Custom-fit profile to ensure correct operation
- With T-handle
- For manual operation
- Phosphate finish
- Chrome vanadium



1/4" 3/8"

			g	
150.1020	5 pcs	Oil Service Special Profile Set for Plastic Oil Drain Screws	286	

consists of:

		g	
150.1021	3/8" T-handle, 100 mm	145	
150.1022	Bit holder 1/4" x 3/8"	23	
150.1023	1/4" Special profile oil service socket for BMW, 10 mm	21	
150.1440	1/4" Oil service special profile bit for VAG plastic oil sump drain plugs	20	
150.1026	3/8" Special profile oil service socket for PSA	54	

Oil sump plug and oil filter set

- For conical screws on the oil sump, transmission differential etc.
- Ideal set for the assembly and disassembly of the oil sump and transmission oil control screw
- With oil filter clamping wrench and oil filter pins
- Perfect profile for correct actuation
- For manual operation
- Matt finish
- Chrome vanadium
- In durable plastic storage case





3/8"

			kg	
150.9300	13 pcs	Oil sump plug and oil filter set	1,55	

consists of:

		g	
150.9313	Oil filter tension wrench Ø63-102mm	370	
150.9390	Oil sump drain plug key set, 6 pcs	800	
155.5002	Band wrench f.oil filter casing,65-110mm	241	
918.3806	3/8" CHROMEplus Spark plug socket, 21mm	136	
918.3807	3/8" CHROMEplus Sliding/Reducing adaptor, 1/2"F x 3/8"M	60	
918.3885	3/8" CHROMEplus Bit socket Torx, T40	35	
918.3886	3/8" CHROMEplus Bit socket Torx, T45	50	
918.3898	3/8" CHROMEplus Extensions, 250mm	240	

Oil service wrench set

- For conical screws on the oil sump, transmission differential etc.
- Special wrench set for the assembly and disassembly of most oil drains and transmission oil control screws
- External drive hexagonal socket 21.0 mm
- Perfect profile for correct actuation
- For manual operation
- Matt finish
- Chrome vanadium
- In durable steel storage case





			g	
150.9390	6 pcs	Oil service wrench set	800	

consists of:

		g	
150.9391	Drain plug key, 8+10mm hex	110	
150.9392	Drain plug key, 5/16+3/8" hex	110	
150.9393	Drain plug key, 8mm+3/8" square	110	
150.9394	Drain plug key, 12mm hex+11mm square	110	
150.9395	Drain plug key, 14mm hex+13mm square	110	
150.9396	Hex oil drain plug key, 17mm+1/2" hex	110	

UNIVERSAL REPAIR SOLUTION

Universal anchor for oil drain plugs

- With washer



	Content	g	
430.0099	1	4	
430.1099	10	40	
430.2099	25	100	

OIL DRAINAGE SCREWS FOR VAG

Oil drain plug with bayonet lock

- Bayonet connection
- With washer



	Content	g	
430.0024	1	45	
430.1024	10	450	
430.2024	25	135	

Oil sump drain plug, M14 x 1.5 x 17.5 mm

- External hexagon
- With washer



	Content	mm	mm	g	
430.0027	1	M14x1,5x17,5	19	41	
430.1027	10	M14x1,5x17,5	19	410	
430.2027	25	M14x1,5x17,5	19	1025	

Oil drain plug M18 x 1.5 x 9 mm

- Hexagon socket
- With washer



	Content	mm	mm	g	
430.0036	1	M18x1,5x9	8	34	
430.1036	10	M18x1,5x9	8	340	
430.2036	25	M18x1,5x9	8	850	

Oil sump drain plug M24 x 1.5 L= 9 mm

- Hexagon socket
- Without washer



	Content	mm	mm	g	
430.0023	1	M24x1,5x9	10	51	
430.1023	10	M24x1,5x9	10	510	
430.2023	25	M24x1,5x9	10	1275	

Suitable washer:



Soft washer 32 x 24 x 3 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g	
430.0032	1	32,0	24,0	3	1	
430.1032	10	32,0	24,0	3,0	10	
430.2032	25	32,0	24,0	3,0	25	

Oil sump drain plug M14 x 1.5 L= 9 mm

- Hexagon socket
- Without washer



	Content	mm	mm	g	
430.0022	1	M14x1,5x9	6	17	
430.1022	10	M14x1,5x9	6	170	
430.2022	25	M14x1,5x9	6	42,5	

Suitable washer:



Soft washer 20 x 14 x 2 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0033	1	20,0	14,0	2	2
430.1033	10	20,0	14,0	2,0	20
430.2033	25	20,0	14,0	2,0	50

Oil sump drain plug, M14 x 1.5 x 12 mm

- External hexagon
- Without washer



	Content	mm	mm	g
430.0136	1	M14x1,5x12	19	27
430.1136	10	M14x1,5x12	19	270
430.2136	25	M14x1,5x12	19	675

Suitable washer:



Copper washer 20 x 14 x 1.5 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0505	1	20,0	14,0	1.5	2
430.1505	10	20,0	14,0	1,5	20
430.2505	25	20,0	14,0	1,5	50

Oil sump drain plug, M14 x 1.5 x 22 mm

- External hexagon
- Without washer



	Content	mm	mm	g
430.0222	1	M14x1,5x22	19	36
430.1222	10	M14x1,5x22	19	360
430.2222	25	M14x1,5x22	19	900

Suitable washer:

Filling ring 20 x 14 x 2.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0520	1	20,0	14,0	2	1
430.1520	10	20,0	14,0	2,0	10
430.2520	25	20,0	14,0	2,0	25

Oil sump drain plug, M26 x 1.5 x 16 mm

- External hexagon
- Without washer



	Content	mm	mm	g
430.0139	1	M26x1,5x16	17	78
430.1139	10	M26x1,5x16	17	780
430.2139	25	M26x1,5x16	17	1950

Suitable washer:



Copper washer 31 x 26 x 2.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0535	1	31,0	26,0	2	3
430.1535	10	31,0	26,0	2,0	30
430.2535	25	31,0	26,0	2,0	75

OIL SUMP DRAIN PLUG FOR ALFA ROMEO

Oil sump drain plug, M18 x 1.5 x 27 mm

- Hexagon socket
- Without washer



	Content	mm	mm	g
430.0001	1	M18x1,5x27	8	57
430.1001	10	M18x1,5x27	8	570
430.2001	25	M18x1,5x27	8	1425

Suitable washer:



Aluminium washer 30 x 22 x 1.5 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0517	1	30,0	22,0	1.5	1
430.1517	10	30,0	22,0	1,5	10
430.2517	25	30,0	22,0	1,5	25

Oil sump drain plug M12 x 1.25 x 13 mm

- External hexagon
- Without washer



	Content	mm	mm	g
430.0331	1	M12x1,25x13	17	16
430.1331	10	M12x1,25x13	17	160
430.2331	25	M12x1,25x13	17	400

Suitable washer:



Copper washer 16 x 12 x 1.5 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0538	1	16,0	12,0	1,5	1
430.1538	10	16,0	12,0	1,5	10
430.2538	25	16,0	12,0	1,5	25

Oil sump drain plug M22 x 1.5 x 16 mm

- External hexagon
- Without washer



	Content	mm	mm	g
430.0003	1	M22x1,5x16	18	43
430.1003	10	M22x1,5x16	18	430
430.2003	25	M22x1,5x16	18	1075

Suitable washer:



Aluminium washer 30 x 22 x 1.5 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0517	1	30,0	22,0	1,5	1
430.1517	10	30,0	22,0	1,5	10
430.2517	25	30,0	22,0	1,5	25

OIL SUMP DRAIN PLUG FOR BMW

Oil sump drain plug, M24 x 1.5 x 12 mm

- Hexagon socket
- With washer



	Content	mm	mm	g
430.0231	1	M24x1,5x12	10	9
430.1231	10	M24x1,5x12	10	90
430.2231	25	M24x1,5x12	10	225

Oil sump drain plug M12 x 1.5 x 13.5 mm

- Hexagon socket
- Without washer



	Content	mm	g
430.0016	1	M12x1,5x13,5	13	13
430.1016	10	M12x1,5x13,5	13	130
430.2016	25	M12x1,5x13,5	13	325

Suitable washer:



Copper washer 17 x 12 x 1.5 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0502	1	17,0	12,0	1.5	1
430.1502	10	17,0	12,0	1,5	10
430.2502	25	17,0	12,0	1,5	25

Oil sump drain plug M10 x 1.25 x 13 mm

- External hexagon
- Without washer



	Content	mm	mm	g
430.0015	1	M10x1,25x13	21	18
430.1015	10	M10x1,25x13	21	180
430.2015	25	M10x1,25x13	21	450

Suitable washer:



Copper washer 20 x 10 x 2.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0508	1	20,0	10,0	2	4
430.1508	10	20,0	10,0	2,0	40
430.2508	25	20,0	10,0	2,0	100

Oil sump drain plug M12 x 1.5 x 18 mm

- External hexagon
- Without washer



	Content	mm	mm	g
430.0011	1	M12x1,5x18	17	24
430.1011	10	M12x1,5x18	17	240
430.2011	25	M12x1,5x18	17	600

Suitable washer:



Aluminium washer 17 x 12 x 1.5 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0512	1	17,0	12,0	1.5	1
430.1512	10	17,0	12,0	1,5	10
430.2512	25	17,0	12,0	1,5	25

Oil sump drain plug M12 x 1.5 x 13 mm

- External hexagon
- Without washer



	Content	mm	mm	g
430.0014	1	M12x1,5x13	17	20
430.1014	10	M12x1,5x13	17	200
430.2014	25	M12x1,5x13	17	500

Suitable washer:



Aluminium washer 17 x 12 x 1.5 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0512	1	17,0	12,0	1.5	1
430.1512	10	17,0	12,0	1,5	10
430.2512	25	17,0	12,0	1,5	25

Oil sump drain plug M12 x 1.25 x 13 mm

- External hexagon
- Without washer



	Content		mm	g
430.0012	1	M12x1,25x13	14	25
430.1012	10	M12x1,25x13	14	250
430.2012	25	M12x1,25x13	14	625

Suitable washer:



Aluminium washer 20 x 12 x 1.5 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0513	1	20,0	12,0	1.5	1
430.1513	10	20,0	12,0	1,5	10
430.2513	25	20,0	12,0	1,5	25

Oil sump drain plug M22 x 1.5 x 14 mm

- External hexagon
- Without washer



	Content		mm	g
430.0013	1	M22x1,5x14	19	75
430.1013	10	M22x1,5x14	19	750
430.2013	25	M22x1,5x14	19	1875

Suitable washer:



Aluminium washer 27 x 22 x 1.5 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0516	1	27,0	22,0	1.5	1
430.1516	10	27,0	22,0	1,5	10
430.2516	25	27,0	22,0	1,5	25

Oil sump drain plug M12 x 1.5 x 14 mm

- External hexagon
- Without washer



	Content		mm	g
430.0019	1	M12x1,5x14	17	20
430.1019	10	M12x1,5x14	17	200
430.2019	25	M12x1,5x14	17	500

Suitable washer:



Aluminium washer 15,5 x 12 x 1.5 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0020	1	15,5	12,0	1.5	1
430.1020	10	15,5	12,0	1,5	10
430.2020	25	15,5	12,0	1,5	20

Oil sump drain plug, M14 x 1.5 x 20 mm

- External hexagon
- With washer



	Content		mm	g
430.0017	1	M14x1,5x20	13	40
430.1017	10	M14x1,5x20	13	400
430.2017	25	M14x1,5x20	13	1000

OIL SUMP DRAIN PLUG FOR CHRYSLER

Oil sump drain plug, M14 x 1.5 x 24 mm

- External hexagon
- Without washer



	Content		mm	g
430.0025	1	M14x1,5x24	13	37
430.1025	10	M14x1,5x24	13	370
430.2025	25	M14x1,5x24	13	925

Suitable washer:



Copper washer 20 x 14 x 1.5 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0505	1	20,0	14,0	1.5	2
430.1505	10	20,0	14,0	1,5	20
430.2505	25	20,0	14,0	1,5	50

Oil sump drain plug, M14 x 1.5 x 13 mm

- External hexagon
- Without washer



	Content		mm	g
430.0026	1	M14x1,5x13	17	32
430.1026	10	M14x1,5x13	17	320
430.2026	25	M14x1,5x13	17	800

Suitable washer:



Japan washer 19 x 14 x 2.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0518	1	19,0	14,0	2	2
430.1518	10	19,0	14,0	2,0	20
430.2518	25	19,0	14,0	2,0	50

Oil sump drain plug, M14 x 1.5 x 17.5 mm

- External hexagon
- With washer



	Content		mm	g
430.0027	1	M14x1,5x17,5	19	41
430.1027	10	M14x1,5x17,5	19	410
430.2027	25	M14x1,5x17,5	19	1025

Oil sump drain plug, 1/2" UNF x 1.25 x 20 mm

- External hexagon
- With washer



	Content		mm	g
430.0028	1	1/2"UNFx1,25x20	16	44
430.1028	10	1/2"UNFx1,25x20	16	440
430.2028	25	1/2"UNFx1,25x20	16	1100

Oil sump drain plug M16 x 1.25 L= 11.5 mm

- Hexagon socket
- Without washer



	Content		mm	g
430.0029	1	M16x1,25x11,5	8	23
430.1029	10	M16x1,25x11,5	8	230
430.2029	25	M16x1,25x11,5	8	575

Suitable washer:



Copper washer 21 x 17 x 1.5 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0534	1	21,0	17,0	1.5	1,5
430.1534	10	21,0	17,0	1,5	15
430.2534	25	21,0	17,0	1,5	30

OIL SUMP DRAIN PLUG FOR DACIA

Oil sump drain plug M16 x 1.5 L= 13 mm

- Internal square
- Without washer



	Content		mm	g
430.0041	1	M16x1,5x13	8	22
430.1041	10	M16x1,5x13	8	220
430.2041	25	M16x1,5x13	8	550

Suitable washer:



Megu washer with centring ribs, 24 x 16 x 2.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0524	1	24,0	16,0	2	2
430.1524	10	24,0	16,0	2,0	20
430.2524	25	24,0	16,0	2,0	50

OIL SUMP DRAIN PLUG FOR DAEWOO

Oil sump drain plug, M14 x 1.5 x 13 mm

- External hexagon
- Without washer



	Content	mm	mm	g
430.0026	1	M14x1,5x13	17	32
430.1026	10	M14x1,5x13	17	320
430.2026	25	M14x1,5x13	17	800

Suitable washer:



Copper washer 20 x 14 x 1.5 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0505	1	20,0	14,0	1.5	2
430.1505	10	20,0	14,0	1,5	20
430.2505	25	20,0	14,0	1,5	50

OIL SUMP DRAIN PLUG FOR DAIHATSU

Oil sump drain plug M12 x 1.25 x 13 mm

- External hexagon
- Without washer



	Content	mm	mm	g
430.0012	1	M12x1,25x13	14	25
430.1012	10	M12x1,25x13	14	250
430.2012	25	M12x1,25x13	14	625

Suitable washer:



Soft washer 24 x 12 x 2.1 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0527	1	24,0	12,0	2.1	2
430.1527	10	24,0	12,0	2,1	20
430.2527	25	24,0	12,0	2,1	50

OIL SUMP DRAIN PLUG FOR FIAT

Oil sump drain plug, M18 x 1.5 x 27 mm

- Hexagon socket
- Without washer



	Content	mm	mm	g
430.0001	1	M18x1,5x27	8	57
430.1001	10	M18x1,5x27	8	570
430.2001	25	M18x1,5x27	8	1425

Suitable washer:



Copper washer 26 x 18 x 2.5 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0506	1	26,0	18,0	2.5	3
430.1506	10	26,0	18,0	2,5	30
430.2506	25	26,0	18,0	2,5	75

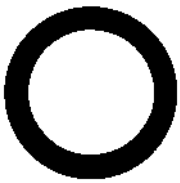
Oil sump drain plug, M18 x 1.5 x 27 mm

- Hexagon socket
- Without washer



	Content	mm	mm	g
430.0001	1	M18x1,5x27	8	57
430.1001	10	M18x1,5x27	8	570
430.2001	25	M18x1,5x27	8	1425

Suitable washer:



Megu washer 26 x 19 mm x 2.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0526	1	26,0	19,0	2	3
430.1526	10	26,0	19,0	2,0	30
430.2526	25	26,0	19,0	2,0	75

Oil sump drain plug M22 x 1.5 x 13.5 mm

- Hexagon socket
- Without washer



	Content	mm	mm	g
430.0002	1	M22x1,5x13,5	10	54
430.1002	10	M22x1,5x13,5	10	540
430.2002	25	M22x1,5x13,5	10	1350

Suitable washer:



Aluminium washer 30 x 22 x 1.5 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0517	1	30,0	22,0	1,5	1
430.1517	10	30,0	22,0	1,5	10
430.2517	25	30,0	22,0	1,5	25

Oil sump drain plug M22 x 1.5 x 16 mm

- External hexagon
- Without washer



	Content	mm	mm	g
430.0003	1	M22x1,5x16	18	43
430.1003	10	M22x1,5x16	18	430
430.2003	25	M22x1,5x16	18	1075

Suitable washer:

Aluminium washer 30 x 22 x 1.5 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0517	1	30,0	22,0	1,5	1
430.1517	10	30,0	22,0	1,5	10
430.2517	25	30,0	22,0	1,5	25

Oil sump drain plug M12 x 1.25 x 13 mm

- External hexagon
- Without washer



	Content	mm	mm	g
430.0331	1	M12x1,25x13	17	16
430.1331	10	M12x1,25x13	17	160
430.2331	25	M12x1,25x13	17	400

Suitable washer:



Copper washer 16 x 12 x 1.5 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0538	1	16,0	12,0	1,5	1
430.1538	10	16,0	12,0	1,5	10
430.2538	25	16,0	12,0	1,5	25

OIL SUMP DRAIN PLUG FOR FORD

Oil drain plug with quick-release fastener

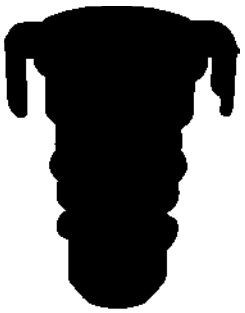
- With rapid fastening
- With washer



	Content	g
430.0073	1	1
430.1073	10	10
430.2073	25	25

Oil drain plug with bayonet lock

- Internal square
- With washer



	Content	mm	g
430.0074	1	10	20
430.1074	10	10	200
430.2074	25	10	50

Oil sump drain plug M10 x 1.25 x 13 mm

- External hexagon
- Without washer



	Content	mm	mm	g
430.0015	1	M10x1,25x13	21	18
430.1015	10	M10x1,25x13	21	180
430.2015	25	M10x1,25x13	21	450

Suitable washer:



Copper washer 20 x 10 x 2.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0508	1	20,0	10,0	2	4
430.1508	10	20,0	10,0	2,0	40
430.2508	25	20,0	10,0	2,0	100

Oil sump drain plug, M14 x 1.5 x 17.5 mm

- External hexagon
- With washer



	Content	mm	mm	g
430.0027	1	M14x1,5x17,5	19	41
430.1027	10	M14x1,5x17,5	19	410
430.2027	25	M14x1,5x17,5	19	1025

Oil sump drain plug, M14 x 1.5 x 16 mm

- External hexagon
- Without washer



	Content				
430.0061	1	M14x1,5x16	13	34	
430.1061	10	M14x1,5x16	13	340	
430.2061	25	M14x1,5x16	13	850	

Suitable washer:



Megu washer with centring ribs, 24 x 16 x 2.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm		
430.0525	1	24,0	16,0	2	2	
430.1525	10	24,0	16,0	2,0	20	
430.2525	25	24,0	16,0	2,0	50	

Oil sump drain plug, M14 x 1.25 x 13 mm

- Hexagon socket
- Without washer



	Content				
430.0062	1	M14x1,25x13	8	23	
430.1062	10	M14x1,25x13	8	230	
430.2062	25	M14x1,25x13	8	575	

Suitable washer:



Filling ring 20 x 14 x 2.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm		
430.0520	1	20,0	14,0	2	1	
430.1520	10	20,0	14,0	2,0	10	
430.2520	25	20,0	14,0	2,0	25	

Oil sump drain plug, M14 x 1.5 x 21 mm

- External hexagon
- Without washer



	Content				
430.0064	1	M14x1,5x21	13	57	
430.1064	10	M14x1,5x21	13	570	
430.2064	25	M14x1,5x21	13	1425	

Suitable washer:



NBR washer 22 x 13 x 3.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	
430.0530	1	22,0	13,0	3	1
430.1530	10	22,0	13,0	3,0	10
430.2530	25	22,0	13,0	3,0	25

Oil sump drain plug M12 x 1.75 x 28.5 mm

- External hexagon
- With washer



	Content			
430.0066	1	M12x1,75x28,5	15	45
430.1066	10	M12x1,75x28,5	15	450
430.2066	25	M12x1,75x28,5	15	1125

Oil sump drain plug M12 x 1.75 x 21 mm

- External hexagon
- With washer



	Content			
430.0068	1	M12x1,75x21	15	38
430.1068	10	M12x1,75x21	15	380
430.2068	25	M12x1,75x21	15	950

Oil sump drain plug, M14 x 1.25 x 12 mm

- Hexagon socket
- Without washer



	Content				
430.0067	1	M14x1,25x12	8	22	
430.1067	10	M14x1,25x12	8	220	
430.2067	25	M14x1,25x12	8	550	

Suitable washer:



Filling ring 20 x 14 x 2.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm		
430.0520	1	20,0	14,0	2	1	
430.1520	10	20,0	14,0	2,0	10	
430.2520	25	20,0	14,0	2,0	25	

OIL SUMP DRAIN PLUG FOR GM

Oil drain plug M12 x 1.75 x 17 mm

- External hexagon
- With washer



	Content				
430.0072	1	M12x1,75x17	15	36	
430.1072	10	M12x1,75x17	15	360	
430.2072	25	M12x1,75x17	15	900	

Oil sump drain plug M12 x 1.75 x 25 mm

- External hexagon
- Without washer



	Content				
430.0065	1	M12x1,75x25	15	40	
430.1065	10	M12x1,75x25	15	400	
430.2065	25	M12x1,75x25	15	1000	

Suitable washer:



NBR washer 21 x 11 x 2.5 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0529	1	21,0	11,0	2.5	1
430.1529	10	21,0	11,0	2,5	10
430.2529	25	21,0	11,0	2,5	25

Oil sump drain plug M12 x 1.75 x 26 mm

- External hexagon
- Without washer



	Content	mm	mm	g
430.0069	1	M12x1,75x26	15	36
430.1069	10	M12x1,75x26	15	360
430.2069	25	M12x1,75x26	15	900

Suitable washer:



Megu washer 18 x 12.7 x 1.5 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0537	1	18,0	12,7	1.5	1,3
430.1537	10	18,0	12,7	1,5	13
430.2537	25	18,0	12,7	1,5	33

OIL SUMP DRAIN PLUG FOR HONDA

Oil sump drain plug, M14 x 1.5 x 11 mm

- External hexagon
- Without washer



	Content	mm	mm	g
430.0071	1	M14x1,5x11	17	33
430.1071	10	M14x1,5x11	17	330
430.2071	25	M14x1,5x11	17	825

Suitable washer:



Aluminium washer 22 x 14 x 2.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0514	1	22,0	14,0	2	1
430.1514	10	22,0	14,0	2,0	10
430.2514	25	22,0	14,0	2,0	25

OIL SUMP DRAIN PLUG FOR HYUNDAI

Oil sump drain plug, M14 x 1.5 x 13 mm

- External hexagon
- Without washer



	Content	mm	mm	g
430.0026	1	M14x1,5x13	17	32
430.1026	10	M14x1,5x13	17	320
430.2026	25	M14x1,5x13	17	800

Suitable washer:



Japan washer 19 x 14 x 2.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0518	1	19,0	14,0	2	2
430.1518	10	19,0	14,0	2,0	20
430.2518	25	19,0	14,0	2,0	50

Oil sump drain plug, M14 x 1.5 x 23 mm

- External hexagon
- Without washer



	Content	mm	mm	g
430.0077	1	M14x1,5x23	17	45
430.1077	10	M14x1,5x23	17	450
430.2077	25	M14x1,5x23	17	1125

Suitable washer:



Japan washer 19 x 14 x 2.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0518	1	19,0	14,0	2	2
430.1518	10	19,0	14,0	2,0	20
430.2518	25	19,0	14,0	2,0	50

OIL SUMP DRAIN PLUG FOR ISUZU

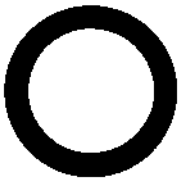
Oil sump drain plug, M18 x 1.5 x 21 mm

- External hexagon
- Without washer



	Content	mm	mm	g
430.0081	1	M18x1,5x21	13	45
430.1081	10	M18x1,5x21	13	450
430.2081	25	M18x1,5x21	13	1125

Suitable washer:



Megu washer 26 x 19 mm x 2.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0526	1	26,0	19,0	2	3
430.1526	10	26,0	19,0	2,0	30
430.2526	25	26,0	19,0	2,0	75

OIL SUMP DRAIN PLUG FOR JAGUAR

Oil sump drain plug, M14 x 1.5 x 21 mm

- External hexagon
- Without washer



	Content	mm	mm	g
430.0064	1	M14x1,5x21	13	57
430.1064	10	M14x1,5x21	13	570
430.2064	25	M14x1,5x21	13	1425

Suitable washer:



NBR washer 22 x 13 x 3.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	
430.0530	1	22,0	13,0	3	1
430.1530	10	22,0	13,0	3,0	10
430.2530	25	22,0	13,0	3,0	25

OIL SUMP DRAIN PLUG FOR JEEP

Oil sump drain plug M12 x 1.5 x 13 mm

- External hexagon
- Without washer



	Content	mm	mm	
430.0014	1	M12x1,5x13	17	20
430.1014	10	M12x1,5x13	17	200
430.2014	25	M12x1,5x13	17	500

Suitable washer:



Copper washer 17 x 12 x 1.5 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	
430.0502	1	17,0	12,0	1.5	1
430.1502	10	17,0	12,0	1,5	10
430.2502	25	17,0	12,0	1,5	25

Oil sump drain plug, M14 x 1.5 x 17.5 mm

- External hexagon
- With washer



	Content	mm	mm	
430.0027	1	M14x1,5x17,5	19	41
430.1027	10	M14x1,5x17,5	19	410
430.2027	25	M14x1,5x17,5	19	1025

OIL SUMP DRAIN PLUG FOR KIA

Oil sump drain plug, M14 x 1.5 x 13 mm

- External hexagon
- Without washer



	Content	mm	mm	
430.0026	1	M14x1,5x13	17	32
430.1026	10	M14x1,5x13	17	320
430.2026	25	M14x1,5x13	17	800

Suitable washer:



Japan washer 19 x 14 x 2.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	
430.0518	1	19,0	14,0	2	2
430.1518	10	19,0	14,0	2,0	20
430.2518	25	19,0	14,0	2,0	50

OIL SUMP DRAIN PLUG FOR LADA

Oil sump drain plug M22 x 1.5 x 10 mm

- Hexagon socket
- Beveled
- Seal ring not necessary



	Content	mm	mm	
430.0101	1	M22x1,5x10	10	22
430.1101	10	M22x1,5x10	10	220
430.2101	25	M22x1,5x10	10	550

OIL SUMP DRAIN PLUG FOR LANCIA

Oil sump drain plug M12 x 1.25 x 13 mm

- External hexagon
- Without washer



	Content	mm	mm	
430.0331	1	M12x1,25x13	17	16
430.1331	10	M12x1,25x13	17	160
430.2331	25	M12x1,25x13	17	400

Suitable washer:



Copper washer 16 x 12 x 1.5 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	
430.0538	1	16,0	12,0	1.5	1
430.1538	10	16,0	12,0	1,5	10
430.2538	25	16,0	12,0	1,5	25

Oil sump drain plug M22 x 1.5 x 16 mm

- External hexagon
- Without washer



	Content	mm	mm	
430.0003	1	M22x1,5x16	18	43
430.1003	10	M22x1,5x16	18	430
430.2003	25	M22x1,5x16	18	1075

Suitable washer:



Aluminium washer 30 x 22 x 1.5 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	
430.0517	1	30,0	22,0	1.5	1
430.1517	10	30,0	22,0	1,5	10
430.2517	25	30,0	22,0	1,5	25

OIL SUMP DRAIN PLUG FOR LAND ROVER

Oil sump drain plug M10 x 1.25 x 13 mm

- External hexagon
- Without washer



	Content	mm	mm	
430.0015	1	M10x1,25x13	21	18
430.1015	10	M10x1,25x13	21	180
430.2015	25	M10x1,25x13	21	450

Suitable washer:



Copper washer 20 x 10 x 2.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0508	1	20,0	10,0	2	4
430.1508	10	20,0	10,0	2,0	40
430.2508	25	20,0	10,0	2,0	100

Oil sump drain plug, M14 x 1.5 x 16 mm

- External hexagon
- Without washer



	Content	mm	mm	g
430.0061	1	M14x1,5x16	13	34
430.1061	10	M14x1,5x16	13	340
430.2061	25	M14x1,5x16	13	850

Suitable washer:



Megu washer with centring ribs, 24 x 16 x 2.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0525	1	24,0	16,0	2	2
430.1525	10	24,0	16,0	2,0	20
430.2525	25	24,0	16,0	2,0	50

OIL SUMP DRAIN PLUG FOR LEXUS

Oil sump drain plug M12 x 1.25 x 13 mm

- External hexagon
- Without washer



	Content	mm	mm	g
430.0012	1	M12x1,25x13	14	25
430.1012	10	M12x1,25x13	14	250
430.2012	25	M12x1,25x13	14	625

Suitable washer:



Soft washer 24 x 12 x 2.1 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0527	1	24,0	12,0	2,1	2
430.1527	10	24,0	12,0	2,1	20
430.2527	25	24,0	12,0	2,1	50

OIL SUMP DRAIN PLUG FOR MAZDA

Oil sump drain plug M10 x 1.25 x 13 mm

- External hexagon
- Without washer



	Content	mm	mm	g
430.0015	1	M10x1,25x13	21	18
430.1015	10	M10x1,25x13	21	180
430.2015	25	M10x1,25x13	21	450

Suitable washer:



Copper washer 20 x 10 x 2.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0508	1	20,0	10,0	2	4
430.1508	10	20,0	10,0	2,0	40
430.2508	25	20,0	10,0	2,0	100

Oil sump drain plug M12 x 1.75 x 28.5 mm

- External hexagon
- With washer



	Content	mm	mm	g
430.0066	1	M12x1,75x28,5	15	45
430.1066	10	M12x1,75x28,5	15	450
430.2066	25	M12x1,75x28,5	15	1125

Oil sump drain plug, M14 x 1.5 x 10 mm

- External hexagon
- Without washer



	Content	mm	mm	g
430.0117	1	M14x1,5x10	19	28
430.1117	10	M14x1,5x10	19	280
430.2117	25	M14x1,5x10	19	700

Suitable washer:



Copper washer 20 x 14 x 1.5 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0505	1	20,0	14,0	1.5	2
430.1505	10	20,0	14,0	1,5	20
430.2505	25	20,0	14,0	1,5	50

Oil sump drain plug M12 x 1.75 x 21 mm

- External hexagon
- With washer



	Content	mm	mm	g
430.0068	1	M12x1,75x21	15	38
430.1068	10	M12x1,75x21	15	380
430.2068	25	M12x1,75x21	15	950

OIL SUMP DRAIN PLUG FOR MERCEDES

Oil sump drain plug M12 x 1.5 x 13 mm

- External hexagon
- Without washer



	Content	mm	mm	g
430.0014	1	M12x1,5x13	17	20
430.1014	10	M12x1,5x13	17	200
430.2014	25	M12x1,5x13	17	500

Suitable washer:



Copper washer 17 x 12 x 1.5 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g	
430.0502	1	17,0	12,0	1.5	1	
430.1502	10	17,0	12,0	1,5	10	
430.2502	25	17,0	12,0	1,5	25	

Oil sump drain plug, M14 x 1.5 x 24 mm

- External hexagon
- Without washer



	Content	mm	mm	g	
430.0025	1	M14x1,5x24	13	37	
430.1025	10	M14x1,5x24	13	370	
430.2025	25	M14x1,5x24	13	925	

Suitable washer:



Copper washer 20 x 14 x 1.5 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g	
430.0505	1	20,0	14,0	1.5	2	
430.1505	10	20,0	14,0	1,5	20	
430.2505	25	20,0	14,0	1,5	50	

Oil sump drain plug, M14 x 1.5 x 13 mm

- External hexagon
- Without washer



	Content	mm	mm	g	
430.0026	1	M14x1,5x13	17	32	
430.1026	10	M14x1,5x13	17	320	
430.2026	25	M14x1,5x13	17	800	

Suitable washer:

Japan washer 19 x 14 x 2.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g	
430.0518	1	19,0	14,0	2	2	
430.1518	10	19,0	14,0	2,0	20	
430.2518	25	19,0	14,0	2,0	50	

OIL SUMP DRAIN PLUG FOR MITSUBISHI

Oil sump drain plug, M14 x 1.5 x 13 mm

- External hexagon
- Without washer



	Content	mm	mm	g	
430.0026	1	M14x1,5x13	17	32	
430.1026	10	M14x1,5x13	17	320	
430.2026	25	M14x1,5x13	17	800	

Suitable washer:



Japan washer 19 x 14 x 2.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g	
430.0518	1	19,0	14,0	2	2	
430.1518	10	19,0	14,0	2,0	20	
430.2518	25	19,0	14,0	2,0	50	

OIL SUMP DRAIN PLUG FOR NISSAN

Oil sump drain plug M12 x 1.25 x 13 mm

- External hexagon
- Without washer



	Content	mm	mm	g	
430.0012	1	M12x1,25x13	14	25	
430.1012	10	M12x1,25x13	14	250	
430.2012	25	M12x1,25x13	14	625	

Suitable washer:

Sleeve 17 x 12 x 3.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g	
430.0509	1	17,0	12,0	3	1	
430.1509	10	17,0	12,0	3,0	10	
430.2509	25	17,0	12,0	3,0	25	

Oil sump drain plug M16 x 1.5 L= 13 mm

- Internal square
- Without washer



	Content	mm	mm	g	
430.0041	1	M16x1,5x13	8	22	
430.1041	10	M16x1,5x13	8	220	
430.2041	25	M16x1,5x13	8	550	

Suitable washer:



Megu washer with centring ribs, 24 x 16 x 2.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g	
430.0524	1	24,0	16,0	2	2	
430.1524	10	24,0	16,0	2,0	20	
430.2524	25	24,0	16,0	2,0	50	

Oil sump drain plug M16 JIS x 1.25 L= 11 mm

- External hexagon
- Without washer



	Content	mm	mm	g	
430.0043	1	M16JISx1,25x11	22	43	
430.1043	10	M16JISx1,25x11	22	430	
430.2043	25	M16JISx1,25x11	22	1075	

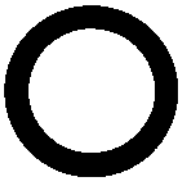
Suitable washer:



Washer, sleeve 21 x 15 x 2.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0531	1	21,0	15,0	2	1
430.1531	10	21,0	15,0	2,0	10
430.2531	25	21,0	15,0	2,0	25

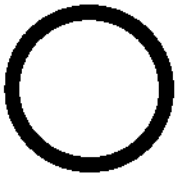
Suitable washer:



Megu washer 26 x 19 mm x 2.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0526	1	26,0	19,0	2	3
430.1526	10	26,0	19,0	2,0	30
430.2526	25	26,0	19,0	2,0	75

Suitable washer:



NBR washer 22 x 18 x 2.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0528	1	22,0	18,0	2	1
430.1528	10	22,0	18,0	2,0	10
430.2528	25	22,0	18,0	2,0	25

OIL SUMP DRAIN PLUG FOR OPEL

Oil sump drain plug M22 x 1.5 x 13.5 mm

- Hexagon socket
- Without washer



	Content		mm	g
430.0002	1	M22x1,5x13,5	10	54
430.1002	10	M22x1,5x13,5	10	540
430.2002	25	M22x1,5x13,5	10	1350

Oil sump drain plug, M14 x 1.5 x 12 mm

- External hexagon
- Without washer



	Content		mm	g
430.0136	1	M14x1,5x12	19	27
430.1136	10	M14x1,5x12	19	270
430.2136	25	M14x1,5x12	19	675

Oil sump drain plug M12 x 1.75 x 25 mm

- External hexagon
- Without washer



	Content		mm	g
430.0138	1	M12x1,75x25	15	41
430.1138	10	M12x1,75x25	15	410
430.2138	25	M12x1,75x25	15	1025

Suitable washer:



Aluminium washer 30 x 22 x 1.5 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0517	1	30,0	22,0	1.5	1
430.1517	10	30,0	22,0	1,5	10
430.2517	25	30,0	22,0	1,5	25

Suitable washer:



Copper washer 20 x 14 x 1.5 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0505	1	20,0	14,0	1.5	2
430.1505	10	20,0	14,0	1,5	20
430.2505	25	20,0	14,0	1,5	50

Suitable washer:



NBR washer 21 x 11 x 2.5 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0529	1	21,0	11,0	2.5	1
430.1529	10	21,0	11,0	2,5	10
430.2529	25	21,0	11,0	2,5	25

Oil sump drain plug, M18 x 1.5 x 21 mm

- External hexagon
- Without washer



	Content		mm	g
430.0081	1	M18x1,5x21	13	45
430.1081	10	M18x1,5x21	13	450
430.2081	25	M18x1,5x21	13	1125

Oil sump drain plug, M14 x 1.5 x 10.5 mm

- Torx
- With washer



	Content		mm	g
430.0137	1	M14x1,5x10,5	T45	24
430.1137	10	M14x1,5x10,5	T45	240
430.2137	25	M14x1,5x10,5	T45	600

OIL DRAINAGE SCREW FOR PSA

Oil drain plug with quick-release fastener

- With rapid fastening
- With washer



	Content	g
430.0073	1	1
430.1073	10	10
430.2073	25	25

Oil sump drain plug M10 x 1.25 x 13 mm

- External hexagon
- Without washer



	Content			
430.0015	1	M10x1,25x13	21	18
430.1015	10	M10x1,25x13	21	180
430.2015	25	M10x1,25x13	21	450

Suitable washer:



Copper washer 20 x 10 x 2.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	
430.0508	1	20,0	10,0	2	4
430.1508	10	20,0	10,0	2,0	40
430.2508	25	20,0	10,0	2,0	100

Oil sump drain plug M16 x 1.5 L= 13 mm

- Internal square
- Without washer



	Content			
430.0041	1	M16x1,5x13	8	22
430.1041	10	M16x1,5x13	8	220
430.2041	25	M16x1,5x13	8	550

Suitable washer:



Filling ring 22 x 16 x 2.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	
430.0521	1	22,0	16,0	2	1
430.1521	10	22,0	16,0	2,0	10
430.2521	25	22,0	16,0	2,0	25

Oil sump drain plug, M14 x 1.5 x 13 mm

- External hexagon
- Without washer



	Content			
430.0026	1	M14x1,5x13	17	32
430.1026	10	M14x1,5x13	17	320
430.2026	25	M14x1,5x13	17	800

Suitable washer:



Japan washer 19 x 14 x 2.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	
430.0518	1	19,0	14,0	2	2
430.1518	10	19,0	14,0	2,0	20
430.2518	25	19,0	14,0	2,0	50

Oil sump drain plug, M20 x 1.5 x 12 mm

- Hexagon socket
- Without washer



	Content			
430.0034	1	M20x1,5x12	12	29
430.1034	10	M20x1,5x12	12	290
430.2034	25	M20x1,5x12	12	725

Suitable washer:



Filling ring 26 x 20 x 2.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	
430.0523	1	26,0	20,0	2	1
430.1523	10	26,0	20,0	2,0	10
430.2523	25	26,0	20,0	2,0	25

Oil sump drain plug, M14 x 1.25 x 13 mm

- Hexagon socket
- Without washer



	Content			
430.0062	1	M14x1,25x13	8	23
430.1062	10	M14x1,25x13	8	230
430.2062	25	M14x1,25x13	8	575

Suitable washer:



Filling ring 20 x 14 x 2.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	
430.0520	1	20,0	14,0	2	1
430.1520	10	20,0	14,0	2,0	10
430.2520	25	20,0	14,0	2,0	25

Oil sump drain plug M16 x 1.5 L= 16 mm

- External hexagon
- Without washer



	Content			
430.0031	1	M16x1,5x16	21	39
430.1031	10	M16x1,5x16	21	390
430.2031	25	M16x1,5x16	21	975

Suitable washer:



Filling ring 22 x 16 x 2.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	
430.0521	1	22,0	16,0	2	1
430.1521	10	22,0	16,0	2,0	10
430.2521	25	22,0	16,0	2,0	25

OIL SUMP DRAIN PLUG FOR PORSCHE

Oil sump drain plug, M20 x 1.5 x 14 mm

- External hexagon
- Without washer



	Content	mm	mm	g
430.0226	1	M20x1,5x14	15	55
430.1226	10	M20x1,5x14	15	550
430.2226	25	M20x1,5x14	15	1375

Suitable washer:



Copper washer 27 x 22 x 1.5 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0533	1	27,0	22,0	1.5	1
430.1533	10	27,0	22,0	1,5	10
430.2533	25	27,0	22,0	1,5	25

Oil sump drain plug, M18 x 1.5 x 11 mm

- Hexagon socket
- Without washer



	Content	mm	mm	g
430.0227	1	M18x1,5x11	8	11
430.1227	10	M18x1,5x11	8	110
430.2227	25	M18x1,5x11	8	275

Suitable washer:



Aluminium washer 24 x 18 x 1.5 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0515	1	24,0	18,0	1.5	1
430.1515	10	24,0	18,0	1,5	10
430.2515	25	24,0	18,0	1,5	25

Oil sump drain plug, M26 x 1.5 x 11 mm

- External hexagon
- Without washer



	Content	mm	mm	g
430.0228	1	M26x1,5x11	22	68
430.1228	10	M26x1,5x11	22	680
430.2228	25	M26x1,5x11	22	1700

Suitable washer:



Aluminium washer 32 x 26 x 2.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0536	1	32,0	26,0	2	1
430.1536	10	32,0	26,0	2,0	10
430.2536	25	32,0	26,0	2,0	25

OIL SUMP DRAIN PLUG FOR RENAULT

Oil sump drain plug M22 x 1.5 x 13.5 mm

- Hexagon socket
- Without washer



	Content	mm	mm	g
430.0002	1	M22x1,5x13,5	10	54
430.1002	10	M22x1,5x13,5	10	540
430.2002	25	M22x1,5x13,5	10	1350

Suitable washer:



Aluminium washer 30 x 22 x 1.5 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0517	1	30,0	22,0	1.5	1
430.1517	10	30,0	22,0	1,5	10
430.2517	25	30,0	22,0	1,5	25

Oil sump drain plug M16 x 1.5 L= 13 mm

- Internal square
- Without washer



	Content	mm	mm	g
430.0041	1	M16x1,5x13	8	22
430.1041	10	M16x1,5x13	8	220
430.2041	25	M16x1,5x13	8	550

Suitable washer:



Filling ring 22 x 16 x 2.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0521	1	22,0	16,0	2	1
430.1521	10	22,0	16,0	2,0	10
430.2521	25	22,0	16,0	2,0	25

Oil sump drain plug M16 x 1.5 L= 24 mm

- Internal square
- Without washer



	Content	mm	mm	g
430.0157	1	M16x1,5x24	8	31
430.1157	10	M16x1,5x24	8	310
430.2157	25	M16x1,5x24	8	775

Suitable washer:



Filling ring 22 x 16 x 2.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0521	1	22,0	16,0	2	1
430.1521	10	22,0	16,0	2,0	10
430.2521	25	22,0	16,0	2,0	25

Oil sump drain plug M16 x 1.5 L= 13 mm

- Internal square
- Without washer



	Content			
430.0158	1	M16x1,5x13	8	35
430.1158	10	M16x1,5x13	8	350
430.2158	25	M16x1,5x13	8	875

Suitable washer:



Filling ring 22 x 16 x 2.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	
430.0521	1	22,0	16,0	2	1
430.1521	10	22,0	16,0	2,0	10
430.2521	25	22,0	16,0	2,0	25

Oil sump drain plug, M18 x 1.5 x 16 mm

- Internal square
- Without washer



	Content			
430.0159	1	M18x1,5x16	8	35
430.1159	10	M18x1,5x16	8	350
430.2159	25	M18x1,5x16	8	875

Suitable washer:



Filling ring 24 x 18 x 2.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	
430.0522	1	24,0	18,0	2	1
430.1522	10	24,0	18,0	2,0	10
430.2522	25	24,0	18,0	2,0	25

Oil sump drain plug, M18 x 1.5 x 22 mm

- Internal square
- Without washer



	Content			
430.0161	1	M18x1,5x22	8	41
430.1161	10	M18x1,5x22	8	410
430.2161	25	M18x1,5x22	8	1025

Suitable washer:



Filling ring 24 x 18 x 2.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	
430.0522	1	24,0	18,0	2	1
430.1522	10	24,0	18,0	2,0	10
430.2522	25	24,0	18,0	2,0	25

OIL DRAINAGE SCREWS FOR ROVER

Oil sump drain plug M12 x 1.5 x 18 mm

- External hexagon
- Without washer



	Content			
430.0011	1	M12x1,5x18	17	24
430.1011	10	M12x1,5x18	17	240
430.2011	25	M12x1,5x18	17	600

Suitable washer:



Aluminium washer 17 x 12 x 1.5 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	
430.0512	1	17,0	12,0	1,5	1
430.1512	10	17,0	12,0	1,5	10
430.2512	25	17,0	12,0	1,5	25

OIL SUMP DRAIN PLUG FOR ROVER MINI

Oil sump drain plug UNC 5/8" x 11G x 16 mm

- External hexagon
- Without washer



	Content			
430.0171	1	UNC 5/8"x11Gx16	24	48
430.1171	10	UNC 5/8"x11Gx16	24	480
430.2171	25	UNC 5/8"x11Gx16	24	1200

Suitable washer:



Copper washer 25.5 x 16 x 1.6 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	
430.0511	1	25,5	16,0	1.6	4
430.1511	10	25,5	16,0	1,6	40
430.2511	25	25,5	16,0	1,6	100

OIL SUMP DRAIN PLUG FOR SAAB

Oil sump drain plug M22 x 1.5 x 13.5 mm

- Hexagon socket
- Without washer



	Content			
430.0002	1	M22x1,5x13,5	10	54
430.1002	10	M22x1,5x13,5	10	540
430.2002	25	M22x1,5x13,5	10	1350

Suitable washer:



Aluminium washer 30 x 22 x 1.5 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	
430.0517	1	30,0	22,0	1.5	1
430.1517	10	30,0	22,0	1,5	10
430.2517	25	30,0	22,0	1,5	25

Oil sump drain plug, M14 x 1.5 x 16 mm

- External hexagon
- Without washer



	Content	mm	mm	g
430.0061	1	M14x1,5x16	13	34
430.1061	10	M14x1,5x16	13	340
430.2061	25	M14x1,5x16	13	850

Suitable washer:



Copper washer 24 x 15 x 2.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0510	1	24,0	15,0	2	4
430.1510	10	24,0	15,0	2,0	40
430.2510	25	24,0	15,0	2,0	100

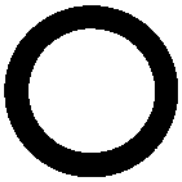
Oil sump drain plug, M18 x 1.5 x 21 mm

- External hexagon
- Without washer



	Content	mm	mm	g
430.0081	1	M18x1,5x21	13	45
430.1081	10	M18x1,5x21	13	450
430.2081	25	M18x1,5x21	13	1125

Suitable washer:



Megu washer 26 x 19 mm x 2.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0526	1	26,0	19,0	2	3
430.1526	10	26,0	19,0	2,0	30
430.2526	25	26,0	19,0	2,0	75

Oil sump drain plug M12 x 1.75 x 25 mm

- External hexagon
- Without washer



	Content	mm	mm	g
430.0138	1	M12x1,75x25	15	41
430.1138	10	M12x1,75x25	15	410
430.2138	25	M12x1,75x25	15	1025

Suitable washer:



NBR washer 21 x 11 x 2.5 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0529	1	21,0	11,0	2.5	1
430.1529	10	21,0	11,0	2,5	10
430.2529	25	21,0	11,0	2,5	25

OIL SUMP DRAIN PLUG FOR SMART 451

Oil sump drain plug, M14 x 1.5 x 21 mm

- External hexagon
- Without washer



	Content	mm	mm	g
430.0064	1	M14x1,5x21	13	57
430.1064	10	M14x1,5x21	13	570
430.2064	25	M14x1,5x21	13	1425

Suitable washer:



NBR washer 22 x 13 x 3.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0530	1	22,0	13,0	3	1
430.1530	10	22,0	13,0	3,0	10
430.2530	25	22,0	13,0	3,0	25

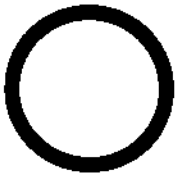
Oil sump drain plug, M14 x 1.5 x 10.5 mm

- Torx
- With washer



	Content	mm	mm	g
430.0137	1	M14x1,5x10,5	T45	24
430.1137	10	M14x1,5x10,5	T45	240
430.2137	25	M14x1,5x10,5	T45	600

Suitable washer:



NBR washer 22 x 18 x 2.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0528	1	22,0	18,0	2	1
430.1528	10	22,0	18,0	2,0	10
430.2528	25	22,0	18,0	2,0	25

Oil sump drain plug M22 x 1.5 x 14 mm

- External hexagon
- Without washer



	Content	mm	mm	g
430.0187	1	M22x1,5x14	24	81
430.1187	10	M22x1,5x14	24	810
430.2187	25	M22x1,5x14	24	2025

Suitable washer:



Copper washer 33 x 22 x 1.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0501	1	33,0	22,0	1	4
430.1501	10	33,0	22,0	1,0	40
430.2501	25	33,0	22,0	1,0	100

OIL SUMP DRAIN PLUG FOR SMART FOR FOUR

Oil sump drain plug, M14 x 1.5 x 24 mm

- External hexagon
- Without washer



	Content	mm	mm	g
430.0025	1	M14x1,5x24	13	37
430.1025	10	M14x1,5x24	13	370
430.2025	25	M14x1,5x24	13	925

Suitable washer:



Copper washer 18 x 14 x 1.5 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0503	1	18,0	14,0	1.5	1
430.1503	10	18,0	14,0	1,5	10
430.2503	25	18,0	14,0	1,5	25

OIL SUMP DRAIN PLUG FOR SUBARU

Oil sump drain plug, M14 x 1.5 x 13 mm

- External hexagon
- Without washer



	Content	mm	mm	g
430.0026	1	M14x1,5x13	17	32
430.1026	10	M14x1,5x13	17	320
430.2026	25	M14x1,5x13	17	800

Suitable washer:



Japan washer 19 x 14 x 2.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0518	1	19,0	14,0	2	2
430.1518	10	19,0	14,0	2,0	20
430.2518	25	19,0	14,0	2,0	50

Oil sump drain plug, M20 x 1.5 x 15 mm

- External hexagon
- Without washer



	Content	mm	mm	g
430.0191	1	M20x1,5x15	17	62
430.1191	10	M20x1,5x15	17	620
430.2191	25	M20x1,5x15	17	1550

Suitable washer:



Japan washer 26 x 20 x 2.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0519	1	26,0	20,0	2	2
430.1519	10	26,0	20,0	2,0	20
430.2519	25	26,0	20,0	2,0	50

OIL SUMP DRAIN PLUG FOR SUZUKI

Oil sump drain plug, M14 x 1.5 x 13 mm

- External hexagon
- Without washer



	Content	mm	mm	g
430.0026	1	M14x1,5x13	17	32
430.1026	10	M14x1,5x13	17	320
430.2026	25	M14x1,5x13	17	800

Suitable washer:



Copper washer 20 x 14 x 1.5 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0505	1	20,0	14,0	1.5	2
430.1505	10	20,0	14,0	1,5	20
430.2505	25	20,0	14,0	1,5	50

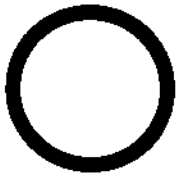
Oil sump drain plug, M14 x 1.5 x 10.5 mm

- Torx
- With washer



	Content	mm	mm	g
430.0137	1	M14x1,5x10,5	T45	24
430.1137	10	M14x1,5x10,5	T45	240
430.2137	25	M14x1,5x10,5	T45	600

Suitable washer:



NBR washer 22 x 18 x 2.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0528	1	22,0	18,0	2	1
430.1528	10	22,0	18,0	2,0	10
430.2528	25	22,0	18,0	2,0	25



OIL SUMP DRAIN PLUG FOR TOYOTA

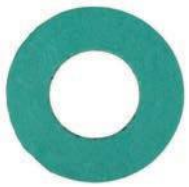
Oil sump drain plug M12 x 1.25 x 13 mm

- External hexagon
- Without washer



	Content		mm	g
430.0012	1	M12x1,25x13	14	25
430.1012	10	M12x1,25x13	14	250
430.2012	25	M12x1,25x13	14	625

Suitable washer:



Soft washer 24 x 12 x 2.1 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0527	1	24,0	12,0	2.1	2
430.1527	10	24,0	12,0	2,1	20
430.2527	25	24,0	12,0	2,1	50

Oil sump drain plug, M18 x 1.5 x 11.5 mm

- External hexagon
- Without washer



	Content		mm	g
430.0018	1	M18x1,5x11,5	24	59
430.1018	10	M18x1,5x11,5	24	590
430.2018	25	M18x1,5x11,5	24	1475

Suitable washer:



Soft washer 28 x 18 x 2.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0532	1	28,0	18,0	2	1,5
430.1532	10	28,0	18,0	2,0	15
430.2532	25	28,0	18,0	2,0	35

OIL SUMP DRAIN PLUG FOR VOLVO

Oil sump drain plug M10 x 1.25 x 13 mm

- External hexagon
- Without washer



	Content		mm	g
430.0015	1	M10x1,25x13	21	18
430.1015	10	M10x1,25x13	21	180
430.2015	25	M10x1,25x13	21	450

Suitable washer:



Copper washer 20 x 10 x 2.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0508	1	20,0	10,0	2	4
430.1508	10	20,0	10,0	2,0	40
430.2508	25	20,0	10,0	2,0	100



Oil sump drain plug, M14 x 1.5 x 13 mm

- External hexagon
- Without washer



	Content		mm	g
430.0026	1	M14x1,5x13	17	32
430.1026	10	M14x1,5x13	17	320
430.2026	25	M14x1,5x13	17	800

Suitable washer:



Japan washer 19 x 14 x 2.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	g
430.0518	1	19,0	14,0	2	2
430.1518	10	19,0	14,0	2,0	20
430.2518	25	19,0	14,0	2,0	50



Oil sump drain plug M16 x 1.5 L= 13 mm

- Internal square
- Without washer



	Content			
430.0041	1	M16x1,5x13	8	22
430.1041	10	M16x1,5x13	8	220
430.2041	25	M16x1,5x13	8	550

Suitable washer:



Filling ring 22 x 16 x 2.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	
430.0521	1	22,0	16,0	2	1
430.1521	10	22,0	16,0	2,0	10
430.2521	25	22,0	16,0	2,0	25

Oil sump drain plug, M18 x 1.5 x 11 mm

- External hexagon
- Without washer



	Content			
430.0208	1	M18x1,5x11	25	46
430.1208	10	M18x1,5x11	25	460
430.2208	25	M18x1,5x11	25	1150

Suitable washer:



Copper washer 26 x 19 x 2.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	
430.0507	1	26,0	19,0	2	4
430.1507	10	26,0	19,0	2,0	40
430.2507	25	26,0	19,0	2,0	100

Oil sump drain plug, M14 x 1.25 x 12 mm

- Hexagon socket
- Without washer



	Content			
430.0067	1	M14x1,25x12	8	22
430.1067	10	M14x1,25x12	8	220
430.2067	25	M14x1,25x12	8	550

Suitable washer:



Filling ring 20 x 14 x 2.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	
430.0520	1	20,0	14,0	2	1
430.1520	10	20,0	14,0	2,0	10
430.2520	25	20,0	14,0	2,0	25

Oil sump drain plug, M14 x 1.5 x 21 mm

- External hexagon
- Without washer



	Content			
430.0064	1	M14x1,5x21	13	57
430.1064	10	M14x1,5x21	13	570
430.2064	25	M14x1,5x21	13	1425

Suitable washer:



NBR washer 22 x 13 x 3.0 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	
430.0530	1	22,0	13,0	3	1
430.1530	10	22,0	13,0	3,0	10
430.2530	25	22,0	13,0	3,0	25

Oil sump drain plug, M18 x 1.5 x 18 mm

- External hexagon
- Without washer



	Content			
430.0211	1	M18x1,5x18	17	54
430.1211	10	M18x1,5x18	17	540
430.2211	25	M18x1,5x18	17	1350

Suitable washer:



Aluminium washer 24 x 18 x 1.5 mm

	Content	Outer Ø mm	Inner Ø mm	Thickness mm	
430.0515	1	24,0	18,0	1.5	1
430.1515	10	24,0	18,0	1,5	10
430.2515	25	24,0	18,0	1,5	25



OIL SUMP TOOL

Oil sump socket for hexagon-screws with ball end

- Ideally suited for assembly and disassembly of securing screws on the oil sump
- Ball end hexagon socket
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Extra long execution
- Matt finish
- Chrome vanadium

Application range: Volkswagen T4 etc.





	mm	Ø mm	L mm	g	
917.3858	5,0	17,5	215,0	79	

Oil sump socket for RIBE screws

- Ideally suited for assembly and disassembly of securing screws on the oil sump
- RIBE profile
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Extra long execution
- With sand blasted bit insert
- Matt finish
- Chrome vanadium



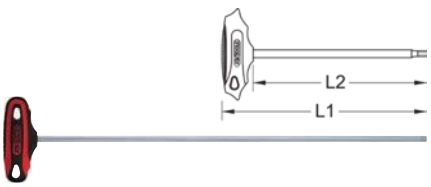


	mm	Ø mm	L mm	g	
917.3859	7,0	17,5	210,0	103	
917.3866	8,0	17,5	265,0	127	

ERGOTORQUE*plus*® T handle RIBE profile extra long

- Extra long execution
- Two component handle
- Continuous hardened
- Mirror polished
- Special tool steel

Application range: for mounting and dismounting the oil pan on **Opel**, **Fiat**, **Alfa Romeo**, **Suzuki** and **Saab** and for valve covers and spark plug covers on **Alfa Romeo**, **Fiat**, **Lancia** etc.



		L1 mm	L2 mm	g	
158.5121	M4	280,0	250,0	100	
158.5122	M5	280,0	250,0	100	
158.5123	M6	280,0	250,0	100	
158.5124	M7	280,0	250,0	130	
158.5125	M8	280,0	250,0	145	
158.5126	M9	280,0	250,0	145	
158.5127	M10	290,0	250,0	316	

Oil sump and cleaning set

- Ideally suited for removing tough oil sumps
- Light, easy and correct usage
- Not dependant on direction
- Includes cleaning disks with holder
- With two different cutting knives
- Sturdy design
- In durable plastic storage case





			g	
150.1585	21 pcs	Oil sump and cleaning set	385	

consists of:

		g	
150.1541	Cutting knife holder	115	
150.1542	Cutting knife, 1.6 mm, black	19	
150.1543	Cutting knife, 2.0 mm, gold	21	
150.1586	Guide pin	24	
150.1587	Cleaning disk holder	44	
150.1588	Cleaning disc set, 15 pcs	30	
151.26025	Hexagon key wrench, phosphate finish, short, 2,5mm	10	

TRANSMISSION OIL COOLANT TOOL

Release pins for transmission oil cooler pipes

- Ideally suited for disconnecting pipe connections on the transmission oil coolant and the coolant loop to the power steering
- Necessary for work on the transmission of oil cooler
- Screwed in support brackets
- 5-stage adjustment
- Two component handle
- Chrome vanadium

Application range: BMW 1 series (E81, 82, 87, 88), 3 series (E46, 90, 91, 92, 93), 5 series (E60, E61), 6 series (E64, 63), 7 series (E65, 66), X3 (E83), X5 (E53, 70), X6 (E71), Z4 (E85, 86) and **Mini** (R50, 52, 53)





	Length mm	Width mm	Height mm	g	
115.8504	134,0	220,0	55,0	360	

OIL DRAINAGE SCREW REPAIR

Universal anchor for oil drain plugs

- With washer



	Content	g	
430.1099	10	40	
430.2099	25	100	

Oil sump drain plug seal seat face milling cutter set

- Tool for facing the seal seat of oil sump drain plugs
- Facing of the seal seat ensures reliable sealing in the area of the oil sump drain plug
- Exact centering and alignment of the sealing surface
- Set includes adaption for original oil sump drain plug and oversize threaded repair plug
- In durable plastic storage case





			g	
150.1485	6 pcs	Oil sump drain plug seal seat face milling cutter set	700	

consists of:

		g	
150.1486	3/8" Milling cutter 0°, Ø 22 mm with bore hole	147	
150.1488	Expander thread M14 x 1.5 to 150.148	12	
150.1489	Expander thread M15 x 1.5 to 150.1485	14	
150.1490	Pilot to 150.1485	25	
150.1492	4 mm wrench to 150.1485	25	
150.1493	8 mm wrench to 150.1485	36	

accessories:

		g	
150.1494	Milling cutter 24 mm optional to 150.1485	208	
150.1487	Toggle lever to 150.1485	36	

OIL SUMP DRAIN PLUG THREAD REPAIRER

Oil sump drain plug repair kit M12 x 1,5

- For the solid and fast repair of oil sump plug screw threads
- The damaged thread is cut down to M12 x 1.5 with the thread cutter
- Also suited for aluminium oil sumps
- Allows for repair work and avoids replacing the oil sump
- Also suitable for oil sumps with recessed drainage openings
- Special tool steel
- In durable plastic storage case

Application range: BMW, **Citroën**, **Land Rover**, **Mazda**, **Peugeot**, **Volvo**





150.4915	12 pcs	Oil sump drain plug repair kit M12 x 1,5	280	
5 x		M12 x 1,5		(150.1461 = 10 x)
5 x		M12 x 1,5		(150.1484 = 25 x)
1 x		M12 x 1,5		(150.4918)
1 x		10mm x 3/8“		(150.4919)

Oil sump drain plug repair kit M14 x 1,5

- For the solid and fast repair of oil sump plug screw threads
- The damaged thread is cut down to M14 x 1.5 with the thread cutter
- Also suited for aluminium oil sumps
- Allows for repair work and avoids replacing the oil sump
- Also suitable for oil sumps with recessed drainage openings
- Special tool steel
- In durable plastic storage case

Application range: Alfa Romeo, **BMW**, **Daihatsu**, **Fiat**, **Ford**, **Jeep**, **Lancia**, **Mazda**, **Lexus**, **Mercedes**, **Opel**, **Nissan**, **Saab**, **Toyota**





150.4920	12 pcs	Oil sump drain plug repair kit M14 x 1,5	320	
5 x		M14 x 1,5		(150.1462 = 10 x)
5 x		M14 x 1,5		(150.1496 = 25 x)
1 x		M14 x 1,5		(150.4923)
1 x		10mm x 3/8“		(150.4919)

Oil sump drain plug repair kit M15 x 1,5

- For the solid and fast repair of oil sump plug screw threads
- The damaged thread is cut down to M15 x 1.5 with the thread cutter
- Also suited for aluminium oil sumps
- Allows for repair work and avoids replacing the oil sump
- Also suitable for oil sumps with recessed drainage openings
- Special tool steel
- In durable plastic storage case

Application range: Audi, **BMW**, **Chrysler**, **Citroën**, **Daewoo**, **Ford**, **Honda**, **Mercedes**, **Opel**, **Peugeot**, **Saab**, **Škoda**, **Suzuki** , **Volkswagen**, **Volvo**





150.4925	12 pcs	Oil sump drain plug repair kit M15 x 1,5	340	
5 x		M15 x 1,5		(150.1451 = 10 x)
5 x		M15 x 1,5		(150.1452 = 25 x)
1 x		M15 x 1,5		(150.1453)
1 x		10mm x 3/8“		(150.4919)



Oil sump drain plug repair kit M17 x 1,5

- For the solid and fast repair of oil sump plug screw threads
- The damaged thread is cut down to M17 x 1.5 with the thread cutter
- Also suited for aluminium oil sumps
- Allows for repair work and avoids replacing the oil sump
- Also suitable for oil sumps with recessed drainage openings
- Special tool steel
- In durable plastic storage case

Application range: Chrysler, **Citroën**, **Dacia**, **Nissan**, **Peugeot**, **Renault**, **Volvo**





150.4930	12 pcs	Oil sump drain plug repair kit M17 x 1,5	330	
5 x		M17 x 1,5		(150.1454 = 10 x)
5 x		M17 x 1,5		(150.1455 = 25 x)
1 x		M17 x 1,5		(150.4956)
1 x		10mm x 3/8“		(150.4919)

Oil sump drain plug repair kit M18 x 1,5

- For the solid and fast repair of oil sump plug screw threads
- The damaged thread is cut down to M18 x 1.5 with the thread cutter
- Also suited for aluminium oil sumps
- Allows for repair work and avoids replacing the oil sump
- Also suitable for oil sumps with recessed drainage openings
- Special tool steel
- In durable plastic storage case

Application range: Chrysler, **Citroën**, **Dacia**, **Nissan**, **Peugeot**, **Renault**, **Volvo**





150.4935	12 pcs	Oil sump drain plug repair kit M18 x 1,5	360	
5 x		M18 x 1,5		(150.1463 = 10 x)
5 x		M18 x 1,5		(150.1497 = 25 x)
1 x		M18 x 1,5		(150.4938)
1 x		10mm x 3/8“		(150.4919)

Oil sump drain plug repair kit M20 x 1,5

- For the solid and fast repair of oil sump plug screw threads
- The damaged thread is cut down to M20 x 1.5 with the thread cutter
- Also suited for aluminium oil sumps
- Allows for repair work and avoids replacing the oil sump
- Also suitable for oil sumps with recessed drainage openings
- Special tool steel
- In durable plastic storage case

Application range: Alfa Romeo, Fiat, Isuzu, Opel, Porsche, Renault, Saab, Toyota, Volvo





150.4940	12 pcs	Oil sump drain plug repair kit M20 x 1,5	400	
5 x		M20 x 1,5	(150.1457 = 10 x)	
5 x		M20 x 1,5	(150.1458 = 25 x)	
1 x		M20 x 1,5	(150.4959)	
1 x		10mm x 3/8“	(150.4919)	

Oil sump drain plug repair kit M22 x 1,5

- For the solid and fast repair of oil sump plug screw threads
- The damaged thread is cut down to M22 x 1.5 with the thread cutter
- Also suited for aluminium oil sumps
- Allows for repair work and avoids replacing the oil sump
- Also suitable for oil sumps with recessed drainage openings
- Special tool steel
- In durable plastic storage case

Application range: Citroën, Peugeot, Subaru





150.4945	12 pcs	Oil sump drain plug repair kit M22 x 1,5	460	
5 x		M22 x 1,5	(150.1464 = 10 x)	
5 x		M22 x 1,5	(150.1498 = 25 x)	
1 x		M22 x 1,5	(150.4948)	
1 x		10mm x 3/8“	(150.4919)	

Oil sump drain plug repair kit M24 x 1,5

- For the solid and fast repair of oil sump plug screw threads
- The damaged thread is cut down to M24 x 1.5 with the thread cutter
- Also suited for aluminium oil sumps
- Allows for repair work and avoids replacing the oil sump
- Also suitable for oil sumps with recessed drainage openings
- Special tool steel
- In durable plastic storage case

Application range: Alfa Romeo, BMW, Fiat, Lada, Lancia, Opel, Porsche, Renault, Saab





150.4950	12 pcs	Oil sump drain plug repair kit M24 x 1,5	580	
5 x		M24 x 1,5	(150.1465 = 10 x)	
5 x		M24 x 1,5	(150.1499 = 25 x)	
1 x		M24 x 1,5	(150.4953)	
1 x		10mm x 3/8“	(150.4919)	

Master oil drain plug thread repair set

- For the solid and fast repair of oil sump plug screw threads
- The damaged thread is cut down to the next biggest size with the thread cutter
- Also suited for aluminium oil sumps
- Allows for repair work and avoids replacing the oil sump
- Also suitable for oil sumps with recessed drainage openings
- In durable plastic storage case





150.1450	64 pcs	Master oil drain plug thread repair set	950
40 x		10 x M13 - 10 x M15 - 10 x M17 10 x M20	
4 x		M13 - M15 - M17 - M20	
20 x		5 x M13 - 5 x M15 - 5 x M17 - 5 x M20	

HSS special hand thread cutter for oil drain plug thread repair

- For the solid and fast repair of oil sump plug screw threads
- The damaged thread is cut down to the next biggest size with the thread cutter
- In accordance to DIN 352
- For through threads with relief-edges
- Surface without discolouration
- High performance steel





		mm	mm	Content	g
150.4918	M12	1,5	10,0	1	46
150.1449	M13	1,5	10,0	1	40
150.4923	M14	1,5	10,0	1	58
150.1453	M15	1,5	10,0	1	50
150.1456	M17	1,5	10,0	1	60
150.4938	M18	1,5	10,0	1	89
150.1459	M20	1,5	10,0	1	70
150.4948	M22	1,5	10,0	1	143
150.4953	M24	1,5	10,0	1	151

Oil sump drain plug

- For oil sump thread
- Suitable for oil sumps made from aluminium, steel, die cast and metal
- Suitable for almost all vehicles





		mm	Profile	mm	Content	g
150.1461	M12	1,5		17,0	10	220
150.1447	M13	1,5		17,0	10	300
150.1462	M14	1,5		19,0	10	290
150.1451	M15	1,5		19,0	10	320
150.1454	M17	1,5		8,0	10	360
150.1463	M18	1,5		8,0	10	290
150.1457	M20	1,5		10,0	10	390
150.1464	M22	1,5		12,0	10	420
150.1465	M24	1,5		14,0	10	600

Aluminium seals for oil drain plug

- For the exchange after the oil change
- Also necessary for oil sump plug repairs
- Aluminium
- Suitable for almost all vehicles





		Content	g
150.1484	M12	25	10
150.1448	M13	25	10
150.1496	M14	25	10
150.1452	M15	25	10
150.1455	M17	25	10
150.1497	M18	25	10
150.1458	M20	25	10
150.1498	M22	25	10
150.1499	M24	25	10

OIL FILTER TENSION WRENCH

Oil filter band wrench

- Ideally suited for the installation and removal of filters and filter cartridges
- One hand operation
- Infinitely variable
- Also for hard-to-reach filter housing
- Adjustment on the filter flow measure by turning the knob on the end of the handle
- Dimpled spring steel band gives a secure mounting on the filter and provides a powerful wrench releasing of the filter





	Ø mm	Replacement band	g	
155.5002	65,0-110,0	155.0238	241	
155.5003	110,0-155,0	155.0338	450	

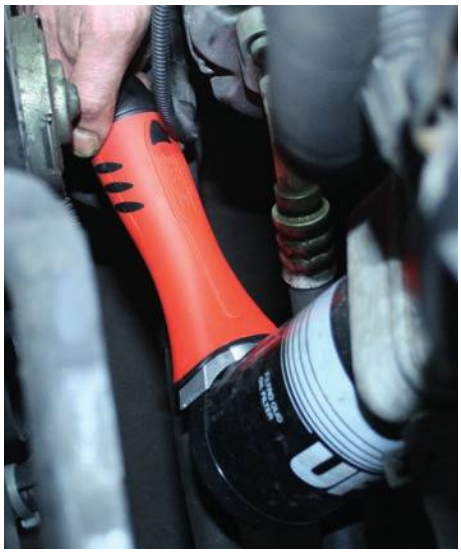
Universal oil filter strap wrench, 65 - 105 mm

- Ideally suited for the installation and removal of filters and filter cartridges
- One hand operation
- Infinitely variable
- Also for hard-to-reach filter housing
- Adjustment on the filter flow measure by turning the knob on the end of the handle
- Dimpled spring steel band gives a secure mounting on the filter and provides a powerful wrench releasing of the filter
- Ergonomic handle shape





	Ø mm	Belt length mm	Handle length mm	g	
155.5005	65,0-105,0	540,0	170,0	297	



Oil filter band wrench

- Ideally suited for the installation and removal of filters and filter cartridges
- One hand operation
- Infinitely variable
- Also for hard-to-reach filter housing
- Handle can also be turned 90° via the turning joint
- Grooves give a secure mounting on the filter and provides a powerful wrench releasing of the filter
- Insulated handle





	Ø mm	g	
150.9377	60,0 - 70,0	350	
150.9378	73,0 - 85,0	360	
150.9379	85,0 - 95,0	370	

Strap pipe pliers

- Ideally suited for the installation and removal of filters and filter cartridges
- Especially suited for plastic pipes
- One hand operation
- Infinitely variable
- For hard to reach places
- Belt made of reinforced, non-slip rubber
- Glass fibre reinforced handle







	Ø mm	L mm	g	
114.0150	110,0	190,0	180	

Strap wrench

- Ideally suited for the removal of filters and filter cartridges
- Especially suited for plastic pipes
- One hand operation
- Infinitely variable
- For hard to reach places
- non-slip, rubber-coated cotton fabric tape
- With metal handle
- Chrome plated
- Chrome vanadium







	mm	Ø mm	Ø	L mm	Replacement band	g	
114.0170	20,0	140,0	9/64"	220,0	114.0170-1	323	
114.0171	25,0	200,0	13/64"	280,0	114.0171-1	590	

Oil filter band wrench

- Sturdy and extra high steel band
- Ideally suited for the installation and removal of filters and filter cartridges
- Internal square drive to DIN 3120 - ISO 1174
- Also for hard-to-reach filter housing
- Especially large working area
- Grooves give a secure mounting on the filter and provides a powerful wrench releasing of the filter
- Special tool steel





1/2"

	Ø mm	Ø	H mm	g	
455.0050	105 - 118	4.1/8" - 4.21/32"	75,0	930	
455.0051	118 - 130	4.21/32" - 5.5/32"	75,0	950	
455.0052	130 - 143	5.5/32" - 5.21/32"	75,0	990	

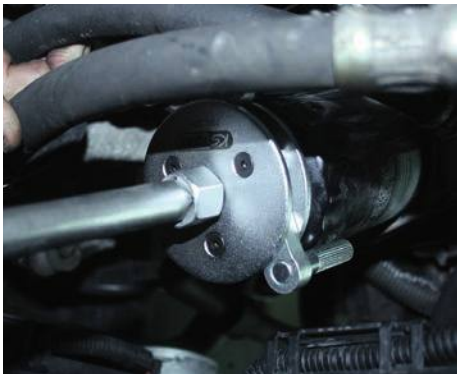
Oil filter and air dryer cartridge chains wrench

- Extremely robust double tension chain
- Ideally suited for the installation and removal of filters, filter cartridges and air dryer cartridges
- One hand operation
- Infinitely variable
- Also for hard-to-reach filter housing
- Handle can also be turned 90° via the turning joint
- Double tension chain gives a secure mounting on the filter and provides a powerful wrench releasing of the filter
- Insulated handle





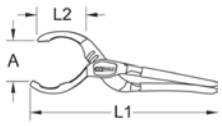
	Ø mm	g	
150.9375	130,0	380	
150.9376	160,0	380	



Oil filter pliers

- Forged, extremely robust execution
- Toughened teeth prevent slips
- Universal usage
- Ideally suited for the installation and removal of filters and filter cartridges
- One hand operation
- With 5 levels of adjustment
- Also for hard-to-reach filter housing
- Special toughened griffin teeth give a secure mounting on the filter and provides a powerful wrench releasing of the filter
- Special tool steel
- Insulated handle







	A mm	L1 mm	L2 mm	g	
150.9317	50-125	290,0	110,0	500	

Oil filter tension wrench

- Infinitely variable
- The special automatic left and right side adjustment mechanism makes possible the releasing and tightening of different sizes oil filters
- Ideally suited for the installation and removal of filters and filter cartridges
- Internal square drive to DIN 3120 - ISO 1174
- Also for hard-to-reach filter housing
- Specially angled surface areas give a secure mounting on the filter and provides a powerful wrench releasing of the filter
- Sheet construction
- Painted surface





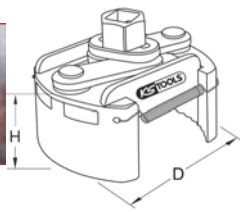
3/8" 1/2"

	Ø mm	mm	g	
150.9313	63,0-102,0	21	370	
150.9314	65,0-120,0	21	350	

Universal oil filter wrench

- Fully adjustable with self-tensioning effect
- The special automatic left and right side adjustment mechanism allows for the releasing and tightening of different sizes oil filters
- Left-toothed jaws for a better hold when releasing
- Ideally suited for the installation and removal of filters and filter cartridges
- Internal square drive to DIN 3120 - ISO 1174
- Also for hard-to-reach filter housing
- Special toughened griffin teeth give a secure mounting on the filter and provides a powerful wrench releasing of the filter
- Forged, extremely robust execution
- Special tool steel









1/2"

	D mm	mm	H mm	g	
700.5005	60 - 80	21	40,0	500	
700.5006	80 - 110	22	50,0	900	
700.5008	104 - 150	24	80,0	1785	

Oil filter and air dryer cartridge wrench

- Infinitely variable
- The special automatic left and right side adjustment mechanism makes possible the releasing and tightening of different sizes oil filters
- Ideally suited for the installation and removal of filters and filter cartridges and air dryer cartridges
- Internal square drive to DIN 3120 - ISO 1174
- Also for hard-to-reach filter housing
- Specially chequered and hardened surface areas give a secure mounting on the filter and provides a powerful wrench releasing of the filter
- Forged, extremely robust execution
- Special tool steel





1/2"

	Ø mm	mm	kg	
700.5001	80 - 120	24	0,63	
700.5002	105 - 165	30	1,40	



SPECIAL OIL FILTER WRENCH

Oil filter wrench for Ford, Jaguar, Citroën, Peugeot Duratorq TDCi/HDI twin cam diesel engines

- Ideally suited for installation and removal of hard to reach oil filter covers when changing the oil filter unit
- 12 point
- Perfectly suited for tight installation areas
- Suitable for left and right side operation
- Correct and torque controlled assembly
- Special socket
- Internal square drive to DIN 3120 - ISO 1174
- Chrome vanadium

Application range:
(DW10C) Citroën, Ford, Peugeot 2.0 L Duratorq-TDCi/HDi:
Peugeot 308 2.0 HDi 163cv (> 2011), 3008 2.0 16v HDi 163CV (> July 2009), 5008 2.0 HDi 163CV (> December 2009), 407 2.0 HDi 163 CV (2010-2011), 407 Coupé 2.0 HDi 163 CV (2009-2012), 508 2.0 HDi 163CV (> 10/2010), RCZ 2.0 HDi (> April 2010), **Citroën** C4 Picasso 2.0 HDi 16v 163CV aut. (> 09/2010), C5 2.0 16v HDi (> 2010), C8 2.0 HDi (> 2010), DS4 2.0 HDi (> 2011), DS5 2.0 HDi (> 2011), **Ford** Mondeo Mk3 2.0 TDCi 163 CV (> 2010), C-Max/C-Max 2.0 TDCi 163CV (> 2010), Galaxy Mk3 2.0 TDCi 163 CV (> 2010), S-Max 2.0 TDCi 163 CV (> 2010), Kuga 2.0 TDCi (> 2010)

(DW12C) Citroën, Ford, Jaguar 2.2 L Duratorq-TDCi/HDI:
Citroën C5 Mk2 2.2 HDi (> 10/2010), 508 2.2 HDi GT (> 10/2010), **Ford** Mondeo Mk3 2.2 TDCi (> 12/2010), Galaxy Mk2 2.2 TDCi (> 2010), S-Max 2.2 TDCi (> 2010), **Jaguar** XF 2.2D Sportbrake (> 2012)





1/2"

	mm	L mm	g	
150.9306	27	245,0	400	

Oil filter wrench for Ford, Jaguar, Citroën, Peugeot Duratorq TDCi/HDI twin cam diesel engines

- Ideally suited for installation and removal of hard to reach oil filter covers when changing the oil filter unit
- 12 point
- Ratchet function
- External drive hexagonal socket 13 mm
- Perfectly suited for tight installation areas
- Suitable for left and right side operation
- Correct and torque controlled assembly
- Special socket
- Chrome vanadium

Application range:
(DW10C) Citroën, Ford, Peugeot 2.0 L Duratorq-TDCi/HDI:
Peugeot 308 2.0 HDi 163cv (> 2011), 3008 2.0 16v HDi 163CV (> July 2009), 5008 2.0 HDi 163CV (> December 2009), 407 2.0 HDi 163 CV (2010-2011), 407 Coupé 2.0 HDi 163 CV (2009-2012), 508 2.0 HDi 163CV (> 10/2010), RCZ 2.0 HDi (> April 2010), **Citroën** C4 Picasso 2.0 HDi 16v 163CV aut. (> 09/2010), C5 2.0 16v HDi (> 2010), C8 2.0 HDi (> 2010), DS4 2.0 HDi (> 2011), DS5 2.0 HDi (> 2011), **Ford** Mondeo Mk3 2.0 TDCi 163 CV (> 2010), C-Max/C-Max 2.0 TDCi 163CV (> 2010), Galaxy Mk3 2.0 TDCi 163 CV (> 2010), S-Max 2.0 TDCi 163 CV (> 2010), Kuga 2.0 TDCi (> 2010)

(DW12C) Citroën, Ford, Jaguar 2.2 L Duratorq-TDCi/HDI:
Citroën C5 Mk2 2.2 HDi (> 10/2010), 508 2.2 HDi GT (> 10/2010), **Ford** Mondeo Mk3 2.2 TDCi (> 12/2010), Galaxy Mk2 2.2 TDCi (> 2010), S-Max 2.2 TDCi (> 2010), **Jaguar** XF 2.2D Sportbrake (> 2012)





	mm	Length mm	g
150.9446	27	410,0	980

Oil filter wrench for Opel and Vauxhall petrol engines

- Ideally suited for installation and removal of hard to reach oil filter covers when changing the oil filter unit
- 12 point
- Perfectly suited for tight installation areas
- Suitable for left and right side operation
- Correct and torque controlled assembly
- Special socket
- Internal square drive to DIN 3120 / ISO 1174
- Chrome vanadium

Application range: for **Opel** and **Vauxhall** 2.0 l and 2.2 l petrol engines, e.g. **Opel** Astra G and H, Vectra B, Vectra C, Speedster, Zafira A and B, Omega B, Signum, Insignia etc.



1/2"

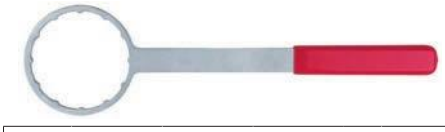
	mm	Length mm	g
150.9444	32	140,0	340

Oil filter wrench Ø 76 mm / 12 grooves

- Ideally suited for installation and removal of hard to reach oil filter covers when changing the oil filter unit
- One hand operation
- Suitable for left and right side operation
- Special socket
- Long handle for optimal force
- Insulated handle
- Chrome vanadium

Application range: Ford with 1.8 l diesel engine and Motocraft filter EFL 344/**Peugeot** with Purflux filter/**Renault** petrol engines, e.g. R5, Twingo, Rapid, Clio, Kangoo, Laguna, Megane,Trafic each with the filter numbers 77 00 873 and 77 00 720 978/ **Honda** Prelude BA4 2.0 16V/ **Land Rover** Defender 2.5 l Diesel (DD5) with filter number LPX 100 590





	Ø mm	Grooves	Length mm	g
150.9308	76,0	12	330,0	400

Oil filter wrench Ø 66 mm / 6 grooves

- Ideally suited for installation and removal of hard to reach oil filter covers when changing the oil filter unit
- One hand operation
- Suitable for left and right side operation
- Special socket
- Long handle for optimal force
- Insulated handle
- Chrome vanadium

Application range: Fiat Punto, Idea, **Renault** Clio, Express, Kangoo, Rapid, Twingo



	Ø mm	Grooves	Length mm	g
150.9517	66,0	6	280,0	225

Oil filter wrench Ø 96 mm / 18 grooves

- Ideally suited for installation and removal of hard to reach oil filter covers when changing the oil filter unit
- One hand operation
- Suitable for left and right side operation
- Special socket
- Long handle for optimal force
- Insulated handle
- Chrome vanadium

Application range: Audi A4, **Volkswagen** Touareg, Passat, **Renault** Master, Laguna, Safrane, Espace III, R19, Rapid, Megane, **Opel** Movano, etc.

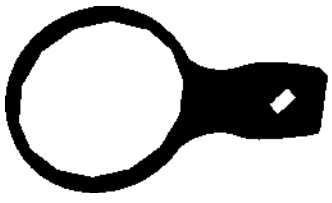


	Ø mm	Grooves	Length mm	g
150.9518	96,0	18	350,0	320

Oil filter wrench Ø 66.5 mm / 14 surfaces

- For the quick and correct assembly and disassembly of the hard to reach oil filter
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Chrome vanadium

Application range: Subaru Estratto, Tutto, Domingo etc.



3/8"

	mm	Stages	Sides	g
150.9463	66,5	1	14	160



Oil filter wrench Ø 42 mm / 6 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface



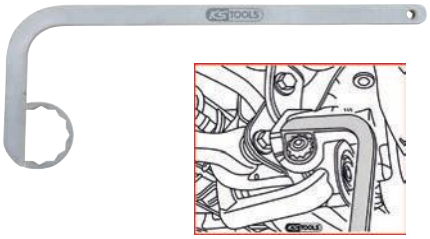
1/2"

	mm	Stages	Grooves	g
150.9523	42	1	6	190

Oil filter wrench for Haldex transmission

- Special length and design
- For the assembly and disassembly of the difficult to reach oil filter of the Haldex transmission
- Allows for simple and time-saving oil filter change
- 12 point
- Matt finish
- Chrome vanadium

Application range: Volkswagen Golf/Passat/Sharan/Caddy/ Tiguan/Transporter T5 (4MOTION Models), **Škoda** Yeti/Octavia II/Superb II with all-wheel transmission shift



	mm	Length mm	g
150.2098	46,0	390,0	770

Oil filter wrench for Audi / Volkswagen

- For the quick and correct assembly and disassembly of the hard to reach oil filter
- Suitable for Mann, Knecht or Mahle filters
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Forged execution
- Matt finish
- Chrome vanadium

Application range: Audi, **Volkswagen** diesel engines with **MAN**N oil or fuel filter W 920, W 920/7, W 930, W 930/9, W 940, W 940/15, W 940/20, W 940/25, W 950, W 950/1, W 950/5, W 962/2, W 962/7, W 962/14, W 1130/1, WK 940/4, WK 950/4, WK 962/5, WP 931 and WP 962/3, as well as KNECHT and MAHLE oil filters: OC 51, OC 83 and OC 214





1/2"

	mm	Ø mm	Height mm	g
150.9259	22,0	49,5	24,0	113

Oil filter cover wrench overview

article-no.	dimension	stages	grooves	sides	drive
150.9366	27	1		6	3/8"
150.9217	27			6	3/8"
150.9367	32	1		6	3/8"
150.9218	32			6	3/8"
150.9368	36	1		6	3/8"
150.9219	36			6	3/8"
150.9291	36	1		6	1/2"
150.9319	64	1		14	3/8"
150.9211	64,5	1		14	3/8"
150.9212	64,5	1		14	3/8"
150.9321	65	1	6	14	3/8"
150.9330	65/67	2		14	3/8"
150.9336	66	1	6		3/8"
150.9408	66	1	18		3/8"
150.9411	92,3	1	45		3/8"
150.9322	68	1		14	3/8"
150.9323	73	1		14	3/8"
150.9309	73	1		10	3/8"
150.9337	74	1		15	3/8"
150.9292	74	1		14	1/2"
150.9215	74,2	1		14	3/8"
150.9325	76	1		14	3/8"
150.9412	75,3	1	16		3/8"
150.9338	76	1	12		3/8"
150.9324	74/76	2		15	3/8"
150.9333	75/77	2		15	3/8"
150.9339	76	1	8		3/8"
150.9334	76	1	30		3/8"
150.9406	76	1	6		3/8"
150.9341	78	1		15	3/8"
150.9326	80	1		15	3/8"
150.9331	80/82	2		15	3/8"
150.9342	86	1		18	3/8"
150.9343	86	1		16	3/8"
150.9214	86,6	1		16	3/8"
150.9413	87	1		16	3/8"
150.9464	86	1		16	3/8"
150.9521	87	1		16	3/8"
150.9213	88,8	1		15	3/8"
150.9332	90	1		15	3/8"
150.9423	91	1	12		3/8"
150.9344	92	1		10	3/8"
150.9428	66,6	1	6		3/8"
150.9327	93	1		15	3/8"
150.9345	93	1	45		3/8"
150.9329	93	1	36		3/8"
150.9346	95	1	15		3/8"
150.9347	96	1	18		3/8"
150.9429	96	1	6		3/8"
150.9335	100	1		15	3/8"
150.9382	103	1		14	3/8"
150.9348	106	1		15	3/8"
150.9293	106	1		15	1/2"
150.9294	107	1		15	1/2"
150.9349	108	1		15	3/8"
150.9351	108	1	18		3/8"
150.9295	108	1		15	1/2"
150.9296	108	1	18		1/2"
150.9383	109	1	6		3/8"
150.9297	135	1		18	1/2"

OIL FILTER CAP WRENCH

Oil filter wrench Ø 27.0 mm / 6 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- External drive hexagonal socket 21.0 mm
- For manual operation
- Painted surface

Application range: Mercedes, **Mazda** etc.





3/8"

	mm	Stages	Sides	g	
150.9366	27	1	6	60	

Oil filter wrench Ø 27.0 mm / 6 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Forged execution
- Matt finish
- Chrome vanadium

Application range: Mercedes, **Smart** etc.





3/8"

	mm	Sides	g	
150.9217	27	6	118	

Oil filter wrench Ø 32.0 mm / 6 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- External drive hexagonal socket 21.0 mm
- For manual operation
- Painted surface

Application range: Volkswagen, **Opel**, **Audi** etc.





3/8"

	mm	Stages	Sides	g	
150.9367	32	1	6	70	

Oil filter wrench Ø 32.0 mm / 6 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Forged execution
- Matt finish
- Chrome vanadium

Application range: Opel, **Mercedes**, **GM** etc.





3/8"

	mm	Sides	g	
150.9218	32	6	146	

Oil filter wrench Ø 36.0 mm / 6 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- External drive hexagonal socket 21.0 mm
- For manual operation
- Painted surface

Application range: Mercedes, **BMW**, **Ford**, **Volkswagen**, **Rover**, **Opel** etc.





3/8"

	mm	Stages	Sides	g	
150.9368	36	1	6	80	

Oil filter wrench Ø 36.0 mm / 6 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Forged execution
- Matt finish
- Chrome vanadium

Application range: BMW, Mini, **Volkswagen**, **Mercedes**, **Ford** etc.





3/8"

	mm	Stages	Sides	g	
150.9219	36	6	188		

Oil filter wrench Ø 36.0 mm / 6 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface





1/2"

	mm	Stages	Sides	g	
150.9291	36,0	1	6	70	

Oil filter wrench Ø 64.0 mm / 14 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface

Application range: Toyota, **Nissan**, **Mazda**, **Fiat**, **Daihatsu** etc.





3/8"

	mm	Stages	Sides	g	
150.9319	64	1	14	140	

Oil filter wrench Ø 64.5 mm / 14 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface

Application range: Toyota, **Lexus** (6 cylinder) etc.





3/8"

	mm	Stages	Sides	g	
150.9211	64,5	1	14	169	

Oil filter wrench Ø 64.5 mm / 14 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface

Application range: Toyota Auris, Corolla, Isis, Prius etc.





3/8"

	mm	Stages	Sides	g
150.9212	64,5	1	14	144

Oil filter wrench Ø 66.0 mm / 6 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface

Application range: Fiat, **Renault**





3/8"

	mm	Stages	Grooves	g
150.9336	66	1	6	190

Oil filter wrench Ø 68.0 mm / 14 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface

Application range: Mazda, **Ford**, **Subaru** etc.





3/8"

	mm	Stages	Sides	g
150.9322	68	1	14	320

Oil filter wrench Ø 65.0 mm / 14 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface

Application range: Daihatsu, **Toyota**, **Nissan**, **Fiat**, **Honda** etc.





3/8"

	mm	Stages	Sides	g
150.9321	65	1	14	150

Oil filter wrench Ø 66.0 mm / 18 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface

Application range: Renault etc.





	mm	Stages	Grooves	g
150.9408	66	1	18	140

Oil filter wrench Ø 73.0 mm / 14 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface

Application range: Toyota, **Lexus** etc.





3/8"

	mm	Stages	Sides	g
150.9323	73	1	14	150

Oil filter wrench Ø 65/0 + 67.0 mm / 14 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface

Application range: Daihatsu, **Toyota** etc.





3/8"

	mm	Stages	Sides	g
150.9330	65/67	2	14	150

Oil filter wrench Ø 92.3 mm / 45 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface

Application range: Audi, **Nissan**, **Volkswagen** etc.





	mm	Stages	Grooves	g
150.9411	92,3	1	45	220

Oil filter wrench Ø 73.0 mm / 10 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface

Application range: Alfa Romeo GTA





3/8"

	mm	Stages	Sides	g
150.9309	73,0	1	10	280

Oil filter wrench Ø 74.0 mm / 15 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface

Application range: Audi, **GM**, **Rover**, **Chrysler** etc.





3/8"

	mm	Stages	Sides	g
150.9337	74	1	15	220

Oil filter wrench Ø 74.0 mm / 14 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface





1/2"

	mm	Stages	Sides	g
150.9292	74,0	1	14	140

Oil filter wrench Ø 74.2 mm / 14 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface

Application range: Audi, **BMW**, **Ford**, **Toyota**, **Volkswagen**, **Mercedes**, **Porsche** (all models with V6+V8) etc.





3/8"

	mm	Stages	Sides	g
150.9215	74,2	1	14	172

Oil filter wrench Ø 76.0 mm / 14 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface

Application range: Volkswagen, **Mercedes**, **Porsche**, **BMW**, **Audi**, **Opel** etc.





3/8"

	mm	Stages	Sides	g
150.9325	76	1	14	150

Oil filter wrench Ø 75.3 mm / 16 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface

Application range: Saab, **Fiat**, **Alfa Romeo** etc.





	mm	Stages	Grooves	g
150.9412	75,3	1	16	160

Oil filter wrench Ø 76.0 mm / 12 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface

Application range: Fiat, **Renault**, **Mercedes** etc.





3/8"

	mm	Stages	Grooves	g
150.9338	76	1	12	190

Oil filter wrench Ø 74.0 + 76.0 mm / 15 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface

Application range: Ford, **Opel**, **Volkswagen**, **Audi**, **Mercedes** etc.





3/8"

	mm	Stages	Sides	g
150.9324	74/76	2	15	170

Oil filter wrench Ø 75.0 + 77.0 mm / 15 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface

Application range: Volkswagen, **Audi**, **Ford**, **Isuzu**, **Mercedes**, **Opel** etc.





3/8"

	mm	Stages	Sides	g
150.9333	75/77	2	15	150

Oil filter wrench Ø 76.0 mm / 8 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface

Application range: Fiat, **Lancia** etc.





3/8"

	mm	Stages	Grooves	g
150.9339	76	1	8	170

Oil filter wrench Ø 76.0 mm / 30 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface

Application range: Ford etc.





	mm	Stages	Grooves	g
150.9334	76	1	30	150

Oil filter wrench Ø 80.0 mm / 15 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface

Application range: Nissan, **Honda**, **Opel**, **Mazda** etc.





	mm	Stages	Sides	g
150.9326	80	1	15	150

Oil filter wrench Ø 86.0 mm / 16 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface

Application range: Volvo etc.





	mm	Stages	Sides	g
150.9343	86	1	16	180

Oil filter wrench Ø 76.0 mm / 6 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface

Application range: Audi, **Citroën**, **Ford**, **Mercedes**, **Honda**, **Renault**, **Suzuki** etc.





	mm	Stages	Grooves	g
150.9406	76,0	1	6	220

Oil filter wrench Ø 80.0 + 82.0 mm / 15 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface

Application range: Subaru, **Toyota**, **Honda**, **Mazda**, **Nissan** etc.





	mm	Stages	Sides	g
150.9331	80/82	2	15	150

Oil filter wrench Ø 86.6 mm / 16 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface

Application range: Volvo, **BMW** etc.





	mm	Stages	Sides	g
150.9214	86,6	1	16	293

Oil filter wrench Ø 78.0 mm / 15 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface

Application range: Nissan, **Ford**, **Toyota** etc.





	mm	Stages	Sides	g
150.9341	78	1	15	170

Oil filter wrench Ø 86.0 mm / 18 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface

Application range: Volkswagen, **Audi**, **Renault**, **Peugeot**, **Citroën** etc.





	mm	Stages	Sides	g
150.9342	86	1	18	143

Oil filter wrench Ø 87.0 mm / 16 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface

Application range: Volkswagen, **Audi**, **Renault**, **Peugeot**, **Citroën** etc.





	mm	Stages	Sides	g
150.9413	87	1	16	240

Oil filter wrench Ø 86 mm / 16 surfaces

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface





3/8"

	mm	Stages	Sides	g
150.9464	86	1	16	351

Oil filter wrench Ø 90.0 mm / 15 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface

Application range: Honda, **Isuzu**, **Mitsubishi** etc.





3/8"

	mm	Stages	Sides	g
150.9332	90	1	15	150

Oil filter wrench Ø 66.6 mm / 6 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface

Application range: Renault etc.





3/8"

	mm	Stages	Grooves	g
150.9428	66,6	1	6	140

Oil filter wrench Ø 87 mm / 16 surfaces

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface

Application range: Mercedes, **Volvo**, etc.



3/8"

	mm	Stages	Sides	g
150.9521	87	1	16	205

Oil filter wrench Ø 91.0 mm / 12 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface

Application range: Fiat Ducato etc.





3/8"

	mm	Stages	Grooves	g
150.9423	91	1	12	220

Oil filter wrench Ø 95.0 mm / 15 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface

Application range: Mazda, **Volvo**, **Mitsubishi**, **Nissan**, **Honda** etc.





3/8"

	mm	Stages	Sides	g
150.9327	93	1	15	150

Oil filter wrench Ø 88.8 mm / 15 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface

Application range: Hyundai, **Kia** etc.





3/8"

	mm	Stages	Sides	g
150.9213	88,8	1	15	289

Oil filter wrench Ø 92.0 mm / 10 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface

Application range: Fiat, **Lancia** etc.





3/8"

	mm	Stages	Sides	g
150.9344	92	1	10	180

Oil filter wrench Ø 93.0 mm / 45 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface

Application range: Volkswagen, **Audi** etc.





3/8"

	mm	Stages	Grooves	g
150.9345	93	1	45	180

Oil filter wrench Ø 93.0 mm / 36 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface

Application range: Ford etc.





	mm	Stages	Grooves	g
150.9329	93	1	36	150

Oil filter wrench Ø 96.0 mm / 6 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface





	mm	Stages	Grooves	g
150.9429	96	1	6	220

Oil filter wrench Ø 106.0 mm / 15 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface





	mm	Stages	Sides	g
150.9348	106	1	15	200

Oil filter wrench Ø 95.0 mm / 15 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface

Application range: Toyota, **Alfa Romeo**, **GM**, **Ford**, **Chrysler** etc.





	mm	Stages	Grooves	g
150.9346	95	1	15	190

Oil filter wrench Ø 100.0 mm / 15 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface





	mm	Stages	Sides	g
150.9335	100	1	15	150

Oil filter wrench Ø 106.0 mm / 15 grooves

- Ideally suited for installation and removal of hard to reach oil filter covers when changing the oil filter unit or the oil filter
- Use according to the manufacturer's specification for torque
- 1/2" internal square and external hexagon 21.0 mm
- Painted surface

Application range Volkswagen, Mercedes, Porsche, BMW, Audi, Opel





	mm	Stages	Sides	g
150.9293	106,0	1	15	200

Oil filter wrench Ø 96.0 mm / 18 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface

Application range: Volkswagen, **Audi**, **Renault** etc.





	mm	Stages	Grooves	g
150.9347	96	1	18	190

Oil filter wrench Ø 103.0 mm / 14 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface

Application range: Opel, **Renault** etc.





	mm	Stages	Sides	g
150.9382	103	1	14	520

Oil filter wrench Ø 107.0 mm / 15 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface





	mm	Stages	Sides	g
150.9294	107	1	15	360

Oil filter wrench Ø 108.0 mm / 15 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface

Application range: Volvo etc.





3/8"

	mm	Stages	Sides	g	
150.9349	108	1	15	220	

Oil filter wrench Ø 108.0 mm / 18 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface





1/2"

	mm	Stages	Grooves	g	
150.9296	108,0	1	18	210	

Oil filter wrench Ø 108.0 mm / 18 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface

Application range: Renault etc.





3/8"

	mm	Stages	Grooves	g	
150.9351	108	1	18	190	

Oil filter wrench Ø 109.0 mm / 6 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface

Application range: Fiat, **Alfa Romeo**, **Lancia**, **Opel** etc. with 1,3L, 1,9L and 2,4L diesel engines





3/8"

	mm	Stages	Grooves	g	
150.9383	109	1	6	380	

Oil filter wrench Ø 108.0 mm / 15 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface





1/2"

	mm	Stages	Sides	g	
150.9295	108,0	1	15	210	

Oil filter wrench Ø 135.0 mm / 18 grooves

- For the quick and professional installation and dismantling of the oil filter cover when changing the oil filter insert
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Painted surface





1/2"

	mm	Stages	Sides	g	
150.9297	135,0	1	18	510	

OIL FILTER CAP WRENCH SET

Oil service wrench set for filter housing cover

- Ideally suited for installation and removal of hard to reach oil filter covers when changing the oil filter unit or the oil filter
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- External drive hexagonal socket 21.0 mm
- For manual operation
- Painted surface
- In durable plastic storage case





3/8"

			g	
150.9365	3 pcs	Oil service wrench set for filter housing cover	320	

consists of:

	Suitable for	mm	Sides	g	
150.9366	Mercedes Benz, Mazda	27	6	60	
150.9367	VW, Audi, Opel	32	6	70	
150.9368	Mercedes Benz, BMW, Ford, VW, Rover, Opel	36	6	80	

Ring spanner set, extra flat

- ideally suited for installing and removing screws and oil filter covers that are difficult to access when changing the oil filter
- 6 point
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- For manual operation
- Phosphate finish
- Includes storage rail





3/8"

			g	
150.9585	5 pcs	24 - 27 - 32 - 36 - 38 mm	507	

consists of:

		g	
150.9586	3/8" set of insert ring spanners, extra flat, 24 mm	80	
150.9587	3/8" set of insert ring spanners, extra flat, 27 mm	85	
150.9588	3/8" set of insert ring spanners, extra flat, 32 mm	97	
150.9589	3/8" set of insert ring spanners, extra flat, 36 mm	103	
150.9591	3/8" set of insert ring spanners, extra flat, 38 mm	107	

Oil service wrench set for oil filter and filter housing covers

- Ideally suited for installation and removal of hard to reach oil filter covers when changing the oil filter unit or the oil filter
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- Includes universal oil filter tension wrench for all standard filters
- For manual operation
- Painted surface
- In durable plastic storage case





3/8"

150.9210	9 pcs	Oil service wrench set for oil filter and filter housing covers	3,14

consists of:

	Suitable for	mm	Sides	g
150.9211	Allion, Auris, Corolla,Prius,Vox-y,etc	64,5	14	169
150.9212	Toyota, Lexus (6 Zyl.)	64,5	14	144
150.9213	Hyunday, KIA	88,8	15	289
150.9214	BMW 3+5+X, Volvo	86,6	16	293
150.9215	Audi, BMW, Ford, Toyota, VW,Porsche, Mercedes Benz	74,2	14	172
150.9216	universal	63-83		378
150.9217	Mercedes, Smart	27	6	118
150.9218	GM, Opel, Mercedes	32	6	146
150.9219	Mercedes Diesel, BMW, Mini, Ford	36	6	188

Oil service set for oil filter and filter housing cover

- Ideally suited for installation and removal of hard to reach oil filter covers when changing the oil filter unit or the oil filter
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- External drive hexagonal socket 21.0 mm
- Includes 1/2" universal oil filter strap wrench
- For manual operation
- Painted surface
- In durable plastic storage case





1/2"

150.9290	9 pcs	Oil service set for oil filter and filter housing covers	3,40

consists of:

	Suitable for	mm	Grooves	Sides	g
150.9291	Mercedes Benz, Scania	36,0		6	70
150.9292	Audi, BMW, Ford, Lancia, Mazda, Mercedes Benz, Fiat	74,0		14	140
150.9293	Volkswagen, Mercedes Benz, Porsche, BMW, Audi, Opel	106,0		15	200
150.9294	Volvo, Iveco, Renault, Scania	107		15	360
150.9295	Volvo, Iveco, Renault, Scania	108,0		15	210
150.9296	Renault, Opel	108,0	18		210
150.9297	MAN	135,0		18	510
150.9298	universal	160,0			140
150.9299	universal	24,0			270

Oil service set for oil filter and filter housing cover

- Ideally suited for installation and removal of hard to reach oil filter covers when changing the oil filter unit or the oil filter
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- External drive hexagonal socket 21.0 mm
- For manual operation
- Painted surface
- In durable plastic storage case





3/8"

150.9320	15 pcs	Oil service set for oil filter and filter housing cover	2,83

consists of:

	Suitable for	mm	Grooves	Sides	g
150.9321	Daihatsu, Toyota, Nissan, Fiat, Honda	65	6	14	150
150.9322	Mazda, Ford, Subaru	68		14	320
150.9323	Toyota, Lexus	73		14	150
150.9324	Ford, Opel, VW, Audi, Mercedes Benz	74/76		15	170
150.9325	VW, Mercedes Benz, Porsche, BMW, Audi, Opel	76		14	150
150.9326	Nissan, Honda, Opel, Mazda	80		15	150
150.9327	Mazda, Mitsubishi, Volvo, Nissan, Honda	93		15	150
150.9329	Ford	93	36		150
150.9330	Daihatsu, Toyota	65/67		14	150
150.9331	Subaru, Toyota, Honda, Mazda, Nissan	80/82		15	150
150.9332	Honda, Mitsubishi, Isuzu	90		15	150
150.9333	VW, Audi, Ford, Isuzu, Mercedes Benz, Opel	75/77		15	150
150.9334	Ford	76	30		150
150.9335	Isuzu, Mitsubishi	100		15	150
150.9340	universal	21			153

Oil service set for oil filter and filter housing cover

- Ideally suited for installation and removal of hard to reach oil filter covers when changing the oil filter unit or the oil filter
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- External drive hexagonal socket 21.0 mm
- Includes 1/2" oil filer pin
- For manual operation
- Painted surface
- In durable plastic storage case





3/8"

150.9310	16 pcs	Oil service set for oil filter and filter housing cover	2,30

consists of:

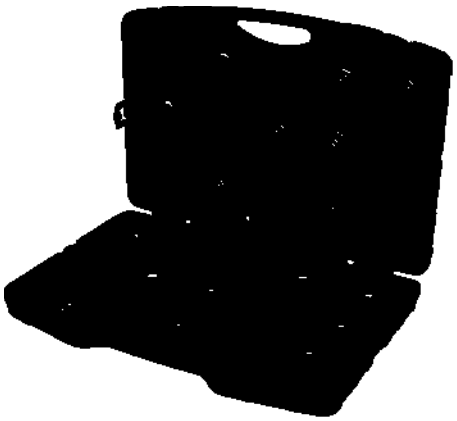
	Suitable for	mm	Grooves	Sides	g
150.9313	universal	63-102			370
150.9324	Ford, Opel, VW, Audi, Mercedes Benz	74/76		15	170
150.9325	VW, Mercedes Benz, Porsche, BMW, Audi, Opel	76		14	150
150.9327	Mazda, Mitsubishi, Volvo, Nissan, Honda	93		15	150
150.9336	Fiat, Renault	66	6		190
150.9338	Fiat, Renault, Mercedes Benz	76	12		190
150.9339	Fiat, Lancia	76	8		170
150.9340	universal	21			153
150.9342	VW, Audi, Renault, Peugeot, Citröen	86		18	143
150.9343	Volvo S40/S80	86		16	180
150.9344	Fiat, Lancia	92		10	180
150.9345	VW, Audi	93	45		180
150.9347	VW, Audi, Renault	96	18		190
150.9348	Fiat	106		15	200
150.9349	Volvo	108		15	220
150.9351	Renault	108	18		190



Oil service set for oil filter and filter housing cover

- Ideally suited for installation and removal of hard to reach oil filter covers when changing the oil filter unit or the oil filter
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive to DIN 3120 - ISO 1174
- External drive hexagonal socket 21.0 mm
- Includes 1/2" oil filer pin
- For manual operation
- Painted surface
- In durable plastic storage case





3/8"

			kg
150.9350	30 pcs	Oil service set for oil filter and filter housing cover	6,67

consists of:

	Suitable for	mm	Grooves	Sides	g
150.9313	universal	63-102			370
150.9321	Daihatsu, Toyota, Nissan, Fiat, Honda	65	6	14	150
150.9322	Mazda, Ford, Subaru	68		14	320
150.9323	Toyota, Lexus	73		14	150
150.9324	Ford, Opel, VW, Audi, Mercedes Benz	74/76		15	170
150.9325	VW, Mercedes Benz, Porsche, BMW, Audi, Opel	76		14	150
150.9326	Nissan, Honda, Opel, Mazda	80		15	150
150.9327	Mazda, Mitsubishi, Volvo, Nissan, Honda	93		15	150
150.9329	Ford	93	36		150
150.9330	Daihatsu, Toyota	65/67		14	150
150.9331	Subaru, Toyota, Honda, Mazda, Nissan	80/82		15	150
150.9332	Honda, Mitsubishi, Isuzu	90		15	150
150.9333	VW, Audi, Ford, Isuzu, Mercedes Benz, Opel	75/77		15	150
150.9334	Ford	76	30		150
150.9335	Isuzu, Mitsubishi	100		15	150
150.9336	Fiat, Renault	66	6		190
150.9337	Audi, GM, Rover, Chrysler	74		15	220
150.9338	Fiat, Renault, Mercedes Benz	76	12		190
150.9339	Fiat, Lancia	76	8		170
150.9340	universal	21			153
150.9341	Nissan, Ford, Toyota	78		15	170
150.9342	VW, Audi, Renault, Peugeot, Citrõen	86		18	143
150.9343	Volvo S40/S80	86		16	180
150.9344	Fiat, Lancia	92		10	180
150.9345	VW, Audi	93	45		180
150.9346	Toyota, Alfa, GM, Ford, Ford, Chrysler	95	15		190
150.9347	VW, Audi, Renault	96	18		190
150.9348	Fiat	106		15	200
150.9349	Volvo	108		15	220
150.9351	Renault	108	18		190

OIL FILTER CUTTER

Oil filter cutter

- Ideally suited for cleanly cutting the oil filter
- Suitable for oil filters from Ø 60 - 120 mm
- Can therefore limit premature damage
- Contaminants and shavings can be discovered early
- With mounting possibility on the work bench
- Includes t-bar
- Special tool steel





	Length mm	Height mm	Width mm	g
150.9203	280,0	35,0	120,0	730

OIL DIP STICK

Oil control rod for Mercedes

- Ideal for the easy, quick and correct control of engine and automatic transmission oil levels
- Essential following an oil change, since vehicles are shipped without a measuring device and only have a plug
- Time-saving and reliable measurements
- With plastic hand grip





			g
150.9280	4 pcs	Oil control rod for Mercedes	380

consists of:

		Transmission gear ID	g
150.9281	Oil control rod 1220mm	772.6_L, G, P, V	160
150.9282	Oil control rod 920mm	772.7_P, 772.8_P, 716.5_V	120
150.9283	Oil control rod 930mm	103, 104, 111, 119, 120, 137, 603	40
150.9284	Oil control rod 930mm	M112, 113, 646, 647, 648	40

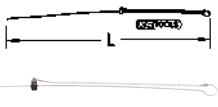


Oil dip stick for VAG

- Ideal for the easy, quick and correct control of engine oil levels
- Adjustable oil measure as a tool for checking oil levels electronically
- Essential following an oil change, since vehicles are shipped without a measuring device and only have a plug
- For checking after an oil change or replacing the oil sensor
- Optimal for recalibrating combi-instruments
- Time-saving and reliable measurements

Application range: Audi A4 (> 2008)/A5 (> 2008)/A7/A8/Q5/ **Volkswagen** Touareg
Engines: 3.2-4V petrol/3.2 FSI/2.0 TFSI/3.0 TDI







	L mm	g
150.9285	630,0	30

OIL FILLING AND EMPTYING PUMP

Mini transfer pump

- Ideal tool for refilling in case of emergencies
- Suitable for battery acid, fuels, oils and distilled water
- The hoses are attached to the balloon lifter using the supplied hose clamps
- Special plastic





	Tube inner Ø mm	tube length mm	g
150.1665	8,0	2 x 900	320

Syringe for fluid change 0.2 litre

- Ideal tool for decanting, removing or dosing liquids to transmissions, power steering, hydraulics, engines etc.
- Suitable for fuel oil, water and antifreeze
- Fine dosing
- Overflowing material can be pumped back problem-free
- Includes rubber hose
- Robust metal execution





		Tube inner Ø mm	Hose external-Ø mm	tube length mm	housing length mm	g
150.1684	0,2	8	10	290	290	365

Syringe for fluid change 0.2 litre

- Ideal tool for decanting, removing or dosing liquids to transmissions, power steering, hydraulics, engines etc.
- Suitable for fuel oil, water and antifreeze
- Fine dosing
- Overflowing material can be pumped back problem-free
- Includes rubber hose with flow stop cap
- Robust PP design



		Tube inner Ø mm	Hose external-Ø mm	tube length mm	housing length mm	g
150.9221	0,2	6	8	210	210	245

Syringe for fluid change 1.5 litre

- Ideal tool for decanting, removing or dosing liquids to transmissions, power steering, hydraulics, engines etc.
- Suitable for fuel oil, water and antifreeze
- Fine dosing
- Overflowing material can be pumped back problem-free
- Includes rubber hose with flow stop cap
- Robust PP design





		Tube inner Ø mm	Hose external-Ø mm	tube length mm	housing length mm	g
150.9222	1,5	14	16	320	320	900



2 direction suction and filling hand pump

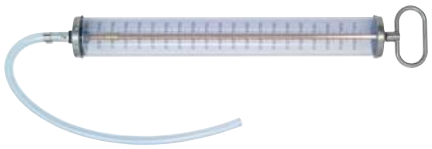
- Ideal for bleeding and filling of fluids
- With ball valve to select between suction and pressure
- Suck and press with every way
- Wear-resistant and temperature resistant
- For difficult to reach openings
- With 2 tubes
- Suction tube clear Ø I x E: 10x16 mm, length 600 mm
- Pressure tube fabric-reinforced Ø I x E: 16x21mm, length 600 mm
- For brake fluid, motor / transmission oil, petrol, diesel, fuel oils, spirit, petroleum, antifreeze etc.
- Robust aluminum piping



	Stroke mm	Content	Length mm	Ø mm	g
150.9255	208,0	256	808,0	40	662
150.9256	255,0	720	855,0	60	884

Dispense hand pump PVC, 1 litre with tube

- For the controlled bleeding and filling of fluids
- Exact dosage per scale
- High suction
- For difficult to reach openings
- For brake fluid, motor / transmission oil, petrol, diesel, fuel oils, spirit, petroleum, antifreeze etc.
- Fabric-reinforced PVC tube
- PVC cylinder



Technical data:

Lift volume:	1,000 ml
Stroke:	420,0 mm
Scale division:	25 ml
Connection thread:	M15x1.5lG

	Ø mm	Length mm	g
150.9250	60	465,0	931

PVC Tube

- Fabric-reinforced
- For 150.9250



	Length mm	Inner Ø mm	Outer Ø mm	g
150.9253	600,0	10,0	16,0	110

PVC Tube with curved outlet pipe

- For difficult to reach openings
- With wing nut and sealing for locking
- With external thread M15 x 1.5
- Robust, curved aluminum piping
- Fabric-reinforced
- Ideal for use with KS dispense hand pump 150.9250



	Length mm	Ø mm	Bend radius	g
150.9252	750,0	10	120°	125

Metal pipe, flexible with outlet head

- For difficult to reach openings
- With wing nut and sealing for locking
- With external thread M15 x 1.5
- Durable, flexible steel pipe
- Ideal for use with KS dispense hand pump 150.9250



	Length mm	Ø mm	g
150.9251	250,0	10	82

Transfer pump

- Ideal aid for easy transferring and pumping
- Suitable for battery acid, fuels, antifreeze, oils and distilled water
- Acid-resistant
- With high quality pump body and reinforced pump handle
- Through a rubber tube can also be used as an air pump
- Includes rubber tubes and reduce piece
- Special plastic





	Tube inner Ø mm	tube length mm	g
150.1660	12,0	2 x 1.300	465

Electric suction and transfer pump

- Ideal for bleeding and filling of fluids
- suitable for diesel, engine oil and heating oil
- Suction capacity: Engine oil 0.2 l/min, diesel and heating oil 1.2 l/min
- 12V connection via the crocodile terminals of the vehicle or an external battery
- including 6 mm suction probe
- not suitable for water, gear oil and highly flammable liquids such as petrol, etc.





	Tube inner Ø mm	tube length mm	kg	
150.2800	13	2 x 1.200	1,15	

Universal transmission oil filling system set incl. 15 piece adapter set

- Ideal for filling transmission, distributor transmission and differentials of different vehicle manufacturers with oil
- Large coverage of many vehicle manufacturers in particular with universal adapter
- Many transmission cannot be filled without this tool
- Optimal for narrow places or hard-to-reach places
- Includes 15 piece adapter set with various angle tails for correct and economic filling
- Quick filling by unscrewing the pump units is possible
- Precise hand pump
- Includes return flow function
- For difficult to access areas
- Secure stand thanks to large base
- Container with filling level scale
- Easy to use and saves time





Technical data:

Capacity:	6 l
Tube length:	2000,0 mm
Tube diameter:	1/2"-14 mm
Viscosity:	- SAE 140

			kg	
150.9675	16 pcs	Universal transmission oil filling system set incl. 15 piece adapter set	2,90	

consists of:

		kg	
150.9671	Transmission oil filling device with hand pump without an adapter	1,57	
150.9690	Transmission oil filling adapter set 15 pcs	1,30	

Universal transmission oil filling adapter set

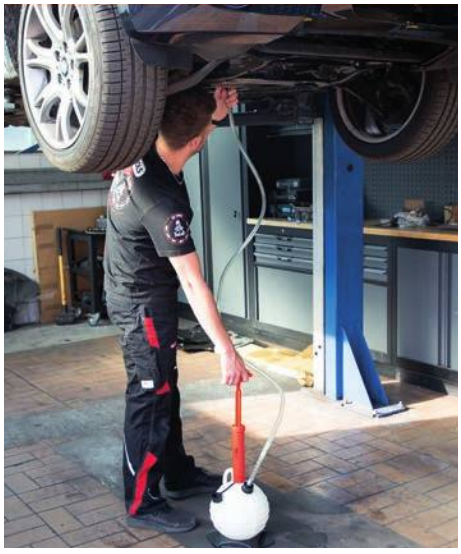
- Ideal for filling transmission, distributor transmission and differentials of different vehicle manufacturers with oil
- Large coverage of many vehicle manufacturers in particular with universal adapter
- Many transmission cannot be filled without this tool
- Optimal for narrow places or hard-to-reach places
- With various angle tails for correct and economic filling
- For difficult to access areas
- Easy to use and saves time
- Fiberglas
- In durable plastic storage case



			kg	
150.9690	15 pcs	Universal transmission oil filling adapter set	1,30	

consists of:

		g	
150.9672	Fibre glass filling adapter straight for Ford 1/8" - 27 NPT	6	
150.9673	Fibre glass filling adapter 15° angled, Universal	8,5	
150.9674	Fibre glass filling adapter short, 29° angled for VAG	7,5	
150.9676	Fibre glass filling adapter long, 29° angled for VAG and Porsche	8	
150.9677	Fibre glass filling adapter straight for VAG, BMW and Mini M10 x 1.0	4,5	
150.9678	Fibre glass filling adapter for Mercedes gearbox 722.9, M12 x 1.5	7	
150.9679	Fibre glass filling adapter for VAG DSG M24 x 1.5	13	
150.9681	Fibre glass filling adapter for VAG CVT M22 x 1.5	12	
150.9682	Fibre glass filling adapter for Škoda M18 x 1.5	8,5	
150.9683	Fibre glass filling adapter for VAG and Škoda M30 x 1.5	14,5	
150.9684	Fibre glass filling adapter flexible, Universal, 300 mm	7,5	
150.9686	Fibre glass filling adapter straight for Volvo 5/16" - 24 UNF	2,5	
150.9687	Fibre glass filling adapter 90° angled for Toyota and Lexus M18 x 1.5	52,5	
150.9688	Fibre glass filling adapter straight for Nissan and Infinity M8 x 1.0	3,5	
150.9689	Fibre glass filling adapter 90° angled for VW Passat and Tiguan	39	





Universal transmission oil filling system set incl. 20 piece adapter set

- Ideal for filling transmission, distributor transmission and differentials of different vehicle manufacturers with oil
- Large coverage of many vehicle manufacturers in particular with universal adapter
- Many transmission cannot be filled without this tool
- Optimal for narrow places or hard-to-reach places
- Includes 20 piece adapter set with various angle tails for correct and economic filling
- Quick filling by unscrewing the pump units is possible
- Precise hand pump
- Includes return flow function
- For difficult to access areas
- Secure stand thanks to large base
- Container with filling level scale
- Easy to use and saves time





Technical data:

Capacity:	7,5 l
Tube length:	1600,0 mm
Tube diameter:	1/2"-14
Quantity per stroke:	80 cc
Viscosity:	- SAE 140

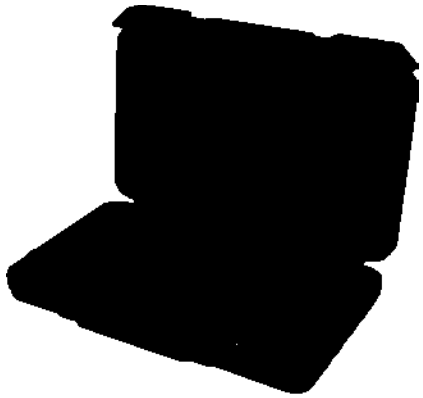
			kg	
150.9275	21 pcs	Universal transmission oil filling system set incl. 20 piece adapter set	5,06	

consists of:

		kg	
150.9258	Transmission oil filling device without adapter	3,50	
150.9680	Transmission oil filling adapter set 20 pcs	1,56	

Universal transmission oil filling adapter set

- Ideal for filling transmission, distributor transmission and differentials of different vehicle manufacturers with oil
- Large coverage of many vehicle manufacturers in particular with universal adapter
- Many transmission cannot be filled without this tool
- Optimal for narrow places or hard-to-reach places
- With various angle tails for correct and economic filling
- For difficult to access areas
- Easy to use and saves time
- In durable plastic storage case



			kg	
150.9680	20 pcs	Universal transmission oil filling adapter set	1,56	

consists of:

		g	
150.9261	Filling adapter straight for Ford 1/8" - 27 NPT	43	
150.9262	Filling adapter 15° angled, universal	65	
150.9263	Filling adapter short, 29° angled for VAG	58	
150.9264	Filling adapter long, 29° angled for VAG and Porsche	61	
150.9265	Filling adapter straight for VAG, BMW and Mini M10 x 1.0	33	
150.9267	Filling adapter for Mercedes transmission 722.9, M12 x 1.5	53	
150.9268	Filling adapter for VAG DSG M24 x 1.5	110	
150.9269	Filling adapter for VAG CVT M22 x 1.5	90	
150.9271	Filling adapter for Škoda M18 x 1.5	65	
150.9272	Filling adapter for VAG and Škoda M30 x 1.5	150	
150.9273	Filling adapter flexible, universal, 300 mm	35	
150.9274	Filling adapter straight for Volvo 5/16" - 24 UNF	22	
150.9276	Filling adapter 90° angled for Toyota and Lexus M18 x 1.5	89	
150.9277	Filling adapter straight for Nissan and Infinity M8 x 1.0	25	
150.9278	ATF filling adapter 90° angled for VW Passat and Tiguan	93	
150.9562	Filling adapter for Nissan Juke M12 x 1.25	55	
150.9563	Filling adapter for Mini Cooper M14 x 1.5	52	
150.9564	Filling adapter for Nissan M10 x 1.5	26	
150.9566	Filling adapter for GM M12 x 1.75	52	
150.9567	Filling adapter for Mercedes 725-9G	70	

Vacuum fluid extractor suction pump 9.5 litre

- Ideal for quick, clean and simple suction, intake and emptying of fluids
- Suitable for engine oil, transmission oil, hydraulic oil, brake fluid, water etc.
- For pneumatic use with a compressor or manual use with the integrated hand pump
- Select a suitable probe and suck easily using the vacuum principle
- Suction process automatically stopped when housing is full, preventing fluids from spilling over
- With integrated pressure relief valve for more safety
- With high-quality pump housing and strengthened pump head
- Includes 4 probes for different uses
- Ideally suited to hard-to-reach places thanks to the included, long suction hose
- The suction hose is resistant to petrol and oil
- Polyethylene





			kg	
160.0790	5 pcs	Vacuum fluid extractor suction pump 9.5 litre	5,00	

consists of:

		g	
160.0791	Vacuum fluid extractor suction pump 9.5 litre	3708	
160.0792	Adaptor and tube 4x8mm x1,5m	200	
160.0793	Main probe 7.8 x 9.8 mm x 1 m	200	
160.0794	Probe 5.3 x 6.7 mm x 1 m	200	
160.0795	Probe 3.5 x 4.5 mm x 1 m	200	

OIL FILLING CONTAINER

Oil release adaptor hose for VAG 1.8 + 2.0 gasoline car with stop function

- Ideally suited for a clean, correct and environmentally-friendly draining of the engine oil via the oil filter housing
- The adapter opens a valve when screwed into the oil filter housing and ensures controlled draining
- With flow stop at the end of the hose
- Reduces loss and dirtying of oily engines
- Flexible, transparent hose

Application range: Audi, **Seat**, **Škoda** and **Volkswagen** with 1.8 l and 2.0 l engines with engine codes AXW/ BLY/ BVZ/ BVY/ BLX/ BLR/ BVX



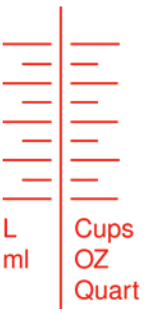


	Length mm	Ø Tube mm	g	
550.1291	550,0	14 x 16	137	

Measuring cup set

- Configuration of practical measuring cup sizes
- For a wide range of uses
- Transparent
- Break-resistant
- Red primed scale division
- Resistant to oil, petrol and acid
- With handle and spout
- PE (polyethylene)

Scales: L/ml, cups, Oz, quart







			g	
150.9205	3 pcs	250 - 500 - 1.000 ml	227	

Measuring cup with flexible outlet spout

- For a wide range of uses
- Flexible, funnel-shaped spout allows for a clean drainage
- Suitable for oil, chemicals, petrol, acid, anti-freeze fluid and non-acidic fluids
- Break-resistant
- Steady
- With a graduation scale
- With practical carry handle
- Special plastic





		Spout	g	
150.9234	1	150.9236	150	
150.9235	2	150.9236	250	
150.9001	3	150.9003	310	
150.9002	5	150.9003	440	

Funnel set

- Configuration of practical funnel sizes
- For a wide range of uses
- Red
- Break-resistant
- Resistant to oil, petrol and acid
- Grip strap for convenient use
- HDPE (high density polyethylene)



150.9240	5 pcs	Ø 50 - Ø 75 - Ø 95 - Ø 115 - Ø 150 mm	251

Universal funnel set

- Special flexible funnel for hard-to-reach places
- For a wide range of uses
- With bayonet connection and seal
- Direct connection to the oil fill opening
- No more lengthy and time consuming pouring
- Includes clear hose with sealing plug on the end of the hose
- Grip strap for convenient use
- Reduces loss and dirtying of oily engines
- Special plastic





		Ø Tube mm		Ø mm	tube length mm	
150.9230	3 pcs	14x16	1	160	400	240



Flexible funnel with aluminium body

- Ideally suited to a clean and control draining of all fluids, e.g. oil, coolant, brake fluid, fuel etc.
- Resistant to petrol, diesel, oil, coolant, hydraulic and brake fluid
- Also suitable as a funnel for filling
- Shape is maintained and can be altered at any time
- Free malleable, therefore can be adapted for extremely tight spaces
- Problems with draining fluids are a thing of the past
- The heavy-duty construction can be fit to any desired shape and used again
- Easy to clean
- Temperature resistance of -34 to +232 °C
- Aluminium frame
- Outer skin made from nitrile rubber







	Length mm	Width mm	
150.9303	372,0	170,0	240

Oil fill funnel set

- Ideally suited for a clean, correct and environmentally-friendly filling
- Special narrower funnel with seal
- Direct and thick connection with the oil pouring opening
- No more lengthy and time consuming pouring
- Prevents loss and dirtying from drained oil on the engine block or exhaust manifold
- Includes bayonet and VAG MQB platform adapter
- No play assembly on the engine
- Aluminium plug system design
- Special plastic
- Optional expandable plug system





150.9525	3 pcs	1	940

consists of:

150.9526	Oil pouring funnel, 1L	253
150.9528	Universal bayonet adapter for oil fill funnel	260
150.9539	VAG MQB platform adapter for oil fill funnel	167

Oil fill funnel set with turnable arm

- Ideally suited for a clean, correct and environmentally-friendly filling
- Special narrower funnel with seal
- Direct and thick connection with the oil pouring opening
- No more lengthy and time consuming pouring
- Prevents loss and dirtying from drained oil on the engine block or exhaust manifold
- With turnable arm for hard to reach places
- Includes bayonet and VAG MQB platform adapter
- No play assembly on the engine
- Aluminium plug system design
- Special plastic
- Optional expandable plug system





			kg	
150.9535	4 pcs	1	1,26	

consists of:

150.9526	Oil pouring funnel, 1L	253
150.9527	Arm for oil fill funnel	309
150.9528	Universal bayonet adapter for oil fill funnel	260
150.9539	VAG MQB platform adapter for oil fill funnel	167

Oil pouring funnel

- Ideally suited with the funnel for clean, correct and environmentally friendly filling alongside the adapter
- Special narrower funnel with seal
- Direct and secure connection with the oil fill opening via the adapter
- No more lengthy and time consuming pouring
- Prevents loss and dirtying from drained oil on the engine block or exhaust manifold
- Aluminium plug system design
- Special plastic
- Optional expandable plug system
- Can be used alongside an adapter





150.9526	1	253

Arm for oil fill funnel

- Ideally suited with the funnel and adapter for clean, correct and environmentally friendly filling
- Special turnable arm for hard to reach places with a seal
- In connection with the funnel and adapter direct and secure connection with the oil fill opening
- No more lengthy and time consuming pouring
- Prevents loss and dirtying from drained oil on the engine block or exhaust manifold
- Aluminium plug system design
- Optional expandable plug system
- Can be used alongside an oil fill funnel and adapter





	Length mm	g	
150.9527	270,0	309	

Universal bayonet adapter for oil fill funnel

- Ideally suited with the funnel for clean, correct and environmentally friendly filling
- Special bayonet adapter with seal
- Direct and thick connection with the oil pouring opening
- No more lengthy and time consuming pouring
- Prevents loss and dirtying from drained oil on the engine block or exhaust manifold
- Aluminium plug system design
- Optional expandable plug system
- For use alongside the oil fill funnel

Application range: Audi, **BMW**, **Ford**, **Mercedes**, **Škoda**, **Seat**, **Volvo** and **Volkswagen**





	Ø mm	g	
150.9528	60,0	260	

MQB platform adapter for oil fill funnel for VAG

- Ideally suited with the funnel for clean, correct and environmentally friendly filling
- Special adapter with seal
- Direct and thick connection with the oil pouring opening
- No more lengthy and time consuming pouring
- Prevents loss and dirtying from drained oil on the engine block or exhaust manifold
- Aluminium plug system design
- Optional expandable plug system
- For use alongside the oil fill funnel

Application range: Audi A3 (8V), **Seat** Leon (5F), **Škoda** Octavia 3, **Volkswagen** Golf 7





	Ø mm	g	
150.9539	54,0	167	

Adapter for oil filling funnel for Subaru

- Ideally suited with the funnel for clean, correct and environmentally friendly filling
- Special adapter with seal
- Direct and thick connection with the oil pouring opening
- No more lengthy and time consuming pouring
- Prevents loss and dirtying from drained oil on the engine block or exhaust manifold
- Aluminium plug system design
- Optional expandable plug system
- For use alongside the oil fill funnel

Application range: Subaru





	Thread	Ø mm	g	
150.9529	M 20 x 2.5	61,0	236	

Adapter for oil fill funnel for Toyota and Lexus

- Ideally suited with the funnel for clean, correct and environmentally friendly filling
- Special adapter with seal
- Direct and thick connection with the oil pouring opening
- No more lengthy and time consuming pouring
- Prevents loss and dirtying from drained oil on the engine block or exhaust manifold
- Aluminium plug system design
- Optional expandable plug system
- For use alongside the oil fill funnel

Application range: Toyota and **Lexus**





	Thread	Ø mm	g	
150.9531	M24 x 1,5	61,0	224	

Bayonet adapter for oil fill funnel for Toyota and Lexus

- Ideally suited with the funnel for clean, correct and environmentally friendly filling
- Special bayonet adapter with seal
- Direct and thick connection with the oil pouring opening
- No more lengthy and time consuming pouring
- Prevents loss and dirtying from drained oil on the engine block or exhaust manifold
- Aluminium plug system design
- Optional expandable plug system
- For use alongside the oil fill funnel

Application range: Toyota and **Lexus**





	Ø mm	g	
150.9534	61,0	260	

Adapter for oil filling funnel Mazda

- Ideally suited with the funnel for clean, correct and environmentally friendly filling
- Special adapter with seal
- Direct and thick connection with the oil pouring opening
- No more lengthy and time consuming pouring
- Prevents loss and dirtying from drained oil on the engine block or exhaust manifold
- Aluminium plug system design
- Optional expandable plug system
- For use alongside the oil fill funnel

Application range: Mazda





	Thread	Ø mm	g	
150.9532	M24 x 1,5	61,0	240	

Adapter for oil fill funnel for Honda, Nissan and Jaguar

- Ideally suited with the funnel for clean, correct and environmentally friendly filling
- Special adapter with seal
- Direct and thick connection with the oil pouring opening
- No more lengthy and time consuming pouring
- Prevents loss and dirtying from drained oil on the engine block or exhaust manifold
- Aluminium plug system design
- Optional expandable plug system
- For use alongside the oil fill funnel

Application range: Honda, **Nissan** and **Jaguar**





	Thread	Ø mm	g	
150.9533	M24 x 1,5	61,0	235	

Adaptor for oil filling hopper for Porsche

- Ideally suited with the funnel for clean, correct and environmentally friendly filling
- Special adapter with seal
- Direct and thick connection with the oil pouring opening
- No more lengthy and time consuming pouring
- Prevents loss and dirtying from drained oil on the engine block or exhaust manifold
- Aluminium plug system design
- Optional expandable plug system
- For use alongside the oil fill funnel

Application range: Porsche 911 (1984-1989), 911 Turbo (1984-1994), 924S (1985-1988), 928 (1987-1995), 944 (1983-1989), 944 S (1986-1991), 944 S2 (1989-1992), 944 Turbo (1985-1991), 968 (1992-1995), 911 Carrera 2 (1989-1993), 911 Carrera 4 (1989-1993)





	Ø mm	g	
150.9536	65,0	200	

Adapter for oil filling funnel for Porsche

- Ideally suited with the funnel for clean, correct and environmentally friendly filling
- Special adapter with seal
- Direct and thick connection with the oil pouring opening
- No more lengthy and time consuming pouring
- Prevents loss and dirtying from drained oil on the engine block or exhaust manifold
- Aluminium plug system design
- Optional expandable plug system
- For use alongside the oil fill funnel

Application range: Porsche Carrera (2005-2008), Carrera S (2005-2008), Carrera 4 (2006-2008), Carrera 4S (2006-2008), 911 Turbo (2007-2009), Boxter (2005-2008), Boxter S (2005-2008), Cayman (2006-2008), Cayman S (2006-2008)





	Ø mm	g	
150.9537	65,0	220	

Universal adapter for oil fill funnel

- Ideally suited with the funnel for clean, correct and environmentally friendly filling
- Special adapter with seal
- Direct and thick connection with the oil pouring opening
- No more lengthy and time consuming pouring
- Prevents loss and dirtying from drained oil on the engine block or exhaust manifold
- Aluminium plug system design
- Optional expandable plug system
- For use alongside the oil fill funnel

Application range: Cadillac, Chevy Cobalt, **Ford** Explorer, **GM**C Sierra, **Hyundai** Santa Fe and Tucson, **Jaguar** 5.0 l V8 engines, **Land Rover** 5.0 l V8 engines, **Mazda** CX-9 3.7 l, **Saab** 9-3





	Ø mm	g	
150.9538	61,0	180	

Bayonet adapter for oil funnel for Mitsubishi

- Ideally suited with the funnel for clean, correct and environmentally friendly filling
- Special bayonet adapter with seal
- Direct and thick connection with the oil pouring opening
- No more lengthy and time consuming pouring
- Prevents loss and dirtying from drained oil on the engine block or exhaust manifold
- Aluminium plug system design
- Optional expandable plug system
- For use alongside the oil fill funnel

Application range: Mitsubishi Pajero V73



	Ø mm	g	
150.9549	60,0	242	

Bayonet adapter for oil funnel for Mazda and Volvo

- Ideally suited with the funnel for clean, correct and environmentally friendly filling
- Special bayonet adapter with seal
- Direct and thick connection with the oil pouring opening
- No more lengthy and time consuming pouring
- Prevents loss and dirtying from drained oil on the engine block or exhaust manifold
- Aluminium plug system design
- Optional expandable plug system
- For use alongside the oil fill funnel

Application range: Mazda 6, **Volvo** S40 and S60



	Ø mm	g	
150.9551	55,0	116	

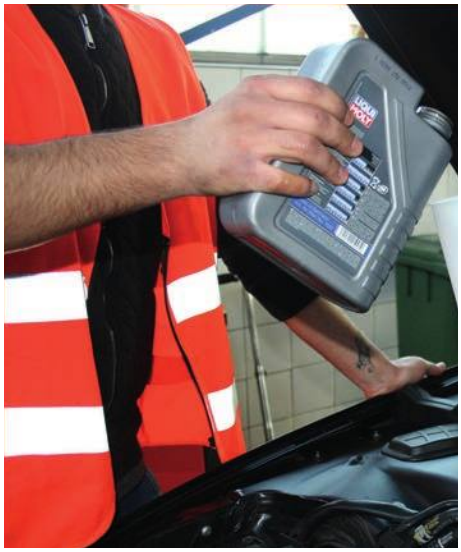
Bayonet adapter for oil hoppers for Citroën and Peugeot

- Ideally suited with the funnel for clean, correct and environmentally friendly filling
- Special bayonet adapter with seal
- Direct and thick connection with the oil pouring opening
- No more lengthy and time consuming pouring
- Prevents loss and dirtying from drained oil on the engine block or exhaust manifold
- Aluminium plug system design
- Optional expandable plug system
- For use alongside the oil fill funnel

Application range: Citroën C4 2.0L, **Peugeot** 408



	Ø mm	g	
150.9552	55,0	140	



Bayonet adapter for oil hoppers for Citroën and Peugeot

- Ideally suited with the funnel for clean, correct and environmentally friendly filling
- Special bayonet adapter with seal
- Direct and thick connection with the oil pouring opening
- No more lengthy and time consuming pouring
- Prevents loss and dirtying from drained oil on the engine block or exhaust manifold
- Aluminium plug system design
- Optional expandable plug system
- For use alongside the oil fill funnel

Application range: Citroën C2 1.6L, C3 XR, C4 1.6L, **Peugeot** 307, 206



	Ø mm	g	
150.9553	55,0	120	

Bayonet adapter for oil hopper for Volvo

- Ideally suited with the funnel for clean, correct and environmentally friendly filling
- Special bayonet adapter with seal
- Direct and thick connection with the oil pouring opening
- No more lengthy and time consuming pouring
- Prevents loss and dirtying from drained oil on the engine block or exhaust manifold
- Aluminium plug system design
- Optional expandable plug system
- For use alongside the oil fill funnel

Application range: Volvo XC90, S80



	Ø mm	g	
150.9554	55,0	100	

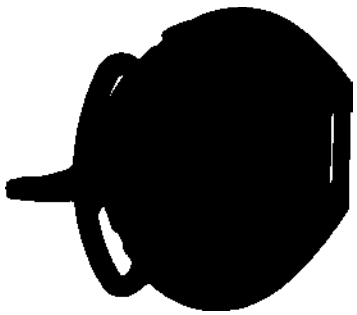


OIL COLLECTION PAN

Drain pan 7.5 litres

- With three carry handles
- Safe and clean pouring with the self-contained overflow edge and spout
- Ideally suited to collecting different fluids
- Suitable for oil, chemicals, petrol, acid and anti-freeze fluid
- Also suitable for cleaning parts
- Practical, quick and friendly to the environment
- Shock and impact resistant





	Ø mm	H mm	g	
150.9359	385,0	130,0	620	

Drain pan 8 litres

- With three carry handles
- Safe and clean pouring with the spout
- Ideally suited to collecting different fluids
- Suitable for oil, chemicals, petrol, acid and anti-freeze fluid
- Also suitable for cleaning parts
- Practical, quick and friendly to the environment
- Screwed connection with rubber seal for safe transport
- Shock and impact resistant





	B mm	H mm	L mm	kg	
150.9357	340,0	120,0	600,0	1,06	





Drain pan 17 litres

- With three carry handles
- Safe and clean pouring with the self-contained overflow edge and spout
- Ideally suited to collecting different fluids
- Suitable for oil, chemicals, petrol, acid and anti-freeze fluid
- Also suitable for cleaning parts
- Practical, quick and friendly to the environment
- Shock and impact resistant





	Ø mm	H mm	kg	
150.9360	445,0	145,0	1,07	

Mobile drain pan, 30 litres, extra flat with castors

- With five carry handles
- 12.0 cm high, extra flat edges
- Safe and clean pouring with the closed contained and spout
- Ideally suited to collecting different fluids
- Suitable for oil, chemicals, petrol, acid and anti-freeze fluid
- Also suitable for cleaning parts
- With four steerable castors
- Practical, quick and friendly to the environment
- Includes removable sieve
- Screwed connection with rubber seal for safe transport
- Shock and impact resistant





	B mm	H mm	L mm	kg	
150.9354	600,0	120,0	850,0	5,60	

Drain pan 55 litres, extra flat

- With four carry handles
- 11.0 cm high, extra flat edges
- Safe and clean pouring with the self-contained overflow edge and spout
- Ideally suited to collecting different fluids
- Suitable for oil, chemicals, petrol, acid and anti-freeze fluid
- Also suitable for cleaning parts
- Practical, quick and friendly to the environment
- Shock and impact resistant
- Polyethylene

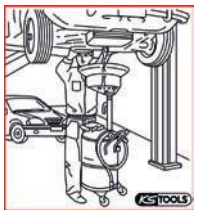




	L mm	B mm	H mm	kg	
150.9358	1030,0	724,0	110,0	6,80	

Mobile oil draining device 60 litre

- Basic unit for old oil capture and re-filling
- Pneumatic pressure emptying with manometer and safety valve
- Emptying takes approximately 3 minutes at 0.8 bar
- Heavy deposits can also be removed via a plate on the underside
- Mobile and connectible container with extra-large plastic wheels
- With carry handle
- Stop cock and clamping screws to release pressure
- Extremely manoeuvrable and ideal for workshop design
- Centrally mounted and height-adjustable round drip pan
- Side filling display with measuring scales
- Includes clear fabric hose for draining





Technical data:

Capacity of container:	60 l
Capacity of catch:	ca,16 l
Collection container dimensions:	490 x 580 x 1040 mm
Collection pan dimensions:	Ø 380 mm
Height adjustment:	1040 - 1700 mm

	l	kg	
160.0001	60	32,00	

A PICTURE IS WORTH A THOUSAND WORDS...

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	FROM PAGE
HUB CAP TOOLS	710
MAGNETIC HOLDERS	710
TYRE STORAGE	710
ASSEMBLY AIDS	711
TORSION RODS	711
WHEEL NUT WRENCH	713
MANUAL RELEASE TOOLS	714
RIM BOLTS	714
SPECIAL BORING TOOLS	714
WHEEL BOLTING SOCKET WRENCH	716
TORQUE WRENCHES	719
TYRE SERVICE HAMMERS	719
WHEEL HUB CLEANING	720
TYRE PRESSURE CONTROL SYSTEM SETS	723
THREAD REPAIR	729
PROFILE DEPTH MEASURER	730
WHEEL FILLING GAUGE	731
MOUNTING LEVER	732
BEAD HOLD-DOWN DEVICE	732
VALVE LIFT	733
VALVE BORING TOOLS	733
TYRE SERVICE PLIERS	734
ADHESIVE WEIGHT REMOVER	734
TYRE FITTING GREASE	735
TYRE REPAIR	735
WEDGES	737
LIFT TECHNOLOGY	738
TYRE TRANSPORT	740

HUB CAP TOOLS

Clip remover

- For metal and plastic clips
- Durable tool for the removal of door panels
- Easier release lever for the damage-free disassembly of plastic hub caps
- Lever effect due to the angled head on the front end of the lifter
- Robust execution with durable square shaft
- With protective insulation
- Ergonomic single component handle





	Length mm	g
911.8150	300,0	190

Release lever for the assembly and disassembly of plastic hub caps

- Release lever for the damage-free assembly and disassembly of plastic hub caps
- Optimally moulded lever end
- Blade-like tapered lever head for the tightest spaces
- With integrated rubber mallet for hitting the plastic hub caps
- Ergonomic single component handle



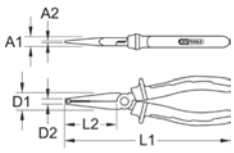


	Length mm	g
911.8155	360,0	550

Wheel nut cap pliers

- For the disassembly and assembly of nut caps
- Specially shaped pliers tip for the optimal removal of wheel bolt protective caps
- Two component handle
- Matt chrome
- Chrome vanadium







	A1 mm	A2 mm	D1 mm	D2 mm	L1 mm	L2 mm	g
150.2023	0,0-11,5	6,5	20,0	7,0	200,0	64,0	260

MAGNETIC HOLDERS

Metal magnetic holder

- Creates an organised working area
- Positive and safe mounting
- With 2 exceptionally strong magnets (Ø each 80 mm)
- Has reinforcement on the elevated section
- Impact wrench, sockets and a torque wrench can all be left in their set place





	Length mm	kg
800.0190	390,0	1,46

Plastic magnetic bowl

- Oblique opening
- For holding screws and other small parts
- Magnetic plate is covered with rubber
- Plastic





	Ø mm	g
800.0156	150	750

Stainless steel magnetic tray

- 1 magnet
- For holding screws and other small parts such as wheel nuts
- Magnetic plate is covered with plastic
- Stainless steel





	Ø mm	g
800.0150	150,0	430

Stainless steel magnetic tray

- 2 magnets
- For holding screws and other small parts such as wheel nuts
- Magnetic plate is covered with plastic
- Stainless steel



	Length mm	B mm	g
800.0151	240,0	140,0	850

TYRE STORAGE

Wheel bolt bag

- Ideal for the storage of wheel bolts
- With handy drawstring for closing
- Made from 100% cotton



		g
500.8032	Wheel bolt bag	20

Tire bags

- Protects the vehicle interior when transporting tires
- Ideal for storage in the garage or workshop
- LDPE plastic
- Supplied on a perforated roll





	Length mm	Width mm	Height mm	Colour code	Content	kg
500.8088	700,0	350,0	900,0	white	100	4,00



ASSEMBLY AIDS

Wheel assembly aid set

- for simple and damage-free assembly of the wheels
- universally usable with various thread sizes
- with knurling for better retention when screwing in
- Much easier work
- Special tool steel





			g	
150.2805	2 pcs	Wheel assembly aid set	295	

consists of:

		g	
150.2806	Terminal Extract Tool,, M12 x 1,25 / M12 x 1,5	125	
150.2807	Terminal Extract Tool,, M14 x 1,25 / M14 x 1,5	170	

TORSION RODS

Torsional torque limiter extension

- Ideal for the time-saving pre-tightening of wheel bolts and nuts with impact wrenches
- Automatic tightening stop prevents damage to rims and bolts
- Combines the speed of impact wrenches with the precision of torque wrenches
- Absorbs excessive torque and limits to the respective torque
- Square drive adaptor to DIN 3121 / ISO 1174 with ball lock
- Internal square drive to DIN 3120 / ISO 1174
- For machinery usage
- Colour coded for better overview
- Chrome molybdenum





1/2"

	Colour code	max N·m	Length mm	Ø mm	g	
515.1061	●	90	195,0	25,0	270	
515.1062	●	100	195,0	25,0	270	
515.1063	○	110	195,0	25,0	270	
515.1064	●	120	195,0	25,0	270	
515.1065	●	135	195,0	25,0	270	

Torsional torque limiter extension set

- Ideal for the time-saving pre-tightening of wheel bolts and nuts with impact wrenches
- Automatic tightening stop prevents damage to rims and bolts
- Combines the speed of impact wrenches with the precision of torque wrenches
- Absorbs excessive torque and limits to the respective torque
- Square drive adaptor to DIN 3121 / ISO 1174 with ball lock
- Internal square drive to DIN 3120 / ISO 1174
- For machinery usage
- Colour coded for better overview
- Chrome molybdenum





1/2"

			kg	
515.1060	5 pcs	90 - 100 - 110 - 120 - 135 Nm	1,37	

consists of:

		g	
515.1061	1/2" Power torsions-extender, 90Nm	270	
515.1062	Torsion bar extension, 1/2", 100Nm	270	
515.1063	Torsion bar extension, 1/2", 110Nm	270	
515.1064	Torsion bar extension, 1/2", 120Nm	270	
515.1065	Torsion bar extension, 1/2", 135Nm	270	

Torsional torque limiter socket 17 mm x 75 Nm

- Ideal for the time-saving pre-tightening of wheel bolts and nuts with impact wrenches
- Automatic tightening stop prevents damage to rims and bolts
- Combines the speed of impact wrenches with the precision of torque wrenches
- Absorbs excessive torque and limits to the respective torque
- Square drive adaptor to DIN 3121 / ISO 1174 with ball lock
- For machinery usage
- Colour coded for better overview
- Chrome molybdenum

Application range: Renault, Škoda, Suzuki



1/2"

	Colour code	mm	max N·m	Length mm	Ø mm	g	
515.1472	●	17,0	75	220,0	26,0	300	

Torsional torque limiter socket 17 mm x 95 Nm

- Ideal for the time-saving pre-tightening of wheel bolts and nuts with impact wrenches
- Automatic tightening stop prevents damage to rims and bolts
- Combines the speed of impact wrenches with the precision of torque wrenches
- Absorbs excessive torque and limits to the respective torque
- Square drive adaptor to DIN 3121 / ISO 1174 with ball lock
- For machinery usage
- Colour coded for better overview
- Chrome molybdenum

Application range: Opel, Renault



1/2"

	Colour code	mm	max N·m	Length mm	Ø mm	g	
515.1473	○	17,0	95	220,0	26,0	300	

Torsional torque limiter socket 17 mm x 110 Nm

- Ideal for the time-saving pre-tightening of wheel bolts and nuts with impact wrenches
- Automatic tightening stop prevents damage to rims and bolts
- Combines the speed of impact wrenches with the precision of torque wrenches
- Absorbs excessive torque and limits to the respective torque
- Square drive adaptor to DIN 3121 / ISO 1174 with ball lock
- For machinery usage
- Colour coded for better overview
- Chrome molybdenum

Application range: Audi, BMW, Opel, Porsche and **Volkswagen**



1/2"

	Colour code	mm	max N·m	Length mm	Ø mm	g	
515.1474	●	17,0	110	220,0	26,0	300	

Torsional torque limiter socket 19 mm x 55 Nm

- Ideal for the time-saving pre-tightening of wheel bolts and nuts with impact wrenches
- Automatic tightening stop prevents damage to rims and bolts
- Combines the speed of impact wrenches with the precision of torque wrenches
- Absorbs excessive torque and limits to the respective torque
- Square drive adaptor to DIN 3121 / ISO 1174 with ball lock
- For machinery usage
- Colour coded for better overview
- Chrome molybdenum

Application range: Alfa Romeo, Citroën, Fiat, Honda, Hyundai, Peugeot, Renault, Rover



1/2"

	Colour code	mm	max N·m	Length mm	Ø mm	g	
515.1475	●	19,0	55	220,0	28,0	300	

Torsional torque limiter socket 19 mm x 90 Nm

- Ideal for the time-saving pre-tightening of wheel bolts and nuts with impact wrenches
- Automatic tightening stop prevents damage to rims and bolts
- Combines the speed of impact wrenches with the precision of torque wrenches
- Absorbs excessive torque and limits to the respective torque
- Square drive adaptor to DIN 3121 / ISO 1174 with ball lock
- For machinery usage
- Colour coded for better overview
- Chrome molybdenum

Application range: Alfa Romeo, **Citroën**, **Fiat**, **Ford**, **Lada**, **Opel**, **Peugeot**, **Renault**, **Rover**, **Volvo**





	Colour code	mm	max N·m	Length mm	Ø mm	g
515.1476		19,0	90	220,0	28,0	300

Torsional torque limiter socket 21 mm x 80 Nm

- Ideal for the time-saving pre-tightening of wheel bolts and nuts with impact wrenches
- Automatic tightening stop prevents damage to rims and bolts
- Combines the speed of impact wrenches with the precision of torque wrenches
- Absorbs excessive torque and limits to the respective torque
- Square drive adaptor to DIN 3121 / ISO 1174 with ball lock
- For machinery usage
- Colour coded for better overview
- Chrome molybdenum

Application range: Mitsubishi, **Rover**





	Colour code	mm	max N·m	Length mm	Ø mm	g
515.1479		21,0	80	220,0	30,0	300

Torsional torque limiter socket 17 mm x 120 Nm

- Ideal for the time-saving pre-tightening of wheel bolts and nuts with impact wrenches
- Automatic tightening stop prevents damage to rims and bolts
- Combines the speed of impact wrenches with the precision of torque wrenches
- Absorbs excessive torque and limits to the respective torque
- Square drive adaptor to DIN 3121 / ISO 1174 with ball lock
- For machinery usage
- Colour coded for better overview
- Chrome molybdenum

Application range: Audi, **Škoda**



	Colour code	mm	max N·m	Length mm	Ø mm	g
515.1482		17,0	120	220,0	26,0	300

Torsional torque limiter socket 19 mm x 110 Nm

- Ideal for the time-saving pre-tightening of wheel bolts and nuts with impact wrenches
- Automatic tightening stop prevents damage to rims and bolts
- Combines the speed of impact wrenches with the precision of torque wrenches
- Absorbs excessive torque and limits to the respective torque
- Square drive adaptor to DIN 3121 / ISO 1174 with ball lock
- For machinery usage
- Colour coded for better overview
- Chrome molybdenum

Application range: Alfa Romeo, **Fiat**, **Ford**, **Honda**, **Hyundai**, **Isuzu**, **Kia**, **Mercedes**, **Rover**, **Saab**, **Volvo**





	Colour code	mm	max N·m	Length mm	Ø mm	g
515.1477		19,0	110	220,0	28,0	300

Torsional torque limiter socket 21 mm x 110 Nm

- Ideal for the time-saving pre-tightening of wheel bolts and nuts with impact wrenches
- Automatic tightening stop prevents damage to rims and bolts
- Combines the speed of impact wrenches with the precision of torque wrenches
- Absorbs excessive torque and limits to the respective torque
- Square drive adaptor to DIN 3121 / ISO 1174 with ball lock
- For machinery usage
- Colour coded for better overview
- Chrome molybdenum

Application range: Daihatsu, **Ford**, **Mazda**, **Mitsubishi**, **Nissan**, **Toyota**





	Colour code	mm	max N·m	Length mm	Ø mm	g
515.1480		21,0	110	220,0	30,0	300

Torsional torque limiter socket 17 mm x 150 Nm

- Ideal for the time-saving pre-tightening of wheel bolts and nuts with impact wrenches
- Automatic tightening stop prevents damage to rims and bolts
- Combines the speed of impact wrenches with the precision of torque wrenches
- Absorbs excessive torque and limits to the respective torque
- Square drive adaptor to DIN 3121 / ISO 1174 with ball lock
- For machinery usage
- Colour coded for better overview
- Chrome molybdenum

Application range: Mercedes S-class





	Colour code	mm	max N·m	Length mm	Ø mm	g
515.1483		17,0	150	220,0	26,0	300

Torsional torque limiter socket 19 mm x 135 Nm

- Ideal for the time-saving pre-tightening of wheel bolts and nuts with impact wrenches
- Automatic tightening stop prevents damage to rims and bolts
- Combines the speed of impact wrenches with the precision of torque wrenches
- Absorbs excessive torque and limits to the respective torque
- Square drive adaptor to DIN 3121 / ISO 1174 with ball lock
- For machinery usage
- Colour coded for better overview
- Chrome molybdenum

Application range: Ford, **Porsche**





	Colour code	mm	max N·m	Ø mm	Length mm	g
515.1478		19,0	135	28,0	220,0	300

Torsional torque limiter socket 21 mm x 95 Nm

- Ideal for the time-saving pre-tightening of wheel bolts and nuts with impact wrenches
- Automatic tightening stop prevents damage to rims and bolts
- Combines the speed of impact wrenches with the precision of torque wrenches
- Absorbs excessive torque and limits to the respective torque
- Square drive adaptor to DIN 3121 / ISO 1174 with ball lock
- For machinery usage
- Colour coded for better overview
- Chrome molybdenum

Application range: Ford





	Colour code	mm	max N·m	Length mm	Ø mm	g
515.1481		21,0	95	220,0	30,0	300

Torsional torque limiter socket 19 mm x 100 Nm

- Ideal for the time-saving pre-tightening of wheel bolts and nuts with impact wrenches
- Automatic tightening stop prevents damage to rims and bolts
- Combines the speed of impact wrenches with the precision of torque wrenches
- Absorbs excessive torque and limits to the respective torque
- Square drive adaptor to DIN 3121 / ISO 1174 with ball lock
- For machinery usage
- Colour coded for better overview
- Chrome molybdenum

Application range: Fiat Ulysse, **Fiat** Multipla





	Colour code	mm	max N·m	Length mm	Ø mm	g
515.1484		19,0	100	220,0	28,0	300

Torsional torque limiter socket 19 mm x 150 Nm

- Ideal for the time-saving pre-tightening of wheel bolts and nuts with impact wrenches
- Automatic tightening stop prevents damage to rims and bolts
- Combines the speed of impact wrenches with the precision of torque wrenches
- Absorbs excessive torque and limits to the respective torque
- Square drive adaptor to DIN 3121 / ISO 1174 with ball lock
- For machinery usage
- Colour coded for better overview
- Chrome molybdenum

Application range: Mercedes M-class





	Colour code	mm	max N·m	Length mm	Ø mm	g
515.1485		19,0	150	220,0	28,0	300

Torsional torque limiter socket 22 mm x 80 Nm

- Ideal for the time-saving pre-tightening of wheel bolts and nuts with impact wrenches
- Automatic tightening stop prevents damage to rims and bolts
- Combines the speed of impact wrenches with the precision of torque wrenches
- Absorbs excessive torque and limits to the respective torque
- Square drive adaptor to DIN 3121 / ISO 1174 with ball lock
- For machinery usage
- Colour coded for better overview
- Chrome molybdenum

Application range: Jaguar (only steel rims)





	Colour code	mm	max N·m	Length mm	Ø mm	g
515.1486		22,0	80	220,0	32,0	300

Torsional torque limiter socket 22 mm x 100 Nm

- Ideal for the time-saving pre-tightening of wheel bolts and nuts with impact wrenches
- Automatic tightening stop prevents damage to rims and bolts
- Combines the speed of impact wrenches with the precision of torque wrenches
- Absorbs excessive torque and limits to the respective torque
- Square drive adaptor to DIN 3121 / ISO 1174 with ball lock
- For machinery usage
- Colour coded for better overview
- Chrome molybdenum

Application range: Jaguar (only aluminium rims)





	Colour code	mm	max N·m	Length mm	Ø mm	g
515.1487		22,0	100	220,0	32,0	300

WHEEL NUT WRENCH

Telescopic wheel nut wrench

- Infinitely variable
- Ideal for use with passenger cars, vans and saloon cars
- Sturdy design
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- For manual operation
- Ergonomic single component handle
- Matt finish
- Chrome vanadium





	L mm	g
518.1130	370,0 - 535,0	730

Telescopic socket wheel nut wrench

- 6 point
- Infinitely variable
- Ideal for use with passenger cars
- Sturdy design
- For manual operation
- Ergonomic single component handle
- Matt finish
- Chrome vanadium





	mm	L mm	g
518.1128	17,0 + 19,0	370,0 - 535,0	860

consists of:

		g
518.1129	Telescopic wheel nut wrench 17+19mm	175
518.1130	Telescopic wheel nut wrench, 370-535mm	730



Wheel spanner with slip joint for passenger cars

- 6 point
- DIN 3319/ISO 6788
- Sturdy design
- Foldable
- With slip joint for lower lying wheel nuts or for enhancing the leverage
- Ideal for use with passenger cars, vans and saloon cars
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- Polished heads
- Matt finish
- Special tool steel







	mm	Length mm	kg	
518.1154	17x19x21x1/2"	400,0	1,25	

Wheel spanner for passenger cars

- 6 point
- DIN 3319/ISO 6788
- Sturdy design
- Ideal for use with passenger cars, vans and saloon cars
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- Polished heads
- Matt finish
- Special tool steel



	mm	L mm	kg	
518.1153	17x19x21x1/2"	400,0	1,25	
518.1150	17x19x22x1/2"	400,0	1,25	

Wheel spanner for passenger cars

- 6 point
- DIN 3319/ISO 6788
- Extremely sturdy design
- Forged middle piece
- High loads (tested up to 500 Nm)
- Ideal for use with passenger cars, vans, saloon cars and agricultural machinery
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- Polished heads
- Matt finish
- Special tool steel



		mm	L mm	kg	
518.1151	17x19x22x13/16"		400,0	1,25	
518.1152	17x19x22x1/2"		400,0	1,25	

MANUAL RELEASE TOOLS

Telescopic wheel nut wrench

- Infinitely variable
- Ideal for use with passenger cars, vans and saloon cars
- Sturdy design
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- For manual operation
- Ergonomic single component handle
- Matt finish
- Chrome vanadium



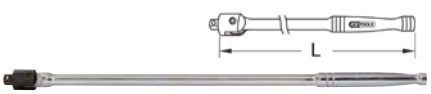


1/2"

	L mm	g	
518.1130	370,0 - 535,0	730	

CHROME*plus*® Flexi head drive handle

- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- Ideal for difficult to access areas
- Protects ratchet and torque wrenches from overloading
- Burnished head
- Mirror polished
- Chrome vanadium



3/8"

	L mm	head,spare	g	
918.3700	260,0	918.3826-1	390	
918.3701	450,0	918.3826-1	615	

CHROME*plus*® Flexible head drive handle

- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- Ideal for difficult to access areas
- Protects ratchet and torque wrenches from overloading
- Burnished head
- Mirror polished
- Chrome vanadium



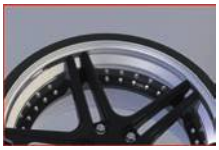
1/2"

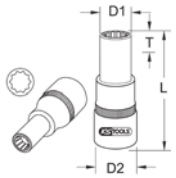
		L mm	head,spare	kg	
918.1291	A	360,0	918.1292-1	0,66	
918.1297	B	460,0	918.1292-1	1,12	
918.1292	B	600,0	918.1292-1	1,42	
918.1293	B	760,0	918.1292-1	1,63	

RIM BOLTS

OZ special aluminium rims socket for multi-piece OZ rims

- Custom-fit special profile for disassembling multi-piece OZ rims
- Also suitable for BBS, AMG, RH etc. rims with OZ bolting
- Square drive as per DIN 3121/ISO 1174 with backstop groove
- Professional and damage-free assembly and disassembly
- Time-saving finishing and repair
- Matt finish
- Chrome vanadium





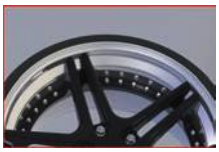


1/2"

	Profile	mm	L mm	D1 mm	D2 mm	T mm	g	
515.1033	10 point	8,0	60,0	12,0	23,0	8,0	80	
515.1034	10 point	10,0	60,0	14,0	23,0	8,0	80	

OZ special aluminium rims bit socket for multi-piece OZ rims

- Custom-fit special profile for disassembling multi-piece OZ rims
- Also suitable for BBS, AMG, RH etc. rims with OZ bolting
- Square drive as per DIN 3121/ISO 1174 with backstop groove
- Professional and damage-free assembly and disassembly
- Time-saving finishing and repair
- Matt finish
- Chrome vanadium







1/2"

	Profile	L mm	D mm	T mm	g	
515.1036	10 point	90,0	23,0	52,0	100	

Special OZ socket set for multi-pieces aluminum rims

- Custom-fit special profile for disassembling multi-piece OZ rims
- Also suitable for BBS, AMG, RH etc. rims with OZ bolting
- Square drive as per DIN 3121/ISO 1174 with backstop groove
- Professional and damage-free assembly and disassembly
- Time-saving finishing and repair
- Matt finish
- Chrome vanadium





1/2"

			g	
515.1039	3 pcs	Special OZ socket set for multi-pieces aluminum rims	280	

consists of:

		g	
515.1033	OZ special aluminium rims socket for multi-piece OZ rims, 8 mm	80	
515.1034	OZ special aluminium rims socket for multi-piece OZ rims, 10 mm	80	
515.1036	OZ special aluminium rims bit socket for multi-piece OZ rims, 8 mm, 90 mm long	100	

SPECIAL BORING TOOLS

Spiral profile impact socket set

- Dual profile sockets have spiral grooves and hexagonal profiles
- Self-fastening and rejuvenating special profile with aggressive spiral nut
- For loosening badly damaged screws and nuts
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Positive connection
- For machinery usage
- Phosphate finish
- Chrome molybdenum





1/2"

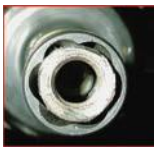
			g	
913.1280	3 pcs	Spiral profile impact socket set	600	

consists of:

		g	
913.1281	Twist socket, 1/2", 17mm	130	
913.1282	Twist socket, 1/2", 19mm	170	
913.1283	1/2" Socket Extension	160	

Spiral profile impact socket set

- Dual profile sockets have fine and coarse spiral groove profiles
- Self-fastening and rejuvenating special profile with aggressive spiral nut
- For loosening badly damaged screws and nuts
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Positive connection
- For machinery usage
- Phosphate finish
- Chrome molybdenum





1/2"

			g	
913.1270	3 pcs	Spiral profile impact socket set	600	

consists of:

		g	
913.1271	Twist socket, 1/2", 17mm	140	
913.1272	Twist socket, 1/2", 19mm	200	
913.1273	Twist socket, 1/2", 21mm	210	

Spiral profile impact socket, extra deep

- Self-fastening and rejuvenating special profile with aggressive spiral nut
- For loosening badly damaged screws and nuts
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Extra long execution
- For machinery usage
- Phosphate finish
- Chrome molybdenum





1/2"

	mm	Length mm	g	
913.1291	17,0	145,0	300	
913.1292	19,0	145,0	320	
913.1293	21,0	145,0	340	



Spiral profile impact socket set, extra deep

- Self-fastening and rejuvenating special profile with aggressive spiral nut
- For loosening badly damaged screws and nuts
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Positive connection
- Includes impact bar to extract or remove the damaged bolt or nut
- Extra long execution
- For machinery usage
- Phosphate finish
- Chrome molybdenum
- In durable plastic storage case





1/2"

			kg	
913.1290	4 pcs	Spiral profile impact socket set, extra deep	1,50	

consists of:

		g	
913.1291	Spiral profile impact socket, 1/2", 17mm	300	
913.1292	Spiral profile impact socket, 1/2", 19mm	320	
913.1293	Spiral profile impact socket, 1/2", 21mm	340	
913.1295	Impact bar, 1/2", for 913.1290	540	



Rim lock release tool set

- For the quick and easy removal of wheel rim locks
- tapered
- Slim design is ideal for tight mounting holes
- suitable for almost all current wheel lock systems without rotating outer sleeve
- Includes impact and pull punch
- Bites firmly to give a firm connection between stuck nut and head
- Phosphate finish
- Chrome molybdenum
- In durable plastic storage case

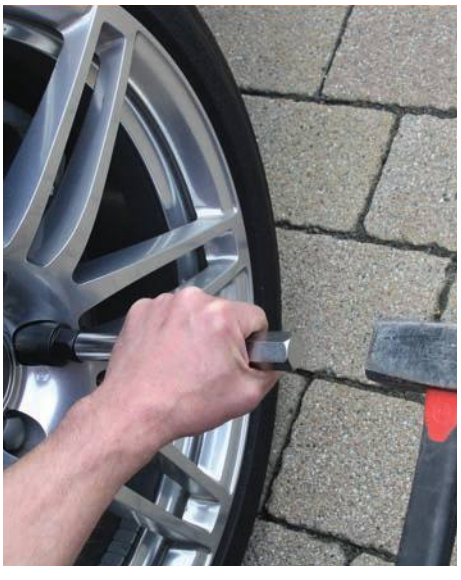




			kg	
913.1480	10 pcs	Rim lock release tool set	2,35	

consists of:

		g	
913.1480-01	6 Point rod, 17 mm x 180 mm	265	
913.1480-02	6 Point rod, 22 mm x 180 mm	530	
913.1480-03	Impact socket, 24 mm	190	
913.1480-04	Impact socket, 23 mm	180	
913.1480-05	Impact socket, 25 mm	200	
913.1480-06	Impact socket, 22 mm	160	
913.1480-07	Impact socket, 21 mm	150	
913.1480-08	Impact socket, 20 mm	140	
913.1480-09	Impact socket, 19 mm	130	
913.1480-10	Impact socket, 18 mm	110	
913.1480-11	Sanding paper	10	



WHEEL BOLTING SOCKET WRENCH

Hexagon impact socket set, deep

- 6 point
- According to DIN 3129 / ISO 2725-2
- Internal square drive to DIN 3121 / ISO 1174
- Long execution
- For machinery usage
- Phosphate finish
- Chrome molybdenum
- Includes storage rail





1/2"

515.0103	3 pcs	17 - 19 - 21 mm	860	

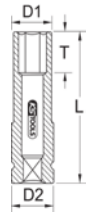
consists of:

515.1117	1/2" Hexagon impact socket, deep, 17mm	220	
515.1119	1/2" Hexagon impact socket, deep, 19mm	220	
515.1121	1/2" Hexagon impact socket, deep, 21mm	220	

Aluminium wheel impact socket, deep

- Specially for the wheel assembly and/or dismantling
- 6 point
- Internal square drive to DIN 3121 / ISO 1174
- Long execution
- For machinery usage
- Plastic sleeves for the damage-free work on aluminium rims
- Plastic sleeves interchangeable
- Colour coded identifies the socket size
- Chrome vanadium







1/2"

	Colour code	mm	L mm	D1 mm	D2 mm	T mm	Replacement sleeves		
515.2015		15,0	85,0	21,0	25,0	23,0	515.2035	180	
515.2017		17,0	85,0	24,0	30,0	23,0	515.2030	231	
515.2019		19,0	85,0	26,0	30,0	23,0	515.2031	235	
515.2021		21,0	85,0	28,0	30,0	23,0	515.2032	258	
515.2022		22,0	85,0	30,0	32,0	23,0	515.2033	320	

Aluminium wheel impact socket set, deep

- Specially for the wheel assembly and/or dismantling
- 6 point
- Square drive as per DIN 3121/ISO 1174 with backstop groove
- For machinery usage
- Plastic sleeves for the damage-free work on aluminium rims
- Plastic sleeves interchangeable
- Colour coded identifies the socket size
- Chrome vanadium
- In durable plastic storage case





1/2"

515.1005	3 pcs	17 - 19 - 21 mm	0,86	
515.1006	4 pcs	17 - 19 - 21 - 22 mm	1,45	
515.1007	5 pcs	15 - 17 - 19 - 21 - 22 mm	1,40	

Aluminium wheel impact socket, extra deep

- Specially for the wheel assembly and/or dismantling
- 6 point
- Internal square drive to DIN 3121 / ISO 1174
- Extra long execution
- For machinery usage
- Plastic sleeves for the damage-free work on aluminium rims
- Plastic sleeves interchangeable
- Colour coded identifies the socket size
- Chrome vanadium







1/2"

	Colour code	mm	L mm	D1 mm	D2 mm	T mm	Replacement sleeves		
515.2040		17,0	150,0	28,0	30,0	31,0	515.2045	600	
515.2041		19,0	150,0	29,5	30,0	31,0	515.2046	650	
515.2042		21,0	150,0	31,0	30,0	31,0	515.2047	700	

Aluminium wheel impact socket set, extra deep

- Specially for the wheel assembly and/or dismantling
- 6 point
- Internal square drive to DIN 3121 / ISO 1174
- Extra long execution
- For machinery usage
- Plastic sleeves for the damage-free work on aluminium rims
- Plastic sleeves interchangeable
- Colour coded identifies the socket size
- Chrome vanadium
- In durable plastic storage case





1/2"

515.1040	6 pcs	Aluminium wheel impact socket set, extra deep	1,45	

consists of:

515.2040	1/2" Aluminium wheel impact socket, extra deep, 17mm	600	
515.2041	1/2" Aluminium wheel impact socket, extra deep, 19mm	650	
515.2042	1/2" Aluminium wheel impact socket, extra deep, 21mm	700	
515.2045	Replacement plastic sleeve, 17mm	10	
515.2046	Replacement plastic sleeve, 19mm	10	
515.2047	Replacement plastic sleeve, 21mm	10	

Special aluminium rims special profile power socket for Porsche

- Specially for the wheel assembly and/or dismantling of Porsche special profile central wheel screws
- Internal square drive to DIN 3121 / ISO 1174
- Long execution
- Aluminium
- Chrome molybdenum





3/4"

	Length mm	Ø mm		
515.2001	86,4	84,3	475	

Special aluminium wheel impact socket, extra deep

- Specially for the wheel assembly and/or dismantling on aluminium sports wheels with deep lying wheel screws
- 6 point
- Internal square drive to DIN 3121 / ISO 1174
- Extra long and thin walled execution
- For machinery usage
- Plastic sleeves for the damage-free work on aluminium rims
- Plastic sleeves interchangeable
- Phosphate finish
- Chrome molybdenum





1/2"

	mm	L mm	D1 mm	D2 mm	T mm	Replacement sleeves	g	
515.2043	17,0	130,0	28,0	30,0	19,0	515.2044	350	

special aluminium rims special profile power socket for Mercedes, long

- Especially for wheel mounting or disassembly of Mercedes special profile wheel bolts
- Square drive as per DIN 3121/ISO 1174 with backstop groove
- Long execution
- Plastic sleeves for the damage-free work on aluminium rims
- Plastic sleeves interchangeable
- Phosphate finish
- Chrome molybdenum

Application range: Mercedes C-class (W204), CL-class (W216), GLK (W204), E-class (W211, W212, W207), M-class (W166), S-class (W221, W222), SLK (W172), **Maybach**







1/2"

	mm	L mm	D1 mm	D2 mm	T mm	Replacement sleeves	g	
515.2055	MS17	88,0	26,0	26,0	18,0	515.2056	257	



special aluminium rims special profile power socket for Hyundai / Kia, long

- Especially for wheel mounting or disassembly of Hyundai special profile wheel bolts
- Square drive as per DIN 3121/ISO 1174 with backstop groove
- Long execution
- Plastic sleeves for the damage-free work on aluminium rims
- Plastic sleeves interchangeable
- Phosphate finish
- Chrome molybdenum

Application range: Hyundai / Kia







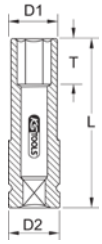
1/2"

		L mm	D1 mm	D2 mm	T mm	Replacement sleeves	g	
515.2060	MS21	86,0	31,0	31,0	16,0	515.2061	280	

Aluminium wheel impact socket, deep

- Sturdy design
- Specially for the wheel assembly and/or dismantling
- 6 point
- Internal square drive to DIN 3121 / ISO 1174
- Long execution
- For machinery usage
- Plastic sleeves for the damage-free work on aluminium rims
- Plastic sleeve it protects the surfaces at the wheel screws/ nuts
- Plastic sleeves interchangeable
- Colour coded identifies the socket size
- Phosphate finish
- Chrome molybdenum







1/2"

	Colour code	mm	L mm	D1 mm	D2 mm	T mm	Replacement sleeves	g	
515.1072		15,0	85,0	24,4	25,0	23,0	515.2053	150	
515.1073		17,0	85,0	26,5	30,0	23,0	515.2050	220	
515.1075		19,0	85,0	28,5	30,0	23,0	515.2051	235	
515.1076		21,0	85,0	30,5	30,0	23,0	515.2052	257	
515.1077		22,0	85,0	31,6	32,0	23,0	515.2054	262	

Aluminium wheel impact socket set, deep

- Sturdy design
- Specially for the wheel assembly and/or dismantling
- 6 point
- Internal square drive to DIN 3121 / ISO 1174
- Long execution
- For machinery usage
- Plastic sleeves for the damage-free work on aluminium rims
- Plastic sleeve it protects the surfaces at the wheel screws/ nuts
- Plastic sleeves interchangeable
- Colour coded identifies the socket size
- Phosphate finish
- Chrome molybdenum
- In durable plastic storage case





1/2"

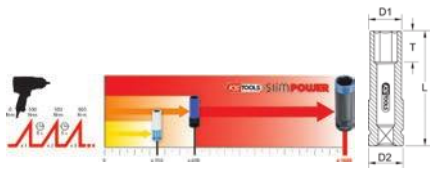
		g	
515.1070	3 pcs	17 - 19 - 21 mm	780

consists of:

		g	
515.1073	1/2" Aluminium wheel impact socket, deep, 17mm	220	
515.1075	1/2" Aluminium wheel impact socket, deep, 19mm	235	
515.1076	1/2" Aluminium wheel impact socket, deep, 21mm	257	

SlimPOWER Alloy rim impact socket, deep

- Very robust execution
- Specially for the wheel assembly and/or dismantling
- 6 point
- Internal square drive to DIN 3121 / ISO 1174
- Long execution
- For machinery usage
- Plastic sleeves for the damage-free work on aluminium rims
- Plastic sleeve it protects the surfaces at the wheel screws/ nuts
- Plastic sleeves interchangeable
- Colour coded identifies the socket size
- Phosphate finish
- Chrome molybdenum





1/2"

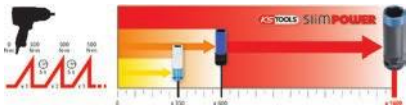
	Colour code	mm	L mm	D1 mm	D2 mm	T mm	g	
515.0991		15,0	86,0	24,5	23,5	20,0	155	
515.0992		17,0	86,0	26,0	26,0	20,0	220	
515.0993		19,0	86,0	28,0	28,0	20,0	207	
515.0994		21,0	86,0	30,0	30,0	20,0	251	
515.0995		22,0	86,0	32,0	30,0	20,0	266	

SlimPOWER Alloy rim impact socket set

- Very robust execution
- Specially for the wheel assembly and/or dismantling
- 6 point
- Internal square drive to DIN 3121 / ISO 1174
- Long execution
- For machinery usage
- Plastic sleeves for the damage-free work on aluminium rims
- Plastic sleeve it protects the surfaces at the wheel screws/ nuts
- Plastic sleeves interchangeable
- Colour coded identifies the socket size
- Phosphate finish
- Chrome molybdenum







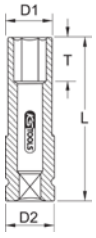
1/2"

			g
515.0989	2 pcs	17 - 19 mm	404
515.0990	3 pcs	17 - 19 - 21 mm	791

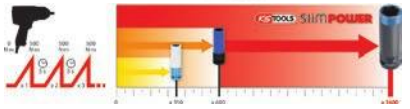
SlimPOWER Alloy rim impact socket, extra deep

- Very robust execution
- Specially for the wheel assembly and/or dismantling
- 6 point
- Internal square drive to DIN 3121 / ISO 1174
- Extra long execution
- For machinery usage
- Plastic sleeves for the damage-free work on aluminium rims
- Plastic sleeve it protects the surfaces at the wheel screws/ nuts
- Plastic sleeves interchangeable
- Colour coded identifies the socket size
- Phosphate finish
- Chrome molybdenum









1/2"

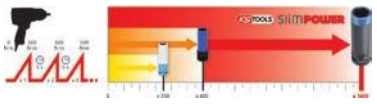
	Colour code	mm	L mm	D1 mm	D2 mm	T mm	g
515.0617		17,0	150,0	26,5	29,0	20,0	385
515.0618		19,0	150,0	28,5	29,5	20,0	405
515.0619		21,0	150,0	30,0	29,5	20,0	425

SlimPOWER Alloy rim impact socket set, extra deep

- Very robust execution
- Specially for the wheel assembly and/or dismantling
- 6 point
- Internal square drive to DIN 3121 / ISO 1174
- Long execution
- For machinery usage
- Plastic sleeves for the damage-free work on aluminium rims
- Plastic sleeve it protects the surfaces at the wheel screws/ nuts
- Plastic sleeves interchangeable
- Colour coded identifies the socket size
- Phosphate finish
- Chrome molybdenum
- In durable plastic storage case







1/2"

			g
515.0621	2 pcs	17 - 19 mm	800
515.0622	3 pcs	17 - 19 - 21 mm	1300

Special impact socket for screwed tracking plates

- specially designed for the assembly and disassembly of flat head screws with screwed tracking plates
- Sturdy design
- 6 point
- Internal square drive to DIN 3121 / ISO 1174
- For machinery usage
- Phosphate finish
- Chrome molybdenum



1/2"

	mm	L mm	D1 mm	D2 mm	T mm	g
515.0601	17,0	84,3	22,3	30,0	31,0	220
515.0602	19,0	85,1	24,4	30,0	31,1	245
515.0603	21,0	87,2	30,5	32,5	33,6	250

Special impact socket set for screwed tracking plates

- specially designed for the assembly and disassembly of flat head screws with screwed tracking plates
- Sturdy design
- 6 point
- Internal square drive to DIN 3121 / ISO 1174
- For machinery usage
- Phosphate finish
- Chrome molybdenum
- In durable plastic storage case





1/2"

			g
515.0605	3 pcs	Special impact socket set for screwed tracking plates	802

consists of:

			g
515.0601	1/2" Special impact socket for screwed tracking plates, 17 mm	220	
515.0602	1/2" Special impact socket for screwed tracking plates, 19 mm	245	
515.0603	1/2" Special impact socket for screwed tracking plates, 21 mm	250	

Magnet set for SlimPOWER alloy rims Kraft sockets

- Ideal supplement for the secure holding of wheel bolts and wheel nuts
- Only suitable for all SlimPOWER alloy rims Kraft sockets
- Spring-mounted magnet
- High retention force





1/2"

			g
515.0625	3 pcs	Magnet set for SlimPOWER alloy rims Kraft sockets	30

consists of:

		g
515.0623	Solenoid holder for 17 mm SlimPOWER alloy wheels impact socket	10
515.0624	Solenoid holder for 19 mm SlimPOWER alloy wheels impact socket	10
515.0626	Solenoid holder for 21 and 22 mm SlimPOWER alloy wheels impact socket	10

Rim lock release tool for Toyota/Lexus/Hyundai

- For the quick and easy removal of wheel rim locks
- Left-turning clamping device
- Shaped in the key core then wedged in and then releasing on the thread and push it in so doing
- For manual operation
- Chrome molybdenum

Application range: Toyota, Lexus, Hyundai



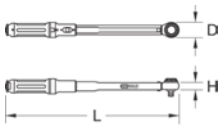


		g
913.1479	Rim lock release tool for Toyota/Lexus/ Hyundai	260

TORQUE WRENCHES

ERGOTORQUE®*precision* torque wrench with rotary mushroom ratchet head

- Actuation accuracy: ±3 % tolerance of the set scale value
- Precise reading accuracy for a minimum 5.000 tightening cycles
- For controlled fastening in clockwise and counter clockwise directions
- Torque setting by pulling out and pushing in the slide in knob at the end of the handle
- The direction of rotation (clockwise and counter clockwise) can be changed by simply rotating the square drive piece
- Double scale in Nm and lbf•ft divisions for precise adjustment
- Includes micrometer scale in Nm divisions for precise and fine adjustment
- Large vision panel, precise adjustment using a magnifying glass
- An audible and palpable signal when the desired torque value is achieved
- Exact gearing 30 teeth ratchet mechanism
- Torque setting is quick and easy using the locking knob in the handle end
- Secure locking function within the handle
- With ejection mechanism on the ratchet head
- Two component handle with a soft zone, is ergonomic in design and comfortable in the hand
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- Individually marked with serial number - unique product identification
- including calibration declaration of conformity according to DIN EN ISO 6789:2017(E) - traceable to national standards

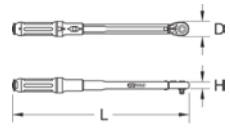


1/2"

		N·m	Division N·m	lbf·ft	L mm	D mm	H mm	kg
516.1442	1/2"	40-200	1,00	15 - 150	500,0	45,0	23,0	1,30
516.1472	1/2"	60-320	1,00	45 - 236	585,0	45,0	23,0	1,45

ERGOTORQUE®*precision* torque wrench with reversible ratchet head

- Actuation accuracy: ±3 % tolerance of the set scale value
- Precise reading accuracy for a minimum 5.000 tightening cycles
- For controlled fastening in a clockwise direction
- Can untighten without any torque restraint thanks to the anticlockwise latch
- Double scale in Nm and lbf•ft divisions for precise adjustment
- Includes micrometer scale in Nm divisions for precise and fine adjustment
- Large vision panel, precise adjustment using a magnifying glass
- An audible and palpable signal when the desired torque value is achieved
- With exact gearing 36 teeth ratchet mechanism
- With ejection mechanism on the ratchet head
- Torque setting is quick and easy using the locking knob in the handle end
- Secure locking function within the handle
- Two component handle with a soft zone, is ergonomic in design and comfortable in the hand
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- Individually marked with serial number - unique product identification
- including calibration declaration of conformity according to DIN EN ISO 6789:2017(E) - traceable to national standards



1/2"

		N·m	lbf·ft	Division N·m	L mm	D mm	H mm	kg
516.1542	1/2"	40-200	15 - 150	1,00	500,0	45,0	23,0	1,30
516.1572	1/2"	60-320	45 - 236	1,00	585,0	45,0	23,0	1,45

Industrial torque wrench with reversible ratchet head

- Release accuracy: ±3 % tolerance from the set scale value and better
- Precise reading accuracy for a minimum 5.000 tightening cycles
- Use is almost all industrial production areas
- For controlled fastening in clockwise and counter clockwise directions
- Double-scale Nm and lbf-ft and/or lbf-in division
- including a micrometre scale in Nm divisions and lbf-ft and/or lbf-in for precise and fine adjustment
- Clearly audible and noticeable torque release sign
- Exact gearing 72 teeth ratchet mechanism
- With ejection mechanism on the ratchet head
- Setting the torque securely by turning the handle
- Secure locking function within the handle
- Long service-life and high holding times
- Highest precision and reliability even under tough long-term use
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- Individually marked with serial number - unique product identification
- including calibration declaration of conformity according to DIN EN ISO 6789:2017(E) - traceable to national standards






1/2"

		Measuring range N·m	Tooth	Division N·m	lbf·ft	Division lbf·ft	D mm	L mm	kg
516.5155	1/2"	40-200	32	1,00	33-144	0,7	43,5	530,0	1,65
516.5156	1/2"	60-340	32	2,00	52-243	1,5	43,5	610,0	1,80

ERGOTORQUE®precision torque wrench with bag

- Actuation accuracy: ±3 % tolerance of the set scale value
- Precise reading accuracy for a minimum 5.000 tightening cycles
- For controlled fastening in clockwise and counter clockwise directions
- The direction of rotation (clockwise and counter clockwise) can be changed by simply rotating the square drive piece
- Double scale in Nm and lbf•ft divisions for precise adjustment
- Large vision panel, precise adjustment using a magnifying glass
- With ejection mechanism on the ratchet head
- An audible and palpable signal when the desired torque value is achieved
- Exact gearing 30 teeth ratchet mechanism
- Torque setting is quick and easy using the locking knob in the handle end
- Secure locking function within the handle
- Two component handle with a soft zone, is ergonomic in design and comfortable in the hand
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- Individually marked with serial number - unique product identification
- including calibration declaration of conformity according to DIN EN ISO 6789:2017(E) - traceable to national standards




1/2"

			kg
516.1905	5 pcs	ERGOTORQUE®precision torque wrench with bag	2,50

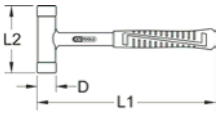
consists of:

		kg
516.1442	1/2" ERGOTORQUE®precision torque wrench with rotary mushroom ratchet head, 40-200Nm	1,30
918.1202	1/2" CHROMEplus Extensions, 125mm	0,18
918.1247	1/2" CHROMEplus Hexagonal socket, deep, 17mm	0,14
918.1249	1/2" CHROMEplus Hexagonal socket, deep, 19mm	0,15
918.1258	1/2" CHROMEplus Hexagonal socket, deep, 21mm	0,19

TYRE SERVICE HAMMERS

Recoil free soft faced hammer

- With steel tube handle and plastic handle
- Shock absorbing effect through steel shot in the head
- Up to 100% higher impact effect than normal Soft head hammers
- Shatterproof and wear resistant
- Polyamid heads interchangeable
- For safer working with less recoil

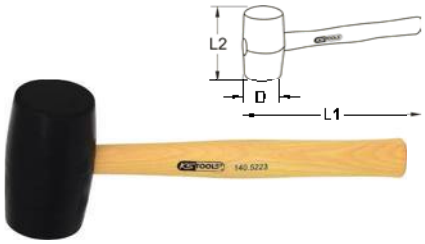





	g	D mm	L1 mm	L2 mm	head,spare	g
140.5270	360	25,0	270,0	105,0	140.5280	360
140.5271	480	30,0	290,0	105,0	140.5281	480
140.5272	590	35,0	295,0	110,0	140.5282	590
140.5273	850	40,0	300,0	120,0	140.5283	850
140.5274	990	45,0	305,0	120,0	140.5284	990
140.5275	1110	50,0	310,0	125,0	140.5285	1110
140.5276	1290	55,0	325,0	135,0	140.5286	1290
140.5277	1670	60,0	335,0	140,0	140.5287	1670

Rubber hammer

- DIN 5128
- With ash handle
- Hammer head made out of hard rubber



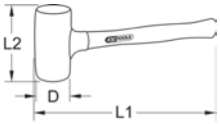
	g	D mm	L1 mm	L2 mm	Handle number		g
140.5221	300	45,0	300,0	80,0	140.5304	140.5404	340
140.5222	500	58,0	310,0	95,0	140.5305	140.5405	560
140.5223	700	63,0	345,0	112,0	140.5306	140.5405	780



Recoil free soft faced hammer

- Polyurethane fiberglass composite
- Serrated surface for secure grip
- Free of sparks due to rubber cover
- Special absorbing effect through steel shot in the hammer head
- Substantially higher blow effect than in conventional hammering
- For safer working with less recoil





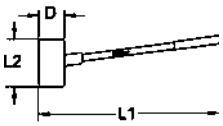


	g	D mm	L1 mm	L2 mm	
140.5252	400	40,0	270,0	81,0	480
140.5254	560	40,0	305,0	100,0	640
140.5255	645	42,0	325,0	100,0	725
140.5256	860	50,0	342,0	118,0	860
140.5257	1270	56,0	355,0	118,0	1350
140.5258	1720	65,0	370,0	135,0	1800

Recoil free soft faced hammer, extra large

- Polyurethane fiberglass composite
- Rubber handle for better grip
- Special absorbing effect through steel shot in the hammer head
- Substantially higher blow effect than in conventional hammering
- For safer working with less recoil





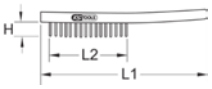


	g	D mm	L1 mm	L2 mm	
140.5259	5500	105,0	890,0	180,0	5,76

WHEEL HUB CLEANING

Steel hand wire brush 3 rowed

- 3 rowed
- Universal usage
- wooden handle
- For surface preparation
- With steel bristles

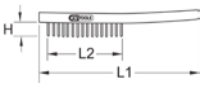




	H mm	L1 mm	L2 mm	
201.2305	32,0	290,0	138,0	120

Steel hand wire brush 4 rowed

- 4 rowed
- Universal usage
- wooden handle
- For surface preparation
- With steel bristles

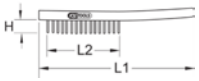




	H mm	L1 mm	L2 mm	
201.2311	32,0	290,0	138,0	120

Stainless steel hand wire hand brush 3 rowed

- 3 rowed
- Universal usage
- wooden handle
- For surface preparation
- With stainless steel bristles

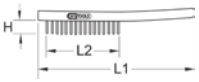




	H mm	L1 mm	L2 mm	
201.2310	32,0	290,0	138,0	120

Stainless steel hand wire hand brush 4 rowed

- 4 rowed
- Universal usage
- wooden handle
- For surface preparation
- With stainless steel bristles

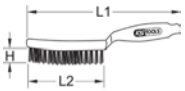




	H mm	L1 mm	L2 mm	
201.2306	32,0	290,0	138,0	100

Steel wire hand brush 4 rowed

- 4 rowed
- Universal usage
- Plastic hand grip casing
- For surface preparation
- Smooth steel wire

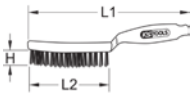




	H mm	L1 mm	L2 mm	
201.2325	25,0	285,0	130,0	120

Brass wire hand brush 3 rowed

- 3 rowed
- Universal usage
- Plastic hand grip casing
- For surface preparation
- Straight brass wire



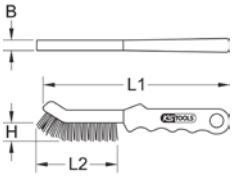


	H mm	L1 mm	L2 mm	
201.2326	25,0	285,0	130,0	105

Steel wire brake saddle wire brush 2 rowed, straight and tapered point

- 2 rowed
- With hanging hole
- Tapered point
- Very narrow execution
- For narrow brake saddle shafts
- Robust stock
- Two component handle
- For removing of stubborn brake dust
- For surface preparation
- Smooth steel wire





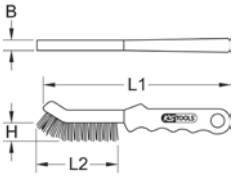


	B mm	H mm	L1 mm	L2 mm	
201.2321	12,0	14,0 - 22,0	225,0	90,0	90

Brass wire brake saddle wire brush 2 rowed, straight

- 2 rowed
- Very narrow execution
- For narrow brake saddle shafts
- Robust stock
- With hanging hole
- Two component handle
- For removing of stubborn brake dust
- For surface preparation
- Curved brass wire





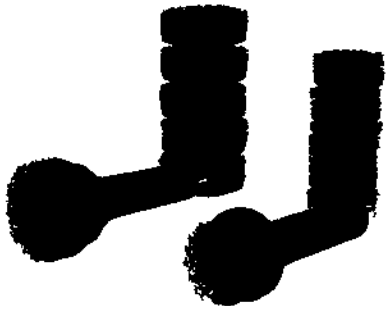


	B mm	H mm	L1 mm	L2 mm	
201.2322	12,0	22,0	225,0	90,0	90

Wheel hub bolt grinder set, Ø 40 / 50 mm

- For the optimal cleaning of wheel hubs and brake discs
- Ideally used for passenger cars, vans and saloon car wheel hubs with stud bolts up to Ø 40 or Ø 50 mm in diameter
- Grinding disc with 10 mm pin receptacle with 3 contact surfaces
- for use with drills or cordless screwdrivers (max. speed 1500 RPM)
- Velcro fastening for quick replacement of the cleaning disc
- No flying sparks
- Low wear - maximum service life (about 50 vehicles per disc)
- Clean contact surfaces prevent falsification of the wheel tightening torques
- Minimum dust development due to open-pore grinding medium and cup-shaped grinding disc





100.4080	14 pcs	Wheel hub bolt grinder set, Ø 40 / 50 mm	470

consists of:

100.4081	Wheel hub grinder	50
100.4085	Wheel hub bolt grinding disc,small,5 pcs	230
100.4088	Wheel hub bolt grinding disc,large,5 pcs	200

Wheel hub bolt grinding discs Ø 40 mm

- 5 replacement discs Ø 40 mm
- For the optimal cleaning of wheel hubs and brake discs
- Ideally used for passenger cars, vans and saloon car wheel hubs with stud bolts up to Ø 40 mm in diameter
- Grinding disc with 10 mm pin receptacle with 3 contact surfaces
- for use with drills or cordless screwdrivers (max. speed 1500 RPM)
- Velcro fastening for quick replacement of the cleaning disc
- No flying sparks
- Low wear - maximum service life (about 50 vehicles per disc)
- Clean contact surfaces prevent falsification of the wheel tightening torques
- Minimal dust development due to open-pore grinding medium
- supplied without grinding disc



		Ø mm	
100.4085	5 pcs	40	230

Wheel hub bolt grinding discs Ø 50 mm

- 5 replacement discs Ø 50 mm
- For the optimal cleaning of wheel hubs and brake discs
- Ideally used for passenger cars, vans and saloon car wheel hubs with stud bolts up to Ø 50 mm in diameter
- Grinding disc with 10 mm pin receptacle with 3 contact surfaces
- for use with drills or cordless screwdrivers (max. speed 1500 RPM)
- Velcro fastening for quick replacement of the cleaning disc
- No flying sparks
- Low wear - maximum service life (about 50 vehicles per disc)
- Clean contact surfaces prevent falsification of the wheel tightening torques
- Minimal dust development due to open-pore grinding medium
- supplied without grinding disc



		Ø mm	
100.4088	5 pcs	50	200

Wheel hub grinding disc set Ø 65 / 105 mm

- For the optimal cleaning of wheel hubs and brake discs
- Ideal for use with passenger cars, vans and saloon car wheel hubs
- Grinding disc with 1/2" receptacle
- For use with impact wrenches or cordless impact wrenches (max. speed 7,000 rpm)
- No flying sparks
- Low wear - maximum service life (about 50 vehicles per disc)
- Clean contact surfaces prevent falsification of the wheel tightening torques
- Minimal dust development due to open-pore grinding medium





1/2"

100.4035	2 pcs	Wheel hub grinding disc set Ø 65 / 105 mm	300

consists of:

100.4038	Wheel hub grinder Ø 65 mm	100
100.4039	Wheel hub grinder Ø 105 mm	200



Wheel hub grinding disc set Ø 65 mm

- For the optimal cleaning of wheel hubs and brake discs
- Ideal for use with passenger cars, vans and saloon car wheel hubs
- Grinding disc with 1/2" receptacle
- For use with impact wrenches or cordless impact wrenches (max. speed 7,000 rpm)
- No flying sparks
- Low wear - maximum service life (about 50 vehicles per disc)
- Clean contact surfaces prevent falsification of the wheel tightening torques
- Minimal dust development due to open-pore grinding medium





		Ø mm	
100.4036	5 pcs	65	575

Wheel hub grinding disc set Ø 105 mm

- For the optimal cleaning of wheel hubs and brake discs
- Ideal for use with passenger cars, vans and saloon car wheel hubs
- Grinding disc with 1/2" receptacle
- For use with impact wrenches or cordless impact wrenches (max. speed 7,000 rpm)
- No flying sparks
- Low wear - maximum service life (about 50 vehicles per disc)
- Clean contact surfaces prevent falsification of the wheel tightening torques
- Minimal dust development due to open-pore grinding medium



		Ø mm	
100.4037	5 pcs	105	625

Wheel hub grinder set Ø 150 mm, internal Ø 90 mm

- For the optimal cleaning of wheel hubs and brake discs
- ideal for use on large truck, van and large limousine wheel hubs up to Ø 150 mm
- Optimised for the latest wheel hubs with larger inner diameter (Ø 90 mm)
- Grinding disc with 1/2" receptacle
- For use with impact wrenches or cordless impact wrenches (max. speed 500 rpm)
- Velcro fastening for quick replacement of the cleaning disc
- No flying sparks
- Low wear - maximum service life (about 50 vehicles per disc)
- Clean contact surfaces prevent falsification of the wheel tightening torques
- Minimal dust development due to open-pore grinding medium





			g	
100.5075	2 pcs	Wheel hub grinder set Ø 150 mm, internal Ø 90 mm	460	

consists of:

		g	
100.5076	Wheel hub grinder, without disc, Ø 150 mm	390	
100.5077	Replacement disk for wheel hub grinder, Ø 150 mm	70	

Wheel hub grinder set Ø 160 mm, internal Ø 60 mm

- For the optimal cleaning of wheel hubs and brake discs
- ideal for use on large truck, van and large limousine wheel hubs up to Ø 160 mm
- Optimised for the latest wheel hubs with larger inner diameter (Ø 60 mm)
- Grinding disc with 10 mm pin receptacle with 3 contact surfaces
- for use with drills or cordless screwdrivers (max. speed 1500 RPM)
- Velcro fastening for quick replacement of the cleaning disc
- No flying sparks
- low-wear – maximum standing time (per disc approx. 100 vehicles)
- Clean contact surfaces prevent falsification of the wheel tightening torques
- Minimum dust development due to open-pore grinding medium and cup-shaped grinding disc





			g	
100.4070	4 pcs	Wheel hub grinder set Ø 160 mm, internal Ø 60 mm	800	

consists of:

		g	
100.4071	Wheel hub grinder, without disc, Ø 160 mm	270	
100.4075	Replacement screen set for wheel hub grinder, Ø 160 mm, internal Ø 60 mm, 3 pcs.	530	

Spare disc set for wheel hub grinder, Ø 160 mm, inner-Ø 60 mm

- 3 replacement discs Ø 160 mm
- For the optimal cleaning of wheel hubs and brake discs
- ideal for use on large truck, van and large limousine wheel hubs up to Ø 160 mm
- Optimised for the latest wheel hubs with larger inner diameter (Ø 60 mm)
- For use with boring machines and cordless spanners (max. speed 1,000 rpm)
- Velcro fastening for quick replacement of the cleaning disc
- No flying sparks
- low-wear – maximum standing time (per disc approx. 100 vehicles)
- Clean contact surfaces prevent falsification of the wheel tightening torques
- Minimal dust development due to open-pore grinding medium
- supplied without grinding disc



			Ø mm	g	
100.4075	3 pcs		160	530	

Wheel hub grinder set Ø 160 mm, internal Ø 75 mm

- For the optimal cleaning of wheel hubs and brake discs
- ideal for use on large truck, van and large limousine wheel hubs up to Ø 160 mm
- Optimised for the latest wheel hubs with larger inner diameter (Ø 75 mm)
- Grinding disc with 10 mm pin receptacle with 3 contact surfaces
- for use with drills or cordless screwdrivers (max. speed 1500 RPM)
- Velcro fastening for quick replacement of the cleaning disc
- No flying sparks
- low-wear – maximum standing time (per disc approx. 100 vehicles)
- Clean contact surfaces prevent falsification of the wheel tightening torques
- Minimum dust development due to open-pore grinding medium and cup-shaped grinding disc





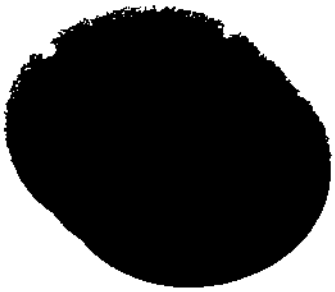
			g	
100.5070	4 pcs	Wheel hub grinder set Ø 160 mm, internal Ø 75 mm	800	

consists of:

		g	
100.4071	Wheel hub grinder, without disc, Ø 160 mm	270	
100.5071	Replacement screen set for wheel hub grinder, Ø 160 mm, internal Ø 75 mm, 3 pcs.	530	

Spare disc set for wheel hub grinder, Ø 160 mm, inner-Ø 75 mm

- 3 replacement discs Ø 160 mm
- For the optimal cleaning of wheel hubs and brake discs
- ideal for use on large truck, van and large limousine wheel hubs up to Ø 160 mm
- Optimised for the latest wheel hubs with larger inner diameter (Ø 75 mm)
- for use with drills or cordless screwdrivers (max. speed 1500 RPM)
- Velcro fastening for quick replacement of the cleaning disc
- No flying sparks
- low-wear – maximum standing time (per disc approx. 100 vehicles)
- Clean contact surfaces prevent falsification of the wheel tightening torques
- Minimal dust development due to open-pore grinding medium
- supplied without grinding disc



			Ø mm	g	
100.5071	3 pcs		160	530	

Wheel hub grinder set Ø 200 mm, internal Ø 85 mm

- For the optimal cleaning of wheel hubs and brake discs
- Ideally used for passenger cars, vans and saloon car wheel hubs up to Ø 200 mm
- Grinding disc with 10 mm pin receptacle with 3 contact surfaces
- For use with boring machines and cordless spanners (max. speed 1,000 rpm)
- Velcro fastening for quick replacement of the cleaning disc
- No flying sparks
- low-wear – maximum standing time (per disc approx. 100 vehicles)
- Clean contact surfaces prevent falsification of the wheel tightening torques
- Minimum dust development due to open-pore grinding medium and cup-shaped grinding disc





			kg	
100.4090	3 pcs	Wheel hub grinder set Ø 200 mm, internal Ø 85 mm	1,01	

consists of:

		g	
100.4091	Wheel hub grinder, without disc, Ø 200 mm	470	
100.4095	Wheel hub grinder replacement screen set, Ø 200 mm, internal Ø 85 mm, 2 pcs.	530	

Wheel hub grinder spare disc set, Ø 200 mm, inner-Ø 85 mm

- 2 replacement discs Ø 200 mm
- For the optimal cleaning of wheel hubs and brake discs
- Ideally used for passenger cars, vans and saloon car wheel hubs up to Ø 200 mm
- For use with boring machines and cordless spanners (max. speed 1,000 rpm)
- Velcro fastening for quick replacement of the cleaning disc
- No flying sparks
- low-wear – maximum standing time (per disc approx. 100 vehicles)
- Clean contact surfaces prevent falsification of the wheel tightening torques
- Minimal dust development due to open-pore grinding medium
- supplied without grinding disc



		Ø mm	g	
100.4095	2 pcs	200	530	

Wheel hub centring bore grinder set, Ø 160 mm, inner-Ø 50 mm

- with a centre guide and integrated grinder for wheel centring cleaning
- for optimal cleaning of the inside rim bearing surface
- ideal for use on large truck, van and large limousine wheel hubs up to Ø 160 mm
- for minimum wheel centring diameter 51 mm
- Grinding disc with 10 mm pin receptacle with 3 contact surfaces
- for use with drills or cordless screwdrivers (max. speed 1500 RPM)
- Velcro fastening for quick replacement of the cleaning disc
- No flying sparks
- low-wear – maximum standing time (per disc approx. 100 vehicles)
- Clean contact surfaces prevent falsification of the wheel tightening torques
- Minimum dust development due to open-pore grinding medium and cup-shaped grinding disc





			g	
100.5065	2 pcs	Wheel hub centring bore grinder set, Ø 160 mm, inner-Ø 50 mm	470	

consists of:

		g	
100.4071	Wheel hub grinder, without disc, Ø 160 mm	270	
100.5066	Replacement screen for wheel hub centring bore grinder, Ø 160 mm, internal Ø 50 mm	200	

Spare disc set for wheel hub centring bore grinder, Ø 160 mm, inner-Ø 50 mm

- 3 replacement discs Ø 160 mm
- with a centre guide and integrated grinder for wheel centring cleaning
- for optimal cleaning of the inside rim bearing surface
- ideal for use on large truck, van and large limousine wheel hubs up to Ø 160 mm
- for minimum wheel centring diameter 51 mm
- for use with drills or cordless screwdrivers (max. speed 1500 RPM)
- Velcro fastening for quick replacement of the cleaning disc
- No flying sparks
- low-wear – maximum standing time (per disc approx. 100 vehicles)
- Clean contact surfaces prevent falsification of the wheel tightening torques
- Minimal dust development due to open-pore grinding medium
- supplied without grinding disc



		Ø mm	g	
100.5067	3 pcs	160	600	

consists of:

		g	
100.5066	Replacement screen for wheel hub centring bore grinder, Ø 160 mm, internal Ø 50 mm	200	

TYRE PRESSURE CONTROL SYSTEM SETS

Passenger car assembly tool for VDO REDI sensors

- ideal for quick and damage-free insertion of VDO REDI sensors
- precise positioning in rubber container possible with simple handling
- for the 4 current VDO REDI sensors
- Plastic





		g	
100.1165	Passenger car assembly tool for VDO REDI sensors	30	

TPMS Tool set for tyre pressure valve control systems

- Ideal configuration for the proper assembly and disassembly of tyre pressure monitoring sensors and the associated special tyre valves
- With this product line, all assembly and service work can be carried out for standard TPM [tyre pressure monitoring] systems.
- Adjustable calibrated torque wrench (5 - 25 Nm) covers all known tightening torques
- The torque wrench has a release accuracy of +/- 3% and exceeds the requirements of the ETRTO values
- Contains all necessary tools to avoid damaging screws and sensors and for ensuring a secure bolted connection and seal
- Includes expanded accessories for standard snap-in tyre valves
- In durable plastic storage case





			kg	
100.1180	13 pcs	TPMS Tool set for tyre pressure valve control systems	2,20	

consists of:

		g	
516.1412	1/4" ERGOTORQUE®precision torque wrench with rotary mushroom ratchet head, 5-25Nm	460	
516.1413	Rotary square box wrench, 3/8"	21	
150.2022	Tyre valve screwdriver, car and transporter	40	
150.2029	Tyre valve torque screwdriver, 0,25 Ncm, 120mm	50	
150.2031	Tyre valve torque screwdriver, 0.45Ncm, 122mm	50	
911.1434	1/4" Square drive screwdriver, 150mm	140	
911.1442	1/4" Bit socket Torx, T10	14	
911.1443	1/4" Bit socket Torx, T15	14	
911.1444	1/4" Bit socket Torx, T20	14	
917.1431	1/4" Hexagonal socket, deep, 11mm	43	
917.1432	1/4" Hexagonal socket, deep, 12mm	46	
156.0111	Pin punch octagonal shaft, mirror polished, Ø 2mm	40	
100.1182	Valve sealing tool, for 11 mm valves	9	

Valve sealing tool

- Ideally suited for the injury-free assembly and disassembly of rubber baskets with TPMS valves
- Suitable for 11 mm valves
- No sharp blades or edges
- Robust metal execution





		Length mm	Width mm	Height mm	g	
100.1182		80,0	25,0	2,0	9	

Hook, 135°

- Ideal for removing and use of O rings and seals
- Two component handle
- Special tool steel



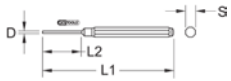


	Length mm	g
550.1049	140,0	27

Pin punch

- 8-point
- Quenched and tempered
- Mirror polished
- Highly polished
- Chrome vanadium







	L1 mm	L2 mm	D mm	S mm	g
156.0111	115,0	30,0	2,0	8,0	40

TPMS tyre bleeder set

- Suitable for bleeding tyres when installing the TPMS wheel pressure sensors
- Colour coding is used for the correct mounting of the wheel
- Reprogramming the sensors is usually therefore eliminated
- Prevents incorrect mounting of the wheels





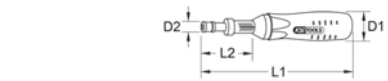
			g
100.1185	4 pcs	TPMS tyre bleeder set	133

consists of:

		g
100.1186	TPMS tyre bleeder, yellow, front left	28
100.1187	TPMS tyre bleeder, red, front right	28
100.1188	TPMS tyre bleeder, green, left rear	28
100.1189	TPMS tyre bleeder, blue, right rear	28

Torque screwdriver with micrometer scale

- Actuation accuracy: ±6 % tolerance from the set scale value and better
- Precise reading accuracy for a minimum 5.000 tightening cycles
- For controlled fastening in clockwise and counter clockwise directions
- With precision helical pressure spring
- Clearly noticeable torque release signal through ratchet
- It is not possible to over tighten the set value
- Automatic reset in the initial position
- Including a micrometre scale in Nm divisions for precise and fine adjustment
- Ergonomic designed rubber handle provides secure torque transmission
- Hexagon socket holder in accordance with DIN 3126 - E6,3
- Individually marked with serial number - unique product identification
- including calibration declaration of conformity according to DIN EN ISO 6789:2017(E) - traceable to national standards





	Measuring range N·m	Division N·m	L mm	L2 mm	D1 mm	D2 mm	g
516.3255	1 - 6	0,10	200,0	30,0	35,0	11,0	450

ERGOTORQUE® *precision* torque wrench with rotary mushroom ratchet head

- Actuation accuracy: ±3 % tolerance of the set scale value
- Precise reading accuracy for a minimum 5.000 tightening cycles
- For controlled fastening in clockwise and counter clockwise directions
- Torque setting by pulling out and pushing in the slide in knob at the end of the handle
- The direction of rotation (clockwise and counter clockwise) can be changed by simply rotating the square drive piece
- Double scale in Nm and lbf•ft divisions for precise adjustment
- Includes micrometer scale in Nm divisions for precise and fine adjustment
- Large vision panel, precise adjustment using a magnifying glass
- An audible and palpable signal when the desired torque value is achieved
- Exact gearing 30 teeth ratchet mechanism
- Torque setting is quick and easy using the locking knob in the handle end
- Secure locking function within the handle
- With ejection mechanism on the ratchet head
- Two component handle with a soft zone, is ergonomic in design and comfortable in the hand
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- Individually marked with serial number - unique product identification
- including calibration declaration of conformity according to DIN EN ISO 6789:2017(E) - traceable to national standards





	■	N·m	Division N·m	lbf·ft	L mm	D mm	H mm	kg
516.1402	1/4"	1-5	0,10	0,8 - 3,6	289,0	35,0	18,0	0,46



TPMS service set for tyre pressure control systems 01

- For Schrader manufacturer
- The entire valve service set of the sensor must be replaced with every tyre change or tyre service
- Suitable for steel or aluminium rims

Technical data:
Tightening torque of the nut: 4.25 Nm

Application range:
Saab: 9.7X
Chevrolet: Camaro, Corvette, Trailblazer
Cadillac: STS, XLR, CTS, SRX

Reference number: 72-20-223



	OE	g
149.1001	72-20-223	5

TPMS service set for tyre pressure control systems 02

- For Schrader manufacturer
- The entire valve service set of the sensor must be replaced with every tyre change or tyre service
- Suitable for steel or aluminium rims

Technical data:
Tightening torque of the nut: 6 Nm

Application range:
Toyota: 4 Runner, Auris, Avalon, Avensis, Avensis Break, Aygo, Camry, Corolla, FJ Cruiser, GT86, Highlander, IQ, Land Cruiser, Land Cruiser SW V8, Land Cruiser V8, Matrix, Prius + (hybrid), Prius Rechargeable, RAV 4 t, RAV 4, Solara, Urban Cruiser, Venza, Verso, Verso-S, Yaris
Lexus: CT, ES, GS, GX470, IS Coupe, IS Coupe Convert, IS Series, IS-F, LS, LX, RX, SC 430
Chrysler: 300, 300 C, Grand Voyager, Sebring, Voyager
Dodge: Avenger, Caliber, Challenger, Charger, Dakota, Journey, Nitro, Ram Series Pickup
Jeep: Cherokee Grand, Commander, Compass, Grand Cherokee, Patriot, Wrangler

Reference number: 72-20-219, TPK66138



	OE	g
149.1002	72-20-219, TPK66138	5

TPMS service set for tyre pressure control systems 03

- For manufacturer VDO
- The entire valve service set of the sensor must be replaced with every tyre change or tyre service
- Suitable for steel or aluminium rims

Technical data:
Tightening torque of the nut 8 Nm

Application range:
Volkswagen: New Beetle, Passat, Passat Syncro

Reference number: 72-20-211, TPK65660



	OE	g
149.1003	72-20-211, TPK65660	5

TPMS service set for tyre pressure control systems 04

- For Schrader manufacturer
- The entire valve service set of the sensor must be replaced with every tyre change or tyre service
- Suitable for steel or aluminium rims

Technical data:
Tightening torque of the nut 8 Nm

Application range:
Opel: Ampera, Astra GTC, Astra H, Astra J, Astra Sports Tourer, Astra Twintop, Cascada, Insigna, Insigna OPC, Insigna Tourer, Signum, Vectra, Vectra Estate, Zafira B, Zafira C, Zafira Tourer
Volvo: S60, V70, XC70, XC90
Saab: 10, 9-3, 9-5
Chrysler: 300C, Sebring, Voyager
Chevrolet: Volt
Dodge: Caliber, Dakota, Nitro
Jeep: Commander, Grand Cherokee, Wrangler
Lotus: Elise, Elise S, Evora, Evora S, Exige, Exige S
Nissan: Primera

Reference number: 72-20-208, TPK65657



	OE	g	
149.1004	72-20-208, TPK65657	5	

TPMS service set for tyre pressure control systems 05

- The entire valve service set of the sensor must be replaced with every tyre change or tyre service
- Suitable for steel or aluminium rims

Technical data:
Tightening torque of the nut 4 Nm

Application range:
Hyundai: i40 (VF)



	OE	g	
149.1005	-	3	

TPMS service set for tyre pressure control systems 06

- For manufacturer VDO
- The entire valve service set of the sensor must be replaced with every tyre change or tyre service
- Suitable for steel or aluminium rims

Technical data:
Tightening torque of the nut 8 Nm

Application range:
Volvo: S60, S80, V60, V70, XC60, XC70
Ford: Galaxy, Mondeo IV, S-Max

Reference number: 72-20-216, TPK66070, 7020K



	OE	g	
149.1006	7020K, 72-20-216, TPK66070	10	

TPMS service set for tyre pressure control systems 07

- For Schrader manufacturer
- The sensor and the valve service set must be checked during every tyre change or tyre service
- Suitable for steel or aluminium rims

Technical data:
Tightening torque of the screw 1.4 Nm

Application range:
Opel: Adam, Antara, Mokka
Saab: 9.4X
Citroën: Berlingo, Berlingo Multispace, C4, C4 Picasso, DS4, DS5, Jumpy
Peugeot: 3008, 3008 Hybrid 4, 307 Facelift, 308, 308 CC, 308 Gti, 308 SW, 5008, Expert, RCZ, RCZ THP 200
Fiat: 500, 500 C, 500 L, Fremont
Lancia: Thema, Voyager
Ford: E series van, E450 Super Duty, Escape, Explorer, F series pickup, Fiesta, Focus, Fusion, Mondeo, Mustang, Navigator, Super Duty Van, Taurus, Transit Connect
Cadillac: CTS
Chevrolet: Malibu, Trax
Chrysler: 300, 300 C , Grand Voyager, Sebring, Town & Country Van , Voyager
Dodge: Avenger, Caliber, Caravan Grand, Challenger, Charger, Dakota, Durango, Grand Caravan, Journey, Nitro, Ram Series pickup
Jeep: Cherokee Grand, Commander, Compass, Grand Cherokee, Liberty, Patriot, Wrangler
Lincoln: MKZ
Mercury: Mariner, Milan
Mazda: Tribute
Hyundai: Veloster

Reference number: 72-20-401, 20018, VS-950



	OE	g	
149.1007	20018, 72-20-401, VS-950	84	

TPMS service set for tyre pressure control systems 08

- For manufacturer VDO
- The entire valve service set of the sensor must be replaced with every tyre change or tyre service
- Suitable for steel or aluminium rims

Technical data:
Tightening torque of the nut 8 Nm

Application range:
Mazda: 3, 5, 6, CX7, MX5

Reference number: 72-20-218, TPK66072, 7000K



	OE	g	
149.1008	7000K, 72-20-218, TPK66072	9	



TPMS service set for tyre pressure control systems 09

- For manufacturer VDO
- The entire valve service set of the sensor must be replaced with every tyre change or tyre service
- Suitable for steel or aluminium rims

Technical data:
Tightening torque of the nut 8 Nm

Application range:
Kia: Carens, Cee'd, Cee'd SW, Opima, Pro Cee'd, Sorento, Soul 1.6 CVVT, Venga
Hyundai: i20, i30, Santa Fe

Reference number: 72-20-217, TPK66071



	OE	g	
149.1009	72-20-217, TPK66071	8	

TPMS service set for tyre pressure control systems 10

- For manufacturer VDO
- The entire valve service set of the sensor must be replaced with every tyre change or tyre service
- Suitable for steel or aluminium rims

Technical data:
Tightening torque of the nut 8 Nm

Application range:
Citroën: C4, C5 II, C5 III, C6, C8
Peugeot: 207, 307, 407, 508, 607 II, 807, 1007
Mazda: 3, 5, 6, CX7, MX5
Volvo: S60, S80, V60, V70, XC60, XC70
Ford: Galaxy, Mondeo IV, S-Max
Land Rover: Discovery, Evoque, Freelander, Range Rover
Jaguar: X-Type, XF, XJ (X350) sedan/saloon, XK New
Fiat: Ulysse Nuovo
Lancia: Phedra

Reference number: 72-20-210, TPK65659



	OE	g	
149.1010	72-20-210, TPK65659	8	

TPMS service set for tyre pressure control systems 11

- For Schrader manufacturer
- The entire valve service set of the sensor must be replaced with every tyre change or tyre service
- Suitable for steel or aluminium rims

Technical data:
Tightening torque of the nut 4.25 Nm

Application range:
Renault: Espace IV, Koleos, Laguna II, Laguna III, Latitude, Megane I, Megane II, Megane III, Modus, Scenic I, Scenic II, Scenic III, Vel Satis

Reference number: 72-20-205, TPK65654



	OE	g	
149.1011	72-20-205, TPK65654	5	

TPMS service set for tyre pressure control systems 12

- For Schrader manufacturer
- The entire valve service set of the sensor must be replaced with every tyre change or tyre service
- Suitable for steel or aluminium rims

Technical data:
Tightening torque of the nut 4.25 Nm

Application range:
Citroën: C5 I, C8
Peugeot: 607, 807
Fiat: Ulysse
Lancia: Phedra

Reference number: 72-20-207, TPK65656



	OE	g
149.1012	72-20-207, TPK65656	5

TPMS service set for tyre pressure control systems 13

- For Schrader manufacturer
- The entire valve service set of the sensor must be replaced with every tyre change or tyre service
- Suitable for steel or aluminium rims

Technical data:
Tightening torque of the nut 6 Nm

Application range:
Mercedes: AMG (W197 and others), C-Class, CLK (W207), CLK (W209), CLS (W218), E-Class (W212), G-Class, ML-Class, S-Class (W221), SL (W231), SLC (W212), SLK, **Smart**, **Smart** FourTwo, Sprinter

Reference number: TPK65964



	OE	g
149.1013	TPK65964	6

TPMS service set for tyre pressure control systems 14

- For Schrader manufacturer
- The entire valve service set of the sensor must be replaced with every tyre change or tyre service
- Suitable for steel or aluminium rims

Technical data:
Tightening torque of the nut 7.5 Nm

Application range:
Renault: Clio III, Espace IV, Koleos, Laguna II, Laguna III, Latitude, Megane I, Megane II, Megane III, Modus, Scenic I, Scenic II, Scenic III, Vel Satis

Reference number: 72-20-206, TPK65655



	OE	g
149.1014	72-20-206, TPK65655	6

TPMS service set for tyre pressure control systems 15

- For Schrader manufacturer
- The entire valve service set of the sensor must be replaced with every tyre change or tyre service
- Suitable for steel or aluminium rims

Technical data:
Tightening torque of the nut 6 Nm

Application range:
Mercedes: AMG, C-class, CLK (W207), CLK (W209), CLS (W218), E-class(W212), G-class, ML-class, S-class(W221), SL (W231), SLC (W212), SLK, Sprinter
Smart: ForTwo

Reference number: TPK65962



	OE	g
149.1015	TPK65962	5

TPMS service set for tyre pressure control systems 16

- For Schrader manufacturer
- The entire valve service set of the sensor must be replaced with every tyre change or tyre service
- Suitable for steel or aluminium rims

Technical data:
Tightening torque of the nut 8 Nm

Application range:
Infiniti: G37 Coupe, G37 Sedan, J50 EX37, R35 GT-R, S51 FX37
Nissan: GTR
Renault: Koleos

Reference number: 72-20-212, TPK65961



	OE	g
149.1016	72-20-212, TPK65961	5

TPMS service set for tyre pressure control systems 17

- For manufacturer VDO
- The entire valve service set of the sensor must be replaced with every tyre change or tyre service
- Suitable for steel or aluminium rims

Technical data:
Tightening torque of the nut 8.5 Nm

Application range:
Renault: Megane II, Scenic II
Chrysler: **Jeep** Grand Cherokee

Reference number: 72-20-209, TPK65658



	OE	g
149.1017	72-20-209, TPK65658	6

TPMS service set for tyre pressure control systems 18

- For manufacturer VDO
- The entire valve service set of the sensor must be replaced with every tyre change or tyre service
- Suitable for steel or aluminium rims

Technical data:
Tightening torque of the nut 4.25 Nm

Application range:
Renault: Laguna III, Latitude, Megane Berline, Megane Coupe, Megane Estate, Megane III, Megane RS, Scenic III

Reference number: 72-20-214, TPK65963



	OE	g
149.1018	72-20-214, TPK65963	9

TPMS service set for tyre pressure control systems 19

- For manufacturer VDO
- The entire valve service set of the sensor must be replaced with every tyre change or tyre service
- Suitable for steel or aluminium rims

Technical data:
Tightening torque of the nut 9 Nm

Application range:
Hyundai: i20, i30
Kia: Cee'd SW, Pro Cee'd, Soul 1.6 CVVT

Reference number: TPK65768



	OE	g
149.1019	TPK65768	8

TPMS service set for tyre pressure control systems 20

- The entire valve service set of the sensor must be replaced with every tyre change or tyre service
- Suitable for steel or aluminium rims

Technical data:
Tightening torque of the nut 7 Nm

Application range:
Hyundai



	OE	g
149.1020	-	6

TPMS service set for tyre pressure control systems 21

- for manufacturer VDO TG1B sensor
- The entire valve service set of the sensor must be replaced with every tyre change or tyre service
- Suitable for steel or aluminium rims

Technical data:
Tightening torque of the nut 8 Nm

Application range:
Chrysler: 300 C, Grand Voyager, Sebring, Voyager
Dodge: Avenger, Caliber, Dakota, Journey, Nitro, Ram Series Pickup
Jaguar: F-Type (TG1B), X-Type (TG1B), XF (TG1B), XFR (TG1B), XJ X350 (TG1B), XK New (TG1B), XKR (TG1B)
Jeep: Commander, Compass, Grand Cherokee, Patriot, Wrangler
Land Rover: Discovery (TG1B), Evoque (TG1B), Free Lander (TG1B), Free Lander 2 (TG1B), Range Rover (TG1B), Range Rover Vogue (TG1B), Range Sport V8 SC (TG1B), Range V8 S.C. (TG1B)

Reference number: 72-20-422



	OE	g	
149.1021	72-20-422	12	

TPMS service set for tyre pressure control systems 22

- for manufacturer Schrader EZ sensor
- The entire valve service set of the sensor must be replaced with every tyre change or tyre service
- Suitable for steel or aluminium rims

Technical data:
Tightening torque of the nut 8 Nm
Tightening torque of the screw 1.4 Nm

Application range:
Mercedes: AMG, C-class, CL-class, CLK, CLS, E-class, G-class, GL-class, GLK-class, M-class, ML-class, R-class, S-class, SL, SL-class, SLK, SLK-class, SLS, Sprinter, Viano, Vito NVC 2
Smart: ForTwo, ForTwo Convertible, ForTwo Coupe
Opel: Ampera, Antara, Astra, Cascada, Insigna, Mokka, Zafira C, Zafira Tourer
Peugeot: 3008, 307 Facelift, 308, 5008, Espace IV, Expert, Koleos, Laguna II, Megane, RCZ, Scenic, Vel Satis
Volkswagen: CC, Passat, Tiguan
Volvo: C30, C70, S40, S60, S80, V50, V60, V70, XC60, XC70, XC90
Saab: 9.3, 9.4X, 9.5
Citroën: Berlingo, C4, DS4, DS5, Jumpy
Ford: Galaxy, Mondeo IV, S-Max
Cadillac: CTS, STS, XLR
Chevrolet: Camaro, Corvette, Malibu, Trax, Volt
Chrysler: 300C, Grand Voyager, Sebring, Voyager
Dodge: Avenger, Caliber, Dakota, Nitro, Ram Series Pickup
Infiniti: EX37, FX30, FX37, FX50, G37, G37 Berline, G37 Convertible, G37 Coupe, G37 Sedan, J50 EX37, M, S51 FX37
Jeep: Commander, Compass, Grand Cherokee, Patriot, Wrangler
Lotus: Elise, Elise S, Evora, Evora S, Exige, Exige S
Hyundai: i20, i30, i30SW, ix20
Kia: Cee'd SW, Optima, Pro Cee'd, Sorento, Soul 1.6 CVVT, Venge
Nissan: GT-R, GT-R Track Pack, Primera

Reference number: 72-20-116



	OE	g	
149.1022	72-20-116	37	

TPMS service set for tyre pressure control systems 23

- For manufacturer VDO
- The entire valve service set of the sensor must be replaced with every tyre change or tyre service
- Suitable for steel or aluminium rims

Technical data:
Tightening torque of the nut 6 Nm

Application range:
Mercedes: CLS (W219), E-class (W211), M-class (W164), R-class (W251), S-class (W221), SL (W230)

Reference number: 72-20-102, TPK65661



	OE	g	
149.1023	172-20-102, TPK6566	17	

TPMS service set for tyre pressure control systems 24

- For Schrader manufacturer
- The entire valve service set of the sensor must be replaced with every tyre change or tyre service
- Suitable for steel or aluminium rims

Technical data:
Tightening torque of the screw 1.4 Nm

Application range:
Opel: Adam, Antara, Mokka
Ford: Explorer, Fiesta, Focus, Mondeo, Navigator
Citroën: Berlingo, C4, DS4, DS5, Jumpy
Peugeot: 307 Facelift, 308, 3008, 5008, Expert, RCZ
Fiat: 500, Fremont
Lancia: Thema, Voyager
Saab: 9.4X
Cadillac: CTS
Chevrolet: Malibu, Trax
Chrysler: 300, 300 C, Grand Voyager, Sebring, Town & Country Van , Voyager
Dodge: Avenger, Caliber, Caravan Grand, Challenger, Charger, Dakota, Durango, Grand Caravan, Journey, Nitro, Ram Series pickup
Jeep: Cherokee Grand, Commander, Compass, Liberty, Patriot, Wrangler
Hyundai: Veloster

Reference number: 72-20-101



	OE	g	
149.1024	72-20-101	21	

TPMS service set for tyre pressure control systems 25

- For Schrader manufacturer
- The entire valve service set of the sensor must be replaced with every tyre change or tyre service
- Suitable for steel or aluminium rims

Technical data:
Tightening torque of the nut 6 Nm
Tightening torque of the screw 1.4 Nm

Application range:
Chrysler: 300C, Sebring, Voyager
Dodge: Caliber, Dakota, Nitro
Jeep: Commander, Grand Cherokee, Wrangler

Reference number: TPK66086



	OE	g	
149.1025	TPK66086	12	

TPMS service set for tyre pressure control systems 26

- For manufacturer VDO
- The entire valve service set of the sensor must be replaced with every tyre change or tyre service
- Suitable for steel or aluminium rims

Technical data:
Tightening torque of the nut 6 Nm

Application range:
Mercedes: Sprinter NVC3 (906), Vito NVC2 (639), Viano
Dodge

Reference number: 72-20-104, TPK65958, 1098K



	OE	g	
149.1026	1098K, 72-20-104, TPK65958	22	

TPMS service set for tyre pressure control systems 27

- for manufacturers TRW, HUF/BERU
- The entire valve service set of the sensor must be replaced with every tyre change or tyre service
- Suitable for steel or aluminium rims

Technical data:
Tightening torque of the nut 4 Nm
Tightening torque of the screw 4 Nm

Application range:
Audi: A4, A6, A8, Q7, R8, RS4, RS6, S4, S6, S8
Volkswagen: CC, Passat (B7), Passat CC, Phaeton, Tiguan (5N), Touareg
Porsche: 911, 997, Boxster, Carrera GT, Cayenne, Cayman, Panamera
Mercedes: AMG E-class (W210 AMG), CLS (C219), E-class, S-class, SL Roadster, SLR (R199), SL-Roadster (R230)
BMW: 1-series, 3-series, 5-series, 6-series, 7-series, Alpina, X1 (E84), X3 (E83), X5 (E53), X5 (E70), X6, Z4 Coupe 30i, Z4 Roadster 30i
Mini: Clubman, Convertible, Cooper, Cooper S, Countryman, Coupe, Paceman, Roadster
Rolls Royce: Cabrio (RR02), Convertible (RR02), Phantom (RR01), Phantom 2 Coupe
Alfa Romeo: 159, 8C (920), Brera, Giulietta, Mito, Spider
Fiat: Bravo, Croma, Doblo, Nuova Bravo, Punto Grand
Lancia: Delta, Delta 2
Ferrari: 458 Italia (F142), 458 Italia Spider, 550 Maran Evol., 575 M-Maranello, 599 GTB (F141), 599 GTO, 612 Scaglietti (F137), California (F149), Enzo (F140), F430 (F131 evo), F430 Spider, FXX
Lamborghini: Aventador, Gallardo (US), Murcielago LP640 (US)
Aston Martin: Rapide, DB9, DBS, V12 Vantage, V8 Vantage, Vanquish
Bentley: Arnage, Azure, Continental Flying Spur (611), Continental GT (614), Continental GT (614), Continental GT S., Continental GTC, Continental Sports, Flying Spur 611, Mulsanne
Maserati: Coupe (M145), Coupe (M154), Quatroporte (M139)
Maybach: 57, 62, Landaulet
Land Rover: Range Rover (L30)

Reference number: 72-20-103, TPK65731



	OE	g	
149.1027	72-20-103, TPK65731	17	

TPMS service set for tyre pressure control systems 28

- The entire valve service set of the sensor must be replaced with every tyre change or tyre service
- Suitable for steel or aluminium rims

Technical data:
Tightening torque of the nut 4 Nm
Tightening torque of the screw 4 Nm

Application range:
Audi: A4, A6, A8, Q7, R8, RS4, RS6, S4, S6, S8
Volkswagen: CC, Passat (B7), Passat CC, Phaeton, Tiguan (5N), Touareg
Porsche: 911, 997, Boxster, Carrera GT, Cayenne, Cayman, Panamera
Mercedes: AMG E-class (W210 AMG), CLS (C219), E-class, S-class, SL Roadster, SLR (R199), SL-Roadster (R230)
BMW: 1-series, 3-series, 5-series, 6-series, 7-series, Alpina, X1 (E84), X3 (E83), X5 (E53), X5 (E70), X6, Z4 Coupe 30i, Z4 Roadster 30i
Mini: Clubman, Convertible, Cooper, Cooper S, Countryman, Coupe, Paceman, Roadster
Rolls Royce: Cabrio (RR02), Convertible (RR02), Phantom (RR01), Phantom 2 Coupe
Alfa Romeo: 159, 8C (920), Brera, Giulietta, Mito, Spider
Fiat: Bravo, Croma, Doblo, Nuova Bravo, Punto Grand
Lancia: Delta, Delta 2
Ferrari: 458 Italia (F142), 458 Italia Spider, 550 Maran Evol., 575 M-Maranello, 599 GTB (F141), 599 GTO, 612 Scaglietti (F137), California (F149), Enzo (F140), F430 (F131 evo), F430 Spider, FXX
Lamborghini: Aventador, Gallardo (US), Murcielago LP640 (US)
Aston Martin: Rapide, DB9, DBS, V12 Vantage, V8 Vantage, Vanquish
Bentley: Arnage, Azure, Continental Flying Spur (611), Continental GT (614), Continental GT (614), Continental GT S., Continental GTC, Continental Sports, Flying Spur 611, Mulsanne
Maserati: Coupe (M145), Coupe (M154), Quatroporte (M139)
Maybach: 57, 62, Landaulet
Land Rover: Range Rover (L30)



	OE	g	
149.1028	-	16	

TPMS service set for tyre pressure control systems 29

- The entire valve service set of the sensor must be replaced with every tyre change or tyre service
- Suitable for steel or aluminium rims

Technical data:
Tightening torque of the nut 4 Nm
Tightening torque of the screw 4 Nm

Application range:
Audi: A4, A6, A8, Q7, R8, RS4, RS6, S4, S6, S8
Volkswagen: CC, Passat (B7), Passat CC, Phaeton, Tiguan (5N), Touareg
Porsche: 911, 997, Boxster, Carrera GT, Cayenne, Cayman, Panamera
Mercedes: AMG E-class (W210 AMG), CLS (C219), E-class, S-class, SL Roadster, SLR (R199), SL-Roadster (R230)
BMW: 1-series, 3-series, 5-series, 6-series, 7-series, Alpina, X1 (E84), X3 (E83), X5 (E53), X5 (E70), X6, Z4 Coupe 30i, Z4 Roadster 30i
Mini: Clubman, Convertible, Cooper, Cooper S, Countryman, Coupe, Paceman, Roadster
Rolls Royce: Cabrio (RR02), Convertible (RR02), Phantom (RR01), Phantom 2 Coupe
Alfa Romeo: 159, 8C (920), Brera, Giulietta, Mito, Spider
Fiat: Bravo, Croma, Doblo, Nuova Bravo, Punto Grand
Lancia: Delta, Delta 2
Ferrari: 458 Italia (F142), 458 Italia Spider, 550 Maran Evol., 575 M-Maranello, 599 GTB (F141), 599 GTO, 612 Scaglietti (F137), California (F149), Enzo (F140), F430 (F131 evo), F430 Spider, FXX
Lamborghini: Aventador, Gallardo (US), Murcielago LP640 (US)
Aston Martin: Rapide, DB9, DBS, V12 Vantage, V8 Vantage, Vanquish
Bentley: Arnage, Azure, Continental Flying Spur (611), Continental GT (614), Continental GT (614), Continental GT S., Continental GTC, Continental Sports, Flying Spur 611, Mulsanne
Maserati: Coupe (M145), Coupe (M154), Quatroporte (M139)
Maybach: 57, 62, Landaulet
Land Rover: Range Rover (L30)



	OE	g	
149.1029	-	19	

TPMS service set for tyre pressure control systems 30

- The entire valve service set of the sensor must be replaced with every tyre change or tyre service
- Suitable for steel or aluminium rims

Technical data:
Tightening torque of the nut 4 Nm
Tightening torque of the screw 4 Nm

Application range:
Audi: A4, A6, A8, Q7, R8, RS4, RS6, S4, S6, S8
Volkswagen: CC, Passat (B7), Passat CC, Phaeton, Tiguan (5N), Touareg
Porsche: 911, 997, Boxster, Carrera GT, Cayenne, Cayman, Panamera
Mercedes: AMG E-class (W210 AMG), CLS (C219), E-class, S-class, SL Roadster, SLR (R199), SL-Roadster (R230)
BMW: 1-series, 3-series, 5-series, 6-series, 7-series, Alpina, X1 (E84), X3 (E83), X5 (E53), X5 (E70), X6, Z4 Coupe 30i, Z4 Roadster 30i
Mini: Clubman, Convertible, Cooper, Cooper S, Countryman, Coupe, Paceman, Roadster
Rolls Royce: Cabrio (RR02), Convertible (RR02), Phantom (RR01), Phantom 2 Coupe
Alfa Romeo: 159, 8C (920), Brera, Giulietta, Mito, Spider
Fiat: Bravo, Croma, Doblo, Nuova Bravo, Punto Grand
Lancia: Delta, Delta 2
Ferrari: 458 Italia (F142), 458 Italia Spider, 550 Maran Evol., 575 M-Maranello, 599 GTB (F141), 599 GTO, 612 Scaglietti (F137), California (F149), Enzo (F140), F430 (F131 evo), F430 Spider, FXX
Lamborghini: Aventador, Gallardo (US), Murcielago LP640 (US)
Aston Martin: Rapide, DB9, DBS, V12 Vantage, V8 Vantage, Vanquish
Bentley: Arnage, Azure, Continental Flying Spur (611), Continental GT (614), Continental GT (614), Continental GT S., Continental GTC, Continental Sports, Flying Spur 611, Mulsanne
Maserati: Coupe (M145), Coupe (M154), Quatroporte (M139)
Maybach: 57, 62, Landaulet
Land Rover: Range Rover (L30)



	OE	g	
149.1030	-	19	





TPMS service set for tyre pressure control systems 31

- For Schrader manufacturer
- The entire valve service set of the sensor must be replaced with every tyre change or tyre service
- Suitable for steel or aluminium rims

Technical data:
Tightening torque of the nut 6 Nm

Application range:
Mercedes: A-class, AMG, B-class, C-class, CL-class, CLK, CLS, E-class, G-class, GL-class, GLK, G-car, M-class, ML-class, R-class, S-class, SL, SLAMG, SLK, SLS, Sprinter, Vario, Vito
Smart: ForTwo, ForTwo Convertible, ForTwo Coupe
Jeep: Commander, Compass, Grand Cherokee, Patriot, Wrangler
Dodge: Avenger, Caliber, Dakota, Journey, Nitro, Ram Series Pickup

Reference number: 72-20-105, TPK43148



	OE	g	
149.1031	72-20-105, TPK43148	12	

TPMS service set for tyre pressure control systems 32

- For manufacturer VDO
- The entire valve service set of the sensor must be replaced with every tyre change or tyre service
- Suitable for steel or aluminium rims

Technical data:
Tightening torque of the nut 8 Nm

Application range:
Volvo: C30, C70, S40, S60, S80, V50, V60, V70, XC60, XC70
Renault: Laguna III, Latitude, Megane, Scenic III, SX4
Ford: Galaxy, Mondeo IV, S-Max
Chrysler: 5, 300, Grand Voyager, Sebring, Voyager
Dodge: Avenger, Caliber, Dakota, Journey, Nitro, Ram Series Pickup
Jeep: Commander, Compass, Grand Cherokee, Patriot, Wrangler
Land Rover: Discovery (TG1C), Evoque (TG1C), Free Lander (TG1C), Free Lander 2 (TG1C), Range Rover (TG1C), Range Rover Vogue (TG1C), Range Sport V8 SC (TG1C), Range V8 S.C. (TG1C)
Jaguar: F-Type (TG1C), X-Type (TG1C), XF (TG1C), XFR (TG1C), XJ X350 (TG1C), XK New (TG1C), XKR (TG1C)
Hyundai: i20, i30, i30SW, ix20
Kia: Cee'd SW, Optima, Pro Cee'd, Sorento, Soul 1.6 CVVT, Venga
Mazda: 2, 3, 5, 6, CX-5, CX-7, MX-5, MX-5 Roadster C

Reference number: 72-20-403, TPK43171



	OE	g	
149.1032	72-20-403, TPK43171	7	

TPMS service set for tyre pressure control systems 33

- For manufacturer VDO
- The entire valve service set of the sensor must be replaced with every tyre change or tyre service
- Suitable for steel or aluminium rims

Technical data:
Tightening torque of the nut 8 Nm

Application range:
Jaguar: X-Type, XF, XJ (X350) Limousine, XK New
Land Rover: Discovery, Evoque, FreeLander, Range Rover
Mazda: 3, 5, 6, CX7, MX5

Reference number: TPK43211



	OE	g	
149.1033	TPK43211	9	

Valve insert

- Suitable for all valves
- Short
- Red rubber gasket
- Nickel plated



	Content	g	
149.1035	25	25	

Valve cap

- Suitable for all valves
- Silver
- Plastic



	Content	g	
149.1036	25	25	

TPMS service product range for tyre pressure control systems

- The entire valve service set of the sensor must be replaced with every tyre change or tyre service
- Consists of valve insert and cap, gasket and washer, union nut and (sometimes) marking ring
- Suitable for the most common European combinations of valve and TPMS sensor
- Assigned using the features of manufacturer, model and year
- All parts required for a repair are included
- Suitable for steel or aluminium rims
- In durable plastic storage case



			g	
149.0100	150 pcs	TPMS service product range for tyre pressure control systems	450	

consists of:

	X		g	
149.1002	8	TPMS service set for tyre pressure control systems 02	5	
149.1003	8	TPMS service set for tyre pressure control systems 03	5	
149.1004	8	TPMS service set for tyre pressure control systems 04	5	
149.1005	8	TPMS service set for tyre pressure control systems 05	3	
149.1006	8	TPMS service set for tyre pressure control systems 06	10	
149.1008	8	TPMS service set for tyre pressure control systems 08	9	
149.1009	8	TPMS service set for tyre pressure control systems 09	8	
149.1016	8	TPMS service set for tyre pressure control systems 16	5	
149.1019	8	TPMS service set for tyre pressure control systems 19	8	
149.1020	8	TPMS service set for tyre pressure control systems 20	6	



TPMS service product range for tyre pressure control systems

- The entire valve service set of the sensor must be replaced with every tyre change or tyre service
- Consists of valve insert and cap, gasket and washer, union nut and (sometimes) marking ring
- Suitable for the most common European combinations of valve and TPMS sensor
- Assigned using the features of manufacturer, model and year
- All parts required for a repair are included
- Suitable for steel or aluminium rims
- In durable plastic storage case



			g	
149.0200	142 pcs	TPMS service product range for tyre pressure control systems	900	

consists of:

	X		g	
149.1010	8	TPMS service set for tyre pressure control systems 10	8	
149.1011	8	TPMS service set for tyre pressure control systems 11	5	
149.1012	8	TPMS service set for tyre pressure control systems 12	5	
149.1013	8	TPMS service set for tyre pressure control systems 13	6	
149.1014	8	TPMS service set for tyre pressure control systems 14	6	
149.1015	8	TPMS service set for tyre pressure control systems 15	5	
149.1017	8	TPMS service set for tyre pressure control systems 17	6	
149.1018	8	TPMS service set for tyre pressure control systems 18	9	
149.1023	4	TPMS service set for tyre pressure control systems 23	17	
149.1026	4	TPMS service set for tyre pressure control systems 26	22	
149.1027	4	TPMS service set for tyre pressure control systems 27	17	
149.1028	4	TPMS service set for tyre pressure control systems 28	16	
149.1029	4	TPMS service set for tyre pressure control systems 29	19	
149.1030	4	TPMS service set for tyre pressure control systems 30	19	

THREAD REPAIR

Thread file, metric

- For the restoration of defective internal and external threads
- Suitable for right and left-handed thread
- Serviceable from both sides
- Special tool steel

Suitable for thread pitch: 0.8 - 3.0 mm



	L mm	g	
150.1340	230,0	130	

Thread file, imperial

- For the restoration of defective internal and external threads
- Suitable for right and left-handed thread
- Serviceable from both sides
- Special tool steel

Suitable for thread pitch: 24 - 10 pitch imperial



	L mm	g	
150.1345	230,0	130	

Wheel bolt thread repair set

- For re-cutting and cleaning damaged outer threads
- Ideal composition for wheel bolts
- Ideal for difficult to access areas
- Outer hexagonal head drive 24 mm
- Right hand cutting
- High performance steel
- In durable plastic storage case





			g	
150.1335	4 pcs	Wheel bolt thread repair set	250	

consists of:

		g	
150.1336	Drive tool	104	
150.1337	Threading die M12 x 1.25	21	
150.1338	Threading die M12 x 1.5	21	
150.1339	Threading die M14 x 1.5	21	

Wheel nut thread repair set

- For re-cutting and cleaning damaged inner threads
- Ideal composition for wheel nuts and wheel hub thread
- Ideal for difficult to access areas
- Outer hexagonal head drive 12 mm
- Right hand cutting
- High performance steel
- In durable plastic storage case





			g	
150.1355	3 pcs	Wheel nut thread repair set	270	

consists of:

		g	
150.1357	Thread cutter M12 x 1.25	58	
150.1358	Thread cutter M12 x 1.5	60	
150.1359	Thread cutter M14 x 1.5	65	

Thread repair set

- For the repair of internal and external threads
- Ideal for drive shafts, oxygen sensors, wheel bolts, shaft ends etc.
- Correct thread repair for damaged or sliced threads
- Suitable for a wide range of applications
- Can be used with a drive handle or socket with ratchet
- In durable plastic storage case





			kg	
150.1470	9 pcs	Thread repair set	1,37	

consists of:

		g	
150.1466	T bar, 8x80mm	30	
150.1471	Thread chaser for M14 x 1.5 for male and female threads	150	
150.1472	Thread chaser for M16 x 1.5 for male and female threads	80	
150.1473	Thread chaser for M18 x 1.5 for male and female threads	90	
150.1474	Thread chaser for M20 x 1.5 for male and female threads	120	
150.1475	Thread chaser for M22 x 1.5 for male and female threads	150	
150.1476	Thread chaser for M24 x 1.5 for male and female threads	170	
150.1477	Thread chaser for M27 x 2.0 for male and female threads	180	
150.1478	Thread chaser for M28 x 1.5 for male and female threads	200	

Thread tapping set for wheel screws and threads

- For re-cutting and cleaning damaged inner and outer threads
- Ideal composition for wheel nuts and bolts
- Slim design
- Ideal for difficult to access areas
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Tolerance as per ISO 2/6H or 6q
- Right-cut
- TiN coated surface
- High performance steel
- In durable plastic storage case





			kg	
150.1420	11 pcs	Thread tapping set for wheel screws and threads	1,20	

consists of:

		g	
150.1419	Die adaptor 3/8"	280	
150.1421	HSS TiN Thread cutter M12x1.25	34	
150.1422	HSS TiN Thread cutter M12x1.50	36	
150.1423	HSS TiN Thread cutter M14x1.50	57	
150.1424	HSS TiN Threading die M12x1.25	66	
150.1425	HSS TIN Threading die M12x1.50	68	
150.1428	3/8" socket for tap, 9 mm	34	
301.0095	Thread gauge metric, 20 blades	40	
150.1527	3/8" socket for tap, 7 mm	30	
150.1526	HSS TiN Threading die M14x1.50	68	
151.1240	Key wrench hex, long, 3mm, for 150.1420	10	

Thread chaser for outside thread Ø 25 - 140 mm

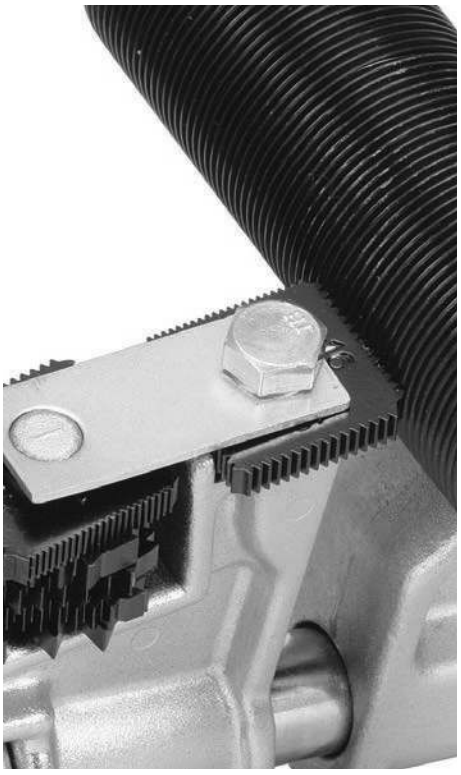
- For re-cutting and cleaning damaged outer threads Ø 25 - 140 mm
- Very large application range due to 6 supplied plates
- No damage of the thread due to the soft holding guides
- Suitable for right and left-handed thread
- Infinitely variable
- Can be used everywhere regardless of the thread length
- The chaser is well-guided due to the width of the jaw and does not tilt
- Quick cutting jaw modification possible from the magazine
- Special tool steel

Metric: 1.0 - 1.25 - 1.5 - 1.75 - 2.0 - 2.5 - 3.0 - 3.5 mm
Imperial: 24 - 20 - 18 - 16 - 14 - 12 - 11,5 - 11 - 10 - 9 - 8 - 7,5 - 7 - 6 - 5 - 4 pitch/imperial





	Ø mm	Replacement jaws mm	Replacement jaws inch	kg	
150.1430	25,0 - 140,0	150.1431	150.1432	1,40	



PROFILE DEPTH MEASURER

Digital depth gauge 0 - 25 mm

- In accordance with DIN 862
- Locking screw
- For depth measurements
- mm/imperial switching
- Reset (to zero) in every position possible
- Large LCD display figure height 8.0 mm
- With automatic switching off
- Entirely hardened, finely engineered
- Stainless steel
- In durable plastic case



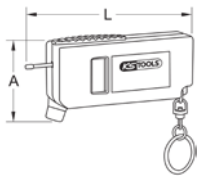


	Measuring range mm	A mm	L mm	Display accuracy mm	g	
300.0550	0 - 25	40,0	125,0	+/- 0,03	100	

Digital tyre pressure and thread gauge 0,35 - 6,80 bar

- Precise and repeatable LCD measurement
- For depth measurements
- For tyre pressure measurements
- Measurement with acoustic signal
- Pressure measurement range can be switched between bar, kpa and PSI
- Low energy consumption due to automatic shutdown
- Includes batteries, key chain and belt clip







	Measuring range bar	Profil depth blade in mm	g	
100.4060	0,35-6,80	0,0-15,0	90	

WHEEL FILLING GAUGE

Digital tyre pressure and thread gauge 0,35 - 6,80 bar

- Precise and repeatable LCD measurement
- For depth measurements
- For tyre pressure measurements
- Measurement with acoustic signal
- Pressure measurement range can be switched between bar, kpa and PSI
- Low energy consumption due to automatic shutdown
- Includes batteries, key chain and belt clip





	Measuring range bar	Profil depth blade in mm	g	
100.4060	0,35-6,80	0,0-15,0	90	

Digital tyre pressure gauge

- Precise and repeatable LCD measurement
- For tyre pressure measurements
- Pressure measurement range can be switched between bar, kpa and PSI
- Low energy consumption due to automatic shutdown
- Self-calibrating
- With valve lighting
- Includes batteries





	Measuring range bar	Length mm	B mm	g	
100.4055	0,2-10	135,0	55,0	60	

Digital tyre pressure tester

- Precise and repeatable LCD measurement
- For tyre pressure measurements
- Measurement with acoustic signal
- Pressure measurement range can be switched between bar, kpa and PSI
- Low energy consumption due to automatic shutdown
- Includes batteries





	Measuring range bar	Length mm	g	
100.4065	0,15-7,00	128,0	45	

Tyre fill nipple with rocker arm

- For hose receptacle Ø 6 mm
- Nipples for tyre fill gauge with rocker arm
- Mounting via hose clamp



	Ø mm	g	
100.5060	6,0	50	

Calibrated tyre filling gauge

- For one handed operation with ergonomic design
- with rubber-coated manometer
- Manometer with bar scale
- With filling lever and pressure release button
- Hose with integrated locking male nipple
- With hanging hole
- Includes 1/4" coupling connector
- Robust rubber coated housing



Technical data:

Working range:	0 - 10 bar
Hose length:	400 mm
Operating pressure:	max. 6,3 bar (90 psi)
Connection thread:	1/4"PT

		g	
515.1960	Calibrated tyre filling gauge	450	

Tyre filling gauge

- For one handed operation with ergonomic design
- with rubber-coated manometer
- manometer with bar and psi scale
- With filling lever and pressure release button
- long hose with integrated moment plug nipple
- With hanging hole
- Includes 1/4" coupling connector
- Robust rubber coated housing



Technical data:

Working range:	0 - 11 bar 9 - 160 psi
Hose length:	490 mm
Operating pressure:	max 6,3 bar (90 psi)
Connection thread:	1/4"PT

		g	
515.1950	Tyre filling gauge	600	

Tyre filling gauge

- For one handed operation with ergonomic design
- with rubber-coated manometer
- manometer with bar and psi scale
- With filling lever and pressure release button
- extra long hose with integrated instant nipple plug
- With hanging hole
- Includes 1/4" coupling connector
- Robust rubber coated housing





Technical data:

Working range:	0 - 12 bar 0 - 174 psi
Hose length:	1000 mm
Operating pressure:	6,3 bar (90 psi)
Connection thread:	1/4"PT

		g	
515.1920	Tyre filling gauge	420	

Tyre filling gauge

- For one hand operation
- with rubber-coated manometer
- Manometer with bar and psi scale
- With filling lever and pressure release button
- Hose with integrated locking male nipple
- Robust rubber coated housing



Technical data:

Working range:	0 - 15 bar
	0 - 220 psi
Hose length:	350 mm
Operating pressure:	11 bar (160 psi)
Connection thread:	1/4"PT

		g	
515.1905	Tyre filling gauge	120	

Digital tyre filling gauge

- For one hand operation
- With rubber coated display
- Manometer with digital display
- With filling lever and pressure release button
- Hose with integrated locking male nipple
- With automatic switch-on and off
- Large LCD display
- Includes 1/4" coupling connector
- Switchable: Bar, PSI, KPA, Kgf/cm³





Technical data:

Working range:	0 - 14 bar
	0 - 200 psi
Battery:	2x 1,5V (AAA)
Hose length:	500 mm
Operating pressure:	max. 6,3 bar (90 psi)
Working temperature:	- 15°C to + 60°C
Connection thread:	1/4"PT

		g	
515.1970	Digital tyre filling gauge	490	

MOUNTING LEVER

Tyre lever with aluminium grip

- Lightweight and thin tyre lever for comfortable working
- With aluminium handle
- Matt finish





	Length mm	g	
911.8170	425,0	620	

Tyre and assembly lever

- Sturdy design
- Double-T profile provides for stability
- For mounting and removing tyres
- Extra rounded lever end for application that is gentle on materials
- Matt finish
- Chrome vanadium



	Length mm	kg	
911.8143	200,0	0,12	
911.8144	240,0	0,17	
911.8145	280,0	0,20	
911.8146	370,0	0,40	
911.8180	650,0	1,10	

Tyre iron for installing and removing tyres with replaceable plastic coating

- Damage-free assembly and disassembly
- With wear resistant and replaceable plastic protection
- Sturdy design
- Double-T profile provides for stability
- For mounting and removing tyres
- Extra rounded lever end for application that is gentle on materials
- Matt finish
- Chrome vanadium

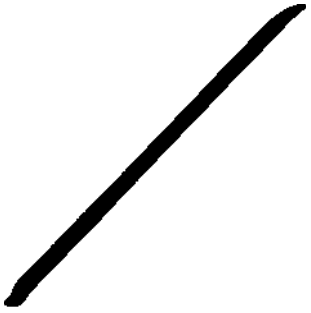




	Length mm	Replaceable plastic coating	g	
911.8199	500,0	911.8157	770	

Tyre and assembly lever

- Sturdy design
- For mounting and removing tyres
- Extra rounded lever end for application that is gentle on materials
- Phosphate finish
- Chrome vanadium



	Length mm	g	
911.8147	535,0	600	

Runflat tyres and mounting levers

- Sturdy design
- for taking off and replacing runflat and low-profile tyres
- wear-resistant and replaceable plastic protection prevents scratches and slipping off
- prevents casing damage
- improved design for damage-free and secure assembly
- Extra rounded lever end for application that is gentle on materials
- Matt finish
- Chrome vanadium





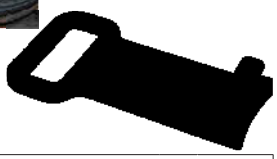
	Length mm	Replaceable plastic coating	kg	
911.8135	530,0	911.8136	1,02	

BEAD HOLD-DOWN DEVICE

Bead hold-down device for tyre mounting machines

- Assembly and disassembly aid that is gentle on the rims
- Universally applicable bead hold-down device
- Sturdy way to press the upper tyre bead down into the rim wheel by hand
- Can be used in connection with all tyre mounting machines
- Ideal for the assembly of run flat tyres
- Much easier work due to lever action
- With sturdy handle
- Sturdy plastic



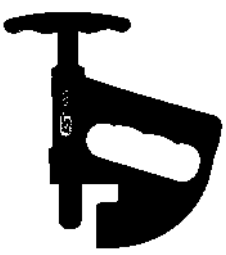


	Length mm	g	
911.8198	300,0	560	

Tyre bead hold-down device for tyre assembly

- Assembly and disassembly aid that is gentle on the rims
- Universally applicable bead hold-down device
- Sturdy way to press the upper tyre bead down into the rim wheel
- Can be used in connection with all tyre mounting machines
- Ideal for the assembly of run flat tyres and low profile tyres
- Much easier work
- With sturdy handle
- Sturdy plastic





	Length mm	g	
911.8197	170,0	170	

VALVE BORING TOOLS

Valve thread repair tool

- For the repair of damaged threads on external and internal valves
- Multi functional including ventalation and removal



		g	
100.5050	Valve thread repair tool	20	

Thread bottom tap for external thread M4 - M45

- For re-cutting and cleaning damaged outer threads
- No damage of the thread
- Suitable for right and left-handed thread
- steplessly adjustable via knurled screw
- The chaser is well-guided due to the width of the jaw and does not tilt
- Can be used everywhere regardless of the thread length
- Simple handling
- cutting of HSS steel with hardness 55-60





	Thread	Thread	Length mm	Width mm	Replacement blades	g	
150.1467	M4 - M45	5/32"- 1.3/4"	77,0	22,0	150.1468	290	

Valve screw-in special profile socket for steel valves

- For the professional and easy installation and removal of steel valves
- Square drive as per DIN 3121/ISO 1174 with backstop groove
- With guide pin as safeguard against accidental slipping
- Fits perfectly in the counter contour of standard metal valves
- Tightening with torque is possible
- Phosphate finish
- Chrome molybdenum





1/4"

	Length mm	g	
150.2028	25,0	11	

Valve screwdriver

- Double-sided usably for short and/or long valves (VG5)
- Also suitable for use as a socket cap driver
- With plastic handle



	Suitable for	Length mm	g	
150.2021	passenger cars and vans (VG5)	130,0	40	

Valve screwdriver

- Double-sided usably for short and/or long valves (VG8)
- Also suitable for use as a socket cap driver
- With plastic handle



	Suitable for	Length mm	g	
150.2022	passenger cars, commercial vehicles and construction machines (VG8)	150,0	40	

Valve screwdriver, long

- Suitable for short and/or long valves usage (VG5)
- Also suitable for use as a socket cap driver
- One component handle



	Suitable for	Length mm	g	
150.2033	passenger cars and vans (VG5)	170,0	30	

Torque valve screwdriver 0,25 Ncm, long

- Ideal for short or long rubber sealing valve usage (VG5)
- Prevents the over tightening and damage of the rubber seal
- When torques is acheived.skips and can also be held audabaly
- Also suitable for use as a socket cap driver
- One component handle



	Ncm	Length mm	g	
150.2029	0,25	120,0	50	

Torque valve screwdriver 0.45 Ncm, long

- Ideal for short or long metal sealing valve applications (VG5)
- Prevents the over tightening and damage of the rubber seal
- When torques is acheived.skips and can also be held audabaly
- Also suitable for use as a socket cap driver
- One component handle





	Nom	Length mm	g	
150.2031	0,45	122,0	50	

VALVE LIFT

Tyre valve puller

- For inserting rubber valves of all lengths in the rim hole
- Simple handling
- Two component handle
- Prevents damage, since application without levers over the edge of the rim
- With T-handle
- Mirror polished
- Chrome vanadium





	Length mm	g	
150.2139	180,0	95	

Plastic tyre valve mounting tool

- Simple handling
- For inserting rubber valves of all lengths in the rim hole
- Tilt joint prevents oblique insertion of the valve
- Snap-in notch for secure angle guidance
- Long lever arm for optimal force metering
- Soft plastic shaft prevents damage to aluminium rims
- Click mechanism of the head for quick screwing onto the valve
- Includes valve screw driver bit (VG5) on the handle end
- Plastic





	Length mm	g	
150.2027	310,0	150	

Metal tyre valve mounting tool

- Simple handling
- For inserting rubber valves of all lengths in the rim hole
- Tilt joint prevents oblique insertion of the valve
- Snap-in notch for secure angle guidance
- Long lever arm for optimal force metering
- Protective rubber covering on the shaft prevents damage to aluminium rims
- Special tool steel



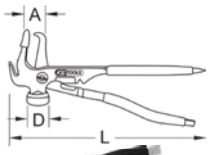


	Length mm	g	
150.2032	330,0	310	

TYRE SERVICE PLIERS

Wheel balance weight pliers

- Sturdy design
- For fastening, loosening and cutting off the weights
- For cutting off the balance weights
- Also for expanding and compressing the retaining springs
- Handle ends suitable for discharging air or for removing hub caps
- With dip-insulated handles
- Matt finish
- Chrome vanadium

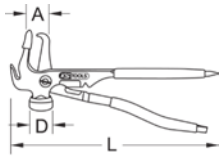




	A mm	D mm	L mm	g	
150.2025	26,0	22,0	250,0	450	

Wheel balance weight pliers, self opening

- Sturdy design
- For fastening, loosening and cutting off the weights
- Hammer head with plastic protection for striking the weights - especially painted weights
- Plastic protective cap prevents from damaging aluminum rims
- Also for expanding and compressing the retaining springs
- Handle ends suitable for discharging air or for removing hub caps
- With dip-insulated handles
- Self-opening handle with internal spring
- Matt finish
- Chrome vanadium





	A mm	D mm	L mm	g	
150.2024	32,0	28,0	250,0	380	

ADHESIVE WEIGHT REMOVER

Adhesive balancing wheel weight removing plier

- Sturdy design
- Extra narrow gripping profile
- for loosening the glued balancing weights
- Plastic protective cap prevents from damaging aluminum rims
- With 2 step adjustment for narrow and wide weights
- With dip-insulated handles
- Self-opening handle with internal spring
- Chrome vanadium

1. step 4 - 16 mm
2. step 12 - 26 mm





	Clamping range mm	Length mm	g	
150.2097	4-26	225,0	400	

Adhesive weight remover with saw blade

- Ideal for protective disassembly of adhesive wheel weights on aluminium rims
- With flexible flat scraper and cutting edge
- Lever back flat side chisel form, cutting side with teeth
- Special lever for the removal of wheel weights
- Also suitable for the removal of labels, adhesive and type plates
- Surfaces are not damaged
- Sharpened with a file
- Solvent-resistant
- Special plastic





	Length mm	Radius dimensions in mm	g	
911.8111	200,0	38,0	20	

Adhesive weight remover set with saw cutting edge

- Ideal for protective disassembly of adhesive wheel weights on aluminium rims
- With flexible flat scraper and cutting edge
- Lever back flat side chisel form, cutting side with teeth
- Special lever for the removal of wheel weights
- Also suitable for the removal of labels, adhesive and type plates
- Surfaces are not damaged
- Sharpened with a file
- Solvent-resistant
- Special plastic





			g	
911.8115	2 pcs	2 x 200 mm	800	

Glassfibre chisel

- For paint preserving removal of ornament and window strips and wheel weights on aluminium rims
- With impact cap for light impacts
- Special shape of the bit handle ensures safe work
- With flexible flat scraper and cutting edge
- Also suitable for the removal of labels, adhesive and type plates
- Surfaces are not damaged
- Sharpened with a file
- Solvent-resistant
- Special plastic





		g	
911.8131	19,0	130	
911.8132	22,0	140	
911.8133	26,0	150	
911.8134	38,0	180	

Glassfibre chisel set

- For paint preserving removal of ornament and window strips and wheel weights on aluminium rims
- With impact cap for light impacts
- Special shape of the bit handle ensures safe work
- With flexible flat scraper and cutting edge
- Also suitable for the removal of labels, adhesive and type plates
- Surfaces are not damaged
- Sharpened with a file
- Solvent-resistant
- Special plastic





			g	
911.8130	4 pcs	19 - 22 - 26 - 38 mm	570	

Universal shear, serrated

- Toothing for cutting adhesive weights
- Self opening
- Safety locking device
- Also for cutting gaskets
- Ergonomic moulded plastic handle





	Ø mm	L mm	S mm	g	
118.0075	24,0	145,0	32,0	130	

Universal snap off blade knife

- For right handed use
- With reinforcement eyelet
- Blade 9 x 80 mm
- With 0,4 mm strong snap off blades
- Blade guide out of metal
- Housing made out of plastic
- Two component handle



	L mm		g
907.2120	140,0	907.2168	50

Universal snap off blade knife

- For right handed use
- With reinforcement eyelet
- Blade 18 x 100 mm
- With 0,5 mm strong snap off blades
- Blade guide out of metal
- Housing made out of plastic
- Two component handle



	L mm		g
907.2135	170,0	907.2166	81

TYRE FITTING GREASE

Round angled brush for tyre mounting paste

- Screwed on brush
- 45° offset
- Ideal for mounting paste on the wheel rim
- With wooden handle



	Ø mm	Length mm	g
100.4020	45,0	400,0	250

Tyre mounting paste 5 kg, white

- Ideally suitable for the dismantling and assembly of tyres with steel Light alloy and synthetic materials
- Preffered use with passenger cars and motor cycles
- Simply apply with a brush or a sponge on the wheel rim
- Optimal lubricating and bonding properties whilst protecting the tyre
- Releases the air out quickly which guarantees a strong bond in a short time the construction components
- Also suitable for wide tyres
- Supplied in a bucket

Application range: Passenger cars, small vans and motor-cycles



		kg
100.4010	Tyre mounting paste 5 kg, white	5,38

Tyre mounting paste 5 kg, gold

- Ideally suitable for the dismantling and assembly of tyres with steel or aluminium rims
- For the dismantling and assembly of truck tyres with steel rims
- Simply apply with a brush or a sponge on the wheel rim
- Optimal lubricating and bonding properties whilst protecting the tyre
- Releases the air out quickly which guarantees a strong bond in a short time the construction components
- The professional black paste advoids staining as with the white paste
- Also suitable for wide tyres
- Supplied in a bucket

Application range: Trucks land and construction machines



		kg
100.4005	Tyre mounting paste 5 kg, gold	5,38

Tyre mounting paste 5 kg, black

- Ideally suitable for the dismantling and assembly of tyres with steel or aluminium rims
- Preffered use with passenger cars and motor cycles
- Simply apply with a brush or a sponge on the wheel rim
- Optimal lubricating and bonding properties whilst protecting the tyre
- Releases the air out quickly which guarantees a strong bond in a short time the construction components
- The professional black paste advoids staining as with the white paste
- Also suitable for wide tyres
- Supplied in a bucket

Application range: Passenger cars, small vans and motor-cycles



		kg
100.4015	Tyre mounting paste 5 kg, black	5,38



Crayon

- Smudge free
- Suitable to write on all surfaces
- Breakpfoof



	Colour code	Ø mm	L mm	Content	g
100.4050		14,0	110,0	12	140
100.4045		14,0	110,0	12	140

TYRE REPAIR

Tyre vulcanisation set for cars

- With 100 mm vulcanising thread
- Self-vulcanising material
- Simple handling
- Sturdy metal tool
- Ideal for the repair of stitch damage to treads of tubeless tyres
- Contains all tools needed for the repair
- Applicable in accordance with the valid guidelines for the repair of pneumatic tyres

Application range: passenger cars, motorcycles, vans, saloon cars





			g
150.1070	5 pcs	Tyre vulcanisation set for cars	900

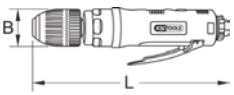
consists of:

		g
150.1071	Seal paste, 70 g	70
150.1072	Seal repair strips, 100mm, pack of 60	190
150.1073	Seal nail remover, short	110
150.1074	Seal file	110
150.1075	Seal knife	10

SlimPOWER mini-pneumatic straight drill

- Straight design
- Air exhaust through the handle rear end
- For one handed operation with ergonomic design
- Not reversible
- With quick-action drill chuck clamping width 0,6 - 6.0mm
- For hard to reach places
- Ideally suited for car bodywork and industrial working
- Stepless speed regulation
- Vibration dampened through double bearing guides
- Very compact construction
- Includes 1/4" coupling connector
- Robust housing







Technical data:

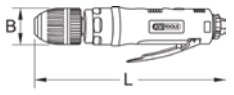
Chuck capacity:	0,6 - 6
Chuck thread reception:	3/8" x 24 UNF
Capacity:	186 Watt
No load current:	7000 r.p.m.
Vibration acceleration:	< 3,3 m/s²
Noise performance level:	97,4 dbA
Noise pressure level:	86,4 dbA
Air consumption:	240 l/min
Min. tube diameter:	3/8" - 10 mm
Operating pressure:	max. 6,3 bar (90 psi)
Connection thread:	1/4"NPT

	B mm	L mm	g	
515.5520	35,5	145,0	400	

Pneumatic straight drill

- Straight design
- Air exhaust through the handle rear end
- For one handed operation with ergonomic design
- Not reversible
- With quick release chuck capacity 0 - 10 mm
- For hard to reach places
- Ideally suited for car bodywork and industrial working
- Stepless speed regulation
- Number of revolutions adjustable through regulating screw
- Vibration dampened through double bearing guides
- Cold insulated handle
- Includes 1/4" coupling connector
- Ultra light robust housing special plastic







Technical data:

Capacity:	370 Watt
No load current:	4000 r.p.m.
Vibration acceleration:	< 2,8 m/s²
Noise performance level:	101,7 dbA
Noise pressure level:	90,7 dbA
Air consumption:	350 l/min
Operating pressure:	max. 6,3 bar (90 psi)
Min. tube diameter:	3/8" - 10 mm
Connection thread:	1/4"NPT

	B mm	L mm	kg	
515.5435	46,0	225,0	0,90	

Steel core cutter

- For exact damage preparation on radial and diagonal tyres
- Specially for the preparation and precision removal of the damaged area
- For the use with pneumatic drill
- Long life time
- Special tool steel



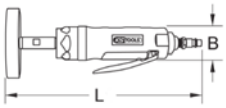


	Ø mm	Length mm	g	
331.0680	3,0	57,0	10	
331.0681	5,0	58,0	10	
331.0682	6,0	72,0	20	
331.0683	9,0	100,0	40	

Pneumatic erasing machine

- Straight design
- Air exhaust through the handle rear end
- For one handed operation with ergonomic design
- Ideal for removing of stickers glue and color remainders
- Stepless speed regulation
- Number of revolutions adjustable through regulating screw
- Vibration dampened
- Cold insulated handle
- Includes 1/4" coupling connector
- Ultra light robust housing special plastic







Technical data:

Tool holder:	5/16" - 24 mm
Capacity:	370 Watt
No load current:	4000 r.p.m.
Vibration acceleration:	< 1,6 m/s²
Noise performance level:	102,5 dbA
Noise pressure level:	91,5 dbA
Air consumption:	350 l/min
Operating pressure:	max. 6,3 bar (90 psi)
Min. tube diameter:	3/8" - 10 mm
Connection thread:	1/4"NPT

	B mm	L mm	Eraser wheels	kg	
515.5445	45,0	200,0	515.1243	0,76	

Mandrel for stripe removing pad

- with internal M8 thread
- Tension pin shaft Ø 6 mm
- for fastening film erasure discs on drilling machines



	size internal thread	Length mm	g	
515.1218	M8	40,0	25	

Stripe removing pad

- For removing of stickers, glue and color remainders on varnished areas
- Includes neutral colored rubber eraser preventing a smearing on the surface
- Not suitable for pneumatic die grinders





Technical data:

Speed:	4000 rpm
Shaft:	M8

	Width mm	Ø mm	Content	g	
515.1243	15,0	90,0	1	110	
515.1285	15,0	90,0	6	660	

Stripe removing pad with lamellae

- For removing of stickers, glue and color remainders on varnished areas
- Includes neutral colored rubber eraser preventing a smearing on the surface
- Not suitable for pneumatic die grinders



Technical data:

Speed:	4000 rpm
Shaft:	M8

	Width mm	Ø mm	Content	kg	
515.1247	24,0	100	1	0,29	
515.1366	24,0	100	6	1,74	



Stripe removing pad with lamellae

- For removing of stickers, glue and color remainders on varnished areas
- Includes neutral colored rubber eraser preventing a smearing on the surface
- Not suitable for pneumatic die grinders



Technical data:

Speed: 4000 rpm
Shaft: M8

	Width mm	Ø mm	Content	g
515.1248	20,0	90	1	160
515.1368	20,0	90	6	960

Stripe removing pad with lamellae

- For removing of stickers, glue and color remainders on varnished areas
- Includes neutral colored rubber eraser preventing a smearing on the surface
- Not suitable for pneumatic die grinders



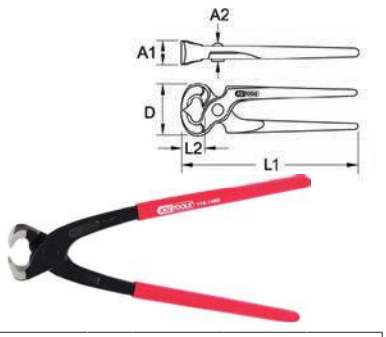
Technical data:

Speed: 4000 rpm
Shaft: M8

	Width mm	Ø mm	Content	g
515.1249	26,5	100	1	260
515.1369	26,5	100	6	1560

Rabitz pliers

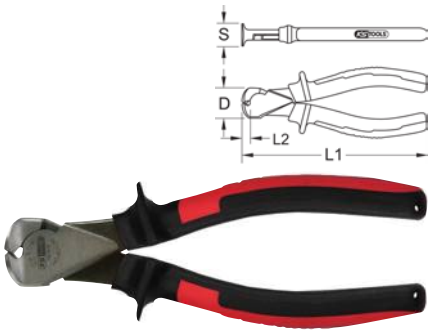
- In accordance to DIN ISO 9242
- With PVC dipped handle
- Ground heads
- For cutting and twisting tie wire
- Oil-hardened
- Black surface
- Special tool steel



	A1 mm	A2 mm	D mm	L1 mm	L2 mm	g
116.1404	18,0	19,0	26,0	190,0	17,0	350
116.1401	20,0	19,0	29,0	220,0	17,0	400
116.1400	25,0	20,0	36,0	250,0	17,0	400
116.1403	26,0	20,0	37,0	280,0	17,0	500

ERGOTORQUE® cutting pliers

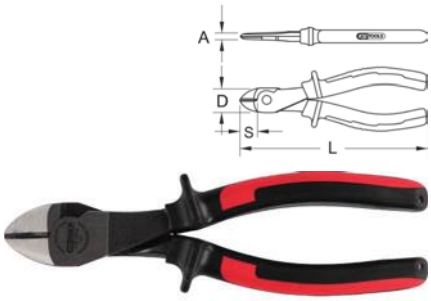
- In accordance to DIN ISO 5748
- Suitable for various types of wire
- Induction-hardened precision cutting
- Two component handle
- Matt chrome
- Special tool steel



	D mm	L1 mm	L2 mm	S mm	g
115.1015	31,0	160,0	7,0	24,0	270

ERGOTORQUE® high leverage side cutter

- In accordance to DIN ISO 5749
- 30° angled head
- Long cutting edge
- Suitable for various types of wire
- Induction-hardened precision cutting
- Two component handle
- Matt chrome
- Special tool steel

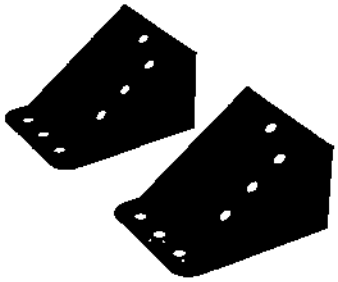


	A mm	D mm	L mm	S mm	g
115.1013	12,0	29,0	180,0	21,0	260

WEDGES

Wedge (pair)

- For securing large vehicles and for load securing
- Optimal slip resistance
- Perforated support surface
- No deformation
- Supplied in pairs
- Heavy execution
- Made of sturdy sheet



	Length mm	Height mm	Width mm	g
160.0381	230,0	220,0	125,0	700

Underlaid rubber wedge (pair)

- For securing trailers, vehicles and for load securing
- Optimal slip resistance
- Gridded support surface
- No deformation, no rusting
- More durable than plastic or sheet metal wedge
- Supplied in pairs
- Made of solid rubber



	Length mm	Height mm	Width mm	g
160.0382	105,0	75,0	75,0	660

Underlaid rubber wedge with handle

- For securing trailers, vehicles and for load securing
- Optimal slip resistance
- Incorporated handle for easy transport
- Gridded support surface
- No deformation, no rusting
- More durable than plastic or sheet metal wedge
- Delivery takes place in parts
- Heavy execution
- Made of solid rubber



	Length mm	Height mm	Width mm	kg
160.0383	200,0	150,0	100,0	2,20



LIFT TECHNOLOGY

Universal rubber mat for lifting platform

- Perfect underlay to protect sills and paintwork
- Optimal slip resistance
- Universal support for lifting platforms
- Gridded support surface
- No deformation, no rusting
- Perfect for car body workshops, tyre service lifting platforms etc.
- Very robust and thus versatile
- Delivery takes place in parts
- Heavy execution
- Made of solid rubber





A



B

		Length mm	Width mm	Height mm	kg	
160.0391	A	155,0	125,0	35,0	0,92	
160.0393	B	160,0	120,0	70,0	2,04	

Scissor steel jack with lever

- Robust steel spindle
- For all common passenger cars and small transporters
- Light and compact shape





Technical data:

max. Load:	1500 kg
Travel:	330,0 mm

	Length mm	Width mm	Height mm	kg	
160.0704	420,0	85,0	110,0	2,26	

Hydraulic vehicle mover

- Universally applicable on driver and passenger side
- Casters allow for the manoeuvring of vehicles in the tightest spaces
- Ideal for manoeuvring vehicles on solid ground
- Easily rolled in any direction
- For the space-saving storage of vehicles in repair breaks
- Ideal for showrooms, body shops, towing companies etc.
- Easy operation via foot pedal
- With self-lubricating ball bearings
- Four ball bearing solid rubber wheels
- With plastic rollers





Technical data:

Tyre size:	13" - 19"
Wheel diameter:	720 mm

	Max load 1 pcs / kg	Max load 4 pcs / kg	Max tyre width mm	kg	
160.0412	680	2720	228	16,60	

Hydraulic vehicle mover

- Universally applicable on driver and passenger side
- Casters allow for the manoeuvring of vehicles in the tightest spaces
- Ideal for manoeuvring vehicles on solid ground
- Easily rolled in any direction
- For the space-saving storage of vehicles in repair breaks
- Ideal for showrooms, body shops, towing companies etc.
- Easy operation via foot pedal
- With self-lubricating ball bearings
- Four ball bearing solid rubber wheels
- With plastic rollers





Technical data:

Tyre size:	13" - 19"
Wheel diameter:	720 mm

	Max load 1 pcs / kg	Max load 4 pcs / kg	Max tyre width mm	kg	
160.0413	680	2720	305	16,60	

Hydraulic vehicle mover

- Universally applicable on driver and passenger side
- Casters allow for the manoeuvring of vehicles in the tightest spaces
- Ideal for manoeuvring vehicles on solid ground
- Easily rolled in any direction
- For the space-saving storage of vehicles in repair breaks
- Ideal for showrooms, body shops, towing companies etc.
- Easy operation via foot pedal
- With self-lubricating ball bearings
- Four ball bearing solid rubber wheels
- With aluminum rollers





Technical data:

Tyre size:	13" - 19"
Wheel diameter:	720 mm

	Max load 1 pcs / kg	Max load 4 pcs / kg	Max tyre width mm	kg	
160.0414	680	2720	305	18,44	

Storage and Trolley for vehicle mover

- Universal usage
- Casters allow for manoeuvring
- Easily rolled in any direction
- For the space-saving housing of hydraulic vehicle movers
- Suitable for 4 vehicle movers
- With self-lubricating ball bearings
- Four ball bearing solid rubber wheels





	Length mm	Width mm	Height mm	kg	
160.0415	800,0	470,0	230,0	9,64	

Wheel roller set

- Direct rolls enable the movement in the narrowest of areas
- Ideal for manoeuvring vehicles on solid ground
- For the space saving storing of vehicles in repair workshops
- Four ball bearing solid rubber wheels





Technical data:

Max. tyre size: 13" - 16"

Wheel diameter: 90,0 mm

	Max load 1 pcs / kg	Max load 4 pcs / kg	Max tyre width mm	kg
160.0375	450,0	1800,0	360,0	10,00

Aluminium axle stand set

- Especially light and stabile
- High level of stability due to the diameter of the base plate
- Safety locking bolt with chain
- Suits itself especially well in combination with jack for the safe bracing of a load
- Aluminium





	Max load t	Stroke way mm	Min total height mm	Max total height mm	kg
160.0315	3,0	140,0	260,0	400,0	2,20

Steel chassis stand with quick lock

- Solid construction
- For heavy vehicles weights
- High level of stability due to large sturdy base plate
- Lifting bar made from cast steel
- Quick adjustments
- Height adjustment has 13 stages
- Suits itself especially well in combination with jack for the safe bracing of a load
- Delivery takes place in parts
- Made from solid steel
- 160.0377 / 160.0378 with turnstile



	Max load t	Min total height mm	Max total height mm	kg
160.0373	10	450,0	750,0	21,50
160.0374	10	650,0	1100,0	26,50
160.0377	20	420,0	660,0	26,00
160.0378	20	665,0	1170,0	29,00
160.0379	25	415,0	640,0	25,50
160.0380	25	675,0	1050,0	35,50

Steel axle stands with quick adjustment

- 4 feet on each stand
- Solid construction
- For heavy vehicles weights
- High level of stability
- Lifting bar made from cast steel
- Quick adjustments
- Supplied in pairs
- Height adjustment has 13 stages
- Suits itself especially well in combination with jack for the safe bracing of a load
- Made from solid steel



	Max load t	Stroke way mm	Min total height mm	Max total height mm	kg
160.0370	3,0	130,0	276,0	420,0	6,40
160.0371	6,0	205,0	382,0	600,0	1,40

Spindle support stand

- Variably adjustable via spindle
- 3-foot chassis stand
- Solid construction
- For heavy vehicles weights
- High level of stability
- Collapsible, so saves a lot of space
- Suits itself especially well in combination with jack for the safe bracing of a load
- Made from solid steel





	Max load t	Min total height mm	Max total height mm	kg
160.0441	12,0	456,0	710,0	17,50
160.0442	12,0	710,0	1065,0	25,00

Hydraulic bottle jack 2 - 50 t

- Security valve against overload
- Telescopic piston pole
- Additional spindle for extension (not in 30 and 50 t executions)
- Two piece lever arms
- For heavy vehicles weights
- Suitable for narrow spaces
- High level of stability
- Ideally suited in combination with jack for the neutralizing and bracing of a load
- Heavy steel construction





	Max load t	min lift height mm	max lift height mm	Hydraulic lift mm	Screw extension mm	Dimension of base plate mm	kg
160.0350	2,0	181,0	345,0	116,0	48,0	88 x 92	2,90
160.0351	3,0	194,0	372,0	118,0	60,0	92 x 100	3,80
160.0352	5,0	216,0	413,0	127,0	70,0	96 x 112	5,10
160.0354	10,0	230,0	460,0	150,0	80,0	110 x 127	7,10
160.0356	15,0	230,0	460,0	150,0	80,0	113 x 136	9,30
160.0358	20,0	242,0	452,0	150,0	60,0	144 x 155	11,90
160.0359	30,0	285,0	465,0	180,0	-	190 x 155	21,70
160.0360	50,0	300,0	480,0	180,0	-	218 x 176	30,70
160.0349	100,0	335,0	515,0	180,0	-	240 x 260	35,50

SlimPOWER hydraulic aluminium trolley jack 2 t

- Especially light aluminum jack
- Very shallow depth for use under low vehicles
- Large base for safe standing
- Raising with the pump lever and foot lever is possible
- With foot pedal to bridge the empty stroke
- Controlled releasing through the turning of the pump lever
- Raising with small pump lifts to the maximum height
- Good maneuverability through two oil and acid resistant nylon direct castors
- Intergrated screw tray
- The lower area of the pump lever is coated with foam material
- Problem free movement due to lightweight and secure handling
- Lifting plate diameter 135 mm
- Overload protection through pressure relief valve
- Ideally suited for daily workshop use
- Extremely heavy aluminium construction



	Max capacity t	Stroke way mm	min lift height mm	max lift height mm	Total length mm	Spare lifting plate	kg
161.0365	2,0	370,0	90,0	460,0	790,0	161.0365-R047P	26,80

Hydraulic steel trolley jack 3 t

- Large base for safe standing
- Controlled releasing through the turning of the pump lever
- Raising with small pump lifts to the maximum height
- Good maneuverability through two oil and acid resistant nylon direct castors
- Intergrated screw tray
- The lower area of the pump lever is coated with foam material
- Lifting plate diameter 140 mm
- Overload protection through pressure relief valve
- Ideally suited for daily workshop use
- Heavy steel construction





	Max capacity t	Stroke way mm	min lift height mm	max lift height mm	Total length mm	Spare lifting plate	kg
160.0366	3,0	410,0	125,0	535,0	720,0	160.0362	43,00

ULTIMATE*line* Hydraulic steel trolley jack

- Very shallow depth for use under low vehicles
- Large base for safe standing
- Raising with the pump lever and foot lever is possible
- With foot pedal to bridge the empty stroke
- Controlled releasing through the turning of the pump lever
- Raising with small pump lifts to the maximum height
- Good maneuverability through two oil and acid resistant nylon direct castors
- Intergrated screw tray
- The lower area of the pump lever is coated with foam material
- Lifting plate diameter 120 mm
- Overload protection through pressure relief valve
- Ideally suited for daily workshop use
- Heavy steel construction





	Max capacity t	Stroke way mm	Min total height mm	Max total height mm	Total length mm	Spare lifting plate	kg
161.0367	2,0	415,0	80,0	495,0	760,0	161.0371	32,00
161.0368	3,0	420,0	100,0	520,0	800,0	161.0371	43,00

TYRE TRANSPORT

Tyres platform trolley

- Solid construction of steel sheet
- Firmly fixed grasping handle made from steel tube
- Grasping handle is hinged and locked with safety security catches without any tools
- In minimal time
- Rubbber surrounding edges protect the trolley and surroundings from damage
- With 4 ball baering rubber wheels, 2 with steering
- Load area has a plastic covering





Technical data:

Total load capacity:	150 kg
Wheel diameter:	100 mm

	H mm	B mm	T mm	kg
800.0015	810,0	740,0	480,0	9,20

Professional wheel trolley

- Steel tubular structure with deep-welded joints
- easy and flexible transport even in small rooms
- for effortless collection and transport of tyres and rims
- made from round pipes, solid weld
- 2 large pneumatic tyres
- with 2 solid rubber guide rollers
- with improved stability and tilting safety
- Optimal transportation due to traverse brake stop





Technical data:

Wheel size fixed rollers:	Ø 260 mm (pneumatic tyres)
Wheel size steer rollers:	Ø 125 mm (solid rubber)
Max. bucket dimensions:	Ø 730 mm

	Max load kg	L mm	B mm	H mm	kg
160.0055	150,0 kg	850,0	715,0	1610,0	15,00



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GENERAL WORKSHOP REQUIREMENTS





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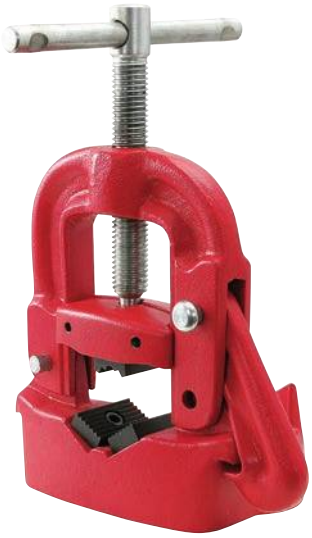
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	FROM PAGE
VICES	744
SERVICE TROLLEYS	745
SUPPORTS	746
PLATFORM TROLLEY	746
PLATFORM	746
PAINTING STANDS	747
PAINT REQUIREMENTS	747
PALLET CAGE TROLLEY	748
TRANSPORT SACK TROLLEY	748
PAINTING PAPER TROLLEY	748
SEAT AND VEHICLE COVERS	750
KEY CHAIN	750
DOCUMENT POCKETS	750
KNEE AND LIE DOWN MATS	753
CREEPERS / STOOLS	753
VEHICLE TROLLEYS	754
WHEEL CHOCKS	755
AXLE STANDS AND RAMPS	756
LIFT TECHNOLOGY	757
WORKSHOP WINCHES	759
ENGINE STAND	759
ENGINE AND TRANSMISSION ENGINES	760
USED OIL RUN OFF DEVICE	760
TRANSMISSION OIL FILLING DEVICE	762
WORKSHOP EQUIPMENT	762
GREASE GUN	764
OILER	764
SUCTION AND FILLING HAND PUMPS	766
MEASURING BEAKER, JUG AND FUNNEL	768
PRESSURE PUMP VAPORISER	768
PAPER STANDS	769
MAGNETIC HOLDERS	770
OPTICAL TEST DEVICE	770
BARREL PUMP	771
AIR BLOW OUT TOOLS	772
THERMOMETER	773
HEAT GUNS	774
AIR PURIFIER	774

VICES

Pipe vice

- Hinged
- V-shaped support
- Special tool steel
- Ideal for working with hydraulics and pneumatic lines



	Clamping range mm	Clamping range	kg	
914.0010	10,0 - 60,0	1/8" - 2"	6,88	
914.0011	10,0 - 89,0	1/8" - 3"	6,88	

Bench vice

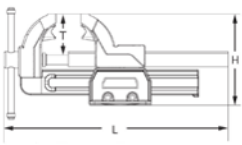
- With swivel base
- Interchangeable jaws
- Includes pipe vice attachment
- Absolutely parallel with adjustable centric drive
- Extra high possible clamping jaws shaped by large embossed casting
- Large anvil for straightening and compression work
- Induction hardened jaws and anvil
- Vise forward opening
- Ground jaws, anvil plate and slide corners
- Special steel



	Jaw length	Jaw length mm	Clamping range mm	kg	
914.0004	4"	100,0	120,0	8,70	
914.0005	5"	130,0	140,0	11,00	
914.0006	6"	150,0	170,0	14,50	
914.0008	8"	200,0	200,0	20,50	

Bench vice

- With adjusting screw and pipe clamps
- Forged front and rear jaws
- Extra high possible clamping jaws shaped by large embossed casting
- Durable prismatic guide
- With mounting screws for turntable
- Induction hardened jaws and anvil
- Double start trapezoidal thread for quick opening and closing
- Vise forward opening
- Ground jaws, anvil plate and slide corners
- Special tool steel





	Jaw length mm	Clamping range mm	T mm	H mm	L mm	Cudgel ø mm	kg	
914.0026	90,0	100,0	70,0	143,0	290,0	12,0	5,00	
914.0031	120,0	120,0	83,5	163,0	360,0	14,0	11,00	
914.0036	147,0	180,0	100,0	212,0	450,0	16,0	20,00	
914.0041	167,0	210,0	112,0	243,0	535,0	18,0	29,00	

Turntable for bench vice

- Ideal supplement for KS-vices 914.0027 - 914.0041
- Enables accurate positioning of the workpiece
- 360° freely rotatable
- Safe and quick locking via handle
- Flat and stable construction
- Inclusive fastening screws for vice



		Ø mm	kg	
914.0027	914.0026	90,0	1,40	
914.0032	914.0031	120,0	2,80	
914.0037	914.0036	147,0	3,75	
914.0042	914.0041	167,0	4,85	

Parallel vice with round plate

- With adjusting screw and pipe clamps
- Forged front and rear jaws
- Extra high possible clamping jaws shaped by large embossed casting
- Durable prismatic guide
- With mounting screws for turntable
- Induction hardened jaws and anvil
- Double start trapezoidal thread for quick opening and closing
- Vise forward opening
- Ground jaws, anvil plate and slide corners
- Special tool steel



		Jaw length mm	kg	
914.0025	2 pcs	90,0	6,40	
914.0030	2 pcs	120,0	13,80	
914.0035	2 pcs	147,0	23,75	
914.0040	2 pcs	167,0	33,85	

Aluminium bench vice protective jaws with textured surface

- Suitable for all bench vices
- The profile is right angled and level parallel
- Integrated special magnet hold the protective jaws safely on the vice
- For material protection and non slip grip on sensitive materials
- For coarse to medium fine work pieces
- Fine textured
- Aluminium



	Protective jaws mm	g	
914.0080	100,0	170	
914.0081	120,0	210	
914.0082	140,0	240	
914.0083	160,0	260	
914.0084	175,0	290	

Aluminium bench vice protective jaws with trapezoid notches

- Suitable for all bench vices
- The profile is right angled and level parallel
- Integrated special magnet hold the protective jaws safely on the vice
- For material protection and non slip grip on sensitive materials
- For different shaped materials
- For trapezoid use
- Aluminium



	Protective jaws mm	g	
914.0085	100,0	145	
914.0086	120,0	187	
914.0087	140,0	210	
914.0088	160,0	226	
914.0089	175,0	248	

Aluminium bench vice protective jaws with rubber insert

- Suitable for all bench vices
- The profile is right angled and level parallel
- Integrated special magnet hold the protective jaws safely on the vice
- For material protection and non slip grip on sensitive materials
- For thin walled wood and plastic parts
- Smooth
- Aluminium / rubber



	Protective jaws mm	g	
914.0090	100,0	163	
914.0091	120,0	207	
914.0092	140,0	224	
914.0093	140,0	204	
914.0094	175,0	276	

SERVICE TROLLEYS

ECO*line* Workshop service trolley

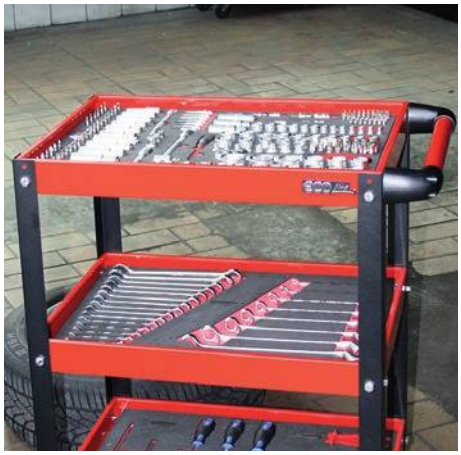
- Made from robust sheet steel construction
- Easy to move, even with heavy loads
- All shelves with high retaining border
- Internal dimension 565 x 395 mm
- With side pull handle
- Two fixed wheels Ø 100 mm
- Two castor wheels Ø 100 mm with rolling and turning brake
- High level of stability



Technical data:

Total load capacity: 150 kg
Wheel diameter: 100 mm

	H mm	B mm	T mm	kg	
890.0001	850,0	680,0	425,0	12,60	



ECO*line* Workshop-Service Trolley with Perforated Plate Cover

- Made from robust sheet steel construction
- Easy to move, even with heavy loads
- All shelves with high retaining border
- Internal dimension 565 x 395 mm
- lateral perforated steel cover for use with extra tools
- lockable at the back
- clearly organised workspace
- With side pull handle
- Two fixed wheels Ø 100 mm
- Two castor wheels Ø 100 mm with rolling and turning brake
- High level of stability





Technical data:

Total load capacity: 150 kg
Wheel diameter: 100 mm

	H mm	B mm	T mm	kg	
890.0006	850,0	682,0	426,0	20,00	

Workshop service trolley with lining

- Extremely substaintial plastic construction
- Equipment lining
- Without screws easily costructed
- Distance between the ground 30 cm
- With two handles
- 2 castor wheels 100 mm
- 2 castor wheels with brake 100 mm
- High level of stability
- Light profile weight
- Columns made out of anodised aluminum



Technical data:

Total load capacity: 200 kg
Wheel diameter: 100 mm

	H mm	B mm	T mm	kg	
800.0021	1010,0	860,0	480,0	12,10	

Workshop service trolley with 2 drawers

- Extremely substaintial plastic construction
- Without screws easily costructed
- Two ball bearing drawer runner guides
- With two handles
- 2 castor wheels 100 mm
- 2 castor wheels with brake 100 mm
- High level of stability
- Light profile weight
- Columns made out of anodised aluminum



Technical data:

Total load capacity: 200 kg
Wheel diameter: 100 mm

	H mm	B mm	T mm	kg	
800.0030	1010,0	860,0	480,0	14,20	

Workshop service trolley with 2 drawers and lining

- Extremely substaintial plastic construction
- Without screws easily costructed
- Two ball bearing drawer runner guides
- With two handles
- 2 castor wheels 100 mm
- 2 castor wheels with brake 100 mm
- High level of stability
- Light profile weight
- Columns made out of anodised aluminum



Technical data:

Total load capacity: 200 kg
Wheel diameter: 100 mm

	H mm	B mm	T mm	kg	
800.0031	1010,0	860,0	480,0	15,00	

PLATFORM TROLLEY

Tyres platform trolley

- Solid construction of steel sheet
- Firmly fixed grasping handle made from steel tube
- Grasping handle is hinged and locked with safety security catches without any tools
- In minimal time
- Rubbber surrounding edges protect the trolley and surroundings from damage
- With 4 ball baering rubber wheels, 2 with steering
- Load area has a plastic covering





Technical data:

Wheel diameter: 100 mm

Total load capacity: 150 kg

	T mm	B mm	H mm	kg
800.0015	480,0	740,0	810,0	9,20

Mobile hydraulic deposit table, 450 kg

- solid frames and scissors made of welded sectional steel
- ideal for parking and transporting heavy vehicle parts
- ergonomic and back-friendly work by lifting the platform with a hydraulic foot pump
- stepless drain valve with sensitive manual lowering
- two swivel castors with brakes for safe standing on site
- two fixed rollers



Technical data:

Platform: L 850 x W 500 mm

	Max load kg	min lift height mm	max lift height mm	Length mm	Total depth mm	kg
460.5525	450,0	280,0	860,0	880,0	945	76,00



PLATFORM

Aluminium work platform

- Skid proof profile on the platform stage
- Chequer plate profile on the steps
- No tipping over through obliquely placed standing feet
- Double-sided access
- Large platform for safe standing
- Safety clips for added security
- Beams and step made from aluminium
- Easy to store as the unit is fully collapsible
- The gripped plastic feet protect the surface and add stability
- Secure stand makes working easier
- Can be used to assemble screens, engine bay work, work on the roof, commercial vehicle pit work etc.
- Universal suitable in very high vehicles e.g. motor homes, small vehicles, truck and buses, terrain vehicles
- Heavy aluminium construction



Technical data:

Platform dimensions: 1000 x 300 mm

Total load capacity: 150 kg

	L mm	B mm	H mm	kg
800.0960	1345,0	405,0	480,0	7,30

Safety assembly step

- No tipping over through obliquely placed standing feet
- Anti slip, hot dip galvanised, with the frame riveted lattice rustproof
- Step to DIN 50976
- Massive and distortion stiff steel tube construction
- Base frame plastic coated
- The gripped plastic feet protect the surface and add stability
- Applicable e.g. panel assembly, engine compartment works, roof works truck pit working
- Universal suitable in very high vehicles e.g. motor homes, small vehicles, truck and buses, terrain vehicles





Technical data:

Height 2nd step: 450,0 mm

Surface area: 690 x 620 mm

Steel grating: 590 x 290 mm

Total load capacity: 300 kg

		kg
450.0960	Safety assembly step	14,00

SUPPORTS

Windscreen table with rubber protective pads

- Ideally suited to holding the windscreen when removing, or removing adhesive material
- four movable rubber suction cups hold the disc securely in position and protect it from scratches
- Fully adjustably
- For nearly all windscreen sizes
- Foldable to save space during storage
- Robust construction
- Capacity up to 50 kg with rubber suction cup
- Capacity up to 300 kg without rubber suction cup
- Made from zinc coated steel tube





Technical data:

max. Load: 50 kg

	Length mm	Width mm	Height mm	kg
140.2225	1030,0	50,0	1040,0	8,40

Universal storage table

- Ideally suited to holding the windscreen when removing, or removing adhesive material
- Holding tube with non-slip, coated padding offer optimal grip and prevent scratches
- Fully adjustably
- For nearly all windscreen sizes
- Foldable to save space during storage
- Robust construction
- Capacity up to 80 kg
- Made from zinc coated steel tube





Technical data:

max. Load: 80 kg

	Length mm	Width mm	Height mm	Pad	kg
140.2226	1030,0	900,0	940,0	140.2226-1	6,60

Universal Telescopic-Multi-purpose trolley with rollers

- Ideally suited to bodywork restoration, in the painting area or for filing screens when removing, or applying adhesive material etc.
- Holding tube with non-slip, coated padding offer optimal grip and prevent scratches
- The multi-talented universal use, since width and height are fully adjustable and lockable
- For nearly all windscreen sizes
- Can also be used as a work bench or for carrying parts
- Collapsible to save space during storage
- With 4 stable castors, 2 with locking brakes
- Simple handling
- Capacity up to 100 kg
- Robust construction made from square tube





Technical data:
max. Load: 100 kg

	Length mm	min. width mm	Max width mm	Height min in mm	Height max in mm	kg	
500.8100	1320,0	257,0	1380,0	845,0	1320,0	23,50	

Universal storage table with rollers

- Ideally suited to holding the windscreen when removing, or removing adhesive material
- Holding tube with non-slip, coated padding offer optimal grip and prevent scratches
- For nearly all windscreen sizes
- Foldable to save space during storage
- 4 substaintial wheels, 2 with locking brakes
- Simple handling
- Capacity up to 100 kg
- Robust construction from steel pipe





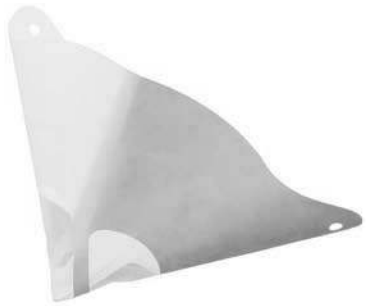
Technical data:
max. Load: 100 kg

	Length mm	Width mm	Height mm	Pad	kg	
140.2227	900,0	760,0	930,0	140.2228	8,00	

PAINT REQUIREMENTS

Single-use colour filter sieve

- Ideal for filtering paints of mechanical impurities
- Paper filter with nylon filter insert
- Optimal for fine cleaning



	Micron	Content	Colour code	kg	
500.8062	125	250		1,50	
500.8061	190	250		1,50	

Single-use colour mixer with cover

- Single-use colour mixer for mixing all types of paint
- Solvent resistant plastic
- Cover for optimal storage
- With mix scale
- Also suitable for water-based paints



	Material	Colour code	Content	Content	g	
500.8056	polypropylene	transparent	400	25	420	
500.8057	polypropylene	transparent	650	25	620	
500.8058	polypropylene	transparent	1300	25	1100	
500.8059	polypropylene	transparent	2240	25	1700	

Single-use protective overall

- Universal usage, e.g. during painting
- Breathable
- Hood with elastic band
- Arm, leg and waist bands
- Zip fastener with cover

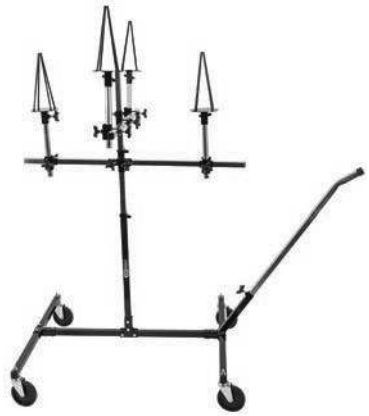


	Colour code	Content	g	
500.8006	S	white	1	220	
500.8007	M	white	1	220	
500.8008	L	white	1	220	
500.8009	XL	white	1	220	
500.8076	XXL	white	1	220	

PAINTING STANDS

Paint stand for wheel rims

- Ideally suited to filing rims or wheels when grinding or painting
- Adjustable holding devices offer optimum grip and protect from scratches
- Multi-way adjustment: width, height and tilt
- For almost all sizes
- With four sturdy rollers, two of which have brakes
- Efficient, one-handed working
- Support rods and cone can be adjusted optimally
- Rims and wheels can be turned for optimum results
- No stopping work leading to a smoother finish
- Saves a lot of time when preparing for painting
- Better results
- Up to 90 kg capacity
- Robust construction from steel pipe



Technical data:
max. Load: 90 kg

	Length mm	Width mm	Height min in mm	Height max in mm	kg	
140.2222	950,0	900,0	1350,0	1950,0	19,00	

Painting stands

- Ideally suited to filing bonnets, tail gates, wings, bumpers and when grinding or painting
- Adjustable holding devices offer optimum grip and protect from scratches
- Multi-way adjustment: width, height and tilt
- For almost all sizes
- With 4 sturdy castors, 2 of which have brakes and steering
- Efficient, one-handed working
- No stopping work leading to a smoother finish
- Saves a lot of time when preparing for painting
- Better results
- Up to 35 kg capacity
- Robust construction from steel pipe



Technical data:
max. Load: 35 kg

	Length mm	Width mm	Height mm	kg	
140.2254	1100,0	780,0	1500,0	17,50	

Rotatable paint stands

- Ideally suited to filing bonnets, tail gates, wings, bumpers and small parts when grinding or painting
- Adjustable holding devices offer optimum grip and protect from scratches
- Multi-way adjustment: width, height and tilt
- Can be turned 360° with foot lever
- For almost all sizes
- Includes lengthener which can be disassembled at any time
- With 6 universally adjustable holding arms
- Includes gun holder on one side
- With two sturdy wheels
- Efficient, one-handed working
- No stopping work leading to a smoother finish
- Saves a lot of time when preparing for painting
- Better results
- Up to 35 kg capacity
- Robust, galvanised construction



Technical data:

max. Load: 35 kg

	Length mm	Width mm	Height mm	kg	
140.2384	1900,0	800,0	1000,0	17,00	

PAINTING PAPER TROLLEY

Paper trolley with 2 shelves

- Ideally suited to masking painting
- Mobile paper dispenser with 2 shelves for up to 2 paper rolls
- Suitable for covering paper and covering sheets up to 45 cm
- Supplied with adjustable tape pressure rollers
- Includes gun holder on one side
- Problem-free and graded separation with use of a sharp blade
- With practical storage compartments
- With two sturdy wheels
- including handles for easy manoeuvring
- Robust construction from steel pipe





	Total depth mm	Width mm	Depth mm	kg	
140.2382	920,0	660,0	600,0	11,00	

Paper trolley with 4 shelves

- Ideally suited to masking painting
- Mobile paper giver with 4 shelves for up to 4 paper rolls
- Suitable for covering paper and covering sheets up to 45 cm
- Two shelves for max. 30 cm and two shelves for max. 45 cm
- Supplied with adjustable tape pressure rollers
- Problem-free and graded separation with use of a sharp blade
- With two sturdy wheels
- Includes handle for easy movement in the workshop
- Robust construction from steel pipe





	Length mm	Width mm	Height mm	kg	
140.2383	580,0	560,0	1080,0	11,00	

Paper trolley with 3 shelves

- Ideally suited to masking painting
- Mobile paper giver with 4 shelves for up to 6 paper rolls
- Suitable for covering paper and covering sheets up to 90 cm
- Supplied with adjustable tape pressure rollers
- Simple replacing of paper rolls
- Multi-adjustable for different lengths
- Includes gun holder on both sides
- With 4 sturdy, steerable castors
- Including bracket for easy manoeuvring
- Robust construction from steel pipe





	Total depth mm	Width mm	Depth mm	kg	
140.2350	1130,0	1240,0	540,0	29,00	

PALLET CAGE TROLLEY

Pallet cage trolley

- For universal use
- With 4 steering castors
- Load capacity up to 80 kg
- Robust construction from steel pipe



Technical data:

Total load capacity: 80 kg

	Total depth mm	Width mm	Depth mm	kg	
160.0260	1965,0	900,0	600,0	40,86	

TRANSPORT SACK TROLLEY

Transport sack trolley with pneumatic wheels

- Steel tubular structure with deep-welded joints
- easy and flexible transport even in small rooms
- Effortless receiving and transporting of packages, carton and all other objects
- made from round pipes, solid weld
- Very wide shovel base
- Equiped with 2 fixed wheels with pneumatic tyres
- Safety handles and slip protection
- Perfectly suitable in industry and business



Technical data:

Tyre size: Ø 260 x 85 mm

Shovel/base dimensions: W 400 x D 170 mm

	Max load kg	L mm	B mm	H mm	kg	
160.0225	250,0 kg	430,0	550,0	1100,0	10,00	

Transport sack trolley with full rubber tyres

- Steel tubular structure with deep-welded joints
- easy and flexible transport even in small rooms
- Effortless receiving and transporting of packages, carton and all other objects
- made from round pipes, solid weld
- Equiped with 2 fixed full rubber wheels
- Safety handles and slip protection
- Perfectly suitable in industry and business



Technical data:

Tyre size:	Ø 255 x 46 mm
Shovel/base dimensions:	W 400 x D 170 mm

	Max load kg	L mm	B mm	H mm	kg
160.0228	250,0 kg	430,0	560,0	1100,0	17,00

Transport sack trolley with full rubber tyres

- Steel tubular structure with deep-welded joints
- easy and flexible transport even in small rooms
- Effortless receiving and transporting of packages, carton and all other objects
- made from round pipes, solid weld
- Fold away shovel base
- Equiped with 2 fixed full rubber wheels
- Safety handles and slip protection
- Perfectly suitable in industry and business



Technical data:

Tyre size:	Ø 255 x 46 mm
Shovel/base dimensions:	W 400 x D 170 mm
Platform:	W 330 x D 520 mm

	Max load kg	L mm	B mm	H mm	kg
160.0229	250,0 kg	775,0	560,0	1100,0	19,00

Professional wheel trolley

- Steel tubular structure with deep-welded joints
- easy and flexible transport even in small rooms
- for effortless collection and transport of tyres and rims
- made from round pipes, solid weld
- 2 large pneumatic tyres
- with 2 solid rubber guide rollers
- with improved stability and tilting safety
- Optimal transportation due to traverse brake stop





Technical data:

Wheel size fixed rollers:	Ø 260 mm (pneumatic tyres)
Wheel size steer rollers:	Ø 125 mm (solid rubber)
Max. bucket dimensions:	Ø 730 mm

	Max load kg	L mm	B mm	H mm	kg
160.0055	150,0 kg	850,0	715,0	1610,0	15,00

Transport sack trolley with pneumatic wheels

- Steel tubular structure with deep-welded joints
- easy and flexible transport even in small rooms
- Effortless receiving and transporting of packages, carton and all other objects
- made from round pipes, solid weld
- Fold away shovel base
- Equiped with 2 fixed wheels with pneumatic tyres
- Safety handles and slip protection
- Perfectly suitable in industry and business



Technical data:

Tyre size:	Ø 260 x 85 mm
Shovel/base dimensions:	W 400 x D 170 mm
Platform:	W 330 x D 520 mm

	Max load kg	L mm	B mm	H mm	kg
160.0226	250,0 kg	775,0	550,0	1100,0	10,00

Transport sack trolley with full rubber three staged wheels

- Steel tubular structure with deep-welded joints
- easy and flexible transport even in small rooms
- Effortless receiving and transporting of packages, carton and all other objects
- made from round pipes, solid weld
- Fold away shovel base
- Problem free overcoming of stairs
- Full rubber three staged wheels
- Perfectly suitable in industry and business





Technical data:

Tyre size:	Ø 160 x 30 mm
Shovel/base dimensions:	W 400 x D 170 mm
Platform:	W 330 x D 520 mm

	Max load kg	L mm	B mm	H mm	kg
160.0227	250,0 kg	900,0	610,0	1285,0	15,00

Transport sack trolley for barrels

- Steel tubular structure with deep-welded joints
- With pneumatic tyres
- easy and flexible transport even in small rooms
- Suitable for all common 200 litre barrels (GGVS, UNO)
- With barrel rim holder for secure grip
- Thanks to adjustable height other barrel sizes may be transported safely





Technical data:

Tyre size:	Ø 260 x 85 mm

	Max load kg	B mm	H mm	kg
160.0223	250,0 kg	700,0	1600,0	13,40

Bottle trolley

- Steel tubular structure with deep-welded joints
- Ideal for the storage of 10 litre nitrogen bottles
- With safety chain for transport
- Includes hose attachment
- Integrated tray for accessories
- Stable fully-rubber wheels
- Secure and easy to use
- Special tool steel





	Length mm	Width mm	Height mm	kg	
160.0247	275,0	305,0	1170,0	4,46	

KEY CHAIN

Key chain, blank

- Ideal for identifying car keys
- With blank area for writing
- Easy to write with a marker
- From stable PVC
- With re-closeable band

	Colour code	Content	g	
500.8018	○	500	420	

Key chain with loop

- Ideal for identifying car keys
- With lined area for writing
- Easy to write with a marker
- From stable PVC
- With re-closeable band



	Colour code	Content	kg	
500.8093		500	1,00	
500.8094		500	1,00	
500.8019		500	1,00	

Key chain set

- Optimal work shop set for organising customers and vehicles
- With 1 x key chain with loop, 1 x customer collection ticket, 1 x mirror hanger and 1 x sticker for the order book
- Numbered from 1-300
- From stable PVC
- Saves time when looking for vehicles



	Colour code	Content	kg	
500.8017		300	1,20	
500.8016		300	1,20	
500.8015		300	1,20	

DOCUMENT POCKETS

Workshop order pocket DIN A4 with key pocket

- Made out of transparent film with protection entry cover
- High quality meaning the document stay clean and are in closed storage with all working papers
- Key has a special compartment with hook and loop fastener
- The front made out of clear plastic means the working papers are readable without removal
- The reinforced back can be used simultaneously as a letter document
- Stable execution with hanging cord serves also as a letter document





	Colour code	L mm	B mm	g	
500.8095		340,0	240,0	190	
500.8096		340,0	240,0	190	
500.8097		340,0	240,0	190	
500.8098		340,0	240,0	190	
500.8099		340,0	240,0	190	

SEAT AND VEHICLE COVERS

Tape dispenser for steering wheel wrapping foil

- For using the steering wheel wrapping foil
- Simple handling
- Robust PP plastic



	Colour code	Length mm	g	
500.8023		260,0	60	
500.8024		260,0	60	

Steering wheel wrapping foil, transparent

- Suitable for wrapping the steering wheel
- Suitable for all steering wheel sizes
- Prevents dirt on the steering wheel
- Easy to use



	Material strength µm	Length m	Content	kg	
500.8089	15	150,00	40	12,80	

Single-use steering wheel cover

- For covering the steering wheel
- Suitable for almost all steering wheel sizes
- With elasticated band
- Prevents dirt on the steering wheel
- Supplied in a practical storage case



	Colour code	Content	kg	
500.8087	white	250	2,50	

Single-use gear stick cover

- Ideal for protecting the gear stick
- Fits well with the elastic band
- Ideal for test driving and stays in the work shop
- LDPE plastic
- Supplied in a practical storage case



	Colour code	Length mm	Width mm	Content	kg	
500.8092	white	140,0	145,0	500	2,50	

Single-use hand brake cover

- Ideal for protecting the hand brake
- Fits well with the elastic band
- Ideal for test driving and stays in the work shop
- LDPE plastic
- Supplied in a practical storage case



	Colour code	Length mm	Width mm	Content	kg
500.8071	white	90,0	160,0	500	2,50

Single-use seat cover

- For covering the driver or passenger seat
- For seat sizes 820 x 1300 mm
- Ideal for test driving and stays in the work shop
- Prevents dirt on the original seats
- LDPE plastic
- Supplied on a perforated roll



	Colour code	Material strength µm	Content	kg
500.8081	white	13	500	5,00

Single-use dual-seat cover

- For covering the rear seats
- For seat sizes 1500 x 1300 mm
- Ideal for test driving and stays in the work shop
- Prevents dirt on the original seats
- LDPE plastic
- Supplied on a perforated roll



	Colour code	Material strength µm	Content	kg
500.8084	white	13	200	6,00

Single-use, foot mat

- Suitable for covering the foot well
- Ideal for test driving and stays in the work shop
- Slip-proof
- Prevents the original foot mats from getting dirty
- Material made from 70 g/m² paper and 10 g/m² PE



	Length mm	Width mm	Content	kg
500.8086	380,0	500,0	500	5,00

Tire bags

- Protects the vehicle interior when transporting tires
- Ideal for storage in the garage or workshop
- LDPE plastic
- Supplied on a perforated roll





	Length mm	Width mm	Height mm	Colour code	Content	kg
500.8088	700,0	350,0	900,0	white	100	4,00

Wheel bolt bag

- Ideal for the storage of wheel bolts
- With handy drawstring for closing
- Made from 100% cotton



		kg
500.8032	Wheel bolt bag	20

Interior protector set 5 in 1

- Optimal interior protection for customer vehicles
- Easy to use and good fit using elasticated drawstring
- 5 pcs set packed in practical polythene bag
- Footwell protector made from strong, coated material
- Seat, steering wheel, gear knob and handbrake lever protectors made from sturdy single-use film





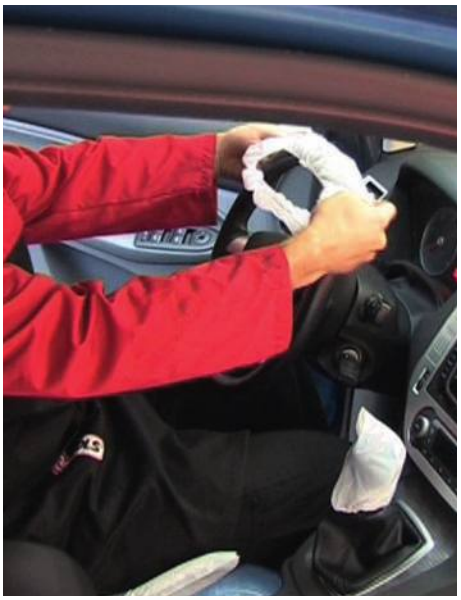
	Content	kg
500.8110	100	5,20

Plastic garage, transparent

- Ideal for protecting paint against rain
- Suitable for painting in halls
- With elasticated band
- Easy to use
- LDPE plastic



	Colour code	Material strength µm	Length m	B m	g
500.8073	transparent	300	6,50	3,5	460



Steering wheel protective cover

- For covering the steering wheel
- Suitable for almost all steering wheel sizes
- Prevents dirt on the steering wheel
- Made out of machine washable nylon material



		g
500.8075	Steering wheel protective cover	20

Gear stick protective cover

- For covering the gear stick
- Suitably for almost all vehicles
- Prevents dirt on the gear stick
- Made out of machine washable nylon material



		g
500.8070	Gear stick protective cover	10

Hand brake protection cover

- For covering the hand brake
- Suitably for almost all hand brakes
- Prevents dirt on the hand brake
- Made out of machine washable nylon material



		g
500.8080	Hand brake protection cover	10

Seat protection cover for single seats

- One piece seat cover
- For covering a front seat
- Suitably for almost all vehicles
- Prevents dirt on the original seat
- Allowed for vehicles with seat airbags
- Ideal for road tests
- Made out of machine washable nylon material



		g
500.8065	Seat protection cover for single seats	125

Double protection cover for front or rear seats

- One piece seat cover
- For covering the front seats, the middle console, the door covers and the foot area
- No glass splinters or dirt on the seats, therefore also ideal for glass repairs
- Suitably for almost all vehicles
- Prevents dirt on the original seat
- Made out of machine washable nylon material



		g
500.8085	Double protection cover for front or rear seats	455

Seat cover set

- For covering the steering wheel, gear stick and front seats
- Protection against soiling
- Suitably for almost all vehicles
- Allowed for vehicles with seat airbags
- Ideal for road tests
- Made out of machine washable nylon material



			kg
500.8025	3 pcs	Seat cover set	1,13

consists of:

		g
500.8065	Seat protection cover, single	125
500.8070	Gear stick protection cover	10
500.8075	Steering wheel cover	20

Universal vehicle front end protection cover

- Covers both wings, grill, bumper and lamps yherefore protecting during the repair and/or maintenance works
- Universal size therefore suitable for small and medium size vehicles
- Elasticated in the border band
- Wheel cut out for working on the wheels, brakes etc.
- Generous transparent cover for headlamps that enables vehicle lamps testing
- The cut away over the grill permits a trial run whilst the cover is still mounted
- Fleece lamination on one side and easy to clean on the other
- The wing area is reinforced with additional internal protection mat
- Reinforcement over mirror and/or bonnet hinge possible





		kg
500.8035	Universal vehicle front end protection cover	1,00



Universal wing cover with sewn-in magnets

- Outer and under side made from high quality nylon
- Grips on car body sheet metals due to the magnet sewn in
- Safe protection against scratches, dirt, oil etc.
- For protecting the wings during repair and maintenance work





	Length mm	Width mm	g
500.8051	1000,0	640,0	500

Bodywork protector with sewn-in magnets

- Outer and under side made from high quality nylon
- Grips on car body sheet metals due to the magnet sewn in
- Ideally for the use as the wing protection
- Also as protection against tools for example windscreen replacement





	L mm	B mm	g	
500.8050	1070,0	600,0	900	



Bodywork protector with anti slip matting

- Outer side made from high quality nylon
- Under side made from a special anti slip matting
- Grips on car body sheet metals
- Ideally for the use as the wing protection
- Also as protection against tools for example windscreen replacement





	L mm	B mm	kg	
500.8055	900,0	500,0	0,31	
500.8060	1200,0	500,0	2,05	

KNEE AND LIE DOWN MATS

Protection mat

- Guarantees safety-conscious working on a flat surface
- Moisture and dirt resistant
- Work garments and knees stay dry, clean and protected
- 3 layered padded construction from soft material
- Integrated hand grip
- Petrol and oil resistant





	L mm	B mm	H mm	g	
500.8040	480,0	320,0	36,0	200	
500.8045	1150,0	550,0	36,0	760	



Mat with handle

- Guarantees safety-conscious working on a flat surface
- Moisture and dirt resistant
- Work garments and knees stay dry, clean and protected
- Insulted
- Can be folded together
- With integrated carry handle
- Petrol and oil resistant





	L mm	B mm	H mm	kg	
500.8002	1022,0	440,0	40,0	1,05	



CREEPERS / STOOLS

Mobile stool

- Robust and mobile stool
- Storage area for the protection of tools and small parts
- Washable cushion
- four ball-bearing polyvinyl chloride swivel castors
- Maximum capacity up to 90 kg
- Construction from robust steel square tube



Technical data:

Number of direct rollers:	4
Type of tire:	plastic
Total load capacity:	90 kg

	L mm	B mm	H mm	kg	
500.8020	440,0	360,0	360,0	4,00	

Mobile and height adjustable stool

- Robust and mobile stool
- Storage area for the protection of tools and small parts
- Washable cushion
- Hydraulic height adjustment
- five ball-bearing polyvinyl chloride swivel castors
- Maximum capacity up to 90 kg
- Durable metal construction



Technical data:

Number of direct rollers:	5
Type of tire:	plastic
Total load capacity:	90 kg

	B mm	Height min in mm	Height max in mm	Substitute roll	kg	
500.8030	370,0	400,0	540,0	500.8031	7,30	

Mobile and height adjustable stool

- Robust and mobile stool
- Storage area for the protection of tools and small parts
- Washable cushion
- Hydraulic height adjustment
- extra stable, ball bearing mounted, solid rubber castors
- maximum weight up to 135 kg
- Durable metal construction



Technical data:

Number of direct rollers:	5
Type of tire:	rubber
Total load capacity:	135 kg

	B mm	Height min in mm	Height max in mm	Substitute roll	kg
500.8004	360,0	440,0	560,0	500.8004-R001P	7,80



Mobile seat

- Padded head support
- Shaped arm areas for optimal movement freedom
- Includes safe tool recesses
- six polyvinyl chloride swivel castors with ball bearings
- Easy to clean
- Maximum capacity up to 120 kg
- Solid construction made from plastic





Technical data:

Number of direct rollers:	6
Type of tire:	plastic
Total load capacity:	120 kg

	L mm	B mm	H mm	Substitute roll	kg
500.8090	1030,0	480,0	115,0	500.8091	5,00

Mobile seat

- for use when lying down
- Padded execution for fatigue free working
- Washable cushion
- Shallow depth for comfortable working
- extra stable, ball bearing mounted, solid rubber castors
- Black powder coated metal frame
- maximum weight up to 180 kg



Technical data:

Number of direct rollers:	6
Type of tire:	rubber
Total load capacity:	180 kg

	L mm	B mm	H mm	Substitute roll	kg
500.8003	1160,0	540,0	120,0	500.8003-R001P	10,50

Drivable stretcher and folding seat

- For the use of lying and sitting
- Interlocking mechanism against accidental loosening
- Padded execution for fatigue free working
- Washable cushion
- Shallow depth for comfortable working
- six polyvinyl chloride swivel castors with ball bearings
- Black powder coated metal frame





Technical data:

Number of direct rollers:	6
Type of tire:	plastic
Total load capacity:	90 kg

	L mm	B mm	H mm	Substitute roll	kg
500.8011	1040,0	490,0	85,0	500.8012	9,50



Drivable stretcher and folding seat

- For the use of lying and sitting
- Interlocking mechanism against accidental loosening
- Padded execution for fatigue free working
- Tool storage tray in the foot well
- Washable cushion
- Shallow depth for comfortable working
- Adjustable head rest
- seven polyvinyl chloride swivel castors with ball bearings
- Black powder coated metal frame





Technical data:

Number of direct rollers:	6
Type of tire:	plastic
Total load capacity:	90 kg

	L mm	B mm	H mm	Substitute roll	kg
500.8000	1200,0	430,0	145,0	500.8001	12,40



VEHICLE TROLLEYS

Wheel roller set

- Direct rolls enable the movement in the narrowest of areas
- Ideal for manoeuvring vehicles on solid ground
- For the space saving storing of vehicles in repair workshops
- Four ball bearing solid rubber wheels





Technical data:

Max. tyre size:	13" - 16"
Wheel diameter:	90,0 mm

	Max load 1 pcs / kg	Max load 4 pcs / kg	Max tyre width mm	kg
160.0375	450,0	1800,0	360,0	10,00

Hydraulic vehicle mover

- Universally applicable on driver and passenger side
- Casters allow for the manoeuvring of vehicles in the tightest spaces
- Ideal for manoeuvring vehicles on solid ground
- Easily rolled in any direction
- For the space-saving storage of vehicles in repair breaks
- Ideal for showrooms, body shops, towing companies etc.
- Easy operation via foot pedal
- With self-lubricating ball bearings
- Four ball bearing solid rubber wheels
- With plastic rollers





Technical data:

Tyre size: 13" - 19"

Wheel diameter: 720 mm

	Max load 1 pcs / kg	Max load 4 pcs / kg	Max tyre width mm	kg
160.0412	680	2720	228	16,60

Hydraulic vehicle mover

- Universally applicable on driver and passenger side
- Casters allow for the manoeuvring of vehicles in the tightest spaces
- Ideal for manoeuvring vehicles on solid ground
- Easily rolled in any direction
- For the space-saving storage of vehicles in repair breaks
- Ideal for showrooms, body shops, towing companies etc.
- Easy operation via foot pedal
- With self-lubricating ball bearings
- Four ball bearing solid rubber wheels
- With aluminum rollers





Technical data:

Tyre size: 13" - 19"

Wheel diameter: 720 mm

	Max load 1 pcs / kg	Max load 4 pcs / kg	Max tyre width mm	kg
160.0414	680	2720	305	18,44

Hydraulic vehicle mover

- Universally applicable on driver and passenger side
- Casters allow for the manoeuvring of vehicles in the tightest spaces
- Ideal for manoeuvring vehicles on solid ground
- Easily rolled in any direction
- For the space-saving storage of vehicles in repair breaks
- Ideal for showrooms, body shops, towing companies etc.
- Easy operation via foot pedal
- With self-lubricating ball bearings
- Four ball bearing solid rubber wheels
- With plastic rollers





Technical data:

Tyre size: 13" - 19"

Wheel diameter: 720 mm

	Max load 1 pcs / kg	Max load 4 pcs / kg	Max tyre width mm	kg
160.0413	680	2720	305	16,60

Storage and Trolley for vehicle mover

- Universal usage
- Casters allow for manoeuvring
- Easily rolled in any direction
- For the space-saving housing of hydraulic vehicle movers
- Suitable for 4 vehicle movers
- With self-lubricating ball bearings
- Four ball bearing solid rubber wheels



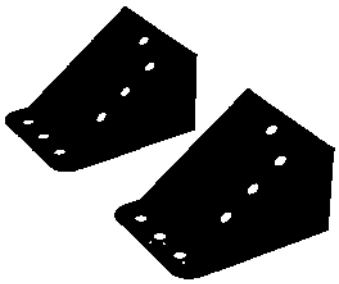


	Length mm	Width mm	Height mm	kg
160.0415	800,0	470,0	230,0	9,64

WHEEL CHOCKS

Wedge (pair)

- For securing large vehicles and for load securing
- Optimal slip resistance
- Perforated support surface
- No deformation
- Supplied in pairs
- Heavy execution
- Made of sturdy sheet



	Length mm	Height mm	Width mm	g
160.0381	230,0	220,0	125,0	700

Underlaid rubber wedge (pair)

- For securing trailers, vehicles and for load securing
- Optimal slip resistance
- Gridded support surface
- No deformation, no rusting
- More durable than plastic or sheet metal wedge
- Supplied in pairs
- Made of solid rubber



	Length mm	Height mm	Width mm	g
160.0382	105,0	75,0	75,0	660

Underlaid rubber wedge with handle

- For securing trailers, vehicles and for load securing
- Optimal slip resistance
- Incorporated handle for easy transport
- Gridded support surface
- No deformation, no rusting
- More durable than plastic or sheet metal wedge
- Delivery takes place in parts
- Heavy execution
- Made of solid rubber



	Length mm	Height mm	Width mm	kg
160.0383	200,0	150,0	100,0	2,20

AXLE STANDS AND RAMPS

Aluminium axle stand set

- Especially light and stabile
- High level of stability due to the diameter of the base plate
- Safety locking bolt with chain
- Suits itself especially well in combination with jack for the safe bracing of a load
- Aluminium





	Max load t	Stroke way mm	Min total height mm	Max total height mm	kg
160.0315	3,0	140,0	260,0	400,0	2,20

Steel chassis stand with quick lock

- Solid construction
- For heavy vehicles weights
- High level of stability due to large sturdy base plate
- Lifting bar made from cast steel
- Quick adjustments
- Height adjustment has 13 stages
- Suits itself especially well in combination with jack for the safe bracing of a load
- Delivery takes place in parts
- Made from solid steel
- 160.0377 / 160.0378 with turnstile



	Max load t	Min total height mm	Max total height mm	kg
160.0373	10	450,0	750,0	21,50
160.0374	10	650,0	1100,0	26,50
160.0377	20	420,0	660,0	26,00
160.0378	20	665,0	1170,0	29,00
160.0379	25	415,0	640,0	25,50
160.0380	25	675,0	1050,0	35,50

Spindle support stand

- Variably adjustable via spindle
- 3-foot chassis stand
- Solid construction
- For heavy vehicles weights
- High level of stability
- Collapsible, so saves a lot of space
- Suits itself especially well in combination with jack for the safe bracing of a load
- Made from solid steel





	Max load t	Min total height mm	Max total height mm	kg
160.0441	12,0	456,0	710,0	17,50
160.0442	12,0	710,0	1065,0	25,00

Steel axle stands with quick adjustment

- 4 feet on each stand
- Solid construction
- For heavy vehicles weights
- High level of stability
- Lifting bar made from cast steel
- Quick adjustments
- Supplied in pairs
- Height adjustment has 13 stages
- Suits itself especially well in combination with jack for the safe bracing of a load
- Made from solid steel

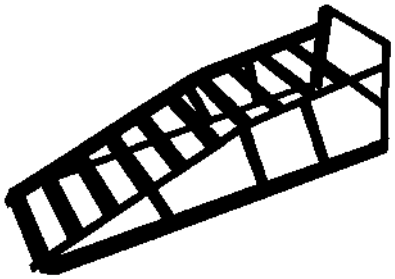


	Max load t	Stroke way mm	Min total height mm	Max total height mm	kg
160.0370	3,0	130,0	276,0	420,0	6,40
160.0371	6,0	205,0	382,0	600,0	1,40

Cars ramp with 185 mm tyre width

- Robust welded, stable and painted steel construction
- For flexible use
- Can be loaded with 1 t individually or 2 t in pairs
- Design with 185 mm ramp width
- Supplied in pairs
- For all common passenger cars and small transporters





Technical data:

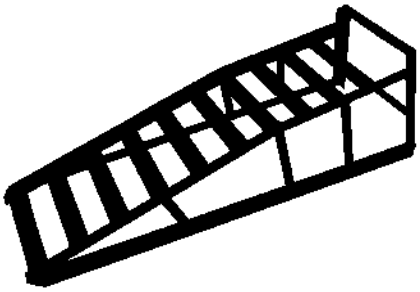
max. Load capacity / 1 pieces kg:	1.000 kg
max. Load capacity / 2 pieces:	2.000 kg
max. Tyre width mm:	185 mm

	Length mm	Width mm	Height mm	kg
160.0314	950,0	290,0	265,0	5,20

Cars ramp with 225 mm tyre width

- Robust welded, stable and painted steel construction
- For flexible use
- Can be loaded with 1 t individually or 2 t in pairs
- Design with 225 mm ramp width
- Supplied in pairs
- For all common passenger cars and small transporters





Technical data:

max. Load capacity / 1 pieces kg:	1.000 kg
max. Load capacity / 2 pieces:	2.000 kg
max. Tyre width mm:	225

	Length mm	Width mm	Height mm	kg
160.0319	950,0	340,0	265,0	7,90

Foldable ramps

- Robust steel design
- Anti-slip with holes in the surfaces with lateral grooves
- Can be folded together
- Easy to transport with carry handle
- Supplied in pairs
- Can be folded out for loading small items such as lawn mowers, motorcycles etc.
- Usable as car ramp when folded

Technical data:

Ramp height in trestle position with brake block: 160 mm
Support wheel surface in trestle position: L 430 x W 250 mm
Total length in loading position: 1.95 m
Max. load in trestle position/pair: 1,600 kg
Max. load as ramp/pair: 520 kg





	Length mm	Width mm	Height mm	kg
160.0318	580,0	250,0	160,0	31,00

LIFT TECHNOLOGY

Universal rubber mat for lifting platform

- Perfect underlay to protect sills and paintwork
- Optimal slip resistance
- Universal support for lifting platforms
- Gridded support surface
- No deformation, no rusting
- Perfect for car body workshops, tyre service lifting platforms etc.
- Very robust and thus versatile
- Delivery takes place in parts
- Heavy execution
- Made of solid rubber





Ⓐ

Ⓑ

		Length mm	Width mm	Height mm	kg
160.0391	Ⓐ	155,0	125,0	35,0	0,92
160.0393	Ⓑ	160,0	120,0	70,0	2,04

Scissor steel jack with lever

- Robust steel spindle
- For all common passenger cars and small transporters
- Light and compact shape





Technical data:

max. Load: 1500 kg
Travel: 330,0 mm

	Length mm	Width mm	Height mm	kg
160.0704	420,0	85,0	110,0	2,26

Hydraulic bottle jack 2 - 50 t

- Security valve against overload
- Telescopic piston pole
- Additional spindle for extension (not in 30 and 50 t executions)
- Two piece lever arms
- For heavy vehicles weights
- Suitable for narrow spaces
- High level of stability
- Ideally suited in combination with jack for the neutralizing and bracing of a load
- Heavy steel construction





	Max load t	min lift height mm	max lift height mm	Hydraulic lift mm	Screw extension mm	Dimension of base plate mm	kg
160.0350	2,0	181,0	345,0	116,0	48,0	88 x 92	2,90
160.0351	3,0	194,0	372,0	118,0	60,0	92 x 100	3,80
160.0352	5,0	216,0	413,0	127,0	70,0	96 x 112	5,10
160.0354	10,0	230,0	460,0	150,0	80,0	110 x 127	7,10
160.0356	15,0	230,0	460,0	150,0	80,0	113 x 136	9,30
160.0358	20,0	242,0	452,0	150,0	60,0	144 x 155	11,90
160.0359	30,0	285,0	465,0	180,0	-	190 x 155	21,70
160.0360	50,0	300,0	480,0	180,0	-	218 x 176	30,70
160.0349	100,0	335,0	515,0	180,0	-	240 x 260	35,50

Hydraulic vehicle mover

- Universally applicable on driver and passenger side
- Casters allow for the manoeuvring of vehicles in the tightest spaces
- Ideal for manoeuvring vehicles on solid ground
- Easily rolled in any direction
- For the space-saving storage of vehicles in repair breaks
- Ideal for showrooms, body shops, towing companies etc.
- Easy operation via foot pedal
- With self-lubricating ball bearings
- Four ball bearing solid rubber wheels
- With plastic rollers





Technical data:

Tyre size: 13" - 19"
Wheel diameter: 720 mm

	Max load 1 pcs / kg	Max load 4 pcs / kg	Max tyre width mm	kg
160.0412	680	2720	228	16,60

Hydraulic vehicle mover

- Universally applicable on driver and passenger side
- Casters allow for the manoeuvring of vehicles in the tightest spaces
- Ideal for manoeuvring vehicles on solid ground
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- With self-lubricating ball bearings
- Four ball bearing solid rubber wheels
- With plastic rollers





Technical data:

Tyre size: 13" - 19"
Wheel diameter: 720 mm

	Max load 1 pcs / kg	Max load 4 pcs / kg	Max tyre width mm	kg
160.0413	680	2720	305	16,60

Hydraulic vehicle mover

- Universally applicable on driver and passenger side
- Casters allow for the manoeuvring of vehicles in the tightest spaces
- Ideal for manoeuvring vehicles on solid ground
- Easily rolled in any direction
- For the space-saving storage of vehicles in repair breaks
- Ideal for showrooms, body shops, towing companies etc.
- Easy operation via foot pedal
- With self-lubricating ball bearings
- Four ball bearing solid rubber wheels
- With aluminum rollers





Technical data:

Tyre size:	13" - 19"
Wheel diameter:	720 mm

	Max load 1 pcs / kg	Max load 4 pcs / kg	Max tyre width mm	kg
160.0414	680	2720	305	18,44

Storage and Trolley for vehicle mover

- Universal usage
- Casters allow for manoeuvring
- Easily rolled in any direction
- For the space-saving housing of hydraulic vehicle movers
- Suitable for 4 vehicle movers
- With self-lubricating ball bearings
- Four ball bearing solid rubber wheels





	Length mm	Width mm	Height mm	kg
160.0415	800,0	470,0	230,0	9,64

SlimPOWER hydraulic aluminium trolley jack 2 t

- Especially light aluminum jack
- Very shallow depth for use under low vehicles
- Large base for safe standing
- Raising with the pump lever and foot lever is possible
- With foot pedal to bridge the empty stroke
- Controlled releasing through the turning of the pump lever
- Raising with small pump lifts to the maximum height
- Good maneuverability through two oil and acid resistant nylon direct castors
- Intergrated screw tray
- The lower area of the pump lever is coated with foam material
- Problem free movement due to lightweight and secure handling
- Lifting plate diameter 135 mm
- Overload protection through pressure relief valve
- Ideally suited for daily workshop use
- Extremely heavy aluminium construction



	Max capacity t	Stroke way mm	min lift height mm	max lift height mm	Total length mm	Spare lifting plate	kg
161.0365	2,0	370,0	90,0	460,0	790,0	161.0365-R047P	26,80

ULTIMATE*line* Hydraulic steel trolley jack

- Very shallow depth for use under low vehicles
- Large base for safe standing
- Raising with the pump lever and foot lever is possible
- With foot pedal to bridge the empty stroke
- Controlled releasing through the turning of the pump lever
- Raising with small pump lifts to the maximum height
- Good maneuverability through two oil and acid resistant nylon direct castors
- Intergrated screw tray
- The lower area of the pump lever is coated with foam material
- Lifting plate diameter 120 mm
- Overload protection through pressure relief valve
- Ideally suited for daily workshop use
- Heavy steel construction





	Max capacity t	Stroke way mm	Min total height mm	Max total height mm	Total length mm	Spare lifting plate	kg
161.0367	2,0	415,0	80,0	495,0	760,0	161.0371	32,00
161.0368	3,0	420,0	100,0	520,0	800,0	161.0371	43,00

Hydraulic steel trolley jack 3 t

- Large base for safe standing
- Controlled releasing through the turning of the pump lever
- Raising with small pump lifts to the maximum height
- Good maneuverability through two oil and acid resistant nylon direct castors
- Intergrated screw tray
- The lower area of the pump lever is coated with foam material
- Lifting plate diameter 135 mm
- Overload protection through pressure relief valve
- Ideally suited for daily workshop use
- Heavy steel construction



	Max capacity t	Stroke way mm	Min total height mm	Max total height mm	Total length mm	Spare lifting plate	kg
161.0366	3,0	350,0	120,0	470,0	628,0	161.0366-R007P	35,00

Underhoist stand with pedal

- Ideal for all work when extra support is needed
- Stable trapeze threaded spindle
- Secure stand thanks to the large foot
- Infinitely variable
- Smooth-operating with axial bearings
- Foot pedal for precise adjustments (20 mm)
- The ideal work shop assistant in many situations





	Load capacity kg	Min total height mm	Max total height mm	kg
160.0342	750	1360,0	2030,0	15,00



Hydraulic transmission jack

- Ideal for installing and removing motors, transmissions, couplings etc.
- Uncomplicated lifting with hydraulic foot pump
- Continuous adjustment allows for precise positioning
- Slow release of the load possible with hand wheel
- Includes overload valve
- With integrated safety stop handle
- High stability due to wide wheel spacing
- Good manoeuvrability through four oil and acid resistant nylon direct castors
- Extra-large covering for lifting
- Wide wheel spacing ensures more stability and manoeuvrability when loaded
- Robust shape





	Max load kg	min lift height mm	max lift height mm	Width mm	kg	
160.0327	300	1200,0	2040,0	610,0	32,00	
160.0324	500	1200,0	2040,0	610,0	34,00	
160.0329	1000	1200,0	2040,0	610,0	48,00	

Hydraulic transmission jack

- Ideal for safe installation
- Heavy execution
- Uncomplicated lifting with hydraulic foot pump
- Continuous adjustment allows for precise positioning
- Especially wide working area
- Slow release of the load possible with the foot pump
- Includes overload valve
- With integrated safety stop handle
- Ground plate can be inclined and adjusted into position/horizontal + 40 mm/inclination -10°/+20°
- Includes 420 mm wide support rail with support chains for secure tensioning
- Chains can be adjusted from 130-430 mm
- Transmission holder attached to the piston rod
- Includes transmission holder
- Good manoeuvrability through four oil and acid resistant nylon direct castors
- Extra-large covering for lifting
- Wide wheel spacing ensures more stability and manoeuvrability when loaded
- Robust shape





	Max load kg	min lift height mm	max lift height mm	Length mm	Width mm	kg	
160.0334	500	880,0	1870,0	700,0	800,0	67,00	

Hydraulic transmission jack

- ideal for safe removal and installation of gearboxes
- Heavy execution
- uncomplicated lifting by hydraulic hand pump
- Continuous adjustment allows for precise positioning
- Especially wide working area
- Controlled lowering of the load possible
- Includes overload valve
- Mounting plate adjustable in inclination and position
- Length of the base plate adjustable from 250-340 mm
- including 350 mm wide holding rails with holding chains for securing
- Adjustable chain spacing from 110 - 350 mm
- High stability due to wide wheel spacing
- good manoeuvrability due to four oil and acid-resistant metal castors
- Extra-large covering for lifting
- Robust shape



	Max load kg	min lift height mm	max lift height mm	Length mm	Width mm	kg	
460.1180	1000	300,0	750,0	910,0	480,0	63,84	

Hydraulic transmission jack

- ideal for safe removal and installation of gearboxes
- Heavy execution
- uncomplicated lifting by hydraulic hand pump
- Continuous adjustment allows for precise positioning
- Especially wide working area
- Controlled lowering of the load possible
- Includes overload valve
- Mounting plate adjustable in inclination and position
- Length of base plate adjustable from 355-460 mm
- including 430 mm wide holding rails with holding chains for securing
- Chains can be adjusted from 110-430 mm
- High stability due to wide wheel spacing
- good manoeuvrability due to four oil and acid-resistant metal castors
- Extra-large covering for lifting
- Robust shape



	Max load kg	min lift height mm	max lift height mm	Length mm	Width mm	kg	
460.1195	1500	295,0	1005,0	1080,0	650,0	132,00	

ENGINE STAND

Engine stand

- Ideally suited to working on removed engines
- 4 pickup points are adjustable in angle and distance
- Pickup plates mounted at 360°
- Stable construction
- Secure stand in 4 steel castors
- Good manoeuvrability thanks to 2 swivelling castors with clamp brakes
- Less space required when folded





Technical data:

max. Load: 680 kg

	Length mm	Width mm	Height mm	kg	
160.0364	803,0	688,0	868,0	35,30	

WORKSHOP WINCHES

Folding workshop crane

- Hand lever pump for lifting
- Finely controllable reduction valve
- Made out of rectangle pipe, welded frame
- Stable construction
- Safety load hooks
- Telescopic crane jib with 4 sided adjustment of the length
- 2 fixed and 2 controllable castors (due to this there is problem free positioning over the load to be lifted)
- Flat feet enable a simple access under low vehicles
- Good maneuverability due to the ball bearing metal castors
- Adjustable load capacity
- Chassis in slightly splayed form and can be folded away
- Ideal for lifting works in the motor vehicle workshop
- For the removal and replacement of engines
- Raising of motorcycles in special works



	Max load kg	H mm	L mm	A mm	kg	
160.0015	1000	1440,0	1550,0	1006,0 - 1330,0	73,30	

Load positioning device

- Makes balancing the load on the crane easier depending on the shape of the parts to be lifted during installation and assembly
- Easy balance adjustment with the hand lever
- Supplied with 4 load chains
- Axle distance 320 mm
- Can be combined with work shop crane for units



Technical data:
max. Load capacity kg: 680

	Height mm	Width mm	kg	
160.0018	560,0	430,0	5,60	

ENGINE AND TRANSMISSION ENGINES

Engine assembly jig

- The 2 spindles are on specially stored also under load are movable and detectable
- Fast adaptation on the desired engine compartment width due to the adjustable support feet
- Conformity to the strong engine compartment inclination through revolving electro galvanized support feet
- Quick safe and problem free positioning of the engine take off and installation of the transmission without additional exclusion from below
- Locking screw
- Electrostatic powder coating





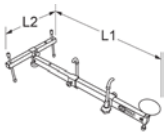
	Max load kg	Max width mm	kg	
160.0145	400	1460,0	15,20	

Universal engine supporting beam

- Highest flexibility thanks to adjustable and flexibly positionable construction
- Universal usage
- Simple handling and quick repair
- Hooks rotatable and adjustable in longitudinal direction
- Supporting plates height adjustable with non slip feet
- Secure supporting of engine or transmission
- Assembly and access unhindered below possible, through it to the engine compartment
- Special tool steel

Application range: Timing belt changing, clutch changing etc.







	L1 mm	L2 mm	H mm	kg	
160.0090	1020,0	510,0	300,0	1,07	

Universal assembly stool

- Ideal for installing and removing engines, transmission and support frames
- Suitable for transmission jacks with an attachment diameter of 25, 30 and 35 mm
- With four arms that can swivel sideways and can be adjusted in length
- For up to 75 kg
- Supporting plates height adjustable with non slip feet
- Simple handling and quick repair
- Stable construction
- Special tool steel





	Length mm	kg	
160.0146	700,0 - 960,0	13,00	

USED OIL RUN OFF DEVICE

Flexible funnel with aluminium body

- Ideally suited to a clean and control draining of all fluids, e.g. oil, coolant, brake fluid, fuel etc.
- Resistant to petrol, diesel, oil, coolant, hydraulic and brake fluid
- Also suitable as a funnel for filling
- Shape is maintained and can be altered at any time
- Free malleable, therefore can be adapted for extremely tight spaces
- Problems with draining fluids are a thing of the past
- The heavy-duty construction can be fit to any desired shape and used again
- Easy to clean
- Temperature resistance of -34 to +232 °C
- Aluminium frame
- Outer skin made from nitrile rubber





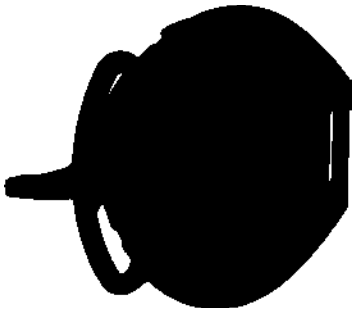


	Length mm	Width mm	g	
150.9303	372,0	170,0	240	

Drain pan 7.5 litres

- With three carry handles
- Safe and clean pouring with the self-contained overflow edge and spout
- Ideally suited to collecting different fluids
- Suitable for oil, chemicals, petrol, acid and anti-freeze fluid
- Also suitable for cleaning parts
- Practical, quick and friendly to the environment
- Shock and impact resistant





	Ø mm	H mm	g	
150.9359	385,0	130,0	620	

Drain pan 8 litres

- With three carry handles
- Safe and clean pouring with the spout
- Ideally suited to collecting different fluids
- Suitable for oil, chemicals, petrol, acid and anti-freeze fluid
- Also suitable for cleaning parts
- Practical, quick and friendly to the environment
- Screwed connection with rubber seal for safe transport
- Shock and impact resistant





	B mm	H mm	L mm	kg	
150.9357	340,0	120,0	600,0	1,06	

Drain pan 17 litres

- With three carry handles
- Safe and clean pouring with the self-contained overflow edge and spout
- Ideally suited to collecting different fluids
- Suitable for oil, chemicals, petrol, acid and anti-freeze fluid
- Also suitable for cleaning parts
- Practical, quick and friendly to the environment
- Shock and impact resistant





	Ø mm	H mm	kg	
150.9360	445,0	145,0	1,07	



Drain pan 17 litres

- With three carry handles
- Safe and clean pouring with the self-contained overflow edge and spout
- Ideally suited to collecting different fluids
- Suitable for oil, chemicals, petrol, acid and anti-freeze fluid
- Also suitable for cleaning parts
- Practical, quick and friendly to the environment
- Shock and impact resistant





	Ø mm	H mm	kg	
150.9361	445,0	145,0	1,16	



Mobile drain pan, 30 litres, extra flat with castors

- With five carry handles
- 12.0 cm high, extra flat edges
- Safe and clean pouring with the closed contained and spout
- Ideally suited to collecting different fluids
- Suitable for oil, chemicals, petrol, acid and anti-freeze fluid
- Also suitable for cleaning parts
- With four steerable castors
- Practical, quick and friendly to the environment
- Includes removable sieve
- Screwed connection with rubber seal for safe transport
- Shock and impact resistant





	B mm	H mm	L mm	kg	
150.9354	600,0	120,0	850,0	5,60	

Drain pan 55 litres, extra flat

- With four carry handles
- 11.0 cm high, extra flat edges
- Safe and clean pouring with the self-contained overflow edge and spout
- Ideally suited to collecting different fluids
- Suitable for oil, chemicals, petrol, acid and anti-freeze fluid
- Also suitable for cleaning parts
- Practical, quick and friendly to the environment
- Shock and impact resistant
- Polyethylene





	L mm	B mm	H mm	kg	
150.9358	1030,0	724,0	110,0	6,80	

Vacuum fluid extractor suction pump 9.5 litre

- Ideal for quick, clean and simple suction, intake and emptying of fluids
- Suitable for engine oil, transmission oil, hydraulic oil, brake fluid, water etc.
- For pneumatic use with a compressor or manual use with the integrated hand pump
- Select a suitable probe and suck easily using the vacuum principle
- Suction process automatically stopped when housing is full, preventing fluids from spilling over
- With integrated pressure relief valve for more safety
- With high-quality pump housing and strengthened pump head
- Includes 4 probes for different uses
- Ideally suited to hard-to-reach places thanks to the included, long suction hose
- The suction hose is resistant to petrol and oil
- Polyethylene





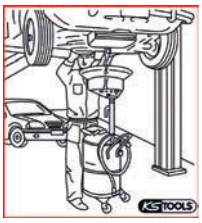
Technical data:

Work pressure:	5-11,5 bar
Capacity:	9,5 l
Operating temperature:	+0 °C to +55 °C
Filling tube length:	1,5 m
Max. flow rate:	125 l/min

			kg	
160.0790	5 pcs	Vacuum fluid extractor suction pump 9.5 litre	5,00	

Mobile oil draining device 60 litre

- Basic unit for old oil capture and re-filling
- Pneumatic pressure emptying with manometer and safety valve
- Emptying takes approximately 3 minutes at 0.8 bar
- Heavy deposits can also be removed via a plate on the underside
- Mobile and connectible container with extra-large plastic wheels
- With carry handle
- Stop cock and clamping screws to release pressure
- Extremely manoeuvrable and ideal for workshop design
- Centrally mounted and height-adjustable round drip pan
- Side filling display with measuring scales
- Includes clear fabric hose for draining





Technical data:

Capacity of container:	60 l
Capacity of catch:	ca,16 l
Collection container dimensions:	490 x 580 x 1040 mm
Collection pan dimensions:	Ø 380 mm
Height adjustment:	1040 - 1700 mm

	l	kg
160.0001	60	32,00

WORKSHOP EQUIPMENT

Mobile cleaning station for small parts

- Mounted metal reservoir with 60 lt tank capacity
- Includes compressed air operated drying pistol
- Cleaning brush with strong bristles
- Emptying of the collecting container by means of pneumatic air
- Includes level indicator display
- Safety valve for the vacuum production and pressure emptying
- High quality 2 m tube and compressed air pistol
- Good maneuverability due to the two solid rubber direct castors
- Storage compartment for small parts
- Includes stop handles
- Especially suitable for use in the car industry
- Ideally suited for removing of stubborn soiling
- Base unit made out of cast iron



Technical data:

Operating pressure:	8,6 bar (125 psi)
Collecting tank:	760 x 525 x 220 mm

	L mm	B mm	H mm	kg
160.0040	490,0	390,0	1040,0	54,00

TRANSMISSION OIL FILLING DEVICE

Syringe for fluid change 0.2 litre

- Ideal tool for decanting, removing or dosing liquids to transmissions, power steering, hydraulics, engines etc.
- Suitable for fuel oil, water and antifreeze
- Fine dosing
- Overflowing material can be pumped back problem-free
- Includes rubber hose
- Robust metal execution





	l	Tube inner Ø mm	Hose external-Ø mm	tube length mm	housing length mm	g
150.1684	0,2	8	10	290	290	365

Syringe for fluid change 0.2 litre

- Ideal tool for decanting, removing or dosing liquids to transmissions, power steering, hydraulics, engines etc.
- Suitable for fuel oil, water and antifreeze
- Fine dosing
- Overflowing material can be pumped back problem-free
- Includes rubber hose with flow stop cap
- Robust PP design



	l	Tube inner Ø mm	Hose external-Ø mm	tube length mm	housing length mm	g
150.9221	0,2	6	8	210	210	245

Syringe for fluid change 1.5 litre

- Ideal tool for decanting, removing or dosing liquids to transmissions, power steering, hydraulics, engines etc.
- Suitable for fuel oil, water and antifreeze
- Fine dosing
- Overflowing material can be pumped back problem-free
- Includes rubber hose with flow stop cap
- Robust PP design





	l	Tube inner Ø mm	Hose external-Ø mm	tube length mm	housing length mm	g
150.9222	1,5	14	16	320	320	900

DSG transmission oil filling hose for VAG

- Ideal for problem-free, simple and clean filling and refilling
- Exact dosing
- For different direct shift gearboxes
- The return valve prevents dirtying from unintentional oil spills
- The oil fill adapter is screwed directly onto the 1 litre oil container tank
- Suitable for many manufacturers and industry standard oil container tanks (VAG G 052 182 A2)
- Robust aluminium connection adapter

Application range: Audi, **Seat**, **Škoda** and **Volkswagen** with DSG transmission





	Transmission thread	tube length mm	g
150.9220	M24x1,5mm	1500	270

CVT transmission oil filling hose for VAG

- Ideal for problem-free, simple and clean filling and refilling
- Exact dosing
- For different stage-free transmission
- The return valve prevents dirtying from unintentional oil spills
- The oil fill adapter is screwed directly onto the 1 litre oil container tank
- Suitable for many manufacturers and industry standard oil container tanks (VAG G 052 180 A2)
- Robust aluminium connection adapter

Application range: Audi, **Seat**, **Škoda** and **Volkswagen** with CVT transmission (Multitronic)





	Transmission thread	tube length mm	g
150.9223	M22x1,5mm	2000	360

Haldex transmission filling hose for VAG

- Ideal for problem-free, simple and clean filling and refilling
- Exact dosing
- For various Haldex transmissions
- The return valve prevents dirtying from unintentional oil spills
- The oil fill adapter is screwed directly onto the 1 litre oil container tank
- Suitable for many manufacturers and industry standard oil container tanks (VAG G 055 175 A2)
- Robust aluminium connection adapter

Application range: Audi, **Seat**, **Škoda** and **Volkswagen** with Haldex transmission





	Transmission thread	tube length mm	g
150.9224	M10x1,0mm	2000	260

DSG transmission oil filing hose for Audi

- Ideal for problem-free, simple and clean filling and refilling
- Exact dosing
- For different direct shift gearboxes
- The return valve prevents dirtying from unintentional oil spills
- The oil fill adapter is screwed directly onto the 1 litre oil container tank
- Suitable for many manufacturers and industry standard oil container tanks (VAG G 052 529 A2)
- Robust aluminium connection adapter

Application range: Audi (>2008) with DSG transmission





	Transmission thread	tube length mm	g	
150.9229	M24x1,5mm	2000	360	

Universal transmission oil filling system set incl. 15 piece adapter set

- Ideal for filling transmission, distributor transmission and differentials of different vehicle manufacturers with oil
- Large coverage of many vehicle manufacturers in particular with universal adapter
- Many transmission cannot be filled without this tool
- Optimal for narrow places or hard-to-reach places
- Includes 15 piece adapter set with various angle tails for correct and economic filling
- Quick filling by unscrewing the pump units is possible
- Precise hand pump
- Includes return flow function
- For difficult to access areas
- Secure stand thanks to large base
- Container with filling level scale
- Easy to use and saves time





Technical data:

Capacity:	6 l
Tube length:	2000,0 mm
Tube diameter:	1/2"-14 mm
Viscosity:	- SAE 140

			kg	
150.9675	16 pcs	Universal transmission oil filling system set incl. 15 piece adapter set	2,90	

consists of:

		kg	
150.9671	Transmission oil filling device with hand pump without an adapter	1,57	
150.9690	Transmission oil filling adapter set 15 pcs	1,30	

Universal transmission oil filling adapter set

- Ideal for filling transmission, distributor transmission and differentials of different vehicle manufacturers with oil
- Large coverage of many vehicle manufacturers in particular with universal adapter
- Many transmission cannot be filled without this tool
- Optimal for narrow places or hard-to-reach places
- With various angle tails for correct and economic filling
- For difficult to access areas
- Easy to use and saves time
- Fiberglas
- In durable plastic storage case



			kg	
150.9690	15 pcs	Universal transmission oil filling adapter set	1,30	

consists of:

		g	
150.9672	Fibre glass filling adapter straight for Ford 1/8" - 27 NPT	6	
150.9673	Fibre glass filling adapter 15° angled, Universal	8,5	
150.9674	Fibre glass filling adapter short, 29° angled for VAG	7,5	
150.9676	Fibre glass filling adapter long, 29° angled for VAG and Porsche	8	
150.9677	Fibre glass filling adapter straight for VAG, BMW and Mini M10 x 1.0	4,5	
150.9678	Fibre glass filling adapter for Mercedes gearbox 722.9, M12 x 1.5	7	
150.9679	Fibre glass filling adapter for VAG DSG M24 x 1.5	13	
150.9681	Fibre glass filling adapter for VAG CVT M22 x 1.5	12	
150.9682	Fibre glass filling adapter for Škoda M18 x 1.5	8,5	
150.9683	Fibre glass filling adapter for VAG and Škoda M30 x 1.5	14,5	
150.9684	Fibre glass filling adapter flexible, Universal, 300 mm	7,5	
150.9686	Fibre glass filling adapter straight for Volvo 5/16" - 24 UNF	2,5	
150.9687	Fibre glass filling adapter 90° angled for Toyota and Lexus M18 x 1.5	52,5	
150.9688	Fibre glass filling adapter straight for Nissan and Infinity M8 x 1.0	3,5	
150.9689	Fibre glass filling adapter 90° angled for VW Passat and Tiguan	39	



Universal transmission oil filling system set incl. 20 piece adapter set

- Ideal for filling transmission, distributor transmission and differentials of different vehicle manufacturers with oil
- Large coverage of many vehicle manufacturers in particular with universal adapter
- Many transmission cannot be filled without this tool
- Optimal for narrow places or hard-to-reach places
- Includes 20 piece adapter set with various angle tails for correct and economic filling
- Quick filling by unscrewing the pump units is possible
- Precise hand pump
- Includes return flow function
- For difficult to access areas
- Secure stand thanks to large base
- Container with filling level scale
- Easy to use and saves time





Technical data:

Capacity:	7,5 l
Tube length:	1600,0 mm
Tube diameter:	1/2"-14
Quantity per stroke:	80 cc
Viscosity:	- SAE 140

			kg	
150.9275	21 pcs	Universal transmission oil filling system set incl. 20 piece adapter set	5,06	

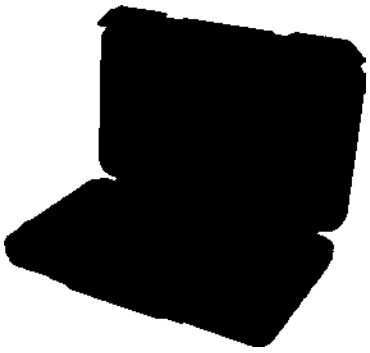
consists of:

		kg	
150.9258	Transmission oil filling device without adapter	3,50	
150.9680	Transmission oil filling adapter set 20 pcs	1,56	



Universal transmission oil filling adapter set

- Ideal for filling transmission, distributor transmission and differentials of different vehicle manufacturers with oil
- Large coverage of many vehicle manufacturers in particular with universal adapter
- Many transmission cannot be filled without this tool
- Optimal for narrow places or hard-to-reach places
- With various angle tails for correct and economic filling
- For difficult to access areas
- Easy to use and saves time
- In durable plastic storage case



			kg	
150.9680	20 pcs	Universal transmission oil filling adapter set	1,56	

consists of:

		g	
150.9261	Filling adapter straight for Ford 1/8" - 27 NPT	43	
150.9262	Filling adapter 15° angled, universal	65	
150.9263	Filling adapter short, 29° angled for VAG	58	
150.9264	Filling adapter long, 29° angled for VAG and Porsche	61	
150.9265	Filling adapter straight for VAG, BMW and Mini M10 x 1.0	33	
150.9267	Filling adapter for Mercedes transmission 722.9, M12 x 1.5	53	
150.9268	Filling adapter for VAG DSG M24 x 1.5	110	
150.9269	Filling adapter for VAG CVT M22 x 1.5	90	
150.9271	Filling adapter for Škoda M18 x 1.5	65	
150.9272	Filling adapter for VAG and Škoda M30 x 1.5	150	
150.9273	Filling adapter flexible, universal, 300 mm	35	
150.9274	Filling adapter straight for Volvo 5/16" - 24 UNF	22	
150.9276	Filling adapter 90° angled for Toyota and Lexus M18 x 1.5	89	
150.9277	Filling adapter straight for Nissan and Infinity M8 x 1.0	25	
150.9278	ATF filling adapter 90° angled for VW Passat and Tiguan	93	
150.9562	Filling adapter for Nissan Juke M12 x 1.25	55	
150.9563	Filling adapter for Mini Cooper M14 x 1.5	52	
150.9564	Filling adapter for Nissan M10 x 1.5	26	
150.9566	Filling adapter for GM M12 x 1.75	52	
150.9567	Filling adapter for Mercedes 725-9G	70	

OILER

Pneumatic tool oil

- For the lubrication of pneumatic tools
- With lockable nozzle



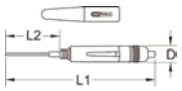


	Content	g	
515.3361	100 ml	250	
515.3362	1000 ml	1100	

Precision oiler

- In ball point pen form
- Practical pocket clip
- Protective cap
- Oil dosage through pushing a button
- Smallest angles and corners reached
- Suitable for a wide range of applications
- Light aluminium housing







	D mm	L1 mm	L2 mm	g	
550.1035	15,0	140,0	50,0	50	

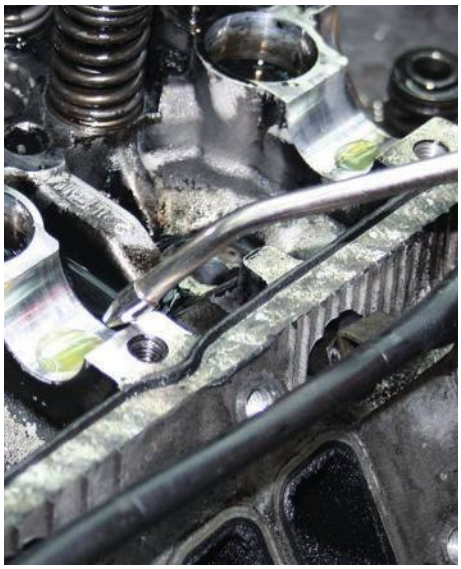
Metal oil can with pump

- The oil can also be supplied by a pressure lever with a single working pump
- The pump station allows for a dosed drip delivery
- The front curved injection pipe (145 mm) is made from aluminium
- With chrome plated pump handle
- 300 ml capacity
- Ergonomic construction
- Red lacquer





	Content	Height mm	Ø mm	g	
150.9204	300	100,0	70,0	220	



GREASE GUN

Mini grease gun

- Grease gun for maintenance work
- Precise, exact dosage per pressure button with return spring
- For tubes
- Includes long, rigid nozzle
- Tube contents 100 g





	Replacement tube	g	
980.1070	980.1075	205	

Mini grease gun set

- Grease gun for maintenance work
- Precise, exact dosage per pressure button with return spring
- For exchangeable cartridges and bucket goods
- Includes long, rigid nozzle and an additional nozzle extension
- Tube contents 110 g





			g	
980.1095	3 pcs	Mini grease gun set	265	

accessories:

		g	
980.1096	Lubricant for mini grease gun,110 g	110	
980.1097	Replacement tip for mini grease gun, 1 mm	1	
980.1098	Extension tube for mini grease gun, 120 mm	20	

Manual lever grease gun with flexible tube

- For cartridges and buckets and/or also for loose grease
- Fill capacity 400g
- Flexible tube
- Mirror polished



	D mm	L mm	kg
980.1010	57,0	370,0	1,30

Single handed grease gun with rigid grease tube

- Perfect single handed usage
- For cartridges and buckets and/or also for loose grease
- Fill capacity 400g
- Rigid grease tube
- Mirror polished



	D mm	L mm	kg
980.1020	57,0	350,0	1,80

Two-hand grease gun

- For working with grease up to NLGI2
- Grease gun piston diameter 10.0 mm
- Quick and easy cartridge replacement
- Clean and complete emptying of the cartridge
- Fill levels can be checked at all times
- Ergonomic anti-slip handle





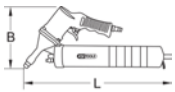
Technical data:

Connection thread:	M10 x 1,0
Operating pressure:	400 bar
Burst pressure system (bar):	850 bar
Burst pressure grease gun head (bar):	1200 bar
NLGI class:	< 2
Output per stroke cm³:	2,10 cm³
Capacity:	500 g

	Total length mm	tube length mm	kg
980.1021	650,0	300,0	1,06

Pneumatic grease gun for stroke by stroke conveyance of grease

- Air exhaust through the handle
- For one handed operation with balanced ergonomic design
- For cartridges and buckets and/or also for loose grease
- Includes flexible hose and nozzle
- Includes 1/4" coupling connector
- Grease feeding: one stroke per trigger actuation





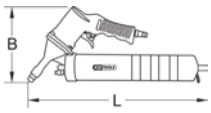
Technical data:

Output pressure:	260 bar
Output per stroke cm³:	1,30
Capacity:	400 g
Air consumption:	170 l/min
Operating pressure:	6,3 bar (90 psi)
Connection thread:	1/4"PT

	B mm	L mm	kg
515.3900	165,0	400,0	1,50

2in1 Pneumatic grease gun for stroke by stroke and constant conveyance of grease

- Air exhaust through the handle
- For one handed operation with balanced ergonomic design
- For cartridges and buckets and/or also for loose grease
- Including nozzle and flexible high-pressure hose
- Includes 1/4" coupling connector
- Adjuster wheel for switching between stroke by stroke and constant greasing
- Grease conveyance: One stroke per trigger operation or constant





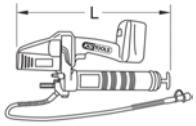
Technical data:

Output pressure:	331 bar
Hauling capacity:	0.62 cm³/min
Capacity:	450 g
Air consumption:	34 l/min
Operating pressure:	6,3 bar (90 psi)
Connection thread:	1/4"PT

	B mm	L mm	kg
515.3925	177,0	420,0	1,43

Cordless grease gun 400 ml

- Handy and ergonomic dual component housing
- For standard grease cartridges or direct filling
- Ideal for heavy greasing with counter pressure
- With flexible 750 mm filling tube
- Carbon brushes interchangeable
- High performance lithium-ion battery
- With a rechargeable battery that can be process up to 15 cartridges
- Longer running time through higher load capacity
- Fast charging function (1 hour)
- Automatic turn off charging station
- In durable plastic storage case





Technical data:

Operating pressure:	420 bar / 42 MPa
NLGI class:	< 2
Grease filling:	75 g / min
Capacity of the unit:	400 ml
No load current:	3 A
Operating current:	2,0 ~ 5,5 A
Charging time:	1 hour
Rechargeable battery:	18 V - 4,0 Ah

	L mm	B mm	H mm	Spare carbon brushes set	Battery pack	Number of Charger batteries		kg
515.3559	237,0	80,0	487,0	515.3596	515.3599	0	0	5,40
515.3560	237,0	80,0	487,0	515.3596	515.3599	1	1	6,70
515.3561	237,0	80,0	487,0	515.3596	515.3599	2	1	7,50

Quick-Lock coupling for grease guns

- Ideal for commercially available manual, battery operated and pneumatic grease guns
- Secure greasing during maintenance work without holding in place
- Uncoupling up to over 690 bar pressure possible
- No grease loss under high load operation
- No spraying when uncoupling
- Simple and secure loosening, even under high pressure through lever actuation
- For all common grease nipple types according to DIN and SAE
- With integrated check valve
- Integrated seal for long service life
- Very low wear
- With 4 hardened tool steel jaws





		Length mm	Height mm	g
980.1108	1/8"PT	74,0	38,0	100

Flexible hose with nozzle

- Made from rubber
- Includes four-jaw nozzle
- For use with the manually operated grease gun



		Total length mm	g	
980.1011	1/8"PT	300,0	60	
980.1012	1/8"PT	500,0	70	

Nozzle

- Made from metal
- Four-jaw nozzle
- For use with the manually operated grease gun



		g	
980.1013	1/8"PT	30	

Nozzle extension

- Made from metal
- Includes four-jaw nozzle
- For use with the manually operated grease gun



		Total length mm	g	
980.1014	1/8"PT	160,0	70	

Grease gun adaptor set

- For standard hand, cordless and pneumatic grease guns
- Adaptor with sliding sleeve for break-proof connection
- Straight and angled grease nipple
- For grease nipples out of steel, brass and stainless steel

Application range: Cone, funnel, ball and flat grease nipples





			kg	
980.1100	7 pcs	Grease gun adaptor set	1,99	

consists of:

		Length mm	g	
980.1101	90° Lubricant adaptor	114,0	150	
980.1102	Tube extension, 300 mm	390,0	240	
980.1103	Straight extension	155,0	230	
980.1104	90° flat nipple adaptor	135,0	160	
980.1105	Rubber grease tip	155,0	150	
980.1106	Needle shaped tip	135,0	143	
980.1107	360° Adaptor, adjustable	185,0	265	

SUCTION AND FILLING HAND PUMPS

Suction and filling bottle

- ideal aid for drip-free filling or extraction of the brake fluid and battery acid
- suitable for brake fluid, battery acid and distilled water
- Resistant to oil, petrol and acid
- With rubber ball and rubber pipe
- Special plastic







	L1 mm	L2 mm	g	
160.0738	245,0	130,0	92	



Battery filler bottle

- Ideal aid for drip-free filling
- Suitable for battery acid and distilled water
- Acid-resistant
- With flexible rubber tube
- Special plastic





		g	
550.1701	1 l	300	

Automatic battery cell filler, 2 litres

- Ideal aid for drip-free filling
- Stops automatically if the optimal filling level is reached
- With automatic closure
- The built-in special valve in the cylinder head automatically stops the flow when the fill level is reached
- Suitable for battery acid and distilled water
- Acid-resistant
- Special plastic





		g	
550.1683	2 l	300	

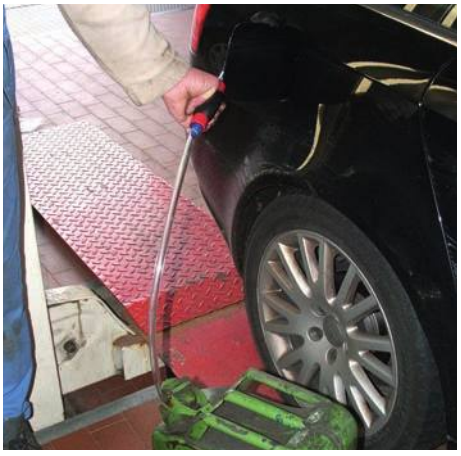
Mini transfer pump

- Ideal tool for refilling in case of emergencies
- Suitable for battery acid, fuels, oils and distilled water
- The hoses are attached to the balloon lifter using the supplied hose clamps
- Special plastic





	Tuba inner Ø mm	tube length mm	g	
150.1665	8,0	2 x 900	320	



Transfer pump

- Ideal aid for easy transferring and pumping
- Suitable for battery acid, fuels, antifreeze, oils and distilled water
- Acid-resistant
- With high quality pump body and reinforced pump handle
- Through a rubber tube can also be used as an air pump
- Includes rubber tubes and reduce piece
- Special plastic





	Tube inner Ø mm	tube length mm	g	
150.1660	12,0	2 x 1.300	465	

Electric suction and transfer pump

- Ideal for bleeding and filling of fluids
- suitable for diesel, engine oil and heating oil
- Suction capacity: Engine oil 0.2 l/min, diesel and heating oil 1.2 l/min
- 12V connection via the crocodile terminals of the vehicle or an external battery
- including 6 mm suction probe
- not suitable for water, gear oil and highly flammable liquids such as petrol, etc.





	Tube inner Ø mm	tube length mm	kg	
150.2800	13	2 x 1.200	1,15	

Syringe for fluid change 0.2 litre

- Ideal tool for decanting, removing or dosing liquids to transmissions, power steering, hydraulics, engines etc.
- Suitable for fuel oil, water and antifreeze
- Fine dosing
- Overflowing material can be pumped back problem-free
- Includes rubber hose
- Robust metal execution





	l	Tube inner Ø mm	Hose external-Ø mm	tube length mm	housing length mm	g	
150.1684	0,2	8	10	290	290	365	

Syringe for fluid change 0.2 litre

- Ideal tool for decanting, removing or dosing liquids to transmissions, power steering, hydraulics, engines etc.
- Suitable for fuel oil, water and antifreeze
- Fine dosing
- Overflowing material can be pumped back problem-free
- Includes rubber hose with flow stop cap
- Robust PP design



	l	Tube inner Ø mm	Hose external-Ø mm	tube length mm	housing length mm	g	
150.9221	0,2	6	8	210	210	245	

Syringe for fluid change 1.5 litre

- Ideal tool for decanting, removing or dosing liquids to transmissions, power steering, hydraulics, engines etc.
- Suitable for fuel oil, water and antifreeze
- Fine dosing
- Overflowing material can be pumped back problem-free
- Includes rubber hose with flow stop cap
- Robust PP design





	l	Tube inner Ø mm	Hose external-Ø mm	tube length mm	housing length mm	g	
150.9222	1,5	14	16	320	320	900	

2 direction suction and filling hand pump

- Ideal for bleeding and filling of fluids
- With ball valve to select between suction and pressure
- Suck and press with every way
- Wear-resistant and temperature resistant
- For difficult to reach openings
- With 2 tubes
- Suction tube clear Ø I x E: 10x16 mm, length 600 mm
- Pressure tube fabric-reinforced Ø I x E: 16x21mm, length 600 mm
- For brake fluid, motor / transmission oil, petrol, diesel, fuel oils, spirit, petroleum, antifreeze etc.
- Robust aluminum piping



	Stroke mm	Length mm	Content	Ø mm	g	
150.9255	208,0	808,0	256	40	662	
150.9256	255,0	855,0	720	60	884	

Dispense hand pump PVC, 1 litre with tube

- For the controlled bleeding and filling of fluids
- Exact dosage per scale
- High suction
- For difficult to reach openings
- For brake fluid, motor / transmission oil, petrol, diesel, fuel oils, spirit, petroleum, antifreeze etc.
- Fabric-reinforced PVC tube
- PVC cylinder



Technical data:

Lift volume:	1,000 ml
Stroke:	420,0 mm
Scale division:	25 ml
Connection thread:	M15x1.5IG

	Ø mm	Length mm	g	
150.9250	60	465,0	931	

PVC Tube

- Fabric-reinforced
- For 150.9250



	Length mm	Inner Ø mm	Outer Ø mm	g	
150.9253	600,0	10,0	16,0	110	

PVC Tube with curved outlet pipe

- For difficult to reach openings
- With wing nut and sealing for locking
- With external thread M15 x 1.5
- Robust, curved aluminum piping
- Fabric-reinforced
- Ideal for use with KS dispense hand pump 150.9250



	Length mm	Ø mm	Bend radius	g
150.9252	750,0	10	120°	125

Metal pipe, flexible with outlet head

- For difficult to reach openings
- With wing nut and sealing for locking
- With external thread M15 x 1.5
- Durable, flexible steel pipe
- Ideal for use with KS dispense hand pump 150.9250

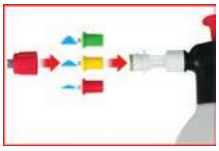


	Length mm	Ø mm	g
150.9251	250,0	10	82

PRESSURE PUMP VAPORISER

Pressure pump foam sprayer (foamer)

- Made from high-quality polyethylene
- Including 3 nozzles for different foam densities
- Ideal for cleaning and disinfecting
- For various chemicals such as detergents, releasing and cleaning fluids
- With safety lever
- Viton® seal





		g
150.8267	1,8	440

Pressure pump vaporiser

- Made from high-quality polyethylene
- For various chemicals such as brake cleaner, detergents, releasing and cleaning fluids etc.
- Adjustable and closable brass spray head
- Viton® seal
- Suitable for overhead work





		g
150.8251	1	250
150.8252	2	330

Pressurised pump vaporiser with carry strap

- Made from high-quality PE plastic
- For various chemicals such as detergents, releasing and cleaning fluids
- With practical carry strap
- Hose length 1.25 m
- Adjustable and lockable stainless steel spray head





		kg
150.8261	5	1,14
150.8262	7	1,38

MEASURING BEAKER, JUG AND FUNNEL

Measuring cup set

- Configuration of practical measuring cup sizes
- For a wide range of uses
- Transparent
- Break-resistant
- Red primed scale division
- Resistant to oil, petrol and acid
- With handle and spout
- PE (polyethylene)

Scales: L/ml, cups, Oz, quart





			g
150.9205	3 pcs	250 - 500 - 1.000 ml	227

Single-use colour mixer with cover

- Single-use colour mixer for mixing all types of paint
- Solvent resistant plastic
- Cover for optimal storage
- With mix scale
- Also suitable for water-based paints



	Material	Colour code	Content	Content	g
500.8056	polypropylene	transparent	400	25	420
500.8057	polypropylene	transparent	650	25	620
500.8058	polypropylene	transparent	1300	25	1100
500.8059	polypropylene	transparent	2240	25	1700

Measuring cup with flexible outlet spout

- For a wide range of uses
- Flexible, funnel-shaped spout allows for a clean drainage
- Suitable for oil, chemicals, petrol, acid, anti-freeze fluid and non-acidic fluids
- Break-resistant
- Steady
- With a graduation scale
- With practical carry handle
- Special plastic



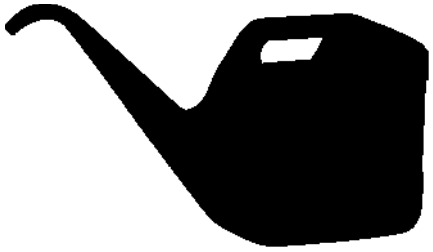


		Spout	g
150.9234	1	150.9236	150
150.9235	2	150.9236	250
150.9001	3	150.9003	310
150.9002	5	150.9003	440

Water can

- For a wide range of uses
- Break-resistant
- With 2 carry handles
- Pouring spout enables clean emptying
- Suitable for water and coolant fluid
- Special plastic





150.9239	9	920



Flexible funnel with aluminium body

- Ideally suited to a clean and control draining of all fluids, e.g. oil, coolant, brake fluid, fuel etc.
- Resistant to petrol, diesel, oil, coolant, hydraulic and brake fluid
- Also suitable as a funnel for filling
- Shape is maintained and can be altered at any time
- Free malleable, therefore can be adapted for extremely tight spaces
- Problems with draining fluids are a thing of the past
- The heavy-duty construction can be fit to any desired shape and used again
- Easy to clean
- Temperature resistance of -34 to +232°C
- Aluminium frame
- Outer skin made from nitrile rubber







	Length mm	Width mm	
150.9303	372,0	170,0	240

Funnel set

- Configuration of practical funnel sizes
- For a wide range of uses
- Red
- Break-resistant
- Resistant to oil, petrol and acid
- Grip strap for convenient use
- HDPE (high density polyethylene)





150.9240	5 pcs	Ø 50 - Ø 75 - Ø 95 - Ø 115 - Ø 150 mm	251

Universal funnel set

- Special flexible funnel for hard-to-reach places
- For a wide range of uses
- With bayonet connection and seal
- Direct connection to the oil fill opening
- No more lengthy and time consuming pouring
- Includes clear hose with sealing plug on the end of the hose
- Grip strap for convenient use
- Reduces loss and dirtying of oily engines
- Special plastic





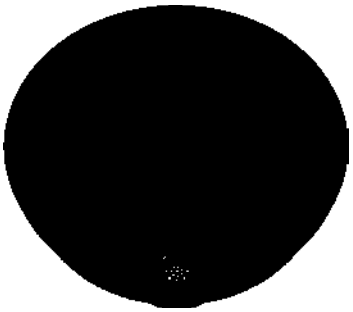
		Ø Tube mm		Ø mm	tube length mm	
150.9230	3 pcs	14x16	1	160	400	240



Polyethylene barrel funnel with sieve

- Ideal for safely filling 200 litre steel barrels with liquids via the 2" bung hole
- On the contoured surfaces cans or filters can be placed to drain
- The funnel volume of 30 litres allows for quick pouring also of large liquid volumes
- With cover and a sieve to collect coarse particles
- Large diameter, barrel remains clean
- High sides, spray protection
- 100% UV-stable polyethylene, does not corrode





		Height mm	Ø mm		
150.9209	30	150,0	590,0	1,70	



PAPER STANDS

Wall bracket for paper cleaning roll

- For all common paper cleaning rolls
- Wide 220-280 mm roll attachment
- Stable steel pipe frame





	Width mm	Height mm	Depth mm		
800.0160	350,0	265,0	230,0	0,93	

Floor stand for paper cleaning roll

- For all common paper cleaning rolls
- Wide roll attachment of max. 300 mm
- Stable steel pipe frame





		kg	
800.0158	350 x 735 x 390 mm	2,14	

MAGNETIC HOLDERS

Metal magnetic holder

- Creates an organised working area
- Positive and safe mounting
- With 2 exceptionally strong magnets (Ø each 80 mm)
- Has reinforcement on the elevated section
- Impact wrench, sockets and a torque wrench can all be left in their set place





	Length mm	kg	
800.0190	390,0	1,46	

Plastic magnetic bowl

- Oblique opening
- For holding screws and other small parts
- Magnetic plate is covered with rubber
- Plastic





	Ø mm	g	
800.0156	150	750	

Stainless steel magnetic tray

- 1 magnet
- For holding screws and other small parts such as wheel nuts
- Magnetic plate is covered with plastic
- Stainless steel





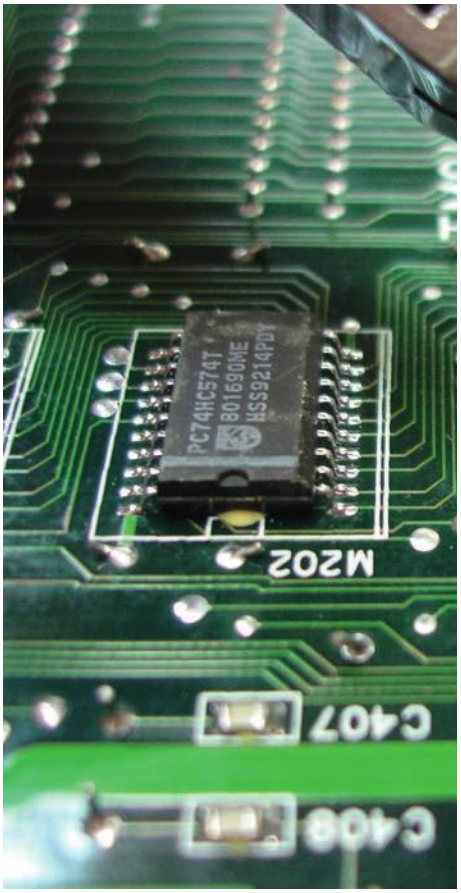
	Ø mm	g	
800.0150	150,0	430	

Stainless steel magnetic tray

- 2 magnets
- For holding screws and other small parts such as wheel nuts
- Magnetic plate is covered with plastic
- Stainless steel



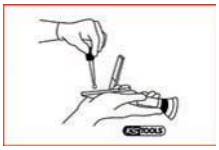
	Length mm	B mm	g	
800.0151	240,0	140,0	850	

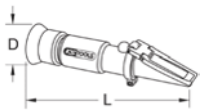


OPTICAL TEST DEVICE

Refractometer - optical tester for battery fluid and antifreeze

- For the quick and accurate testing of acidity in the battery fluid and the antifreeze content
- Can also be used for coolant and windscreen wiper fluid
- Adjustable eye piece with rubber viewing rest
- With automatic temperature compensation (ATC)
- Also suitable in ambient temperatures of less than 10 °C
- Reading correction function by means of bimetallic measurement
- High quality design made from aluminium
- Good readability due to defined dividing lines
- Recalibration possible
- Includes calibration screwdriver and pipette
- In practical plastic case







Technical data:

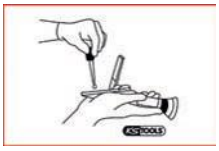
Battery acid:	acid density (measuring range 1.1 to 1.4 kg/l)
Coolant water Propylene:	temperature resistance (measuring range 0° to -50°C)
Coolant water Ethylene:	temperature resistance (measuring range 0° to -50°C)
Windscreen water:	antifreeze (measuring range 0° to -40° C)

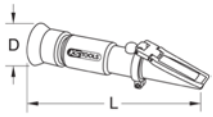
	D mm	L mm	Glass face mm	g	
550.1290	40,0	149,0	40 x 13	630	

Refractometer - optical tester for battery fluid, antifreeze and AdBlue® additives

- For the quick and accurate testing of the acidity of the battery fluid, the antifreeze content and the AdBlue® additives
- Can also be used for coolant and windscreen wiper fluid
- Adjustable eye piece with rubber viewing rest
- With automatic temperature compensation (ATC)
- Also suitable in ambient temperatures of less than 10 °C
- Reading correction function by means of bimetallic measurement
- High quality design made from aluminium
- Good readability due to defined dividing lines
- Recalibration possible
- Includes calibration screwdriver and pipette
- In practical plastic case

*AdBlue® is a registered trademark of the Verband der Automobilindustrie e.V (VDA).







Technical data:

Battery acid:	acid density (measuring range 1.1 to 1.3 kg/l)
Coolant water Propylene:	temperature resistance (measuring range -25° to -50°C)
Coolant water Ethylene:	temperature resistance (measuring range -25° to -50°C)
Windscreen water:	antifreeze (measuring range -10° to -40° C)
For AdBlue® additives (VRA):	urea content (measuring range 30% - 35%)

	D mm	L mm	Glass face mm	g
550.1285	40,0	160,0	40 x 13	480

BARREL PUMP

Chemical barrel pump

- For water soluble, lightly abrasive types such as anti-freeze, mild acids, glass cleaner, soaps and alkalis
- Pump body made from robust PP
- Seal made from NEOP
- Usable for 200 and 220 litre barrels
- For filling measuring jugs, beakers, canisters etc.





Technical data:

Output per stroke cm³:	200,00 cm³
Output per stroke l/min:	20,0 l/min

	Barrel screw connection	Length of suction pipe mm	tube length mm	g
150.8253	G2" a / M64x4	840,0	1350,0	340

Steel pipe barrel pump

- Pump body made from die-cast zinc
- Pump bodies from steel
- All steel parts with galvanised surfaces
- With PVC and NBR seal
- Steel outlet manifold
- For all oils up to SAE90, self-lubricating, non-abrasive types, transmission oil, fuel oil, diesel etc.





Technical data:

Output per stroke cm³:	300,00 cm³
Output per stroke l/min:	16,0 l/min

	Barrel screw connection	Length of suction pipe mm	kg
150.8254	G2" a	480-900	1,73

Hand cylinder, barrel pump

- Pump housing made from die-cast zinc
- Suction tube in two parts, can be adjusted
- For 60/200/220 litre containers
- Seal material NBR
- With flexible OVC exhaust hose
- For oils up to SAE 50, self-lubricating, non-abrasive types such as engine oil, machine oil, cutting oil, undiluted anti-freeze fluid



Technical data:

Output per stroke cm³:	120,00 cm³
Output per stroke l/min:	12,0 l/min

	Barrel screw connection	Length of suction pipe mm	tube length mm	g
150.8255	G2" a / M64x4	1200,0	1000,0	960



Handle barrel pump

- Pump housing made from stable grey cast iron
- With sturdy steel outlet manifold
- Suction pipe adjustable via barrel screw
- For 60/200/220 litre containers
- Seal material NBR
- For filling measuring jugs, beakers, canisters etc.
- For all oils up to SAE90, self-lubricating, non-abrasive types, fuel oil, diesel, petroleum





Technical data:

Output per stroke cm³:	250,00 cm³
Output per stroke l/min:	25,0 l/min

	Barrel screw connection	Length of suction pipe mm	kg
150.8256	G2" a	980,0	4,90

Mobile oil system for drums, 50-60 litres

- ideal for filling transmissions, transfer cases, differentials and planetary hub axles of various vehicle manufacturers with oil
- Optimal for narrow places or hard-to-reach places
- Filler neck with digital display, 2 decimals
- One-man operation
- For mobile use as well as stationary



Technical data:

Work pressure:	5-8 bar
Max. flow rate:	14 l/min
Air consumption:	125 l/min
Readout:	digital
Ø tube	1/2"
Tube length:	4 m

	Length mm	Width mm	Height mm	kg
460.5220	640,0	640,0	1110,0	20,00

Mobile oil system for drums, 180-220 litres

- ideal for filling transmissions, transfer cases, differentials and planetary hub axles of various vehicle manufacturers with oil
- Optimal for narrow places or hard-to-reach places
- Filler neck with digital display, 2 decimals
- One-man operation
- For mobile use as well as stationary



Technical data:

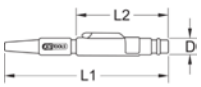
Work pressure:	5-8 bar
Max. flow rate:	14 l/min
Air consumption:	125 l/min
Readout:	digital
Ø tube	1/2"
Tube length:	4 m

	Length mm	Width mm	Height mm	kg	
460.5230	815,0	815,0	1310,0	30,50	

AIR BLOW OUT TOOLS

Compressed blow out pen

- In ball point pen form
- Practical pocket clip
- Controllable air volume
- With 2,5 mm nozzle
- With Euro connection
- Direct air coupling suitable for connection
- Light aluminium housing





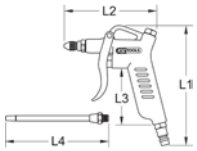
Technical data:

Input pressure:	max. 12 bar
Operating pressure:	max. 6,3 bar (90 psi)
Max. flow rate:	360 l/min
Noise pressure level:	90 dbA
Connection thread:	1/4"PT

	D mm	L1 mm	L2 mm	g	
515.1908	10,0	110,0	70,0	150	

Pneumatic blow out pistol with extension

- Ergonomic handle
- Controllable air volume
- With 2,5 mm nozzle
- Direct air coupling suitable for connection
- Easy to operate
- With hanging hole
- Includes 1/4" coupling connector
- Solid metal base body
- Robust metal housing





Technical data:

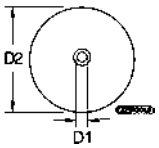
Input pressure:	max. 15 bar
Operating pressure:	max. 6,3 bar (90 psi)
Max. flow rate:	130 l/min
Noise pressure level:	90 dbA
Connection thread:	1/4"PT

	L1 mm	L2 mm	L3 mm	L4 mm	g	
515.1930	125,0	110,0	75,0	125,0	180	

Protective shield for compressed-blowing pistols

- Optimal protection for fluids spraying back or particles when blowing
- Suitable to be attached on the compressed-air blowing pistol
- Ideal for models with 6 mm nozzle diameter
- Stable protection shield made from see-through plastic
- Safe and easy use





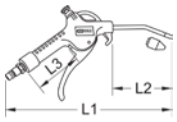


	D1 mm	D2 mm	g	
515.1912	6,0	100,0	50	



Pneumatic blow out pistol with flow regulation

- With universal mouth piece
- Ideal for cleaning and removing of foreign objects
- Ergonomic handle
- Controllable air volume
- With hanging function
- Direct air coupling suitable for connection
- Easy to operate
- Slip proof handle
- Includes 1/4" coupling connector
- Ultra light robust housing special plastic





Technical data:

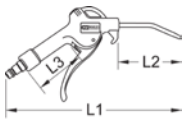
Input pressure:	max. 15 bar
Operating pressure:	max. 6,3 bar (90 psi)
Max. flow rate:	300 l/min
Noise pressure level:	90 dbA
Connection thread:	1/4"PT

	L1 mm	L2 mm	L3 mm	g	
515.1901	235,0	100,0	75,0	150	

Universal pneumatic blow out pistol

- Ideal for cleaning and removing of foreign objects
- Ergonomic handle
- Controllable air volume
- With hanging function
- Direct air coupling suitable for connection
- Easy to operate
- Slip proof handle
- Includes 1/4" coupling connector
- Ultra light robust housing special plastic







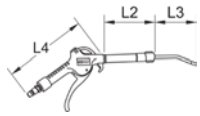
Technical data:

Input pressure:	max. 15 bar
Operating pressure:	max. 6,3 bar (90 psi)
Max. flow rate:	300 l/min
Noise pressure level:	90 dbA
Connection thread:	1/4"PT

	L1 mm	L2 mm	L3 mm	g	
515.1902	235,0	95,0	75,0	170	
515.1903	470,0	330,0	75,0	240	
515.1904	650,0	510,0	75,0	280	

Telescopic pneumatic blow out pistol

- With stepless extendable nozzle
- Telescopic blast pipe in length and angle adjustable 90 - 190 mm / 360°
- Ideal for cleaning and removing of foreign objects
- Ergonomic handle
- Controllable air volume
- With hanging function
- Direct air coupling suitable for connection
- Easy to operate
- Slip proof handle
- Includes 1/4" coupling connector
- Ultra light robust housing special plastic





	L2 mm	L3 mm	L4 mm	g	
515.1907	120,0	90,0	195,0	200	

Pneumatic blow out pistol set

- Ideal for cleaning and removing of foreign objects
- Ergonomic handle
- Controllable air volume
- With hanging function
- Direct air coupling suitable for connection
- Easy to operate
- Slip proof handle
- Includes 1/4" coupling connector
- Ultra light robust housing special plastic



			g	
515.1921	3 pcs	Pneumatic blow out pistol set	690	

consists of:

		g	
515.1902	Air operated blow pistol, 95mm	170	
515.1903	Air operated blow pistol, 330mm	240	
515.1904	Air operated blow pistol, 510mm	280	



THERMOMETER

Rod thermometer

- Controls temperature of air streams through air channels
- Controls the water temperature
- With long and narrow measuring instruments
- Scale with °C and °F measurements





	Length mm	Working range °C	Working range °F	g	
150.1963	210,0	0 - 200	0 - 400	27	

Digital rod thermometer

- Controls temperature of air streams through air channels
- Controls the water temperature
- With long, narrow measuring instruments
- Good readability
- Includes 9V block battery
- Includes hold function
- Includes LCD display





	Length mm	Working range °C	g	
150.1968	125,5	-50 - +150	145	



Thermal imaging camera with UV light

- Compact thermal imaging camera for applications in construction, electrical engineering, mechanical engineering, automotive industry, etc.
- Reliably measure temperature and store images and data for reports
- Accurate readings can be taken from safer distances
- Colour display for the safe evaluation and analysis of temperature conditions
- With a laser pointer for precise positioning
- Three selectable colour palettes for image display: hot iron, rainbow and grey
- Selectable measuring range between Celsius °C or Fahrenheit °F
- Integrated LED lights support working in dark areas
- The integrated UV lamps are ideal for the detection of leaks in cooling or air conditioning systems
- Adjustable automatic switch-off
- Date and time can be set for accurate data acquisition
- Integrated micro USB interface
- On and off switch is also used to protect the camera
- Includes 3xAA batteries
- In durable plastic storage case
- for replacing the silent bearing from the longitudinal control arm and cross control arm on the front and rear axles

Advantages:
- Measure temperatures more accurately
- Result report with integrated images
- Quick fault diagnosis
- Safety and greater distance for the employee

Contents:
- Basic unit
- 2 GB micro SD memory cards
- Batteries 3xAA

Technical data:
- Accuracy: ±1.5% or 1.5°C
- Measurement range: -30°C to 650°C (-22°F to 1202°F)
- Emissivity: 4 pre-set values, user adjustments between ε 0.10 and 1.00 are possible
- Distance-to-spot ratio (D:S): 30:1
- Measurement value resolution: 0.1°C/°F
- Response time: >125 ms
- Spectral range: 8 to 14 µmv
- Laser: a laser cross-hair encircles the area being measured
- Detector: IR-EX™ technology (integrated IR array sensor with CMOS sensor)
- Screen resolution (H x W): 16,384 pixels (128 x 128)
- Field of view (H x W): 30.0°
- Upper range: 650°C
- Thermal sensitivity: 150 mK
- Screen refresh rate: <9 Hz
- Colour range: 3 (iron, rainbow and grey)
- Picture storage format: image in bitmap format (BMP) with temperature and emissivity
- Screen: 1.77" TFT colour screen (pixel resolution 128 x 160)
- Battery: 3 x AA
- Battery life with laser and light: 12 hours
- Memory: 2 GB micro SD card
- Working temperature: 0°C to 50°C (31°F to 122°F)





	Length mm	Width mm	Height mm	g	
150.3220	185,0	54,0	104,0	300	

Infrared thermometer

- Laser pistol for non contact temperature measurement
- Ideally suited for the automotive sector, industrial, and construction usage Chemical and foodsuffs industry
- Laser measuring beam with a red measuring point
- Illuminating Display
- LCD Digital display
- Automatic swiching off
- Includes 9V block battery
- Sturdy plastic housing

Application range: In turning motors, difficult to access places, fluids, under current line directions, in heating appliances, gas and, air-conditioning, coolent systems, brake discs aggressive chemicals and groceries





Technical data:

Switchable:	°C / °F
Working range:	-20°C - 500°C
Emission factor:	adjust to 0.95
Power output max:	1mW
Power requirement:	9V block battery

		g
150.3040	Infrared thermometer	135



AIR PURIFIER

Plasma air-cleaner with ionisator technology

- Eliminates odours and disinfects the interior of the vehicle
- Compact, lightweight, and high ozone emission
- For use in closed passenger compartments
- In odour elimination mode, it switches off automatically after 60 minutes
- In disinfection mode, it automatically switches off after 30 minutes and immediately switches to odour elimination mode for 30 minutes
- Works without chemical additives , guaranteed to leave no residue
- It leaves no traces, even on sensitive surfaces
- Removes mould, bacteria, fungus and mites
- Includes an active carbon HEPA technology replacement filter
- Simple operation





Technical data:

Dimensions:	173x122x49 mm
Battery technologie:	Lithium-ion
Rechargeable battery:	850 mAh
Operational voltage:	DC 12-24V / AC 100-240V / 50/60 Hz
Power consumption:	5 W
Ozone transformation:	5 mg/h
Negative Ion concentration:	3000000 pcs/cm²
Covering scope:	15m²

	Replacement filter	Scented cube	g
550.1183	550.1199	550.1189	360

HEAT GUNS

Heat blow gun set

- High-performance hot-air gun with two supply levels
- Seamless temperature regulation
- Adjustment wheel with marking for 6 temperature settings
- Stand for high up-right assembly
- Includes 4 different replacement nozzles
- Supply level 1: 200-300 l/min (max. 450°C)
- Supply level 2: 350-500 l/min (max. 650°C)
- Temperature settings: 1≈50°C/2≈100°C/3≈200°C/4≈350°C/5≈550°C/6≈650°C

Application range: Removing paint, soldering pipes, shrinking PVS, welding and bending plastics, drying, thawing etc.





			kg
960.1190	5 pcs	Heat blow gun set	1,11

consists of:

		g
960.1191	Heat blow gun	670
960.1192	Broad blast pipe 75 mm	20
960.1193	Reflector blast pipe	20
960.1194	Restrictor 45mm	20
960.1195	Restrictor 14mm	50

Digital heat blow gun set

- High-performance hot-air gun with two supply levels
- Digital seamless temperature regulation
- Includes jig for up-right assembly
- 10 blower levels
- Includes 4 different replacement nozzles
- LCD display
- Power: 2000W
- Supply level 1: 200-300 l/min (max. 450°C)
- Supply level 2: 350-500 l/min (max. 650°C)
- Temperature settings: 1≈50°C/2≈100°C/3≈200°C/4≈350°C/5≈550°C/6≈650°C

Application range: Removing paint, soldering pipes, shrinking PVS, welding and bending plastics, drying, thawing etc.





			g
960.1175	5 pcs	Digital heat blow gun set	850

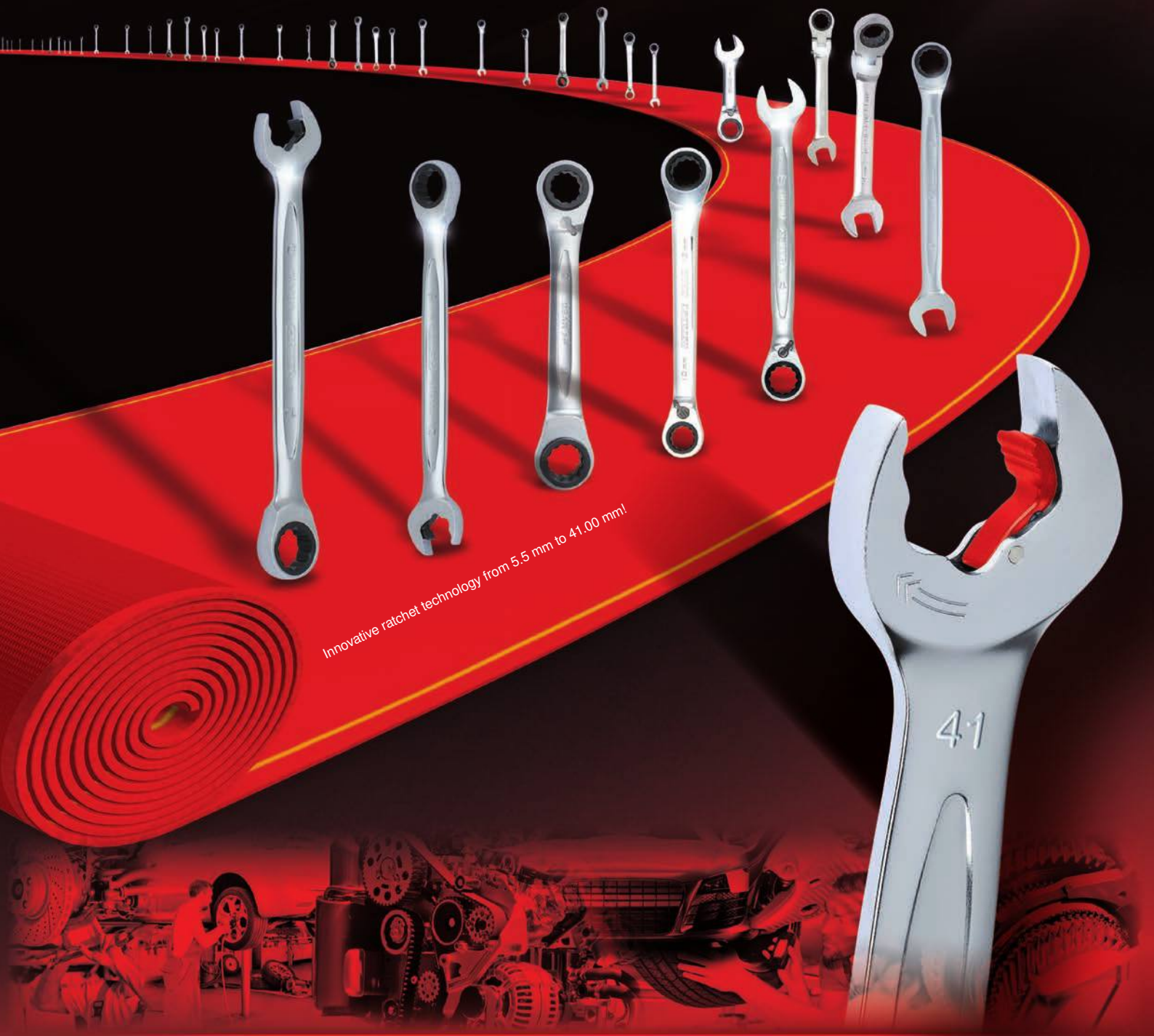
consists of:

		g
960.1176	Heat blow gun, digital	740
960.1192	Broad blast pipe 75 mm	20
960.1193	Reflector blast pipe	20
960.1194	Restrictor 45mm	20
960.1195	Restrictor 14mm	50



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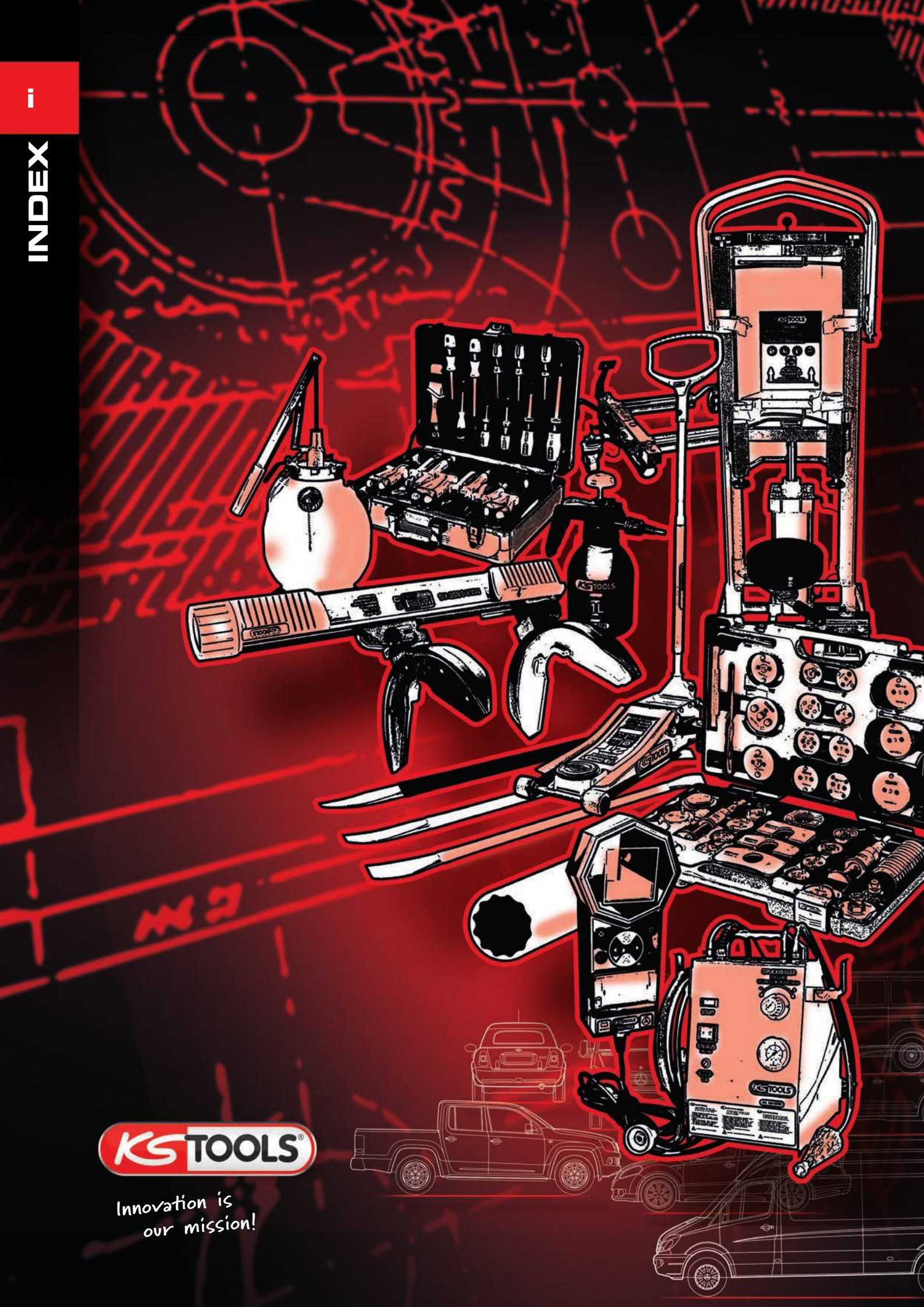


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INDEX



Item	Page
1	
100.1165	723
100.1180	723
100.1182	723
100.1185	724
100.1186	724
100.1187	724
100.1188	724
100.1189	724
100.4005	735
100.4010	735
100.4015	735
100.4020	735
100.4035	643, 721
100.4036	644, 721
100.4037	644, 721
100.4038	643-644, 721
100.4039	643-644, 721
100.4045	735
100.4050	735
100.4055	731
100.4060	731
100.4065	731
100.4070	644, 722
100.4071	644-645, 722-723
100.4075	644, 722
100.4080	643, 721
100.4081	643, 721
100.4085	643, 721
100.4088	643, 721
100.4090	645, 722
100.4091	645, 722
100.4095	645, 722-723
100.5050	733
100.5060	731
100.5065	645, 723
100.5066	645, 723
100.5067	645, 723
100.5070	644, 722
100.5071	645, 722
100.5075	644, 722
100.5076	644, 722
100.5077	644, 722
101.1000	646, 648
101.2000	646
101.5000	646
101.5016	646
101.5022	646
103.5000	646
104.5050	396
105.2000	647
105.3010	647-648
105.3015	647
111.3540	570
111.3550	569
114.0050	569, 650
114.0051	569, 650
114.0150	687
114.0170	687
114.0171	687
115.0570	43
115.0573	43
115.0900	180
115.0901	154, 166, 176, 228
115.0905	586
115.0910	152, 164, 174, 226
115.0911	152, 164, 174, 226
115.0991	498, 583
115.0992	498, 583
115.0993	498, 583
115.0994	130
115.1001	440
115.1002	440
115.1003	440
115.1006	440
115.1007	440
115.1008	179
115.1013	737
115.1014	439
115.1015	737
115.1025	640
115.1026	40
115.1028	439
115.1029	439, 444
115.1031	40
115.1032	40
115.1033	40
115.1034	42
115.1035	42
115.1039	168, 586
115.1040	155, 167, 177
115.1041	176, 178, 228-229
115.1042	170, 178, 226, 229
115.1043	175, 178, 227, 229
115.1044	156, 170, 178, 229
115.1045	155-156, 229
115.1046	175, 178, 227, 229
115.1047	170, 177-178, 229
115.1048	498, 583
115.1049	499, 583
115.1050	168, 177, 587
115.1051	130
115.1052	448
115.1053	168, 177, 587
115.1054	7
115.1055	156, 169, 178, 229
115.1056	168, 177, 587
115.1057	168, 177, 570, 586
115.1059	168, 571, 587
115.1060	169, 178
115.1061	209
115.1062	165, 227
115.1063	166, 227
115.1064	166, 227
115.1065	154, 178, 228-229
115.1067	179
115.1069	229
115.1070	43
115.1071	43
115.1072	43
115.1073	43
115.1074	43
115.1075	43
115.1076	42
115.1077	42
115.1078	42
115.1079	42
115.1080	44
115.1081	44
115.1082	44
115.1083	44
115.1084	44
115.1085	44
115.1086	68, 131
115.1087	68, 131
115.1088	68, 131
115.1089	181, 400
115.1090	180
115.1091	180
115.1092	180
115.1093	180
115.1094	180
115.1095	181, 400
115.1096	68, 131
115.1097	68, 131
115.1098	68, 131
115.1099	180
115.1103	156, 170, 229
115.1104	156, 169, 178, 229
115.1105	40
115.1106	40
115.1113	445
115.1115	443
115.1120	443
115.1125	153, 164, 174, 226
115.1126	153, 164, 174, 226
115.1127	153, 164, 174, 226
115.1151	41
115.1152	41
115.1166	166, 227
115.1167	153, 165, 175, 227
115.1168	154, 166, 176, 228
115.1169	154, 166, 176, 228
115.1171	42
115.1173	154, 165, 175, 227
115.1175	41, 640
115.1176	41, 640
115.1177	42
115.1178	43
115.1179	155, 167, 177
115.1180	45
115.1181	153, 164, 174
115.1182	153, 165, 175
115.1183	165
115.1184	179
115.1185	168, 570, 587
115.1186	169, 570, 587
115.1187	156, 169, 178, 229
115.1188	155, 167, 177
115.1189	155, 167, 176, 229
115.1190	155, 167, 176, 228
115.1191	169, 570, 587
115.1196	40
115.1197	40
115.1198	153, 165, 175, 226
115.1199	156, 170, 229
115.1205	443
115.1210	168, 586
115.1230	442, 487
115.1231	442, 487
115.1235	441
115.1236	441
115.1237	441
115.1241	439
115.1244	439
115.1245	439
115.1249	439
115.1251	440
115.1252	440
115.1254	439
115.1255	443
115.1256	440
115.1260	181, 400
115.1261	181, 400
115.1262	181, 400
115.1263	181, 400
115.1264	181, 400
115.1265	181, 400
115.1266	181, 400
115.1267	181, 400
115.1268	181, 400
115.1269	181, 400
115.1270	181, 400
115.1271	181, 400
115.1272	181, 400
115.1273	181, 400
115.1274	181, 400
115.1275	181, 400
115.1276	181, 400
115.1277	181, 400
115.1278	181, 400
115.1279	181, 400
115.1280	181, 400
115.1281	181, 400
115.1282	181, 400
115.1285	181, 400
115.1295	180, 244
115.1301	217
115.1305	17, 608
115.1306	15, 428
115.1307	429
115.1308	429
115.1309	607
115.1314	439
115.1360	395
115.1361	569, 640
115.1362	569
115.1363	569
115.1366	395
115.1367	395
115.1400	444, 489
115.1401	444
115.1402	444
115.1415	444
115.1416	444
115.1417	444
115.1418	444
115.1419	444
115.1421	444
115.1422	444
115.1423	444
115.1424	444
115.1425	442, 487
115.1430	442, 487
115.1435	442, 488
115.1440	442, 487
115.1445	488
115.1450	442, 487
115.1455	442, 488
115.1460	488
115.1465	488
115.1470	488
115.1475	443
115.1480	444, 488
115.1485	443
115.1490	444, 488
115.1495	442
115.1501	41
115.1502	41
115.1504	41
115.1505	41
115.1506	41
115.1510	444
115.1515	443
115.1520	488
115.1521	488
115.1522	488
115.1570	444
115.1575	444
115.1585	443
115.1590	169, 587
115.1591	168, 571, 587
115.1592	168, 571, 587
115.1593	168, 571, 587
115.1594	168, 571, 587
115.1595	443
115.2006	41
115.2008	43
115.2009	43
115.2013	44
115.2014	44
115.2031	41
115.2032	41
115.2033	41
115.2034	42
115.2035	42
115.2072	40
115.2076	42
115.2077	42
115.2078	42
115.2079	42
115.2112	179
115.3007	209
115.3008	209-210
115.3009	210
115.3011	41
115.3012	41
115.3014	217
115.5010	158, 171, 179
115.5012	158, 171, 179
115.5013	158, 171, 179
115.5014	158, 171, 179
115.5050	157, 171, 179
115.5052	157, 171, 179
115.5053	157, 171, 179
115.5054	157, 171, 179
115.5055	157, 171, 179
115.5057	157, 171, 179
115.5058	157, 171, 179
115.5059	157, 171, 179
115.8504	684
116.1035	16, 129, 614
116.1200	607
116.1400	737
116.1401	737
116.1403	737
116.1404	737
117.0502	470
117.0504	470
117.0506	470
117.0508	470
117.0512	470
117.0514	470
117.0516	470
117.0518	470
117.0522	470
117.0524	470
117.0526	470
117.0528	470
117.0532	470

Item	Page
117.0534	470
117.0536	470
117.0538	470
117.0540	471
117.0541	470
117.0542	470
117.0543	470
117.0544	470
117.0545	470
117.0546	470
117.0550	471
117.0551	470
117.0552	470
117.0553	470
117.0554	470
117.0555	470
117.0556	470
117.0557	470
117.0558	470
117.0581	470
117.0582	470
117.0583	470
117.0584	470
117.0585	470
117.0586	470
117.0587	470
117.0588	470
117.0589	470
117.0591	470
117.0592	470
117.0593	470
117.0594	470
117.0595	470
117.0600	469
117.1001	457, 466
117.1020	463
117.1021	463
117.1022	463
117.1023	463
117.1024	463
117.1025	463
117.1026	463
117.1027	463
117.1028	463
117.1029	463
117.1030	463
117.1031	463
117.1090	463
117.1091	463
117.1092	463
117.1093	463
117.1094	463
117.1095	463
117.1096	463
117.1097	463
117.1100	477
117.1101	480
117.1102	481
117.1103	479
117.1104	478
117.1107	479
117.1108	479
117.1109	479
117.1110	477
117.1111	472
117.1112	472
117.1113	472
117.1114	472
117.1115	475
117.1116	475
117.1117	474
117.1118	474
117.1119	475
117.1120	474
117.1121	474
117.1122	478
117.1123	478
117.1124	478
117.1125	473
117.1126	484
117.1127	484
117.1131	484
117.1132	454
117.1133	454
117.1134	454
117.1148	482
117.1151	468
117.1152	468
117.1153	468
117.1154	468
117.1155	468
117.1156	468
117.1157	468
117.1158	468
117.1159	468
117.1160	477
117.1161	468
117.1162	468
117.1163	468
117.1164	468
117.1165	468
117.1166	468
117.1168	483
117.1169	483
117.1170	477
117.1171	468
117.1172	468
117.1173	468
117.1174	468
117.1175	468
117.1176	468
117.1177	458
117.1178	458
117.1179	458
117.1181	458
117.1182	458
117.1183	483
117.1184	457, 462
117.1185	457
117.1187	469
117.1189	464
117.1190	464
117.1198	475
117.1200	466
117.1201	466
117.1202	467
117.1203	467
117.1204	476
117.1205	467
117.1206	478
117.1207	476
117.1208	467
117.1209	467
117.1210	467
117.1211	467
117.1212	467
117.1213	467
117.1214	467
117.1215	467
117.1216	467
117.1217	467
117.1218	467
117.1219	467
117.1220	467
117.1221	467
117.1222	467
117.1223	467
117.1224	467
117.1225	473
117.1226	467
117.1227	467
117.1228	467
117.1229	467
117.1230	467
117.1231	467
117.1232	467
117.1233	480
117.1234	475
117.1235	458
117.1236	458
117.1237	458
117.1238	458
117.1239	458
117.1240	458
117.1241	458
117.1242	458
117.1243	458
117.1244	458
117.1245	480
117.1246	480
117.1247	458
117.1248	480
117.1249	480
117.1250	457
117.1251	466
117.1252	466
117.1253	457
117.1254	457
117.1255	459
117.1256	481
117.1259	479
117.1260	479
117.1261	479
117.1262	479
117.1264	480
117.1265	484
117.1266	480
117.1268	475
117.1269	479
117.1270	479
117.1271	472
117.1272	472
117.1273	476
117.1274	476
117.1275	472
117.1276	472
117.1277	475
117.1278	472
117.1279	472
117.1280	473
117.1281	473
117.1282	475
117.1283	475
117.1284	475
117.1285	464, 468
117.1286	479
117.1287	479
117.1288	475
117.1289	473
117.1290	474
117.1291	474
117.1292	474
117.1293	474
117.1294	474
117.1295	481
117.1296	481
117.1297	474
117.1298	473
117.1299	474
117.1300	457, 466
117.1301	457, 466
117.1302	457, 466
117.1303	457, 466
117.1304	481
117.1305	481
117.1306	458
117.1307	458
117.1308	458
117.1309	458
117.1310	458
117.1311	458
117.1312	458
117.1313	458
117.1314	458
117.1315	458
117.1316	458
117.1317	458
117.1318	458
117.1319	458
117.1320	482
117.1321	483
117.1322	458
117.1323	484
117.1324	458
117.1325	484
117.1326	482
117.1327	458
117.1328	482
117.1329	482
117.1330	458
117.1331	481
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117.1393	482
117.1394	482
117.1395	482
117.1396	482
117.1397	481
117.1398	455
117.1399	455
117.1400	457, 460
117.1401	460
117.1402	457, 460
117.1403	471
117.1404	460
117.1405	460
117.1406	460
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117.1420	461
117.1451	460

Item	Page
117.1452	460
117.1453	460
117.1454	460
117.1503	423
117.1506	458
117.1507	458
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117.1700	477
117.1701	459
117.1702	459
117.1704	459
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117.1707	459
117.1708	459
117.1709	459
117.1710	477
117.1711	472
117.1712	472
117.1713	473
117.1714	473
117.1715	473
117.1716	474
117.1717	474
117.1718	474
117.1719	475
117.1720	459
117.1721	475
117.1722	475
117.1723	483
117.1725	459
117.1726	459
117.1727	459
117.1728	459
117.1729	459
117.1730	459
117.1731	459
117.1732	459
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117.1743	471
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117.1746	455
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117.1760	477
117.1762	454
117.1765	484
117.1766	485
117.1767	485
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117.1769	486
117.1770	478
117.1771	459
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117.1773	459
117.1774	459
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117.1777	459
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117.1781	459
117.1782	459
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117.1784	485
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117.1789	485
117.1790	485
117.1791	485
117.1792	485
117.1793	485
117.1794	485
117.1795	485
117.1796	454
117.1810-99	492
117.1820-99	492
117.1830-99	492
117.1840	491
117.1850	465, 489
117.1860	469, 491
117.1870	491
117.1872	491
117.1873	478
117.1875	478
117.1876	461, 489
117.1877	461, 489
117.1878	461, 489
117.1881	465, 490
117.1882	465, 489
117.1883	469, 491
117.1885	465, 490
117.1886	465, 490
117.1887	466, 490
117.1888	465, 490
117.1889	466, 490
117.1890	492
117.2000	476
117.2201	476
117.2202	476
117.2203	476
117.2204	476
117.2205	476
117.2206	476
117.2207	476
117.2208	458
117.2209	458
117.2235	470
117.2236	470
117.2237	470
117.2238	470
117.2239	470
117.2251	458
117.2252	458
117.2253	458
117.2254	458
117.2255	458
117.2256	458
117.2257	458
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117.2259	458
117.2261	458
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117.2291	458
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117.2294	458
117.2295	458
117.2296	458
117.2297	458
117.2301	462
117.2302	466
117.2303	455
117.2304	455
117.2305	455
117.2306	455
117.2307	455
117.2308	455
117.2309	455
117.2311	455
117.2313	464
117.2314	464
117.2315	454
117.2316	454
117.2318	485
117.2321	456
117.2322	456
117.2323	456
117.2324	456
117.2341	460
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117.2363	463
117.2364	463
117.2365	463
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117.2367	463
117.2368	463
117.2369	463
117.2371	463

Item	Page
117.2372	463
117.2373	463
117.2374	463
117.2375	463
117.2376	463
117.2377	463
117.2378	463
117.2379	463
117.2381	463
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117.2491	471
117.2492	471
117.3800	462
117.3801	462
117.3802	457, 461
117.3803	457, 461
117.3804	457, 461
117.3805	457, 462
117.3806	457, 461
117.3807	457, 461
117.3808	457, 461
117.3810	457, 462
117.3811	462
117.3812	462
117.3813	463
117.3819	455
117.3820	463
117.3823	462
117.3825	462
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117.3901	482
117.3915	483
117.3916	483
117.3919	459
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117.3921	459
117.3922	457, 462
117.3930	469
117.3931	469
117.3932	469
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117.4221	458
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117.4231	448
117.4232	448
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117.4256	486
117.4257	486
117.4258	486
117.4266	423
117.4267	486
117.4268	486
117.4269	486
117.4270	457
117.4271	457
117.4272	457
117.4273	483
117.4277	478
117.4278	478
117.4279	478
117.4280	480
117.4281	480
117.4282	480
117.4283	480
117.4284	480
117.4285	480
117.4286	480
117.4287	480
118.0010	441
118.0013	441
118.0030	429
118.0031	429
118.0033	429
118.0034	429
118.0045	39
118.0046	39
118.0050	39
118.0051	39
118.0052	39
118.0053	39
118.0055	37
118.0056	37
118.0057	37
118.0058	37
118.0060	441
118.0072	441
118.0073	441
118.0075	734
118.0095	40
118.0096	40
118.0097	40
118.0098	40
118.0105	37
118.0106	37
118.0107	37
118.0108	37
118.0109	37
118.0110	37
118.0111	37
118.0112	37
118.0113	37
118.0114	37
118.0115	37
118.0116	37
118.0117	37
118.0121	37
118.0122	37
118.0123	37
118.0126	37
118.0144	39
118.0145	38
118.0146	38
118.0147	38
118.0148	38
118.0149	38
118.0150	38
118.0151	38
118.0152	38
118.0153	38
118.0160	129
118.0161	129
118.0162	129
119.2051	582
119.2052	582
119.2053	582
119.2054	583
119.2056	582
119.2057	582
119.2058	582
119.2059	583
119.2061	582
119.2062	582
119.2063	582
119.2064	583
120.1003	647
120.1050	647-648
120.2000	647

Item	Page
122.1200	157, 170, 178
122.1201	157, 170-171, 178
122.1202	157, 170-171, 178
122.1203	157, 170-171, 178
122.1204	157, 170-171, 178
122.1215	648
122.1216	648
122.1217	648
122.1218	648
122.1219	648
122.1230	648
122.1231	648
122.1232	648
122.1233	648
122.1234	648
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122.1259	648
122.1260	649
122.1264	648-649
122.1265	648-649
122.1266	648-649
122.1267	648-649
122.1268	648-649
122.1269	649
122.1271	648
122.1272	648
122.1273	648-649
122.1274	648-649
122.1275	648-649
122.1281	648
122.1283	648
122.1285	649
122.1286	649
122.1290	648
122.1295	156, 170, 178, 646
122.1296	156, 170, 178, 646
122.1297	156, 170, 178, 646
122.1300	649
122.1301	649
122.1302	649
122.1303	649
122.1304	649
122.1305	649
122.1306	649
122.1315	648
122.1316	648
122.1317	648
129.2222	17
129.3740	40
129.3742	40
129.3744	40
129.3746	40
129.3750	40
129.3752	40
129.3754	40
129.3756	40
130.0122	403
130.0222	403
130.0300	403
130.1000	216
140.1003	619
140.1004	608, 618
140.1005	608, 618
140.1006	617, 619
140.1007	619
140.1008	619
140.1009	619
140.1010	619
140.1015	608, 618
140.1020	14, 618
140.1021	14, 617-618
140.1040	617
140.1060	618
140.1065	617
140.1215	31
140.1230	31
140.1234	31
140.1235	31
140.1236	31
140.1237	31
140.1245	29
140.1246	29
140.1247	29
140.1248	29
140.1249	29
140.1251	29
140.1252	29
140.1253	29
140.2080	28
140.2083	28
140.2084	28
140.2085	28
140.2086	28
140.2087	28
140.2096	35
140.2100	31
140.2101	34
140.2102	35
140.2103	34
140.2104	34
140.2105	32
140.2106	32
140.2107	32
140.2108	32
140.2109	29
140.2110	33
140.2111	33
140.2112	31, 33
140.2113	34
140.2114	31, 34
140.2115	31, 33
140.2116	31, 34
140.2117	34
140.2118	34
140.2119	31, 34
140.2120	34
140.2121	29
140.2125	31
140.2129	28
140.2130	30
140.2131	30
140.2132	30-31
140.2133	29, 31
140.2134	30
140.2135	30
140.2136	30
140.2137	30-31
140.2138	29
140.2139	30-31
140.2141	35
140.2142	35
140.2144	35
140.2145	19
140.2146	35
140.2147	137
140.2149	35
140.2150	33
140.2151	32
140.2162	19
140.2163	35
140.2164	35
140.2165	19
140.2167	35
140.2175	37
140.2178	138, 625, 641
140.2180	15
140.2181	15
140.2182	15
140.2183	15
140.2184	15
140.2185	15
140.2186	15
140.2187	15
140.2188	15
140.2189	15
140.2190	15
140.2191	15
140.2192	15
140.2193	15
140.2194	15
140.2198	23
140.2199	138, 625
140.2200	31
140.2202	131, 612
140.2204	30-31
140.2205	616-617
140.2206	616-617
140.2207	616
140.2208	129
140.2209	30-31
140.2210	616-617
140.2211	616-617
140.2212	616
140.2213	616-617
140.2214	616
140.2215	616-617
140.2216	16, 607
140.2217	16, 607
140.2218	16, 607
140.2220	617, 623
140.2222	135, 747
140.2223	69
140.2224	69
140.2225	134, 611, 746
140.2226	135, 611, 746
140.2227	135, 611, 747
140.2229	612
140.2231	617
140.2232	69
140.2233	612-613
140.2234	612-613
140.2235	612-613
140.2236	613
140.2237	613
140.2238	616
140.2239	614
140.2240	613
140.2241	614, 617
140.2244	614
140.2245	616
140.2248	614
140.2249	69, 131
140.2250	616
140.2252	617-618
140.2253	613
140.2254	135, 747
140.2255	617-618
140.2256	617-618
140.2261	617-618
140.2263	617-618
140.2267	615
140.2268	615
140.2269	615
140.2270	615
140.2271	615
140.2272	615
140.2273	615
140.2274	615
140.2275	615
140.2276	615
140.2277	615
140.2278	615
140.2279	130
140.2282	211, 230, 622
140.2284	614
140.2285	612
140.2286	211, 230, 622
140.2288	211, 230, 622
140.2290	614
140.2291	614
140.2292	615
140.2293	615
140.2294	615
140.2295	615
140.2296	615
140.2297	615
140.2298	615
140.2299	615
140.2300	63
140.2301	62-63
140.2302	62-63
140.2303	62-63
140.2304	62-63
140.2305	62-63
140.2306	131
140.2307	62
140.2308	62
140.2309	617
140.2310	63
140.2311	63
140.2313	63
140.2315	63
140.2316	63
140.2317	63
140.2318	63
140.2319	30-31
140.2320	607
140.2321	606-607
140.2322	606-607
140.2323	606-607
140.2324	606-607
140.2325	69
140.2326	605
140.2327	138, 625
140.2328	129
140.2329	130, 612
140.2331	617
140.2334	617
140.2335	617
140.2336	617
140.2340	615
140.2341	615
140.2350	136, 748
140.2351	131, 612
140.2352	131, 612
140.2353	616-617
140.2356	614
140.2357	614
140.2358	614
140.2359	605
140.2360	617
140.2365	609
140.2366	608-609
140.2367	608-609
140.2368	608-609
140.2370	69, 131
140.2371	68-69, 131
140.2372	68-69, 131
140.2373	68-69, 131
140.2374	69, 131
140.2375	69, 131
140.2376	69, 131
140.2378	129
140.2380	61
140.2381	61
140.2382	136, 748
140.2383	136, 748
140.2384	135, 748
140.2400	25
140.2404	26
140.2405	25
140.2410	25
140.2415	25
140.2420	25
140.2425	25
140.2430	25
140.2435	25
140.2436	26
140.2440	25
140.2445	26
140.2450	26
140.2455	23, 26
140.2456	23
140.2460	26
140.2461	30
140.2462	26
140.2465	26
140.2469	26
140.2470	27
140.2475	29
140.2476	29, 33
140.2477	29, 33
140.2478	29, 34

Item	Page
140.2479	29, 34
140.2480	28
140.2481	28
140.2482	28
140.2483	28
140.2484	28
140.2485	28
140.2486	28
140.2487	28
140.2488	28
140.2489	28
140.2490	27
140.2491	27
140.2492	27
140.2493	27
140.2494	27
140.2495	27
140.2496	27
140.2497	27
140.2498	27
140.2499	27
140.2501	27-28
140.2505	28
140.2510	27
140.2511	27-28
140.2515	28
140.2520	28
140.2521	27-28
140.2522	28
140.2523	28
140.2525	28
140.2530	619
140.2531	27-28
140.2532	619
140.2533	619
140.2535	28
140.2536	619
140.2537	619
140.2541	27-28
140.2542	10-12, 14
140.2543	10-11
140.2545	28
140.2546	10-11
140.2548	10-11
140.2550	11
140.2551	27-28
140.2552	11
140.2553	10
140.2554	10-11
140.2555	28
140.2556	10-11
140.2557	11
140.2558	10-11
140.2559	11
140.2560	13
140.2561	27-28
140.2562	12, 14
140.2563	12, 14
140.2564	12, 14
140.2565	28
140.2566	12, 14
140.2567	12, 14
140.2568	13-14
140.2569	13-14
140.2571	27-28
140.2572	13-14
140.2573	13-14
140.2574	13-14
140.2575	28
140.2576	11, 14
140.2577	12, 14
140.2578	10
140.2579	11
140.2581	27-28
140.2582	11
140.2585	28
140.2591	27-28
140.2595	28
140.2597	27
140.2598	27
140.2599	27
140.2600	9
140.2601	9
140.2602	9
140.2605	62
140.3010	35
140.3011	35
140.3012	35
140.3016	36
140.3017	36
140.3019	36
140.3065	58
140.3066	58
140.3067	58
140.3068	58
140.3090	36
140.4003	29
140.5201	32
140.5202	32
140.5211	32
140.5212	32
140.5221	31, 719
140.5222	31, 719
140.5223	31, 719
140.5245	29
140.5246	29
140.5247	29
140.5248	29
140.5249	29
140.5250	29
140.5251	29
140.5252	32, 720
140.5253	29
140.5254	32, 720
140.5255	32, 720
140.5256	32, 720
140.5257	32, 720
140.5258	32, 720
140.5259	32, 720
140.5261	29
140.5262	29
140.5263	29
140.5264	29
140.5265	29
140.5270	32, 719
140.5271	32, 719
140.5272	32, 719
140.5273	32, 719
140.5274	32, 719
140.5275	32, 719
140.5276	32, 719
140.5277	32, 719
140.5290	28
140.5291	28
140.5292	28
140.5293	28
140.5294	28
140.5295	28
140.5296	29
141.6000	448
141.6001	448
141.6010	448
144.0622	57
144.0624	57
144.0625	57
144.0626	57
144.0628	57
144.0631	57
144.0632	57
144.0633	57
144.0634	57
149.0100	729
149.0200	729
149.1001	724
149.1002	724, 729
149.1003	724, 729
149.1004	725, 729
149.1005	725, 729
149.1006	725, 729
149.1007	725
149.1008	725, 729
149.1009	725, 729
149.1010	725, 729
149.1011	725, 729
149.1012	726, 729
149.1013	726, 729
149.1014	726, 729
149.1015	726, 729
149.1016	726, 729
149.1017	726, 729
149.1018	726, 729
149.1019	726, 729
149.1020	726, 729
149.1021	727
149.1022	727
149.1023	727, 729
149.1024	727
149.1025	727
149.1026	727, 729
149.1027	727, 729
149.1028	728-729
149.1029	728-729
149.1030	728-729
149.1031	728
149.1032	729
149.1033	729
149.1035	729
149.1036	729
150.0501	206
150.0502	206
150.0503	206
150.0504	206
150.0505	206
150.0506	206
150.0507	206
150.0508	206
150.0509	206
150.0510	206
150.0511	206
150.0512	206
150.0513	206
150.0514	206
150.0515	206
150.0521	206
150.0522	206
150.0523	206
150.0524	206
150.0525	206
150.0909	207
150.0918	208
150.0919	208
150.0924	208
150.0925	424
150.0926	424
150.0927	424
150.0928	424
150.0929	424
150.0930	428
150.0931	428
150.0932	428
150.0933	425
150.0934	424
150.0935	428
150.0936	425
150.0937	425
150.0938	424
150.0941	210
150.0945	210
150.0950	427
150.0951	427-428
150.0952	427-428
150.0953	427
150.0954	427
150.0955	427
150.0956	427
150.0957	427
150.0958	427
150.0959	427
150.0960	444
150.0961	427
150.0962	427
150.0963	427
150.0964	427
150.0965	427
150.0966	427
150.0967	427
150.0968	427
150.0969	427
150.0970	444
150.0971	427
150.0972	427
150.0973	427
150.0974	427
150.0975	427
150.0976	427
150.0977	427
150.0990	425
150.0991	425
150.0992	425
150.0993	425
150.0994	425
150.0995	425
150.0997	425
150.0999	422
150.1020	664
150.1021	665
150.1022	665
150.1023	664-665
150.1026	664-665
150.1035	8
150.1036	8
150.1037	8
150.1051	8-9
150.1052	8-9
150.1053	9
150.1055	9
150.1057	8-9
150.1058	9
150.1059	9
150.1061	9
150.1070	735
150.1071	735
150.1072	735
150.1073	735
150.1074	735
150.1075	735
150.1100	209
150.1101	209
150.1103	209
150.1104	209
150.1105	209
150.1106	209
150.1107	209
150.1108	209
150.1109	209
150.1110	209
150.1111	209
150.1112	209-210
150.1113	209
150.1114	209
150.1115	209
150.1116	209
150.1117	209
150.1118	209
150.1119	209
150.1120	209
150.1121	209
150.1122	209
150.1124	209
150.1125	568
150.1126	568
150.1127	568
150.1128	568
150.1129	568
150.1130	216
150.1131	215-216
150.1132	215-216
150.1133	215
150.1134	215
150.1135	208
150.1140	208
150.1141	217
150.1142	217
150.1143	217
150.1144	217
150.1150	217
150.1151	217
150.1152	217
150.1153	217
150.1154	217
150.1155	217
150.1156	217
150.1157	217
150.1160	208
150.1165	216
150.1170	200
150.1173	200
150.1175	216
150.1176	216
150.1177	216

Item	Page
150.1179	217
150.1180	217
150.1181	217
150.1182	642
150.1183	642
150.1185	217
150.1186	217
150.1190	217
150.1191	217
150.1195	217
150.1196	217
150.1200	282, 386
150.1201	282, 386
150.1202	282, 386
150.1203	282, 386
150.1204	282, 386
150.1205	282, 386
150.1206	282, 386
150.1207	282, 386
150.1208	282, 386
150.1209	282, 386
150.1210	208
150.1211	208
150.1213	282, 386
150.1214	282, 386
150.1216	282, 386
150.1217	282, 386
150.1218	282, 386
150.1219	282, 386
150.1221	282, 386
150.1222	282, 386
150.1223	282, 386
150.1226	282, 373
150.1227	294, 312, 350, 373
150.1228	282, 373
150.1229	283, 294
150.1231	430
150.1232	430
150.1233	283, 294
150.1234	283, 312, 350
150.1236	283, 312, 350
150.1237	283, 294
150.1238	283, 351
150.1239	283, 351
150.1240	397
150.1241	397
150.1242	397
150.1244	285, 294
150.1245	394
150.1247	435
150.1248	436-438
150.1249	436, 438
150.1252	285, 351
150.1253	308
150.1254	329
150.1256	437
150.1257	436, 438
150.1259	374
150.1261	436, 438
150.1262	436-438
150.1263	435, 437-438
150.1264	432, 437-438
150.1265	431, 437-438
150.1266	434
150.1267	434, 437-438
150.1268	431, 437-438
150.1269	433, 437-438
150.1270	435
150.1271	436
150.1272	436
150.1273	433, 438
150.1275	432, 438
150.1276	433, 438
150.1280	264
150.1281	264
150.1282	264
150.1283	264
150.1284	264
150.1285	433, 438
150.1287	434, 438
150.1288	432
150.1289	432, 438
150.1290	435
150.1291	436
150.1292	436
150.1299	430, 437-438
150.1302	373
150.1303	149, 286, 350
150.1304	149, 287, 350
150.1305	206
150.1305-21	206
150.1305-22	206
150.1305-23	206
150.1305-24	206
150.1305-25	206
150.1306	373
150.1307	149, 286, 350
150.1308	149, 287, 350
150.1309	525
150.1330	203
150.1335	730
150.1336	730
150.1337	730
150.1338	730
150.1339	730
150.1340	585, 729
150.1345	585, 730
150.1355	730
150.1357	730
150.1358	730
150.1359	730
150.1361	259
150.1371	202
150.1373	202
150.1375	202
150.1379	202
150.1381	202
150.1385	202
150.1386	202
150.1387	202
150.1388	202
150.1389	202
150.1390	202
150.1391	202
150.1392	202
150.1393	202
150.1394	202
150.1395	202
150.1404	507, 509, 663-664
150.1405	507, 509, 663-664
150.1406	507, 509, 663-664
150.1407	507, 509, 663-664
150.1408	507, 509, 663-664
150.1409	507, 509, 663-664
150.1410	138, 219, 290, 543
150.1415	508-509, 663-664
150.1416	508-509, 663-664
150.1417	508-509, 663-664
150.1419	730
150.1420	730
150.1421	730
150.1422	730
150.1423	730
150.1424	730
150.1425	730
150.1426	508-509, 663-664
150.1427	508-509, 664
150.1428	730
150.1429	508-509, 663-664
150.1430	584-585, 730
150.1433	508-509, 663-664
150.1434	508-509, 663-664
150.1435	584
150.1436	508-509, 663-664
150.1437	506, 509, 664
150.1438	508-509, 663-664
150.1439	508-509, 663-664
150.1440	664-665
150.1441	508-509, 663-664
150.1442	508-509, 663-664
150.1443	508-509, 663-664
150.1444	508-509, 663-664
150.1445	508, 664
150.1446	508-509, 663-664
150.1447	686
150.1448	686
150.1449	686
150.1450	686
150.1451	686
150.1452	686
150.1453	686
150.1454	686
150.1455	686
150.1456	686
150.1457	686
150.1458	686
150.1459	686
150.1461	686
150.1462	686
150.1463	686
150.1464	686
150.1465	686
150.1466	394, 584, 730
150.1467	394, 584, 733
150.1470	394, 584, 730
150.1471	394, 584, 730
150.1472	394, 584, 730
150.1473	394, 584, 730
150.1474	394, 584, 730
150.1475	394, 584, 730
150.1476	394, 584, 730
150.1477	394, 584, 730
150.1478	394, 584, 730
150.1480	413, 426
150.1484	686
150.1485	684
150.1486	684
150.1487	684
150.1488	684
150.1489	684
150.1490	684
150.1492	684
150.1493	684
150.1494	684
150.1495	413, 425
150.1496	686
150.1497	686
150.1498	686
150.1499	686
150.1500	395
150.1505	395
150.1506	252
150.1507	252
150.1510	395
150.1515	395
150.1516	259
150.1517	259
150.1520	395
150.1522	397
150.1523	397
150.1524	397
150.1525	395
150.1526	730
150.1527	730
150.1528	397
150.1529	397
150.1530	395
150.1531	397
150.1535	394
150.1540	395
150.1541	684
150.1542	684
150.1543	684
150.1545	395
150.1546	395
150.1547	395
150.1548	395
150.1549	395
150.1560	394
150.1569	137
150.1570	138, 625
150.1571	245
150.1575	252
150.1576	252
150.1577	252
150.1578	252
150.1579	252
150.1580	189, 245
150.1581	190, 245
150.1582	190, 245
150.1584	190, 245
150.1585	684
150.1586	684
150.1587	684
150.1588	684
150.1594	190, 245
150.1595	190, 245
150.1596	190, 245
150.1597	190, 245
150.1598	190, 245
150.1599	190, 245
150.1600	568
150.1601	7
150.1602	568
150.1605	15
150.1608	577
150.1609	15
150.1611	16
150.1612	16
150.1613	16
150.1614	16
150.1615	16
150.1616	16
150.1617	16
150.1618	16
150.1619	16
150.1620	16
150.1621	16
150.1622	16
150.1623	16
150.1624	16
150.1625	16
150.1626	16
150.1627	568
150.1628	15
150.1630	16
150.1635	567
150.1640	568
150.1642	567
150.1645	138, 218, 290, 543
150.1650	221
150.1650-1	221
150.1650-10	221
150.1650-2	221
150.1650-3	221
150.1650-4	221
150.1650-5	221
150.1650-6	221
150.1650-7	221
150.1650-8	221
150.1650-9	221
150.1653	221
150.1654	222
150.1655	423
150.1656	222
150.1657	222
150.1659	222
150.1660	160, 412, 700, 767
150.1661	190
150.1662	222
150.1665	190, 412, 699, 766
150.1667	426-427
150.1668	426-427
150.1669	426, 428
150.1670	423
150.1672	426-428
150.1673	426-428
150.1674	426-428
150.1675	426
150.1676	426-428
150.1677	426-428
150.1678	426-428
150.1679	426-428
150.1680	222
150.1680-1	222
150.1680-10	222
150.1680-11	222
150.1680-12	222
150.1680-13	222
150.1680-2	222
150.1680-3	222
150.1680-4	222
150.1680-5	222
150.1680-6	222
150.1680-7	222
150.1680-8	222
150.1680-9	222
150.1682	222
150.1683	222
150.1684	160, 699, 762, 767

Item	Page
150.1685	16, 129, 614
150.1686	16, 129, 614
150.1687	16, 129, 614
150.1688	16, 129, 614
150.1689	16, 129, 614
150.1690	139, 219, 544, 625
150.1691	7
150.1692	222
150.1693	222
150.1694	222
150.1695	138, 219, 290, 544
150.1695-1	139, 219, 290, 544
150.1695-2	139, 219, 290, 544
150.1695-3	139, 219, 290, 544
150.1695-4	139, 219, 290, 544
150.1695-5	139, 219, 290, 544
150.1695-6	139, 219, 290, 544
150.1696	222
150.1697	222
150.1698	222
150.1701	579
150.1702	579
150.1703	578
150.1704	578
150.1705	578
150.1706	578
150.1707	578
150.1708	578
150.1709	578
150.1710	578
150.1711	578
150.1712	575
150.1713	585
150.1716	497
150.1717	497, 524, 580
150.1718	497
150.1719	578
150.1720	497, 525, 580
150.1724	579
150.1725	497, 525, 580
150.1730	497, 525, 580
150.1735	497, 525, 580
150.1740	497, 525, 580
150.1745	424
150.1750	578
150.1755	422
150.1761	16
150.1780	221
150.1781	221
150.1782	221
150.1783	221
150.1784	221
150.1785	221
150.1786	221
150.1787	221
150.1788	221
150.1789	221
150.1820	533, 572
150.1821	532-533, 571-572
150.1822	533, 571-572
150.1825	235
150.1826	235
150.1827	235
150.1828	235
150.1829	235
150.1831	235
150.1832	235
150.1833	235
150.1834	235
150.1835	190, 245
150.1836	190, 245
150.1837	190, 245
150.1843	235
150.1844	235
150.1845	189
150.1846	189
150.1847	189
150.1848	189
150.1849	189
150.1850	585
150.1851	189
150.1852	189
150.1853	189
150.1854	189
150.1855	189
150.1856	189
150.1857	189
150.1858	189
150.1859	189
150.1860	190
150.1861	190
150.1862	190
150.1864	190
150.1865	190
150.1866	190
150.1867	190
150.1868	190
150.1869	190
150.1870	190
150.1871	190
150.1872	190
150.1873	190
150.1874	190
150.1875	190
150.1876	235
150.1877	235
150.1894	234
150.1895	533
150.1896	235
150.1897	533
150.1898	533
150.1900	233, 654
150.1901	233, 654
150.1902	233, 654
150.1903	233, 654
150.1904	233, 654
150.1905	233, 654
150.1906	233, 654
150.1907	233, 654
150.1910	147, 220
150.1911	147, 220
150.1912	147, 220
150.1913	147, 220
150.1914	147, 220
150.1915	147, 220
150.1916	144, 147, 220
150.1917	144, 147, 220
150.1918	144, 147, 220
150.1920	220, 233
150.1920-1	220, 233
150.1920-10	220, 233
150.1920-2	220, 233
150.1920-3	220, 233
150.1920-4	220, 233
150.1920-5	220, 233
150.1920-6	220, 233
150.1920-7	220, 233
150.1920-8	220, 233
150.1920-9	220, 233
150.1921	220, 233
150.1922	220, 233
150.1923	233
150.1925	630
150.1926	630
150.1927	630
150.1930	147
150.1931	144, 147
150.1932	144, 147
150.1933	144, 147
150.1935	649
150.1940	147
150.1941	146-147
150.1942	145, 147
150.1943	146-147
150.1944	146-147
150.1945	145, 147
150.1946	145, 147
150.1947	146-147
150.1948	146-147
150.1949	146-147
150.1950	145, 147
150.1951	145, 147
150.1952	146-147
150.1953	145, 147
150.1954	145, 147
150.1955	145
150.1956	146
150.1957	144
150.1958	146
150.1960	143, 147
150.1961	143, 147
150.1962	147
150.1963	147, 151, 401, 773
150.1964	629-630
150.1965	629
150.1966	629
150.1967	630
150.1968	151, 401, 773
150.1970	632
150.1971	632
150.1972	632
150.1973	632
150.1974	632
150.1975	632
150.1976	632
150.1978	632-633
150.1979	633
150.1980	633
150.1981	632-633
150.1982	632
150.1984	633
150.1985	632
150.1986	632
150.1987	632
150.1988	632
150.1989	632
150.1993	632
150.1994	145
150.2000	631
150.2001	629-632
150.2002	630-631
150.2003	630-632
150.2004	630-632
150.2005	630-632
150.2006	630-632
150.2007	629-632
150.2008	630-632
150.2009	630-632
150.2010	630-631
150.2011	630-631
150.2012	630-631
150.2013	630-632
150.2014	631-632
150.2015	630
150.2016	630-632
150.2017	630-631
150.2018	630-631
150.2019	630-632
150.2021	733
150.2022	723, 733
150.2023	710
150.2024	734
150.2025	734
150.2027	733
150.2028	733
150.2029	404, 723, 733
150.2030	631
150.2031	723, 733
150.2032	734
150.2033	733
150.2034	631-632
150.2035	630
150.2036	628, 630-632
150.2037	631-632
150.2038	631-632
150.2039	629-631
150.2040	414, 426
150.2042	632
150.2044	147
150.2048	631-632
150.2051	631-632
150.2052	631-632
150.2053	631-632
150.2054	631
150.2056	628
150.2057	628
150.2058	654
150.2059	631-632
150.2062	631-632
150.2064	629-632
150.2065	147
150.2065-01	147
150.2065-07	147
150.2065-1	147
150.2065-2	147
150.2065-3	147
150.2065-4	147
150.2065-5	147
150.2065-6	147
150.2066	147
150.2067	147
150.2068	147
150.2069	631-632
150.2070	143
150.2070-1	143
150.2070-28	143
150.2070-29	143
150.2070-30	143
150.2071	631-632
150.2072	631-632
150.2073	631-632
150.2074	631-632
150.2075	589
150.2076	589
150.2077	589
150.2078	589
150.2079	589
150.2080	589
150.2081	589
150.2082	589
150.2083	589
150.2084	589
150.2085	589
150.2086	589
150.2087	589
150.2089	589
150.2090	287
150.2092	589-590
150.2093	589-590
150.2095	392
150.2096	287
150.2097	734
150.2098	506, 525, 689
150.2099	631-632
150.2100	393
150.2101	392
150.2105	521
150.2106	521
150.2107	521
150.2108	521
150.2109	521
150.2111	521
150.2112	521
150.2113	393
150.2115	521
150.2116	640
150.2118	640
150.2120	392
150.2121	393
150.2122	393
150.2123	147, 393
150.2124	393
150.2125	392-393
150.2126	392-393
150.2127	392-393
150.2128	392-393
150.2129	394
150.2130	588
150.2131	588
150.2132	588
150.2133	588
150.2134	588
150.2135	588
150.2136	588
150.2137	588
150.2138	588
150.2139	733
150.2140	635
150.2141	588
150.2142	588
150.2143	588
150.2144	588
150.2144-1	588
150.2144-2	588
150.2145	588
150.2146	588
150.2147	588
150.2148	588
150.2149	588
150.2150	637

Item	Page
150.2151	637
150.2152	148
150.2153	635
150.2154	635
150.2155	635
150.2160	521
150.2161	521
150.2162	521
150.2163	521
150.2164	521
150.2165	521
150.2166	521
150.2167	521
150.2169	521
150.2173	521
150.2174	521
150.2175	521
150.2176	521
150.2177	521
150.2178	521
150.2179	521
150.2180	518
150.2181	518
150.2182	518
150.2183	518
150.2188	521
150.2191	636
150.2192	635
150.2193	628
150.2194	628
150.2195	650
150.2196	650
150.2197	650
150.2198	650
150.2199	649
150.2206	639
150.2207	639
150.2208	639
150.2209	639
150.2211	640
150.2212	639
150.2213	639
150.2214	640
150.2216	641
150.2218	639
150.2222	628
150.2225	635
150.2226	646
150.2227	634-635
150.2228	634-635
150.2229	634-635
150.2230	658
150.2231	232
150.2232	233
150.2233	226
150.2234	636
150.2235	649
150.2236	635
150.2237	629
150.2241	642
150.2242	642
150.2249	232
150.2250	590
150.2251	590
150.2252	590
150.2253	590
150.2254	590
150.2255	590

Item	Page
150.2256	590
150.2257	590
150.2258	590
150.2259	590
150.2260	590
150.2261	590
150.2262	590
150.2263	590
150.2264	590
150.2265	590
150.2266	590
150.2267	590
150.2268	590
150.2269	590
150.2270	590
150.2271	590
150.2272	590
150.2273	590
150.2274	590
150.2275	590
150.2276	229
150.2277	229
150.2281	518
150.2282	518
150.2283	518
150.2285	518
150.2286	518
150.2287	518
150.2290	518
150.2295	629
150.2296	629
150.2297	629
150.2298	629
150.2301	654
150.2302	652, 654
150.2303	654
150.2304	652
150.2305	653
150.2307	183, 241-242
150.2308	183, 241-242
150.2309	183, 241-242
150.2310	183, 242
150.2311	183, 240
150.2312	183, 241
150.2314	183, 241
150.2322	184, 242
150.2323	190
150.2324	190
150.2325	189
150.2326	189
150.2327	189
150.2328	189
150.2329	189
150.2340	189
150.2341	189
150.2342	189
150.2343	189
150.2344	189
150.2345	189
150.2346	189
150.2347	189
150.2348	189
150.2349	189
150.2350	589
150.2351	589
150.2352	589
150.2353	589
150.2354	589

Item	Page
150.2355	589
150.2356	589
150.2357	589
150.2358	589
150.2359	519
150.2360	189
150.2361	189
150.2362	189
150.2363	189
150.2364	189
150.2365	189
150.2366	189
150.2367	189
150.2368	189
150.2369	189
150.2370	589, 636
150.2371	589, 636
150.2372	589, 636
150.2373	589, 636
150.2374	589, 636
150.2375	589, 636
150.2376	589, 636
150.2377	589, 636
150.2378	589, 636
150.2379	589, 636
150.2380	519
150.2381	519
150.2382	519
150.2383	519
150.2390	519
150.2391	183, 241-242
150.2392	519
150.2393	519
150.2395	519
150.2396	520
150.2399	524
150.2401	520-521
150.2402	520
150.2403	520
150.2404	520-521
150.2405	520
150.2406	520
150.2407	519
150.2408	520-521
150.2410	633
150.2411	633
150.2412	522
150.2415	522
150.2416	522
150.2417	522
150.2418	522
150.2419	522
150.2420	522
150.2421	522
150.2422	522
150.2423	522
150.2424	522
150.2425	523
150.2426	522-523
150.2427	522-523
150.2428	522-523
150.2429	522-523
150.2430	522-523
150.2431	522-523
150.2432	522-523
150.2433	522-523
150.2434	524
150.2435	522

Item	Page
150.2436	523
150.2437	523
150.2438	360, 524
150.2439	524
150.2441	524
150.2442	524
150.2443	524
150.2444	524
150.2445	524
150.2446	524
150.2447	524
150.2448	524
150.2457	522
150.2481	633
150.2482	633
150.2483	633
150.2484	633
150.2485	633
150.2486	633
150.2487	633
150.2490	589
150.2510	244
150.2511	244
150.2512	244
150.2513	244
150.2514	244
150.2515	244
150.2516	244
150.2520	234
150.2521	234
150.2522	234
150.2523	234
150.2524	234
150.2525	234
150.2526	234
150.2527	234
150.2528	234
150.2529	234
150.2530	234
150.2531	234
150.2532	234
150.2533	234
150.2534	234
150.2535	234
150.2536	234
150.2650	189
150.2651	189
150.2652	189
150.2653	189
150.2654	189
150.2655	189
150.2656	189
150.2657	189
150.2658	189
150.2659	189
150.2661	189
150.2675	498
150.2676	498
150.2680	498
150.2681	498
150.2750	585
150.2751	585
150.2752	585
150.2753	585
150.2754	585
150.2755	585
150.2756	585
150.2757	585

Item	Page
150.2758	585
150.2759	585
150.2771	585
150.2772	585
150.2773	585
150.2774	585
150.2775	585
150.2776	585
150.2777	585
150.2778	641
150.2779	641
150.2781	634
150.2795	647
150.2798	647
150.2799	647
150.2800	160, 190, 701, 767
150.2805	711
150.2806	711
150.2807	711
150.2810	590
150.2811	590
150.2812	590
150.2813	590
150.2814	590
150.2815	590
150.2816	590
150.2818	590
150.2990	285, 385
150.3000	150, 284, 385
150.3001	150, 284, 385
150.3002	150, 284, 385
150.3003	150, 284, 385
150.3004	150, 284, 385
150.3005	150, 284, 385
150.3006	150, 284, 385
150.3007	142
150.3008	286-287, 350, 385
150.3009	150, 287, 350, 385
150.3010	139
150.3011	324, 368
150.3012	294-295, 306-308
150.3013	152
150.3014	324, 368
150.3015	289, 386
150.3016	296, 302
150.3017	295
150.3018	295
150.3019	387
150.3021	529
150.3022	150, 286-287, 385
150.3023	149, 286, 385
150.3024	149-150, 287, 385
150.3025	324, 361, 369, 375
150.3026	142, 285
150.3027	149-150, 287, 385
150.3028	142, 285, 294
150.3029	285, 384
150.3034	297, 306-308
150.3036	351
150.3037	287
150.3040	151, 401, 774
150.3045	48, 416
150.3067	299
150.3075	422
150.3076	422
150.3077	422
150.3080	48, 416
150.3095	423

Item	Page
150.3096	423
150.3097	530
150.3100	289
150.3101	288-289
150.3102	288-289
150.3103	289
150.3104	289
150.3105	289
150.3106	289
150.3107	289
150.3108	289
150.3109	289
150.3110	288-289
150.3111	289
150.3112	288-289
150.3113	185
150.3114	185
150.3121	186
150.3122	186
150.3124	185
150.3126	186
150.3129	186
150.3130	290
150.3134	186
150.3135	288
150.3150	284, 384
150.3152	284, 384
150.3154	299
150.3155	287
150.3156	288
150.3157	288
150.3162	186
150.3164	186
150.3165	289, 386
150.3166	188
150.3167	187
150.3170	290
150.3171	388
150.3172	388
150.3173	188
150.3174	187
150.3175	288
150.3176	288
150.3177	288
150.3179	187
150.3180	284
150.3181	284
150.3182	284
150.3183	284
150.3184	284
150.3185	284
150.3186	284
150.3187	284
150.3188	284
150.3189	284
150.3190	388
150.3193	188
150.3194	290
150.3195	185
150.3196	388
150.3197	388
150.3198	284
150.3199	284
150.3200	288
150.3201	288
150.3202	288
150.3203	288
150.3205	150, 385, 501
150.3206	150, 385, 501
150.3207	150, 385, 501
150.3208	150, 385, 501
150.3209	150, 385, 501
150.3210	150, 385, 501
150.3211	150, 385, 501
150.3212	150, 385, 501
150.3213	150, 385, 501
150.3214	150, 385, 501
150.3215	150, 385, 501
150.3216	150, 385, 501
150.3217	150, 385, 501
150.3220	152, 401, 773
150.3222	188
150.3228	188
150.3229	188
150.3230	187
150.3231	188
150.3232	497
150.3233	181, 244
150.3234	187
150.3235	253
150.3236	253
150.3237	253
150.3238	253
150.3239	253
150.3240	503
150.3266	253
150.3301	286-287, 351, 385
150.3305	284
150.3306	149-150, 312, 385
150.3310	285, 351
150.3311	285, 351
150.3312	285, 351
150.3313	285, 351
150.3320	150, 287, 385
150.3321	150, 287, 385
150.3322	150, 287, 385
150.3323	150, 287, 385
150.3324	150, 287, 385
150.3325	285
150.3326	285
150.3327	285
150.3328	285
150.3329	285
150.3340	283, 354
150.3341	283, 354
150.3342	283, 354
150.3343	284
150.3344	284
150.3345	283, 350
150.3346	504
150.3347	504
150.3348	504
150.3349	504
150.3351	504
150.3352	504
150.3353	504
150.3354	504
150.3356	504
150.3357	504
150.3358	504
150.3359	504
150.3510	210
150.3511	210
150.3512	210
150.3513	210
150.3514	210
150.3515	210
150.3516	210
150.3517	210
150.3518	210
150.3519	210
150.3520	210
150.3521	210
150.3522	210
150.3523	210
150.3524	210
150.3526	210
150.3570	215
150.3571	215
150.3572	215
150.3573	215
150.3574	215
150.3575	215
150.3576	215
150.3577	215
150.3578	215
150.3579	215
150.3580	215
150.3581	215
150.3582	215
150.3585	216
150.3587	216
150.3589	216
150.3590	216
150.3593	217
150.3594	217
150.3600	189
150.3601	189
150.3602	189
150.3603	189
150.3604	189
150.3605	189
150.3606	189
150.3607	189
150.3608	207, 300
150.3610	213
150.3611	213
150.3616	213
150.3617	213
150.3618	213
150.3620	214
150.3621	214
150.3622	214
150.3625	214
150.3626	214
150.3627	214
150.3628	214
150.3629	214
150.3630	214
150.3631	214
150.3632	214
150.3633	214
150.3635	215
150.3636	215
150.3637	215
150.3638	215
150.3639	215
150.3640	214
150.3641	215
150.3642	215
150.3643	215
150.3644	215
150.3645	218
150.3646	215
150.3653	214
150.3654	214
150.3660	222
150.3661	222
150.3662	222
150.3663	222
150.3664	222
150.3665	222
150.3666	222
150.3667	222
150.3668	222
150.3669	222
150.3670	222
150.3671	222
150.3672	222
150.3673	222
150.3674	222
150.3675	222
150.3676	222
150.3677	222
150.3678	222
150.3679	222
150.3680	222
150.3681	222
150.3682	222
150.3683	222
150.3684	222
150.3685	222
150.3686	222
150.3687	222
150.3688	222
150.3689	222
150.3690	222
150.3691	222
150.3692	222
150.3693	222
150.3694	222
150.3695	222
150.3696	222
150.3805	148
150.3810	148
150.3811	148
150.3812	148
150.3814	148
150.3817	148
150.3819	148
150.4915	685
150.4918	686
150.4920	685
150.4923	686
150.4925	685
150.4930	685
150.4935	685
150.4938	686
150.4940	686
150.4945	686
150.4948	686
150.4950	686
150.4953	686
150.5005	215
150.5006	215
150.5007	215
150.5011	264
150.5012	264
150.5013	264
150.5014	264
150.5015	264
150.5016	263
150.5017	263
150.5018	263
150.5020	277
150.5021	277
150.5022	277
150.5023	277
150.5024	277
150.5026	277
150.5030	277
150.5031	277
150.5032	277
150.5033	277
150.5034	277
150.5036	277
150.5040	277
150.5041	277
150.5042	277
150.5043	277
150.5044	277
150.5047	277
150.5048	277
150.5049	277
150.5050	277
150.5051	277
150.5052	277
150.5053	277
150.5054	277
150.5056	277
150.5060	263, 278
150.5061	263, 278
150.5062	263, 278
150.5063	263, 278
150.5064	263, 278
150.5068	263, 278
150.5069	263, 278
150.5070	393
150.5071	393
150.5072	393
150.5073	393
150.5074	393
150.5076	393
150.5077	263, 278
150.5078	263, 278
150.5079	263, 278
150.5080	264
150.5081	264
150.5082	264
150.5083	264
150.5084	264
150.5085	264
150.5086	264
150.5087	264
150.5088	264
150.5090	394
150.5091	394
150.5092	394
150.5093	394
150.5094	394
150.5096	394
150.6001	279
150.6002	279
150.6003	279
150.6004	279
150.6005	279
150.6011	279
150.6012	279
150.6013	279
150.6014	279

Item	Page
150.6015	279
150.6025	278-279
150.6030	278
150.6031	278
150.6032	278-279
150.6033	278
150.6034	278-279
150.6040	278
150.6041	278-279
150.6043	278-279
150.6060	278
150.6061	278
150.6062	278
150.6063	278
150.6064	278-279
150.6065	278-279
150.6070	278
150.6071	278
150.6073	278
150.6081	279
150.6082	279
150.6083	279
150.6100	393
150.6101	393
150.6102	278, 393
150.6103	393
150.6104	278-279, 393
150.6105	278-279, 393
150.6110	278
150.6111	278
150.6113	278
150.6120	393
150.6121	393
150.6122	279, 393
150.6123	279, 393
150.6131	279
150.6133	279
150.6140	264
150.6141	264, 279
150.6142	264, 279
150.6143	264, 279
150.6144	264, 279
150.6145	264, 279
150.6150	278
150.6155	279
150.6160	279
150.6500	265, 276
150.6501	265, 276
150.6502	265, 276
150.6503	265, 276
150.6504	265, 276
150.6505	264-265, 276
150.6506	264-265, 276
150.6507	265, 276
150.7005	206, 298
150.7006	207, 298
150.7007	207, 298
150.7008	207, 298
150.7010	206
150.7011	206
150.7012	206
150.7013	206
150.7014	206
150.7015	8, 203
150.7016	8, 203
150.7017	8, 203
150.7018	8, 203
150.7019	8, 203
150.7021	8, 203
150.7022	8, 203
150.7023	8, 203
150.7024	8, 203
150.7026	8, 203
150.7030	206
150.7031	206
150.7032	206
150.7033	206
150.7034	206
150.7035	206
150.7036	206
150.7037	206
150.7038	206
150.7039	206
150.7040	206
150.7041	206
150.7042	206
150.7043	206
150.7044	206
150.7045	206
150.7046	206
150.7047	206
150.7048	206
150.7049	206
150.7050	206
150.7056	216
150.7060	8, 203
150.7061	8, 203
150.7062	8, 203
150.7063	8, 203
150.7064	8, 203
150.7065	8, 203
150.7066	8, 203
150.7067	8, 203
150.7068	8, 203
150.7069	8, 203
150.8001	210
150.8105	7
150.8110	7
150.8251	768
150.8252	768
150.8253	771
150.8254	771
150.8255	771
150.8256	771
150.8261	768
150.8262	768
150.8267	768
150.9001	159, 702, 768
150.9002	159, 702, 768
150.9010	245, 249
150.9020	142
150.9021	142
150.9022	142
150.9023	142
150.9025	142
150.9026	142
150.9027	142
150.9030	191
150.9031	191
150.9032	191
150.9033	191
150.9034	191
150.9035	191
150.9036	191
150.9037	191
150.9201	497
150.9202	506
150.9203	699
150.9204	764
150.9205	159, 411, 702, 768
150.9209	769
150.9210	698
150.9211	691, 698
150.9212	692, 698
150.9213	695, 698
150.9214	694, 698
150.9215	693, 698
150.9216	698
150.9217	691, 698
150.9218	691, 698
150.9219	691, 698
150.9220	509, 762
150.9221	160, 509, 762, 767
150.9222	160, 700, 762, 767
150.9223	509, 762
150.9224	509, 762
150.9225	507, 662
150.9227	506, 662
150.9228	506, 662
150.9229	509, 763
150.9230	160, 703, 769
150.9231	507, 662
150.9232	507, 662
150.9233	507, 662
150.9234	159, 702, 768
150.9235	159, 702, 768
150.9237	507, 662
150.9239	159, 769
150.9240	159, 411, 703, 769
150.9247	507
150.9250	161, 700, 767
150.9251	161, 700, 768
150.9252	161, 700, 768
150.9253	161, 700, 767
150.9255	161, 700, 767
150.9256	161, 700, 767
150.9257	506, 663
150.9258	510, 701, 763
150.9259	689
150.9261	511, 702, 764
150.9262	511, 702, 764
150.9263	511, 702, 764
150.9264	511, 702, 764
150.9265	511, 702, 764
150.9266	505
150.9267	511, 702, 764
150.9268	511, 702, 764
150.9269	511, 702, 764
150.9271	511, 702, 764
150.9272	511, 702, 764
150.9273	511, 702, 764
150.9274	511, 702, 764
150.9275	510, 701, 763
150.9276	511, 702, 764
150.9277	511, 702, 764
150.9278	511, 702, 764
150.9280	506, 699
150.9281	506, 699
150.9282	506, 699
150.9283	506, 699
150.9284	506, 699
150.9285	699
150.9290	698
150.9291	691, 698
150.9292	693, 698
150.9293	696, 698
150.9294	696, 698
150.9295	697-698
150.9296	697-698
150.9297	697-698
150.9298	698
150.9299	698
150.9300	665
150.9302	507, 663
150.9303	511, 703, 760, 769
150.9305	663
150.9306	688
150.9308	689
150.9309	692
150.9310	698
150.9313	665, 688, 698-699
150.9314	688
150.9317	688
150.9319	691
150.9320	698
150.9321	692, 698-699
150.9322	692, 698-699
150.9323	692, 698-699
150.9324	693, 698-699
150.9325	693, 698-699
150.9326	694, 698-699
150.9327	695, 698-699
150.9329	696, 698-699
150.9330	692, 698-699
150.9331	694, 698-699
150.9332	695, 698-699
150.9333	693, 698-699
150.9334	694, 698-699
150.9335	696, 698-699
150.9336	692, 698-699
150.9337	693, 699
150.9338	693, 698-699
150.9339	693, 698-699
150.9340	698-699
150.9341	694, 699
150.9342	694, 698-699
150.9343	694, 698-699
150.9344	695, 698-699
150.9345	695, 698-699
150.9346	696, 699
150.9347	696, 698-699
150.9348	696, 698-699
150.9349	697-699
150.9350	699
150.9351	697-699
150.9353	506
150.9354	159, 512, 706, 761
150.9355	191
150.9357	158, 511, 706, 761
150.9358	159, 512, 706, 761
150.9359	158, 511, 706, 760
150.9360	158, 511, 706, 761
150.9361	158, 511, 761
150.9364	506, 664
150.9365	697
150.9366	691, 697
150.9367	691, 697
150.9368	691, 697
150.9375	687
150.9376	687
150.9377	687
150.9378	687
150.9379	687
150.9382	696
150.9383	185, 697
150.9384	187
150.9385	187
150.9386	187
150.9387	187
150.9388	187
150.9389	188
150.9390	508, 665
150.9391	508, 665
150.9392	508, 665
150.9393	508, 665
150.9394	508, 665
150.9395	508, 665
150.9396	508, 665
150.9398	186
150.9399	188
150.9400	531
150.9401	530-531
150.9402	530-531
150.9403	530-531
150.9404	530-531
150.9405	530-531
150.9406	694
150.9407	531, 545
150.9408	692
150.9409	532
150.9410	530
150.9411	692
150.9412	693
150.9413	694
150.9414	528, 531
150.9415	532, 571
150.9416	528, 531
150.9417	528, 531
150.9418	528, 531
150.9419	528, 531
150.9420	532, 571
150.9421	528, 531
150.9422	528, 531
150.9423	695
150.9424	528, 531
150.9425	529
150.9426	533, 572
150.9427	528, 531
150.9428	695
150.9429	696
150.9430	530
150.9431	534, 571
150.9434	528, 531
150.9435	528, 531
150.9436	528, 531
150.9437	528, 531
150.9438	528, 531
150.9439	528, 531
150.9440	528, 531
150.9441	528, 531
150.9442	528, 531
150.9443	533, 572
150.9444	689
150.9445	528, 531
150.9446	689
150.9447	529
150.9448	529
150.9450	528, 531
150.9451	530
150.9452	530

Item	Page
150.9453	530
150.9454	530
150.9455	530
150.9456	530
150.9457	529
150.9458	529, 531
150.9459	529, 531
150.9460	528-529, 531
150.9461	529, 531
150.9462	529
150.9463	689
150.9464	695
150.9465	529, 531
150.9466	529, 531
150.9467	529, 531
150.9468	529, 531
150.9470	533, 572
150.9471	533, 572
150.9472	533, 572
150.9473	529, 531
150.9474	529, 531
150.9475	529, 531
150.9476	528
150.9481	529, 531
150.9482	529, 531
150.9483	529, 531
150.9485	530
150.9490	531, 545
150.9491	531, 545
150.9492	531, 545
150.9493	528
150.9494	528, 632
150.9498	530
150.9499	530
150.9510	45
150.9517	689
150.9518	689
150.9520	45
150.9521	695
150.9523	689
150.9525	703
150.9526	703
150.9527	703-704
150.9528	703-704
150.9529	704
150.9530	46
150.9531	704
150.9532	704
150.9533	704
150.9534	704
150.9535	703
150.9536	704
150.9537	705
150.9538	705
150.9539	703-704
150.9540	45
150.9541	184, 242, 528
150.9542	529
150.9545	530
150.9546	530
150.9547	530
150.9548	530
150.9549	705
150.9551	705
150.9552	705
150.9553	705
150.9554	705
150.9555	511
150.9556	511
150.9557	511
150.9558	511
150.9559	511
150.9561	511
150.9562	511, 702, 764
150.9563	511, 702, 764
150.9564	511, 702, 764
150.9566	511, 702, 764
150.9567	511, 702, 764
150.9570	46
150.9571	46
150.9572	46
150.9573	46
150.9574	46
150.9575	46
150.9578	46
150.9579	46
150.9585	697
150.9586	697
150.9587	697
150.9588	697
150.9589	697
150.9591	697
150.9610	46
150.9611	46
150.9613	46
150.9614	46
150.9615	46
150.9616	46
150.9619	45-46
150.9620	46
150.9627	662
150.9628	662
150.9630	46
150.9630-1	46
150.9631	46
150.9632	46
150.9633	46
150.9634	46
150.9635	46
150.9636	46
150.9637	46
150.9638	46
150.9640	46
150.9642	46
150.9643	46
150.9644	46
150.9650	45, 68
150.9651	45, 68
150.9652	45, 68
150.9653	45, 68
150.9654	45, 68
150.9655	45, 68
150.9660	46
150.9661	46
150.9662	46
150.9663	46
150.9664	46
150.9665	46
150.9666	46
150.9667	46
150.9668	46
150.9669	46
150.9670	46
150.9671	510, 701, 763
150.9672	510, 701, 763
150.9673	510, 701, 763
150.9674	510, 701, 763
150.9675	510, 701, 763
150.9676	510, 701, 763
150.9677	510, 701, 763
150.9678	510, 701, 763
150.9679	510, 701, 763
150.9680	701-702, 763-764
150.9681	510, 701, 763
150.9682	510, 701, 763
150.9683	510, 701, 763
150.9684	510, 701, 763
150.9686	510, 701, 763
150.9687	510, 701, 763
150.9688	510, 701, 763
150.9689	510, 701, 763
150.9690	510, 701, 763
150.9695	510
150.9696	510
150.9697	510
150.9698	510
150.9700	534, 572
150.9702	584
150.9703	584
150.9704	580
150.9705	584
150.9706	584
150.9707	584
150.9708	580
150.9709	579
150.9710	504, 591
150.9712	504, 591
150.9713	504, 591
150.9714	504, 591
150.9715	504, 591
150.9716	504, 591
150.9717	504, 591
150.9718	504, 591
150.9719	504, 591
150.9720	504, 591
150.9721	504, 591
150.9722	504, 591
150.9723	504, 591
150.9724	504, 591
150.9725	504, 591
150.9726	504, 591
150.9727	504, 591
150.9728	504, 591
150.9729	504, 591
150.9730	504, 591
150.9731	504, 591
150.9775	579
150.9776	579
150.9778	550
150.9780	598
150.9781	598
150.9782	598
150.9783	596, 598
150.9784	598
150.9785	598
150.9786	598
150.9787	598
150.9788	598
150.9789	598
150.9790	598
150.9791	598
150.9792	598
150.9793	598
150.9794	598
150.9795	580
150.9796	590
150.9797	590
150.9825	596
150.9826	596
150.9827	596
150.9828	596
150.9829	596
150.9830	596
150.9831	596
150.9832	596
150.9833	596
150.9834	596
150.9835	596
150.9836	596
150.9837	596
150.9838	596
150.9839	596
150.9840	596
150.9841	596
150.9842	596
150.9843	596
150.9855	596
150.9856	596
150.9857	596
150.9859	596
150.9860	596
150.9861	596
150.9862	596
150.9863	596
150.9865	596
150.9869	596
150.9870	596
150.9871	596
150.9872	596
150.9875	585
150.9876	585
150.9877	585
150.9878	585
150.9879	585
150.9881	585
150.9882	585
150.9883	585
150.9884	585
150.9886	585
150.9887	585
150.9888	585
151.1240	730
151.2023	550
151.2026	46
151.2073	205-206
151.2470	195, 405
151.2602	29
151.26025	150, 287, 385, 684
151.2603	504, 591
151.31025	249
151.3138	305
151.8135	530
152.1002	201
152.1003	201
152.1004	201
152.1005	201
152.1006	201
152.1007	201
152.1008	201, 249
152.1010	201
152.1012	201
152.1014	201
152.1016	201
152.1018	201
152.1020	274
152.1021	274
152.1022	274-275
152.1023	274-275
152.1024	274
152.1026	274
152.1027	274
152.1029	201
152.1030	275
152.1031	275
152.1032	274-275
152.1033	275
152.1034	275
152.1035	275
152.1036	275
152.1037	274-275
152.1038	275
152.1040	275
152.1050	246
152.1055	246
152.1056	23, 246, 546
152.1057	184, 243, 246
152.1058	185, 243
152.1060	273
152.1061	273
152.1062	273
152.1063	273
152.1064	273
152.1065	273
152.1080	272
152.1085	248
152.1086	248
152.1087	248
152.1088	248
152.1089	248
152.1090	218
152.1095	273
152.1096	273
152.1097	273
152.1098	273
152.1100	201
152.1101	202
152.1120	274
152.1120-01	274
152.1120-02	274
152.1120-03	274
152.1120-04	274
152.1120-05	274
152.1120-06	274
152.1120-07	274
152.1120-08	274
152.1120-09	274
152.1121	273
152.1122	273
152.1123	274
152.1124	274
152.1125	274
152.1170	250
152.1171	249-250
152.1172	249-250
152.1173	249-251
152.1174	250
152.1175	249-250
152.1176	249-250
152.1177	249-250
152.1178	249-250

Item	Page
152.1179	249
152.1180	250
152.1181	250
152.1183	249
152.1190	248
152.1191	248
152.1192	248
152.1193	248
152.1194	248
152.1195	185, 243, 248
152.1196	185, 243, 248
152.1197	185, 243, 248
152.1198	185, 243, 248
152.1199	248
152.1200	246
152.1255	247
152.1265	247
152.1270	247
152.1275	247
152.1280	247
152.1285	247
152.1347	252
152.1348	252
152.1350	248
152.1351	248
152.1352	248
152.1353	248
152.1354	248
152.1355	248
152.1356	248
152.1357	248
152.1358	248
152.1359	248
152.1360	248
152.1361	248
152.1362	248
152.1363	248
152.1364	248
152.1365	248
152.1366	248
152.1367	248
152.1368	248
152.1369	248
152.1370	251
152.1372	251
152.1373	251
152.1374	251
152.1375	251
152.1376	251
152.1377	251
152.1379	248
152.1380	252
152.1381	251
152.1382	251
152.1383	251
152.1384	251
152.1385	251
152.1386	250
152.1387	250
152.1388	250
152.1389	250
152.1391	250
152.1392	250
152.1393	251
152.1394	251
152.1395	251
152.1396	252
152.1397	252

Item	Page
152.1401	182, 240
152.1405	248
152.1450	247
152.1451	248
152.1452	248
152.1453	248
152.1454	248
152.1455	247
152.1456	247
152.1457	247
152.1458	247
152.1459	247
152.1461	247
152.1462	247
152.1463	247
152.1464	249
152.1465	249
152.1466	249
152.1467	249
152.1511	245
152.1512	246
152.1513	246
152.1610	275
152.1615	275
152.1620	275
152.1621	275
152.1624	275
152.1625	275
152.1630	275
152.1634	275
152.1635	275
152.1636	275
152.1637	275
152.1640	276
152.1641	276
152.1642	276
152.1643	276
152.1644	276
152.1646	276
152.2030	221
152.2031	221
152.2032	221
152.2033	221
152.2034	221
152.2036	221
152.2037	221
152.2038	221
152.2055	387
152.2056	387
152.2057	387
152.2058	387
152.2059	387
152.2062	387
152.2067	221
152.2068	221
152.2069	221
152.2070	247
154.0011	429
154.0012	429
154.0013	429
154.0102	430, 437-438
154.0103	430, 438
154.0104	431, 437-438
154.0105	431, 438
154.0106	431, 438
154.0107	431, 437-438
154.0108	431, 437-438
154.0111	431, 438

Item	Page
154.0112	431
154.0113	430
154.0114	430
154.0115	430
154.0116	430
154.0117	432
154.0118	432, 438
154.0119	432, 438
154.0120	432, 438
154.0121	432, 438
154.0122	433, 438
154.0123	434
154.0125	433, 438
154.0128	433, 438
154.0129	433, 438
154.0130	433, 438
154.0131	434, 438
154.0132	436
154.0134	434, 437-438
154.0135	434
154.0137	434
154.0138	435, 438
154.0139	437
154.0140	437
154.0145	437
154.0150	438
154.0155	438
154.0160	438
154.0165	438
154.0201	435, 438
154.0202	435
154.0203	435, 437-438
154.0205	435, 438
154.0206	435
154.0207	435
154.0208	435
154.0209	435
154.0218	436
154.0221	436
154.0222	436
154.0225	437
154.0227	437
154.0228	437
155.5002	665, 687
155.5003	687
155.5005	687
156.0000	638
156.0002	638
156.0003	638
156.0004	638
156.0005	638
156.0006	638
156.0008	638
156.0010	638
156.0020	638
156.0026	638
156.0028	638
156.0030	638
156.0032	638
156.0034	638
156.0111	636, 723-724
156.0112	636
156.0113	636
156.0114	636-637
156.0115	636-637
156.0116	636-637
156.0121	636-637
156.0122	636-637

Item	Page
156.0123	636-637
156.0124	636-637
156.0125	636-637
156.0126	636-637
156.0130	637
156.0131	637
156.0132	637
156.0133	637
156.0134	637
156.0150	636
156.0180	636
156.0211	638
156.0212	638
156.0213	638
156.0214	638
156.0215	638
156.0216	638
156.0217	638
156.0218	638
156.0219	638
156.0220	638
156.0230	637
156.0231	637
156.0232	637
156.0233	637
156.0234	637
156.0235	637
156.0330	19
156.0415	504, 590
156.0416	504, 590
156.0425	504, 590
156.0426	504, 590
156.0436	504, 590
156.0440	504, 590
156.0441	504, 590
156.0442	504, 590
156.0443	504, 590
156.0447	504, 590
156.0449	504, 590
156.0450	504, 590
156.0451	504, 590
156.0455	504, 590
156.0457	504, 590
156.0458	504, 590
156.0459	504, 590
156.0463	504, 590
156.0506	33
156.0507	33
156.0519	33
156.0520	33
156.0529	33
157.0950	643
157.0960	643
158.5050	195
158.5121	195, 684
158.5122	195, 684
158.5123	195, 684
158.5124	195, 684
158.5125	195, 684
158.5126	195, 684
158.5127	195, 684
158.8050	7, 14, 17, 195, 607
158.8051	7, 14, 17, 195, 607
158.8052	7, 14, 17, 195, 607
158.8053	7, 14, 17, 195, 607
158.8054	7, 14, 17, 195, 607
158.8055	7, 14, 17, 195, 607
158.8056	7, 14, 17, 195, 607

Item	Page
159.1054	16, 607
159.1125	152, 174, 226, 570
159.1126	164, 174, 226, 570
159.1127	152, 164, 226, 570
159.2128	164, 174, 226, 570
160.0001	512, 706, 762
160.0015	759
160.0018	760
160.0040	762
160.0055	740, 749
160.0090	500, 760
160.0095	500
160.0096	500
160.0097	500
160.0098	500
160.0145	760
160.0146	760
160.0175	24
160.0176	24
160.0177	24
160.0178	24
160.0179	24
160.0180	24
160.0181	24
160.0182	24
160.0183	24
160.0184	24
160.0185	24
160.0186	24
160.0187	24
160.0188	24
160.0189	24
160.0190	24
160.0223	749
160.0225	748
160.0226	749
160.0227	749
160.0228	749
160.0229	749
160.0247	406, 750
160.0260	136, 748
160.0270	209
160.0271	209
160.0272	209
160.0273	209
160.0274	209
160.0275	209
160.0276	209
160.0277	209
160.0279	209
160.0280	209
160.0281	209
160.0282	209
160.0283	209
160.0284	209
160.0285	209
160.0286	209
160.0287	209
160.0289	209
160.0290	209
160.0291	209
160.0292	209
160.0293	209
160.0294	209
160.0295	209
160.0314	756
160.0315	739, 756
160.0318	757

Item	Page
160.0319	756
160.0324	500, 759
160.0327	500, 759
160.0329	500, 759
160.0334	500, 759
160.0342	500, 758
160.0349	739, 757
160.0350	739, 757
160.0351	739, 757
160.0352	739, 757
160.0354	739, 757
160.0356	739, 757
160.0358	739, 757
160.0359	739, 757
160.0360	739, 757
160.0364	759
160.0370	739, 756
160.0371	739, 756
160.0373	739, 756
160.0374	739, 756
160.0375	739, 754
160.0377	739, 756
160.0378	739, 756
160.0379	739, 756
160.0380	739, 756
160.0381	737, 755
160.0382	737, 755
160.0383	737, 755
160.0391	738, 757
160.0392	738, 757
160.0412	738, 755, 757
160.0413	738, 755, 757
160.0414	738, 755, 758
160.0415	738, 755, 758
160.0441	739, 756
160.0442	739, 756
160.0445	24
160.0446	24
160.0447	24
160.0448	24
160.0449	24
160.0451	24
160.0452	24
160.0453	24
160.0454	24
160.0455	24
160.0456	24
160.0457	24
160.0458	24
160.0459	24
160.0461	24
160.0462	24
160.0700	655
160.0704	738, 757
160.0705	655
160.0708	655-656
160.0709	655-656
160.0710	656
160.0713	655-656
160.0715	655-656
160.0725	653
160.0726	653
160.0727	653
160.0728	653
160.0729	653
160.0733	653
160.0734	653
160.0735	653
160.0738	411, 652, 766
160.0757	653
160.0790	191, 654, 702, 761
160.0791	191, 512, 654, 702
160.0792	191, 512, 654, 702
160.0793	191, 512, 654, 702
160.0794	191, 512, 654, 702
160.0795	191, 512, 654, 702
161.0017	36
161.0018	36
161.0019	36
161.0021	36
161.0022	36
161.0023	36
161.0365	740, 758
161.0366	740, 758
161.0367	740, 758
161.0368	740, 758
161.0950	643
161.0960	642
162.0215	19
162.0216	18-19
162.0217	18-19
162.0218	18-19
162.0271	19
162.0370	638
162.0371	637
162.0372	637
162.0373	637
162.0374	637
162.0375	637
162.0376	637
162.0377	637
162.0378	637
162.0379	637
162.0380	637
162.0381	637
162.0382	637
162.0383	637
162.0391	637
162.0392	637
162.0393	637
162.0394	637
162.0395	550, 637
162.0396	637
162.0401	637
162.0402	637
162.0403	637
162.0404	637
162.0405	637
162.0406	637
162.0407	637
162.0411	637
162.0412	637
162.0471	19
162.2122	637
162.2123	637
162.2249	638
162.2250	638
162.2251	638
162.2252	638
162.2253	638
162.2254	638
162.2255	638
162.2256	638
162.2257	638
162.2310	638
2	
201.2300	641
201.2301	642
201.2302	642
201.2305	59, 641, 720
201.2306	59, 641, 720
201.2310	59, 641, 720
201.2311	59, 641, 720
201.2315	265
201.2316	9, 265
201.2320	642
201.2321	642, 720
201.2322	642, 720
201.2325	59, 641, 720
201.2326	59, 641, 720
201.2330	265
222.1601	36
222.1602	36
222.1603	36
3	
300.0066	487
300.0208	300
300.0506	657
300.0507	657
300.0525	656
300.0530	656
300.0535	656
300.0536	656
300.0539	656
300.0540	656
300.0550	731
300.0555	657-658
300.0556	658
300.0560	523, 657-658
300.0565	523, 657
300.0570	656
300.0580	657
300.0600	207, 265
300.0611	207
300.0612	207
300.0613	207
300.0614	207
300.0615	207
300.0616	207
300.0617	207
300.0618	207
300.0623	658
300.0625	658
300.0630	218
300.0631	218
300.0632	218
300.0633	218
300.0634	218
300.0635	218
300.0636	218
300.0637	218
300.0638	218
300.0639	218
300.0690	658
300.0691	658
300.0692	658
301.0090	266, 279
301.0095	266, 279, 730
310.0176	617
310.0180	48-49
310.0185	49
331.0680	736
331.0681	736
331.0682	736
331.0683	736
332.0106	21
332.0108	21
332.0110	21
332.0206	21
332.0208	21
332.0210	21
332.0308	21
332.0310	21
332.0408	22
332.0508	22
332.0608	22
332.0708	22
332.0808	22
332.0809	22
332.0908	22
332.0938	22
332.0950	21
332.0951	21
332.0953	21
337.2010	396
340.0001	59
340.0002	59
340.0003	59
340.0004	59
340.0005	59
340.0010	251, 265
340.0011	59
340.0012	59
340.0013	59
340.0014	59
340.0015	59
340.0016	59
340.0017	59
340.0018	59
340.0019	59
340.0020	59
340.0021	59
340.0022	60
340.0023	60
340.0024	60
340.0025	60
340.0026	60
340.0027	60
340.0028	60
340.0029	60
340.0030	60
340.0031	60
340.0032	60
340.0033	60
340.0034	60
340.0035	60
340.0036	60
340.0037	60
340.0038	60
340.0039	60
340.0040	60
340.0041	60
340.0042	60
340.0043	60
340.0044	60
340.0045	60
340.0046	60
340.0047	60
340.0048	60
340.0049	60
340.0050	61
340.0051	61
340.0061	251, 265
340.0062	251, 265
340.0063	251, 265
340.0064	251, 265
340.0065	251, 265
340.0066	251, 265
340.0067	251, 265
340.0068	251, 265
340.0069	251, 265
340.0070	251, 265
340.0071	251, 265
340.0072	251, 265
340.0073	251, 265
340.0074	251, 265
340.0075	251, 265
340.0076	251, 265
340.0077	251, 265
340.0078	251, 265
340.0079	251, 265
340.0080	251, 265
340.0081	251, 265
340.0082	251, 265
340.0083	251, 265
340.0084	251, 265
340.0085	251, 265
340.0086	251, 265
340.0087	251, 265
340.0088	251, 265
340.0089	251, 265
340.0090	251, 265
340.0091	251, 265
340.0092	251, 265
340.0093	251, 265
340.0094	251, 265
340.0095	251, 265
340.0096	251, 265
340.0097	251, 265
340.0098	251, 265
390.0190	21
4	
400.0001	351-352
400.0002	313, 330, 354
400.0003	313, 330, 354
400.0004	341, 346
400.0009	313, 354, 361
400.0010	360
400.0011	320, 368
400.0012	299
400.0014	332
400.0015	339
400.0016	339
400.0017	339, 344
400.0018	339, 344
400.0019	346
400.0021	382
400.0022	382
400.0023	382
400.0025	342, 348, 352
400.0026	342, 348, 352
400.0027	342, 348, 352
400.0028	342, 348, 352
400.0029	342, 348, 352
400.0035	298
400.0036	298
400.0037	298
400.0038	298
400.0039	298
400.0041	298

Item	Page
400.0042	298
400.0043	298
400.0044	298
400.0046	298
400.0047	298
400.0048	294
400.0049	297, 306-308
400.0050	363
400.0051	363
400.0052	363
400.0053	316, 356, 363, 370
400.0055	379, 382
400.0056	296
400.0057	379, 382
400.0058	379, 382
400.0075	339, 357, 382
400.0076	339, 357, 382
400.0077	339, 357, 382
400.0078	339, 344
400.0079	339, 344
400.0081	346
400.0082	346
400.0083	339, 344
400.0086	346
400.0100	362, 380
400.0101	362, 380
400.0102	362, 380
400.0103	360, 362, 380, 388
400.0104	360, 362, 380, 388
400.0105	362, 380
400.0120	365
400.0125	314
400.0127	314, 318
400.0150	388
400.0151	378, 388
400.0152	388
400.0153	370, 372, 388
400.0154	337, 350, 388-389
400.0155	349-350, 382, 388
400.0156	321, 370-372, 388
400.0157	321, 370-372, 388
400.0158	321, 370, 372, 388
400.0159	306-308, 373, 388
400.0160	298, 307-308, 388
400.0161	326, 341, 388
400.0162	367, 379, 381, 388
400.0163	360, 367, 381, 388
400.0164	255, 388-389
400.0165	372, 374, 384, 388
400.0175	331, 349
400.0176	149, 286, 346
400.0177	149, 286, 346
400.0200	370
400.0225	298
400.0250	335
400.0251	253, 337, 350, 389
400.0252	255, 334-336, 389
400.0253	255, 315, 335, 389
400.0254	350, 367, 381, 389
400.0255	255, 335, 389
400.0256	335
400.0257	255, 337, 350, 389
400.0258	307-308, 350, 389
400.0275	389
400.0281	255, 337, 350, 389
400.0285	326-327, 372, 389
400.0286	370-372, 376, 389
400.0287	370, 372, 381, 389

Item	Page
400.0289	254-255, 389
400.0290	255, 389
400.0300	255, 388
400.0301	255, 328, 387-389
400.0302	255, 328, 387-389
400.0303	255, 328, 387-389
400.0304	255, 387-389
400.0305	255, 388-389
400.0306	255, 388-389
400.0307	255, 388-389
400.0309	255, 328, 387-389
400.0310	255, 328, 387-389
400.0311	255, 328, 387-389
400.0315	342, 348
400.0316	342, 348
400.0317	342, 348
400.0318	342, 348
400.0319	342, 348
400.0321	342, 348
400.0322	342, 348
400.0325	254, 328, 387
400.0330	366, 380
400.0331	366, 380
400.0332	366, 380
400.0333	366, 380
400.0334	366, 380
400.0335	366, 380
400.0336	366, 380
400.0337	366, 380
400.0338	366, 380
400.0339	328, 349, 366, 380
400.0340	349
400.0341	366, 380
400.0342	349
400.0343	349
400.0344	349
400.0345	349
400.0346	349
400.0347	349
400.0348	349
400.0350	349, 378
400.0351	349, 378
400.0352	349, 378
400.0353	349, 378
400.0354	349, 378
400.0355	335, 337, 349, 378
400.0356	349, 378
400.0357	349, 378
400.0358	349, 378
400.0359	349, 378
400.0375	342, 347
400.0376	342, 347
400.0377	321, 342, 347, 372
400.0378	342, 347
400.0379	342, 347
400.0380	321, 342, 347, 372
400.0381	321, 342, 347, 372
400.0382	349
400.0385	353
400.0386	353
400.0387	353
400.0388	353
400.0390	343
400.0391	343
400.0392	343
400.0393	343
400.0394	343
400.0396	343

Item	Page
400.0400	326, 341
400.0401	326, 341
400.0402	326, 341
400.0425	311, 325, 345
400.0428	311, 325, 345
400.0435	311, 325, 345
400.0436	366, 372, 380, 388
400.0437	311, 325, 345
400.0438	311, 325, 327, 345
400.0439	311, 325, 345
400.0440	345, 365, 370, 380
400.0441	311, 325-326, 345
400.0442	325, 327, 345, 370
400.0443	311, 325-327, 345
400.0444	311, 325, 327, 345
400.0445	311, 325, 345
400.0446	311, 325, 345
400.0447	311, 325, 345
400.0450	328
400.0451	326, 328
400.0452	327-328
400.0453	327-328
400.0475	318
400.0478	318
400.0479	318
400.0480	317-318
400.0481	318
400.0482	317-318
400.0500	327
400.0502	311, 325, 327, 345
400.0525	326
400.0550	327, 370
400.0554	310, 321, 370, 372
400.0575	334
400.0576	308, 334-335, 337
400.0577	308, 334-335, 337
400.0578	308, 333-334, 337
400.0580	376-377, 382, 384
400.0600	337, 350
400.0603	349-350, 382-383
400.0609	350, 369, 382, 384
400.0614	337, 350
400.0615	304-308, 350, 388
400.0616	334, 336-337, 350
400.0625	306
400.0634	306-308
400.0635	306-308
400.0650	338, 363
400.0651	363, 367, 381, 389
400.0652	363, 367, 381, 389
400.0653	255, 367, 381, 389
400.0675	362, 379
400.0676	362, 367, 379, 381
400.0677	362, 367, 379, 381
400.0678	253, 367, 379, 381
400.0679	362, 367, 379, 381
400.0680	362, 367, 379, 381
400.0700	338, 340, 363, 380
400.0701	363-364, 380
400.0702	363-364, 380-381
400.0703	363, 367, 380-381
400.0704	363-364, 380-381
400.0705	363-367, 380-381
400.0725	309, 326, 344
400.0726	309, 311, 344, 346
400.0727	346, 365-366, 380
400.0728	330, 336, 344-346
400.0750	358, 366, 377

Item	Page
400.0751	358, 366, 376-377
400.0752	358, 366, 377, 384
400.0753	339-340, 377, 381
400.0754	326, 374, 376-377
400.0757	358, 366, 377
400.0758	358, 366, 377
400.0759	358, 366, 377
400.0760	358, 366, 377
400.0775	365, 380
400.0778	309, 363, 365, 380
400.0779	325, 336, 366, 380
400.0780	310, 328, 365, 380
400.0781	310, 328, 365, 380
400.0782	365, 380
400.0800	335
400.0806	308, 335, 337
400.0807	254, 308, 335, 337
400.0825	300
400.0826	300
400.0827	300
400.0828	300
400.0850	316, 324, 356, 370
400.0851	316, 324, 356, 370
400.0852	316, 324, 356, 370
400.0853	316, 324, 356, 370
400.0875	316, 322, 356, 370
400.0876	316, 322, 356, 370
400.0877	316, 322, 356, 370
400.0878	316, 322, 356, 370
400.0900	333
400.0901	304-305, 355, 361
400.0902	333, 336-337, 383
400.0903	308, 371, 382, 384
400.0904	308, 333, 336-337
400.0905	342, 348, 382-384
400.0925	283, 314, 354
400.0926	283, 314, 354
400.0927	283, 314, 354
400.0928	283, 314, 354
400.0929	283, 314, 354
400.0950	358, 364, 373
400.0951	358, 364, 373
400.0952	362, 364, 373, 376
400.0953	334-335, 373, 376
400.0954	362, 364, 373, 376
400.0955	358, 364, 373
400.0956	362, 364, 373, 376
400.0957	358, 364, 373
400.0958	358, 364, 373
400.0975	301
400.0978	302
400.1000	328, 336
400.1002	328, 336
400.1003	328, 336
400.1004	328, 336
400.1005	330, 336, 345-346
400.1006	328, 336
400.1009	328, 336, 384
400.1025	319, 343, 353
400.1026	319, 343, 353
400.1027	319, 343, 353
400.1028	319, 343, 353
400.1050	318
400.1052	314, 316-318
400.1053	315-316, 318
400.1054	318
400.1055	318
400.1056	318

Item	Page
400.1075	317
400.1078	317
400.1079	317
400.1080	317
400.1100	334
400.1101	337, 349, 382-383
400.1105	308, 334, 336-337
400.1106	308, 334, 336-337
400.1107	308, 334, 336-337
400.1125	307
400.1126	303, 307
400.1127	307
400.1128	307
400.1129	303, 307
400.1130	303, 307
400.1131	307
400.1132	303, 307
400.1133	303, 307
400.1134	303, 307
400.1150	306
400.1153	306
400.1155	306
400.1156	306
400.1157	306
400.1158	306
400.1175	317
400.1176	317
400.1177	314, 317
400.1178	317
400.1179	317
400.1180	317
400.1181	328, 336, 356, 370
400.1183	318, 329, 344-345
400.1184	317-318
400.1185	315-318, 356
400.1200	336
400.1225	315, 355
400.1226	315, 355
400.1227	315, 355
400.1228	315, 355
400.1229	315, 355
400.1250	340, 367, 381
400.1254	340, 367, 381, 388
400.1255	309, 363, 367, 381
400.1256	340, 363, 367, 381
400.1260	255, 340, 381, 389
400.1261	340, 367, 381, 389
400.1262	340, 367, 381
400.1263	255, 340, 381, 389
400.1264	340, 367, 381
400.1275	340, 367, 381
400.1300	308, 337
400.1301	308, 335, 337
400.1309	308, 334, 336-337
400.1350	321, 372
400.1355	321-322, 372
400.1356	321-322, 372
400.1360	321-322, 373, 381
400.1361	323, 329, 371-373
400.1362	371-373, 376-377
400.1363	321-322, 372-373
400.1364	322, 372-373
400.1365	322, 372-373
400.1366	322, 372-373
400.1370	322, 373
400.1371	322-323, 371, 373
400.1375	321-322, 372-373
400.1376	321-322, 372-373

Item	Page
400.1377	341, 370-373, 384
400.1378	321-322, 372-373
400.1379	321-322, 372-373
400.1380	321-322, 372-373
400.1381	321-322, 372-373
400.1382	321-322, 372-373
400.1383	329, 371-373, 384
400.1384	329, 371-373
400.1385	321-322, 372-373
400.1386	329, 371-373, 376
400.1387	329, 371-373
400.1388	369-370, 373-374
400.1400	308
400.1415	304-305, 307-308
400.1420	303, 306-308
400.1421	303, 307-308
400.1422	303, 306-308
400.1425	303-308
400.1427	304, 307-308
400.1428	302, 305, 307-308
400.1429	302, 305, 307-308
400.1430	302, 307-308
400.1450	377
400.1475	318
400.1483	318
400.1484	318
400.1486	315-316, 355, 378
400.1525	333, 382
400.1550	301
400.1575	340, 367, 381
400.1576	340, 367, 381
400.1577	340, 367, 381
400.1625	332, 347, 369, 382
400.1650	321, 372
400.1700	321, 326
400.1725	299, 382
400.1750	322, 372
400.1775	326, 361, 369, 374
400.1800	377
400.1804	377
400.1805	253, 377
400.1807	377
400.1808	376-377, 383
400.1810	377
400.1811	376-377, 383
400.1812	376-377, 383
400.1813	377
400.1814	376-377
400.1815	377
400.1825	383
400.1850	376
400.1875	376
400.1879	376
400.1900	324, 371, 376
400.1904	324, 371, 376
400.1906	324, 371, 376
400.1907	324, 371, 376
400.1925	374
400.1926	374, 377
400.1950	255, 389
400.1968	255, 389
400.2000	326
400.2025	327
400.2050	327
400.2075	295
400.2077	295, 306
400.2078	295
400.2100	305
400.2104	297, 305
400.2105	297, 305
400.2107	305
400.2110	297
400.2115	320, 368
400.2116	320, 368
400.2117	320, 368
400.2120	305
400.2121	305
400.2122	305
400.2125	298
400.2130	310, 345
400.2131	310, 345
400.2132	310, 345
400.2133	310, 345
400.2134	310, 345
400.2135	310, 345
400.2140	305
400.2141	300, 305
400.2142	300, 305
400.2144	301, 305
400.2145	300, 305
400.2146	300, 305
400.2147	305
400.2148	300, 305
400.2150	295
400.2151	296, 305, 384
400.2152	296, 306
400.2153	296, 305
400.2155	334
400.2156	334
400.2157	334
400.2158	334
400.2159	334
400.2161	334
400.2162	334
400.2163	334
400.2175	303
400.2200	304
400.2205	300-301, 304-305
400.2206	301, 304
400.2225	307
400.2250	302
400.2275	302
400.2276	302
400.2277	302
400.2278	302
400.2300	307
400.2325	337, 359
400.2326	337, 359
400.2327	337, 359, 362, 379
400.2350	316, 348, 378
400.2351	316-318, 348, 378
400.2352	316, 348, 378
400.2354	316, 318, 348, 378
400.2375	313
400.2376	313, 316, 348, 378
400.2377	313, 316, 348, 378
400.2378	306
400.2400	310, 328
400.2402	310, 328, 345
400.2403	310, 329, 345
400.2404	327, 329, 345, 370
400.2425	325, 336, 366
400.2426	325, 336, 366
400.2427	325, 336, 366
400.2428	325, 336, 366
400.2429	320, 325, 330, 368
400.2450	319
400.2451	319
400.2452	319
400.2453	319
400.2454	319
400.2455	319
400.2456	319
400.2457	319
400.2475	315, 356
400.2476	315, 356
400.2500	303
400.2525	339
400.2526	339
400.2527	339
400.2550	314
400.2552	314
400.2553	314
400.2554	314
400.2600	347, 378
400.2601	347, 378
400.2602	347, 378
400.2603	347, 378
400.2650	388
400.2700	303
400.2800	360
400.2850	309, 329, 344
400.2851	309, 329, 344
400.2852	309, 329, 344
400.2853	309, 329, 344
400.2900	310, 329, 345
400.2901	310, 329, 345
400.2950	311, 330, 346
400.2951	311, 330, 346
400.3000	322, 329, 341, 370
400.3001	322, 329, 341, 370
400.3050	309, 330, 338, 363
400.3051	309, 330, 338, 363
400.3052	309, 330, 338, 363
400.3100	323, 371
400.3101	323, 371
400.3102	323, 329, 371
400.3150	323, 329, 371
400.3151	323, 329, 371
400.3152	323, 329, 371
400.3154	323, 329, 371
400.3200	316
400.3201	316
400.3202	316
400.3203	312, 316
400.3204	315-316, 356
400.3250	315
400.3251	315
400.3252	315
400.3254	315
400.3256	315
400.3300	304
400.3301	301, 304
400.3350	333, 349
400.3351	333, 349
400.4025	320, 343
400.4026	320, 343
400.4027	320, 343
400.4125	332, 383
400.4126	332, 383
400.4127	332, 383
400.4150	333
400.4151	333
400.4152	333, 342, 348
400.4153	333, 342, 348
400.4154	333
400.4175	149, 286, 346
400.4200	364
400.4201	364
400.4202	364
400.4203	364
400.4225	384
400.4226	384
400.4227	384
400.4228	384
400.4229	384
400.4250	384
400.4251	384
400.4252	384
400.4253	384
400.4275	333
400.4276	333
400.4300	282, 294
400.4325	304
400.4326	304
400.4327	304
400.4328	304
400.4329	304
400.4330	304
400.4350	299
400.4355	305
400.4356	305
400.4357	305
400.4360	315, 355
400.4361	315, 355
400.4362	315, 319, 355, 357
400.4363	315, 319, 355, 357
400.4365	312
400.4366	312
400.4367	312
400.4368	312
400.4370	312, 356
400.4371	312, 356
400.4372	312, 356
400.4375	319, 357
400.4376	319, 357
400.4377	319, 357
400.4378	319, 357
400.4380	312, 355
400.4381	312, 355
400.4382	312, 355
400.4383	312, 355
400.4384	312, 355
400.4385	313
400.4386	313
400.4387	313
400.4388	313
400.4390	312, 354
400.4395	313, 356
400.4400	354
400.4405	319, 343
400.4406	319, 343
400.4407	319, 343
400.4410	309
400.4420	335
400.4421	335
400.4422	335
400.4423	335
400.4424	335
400.4425	332
400.4426	335
400.4427	332
400.4428	332
400.4440	331
400.4445	332
400.4450	332, 347, 357, 369
400.4451	332, 347, 357, 369
400.4452	332, 347, 357, 369
400.4453	332, 347, 357, 369
400.4455	332, 341, 346
400.4460	331, 383
400.4461	331, 383
400.4462	331, 383
400.4465	341, 348
400.4466	342, 348
400.4467	342, 348
400.4470	341, 347
400.4471	341, 347
400.4472	341, 347
400.4473	341, 347
400.4475	362, 379
400.4476	362, 379
400.4477	362, 379
400.4478	362, 379
400.4480	365
400.4481	365
400.4482	365
400.4483	365
400.4485	364
400.4486	364
400.4487	364
400.4488	364
400.4489	364
400.4490	361
400.4491	361
400.4495	361
400.4496	361
400.4497	361
400.4498	361
400.4500	365
400.4501	365
400.4502	365
400.4503	365
400.4505	361
400.4506	361
400.4507	361
400.4508	361
400.4510	358, 375
400.4511	358, 375
400.4512	358, 375
400.4513	358, 375
400.4514	358, 375
400.4515	353, 359, 362, 376
400.4516	353, 359, 362, 376
400.4520	300
400.4525	300
400.4530	300
400.4535	303, 373
400.4536	303, 373
400.4537	303, 373
400.4538	303, 373
400.4539	303, 373
400.4540	301
400.4541	301
400.4542	301
400.4550	301
400.4555	302
400.4556	302
400.4557	302
400.4558	302

Item	Page
400.4560	300
400.4561	300
400.4562	300
400.4565	295
400.4570	301
400.4571	301
400.4572	301
400.4575	314
400.4576	314
400.4577	314
400.4578	314
400.4580	317
400.4581	317
400.4582	317
400.4583	317
400.4584	317
400.4585	312
400.4586	317
400.4587	317
400.4600	306
400.4605	320, 343, 352
400.4606	320, 344, 352
400.4607	320, 344, 352
400.4608	320, 344, 352
400.4609	320, 344, 352
400.4610	320, 344, 352
400.4611	320, 344, 352
400.4612	320, 344, 352
400.4613	320, 344, 352
400.4614	320, 344, 352
400.4615	320, 344, 352
400.4616	320, 344, 352
400.4617	320, 344, 352
400.4618	320, 344, 352
400.4619	320, 344, 352
400.4621	320, 344, 352
400.4625	352
400.4626	352
400.4627	352
400.4628	352
400.4629	352
400.9001	208, 323, 368
400.9003	331
400.9004	328, 345, 387-389
400.9005	308
400.9006	387
400.9007	284, 385
400.9008	295, 306-308, 319
400.9009	295
400.9010	295, 307-308
400.9011	295, 303, 307-308
400.9012	297-298
400.9013	297
400.9014	149, 286, 331
400.9015	337, 350, 382, 389
400.9016	253, 374, 377
400.9017	337, 350, 382, 389
400.9018	253, 308, 337, 350
400.9019	306-308, 337, 350
400.9021	374, 377
400.9022	374, 377
400.9023	358, 366, 374, 377
400.9024	374, 377
400.9025	374, 377
400.9026	387
400.9027	311, 325, 345, 387
400.9028	309
400.9029	309, 311, 325, 345

Item	Page
400.9030	309, 311, 325, 345
400.9031	311, 325, 345
400.9032	311, 325, 345
400.9033	311, 325, 345
400.9034	325-326, 344-345
400.9035	325, 344
400.9036	325
400.9037	309
400.9038	309
400.9039	309
400.9040	297
400.9042	200, 298
400.9043	299, 301, 306-308
400.9044	296, 306-308
400.9045	360, 367, 381, 524
400.9046	309, 367, 379, 381
400.9047	357
400.9050	253
400.9051	254, 357, 367, 378
400.9055	253
400.9060	253
400.9065	254
400.9066	254
400.9067	254
400.9068	254
400.9070	200, 330, 382
400.9080	254
400.9083	254
400.9084	254
400.9085	254
400.9086	254
400.9087	254
400.9088	254
400.9089	254
400.9090	356
400.9091	356
400.9092	356
400.9093	356
400.9094	297
400.9097	254
400.9098	335, 389
405.0010	251
405.0019	181, 244
405.0020	190, 245
405.0021	190, 245
405.0022	190, 245
405.0023	190, 245
405.0024	190, 245
405.0050	248
405.0051	248
405.0052	248
405.0053	248
405.0054	249
405.0055	249
405.0056	249
405.0057	249
405.0058	249
405.0059	249
405.0060	249
405.0061	249
405.0070	246
405.0071	246
405.0072	246
405.0080	252
405.0081	252
405.0082	252
405.0090	282, 331
405.0100	252

Item	Page
405.0101	252
405.0102	252
405.0103	252
405.0104	252
405.0106	252
405.0107	252
405.0108	252
405.0109	252
405.0111	252
405.0120	246
405.0130	246
405.0140	246
405.0150	182, 241
405.0151	182, 241
405.0152	182, 241
405.0800	248
405.0801	248
405.0802	248
405.0803	248
405.0804	248
405.0806	248
405.0807	248
420.0000	125
420.0050	125
420.0250	126
420.0350	126
420.0400	127
420.0450	127
420.0500	127
420.0550	127
420.0600	128
420.0650	125
420.0700	128
420.0750	128
420.0800	128
420.0850	128
420.0900	123
420.0905	124
420.0910	126
420.0915	124
420.0920	124
420.0925	124
420.0930	125
420.1001	71, 112, 122
420.1002	71, 112
420.1003	71, 105, 112
420.1004	71, 112
420.1005	71, 112
420.1006	71, 110
420.1007	72, 113
420.1008	72, 104
420.1009	72, 122
420.1010	71, 112
420.1011	72, 110
420.1012	72, 80
420.1013	72, 112
420.1014	104-105, 113, 117
420.1015	73, 105, 113, 117
420.1016	72
420.1017	72, 113
420.1018	73, 105
420.1019	73
420.1020	73
420.1051	75, 116
420.1052	74
420.1053	74
420.1054	75
420.1055	75

Item	Page
420.1056	74
420.1057	74, 114
420.1058	74
420.1059	74
420.1060	75, 94
420.1061	75, 80, 112
420.1062	75
420.1063	76
420.1064	75
420.1065	75
420.1066	76
420.1067	75
420.1068	76
420.1069	76
420.1101	77
420.1102	77, 100, 115
420.1103	77, 116
420.1104	77, 116
420.1105	77
420.1106	92, 96
420.1151	77, 80, 104
420.1201	81, 113
420.1202	81
420.1203	81
420.1204	81
420.1205	81
420.1206	82
420.1207	82
420.1208	71, 82
420.1209	82
420.1210	82
420.1211	82, 121
420.1212	82
420.1251	82, 114
420.1252	84, 114
420.1253	84, 115
420.1254	78, 84, 101, 121
420.1255	78, 84, 121
420.1256	78, 85
420.1257	85
420.1258	85
420.1259	85
420.1260	84, 86, 91
420.1261	82
420.1262	83
420.1263	83, 120
420.1264	83
420.1265	83
420.1266	83
420.1267	83, 92, 121
420.1268	83
420.1269	83
420.1271	84
420.1272	84
420.1273	84
420.1274	85, 116
420.1275	79, 85, 103, 116
420.1276	76, 85, 117
420.1277	86, 118
420.1278	85, 113
420.1279	85
420.1301	78, 100
420.1302	100
420.1303	101
420.1304	78, 101, 117
420.1305	101, 117
420.1306	101, 117
420.1307	86, 102, 115

Item	Page
420.1308	78, 102
420.1309	89, 102
420.1310	102
420.1311	78, 102
420.1313	102
420.1314	102
420.1315	78, 102
420.1316	79, 83, 103
420.1317	103, 116
420.1318	103, 116
420.1319	103, 119
420.1351	86
420.1352	86, 96, 121
420.1353	88
420.1354	88-89, 97
420.1355	88, 97
420.1356	88, 105, 109
420.1357	88, 109
420.1358	86, 88
420.1359	87
420.1360	87
420.1361	87
420.1362	87
420.1363	87
420.1364	87
420.1365	87
420.1366	87
420.1367	87
420.1368	87
420.1369	87, 99
420.1370	88
420.1371	88
420.1372	88
420.1373	76, 102, 115
420.1401	89, 91, 109
420.1402	90, 121
420.1403	91, 109
420.1404	90, 98, 109, 120
420.1405	90
420.1406	89-90, 100
420.1407	91
420.1408	90, 99
420.1409	84, 86, 90, 115
420.1410	90
420.1411	91
420.1412	91
420.1413	91, 109
420.1414	97
420.1415	90
420.1416	90
420.1417	90
420.1418	90
420.1419	91
420.1420	91
420.1451	93, 119
420.1452	80, 93, 104
420.1453	92, 122
420.1454	92, 120
420.1455	92
420.1456	92
420.1457	93
420.1458	93, 122
420.1459	93, 119
420.1460	93
420.1461	93
420.1462	93
420.1463	93
420.1464	76, 94, 117

Item	Page
420.1465	81, 93
420.1501	94, 120
420.1502	94, 109
420.1503	95
420.1504	76, 95
420.1505	95
420.1506	89, 95
420.1507	95
420.1508	94, 120
420.1509	94
420.1510	95
420.1511	95
420.1512	95
420.1551	92, 98
420.1552	96
420.1553	83, 96, 121
420.1554	89, 97
420.1555	92, 97
420.1556	89, 98
420.1557	98, 101, 121
420.1558	98, 113
420.1559	89, 98
420.1560	97, 114
420.1561	96
420.1562	96
420.1563	96
420.1564	96
420.1565	97, 121
420.1566	97
420.1567	97
420.1568	98, 115
420.1601	100, 112
420.1602	86, 99
420.1603	99
420.1604	74, 99, 104
420.1605	99
420.1606	100
420.1651	79, 94, 114, 119
420.1652	79
420.1653	71, 79
420.1654	80
420.1655	79
420.1656	79
420.1657	79
420.1658	80
420.1659	80
420.1660	80
420.1661	77, 81
420.1701	80, 82, 104
420.1702	103
420.1703	103, 120
420.1704	81, 104
420.1705	81, 104
420.1751	96, 107
420.1752	105
420.1753	86, 94, 108
420.1754	107, 120
420.1755	94, 98, 105, 120
420.1756	107
420.1757	88, 108
420.1758	99, 106, 120
420.1759	107
420.1760	96, 107
420.1761	98, 108
420.1762	106
420.1763	106
420.1764	106
420.1765	109
420.1766	91, 108
420.1767	99, 107
420.1768	116, 122
420.1769	105
420.1770	105
420.1771	105
420.1772	106
420.1773	106
420.1774	106
420.1775	106
420.1776	106
420.1777	106
420.1778	107
420.1779	107
420.1780	107
420.1781	108, 118
420.1782	108, 118
420.1783	108, 118
420.1784	108, 118
420.1785	108, 120
420.1801	113, 118
420.1802	114, 119
420.1803	113-114
420.1804	114
420.1805	114
420.1806	114
420.1807	114
420.1851	78, 100, 111
420.1852	77, 86, 111, 115
420.1853	100, 111
420.1854	111
420.1855	101, 111, 120
420.1856	76, 100, 110, 115
420.1857	80, 99, 110, 119
420.1858	111
420.1859	111
420.1860	73, 111
420.1861	111, 119
420.1862	73, 109
420.1863	73, 109
420.1864	72, 110
420.1865	73, 110
420.1866	110
420.1867	110
420.1868	110, 119
420.1869	74, 110
420.1870	79, 111, 116
420.1871	76
420.1872	111, 119
420.1901	77, 115
420.1902	95, 122
420.1903	92, 122
420.1904	84
420.1906	117, 122
420.1907	117, 123
420.1908	74, 118
420.1909	118, 123
420.1911	118, 123
420.1912	119, 123
420.1913	88
420.1916	103, 122
420.1917	103, 122
420.1957	123
420.1958	123
420.1959	123
420.1960	123
420.5001	71, 112, 122
420.5002	71, 112
420.5003	71, 105, 112
420.5004	71, 112
420.5005	71, 112
420.5006	71, 110
420.5007	72, 113
420.5008	72, 104
420.5009	72, 122
420.5010	71, 112
420.5011	72, 110
420.5012	72, 80
420.5013	72, 112
420.5014	104-105, 113, 117
420.5015	73, 105, 113, 117
420.5016	72
420.5017	72, 113
420.5018	73, 105
420.5019	73
420.5020	73
420.5051	75, 116
420.5052	74
420.5053	74
420.5054	75
420.5055	75
420.5056	74
420.5057	74, 114
420.5058	74
420.5059	74
420.5060	75, 94
420.5061	75, 80, 112
420.5062	75
420.5063	76
420.5064	75
420.5065	75
420.5066	76
420.5067	75
420.5068	76
420.5069	76
420.5101	77
420.5102	77, 100, 115
420.5103	77, 116
420.5104	77, 116
420.5105	77
420.5106	92, 96
420.5151	77, 80, 104
420.5201	81, 113
420.5202	81
420.5203	81
420.5204	81
420.5205	81
420.5206	82
420.5207	82
420.5208	71, 82
420.5209	82
420.5210	82
420.5211	82, 121
420.5212	82
420.5251	82, 114
420.5252	84, 114
420.5253	84, 115
420.5254	78, 84, 101, 121
420.5255	78, 84, 121
420.5256	78, 85
420.5257	85
420.5258	85
420.5259	85
420.5260	84, 86, 91
420.5261	82
420.5262	83
420.5263	83, 120
420.5264	83
420.5265	83
420.5266	83
420.5267	83, 92, 121
420.5268	83
420.5269	83
420.5271	84
420.5272	84
420.5273	84
420.5274	85, 116
420.5275	79, 85, 103, 116
420.5276	76, 85, 117
420.5277	86, 118
420.5278	85, 113
420.5279	85
420.5301	78, 100
420.5302	100
420.5303	101
420.5304	78, 101, 117
420.5305	101, 117
420.5306	101, 117
420.5307	86, 102, 115
420.5308	78, 102
420.5309	89, 102
420.5310	102
420.5311	78, 102
420.5313	102
420.5314	102
420.5315	78, 102
420.5316	79, 83, 103
420.5317	103, 116
420.5318	103, 116
420.5319	103, 119
420.5351	86
420.5352	86, 96, 121
420.5353	88
420.5354	88-89, 97
420.5355	88, 97
420.5356	88, 105, 109
420.5357	88, 109
420.5358	86, 88
420.5359	87
420.5360	87
420.5361	87
420.5362	87
420.5363	87
420.5364	87
420.5365	87
420.5366	87
420.5367	87
420.5368	87
420.5369	87, 99
420.5370	88
420.5371	88
420.5372	88
420.5373	76, 102, 115
420.5401	89, 91, 109
420.5402	90, 121
420.5403	91, 109
420.5404	90, 98, 109, 120
420.5405	90
420.5406	89-90, 100
420.5407	91
420.5408	90, 99
420.5409	84, 86, 90, 115
420.5410	90
420.5411	91
420.5412	91
420.5413	91, 109
420.5414	97
420.5415	90
420.5416	90
420.5417	90
420.5418	90
420.5419	91
420.5420	91
420.5451	93, 119
420.5452	80, 93, 104
420.5453	92, 122
420.5454	92, 120
420.5455	92
420.5456	92
420.5457	93
420.5458	93, 122
420.5459	93, 119
420.5460	93
420.5461	93
420.5462	93
420.5463	93
420.5464	76, 94, 117
420.5465	81, 93
420.5501	94, 120
420.5502	94, 109
420.5503	95
420.5504	76, 95
420.5505	95
420.5506	89, 95
420.5507	95
420.5508	94, 120
420.5509	94
420.5510	95
420.5511	95
420.5512	95
420.5551	92, 98
420.5552	96
420.5553	83, 96, 121
420.5554	89, 97
420.5555	92, 97
420.5556	89, 98
420.5557	98, 101, 121
420.5558	98, 113
420.5559	89, 98
420.5560	97, 114
420.5561	96
420.5562	96
420.5563	96
420.5564	96
420.5565	97, 121
420.5566	97
420.5567	97
420.5568	98, 115
420.5601	100, 112
420.5602	86, 99
420.5603	99
420.5604	74, 99, 104
420.5605	99
420.5606	100
420.5651	79, 94, 114, 119
420.5652	79
420.5653	71, 79
420.5654	80
420.5655	79
420.5656	79
420.5657	79
420.5658	80

Item	Page
420.5659	80
420.5660	80
420.5661	77, 81
420.5701	80, 82, 104
420.5702	103
420.5703	103, 120
420.5704	81, 104
420.5705	81, 104
420.5751	96, 107
420.5752	105
420.5753	86, 94, 108
420.5754	107, 120
420.5755	94, 98, 105, 120
420.5756	107
420.5757	88, 108
420.5758	99, 106, 120
420.5759	107
420.5760	96, 107
420.5761	98, 108
420.5762	106
420.5763	106
420.5764	106
420.5765	109
420.5766	91, 108
420.5767	99, 107
420.5768	116, 122
420.5769	105
420.5770	105
420.5771	105
420.5772	106
420.5773	106
420.5774	106
420.5775	106
420.5776	106
420.5777	106
420.5778	107
420.5779	107
420.5780	107
420.5781	108, 118
420.5782	108, 118
420.5783	108, 118
420.5784	108, 118
420.5785	108, 120
420.5801	113, 118
420.5802	114, 119
420.5803	113-114
420.5804	114
420.5805	114
420.5806	114
420.5807	114
420.5851	78, 100, 111
420.5852	77, 86, 111, 115
420.5853	100, 111
420.5854	111
420.5855	101, 111, 120
420.5856	76, 100, 110, 115
420.5857	80, 99, 110, 119
420.5858	111
420.5859	111
420.5860	73, 111
420.5861	111, 119
420.5862	73, 109
420.5863	73, 109
420.5864	72, 110
420.5865	73, 110
420.5866	110
420.5867	110
420.5868	110, 119
420.5869	74, 110
420.5870	79, 111, 116
420.5871	76
420.5872	111, 119
420.5901	77, 115
420.5902	95, 122
420.5903	92, 122
420.5904	84
420.5906	117, 122
420.5907	117, 123
420.5908	74, 118
420.5909	118, 123
420.5911	118, 123
420.5912	119, 123
420.5913	88
420.5916	103, 122
420.5917	103, 122
420.5957	123
420.5958	123
420.5959	123
420.5960	123
430.0001	666, 669
430.0002	670, 676, 678-679
430.0003	667, 670, 673
430.0011	667, 679
430.0012	668-669, 675, 682
430.0013	668
430.0014	667, 673-674
430.0015	673-674, 677, 682
430.0016	667
430.0017	668
430.0018	682
430.0019	668
430.0020	668
430.0022	665
430.0023	665
430.0024	665
430.0025	668, 675, 681
430.0026	675, 677, 681-682
430.0027	665, 668, 670, 673
430.0028	669
430.0029	669
430.0031	677
430.0032	665
430.0033	666
430.0034	677
430.0036	665
430.0041	675, 677-678, 683
430.0043	675
430.0061	671, 674, 680
430.0062	671, 677
430.0064	671-672, 680, 683
430.0065	671
430.0066	671, 674
430.0067	671, 683
430.0068	671, 674
430.0069	672
430.0071	672
430.0072	671
430.0073	670, 676
430.0074	670
430.0077	672
430.0081	672, 676, 680
430.0099	665
430.0101	673
430.0117	674
430.0136	666, 676
430.0137	676, 680-681
430.0138	676, 680
430.0139	666
430.0157	678
430.0158	679
430.0159	679
430.0161	679
430.0171	679
430.0187	680
430.0191	681
430.0208	683
430.0211	683
430.0222	666
430.0226	678
430.0227	678
430.0228	678
430.0231	667
430.0331	666, 670, 673
430.0501	680
430.0502	667, 673, 675
430.0503	681
430.0505	669, 674-676, 681
430.0506	666, 669
430.0507	683
430.0508	670, 674, 677, 682
430.0509	675
430.0510	680
430.0511	679
430.0512	667, 679
430.0513	668
430.0514	672
430.0515	678, 683
430.0516	668
430.0517	673, 676, 678-679
430.0518	668, 677, 681-682
430.0519	681
430.0520	666, 671, 677, 683
430.0521	677-679, 683
430.0522	679
430.0523	677
430.0524	669, 675
430.0525	671, 674
430.0526	670, 672, 676, 680
430.0527	669, 674, 682
430.0528	676, 680-681
430.0529	672, 676, 680
430.0530	671, 673, 680, 683
430.0531	676
430.0532	682
430.0533	678
430.0534	669
430.0535	666
430.0536	678
430.0537	672
430.0538	667, 670, 673
430.1001	666, 669
430.1002	670, 676, 678-679
430.1003	667, 670, 673
430.1011	667, 679
430.1012	668-669, 675, 682
430.1013	668
430.1014	667, 673-674
430.1015	667, 674, 677, 682
430.1016	667
430.1017	668
430.1018	682
430.1019	668
430.1020	668
430.1022	665
430.1023	665
430.1024	665
430.1025	668, 675, 681
430.1026	675, 677, 681-682
430.1027	665, 668, 670, 673
430.1028	669
430.1029	669
430.1031	677
430.1032	665
430.1033	666
430.1034	677
430.1036	665
430.1041	675, 677-678, 683
430.1043	675
430.1061	671, 674, 680
430.1062	671, 677
430.1064	671-672, 680, 683
430.1065	671
430.1066	671, 674
430.1067	671, 683
430.1068	671, 674
430.1069	672
430.1071	672
430.1072	671
430.1073	670, 676
430.1074	670
430.1077	672
430.1081	672, 676, 680
430.1099	665, 684
430.1101	673
430.1117	674
430.1136	666, 676
430.1137	676, 680-681
430.1138	676, 680
430.1139	666
430.1157	678
430.1158	679
430.1159	679
430.1161	679
430.1171	679
430.1187	680
430.1191	681
430.1208	683
430.1211	683
430.1222	666
430.1226	678
430.1227	678
430.1228	678
430.1231	667
430.1331	666, 670, 673
430.1501	680
430.1502	667, 673, 675
430.1503	681
430.1505	669, 674-676, 681
430.1506	666, 669
430.1507	683
430.1508	670, 674, 677, 682
430.1509	675
430.1510	680
430.1511	679
430.1512	667, 679
430.1513	668
430.1514	672
430.1515	678, 683
430.1516	668
430.1517	673, 676, 678-679
430.1518	675, 677, 681-682
430.1519	681
430.1520	666, 671, 677, 683
430.1521	677-679, 683
430.1522	679
430.1523	677
430.1524	669, 675
430.1525	671, 674
430.1526	670, 672, 676, 680
430.1527	669, 674, 682
430.1528	676, 680-681
430.1529	672, 676, 680
430.1530	671, 673, 680, 683
430.1531	676
430.1532	682
430.1533	678
430.1534	669
430.1535	666
430.1536	678
430.1537	672
430.1538	667, 670, 673
430.2001	666, 669
430.2002	666, 676, 678-679
430.2003	667, 670, 673
430.2011	667, 679
430.2012	669, 674-675, 682
430.2013	668
430.2014	667, 673-674
430.2015	673-674, 677, 682
430.2016	667
430.2017	668
430.2018	682
430.2019	668
430.2020	668
430.2022	665
430.2023	665
430.2024	665
430.2025	668, 675, 681
430.2026	675, 677, 681-682
430.2027	665, 668, 670, 673
430.2028	669
430.2029	669
430.2031	677
430.2032	665
430.2033	666
430.2034	677
430.2036	665
430.2041	675, 677-678, 683
430.2043	675
430.2061	671, 674, 680
430.2062	671, 677
430.2064	671-672, 680, 683
430.2065	671
430.2066	671, 674
430.2067	671, 683
430.2068	671, 674
430.2069	672
430.2071	672
430.2072	671
430.2073	670, 676
430.2074	670
430.2077	672
430.2081	672, 676, 680
430.2099	665, 684
430.2101	673
430.2117	674
430.2136	666, 676
430.2137	676, 680-681
430.2138	676, 680
430.2139	666

Item	Page
430.2157	678
430.2158	679
430.2159	679
430.2161	679
430.2171	679
430.2187	680
430.2191	681
430.2208	683
430.2211	683
430.2222	666
430.2226	678
430.2227	678
430.2228	678
430.2231	667
430.2331	666, 670, 673
430.2501	680
430.2502	667, 673, 675
430.2503	681
430.2505	669, 674-676, 681
430.2506	666, 669
430.2507	683
430.2508	670, 674, 677, 682
430.2509	675
430.2510	680
430.2511	679
430.2512	667, 679
430.2513	668
430.2514	672
430.2515	678, 683
430.2516	668
430.2517	673, 676, 678-679
430.2518	668, 677, 681-682
430.2519	681
430.2520	666, 671, 677, 683
430.2521	677-679, 683
430.2522	679
430.2523	677
430.2524	669, 675
430.2525	671, 674
430.2526	670, 672, 676, 680
430.2527	669, 674, 682
430.2528	676, 680-681
430.2529	672, 676, 680
430.2530	671, 673, 680, 683
430.2531	676
430.2532	682
430.2533	678
430.2534	669
430.2535	666
430.2536	678
430.2537	672
430.2538	667, 670, 673
440.0001	551
440.0002	551
440.0003	551
440.0004	551-552
440.0005	551
440.0006	551
440.0007	551-552, 556-557
440.0008	551-552, 563-564
440.0009	551-552
440.0010	551
440.0011	551, 560
440.0012	551, 555
440.0013	551
440.0014	551
440.0015	552
440.0016	551-552
440.0017	552
440.0020	551
440.0021	551, 563
440.0022	551, 563
440.0023	551, 563
440.0024	551, 563
440.0025	552
440.0026	552
440.0027	552
440.0028	552, 563
440.0029	552, 563
440.0031	557
440.0032	557
440.0033	557
440.0034	553, 573, 592
440.0035	557, 559
440.0036	553
440.0037	554
440.0038	553
440.0040	552
440.0041	552
440.0042	552
440.0043	552, 563-564
440.0044	552
440.0045	552
440.0046	552, 563-565
440.0047	552
440.0048	552
440.0049	552, 564-565
440.0055	552
440.0056	552
440.0057	552
440.0058	552
440.0060	552
440.0061	552
440.0063	552
440.0064	558-560
440.0065	558-560
440.0066	559
440.0067	559
440.0068	559
440.0069	558-560
440.0070	552
440.0071	558-560, 562
440.0072	558-560
440.0074	557-560
440.0075	562-563
440.0076	556, 558, 562
440.0077	556, 558, 562
440.0078	556, 558, 562
440.0079	556, 558, 562
440.0080	556
440.0081	562
440.0082	562
440.0083	562
440.0084	560, 562, 564
440.0085	560-562
440.0086	562
440.0087	558, 562
440.0088	562
440.0089	562
440.0090	562
440.0091	562
440.0092	562
440.0093	562
440.0094	562
440.0095	561, 563
440.0096	561
440.0097	561
440.0098	560-562
440.0099	560
440.0100	561, 563
440.0102	561
440.0103	561
440.0104	560
440.0105	560
440.0106	560
440.0107	560
440.0108	560
440.0109	560
440.0110	556
440.0111	560-562
440.0112	560-562
440.0113	560-562
440.0114	557
440.0115	556-557, 559, 563
440.0116	557
440.0117	557
440.0118	556
440.0119	556
440.0120	560
440.0121	560, 563-564
440.0122	560
440.0123	560
440.0124	557, 560-561
440.0125	560
440.0126	560
440.0127	560-562
440.0128	560
440.0129	560
440.0130	561
440.0131	561
440.0132	562
440.0133	562
440.0134	562
440.0135	561
440.0136	557, 561
440.0137	562
440.0138	562
440.0139	562
440.0140	557
440.0150	560, 562
440.0153	563-564
440.0154	563-564
440.0155	562
440.0160	561
440.0161	561
440.0162	561-562
440.0163	561
440.0165	562
440.0166	561-562
440.0168	557
440.0170	556
440.0171	556
440.0172	556
440.0173	556
440.0174	556
440.0176	553, 564, 566
440.0178	553
440.0179	553, 564, 566
440.0180	553, 566
440.0181	554
440.0182	554
440.0183	554
440.0184	554-556
440.0185	553
440.0186	554-555
440.0187	554
440.0188	555
440.0189	555
440.0190	553
440.0191	555-556
440.0192	555
440.0193	555-556
440.0194	554-555
440.0196	555
440.0197	554
440.0198	555
440.0199	555
440.0201	555
440.0202	554, 556
440.0203	556
440.0204	553, 566
440.0205	564
440.0206	565
440.0207	565
440.0208	565
440.0210	565
440.0213	565
440.0214	565
440.0216	565
440.0217	565
440.0225	564
440.0226	564
440.0227	564
440.0228	564
440.0229	564
440.0230	555
440.0231	555
440.0232	555
440.0233	555
440.0234	565
440.0235	554
440.0236	554
440.0237	554
440.0238	555
440.0240	554
440.0241	554
440.0242	554
440.0243	554
440.0244	554
440.0245	564
440.0246	564
440.0247	564
440.0248	564
440.0249	564
440.0250	563
440.0251	564
440.0252	563-564
440.0253	563-564
440.0254	563-564
440.0255	563
440.0256	563
440.0257	563
440.0258	563
440.0259	563
440.0261	563
440.0262	563
440.0263	563
440.0264	563
440.0266	563
440.0267	563
440.0268	563
440.0269	563
440.0270	564
440.0271	564
440.0272	564
440.0273	564
440.0274	564
440.0275	564
440.0276	564
440.0277	564
440.0278	564
440.0279	564
440.0281	564
440.0282	564
440.0283	564
440.0285	564
440.0286	564
440.0287	564
440.0290	565
440.0291	565
440.0292	565
440.0293	565
440.0295	565
440.0296	565
440.0297	565
440.0298	565
440.0299	565
440.0300	565-566
440.0301	565
440.0302	565
440.0303	565
440.0304	565
440.0305	565
440.0306	565
440.0307	565
440.0308	565
440.0309	565
440.0310	565
440.0311	565
440.0312	565
440.0313	563, 565
440.0314	565
440.0315	565
440.0316	565
440.0317	565
440.0318	565
440.0319	565
440.0320	565
440.0321	565
440.0322	565
440.0323	565
440.0324	565
440.0325	566
440.0326	566
440.0327	566
440.0328	566
440.0329	566
440.0330	645
440.0331	566
440.0332	566
440.0333	566
440.0334	566
440.0335	646
440.0336	566
440.0337	566
440.0338	566
440.0340	582
440.0341	582
440.0342	582
440.0343	582

Item	Page
440.0344	582
440.0348	565
440.0407	553
440.0408	554
440.0409	553
440.0415	565
440.0416	565
440.0417	565
440.0418	565
440.0420	554
440.0425	554
440.0430	555
440.0435	555
440.0440	555
440.0445	556
440.0450	556
440.0455	555
440.0470	554
440.0475	553
440.0476	553
440.0477	553
440.0478	553
440.0479	553
440.0501	558
440.0520	563
440.0521	563
440.0522	563
440.0523	563
440.0525	563
440.0530	557
440.0535	559
440.0536	553, 566
440.0537	566
440.0538	566
440.0555	566
440.0630	558-560
440.0631	558
440.0632	558
440.0633	558
440.0634	558
440.0636	558
440.0640	559
440.0645	558
440.0650	558
440.0655	558
440.0660	558
440.0700	553
440.0720	556
440.0901	551
440.0902	552
440.3049	565
440.9992	563
440.9997	566
440.9998	560
450.0030	582
450.0031	582
450.0050	549
450.0051	549
450.0052	549
450.0060	549
450.0061	549
450.0062	549
450.0070	548
450.0071	548
450.0075	547
450.0076	547
450.0085	549
450.0108	496
450.0109	496
450.0111	496
450.0303	61
450.0304	61
450.0960	612, 746
450.0965	550
450.0966	550
450.0970	548
450.0971	549
450.0972	549
450.0973	549
450.0974	549
450.0975	549
450.0976	549
450.0977	549
455.0005	244
455.0006	244
455.0030	184, 242
455.0031	184, 242-243
455.0032	184, 242-243
455.0033	184, 242-243
455.0034	184, 242-243
455.0050	687
455.0051	687
455.0052	687
455.0111	144
455.0120	245
455.0121	245
455.0122	245
455.0123	245
455.0135	143
455.0136	143
455.0137	143
455.0138	143
455.0140	144
455.0141	143-144
455.0142	143-144
455.0143	143-144
455.0144	143-144
455.0170	518
455.0171	518
455.0172	518
455.0173	518
455.0174	518
455.0175	518
455.0176	518
455.0177	518
455.0178	518
455.0180	518
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455.0186	518
455.0187	518
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455.0189	518
455.0190	518
455.2291	518
455.2292	518
455.2293	518
455.2294	518
455.2295	518
455.2296	518
455.2297	518
455.2298	518
455.2383	519
455.2384	519
455.2385	519
455.2386	519
455.2387	519
455.2388	519
455.2389	519
460.1180	759
460.1195	759
460.5220	771
460.5230	772
460.5525	492, 746
5	
500.1010	201
500.1015	201
500.1037	640
500.1038	583
500.1310	64
500.1311	64
500.1312	64
500.1313	64
500.1314	64
500.1315	64
500.1366	65, 68
500.1367	65, 68
500.1368	65, 68
500.1369	65, 68
500.1370	67
500.1371	65, 67-68
500.1372	65, 67-68
500.1373	65, 67-68
500.1374	65, 67-68
500.1375	65, 67-68
500.1376	66-68
500.1377	66-68
500.1378	66-68
500.1379	66-68
500.1380	68
500.1381	66, 68
500.1382	66, 68
500.1383	64, 66, 68
500.1384	64, 66, 68
500.1385	66, 68
500.1386	67-68
500.1387	67-68
500.1388	67-68
500.1389	67-68
500.1396	67-68
500.1397	67-68
500.1398	67-68
500.1399	67-68
500.1401	272
500.1402	272
500.1403	272
500.1410	270
500.3801	261
500.3802	261
500.3803	261
500.4315	295
500.6136	470
500.6137	470
500.6138	469
500.6139	469
500.6140	469
500.6141	469
500.6142	469
500.6143	469
500.6144	470
500.6165	471
500.7020	450
500.7111	9
500.7150	450
500.7160	449
500.7165	449
500.7166	260
500.7167	260
500.7170	450
500.7180	450
500.7190	450
500.7205	260
500.7300	271
500.7301	271
500.7302	271
500.7303	271
500.7304	271
500.7305	271
500.7306	271
500.7310	270
500.7311	271
500.7312	271
500.7313	271
500.7314	271
500.7315	271
500.7316	271
500.7320	271
500.7330	270
500.7335	270
500.7340	272
500.7341	272
500.7342	272
500.7343	272
500.7345	270
500.7350	271
500.7351	270-271
500.7352	270-271
500.7353	270-271
500.7510	259
500.7520	262, 271
500.7525	258
500.7530	258
500.7532	259
500.7533	260
500.7534	259
500.7535	258
500.7540	258-259
500.7545	258-259
500.7550	258-259
500.7555	258-259
500.7570	259
500.7775	448
500.7780	448
500.8000	754
500.8002	753
500.8003	754
500.8004	754
500.8006	747
500.8007	747
500.8008	747
500.8009	747
500.8011	754
500.8015	750
500.8016	750
500.8017	750
500.8018	750
500.8019	750
500.8020	753
500.8023	750
500.8024	750
500.8025	752
500.8030	753
500.8032	710, 751
500.8035	752
500.8040	753
500.8045	753
500.8050	753
500.8051	752
500.8055	753
500.8056	747, 768
500.8057	747, 768
500.8058	747, 768
500.8059	747, 768
500.8060	753
500.8061	747
500.8062	747
500.8065	752
500.8070	752
500.8071	751
500.8073	751
500.8075	752
500.8076	747
500.8080	752
500.8081	751
500.8084	751
500.8085	752
500.8086	751
500.8087	750
500.8088	710, 751
500.8089	750
500.8090	754
500.8092	750
500.8093	750
500.8094	750
500.8095	750
500.8096	750
500.8097	750
500.8098	750
500.8099	750
500.8100	135, 612, 747
500.8110	751
500.8220	395
500.8400	536
500.8401	536-537
500.8403	536-537
500.8404	537
500.8405	536-537
500.8406	536-537
500.8407	534, 536-537
500.8410	537
500.8411	537
500.8412	537
500.8413	537
500.8415	14, 544
500.8420-1	14, 544
500.8421	544
500.8422	544
500.8423	14, 544
500.8424	14, 544
500.8425	544
500.8426	544
500.8427	544
500.8431	14, 544
500.8432	14, 544
500.8433	14, 544
500.8434	14, 544
500.8435	14, 544

Item	Page
500.8436	14, 544
500.8437	544
500.8440	14, 544-545
500.8445	14, 544-545
500.8450	14, 544-545
500.8475	537
500.8503	535
500.8507	535
500.8508	535
500.8509	536
500.8510	535-536
500.8513	535
500.8514	536
500.8516	535
500.8517	535
500.8519	535
500.8523	535
500.8524	535
500.8525	536
500.8530	24, 50
500.8531	24, 50
500.8532	24, 50
500.8533	24, 50
500.8534	24, 50
500.8536	24, 50
500.8540	536
500.8541	535
500.8550	23, 50
500.8551	23, 50
500.8554	23-24, 50-51
500.8556	23-24, 50-51
500.8557	23-24, 50-51
500.8558	23-24, 50-51
500.8559	23, 50
500.8560	23-24, 50-51
500.8562	24, 51
500.8570	24, 51
500.8571	23-24, 50-51
500.8572	23-24, 50-51
500.8573	24, 51
500.8574	23-24, 50-51
500.8575	24, 51
500.8576	24, 51
500.8579	23-24, 50-51
500.8592	23-24, 50-51
500.8595	24, 51
500.8625	535
500.8626	535
500.8709	534
500.8755	537
500.8756	537
500.8757	537
500.8758	537
500.8759	537
500.8761	537
500.8762	537
500.8800	538
500.8801	538
500.8802	538
500.8803	538
500.8810	538
503.0812	272
503.4210	531
503.4219	531
503.4222	531
503.4351	497
503.4353	497
503.4355	497
503.4357	497
503.4364	497
503.4820	233
503.4821	233
503.4822	233
503.4823	233
503.4824	233
503.4825	233
503.4826	233
503.4827	233
503.4828	233
503.4829	233
503.4831	233
503.4832	233
503.4833	233
503.4834	233
514.1113	8, 203
515.0010	579
515.0012	579
515.0013	579
515.0016	579
515.0017	579
515.0018	579
515.0019	579
515.0055	576
515.0056	576
515.0057	576
515.0058	576
515.0059	576
515.0061	576
515.0062	576
515.0063	576
515.0064	576
515.0066	576
515.0067	576
515.0068	576
515.0069	576
515.0071	576
515.0072	576
515.0073	576
515.0103	716
515.0601	718
515.0602	718
515.0603	718
515.0605	718
515.0617	718
515.0618	718
515.0619	718
515.0621	718
515.0622	718
515.0623	718
515.0624	718
515.0625	718
515.0626	718
515.0900	197
515.0950	197
515.0988	525
515.0989	718
515.0990	718
515.0991	717
515.0992	717
515.0993	717
515.0994	717
515.0995	717
515.1002	207
515.1005	716
515.1006	716
515.1007	716
515.1033	714
515.1034	714
515.1036	714
515.1039	714
515.1040	716
515.1041	207
515.1042	207
515.1043	207
515.1060	711
515.1061	711
515.1062	711
515.1063	711
515.1064	711
515.1065	711
515.1070	717
515.1072	717
515.1073	715, 717
515.1075	717
515.1076	717
515.1077	717
515.1101	635
515.1117	716
515.1119	716
515.1121	716
515.1160	578
515.1161	578
515.1162	578
515.1163	578
515.1164	578
515.1165	579
515.1166	579
515.1167	578
515.1171	575
515.1172	578
515.1173	575
515.1174	578
515.1175	575
515.1176	578
515.1216	143
515.1218	57, 736
515.1243	57, 736
515.1247	57, 736
515.1248	57, 737
515.1249	57, 737
515.1276	197
515.1277	197
515.1281	196
515.1285	57, 736
515.1295	37
515.1305	22
515.1308	22
515.1310	21
515.1311	21
515.1312	21
515.1313	21
515.1314	21
515.1366	57, 736
515.1368	57, 737
515.1369	57, 737
515.1472	711
515.1473	711
515.1474	711
515.1475	711
515.1476	712
515.1477	712
515.1478	712
515.1479	712
515.1480	712
515.1481	712
515.1482	712
515.1483	712
515.1484	712
515.1485	713
515.1486	713
515.1487	713
515.1581	635
515.1582	635
515.1583	635
515.1901	772
515.1902	772-773
515.1903	772-773
515.1904	772-773
515.1905	236, 732
515.1907	773
515.1908	772
515.1909	51
515.1911	58
515.1912	772
515.1919	51
515.1920	236, 731
515.1921	773
515.1923	52
515.1930	772
515.1950	236, 731
515.1960	236, 731
515.1970	236, 732
515.1975	624
515.1980	58
515.1983	58
515.1985	625
515.1986	58
515.2001	716
515.2005	216
515.2006	216
515.2007	216
515.2008	216
515.2009	216
515.2010	216
515.2015	716
515.2017	716
515.2019	716
515.2021	716
515.2022	716
515.2040	716
515.2041	716
515.2042	716
515.2043	717
515.2045	716
515.2046	716
515.2047	716
515.2055	717
515.2060	717
515.3061	56
515.3063	54
515.3066	56
515.3095	58
515.3100	585
515.3101	47
515.3102	47
515.3115	586
515.3120	586
515.3170	586
515.3175	586
515.3198	52
515.3361	764
515.3362	764
515.3534	20
515.3535	20
515.3536	20
515.3549	55
515.3551	55
515.3552	55
515.3553	55
515.3559	765
515.3560	765
515.3561	765
515.3569	624
515.3570	624
515.3571	624
515.3574	624
515.3575	624
515.3576	624
515.3579	624
515.3580	624
515.3581	624
515.3880	576
515.3881	397, 576
515.3882	576
515.3884	576
515.3885	577
515.3886	576-577
515.3887	576-577
515.3888	576-577
515.3889	576-577
515.3900	765
515.3925	765
515.3961	576
515.3962	397, 576
515.3963	397, 576
515.3964	576
515.3965	577
515.3966	577
515.3967	577
515.3968	577
515.3969	577
515.5057	396
515.5071	54
515.5072	54
515.5073	54
515.5074	54
515.5075	54
515.5081	55
515.5082	55
515.5083	55
515.5084	55
515.5085	55
515.5086	55
515.5087	55
515.5093	618
515.5094	618
515.5095	618
515.5096	618
515.5097	618
515.5101	53-54, 620
515.5102	53-54, 620
515.5103	53-54, 620
515.5110	55
515.5111	56
515.5112	53, 56, 620
515.5113	53, 56, 620
515.5114	54, 56
515.5115	54, 56
515.5116	54, 56
515.5117	54, 56

Item	Page
515.5118	54, 56
515.5119	54, 56
515.5120	53, 620
515.5121	53, 620
515.5122	53, 620
515.5123	53, 620
515.5124	53, 620
515.5126	53, 620
515.5127	53, 620
515.5128	53, 620
515.5129	53, 620
515.5410	52
515.5415	52
515.5420	53
515.5430	56
515.5431	56
515.5432	56
515.5433	56
515.5434	56
515.5435	20, 736
515.5436	56
515.5437	56
515.5438	56
515.5440	55
515.5445	57, 736
515.5450	618
515.5451	617-618
515.5455	54
515.5465	20
515.5475	396
515.5520	20, 736
515.5530	52
515.5535	20, 52
515.5540	53
515.5545	39
515.5555	396
515.5560	396
515.5570	54
515.5580	55
515.5585	54
515.5590	53, 620
516.1001	149, 359
516.1002	148, 359
516.1004	148, 359
516.1191	196, 218, 523
516.1192	196, 218
516.1193	196, 218
516.1194	196, 218
516.1195	195, 218, 522
516.1196	195, 218, 522-523
516.1197	522
516.1198	522
516.1402	724
516.1412	195, 723
516.1413	723
516.1422	195, 263, 272
516.1432	195
516.1442	719
516.1472	719
516.1500	263
516.1501	263
516.1502	263
516.1542	719
516.1572	719
516.1905	719
516.3255	724
516.5155	719
516.5156	719

Item	Page
517.0057	182, 240
517.0252	652
517.0253	652
517.0254	652
517.0255	652
517.0257	652
517.0258	652
517.0260	652
517.0261	652
517.0263	652
517.0270	651
517.1130	260
517.1131	260
517.1132	260
517.1133	260
517.1134	260
517.1140	263
517.1141	262-263
517.1142	262-263
517.1143	262
517.1170	260
517.1175	260
517.1180	182, 240
517.1181	182, 240
517.1182	182, 240
517.1183	182, 240
517.1184	182, 240
517.1185	182, 240
517.1186	182, 240
517.1187	182, 240
517.1191	261
517.1192	261
517.1193	261
517.1194	261
517.1302	501
517.1303	501
517.1304	501
517.1305	501
517.1312	501
517.1313	501
517.1314	501
517.1315	501
517.1316	501
517.1317	501
517.1318	501
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517.1329	502
517.1330	502
517.1370	501
517.1371	501
517.1372	501
517.1373	501
517.1374	501
517.1375	501
517.1376	501
517.1377	501
517.1378	501
517.1379	501
517.1380	501
517.1381	501
517.1382	501

Item	Page
517.1383	501
517.1397	502
517.1398	502
517.1399	502
517.1471	501
517.1472	501
517.1473	501
517.1474	501
517.1476	501
517.1477	501
517.1478	501
517.1479	501
517.1480	501
517.1481	501
517.1482	501
517.1483	501
517.1484	501
517.1485	501
517.1486	501
517.1487	501
517.1488	501
517.2013	501
517.2015	501
517.2020	501
517.2025	501
517.2030	501
517.2035	501
517.2040	501
517.2045	501
517.2050	501
517.2060	501
517.2075	501
517.2090	501
518.0300	651
518.0307	651-652
518.0308	651-652
518.0309	651-652
518.0310	651-652
518.0311	651-652
518.0340	651
518.0341	651
518.0342	651
518.0343	651
518.0344	651
518.0345	651
518.0346	651
518.0390	653
518.0390-01	653
518.0390-02	653
518.0390-03	653
518.0390-04	653
518.0390-05	653
518.0390-06	653
518.0511	652
518.0512	652
518.0513	652
518.0514	652
518.0515	652
518.0516	652
518.0517	652
518.0523	652
518.0524	652
518.0525	652
518.0526	652
518.0850	287
518.0852	287
518.0853	287
518.0856	287

Item	Page
518.0857	287
518.0859	287
518.1128	713
518.1129	713
518.1130	713-714
518.1150	713
518.1151	714
518.1152	714
518.1153	713
518.1154	713
550.1000	605
550.1001	605
550.1002	605
550.1003	605
550.1004	605
550.1010	605
550.1022	605
550.1023	605
550.1025	606
550.1026	606
550.1027	606
550.1032	605-606
550.1035	764
550.1040	212, 231, 405, 613
550.1041	212, 231, 405, 613
550.1042	212, 231, 405, 613
550.1045	213, 232, 406, 613
550.1046	232, 406, 613-614
550.1047	130, 406, 613-614
550.1048	130, 213, 613-614
550.1049	130, 213, 614, 724
550.1050	606
550.1060	213, 232, 405, 613
550.1070	213, 232, 406, 613
550.1071	213, 232, 406, 614
550.1072	213, 232, 406, 614
550.1073	213, 232, 406, 614
550.1074	213, 232, 406, 614
550.1075	213, 232, 406, 614
550.1080	213, 232, 405, 613
550.1081	213, 232, 406, 613
550.1082	213, 232, 406, 613
550.1083	213, 232, 406, 613
550.1084	213, 232, 406, 613
550.1085	213, 232, 406, 613
550.1086	213, 232, 406, 613
550.1109	404
550.1165	402
550.1170	403
550.1171	403
550.1172	403
550.1175	404
550.1176	404
550.1177	404
550.1178	404
550.1180	402
550.1181	402
550.1182	402
550.1183	58, 406, 774
550.1190	402
550.1191	402
550.1192	402
550.1193	351
550.1195	403
550.1196	403
550.1197	403
550.1198	403
550.1238	49

Item	Page
550.1241	151
550.1285	151, 413, 771
550.1286	191
550.1287	191
550.1288	190
550.1290	150, 413, 770
550.1291	702
550.1301	606
550.1401	279
550.1410	402
550.1421	402
550.1422	402
550.1423	402
550.1424	402
550.1426	402
550.1427	402
550.1428	402
550.1454	402
550.1500	266
550.1500-1	266
550.1501	423
550.1503	422
550.1504	422
550.1506	266
550.1507	266
550.1645	415
550.1646	415
550.1648	414
550.1649	415
550.1680	412
550.1681	411
550.1682	148, 411
550.1683	411, 766
550.1685	414
550.1686	148, 411
550.1687	148, 411
550.1690	414
550.1701	411, 766
550.1705	412
550.1706	412
550.1710	417
550.1720	418
550.1723	412
550.1725	418
550.1730	416
550.1730-1	416
550.1730-2	416
550.1730-3	416
550.1735	416
550.1745	416
550.1751	417
550.1752	417
550.1753	417
550.1754	417
550.1755	417
550.1756	417
550.1757	417
550.1758	417
550.1759	417
550.1810	417
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550.7511	219-220
550.7512	219

Item	Page
550.7513	219-220
550.7516	219-220
550.7517	219
550.7518	219
550.7519	219
550.7520	219
550.7521	219-220
550.7522	219
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660.0126	503

Item	Page
660.0127	503
660.0128	503
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670.0110-1	547
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670.0141	549

Item	Page
670.0151	548
670.0201	61
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700.1151	206
700.1152	206
700.1155	604
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700.1161	205-206
700.1162	205-206
700.1163	205-206
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700.1191	603-604
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700.1238	605
700.1239	605
700.1240	604

Item	Page
700.1241	605
700.1242	604-605
700.1243	605
700.1244	605
700.1245	604
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700.1316	502
700.1330	272
700.1331	272
700.1332	272
700.1348	504, 591
700.1349	504, 591
700.1350	504, 591
700.1351	504, 591
700.1352	504, 591
700.1353	504, 591
700.1354	504, 591
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700.1364	504, 591
700.1365	504, 591
700.1366	504, 591
700.1367	504, 591
700.1368	504, 591
700.1369	504, 591
700.1370	504, 591
700.1371	504, 591
700.1372	504, 591

Item	Page
700.1373	504, 591
700.1374	504, 591
700.1375	504, 591
700.1376	504, 591
700.1377	504, 591
700.1378	504, 591
700.1379	504, 591
700.1380	504, 591
700.1381	504, 591
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700.1383	504, 591
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700.1393	504, 591
700.1394	504, 591
700.1395	504, 591
700.1396	504, 591
700.1397	504, 591
700.1398	504, 591
700.1399	504, 591
700.1400	581
700.1400-1	550, 573, 581, 592
700.1400-2	581
700.1400-3	581
700.1400-4	581
700.1400-5	581
700.1400-7	581
700.1410	581
700.1411	23, 546, 580-581
700.1412	581
700.1415	23, 246, 546, 580
700.1420	580
700.1421	23, 546, 580
700.1423	23, 546
700.1424	23, 546
700.1425	23, 546
700.1428	23, 546
700.1430	23, 546
700.1435	581
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700.1445	24
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700.1475	23
700.1489	29-30
700.1490	29-30
700.1491	29-30
700.1495	546
700.1500	503
700.1501	503
700.1502	503
700.1503	503
700.1504	503
700.1505	503

Item	Page
700.1506	503
700.1507	503
700.1508	503
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700.1520	201
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700.1523	201
700.1524	201
700.1525	201
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700.1527	201
700.1550	566, 594
700.1550-34	594
700.1550-36	594
700.1550-38	594
700.1550-40	594
700.1550-42	594
700.1550-44	594
700.1550-46	594
700.1550-48	594
700.1550-50	594
700.1550-52	594
700.1550-54	594
700.1550-56	594
700.1550-58	594
700.1550-60	594
700.1550-62	594
700.1550-64	594
700.1550-66	594
700.1550-68	594
700.1550-70	594
700.1550-72	594
700.1550-75	594
700.1550-80	594
700.1551	594
700.1551-01	594
700.1551-02	594
700.1552	594
700.1552-01	594
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700.1671	533, 572
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700.1729	594-595
700.1730	595
700.1731	595
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700.1733	594-595
700.1738	505, 592
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700.1743	505, 592
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700.1780	574
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700.1785	573, 592
700.1800-10	594
700.1800-11	594
700.1800-17	594
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700.1900	142
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700.2183	597-598
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700.2320	646
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700.2325	646
700.2326	646

Item	Page
700.2327	646
700.2328	646
700.2340	599
700.2341	599
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700.2343	599
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700.2347	599
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700.5001	688
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700.5635-03	550
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700.5645	550
700.5650	531, 545
700.5651	532, 545-546
700.5652	532, 545-546
700.5653	532, 545-546
700.5654	532, 545-546
700.5655	532, 545-546
700.5656	532, 545-546
700.5658	532, 545-546
700.5659	532, 545-546
700.5660	532, 546
700.5661	532, 546
700.5665	550
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700.5672	550
8	
800.0015	740, 746
800.0020	137
800.0021	137, 745
800.0030	137, 745
800.0031	137, 745
800.0150	710, 770
800.0151	710, 770
800.0156	710, 770
800.0158	770
800.0160	769
800.0190	710, 770
800.0960	612, 746
890.0001	136, 745
890.0006	136, 745
899.0004	551
9	
903.1010	57
903.1011	57
903.1012	57
903.1013	57
903.1016	57
903.1017	57
903.1040	51
903.1041	51
903.1042	51
903.1045	51
907.2120	735
907.2135	735
907.2170	212, 231, 621
907.2184	439
907.2185	440
907.2186	440
907.2187	441
907.2188	441
907.2200	212, 231, 621
907.2201	211-212, 231, 621
907.2202	212, 230-231, 621
907.2203	212, 230-231, 621
907.2204	212, 230-231, 621
907.2205	212, 230-231, 621
907.2206	212, 231, 621
907.2210	211, 230, 622
907.2211	210, 230, 622
907.2212	210, 230, 622
907.2213	210, 230, 622
907.2214	210, 230, 622
907.2215	211, 230, 617, 621
907.2230	211, 230, 622
907.2231	211, 230, 622
907.2232	211, 230, 622
907.2233	211, 230, 622
907.2234	211, 230, 622
907.2237	212, 231, 622, 642
907.2240	212, 231, 620
907.2242	212, 231, 621
907.2261	58
907.2262	58
907.2263	58
907.2264	58
907.2265	58
907.2266	211, 230, 622
907.2267	211, 230, 622
907.2268	211, 230, 622
907.2270	211, 230, 622
907.2280	212, 231, 623
907.2281	212, 231, 623
907.2282	212, 231, 623
907.2285	212, 231, 623
911.0895	197, 525
911.0896	197, 525
911.0897	197, 525
911.0898	197, 525
911.0953	296
911.0954	199
911.1117	14, 64
911.1118	64
911.1175	164, 174, 226, 570
911.1176	164, 174, 226, 570
911.1177	164, 174, 226, 570
911.1178	164, 174, 226, 570
911.1180	164, 174, 226, 570
911.1288	194
911.1293	194, 294
911.1294	194, 294
911.1295	194, 294
911.1313	199
911.1314	199
911.1317	199
911.1319	199
911.1322	199
911.1324	199
911.1326	634
911.1327	634
911.1327-240	199
911.1328	634
911.1329	634
911.1340	199
911.1341	199
911.1342	199
911.1343	199
911.1344	199
911.1345	199, 575
911.1346	199
911.1347	525
911.1348	199
911.1350	196, 199
911.1351	196, 199
911.1352	196, 199
911.1353	196, 199, 296
911.1354	196, 199
911.1355	196, 199
911.1356	196, 199
911.1359	196, 198-199
911.1361	282, 386
911.1362	282, 386
911.1363	282, 386
911.1364	282, 386
911.1365	282, 386
911.1366	282, 386, 663
911.1367	282, 386
911.1368	282, 386
911.1369	282, 386
911.1387	602
911.1391	199
911.1392	199
911.1393	199
911.1394	196, 199
911.1395	196, 198
911.1434	723
911.1442	723
911.1443	723
911.1444	723
911.1470	194, 404
911.1471	194
911.1472	194
911.1473	194
911.1474	194
911.1475	194
911.1476	194
911.1477	194
911.1480	194, 404
911.1487	524, 569, 580
911.1488	524, 569, 580
911.1489	524, 569, 580
911.1517	196
911.1548	569, 580
911.1549	569, 580
911.1593	199
911.1594	199
911.1596	199
911.1597	199
911.1598	194, 296
911.1624-300	199
911.1630	197
911.1632	199
911.1635	199
911.1661	61
911.1685	199
911.1701	199
911.1702	199
911.1703	199
911.1704	199
911.1705	199
911.1706	199
911.1707	199
911.1708	199
911.1709	199
911.1710	651
911.1711	650-651
911.1712	650-651
911.1713	650-651
911.1714	650-651
911.1715	650-651
911.1716	650-651
911.1717	650-651
911.1720	200, 313
911.1721	200, 313
911.1722	200, 313
911.1723	200, 313
911.1724	200, 313
911.1725	200, 313
911.1735	200
911.1737	200
911.1738	200
911.1739	200
911.1921	199
911.1922	199
911.1923	199
911.1924	199
911.1925	199
911.1926	199
911.1937	196, 199
911.1938	196, 199, 397
911.1939	196, 199
911.1940	196, 198-199
911.1941	199
911.1942	198-199
911.1960	199
911.1961	185, 199
911.1963	185, 199
911.1970	198-199
911.1972	198-199
911.1974	199
911.1980	199
911.1993	199
911.1994	199
911.1995	198-199
911.1996	198-199
911.1997	198-199
911.2176	422
911.2177	422
911.2188	422
911.2440	525
911.2445	525
911.2471	194
911.3101	194, 198
911.3102	194, 198
911.3103	194, 198
911.3104	194, 198
911.3105	194
911.3106	194, 198
911.3107	194
911.3120	198
911.3121	198
911.3122	198
911.3123	198
911.3124	198
911.3125	198
911.3240	198
911.3241	198
911.3242	198
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911.3260	198
911.3261	198
911.3262	198
911.3263	198
911.3264	198
911.3804	261
911.3805	261
911.3823	261
911.3885	404
911.3904	633
911.3908	261
911.3909	261
911.3926	633
911.3927	634
911.3928	633
911.3929	634
911.3951	196
911.3952	196
911.3953	196
911.3954	196
911.3955	196
911.3956	196
911.3957	196
911.3958	196
911.3959	196

Item	Page
911.3990	261
911.3991	262
911.3999	262
911.4010	129
911.4011	129
911.4012	129
911.4013	129
911.4014	129
911.4016	129
911.4113	579
911.4306	198
911.4311	198
911.4312	8, 203
911.4327	198
911.4354	496
911.4356	497
911.4450	197
911.4451	15, 197
911.4452	197-198
911.4453	197-198
911.4454	197
911.4455	197
911.4456	197
911.4460	198
911.4500	199
911.4506	199
911.4507	199
911.4508	199
911.4509	199
911.4511	199
911.4512	199
911.4513	199
911.4514	199
911.4515	199
911.4516	199, 306
911.4517	199
911.4518	199
911.4519	199
911.4521	199
911.4522	199
911.4523	199
911.4524	199
911.4525	199
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911.5173	198
911.5174	198
911.5175	198
911.5176	198
911.5177	198
911.5178	198
911.5327	634
911.8100	17, 499, 542
911.8101	17, 499, 542
911.8102	17, 499, 542
911.8103	17, 499, 542
911.8104	17, 499, 542
911.8105	133, 610
911.8106	133-134, 609-610
911.8107	133-134, 609-610
911.8108	133-134, 610
911.8109	133-134, 610
911.8110	133-134, 610
911.8111	133-134, 610, 734
911.8115	734
911.8116	625
911.8117	625
911.8118	130
911.8119	134, 611
911.8120	69, 132, 609
911.8121	132-134, 609-610
911.8122	132-134, 609-610
911.8123	132-134, 609-610
911.8124	132-134, 609-610
911.8125	132-134, 609-610
911.8126	212, 231, 617, 620
911.8127	212, 231, 621
911.8127-1	619
911.8128	621
911.8130	621, 734
911.8131	621, 734
911.8132	621, 734
911.8133	621, 734
911.8134	621, 734
911.8135	732
911.8138	134, 611
911.8139	134, 611
911.8140	134, 611
911.8141	134, 610-611
911.8142	134, 610-611
911.8143	732
911.8144	732
911.8145	732
911.8146	732
911.8147	732
911.8150	68, 131, 617, 710
911.8155	710
911.8160	134, 611
911.8170	732
911.8175	18, 499, 542
911.8176	18, 499, 542
911.8177	18, 499, 542
911.8178	18, 499, 542
911.8179	18, 499, 542
911.8180	732
911.8185	18, 500, 543
911.8186	18, 500, 543
911.8187	18, 500, 543
911.8188	18, 500, 543
911.8190	70, 132
911.8191	70, 131-132
911.8192	70, 131-132
911.8193	70, 132
911.8194	70, 132
911.8195	70, 132
911.8197	732
911.8198	732
911.8199	732
911.8205	133, 610
911.8210	134, 610
911.8211	134, 610
911.8212	134, 610
911.8213	134, 610
911.8214	134, 610
911.8225	70
911.8226	70
911.8227	70
911.8228	70
911.8410	18, 499, 542
911.8411	17-18, 499, 542
911.8412	17-18, 499, 542
911.8413	17-18, 499, 542
911.8414	17-18, 499, 542
911.8415	17, 499, 542
913.1210	182, 240
913.1211	182, 240
913.1212	182, 240
913.1213	182, 240
913.1214	182, 240
913.1215	182, 240
913.1216	182, 240
913.1249	204
913.1250	204
913.1252	204
913.1253	204
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913.1270	715
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913.1290	715
913.1291	715
913.1292	715
913.1293	715
913.1295	715
913.1300	244
913.1301	244, 569
913.1302	244, 569
913.1303	244, 569
913.1304	244, 569
913.1305	244, 569
913.1306	244, 569
913.1307	244, 569
913.1308	244, 569
913.1309	244, 569
913.1310	244, 569
913.1321	243
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913.1467	204-205
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913.1473	204-205
913.1479	718
913.1480	715
913.1480-01	715
913.1480-02	715
913.1480-03	715
913.1480-04	715
913.1480-05	715
913.1480-06	715
913.1480-07	715
913.1480-08	715
913.1480-09	715
913.1480-10	715
913.1480-11	715
913.1485	715
913.1486	715
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913.1488	715
913.1489	715
913.1490	715
913.1491	715
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913.1495	715
913.1941	569
913.1942	569
913.1943	569
913.1944	569
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913.3868	204
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913.3882	204
913.3883	204
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914.0003	744
914.0004	744
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914.0008	744
914.0010	744
914.0011	744
914.0025	744
914.0026	744
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914.0030	744
914.0031	744
914.0032	744
914.0035	744
914.0036	744
914.0037	744
914.0040	744
914.0041	744
914.0042	744
914.0065	28
914.0066	27
914.0067	28
914.0080	744
914.0081	744
914.0082	744
914.0083	744
914.0084	744
914.0085	744
914.0086	744
914.0087	744
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914.0089	744
914.0090	745
914.0091	745
914.0092	745
914.0093	745
914.0094	745
914.3896	261
917.1254	294
917.1272	496
917.1274	496
917.1275	496
917.1423	7
917.1424	9
917.1431	723
917.1432	723
917.1453	639
917.3828	270
917.3830	270
917.3858	684
917.3859	684
917.3866	684
917.3897	456
917.3898	456
917.3899	455
918.0607	262
918.1202	719

Item	Page
918.1247	719
918.1249	719
918.1258	719
918.1271	8, 203, 289
918.1291	714
918.1292	714
918.1293	714
918.1297	714
918.3401	8, 203
918.3403	8, 203
918.3405	8, 203
918.3407	8, 203
918.3410	8, 203
918.3415	8, 203
918.3420	8, 203
918.3500	634
918.3501	634
918.3502	634
918.3503	634
918.3504	634
918.3505	8, 203
918.3507	634
918.3510	8, 203
918.3515	8, 203
918.3520	8, 203
918.3525	8, 203
918.3530	8, 203
918.3535	8, 203
918.3700	714
918.3701	714
918.3802	262
918.3804	261-262
918.3805	261-262
918.3806	261-262, 665
918.3807	665
918.3885	665
918.3886	665
918.3890	263
918.3895	261-262
918.3898	665
918.3990	262
918.3991	261
918.3992	261
919.3804	262
960.1110	448
960.1115	9
960.1116	9
960.1117	9
960.1118	9
960.1119	9
960.1120	9
960.1121	9
960.1122	9
960.1123	9
960.1124	9
960.1125	9
960.1126	9
960.1130	449
960.1160	449
960.1161	449
960.1162	449
960.1163	449
960.1164	449
960.1165	449
960.1166	449
960.1167	449
960.1168	449
960.1169	449

Item	Page
960.1170	449
960.1175	139, 774
960.1176	139, 774
960.1190	139, 774
960.1191	139, 774
960.1192	139, 774
960.1193	139, 774
960.1194	139, 774
960.1195	139, 774
960.1200	448
960.1210	449
960.1215	448
960.1255	449
960.1265	449
960.1266	449
960.1267	449
960.1268	449
970.0050	445
970.0150	47
970.0230	447
970.0250	445
970.0260	405
970.0270	446
970.0280	445-446
970.0300	446
970.0340	405
970.0540	447
970.0570	446
970.0610	48
970.0620	48
970.0630	48
970.0640	447
970.0650	447
970.0660	447
970.0670	447
970.0680	447
970.0690	447
970.0710	447
970.0720	447
970.0730	445
970.0740	445
970.0790	447
970.0840	446
980.1000	623
980.1010	765
980.1011	766
980.1012	766
980.1013	766
980.1014	766
980.1020	765
980.1021	765
980.1070	764
980.1080	623
980.1085	589
980.1090	502, 594
980.1095	764
980.1096	764
980.1097	764
980.1098	764
980.1100	766
980.1101	766
980.1102	766
980.1103	766
980.1104	766
980.1105	766
980.1106	766
980.1107	766
980.1108	765

Item	Page
980.2000	623
980.2010	623
980.3000	623
980.3050	624
985.7000	49
985.7001	49
985.7002	49
985.7003	49
985.7019	49
985.7020	49
985.7021	49
985.7022	49
985.7026	50
985.7027	50
985.7028	50
985.7029	50
985.7034	49
985.7035	49
985.7036	49
985.7037	49
985.7038	49
985.7039	49
985.7040	49
985.7041	49

Item	Page

Item	Page

Conversion table from inches to millimetres

Conversion example from mm to inches: 69,850 mm = 2.3/4”
Conversion example from inches to mm: 4.1/2” = 114,300 mm

inch	mm	1	2	3	4	5	6	7	8	9
		millimetres								
0	0	25,400	50,800	76,200	101,600	127,000	152,400	177,800	203,200	228,600
1/64	0,397	25,797	51,197	76,597	101,997	127,397	152,797	178,197	203,597	228,997
1/32	0,794	26,194	51,594	76,994	102,394	127,794	153,194	178,594	203,994	229,394
3/64	1,191	26,591	51,991	77,391	102,791	128,191	153,591	178,991	204,391	229,791
1/16	1,588	26,988	52,388	77,788	103,188	128,588	153,988	179,388	204,788	230,188
5/64	1,984	27,384	52,784	78,184	103,584	128,984	154,384	179,784	205,184	230,584
3/32	2,381	27,781	53,181	78,581	103,981	129,381	154,781	180,181	205,581	230,981
7/64	2,778	28,178	53,578	78,978	104,378	129,778	155,178	180,578	205,978	231,378
1/8	3,175	28,575	53,975	79,375	104,775	130,175	155,575	180,975	206,375	231,775
9/64	3,572	28,972	54,372	79,772	105,172	130,572	155,972	181,372	206,772	232,172
5/32	3,969	29,369	54,769	80,169	105,569	130,969	156,369	181,769	207,169	232,569
11/64	4,366	29,766	55,166	80,566	105,966	131,366	156,766	182,166	207,566	232,966
3/16	4,762	30,162	55,562	80,962	106,362	131,762	157,162	182,562	207,962	233,362
13/64	5,159	30,559	55,959	81,359	106,759	132,159	157,559	182,959	208,359	233,759
7/32	5,556	30,956	56,356	81,756	107,156	132,556	157,956	183,356	208,756	234,156
15/64	5,953	31,353	56,753	82,153	107,553	132,953	158,353	183,753	209,153	234,553
1/4	6,35	31,750	57,150	82,550	107,950	133,350	158,750	184,150	209,550	234,950
17/64	6,747	32,147	57,547	82,947	108,347	133,747	159,147	184,547	209,947	235,347
9/32	7,144	32,544	57,944	83,344	108,744	134,144	159,544	184,944	210,344	235,744
19/64	7,541	32,941	58,341	83,741	109,141	134,541	159,941	185,341	210,741	236,141
5/16	7,938	33,338	58,738	84,138	109,538	134,938	160,338	185,738	211,138	236,538
21/64	8,334	33,734	59,134	84,534	109,934	135,334	160,734	186,134	211,534	236,934
11/32	8,731	34,131	59,531	84,931	110,331	135,731	161,131	186,531	211,931	237,331
23/64	9,128	34,528	59,928	85,328	110,728	136,128	161,528	186,928	212,328	237,728
3/8	9,525	34,925	60,325	85,725	111,125	136,525	161,925	187,325	212,725	238,125
25/64	9,922	35,322	60,722	86,122	111,522	136,922	162,322	187,722	213,122	238,522
13/32	10,319	35,719	61,119	86,519	111,919	137,319	162,719	188,119	213,519	238,919
27/64	10,716	36,116	61,516	86,916	112,316	137,716	163,116	188,516	213,916	239,316
7/16	11,112	36,512	61,912	87,312	112,712	138,112	163,512	188,912	214,312	239,712
29/64	11,509	36,909	62,309	87,709	113,109	138,509	163,909	189,309	214,709	240,109
15/32	11,906	37,306	62,706	88,106	113,506	138,906	164,306	189,706	215,106	240,506
31/64	12,303	37,703	63,103	88,503	113,903	139,303	164,703	190,103	215,503	240,903
1/2	12,7	38,100	63,500	88,900	114,300	139,700	165,100	190,500	215,900	241,300
33/64	13,097	38,497	63,897	89,297	114,697	140,097	165,497	190,897	216,297	241,697
17/32	13,494	38,894	64,294	89,694	115,094	140,494	165,894	191,294	216,694	242,094
35/64	13,891	39,291	64,691	90,091	115,491	140,891	166,291	191,691	217,091	242,491
9/16	14,288	39,688	65,088	90,488	115,888	141,288	166,688	192,088	217,488	242,888
37/64	14,684	40,084	65,484	90,884	116,284	141,684	167,084	192,484	217,884	243,284
19/32	15,081	40,481	65,881	91,281	116,681	142,081	167,481	192,881	218,281	243,681
39/64	15,478	40,878	66,278	91,678	117,078	142,478	167,878	193,278	218,678	244,078
5/8	15,875	41,275	66,675	92,075	117,475	142,875	168,275	193,675	219,075	244,475
41/64	16,272	41,672	67,072	92,472	117,872	143,272	168,672	194,072	219,472	244,872
21/32	16,669	42,069	67,469	92,869	118,269	143,669	169,069	194,469	219,869	245,269
43/64	17,066	42,466	67,866	93,266	118,666	144,066	169,466	194,866	220,266	245,666
11/16	17,462	42,862	68,262	93,662	119,062	144,462	169,862	195,262	220,662	246,062
45/64	17,859	43,259	68,659	94,059	119,459	144,859	170,259	195,659	221,059	246,459
23/32	18,256	43,656	69,056	94,456	119,856	145,256	170,656	196,056	221,456	246,856
47/64	18,653	44,053	69,453	94,853	120,253	145,653	171,053	196,453	221,853	247,253
3/4	19,05	44,450	69,850	95,250	120,650	146,050	171,450	196,850	222,250	247,650
49/64	19,447	44,847	70,247	95,647	121,047	146,447	171,847	197,247	222,647	248,047
25/32	19,844	45,244	70,644	96,044	121,444	146,844	172,244	197,644	223,044	248,444
51/64	20,241	45,641	71,041	96,441	121,841	147,241	172,641	198,041	223,441	248,841
13/16	20,638	46,038	71,438	96,838	122,238	147,638	173,038	198,438	223,838	249,238
53/64	21,034	46,434	71,834	97,234	122,634	148,034	173,434	198,834	224,234	249,634
27/23	21,431	46,831	72,231	97,631	123,031	148,431	173,831	199,231	224,631	250,031
55/64	21,828	47,228	72,628	98,028	123,428	148,828	174,228	199,628	225,028	250,428
7/8	22,225	47,625	73,025	98,425	123,825	149,225	174,625	200,025	225,425	250,825
57/64	22,622	48,022	73,422	98,822	124,222	149,622	175,022	200,422	225,822	251,222
29/32	23,019	48,419	73,819	99,219	124,619	150,019	175,419	200,819	226,219	251,619
59/64	23,416	48,816	74,216	99,616	125,016	150,416	175,816	201,216	226,616	252,016
15/16	23,812	49,212	74,612	100,012	125,412	150,812	176,212	201,612	227,012	252,412
61/64	24,209	49,609	75,009	100,409	125,809	151,209	176,609	202,009	227,409	252,809
31/32	24,606	50,006	75,406	100,806	126,206	151,606	177,006	202,406	227,806	253,206
63/64	25,003	50,403	75,803	101,203	126,603	152,003	177,403	202,803	228,203	253,603

1 BODYWORK AND INTERIOR

2 ENGINE - ENGINE COOLING SYSTEM

3 ENGINE - HOSE CLAMP PLIERS

4 ENGINE - FUEL SYSTEM

5 ENGINE - CYLINDER HEAD / ENGINE BLOCK

6 ENGINE - TURBOCHARGER

7 ENGINE - FUEL INJECTION SYSTEM

8 ENGINE - SPARK PLUGS

9 ENGINE - GLOW PLUGS

10 ENGINE - AUXILIARY DRIVE BELT / ALTERNATOR

11 ENGINE TIMING TOOLS

12 EXHAUST SYSTEM / CATALYSERS

13 AIR CONDITIONING

14 BATTERY SERVICE

15 ELECTRICAL / ELECTRONIC TOOLS

16 HYBRID / HIGH-VOLTAGE TOOLS

17 GEARBOX

18 CLUTCH

19 SPRINGS / SHOCK ABSORBERS

20 STEERING AND AXLE

21 AUTO GLASS

22 BRAKE SERVICE

23 OIL SERVICE

24 WHEEL / TYRE FITTING

25 GENERAL WORKSHOP REQUIREMENTS

i INDEX


PAGE 4 - 139 1


PAGE 140 - 161 2


PAGE 162 - 171 3


PAGE 172 - 191 4


PAGE 192 - 223 5


PAGE 224 - 237 6


PAGE 238 - 255 7


PAGE 256 - 267 8


PAGE 268 - 279 9


PAGE 280 - 291 10


PAGE 292 - 389 11


PAGE 390 - 397 12


PAGE 398 - 407 13


PAGE 408 - 419 14


PAGE 420 - 451 15


PAGE 452 - 493 16


PAGE 494 - 513 17


PAGE 514 - 525 18


PAGE 526 - 539 19


PAGE 540 - 599 20


PAGE 600 - 625 21


PAGE 626 - 659 22


PAGE 660 - 707 23


PAGE 708 - 741 24


PAGE 742 - 774 25


PAGE 775 - 804 i

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