KS TOOLS®



24 V

SPECIAL TOOLS FOR COMMERCIAL VEHICLES AND TRANSPORTER

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 - AUXILIARY DRIVE BELT / ALTERNATOR

9 EXHAUST SYSTEM / CATALYSERS

10 AIR CONDITIONING

11 BATTERY SERVICE

12 ELECTRICAL / ELECTRONIC TOOLS

13 HYBRID / HIGH-VOLTAGE TOOLS

14 GEARBOX

15 CLUTCH

16 SPRINGS / SHOCK ABSORBERS

17 STEERING AND STEERING GEOMETRY

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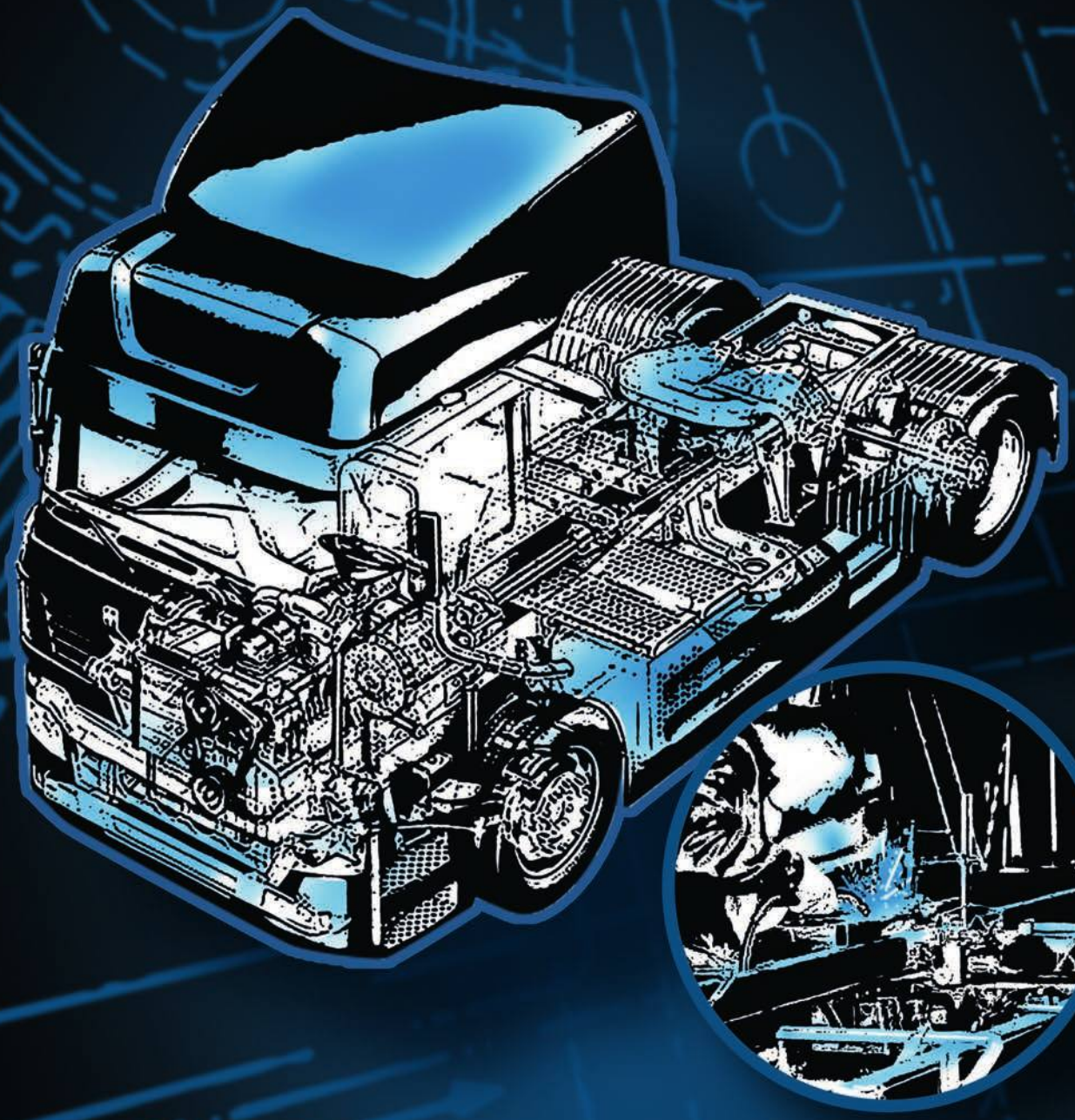

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1

BODYWORK AND INTERIOR





KS TOOLS®

Innovation is our mission!

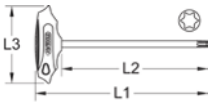
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VEHICLE LIGHTING AND BUMPERS

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





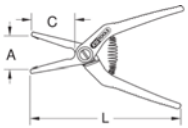
			g	
158.8050	6 pcs	T10 - T15 - T20 - T25 - T27 - T30	375	



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	

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





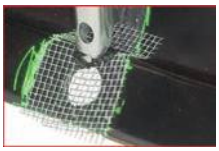
Technical data:

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	

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

			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	

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 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	



CAB TILT MECHANISM

Driver's Cab Wrench Set for Volvo / Scania

- suitable for tilting the cockpit
- ideally suited for actuating the valve lever and the tilting pump on the driver's cab
- 12 point
- Extremely sturdy execution
- For manual operation
- With rubber grip
- Special tool steel

Application range: Volvo FM12, FL10, FH500, FM440 und **Scania** 340 (114)





			kg	
460.0730	2 pcs	Driver's Cab Wrench Set for Volvo / Scania	1,14	

consists of:

		g	
460.0731	Valve lever and tilt pump wrench, 22 mm	380	
460.0732	Lever for tilt pump wrench, 535 mm	756	

Cockpit key set for Mercedes

- suitable for tilting the cockpit
- ideal for actuating the tilt pump on the cockpit
- 12 point
- with telescopic operating lever (480-820 mm)
- Key width 30 mm and 33 mm
- Serviceable from both sides
- Extremely sturdy execution
- For manual operation
- Special tool steel

Application range: Mercedes 360 / 410 / 440 / 460 / 480 / 550 driver's cab





			kg	
460.3695	2 pcs	Cockpit key set for Mercedes	4,00	

consists of:

		kg	
460.3696	Operation lever, 480-820 mm	2,27	
460.3697	Tilt pump wrench, 30x33 mm	1,73	

EXTERIOR MIRROR

ERGOTORQUE*plus*® screwdriver set

- Two component handle
- Optimal power transmission
- Hardened blade
- Chrome finish with burnished tips
- Blade made of chrome vanadium



159.0010	6 pcs	ERGOTORQUE*plus*® screwdriver set	708

4 x	3 - 4 - 5,5 - 6,5 mm
2 x	PH1 - PH2

ERGOTORQUE*plus*® screwdriver set

- Two component handle
- Optimal power transmission
- Hardened blade
- Chrome finish with burnished tips
- Blade made of chrome vanadium



159.0030	6 pcs	ERGOTORQUE*plus*® screwdriver set	580

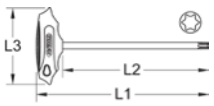
6 x	T10 - T15 - T20 - T25 - T30 - T40



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

LEVER AND SEPARATING TOOLS

Bending iron/pry bar

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



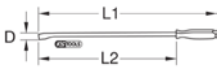


	D1 mm	D2 mm	L mm	S mm	
129.2222	22,0	5,0	405,0	16,0	650

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	
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





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	
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



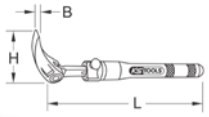


			kg	
911.8410	4 pcs	Pry bar sets	8,70	

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

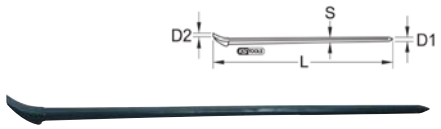
- Lever extension with push-button in steps
- Roller head adjustable in steps
- Extra narrow, with recessed push button
- Maximum power transmission in the narrowest area
- Optimal leverage in minimal work area
- Special tool steel



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

Lever bar

- 4 point
- Quenched and tempered
- Black lacquer
- Special tool steel

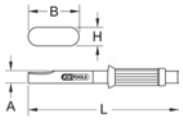


	D1 mm	D2 mm	Length m	S mm	Handle number	kg	
156.0598	22,0	35,0	1,80	37,0	-	8,00	

Bodywork slitting chisel

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





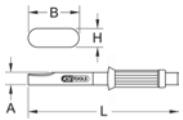


	L mm	A mm	B mm	H mm	g	
162.0216	300,0	25,0	19,0	6,0	330	

Bodywork slitting chisel

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





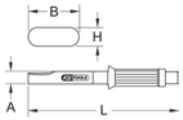


	L mm	A mm	B mm	H mm	g	
162.0217	300,0	25,0	19,0	6,0	330	

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

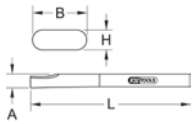
consists of:

		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





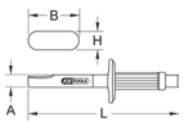


	L mm	A mm	B mm	H mm	Handle number	g
140.2162	300,0	21,0	25,0	6,0	-	310

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

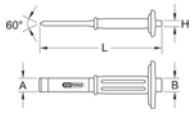




	L mm	A mm	B mm	H mm	Handle number	g
162.0271	250,0	30,0	23,0	13,0	162.0442	460

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:

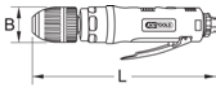
		g
156.0330	Bodywork chisel, 240mm	600
140.2162	Bodywork slitting chisel, 300mm	310
140.2165	Bodywork slitting chisel with hand grip, 300mm	550
162.0471	Slitting chisel, hand grip, 240mm	370

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:

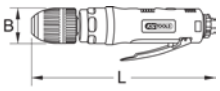
Chuck capacity:	0,6 - 6
Chuck thread reception:	3/8" x 24 UNF
Capacity:	186 Watt
No load current:	7000 r.p.m.
Vibration acceleration:	< 3,3 m/s²
Noise performance level:	97,4 dbA
Noise pressure level:	86,4 dbA
Air consumption:	240 l/min
Min. tube diameter:	3/8" - 10 mm
Operating pressure:	max. 6,3 bar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

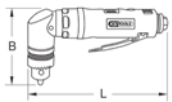
Capacity:	370 Watt
No load current:	4000 r.p.m.
Vibration acceleration:	< 2,8 m/s²
Noise performance level:	101,7 dbA
Noise pressure level:	90,7 dbA
Air consumption:	350 l/min
Operating pressure:	max. 6,3 bar (90 psi)
Min. tube diameter:	3/8” - 10 mm
Connection thread:	1/4”NPT

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

SlimPOWER mini-pneumatic angle drill

- Angled design
- Air exhaust through the handle rear end
- For one handed operation with ergonomic design
- Not reversible
- With gear rim drill chuck – span width 1 – 6.5mm
- For hard to reach places
- Ideally suited for car body work
- Stepless speed regulation
- Vibration dampened through double bearing guides
- Includes 1/4” coupling connector
- Very compact construction
- 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:	5000 r.p.m.
Vibration acceleration:	< 6,6 m/s²
Noise performance level:	99,3 dbA
Noise pressure level:	88,3 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

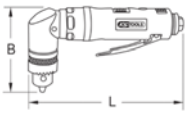
	B mm	L mm	g	
515.5525	90,0	145,0	700	



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:

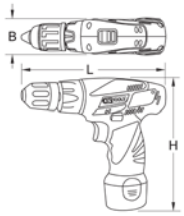
Chuck capacity:	1 - 10
Chuck thread reception:	3/8” x 24 UNF
Capacity:	370 Watt
No load current:	1900 r.p.m.
Vibration acceleration:	< 3,5 m/s²
Noise performance level:	101,9 dbA
Noise pressure level:	90,9 dbA
Air consumption:	350 l/min
Min. tube diameter:	3/8” - 10 mm
Operating pressure:	max. 6,3 bar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



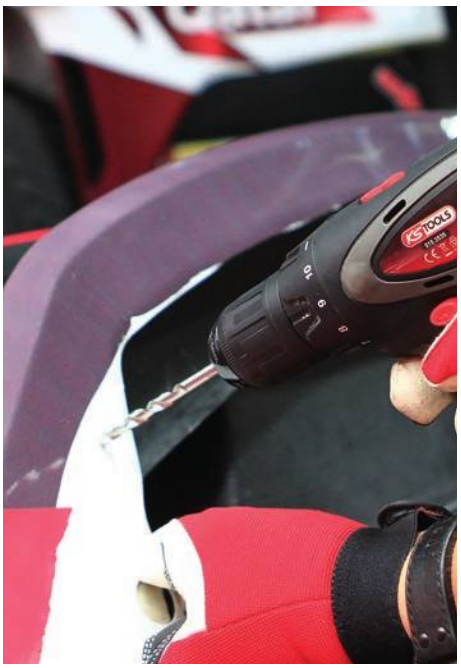




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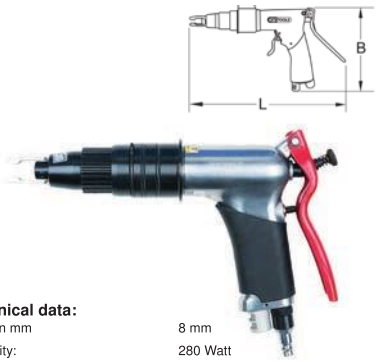
Chuck capacity:	1 - 10 mm
Electrical Voltage:	10,8 V
Speed:	0 - 1870 rpm
Torque max.	24 Nm
No load current:	3,5 A
Charging time:	1 hour
Rechargeable battery:	10,8 V - 2,0 Ah

	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

- 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



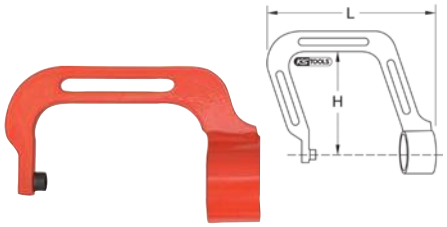
Technical data:

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

	B mm	L mm	kg	
515.1311	175,0	315,0	1,85	

Bracket, small, for Fastdrill

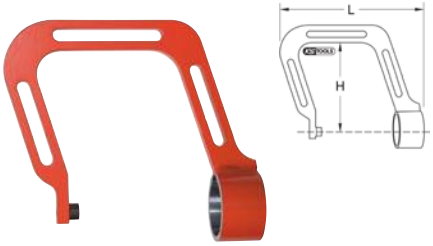
- As complement to Fastdrill 515.1310
- Large reach of the bracket for deeper welding point
- Bracket can be replaced without the use of tools
- Can be rotated on the machine shaft



	H mm	L mm	g	
515.1312	55,0	150,0	550	

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	

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:

515.1311	Spot welding drill machines,Fastdrill	1,85	
515.1312	Bow, small, for Fastdrill	0,55	
515.1314	T-handle	0,04	

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 recharge-able 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
- Special high performance steel

Ideally suitable with pneumatic drill, electric drill and recharge-able 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.

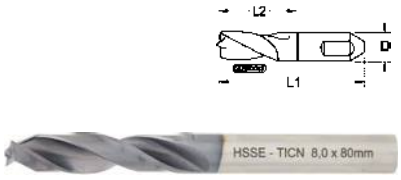


	D mm	L1 mm	L2 mm	Content	
332.0206	6,0	70,0	25,0	1	10
332.0208	8,0	80,0	30,0	1	20
332.0210	10,0	90,0	35,0	1	40

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.

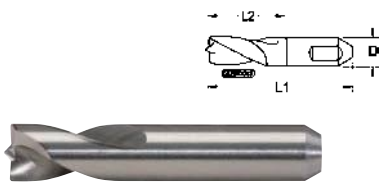


	D mm	L1 mm	L2 mm	Content	
332.0308	8,0	80,0	30,0	1	20
332.0310	10,0	90,0	35,0	1	40

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	
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.

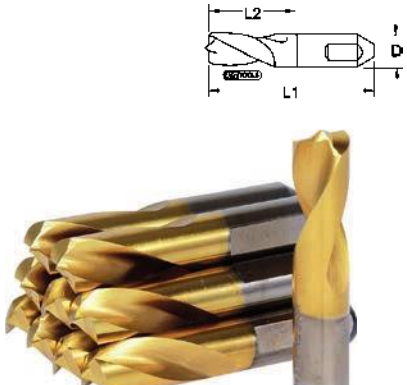


	D mm	L1 mm	L2 mm	Content	
332.0508	6,5	44,0	15,0	1	10
332.0808	8,0	44,0	15,0	1	10

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

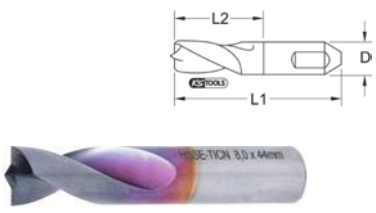


	D mm	L1 mm	L2 mm	Content	
332.0809	8,0	44,0	23,0	10	134

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	
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	
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

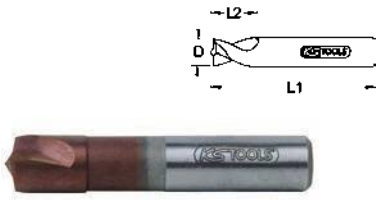
Ideally suitable in steel, cast steel and high and low alloyed steel up to 900 N/mm² tensile, bronze, brass, brushed aluminum alloy, graphite, nickel silver, sintered iron, pressure-, malleable- and cast iron



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

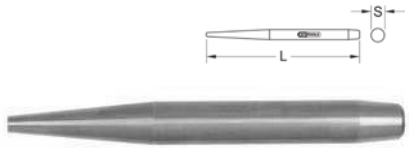


	D mm	L1 mm	L2 mm	Content	
515.1305	8,0	44,0	11,0	1	22
515.1308	10,0	44,0	11,0	1	25

TAPER PUNCHES

Punch drawbore pin

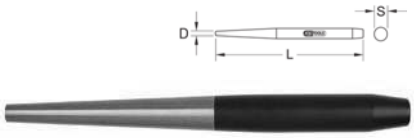
- Hardened through the whole length
- Cone polished
- Carbon manganese silicon steel



	L mm	S mm	kg	
129.2161	110,0	11,0	0,07	
129.2162	120,0	13,0	0,11	
129.2163	150,0	15,0	0,19	
129.2164	170,0	17,0	0,27	
129.2165	170,0	19,0	0,34	
129.2166	190,0	21,0	0,45	
129.2167	200,0	23,0	0,47	
129.2168	200,0	25,0	0,68	
129.2169	210,0	27,0	0,84	
129.2170	210,0	28,0	0,91	
129.2171	230,0	29,0	1,06	
129.2172	230,0	31,0	1,21	
129.2173	250,0	33,0	1,52	
129.2174	280,0	34,0	1,80	
129.2175	280,0	36,0	2,02	
129.2176	280,0	37,0	2,14	

Assembly drawbore pin

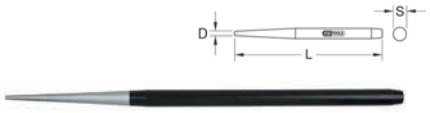
- Hardened through the whole length
- Cone polished
- Carbon manganese silicon steel



	L mm	D mm	S mm	kg	
129.2177	120,0	5,0	11,0	0,08	
129.2178	120,0	5,0	13,0	0,09	
129.2179	150,0	6,0	15,0	0,17	
129.2180	170,0	7,0	17,0	0,24	
129.2181	170,0	7,0	19,0	0,30	
129.2182	190,0	8,0	21,0	0,41	
129.2183	190,0	9,0	23,0	0,49	
129.2184	200,0	10,0	25,0	0,59	
129.2185	210,0	12,0	28,0	0,81	
129.2186	230,0	12,0	31,0	1,05	
129.2187	250,0	13,0	34,0	1,35	
129.2188	270,0	14,0	37,0	1,72	

Assembly punch

- Hardened through the whole length
- Cone polished
- Chrome vanadium



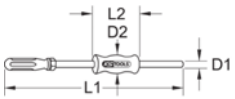
	L mm	D mm	S mm	kg	
129.2189	180,0	5,0	12,0	0,11	
129.2190	200,0	6,0	13,0	0,15	
129.2191	200,0	8,0	16,0	0,22	
129.2192	200,0	9,0	20,0	0,34	
129.2193	230,0	10,0	22,0	0,46	
129.2194	250,0	11,0	24,0	0,62	
129.2195	280,0	12,0	27,0	0,87	
129.2196	315,0	14,0	30,0	1,26	
129.2197	340,0	15,0	32,0	1,57	
129.2198	380,0	16,0	36,0	2,23	

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:

		kg	
500.8551	Welding gun, 220V, 50/60 Hz	5,46	
500.8554	Electrode f.welding nails, copper	0,01	
500.8556	Electrode f.rivets, magnetic, copper	0,01	
500.8557	Electrode f.washers, brass	0,01	
500.8558	Heating electrode f.hot spots, brass	0,01	
500.8559	Slide hammer, 1.5kg	2,08	
500.8560	Electrode extension, brass	0,01	
500.8571	Nails 2.0 x 50.0 mm copper coated, pack of 500	0,66	
500.8572	Nails 2.5 x 50.0 mm copper coated, pack of 100	0,21	
500.8574	Rivets 3.0 x 3.2 mm copper coated, pack of 100	0,03	
500.8579	Screws M4 x 16.0 mm copper coated, pack of 100	0,14	
500.8592	Washers 8.0 x 16.0 mm copper coated, pack of 100	0,16	

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

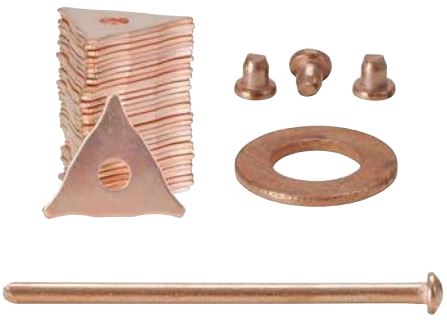
- Usable in connection with the super spotter
- Copper and/or brass



		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



		kg	
500.8570	Nails 2.0 x 50.0 mm copper coated, pack of 100	0,14	
500.8571	Nails 2.0 x 50.0 mm copper coated, pack of 500	0,66	
500.8572	Nails 2.5 x 50.0 mm copper coated, pack of 100	0,21	
500.8573	Nails 2.5 x 50.0 mm copper coated, pack of 500	1,15	
500.8592	Washers 8.0 x 16.0 mm copper coated, pack of 100	0,16	
500.8595	Triangular-washer 2.5 x 50.0 mm copper coated, pack of 100	0,50	
500.8574	Rivets 3.0 x 3.2 mm copper coated, pack of 100	0,03	
500.8575	Rivets 3.0 x 4.5 mm copper coated, pack of 100	0,04	
500.8576	Rivets 5.0 x 8.2 mm copper coated, pack of 100	0,04	
500.8579	Screws M4 x 16.0 mm copper coated, pack of 100	0,14	

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.





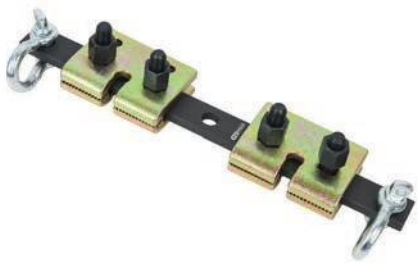
Technical data:

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

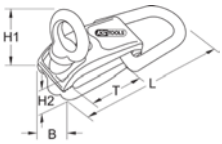
- Suitable for bodywork repairs and pulling
- 2 adjustable jaws for secure attachment
- Includes 2 blades
- Maximum load 5 tonnes
- Universal application by adjusting the adjustable jaws
- Sturdy design
- Special tool steel



	Length mm	Claw width mm	Drawbar eye opening mm	Clamping depth mm		kg
700.1457	540,0	120,0	30 x 32	20,0	5.000	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

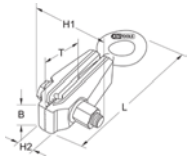




	Length mm	Claw width mm	Drawbar eye opening mm	Clamping depth mm	Fixing bolt	g
140.2400	150,0	36,0	25 x 25	27,0	M12x1,75	930

Standard pull clamp

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

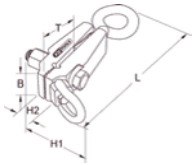




	Length mm	Claw width mm	Drawbar eye opening mm	Clamping depth mm	Fixing bolt	kg
140.2405	215,0	44,0	35 x 41	32,0	M17x90	1,95

Standard pull clamp with 2 pull directions

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

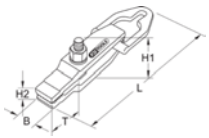




	Length mm	Claw width mm	Drawbar eye opening mm	Clamping depth mm	Fixing bolt	kg
140.2410	235,0	44,0	35 x 41	32,0	M17x90	2,13

Small pull clamp

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

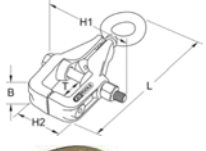




	Length mm	Claw width mm	Clamping depth mm	Fixing bolt	kg
140.2415	255,0	32,0	70,0	M14x85	1,65

Box pull clamp

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

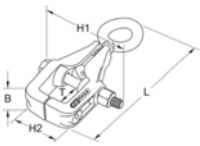




	Length mm	Claw width mm	Drawbar eye opening mm	Clamping depth mm	Fixing bolt	kg
140.2420	245,0	38,0	35 x 41	64,0	M14x130	2,04

Box pull clamp with adaptable jaws

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

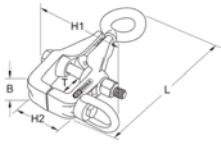




	Length mm	Claw width mm	Drawbar eye opening mm	Clamping depth mm	Fixing bolt	kg
140.2425	225,0	38,0	35 x 41	64,0	M14x130	2,01

Box pull clamp with 2 pull directions

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

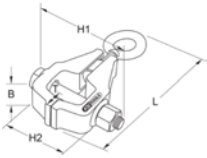




	Length mm	Claw width mm	Drawbar eye opening mm	Clamping depth mm	Fixing bolt	kg
140.2430	245,0	38,0	35 x 41	64,0	M14x130	2,21

Maxi pull clamp

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

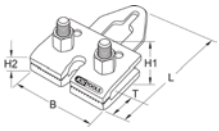


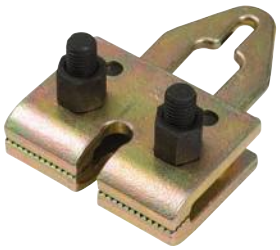


	Length mm	Claw width mm	Drawbar eye opening mm	Clamping depth mm	Fixing bolt	kg
140.2435	240,0	46,0	35 x 41	42,0	M19x150	3,00

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





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

Single-ended tensioning clamp

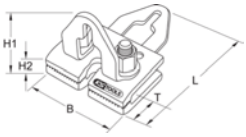
- One direction of pull
- With extra large mouth
- Ideal for car body repairs
- Extremly versatile
- Special tool steel



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

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

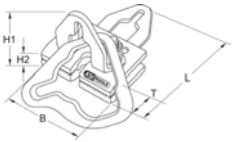




	Length mm	Claw width mm	Clamping depth mm	Fixing bolt	kg
140.2445	175,0	120,0	32,0	M17x90	2,86

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





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

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



	Length mm	Claw width mm	Clamping depth mm	Fixing bolt	g
140.2436	135,0	35,0	29,0	M12x70	666

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

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	

Universal bodywork tensioning clamp

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



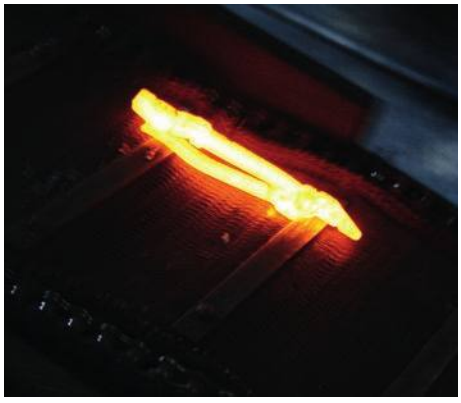
	Length mm	Width mm	Height mm	kg	
140.2469	260,0	35,0	30,0	1,85	

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



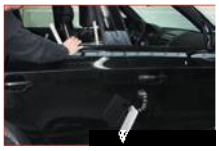
	Length mm	Width mm	Height mm	kg	
140.2460	300,0	75,0	12,0	1,00	

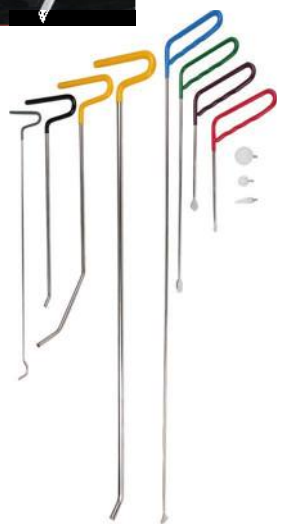


HAMMERING TOOLS

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	

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	

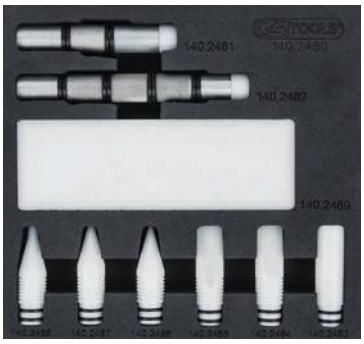
consists of:

		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	

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	

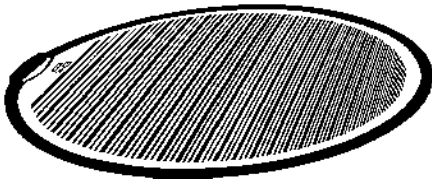
consists of:

		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	

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



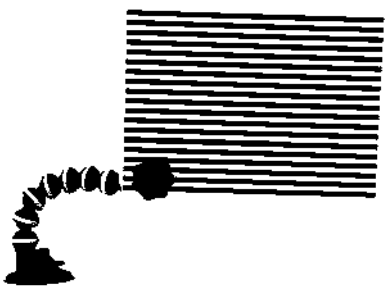


	Ø mm	g	
140.2599	800,0	320	

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	

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





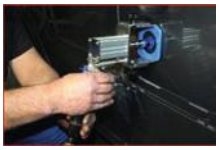
			g	
914.0065	11 pcs	Professional smart-repair dent puller set	316	

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





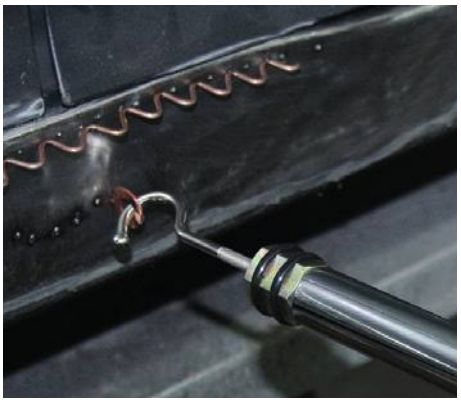
Technical data:

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:

		kg	
140.2083	Panel beating hammer with impact weight	2,40	
140.2084	Suction disk Ø 75 mm	0,13	
140.2085	Suction disk Ø 100 mm	0,17	
140.2086	Suction disk Ø 125 mm	0,26	
140.2087	Pull hook	0,10	



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

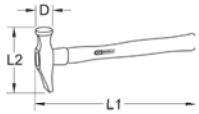




	Length mm	head length mm	Ø round side mm	Tip width mm	g	
140.2109	280,0	120,0	40,0	20,0	460	

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

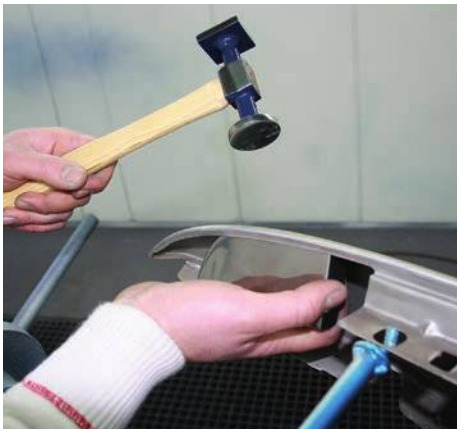
- For hammering out the car body
- High-quality design
- Optimum composition of rough and curved faces
- Work areas ground
- Special tool steel
- In durable plastic storage case



			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:

		kg	
140.2112	Bodywork grid toe dolly, 120mm	1,13	
140.2132	Panel beaters serrated hammer, round/ square, 325mm	0,49	
140.2133	Panel beaters standard hammer, large round/square, 325mm	0,42	

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



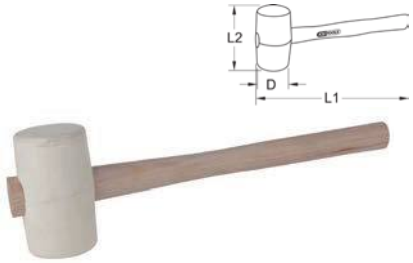
			kg	
140.2100	7 pcs	Car body panel beating set	7,50	

consists of:

		kg	
140.2114	Bodywork universal heel dolly, 70mm	1,38	
140.2115	Bodywork curved heel dolly, 130mm	1,63	
140.2116	Bodywork heel dolly, 60mm	1,13	
140.2119	Bodywork toe dolly, large, 120mm	1,40	
140.2133	Panel beaters standard hammer, large round/square, 325mm	0,42	
140.2137	Panel beaters pick hammer straight head, round/pointed, 325mm	0,46	
140.2139	Panel beaters serrated hammer fine, round/ square, 325mm	0,49	

Rubber hammer

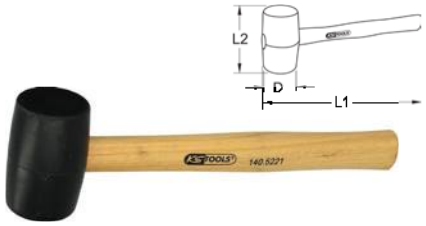
- DIN 5128
- With tapered ash inserted handle
- Hammer head made out of hard rubber
- With white rubber head



	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

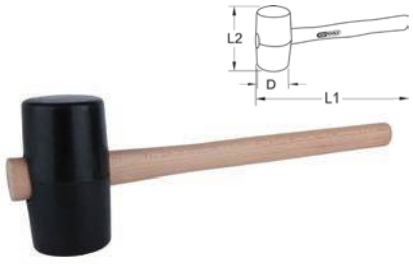
- DIN 5128
- With ash handle
- Hammer head made out of hard rubber



	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

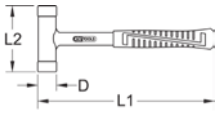


	g	D mm	L1 mm	L2 mm	g	
140.1237	500	56,0	325,0	100,0	520	

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







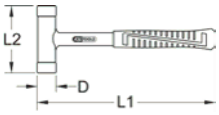
	g	D mm	L1 mm	L2 mm	g	
140.1215	350	32,0	330,0	120,0	480	



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



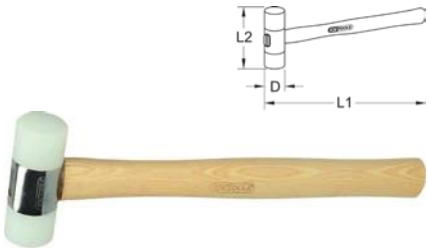




	g	D mm	L1 mm	L2 mm	head,spare	kg	
140.5270	360	25,0	270,0	105,0	140.5280	0,36	
140.5271	480	30,0	290,0	105,0	140.5281	0,48	
140.5272	590	35,0	295,0	110,0	140.5282	0,59	
140.5273	850	40,0	300,0	120,0	140.5283	0,85	
140.5274	990	45,0	305,0	120,0	140.5284	0,99	
140.5275	1110	50,0	310,0	125,0	140.5285	1,11	
140.5276	1290	55,0	325,0	135,0	140.5286	1,29	
140.5277	1670	60,0	335,0	140,0	140.5287	1,67	

Nylon hammer

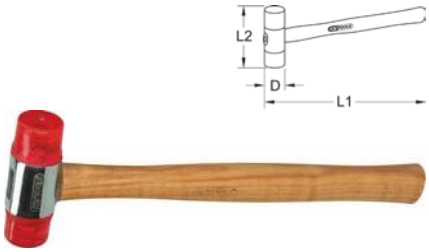
- With impact heads made out of impact resistant nylon
- shatterproof, break and wear-resistant
- With ash handle
- Ideal for hammering out and gentle sheet metal working



	g	D mm	L1 mm	L2 mm	Handle number		
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

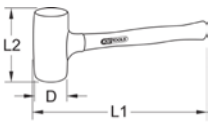


	g	D mm	L1 mm	L2 mm	Handle number		
140.5201	200	28,0	260,0	82,0	140.5301	140.5401	210
140.5202	340	35,0	300,0	95,0	140.5304	140.5404	350

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





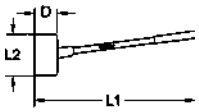


	g	D mm	L1 mm	L2 mm	kg
140.5252	400	40,0	270,0	81,0	0,48
140.5254	560	40,0	305,0	100,0	0,64
140.5255	645	42,0	325,0	100,0	0,73
140.5256	860	50,0	342,0	118,0	0,86
140.5257	1270	56,0	355,0	118,0	1,35
140.5258	1720	65,0	370,0	135,0	1,80

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

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

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

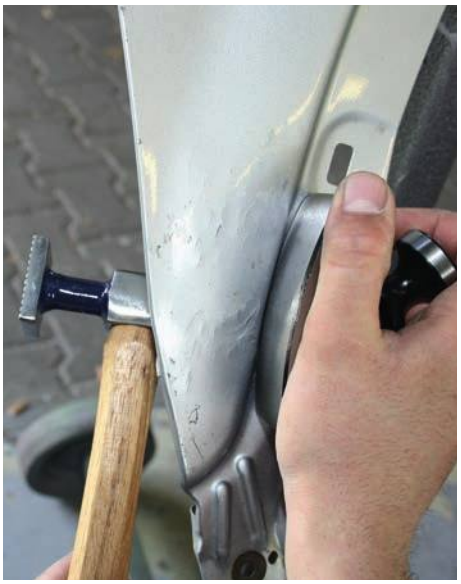




			kg
140.2108	3 pcs	3 in 1 Heel dolly set	1,37

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, wide

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



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

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

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

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

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

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

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 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

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

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

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



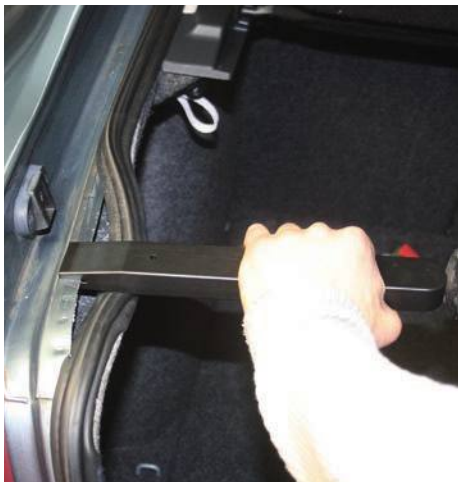
	Ø mm	Height mm	g
140.2101	55,0	55,0	740

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

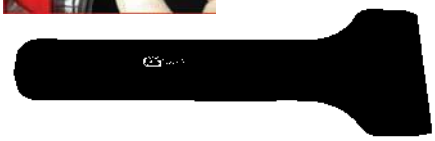


	Length mm	Width mm	g
140.2163	190,0	50,0	320

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



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

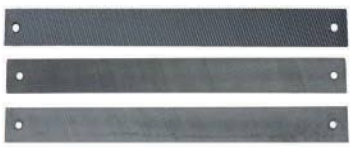




	Length mm	Width mm	g
140.3016	525,0	25,0	350

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





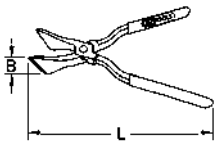
	Length mm	Width mm	g
140.3019	400,0	70,0	440

HOLE, SETTING, AND SEAM PLIERS

Seaming pliers

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





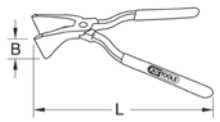


	L mm	B mm	g
222.1601	280,0	52,0	660

Seaming pliers

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





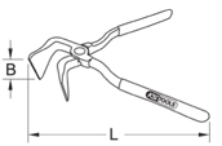


	L mm	B mm	g
222.1602	260,0	52,0	670

Seaming pliers

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





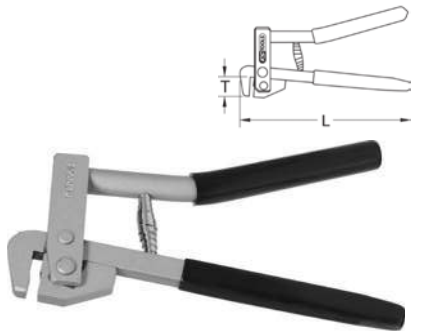


	L mm	B mm	g
222.1603	260,0	52,0	760



Mini joggler pliers

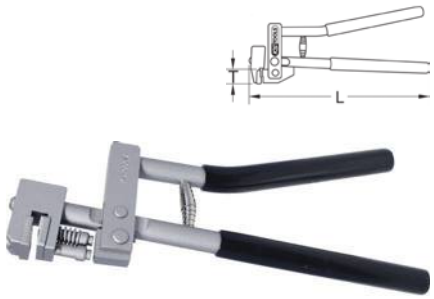
- Self opening
- For the flanging of sheet metal and body parts
- Up to 1 mm thickness
- Particularly suitable for thin sheet metal edges, curves and arches
- Lower power usage
- Hardened flanging jaws
- Special tool steel



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

Joggler pliers

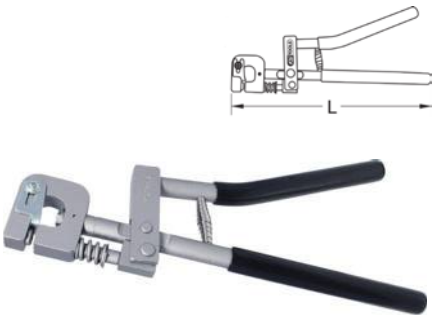
- Self opening
- For the flanging of sheet metal and body parts
- Up to 1 mm thickness
- Lower power usage
- Hardened flanging jaws
- Special tool steel



	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

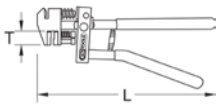


	L mm	hole diameter	kg
118.0057	300,0	max. 5 mm	1,00

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:

		kg
118.0106	Joggler pliers	1,02
118.0107	Punch, 2.38 mm	0,01
118.0108	Punch, 3.18 mm	0,01
118.0109	Punch, 3.97 mm	0,01
118.0110	Punch, 4.76 mm	0,01
118.0111	Punch, 5.56 mm	0,01
118.0112	Punch, 6.35 mm	0,01
118.0113	Punch, 7.14 mm	0,01
118.0114	Counter holder, 2.38 mm	0,01
118.0115	Counter holder, 3.18 mm	0,01
118.0116	Counter holder, 3.97 mm	0,01
118.0117	Counter holder, 4.76 mm	0,01
118.0121	Counter holder, 5.56 mm	0,01
118.0122	Counter holder, 6.35 mm	0,01
118.0123	Counter holder, 7.14 mm	0,01
118.0126	Assembly tool	0,01

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"

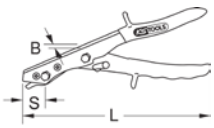
	Length mm	Ø mm	kg
515.1295	250,0	55,0	1,30

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





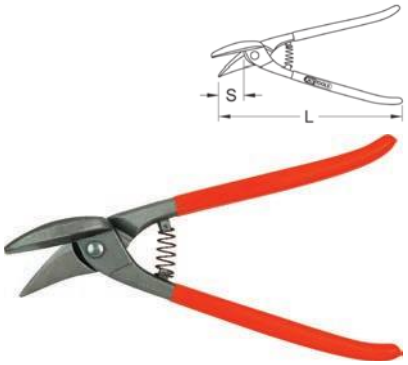


	Ø mm	B mm	L mm	S mm	Replacement blades	g
140.2175	1,2	14,0	265,0	3,0	140.2175-1	460



Ideal shears, right handed cut

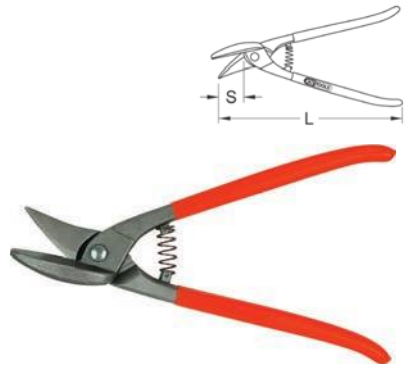
- Right hand cutting
- With spring
- Induction-hardened precision cutting
- With PVC dipped handle
- Cuts steel sheet up to 1,2 mm, stainless steel up to 0,7 mm
- Special tool steel



	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

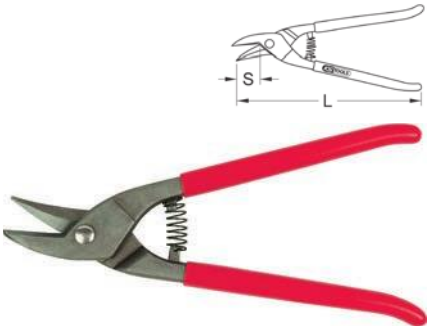
- Right hand cutting
- Induction-hardened precision cutting
- With PVC dipped handle
- Cuts steel sheet up to 1,2 mm, stainless steel up to 0,7 mm
- Special tool steel



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

Punching shears, left handed cut

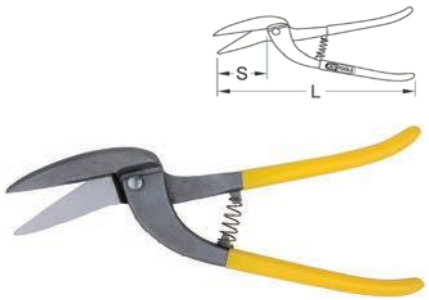
- Left handed cut
- Induction-hardened precision cutting
- With PVC dipped handle
- Cuts steel sheet up to 1,2 mm, stainless steel up to 0,7 mm
- Special tool steel



	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

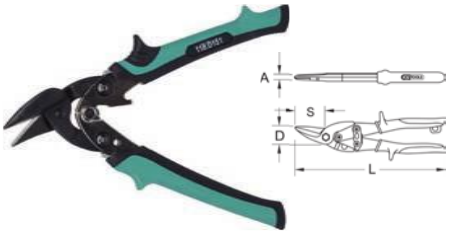
- Straight cut
- Optimal for fine working
- Self opening handle
- With internal spring
- With easy locking action
- Induction-hardened precision cutting
- Two component handle
- Cuts sheet metal up to 1.2 mm
- Special tool steel



	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

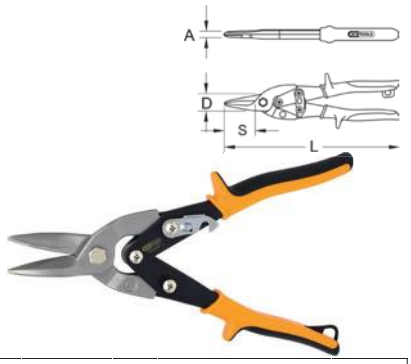
- Self opening handle
- With internal spring
- With easy locking action
- Two component handle
- 25% power savings
- Left, right hand cutting & straight
- Smooth blades
- Induction-hardened precision cutting
- Cuts sheet metal up to 1.2 mm
- Chrome molybdenum



			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

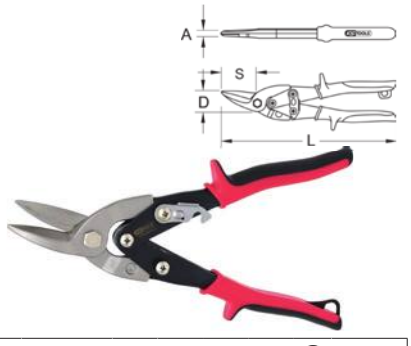
- Right hand cutting
- Self opening handle
- Serrated blades
- With internal spring
- With easy locking action
- Includes hanging loop
- Induction-hardened precision cutting
- Two component handle
- Cuts steel sheet up to 1,2 mm, stainless steel up to 0,7 mm
- Special tool steel



	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.





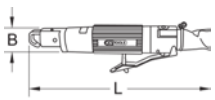
	Cutting width mm	max. material strength mm	kg
118.0144	250,0	1,5	4,50

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



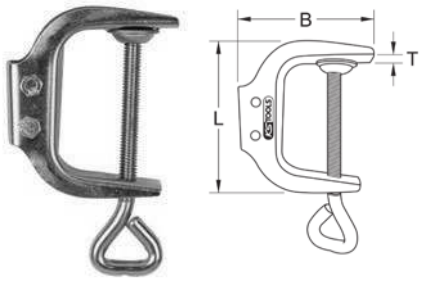


	Clamping range mm	Length mm	g
115.1026	0 - 12,0	92,0	120

Locking pliers holder

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



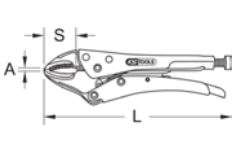


	L mm	B mm	T mm	g
115.2072	91,0	84,0	24,3	300

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







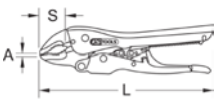
	A mm	L mm	S mm	g
115.1031	0-50	140,0	19,3	180
115.1032	0-55	175,0	24,0	340
115.1033	0-60	220,0	27,5	520



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





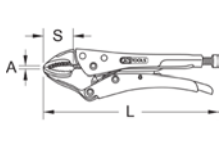


	A mm	L mm	S mm	g
115.1196	0-40	175,0	30,0	400
115.1197	0-50	220,0	37,0	600

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





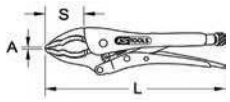


	A mm	L mm	S mm	g
115.2031	0-30	125,0	21,0	300
115.2032	0-40	175,0	27,0	390
115.2033	0-55	225,0	30,0	600

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





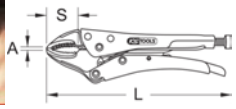


	A mm	L mm	S mm	g	
115.1506	0-64	235,0	50,0	600	

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	

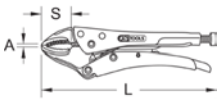




Locking pliers, straight jaws

- 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





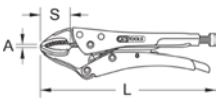


	A mm	L mm	S mm	g	
115.1501	0-28,5	175,0	27,0	370	
115.1502	0-45,5	225,0	30,0	600	

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





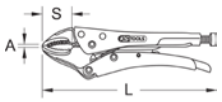


	A mm	L mm	S mm	g	
115.3011	0-40	175,0	25,0	400	
115.3012	0-50	250,0	30,0	600	

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





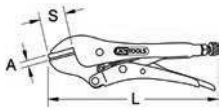


	A mm	L mm	S mm	g	
115.1151	0-25	185,0	24,0	400	
115.1152	0-32	225,0	27,5	600	

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





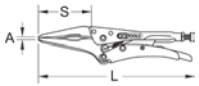


	A mm	L mm	S mm	g	
115.1504	0-30,5	175,0	29,5	360	



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

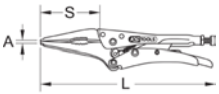
- For fastening and clamping of different profiles
- With loosening lever
- With easy locking action
- Size adjustment using the adjustment wheel
- Ideal for confined spaces
- Good adaptation to existing surfaces
- No flaring under the strongest loads
- Loosening under continuous pressure of a national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

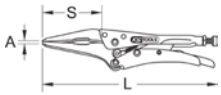





	A mm	L mm	S mm	g
115.1177	0-25	125,0	35	110
115.1034	0-35	150,0	45,0	180
115.1035	0-45	210,0	65,0	340

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

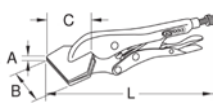





	A mm	L mm	S mm	g
115.2034	0-45	170,0	45,0	300
115.2035	0-60	205,0	53,0	500

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

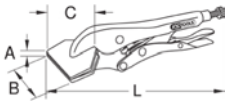





	A mm	B mm	C mm	L mm	g
115.1076	0-50	80,0	40,0	210,0	465
115.1077	0-55	80,0	45,0	250,0	675

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

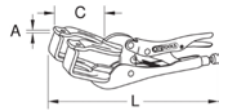





	A mm	C mm	L mm	B mm	g
115.2076	0-40	45,0	205,0	80,0	600
115.2077	0-55	45,0	250,0	80,0	800

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

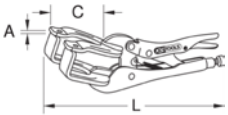





	A mm	C mm	L mm	g
115.1078	0-45	70,0	220,0	600
115.1079	0-55	70,0	260,0	780

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

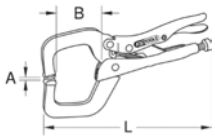


	A mm	C mm	L mm	g
115.2078	0-45	70,0	220,0	710
115.2079	0-65	70,0	260,0	875

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





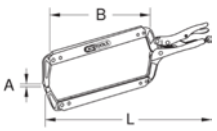


	A mm	B mm	L mm	g
115.1070	0-35	40,0	170,0	240

Welding gripping pliers, extra long

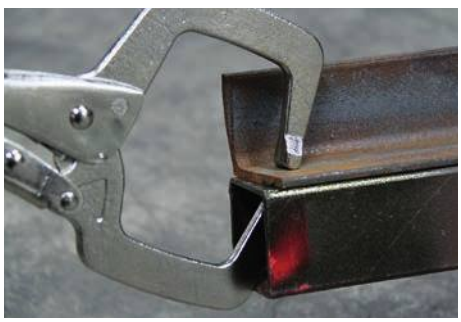
- Round forged gripping jaws
- With loosening lever
- With easy locking action
- Size adjustment using the adjustment wheel
- For profiled bulky components
- Large clamping depth for front and rear panels
- Good adaptation to existing surfaces
- No flaring under the strongest loads
- Loosening under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

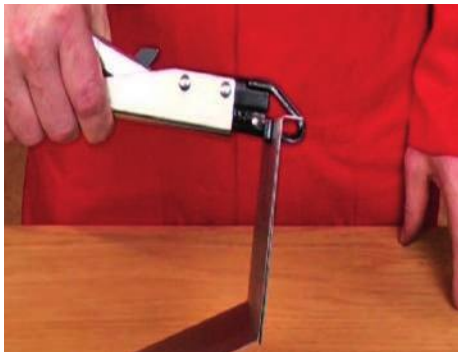






	A mm	B mm	L mm	kg
115.1072	0-270	250,0	450,0	1,18

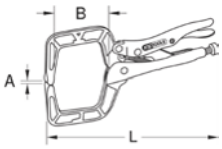




Welding gripping pliers

- 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





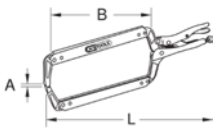


	A mm	B mm	L mm	g
115.1071	0-100	90,0	270,0	780

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





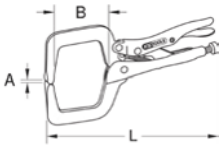


	A mm	B mm	L mm	kg
115.0573	0-295	415,0	610,0	1,50

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





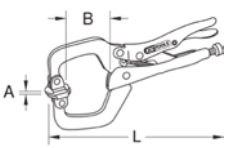


	A mm	B mm	L mm	g
115.2008	0-45	45,0	165,0	300
115.2009	0-90	85,0	280,0	900

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



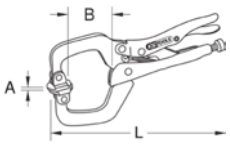




	A mm	B mm	L mm	kg
115.1178	0-25	25,0	125,0	0,15
115.1073	0-35	40,0	170,0	0,24
115.1074	0-100	70,0	285,0	0,78
115.1075	0-270	240,0	420,0	1,25
115.0570	0-420	395,0	610,0	1,54

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

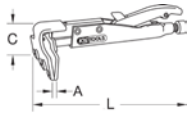





	A mm	B mm	L mm	kg
115.2013	0-30	40,0	175,0	0,30
115.2014	0-85	75,0	290,0	0,85

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

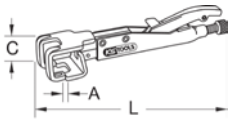





	A mm	C mm	L mm	g
115.1080	0-20	56,0	205,0	548

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

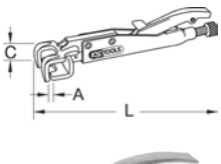





	A mm	C mm	L mm	g
115.1081	0-20	39,0	230,0	568

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

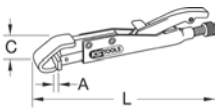





	A mm	C mm	L mm	g
115.1082	0-15	26,0	215,0	562

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

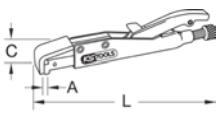





	A mm	C mm	L mm	g
115.1083	0-20	30,0	210,0	509

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



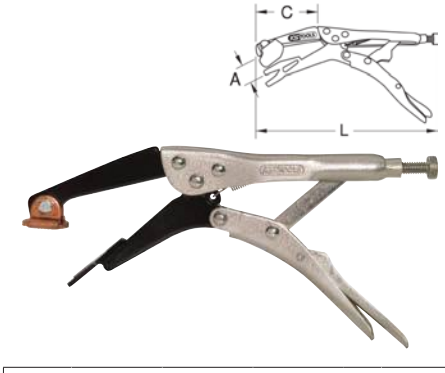

			kg
115.1085	5 pcs	Welding gripping pliers set	2,62

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

RIVETING 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:

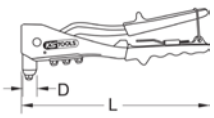
		g	
150.9651	Plastic rivet pliers	580	
150.9652	Replacement rivets pack of 10, 17,2x6,6mm	20	
150.9653	Replacement rivets pack of 10, 25,2x6,3mm	22	
150.9654	Replacement rivets pack of 10, 17,2x5mm	15	
150.9655	Replacement rivets pack of 10, 15,8x5mm	16	

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

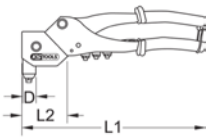


			kg	
150.9520	205 pcs	Standard hand riveting tool set	1,25	

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



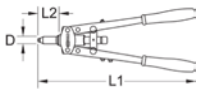
			kg	
150.9610	10 pcs	Universal hand riveting tool set	1,96	

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:

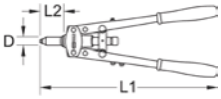
		kg	
150.9661	Long arm hand riveting tool	1,29	
150.9662	Threaded mandrel, M5	0,04	
150.9663	Mouthpiece, M5	0,03	
150.9664	Threaded mandrel, M6	0,04	
150.9665	Mouthpiece, M6	0,03	
150.9666	Thread arbour, M8	0,04	
150.9667	Mouthpiece, M8	0,03	
150.9668	Thread arbour, M10	0,03	
150.9669	Mouthpiece, M10	0,03	
150.9670	Wrench 10 mm for threaded mandrel	0,01	



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







			kg	
150.9630	17 pcs	Universal riveting tool set	2,67	

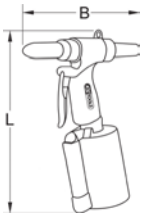
consists of:

		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	

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:

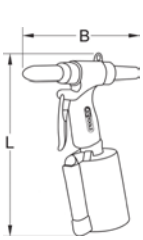
Rivet sizes:	2,4 - 3,2 - 4,0 - 4,8 mm
Stroke length:	14 mm
Driving power:	8677,5 N
Vibration acceleration:	< 1,20 m/s²
Noise performance level:	98,6 dbA
Noise pressure level:	85 dbA
Air consumption:	1 l/Hub
Operating pressure:	max. 6,3 bar (90 psi)
Min. tube diameter:	3/8" - 10 mm
Connection thread: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

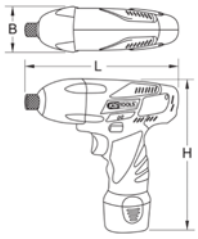
Rivet sizes:	2,4 - 3,2 - 4 - 4,8 - 5,6 - 6,4mm
Stroke length:	19 mm
Driving power:	13839,5 N
Vibration acceleration:	< 0,60 m/s²
Noise performance level:	85 dbA
Noise pressure level:	73,3 dbA
Air consumption:	1,8 l/Hub
Operating pressure:	max. 6,3 bar (90 psi)
Min. tube diameter:	3/8" - 10 mm
Connection 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



			g
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



			g
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



			kg
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



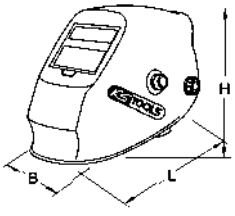


		Cable length mm	g	
150.3045	12/24V	195	480	
150.3085	24 V	195	480	

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:

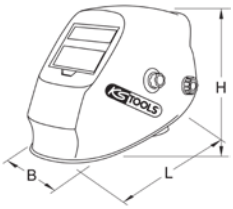
Switching timed:	1/25,000 s
	0.6 s delay
Window:	98 x 40 mm (3.7/8" x 1.5/8")
Cassette size:	110 x 90 x 9 mm (4.3/8" x 3.1/2" x 0,35")
Power requirement:	litium battery + solar cells
UV / IR protection:	according to EN169 / to DIN 16
Colour selection:	varible adjustment from DIN 9-13
	standard light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

	L mm	B mm	H mm	g	
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



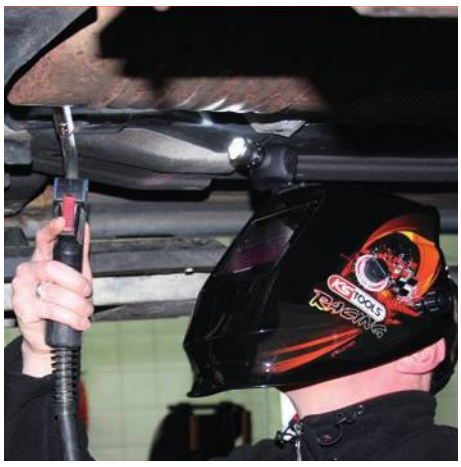




Technical data:

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	



Welding apron

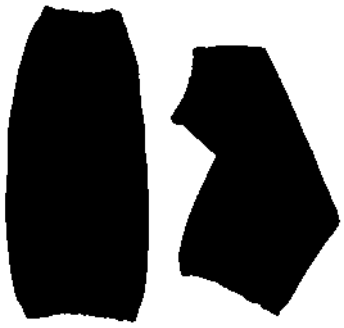
- Made from leather
- Adjustable in length
- Size of the waist adjustable
- Breast pocket



		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

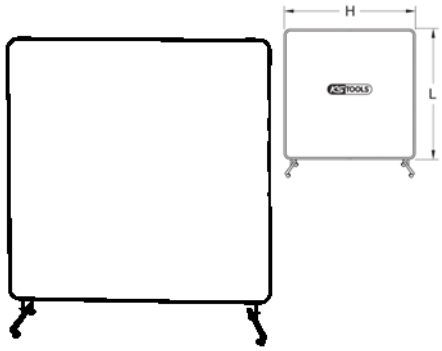
- Made from leather
- Extra long
- Good, comfortable wear
- Can be used for applications with heat
- With open sleeves



	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



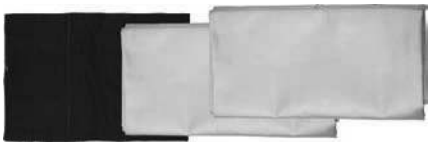


	Colour code	L mm	H mm	kg	
985.7027		1740,0	1740,0	1,72	
985.7028		1740,0	1740,0	1,72	
985.7029		1740,0	1740,0	1,72	

Flame proof mats

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





	B mm	L mm	max. °C	kg	
610.3350	330,0	500,0	700	0,33	
610.3351	460,0	800,0	700	0,65	
610.3399	1500,0	2000,0	600	2,11	

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:

		kg	
500.8551	Welding gun, 220V, 50/60 Hz	5,46	
500.8554	Electrode f.welding nails, copper	0,01	
500.8556	Electrode f.rivets, magnetic, copper	0,01	
500.8557	Electrode f.washers, brass	0,01	
500.8558	Heating electrode f.hot spots, brass	0,01	
500.8559	Slide hammer, 1.5kg	2,08	
500.8560	Electrode extension, brass	0,01	
500.8571	Nails 2.0 x 50.0 mm copper coated, pack of 500	0,66	
500.8572	Nails 2.5 x 50.0 mm copper coated, pack of 100	0,21	
500.8574	Rivets 3.0 x 3.2 mm copper coated, pack of 100	0,03	
500.8579	Screws M4 x 16.0 mm copper coated, pack of 100	0,14	
500.8592	Washers 8.0 x 16.0 mm copper coated, pack of 100	0,16	

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



		kg	
500.8570	Nails 2.0 x 50.0 mm copper coated, pack of 100	0,14	
500.8571	Nails 2.0 x 50.0 mm copper coated, pack of 500	0,66	
500.8572	Nails 2.5 x 50.0 mm copper coated, pack of 100	0,21	
500.8573	Nails 2.5 x 50.0 mm copper coated, pack of 500	1,15	
500.8592	Washers 8.0 x 16.0 mm copper coated, pack of 100	0,16	
500.8595	Triangular-washer 2.5 x 50.0 mm copper coated, pack of 100	0,50	
500.8574	Rivets 3.0 x 3.2 mm copper coated, pack of 100	0,03	
500.8575	Rivets 3.0 x 4.5 mm copper coated, pack of 100	0,04	
500.8576	Rivets 5.0 x 8.2 mm copper coated, pack of 100	0,04	
500.8579	Screws M4 x 16.0 mm copper coated, pack of 100	0,14	

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	

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:

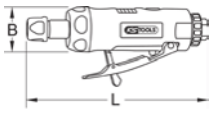
Tube length:	1 m
Tube diameter:	5 mm
Chuck capacity:	3 mm
Capacity:	150 KW
No load current:	70000 r.p.m.
Vibration acceleration:	< 0,80 m/s²
Noise performance level:	86 dbA
Noise pressure level:	74 dbA
Air consumption:	140 l/min
Operating pressure:	max. 6,3 bar (90 psi)
Min. tube diameter:	1/4" - 6,35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

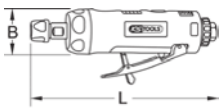
Chuck:	6 mm
Capacity:	220 Watt
No load current:	25000 r.p.m.
Vibration acceleration:	< 2,6 m/s²
Noise performance level:	95,6 dbA
Noise pressure level:	84,6 dbA
Air consumption:	283 l/min
Min. tube diameter:	3/8" - 10 mm
Operating pressure:	max. 6,3 bar (90 psi)
Connection thread:	1/4"NPT

	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:

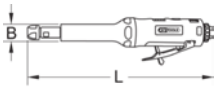
Chuck:	6 mm
Capacity:	370 Watt
No load current:	23000 r.p.m.
Vibration acceleration:	< 2,0 m/s²
Noise performance level:	101,1 dbA
Noise pressure level:	90,1 dbA
Air consumption:	350 l/min
Operating pressure:	max. 6,3 bar (90 psi)
Min. tube diameter:	3/8" - 10 mm
Connection thread:	1/4"NPT

	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







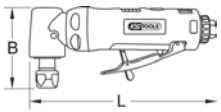
Technical data:

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



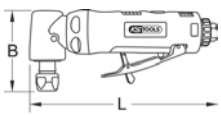
Technical data:

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



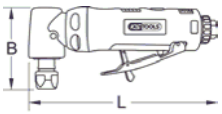
Technical data:

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



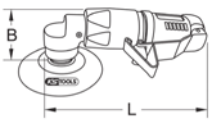
Technical data:

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:

		kg	
515.5121	1/4" mini burnishing machine	1,00	
515.5122	Burnishing pads yellow, Ø 85,0mm, pack of 5	0,06	
515.5123	Burnishing pads white, Ø 85,0mm, pack of 5	0,06	
515.5124	Burnishing pads lambskin Ø 80,0mm, pack of 5	0,08	
515.5112	Grinding disc Ø76.5 mm	0,02	

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	

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

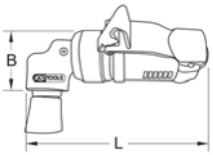


	Ø mm	Grain	Content	g	
515.5119	50,0	320	10	16	
515.5116	75,0	320	10	19	
515.5118	50,0	400	10	16	
515.5115	75,0	400	10	19	
515.5117	50,0	600	10	16	
515.5114	75,0	600	10	19	

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







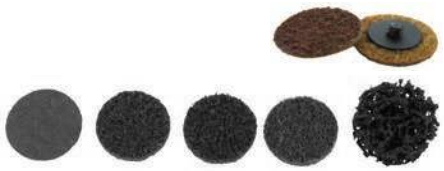
Technical data:

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	

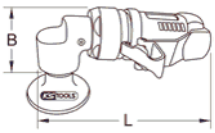




SlimPOWER mini-pneumatic grinding machine for large pads

- 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

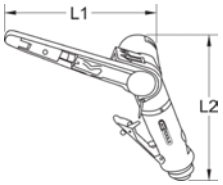


	Material	Ø mm	Grain	Colour code	Content	g	
515.5081	Scouring wool	50,0		white	10	60	
515.5083	Sand paper	50,0	80	brown	10	60	
515.5084	Sand paper	50,0	150	purple	10	60	
515.5082	Sand paper	50,0	240	brown	10	30	
515.5085	Sand paper	50,0	300	blue	10	60	
515.5086	Strip Rad	50,0		purple	10	100	
515.5087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



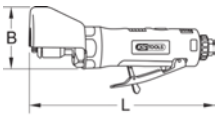
	Grain	Content	g	
515.3551	80	10	60	
515.3552	100	10	80	
515.3553	120	10	100	



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
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	
515.5440	85,0	200,0	820	

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:

		kg	
515.5431	Multi-grinder with handle, 212 mm	1,40	
515.5432	Film eraser, light execution, Ø100 mm	0,26	
515.5433	Brush strip coarse	0,25	
515.5434	Brush strip fine	0,33	
515.5436	Attachment for brush strip	0,90	
515.5437	Grinding wheel, pack of 2	0,08	
515.5438	Attachment for grinding wheel	0,38	

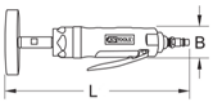




Pneumatic erasing machine

- 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	g	
515.5445	45,0	200,0	515.1243	760	

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	

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

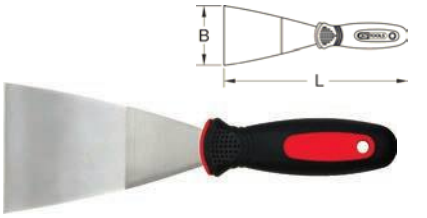




	Length mm	Width mm	g	
144.0631	50,0	100,0	20	
144.0632	75,0	113,0	30	
144.0633	100,0	116,0	50	
144.0634	150,0	120,0	85	

Stainless steel scraper

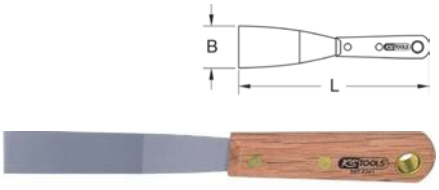
- Two component handle
- Ground
- Polished
- With hanging hole
- Stainless steel



	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

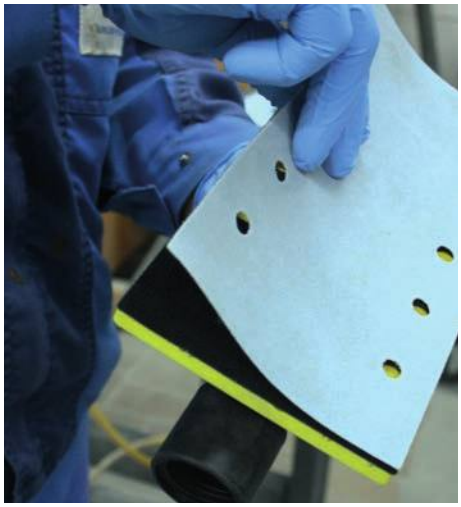




			g	
140.3065	3 pcs	Grinding hand block set	690	

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	



INTERIOR AND EXTERIOR 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

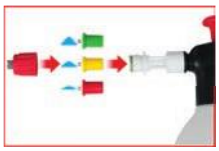
- Ideal addition for cleaning the interior
- Can be used in conjunction with compressed-air cleaning guns (515.1980)
- With hanging hole
- Plastic housing



		g	
515.1986	Cleaning Brush	60	

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



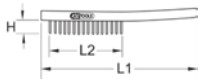


150.8267	1,8	440

WIRE BRUSHES

Steel hand wire brush 3 rowed

- 3 rowed
- Universal usage
- wooden handle
- For surface preparation
- With steel bristles

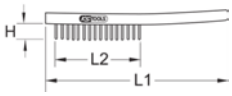




	H mm	L1 mm	L2 mm	
201.2305	32,0	290,0	138,0	120

Steel hand wire brush 4 rowed

- 4 rowed
- Universal usage
- wooden handle
- For surface preparation
- With steel bristles

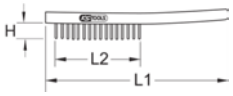




	H mm	L1 mm	L2 mm	
201.2311	32,0	290,0	138,0	120

Stainless steel hand wire hand brush 3 rowed

- 3 rowed
- Universal usage
- wooden handle
- For surface preparation
- With stainless steel bristles

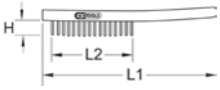




	H mm	L1 mm	L2 mm	
201.2310	32,0	290,0	138,0	120

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

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 hand brush 4 rowed

- 4 rowed
- Universal usage
- Plastic hand grip casing
- For surface preparation
- Smooth steel wire

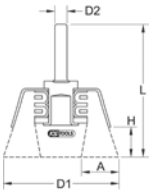




	H mm	L1 mm	L2 mm	
201.2325	25,0	285,0	130,0	120

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

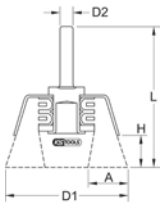




	RPM max	A mm	D1 mm	D2 mm	H mm	L mm	
340.0001	4500	10,0	38,0	6,0	20,0	55,0	50
340.0002	4500	10,0	50,0	6,0	20,0	70,0	60
340.0003	4500	10,0	63,0	6,0	20,0	88,0	70
340.0004	4500	15,0	75,0	6,0	25,0	105,0	80
340.0005	4500	15,0	80,0	6,0	25,0	112,0	90

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



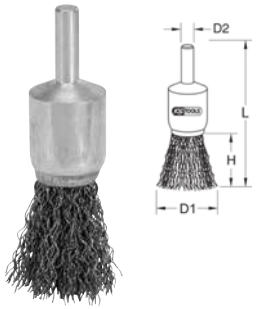


	RPM max	A mm	D1 mm	D2 mm	H mm	L mm	
340.0011	4500	10,0	38,0	6,0	20,0	55,0	50
340.0012	4500	10,0	50,0	6,0	20,0	70,0	60
340.0013	4500	10,0	63,0	6,0	20,0	88,0	70
340.0014	4500	15,0	75,0	6,0	25,0	105,0	80
340.0015	4500	15,0	80,0	6,0	25,0	112,0	90



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

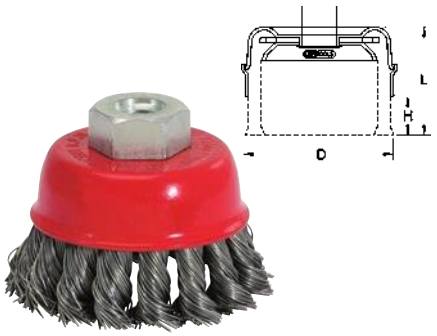
- Braided design
- With thread arbor
- For use in one hand angle grinder
- Ideal for heavy brush works
- For surface preparation
- Crimped steel wire



	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 stainless steel wire jar brush 0,5 mm

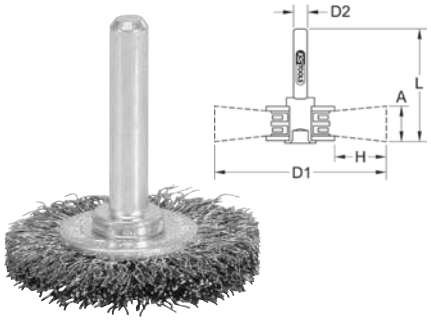
- Braided design
- With thread arbor
- For use in one hand angle grinder
- Ideal for heavy brush works
- For surface preparation
- Curled and rust free steel wire



	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 brush disc 0,3 mm

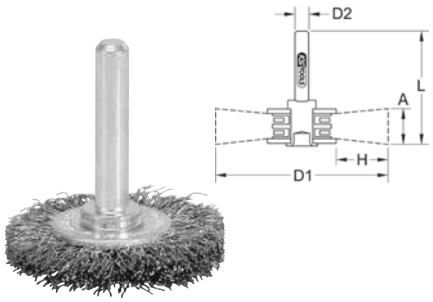
- With 6 mm mandril
- Especially longlife industry version
- For use with drill machine
- For surface preparation
- Crimped steel wire



	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

Rust free steel wire brush disc 0,3 mm

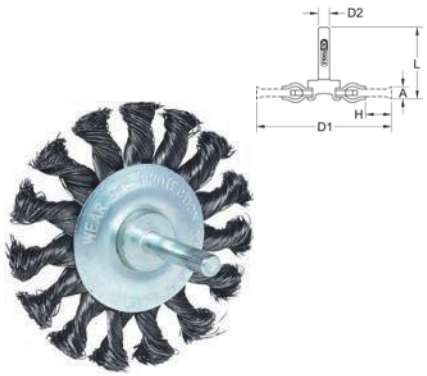
- With 6 mm mandril
- Especially longlife industry version
- For use with drill machine
- For surface preparation
- Curled and rust free steel wire



	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 0,3 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
340.0038	15000	12,0	75,0	6,0	15,0	43,0	100

Steel wire circular brush 0,5 mm

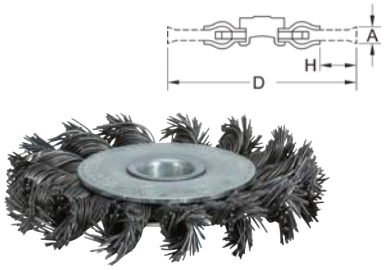
- Braided design
- With 6 mm mandril
- Especially longlife industry version
- For use in with drill machine
- For removing of underbody coating
- For surface preparation
- Smooth steel wire



	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

Steel wire circular brush 0,5 mm

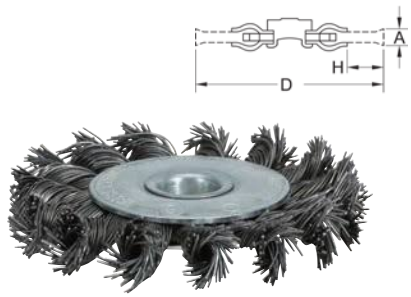
- Braided design
- With 22,2 mm bore reception
- Longlife industry version
- For use in one hand angle grinder
- For removing of rubber, grate and lacquer residue
- For surface preparation
- Smooth steel wire



	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

Stainless steel and brushed steel 0,5 mm

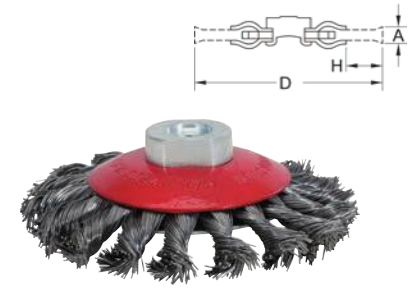
- Braided design
- With 22,2 mm bore reception
- Longlife industry version
- For use in one hand angle grinder
- For removing of rubber, grate and lacquer residue
- For surface preparation
- Flat and grate free steel wire



	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

Cone design steel wire circular brush 0,5 mm

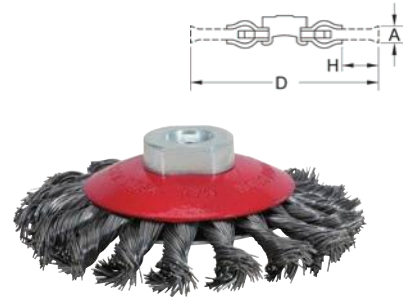
- Braided design
- With thread arbor
- Especially longlife industry version
- For use in one hand angle grinder
- For hard to reach places
- For surface preparation
- Smooth steel wire



	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	mm	D mm	E mm	F mm	G mm	g
670.0201	90	135	2,5	M14x1,5 x 130	17	5	3,5	11	7,5	900

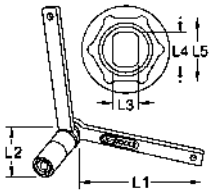
CAB SUSPENSION

Special counter bracket for Volvo, profile flat/oval, 18 mm

- For the removal and installation of driver's cab shock absorbers
- For counter holding the piston rod and simultaneous turning of the screw cap
- Extremely sturdy execution
- For manual operation
- Special tool steel

Application range: Volvo driver's cab shock absorbers







	L1 mm	L2 mm	L3 mm	L4 mm	L5 mm	g
455.0090	150,0	100,0	7,2	10,0	18,0	710

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

Shock absorber strut brace for driver's cab shock absorber

- For save clamping the springs of cab shock absorbers
- Extra slim and small execution
- Special tool steel

Application range: Volvo FM and FH





	Ø mm	Min span width mm	Max span width mm	kg
460.5700	75	70,0	170,0	3,85



RADIO AND NAVIGATION SYSTEM

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

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	

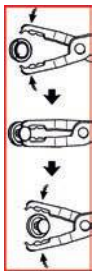
consists of:

		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 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	

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, 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		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		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		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		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





			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

- 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	

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

- 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	

INTERIOR TRIM AND LINER

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

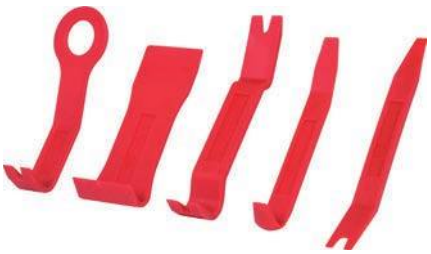


	L mm	B mm	g	
911.8124	180,0	30,0	70	

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:

		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	

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	

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	

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	

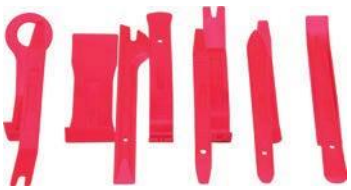
consists of:

		g	
911.8106	Double ended clip 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





			g	
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



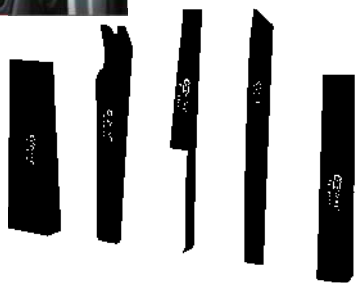


	L mm	B mm	g	
911.8140	210,0	26,0	90	

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	



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	

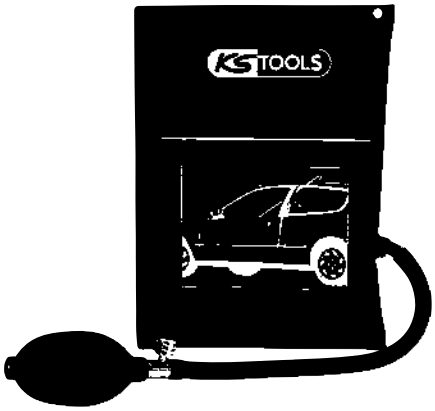
consists of:

		g	
118.0161	Clamps, 100 pcs	85	
118.0162	Seat clamp pliers	180	

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 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



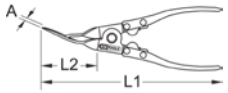


	Length mm	g	
140.2279	265,0	120	

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	

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	

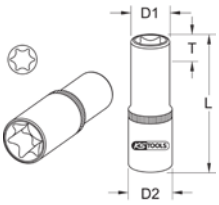
FRAME SCREW FITTINGS

Torx-E special socket for Mercedes

- For loosening and tightening of the special screw connection of the vehicle body
- Internal square drive to DIN 3121 / ISO 1174
- For machinery usage
- Phosphate finish
- Chrome molybdenum

Application range: Mercedes Bus (405), Unimog (437), Econic (956), Actros (963), Arocs (964), Atego (967), Zetros (949)







1/2"

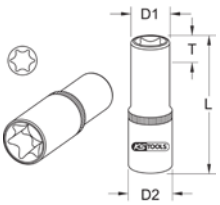
		L mm	D1 mm	D2 mm	T mm	g	
460.0016	E30	46,0	34,0	30,0	30,0	220	

Torx-E special socket for Mercedes, long

- For loosening and tightening of the special screw connection of the vehicle body
- Internal square drive to DIN 3121 / ISO 1174
- For machinery usage
- Phosphate finish
- Chrome molybdenum

Application range: Mercedes Bus (405), Unimog (437), Econic (956), Actros (963), Arocs (964), Atego (967), Zetros (949)



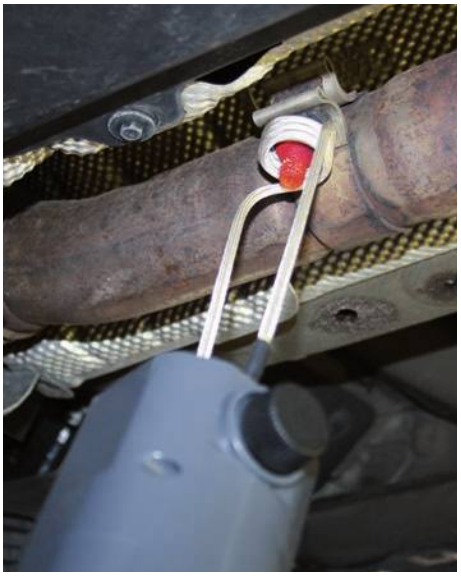




3/4"

		L mm	D1 mm	D2 mm	T mm	g	
460.0014	E30	111,0	38,0	38,0	31,0	762	





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	
500.8420	4 pcs	Induction Heat Gun Set	3,30	

consists of:

		kg	
500.8432	Induction coils 19mm, standard	0,05	
500.8450	Induction coil, cable, fully flexible, standard	0,06	
500.8420-1	Induction heat gun	1,83	
500.8433	Induction coils 22mm, standard	0,05	

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
Operational voltage:	230V
Cable length:	2,3

			kg	
500.8430	9 pcs	Induction Heat Gun Set	2,15	

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	
500.8450	Induction coil, cable, fully flexible, standard	0,06	
500.8445	Induction coil, semi-rigid, deformable, universal	0,04	



STORAGE COMPARTMENTS

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	

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	

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



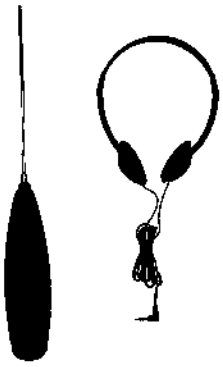


	Length mm	g	
150.1645	1120,0	200	

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.





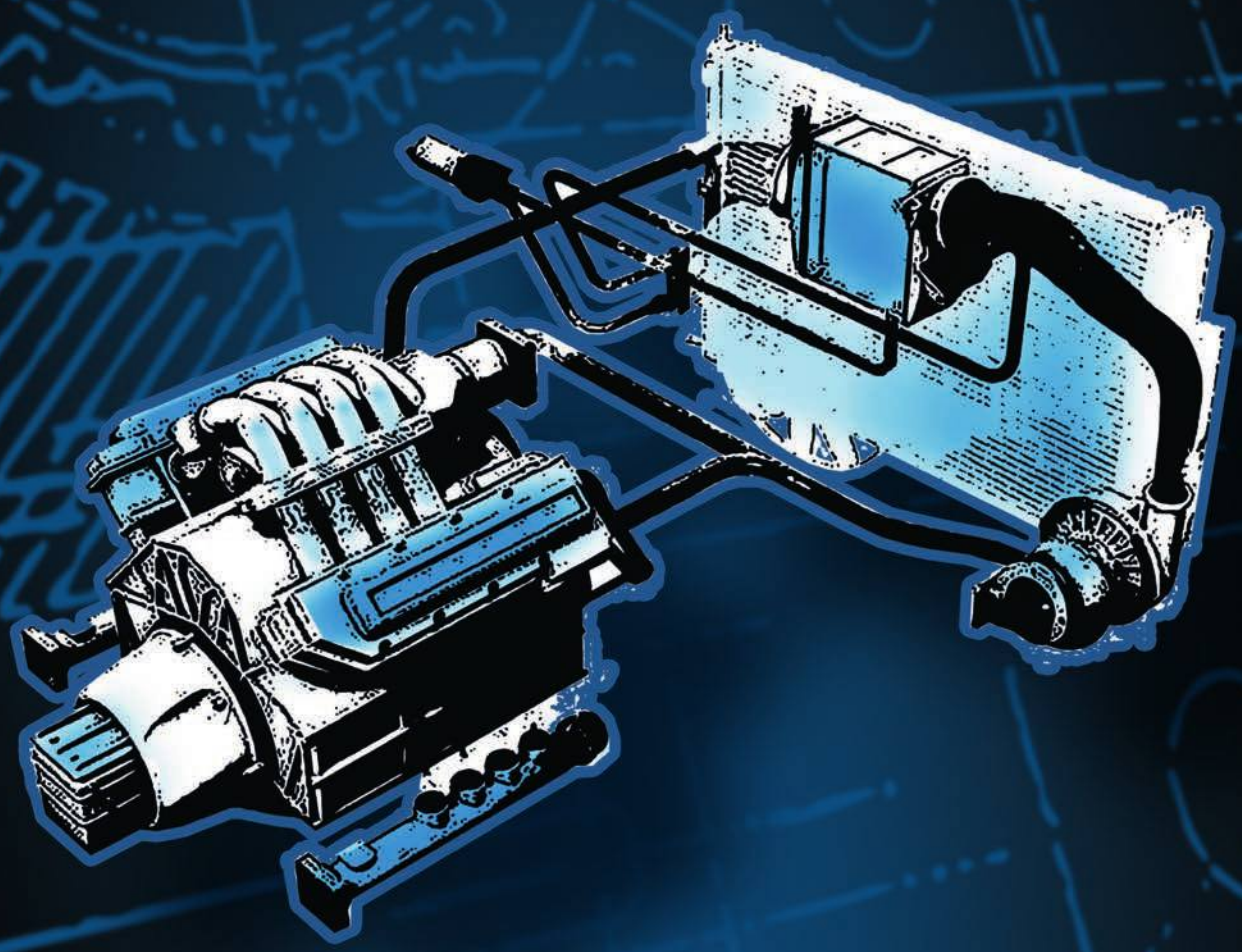
			g	
960.1175	5 pcs	Digital heat blow gun set	850	

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 2





KS TOOLS®

Innovation is our mission!

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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	

COOLING SYSTEM VACUUM FILLING DEVICE

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	
150.2070-29	Rubber cone adaptor large	0,07	
150.2070-28	Rubber cone adaptor small	0,06	
150.2070-30	Hose, 1.5 m	0,20	



RINSING DEVICES

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 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
- Sturdy design



		g	
455.0111	Hand pump with manometer	473	

COOLING SYSTEM TEST ADAPTER

Cooling system test adapter

- For the diagnosis of leakages on coolent systems
- With quick coupling
- internal thread or bayonet lock
- Simple handling
- Optimal use alongside KS Test pump 455.0111
- Sturdy design



		g	
455.0113	Screw adapter M42 x 3.0	163	
455.0114	Screw adapter M45 x 3.0	137	
455.0115	Screw adapter M45 x 4.0	84	
455.0116	Screw adapter M52 x 3.0	114	
455.0117	Screw adapter M62 x 4.0	169	
455.0118	Screw adapter M72 x 4.0	216	
455.0119	Bayonet Adaptor Ø 60 mm	105	

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:

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		
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)



455.0140	4 pcs	Cooling system expander cones test adapter set 17.0 - 60.0 mm	1,50	

consists of:

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 DIAGNOSIS SYSTEM SET

Commercial vehicle cooling system testing equipment

- For the diagnosis of leakages on coolent systems
- 7 adaptors ≈ 85% coverage of all commercial vehicles
- Optimal and safe seat like original cover
- Manometer with protective rubber cap
- Metall hand pump and flexible tube with decompression valve
- Sturdy design
- Special tool steel





455.0110	9 pcs	Commercial vehicle cooling system testing equipment	1,62	

consists of:

455.0111	Hand pump for cooling system testing equipment 2.5bar/36psi	473	
455.0112	Tube with pressure relief for hand pump 455.0111	155	
455.0113	Screw adapter M42 x 3.0	163	
455.0114	Screw adapter M45 x 3.0	137	
455.0115	Screw adapter M45 x 4.0	84	
455.0116	Screw adapter M52 x 3.0	114	
455.0117	Screw adapter M62 x 4.0	169	
455.0118	Screw adapter M72 x 4.0	216	
455.0119	Bayonet Adaptor Ø 60 mm	105	

Cooling system expander cones diagnosis set

- 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 due to expansion
- No need to purchase expensive individual adapters
- Removes need to purchase single adapters
- Simple handling
- Incl. hand pump with manometer
- Robust design made from POM (polyoxmethylene)
- Also suitable for filling the cooling system alongside a filling valve





455.0145	5 pcs	Cooling system expander cones diagnosis set	1,80	

consists of:

455.0111	Hand pump for cooling system testing equipment 2.5bar/36psi	473	
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	

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





150.1910	8 pcs	CO2 Cylinder head leak testing set	1,43	

consists of:

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

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:

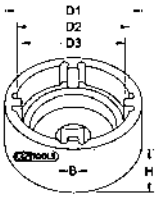
		g	
150.3810	3/8" Special socket wrench, 10 mm	19	
150.3811	3/8" Special socket wrench, 11 mm	41	
150.3812	3/8" Special socket wrench, 12 mm	49	
150.3814	3/8" Special socket wrench, 14 mm	69	
150.3817	3/8" Special socket wrench, 17 mm	108	
150.3819	3/8" Special socket wrench, 19 mm	135	

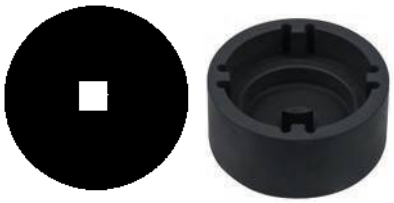
FAN BEARING

Fan bearing nut wrench for Volvo with 4 pins

- ideally suited for dismantling the slotted nut of the fan bearing
- Internal square drive to DIN 3121 / ISO 1174
- Short execution
- For machinery usage
- Phosphate finish
- Chrome molybdenum

Application range: Volvo FM12 fan bearing





1/2"

	D1 mm	D2 mm	D3 mm	H mm	Stud	B mm	g	
460.0950	73,0	60,0	54	48,0	4	6,0	780	

SPEED MEASUREMENT TOOL

Photoelectric rev counter

- Portable laser measuring instrument, digital
- For touchless measuring of the rotating speed / number of revolutions
- LED display 18mm
- Automatic back up: last test result / maximum and minimum value
- Laser aim point to focus exactly on the measuring point
- Solid state RPM measurement by reflectors supplied



Technical data:

Working range:	2,5 - 99.999 U/min
Measuring distance:	50-500 mm
Resolution:	0.1 RPM up to 999.9 , 1 RPM from 1000
Display accuracy:	0,05% +/- 1
Power requirement:	3x 1,5V AAA (not in the delivery)
Dimensions:	185x73x37mm
Working temperature:	0° / +50°C

		g	
455.0130	Photoelectric rev counter	415	

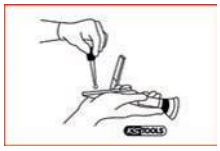
accessories:

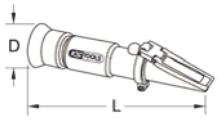
		g	
455.0131	Reflective tape stripes200 x 12 mm, pack of 3	1	

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)

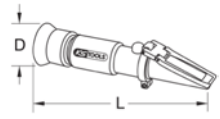
	D mm	L mm	Glass face mm	g	
550.1290	40,0	149,0	40 x 13	630	

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)





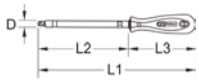
		g
150.3220	Thermal imaging camera with UV light	300

HOSE CLAMP TOOL

ERGOTORQUE*plus*® socket screwdriver

- Two component handle
- 6 point
- Flexible
- Limited torque
- Double spiral shaft
- Plastic protective coating
- Chrome vanadium





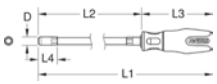


	mm	D mm	L1 mm	L2 mm	L3 mm	L4 mm	g
159.1126	6,0	10,8	259,0	150,0	109,0	9,3	155
159.1127	7,0	11,7	259,0	150,0	109,0	10,0	155
159.2128	8,0	11,9	259,0	150,0	109,0	10,0	155
159.1125	10,0	12,5	279,0	170,0	109,0	14,3	170

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

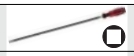
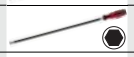
ERGOTORQUE*plus*® screwdriver set

- 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



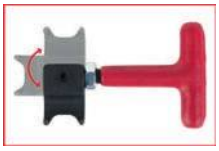


			kg
911.1180	16 pcs	ERGOTORQUE*plus*® screwdriver set	1,30

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

- 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



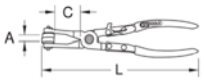


	Clamping range mm	Length mm	g	
115.1182	0-22	220,0	380	

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



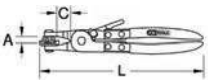


	Ø mm	Clamping range mm	Length mm	g	
115.1198	18- 53	5-43	210,0	400	

Universal hose clamp pliers

- Universal crown profile
- For difficult to reach clamps
- With PVC dipped handle
- Includes locking mechanism
- Versitile usage
- Chrome molybdenum





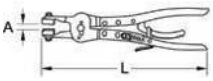


	A mm	C mm	L mm	g	
115.1043	0-48,5	40,0	220,0	240	

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





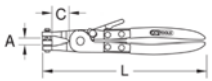


	A mm	L mm	g	
115.1167	15-56	275,0	400	

Hose clamp pliers

- With PVC dipped handle
- For spring pipe clamps
- Includes locking mechanism and ratchet function
- Chrome molybdenum





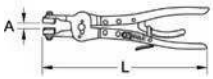


	A mm	C mm	L mm	g	
115.1046	0-45	37,0	220,0	230	

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





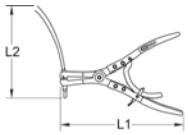


	A mm	L mm	g	
115.1173	6-58	250,0	400	

Hose clamp pliers with double bowden cable

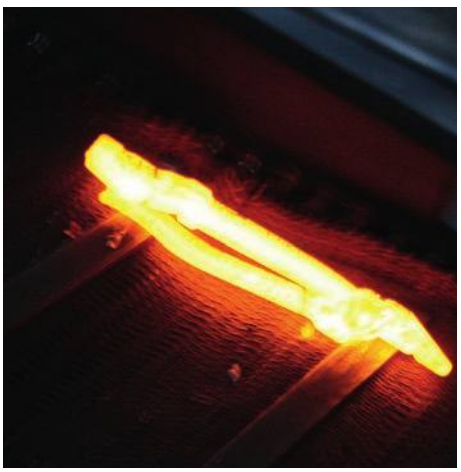
- With PVC dipped handle
- For spring pipe clamps
- With 600 mm bowden cable
- Adjustable length bowden cable
- Includes locking mechanism
- For difficult to reach clamps
- Special tool steel







	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



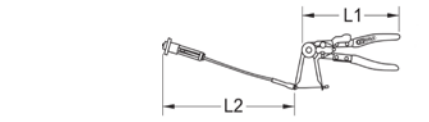


	Ø mm	L1 mm	L2 mm	g
115.1169	0 - 60	260,0	600,0	500

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







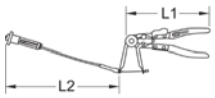
	Ø mm	L1 mm	L2 mm	g
115.1168	0 - 70	260,0	650,0	500

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





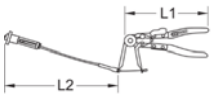


	Ø mm	L1 mm	L2 mm		g
115.0901	15 - 54	260,0	730,0	115.0902	500

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







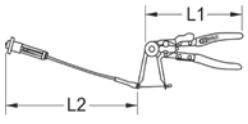
	Ø mm	L1 mm	L2 mm		g
115.1041	0 - 60	200,0	650,0	115.1041-1	470



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	

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	

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	

consists of:

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

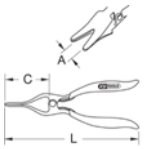
HOSE ASSEMBLY AND REMOVAL TOOLS

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





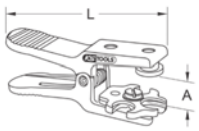
	Length mm	Ø mm	
115.1103	285,0	45-120	530

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:

122.1296	ALLinONE Fluidstopper Ø 4,75-14 mm	60
122.1297	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





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

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:

		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

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:

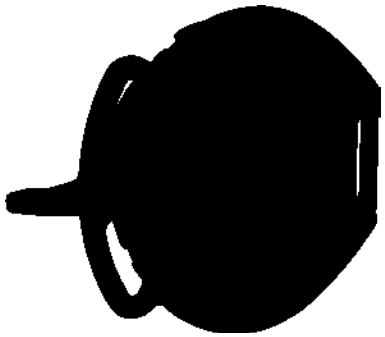
		g
115.5057	Hose clamp gripper 90°, Ø 15mm	55
115.5058	Hose clamp gripper 90°, Ø 23mm	95
115.5059	Hose clamp gripper 90°, Ø 35mm	130

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	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	

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	



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	

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



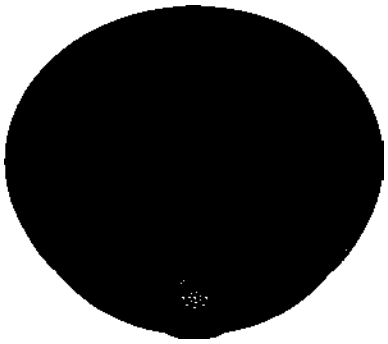


		Ø Tube mm	l	Ø mm	tube length mm	g	
150.9230	3 pcs	14x16	1	160	400	240	

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





	l	Height mm	Ø mm	kg	
150.9209	30	150,0	590,0	1,70	

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	

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

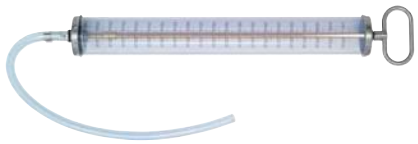
- Ideal for bleeding and filling of fluids
- With ball valve to select between suction and pressure
- Suck and press with every way
- Wear-resistant and temperature resistant
- For difficult to reach openings
- With 2 tubes
- Suction tube clear Ø I x E: 10x16 mm, length 600 mm
- Pressure tube fabric-reinforced 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:	M15x1.5IG

	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

Condenser filling and relief adaptor, Scania/Volvo/Renault

- Ideally for the change of antifreeze
- Big aperture for fast draining
- Quick coupling made of stainless steel

Application: Scania 340/360 commercial vehicle and bus,Volvo/Renault



	D1 mm	D2 mm	L mm	g
455.0076	15,0	9,8	78,0	150

Condenser filling and relief adaptor, Volvo

- Ideally for the change of antifreeze
- Big aperture for fast draining
- Quick coupling made of stainless steel



	Length mm	g
460.1750	83,0	150

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	
150.8253	G2" a / M64x4	840,0	1350,0	340

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	
150.8255	G2" a / M64x4	1200,0	1000,0	960

HOSE CLAMPS

Hose clamp assortment

- Suitable for tube diameters 16-40mm
- In plastic storage case





970.0070	26 pcs	Hose clamp assortment	300
8 x		Ø 16 mm	
6 x		Ø 22 mm	
4 x		Ø 25 mm	
2 x		Ø 28 mm	
2 x		Ø 35 mm	
4 x		Ø 40 mm	

Assortment single ear hose clamps

- Suitable for tube diameters 5,8-21mm
- Stainless steel
- In plastic storage case





970.0830	170 pcs	Assortment single ear hose clamps	490
20 x		Ø 5,8 - 7,0 mm	
20 x		Ø 7,3 - 9,0 mm	
20 x		Ø 8,8 - 10,5 mm	
20 x		Ø 10,8 - 13,3 mm	
20 x		Ø 12,0 - 14,5 mm	
20 x		Ø 12,3 - 14,8 mm	
20 x		Ø 14,5 - 17,0 mm	
15 x		Ø 16,0 - 19,2 mm	
15 x		Ø 17,8 - 21,0 mm	

Assortment mini hose clamps

- Suitable for tube diameters 7-18mm
- In plastic storage case





970.0770	78 pcs	Assortment mini hose clamps	550
10 x		Ø 7 - 9 mm	
10 x		Ø 8 - 10 mm	
10 x		Ø 9 - 11 mm	
10 x		Ø 10 - 12 mm	
6 x		Ø 11 - 13 mm	
6 x		Ø 12 - 14 mm	
6 x		Ø 13 - 15 mm	
6 x		Ø 14 - 16 mm	
7 x		Ø 15 - 17 mm	
7 x		Ø 16 - 18 mm	



ENGINE - HOSE CLAMP PLIERS

3



KS TOOLS

Innovation is our mission!

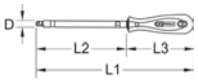
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SCREW HOSE CLAMPS

ERGOTORQUE*plus*® socket screwdriver

- Two component handle
- 6 point
- Flexible
- Limited torque
- Double spiral shaft
- Plastic protective coating
- Chrome vanadium





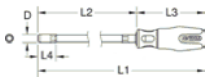


	mm	D mm	L1 mm	L2 mm	L3 mm	L4 mm	g
159.1126	6,0	10,8	259,0	150,0	109,0	9,3	155
159.1127	7,0	11,7	259,0	150,0	109,0	10,0	155
159.2128	8,0	11,9	259,0	150,0	109,0	10,0	155
159.1125	10,0	12,5	279,0	170,0	109,0	14,3	170

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

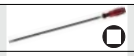
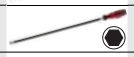
ERGOTORQUE*plus*® screwdriver set

- 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

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 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



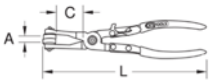


	Clamping range mm	Length mm	g	
115.1182	0-22	220,0	380	

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



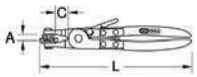


	Ø mm	Clamping range mm	Length mm	g	
115.1198	18- 53	5-43	210,0	400	

Universal hose clamp pliers

- Universal crown profile
- For difficult to reach clamps
- With PVC dipped handle
- Includes locking mechanism
- Versitile usage
- Chrome molybdenum





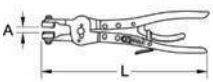


	A mm	C mm	L mm	g	
115.1043	0-48,5	40,0	220,0	240	

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





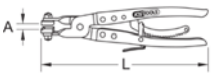


	A mm	L mm	g	
115.1167	15-56	275,0	400	

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





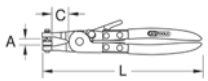


	A mm	L mm	g	
115.1183	0-40	220,0	350	

Hose clamp pliers

- With PVC dipped handle
- For spring pipe clamps
- Includes locking mechanism and ratchet function
- Chrome molybdenum





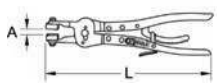


	A mm	C mm	L mm	g	
115.1046	0-45	37,0	220,0	230	

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



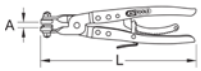




	A mm	L mm	g	
115.1173	6-58	250,0	400	

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

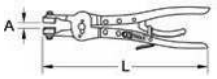


	A mm	L mm	g
115.1062	0-30	235,0	390

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** Oktavia, **Audi** A3 etc.

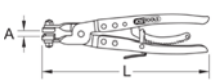





	A mm	L mm	g
115.1063	0-40	295,0	470

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

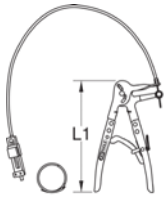


	A mm	L mm	g
115.1166	4-45	290,0	440

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

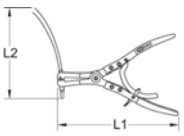





	Ø mm	L1 mm	L2 mm		g
115.1064	0 - 50	240,0	600,0	115.1066	540

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

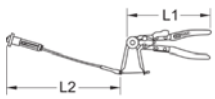


	Ø mm	L1 mm	L2 mm		g
115.1065	0 - 70	270,0	600,0	115.1065-1	540

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

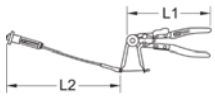





	Ø mm	L1 mm	L2 mm	g
115.1169	0 - 60	260,0	600,0	500

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



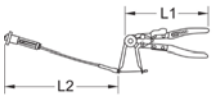
	Ø mm	L1 mm	L2 mm	g
115.1168	0 - 70	260,0	650,0	500

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





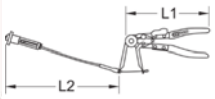


	Ø mm	L1 mm	L2 mm		g
115.0901	15 - 54	260,0	730,0	115.0902	500

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







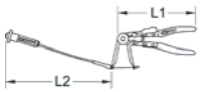
	Ø mm	L1 mm	L2 mm		g
115.1041	0 - 60	200,0	650,0	115.1041-1	470



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



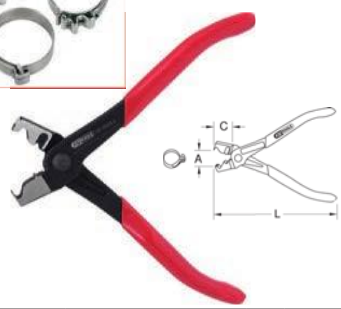


	Clamping range mm	Length mm	g
115.1179	0-18	180,0	160

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

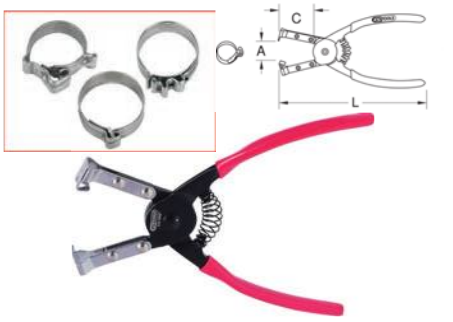




	A mm	C mm	L mm	g
115.1045	0-38	25,0	180,0	215

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

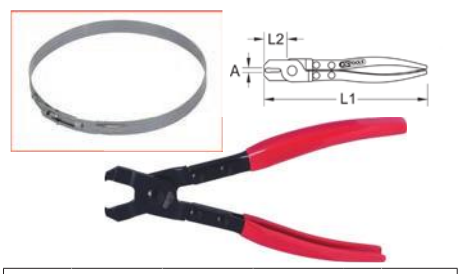


	A mm	C mm	L mm	g	
115.1057	0-30	45,0	200,0	180	

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

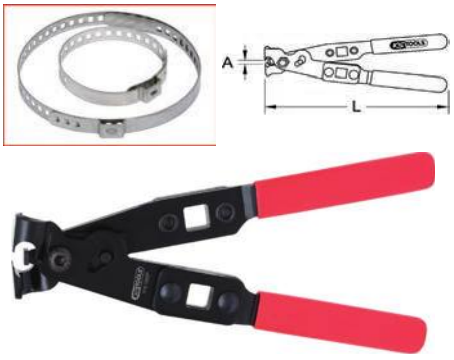
Application range: Axle boots, coolant and fuel hoses for **Volkswagen**, **Audi**, **Opel**, **BMW**, **Mercedes**, **Honda**, **Nissan** and **Mazda**



	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

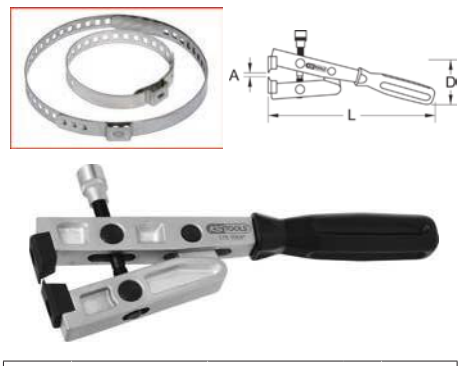
- Work side
- For compressing locking hose clips
- With PVC dipped handle
- Chrome vanadium



	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



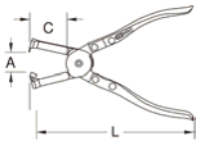


	Length mm	g	
115.1186	220,0	345	

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







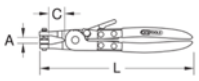
	A mm	C mm	L mm	g	
115.1191	0 - 30,0	50,0	230,0	330	

SPRING WIRE HOSE CLAMPS

Hose clamp pliers

- With PVC dipped handle
- For spring pipe clamps
- Includes locking mechanism and ratchet function
- Chrome molybdenum







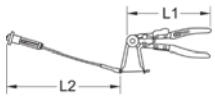
	A mm	C mm	L mm	g	
115.1047	0-45	37,0	220,0	230	

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:

		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

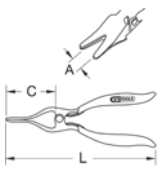
HOSE ASSEMBLY AND REMOVAL TOOLS

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	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

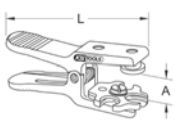


	Length mm	Ø mm	g
115.1103	285,0	45-120	530

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



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	

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	

HOSE CLAMPS

Hose clamp assortment

- Suitable for tube diameters 16-40mm
- In plastic storage case



			g	
970.0070	26 pcs	Hose clamp assortment	300	
8 x		Ø 16 mm		
6 x		Ø 22 mm		
4 x		Ø 25 mm		
2 x		Ø 28 mm		
2 x		Ø 35 mm		
4 x		Ø 40 mm		

Assortment single ear hose clamps

- Suitable for tube diameters 5,8-21mm
- Stainless steel
- In plastic storage case



			g
970.0830	170 pcs	Assortment single ear hose clamps	490
20 x		Ø 5,8 - 7,0 mm	
20 x		Ø 7,3 - 9,0 mm	
20 x		Ø 8,8 - 10,5 mm	
20 x		Ø 10,8 - 13,3 mm	
20 x		Ø 12,0 - 14,5 mm	
20 x		Ø 12,3 - 14,8 mm	
20 x		Ø 14,5 - 17,0 mm	
15 x		Ø 16,0 - 19,2 mm	
15 x		Ø 17,8 - 21,0 mm	

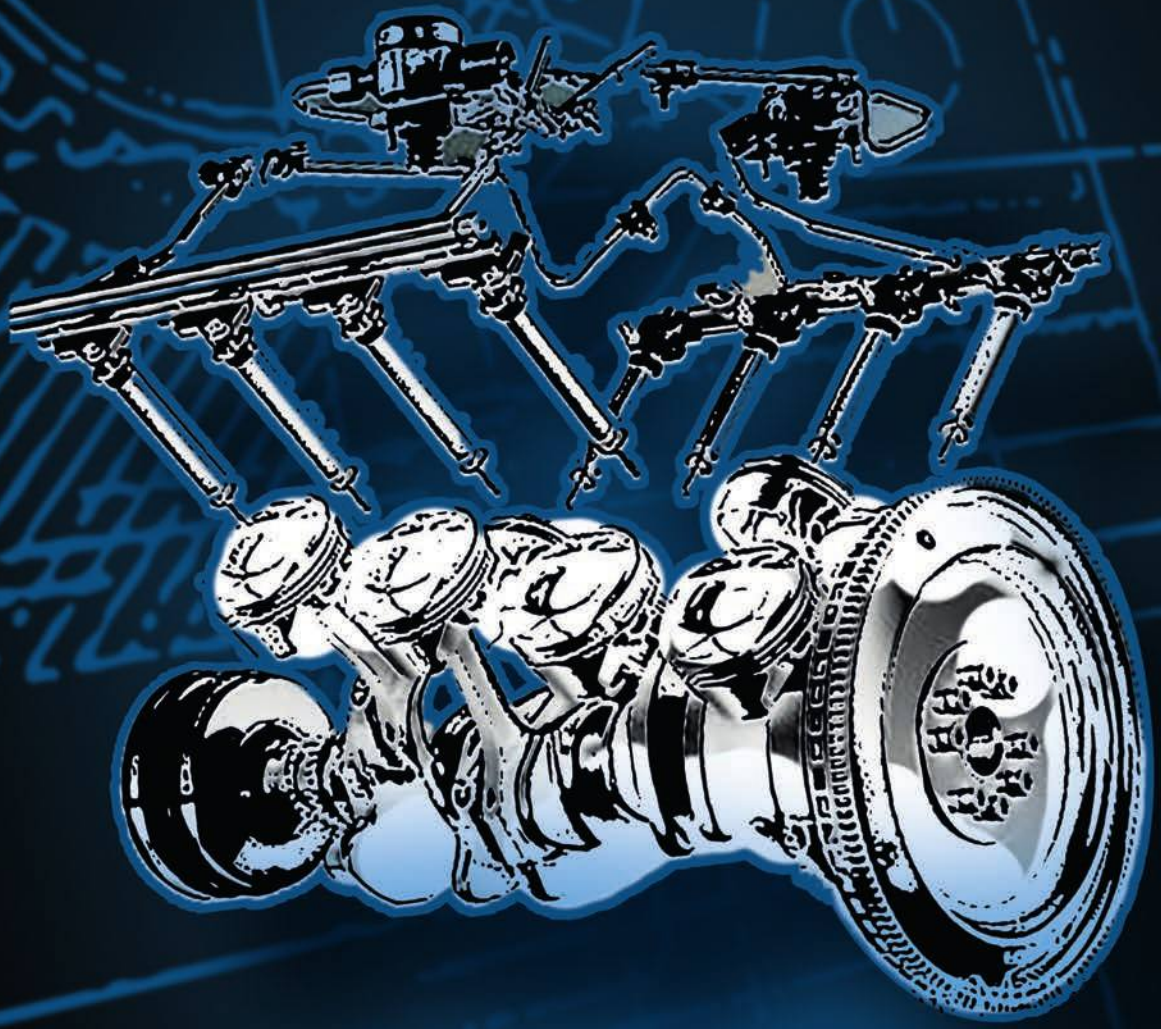
Assortment mini hose clamps

- Suitable for tube diameters 7-18mm
- In plastic storage case



			g
970.0770	78 pcs	Assortment mini hose clamps	550
10 x		Ø 7 - 9 mm	
10 x		Ø 8 - 10 mm	
10 x		Ø 9 - 11 mm	
10 x		Ø 10 - 12 mm	
6 x		Ø 11 - 13 mm	
6 x		Ø 12 - 14 mm	
6 x		Ø 13 - 15 mm	
6 x		Ø 14 - 16 mm	
7 x		Ø 15 - 17 mm	
7 x		Ø 16 - 18 mm	

ENGINE - FUEL SYSTEM 4





KS TOOLS®

Innovation is our mission!

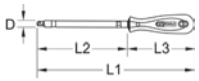
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HOSE CLAMP TOOL

ERGOTORQUE*plus*® socket screwdriver

- Two component handle
- 6 point
- Flexible
- Limited torque
- Double spiral shaft
- Plastic protective coating
- Chrome vanadium





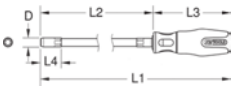


	mm	D mm	L1 mm	L2 mm	L3 mm	L4 mm	g	
159.1126	6,0	10,8	259,0	150,0	109,0	9,3	155	
159.1127	7,0	11,7	259,0	150,0	109,0	10,0	155	
159.2128	8,0	11,9	259,0	150,0	109,0	10,0	155	
159.1125	10,0	12,5	279,0	170,0	109,0	14,3	170	

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	

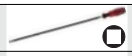
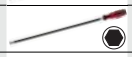
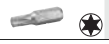
ERGOTORQUE*plus*® screwdriver set

- 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



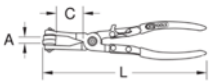


	Clamping range mm	Length mm	g	
115.1182	0-22	220,0	380	

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



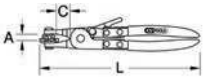


	Ø mm	Clamping range mm	Length mm	g	
115.1198	18- 53	5-43	210,0	400	

Universal hose clamp pliers

- Universal crown profile
- For difficult to reach clamps
- With PVC dipped handle
- Includes locking mechanism
- Versitile usage
- Chrome molybdenum





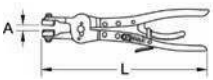


	A mm	C mm	L mm	g	
115.1043	0-48,5	40,0	220,0	240	

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





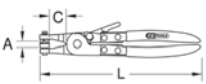


	A mm	L mm	g	
115.1167	15-56	275,0	400	

Hose clamp pliers

- With PVC dipped handle
- For spring pipe clamps
- Includes locking mechanism and ratchet function
- Chrome molybdenum





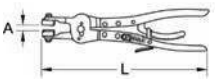


	A mm	C mm	L mm	g	
115.1046	0-45	37,0	220,0	230	

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





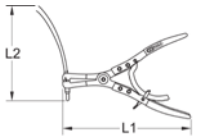


	A mm	L mm	g	
115.1173	6-58	250,0	400	

Hose clamp pliers with double bowden cable

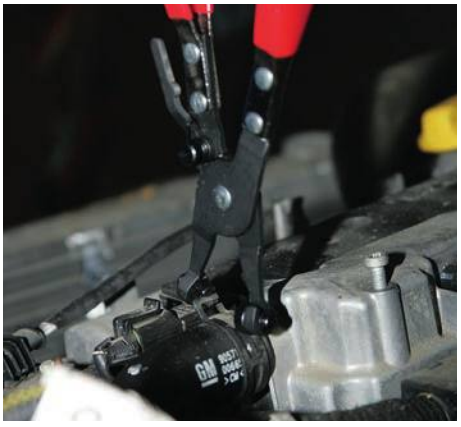
- With PVC dipped handle
- For spring pipe clamps
- With 600 mm bowden cable
- Adjustable length bowden cable
- Includes locking mechanism
- For difficult to reach clamps
- Special tool steel







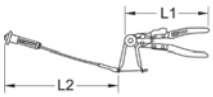
	Ø mm	L1 mm	L2 mm		g	
115.1065	0 - 70	270,0	600,0	115.1065-1	540	



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

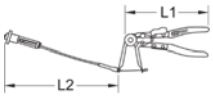





	Ø mm	L1 mm	L2 mm	g
115.1169	0 - 60	260,0	600,0	500

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

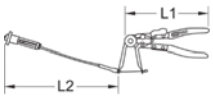


	Ø mm	L1 mm	L2 mm	g
115.1168	0 - 70	260,0	650,0	500

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

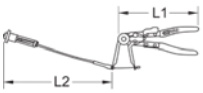





	Ø mm	L1 mm	L2 mm		g
115.0901	15 - 54	260,0	730,0	115.0902	500

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

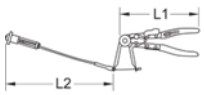


	Ø mm	L1 mm	L2 mm		g
115.1041	0 - 60	200,0	650,0	115.1041-1	470



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

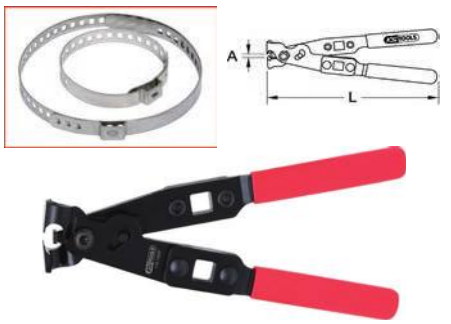
Application range: Axle boots, coolant and fuel hoses for **Volkswagen**, **Audi**, **Opel**, **BMW**, **Mercedes**, **Honda**, **Nissan** and **Mazda**



	A mm	L mm	g	
115.1050	0-22	260,0	380	

Hose clamp pliers

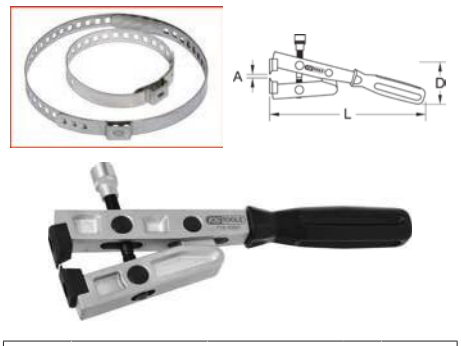
- With PVC dipped handle
- With 3/8" drive for use with a torque wrench
- For the fitting and clamping of ear clamps
- 1/2" 4-point recess in the handle for use with torque wrench
- Chrome molybdenum



	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

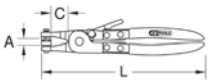


	A mm	L mm	g	
115.1056	0-45	270,0	880	

Hose clamp pliers

- With PVC dipped handle
- For spring pipe clamps
- Includes locking mechanism and ratchet function
- Chrome molybdenum





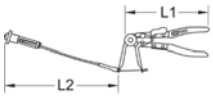


	A mm	C mm	L mm	g	
115.1047	0-45	37,0	220,0	230	

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	

consists of:

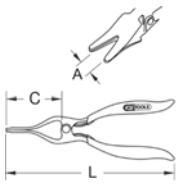
		g	
115.1046	Hose clamp pliers (recessed/slot),220mm	230	
115.1047	Hose clamp pliers (dbl cross slot),220mm	230	

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.







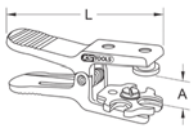
	A mm	L mm	C mm	g	
115.1044	0-30	195,0	70,0	190	

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



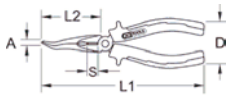


	Length mm	g	
115.1008	210,0	200	

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



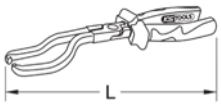


	Ø mm	A mm	Length mm	g	
115.2112	7,0	0-68	190,0	220	

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





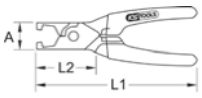


	Ø mm	L mm	g	
115.0900	0-105	230,0	310	

Fuel pipe pliers for quick coupling

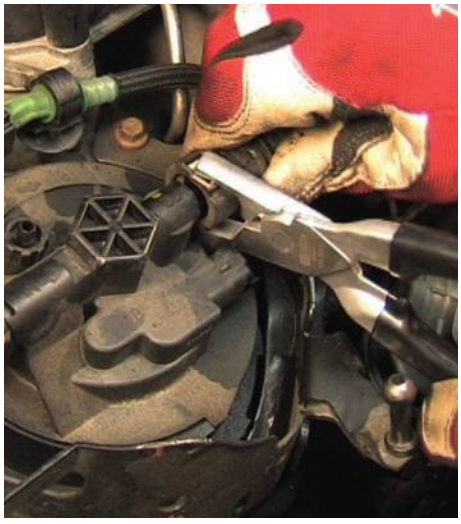
- For correct unbolting of fuel pipe coupling
- Especially for fuel pipe couplings on which the unbolting elements are reached from the side
- No damage to the compression coupling, fuel pipes and fuel hoses
- Quick and easy separation of the fuel pipes
- With PVC dipped handle
- Matt chrome
- Special tool steel







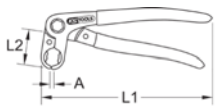
	A mm	L1 mm	L2 mm	g	
115.1094	0-30	160,0	50,0	220	



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





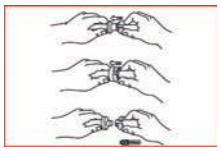


	A mm	L1 mm	L2 mm	g	
115.1099	0-24	220,0	39,0	280	

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
- 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	

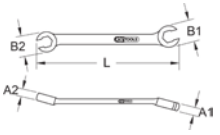


PIPE WRENCH

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	
517.9244	11x13	9,0	10,0	21,5	24,0	170,0	95	
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	
517.9247	13x14	9,0	11,0	23,5	26,0	190,0	115	
517.9252	13x15	10,5	11,8	26,0	29,0	180,0	118	
517.0260	14x15	11,4	11,5	30,0	32,1	196,0	120	
517.9248	14x16	11,0	14,0	25,0	29,0	200,0	135	
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	
517.0264	17x19	11,4	11,5	30,0	32,1	196,0	180	
460.2511	17x19	12,0	13,0	30,0	33,0	220,0	250	
517.0265	19x21	13,5	13,1	34,1	37,6	207,0	240	
517.0266	19x22	13,5	13,1	34,1	37,6	207,0	240	
517.9251	21x23	16,5	18,0	37,0	40,0	245,0	310	
517.0267	22x24	13,5	17,0	37,6	46,0	252,0	320	
517.0268	24x27	17,0	16,2	46,0	42,3	264,0	430	
517.0269	30x32	22,4	20,4	46,3	44,8	283,0	700	
517.0271	32x36	25,0	23,0	58,0	51,0	315,0	640	
517.0272	36x41	27,0	25,0	65,0	58,0	350,0	820	





Special Angle Pipe Connector Socket

- for safe disassembly and assembly of angle connections
- socket with side opening
- Slim design
- For difficult to access areas
- Internal square to DIN 3120 / ISO 1174 with ball reception
- Simple handling
- Matt finish
- Chrome vanadium

Application range: Angle connections e.g. to lines and air suspension



3/8"

	mm	L mm		
460.5086	12	50,0	49	
460.5087	14	50,0	57	
460.5088	17	50,0	83	
460.5089	19	50,0	92	
460.5090	22	50,0	116	

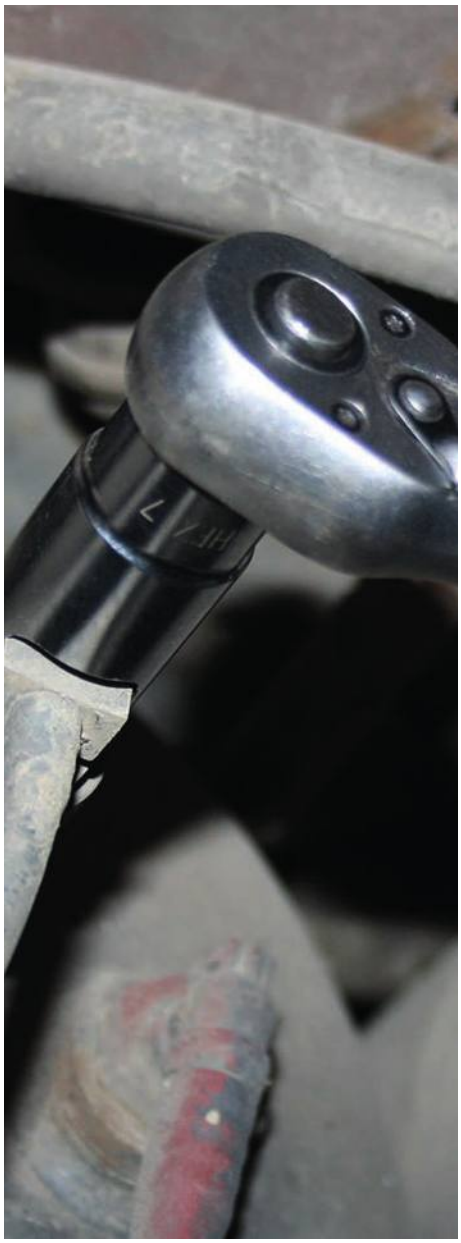
Open box head spanner

- 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		
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	



Special Angle Pipe Connector Socket Set

- for safe disassembly and assembly of angle connections
- socket with side opening
- Slim design
- For difficult to access areas
- Internal square to DIN 3120 / ISO 1174 with ball reception
- Simple handling
- Matt finish
- Chrome vanadium
- In durable plastic storage case

Application range: Angle connections e.g. to lines and air suspension





3/8"

460.5085	5 pcs	12 - 14 - 17 - 19 - 22 mm	564	



Open box head spanner set

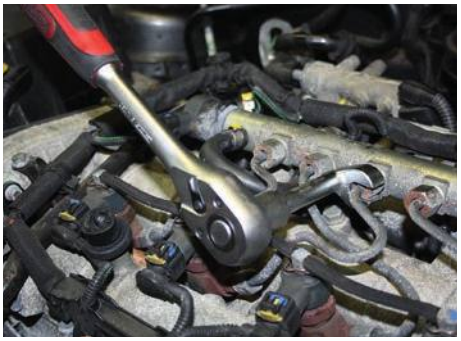
- 12 point
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Special length and design
- For most current vehicle types
- For the assembly and disassembly of hard-to-reach injection pipes
- Makes possible simple and time-saving work
- With opening
- Special tool steel
- In durable plastic storage case





1/2"

913.1210	6 pcs	12 - 14 - 16 - 17 - 18 - 19 mm	1,13	



Pronged wrench

- Light work in inaccessible places
- Alternative insert for tommy bar
- Matt finish
- Special tool steel





	mm	L mm	A mm	B mm	D1 mm	D2 mm	g
517.9150	13	160,0	5,5	28,0	8,5	13,8	95
517.9151	14	160,0	5,5	28,0	8,5	13,8	93
517.9152	16	200,0	6,0	33,0	10,5	16,8	160
517.9153	17	200,0	6,0	33,0	10,5	16,8	169
517.9154	18	200,0	7,0	37,0	12,5	19,6	216
517.9155	19	200,0	7,0	37,0	12,5	19,6	224
517.9156	21	200,0	8,0	42,0	12,5	19,6	272
517.9157	22	200,0	8,0	42,0	12,5	19,6	265
517.9158	24	250,0	9,0	46,0	14,5	23,6	419
517.9169	27	250,0	10,0	52,0	14,5	23,6	519
517.9170	30	250,0	11,0	57,0	16,5	27,6	633
517.9171	32	250,0	11,8	61,0	16,5	27,6	712
517.9172	36	315,0	12,8	68,0	19,0	31,5	1034
517.9173	41	315,0	14,0	76,0	19,0	31,0	1197
517.9174	46	315,0	15,0	85,0	21,0	34,0	1486
517.9175	50	315,0	15,0	92,0	21,0	34,0	1674

Tommy bar for crowfoot spanners

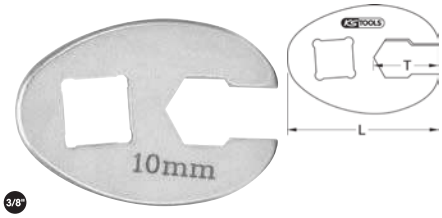
- Matt finish
- Special tool steel



	D mm	L mm	g
517.9176	8,0	177,0	75
517.9177	10,0	197,0	128
517.9178	12,0	246,0	229
517.9179	14,0	316,0	385
517.9180	16,0	396,0	635
517.9181	18,0	495,0	995
517.9182	20,0	625,0	1550

Crawfoot wrench, hexagonal

- 6 point
- Internal square drive
- For manual operation
- Matt finish
- Chrome vanadium



3/8"

	mm	L mm	T mm	g
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
913.3817	17,0	48,0	23,0	80
913.3818	18,0	46,0	21,0	80
913.3819	19,0	44,0	22,0	80

Crawfoot wrench, hexagonal

- 6 point
- Internal square drive
- For manual operation
- Matt finish
- Chrome vanadium



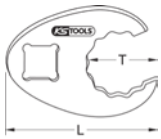
3/8"

			g
913.3800	10 pcs	10 - 11 - 12 - 13 - 14 - 15 - 16 - 17 - 18 - 19 mm	630

CHROME*plus*® 12 point crawfoot wrench

- 12 point
- Internal square drive
- For manual operation
- Mirror polished
- Chrome vanadium







3/8"

	○ mm	L mm	T mm	g
913.3910	10,0	36,0	13,0	40
913.3911	11,0	36,0	17,0	40
913.3912	12,0	37,0	14,0	40
913.3913	13,0	37,0	17,0	40
913.3914	14,0	41,0	19,0	60
913.3915	15,0	42,0	21,0	60
913.3916	16,0	43,0	22,0	60
913.3917	17,0	46,0	22,0	80
913.3919	19,0	46,0	23,0	80
913.3922	22,0	54,0	30,0	90

CHROME*plus*® 12 point crawfoot wrench set

- 12 point
- Internal square drive
- For manual operation
- Mirror polished
- Chrome vanadium
- Includes storage rail





3/8"

			kg
913.3900	10 pcs	10 - 11 - 12 - 13 - 14 - 15 - 16 - 17 - 19 - 22 mm	0,50

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



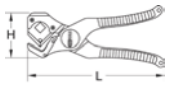


			kg
913.1300	10 pcs	19 - 21 - 22 - 24 - 27 - 30 - 32 - 36 - 41 - 46 mm	2,14

TOOLS FOR PLASTIC PIPES

Hose cutter

- Aluminium die cast body





	Ø mm	H mm	L mm		g
222.2060	6,0 - 25,0	50,0	185,0	222.2061	300

Special clamping gripping pliers

- For the cutting of plastic pipes
- Enormous time and cost saving
- Suitable for narrow hard to access areas
- Versatile use
- With loosening lever
- With easy locking action
- Size adjustment using the adjustment wheel
- Black lacquer
- Chrome molybdenum





	Size mm	Ø mm	Length mm	g
450.0350	1	8 / 9 / 10 / 11 / 12	260,0	775
450.0351	2	7 / 9 / 10 / 12 / 14	265,0	775
450.0352	3	15 / 16 / 18	255,0	636

Compressed air quick connector release pliers

- for correct and destruction-free unlocking of compressed air quick connectors
- universally applicable for compressed air lines with the diameters 6 mm, 8 mm, 10 mm, 12 mm
- Secure and easy to use
- Special tool steel



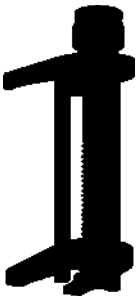


		g
460.5095	Compressed air quick connector release pliers	375

Compressed air quick connector release tool

- for correct and destruction-free unlocking of compressed air quick connectors
- universally applicable for compressed air lines with the diameters 6 mm, 8 mm, 10 mm, 12 mm
- Secure and easy to use
- Special tool steel





	Ø mm	g
460.5665	6 - 8 - 10 - 12	115

Compressed air plug connection system removal tool set

- for correct and destruction-free unlocking of compressed air quick connectors
- universally applicable for compressed air lines with the diameters 6 mm, 8 mm, 10 mm, 12 mm, 15 mm and 16 mm
- Secure and easy to use
- Special tool steel

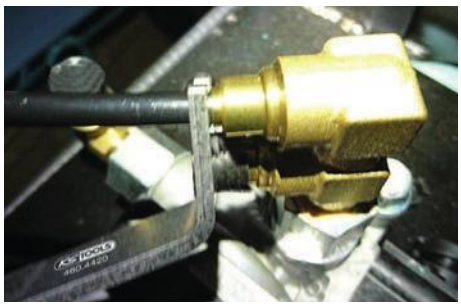




			g
460.4420	6 pcs	Compressed air plug connection system removal tool set	400

consists of:

		g
460.4421	Compressed air plug connection system removal tool, 6 mm	60
460.4422	Compressed air plug connection system removal tool, 8 mm	60
460.4423	Compressed air plug connection system removal tool, 10 mm	60
460.4424	Compressed air plug connection system removal tool, 12 mm	60
460.4426	Compressed air plug connection system removal tool, 15 mm	60
460.4427	Compressed air plug connection system removal tool, 16 mm	60



INJECTOR NOZZLE TOOL

Injection socket for DAF

- 12 point
- Ideally suited for dismantling and mounting the union nut on high-pressure lines on the injection valve of the common rail system
- with side window and open for use on injection lines
- Internal square to DIN 3120 / ISO 1174 with ball reception
- For manual operation
- Burnished
- Special tool steel

Application range: DAF with Euro 6 e.g. XF and CF (engine: MX11/MX13)



1/2"

	mm	Ø mm	L mm	g
460.5245	21	34	90,0	250

Injector-socket for Scania

- 8-point
- Ideally suited to the assembly and disassembly of the cover cap on the electromagnetic injection nozzles
- Extra slim design
- Internal square to DIN 3120 / ISO 1174 with ball reception
- For manual operation
- Burnished
- Special tool steel

Application range: Scania 340





1/2"

	mm	Ø mm	L mm	g
460.0715	38,0	45,0	100,0	480

Thrust bolt spigot socket 22,0x28,5x72,0 mm

- For the disassembly and assembly of the pressure screw on the injector body
- Internal square to DIN 3120 / ISO 1174 with ball reception
- Ideally suited for commercial vehicles
- Special tool steel



1/2"

		Inner Ø mm	Outer Ø mm	L mm	Stud	g
455.0001	1/2"	22,0	28,5	72,0	4	150

Thrust bolt spigot socket 22,0x28,0x70,0 mm

- For the disassembly and assembly of the pressure screw on the injector body
- M14 fixing screw for non slip mounting
- Hexagon drive SW 22
- Ideally suited for commercial vehicles
- Special tool steel



	mm	Inner Ø mm	Outer Ø mm	L mm	Stud	g
455.0002	32	22,0	28,0	70,0	4	180

Thrust bolt spigot socket 22,0x28,5x122,0 mm

- For the disassembly and assembly of the pressure screw on the injector body
- Permeable and open form
- Possible to extract the cable from the needle motion sensors
- With hexagon drive 32.0 mm
- Ideally suited for commercial vehicles
- Special tool steel

Application range: Mercedes Euro 2 engines, MAN engines etc.



	mm	Inner Ø mm	Outer Ø mm	L mm	Stud	g
455.0003	32	22,0	28,5	122,0	4	270

Thrust bolt spigot socket 23,0x30,0x121,0 mm

- For the disassembly and assembly of the pressure screw on the injector body
- Internal square to DIN 3120 / ISO 1174 with ball reception
- Ideally suited for commercial vehicles
- Special tool steel



1/2"

	■	Inner Ø mm	Outer Ø mm	L mm	Stud	g
455.0004	1/2"	23,0	30,0	121,0	3	160

Thrust bolt spigot socket set for Mercedes and MAN

- For the disassembly and assembly of the pressure screw on the injector body
- Assortment of the most important thrust spigot sockets
- Ideally suited for commercial vehicles
- In durable plastic storage case





			kg
455.0000	4 pcs	22,0x28,5x72,0 - 22,0x28,0x70,0 - 22,0x28,5x122,0 - 23,0x30,0x121,0 mm	1,01

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: 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

- 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"

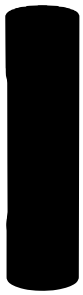
	mm	L mm	g
455.0032	27	78,0	250

Diesel injector socket

- 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 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



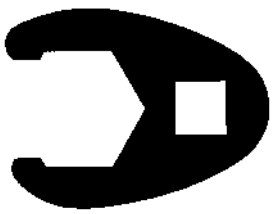


1/2"

		kg
455.0030	4 pcs	22x80 - 28x78 - 27x78 - 22x110 mm	1,10

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	g
913.1321	3/8"	17	72

	□	mm	g	
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	
913.1329	1/2"	36	275	
913.1330	1/2"	41	392	
913.1331	1/2"	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	

FUEL FILTER TOOL

Oil filter strap

- strong and extra high webbing
- 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
- particularly great work area and light weight
- small space requirement on the exterior diameter of the filters
- strong nylon webbing offers secure grip on the filter and provides positive dismantling of the filter



1/2"

	Ø mm	Ø	H mm	g	
455.0055	150,0	6"	50,0	380	

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 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 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
- Special tool steel





	Ø mm	Height mm	g	
460.1670	70 - 80	58,0	1020	
460.4265	80 - 90	58,0	1050	
460.4270	90 - 100	58,0	1080	
460.1130	100 - 110	58,0	1032	
460.1570	125 - 140	58,0	1139	



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

Fuel filter key Ø 50 mm for Fuso

- 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
- Special tool steel
- Matt finish

Application range: Fuso Canter (Euro 5), 3.5 / 6.7 and 6.9 t





	Ø mm	g
460.4650	50,0	22

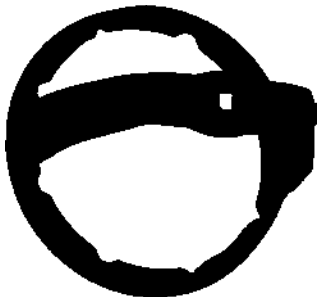


Fuel filter key Ø 109 mm / 16 grooves for Fuso

- 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
- Tempered surface
- Special tool steel

Application range: Fuso Canter 3.5 and 11 t (EURO 4)





	Ø mm	Grooves	g
460.4575	109,0	16	924

Fuel filter key Ø 100 mm / 15 surfaces for Hino

- Ideal for releasing and fastening fuel filter covers
- Makes possible simple and time-saving work
- For manual operation
- Matt finish
- Special tool steel

Application range: HINO 3.5 - 8.5 t (EURO 5)





	Ø mm	Sides	g
460.4305	100	15	533

Fuel filter key Ø 100 mm / 12 grooves for Fuso

- 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
- Tempered surface
- Special tool steel

Application range: Fuso 6.5 - 7.7 t and **Isuzu** 7.5 t





1/2"

	Ø mm	Grooves	g
460.4300	100	12	412

Oil mist separator key for Mitsubishi Ø 54 mm

- for quick and professional removal and installation of the oil mist separator
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- For manual operation
- Special tool steel

Application range: Mitsubishi Canter





	mm	Sides	g
460.4580	54	12	228



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	

TEST DEVICE

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	



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	
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	

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	



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

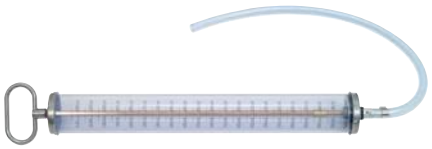




		Tube inner Ø mm	Hose external-Ø mm	tube length mm	housing length mm	g	
150.9222	1,5	14	16	320	320	900	

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

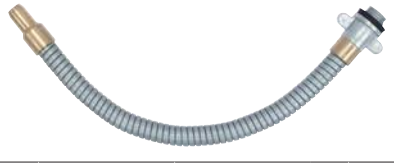
- For difficult to reach openings
- With wing nut and sealing for locking
- With external thread M15 x 1.5
- Robust, curved aluminum piping
- Fabric-reinforced
- Ideal for use with KS dispense hand pump 150.9250



	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	

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	



FILLING DEVICE AND AIR VENT DEVICE

Diesel air venting / pre-filling set

- Makes the air venting of many diesel fuel systems possible





			g
150.9030	7 pcs	Diesel air venting / pre-filling set	700

consists of:

		g
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:

		g
150.9356	Diesel filter filling and exhaust base device	885
150.9355-1	PU hose 8.0 x 12.0 mm x 1.5 mm	125
150.9355-2	Quick coupling adapter PU hose 8.0 x 12.0 mm x 1.5 m	20
150.9355-3	PU hose 6.5 x 9.5 mm x 1.5 mm	83
150.9355-4	Quick coupling adapter for PU hose 6.5 x 9.5 mm x 1.5 m	20
150.9355-5	PU hose 4.0 x 8.0 mm x 1.5 mm	73
150.9355-6	Quick coupling adapter for PU hose 4.0 x 8.0 mm x 1.5 m	8
150.9355-7	Silicone hose 8.0 x 12.0 mm x 15 cm	23
150.9355-8	Silicone hose 6.0 x 9.0 mm x 15 cm	14
150.9355-9	Suspension chain	31
150.9355-24	Washer (between container and head)	7



HOSE CLAMPS

Hose clamp assortment

- Suitable for tube diameters 16-40mm
- In plastic storage case



			g
970.0070	26 pcs	Hose clamp assortment	300

8 x		Ø 16 mm
6 x		Ø 22 mm
4 x		Ø 25 mm
2 x		Ø 28 mm
2 x		Ø 35 mm
4 x		Ø 40 mm

Assortment single ear hose clamps

- Suitable for tube diameters 5,8-21mm
- Stainless steel
- In plastic storage case





			g
970.0830	170 pcs	Assortment single ear hose clamps	490

20 x		Ø 5,8 - 7,0 mm
20 x		Ø 7,3 - 9,0 mm
20 x		Ø 8,8 - 10,5 mm
20 x		Ø 10,8 - 13,3 mm
20 x		Ø 12,0 - 14,5 mm
20 x		Ø 12,3 - 14,8 mm
20 x		Ø 14,5 - 17,0 mm
15 x		Ø 16,0 - 19,2 mm
15 x		Ø 17,8 - 21,0 mm

Assortment mini hose clamps

- Suitable for tube diameters 7-18mm
- In plastic storage case





			g
970.0770	78 pcs	Assortment mini hose clamps	550

10 x		Ø 7 - 9 mm
10 x		Ø 8 - 10 mm
10 x		Ø 9 - 11 mm
10 x		Ø 10 - 12 mm
6 x		Ø 11 - 13 mm
6 x		Ø 12 - 14 mm
6 x		Ø 13 - 15 mm
6 x		Ø 14 - 16 mm
7 x		Ø 15 - 17 mm
7 x		Ø 16 - 18 mm

A PICTURE IS WORTH A THOUSAND WORDS...

TOOL CHANNEL

KS TOOLS HDV



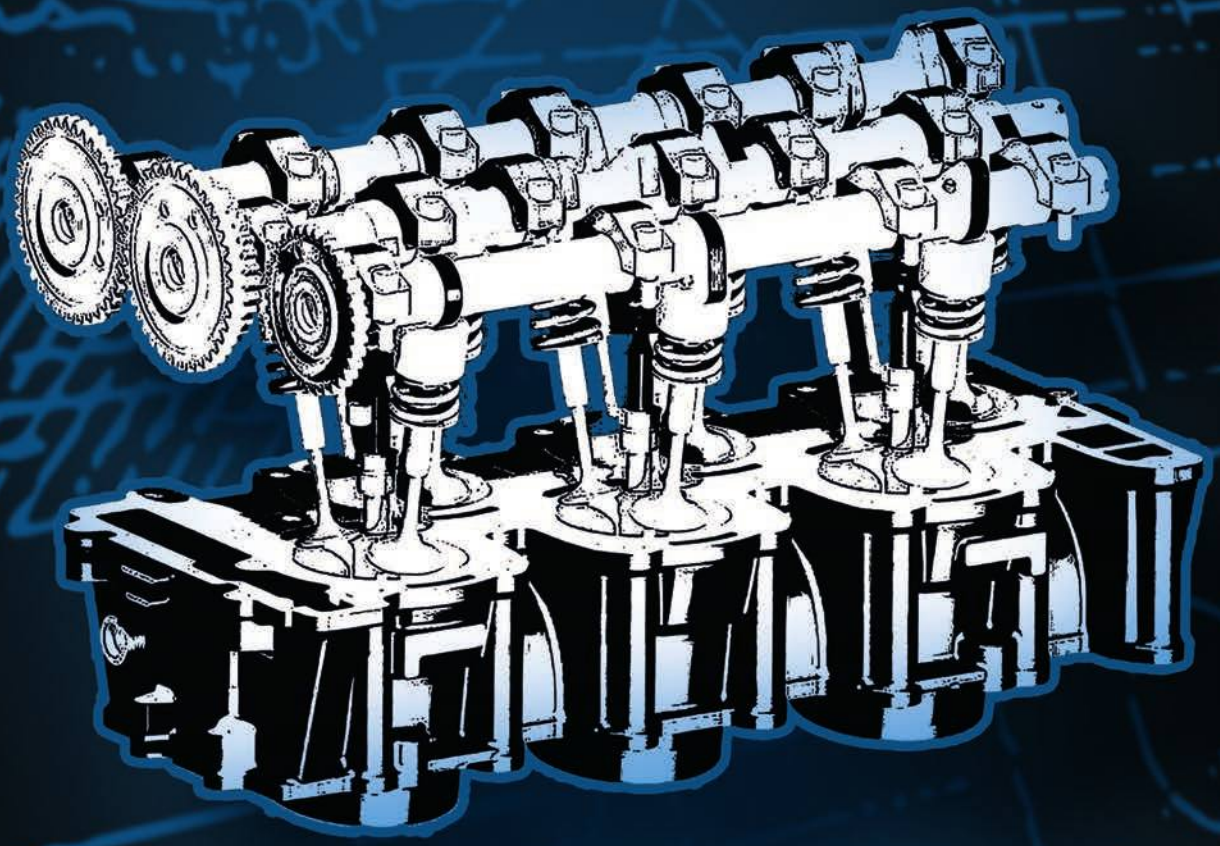
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ENGINE - CYLINDER HEAD / ENGINE BLOCK





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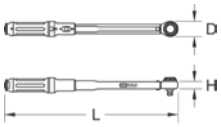
Innovation is our mission!

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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	g
516.1412	1/4"	5-25	0,10	0,8 - 18	289,0	35,0	18,0	460
516.1422	3/8"	10-50	0,25	4 - 37	350,0	45,0	23,0	610
516.1432	1/2"	20-100	0,50	8 - 75	412,0	45,0	23,0	910

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

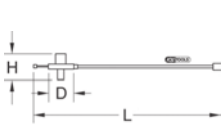


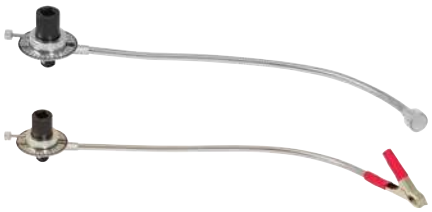
1/2"

		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

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

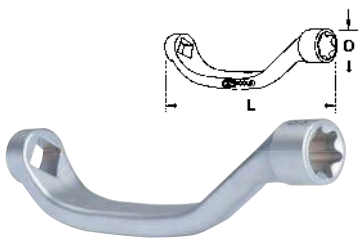



	Ø mm	g
516.1191	55,0	720

MAN Torx E Cylinder head socket

- Torx E
- For loosening and fastening of cylinder head screws
- Removing of the injector no longer necessarily
- Ideally suited for commercial vehicles
- Special tool steel

Application range: MAN Series F2000 / F90 / F8, **MAN** buses with D25 and D28 engines



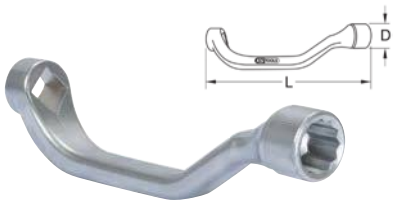
1/2"

			L mm	D mm	g
455.0016	1/2"	E20	165,0	24,0	150

Mercedes cylinder head socket

- 12 point
- For loosening and fastening of cylinder head screws
- Removing of the injector no longer necessarily
- Ideally suited for commercial vehicles
- Special tool steel

Application range: Mercedes, M 401, 404, 407-409, 421-424, 427, 428, 444, 447



1/2"

		mm	L mm	D mm	g
455.0017	1/2"	17	165,0	26,0	340

Special impact 12-point socket, deep

- Spline (XZN®)
- Internal square drive to DIN 3121 / ISO 1174
- Ideally for the dismantling and/or assembly of cylinder head screws in commercial vehicles
- Long execution
- For machinery usage
- Phosphate finish
- Chrome molybdenum




3/4"

	mm	L mm	D mm	g
455.0010	17,0	110,0	26,2	570
455.0011	19,0	110,0	28,3	600

Torx E impact socket, deep

- Torx E
- Internal square drive to DIN 3121 / ISO 1174
- ideal for mounting and dismounting cylinder head bolts on commercial vehicles
- Long execution
- For machinery usage
- Phosphate finish
- Chrome molybdenum

Application range: MAN M2000, buses with D08 engines




3/4"

		L mm	g
455.0012	E18	110,0	620

Torx E impact socket, deep

- Torx E
- Internal square drive to DIN 3121 / ISO 1174
- ideal for mounting and dismounting cylinder head bolts on commercial vehicles
- Long execution
- For machinery usage
- Phosphate finish
- Chrome molybdenum

Application range: MAN F2000, F90, F8, buses with D25 and D28 engines





3/4"

		L mm	g	
455.0013	E20	110,0	670	

Torx E impact socket, deep

- Torx E
- Internal square drive to DIN 3121 / ISO 1174
- ideal for mounting and dismounting cylinder head bolts on commercial vehicles
- Long execution
- For machinery usage
- Phosphate finish
- Chrome molybdenum

Application range: MAN and new TGA engines





3/4"

		L mm	D mm	g	
450.0453	E22	140,0	44,0	700	

Torx E impact socket, deep

- Torx E
- Internal square drive to DIN 3121 / ISO 1174
- ideal for mounting and dismounting cylinder head bolts on commercial vehicles
- Long execution
- For machinery usage
- Phosphate finish
- Chrome molybdenum

Application range: MAN commercial vehicles with common rail engines D20





3/4"

		L mm	D mm	g	
460.1503	E24	90,0	29,0	345	

Impact socket, set

- Torx E and 12-point
- Internal square drive to DIN 3121 / ISO 1174
- ideal for mounting and dismounting cylinder head bolts on commercial vehicles
- Long execution
- For machinery usage
- Phosphate finish
- Chrome molybdenum
- In durable plastic storage case





3/4"

			kg	
460.1505	6 pcs	Impact socket, set	1,90	

consists of:

		g	
460.1501	3/4" MAN Cylinder head socket E18	285	
460.1502	3/4" MAN Cylinder head socket E20	310	
460.1507	3/4" MAN Cylinder head socket E22	335	
460.1503	3/4" MAN Cylinder head socket E24	345	
460.1504	3/4" MAN Cylinder head socket 12-point, 17 mm	300	
460.1506	3/4" MAN Cylinder head socket 12-point, 19 mm	330	

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	

consists of:

		g	
515.0958	3/8" 12 point impact socket, short, 8mm	40	
515.0959	3/8" 12 point impact socket, short, 9mm	40	
515.0960	3/8" 12 point impact socket, short, 10mm	40	
515.0961	3/8" 12 point impact socket, short, 11mm	40	
515.0962	3/8" 12 point impact socket, short, 12mm	40	
515.0963	3/8" 12 point impact socket, short, 13mm	60	
515.0964	3/8" 12 point impact socket, short, 14mm	60	
515.0965	3/8" 12 point impact socket, short, 15mm	60	
515.0966	3/8" 12 point impact socket, short, 16mm	70	
515.0967	3/8" 12 point impact socket, short, 17mm	80	

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	

consists of:

		g	
515.0910	1/2" 12 point impact socket, short, 10mm	100	
515.0912	1/2" 12 point impact socket, short, 12mm	100	
515.0913	1/2" 12 point impact socket, short, 13mm	100	
515.0914	1/2" 12 point impact socket, short, 14mm	100	
515.0916	1/2" 12 point impact socket, short, 16mm	140	
515.0917	1/2" 12 point impact socket, short, 17mm	140	
515.0919	1/2" 12 point impact socket, short, 19mm	140	
515.0920	1/2" 12 point impact socket, short, 20mm	140	
515.0921	1/2" 12 point impact socket, short, 21mm	150	
515.0922	1/2" 12 point impact socket, short, 22mm	150	
515.0923	1/2" 12 point impact socket, short, 23mm	160	
515.0924	1/2" 12 point impact socket, short, 24mm	160	



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	

consists of:

		g	
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	

consists of:

		g	
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	

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:

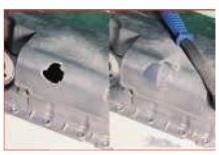
		kg	
700.1521	Impact hammer M8x1.25	1,32	
700.1522	Collet for internal Ø 5 mm	0,08	
700.1523	Collet for internal Ø 6 mm	0,08	
700.1524	Collet for internal Ø 7 mm	0,08	
700.1525	Collet for internal Ø 8 mm	0,08	
700.1526	Collet for internal Ø 9 mm	0,08	
700.1527	Collet for internal Ø 10 mm	0,08	

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



		■	⬢	kg	
152.1005	M5	3/8"	19 mm	0,15	
152.1006	M6	1/2"	21 mm	0,16	
152.1007	M7	1/2"	21 mm	0,16	
152.1008	M8	1/2"	21 mm	0,17	
152.1010	M10	1/2"	21 mm	0,18	
152.1012	M12	1/2"	21 mm	0,20	
152.1014	M14		24 mm	0,20	
152.1016	M16		24 mm	0,30	
152.1018	M18	3/4"	36 mm	0,84	
152.1002	M20	3/4"	36 mm	0,82	
152.1003	M22		36 mm	0,75	
152.1004	M24		36 mm	0,73	
152.1029	M30		46 mm	1,68	

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	

consists of:

152.1006	Stud bolt puller, M6	160
152.1008	Stud bolt puller, M8	170
152.1010	Stud bolt puller, M10	180
152.1012	Stud bolt puller, M12	200

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





152.1101	7 pcs	M5 - M6 - M7 - M8 - M10 - M12 - M14	1,50

consists of:

152.1005	Stud bolt puller, M5	150
152.1006	Stud bolt puller, M6	160
152.1007	Stud bolt puller, M7	160
152.1008	Stud bolt puller, M8	170
152.1010	Stud bolt puller, M10	180
152.1012	Stud bolt puller, M12	200
152.1014	Stud bolt puller, M14	200

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





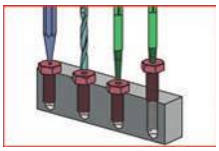
670.0255	12 pcs	Stud bolt extraction and insertion tool set	544

consists of:

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





150.1330	6 pcs	M3-M6 - M6-M8 - M8-M11 - M11-M14 - M14-M18 - M18-M24	64

consists of:

150.1330-1	Screw extractor M3-M6	4
150.1330-2	Screw extractor M6-M8	7
150.1330-3	Screw extractor M8-M11	13
150.1330-4	Screw extractor M11-M14	22
150.1330-5	Screw extractor M14-M18	40
150.1330-6	Screw extractor M18-M24	100



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	
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.





150.1385	15 pcs	Captive bolt extractor set	360

consists of:

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	

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		
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

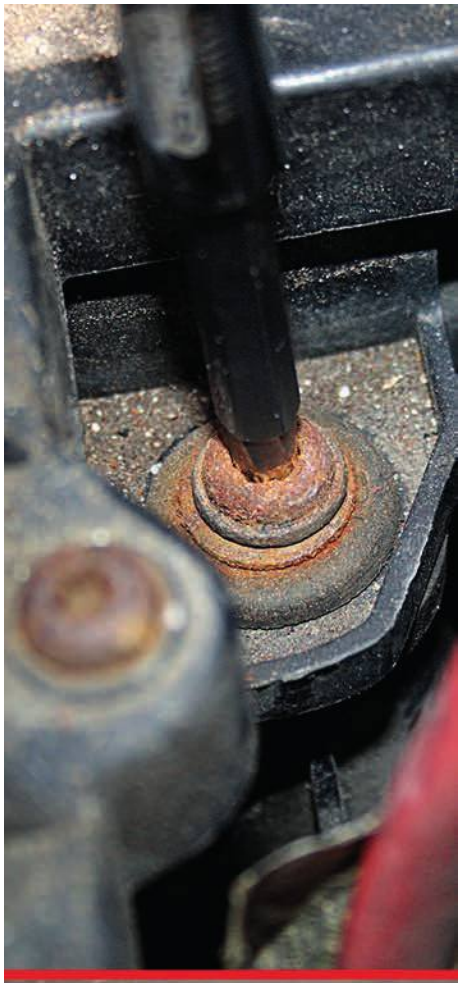
- Ideal for loosening and opening screws and bolts whose head is damaged or worn off
- Special, left-handed thread with conical tapered cutting edges
- For manual operation
- Special tool steel



1/4"

		L mm		
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

150.7060	34 pcs	Torx and hexagon socket screw extractor set	520	

consists of:

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	

consists of:

		g	
913.3881	Spiral profile socket nut, M8	10	
913.3882	Spiral profile socket nut, M10	10	
913.3883	Spiral profile socket nut, M11	10	
913.3884	Spiral profile socket nut, M12	10	
913.3885	Spiral profile socket nut, M13	20	
913.3886	Spiral profile socket nut, M14	20	
913.3887	Spiral profile socket nut, M15	20	
913.3888	Spiral profile socket nut, M16	30	
913.3889	Spiral profile socket nut, M17	40	
913.3890	Spiral profile socket nut, M19	40	

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	

consists of:

		g	
913.1408	1/4” Spiral profile impact socket, 8mm	40	
913.1410	1/4” Spiral profile impact socket, 10mm	40	
913.1412	1/4” Spiral profile impact socket, 12mm	40	
913.1413	1/4” Spiral profile impact socket, 13mm	40	



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





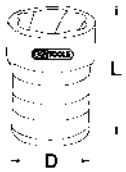
3/8"

	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







1/2"

	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
913.1408	1/4" Spiral profile impact socket, 8mm	40
913.1410	1/4" Spiral profile impact socket, 10mm	40
913.1412	1/4" Spiral profile impact socket, 12mm	40
913.1461	1/2" Spiral profile impact socket, 27mm	110
913.1462	1/2" Spiral profile impact socket, 24mm	110
913.1463	1/2" Spiral profile impact socket, 21mm	90
913.1465	1/2" Spiral profile impact socket, 17mm	70
913.1466	1/2" Spiral profile impact socket, 15mm	70
913.1467	1/2" Spiral profile impact socket, 14mm	70
913.1468	1/2" Spiral profile impact socket, 13mm	50
913.1470	1/4" Spiral profile impact socket, 11mm	40
913.1473	1/4" Spiral profile impact socket, 6mm	40
913.1474	Extension drive, small	10
913.1475	Extension drive, large	58
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

- 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:

		kg	
700.1150	Nut splitter, hydraulic, 7-21mm	0,70	
700.1163	Nut splitter, hydraulic, 22-36mm	3,60	
700.1151	Replacement chisel small	0,05	
700.1152	Replacement plate small	0,05	
700.1161	Replacement chisel small	0,10	
700.1162	Replacement plate small	0,10	
151.2073	Hexagon key wrench, long, 3/8''	0,11	

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:

		kg	
700.1161	Replacement chisel small	0,10	
700.1162	Replacement plate small	0,10	
700.1163	Nut splitter, hydraulic, 22-36mm	3,60	
151.2073	Hexagon key wrench, long, 3/8''	0,11	

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

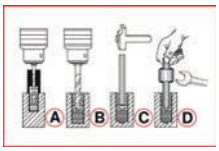


	mm	Length mm	kg	
630.0022	22-36	290,0	2,90	

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





			g	
150.1305	25 pcs	Stud extractor set	650	

extractor:

	Size mm	Ø mm	Ø	Thread	L mm	Extractor pin incl thrust bolt	g	
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	g	
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	g	
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	g	
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		g	
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	

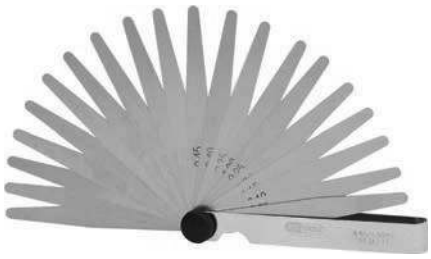
VALVE GAUGES

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



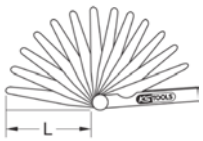




	Tooth pitch	L mm	Measuring range mm	g	
300.0600	20	100,0	0,05-0,10-0,15-0,20-0,25-0,30-0,35-0,40-0,45-0,50-0,55-0,60-0,65-0,70-0,75-0,80-0,85-0,90-0,95-1,00	88	

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





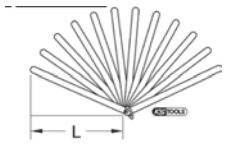
	Tooth pitch	Measuring range mm	L mm	g	
300.0611	8	0,05-0,1-0,15-0,2-0,25-0,3-0,4-0,5	100,0	55	
300.0612	13	0,05-0,1-0,15-0,2-0,25-0,3-0,4-0,5-0,6-0,7-0,8-0,9-1,0	100,0	70	
300.0613	20	0,05-0,1-0,15-0,2-0,25-0,3-0,35-0,4-0,45-0,5-0,55-0,6-0,65-0,7-0,75-0,8-0,85-0,9-0,95-1,0	100,0	85	





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 RETAINER AND VALVE SPRING TENSIONER

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 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		kg	
160.0271	2	Foot for 160.0270	1,24	
160.0272	1	Rod for 160.0270, 660 mm	1,94	
160.0273	2	O-ring 17x4mm	0,01	
160.0274	1	Pressure lever for 160.0270	0,88	
160.0275	1	Threaded pin M8 x 50mm	0,02	
160.0276	1	Clevis with spring cap bolts M8 x 32mm	0,06	
160.0277	4	Thrust bolt External hexagon 19 mm, inner diameter 6 mm	0,06	
160.0279	2	Hexagon bolt M8 für 160.0270	0,01	
160.0295	1	Pressure adaptor external Ø 34 mm	0,12	



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





			g	
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 mounting bridge set

- For assembly and removal of valve springs
- with mounted or dismounted 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
- Special tool steel

Application range: Fuso 3.5 t and > 15 t, **Hino** 750, **Isuzu** 180 and 200, **Volvo** FM





			kg	
460.4505	10 pcs	Valve mounting bridge set	3,34	

consists of:

		g	
460.4506	Spindle M16x2/M14 x1.5, 240 mm long	290	
460.4507	Spindle M16x2/M12 x1.75, 240 mm long	294	
460.4508	Spindle M16x2/M10 x1.5, 240 mm long	290	
460.4509	Spindle M16x2/M10 x1.25, 240 mm long	290	
460.4511	Spindle M16x2/M8 x1.25, 240 mm long	290	
460.4512	Bridge for 460.4505	840	
460.4513	Valve pressure piece, exterior diameter 30 mm, internal diameter 21.5 mm	120	
460.4514	Upper adjustment nut, M16x2, wrench width 24 mm	430	
460.4516	Lower adjustment nut, M16x2, wrench width 24 mm	223	
460.4517	Ball bearing exterior diameter 32 mm, internal diameter 17 mm	29	

Valve spring compressor for Scania

- For assembly and disassembly of valve springs and valves
- For fitted or removed cylinder head
- time- and cost-efficient
- Removal of cylinder head not necessary for repair of valve shaft seals or valve springs
- Fixing via pump-nozzle guide
- Special tool steel

Application range:Scania (340, 360 and 380)





			kg	
460.3870	5 pcs	Valve spring compressor for Scania	2,00	

consists of:

		g	
460.1006	Knebel	550,0	
460.3871	Guide rod	850,0	
460.1008	Valve retainer	395,0	
460.1011	Locking screw M10x1,5, L=25 mm	25,0	
460.1012	Bearing	15,0	

Valve spring compressor for Volvo

- For assembly and disassembly of valve springs and valves
- For fitted or removed cylinder head
- time- and cost-efficient
- Removal of cylinder head not necessary for repair of valve shaft seals or valve springs
- Fixing via pump injector guide with M10x1,5 screws
- Special tool steel

Application range: Cylinder heads from **Volvo** FM12





			kg	
460.1005	6 pcs	Valve spring compressor for Volvo	2,20	

consists of:

		kg	
460.1006	Knebel	0,55	
460.1007	Guide rod	1,12	
460.1008	Valve retainer	0,40	
460.1009	Spring	0,02	
460.1011	Locking screw M10x1,5, L=25 mm	0,03	
460.1012	Bearing	0,02	

Injector service kit for DAF

- For assembly and disassembly of valve springs and valves
- with mounted or dismounted cylinder head
- time- and cost-efficient
- Removal of cylinder head not necessary for repair of valve shaft seals or valve springs
- Fixing via pump-nozzle guide
- Special tool steel

Application range: DAF (CF85)





			kg	
460.3670	3 pcs	Injector service kit for DAF	2,79	

consists of:

		kg	
460.3671	Valve spring tensioner for 460.3670	1,37	
460.3672	Slide hammer puller, 900 g, connecting thread M12x1.5	1,43	
460.3673	Adapter for slide hammer puller, internal thread M12x1.5, external thread M8x1.25	0,13	

Rocker arm lift for Volvo

- for mounting and dismounting the rocker arms
- the distances between the toggle levers remain in the installed condition even during lifting
- time- and cost-efficient

Application range: Volvo D9, D12, D16





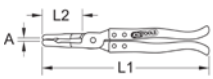
		kg	
460.3725	Rocker arm lift for Volvo	4,62	

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





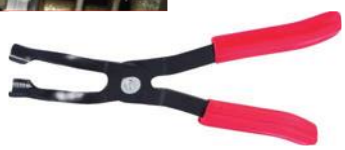


	A mm	L1 mm	L2 mm	g	
115.1061	0-125	275,0	100,0	380	

Valve 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	

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

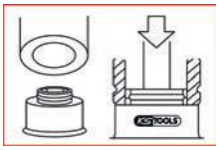




	Ø Bore mm	Length mm	kg	
150.0941	10 - 19	350,0	1,38	

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:

		kg	
150.3511	Push-on mandrel Ø 9.5 mm	0,06	
150.3512	Push-on mandrel Ø 10.0 mm	0,06	
150.3513	Push-on mandrel Ø 10.5 mm	0,06	
150.3514	Push-on mandrel Ø 11.0 mm	0,06	
150.3515	Push-on mandrel Ø 11.5 mm	0,06	
150.3516	Push-on mandrel Ø 12.0 mm	0,06	
150.3517	Push-on mandrel Ø 12.5 mm	0,06	
150.3518	Push-on mandrel Ø 13.0 mm	0,06	
150.3519	Push-on mandrel Ø 13.5 mm	0,06	
150.3520	Push-on mandrel Ø 14.0 mm	0,06	
150.3521	Push-on mandrel Ø 15.0 mm	0,06	
150.3522	Collet for valve shaft washer	0,34	
150.3523	Collet for valve shaft washer, small	0,24	
150.3524	Slide hammer puller basic unit	1,22	
150.3526	Plastic sleeve	0,02	
115.3008	Valve washer pliers, 270mm	0,34	

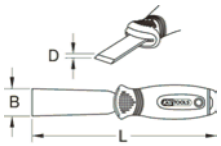


GASKET SCRAPER

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
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- 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





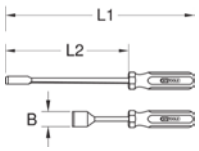


	B mm	L mm		g	
140.2282	13,0	240,0	140.2283	200	
140.2286	16,0	240,0	140.2287	200	
140.2288	19,0	240,0	140.2289	200	

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	

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:

	X		g	
907.2170	1	Professional universal knife, with trapezoid blades	90	
907.2201	1	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	

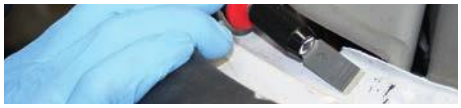
carbide scraper

- 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



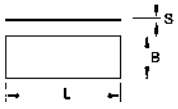
	Width mm	Length mm		g	
907.2242	40,0	145,0	911.8127	103	

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	



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	

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	

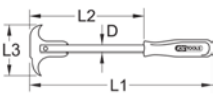
consists of:

		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
- Chrome 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





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

SPECIAL SEALING RING TOOLS

Sealing ring mounting kit for DAF

- for the assembly of sealing rings
- especially for the front crankshaft radial seal ring with a height of 16 mm, inner diameter 70 mm, outer diameter 100 mm
- Including retraction tool
- Special tool steel

Application range: DAF (CF65, LF45, LF55, SB), Irisbus (Euromidi, Europolis, Midirider, Proway), Iveco (Eurocargo I-III, Eurofire, Tector, Vertis), Kamaz 4





			kg
460.3745	5 pcs	Sealing ring mounting kit for DAF	3,50

consists of:

	x		kg
460.3746	1	Mounting guide, exterior diameter 108 mm, internal diameter 70 mm	2,15
460.3747	1	Guide plate, external diameter 70 mm	0,68
460.3748	2	Mounting screws, M12x1.25, length 90 mm	0,37
460.3749	1	Drive nut with ball bearings, M16x2	0,13

Sealing ring mounting kit for DAF

- for the assembly of sealing rings
- especially for the front crankshaft radial seal with a height of 16 mm, inner diameter of 134 mm and outer diameter of 161 mm
- drawing tool
- Special tool steel

Application range: DAF (CF85, CF, XF105, XF), Solaris Vacanza





			kg
460.4030	7 pcs	Sealing ring mounting kit for DAF	4,70

consists of:

	x		kg
460.4031	1	Pulling bell, interior diameter 135 mm	2,94
460.4032	1	Guide plate, external diameter 134 mm	1,51
460.4033	4	Attachment bolts, M10 x 1.5 mm, 140 mm long	0,13
460.4034	1	Drive nut, M16 x 2 mm	0,13

Sealing ring mounting kit for DAF

- for the assembly of sealing rings
- especially for the front crankshaft radial seal ring with a height of 16 mm, internal diameter 166 mm, external diameter 191 mm
- Including retraction tool
- Special tool steel

Application range: DAF (CF85, CF, XF105, XF), Irizar (i3, i4, i6, i8, PB), Solaris Vacanza, Van Hool (Acron, Altano, Astromega, Astron, Astronef, EX Series, T Series), VDL (Futura, Jonkheere)





			g	
460.3680	7 pcs	Sealing ring mounting kit for DAF	6170	

consists of:

	x		kg	
460.3681	1	Mounting guide, exterior diameter 190 mm, internal diameter 165 mm	3,46	
460.3682	1	Guide plate, external diameter 165 mm	1,92	
460.3683	4	Mounting screws, M16x2, length 115 mm	0,67	
460.3684	1	Drive nuts with ball bearings, wrench width 27 mm, M16x2	0,13	

Gasket ring mounting kit for Mitsubishi

- for the assembly of sealing rings
- especially for the front crankshaft radial seal with a height of 11 mm, inner diameter of 50 mm and outer diameter of 74 mm
- drawing tool
- Special tool steel

Application range: Mitsubishi Canter (FE5 and FE6)





			kg	
460.4280	3 pcs	Gasket ring mounting kit for Mitsubishi	1,23	

consists of:

			g	
460.4281		Mounting guide, exterior diameter 70 mm, internal diameter 50 mm	550	
460.4282		Guide plate, external diameter 50 mm	550	
460.4283		Drive nut, M16x2, wrench width 27 mm	130	

Gasket ring mounting kit for Mitsubishi

- for the assembly of sealing rings
- especially for the front crankshaft radial seal with a height of 12 mm, inner diameter of 91 mm and outer diameter of 114 mm
- drawing tool
- Special tool steel

Application range: Mitsubishi Canter (FE5 and FE6)





			kg	
460.4285	5 pcs	Gasket ring mounting kit for Mitsubishi	2,89	

consists of:

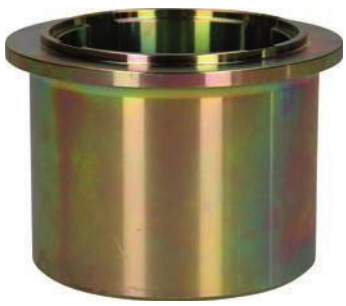
	x		kg	
460.4286	1	Mounting guide, exterior diameter 118 mm, internal diameter 90 mm	1,32	
460.4287	1	Guide plate, external diameter 90 mm	1,36	
460.4288	2	Attachment bolts, M18x1.25 mm, 40 mm long	0,08	
460.4289	1	Drive nut with ball bearings, M16x2 mm	0,13	

Sealing ring mounting tool for Hino

- for the assembly of sealing rings
- specially for the front crankshaft radial seal with a height of 17 mm, inner diameter of 96 mm and outer diameter of 131 mm
- drawing tool
- Special tool steel

Application range: Hino E13C (700 Series, RM, King)





		g	
460.4395	Sealing ring mounting tool for Hino	1794	

Sealing ring mounting kit for Hino

- for the assembly of sealing rings
- especially for the front crankshaft radial seal with a height of 17 mm, inner diameter of 100 mm and outer diameter of 135 mm
- drawing tool
- Special tool steel

Application range: Hino (AK, Citi bus, RK, Roadliner Supreme, 500 series)





			kg	
460.4390	5 pcs	Sealing ring mounting kit for Hino	2,56	

consists of:

	x		kg	
460.4391	1	Mounting guide, exterior diameter 131 mm, internal diameter 100 mm	1,14	
460.4392	1	Guide plate, external diameter 100 mm	0,94	
460.4393	2	Attachment bolts, M14x1.5, 108 mm long	0,37	
460.4394	1	Drive screw, M14x1,5	0,12	

Sealing ring assembly set for Hino

- for the assembly of sealing rings
- especially for the front crankshaft radial seal with a height of 13 mm, inner diameter of 96 mm and outer diameter of 131 mm
- drawing tool
- Special tool steel

Application range: Hino (E13C, Serie 700)





			kg	
460.4530	5 pcs	Sealing ring assembly set for Hino	3,13	

consists of:

	x		kg	
460.4531	1	Mounting guide, exterior diameter 142 mm, internal diameter 96,5 mm	1,36	
460.4532	1	Guide plate, external diameter 96,5 mm	1,11	
460.4533	1	Attachment bolts M16x1,5x126mm	0,55	
460.4534	1	Drive screw, M14x1,5	0,12	

Sealing ring mounting kit for Hino

- for the assembly of sealing rings
- especially for the front crankshaft radial seal with a height of 15 mm, inner diameter of 79 mm and outer diameter of 114 mm
- drawing tool
- Special tool steel

Application range: Hino (AK, Citi bus, RK, Roadliner Supreme, 500 series)





			kg	
460.4400	5 pcs	Sealing ring mounting kit for Hino	1,76	

consists of:

	x		g	
460.4401	1	Mounting guide, exterior diameter 110 mm, internal diameter 80 mm	908	
460.4402	1	Guide plate, external diameter 80 mm	472	
460.4403	2	Attachment bolts, M12x1.5, 93 mm long	261	
460.4404	1	Drive screw, M14x1,5	116	

Sealing ring mounting kit for Hino

- for the assembly of sealing rings
- specially for the front crankshaft radial seal with a height of 17 mm, inner diameter of 96 mm and outer diameter of 131 mm
- drawing tool
- Special tool steel

Application range: Hino (King, RM, 700 series)





			kg	
460.4330	6 pcs	Sealing ring mounting kit for Hino	3,60	

consists of:

	x		kg	
460.4331	1	Mounting guide, exterior diameter 142 mm, internal diameter 96.5 mm	2,00	
460.4332	1	Guide plate, external diameter 96.5 mm	0,91	
460.4333	2	Attachment bolts, M16x1.5 mm, 126 mm long	0,55	
460.4334	1	Drive screw, M14x1,5	0,12	
460.4284	1	Ring washer, exterior diameter 30 mm, internal diameter 15 mm	0,02	

Sealing ring mounting kit for Hino

- for the assembly of sealing rings
- especially for the front crankshaft radial seal with a height of 16 mm, inner diameter of 116 mm and outer diameter of 151 mm
- drawing tool
- Special tool steel

Application range: Hino



			kg	
460.4340	7 pcs	Sealing ring mounting kit for Hino	7,22	

consists of:

	x		kg	
460.4341	1	Mounting guide, exterior diameter 147 mm, internal diameter 116 mm	1,83	
460.4342	1	Guide plate for K13CTV, external diameter 116 mm	2,62	
460.4343	1	Guide plate for P11C, external diameter 116 mm	1,82	
460.4344	3	Attachment bolts, M16x1.5 mm, 126 mm long	0,82	
460.4396	1	Drive screw, M14x1,5	0,12	

Sealing ring mounting kit for Hino

- for the assembly of sealing rings
- especially for the front crankshaft radial seal with a height of 15 mm, inner diameter of 125 mm and outer diameter of 177 mm
- drawing tool
- Special tool steel

Application range: Hino (King, RM, 700 series)





			kg	
460.4535	5 pcs	Sealing ring mounting kit for Hino	4,77	

consists of:

	x		kg	
460.4536	1	Mounting guide, exterior diameter 172 mm, internal diameter 125 mm	2,69	
460.4537	1	Guide plate, external diameter 125 mm	1,36	
460.4538	2	Attachment bolts, M18x1.5 mm, 110 mm long	0,60	
460.4539	1	Drive screw, M15x1.5	0,12	

Sealing ring mounting kit for Isuzu

- for the assembly of sealing rings
- especially for the front crankshaft radial seal ring with a height of 8 mm, inner diameter 50 mm, outer diameter 68 mm
- Including retraction tool
- Special tool steel

Application range: Isuzu (N Series)





			g	
460.4470	3 pcs	Sealing ring mounting kit for Isuzu	876	

consists of:

			g	
460.4471		Guide bell, exterior diameter 57 mm, internal diameter 40 mm	677	
460.4472		Press-in nut, exterior diameter 67 mm, internal diameter 58 mm	109	
460.4473		Centering screw, M16x1, length 50 mm	90	

Sealing ring mounting kit for Isuzu

- for the assembly of sealing rings
- especially for the front crankshaft radial seal with a height of 13 mm, inner diameter of 95 mm and outer diameter of 118 mm
- drawing tool
- Special tool steel

Application range: Isuzu (N Series)



			kg	
460.4465	5 pcs	Sealing ring mounting kit for Isuzu	2,07	

consists of:

	x		kg	
460.4466	1	Mounting guide, exterior diameter 118 mm, internal diameter 95 mm	1,05	
460.4467	1	Guide plate, 95 mm	0,87	
460.4468	2	Attachment bolts, G1-2 x20, 43 mm long	0,10	
460.4469	1	Drive screw, M12x1.75	0,06	



Sealing ring mounting kit for Isuzu

- for the assembly of crankshaft sealing rings on the face and gearbox side
- Disassembly of the crankshaft mounting flanges
- especially for the front crankshaft radial seal with a height of 10 mm, inner diameter of 109 mm and outer diameter of 137 mm
- especially for the rear crankshaft radial seal with a height of 10 mm, inner diameter of 104 mm and outer diameter of 139 mm
- drawing tool
- Special tool steel

Application range: Isuzu FRD34, FRR33, FRR34, FSR32, FSR33, FSR34, FSS33, FSS34, FTR32, FVR33





			kg	
460.4455	13 pcs	Sealing ring mounting kit for Isuzu	18,00	

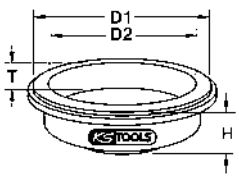
consists of:

	X		kg	
460.4456	1	Puller, rear	3,29	
460.4457	1	Puller, front	2,96	
460.4458	1	Mounting tool, front	3,54	
460.4459	1	Spacer sleeve, front	0,51	
460.4451	1	Mounting tool, rear	3,46	
460.4452	1	Guide sleeve, exterior diameter 132 mm, internal diameter 113 mm	1,11	
460.4453	4	Attachment bolts, M16x1.5 mm, 60 mm long	0,19	
460.4454	1	Distance sleeve, rear	0,08	
460.4449	2	Attachment bolts, M16x1.5 mm, 135 mm long	0,39	

Crank shaft simmerring installation tool for Scania

- Washer installation aid
- For damage free mounting
- Knurling for positive holding while positioning
- Extremly versatile
- Special tool steel

Application: Scania 9L engines 310/320PS
Crank shaft simmering (no. 0366303-R)





	D1 mm	D2 mm	T mm	H mm	kg	
455.0075	159,0	130,0	30,0	60,0	2,68	

Gasket ring mounting kit for Scania

- for the assembly of sealing rings
- especially for the front crankshaft radial seal ring with a height of 12 mm, inner diameter 120 mm, outer diameter 140 mm
- drawing tool
- Special tool steel

Application range: Scania (4 Series, K, P, G, R and T Series)





			kg	
460.3940	5 pcs	Gasket ring mounting kit for Scania	4,29	

consists of:

	X		kg	
460.3941	1	Mounting guide, exterior diameter 140 mm, internal diameter 120 mm	1,73	
460.3942	1	Guide plate, external diameter 120 mm	2,23	
460.3943	2	Mounting screws, M12x1.75mm	0,20	
460.3944	2	Drive nut, M16x2mm	0,13	

Gasket ring mounting kit for Scania

- for the assembly of sealing rings
- Especially for the front and rear crankshaft radial seal ring with a height of 13 mm, inner diameter 145 mm, outer diameter 175 mm
- drawing tool
- Special tool steel

Application range: Scania 340 / 380 (EURO 4)





			kg	
460.3935	4 pcs	Gasket ring mounting kit for Scania	5,00	

consists of:

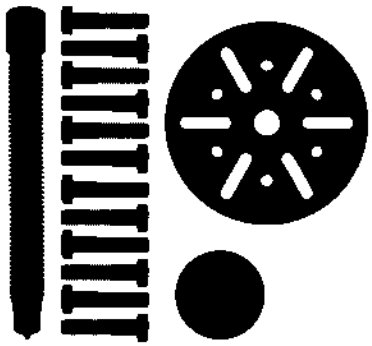
		kg	
460.3936	Mounting guide, exterior diameter 145 mm, internal diameter 133 mm	2,35	
460.3937	Guide plate with thread, external diameter 130 mm	1,26	
460.3938	Operation lever M20x1.5 mm	0,55	
460.3939	Spacer exterior diameter 160 mm, internal diameter 140 mm	0,27	

Oil seal puller for Scania

- suitable for removing the shaft sealing ring
- With pressure plate for support
- Sturdy design
- Trapezoid thread spindle for high removal power - drive 30 mm
- Special tool steel

Application range: Scania 310 (112) / 320 (113) Engine shaft seal, gearbox side and driveline





			kg	
460.1110	15 pcs	Oil seal puller for Scania	4,30	

consists of:

		kg	
460.1111	Base plate Ø 200 x 36 mm, SW 46	3,44	
460.1082	Trapezoid thread spindle Tr.30 with pressure tip, 285 mm	1,32	
460.1112	Pressure plate Ø 58 mm	0,40	
460.1113	Screw set M12 x 1,75 mm, SW 19, L=55 mm, 6 pcs	0,30	
460.1114	Screw set M12 x 1.75 mm, SW 19, L=40 mm, 6 pcs.	0,28	

Crank shaft simmer ring assembly tool set for Volvo

- For quick and damage-free installation of the rear crankshaft seal ring
- No need for reworking with repeated removal of the gearbox
- Including retraction tool
- time- and cost-efficient
- No need to strip the engine

Application range: Volvo FM (2000-2007)



			kg	
460.4195	6 pcs	Crank shaft simmer ring assembly tool set for Volvo	8,76	

consists of:

	X		kg	
460.4196	1	Mounting flange	4,25	
460.4197	1	Pull-in housing	4,10	
460.3943	1	Mounting screws, M12x1.75mm	0,20	
460.4198	2	Hexagonal socket head screw M16 x 35 mm	0,15	
460.4199	1	Spindle	0,20	

Gasket ring mounting kit for Volvo

- for the assembly of sealing rings
- especially for the rear crankshaft radial seal with a height of 15 mm, inner diameter of 180 mm, outer diameter of 205 mm
- Including retraction tool
- Special tool steel



			kg	
460.3780	8 pcs	Gasket ring mounting kit for Volvo	4,30	

consists of:

	X		kg	
460.3781	1	Mounting guide, exterior diameter 204 mm, internal diameter 185 mm	1,98	
460.3782	1	Guide plate with thread, external diameter 179 mm, M20x2.5	1,40	
460.3783	1	Spacer, exterior diameter 50 mm, internal diameter 20 mm	0,66	
460.3784	1	Mounting screws, short, M16x1.5, length 46 mm, 2 pcs	0,15	
460.3786	1	Attachment bolts, long, M16x1.5, length 96 mm, 2 pcs	0,30	
460.3787	1	Operation lever, M20x2.5	0,42	

Sealing ring mounting tool for Volvo

- for the assembly of sealing rings
- especially for the front crankshaft radial seal ring with a height of 13 mm, internal diameter 136 mm, external diameter 159 mm
- drawing tool
- Special tool steel

Application range: Volvo D16



	L mm	Ø mm	g	
460.3955	205,0	136,0	4140	



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:

		kg	
515.2006	Pneumatic valve grinder	1,43	
515.2007	Sucker, Ø 20 mm	0,00	
515.2008	Sucker, Ø 30 mm	0,01	
515.2009	Sucker, Ø 34 mm	0,02	
515.2010	Sucker, Ø 45 mm	0,02	

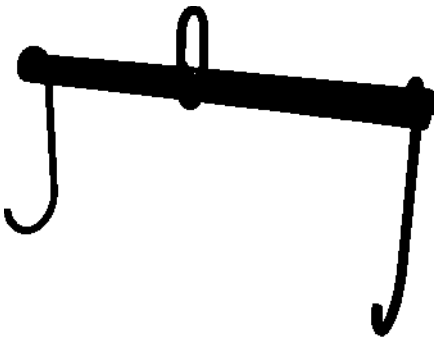
CAMSHAFT LIFT

Camshaft lift for Volvo

- for safe lifting of camshafts
- with a maximum load capacity of 40 kg
- Special tool steel

Application range: Volvo



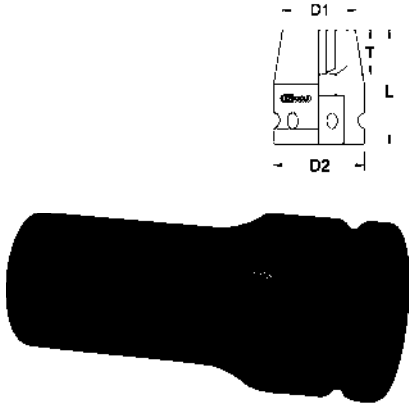


	Length mm	kg	
460.3710	400,0	1,13	

CRANK SHAFT FITTINGS

Torx E impact socket, deep

- Torx E
- Internal square drive to DIN 3121 / ISO 1174
- ideal for disassembly and assembly of crankshaft bolts in commercial vehicles
- Long execution
- For machinery usage
- Phosphate finish
- Chrome molybdenum



3/4"

		L mm	D1 mm	D2 mm	T mm	g
455.0081	E28	90,0	33,0	42,0	25,0	556

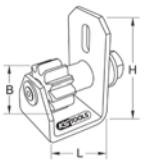
ENGINE BARRING GEARS

Engine camshaft rotator for DAF

- Allows the engine crank to be manually adjusted
- Allows pinpoint accuracy calibration
- Ideal for adjustments to the engine
- With external drive hexagonal socket 24.0 mm
- Special tool steel

Application range: e.g. 65CF, 75CF, 85CF, 95XF, CF75, CF85,F65, F75, F85, F95, XF95





	mm	No. teeth	L mm	B mm	H mm	g
455.0105	24	11	90,0	40,0	90	650

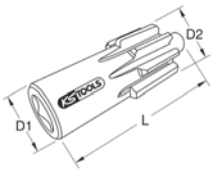


Engine camshaft rotator for DAF

- Allows the engine crank to be manually adjusted
- Allows pinpoint accuracy calibration
- Ideal for adjustments to the engine
- Internal square drive to DIN 3121 / ISO 1174
- Special tool steel

Application range: XF105 Euro5 etc.







1/2"

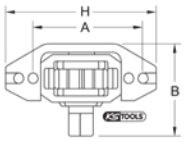
	■	No. teeth	D1 mm	D2 mm	L mm	g
455.0106	1/2"	9	27,0	33,0	81,0	250

Engine spinning device for Iveco

- With 6 point drive SW22
- Allows the engine crank to be manually adjusted
- Allows pinpoint accuracy calibration
- Ideal for adjustments to the engine
- Special tool steel

Application range: Iveco Euro Cargo, Cargo 150E27R PR, FPR, 320E27T, PT Eurotech, Eurostar







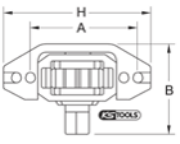
	A mm	B mm	H mm	No. teeth	kg
460.3980	105,0	70,0	125,0	13	1,75

Engine spinning device for Iveco

- With 6 point drive SW22
- Allows the engine crank to be manually adjusted
- Allows pinpoint accuracy calibration
- Ideal for adjustments to the engine
- Special tool steel

Application range: Iveco Euro Cargo, Cargo models, Eurotech, Heavy, Off-Road, Bus



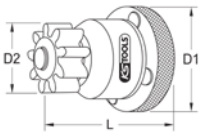


	A mm	B mm	H mm	No. teeth	kg
460.5610	105,0	70,0	126,0	13	1,43

Engine camshaft rotator for MAN

- Allows the engine crank to be manually adjusted
- Allows pinpoint accuracy calibration
- Ideal for adjustments to the engine
- Internal square drive to DIN 3121 / ISO 1174
- Special tool steel

Application range: MAN D20 + D25 + D26 + D28





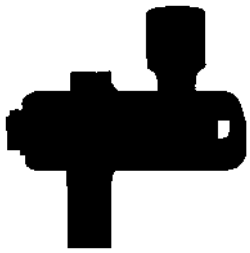
1/2"

	D2 mm	D1 mm	No. teeth	L mm	g
460.1155	33,0	52,0	9	62,0	465

Engine camshaft rotator for Mercedes / MAN

- Allows the engine crank to be manually adjusted
- Allows pinpoint accuracy calibration
- Ideal for adjustments to the engine
- Attachment in the clutch housing
- Internal square drive to DIN 3121 / ISO 1174
- Special tool steel

Application range: Mercedes Actros and Atego, **MAN** 5-/6- and 8-cylinder engines - D25/28, etc.



1/2"

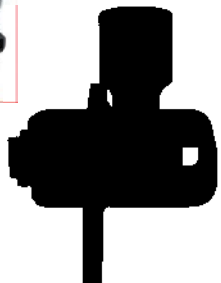
	■	H mm	No. of gears		g
455.0021	1/2"	100,0	3	920.1290	790

Engine camshaft rotator for Mercedes / MAN

- Allows the engine crank to be manually adjusted
- Allows pinpoint accuracy calibration
- Ideal for adjustments to the engine
- Attachment in the clutch housing
- Internal square drive to DIN 3121 / ISO 1174
- Special tool steel

Application range: Mercedes 6-/8- and 10-cylinder engines, **MAN** 12-cylinder engines, etc.



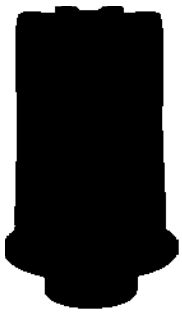


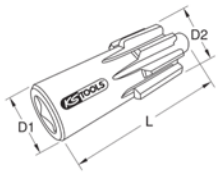
1/2"

	■	H mm	No. of gears		g
455.0020	1/2"	70,0	2	920.1290	450

Engine camshaft rotator for Renault

- With 1/2" square drive
- Allows the engine crank to be manually adjusted
- Allows pinpoint accuracy calibration
- Ideal for adjustments to the engine
- Special tool steel





1/2"

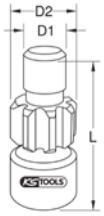
	D1 mm	D2 mm	No. teeth	L mm	g
460.4020	51,0	44,0	8	83,0	540

Engine camshaft rotator for Scania

- Allows the engine crank to be manually adjusted
- Allows pinpoint accuracy calibration
- Ideal for adjustments to the engine
- Internal square drive to DIN 3121 / ISO 1174
- Special tool steel

Application range: Scania 4 series from 1996 and R series from 2003





1/2"

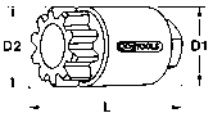
	No. teeth	D1 mm	D2 mm	L mm	g
455.0070	8	18,3	29,8	71,0	225

Engine camshaft rotator for Volvo

- Allows the engine crank to be manually adjusted
- Allows pinpoint accuracy calibration
- Ideal for adjustments to the engine
- Internal square drive to DIN 3121 / ISO 1174
- Special tool steel

Application range: MP8, MP10 (FH, D13A 520) engines





1/2"

	D2 mm	D1 mm	No. teeth	L mm	g
460.1395	38,0	39,0	10	71,0	390

Engine camshaft rotator for Volvo

- With 6 point drive SW24
- Allows the engine crank to be manually adjusted
- Allows pinpoint accuracy calibration
- Ideal for adjustments to the engine
- Special tool steel



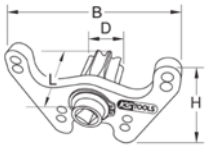


	Height mm	No. teeth	Hole spacing mm	Width mm	g
460.3625	59,0	9	56,0	77,0	524

Engine camshaft rotator for Volvo

- Allows the engine crank to be manually adjusted
- Allows pinpoint accuracy calibration
- Ideal for adjustments to the engine
- Attachment in the clutch housing
- Internal square drive to DIN 3121 / ISO 1174
- Special tool steel

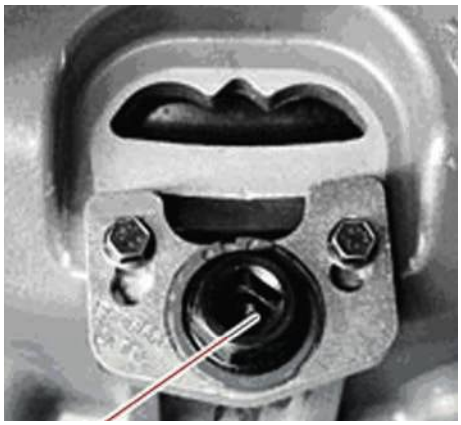
Application range: turning it means it can be used for 6 or 12 litre **Volvo** motors e.g. motor D9A, D12, D16C





1/2"

	H mm	No. teeth	B mm	D mm	L mm	g
455.0085	95,0	9	135,0	34,0	68,5	800





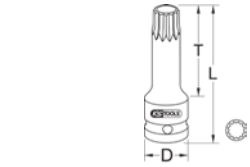
CRANK HANDLE FOR FLY WHEELS

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"

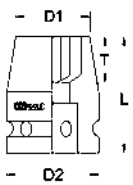
		L mm	D mm	T mm	g
911.0953	M16	75,0	25,0	45,0	150

Hexagon impact socket

- ideally suited for mounting and dismounting screws on the flywheel
- 6 point
- According to DIN 3129 / ISO 2725-2
- Internal square drive to DIN 3121 / ISO 1174
- Short execution
- For machinery usage
- Phosphate finish
- Chrome molybdenum

Application range: MAN TGA, TGX, TGS, **Iveco** Euro Trakker and Euro Tech





1/2"

	mm	L mm	D1 mm	D2 mm	T mm	g
515.1019	19,0	38,0	28,0	28,0	13,0	100

Hexagon impact socket

- ideally suited for mounting and dismounting screws on the flywheel
- 6 point
- According to DIN 3129 / ISO 2725-2
- Internal square drive to DIN 3121 / ISO 1174
- Short execution
- For machinery usage
- Phosphate finish
- Chrome molybdenum

Application range: Iveco Euro Cargo, **DAF** XF 95, XF 105, Bora bus and Temsa



1/2"

	mm	L mm	D1 mm	D2 mm	T mm	g
515.1021	21,0	38,0	30,0	30,0	14,0	125

Hexagon impact socket

- ideally suited for mounting and dismounting screws on the flywheel
- 6 point
- According to DIN 3129 / ISO 2725-2
- Internal square drive to DIN 3121 / ISO 1174
- Short execution
- For machinery usage
- Phosphate finish
- Chrome molybdenum

Application range: MAN TGL, **TGM** and **Scania**

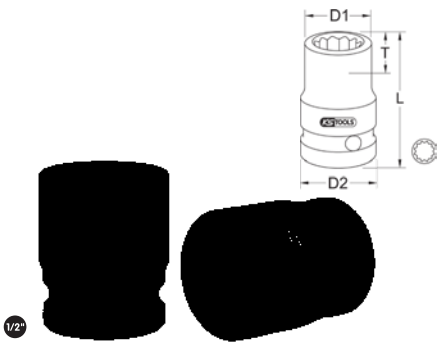


1/2"

	mm	L mm	D1 mm	D2 mm	T mm	g
515.1022	22,0	38,0	32,0	30,0	14,0	130

12 point impact socket

- ideally suited for mounting and dismounting screws on 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
515.0922	22,0	38,0	32,0	30,0	14,0	150

Hexagon impact socket

- ideally suited for mounting and dismounting screws on the flywheel
- 6 point
- According to DIN 3129 / ISO 2725-2
- Internal square drive to DIN 3121 / ISO 1174
- Short execution
- For machinery usage
- Phosphate finish
- Chrome molybdenum

Application range: Scania Series 4 (P, R, T), **Iveco** Euro Trakker, Euro Star, **Volvo** FL, FH and FM

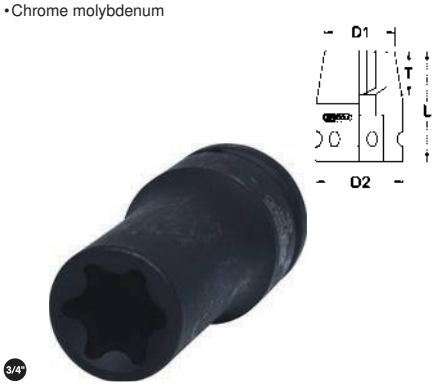


1/2"

	mm	L mm	D1 mm	D2 mm	T mm	g
515.1024	24,0	38,0	34,0	30,0	15,0	138

Torx E impact socket, deep

- Torx E
- Internal square drive to DIN 3121 / ISO 1174
- ideal for disassembly and assembly of crankshaft bolts in commercial vehicles
- Long execution
- For machinery usage
- Phosphate finish
- Chrome molybdenum



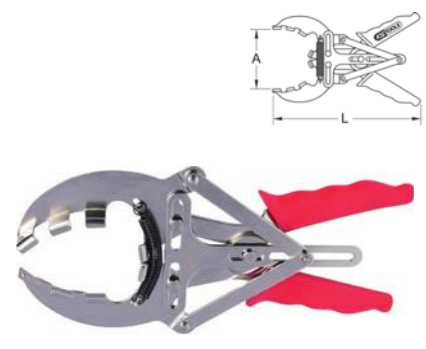
3/4"

		L mm	D1 mm	D2 mm	T mm	g
455.0081	E28	90,0	33,0	42,0	25,0	556

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	



Piston ring tension band set

- For the pretensioning of the piston rings when inserting the piston in the cylinder
- Self locking ratchet function
- incl. piston clearance gauge
- Phosphate finish
- In durable plastic storage case





			kg	
460.5600	5 pcs	Piston ring tension band set	3,64	

consists of:

		g	
150.1175	Piston ring pliers, Ø50-100mm	305	
150.1177	Piston ring pliers, Ø110-160mm	445	
300.0616	Piston tolerance gauge, 20 blades, 0,05-1mm	150	
150.1142	Piston ring tension band, Ø 57-125mm, H=100mm	300	
150.1144	Piston ring tension band, Ø 90-175mm, H=165mm	555	
115.1301	Piston ring pliers, Ø 60-140mm	330	

Piston ring tension band set

- For the pretensioning of the piston rings when inserting the piston in the cylinder
- Self locking ratchet function
- incl. piston clearance gauge
- Phosphate finish
- In durable plastic storage case



			kg	
460.5605	5 pcs	Piston ring tension band set	3,64	

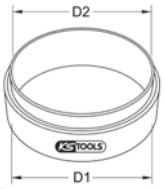
consists of:

		g	
150.1175	Piston ring pliers, Ø50-100mm	305	
150.1177	Piston ring pliers, Ø110-160mm	445	
300.0616	Piston tolerance gauge, 20 blades, 0,05-1mm	150	
150.1142	Piston ring tension band, Ø 57-125mm, H=100mm	300	
150.1144	Piston ring tension band, Ø 90-175mm, H=165mm	555	

Piston ring installation aid for DAF

- facilitates mounting of the piston in the liner
- conical mounting sleeve with centring
- Enormous time and cost saving
- Special tool steel





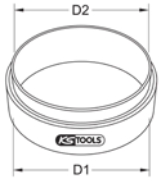


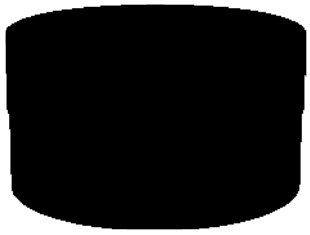
	D1 mm	D2 mm	g	
460.1095	137,0	130,0	965	
460.3675	134,0	130,0	1860	

Piston ring installation aid for Scania

- facilitates mounting of the piston in the liner
- Conical mounting flange
- Enormous time and cost saving
- Special tool steel





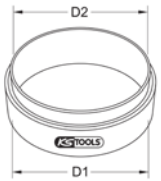


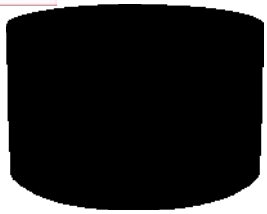
	D1 mm	D2 mm	g	
460.3810	130,0	127,0	2594	

Piston ring installation aid for Volvo

- facilitates mounting of the piston in the liner
- conical mounting sleeve with centring
- Enormous time and cost saving
- Special tool steel







	D1 mm	D2 mm	g	
460.3760	138,0	130,0	2008	
460.3765	128,0	120,0	2004	
460.3770	110,0	104,0	1720	

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	

CYLINDER LINER TOOLS

Cylinder liner extractor set

- Ideal for removing of cylinder liner in commercial vehicles and industrial bearing
- Outriggers suitable especially for large cylinder liners and bearings
- Suitable for cylinder liner with Ø 60 – 160 mm
- Solid state
- 3 spreader guarantee an optimal adjustment of the internal extractor
- Extremely robust spindle with inductively hardened thread
- Lower power usage
- Enormous time and cost saving
- Special tool steel
- In durable plastic storage case

Application range: Cylinder liner on MAN, Mercedes etc.





			kg	
460.1815	6 pcs	Cylinder liner extractor set	8,00	

consists of:

	x		kg	
460.1816	2	Double ended support	0,39	
460.1817	1	Traverse	1,40	
460.1818	1	Internal extractor Ø 60 - 160 mm	2,50	
460.1819	1	Spindle with nut, 7/16"x14G	1,20	
460.1821	1	Toggle	0,10	

Cylinder liner extractor set

- Ideal for removing of cylinder liner in commercial vehicles and industrial bearing
- Outriggers suitable especially for large cylinder liners and bearings
- suitable for cylinder liners with inner-Ø 119 - 136.5 mm
- Solid state
- Optimum fit of the internal extractor for different vehicle manufacturers
- Extremely robust spindle with inductively hardened thread
- Lower power usage
- Enormous time and cost saving
- Special tool steel
- In durable steel storage case

Application range: Cylinder liners on **Fuso** 3.5t, 15t, 330, **Hino** 750, **Scania** 310, **Volvo** FL10, FM12, **DAF** and buses





			kg	
460.0830	14 pcs	Cylinder liner extractor set	34,35	

consists of:

		kg	
460.0831	Traverse	5,62	
460.0832	Trapezoid threaded couplings with nuts	4,30	
460.0833	Set of support legs, 4 pcs.	9,40	
460.0834	Bearing	0,33	
460.0835	Adapter plate, Ø internal 119 mm, Ø external 130 mm	1,30	
460.0836	Adapter plate Fuso 330, Ø internal 129 mm, Ø external 142 mm	1,43	
460.0837	Adapter plate Scania 310, Ø internal 126 mm, Ø external 138.5 mm	1,39	
460.0838	Adapter plate, Ø internal 134 mm, Ø external 140 mm	1,43	
460.0839	Adapter plate, Ø internal 136 mm, Ø external 147 mm	1,50	
460.0840	Adapter plate Scania 320, Ø internal 126 mm, Ø external 140 mm	1,40	

MOTOR ATTACHMENT TOOLS

Compressor bearing special socket for DAF

- Ideally suited for removing the screw from the rear compressor bearing
- 11-point
- With 1/2" square drive
- Chrome molybdenum

Application range: DAF 85 (CF)



	Length mm	g	
460.4185	65,0	145	

TEST AND MEASURING TOOLS

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





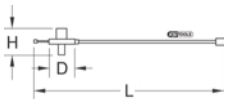


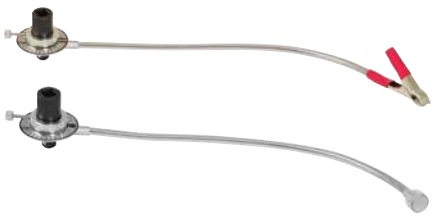
	L mm	H mm	S mm	kg	
152.1090	600,0	30,0	16,0	2,10	

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	

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



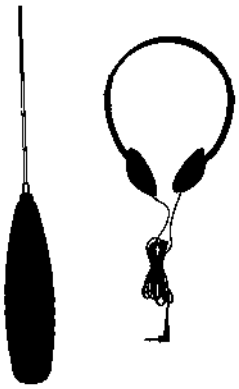


	Length mm	g	
150.1645	1120,0	200	

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

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

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

MOTOR SETTING TOOLS

Guide screws Front cover for Volvo

- Hexagon socket
- ideal for mounting and dismounting the spur gear cover
- time- and cost-efficient
- Special tool steel

Application range: Volvo D12



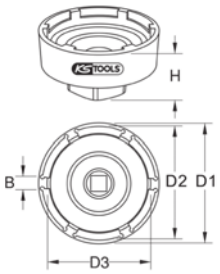
		g
460.3975	Guide screws Front cover for Volvo	90

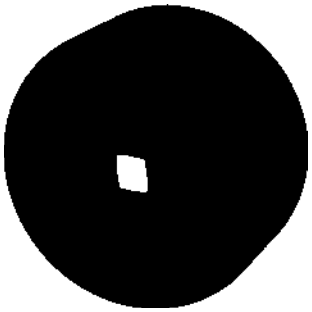
Nut wrench with 4 pins for Volvo

- Internal square drive to DIN 3121 / ISO 1174
- High accuracy of fit
- Special profile with 4 internal studs
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: Volvo spur gear drive





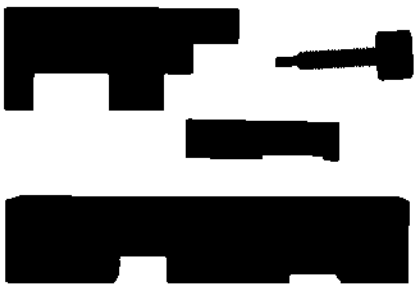


	D1 mm	D2 mm	D3 mm	Stud	B mm	H mm	kg
460.3775	113,0	98,0	89,0	4	7,5	60,0	1,73

Mounting aid kit for timing cover for Volvo

- ideal for professional installation of the timing gear cover
- time- and cost-efficient
- Special tool steel



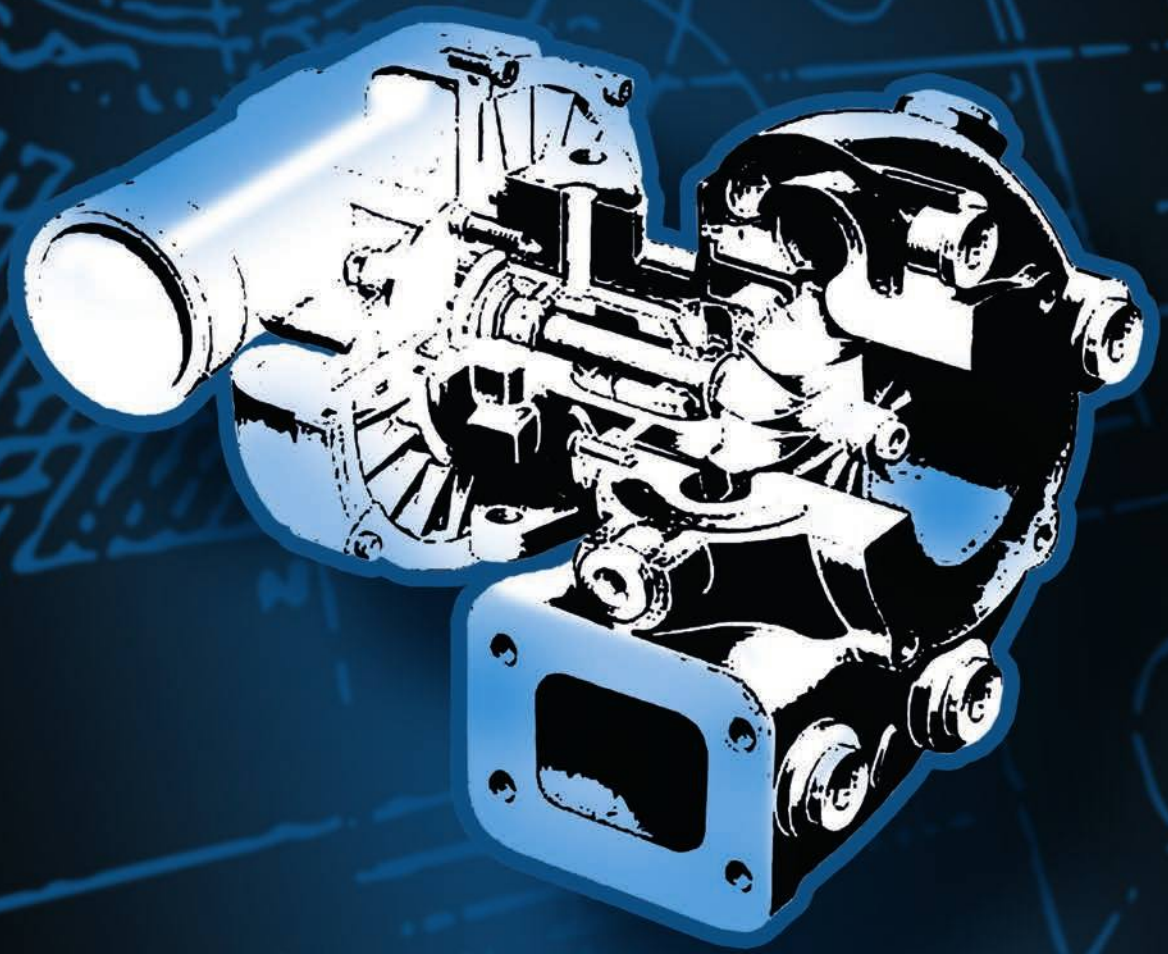


			kg
460.3970	4 pcs	Mounting aid kit for timing cover for Volvo	1,10

consists of:

		g
460.3971	Fixing screw	37
460.3972	Holder at the valve	627
460.3973	Holder at the cam shaft, small	75
460.3974	Holder at the cam shaft, large	336

ENGINE - TURBOCHARGER





KS TOOLS®

Innovation is our mission!

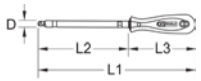
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SPECIAL SPANNER AND ADAPTER	150
PRESSURE TESTING TOOLS	150
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HOSE CLAMP TOOL

ERGOTORQUE*plus*® socket screwdriver

- Two component handle
- 6 point
- Flexible
- Limited torque
- Double spiral shaft
- Plastic protective coating
- Chrome vanadium





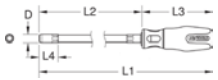


	mm	D mm	L1 mm	L2 mm	L3 mm	L4 mm	g
159.1126	6,0	10,8	259,0	150,0	109,0	9,3	155
159.1127	7,0	11,7	259,0	150,0	109,0	10,0	155
159.2128	8,0	11,9	259,0	150,0	109,0	10,0	155
159.1125	10,0	12,5	279,0	170,0	109,0	14,3	170

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



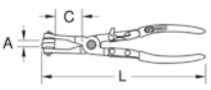


			g
115.1125	2 pcs	175 - 230 mm	653

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

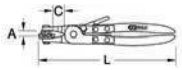




	Ø mm	Length mm	g
115.1198	18- 53	210,0	400

Universal hose clamp pliers

- Universal crown profile
- For difficult to reach clamps
- With PVC dipped handle
- Includes locking mechanism
- Versitile usage
- Chrome molybdenum

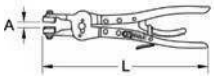





	A mm	C mm	L mm	g	
115.1043	0-48,5	40,0	220,0	240	

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

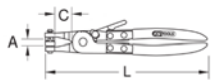





	A mm	L mm	g	
115.1167	15-56	275,0	400	

Hose clamp pliers

- With PVC dipped handle
- For spring pipe clamps
- Includes locking mechanism and ratchet function
- Chrome molybdenum

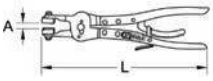





	A mm	C mm	L mm	g	
115.1046	0-45	37,0	220,0	230	

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

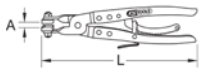





	A mm	L mm	g	
115.1173	6-58	250,0	400	

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

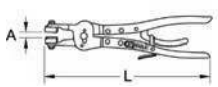


	A mm	L mm	g	
115.1062	0-30	235,0	390	

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

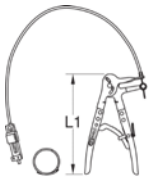



	A mm	L mm	g	
115.1166	4-45	290,0	440	

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

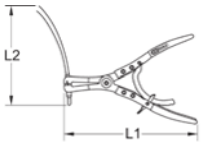


	Ø mm	L1 mm	L2 mm		g	
115.1064	0 - 50	240,0	600,0	115.1066	540	

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





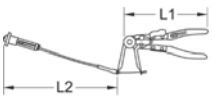


	Ø mm	L1 mm	L2 mm		g
115.1065	0 - 70	270,0	600,0	115.1065-1	540

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





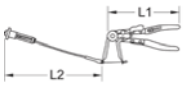


	Ø mm	L1 mm	L2 mm	g
115.1168	0 - 70	260,0	650,0	500

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







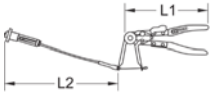
	Ø mm	L1 mm	L2 mm		g
115.1041	0 - 60	200,0	650,0	115.1041-1	470

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







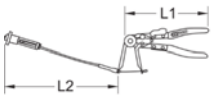
	Ø mm	L1 mm	L2 mm	g
115.1169	0 - 60	260,0	600,0	500

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

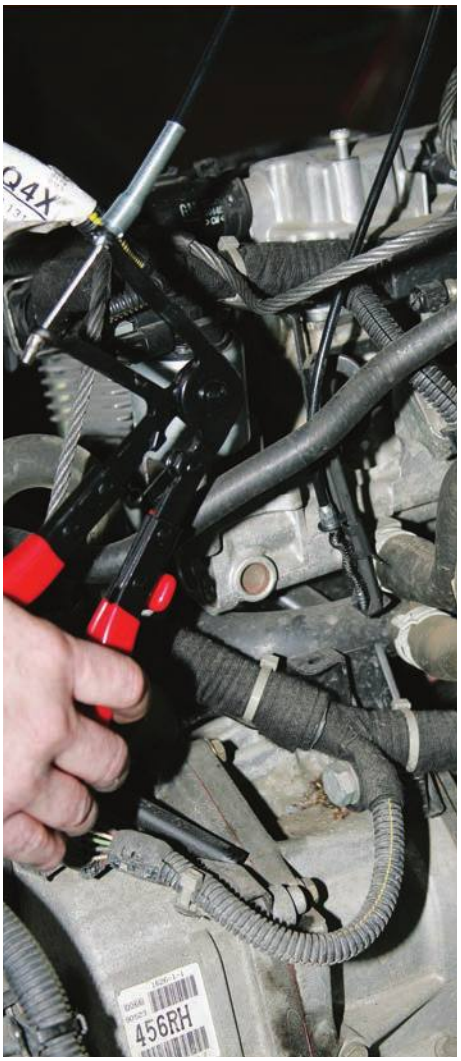
Application range: MUBEA and NORMA







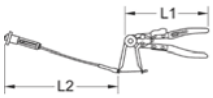
	Ø mm	L1 mm	L2 mm		g
115.0901	15 - 54	260,0	730,0	115.0902	500



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	

GASKET SCRAPER

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	

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:

	x		g	
907.2170	1	Professional universal knife, with trapezoid blades	90	
907.2201	1	2 component scraper handle	60	

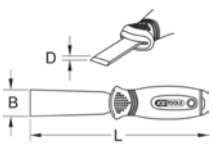
Replacement blades:

	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	

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
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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





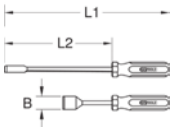


	B mm	L mm		g	
140.2282	13,0	240,0	140.2283	200	
140.2286	16,0	240,0	140.2287	200	
140.2288	19,0	240,0	140.2289	200	

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

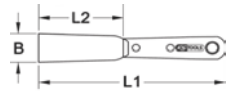




			g	
907.2230	4 pcs	12,5 x 200; 25 x 200; 12,5 x 300; 25 x 300 mm	1,28	

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	

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	

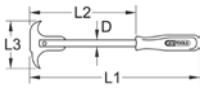
consists of:

		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
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

Special turbocharger key for MAN

- 12 point
- ideally suited for loosening the turbocharger mounting nuts
- Ideal for confined spaces
- monkey wrench
- Two component handle
- Special tool steel



	mm	Length mm	g
460.5210	15	266,0	320



Turbocharger socket for MAN

- Special socket
- Ideal for mounting and dismounting turbocharger and manifold fittings
- for use in conjunction with a 17 mm open-end ratchet wrench
- Extremely robust
- Suitable for narrow spaces
- Special tool steel

Application range: MAN TGL, T**GM** and E08 engines



		mm	Length mm	g
460.5211	E12	17	28,0	52

PRESSURE TESTING TOOLS

Turbocharger charged air system inlet test adapter, 2 stages

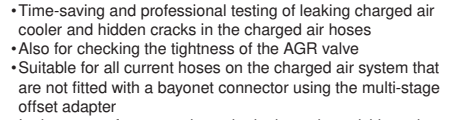
- Inlet adapter for closing the charged air system
- For passenger car and commercial vehicle turbo engines, diesel and petrol
- Allows rapid diagnosis by pressure testing the charged air system with hose internal diameters 31.0 - 110.0 mm when fitted
- Time-saving and professional testing of leaking 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



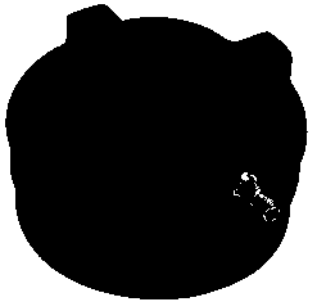


		g
150.2529	2-stage counter-stopper adapter, 31 x 38 mm	100
150.2530	2-stage counter-stopper adapter, 46 x 51 mm	140
150.2531	2-stage counter-stopper adapter, 55 x 60 mm	160
150.2532	2-stage counter-stopper adapter, 65 x 70 mm	200
150.2533	2-stage counter-stopper adapter, 75 x 80 mm	240
150.2534	2-stage counter-stopper adapter, 85 x 90 mm	260
150.2535	2-stage counter-stopper adapter, 95 x 100 mm	300

Turbocharger charged air system inlet test adapter, 2 stages for commercial vehicle

- Inlet adapter for closing the charged air system
- for truck and commercial vehicle turbo engines, diesel
- enables fast diagnosis by pressing off the charge air system with internal hose diameter 105.0 - 130.0 mm when installed
- 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 in combination with the matching truck counter plug adapter and air inlet system adapter and in combination with a conventional compressed air hose

Application range: Intercooler systems



		g	
460.2466	2-stage inlet adapter, 105x110 mm	340	
460.2467	2-stage inlet adapter, 115x120 mm	360	
460.2477	2-stage inlet adapter, 125x130 mm	400	

Turbocharger charged air system counter stoppers, 2 stages for commercial vehicle

- Counter stoppers for closing the charged air system
- for truck and commercial vehicle turbo engines, diesel
- enables fast diagnosis by pressing off the charge air system with internal hose diameter 105.0 - 130.0 mm when installed
- 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 in combination with the suitable truck inlet test adapter and air inlet system adapter and in combination with a conventional compressed air hose

Application range: Intercooler systems



		g	
460.2478	2-stage counter-stopper adapter, 105x110 mm	340	
460.2479	2-stage counter-stopper adapter, 115x120 mm	360	
460.2480	2-stage counter-stopper adapter, 125x130 mm	400	

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	



Turbocharger charged air system air inlet adapter with hose and manometer

- suitable for the 2-stage truck turbocharger-charge air system test adapter
- for truck and commercial vehicle turbo engines, diesel
- 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. 1.75 bar
- the pressure gauge serves as pressure loss indicator
- can be used in combination with a truck inlet test adapter and truck counter plug and in combination with a conventional compressed air hose

Application range: Intercooler systems



	Length mm	g	
460.2481	450,0	380	

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 charge air system test kit set for commercial vehicle

- for truck and commercial vehicle turbo engines, diesel
- enables fast diagnosis by pressing off the charge air system with internal hose diameter 105.0 - 130.0 mm when installed
- 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. 1.75 bar
- can be used in conjunction with a conventional compressed air hose
- the pressure gauge serves as pressure loss indicator
- In durable plastic storage case

Application range: Intercooler systems



			kg	
460.2465	7 pcs	Turbocharger charge air system test kit set for commercial vehicle	4,00	

consists of:

		g	
460.2466	2-stage inlet adapter, 105x110 mm	340	
460.2467	2-stage inlet adapter, 115x120 mm	360	
460.2477	2-stage inlet adapter, 125x130 mm	400	
460.2478	2-stage counter-stopper adapter, 105x110 mm	340	
460.2479	2-stage counter-stopper adapter, 115x120 mm	360	
460.2480	2-stage counter-stopper adapter, 125x130 mm	400	
460.2481	Turbocharger charged air system air inlet adapter with hose and manometer, 450 mm	380	

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
Tube 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
Tube 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
- Tube with integrated locking male nipple
- Robust rubber coated housing



Technical data:

Working range:	0 - 15 bar
	0 - 220 psi
Tube length:	350 mm
Operating pressure:	11 bar (160 psi)
Connection thread:	1/4"PT

		g	
515.1905	Tyre filling gauge	120	

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	



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FUEL INJECTOR RAIL WRENCH

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"

911.1470	7 pcs	TS10 - TS15 - TS20 - TS25 - TS27 - TS30 - TS40	160

T-handle box wrench

- 6 point
- With T-handle
- Matt finish
- Chrome vanadium





	mm	Length mm	Width mm	
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





517.1180	7 pcs	T-handle box wrench set	2,50

consists of:

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	
152.1401	17,0	80,0	150

Open box head spanner

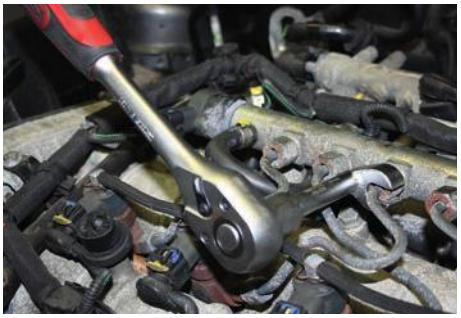
- 12 point
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Special length and design
- For most current vehicle types
- For the assembly and disassembly of hard-to-reach injection pipes
- Makes possible simple and time-saving work
- With opening
- Special tool steel





1/2"

	mm	Length mm	
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"

913.1210	6 pcs	12 - 14 - 16 - 17 - 18 - 19 mm	1,13

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 for Scania

- 8-point
- Ideally suited to the assembly and disassembly of the cover cap on the electromagnetic injection nozzles
- Extra slim design
- Internal square to DIN 3120 / ISO 1174 with ball reception
- For manual operation
- Burnished
- Special tool steel

Application range: Scania 340





1/2"

	mm	Ø mm	L mm	g
460.0715	38,0	45,0	100,0	480

Thrust bolt spigot socket 22,0x28,5x72,0 mm

- For the disassembly and assembly of the pressure screw on the injector body
- Internal square to DIN 3120 / ISO 1174 with ball reception
- Ideally suited for commercial vehicles
- Special tool steel



1/2"

	■	Inner Ø mm	Outer Ø mm	L mm	Stud	g
455.0001	1/2"	22,0	28,5	72,0	4	150

Thrust bolt spigot socket 22,0x28,0x70,0 mm

- For the disassembly and assembly of the pressure screw on the injector body
- M14 fixing screw for non slip mounting
- Hexagon drive SW 22
- Ideally suited for commercial vehicles
- Special tool steel



	mm	Inner Ø mm	Outer Ø mm	L mm	Stud	g
455.0002	32	22,0	28,0	70,0	4	180

Thrust bolt spigot socket 22,0x28,5x122,0 mm

- For the disassembly and assembly of the pressure screw on the injector body
- Permeable and open form
- Possible to extract the cable from the needle motion sensors
- With hexagon drive 32.0 mm
- Ideally suited for commercial vehicles
- Special tool steel

Application range: Mercedes Euro 2 engines, MAN engines etc.



	mm	Inner Ø mm	Outer Ø mm	L mm	Stud	g
455.0003	32	22,0	28,5	122,0	4	270

Thrust bolt spigot socket 23,0x30,0x121,0 mm

- For the disassembly and assembly of the pressure screw on the injector body
- Internal square to DIN 3120 / ISO 1174 with ball reception
- Ideally suited for commercial vehicles
- Special tool steel



1/2"

		Inner Ø mm	Outer Ø mm	L mm	Stud	g
455.0004	1/2"	23,0	30,0	121,0	3	160

Thrust bolt spigot socket set for Mercedes and MAN

- For the disassembly and assembly of the pressure screw on the injector body
- Assortment of the most important thrust spigot sockets
- Ideally suited for commercial vehicles
- In durable plastic storage case





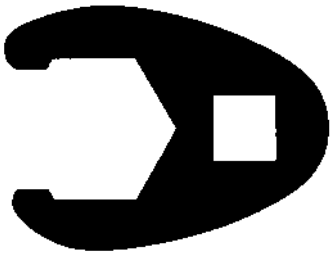
			kg
455.0000	4 pcs	Thrust bolt spigot socket set for Mercedes and MAN	1,01

consists of:

		g
455.0001	Thrust bolt spigot socket	150
455.0002	Thrust bolt spigot socket, 22,0x28,0x70,0 mm	180
455.0003	Thrust bolt spigot socket, 22,0x28,5x122,0 mm	270
455.0004	Thrust bolt spigot socket, 23,0x30,0x121,0 mm	160

Crawfoot wrench, hexagonal

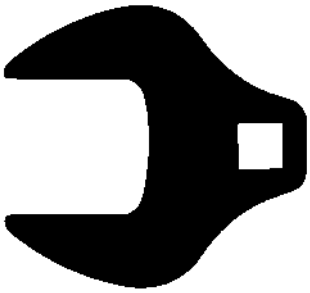
- 6 point
- Internal square drive
- For tightening and loosening pipe connections
- For manual operation
- Slim execution
- For difficult to access areas
- Burnished
- Special tool steel



	□	mm	g
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

Insertable open-ended 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	g
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

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





	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:

			kg	
150.2511		Connecting rod	0,46	
150.2512		Impact weight of 2.4 kg	2,40	
150.2513		Nut M14	0,02	
150.2514		T-handle	0,40	
150.2515		M14 to M12 adapter	0,10	
150.2516		Tension bolts for Mercedes pre-chamber	0,36	

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:

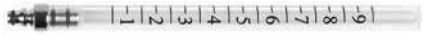
	X		g	
150.1581	1	Acrylic block	800	

consists of:

	X		g	
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	

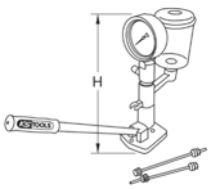
Diesel injector test device set 0-600 bar

- 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:

			kg	
455.0121		Connection pipe M14 x M14, 210 mm	0,08	
455.0122		Connection pipe M14 x M12, 210 mm	0,07	
455.0123		Diesel injector test device 0-600 bar	2,70	

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	

INJECTOR REMOVAL TOOLS

Injector extractor with impact extractor for Scania

- Sturdy design
- for removing fixed 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
- including impact extractor and claw
- Thread on impact extractor M12x1,5 mm
- Special tool steel

Application range: Scania 340, 360 and 380 (114)





	Impact weight kg	Length mm	Replacement claw	Replacement impact weight	kg	
460.4015	0,90	430,0	460.4016	460.1092	1,31	

Injector extractor with impact extractor for Hino

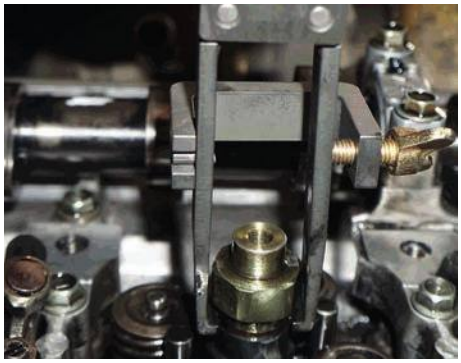
- Sturdy design
- For the extraction of jammed injectors in the cylinder head
- Enables short and intensive impact through impact weight
- Cylinder head does not work against the thrust bearing
- Avoids tilting of the injectors
- Short design for hard-to-reach areas
- Includes impact weight, claw and clamping yoke
- Thread on impact extractor M12x1,5 mm
- Special tool steel

Application range: Hino truck 300, 500, 700





	Impact weight kg	Length mm	Replacement claw	Replacement impact weight	kg	
460.4525	0,90	450,0	460.4526	460.1092	1,58	

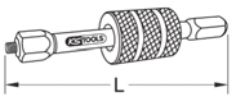


Diesel injector impact puller

- For manual use
- Sturdy design
- For the extraction of jammed injectors in the cylinder head
- Enables short and intensive impact through impact weight
- Cylinder head does not work against the thrust bearing
- Tilting and jamming of the injector is avoided
- Short design for hard-to-reach areas
- incl. 2 threaded adaptor size 1 = M8x0,75 mm internal thread, size 2 = M12x1,5 mm / M14x1,5 mm external thread
- Special tool steel

Application range: Volvo / **Scania** e.g. 113(320) / **DAF** / **Fiat** / **Ford** / **Honda** / **Iveco** / **Land Rover** / **Leyland** / **MAN** / **Mercedes** / **Perkins** / **Renault** / **Rover** / **Vauxhall** / **York**







	Impact weight kg	Thread	L mm	g	
455.0095	0,62	M12 x 1,5	210,0	990	

Volvo injector extractor with 0.9 kg impact weight

- 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, claw and clamping yoke
- Thread on impact extractor 5/16" x 16 mm
- Special tool steel

Application range: Volvo FM12, FM440, FH500 etc.



	Impact weight kg	Thread impact weight	Length mm	Replacement claw	Replacement impact weight	Replacement clamping yoke	kg	
460.1090	0,90	M12 x 1,5	470,0	460.1091	460.1092	460.1093	1,74	

consists of:

		kg	
460.1091	Injector puller claw	0,42	
460.1092	Impact weight	1,20	
460.1093	Clamping yoke, 40x75mm	0,12	

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 bore-hole 10 mm, Ø 6 mm	78	
152.1087	Injector nozzles hexagon socket with bore-hole 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	

INJECTOR SEALING TOOLS

Injector sleeve set for Volvo

- Ideal for the assembly and disassembly of injector sleeves
- Sturdy design
- Cylinder head works against the thrust bearing
- Tilting of the injector sleeve is to be avoided
- Short design for hard-to-reach areas
- Special tool steel

Application range: Volvo FM12





			kg	
460.0975	3 pcs	Injector sleeve set for Volvo	3,88	

consists of:

		kg	
460.0976	Injector sleeve taper tap for Volvo	0,64	
460.0977	Injector sleeve disassembly tool for Volvo	1,28	
460.0978	Injector sleeve assembly tool for Volvo	1,00	



Injector sleeve puller set for Volvo

- Ideal for the assembly and disassembly of injector sleeves
- Sturdy design
- Cylinder head works against the thrust bearing
- Tilting of the injector sleeve is to be avoided
- Short design for hard-to-reach areas
- Special tool steel

Application range: Volvo FM12





			kg	
460.1805	5 pcs	Injector sleeve puller set for Volvo	4,28	

consists of:

		kg	
460.1808	Injector sleeve expander	0,48	
460.1806	Puller	1,68	
460.1807	Support ring for puller	0,10	
460.0978	Injector sleeve assembly tool for Volvo	1,00	
460.0979	Injector sleeve assembly tool, conical sleeve receptacle	0,90	

Injector service kit for Hino

- Sturdy design
- for removing fixed injectors in the cylinder head
- Enables short and intensive impact through impact weight
- Includes impact weight, claw and clamping yoke
- Thread on impact extractor M12x1,5 mm
- Ideal for the assembly and disassembly of injector sleeves
- Tilting of the injector sleeve is to be avoided
- Short design for hard-to-reach areas
- Special tool steel

Application range: Hino





			kg	
460.4325	4 pcs	Injector service kit for Hino	5,63	

consists of:

		kg	
460.4321	Injector sleeve taper tap for Hino	0,60	
460.4322	Injector sleeve disassembly tool for Hino	1,17	
460.4323	Injector sleeve assembly tool for Hino	1,58	
460.4525	Injector extractor with slide hammer puller for Hino	1,58	

Injector sleeve extractor set for Hino

- Ideal for the assembly and disassembly of injector sleeves
- Sturdy design
- Cylinder head works against the thrust bearing
- Tilting of the injector sleeve is to be avoided
- Short design for hard-to-reach areas
- Special tool steel

Application range: Hino (JO8C and JO8E)





			kg	
460.4320	3 pcs	Injector sleeve extractor set for Hino	2,58	

consists of:

		kg	
460.4321	Injector sleeve taper tap for Hino	0,60	
460.4322	Injector sleeve disassembly tool for Hino	1,17	
460.4323	Injector sleeve assembly tool for Hino	1,58	

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	

consists of:

		g	
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 ASSEMBLY AIDS

Injector setting tools for Scania

- For the professional engine repair
- for pump-jet engines
- ideally suited for adjusting the injection nozzles
- Very high degree of accuracy

Application range: Scania 12l and 16l engines





	Length mm	g	
460.3785	80,0	116	

INJECTOR PUMP SOCKET WRENCH

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:

		g	
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	

Injection pump multi-tooth socket

- Ideal for assembly and disassembly of the pressure valve of the diesel injection pump
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Matt finish
- Chrome vanadium

Application range: Lucas injection pump



1/2"

	Tooth	Length mm	g	
460.2490	34	56,0	59	

Lucas injection pump socket

- 5-point
- Ideal for Lucas injection pump
- For loosening the cover screws
- Required for disassembling, tightening or adjust the pump
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Phosphate finish
- Chrome vanadium

Application range: Mercedes, **MAN** TGA



1/2"

	Profile	mm	kg	
460.2485	⬠	10	2,81	

Injection pump socket for Mercedes

- 12 point
- ideally suited for mounting and dismounting the injection pump
- Internal square drive adaptor to DIN 3120 / ISO 1174
- Special tool steel

Application range: Mercedes Actros



	mm	Length mm	g	
460.5212	10,0	111,0	78	

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



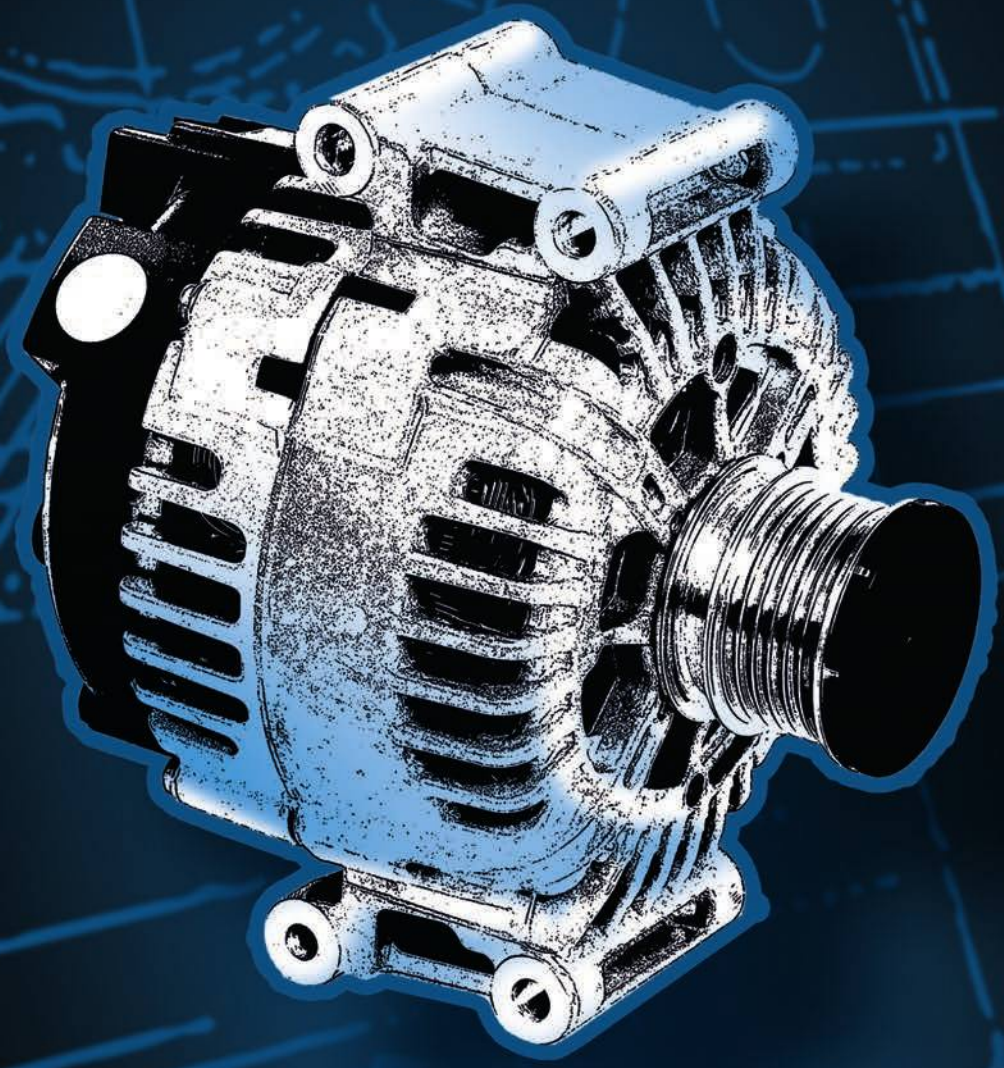
kstools.com

KSTOOLS®

Innovation is our mission!

ENGINE - AUXILIARY DRIVE BELT / ALTERNATOR

08





KS TOOLS®

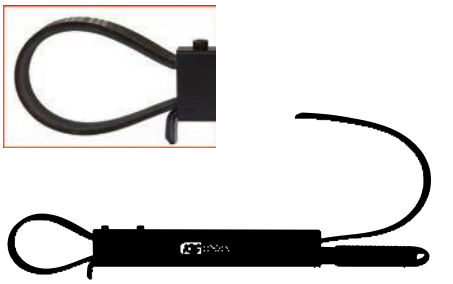
Innovation is our mission!

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PULLEY RETAINER

Universal counter holder for V ribbed belt discs

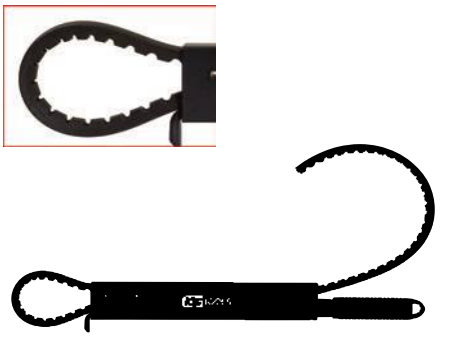
- With strong belt that has an adjustable flexible diameter
- For securing belt discs
- Ideal for water pumps, alternators, drive pulleys for pumps, fans etc.
- Can be used for discs with a diameter 50.00-200.00 mm



	Length mm	Replacement belt	g	
150.3152	360,0	150.3153	506	

Universal counter holder for V ribbed discs

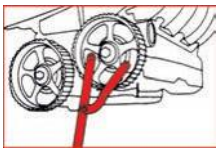
- With strong belt that has an adjustable flexible diameter
- 5.0 mm groove spacing
- For securing toothed-belt discs
- Ideal for water pumps, alternators, drive pulleys for pumps, fans etc.
- Can be used for discs with a diameter 50.00-200.00 mm



	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	

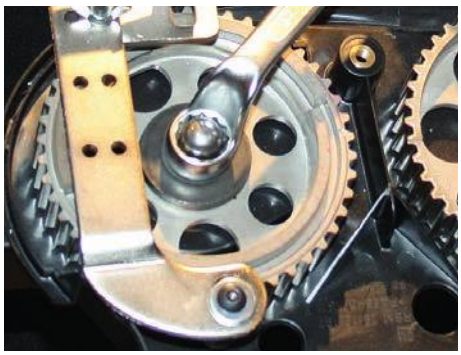
Universal locking tool / counter tool for crank shaft wheels

- 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	



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	

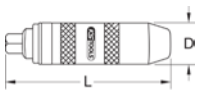
consists of:

		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	

SLOGGING SPANNER

Hand-impact screwdriver

- Reversible
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- 1/4 Revolution of the impact screwdriver through hammer blow (Parable mechanism)
- Optimal feed rate
- No slippage of the blade bit possible
- Ideal for loosening jammed screw connections
- Ideally suited for the automotive area
- Special tool steel





	■	D mm	L mm	g	
515.1004	1/2"	35,0	135,0	950	

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



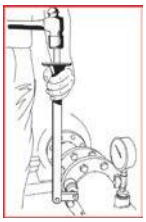


1/2"

		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



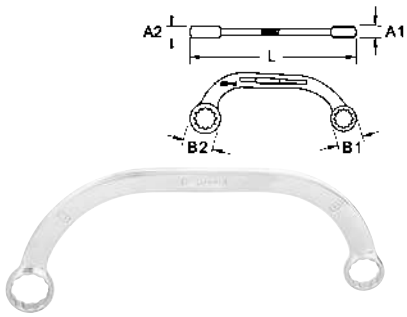


		Length mm	kg	
150.2090	1/2"	560,0	1,32	

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	

TENSION PULLEY WRENCH V/V RIBBED BELTS

alternator socket

- suitable for tensioning the V-belt over the alternator
- 6 point
- FlankTraction profile
- According to DIN 3124 / ISO 2725-1
- Internal square to DIN 3120 / ISO 1174 with ball reception
- Long execution
- For manual operation
- Matt finish
- Chrome vanadium

Application range: MAN F90, F2000 and **Mercedes** SK series



1/2"

	mm	L mm	g	
150.3192	19	200,0	88	

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:

Working range / Scale	0,0-20,0 mm
Scale division:	in mm
Measurement mode:	mechanical (spring)
Adjusting nut revolution around 360°	1,0 mm
Adjusting nut pitch:	1,0/10,0 mm

	Length mm	g	
150.3015	100,0	260	

BELT LENGTH MEASUREMENT DEVICES

Belt length measuring device

- enables reliable measurement of V-belts and multiple V-ribbed belts
- quick and easy handling
- reliable readings
- simple and fast handling
- Plastic

Application range: V-belt profiles AVP10, AVP13, AVX13 and V-ribbed belts with PK profile



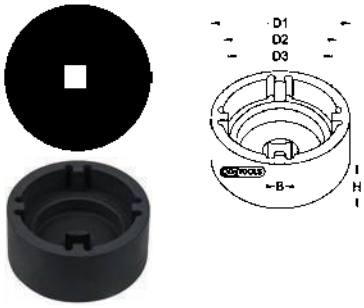
	Measuring range mm	g	
460.2505	500-2500	654	

FAN BEARING

Fan bearing nut wrench for Volvo with 4 pins

- ideally suited for dismantling the slotted nut of the fan bearing
- Internal square drive to DIN 3121 / ISO 1174
- Short execution
- For machinery usage
- Phosphate finish
- Chrome molybdenum

Application range: Volvo FM12 fan bearing



1/2"

	D1 mm	D2 mm	D3 mm	H mm	Stud	B mm	g	
460.0950	73,0	60,0	54	48,0	4	6,0	780	

SPEED MEASUREMENT TOOL

Photoelectric rev counter

- Portable laser measuring instrument, digital
- For touchless measuring of the rotating speed / number of revolutions
- LED display 18mm
- Automatic back up: last test result / maximum and minimum value
- Laser aim point to focus exactly on the measuring point
- Solid state RPM measurement by reflectors supplied



Technical data:

Working range:	2,5 - 99.999 U/min
Measuring distance:	50-500 mm
Resolution:	0.1 RPM up to 999.9 , 1 RPM from 1000
Display accuracy:	0,05% +/- 1
Power requirement:	3x 1,5V AAA (not in the delivery)
Dimensions:	185x73x37mm
Working temperature:	0° / +50°C

		g	
455.0130	Photoelectric rev counter	415	

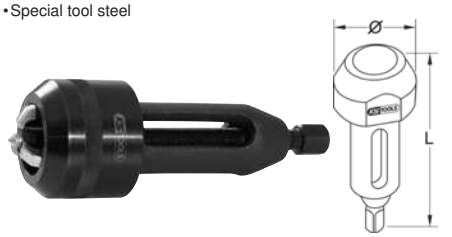
accessories:

		g
455.0131	Reflective tape stripes200 x 12 mm, pack of 3	1

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

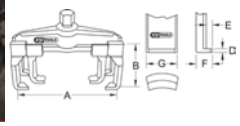


	Ø mm	L mm	max N·m	mm	mm	kg
670.0221	5-32	135	60	17	M14x1,5 x 130	1,40

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





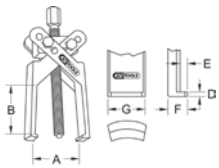


	A mm	B mm	max t	mm	mm	D mm	E mm	F mm	G mm	g
670.0211	130	44	2,5	M14x1,5 x 55	17	4	9	20	15	900

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





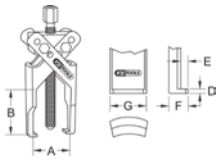


	A mm	B mm	max t	mm	mm	D mm	E mm	F mm	G mm	kg
620.5201	6-100	70/85	1,5	M10 x 105	12	2,5	4,5	8,5	23	0,40
620.5202	10-140	85/120	3,5	M14x1,5 x 130	17	3,5	5	10	31	0,90
620.5203	15-140	125/155	4,5	M14x1,5 x 200	17	3,5	5	10	31	1,10

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





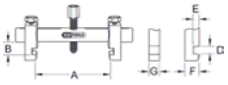


	A mm	B mm	max t	mm	mm	D mm	E mm	F mm	G mm	kg
620.5301	6-100	70/85	1	M10 x 105	12	2,5	4,5	8,5	11	0,40
620.5302	15-140	125/155	2	M14x1,5 x 200	17	3,5	5	11	12	1,00

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





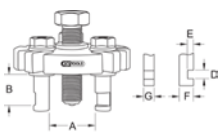


	A mm	B mm	mm	mm	D mm	E mm	F mm	G mm	kg
150.3170	40-165	30	M12 x 75	17	10	9	18	35	1,60

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





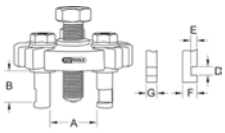


	A mm	B mm	mm	mm	D mm	E mm	F mm	G mm	g
150.3130	90	30	M16x1,5 x 75	24	10	6	11	12	900

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

Universal pulley wheel puller set with hydraulic cylinder

- Ideally suited for the professional disassembly of crank shaft pulley wheels
- Hydraulic cylinder removes the crank shaft pulley wheels without difficulty
- Extremely sturdy execution
- Variable disassembly flange
- Suitable for 4 and 5 hole pulley wheels
- Suitable for HGVs
- Special tool steel







			kg
460.0635	4 pcs	Universal pulley wheel puller set with hydraulic cylinder	7,84

consists of:

		kg
460.0636	Hydraulic cylinder	3,66
460.0637	Disassembly flange Ø 159 mm	3,02
460.0638	Pressure piece, l=40,0 mm	0,29
460.0639	Extension, l=90,0 mm	0,87

Hydraulic hand pump

- Single stage
- Reverse valve for advance and return stroke
- Safety valve for overload protection
- Includes pressure tube 1.8 meters
- Usable tank volume 2081cm³ = 2.081l



		L mm	B mm	H mm	Flow rate per hub cm³	kg	
640.0010	3/8" - 18 NPT	585	133	119	2,62	9,00	

Pneumatic hydraulic pump

- Pneumatic working
- For simply agent press cylinders
- Safety valve for overload protection
- Includes pressure tube 1.8 meters
- Usable tank volume 2081cm³ = 2.081l
- Operating pressure max. 700 bar
- Output per stroke:
  0.8 l/min up to 200 bar
  0.1 l/min up to 700 bar



		L mm	B mm	H mm	kg	
640.0020	3/8" - 18 NPT	255	130	200	11,00	

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

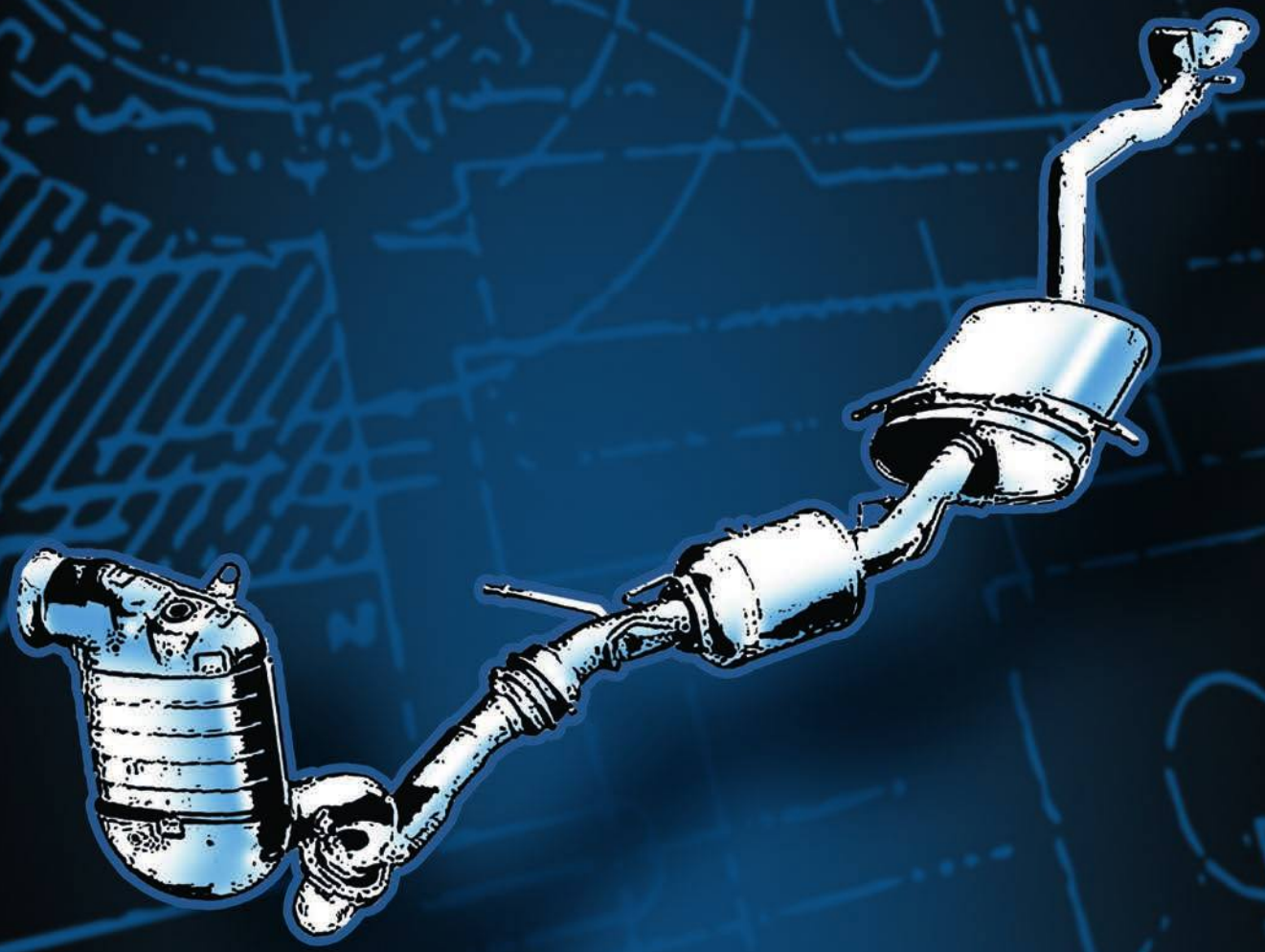
- Acoustic locating of leaks on bodywork
- Receiver is passed externally along the bodywork
- Simplifies cause investigation for wind noise and water leaks
- In a practical storage case





		g	
150.1690	Ultrasound leak detector	460	







KS TOOLS®

Innovation is our mission!

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EXHAUST PIPE SEPARATING AND CUTTING TOOLS

SlimPOWER mini-pneumatic disc cutter, short

- Air exhaust through the handle rear end
- For cutting wheels up to Ø 50.4 x 1.1 x 9.5 mm
- For grinding wheels up to Ø 59.0 x 4.0 x 9.56mm
- 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
- Vibration dampened
- Very compact construction
- Includes 1/4" coupling connector
- Robust housing







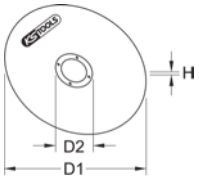
Technical data:

Tool holder:	9,6 mm
Capacity:	220 Watt
No load current:	19000 r.p.m.
Vibration acceleration:	< 3,7 m/s²
Noise performance level:	95,4 dbA
Noise pressure level:	84,4 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
515.5550	60,0	125,0	400

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
515.5056	30600	50,0	10	1,1	50	650

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:

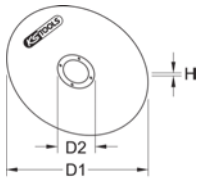
Tool holder:	9,6 mm
Capacity:	220 Watt
No load current:	18000 r.p.m.
Vibration acceleration:	< 3,2 m/s²
Noise performance level:	98,4 dbA
Noise pressure level:	87,4 dbA
Air consumption:	283 l/min
Operating pressure:	max. 6,3 bar (90 psi)
Min. tube diameter:	3/8" - 10 mm
Connection thread:	1/4"NPT

	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)
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:

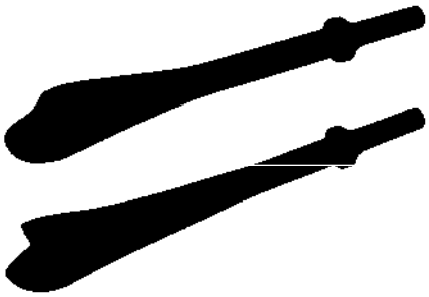
Chisel holder:	10,2 mm
Number of blows:	2200 strokes/min
Vibration acceleration:	< 11,55 m/s²
Noise performance level:	100 dbA
Noise pressure level:	100 dbA
Air consumption:	114 l/min
Operating pressure:	max. 6,3 bar (90 psi)
Min. tube diameter:	3/8"
Connection thread:	1/4"NPT

	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
- Utilisation of vibration and shock pulse of Vibro Power pneumatic hammer
- Robust chisel forged out of one piece
- Special tool steel





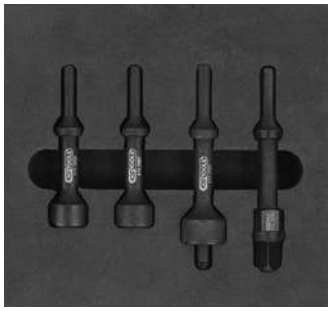
	Suitable for	Width mm	Length mm	g	
515.3962	Internal pipe	23,0	215,0	190	
515.3963	External pipe	23,0	215,0	190	

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:

515.3886	Pneumatic chisel track rod loosener,110mm	138	
515.3887	Pneumatic chisel hammer,110mm	148	
515.3888	Pneumatic chisel loosening adapter,130mm	159	
515.3889	Pneumatic chisel loosening mandrel,100x25x12mm	190	

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	Holder for pneumatic chisel hammer	1,55	
515.3886	Pneumatic chisel track rod loosener,110mm	0,14	
515.3887	Pneumatic chisel hammer,110mm	0,15	
515.3888	Pneumatic chisel loosening adapter,130mm	0,16	
515.3889	Pneumatic chisel loosening mandrel,100x25x12mm	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	

INDUCTION HEAT GUN

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	
500.8420	4 pcs	Induction Heat Gun Set	3,30	

consists of:

		kg	
500.8420-1	Induction heat gun	1,83	
500.8432	Induction coils 19mm, standard	0,05	
500.8433	Induction coils 22mm, standard	0,05	
500.8450	Induction coil, cable, fully flexible, standard	0,06	

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

Operational voltage: 230V

Cable length: 2,3

			kg	
500.8430	9 pcs	Induction Heat Gun Set	2,15	

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	
500.8450	Induction coil, cable, fully flexible, standard	0,06	
500.8445	Induction coil, semi-rigid, deformable, universal	0,04	

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	

TEMPERATURE TESTERS

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)





		g	
150.3220	Thermal imaging camera with UV light	300	

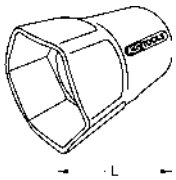
UREA PLANT

Urea service key for AdBlue® filter and tanks

- For removal and fitting of the cover on the urea filter element
- Ideal for concealed filter element between urea tank and metering valve
- Permits precision torque tightening to 23 Nm
- Special tool steel

Application range: Mercedes commercial vehicle, e.g. new Actros, Atego, Axor, Eonic

*AdBlue® is a registered trademark of the Verband der Automobilindustrie e.V (VDA).



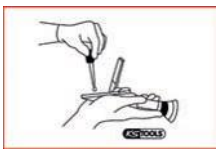


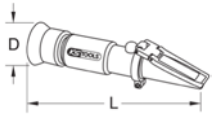
		mm	L mm	g	
550.1289	3/8"	45,5	65,0	250	

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

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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	

Concentration tester for urea

- for checking the urea content in the urea solution
- Easy to use: Suction, read, release
- Clean internal parts with distilled water after use
- With suction bellows
- exact results independent of sample temperature
- Unique result (OK or not OK)

Application range: Diesel engines with urea solution for exhaust gas treatment



		g	
460.5305	Concentration tester for urea	157	

AdBlue® Syringe for fluid change

- Ideal tool for decanting, removing or dosing urea additive
- Suitable for AdBlue®* additives
- Mechanical shut-off valve prevents leakage of urea liquid
- Contaminated urea liquid can be sucked back problems
- With a graduation scale
- Viton® seal
- Robust PP design

*AdBlue® is a registered trademark of the Verband der Automobilindustrie e.V (VDA).



	l	Tube inner Ø mm	Hose external-Ø mm	tube length mm	housing length mm	g	
460.2513	1,5	9,5	12,5	410,0	540,0	640	

Crank-barrel pump for urea solutions

- for urea solutions
- Pump body made of special plastic
- Viton® seal
- Usable for 60 and 220 litre barrels
- For filling measuring jugs, beakers, canisters etc.



Technical data:
Output per stroke cm³: 350,00 cm³

	Barrel screw connection	Length of suction pipe mm	g	
150.9560	2" BSP	600-900	805	

Drum pump for urea solutions

- for urea solutions
- Pump body made of special plastic
- flexible transport hose
- Usable for 200 and 220 litre barrels
- For filling measuring jugs, beakers, canisters etc.



Technical data:
Output per stroke cm³: 500,00 cm³
Output per stroke l/min: 20,0 l/min

	Barrel screw connection	Length of suction pipe mm	kg	
460.5310	G2" a	980-1200	1,32	

Mobile tapping station for urea solutions

- for urea solutions
- for professional storage of the urea solution
- Easy filling of the urea tank directly on the vehicle by electronic feed pump
- nozzle allows the perfect dosage of the filling quantity
- propeller pump
- stainless steel spout
- for 12 volt operation
- EPDM hose
- Dispensing station can be optionally extended with the flow meter 460.5316 (not included)





Technical data:
Output per stroke l/min: 20,0 l/min

	l		kg	
460.5315	75	4	18,45	



Flow meter for urea solutions

- suitable for measuring the flow rate of urea solutions
- Can be used in conjunction with mobile urea dispensing station (460.5315)
- detects the flow rate 10 - 90 l/min
- Accurate to ±0,5%



Technical data:
Output per stroke l/min: 20,0 l/min

		g	
460.5316	1"	334	

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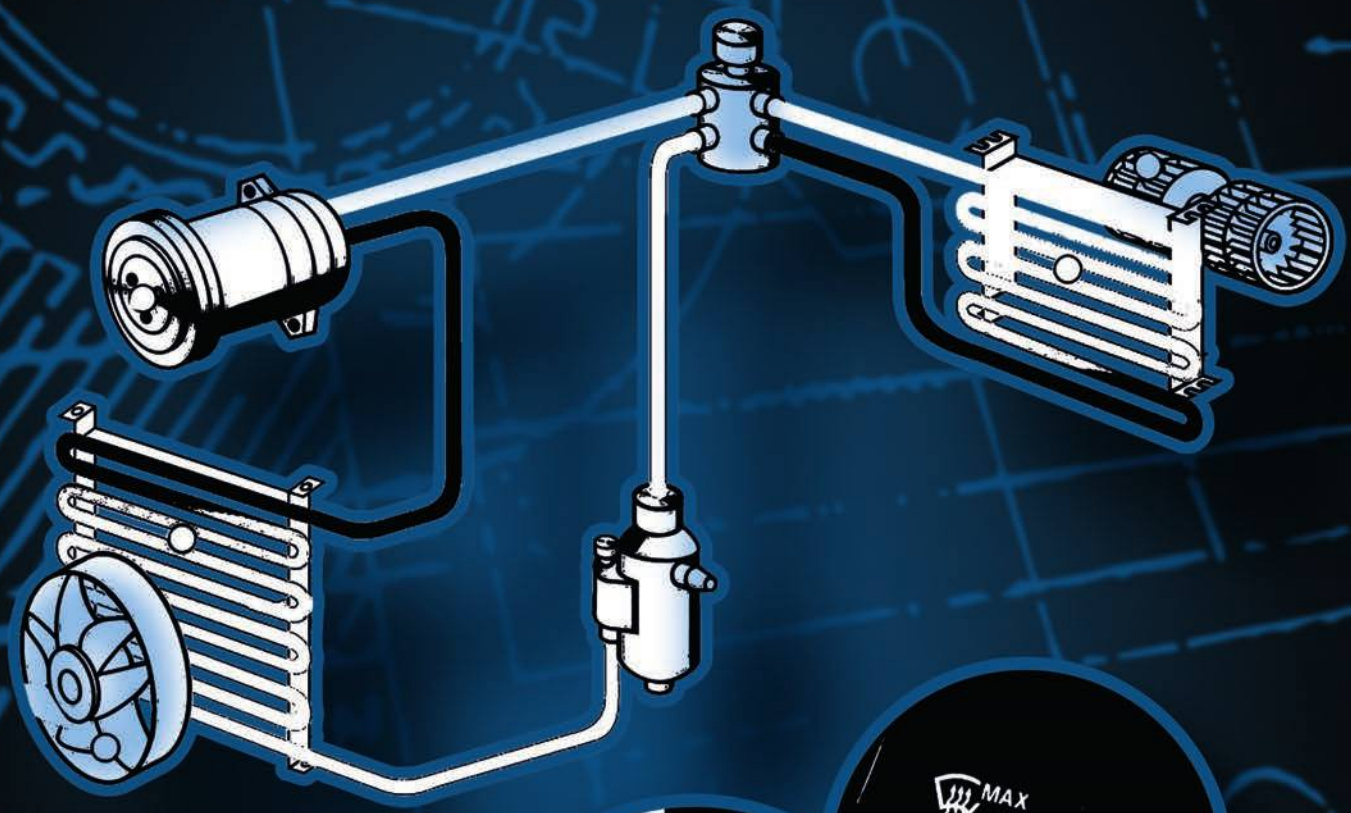
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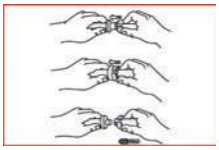
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WIRE CONNECTOR UNLOCKING DEVICE

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
- 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	

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)





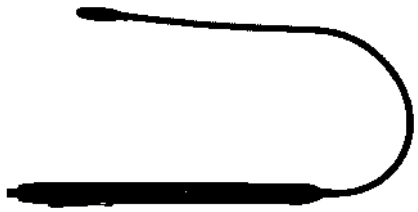
	Length mm	Width mm	Height mm	g
150.3220	185,0	54,0	104,0	300

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

COMPRESSOR TEST DEVICES

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

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

AIR CONDITIONING SYSTEM TOOLS

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

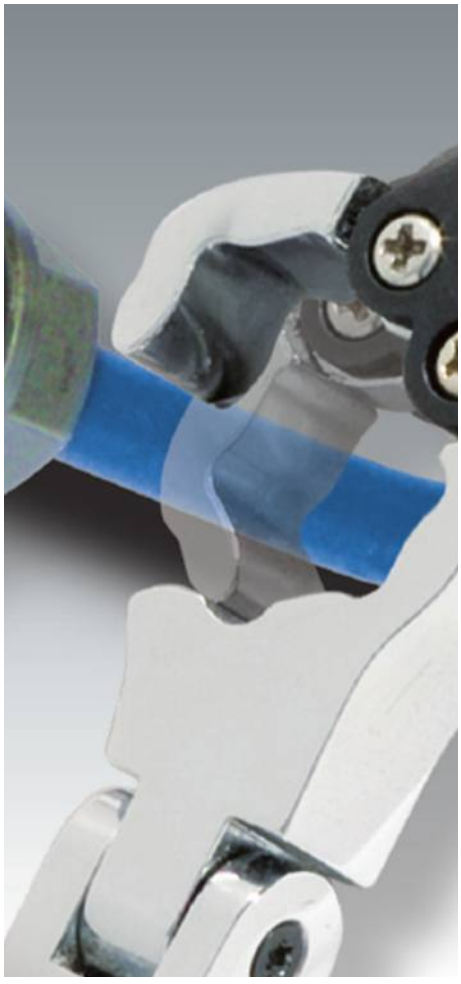
- Metric sizes
- Suitable for all current lock valves
- Ideal set of compilation for air conditioning
- Size 1/4“ + 5/16“ at ratchet head
- Siye 8.5 + 13.0 mm, 3/8“ at ratchet handle
- Matt finish
- Chrome vanadium
- In durable plastic storage case

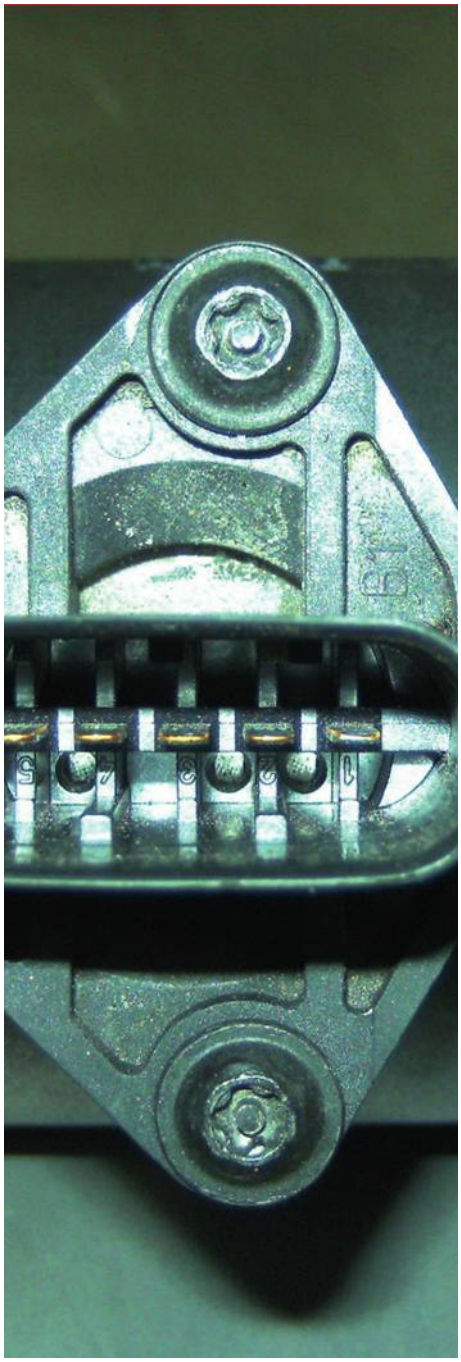


1/4"

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		





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		
150.2029	0,25	120,0	50	

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"

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"

911.1480	8 pcs	TS10 - TS15 - TS20 - TS25 - TS27 - TS30 - TS40	50	

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

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

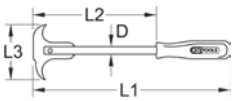
consists of:

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	
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





550.1045	4 pcs	Hook tool set	120

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

Master hook tool set

- Ideal for removing and use of O rings and seals
- Special tool steel





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

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	
550.1183	550.1199	550.1189	360





AIR-CONDITIONING SYSTEMS FOR BUSES

magnetic key

- quickly and easily converts solenoid valves into manual valves
- enables tests on solenoid valves
- facilitates the search for the defective valve
- very compact in size
- easy handling and use
- practical size

Application range: e.g. when opening the compressor circuit in bus air-conditioning systems



	Type	Ø Bore mm	H mm	Ø mm	
550.1331	MVOC-10	10,0	41,0	41,0	84
550.1332	MVOC-15	15,0	41,0	41,0	81
550.1333	MVOC-18	18,0	41,0	41,0	13

Mini magnetic key

- quickly and easily converts solenoid valves into manual valves
- enables tests on solenoid valves
- facilitates the search for the defective valve
- very compact in size
- easy handling and use
- practical size

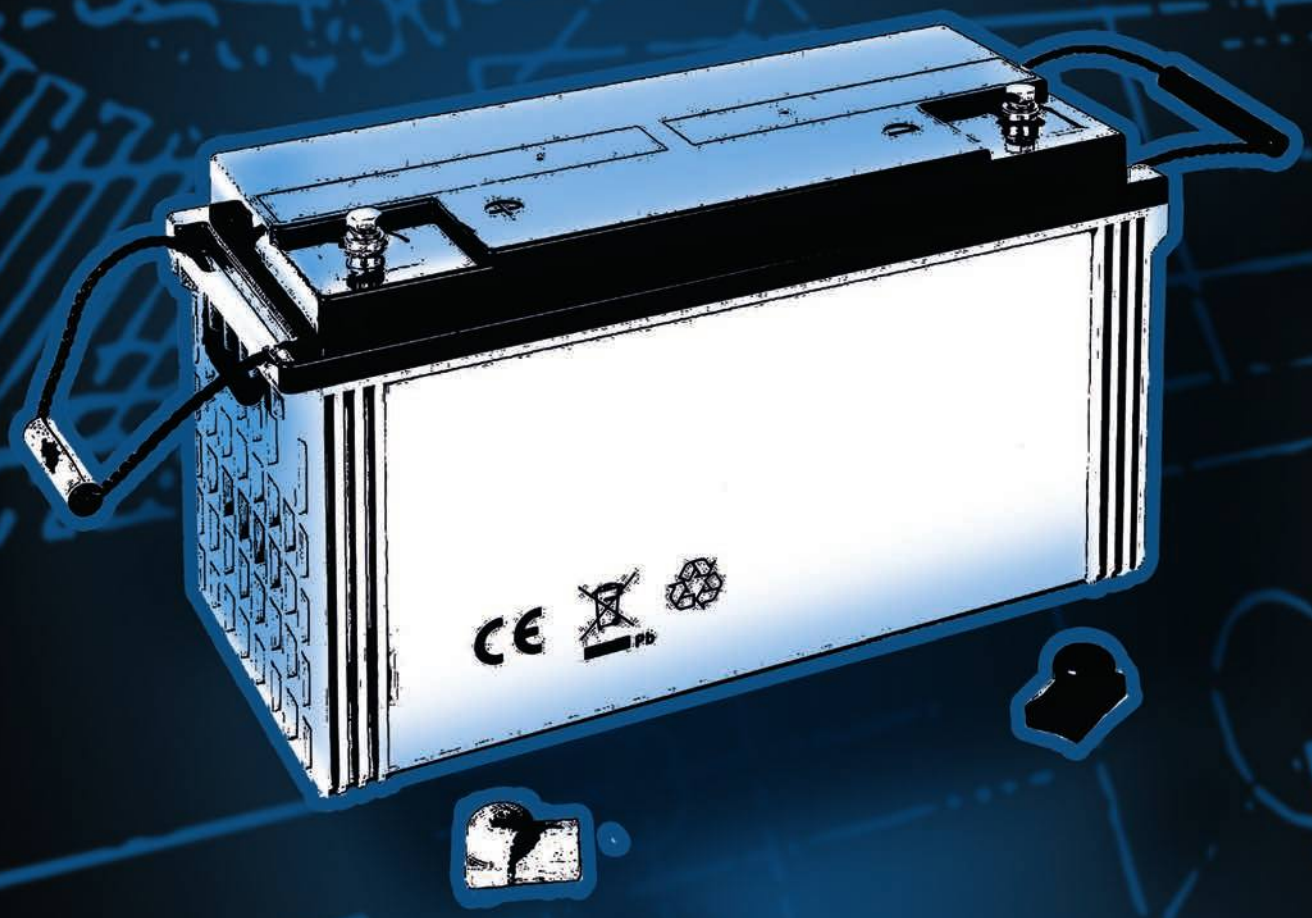
Application range: e.g. when opening the compressor circuit in bus air-conditioning systems



	Type	H mm	Outer Ø mm	Inner Ø mm	
550.1334	MVOC-16	5,0	27,0	16,0	13

11

BATTERY SERVICE





KS TOOLS®

Innovation is our mission!

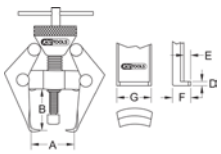
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POLE TERMINAL EXTRACTOR

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





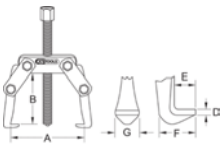


	A mm	B mm	max t	mm	D mm	E mm	F mm	G mm	g
700.1190	15	32	1,2	M8 x 50	2,5	9	10,5	11	300

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





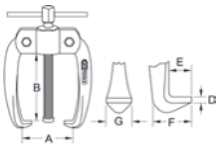


	A mm	B mm	max t	mm	mm	D mm	E mm	F mm	G mm	g
620.3101	10-60	40	1	M8x85	10	1	5	12	8	160
620.3102	10-70	44/74	1,2	M8x85	10	1	5	12	8	200
620.3103	10-90	84	2	M10x105	12	1,8	10	20	12	340

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





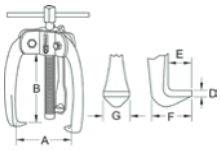


	A mm	B mm	max t	mm	D mm	E mm	F mm	G mm	g
700.1164	10-60	40	0,5	M10 x 60	2,6	5,5	12,8	10,0	145
700.1165	10-60	60	0,5	M10 x 80	3,7	5,8	12,4	10,1	173
700.1166	10-70	80	0,5	M10 x 100	4,0	9,2	16,8	14,0	245

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

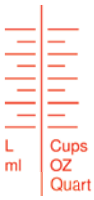
BATTERY CELL FILLING

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)

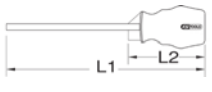


	g
150.9240	5 pcs	Ø 50 - Ø 75 - Ø 95 - Ø 115 - Ø 150 mm	251

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 croco-dile 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 ACID 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



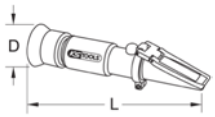


	L mm	g
550.1680	280,0	107

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)

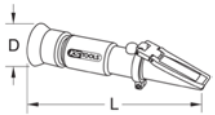
	D mm	L mm	Glass face mm	
550.1290	40,0	149,0	40 x 13	630

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	
550.1285	40,0	160,0	40 x 13	480

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	
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	
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	

DIGITAL AMPERE METER

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



BATTERY TESTER

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



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	
150.3045	12/24V	195	480	

BATTERY CHARGERS

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	

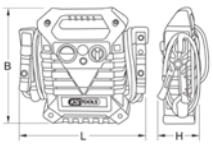


BATTERY BOOSTER MOBILE STARTING AID

12 V + 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

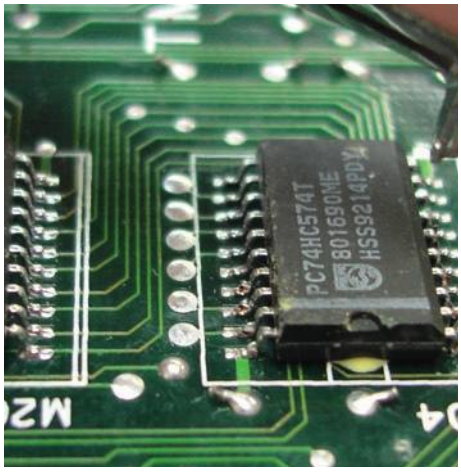


Battery charger for battery booster

- Designed for continuous usage
- Intergrated automatic safety switching off
- Impact resistant polyethylene housing



		Input current	Output current	kg
550.1721	550.1720	220 - 240 V	24 V / 4 A	439



Car charger lead

- For temporary charge
- No safety switching off
- 1.6 mm cable diameter
- 2.0 m cable length
- With double connector



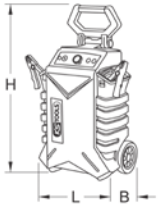
		kg
550.1712	➡ 550.1710 + 550.1720	62



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:

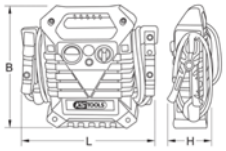
Battery:	2 x 12 Volt / 50 Ah
Starting current:	3000 / 1500 A
Peak current:	7200 / 3400 A
Cable cross section:	75 mm²

	L mm	B mm	H mm	kg
550.1725	450,0	300,0	750,0	47,00

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

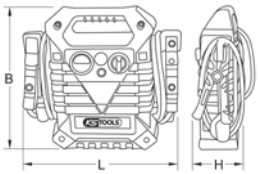
	L mm	B mm	H mm	Charger spare	Replacement fuse	Charging cable	kg
550.1820	390,0	410,0	200,0	550.1826	550.1821	550.1812	24,18



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

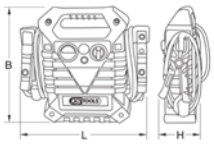
	L mm	B mm	H mm	Charger spare	Charging cable	kg
550.1825	390,0	535,0	285,0	550.1826	550.1812	24,18

CAPACITOR BOOSTER MOBILE STARTING AID

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

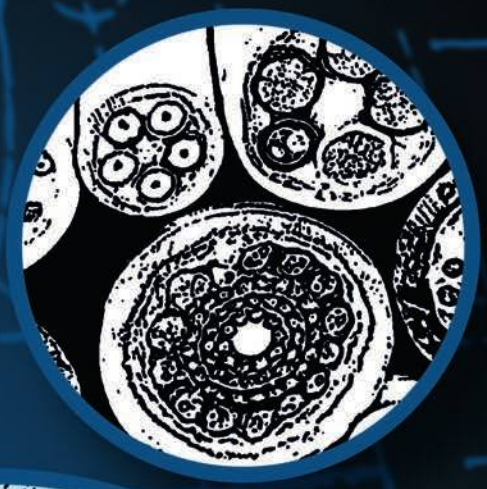
	L mm	B mm	H mm	Charger spare	Replacement fuse	kg
550.1850	380,0	410,0	160,0	550.1841	550.1842	16,50



12

ELECTRICAL / ELECTRONIC TOOLS









KS TOOLS®

Innovation is our mission!

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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





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 headphones 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





150.3075	2 pcs	12-42 V detector for locating short circuits, cable breaks and leakage current	400

consists of:

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	
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	
550.1503	140,0	70

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	1000V	180

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	kg	
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	g	
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)

150.0929	3 pcs	Digital amp pliers 1000 A	480

consists of:

150.0928	Temperature gauge	20
150.0938	Probe set, 1000 A	65
150.0934	Digital amp pliers 1000A	260



CIRCUIT TESTER

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





150.3075	2 pcs	12-42 V detector for locating short circuits, cable breaks and leakage current	400

consists of:

150.3076	Receiver	200
150.3077	Transmitter with crocodile clamps	200



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

150.0990	4 pcs	Circuit breaker set (10 A - 15 A - 20 A)	945

consists of:

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





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

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	red	Measuring line extension with double plug and additional socket 1,100 mm (red)	30
150.1668	1	black	Measuring line extension with double plug and additional socket 1,100 mm (black)	30
150.1669	1	red	Injector test probe	30
150.1672	2		Polarity tester with 4.0 mm banana plug connection and duo LED	10
150.1673	2	black	4,0 mm Needle-shaped probe, black	10
150.1674	2	red	4,0 mm Needle-shaped probe, red	10
150.1676	1	black	4,0 mm Test probe, black	10
150.1677	1	red	4,0 mm Test probe, red	10
150.1678	1	red	4,0 mm Crocodile clamp, red	20
150.1679	1	black	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





			g
150.0950	92 pcs	12/24V Master diagnostic test and measurement lead set	790

consists of:

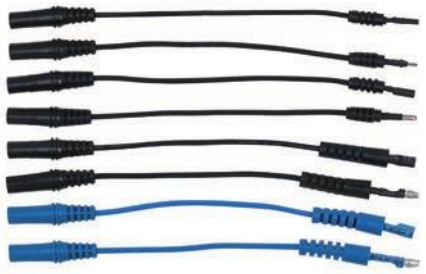
	x	Colour code		g
150.1667	2	red	Measuring line extension with double plug and additional socket 1,100 mm (red)	30
150.1668	2	black	Measuring line extension with double plug and additional socket 1,100 mm (black)	30
150.1672	2		Polarity tester with 4.0 mm banana plug connection and duo LED	10
150.1673	2	black	4,0 mm Needle-shaped probe, black	10
150.1674	2	red	4,0 mm Needle-shaped probe, red	10
150.1676	1	black	4,0 mm Test probe, black	10
150.1677	1	red	4,0 mm Test probe, red	10
150.1678	1	red	4,0 mm Crocodile clamp, red	20
150.1679	1	black	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	black	4.0 mm input socket on 1.5 mm test adapter socket, round (black)	6
150.0974	3	black	4.0 mm input socket on 1.5 mm test adapter plug, round (black)	6
150.0956	3	black	4.0 mm input socket on 2.0 mm test adapter socket, round (black)	6

consists of:

	x	Colour code		g
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

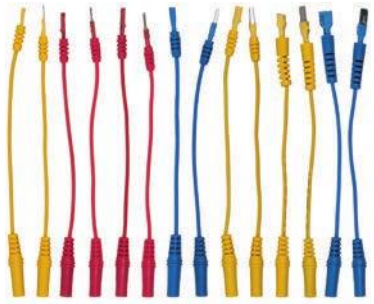
- Insulated
- Universal usage
- Round designs
- With 4.0 mm input socket
- Flexible silicone cable
- Applicable up to a maximum of 24 V (10 A)
- Overall length 175.0 mm



	Colour code		g
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		g
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		g
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



		g
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



		g
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



		g
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		g
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



			g
150.0930	2 pcs	Measuring line extension set	360

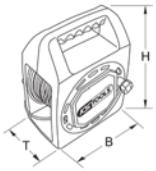
consists of:

		g
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	g
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



		g
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		g
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		g
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		g
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



		g
150.1672	Polarity tester with 4.0 mm banana plug connection and duo LED	10





DISASSEMBLY AND ASSEMBLY TOOLS

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



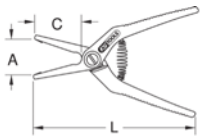


	Format	Total length mm	g
115.1308	45° angle	200	130

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







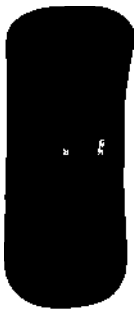
		g	
115.1054	Incandescent bulbs pliers	70	

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	

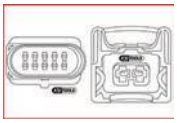
consists of:

		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

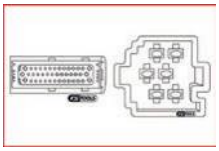




	Plug width mm	Plug type	Release principle	Length mm	g	
154.0011	2,8 / 4,8 / 5,8 / 6,3	Blade terminal / Blade terminal sleeve	2 + 5	117,0	20	

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

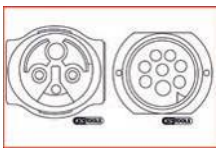




	Plug width mm	Plug type	Release principle	Length mm	g	
154.0012	1,6	Blade terminal / Blade terminal sleeve	2 + 5	117,0	18	

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

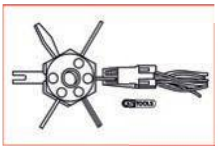




	Plug Ø mm	Plug type	Release principle	Length mm	g	
154.0013	1,5 / 3,5	Round connector / Round connector sleeve	2 + 5	107,0	16	

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

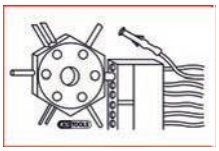




		g	
150.1231	Unlocking tool	60	

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



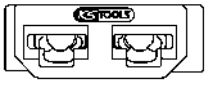


		g	
150.1232	Unlocking tool	60	

UNLOCKING TOOLS FOR RECEPTACLES/FLAT PLUGS

Cable unlocking tool for 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 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 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 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 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 receptacles

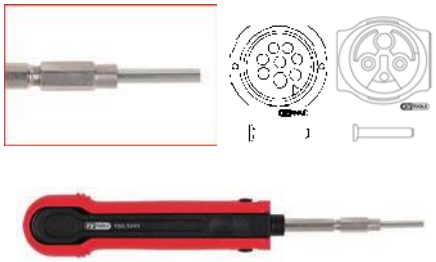
- For the professional and non-destructive release of contacts
- **For manufacturer KOSTAL PLK**
- For plug design receptacle
- For plug widths of 14.5 mm
- Unlocking according to principle 2
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band 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 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

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

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

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

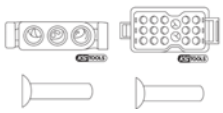


	Plug Ø mm	Plug type	Release principle	Length mm	g
150.1291	2,5	Round connector / Round connector sleeve	2	138,0	30

Cable unlocking tool for round plugs and circular sockets

- For the professional and non-destructive release of contacts
- **For manufacturer AMP Tyco 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	

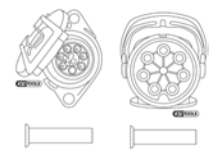
Replacement sleeve:

		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 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





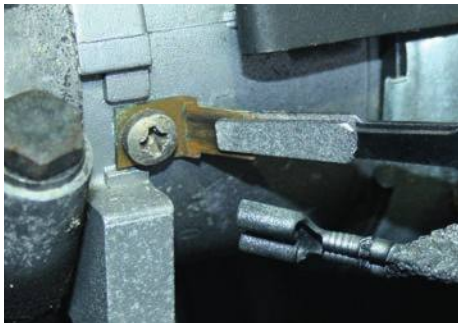


	Plug Ø mm	Plug type	Release principle	Length mm	g	
150.1292	4,0	Round connector / Round connector sleeve	1	172,0	30	

Replacement sleeve:

		g	
154.0225	Sleeve Ø 4.0 mm (ABS 4.0)	3	

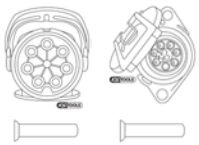




Cable unlocking tool for round plugs and circular sockets

- 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







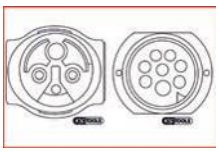
	Plug Ø mm	Plug type	Release principle	Length mm	g	
150.1256	5,5	Round connector / Round connector sleeve	1	172,0	38	

Replacement sleeve:

		g	
154.0227	Sleeve Ø 5.5 mm (ABS 5.5)	2	

Universal cable unlocking tool set

- For the professional and non-destructive release of contacts
- **for manufacturers:**AMP Tyco JPT, AMP Tyco JT, AMP Tyco SPT, AMP Tyco ST, AMP Tyco MT I, AMP Tyco MT II, AMP TycoCI2, AMP Tyco Mate-N-Lok, GHW RAM, GHW RSA2
- For flat plugs, flat plug receptacles, round plugs and circular sockets
- Unlocking according to principles 1, 2 and 5
- Universal usage
- With tool tips made of high-quality spring band steel





			g	
154.0015	3 pcs	Universal cable unlocking tool set	54	

consists of:

		g	
154.0011	Universal cable unlocking tool for flat plugs and receptacles 2.8-6.3mm	20	
154.0012	Universal cable unlocking tool for flat plugs and receptacles 1.6mm	18	
154.0013	Universal cable unlocking tool for round plugs and circular sockets 1.5 / 3.5mm	16	

HGV terminal extractor tool set for the most popular connections

- specially designed for commercial vehicle plug-in contacts
- For the professional and non-destructive release of contacts
- for manufacturers AMP Tyco (1.5, MPT), GHW (Maxi-DFK, MKS, MKR, VKR Plus), ABS
- Contains the most common unlocking tools for the new generation of vehicles



			kg	
154.0175	8 pcs	HGV terminal extractor tool set for the most popular connections	1,00	

consists of:

		g	
150.1256	Cable unlocking tool for round plugs and circular sockets, 5,5mm	38	
150.1266	Cable unlocking tool for receptacles 9,5mm	30	
150.1288	Terminal extract tool, 2.8mm	20	
150.1290	Cable unlocking tool for circular sockets, 1,5mm	30	
150.1291	Cable unlocking tool for round plugs and circular sockets 2,5mm	30	
150.1292	Cable unlocking tool for round plugs and circular sockets 4,0mm	30	
154.0135	Cable unlocking tool for receptacles 9.5mm	34	
154.0208	Cable unlocking tool for circular sockets 1.5mm	36	

NKW unlocking tool set

- Universal application in the field of electrics in commercial vehicles
- Precision tool to repair a breakdown or failure electrical links
- Contains a selection of the most common single tools
- Professional and non destructive release of contacts
- Optimum protection against unwanted mechanical action by safety bar
- In durable plastic storage case



			g	
150.1215	14 pcs	NKW unlocking tool set	743	

consists of:

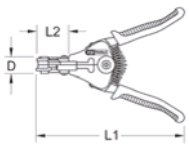
150.1296	Terminal extract tool, ABS	20	
150.1262	Unlocking Tool for round plug/round connector sleeve 3,5 mm (AMP Tyco 3,5)	30	
150.1292	Cable unlocking tool for round plugs and circular sockets 4,0mm	30	
150.1261	Unlocking Tool for round plug 1,5 mm (AMP Tyco 1,5)	30	
150.1264	Unlocking Tool for blade 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	
150.1288	Terminal extract tool, 2.8mm	20	
150.1290	Cable unlocking tool for circular sockets, 1,5mm	30	
150.1291	Cable unlocking tool for round plugs and circular sockets 2,5mm	30	
150.1256	Cable unlocking tool for round plugs and circular sockets, 5,5mm	38	
150.1270	Sleeve Ø 1.5 mm (AMP Tyco 1.5)	10	
150.1271	Sleeve Ø 3.5 mm (AMP Tyco 3.5)	10	
150.1272	Sleeve Ø 2.3 mm (AMP Tyco 2.3, Delphi 2.3, GHW 2.3)	10	
150.1293	Terminal extract tool, 4.0mm	10	

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







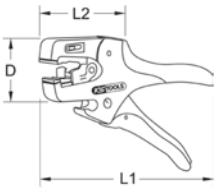


	Ø mm	AWG	D mm	L1 mm	L2 mm	
115.1028	0,5-2,0	20-14	20,0	170,0	35,0	280
115.1029	1,0-3,2	18-8	20,0	170,0	35,0	280

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



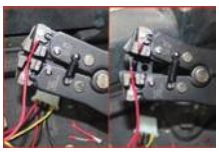




	mm²	AWG	D mm	L1 mm	L2 mm	Replacement blades	
115.1244	0,1-4	28-12	48,0	190,0	73,0	115.1247	130
115.1245	0,02-10	34-8	48,0	190,0	73,0	115.1246	130
115.1249	4-16	10-5	48,0	190,0	73,0	115.1248	130

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





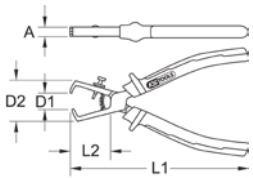
	mm²	AWG	Length mm	
115.1254	0,2-6	10-24	210,0	280





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

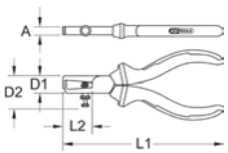




	A mm	D1 mm	D2 mm	L1 mm	L2 mm	
115.1314	9,0	20,5	33,0	176,0	39,0	170

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

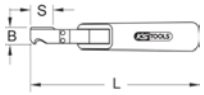




	A mm	D1 mm	D2 mm	L1 mm	L2 mm	
115.1014	9,0	20,5	33,0	179,0	39,0	300

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

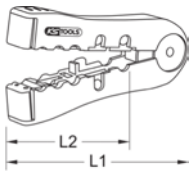




	Ø mm	B mm	L mm	S mm	g	
907.2184	28,0	18,0	175,0	24,0	100	

Stripping tool for data cable

- Round cut
- For the stripping of flat and flat oval data cables
- Safety locking device for safe storage

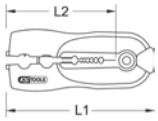




	mm²	L1 mm	L2 mm	g	
115.1241	2,5-12,0	105,0	72,0	40	

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

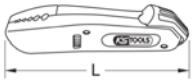




	mm²	AWG	L1 mm	L2 mm	g	
115.1251	0,2-0,8	30-20	117,0	85,5	96	
115.1252	0,8-2,6	20-10	117,0	85,5	96	

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

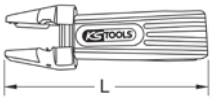




	mm²	Ø Wire mm	AWG	L mm	g	
115.1003	0,5-6,0	4,0-28,0	20-10	143,0	120	

Insulation stripping knife

- For stripping external insulation layers
- Stripping insulation from single- and multiple-wire conductors
- Round and longitudinal cutting

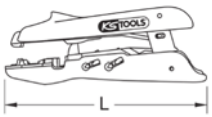




	mm²	Ø Wire mm	L mm	g	
115.1007	0,5-16,0	4,0-12,0	137,0	81	

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

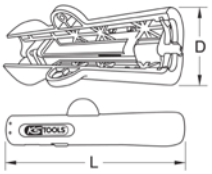




	mm²	AWG	L mm	g	
115.1001	0,5-6,0	20-10	158,0	116	

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

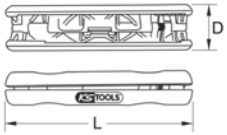




	Ø Wire mm	L mm	g	
115.1006	8,0-13,0	125,0	43	

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

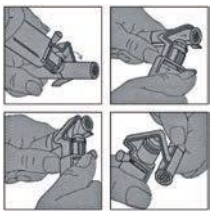


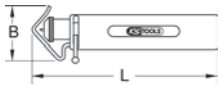


	Ø Wire mm	L mm	g	
115.1002	4,8-7,5	110,0	30	

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

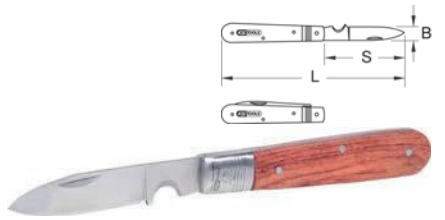
- Retractable blades
- With straight blade
- With sickle blade and downward curved tip that ensures a powerful cut
- Sturdy, practical and very sharp
- Moulded handle made out of wood
- Rust-proof
- Stainless steel



	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



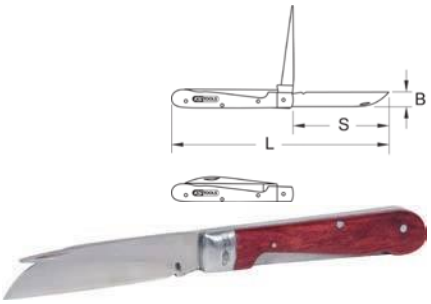
	B mm	L mm	S mm	g	
907.2187	15,0	195,0	85,0	60	





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

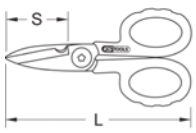


	L mm	S mm	g	
118.0010	140,0	43,0	100	

Universal workshop shear

- Robust short shears
- With screw on blade
- Various applications
- Stainless steel blade
- Two component handle





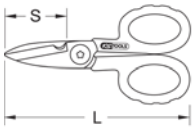


	L mm	S mm	g	
118.0013	143,0	46,0	100	

Universal workshop shear

- Robust short shears
- For various application areas
- With cable cutter
- Practical and very sharp
- Includes belt bag with cut protection



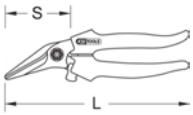




	Ø mm	L mm	S mm	g	
118.0060	24,0	140,0	42,0	170	

Universal Workshop Shears, angled

- Self opening
- Safety locking device
- Practical and very sharp
- Angled design
- Ergonomic moulded plastic handle
- Ideal for seals and cables



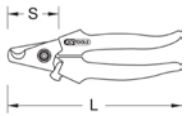


	Ø mm	L mm	S mm	g	
118.0072	35,0	185,0	42,0	190	

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

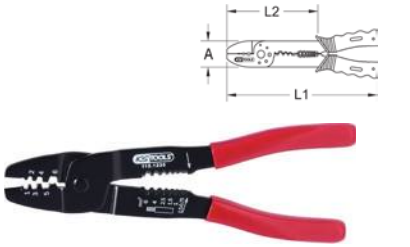
- For cable cutting and wire stripping
- For the proper crimping of lugs and plug connectors
- Suitable for insulated and non-insulated cable end sleeves
- Ideal leverage
- Easy solderless pressing on in one work step
- With PVC dipped handle
- Pliers body made of flat steel



	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

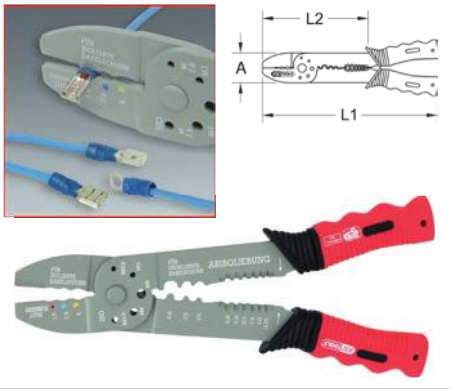
- Ideally suited for converting not insulated contacts
- For stripping of wires from 0.5 - 6.0 mm²
- Cut wires up to 6.0 mm²
- For crimping blade terminals 2.8 / 4.8 / 6.3 mm and other contacts with open crimp sleeve
- With PVC dipped handle
- Plier body from special steel
- Material strength 3 mm



	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

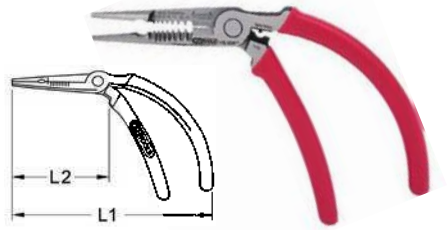
- For professional cable cutting and stripping wires from 0,75 - 6,0 mm²
- For crimping cable terminals and connectors from 1,5 - 6,0 mm²
- Cutting function
- Two component handle
- Pliers body made of flat steel



	A mm	L1 mm	L2 mm	g	
115.1231	40,0	220,0	130,0	230	

5-in-1 crimping pliers with bent handle

- Versatile long-nose pliers to crimp, strip, cut, bend and shape
- Serrated jaws
- Perfect for stripping and crimping wires
- With integrated screw extractor and wire cutters
- Ergonomic design
- Perfect for hard-to-reach places
- Extremely robust and reliable
- Optimum power transmission with rotary and train movements
- With PVC dipped handle
- Chrome vanadium



	Ø mm	AWG	L1 mm	L2 mm	g	
115.1238	0,3 - 6,0	10/12/14/16/18/20/22	190,0	110,0	280	

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	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	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	487	

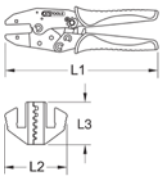




Crimping pliers for pin terminals

- 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





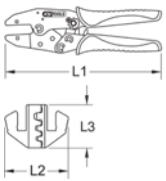


	mm²	AWG	L1 mm	L2 mm	L3 mm		
115.1440	0,5/0,75/1,0/1,5/2,5/4,0	22/20/18/16-14/12-10	220,0	50,0	34,0	115.1418	499
115.1450	6,0/10,0/16,0	10/8/6	220,0	50,0	34,0	115.1420	499

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		
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

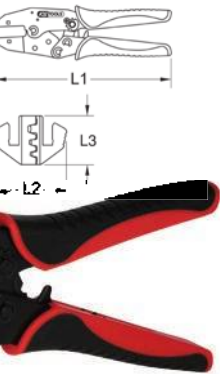
- Extremely robust and reliable
- Safety lock
- Inserts lock and to they click to prevent possible misuse
- Optimal crimping through precision profile
- Ratchet function
- Adjustment of the crimping pressure
- Easy to change the crimp heads through quick locking device
- Two component handle
- Burnished
- Pliers body made of flat steel



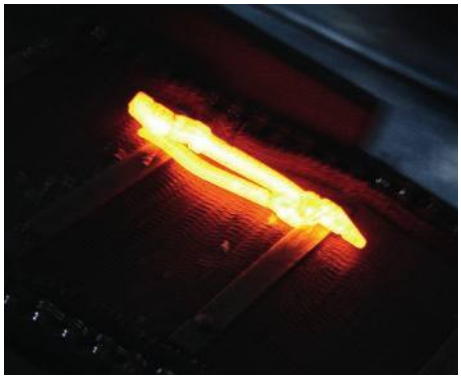
	mm²	AWG	L1 mm	L2 mm	L3 mm		
115.1595	6,0 / 5,0	10/12	220,0	50,0	34,0	115.1437	500

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		
115.1120	40/25/15	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		
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		
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



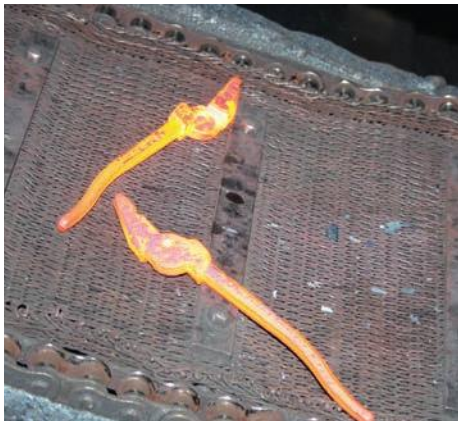
	mm²	AWG	L1 mm	L2 mm	L3 mm		g
115.1485	0,5-1,5 / 1,5-2,5 / 4,0-6,0	22-16/16-14/12-10	220,0	50,0	34,0	115.1427	480

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

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



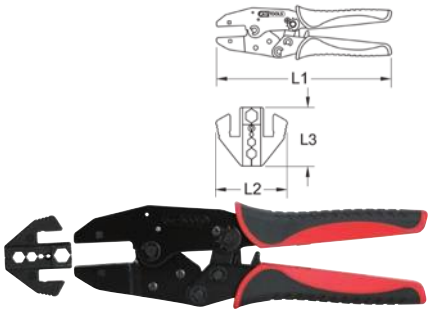
			g
115.1480	3 pcs	Electricians crimping pliers set	910

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

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 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
115.1575	1,0 - 2,0 / 3,0	16-14/12	220,0	50,0	34,0	115.1433	500

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	Ø mm	kg	
115.1113	30,00	3,0	1,20	

SOLDERING TECHNOLOGY

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:

Capacity:	30 Watt
Working temperature:	0 - 600 °C
Operational voltage:	220-240V AC, 50HZ
Connection cable length:	1,3 m
Protection class:	I

	Length mm	g	
960.1255	220,0	220	

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:

Capacity:	60 Watt
Working temperature:	0 - 600 °C
Operational voltage:	220-240V AC, 50HZ
Connection cable length:	1,3 m
Protection class:	I

	Length mm	g	
960.1130	230,0	225	

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	g	
960.1110	70,0	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



	Length mm	g	
960.1200	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	

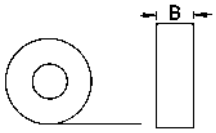
consists of:

		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	

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



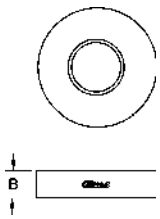


		B mm	Length m	g	
141.6010	8 pcs	19,0	10,00	150	

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



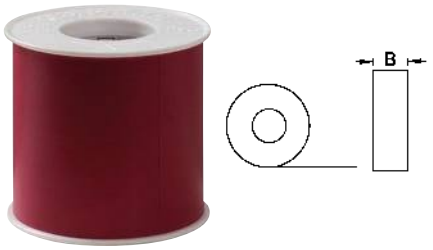




	Colour code	B mm	Length m	g	
141.6000	●	18,0	10,00	100	
141.6001	●	38,0	10,00	210	

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

Shrink tubing assortment

- Shrinkage ratio 2:1
- In plastic storage case



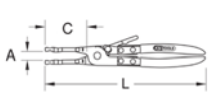
			g
970.0540	100 pcs	Shrink tubing assortment	130

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

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

CABLE ATTACHMENT

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
150.1053	W shaped	0,6	100	20
150.1059	W shaped	0,8	100	20

DIN AND STANDARD PARTS

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 fuses assortment

- According to ISO 8820-3
- Fuses colour-coded according to ampere sizes
- In plastic storage case



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 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	

Automotive fuses assortment

- According to ISO 8820-3
- Fuses colour-coded according to ampere sizes
- In plastic storage case



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	

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



970.0290	160 pcs	Crimp connectors assortment	260
12 x		0,5-1,5 mm²	
18 x		1,5-2,5 mm²	
20 x		1,5-2,5 mm²	
12 x		2,5-6,0 mm²	
8 x		0,5-1,5 mm² M4	
10 x		1,5-2,5 mm² M4	
10 x		1,5-2,5 mm² M5	
10 x		1,5-2,5 mm² M6	
4 x		2,5-6,0 mm² M5	





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 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		

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		

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		



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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	ϟ	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	ϟ	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

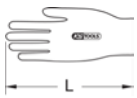
- For working enviroment of voltages AC 1000 V and DC 1500 V
- In accordance with new standard EN 50321
- With steel bar



	Size mm	ϟ	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





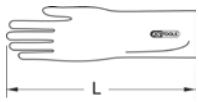
	L mm	g
117.1660	260,0	225

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!





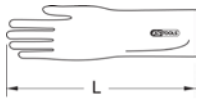
	Thickness mm	Electrosoft Class	Size mm	L mm	ϟ	g
117.1663	1,0	0	9	360,0	1000V	215
117.1664	1,0	0	10	360,0	1000V	215
117.1132	2,0	1	10	360,0	7500V	250
117.1133	2,0	3	10	410,0	26500V	690
117.1134	2,5	4	10	410,0	36000V	890

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	ϟ	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

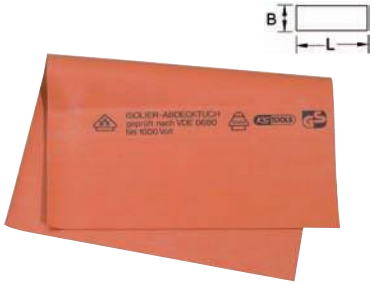
- Insulation according to DIN EN 61112
- transparent cloth
- cold-resistant and highly flexible



	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

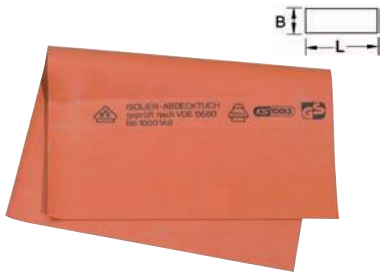
- Tested to VDE 0680/1
- Insulated to DIN EN 60903
- Extensively tear and water resistant
- Particularly suitable for external usage



	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

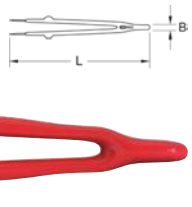
- Insulated handle to IEC 60900
- Wrap insulation
- Chrome vanadium



	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

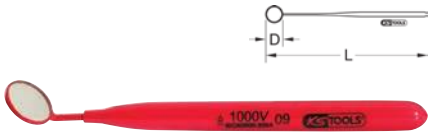
- Insulated handle to IEC 60900
- Wrap insulation
- Chrome vanadium



	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

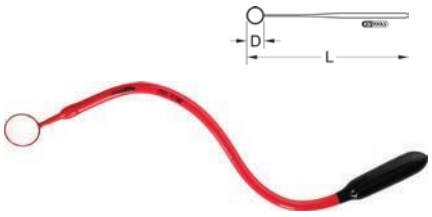
- Insulated handle to IEC 60900
- Insulated
- Chrome vanadium



	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

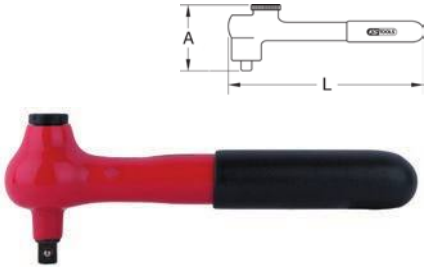


	Load capacity kg	Ø mm	Length mm		g
117.2322	0,25	14,0	420,0	1000V	23
117.2323	1,0	15,0	470,0	1000V	180
117.2324	1,8	16,5	520,0	1000V	325

TORQUE WRENCHES WITH PROTECTIVE INSULATION

Fixed torque wrench with protective insulation

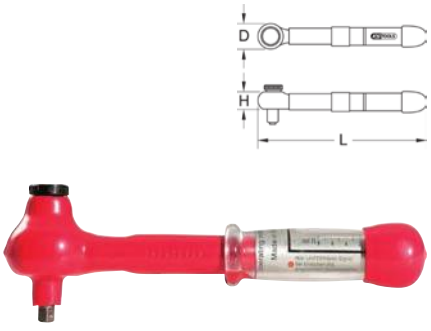
- Actuation accuracy: ±4 % tolerance of the set scale value
- Precise reading accuracy for a minimum 5.000 tightening cycles
- For controlled fastening in a clockwise direction
- Can untighten without any torque restraint thanks to the anticlockwise latch
- An audible and palpable signal when the desired 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

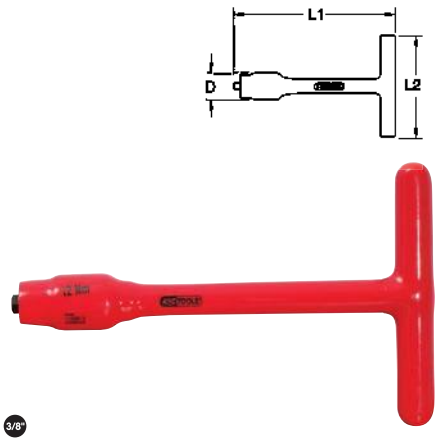
- Insulated handle to IEC 60900
- For working enviroment of voltages AC 1000 V and DC 1500 V
- Release accuracy: ±4 % tolerance from the set scale value and better
- Precise reading accuracy for a minimum 5.000 tightening cycles
- For controlled fastening in a clockwise direction
- Can untighten without 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	GS	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

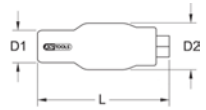


3/8"

	■	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





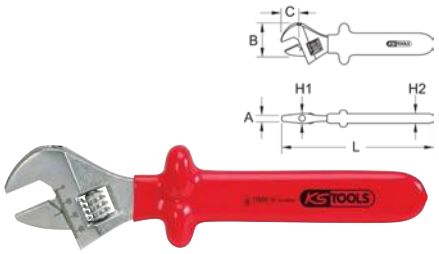
3/8"

	■	■	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

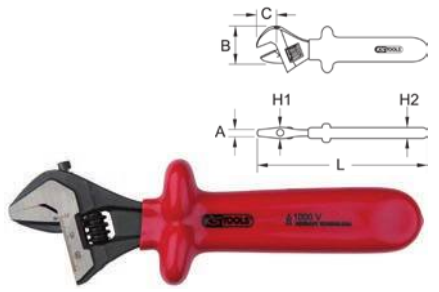
- In accordance to DIN 3117
- Insulated handle to IEC 60900
- Jaw 15° offset
- Swedish type design
- With mm scale
- Matt finish
- Chrome vanadium



	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

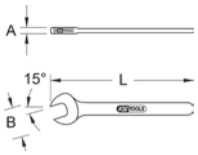
- In accordance to DIN 3117
- Insulated handle to IEC 60900
- Jaw 15° offset
- Swedish type design
- With mm scale
- Matt finish
- Burnished
- Chrome vanadium



	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

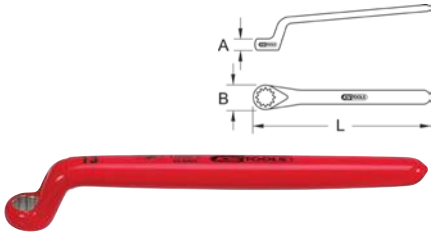


	mm		A mm	B mm	L mm		kg
117.4206	6		6,7	14,4	126,0	1000V	0,03
117.4207	7		6,9	17,2	137,0	1000V	0,04
117.4208	8		6,9	17,2	140,0	1000V	0,04
117.4209	9		7,3	19,2	150,0	1000V	0,04
117.4210	10		7,7	21,2	159,0	1000V	0,06
117.4211	11		8,1	22,2	165,0	1000V	0,06
117.4212	12		8,6	23,2	172,0	1000V	0,08
117.4213	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

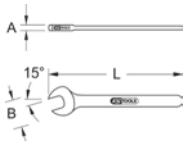


	mm		A mm	B mm	L mm		g
117.1306	6		6,1	13,6	160,0		55
117.1307	7		6,7	12,6	160,0		55
117.1308	8		7,1	14,0	170,0		60
117.1309	9		7,4	15,5	170,0		65
117.1310	10		7,8	17,0	170,0		80
117.1311	11		8,1	18,4	180,0		90
117.1312	12		10,2	19,9	190,0		100
117.1313	13		10,9	21,3	190,0		110
117.1314	14		11,3	22,8	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

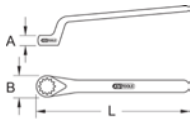




	mm	A mm	B mm	L mm		g
117.2262	10	7,1	22,7	105,0	1000V	28
117.2263	11	8,2	25,6	115,0	1000V	34
117.2264	12	7,7	27,1	127,0	1000V	38
117.2265	13	8,5	28,9	135,0	1000V	46
117.2266	14	9,3	31,8	145,0	1000V	54
117.2267	17	10,7	38,4	160,0	1000V	74
117.2268	19	11,8	42,1	175,0	1000V	100

Ratchet gear with protective insulation

- FlankTraction profile
- Insulated handle to DIN 60900
- Exact gearing with 32 teeth
- extremely stable
- Reversible
- Chrome vanadium

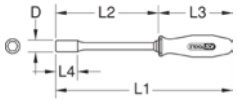




	mm	A mm	B mm	L mm		kg
117.2294	13x17	44,2	34,2	283,0	1000V	0,35
117.2295	17x19	48,1	42,1	287,0	1000V	0,58
117.2296	19x24	55,1	51,5	365,0	1000V	0,91
117.2297	24x30	63,0	65,0	445,0	1000V	1,57

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

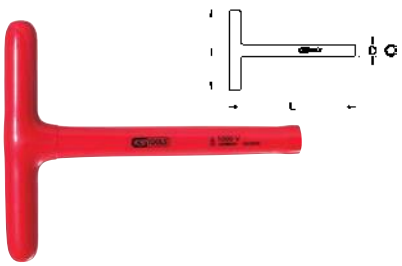
- 6 point
- In accordance to DIN 7445
- Insulated handle to IEC 60900
- Chrome vanadium



117.1255	5 pcs	5,5 - 7 - 8 - 10 - 13 mm	630

T-handle socket wrench with protective insulation

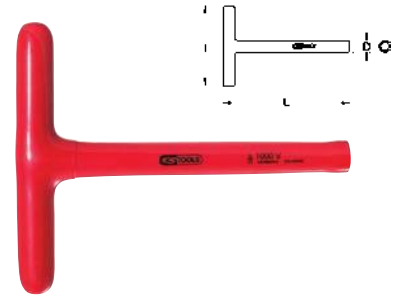
- 6 point
- In accordance to DIN 7440
- Insulated handle to IEC 60900
- For use of especially long threaded bolts
- Made from precision steel tube
- Chrome vanadium



	mm	D mm	l mm	L mm	1000V	g
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

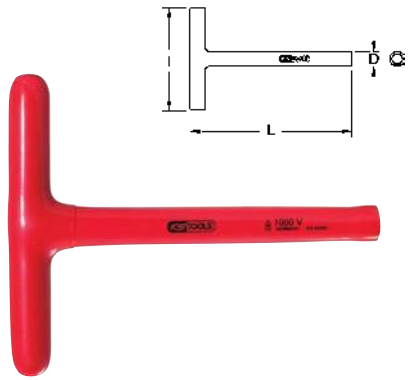
- 6 point
- In accordance to DIN 7440
- Insulated handle to IEC 60900
- For use of especially long threaded bolts
- Made from precision steel tube
- Chrome vanadium



	mm	D mm	l mm	L mm	1000V	g
117.1725	8	17,0	165,0	300,0	1000V	350
117.1726	10	20,0	165,0	300,0	1000V	380
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

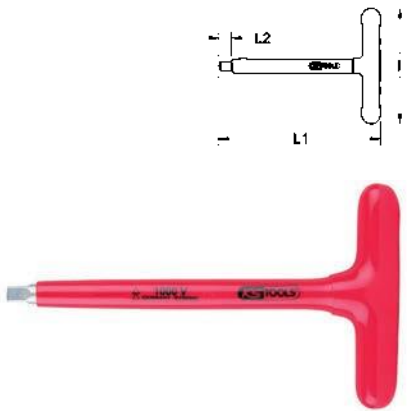
- Insulated to IEC 60900
- Magnetic
- For bits to DIN 3126 - C 6,3
- Chrome vanadium



	mm	D mm	l mm	L mm	1000V	g
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

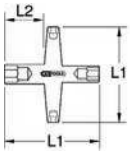
- Square drive adaptor to DIN 3120 / 1174 with ball lock
- In accordance to DIN 7436
- Insulated handle to IEC 60900
- Chrome vanadium



	■	l mm	L1 mm	L2 mm	1000V	g
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

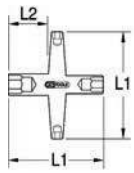




	mm	L1 mm	L2 mm	1000V	g
117.1701	10x11x12x13	140,0	55,0	1000V	230
117.1702	10x11x13x17	140,0	55,0	1000V	230
117.1704	10x12x14x17	140,0	55,0	1000V	230
117.1705	10x13x14x17	140,0	55,0	1000V	230
117.1706	11x12x13x17	140,0	55,0	1000V	230
117.1707	11x13x14x17	140,0	55,0	1000V	230
117.1708	13x17x19x22	140,0	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



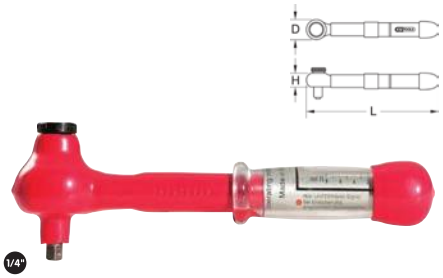


	mm	L1 mm	L2 mm	1000V	g
117.1720	10x13x14x17	220,0	92,0	1000V	430

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

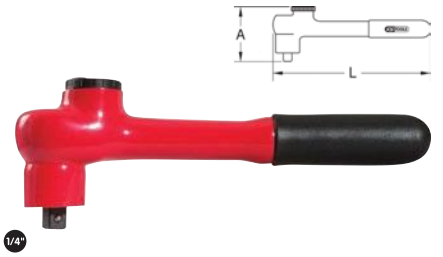


1/4"

	■	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

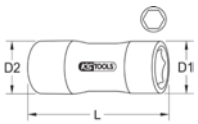


1/4"

	■	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



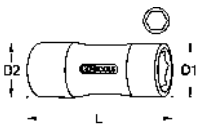


1/4"

	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



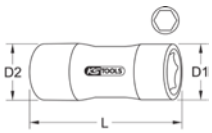


1/4"

	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



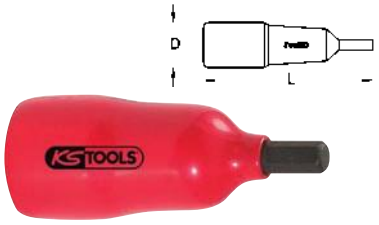


1/4"

	■	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

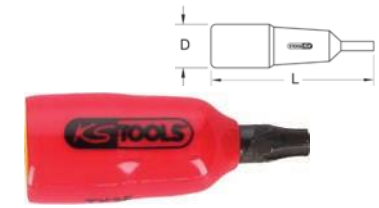


1/4"

	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		kg
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"

			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



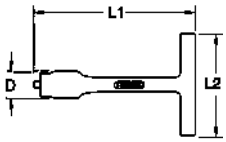
1/4"

			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	

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



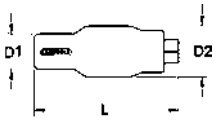


3/8"

	■	N·m	D mm	L mm	l mm		kg
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





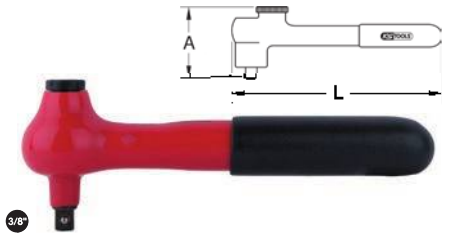
3/8"

	□	■	N·m	D1 mm	D2 mm	L mm		kg
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

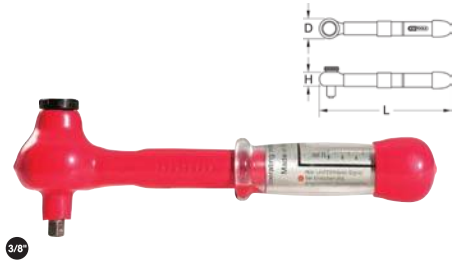
- Actuation accuracy: ±4 % tolerance of the set scale value
- Precise reading accuracy for a minimum 5.000 tightening cycles
- For controlled fastening in a clockwise direction
- Can untighten without any torque restraint thanks to the anticlockwise latch
- An audible and palpable signal when the desired 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

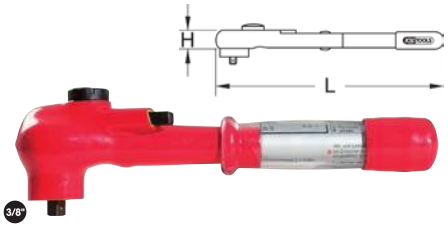


	■	N·m	D mm	H mm	L mm	ϟ	g
117.1184	3/8"	5-25	40,0	42,0	200,0	1000V	440



Torque wrench with protective insulation and reversible ratchet head

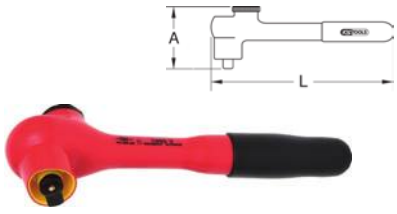
- Insulated handle to IEC 60900
- For working enviroment of voltages AC 1000 V and DC 1500 V
- Release accuracy: ±4 % tolerance from the set scale value and better
- Precise reading accuracy for a minimum 5.000 tightening cycles
- For controlled fastening in a clockwise direction
- Can untighten without 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

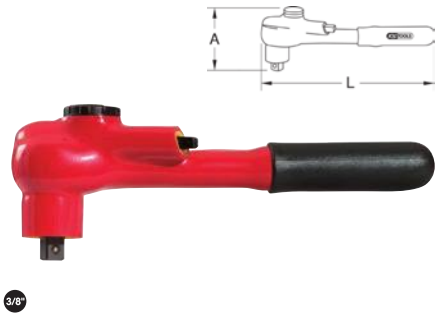
- Square drive adaptor to DIN 3120 / 1174 with ball lock
- In accordance to DIN 7449
- Insulated handle to IEC 60900
- With reversible 32-teeth ratchet head
- With frictional contact square drive with locking device
- Chrome vanadium



	■	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

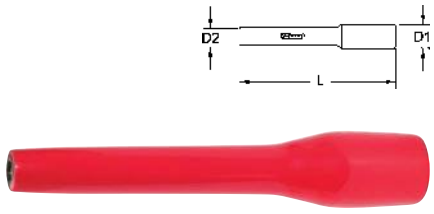
- In accordance to DIN 7434
- Insulated handle to IEC 60900
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- With screw adjustment on the square drive
- Chrome vanadium



	■	L mm	ϟ	g
117.3823	3/8"	125,0		140
117.3825	3/8"	250,0		280

Bit holder with protective insulation

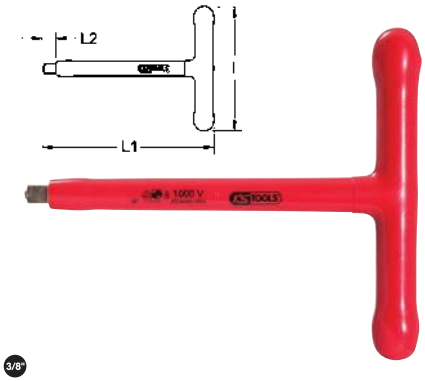
- Insulated handle to IEC 60900
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Magnetic
- For bits to DIN 3126 / C 6,3
- Chrome vanadium



	■	○	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



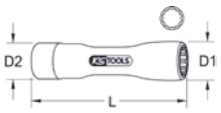


3/8"

	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

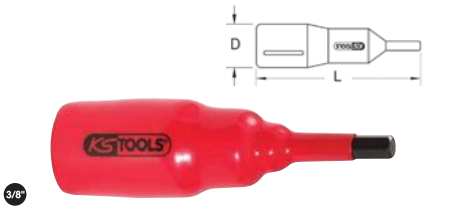
- PZ
- Insulated handle to IEC 60900
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Burnished
- Chrome vanadium



		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

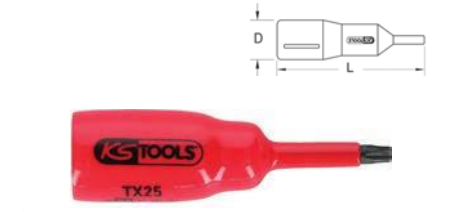
- Hexagon socket
- Insulated handle to IEC 60900
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Burnished
- Chrome vanadium



	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

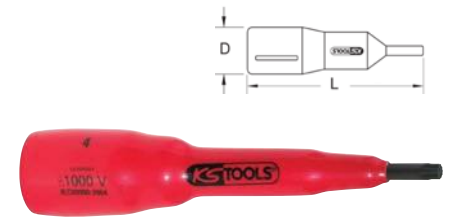
- Torx
- Insulated handle to IEC 60900
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Burnished
- Chrome vanadium



		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

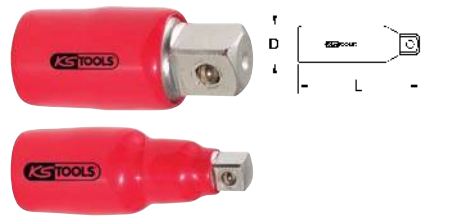
- Insulated handle to IEC 60900
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Magnetic
- For bits to DIN 3126 / C 6,3
- Chrome vanadium



	□	○	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



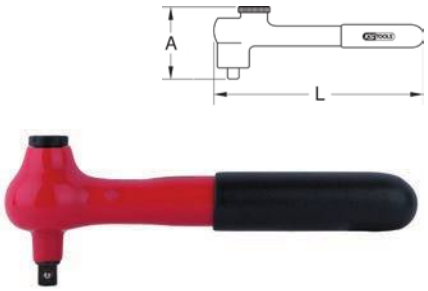
3/8"

			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

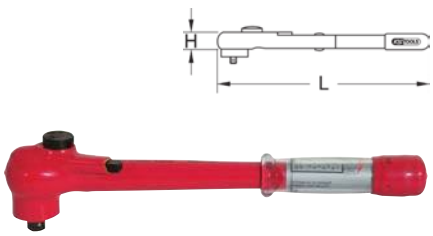


1/2"

	■	N·m	A mm	L mm	ϟ	kg
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

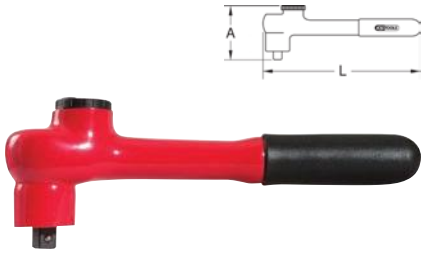


1/2"

	■	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

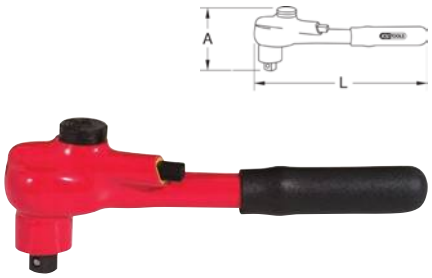


1/2"

	■	A mm	L mm	ϟ	kg
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	kg
117.1200	1/2”	88,0	245,0	≙ 1000V	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	kg
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	ϟ	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

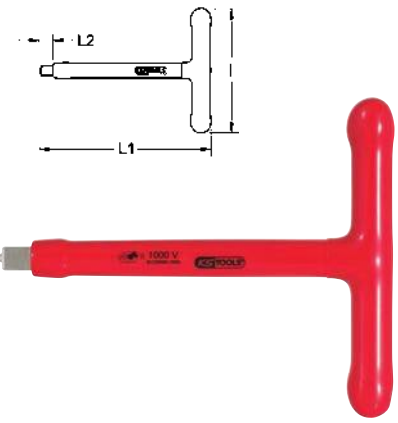


1/2"

	■	L mm	ϟ	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	ϟ	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	ϟ	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	ϟ	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

	mm	D1 mm	D2 mm	L mm	ϟ	g
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	ϟ	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



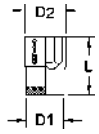
1/2"

	mm	D1 mm	D2 mm	L mm	ϟ	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



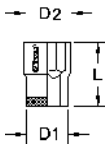


1/2"

		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



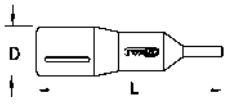


1/2"

		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



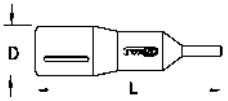


1/2"

	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



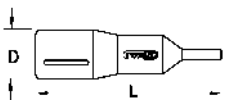


1/2"

	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"

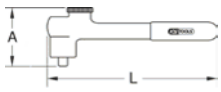
			kg
117.1860	16 pcs	Socket-set with insulated tools	4,50

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





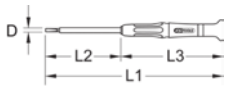
3/4"

	mm	D1 mm	D2 mm	L mm		g
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



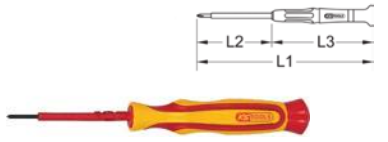


	D mm	L1 mm	L2 mm	L3 mm		g
500.6138	1,5	132,0	40,0	92,0	1000V	16
500.6139	1,8	132,0	40,0	92,0	1000V	16
500.6140	2,0	132,0	40,0	92,0	1000V	16
500.6141	2,5	152,0	60,0	92,0	1000V	18
500.6142	3,0	152,0	60,0	92,0	1000V	21
500.6143	3,5	152,0	60,0	92,0	1000V	21



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

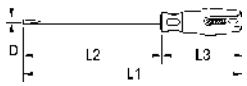


		L1 mm	L2 mm	L3 mm		g
500.6136	PH 00	132,0	40,0	92,0		16
500.6137	PH 0	152,0	60,0	92,0		16
500.6144	PH 1	152,0	60,0	92,0		21



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

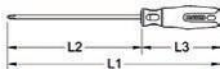




	D mm	L1 mm	L2 mm	L3 mm		g
117.0541	2	140,0	60,0	80,0		30
117.0502	2,5	155,0	75,0	80,0		32
117.0504	3,0	180,0	100,0	80,0		35
117.0506	3,5	180,0	100,0	80,0		38
117.0508	4,0	180,0	100,0	80,0		41
117.0542	4,5	230,0	125,0	105,0		92
117.0543	4,5	290,0	175,0	115,0		164
117.0544	4,5	315,0	200,0	115,0		230
117.0512	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

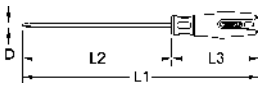




		L1 mm	L2 mm	L3 mm		g
117.0522	PH 0	140,0	60,0	80,0		32
117.0524	PH 1	185,0	80,0	105,0		38
117.1521	PH 1	265,0	150,0	115,0		152
117.0526	PH 2	205,0	100,0	105,0		95
117.1523	PH 2	315,0	200,0	115,0		230
117.0528	PH 3	265,0	150,0	115,0		152
117.1526	PH 4	315,0	200,0	115,0		230

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

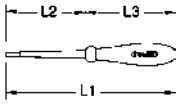




		L1 mm	L2 mm	L3 mm		g
117.0532	PZ 0	140,0	60,0	80,0		32
117.0534	PZ 1	185,0	80,0	105,0		38
117.1533	PZ 1	265,0	150,0	115,0		152
117.0536	PZ 2	205,0	100,0	105,0		95
117.1534	PZ 2	315,0	200,0	115,0		230
117.0538	PZ 3	265,0	150,0	115,0		152
117.1535	PZ 4	315,0	200,0	115,0		230

Hexagon socket screwdriver with protective insulation

- Hexagon socket
- In accordance to DIN 7439
- Insulated to IEC 60900
- Burnished
- Chrome vanadium

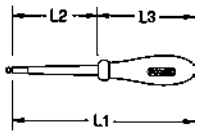




	mm	L1 mm	L2 mm	L3 mm		g
117.1631	1,5	156,0	75,0	81,0	1000V	16
117.1632	2,0	156,0	75,0	81,0	1000V	18
117.1633	2,5	181,0	100,0	81,0	1000V	34
117.1634	3,0	181,0	100,0	81,0		36
117.1635	4,0	231,0	125,0	106,0		43
117.1636	5,0	256,0	150,0	106,0		67
117.1637	6,0	291,0	175,0	116,0		83
117.1638	8,0	316,0	200,0	116,0		116

Insulated screwdriver for internal Torx screws

- Torx
- Insulated to IEC 60900
- Burnished
- Special tool steel

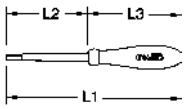




		L1 mm	L2 mm	L3 mm		g
117.2235	T5	140,0	60,0	80,0	1000V	32
117.2236	T6	140,0	60,0	80,0	1000V	33
117.2237	T7	140,0	60,0	80,0	1000V	33
117.2238	T8	140,0	60,0	80,0	1000V	35
117.2239	T9	140,0	60,0	80,0	1000V	36
117.0551	T10	170,0	80,0	90,0	1000V	27
117.0552	T15	170,0	80,0	90,0	1000V	28
117.0553	T20	190,0	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

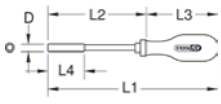




	■	L1 mm	L2 mm	L3 mm		g
117.0591	#1	160,0	80,0	80,0	1000V	27
117.0592	#1	255,0	150,0	105,0	1000V	92
117.0593	#2	180,0	100,0	80,0	1000V	41
117.0594	#2	315,0	200,0	115,0	1000V	230
117.0595	#3	265,0	150,0	115,0	1000V	115

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

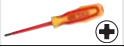
2 x		PH 0 - PH 00
5 x		1,5 - 1,8 - 2,0 - 2,5 - 3,0 mm

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

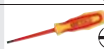
1 x		PH1
3 x		2,5 - 4,0 - 5,5 mm
1 x		3,0 mm

ERGOTORQUE® VDE screwdriver set

- In accordance to DIN 5264 / 7437 / 7438 / 8764
- Insulated to IEC 60900
- Two component handle
- Burnished
- Special tool steel



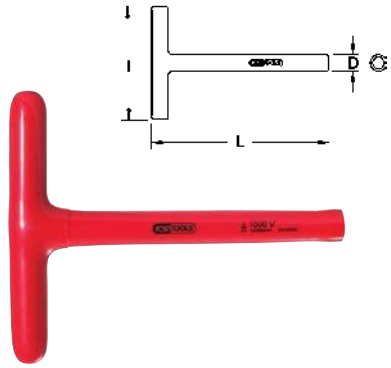
117.0550	8 pcs	ERGOTORQUE® VDE screwdriver set	430

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

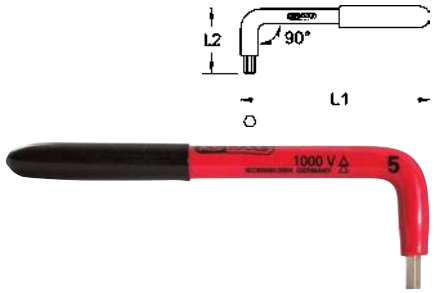


		D mm	L mm	l mm		
117.1743	1/4"	14,0	120,0	110,0	1000V	166
117.1744	1/4"	14,0	160,0	110,0	1000V	242
117.1745	1/4"	14,0	250,0	165,0	1000V	310



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

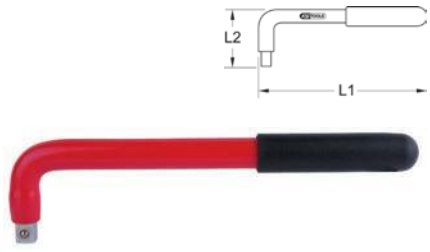
- Hexagon socket
- In accordance to DIN 7439
- Insulated handle to IEC 60900
- Specially for cable branch clamp ring
- Matt chrome
- Chrome vanadium



		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

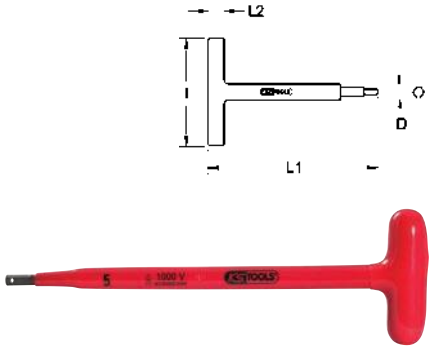
- Square drive adaptor to DIN 3120 / 1174 with ball lock
- In accordance to DIN 7436
- Insulated handle to IEC 60900
- With screw adjustment
- Chrome vanadium



		L1 mm	L2 mm		
117.1403	1/2"	280,0	70,0	1000V	470

T-handle Allen key with protective insulation

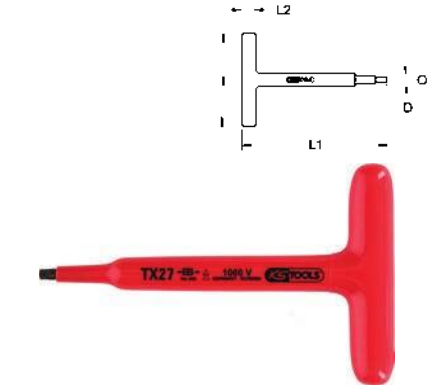
- Hexagon socket
- Insulated handle to IEC 60900
- Extremly versatile
- Burnished
- Chrome vanadium



	mm	l mm	D mm	L1 mm	L2 mm		g	
117.1671	3	65,0	5,0	120,0	17,5	1000V	80	
117.1673	4	65,0	10,0	120,0	19,0	1000V	85	
117.1674	4	104,0	15,0	160,0	22,0		145	
117.1675	4	64,0	10,0	200,0	18,0	1000V	150	
117.1676	4	94,0	13,0	250,0	19,0	1000V	168	
117.1677	5	65,0	11,0	120,0	20,0	1000V	85	
117.1678	5	105,0	15,0	160,0	21,0		250	
117.1679	5	65,0	10,0	200,0	18,0	1000V	150	
117.1681	5	105,0	15,0	250,0	20,0	1000V	168	
117.1682	6	90,0	11,0	120,0	20,0	1000V	110	
117.1683	6	105,0	15,0	160,0	21,0		250	
117.1684	6	65,0	11,0	200,0	19,0	1000V	150	
117.1742	6	105,0	8,0	250,0	20,0	1000V	307	
117.1685	8	105,0	15,0	160,0	21,0		260	
117.1686	8	160,0	13,0	200,0	22,0	1000V	325	
117.1687	8	100,0	17,0	250,0	22,0	1000V	360	
117.1688	10	160,0	15,0	200,0	20,0	1000V	390	
117.1689	10	160,0	15,0	250,0	20,0	1000V	420	
117.1691	10	160,0	15,0	300,0	20,0	1000V	450	
117.1692	11	160,0	15,0	200,0	20,0	1000V	400	
117.1693	12	160,0	16,0	200,0	20,0	1000V	420	
117.1694	13	160,0	16,0	200,0	21,0	1000V	450	
117.1695	14	160,0	17,0	200,0	21,0	1000V	490	
117.1696	17	160,0	20,0	200,0	21,0	1000V	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	1000V	85	
117.2413	T15	63,0	4,0	120,0	13,0	1000V	90	
117.2414	T20	103,0	5,0	120,0	13,0	1000V	90	
117.2415	T25	103,0	5,0	160,0	15,0	1000V	135	
117.2416	T27	103,0	6,0	160,0	15,0	1000V	150	
117.2417	T30	103,0	6,0	160,0	15,0	1000V	160	
117.2418	T40	103,0	7,0	200,0	15,0	1000V	210	
117.2419	T45	103,0	7,0	200,0	15,0	1000V	330	
117.2421	T50	103,0	8,0	200,0	15,0	1000V	410	

PLIERS WITH PROTECTIVE INSULATION

ERGOTORQUE® VDE combination pliers

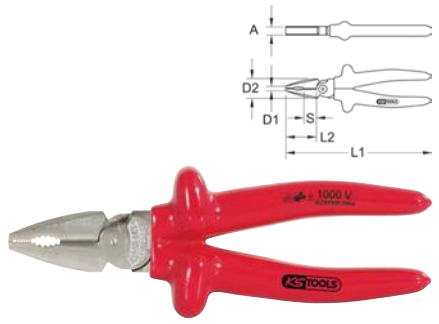
- In accordance to DIN ISO 5748
- Wrap around insulation to IEC 60900
- Two component handle
- Suitable for wire
- Induction-hardened precision cutting
- Matt chrome
- Special tool steel



	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

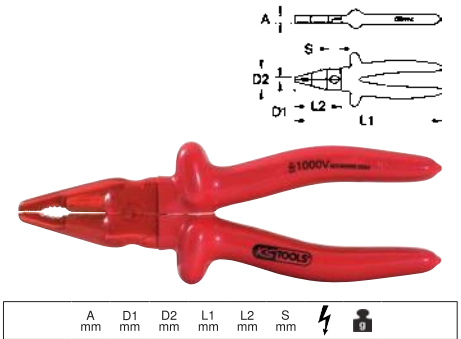
- In accordance to DIN ISO 5746
- Insulated handle to IEC 60900
- Also suitable for hard wire
- Extra heavy execution
- Induction-hardened precision cutting
- Matt chrome
- Special tool steel



	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	1000V	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	1000V	570	

1000V combination pliers

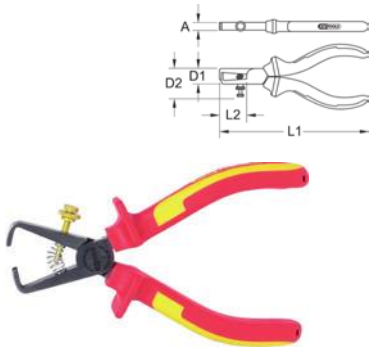
- In accordance to DIN ISO 5244
- Insulated handle to IEC 60900
- With coated working head
- Also suitable for hard wire
- Extra heavy execution
- Induction-hardened precision cutting
- Matt chrome
- Special tool steel



	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	1000V	280	
117.1712	16,0	8,5	32,5	205,0	44,0	18,5	1000V	350	

ERGOTORQUE® VDE cable stripper

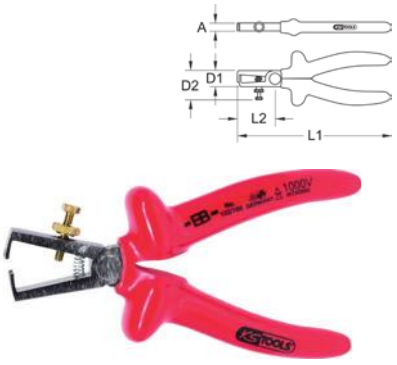
- In accordance to DIN ISO 5232
- Wrap around insulation to IEC 60900
- Locking jaw opening
- Adjusting screw and spring
- Two component handle
- For wires from 0,8 - 6,0 mm²
- Matt chrome
- Special tool steel



	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

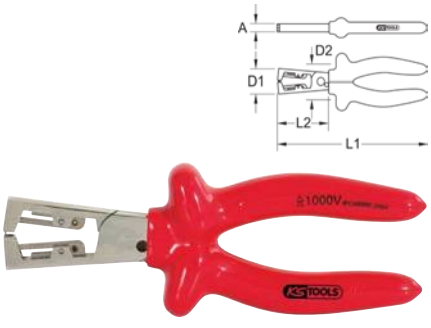
- In accordance to DIN ISO 5232
- Insulated handle to IEC 60900
- Locking jaw opening
- Adjusting screw and spring
- For wires from 0,8 - 6,0 mm²
- Matt chrome
- Special tool steel



	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

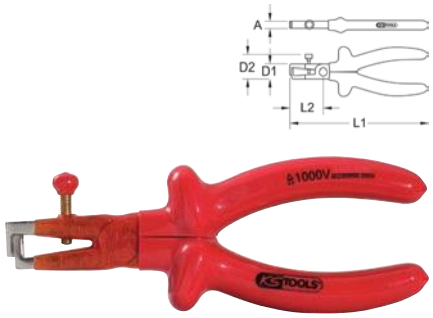
- Insulated handle to IEC 60900
- Self-adjusting
- With replaceable knives
- For wires from 0,5 - 5,0 mm²
- Cutting holes for the separation of cables and wires
- Matt chrome
- Special tool steel



	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

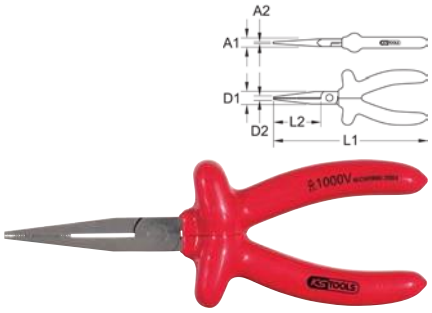
- In accordance to DIN ISO 5745
- Insulated handle to IEC 60900
- With flat and smooth gripping jaws
- Rounded edges
- Matt chrome
- Special tool steel



	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

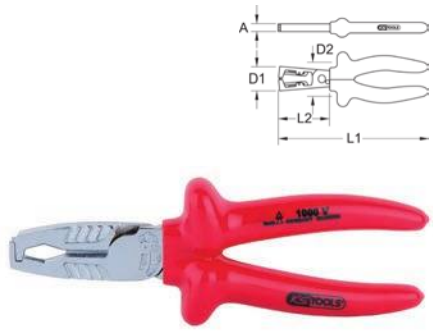
- In accordance to DIN ISO 5745
- Insulated handle to IEC 60900
- With long jaws
- Serrated execution
- Matt chrome
- Special tool steel



	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

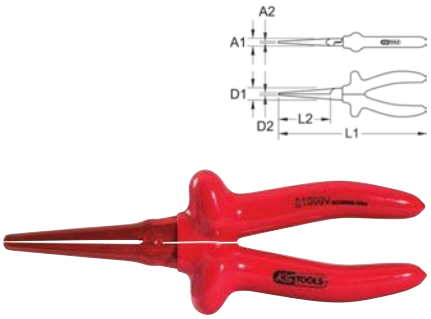
- Insulated handle to IEC 60900
- Multifunctional wire strippers
- Self-adjusting
- With replaceable knives
- For wires from 0,5 - 5,0 mm²
- Cutting holes for the separation of cables and wires
- Matt chrome
- Special tool steel



	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

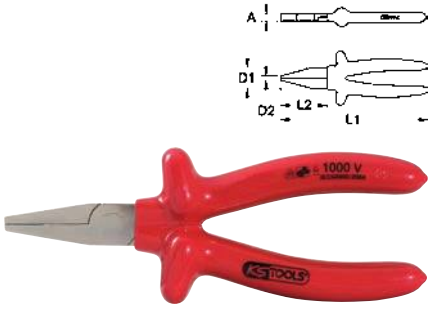
- In accordance to DIN ISO 5745
- Insulated handle to IEC 60900
- With coated working head
- With flat and smooth gripping jaws
- Rounded edges
- Matt chrome
- Special tool steel



	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

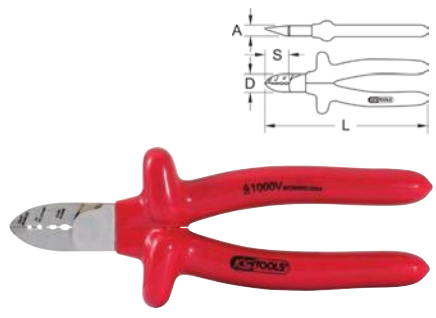
- In accordance to DIN ISO 5745
- Insulated handle to IEC 60900
- Short and powerful jaws
- Serrated execution
- Matt chrome
- Special tool steel



	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

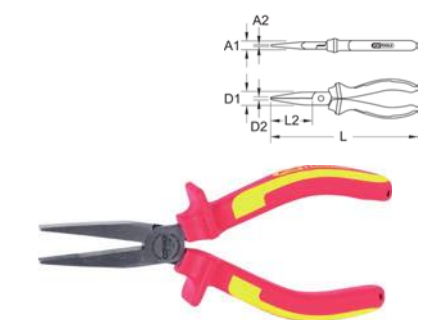
- Insulated handle to DIN / EN 60900
- For cutting, stripping and crimping
- Wire stippers for wires from 1,5 mm² + 2,5 mm²
- For crimping of insulated cable lugs with Ø 1,5 mm + 2,5 mm
- Induction-hardened precision cutting
- Matt chrome
- Special tool steel



	A mm	D mm	L mm	S mm		
117.1281	10,5	22,0	175,0	27,0	1000V	320

ERGOTORQUE® VDE flat pliers

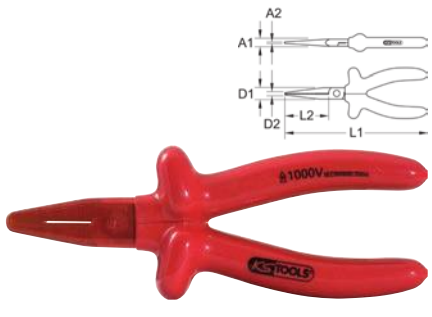
- In accordance to DIN ISO 5745
- Wrap around insulation to IEC 60900
- Two component handle
- Serrated execution
- Matt chrome
- Special tool steel



	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

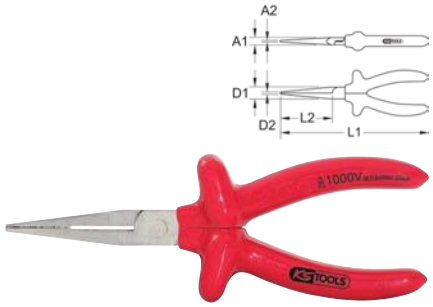
- In accordance to DIN ISO 5745
- Insulated handle to IEC 60900
- With coated working head
- Short and powerful jaws
- Serrated execution
- Matt chrome
- Special tool steel



	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

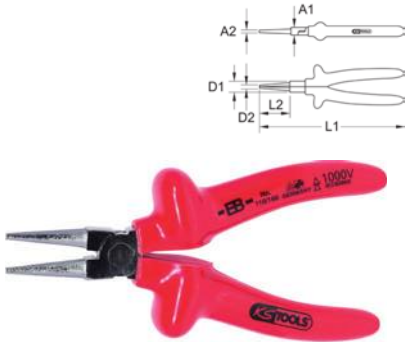
- In accordance to DIN ISO 5745
- Insulated handle to IEC 60900
- With round and long jaws
- With smooth tips
- Serrated execution
- Matt chrome
- Special tool steel



	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	1000V	180

ERGOTORQUE® VDE long nosed pliers

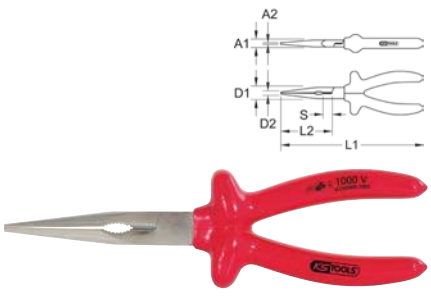
- In accordance to DIN ISO 5745
- Wrap around insulation to IEC 60900
- Two component handle
- Long jaws
- Suitable for medium and hard wire
- Induction-hardened precision cutting
- Matt chrome
- Special tool steel



	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	1000V	177
117.1118	11,0	3,5	22,0	4,5	215,0	69,0	2,5	1000V	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	1000V	230
117.1293	9,0	2,0	15,5	3,0	160,0	55,0	1000V	170

1000V long nosed pliers

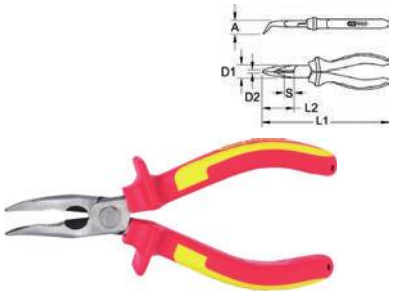
- In accordance to DIN ISO 5745
- Insulated handle to IEC 60900
- With coated working head
- Long jaws
- For soft and medium wire
- Induction-hardened precision cutting
- Matt chrome
- Special tool steel



	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	1000V	210
117.1121	11,0	22,0	5,0	205,0	70,0	2,5	1000V	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	1000V	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		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		g
117.1268	10,0	20,0	160,0	15,0	1000V	220

ERGOTORQUE® VDE diagonal side cutters

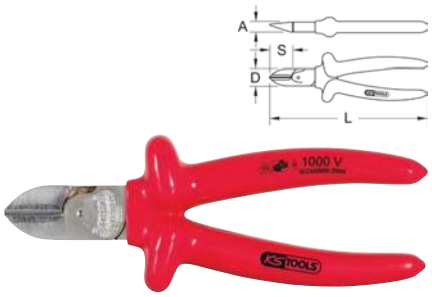
- In accordance to DIN ISO 5749
- Wrap around insulation to IEC 60900
- Two component handle
- For soft and medium wire
- Induction-hardened precision cutting
- Matt chrome
- Special tool steel



	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

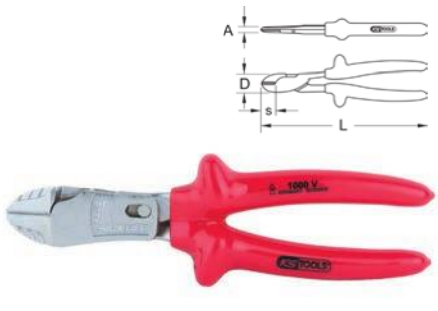
- In accordance to DIN ISO 5232
- Insulated handle to IEC 60900
- Working head coated
- For soft and hard wire
- Induction-hardened precision cutting
- Matt chrome
- Special tool steel



	A mm	D mm	L mm	S mm		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

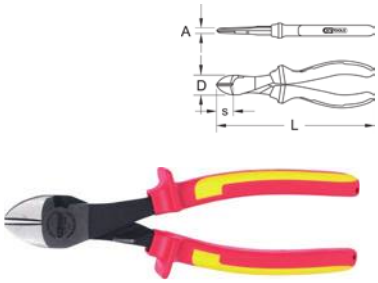
- In accordance to DIN ISO 5749
- Insulated handle to IEC 60900
- For all types of wire
- Especially for overhead line construction
- Lower power usage
- 40% power saving
- Induction-hardened precision cutting
- Matt chrome
- Special tool steel



	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

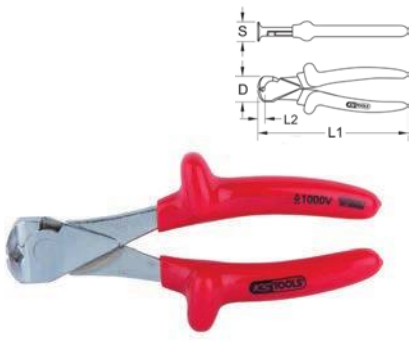
- In accordance to DIN ISO 5749
- Insulated handle to IEC 60900
- For all types of wire
- Especially for overhead line construction
- Lower power usage
- Induction-hardened precision cutting
- Matt chrome
- Special tool steel



	A mm	D mm	L mm	S mm		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

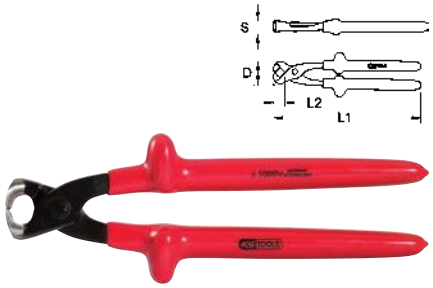
- In accordance to DIN ISO 5748
- Insulated handle to IEC 60900
- For soft and hard wire
- Induction-hardened precision cutting
- Matt chrome
- Special tool steel



	D mm	L mm	L2 mm	S mm		g
117.1198	30,0	160,0	6,5	23,0	1000V	280

1000V rabitz pliers

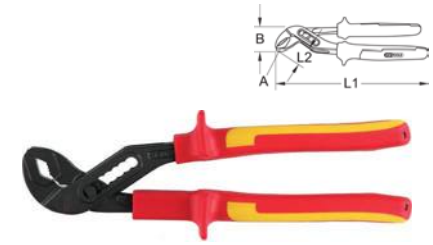
- Insulated handle to DIN / EN 60900
- For soft wire
- For the cutting and twisting of tie wire
- Induction-hardened precision cutting
- Phosphate finish
- Special tool steel



	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



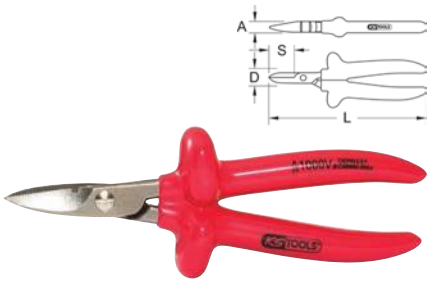
117.1873	6 pcs	1000V pliers set	2,50

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

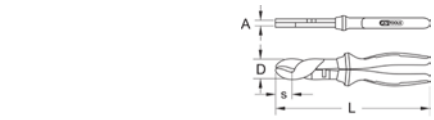
- Insulated handle to IEC 60900
- For and on multi strand copper and aluminium cable
- For lead cable up to max. Ø 50 mm²
- Lower power usage
- Not suited for steel wire and hard pulled copper cables
- Matt chrome
- Special tool steel



	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

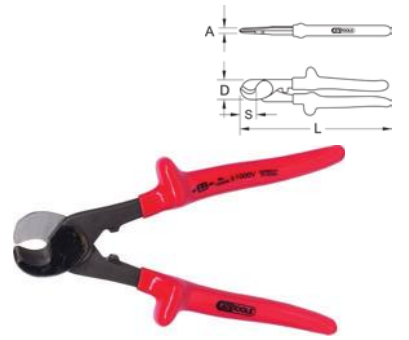




	Ø mm	A mm	D mm	L mm	S mm		g
117.1122	10,0	10,8	24,5	165,0	15,0		200
117.1123	12,5	13,0	29,0	215,0	17,5		270
117.1124	15,0	13,5	45,0	245,0	31,0		550

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		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		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		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		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		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		g
117.1259	22,0	18,0	31,0	215,0	32,0		360

1000V two cut cable shear

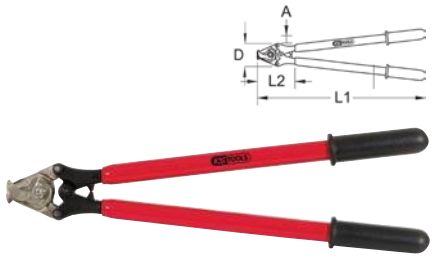
- Insulated handle to IEC 60900
- For and on multi strand copper and aluminium cable
- Precision blade for easy and clean cut
- With before and after cut
- With after adjustable screw joint
- Not suited for steel wire and hard pulled copper cables
- Matt chrome
- Special tool steel



	Ø mm	Cutting ratio mm²	A mm	D mm	L1 mm	L2 mm	S mm		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		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

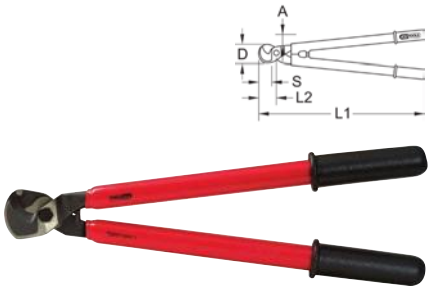
- From black synthetic leather
- For storage and protection of insulated cable shears



	L mm	B mm		g
117.1262	650,0	95 - 190	➡ 117.1260 + 117.1261	241

Cable shears with protective insulation

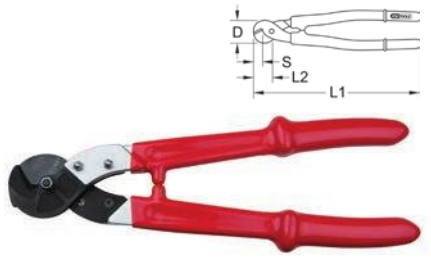
- Insulated handle to IEC 60900
- For bruise free cutting of copper and aluminium cables
- Clean cut through new cutting edge geometry
- With after adjustable screw joint
- Lower power usage
- Not suited for steel wire and hard pulled copper cables
- Matt chrome
- Special tool steel



	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

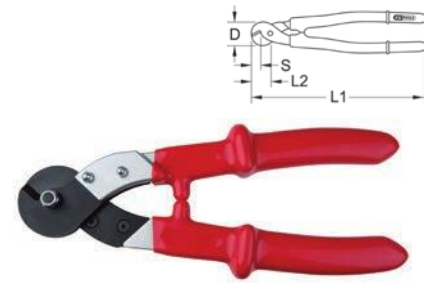
- Insulated handle to IEC 60900
- For bruise free cutting of copper and aluminium cables
- Clean cut through new cutting edge geometry
- With after adjustable screw joint
- Lower power usage
- Not suited for steel wire and hard pulled copper cables
- Matt chrome
- Special tool steel



	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

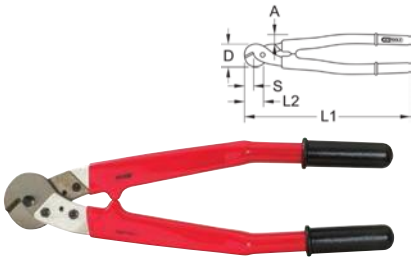
- Insulated handle to IEC 60900
- Above average cutting edge achieved
- For bruise free cutting for steel and aluminium rope, copper and aluminium cable
- Angular cutting edge tip for cutting single rope cords
- With interchangeable cutter head
- Cutter head made of high quality special steel
- Lower 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

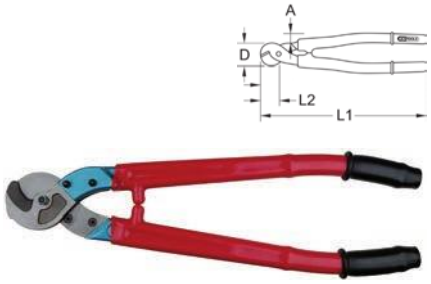
- Insulated handle to IEC 60900
- Above average cutting edge achieved
- For bruise free cutting for steel and aluminium rope, copper and aluminium cable
- Angular cutting edge tip for cutting single rope cords
- With interchangeable cutter head
- Cutter head made of high quality special steel
- Lower 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

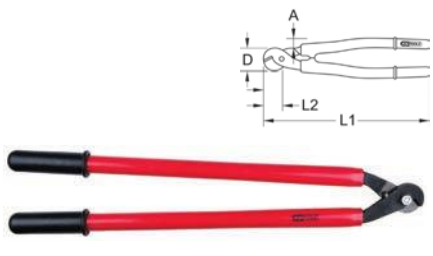
- Insulated handle to IEC 60900
- Above average cutting edge achieved
- For bruise free cutting for steel and aluminium rope, copper and aluminium cable
- Angular cutting edge tip for cutting single rope cords
- With interchangeable cutter head
- Cutter head made of high quality special steel
- Lower 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

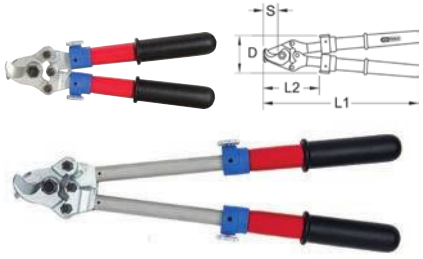
- Insulated handle to IEC 60900
- Above average cutting edge achieved
- For bruise free cutting for steel and aluminium rope, copper and aluminium cable
- Angular cutting edge tip for cutting single rope cords
- With interchangeable cutter head
- Cutter head made of high quality special steel
- Lower 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

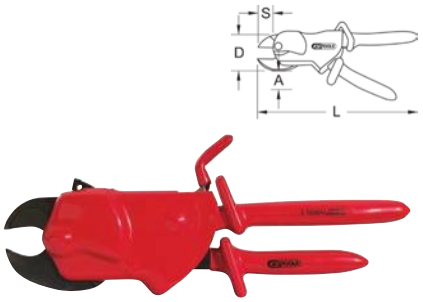
- Insulated handle to IEC 60900
- For and on multi strand copper and aluminium cable
- With telescopic handle
- With interchangeable cutter head
- Lower power usage
- Not suited for steel wire and hard pulled copper cables
- Matt chrome
- Special tool steel



	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

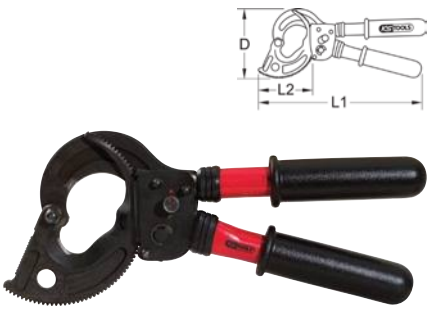
- Insulated handle to IEC 60900
- For and on multi strand copper and aluminium cable
- Working head coated
- Automatic reserve through spring return
- Cutting edge process can be interrupted in every position
- Matt chrome
- Special tool steel



	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

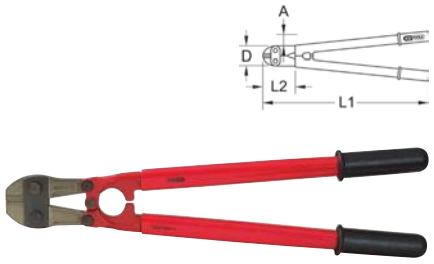
- Insulated handle to IEC 60900
- For and on multi strand copper and aluminium cable
- With double supported eccentric drive
- Almost break proof gearing
- Thin cutting steel sheet casing
- Ratchet function
- Not suitable for hardened steel wire
- Phosphate finish
- Special tool steel



	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



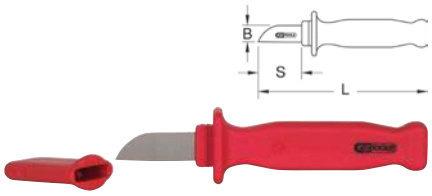
	A mm	D mm	L1 mm	L2 mm	Replacement cutter head	1000V	kg
117.1256	8,0	79,0	610,0	115,0	117.1257		2,70



ELECTRICIAN'S KNIVES

Cable knife with protective insulation

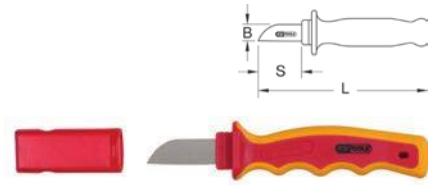
- Insulated to IEC 60900
- With durable and straight blade
- Straight blade
- Safety handle made out of tough elastic and impact resistant plastic
- With safety cover



	B mm	S mm	L mm	1000V	g
117.1295	18,5	50,0	210,0		105

Cable knife with protective insulation

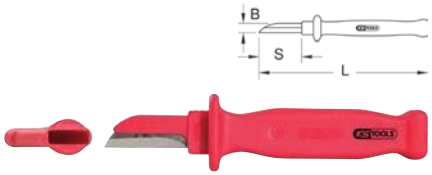
- Insulated to IEC 60900
- Two component handle
- With durable and straight blade
- Straight blade
- Safety handle made out of tough elastic and impact resistant plastic
- With safety cover



	B mm	S mm	L mm	1000V	g
117.1397	16,7	53,0	205,0		90

Cable knife with protective insulation

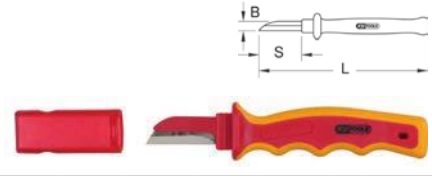
- Insulated to IEC 60900
- With durable, part insulated and straight blade
- Straight blade
- Safety handle made out of tough elastic and impact resistant plastic
- With safety cover



	B mm	S mm	L mm	1000V	g
117.1390	18,5	50,0	210,0		115

Cable knife with protective insulation

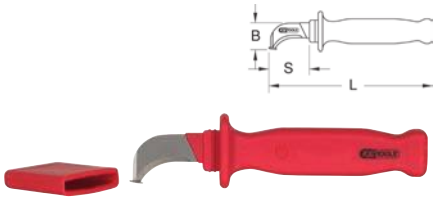
- Insulated to IEC 60900
- Two component handle
- With durable, part insulated and straight blade
- Straight blade
- Safety handle made out of tough elastic and impact resistant plastic
- With safety cover



	B mm	S mm	L mm	1000V	g
117.1304	20,3	53,0	205,0		99

Cable knife with protective insulation and hook blade

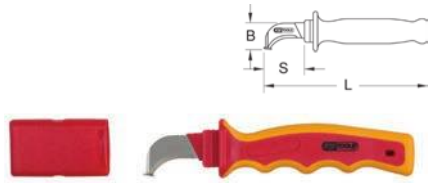
- Insulated to IEC 60900
- With durable blade
- Hook shaped cutting edge
- For slitting and stripping cable
- Safety handle made out of tough elastic and impact resistant plastic
- With safety cover



	B mm	S mm	L mm	1000V	g
117.1296	28,0	40,0	200,0		100

Cable knife with protective insulation and hook blade

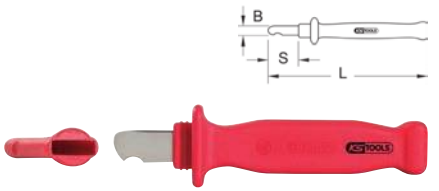
- Insulated to IEC 60900
- Two component handle
- With durable blade
- Hook shaped cutting edge
- For slitting and stripping cable
- Safety handle made out of tough elastic and impact resistant plastic
- With safety cover



	B mm	S mm	L mm	1000V	g
117.1331	30,0	47,0	200,0		92

Dismantling knife with protective insulation

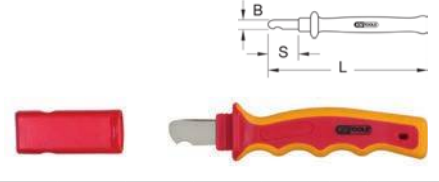
- Insulated to IEC 60900
- With durable and straight blade
- Hook shaped cutting edge
- Safety handle made out of tough elastic and impact resistant plastic
- With safety cover



	B mm	S mm	L mm	1000V	g
117.1391	19,0	35,0	182,0		95

Dismantling knife with protective insulation

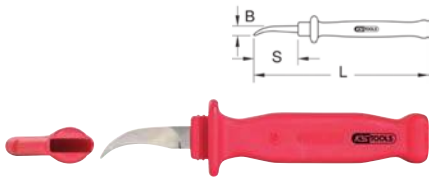
- Insulated to IEC 60900
- Two component handle
- With durable and straight blade
- Hook shaped cutting edge
- Safety handle made out of tough elastic and impact resistant plastic
- With safety cover



	B mm	S mm	L mm	1000V	g
117.1305	19,0	35,0	185,0		92

Paper section knives with protective insulation

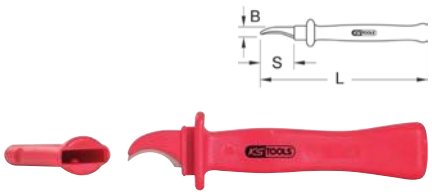
- Insulated to IEC 60900
- With durable blade
- Hook shaped cutting edge
- Suitable for sector cable
- Safety handle made out of tough elastic and impact resistant plastic
- With safety cover



	B mm	S mm	L mm		g
117.1392	19,0	50,0	205,0		90

Settling knife with protective insulation

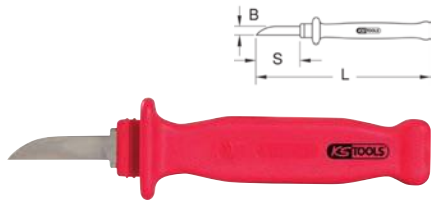
- Insulated to IEC 60900
- With durable blade
- Hook shaped and part isolated cutting edge
- Safety handle made out of tough elastic and impact resistant plastic
- With safety cover



	B mm	S mm	L mm		g
117.1394	21,0	35,0	165,0		75

Cable stripping blades with protective insulation

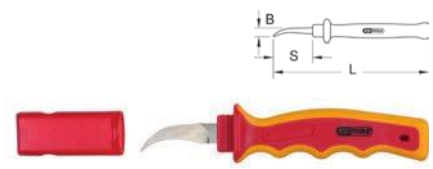
- Insulated to IEC 60900
- With durable blade
- Narrow and straight cutting edge
- Safety handle made out of tough elastic and impact resistant plastic
- With safety cover



	B mm	S mm	L mm		g
117.1396	11,0	50,0	200,0		95

Paper section knives with protective insulation

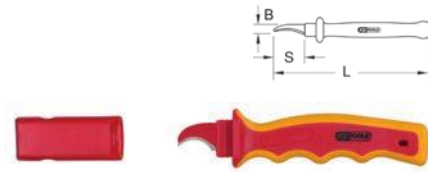
- Insulated to IEC 60900
- Two component handle
- With durable blade
- Hook shaped cutting edge
- Suitable for sector cable
- Safety handle made out of tough elastic and impact resistant plastic
- With safety cover



	B mm	S mm	L mm		g
117.1320	17,0	56,0	210,0	1000V	83

Settling knife with protective insulation

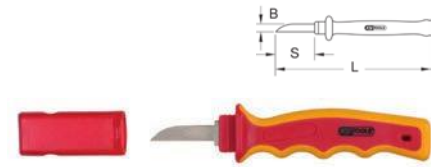
- Insulated to IEC 60900
- Two component handle
- With durable blade
- Hook shaped and part isolated cutting edge
- Safety handle made out of tough elastic and impact resistant plastic
- With safety cover



	B mm	S mm	L mm		g
117.1328	21,2	30,0	180,0	1000V	87

Cable stripping blades with protective insulation

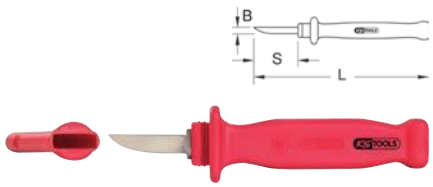
- Insulated to IEC 60900
- Two component handle
- With durable blade
- Narrow and straight cutting edge
- Safety handle made out of tough elastic and impact resistant plastic
- With safety cover



	B mm	S mm	L mm		g
117.1360	11,0	50,0	200,0	1000V	86

Gutta percha knife with protective insulation

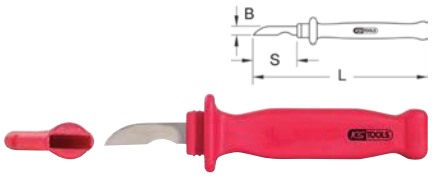
- Insulated to IEC 60900
- With durable blade
- Arched cutting edge
- Safety handle made out of tough elastic and impact resistant plastic
- With safety cover



	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

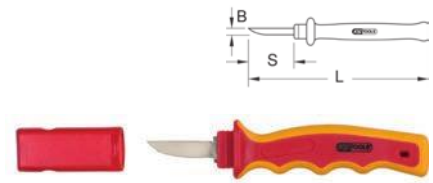
- Insulated to IEC 60900
- With durable and straight blade
- For stripping all insulation layers from cables
- Replaceable double knife
- Cutting depth adjustable
- Suitable for longitudinal and round cutting



	L mm	Ø Wire mm	Replacement blades		g
117.3901	240,0	> 25,0	117.3902	1000V	250

Gutta percha knife with protective insulation

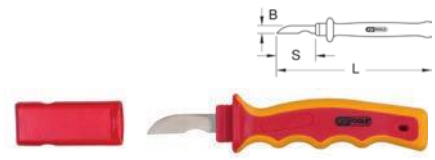
- Insulated to IEC 60900
- Two component handle
- With durable blade
- Arched cutting edge
- Safety handle made out of tough elastic and impact resistant plastic
- With safety cover



	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

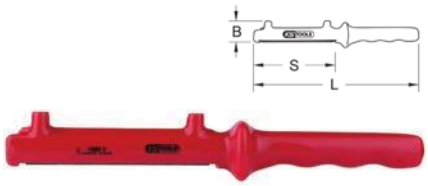
- Insulated to IEC 60900
- With durable, partially insulated and replaceable blade
- Straight blade
- Safety handle made out of tough elastic and impact resistant plastic
- With built-in protective cap



	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

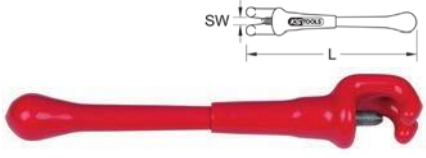


	Ø mm	D mm	L mm		g
117.1365	25-52	140,0	300,0	1000V	690

COUNTERHOLDER WITH PROTECTIVE INSULATION

Counterholder with protective insulation

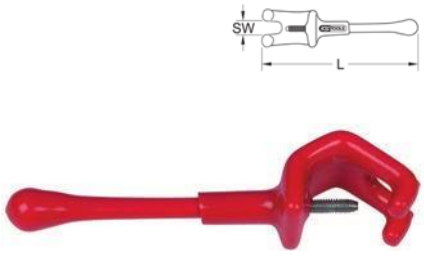
- Insulated handle to IEC 60900
- For better handling of screw connectors during assembly of sleeves
- Infinitely variable
- Can also be used for streetlights
- For screw connections of 0 - 15 mm



	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

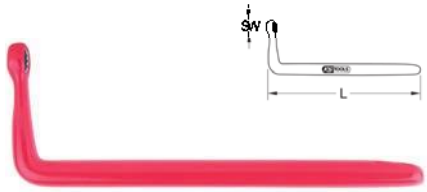
- Insulated handle to IEC 60900
- For better handling of screw connectors during assembly of sleeves
- Infinitely variable
- Can also be used for streetlights
- For screw connections of 25 - 50 mm



	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

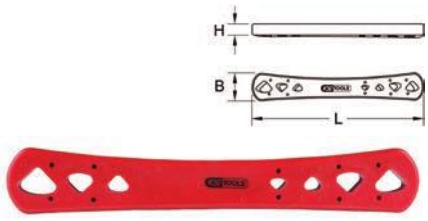


3/8"

	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



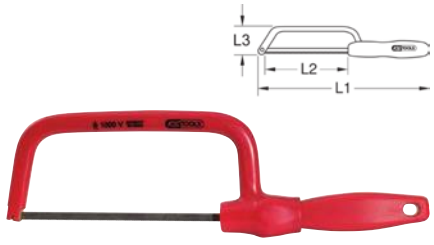
3/8"

	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

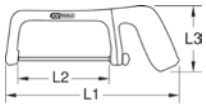
- Insulated handle to IEC 60900
- Frame out of reinforced flat iron 10 x 5 mm
- With insulated handle for tensioning the saw blade



	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

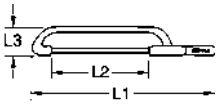




	L1 mm	L2 mm	L3 mm			g
117.1265	265,0	145,0	100,0	997.1216	1000V	180

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

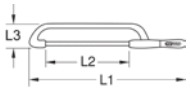




	L1 mm	L2 mm	L3 mm			g
117.1323	520,0	330,0	130,0	129.6620-24	1000V	770

Hacksaw with protective insulation

- Insulated handle to IEC 60900
- Heavy execution
- With plastic screw for tensioning the saw blade



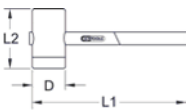


	L1 mm	L2 mm	L3 mm			g
117.1325	450,0	275,0	140,0	129.6620-24	1000V	700

HAMMER WITH PROTECTIVE INSULATION

Plastic hammer with protective insulation

- Insulated to IEC 60900
- Made from plastic
- Without metal parts

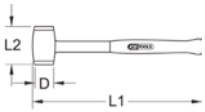




	D mm	L1 mm	L2 mm		g
117.1131	55,0	300,0	82,0	1000V	325

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



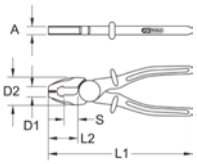


	D mm	L1 mm	L2 mm	head,spare		g
117.1126	25,0	300,0	105,0	117.1128	1000V	560
117.1127	35,0	310,0	115,0	117.1129	1000V	790

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

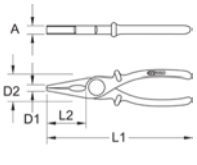




	A mm	D1 mm	D2 mm	L1 mm	L2 mm	S mm		g
117.1639	15,0	15,0	37,0	200,0	39,0	14,0	1000V	152

Plastic flat nose pliers with protective insulation

- Insulated to IEC 60900
- Made out of extremely durable plastic

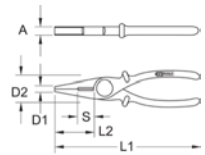




	A mm	D1 mm	D2 mm	L1 mm	L2 mm		g
117.1640	9,0	6,0	32,0	200,0	55,0	1000V	106

Plastic flat nose pliers with protective insulation

- Insulated to IEC 60900
- With machined cutting edge
- Made out of extremely durable plastic

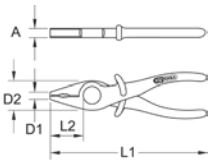




	A mm	D1 mm	D2 mm	L1 mm	L2 mm	S mm		g
117.1641	9,0	6,0	32,0	190,0	55,0	14,0	1000V	108

Plastic flat nose pliers with protective insulation

- Insulated to IEC 60900
- Suitable for meter assembly and closure
- Made out of extremely durable plastic

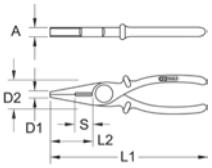




	A mm	D1 mm	D2 mm	L1 mm	L2 mm		g
117.1642	11,0	10,0	38,0	180,0	37,0	1000V	85

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

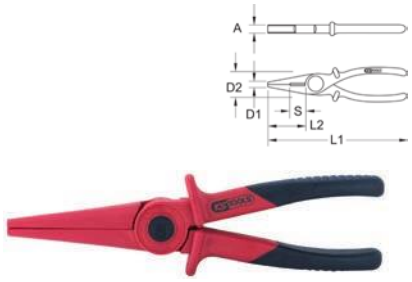




	A mm	D1 mm	D2 mm	L1 mm	L2 mm	S mm		g
117.1765	11,5	6,0	32,0	185,0	33,0	19,0		130

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

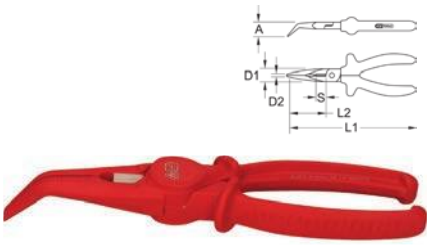
- Two component handle
- Fully insulated pliers
- Reduces the risk of short-circuit
- For assembling counters and locking
- Glass-fibre reinforced plastic
- With soft plastic area on the handle
- For firm hold



	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

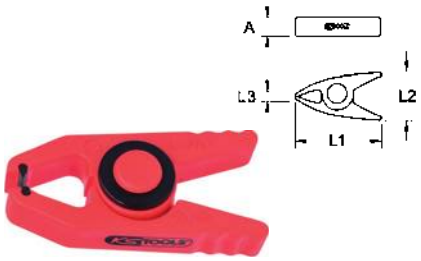
- Insulated to IEC 60900
- Fully insulated pliers
- Reduces the risk of short-circuit
- For assembling counters and locking
- Glass-fibre reinforced plastic
- For firm hold



	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

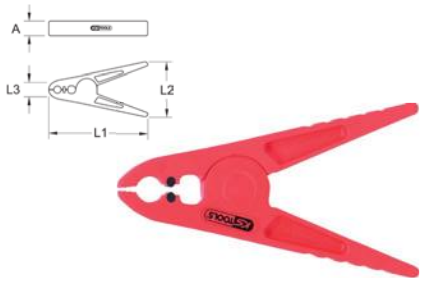
- Insulated to IEC 60900
- Extra small execution
- With inserted steel spring
- For clamping of uncovered cable
- Made from plastic



	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

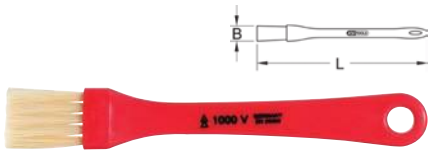


	A mm	L1 mm	L2 mm	L3 mm		
117.1644	16,0	160,0	94,0	27,0		70

BRUSH WITH PROTECTIVE INSULATION

Dust brush with protective insulation, straight

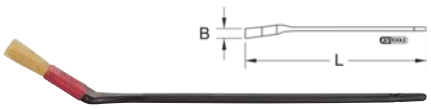
- Insulated to IEC 60900
- With hanging hole
- Short execution
- No electric run
- Made from plastic



	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

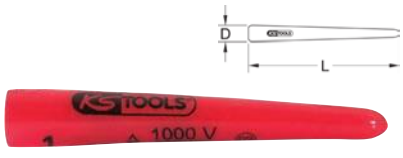
- Insulated handle to IEC 60900
- For isolating of cable heads and single conductors
- Made out of tough elastic insulating material



	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

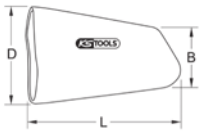
- Insulated handle to IEC 60900
- For isolating of cable single conductors
- Beveled
- Made out of tough elastic insulating material



	D mm	L mm		
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		
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

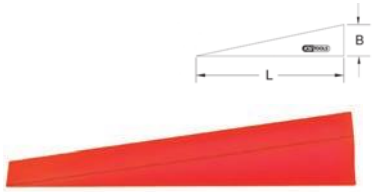


	D mm	L mm	Replacement battery		
117.1650	28,0	90,0	AA-Lithium	1000V	80

EXPANSION WEDGES WITH PROTECTIVE INSULATION

Plastic expansion wedge

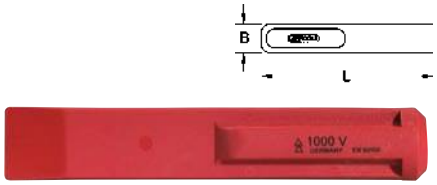
- For working enviroment of voltages AC 1000 V and DC 1500 V
- Without flute
- Made from impact resistant plastic



	L mm	B mm		
117.4267	160,0	15,0	1000V	60

Plastic wedge

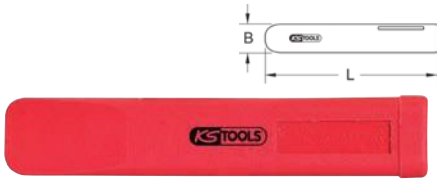
- For working enviroment of voltages AC 1000 V and DC 1500 V
- With sharp edges
- With large impact head
- Made from impact resistant plastic



	B mm	L mm		
117.1667	28,0	170,0	1000V	90

Plastic expansion wedge

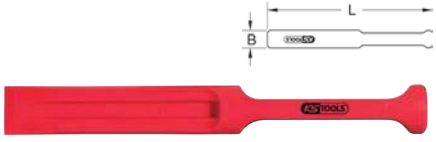
- For working enviroment of voltages AC 1000 V and DC 1500 V
- Without flute
- Oval form without sharp edges
- Short execution
- Made from impact resistant plastic



	B mm	L mm		
117.1668	30,0	150,0	1000V	40

Plastic expansion wedge

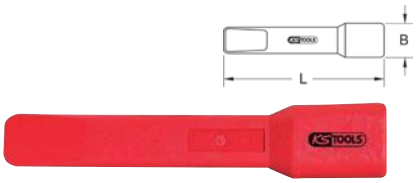
- For working enviroment of voltages AC 1000 V and DC 1500 V
- With wide groove for all current cable scissors
- Oval form without sharp edges
- Made from impact resistant plastic



	B mm	L mm		
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		
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		
117.1680	53,0	225,0	1000V	225

Plastic expansion wedge

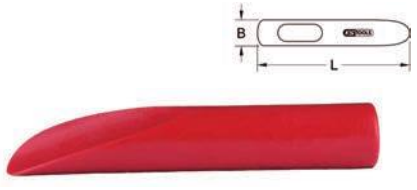
- For working enviroment of voltages AC 1000 V and DC 1500 V
- Specially for assembly of cable branch terminals
- Groove width 22 mm
- Made from impact resistant plastic
- As an aid for cutting cable wires



	A mm	L mm	B mm		
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

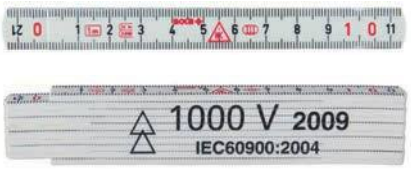


	L mm	B mm		
117.4269	140,0	25,0	1000V	58

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



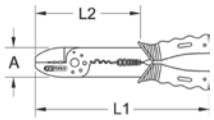
	Plug width mm	Length mm	g
154.0124	14,5	200,0	274

CRIMPING TOOLS

Multifunction pliers for insulated and non insulated cable terminals

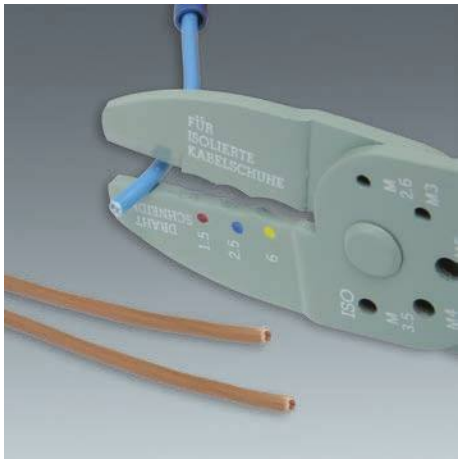
- For professional cable cutting and stripping wires from 0,75 - 6,0 mm²
- For crimping cable terminals and connectors from 1,5 - 6,0 mm²
- Cutting function
- Two component handle
- Pliers body made of flat steel







	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

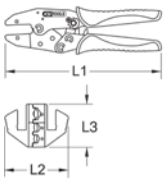


			g
115.1230	271 pcs	Multifunction crimping pliers set	560

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



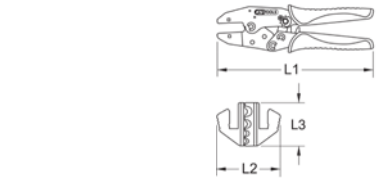




	mm²	AWG	L1 mm	L2 mm	L3 mm		g
115.1425	0,5-1,0/1,5-2,5/4,0-6,0	22-18/16-14/12-10	220,0	50,0	34,0	115.1415	491

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

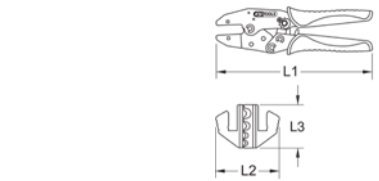




	mm²	AWG	L1 mm	L2 mm	L3 mm		g
115.1430	1,5/2,5/6,0/10,0	20-18/16-14/12-10/8	220,0	50,0	34,0	115.1416	487

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

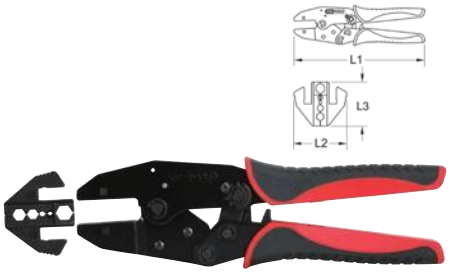
- Extremely robust and reliable
- Safety lock
- Inserts lock and to they click to prevent possible misuse
- Optimal crimping through precision profile
- Ratchet function
- Adjustment of the crimping pressure
- Easy to change the crimp heads through quick locking device
- Two component handle
- Burnished
- 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

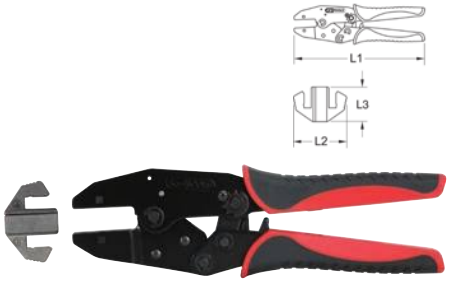
- Extremely robust and reliable
- Safety lock
- Inserts lock and to they click to prevent possible misuse
- Optimal crimping through precision profile
- Ratchet function
- Adjustment of the crimping pressure
- Easy to change the crimp heads through quick locking device
- Two component handle
- Burnished
- 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

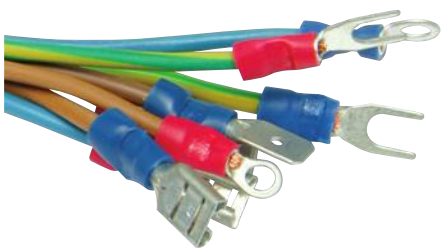
Net working crimping pliers set

- 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

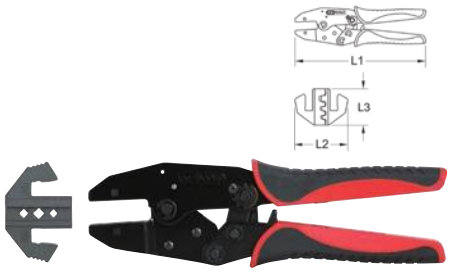
- Extremely robust and reliable
- Safety lock
- Inserts lock and to they click to prevent possible misuse
- Optimal crimping through precision profile
- Ratchet function
- Adjustment of the crimping pressure
- Easy to change the crimp heads through quick locking device
- Two component handle
- Burnished
- 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	

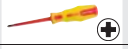
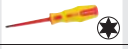
Tool set with insulated tools for hybrid and electric vehicles

- 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.

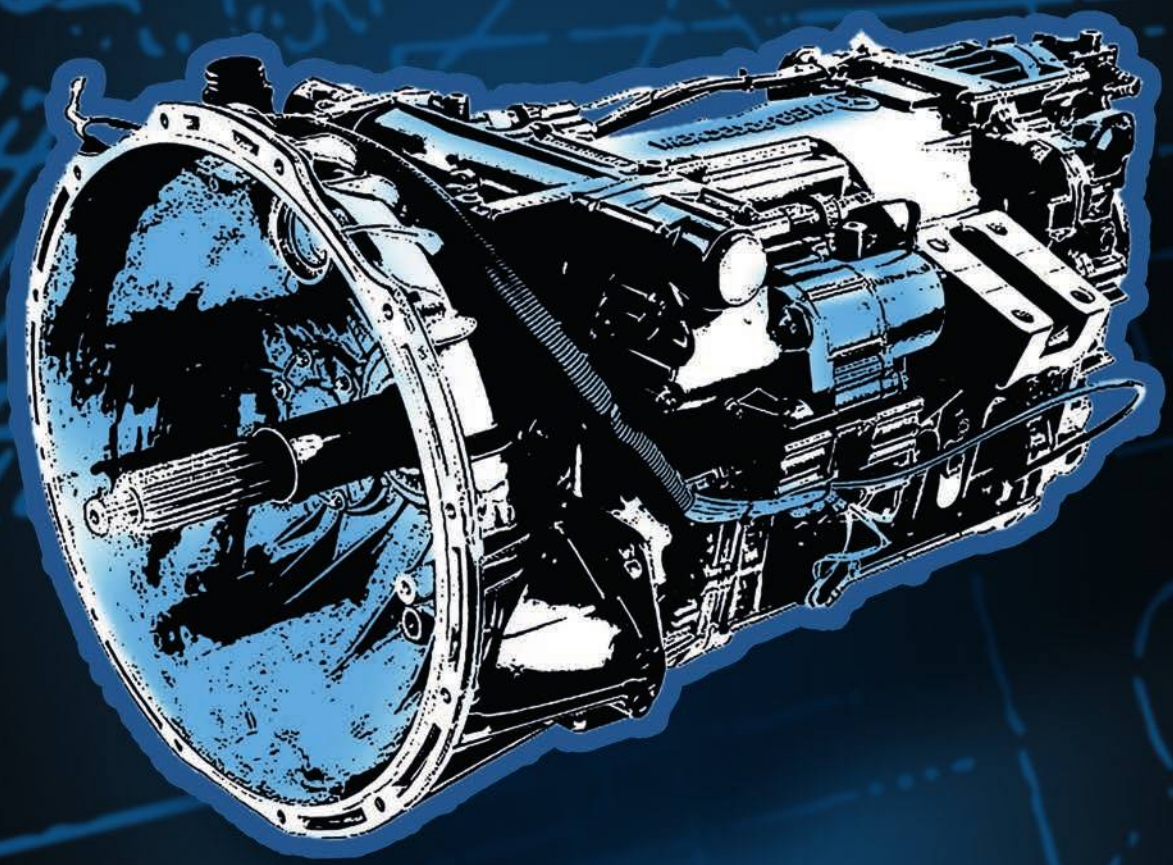
The KS Tools specialist tools for hybrid and electric vehicles are manufactured to the most recent and international regulations from high-quality materials and offer maximum protection for every user!



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Innovation is our mission!





KS TOOLS®

Innovation is our mission!

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PIN WRENCH

Slotted nut wrench with 4 pins for DAF

- Internal square drive to DIN 3121 / ISO 1174
- High accuracy of fit
- Special profile with 4 internal studs
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: DAF XLR (Euro 4) centre drive shaft bearing



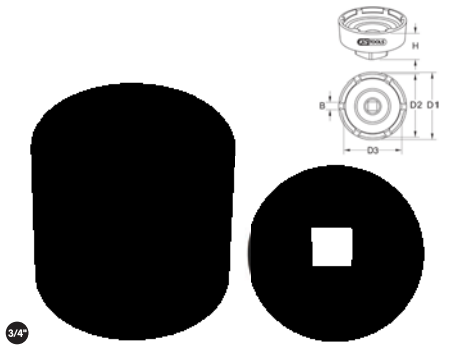
3/4"

	D1 mm	D2 mm	D3 mm	Stud	B mm	H mm	kg
460.1025	72,0	57,0	50,0	4	6,0	55,0	0,79

Slotted nut wrench with 4 pins for MAN

- Internal square drive to DIN 3121 / ISO 1174
- High accuracy of fit
- Special profile with 4 internal studs
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: **MAN** 410/414 drive



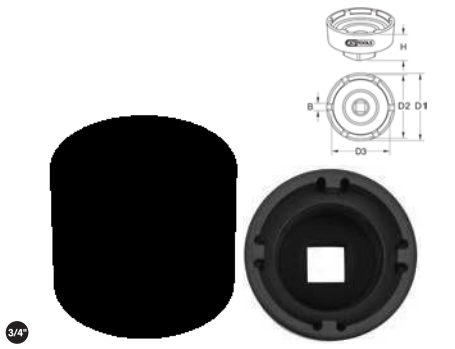
3/4"

	D1 mm	D2 mm	D3 mm	Stud	B mm	H mm	kg
460.0655	72,0	58,0	53,0	4	5,0	77,0	1,32

Nut wrench with 4 pins for Scania

- Internal square drive to DIN 3121 / ISO 1174
- High accuracy of fit
- Special profile with 4 internal studs
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: Scania 8 gear bus drive



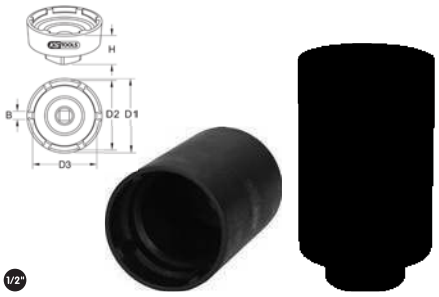
3/4"

	D1 mm	D2 mm	D3 mm	Stud	B mm	H mm	kg
460.1515	78,0	65,0	58,0	4	7,0	76,0	1,45

Nut wrench with 4 pins for Scania

- Internal square drive to DIN 3121 / ISO 1174
- High accuracy of fit
- Special profile with 4 internal studs
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: Auxiliary drive **Scania**



1/2"

	D1 mm	D2 mm	D3 mm	Stud	B mm	H mm	kg
460.1680	58,0	53,0	48,0	4	5,0	100,0	889

Nut wrench with 4 pins for Scania

- With 3/4" square drive to DIN 3121 / ISO 1174
- Suitable for exact torque possible
- Special profile with 4 internal studs
- Extremly versatile
- For machinery usage
- Special tool steel

Application range: Scania transmission flange shafts on transmission and rear axle (e.g. change fo simmerrings)



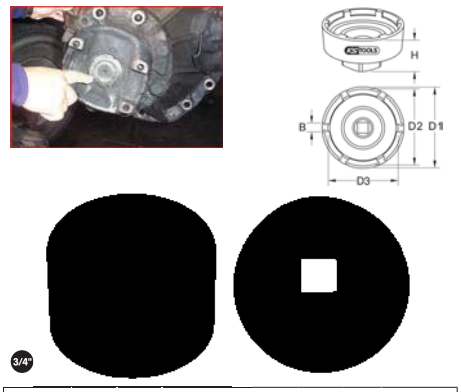
3/4"

	D1 mm	D2 mm	D3 mm	Stud	B mm	T mm	H mm	kg
450.0235	82,0	70,0	64,0	4	7,0	19,0	65,0	1,25

Nut wrench with 4 pins for Scania

- Internal square drive to DIN 3121 / ISO 1174
- High accuracy of fit
- Special profile with 4 internal studs
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: **Scania** (310/320/340) Transmission



3/4"

	D1 mm	D2 mm	D3 mm	Stud	B mm	H mm	kg
460.0465	82,0	70,0	64,0	4	7,0	65,0	1,24

Nut wrench with 4 pins for Scania

- Internal square drive to DIN 3121 / ISO 1174
- High accuracy of fit
- Special profile with 4 internal studs
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: Scania main drive shaft



3/4"

	D1 mm	D2 mm	D3 mm	Stud	B mm	H mm	kg
460.1590	75,0	70,0	65,0	4	7,0	80,0	1,07

Wrench with 6 pins for DAF

- Internal square drive to DIN 3121 / ISO 1174
- High accuracy of fit
- Special profile with 6 internal studs
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: **DAF** CF85 transmission (EURO 4 and EURO 5)



3/4"

	D2 mm	D1 mm	H mm	D3 mm	Stud	kg
460.1085	74,0	91,0	55,0	66,0	6	1,10

Nut wrench with 4 pins for Scania

- Internal square drive to DIN 3121 / ISO 1174
- High accuracy of fit
- Special profile with 4 internal studs
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: Scania locknut 1338267



3/4"

	D1 mm	D2 mm	D3 mm	Stud	B mm	H mm	kg
460.1745	87,0	76,0	70,0	4	6,5	145,0	1,48

Nut wrench for Scania with 4 pins

- Internal square drive to DIN 3121 / ISO 1174
- High accuracy of fit
- Special profile with 4 internal studs
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: **Scania** (340) Main gearbox shaft



3/4"

	A mm	B mm	Stud	D1 mm	D2 mm	T mm	kg	
460.1730	7,0	72,6	4	80,0	72,0	65,0	1,84	

Nut wrench with 4 pins for Scania

- for loosening and tightening the slotted nut on the gearbox input shaft
- Square drive in accordance with DIN 3121 / ISO 1174
- Extremly versatile
- Suitable for exact torque
- Special profile with 4 internal studs
- Suitable for high tightening and loosening torque
- Special tool steel



3/4"

	Inner Ø mm	D1 mm	H mm	D3 mm	Stud	Stud width mm	kg	
460.1350	80,5	80,0	76,0	72,0	4	6,5	1,90	

SPECIAL BOX SPANNERS

Special socket for 8 point screws

- Special 8 point internal profile
- To the dismantling and assembly of the control switch for the differential lock
- Ideally suited also for various electric switches on the transmissions
- Mirror polished
- Special tool steel

Application range: MAN, **Mercedes** LKW Actros, SK Baureihe etc.



1/2"

	Profile	mm	Ø mm	L mm	g	
455.0100	8 point	27	34,0	57,0	200	

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	

Hexagon impact socket, deep

- 6 point
- Internal square drive to DIN 3121 / ISO 1174
- Long execution
- For machinery usage
- Phosphate finish
- Chrome molybdenum

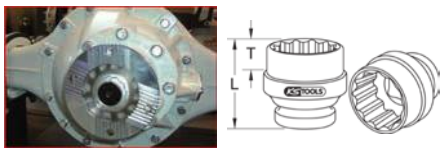
Application range: drive shaft flange



	mm	L mm	D1 mm	D2 mm	T mm	kg	
515.1855	55,0	100,0	81,0	54,0	52,0	1,95	

12 point impact socket

- 12 point
- Internal square drive to DIN 3121 / ISO 1174
- Short execution
- For machinery usage
- Phosphate finish
- Chrome molybdenum





1"

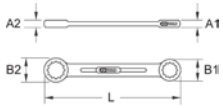
	mm	L mm	T mm	kg	
450.0404	50,0	70,0	36,0	1,02	
450.0405	55,0	75,0	40,0	1,23	
450.0407	65,0	75,0	38,0	1,49	

DOUBLE RING SPANNERS

CHROME*plus*® double ring spanner, extra long

- FlankTraction profile
- Thin walled
- Mirror polished
- Chrome molybdenum







	mm	A1 mm	A2 mm	B1 mm	B2 mm	L mm	g	
518.0821	8x10	7,5	8,4	12,5	15,0	235,0	72	
518.0822	10x11	8,5	9,5	14,3	17,0	291,0	95	
518.0823	12x14	10,4	11,3	17,8	20,3	328,0	157	
518.0824	13x15	11,5	13,2	20,2	23,3	386,0	217	
518.0825	16x18	13,0	14,8	23,7	26,6	407,0	284	
518.0826	17x19	13,0	14,8	23,7	26,6	407,0	284	
518.0827	20x21	13,5	15,2	27,5	29,7	415,0	376	
518.0828	22x24	15,4	17,7	31,3	34,0	430,0	482	

CHROME*plus*® double ring spanner set, extra long

- FlankTraction profile
- Thin walled
- Mirror polished
- Chrome molybdenum



			kg	
518.0800	6 pcs	10x11 - 12x14 - 13x15 - 16x18 - 17x19 - 22x24 mm	2,06	

CHROME*plus*® double ring spanner set, extra long

- FlankTraction profile
- Thin walled
- Mirror polished
- Chrome molybdenum

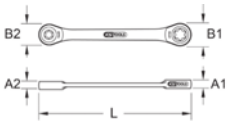


			kg	
518.0830	7 pcs	10x11 - 12x14 - 13x15 - 16x18 - 17x19 - 20x21 - 22x24 mm	2,44	



GEAR*plus*® 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

GEAR*plus*® 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



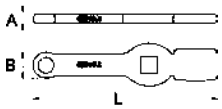
			g
503.4364	4 pcs	E6xE8 - E10xE12 - E14xE18 - E20xE24	475

SLOGGING SPANNER

Slogging 12 point spanner with 2 striking faces

- 12 point
- ideally suited for loosening and tightening the cardan shaft screw connection
- With 3/4 " square drive for the correct tightening of the screw
- with lasered torque conversion formula for the extended lever
- With 2 impact area
- Phosphate finish
- Chrome vanadium

Application range: Cardan shafts at **MAN**





3/4"

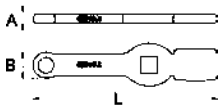
	mm	A mm	B mm	L mm	g
460.5250	19	12,0	30,0	215,0	572

Slogging 12 point spanner with 2 striking faces

- 12 point
- ideally suited for loosening and tightening the cardan shaft screw connection
- With 3/4 " square drive for the correct tightening of the screw
- with lasered torque conversion formula for the extended lever
- With 2 impact area
- Phosphate finish
- Chrome vanadium

Application range: Cardan shafts for **Mercedes** commercial vehicles







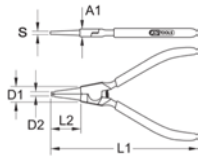
3/4"

	mm	A mm	B mm	L mm	g
460.5251	21	12,0	32,0	216,0	565

CIRCLIP PLIERS

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



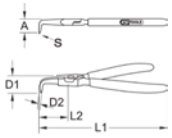


		Ø mm	A1 mm	S mm	D1 mm	D2 mm	L1 mm	L2 mm	g
119.2051	A1	10-25	8,0	1,0	13,5	3,5	135,0	30,0	80
119.2056	A2	19-60	9,0	1,5	15,0	4,5	175,0	40,0	150
119.2061	A3	40-100	10,0	2,5	20,0	6,0	230,0	50,0	250



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

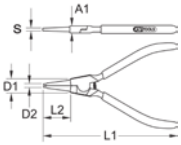




		Ø mm	A mm	S mm	D1 mm	D2 mm	L1 mm	L2 mm	g
119.2052	A11	10-25	20,0	1,0	15,0	3,0	125,0	20,0	80
119.2057	A21	19-60	25,0	1,5	20,0	4,5	165,0	32,0	150
119.2062	A31	40-100	30,0	2,0	25,0	6,0	210,0	40,0	250

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

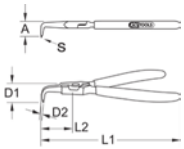




		Ø mm	A1 mm	S mm	D1 mm	D2 mm	L1 mm	L2 mm	g
119.2053	J1	12-25	7,5	1,2	15,0	2,7	135,0	30,0	80
119.2058	J2	19-60	9,5	1,6	18,0	5,0	180,0	40,0	150
119.2063	J3	40-100	10,0	2,5	20,0	6,0	230,0	50,0	250

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

Circlip pliers set

- For inside and outside circlips
- With rubber grip
- 90° angled tips
- Durable, straight precision tips
- All outside circlips with opening spring
- Power version
- Chrome vanadium



			g
119.2050	4 pcs	Circlip pliers set	455

consists of:

		g
119.2051	Circlip pliers for external circlips, 10-25 mm	80
119.2052	Circlip pliers for external circlips, angled, 12-25 mm	80
119.2053	Circlip pliers for internal circlips, 12-25 mm	80
119.2054	Circlip pliers for internal circlips, angled, 12-25 mm	80

Circlip pliers set

- For inside and outside circlips
- With rubber grip
- 90° angled tips
- Durable, straight precision tips
- All outside circlips with opening spring
- Power version
- Chrome vanadium



			g
119.2055	4 pcs	Circlip pliers set	735

consists of:

		g
119.2056	Circlip pliers for external circlips, 19-60 mm	150
119.2057	Circlip pliers for external circlips, angled, 19-60 mm	150
119.2058	Circlip pliers for internal circlips, 19-60 mm	150
119.2059	Circlip pliers for internal circlips, angled, 19-60 mm	150

Circlip pliers set

- For inside and outside circlips
- With rubber grip
- 90° angled tips
- Durable, straight precision tips
- All outside circlips with opening spring
- Power version
- Chrome vanadium



			kg
119.2060	4 pcs	Circlip pliers set	1,00

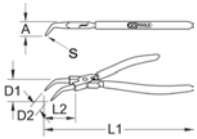
consists of:

		g
119.2061	Circlip pliers for external circlips, 40-100 mm	250
119.2062	Circlip pliers for external circlips, angled, 40-100 mm	250
119.2063	Circlip pliers for internal circlips, 40-100 mm	250
119.2064	Circlip pliers for internal circlips, angled, 40-100 mm	250

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







										g
		Ø mm	A mm	S mm	D1 mm	D2 mm	L1 mm	L2 mm		
500.1038	J22	19-60	22,0	2,5	23,0	2,3	240,0	32,0	250	

Circlip pliers set with ratchet function

- For inside and outside circlips
- With rubber grip
- Interchangeable tips
- 8 types of pliers by reversing the tips
- Includes disassembly and assembly heads
- Chrome vanadium

Internal circlips: 60,0 mm - 100,0 mm
External circlips: 40,0 mm - 85,0 mm



			kg
500.1350	20 pcs	Circlip pliers set with ratchet function	1,80

consists of:

		g
500.1351	10-1/2" Heavy duty ext. circlip pliers w/changeable tips	315
500.1353	Replacement tip kit 0°/ 2,75mm	24
500.1357	Replacement tip kit 0°/ 3,0mm	24
500.1354	Replacement tip kit 15°/ 2,75mm	14
500.1358	Replacement tip kit 15°/ 3,0mm	24
500.1355	Replacement tip kit 45°/ 2,75mm	24
500.1359	Replacement tip kit 45°/ 3,0mm	24
500.1356	Replacement tip kit 90°/ 2,75mm	24
500.1352	10-1/2" Heavy duty internal circlip pliers w/ changeable tips for set 500.1350	310
500.1361	Replacement screws, pack of 6	13
500.1360	Replacement tip kit 90°/ 3,0mm	24

Circlip pliers set with ratchet function

- For inside and outside circlips
- With rubber grip
- Interchangeable tips
- 6 types of pliers by reversing the tips
- Includes disassembly and assembly heads
- Chrome vanadium

Internal circlips: 78,0 mm - 159,0 mm
External circlips: 89,0 mm - 159,0 mm



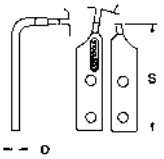
			kg
500.1300	14 pcs	Circlip pliers set with ratchet function	1,80

consists of:

		g
500.1301	16" heavy duty external circlip-plier	965
500.1302	16" Heavy duty internal circlip-pliers	965
500.1303	REPLACEMENT TIP KIT 0°	15
500.1304	REPLACEMENT TIP KIT 45°	15
500.1305	REPLACEMENT TIP KIT 90°	16
500.1306	REPLACEMENT TIP KIT 0°	16
500.1307	REPLACEMENT TIP KIT 45°	16
500.1308	REPLACEMENT TIP KIT 90°	16
500.1309	Replacement screws, pack of 4	4

Circlip pliers for internal circlips with 0°+ 90° tips

- For internal circlips
- Interchangeable tips
- For circlips according to DIN 472 / DIN 984
- Black powder coating
- Chrome vanadium



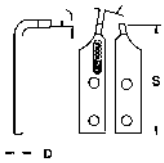


		Ø mm	D mm	S mm	L mm	kg
500.1340	J51/J5	122-300	3,5	66,0	540,0	2,03



Circlip pliers for external circlips with 0° + 90° tips

- For external security rings
- Interchangeable tips
- For circlips according to DIN 472 / DIN 984
- Black powder coating
- Chrome vanadium





		Ø mm	D mm	S mm	L mm	kg	
500.1345	A51/A5	122-300	3,5	66,0	540,0	2,01	

accessories:

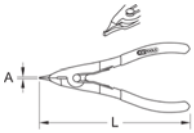
		g	
500.1341	Replacement tips straight	90	
500.1342	Replacement tips 90°	125	

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	

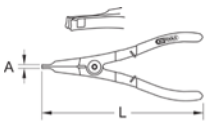


Lockring pliers, fully formed tips

- 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**.





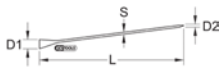


	A mm	L mm	g	
115.1049	0-20	240,0	600	

PRY BAR

Bending iron/pry bar

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



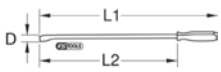


	D1 mm	D2 mm	L mm	S mm	g	
129.2222	22,0	5,0	405,0	16,0	650	

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	

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	250 - 300 - 400 mm	1,50	

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	

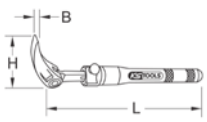
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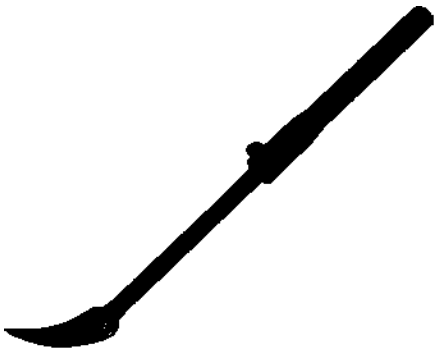
		kg	
911.8412	Pry bar, 45°, 900mm	1,75	
911.8413	Pry bar, 75°, 600mm	1,17	
911.8414	Pry bar, 90°, 600mm	1,20	

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	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	

Lever bar

- 4 point
- Quenched and tempered
- Black lacquer
- Special tool steel



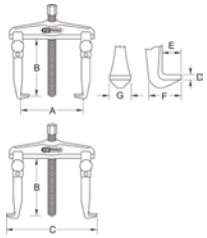
	D1 mm	D2 mm	Length m	S mm	Handle number	kg	
156.0598	22,0	35,0	1,80	37,0	-	8,00	

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







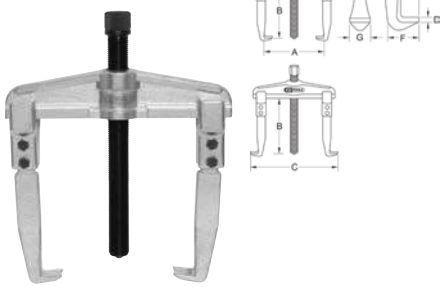
		A mm	B mm	mm	max t	kg	
625.1701	7 pcs	20 - 90	100	M14 x 1,5	5,5	2,30	

consists of:

		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



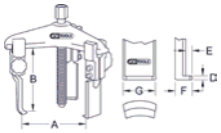
	A mm	B mm	C mm	max t	mm	mm	D mm	E mm	F mm	G mm	kg	
620.0101	20-90	100	70-130	4,5	M14x1,5 x 140	17	3	13	25	20	1,00	
620.0102	25-130	100	80-180	4,5	M14x1,5 x 140	17	3	13	25	20	1,20	
620.0103	50-160	150	105-220	6,5	G1/2"x140 x210	22	4	16	35	25	3,00	
620.0104	60-200	150	120-270	6,5	G1/2"x140 x210	22	4	16	35	25	3,30	
620.0105	80-250	200	160-330	11	G3/4"x140 x280	27	5	25	54	35	7,40	

	A mm	B mm	C mm	max t	mm	D mm	E mm	F mm	G mm	kg	
620.0106	80-350	200	160-420	11	G3/4"x14g x280	27	5	25	54	35	8,50
620.0107	110-520	200	195-600	13	G3/4"x14g x280	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





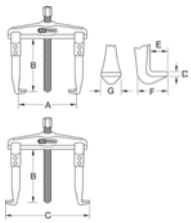


	A mm	B mm	max t	mm	mm	D mm	E mm	F mm	G mm	kg	
630.1101	20-90	100	5	M14x1,5 x 130	17	3,6	6	13	27	1,30	

Universal 2 + 3 arm puller

- Legs double ended usable
- Through reversing the arms internal and external applications are possible
- Reception star for 2 or 3 hooks
- 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	
640.4203	60	65	2,0	G3/8"x-1,06px110	13	3	10	18	11	0,47	
640.4204	90	100	5,0	G9/16"x-2,0px190	17	4	15,5	29	17	1,60	
640.4205	165	170	7,0	G3/4"x-2,0px285	22	4	15,5	29	17	3,20	

Precision internal extractor set ø 10,0 - 75,0 mm

- Centering shaft
- For the removal of secure bearings and bushes
- Extremely robust spindle with inductively hardened thread
- Special tool steel
- In durable plastic storage case



			kg	
660.0012	9 pcs	Precision internal extractor set ø 10,0 - 75,0 mm	4,92	

consists of:

		kg	
660.0106	Precision internal extractor, 10-13mm	0,05	
660.0109	Precision internal extractor, 14-19mm	0,09	
660.0114	Precision internal extractor, 20-25mm	0,11	
660.0116	Precision internal extractor, 25-30mm	0,12	
660.0119	Precision internal extractor, 30-37mm	0,28	
660.0122	Precision internal extractor, 38-45mm	0,29	
660.0125	Precision internal extractor, 40-75mm	0,76	
660.0601	Double ended support for internal extractor, 35-75mm	0,70	
660.0602	Double ended support for internal extractor, 60-130mm, M10xG3/8"	1,60	

Separator set inclusive with yoke ø 22,0 - 115,0 mm

- For the removal of secure bearings and bushes
- Extremely robust spindle with inductively hardened thread
- Hydraulic thrust spindle available
- Special tool steel
- In durable plastic storage case



			kg	
605.0003	3 pcs	Separator set inclusive with yoke ø 22,0 - 115,0 mm	6,10	

consists of:

		kg	
605.0503	Separator puller tool, 22-115mm	1,90	

consists of:

		kg	
605.0113	Yoke for bearing separator tool, 55-205mm	2,70	
605.0403	Extension for pressure rod, M16 x100mm	0,40	

Precision internal extractor set ø 10,0 - 115,0 mm

- Centering shaft
- For the removal of secure bearings and bushes
- Extremely robust spindle with inductively hardened thread
- Special tool steel
- In durable plastic storage case



			kg	
660.0013	10 pcs	Precision internal extractor set ø 10,0 - 115,0 mm	9,72	

consists of:

		kg	
660.0106	Precision internal extractor, 10-13mm	0,05	
660.0109	Precision internal extractor, 14-19mm	0,09	
660.0114	Precision internal extractor, 20-25mm	0,11	
660.0116	Precision internal extractor, 25-30mm	0,12	
660.0119	Precision internal extractor, 30-37mm	0,28	
660.0122	Precision internal extractor, 38-45mm	0,29	
660.0125	Precision internal extractor, 40-75mm	0,76	
660.0601	Double ended support for internal extractor, 35-75mm	0,70	
660.0128	Precision internal extractor, 70-115mm	1,40	
660.0605	Double ended support for internal extractor, 55-205mm	3,80	

Universal puller set

- Legs double ended usable
- Reception star for 2 or 3 hooks
- Extremely robust spindle with inductively hardened thread
- Special tool steel
- In durable plastic storage case





			kg	
700.1100	11 pcs	Universal puller set	4,39	

consists of:

		kg	
700.1100-4	Puller arm large	0,25	
700.1100-5	Puller arm small	0,08	

consists of:

700.1100-8	Screw with nut, large	0,02
700.1100-9	Screw with nut, small	0,01
700.1100-10	Spindle large	0,20
700.1100-11	Spindle small	0,06
700.1100-2	Traverse large	0,31
700.1100-3	Traverse small	0,10
700.1100-6	Connection plate large	0,04
700.1100-7	Connection plate small	0,01
700.1140	Bearing splitter, for max. Ø 50 mm	1,15

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



700.1300	12 pcs	Universal 2 + 3 arm puller set	6,69

consists of:

	X		
700.1311	1	Spindle, M14x1,5	180
700.1312	1	Two armed traverse	485
700.1313	1	Three armed traverse	675
700.1314	3	Draw-off arm, 100mm	250
700.1315	3	Draw-off arm, 210mm	530
700.1316	3	Draw-off arm, 260mm	640

Double ended support for internal extractor

- Extremely robust spindle with inductively hardened thread
- Special tool steel

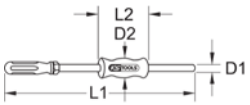


	A mm	max N·m		Internal extractors		
660.0601	35-75	30	12	M10	M16x1,5 x 136	0,70
660.0602	60-130	60	19	M10xG3/8"	M24x1,5 x 160	1,60
660.0603	60-130	60	19	G3/8"	M24x1,5 x 160	1,50
660.0605	55-205	100	22	G3/8"	G1/2"x14g x 210	3,80

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		
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 clamping yoke

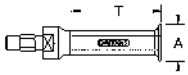
- For universal 2 arm puller
- Clamping yoke compresses the legs firmly
- Prevents slipping
- Special tool steel



	A mm	
615.5101	10-130	800

Precision internal extractor

- Centering shaft
- For the removal of secure bearings and bushes
- Special tool steel





	A mm				T mm	max N·m	
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

GEARBOX COMMISSIONING

Transmission input shaft seal installation tool for DAF

- Washer installation aid for manual use
- For damage free mounting
- Extremly versatile
- Special tool steel

Application range: DAF LF55, CF65 (gearbox input shaft)



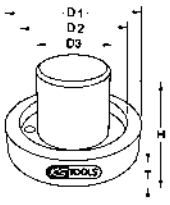
	Outer Ø mm	Inner Ø mm	Length mm	
460.3735	65,0	49,0	245,0	1,76

Simmerring installation tool for Scania transmission + rear axle

- Washer installation aid for manual use
- For damage free mounting
- Extremly versatile
- Special tool steel

Application range: Scania transmission flange shafts on transmission and rear axle (e.g. change fo simmerrings part no. 1502384 / 1502385)





	D1 mm	D2 mm	D3 mm	T mm	H mm	
450.0237	109,0	86,0	56,0	19,0	70,0	2,39

Gearbox output shaft seal mounting tool for Volvo (FM)

- Washer installation aid for manual use
- For damage free mounting
- Extremly versatile
- Special tool steel

Application range: Volvo cardan shaft flange on the gearbox



	Outer Ø mm	Inner Ø mm	Stud Ø mm	Length mm	Depth mm	
460.4045	165,0	143,0	90,0	122,0	112,0	3,70

Gear box assembly and disassembly set for MAN / Mercedes ZF 16S

- For assembly and disassembly of the ZF 16S gear box
- Extremely sturdy execution
- Special tool steel
- In durable metal case

Application range: Assembly and disassembly of the ZF 16S gear box (**Mercedes**, **DAF**, etc.)



			kg	
460.0735	8 pcs	Gear box assembly and disassembly set for MAN / Mercedes ZF 16S	37,50	

consists of:

		kg	
460.0736	DAF / Mercedes lifting device for gear shafts	7,79	
460.0737	DAF / Mercedes shut-off device for main shafts and primary reduction gearing	9,39	
460.0738	DAF / Mercedes holder for planetary gears	1,26	
460.0739	DAF / Mercedes lifting device for planetary gears	0,68	
460.0740	DAF / Mercedes securing screw for fixing the shift rail	0,11	
460.0741	DAF / Mercedes pressure sleeve for roll bearing	5,61	
460.0742	DAF / Mercedes pressure sleeve for roll bearing	3,83	
460.0743	DAF / Mercedes pressure sleeve for roll bearing	3,06	

Transmission locating pins puller for ZF

- for professional mounting and dismounting of the gear box cover
- To remove the transmission locating pin
- Extremely sturdy execution
- Special tool steel

Application range: Gearbox ZF12S and ZF16S





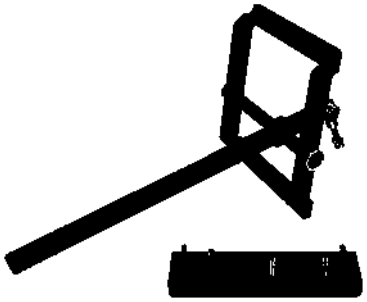
			g	
460.4655	Transmission locating pins puller for ZF	235		



Gearbox setting gauge set for ZF 12 AS

- for adjusting the gearbox adjuster and the shift linkage
- Special tool steel

Application range: ZF 12 AS transmission



			kg	
460.1055	2 pcs	Gearbox setting gauge set for ZF 12 AS	8,42	

consists of:

		kg	
460.1056	Setting gauge for control rods for 460.1055	3,54	
460.1057	Setting gauge for choice shafts for 460.1055	4,87	

Differential main shaft bearing puller set for Scania

- for damage-free removal of the main shaft bearings of the countershaft
- Extremely sturdy execution
- including 5 pairs of half-shells
- Trapezoid thread spindle for high removal power - drive 30 mm
- Special tool steel

Application range: Scania 113





			kg	
460.2520	11 pcs	Differential main shaft bearing puller set for Scania	24,31	

consists of:

		kg	
460.3906	Puller sleeve Ø 65 mm	2,96	
460.3907	Spindle, 290 mm	1,33	
460.3911	Holding ring Ø 115 mm	0,75	
460.3913	Pressure sleeve, Ø 42 mm, 70 mm	0,75	
460.3915	Holding ring Ø 125 mm	0,80	
460.2521	Pair of bearing brushes Ø 130 mm	2,96	
460.2522	Pair of bearing brushes Ø 109 mm	2,38	
460.2523	Pair of bearing brushes Ø 106 mm	2,54	
460.2524	Pair of bearing brushes Ø 84 mm	2,17	
460.2525	Pair of bearing brushes Ø 74 mm	2,10	
460.2526	Extension for draw-off bell, length 85 mm	1,56	

Gear bearing shaft sleeve puller set for Fuso

- for removing the gear bearing shaft sleeves without damage
- Extremely sturdy execution
- Special tool steel

Application range: Fuso transmission countershaft



			kg	
460.4480	8 pcs	Gear bearing shaft sleeve puller set for Fuso	11,85	

consists of:

		kg	
460.4481	Pair of bearing brushes, Ø 70 mm	0,44	
460.4482	Pair of bearing brushes, Ø 64 mm	0,59	
460.0489	Spindle, 340 mm long	1,63	
460.1433	Spindle mandrel, 50 mm long	0,18	
460.1434	Spindle mandrel, 200 mm long	1,12	
460.4486	Draw-off bell, Ø 100 mm	3,88	

Roller bearing puller set for ZF transmissions

- to remove the roller bearings without damage
- Extremely sturdy execution
- Special tool steel

Application range: Flat roller bearing transmission e.g. ZF12S





			kg	
460.1425	17 pcs	Roller bearing puller set for ZF transmissions	28,00	

consists of:

		kg	
460.1426	Pair of bearing brushes Ø 79 mm	2,70	
460.1427	Pair of bearing brushes Ø 118 mm	2,00	
460.1428	Pair of bearing brushes Ø 94 mm	4,50	
460.1429	Pair of bearing brushes Ø 122 mm	2,90	
460.1430	Holding ring Ø 110 mm	0,60	
460.1431	Holding ring Ø 140 mm	0,75	
460.1433	Spindle mandrel, 50 mm long	0,18	
460.1434	Spindle mandrel, 200 mm long	1,12	
460.0489	Spindle, 340 mm long	1,63	
460.1436	Draw-off bell Ø 68 mm	1,15	
460.1437	Draw-off bell Ø 90 mm	2,20	
460.1438	Spindle holder, 235mm long	2,20	
460.1439	Adapter Ø 15 mm	0,85	

Gear shaft puller set for ZF transmissions

- to remove the roller bearings without damage
- Extremely sturdy execution
- Special tool steel

Application range: Transmission main shaft e.g. ZF16S221-16S251





			kg	
460.3855	26 pcs	Gearbox shaft puller set for ZF gearbox, 26 pcs.	34,00	

consists of:

		kg	
460.3856	Pulling flange, 110 –255 mm	5,65	
460.3857	Spindle, 285 mm long	1,33	
460.3858	Spindle mandrel, 75 mm long	0,75	
460.3859	Pair of bearing brush Ø 99 mm	2,31	
460.3860	Holding ring, Ø 168 mm	0,56	
460.3861	Pair of bearing brushes, Ø 200 mm	4,71	
460.3862	Holding ring, Ø 271 mm	0,84	
460.3863	Pair of bearing brushes Ø 190 mm	4,01	
460.3864	Holding ring, Ø 249 mm	0,89	
460.3865	Pair of bearing brushes, Ø 155 mm	5,21	
460.3866	Attachment bolts, 290 mm long, 4 pcs.	1,61	
460.3867	Attachment bolts, 380 mm long, 4 pcs.	2,16	
460.3868	Attachment bolts, 500 mm long, 4 pcs.	2,92	
460.3869	Muttern, Schlüsselweite 21 mm, M12x1,75, 4 Stück	0,18	

Puller set for roller bearings

- to remove the roller bearings without damage
- Extremely sturdy execution
- Special tool steel
- in sturdy sheet metal case

Application range: Angular contact roller bearing transmission e.g. ZF12S



			kg	
460.0480	15 pcs	Puller set for roller bearings	18,34	

consists of:

		kg	
460.0481	Pair of bearing brushes for 460.0480, Ø121mm	1,12	
460.0482	Pair of bearing brushes for 460.0480, Ø130mm	1,18	
460.0483	Pair of bearing brushes for 460.0480, Ø114mm	1,32	
460.0484	Pair of bearing brushes for 460.0480, Ø151mm	1,50	
460.0485	Pair of bearing brushes for 460.0480, Ø160mm	1,66	
460.0486	Retention ring, Ø130mm	0,22	

consists of:

		kg	
460.0487	Spindle mandrel, short, 50 mm	0,18	
460.0488	Spindle mandrel, long, 200 mm	1,12	
460.0489	Spindle, 340 mm long	1,63	

Bearing Cup Supplement Set for Scania, Ø 161 mm

- Supplement to puller set for roller bearings (460.0480)
- to remove the roller bearings without damage
- Special tool steel

Application range: **Scania** transmission



			kg	
460.0495	2 pcs	Bearing Cup Supplement Set for Scania, Ø 161 mm	1,30	

Bearing Cup Supplement Set for Isuzu, Ø 86.5 mm

- Supplement to puller set for roller bearings (460.0480)
- to remove the roller bearings without damage
- Special tool steel

Application range: Isuzu Gearbox



			kg	
460.4635	2 pcs	Bearing Cup Supplement Set for Isuzu, Ø 86.5 mm	1,43	

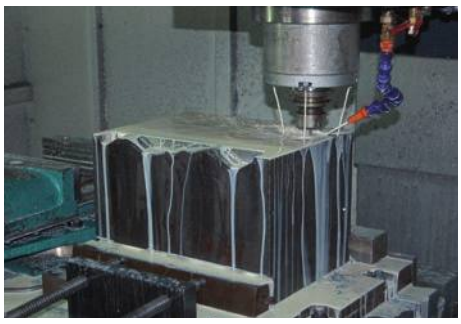
Bearing Cup Supplement Set for Hino, Ø 97 mm

- Supplement to puller set for roller bearings (460.0480)
- to remove the roller bearings without damage
- Special tool steel

Application range: Hino Gearbox



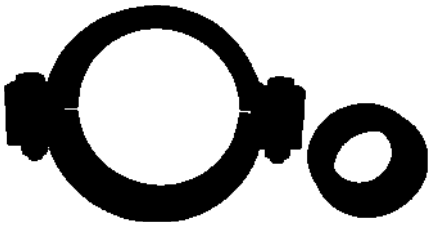
			kg	
460.4640	2 pcs	Bearing Cup Supplement Set for Hino, Ø 97 mm	1,23	



Gearbox main shaft puller for Volvo

- for removing the gearbox main shaft bearings without damage
- for use with a two-arm puller
- Extremely sturdy execution
- Special tool steel

Application range: Volvo FM, FH transmission main shaft bearing



			kg	
460.4040	2 pcs	Gearbox main shaft puller for Volvo	6,51	

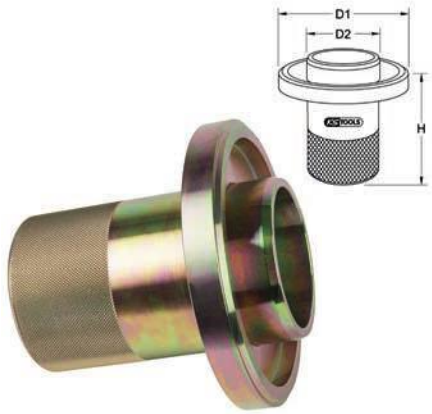
consists of:

		kg	
460.4041	Extraction aid, Ø 77 mm	1,94	
460.4042	Extraction aid, Ø 173 mm	4,57	

Differential main shaft bearing assembly tool for Vovlo

- Ideally suited for mounting the main shaft bearing
- Applicable in connection with a workshop press
- Extra heavy and solid execution
- Special tool steel

Application range: Volvo FH / FM



	D1 mm	D2 mm	H mm	kg	
460.3950	136,0	77,0	151,0	3,82	

6-sided special hexagonal wrench for Volvo

- hexagonal special profile
- for mounting and dismounting the gear oil distributor shaft
- Extremely robust
- Internal square drive adaptor
- Special tool steel

Application range: Volvo FH, FM, FMX and NH Series



	mm	Length mm	g	
460.4200	74	155,0	666	

PRISMS

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



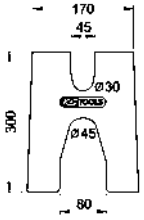


	Length mm	Width mm	Height mm	Replacement bolt & nut set	kg
700.1740	245,0	200,0	40,0	700.1741	8,10
700.1770	286,0	200,0	50,0	700.1771	16,94

Prism plate extra narrow, Ø 30,0/45.0 mm

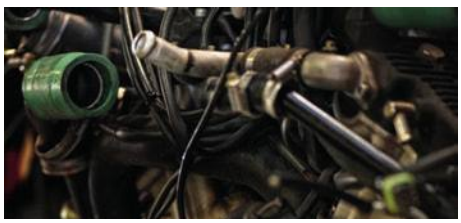
- Universally usable plates
- Especially suitable for tight spaces (up to 4 mm)
- For pressing on and off bearings or cogs on bearing shafts, e.g. on engines, transmissions etc.
- Special tool steel





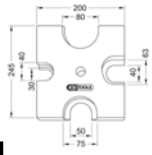


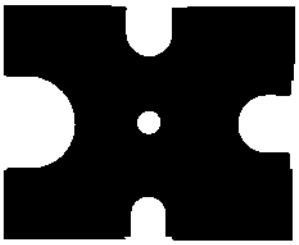
	Length mm	Width mm	kg
700.1744	300,0	170,0	1,10



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

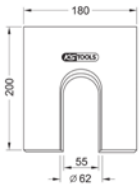


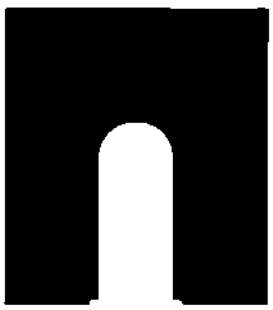


	Length mm	Width mm	kg
700.1738	245,0	200,0	7,32

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



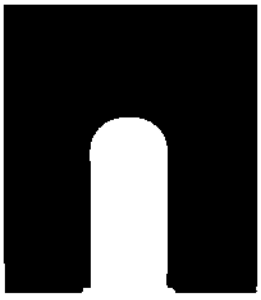


	Length mm	Width mm	kg
700.1739	200,0	180,0	4,36

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

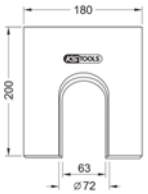


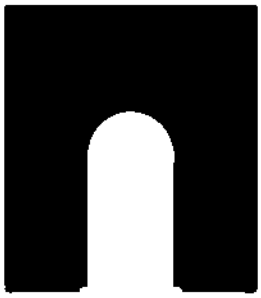


	Length mm	Width mm	kg
700.1742	200,0	180,0	4,28

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

POSITIONING AND SUPPORT DEVICES

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

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

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
- Centre distance: 400 mm
- Can be combined with work shop crane for units like the engine block, transmission, etc.

Application range: Volvo FH, FM, FMX and NH Series



Technical data:
max. Load: 2.000 kg

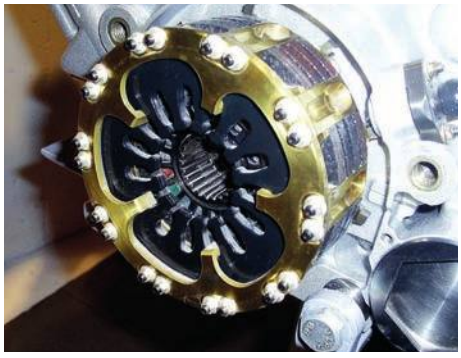
	Width mm	Height mm	kg
460.5255	445,0	190,0	5,40

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

Universal engine and gear holder with rotary function

- ideally suited for work on dismantled engines, transmissions and differential gears
- Interchangeable mounting plates optionally available
- Mounting plate 360° rotatable by hand crank
- Stable construction
- Left- and right-hand rotation
- safe stand due to five rotating feet
- low space requirement when retracted
- Distance of telescopic arms 775 mm





max. Load: 1.360 kg

	Length mm	Width mm	Height mm	kg
460.0850	1150-1600	1000,0	1350,0	347,00

Universal mounting plate for universal engine and gear holder

- ideally suited for work on dismantled engines, transmissions and differential gears
- 6 pickup points are adjustable in angle and distance
- Stable construction
- for use with universal motor and gear holder (460.1565)





		kg	
460.5260	Universal mounting plate for universal engine and gear holder	23,00	

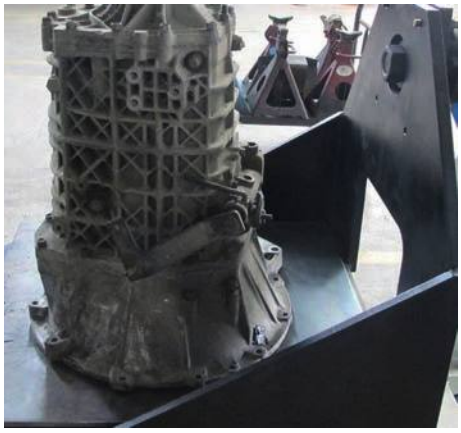
Gear holder plate for universal motor and gear holder

- ideally suited for work on dismounted gearboxes
- Stable construction
- Special plates optionally available
- Special tool steel
- for use with universal motor and gear holder (460.0850)





		kg	
460.1565	Gear holder plate for universal motor and gear holder	103,00	



Gearbox holder adapter plate for Isuzu

- ideally suited for work on dismounted gearboxes
- Stable construction
- Special tool steel
- for use with universal motor and gear holder (460.1565)

Application range: Isuzu Gearbox MZW 6P





		kg	
460.5261	Gearbox holder adapter plate for Isuzu	16,00	



Gearbox holder adapter plate for Isuzu

- ideally suited for work on dismounted gearboxes
- Special tool steel
- Stable construction
- for use with universal motor and gear holder (460.1565)

Application range: Isuzu Gearbox MYY 5T





		kg	
460.5262	Gearbox holder adapter plate for Isuzu	17,13	

GEARBOX OIL SERVICE

Mercedes Transmission Oil Control Dipstick

- Ideal for the easy, quick and correct control of 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



	Length mm	g	
460.0960	1035,0	800	

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	



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

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

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



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

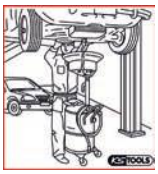




	L mm	B mm	H mm	kg	
150.9358	1030,0	724,0	110,0	6,80	

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

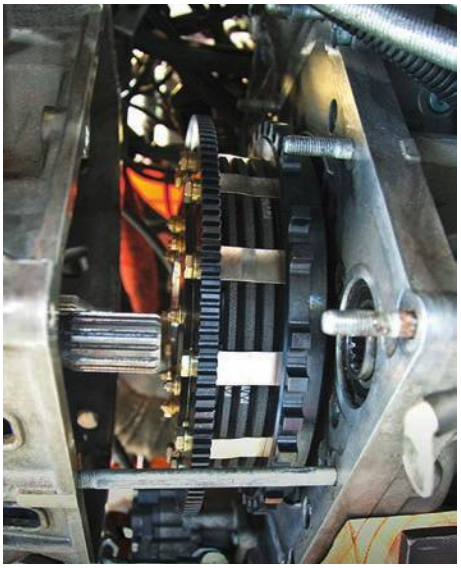




Technical data:

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

		kg	
160.0001	60	32,00	



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:

		kg	
160.0791	Vacuum fluid extractor suction pump 9.5 litre	3,71	
160.0792	Adaptor and tube 4x8mm x1,5m	0,20	
160.0793	Main probe 7.8 x 9.8 mm x 1 m	0,20	
160.0794	Probe 5.3 x 6.7 mm x 1 m	0,20	
160.0795	Probe 3.5 x 4.5 mm x 1 m	0,20	

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

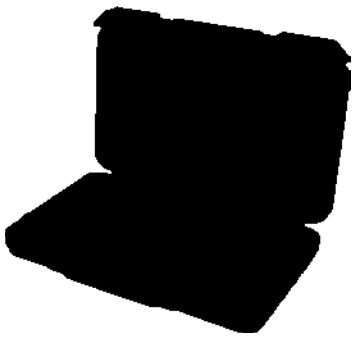
			kg	
150.9275	21 pcs	Universal transmission oil filling system set incl. 20 piece adapter set	5,06	

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

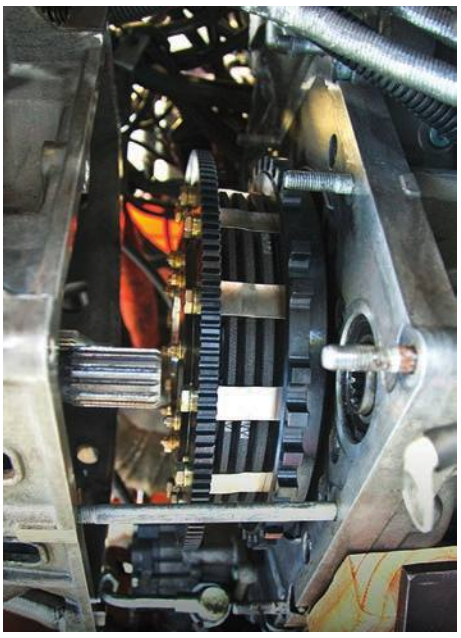
- Ideal for filling transmission, distributor transmission and differentials of different vehicle manufacturers with oil
- Large coverage of many vehicle manufacturers in particular with universal adapter
- Many transmission cannot be filled without this tool
- Optimal for narrow places or hard-to-reach 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	



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
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
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

Bleeding and filling tool KS 4 HY

- For the fast and safe hydraulic oil change, on clutch systems directly on the vehicle
- Pulsatile liquid flow
- Stepless pressure regulator
- Automatic end switching off in empty container
- Best suited for mineral oil (incl. hydraulic system agricultural engineering)
- Not suited for brake fluid
- Container drive for all standard original containers
- Pressureless uncoupling on the vehicle
- For hydraulic couplings
- Low pressure test possible
- One-man operation
- For mobile use as well as stationary
- Includes rubber cone set and euroadaptor E20

Application range: MAN-TGA / TGL / agricultural engineering
Caution: not suited for **Mercedes**



Technical data:

Capacity:	10 l
Max. flow rate:	>45 l/h
Work pressure:	0.5-3.5
Operational voltage:	230 V / 50 Hz
Filling tube length:	3,5 m
Dimensions:	400 x 200 x 205 mm

		kg
160.0750	Bleeding and filling tool KS 4 HY	9,00



Bleeding and filling tool KS 20 HY

- For the fast and safe hydraulic oil change, on clutch systems directly on the vehicle
- Pulsatile liquid flow
- Stepless pressure regulator
- Automatic end switching off in empty container
- Bleeding of the device after brake fluid change is not required
- Best suited for mineral oil (incl. hydraulic system agricultural engineering)
- Not suited for brake fluid
- Container drive for all standard original containers
- Pressureless uncoupling on the vehicle
- For hydraulic couplings
- Low pressure test possible
- One-man operation
- For mobile use as well as stationary
- Includes rubber cone set and euroadaptor E20

Application range: ACTROS with HPS2, ATEGO, AXOR & **MAN**-TGA / TGL / agricultural engineering
Caution: with permission of **Mercedes**!



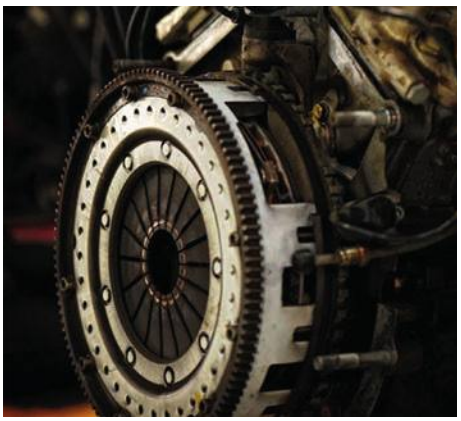
Technical data:

Capacity:	20 l
Max. flow rate:	>45 l/h
Work pressure:	0.5-3.8
Operational voltage:	230 V / 50 Hz
Filling tube length:	3,6 m
Dimensions:	960 x 500 x 400 mm

		kg
160.0755	Bleeding and filling tool KS 20 HY	28,00

accessories:

		g
160.0751	Euroadaptor HY 20	76
160.0752	Set for TGA For vehicles with	300
160.0753	G45 HY for TGL 1 Screw	200
160.0756	Hand pump for level adjustment no.A	740
160.0762	Return hose front-end flap, no.D	490
160.0763	Return hose coupling 6 mm, no.F, length 2,5m	220
160.0764	Return hose coupling 8 mm, no.F, length 2,5m	250
160.0765	Return hose FGG for no.G	820
160.0766	Collection container, no.H10 litres	410
160.0767	Hose (Y hose), no.I with quick	500
160.0768	Y-adaptor for bleeding, no.K	125
160.0769	Adaptor for container, no.L Coupling	115



THE BEST CHOICE FOR THE MECHANIC



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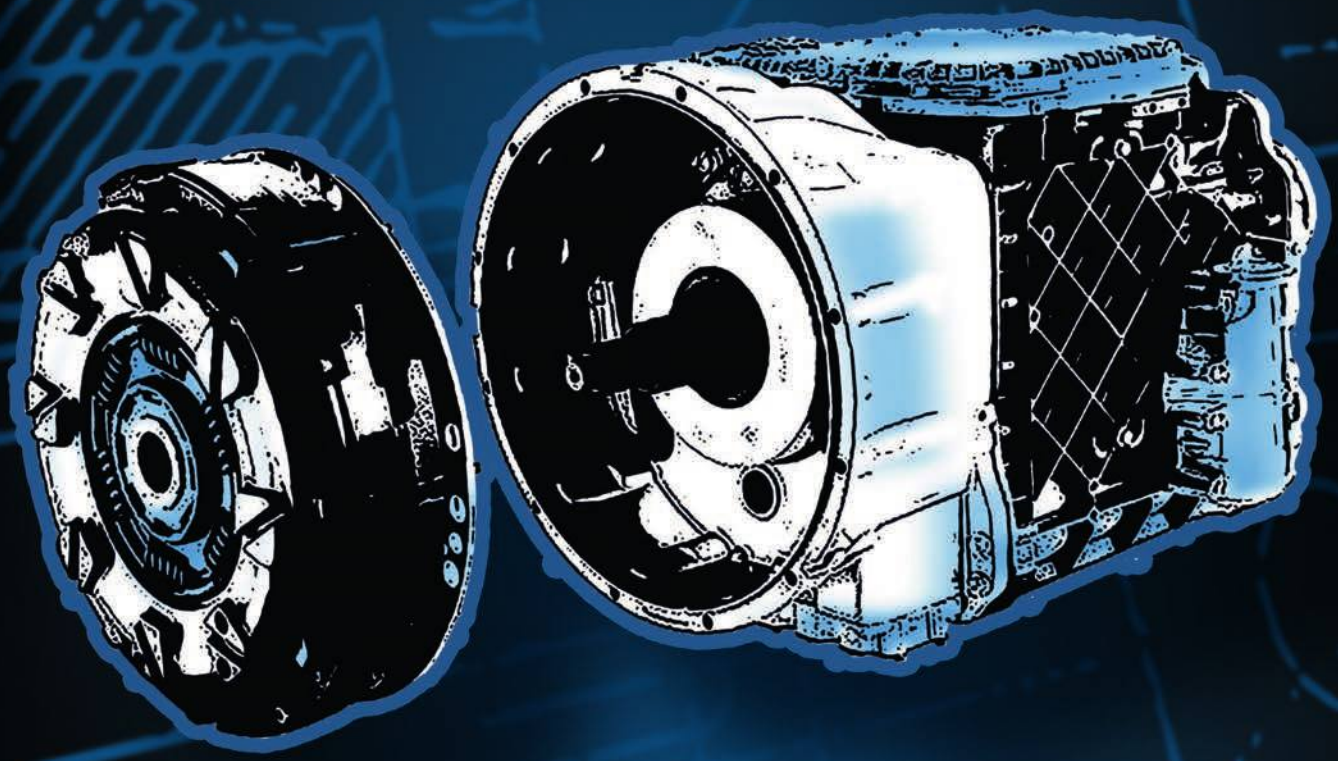
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KS TOOLS®

Innovation is our mission!

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FILLING DEVICE AND AIR VENT DEVICE	289

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

Universal commercial vehicle clutch aligner tool set

- Universal usage for vehicles with a hub diameter of Ø 36.0 - 52.0 mm
- Includes 4 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
- With reinforced knurled metal clamping screw





			kg	
150.2450	6 pcs	Universal commercial vehicle clutch aligner tool set	3,30	

consists of:

		kg	
150.2451	Coupling aligner 36-45 mm for 150.2450	0,97	
150.2452	Coupling aligner 42-52 mm for 150.2450	1,42	
150.2453	Centring sleeve 20 mm for 150.2450	0,02	
150.2454	Centring sleeve 25 mm for 150.2450	0,07	
150.2455	Centring sleeve 27 mm for 150.2450	0,08	
150.2456	Centring sleeve 30 mm for 150.2450	0,11	

Clutch centering pin for commercial vehicle

- For centering of one-and two-disc couplings
- For hub sizes 1.1/2" (37.5 mm), 1.3/4" (43.5 mm), 2" (50 mm)
- 10-wedge profile
- Centering in the pilot bearing by 25 mm (1") or 30 mm and 1.1/4" stud
- Knurled handle
- Body made of fiberglass nylon

Application range
Size 1: universal
Size 2: MB, MAN, Volvo, Isuzu, Iveco (e.g. Eurocargo 7,5t), Ford, Chevrolet/GM
Size 3: Ford, Chevrolet/GM
Size 4: Volvo, Iveco (e.g. Stralis) Ford, Chevrolet/GM
Size 5: Volvo, MB, Isuzu, Iveco (e.g. Eurocargo 12t), Ford



	L mm		g	
455.0161	315,0	Coupling mandrel, 1.1/2" Ø, Pilot 30mm	205	
455.0162	315,0	Coupling mandrel, 1.1/2" Ø, Pilot 1"	205	
455.0163	315,0	Coupling mandrel, 1.3/4" Ø, Pilot 1.1/4"	240	
455.0164	315,0	Coupling mandrel, 2" Ø, Pilot 30mm	280	
455.0165	315,0	Coupling mandrel, 1.3/4" Ø, Pilot 1"	230	

Hydraulic clutch mounting aid

- suitable for assembly, disassembly and transport of couplings
- Adjustment screw allows positioning of the clutch and flywheel
- Tilting mechanism allows the coupling or flywheel to pivot into the horizontal position
- Special tool steel

Application range: Volvo, **Iveco**, **Mercedes**, **Ford** and **Isuzu**



			kg	
460.4645	4 pcs	Hydraulic clutch mounting aid	65,00	

consists of:

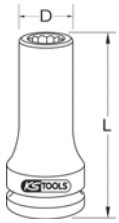
		kg	
460.4646	Hydraulic coupling assembly aid without accessories	55,60	
460.4647	Coupling mandrel Ø 2", Pilot 30 mm	3,28	
460.4648	Coupling mandrel Ø 1.3/4", Pilot 1"	2,56	
460.4649	Assembly aid for fly wheels	3,57	

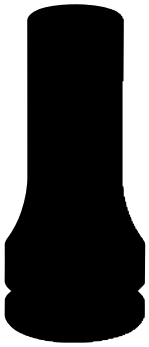
GENERAL CLUTCH TOOLS

Special impact 12-point socket, deep

- Spline (XZN®)
- Internal square drive to DIN 3121 / ISO 1174
- Ideally for the dismantling and/or assembly of cylinder head screws in commercial vehicles
- Long execution
- For machinery usage
- Phosphate finish
- Chrome molybdenum







	mm	L mm	D mm	g	
455.0010	17,0	110,0	26,2	570	
455.0011	19,0	110,0	28,3	600	

Wear gauge for manual transmission couplings for Volvo

- for checking couplings
- checks the wear of the clutch disc
- no disassembly of the gear unit necessary
- Special tool steel

Application range: **Volvo** FM12





	Length mm	g	
460.0660	265,0	470	

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	

Precision internal extractor set ø 10,0 - 37,0 mm

- Centering shaft
- For the removal of secure bearings and bushes
- Extremely robust spindle with inductively hardened thread
- Special tool steel
- In durable plastic storage case
- For pulling/hitting the pilot bearing



			kg	
660.0014	7 pcs	Precision internal extractor set ø 10,0 - 37,0 mm	2,42	

consists of:

		g	
660.0601	Double ended support for internal extractor, 35-75mm	700	
660.0106	Precision internal extractor, 10-13mm	50	
660.0109	Precision internal extractor, 14-19mm	90	
660.0114	Precision internal extractor, 20-25mm	110	
660.0116	Precision internal extractor, 25-30mm	120	
660.0119	Precision internal extractor, 30-37mm	280	
660.0501	Slide hammer, 170mm, M10, variante1	400	



FILLING DEVICE AND AIR VENT DEVICE

Bleeding and filling tool KS 4 HY

- For the fast and safe hydraulic oil change, on clutch systems directly on the vehicle
- Pulsatile liquid flow
- Stepless pressure regulator
- Automatic end switching off in empty container
- Best suited for mineral oil (incl. hydraulic system agricultural engineering)
- Not suited for brake fluid
- Container drive for all standard original containers
- Pressureless uncoupling on the vehicle
- For hydraulic couplings
- Low pressure test possible
- One-man operation
- For mobile use as well as stationary
- Includes rubber cone set and euroadaptor E20

Application range: MAN-TGA / TGL / agricultural engineering
Caution: not suited for **Mercedes**



Technical data:

Capacity:	10 l
Max. flow rate:	>45 l/h
Work pressure:	0.5-3.5
Operational voltage:	230 V / 50 Hz
Filling tube length:	3,5 m
Dimensions:	400 x 200 x 205 mm

		kg	
160.0750	Bleeding and filling tool KS 4 HY	9,00	



Bleeding and filling tool KS 20 HY

- For the fast and safe hydraulic oil change, on clutch systems directly on the vehicle
- Pulsatile liquid flow
- Stepless pressure regulator
- Automatic end switching off in empty container
- Bleeding of the device after brake fluid change is not required
- Best suited for mineral oil (incl. hydraulic system agricultural engineering)
- Not suited for brake fluid
- Container drive for all standard original containers
- Pressureless uncoupling on the vehicle
- For hydraulic couplings
- Low pressure test possible
- One-man operation
- For mobile use as well as stationary
- Includes rubber cone set and euroadaptor E20

Application range: ACTROS with HPS2, ATEGO, AXOR & **MAN**-TGA / TGL / agricultural engineering
Caution: with permission of **Mercedes**!



Technical data:

Capacity:	20 l
Max. flow rate:	>45 l/h
Work pressure:	0.5-3.8
Operational voltage:	230 V / 50 Hz
Filling tube length:	3,6 m
Dimensions:	960 x 500 x 400 mm

		kg	
160.0755	Bleeding and filling tool KS 20 HY	28,00	

accessories:

		g	
160.0751	Euroadaptor HY 20	76	
160.0752	Set for TGA For vehicles with	300	
160.0753	G45 HY for TGL 1 Screw	200	
160.0756	Hand pump for level adjustment no.A	740	
160.0762	Return hose front-end flap, no.D	490	
160.0763	Return hose coupling 6 mm, no.F, length 2,5m	220	
160.0764	Return hose coupling 8 mm, no.F, length 2,5m	250	
160.0765	Return hose FGG for no.G	820	
160.0766	Collection container, no.H10 litres	410	
160.0767	Hose (Y hose), no.I with quick	500	
160.0768	Y-adaptor for bleeding, no.K	125	
160.0769	Adaptor for container, no.L Coupling	115	

16

SPRINGS / SHOCK ABSORBERS







KS TOOLS®

Innovation is our mission!

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SPECIAL WRENCH

Special counter bracket for Volvo, profile flat/oval, 18 mm

- For the removal and installation of driver's cab shock absorbers
- For counter holding the piston rod and simultaneous turning of the screw cap
- Extremely sturdy execution
- For manual operation
- Special tool steel

Application range: Volvo driver's cab shock absorbers



	L1 mm	L2 mm	L3 mm	L4 mm	L5 mm	g
455.0090	150,0	100,0	7,2	10,0	18,0	710

CAB SUSPENSION

Shock absorber strut brace for driver's cab shock absorber

- For save clamping the springs of cab shock absorbers
- Extra slim and small execution
- Special tool steel

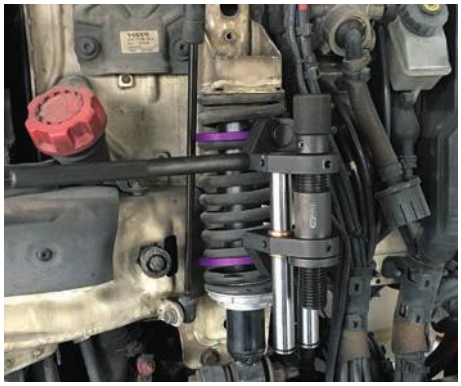
Application range: Volvo FM and FH





1/2"

	Ø mm	Min span width mm	Max span width mm	kg
460.5700	75,0	70,0	170,0	3,85



SOCKETS FOR AXLE SCREW FITTINGS

Torx-E-Plus socket for Mercedes

- Torx-E-Plus (EPL)
- For loosening and tightening Torx-E-Plus (EPL) axle mounting bolts
- Internal square drive to DIN 3121 / ISO 1174
- For machinery usage
- Phosphate finish
- Chrome molybdenum

Application range: Mercedes Actros





3/4"

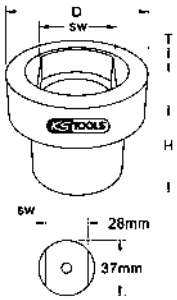
		D mm	L mm	g
460.0012	EPL 32	44,0	50,0	370
460.0013	EPL 32	44,0	90,0	712

SOCKET SPANNER FOR LEAF SPRING BOLTS

Leaf spring bolt socket for Scania

- for mounting and dismounting of leaf spring bolts
- Sturdy design
- Flat oval form
- Torque-precise tightening via square socket possible
- designed for high release and tightening torques
- For machinery usage
- Special tool steel







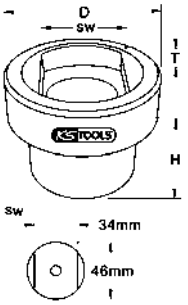
3/4"

	mm	D mm	T mm	H mm	g
450.0225	28	54,0	12,0	50,0	420

Leaf spring bolt socket for Scania

- for mounting and dismounting of leaf spring bolts
- Sturdy design
- Flat oval form
- Torque-precise tightening via square socket possible
- designed for high release and tightening torques
- For machinery usage
- Special tool steel







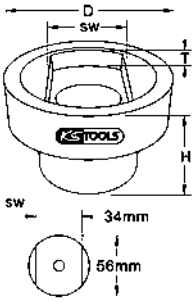
3/4"

	mm	D mm	T mm	H mm	g
450.0226	34	64,0	12,0	50,0	622

Leaf spring bolt socket for Scania

- for mounting and dismounting of leaf spring bolts
- Sturdy design
- Flat oval form
- Torque-precise tightening via square socket possible
- designed for high release and tightening torques
- For machinery usage
- Special tool steel







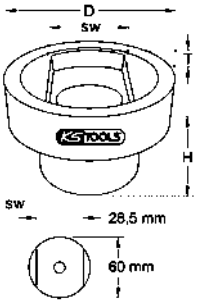
3/4"

	mm	D mm	T mm	H mm	g
450.0227	34	64,0	12,0	50,0	749

Leaf spring bolt socket for Volvo

- for mounting and dismounting of leaf spring bolts
- Sturdy design
- Flat oval form
- Torque-precise tightening via square socket possible
- designed for high release and tightening torques
- For machinery usage
- Special tool steel









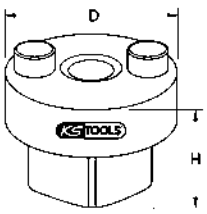
3/4"

	mm	D mm	T mm	H mm	g	
450.0243	28,5	62,0	22,0	60,0	800	

Leaf spring bolt socket for Volvo

- for mounting and dismounting of leaf spring bolts
- Sturdy design
- Flat oval form
- Torque-precise tightening via square socket possible
- designed for high release and tightening torques
- For machinery usage
- Special tool steel







	mm	D mm	Stud	H mm	g	
450.0242	27	37,0	2	31,5	160	

PRESS AND PULL SLEEVE SET

Special thread grease for puller and pusher spindles and nuts subjected high loads

- Lubricant for components subjected to high static loads, e.g. threaded spindles
- Prevents excessive wear and seizing
- Irregularities in the surface to be protected are completely filled
- Minimises the friction thanks to the closed surface
- Effective protection against corrosion
- Increases the service life of threaded spindles
- Ensures reliable function even at high temperatures up to max. 1200 °C



		g	
980.1085	Special thread grease, gun	22	

Special thread grease for puller and pusher spindles

- Lubricant for components subjected to high static loads, e.g. threaded spindles
- Prevents excessive wear and seizing
- Irregularities in the surface to be protected are completely filled
- Minimises the friction thanks to the closed surface
- Effective protection against corrosion
- Increases the service life of threaded spindles
- Ensures reliable function even at high temperatures up to max. 1200 °C



		g	
980.1090	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





		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

- 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

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	
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	

Compression and Tension Sleeve Extension Set, Level 1

- For the assembly and disassembly of bearings
- Ideally for silent bearings, hydro bearings, bushings, ball bearings, simmer rings etc.
- Universal use for construction machines, truck, municipally, country and forestery technology etc.
- 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
- Supplement set for 700.1700 / 700.1735

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
Spindle TR20x4 400 Nm



			kg	
700.1800	22 pcs	Compression and Tension Sleeve Extension Set, Level 1	16,60	

consists of:

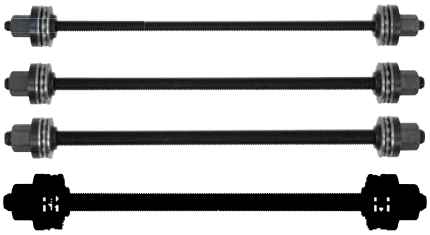
		g	
700.1800-01	Pressure sleeve, internal Ø 74 mm, external Ø 84 mm	240	
700.1800-02	Pressure sleeve, internal Ø 76 mm, external Ø 86 mm	240	
700.1800-03	Pressure sleeve, internal Ø 78 mm, external Ø 88 mm	240	
700.1800-04	Pressure sleeve, internal Ø 80 mm, external Ø 90 mm	240	
700.1800-05	Pressure sleeve, internal Ø 82 mm, external Ø 92 mm	240	
700.1800-06	Pressure sleeve, internal Ø 84 mm, external Ø 94 mm	240	
700.1800-07	Pressure sleeve, internal Ø 86 mm, external Ø 96 mm	240	
700.1800-08	Pressure sleeve, internal Ø 88 mm, external Ø 98 mm	240	
700.1800-09	Impact adaptor for step discs 2 pcs	350	
700.1800-10	Check nut M 10	350	
700.1800-11	Check nut M 12	350	
700.1800-12	Check nut M 14	350	
700.1800-13	Stepped plate, #1	350	
700.1800-14	Stepped plate, #2	350	
700.1800-15	Stepped plate, #3	350	
700.1800-16	Stepped plate, #4	350	
700.1800-17	Spindle TR 20, short	350	
700.1800-18	Spindle TR 20, long	350	
700.1800-19	Thrust bolt TR 20 with bearing 2 pcs	350	
980.1085	Special thread grease, gun	22	

Spindle set for press and pull sleeve set

- With 4 spindles for KS press and pull sleeve set
- Thread lead: 1.5
- Pressure bearing protects against increased friction during the process
- Incl. special thread grease
- Chrome molybdenum

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	
700.1735	13 pcs	Spindle set for press and pull sleeve set	2,20	

consists of:

	x		g	
700.1710	1	Spindle, M10, 350 mm	170	
700.1711	1	Spindle, M12, 350 mm	253	
700.1712	1	Spindle, M14, 350 mm	350	
700.1713	1	Spindle, M16, 350 mm	473	
700.1701	2	Thrust bolt, M10	125	
700.1702	2	Thrust bolt, M12	124	
700.1703	2	Thrust bolt, M14	130	
700.1704	2	Thrust bolt, M16	130	
980.1085	1	Special thread grease, gun	22	

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	





Compression and Tension Sleeve Extension Set, Level 2

- For the assembly and disassembly of bearings
- Ideally for silent bearings, hydro bearings, bushings, ball bearings, simmer rings etc.
- Universal use for construction machines, truck, municipally, country and forestery technology etc.
- 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
- Supplement set for 700.1700 + 700.1800 / 700.1735 + 700.1800



			kg	
700.1805	14 pcs	Compression and Tension Sleeve Extension Set, Level 2	16,40	

consists of:

		kg	
700.1800-20	Thrust bolt big, M16 with bearing	0,31	
700.1800-21	Pressure sleeve, internal Ø 90 mm, external Ø 100 mm	0,90	
700.1800-22	Pressure sleeve, internal Ø 92 mm, external Ø 102 mm	0,92	
700.1800-23	Pressure sleeve, internal Ø 94 mm, external Ø 104 mm	0,94	
700.1800-24	Pressure sleeve, internal Ø 96 mm, external Ø 106 mm	0,96	
700.1800-25	Pressure sleeve, internal Ø 98 mm, external Ø 108 mm	0,98	
700.1800-26	Pressure sleeve, internal Ø 100 mm, external Ø 110 mm	0,99	
700.1800-27	Pressure sleeve, internal Ø 102 mm, external Ø 112 mm	1,00	
700.1800-28	Pressure sleeve, internal Ø 104 mm, external Ø 114 mm	1,03	
700.1800-29	Pressure sleeve, internal Ø 106 mm, external Ø 116 mm	1,05	
700.1800-30	Pressure sleeve, internal Ø 108 mm, external Ø 118 mm	1,06	
700.1800-31	Pressure sleeve, internal Ø 110 mm, external Ø 120 mm	1,10	
700.1800-32	Pressure sleeve, internal Ø 112 mm, external Ø 122 mm	1,10	

Master Compression and Tension Sleeve Set

- For the assembly and disassembly of bearings
- Ideally for silent bearings, hydro bearings, bushings, ball bearings, simmer rings etc.
- Universal use for construction machines, truck, municipally, country and forestery technology etc.
- 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
Spindle TR20x4 400 Nm





			kg	
700.1810	46 pcs	Master Compression and Tension Sleeve Set	31,20	

consists of:

	x		kg	
700.1701	2	Thrust bolt, M10	0,13	
700.1702	2	Thrust bolt, M12	0,12	
700.1703	2	Thrust bolt, M14	0,13	
700.1710	1	Spindle, M10, 350 mm	0,17	
700.1711	1	Spindle, M12, 350 mm	0,25	
700.1712	1	Spindle, M14, 350 mm	0,35	
700.1713	1	Spindle, M16, 350 mm	0,47	
700.1800-01	1	Pressure sleeve, internal Ø 74 mm, external Ø 84 mm	0,24	
700.1800-02	1	Pressure sleeve, internal Ø 76 mm, external Ø 86 mm	0,24	
700.1800-03	1	Pressure sleeve, internal Ø 78 mm, external Ø 88 mm	0,24	
700.1800-04	1	Pressure sleeve, internal Ø 80 mm, external Ø 90 mm	0,24	
700.1800-05	1	Pressure sleeve, internal Ø 82 mm, external Ø 92 mm	0,24	
700.1800-06	1	Pressure sleeve, internal Ø 84 mm, external Ø 94 mm	0,24	
700.1800-07	1	Pressure sleeve, internal Ø 86 mm, external Ø 96 mm	0,24	
700.1800-08	1	Pressure sleeve, internal Ø 88 mm, external Ø 98 mm	0,24	
700.1800-09	2	Impact adaptor for step discs 2 pcs	0,35	
700.1800-10	1	Check nut M 10	0,35	
700.1800-11	1	Check nut M 12	0,35	
700.1800-12	1	Check nut M 14	0,35	
700.1800-13	1	Stepped plate, #1	0,35	
700.1800-14	1	Stepped plate, #2	0,35	
700.1800-15	1	Stepped plate, #3	0,35	
700.1800-16	1	Stepped plate, #4	0,35	
700.1800-17	1	Spindle TR 20, short	0,35	
700.1800-18	1	Spindle TR 20, long	0,35	
700.1800-19	1	Thrust bolt TR 20 with bearing 2 pcs	0,35	
700.1800-20	2	Thrust bolt big, M16 with bearing	0,31	
700.1800-21	1	Pressure sleeve, internal Ø 90 mm, external Ø 100 mm	0,90	
700.1800-22	1	Pressure sleeve, internal Ø 92 mm, external Ø 102 mm	0,92	
700.1800-23	1	Pressure sleeve, internal Ø 94 mm, external Ø 104 mm	0,94	
700.1800-24	1	Pressure sleeve, internal Ø 96 mm, external Ø 106 mm	0,96	
700.1800-25	1	Pressure sleeve, internal Ø 98 mm, external Ø 108 mm	0,98	
700.1800-26	1	Pressure sleeve, internal Ø 100 mm, external Ø 110 mm	0,99	
700.1800-27	1	Pressure sleeve, internal Ø 102 mm, external Ø 112 mm	1,00	
700.1800-28	1	Pressure sleeve, internal Ø 104 mm, external Ø 114 mm	1,03	
700.1800-29	1	Pressure sleeve, internal Ø 106 mm, external Ø 116 mm	1,05	
700.1800-30	1	Pressure sleeve, internal Ø 108 mm, external Ø 118 mm	1,06	
700.1800-31	1	Pressure sleeve, internal Ø 110 mm, external Ø 120 mm	1,10	
700.1800-32	1	Pressure sleeve, internal Ø 112 mm, external Ø 122 mm	1,10	
980.1085	1	Special thread grease, gun	0,02	

ASSEMBLY SLEEVE FOR SPRING PINS

Assembly sleeves for slotted silent bearings on commercial vehicles

- Allows the pretensioning of slotted silent bearings on commercial vehicles
- Adaptor for original dimension to intake bore size with conical sleeve
- Universal solution
- For use with hydraulic and / or mechanical press tools
- Press the sleeve directly on the intake of the vehicle is possible
- Contains a selection of the most common diameters
- Polished inside wall for optimum sliding
- Sturdy design
- Low dimension

Application: Leaf spring, stabiliser, cab suspension etc.
Caution: This tool must be combined with parts of other sets (e.g. press and pull sleeve set)
Recommended mounting paste: e.g. MOLYKOTE G-Rapid Plus





	Size mm	Length mm	Suitable for	kg	
700.1821	58 ➡ 55	85,0	z.B.Gi-Metall-Lagerbuchse Iveco Eurostar Stabi/Blattfeder	1,60	
700.1823	63 ➡ 60	85,0	z.B.Gi-Metall-Lagerbuchse Iveco Eurostar Stabi/Blattfeder	1,60	
700.1825	68 ➡ 63	85,0	z.B.DB Stabilisator Actros, Atego	1,60	
700.1827	72 ➡ 68	85,0	z.B.MAN Vorderachse	1,60	
700.1829	74 ➡ 70	85,0	z.B.Lager mit Zapfen, DB Actros Classic	1,60	
700.1831	89 ➡ 84	85,0	z.B.Lager mit Zapfen, DB Stabilisator Actros	0,50	

Slot bushing tool set for silent bearing slot bushes

- Suitable for the installation and removal of the bearing bushes in commercial vehicle spring suspension
- The slotted bushes can be effortlessly preloaded using the clamping block and the accompanying half shells and thus adjusted to the installation dimensions
- Includes 12 t hydraulic cylinder, especially in the construction of fixed bushes
- The hydraulic cylinder is made for universal usage
- Supplied without hydraulic pump
- Optional: Hand pump 640.0010
- Optional: Air Hydraulic Pump 640.0020
- Optional: Electric Hydraulic Pump 640.0030
- Special installation method that protects the bush via parallel working tensioning elements
- The function of the bearing bush is retained
- Simple handling and quick assembly times
- Safe working
- Suitable for bush change directly on the vehicle

Application:
Ø 51 mm - Volvo FM12
Ø 60 mm - DB / Renault (430/450/460)
Ø 68 mm - MAN-TGA (140/414/460) front axle spring ROR, SAF





			kg	
460.1705	19 pcs	Slot bushing tool set for silent bearing slot bushes	14,90	

consists of:

		kg	
460.1706	Hydraulic cylinder 12t	6,13	
460.1707	Collecting sleeve Ø90x166mm	2,60	
460.1708	Supporting ring (removal) Ø 74x20mm	0,59	
460.1709	Supporting ring (removal) Ø 64x20mm	0,68	
460.1711	Pressure piece (removal) Ø 66x35mm	0,29	
460.1712	Pressure piece (removal) Ø 59x34mm	0,24	
460.1713	Pressure piece (removal) Ø 49x34mm	0,19	
460.1714	Clamping block Ø 90x54mm	3,08	
460.1715	Half shell set Ø 68x54mm	1,09	
460.1716	Half shell set Ø 60x54mm	1,42	
460.1717	Half shell set Ø 51x54mm	1,74	
460.1718	Insertion block Ø78x35	0,52	
460.1719	Counter-bearing (assembly) Ø 78x37mm	0,51	
460.1721	Counter-bearing (assembly) Ø 98x36mm	0,73	
460.1722	Supporting ring (assembly) Ø 108x26mm	0,92	
460.1723	Supporting ring (assembly) Ø 103x26mm	0,86	
460.1724	Supporting ring (assembly) Ø 108x25mm	1,04	
460.1725	Spindle (assembly) M16x2.0 L=280mm	0,52	
460.1726	Spindle (removal) M16x2.0 L=195mm	0,24	



Universally press frame with 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 de- and assembly directly on the vehicle
- Through the long trailing arm also especially high housings release themselves without problem on and pressing out
- Extremely robust spindle with inductively hardened thread
- Special tool steel



			kg	
700.1750	6 pcs	Universally press frame with hydraulic spindle	9,80	

consists of:

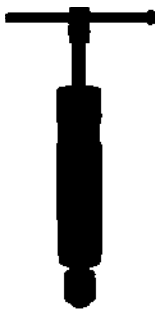
		kg	
700.1400-1	Hydraulic spindle 10 t, AG 1.1/2"x16G	1,34	
700.1751	Universal press frame, 5 pcs without hydraulic spindle	8,90	

HYDRAULIC SUPPORT SYSTEMS

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	Ø mm	kg	
700.1400-1	AG 1 1/2"-16 UN	92,0	260,0	10	15,0	17	1,34	

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 hollow piston cylinder set, 12 t with spindle

- For the dismantling and assembly of silent support, steering pin, track rod ends, wheel bearings etc.
- Extremely high and uniform power construction
- Maximum pressure with little effort
- Industrial execution with forged piston
- Suitable for both pressure and train uses
- Special tool steel



Technical data cylinder

Capacity:	12 t
Connection thread:	3/8" NPT IG
Piston:	industrial forged execution
Stroke:	42,0 mm

			kg	
700.1788	2 pcs	Hydraulic hollow piston cylinder set, 12 t with spindle	3,40	

consists of:

		kg	
700.1789	Hydraulic hollow piston cylinder 12 t	2,20	
700.1787	Feed shaft for hydraulic	1,20	

Hydraulic hollow piston cylinder set 20 t with spindle

- For the dismantling and assembly of silent support, steering pin, track rod ends, wheel bearings etc.
- Extremely high and uniform power construction
- Maximum pressure with little effort
- Industrial execution with forged piston
- Suitable for both pressure and train uses
- Special tool steel



Technical data cylinder

Capacity:	20 t
Connection thread:	3/8" NPT IG
Piston:	industrial forged execution
Stroke:	52,0

			kg	
700.1786	2 pcs	Hydraulic hollow piston cylinder set 20 t with spindle	8,80	

consists of:

		kg	
700.1796	Feed shaft for hydraulic M20 x 500 mm	1,50	
700.1791	Hydraulic hollow piston cylinder 20 t	7,30	

Hydraulic tension and pressure unit

- For the dismantling and assembly of silent support, steering pin, track rod ends, wheel bearings etc.
- Extremely high and uniform power construction
- Industrial execution with forged piston
- Suitable for both pressure and train uses
- Ideally suited for commercial vehicles
- Special tool steel
- In durable plastic storage case





			kg	
700.1790	4 pcs	Hydraulic tension and pressure unit	15,40	

consists of:

		kg	
700.1791	Hydraulic hollow piston cylinder 20 t	7,30	
700.1792	Hydraulic hand pump, 700 bar	5,50	
700.1793	Hydraulic hose, 2 m	1,10	
700.1796	Feed shaft for hydraulic M20 x 500 mm	1,50	

Hydraulic hand pump

- For the dismantling and assembly of silent support, steering pin, track rod ends, wheel bearings etc.
- Extremely high and uniform power construction
- Suitable for both pressure and train uses
- Ideally suited for commercial vehicles
- Supplied without manometer and hydraulic tube
- Special tool steel



Technical data:

Connection thread:	3/8" NPT IG
Hand pump:	700 bar high pressure pump
Dimensions:	410 x 150 x 135

		kg	
700.1792	Hydraulic hand pump	5,50	

Hydraulics tube, 2 m including connection

- Ideally suited for commercial vehicles





Technical data:

Connection thread:	3/8" NPT AG x 3/8" NPT AG
Length:	2000 mm

		kg	
700.1793	Hydraulics tube, 2 m including connection	1,10	

Manometer

- Max. 700 bar
- Special tool steel



Technical data:

Working range:	20-700 bar

	mm	Ø mm	g	
700.1790-2	20	80,0	334	

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	

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
- Ideally suited to transporters
- 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	

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	







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	

Pressure and pull hydraulic cylinder set

- Optimal for universal use in car garages
- Suitable for both pressure and train uses
- 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
- With automatic piston return
- Ideally used with transporters and commercial vehicles
- Special tool steel



Technical data cylinder

Capacity:	45 t
Connection thread:	Cejn quick coupling
Piston:	industrial forged execution
Piston-inner thread:	M27
Outer thread:	2.1/2"
Stroke:	70,0 mm

			kg	
440.0480	7 pcs	Pressure and pull hydraulic cylinder set	14,92	

consists of:

		kg	
440.0481	Hydraulic cylinder, 45 t	11,92	
440.0027	Protective ring for thread, 2.5	0,20	
440.0482	Adjustable pressure sleeve, M30	0,72	
440.0483	Impact body M27	0,52	
440.0484	Collar nut, M27	0,30	
440.0485	Pressure rod M27, 330mm	1,26	
440.0009	(CEJN-) Nipple hydraulic for connection thread 1/4"	0,01	

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:

		kg	
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 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	

Hydraulic hand pump

- Single stage
- Reverse valve for advance and return stroke
- Safety valve for overload protection
- Includes pressure tube 1.8 meters
- Usable tank volume 2081cm³ = 2.081l





		L mm	B mm	H mm	Flow rate per hub cm³	kg	
640.0010	3/8" - 18 NPT	585	133	119	2,62	9,00	

Pneumatic hydraulic pump

- Pneumatic working
- For simply agent press cylinders
- Safety valve for overload protection
- Includes pressure tube 1.8 meters
- Usable tank volume 2081cm³ = 2.081l
- Operating pressure max. 700 bar
- Output per stroke:
  0.8 l/min up to 200 bar
  0.1 l/min up to 700 bar



		L mm	B mm	H mm	kg	
640.0020	3/8" - 18 NPT	255	130	200	11,00	



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

Electric hydraulic pump

- Two stepped for simply agent press cylinders
- Safety valve for overload protection
- Usable tank volume 1900 cm^3 = 1.9l
- Includes pressure tube 1.8 meters
- Motor specification 0.37kW - 220/230 V - 50/60 hertz, single phase (3.2 amps)

1. Step: max. 13 bar
2. Step: max. 700 bar

- Output per stroke:

1. Step: 3.31 l/min
2. Step: 0.32 l/ min



		L mm	B mm	H mm	kg
640.0030	3/8" - 18 NPT	244	244	362	14,00

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

ADAPTERS FOR HYDRAULIC SYSTEMS

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 PRESS FRAME SYSTEMS

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



Universally press frame with 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 de- and assembly directly on the vehicle
- Through the long trailing arm also especially high housings release themselves without problem on and pressing out
- Extremely robust spindle with inductively hardened thread
- Special tool steel



			kg
700.1750	6 pcs	Universally press frame with hydraulic spindle	9,80

consists of:

		kg
700.1751	Universal press frame, 5 pcs without hydraulic spindle	8,90
700.1400-1	Hydraulic spindle 10 t, AG 1.1/2”x16G	1,34

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

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



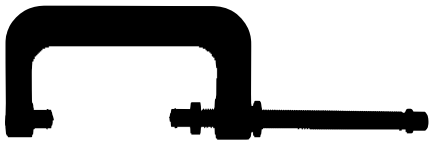
		Max span width mm	Max span depth mm	Length mm	Width mm	kg
700.1780	4 pcs	170,0	65,0	320,0	150,0	6,42

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



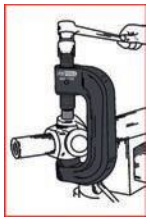
		Max span width mm	Max span depth mm	Length mm	Width mm	kg
700.1755	5 pcs	245,0	95,0	380,0	180,0	7,82

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

Universal C clamp press frame set

- ideally suited for mounting and dismounting anchor bolts on drum brakes, support joints and universal joints
- Very robust execution
- Suitable for impact wrenches
- High release force due to rotary shock pulse with impact wrench
- with removable spindle and step plate holders on the bracket side
- Trapezoidal threaded spindle with ball-bearing pressure tip
- Special tool steel
- In durable plastic storage case





			kg
460.1735	9 pcs	Universal C clamp press frame set	8,30

consists of:

		kg	
460.1736	C-frame with trapezoid spindle, 235.0 mm	4,33	
460.1739	Sleeve for spindle, 100 mm	0,43	
460.1741	Sleeve for C-frame, 28 mm	0,21	
460.1742	Sleeve for C-frame, 71 mm	0,35	
460.1743	Sleeve with step plate, Ø 51 mm	0,15	
460.1744	Sleeve with step plate, Ø 64 mm	0,22	
460.1746	Sleeve with step plate, Ø 76 mm	0,29	
460.1737	Step plate for spindle	0,79	
460.1738	Step plate for C-frame	0,61	

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	

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	

HYDRAULIC SYSTEMS FOR SPRING BOLTS

Truck spring pin metal bush removal / installation set

- Universal application for removal and installation of stubborn metal spring bushes
- Simple expansion even with stiff bolt through 17t hydraulic cylinders
- Easy to use (One-man operation)
- Saves a lot of time
- For light and heavy commercial vehicle and also pickup





			kg	
700.1850	18 pcs	Truck spring pin metal bush removal / installation set	11,80	

consists of:

		kg	
700.1851	Hydraulic hollow piston cylinder 17t	3,51	
700.1852	Collector sleeve with thread 2.1/4"x14UNC	1,70	
700.1853	Supporting plate for collection sleeve (pull)	0,24	
700.1854	Pressure piece (pull) Ø44 x 37.0, M16x2.0	0,17	
700.1855	Pressure piece (pull) Ø44 x 32.5, M16x2.0	0,16	
700.1856	Pressure piece (pull) Ø36 x 29.0, M16x2.0	0,10	
700.1857	Pressure piece (pull) Ø34 x 24.2, M16x2.0	0,08	
700.1858	Pressure piece (assembly) Ø65.0, M16x2.0	0,28	
700.1859	Adapter (assembly) with IG 2.1/4"x14UNC	0,34	
700.1860	Adapter (assembly) 73.0 x 26.0	0,24	
700.1861	Pressure piece (assembly) Ø65.0, M14x2.0	0,30	
700.1862	Pressure piece (pull) Ø41.5, M14x2.0	0,17	
700.1863	Pressure piece (pull) Ø39.5, M14x2.0	0,16	
700.1864	Pressure piece (pull) Ø33.5 x 27.8, M16x2.0	0,14	
700.1865	Pressure piece (pull) Ø29.5 x 24.7, M16x2.0	0,20	
700.1866	Adapter for collection sleeve 2.1/4"x14UNC	0,46	
700.1867	Spindle M20x2.5 / M16x2.0	1,00	
700.1868	Spindle M20x2.5 / M14x2.0	0,84	

Spring bolt set for Scania

- for mounting and dismounting of leaf spring bolts
- ideal for rusted or shrunken bolts
- for use with 32 t hydraulic cylinder (440.0025)
- Use directly at the vehicle possible
- Secure and easy to use
- Special tool steel

Recommended hydraulic cylinder: 32 t hydraulic cylinder 440.0025

Application range: Scania leaf spring bolts



			kg	
440.0620	8 pcs	Spring bolt set for Scania	14,23	

consists of:

	X		kg	
440.0371	1	Press frame, 303 mm	11,80	
440.0374	1	Pressure pipe Ø 54 mm	1,16	
440.0372	1	Pressure rod Ø 29 mm, 115 mm	0,59	
440.0366	4	Screw M22 x 60 mm	0,26	
440.0373	1	Pressure rod Ø 29 mm, 110 mm	0,51	

Spring bolt set for Scania

- for mounting and dismounting of leaf spring bolts
- ideal for rusted or shrunken bolts
- for use with 45 t hydraulic cylinder (440.0480)
- Use directly at the vehicle possible
- Secure and easy to use
- Special tool steel

Recommended hydraulic cylinder: 45 t hydraulic cylinder 440.0480

Application range: Scania leaf spring bolts



			kg	
440.0625	8 pcs	Spring bolt set for Scania	16,39	

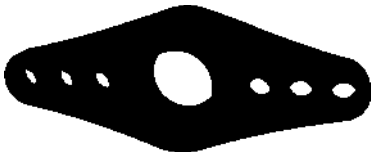
consists of:

	X		kg	
440.0371	1	Press frame, 303 mm	11,80	
440.0603	1	Pressure rod M30, 137 mm	1,60	
440.0366	4	Screw M22 x 60 mm	0,26	
440.0374	1	Pressure pipe Ø 54 mm	1,16	
440.0626	1	Pressure rod Ø 29 mm	1,56	

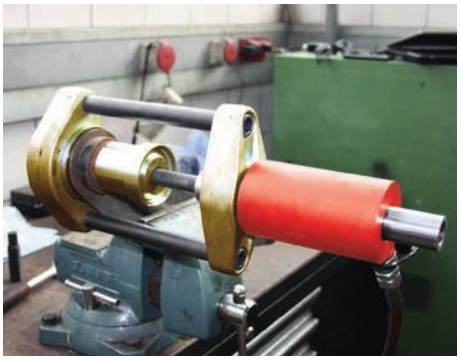
Press frame crosshead for Scania

- for use with spring bolt set for Scania (440.0620 and 440.0625)
- with a maximum width of 380 mm
- Use directly at the vehicle possible
- Secure and easy to use
- Special tool steel

Application range: Scania leaf spring bolts



		Width mm	kg	
440.0593		380,0	9,30	



HYDRAULIC SYSTEMS FOR BUSHING

Universal spring bushing set

- for mounting and dismounting truck leaf spring bushings
- extremely robust tie rods with inductively hardened thread
- suitable for sockets of size 44mm to 63mm
- Enables use directly on the vehicle
- ideal for use with 32t hydraulic cylinder (440.0025)
- Simple handling
- Special tool steel
- In durable plastic storage case

Recommended hydraulic cylinder: 32t (440.0025)
Application range: Truck leaf spring bushes sizes 44mm to 63mm



			kg	
440.0380	12 pcs	Universal spring bushing set	5,48	

consists of:

		kg	
440.0357	Pressure pipe, 130 mm	1,78	
440.0358	Pressure pipe, 42 mm	0,67	
440.0381	Pressure disk Ø 63mm	0,49	
440.0382	Pressure disk Ø 50mm	0,32	
440.0383	Pressure disk Ø 44mm	0,18	
440.0384	Pressure disk Ø 63mm	0,18	
440.0386	Pressure disk Ø 57mm	0,41	
440.0007	Collar nut, M18	0,08	
440.0008	Pressure rod, M18/M22, L = 250 mm	0,44	
440.0028	Collar nut, M22	0,16	
440.0029	Pressure rod, M22, L = 250 mm	0,62	
440.0104	Drive nut, M22	0,20	

HYDRAULIC SYSTEMS FOR 3D BEARINGS

Bushing set for SAF

- for mounting and dismounting the 3D bearing (150mm) on SAF axles
- extremely robust 500mm tie rods with inductively hardened thread
- Enables use directly on the vehicle
- ideal for use with 32t hydraulic cylinder (440.0025)
- Simple handling
- Special tool steel

Recommended hydraulic cylinder: 32t (440.0025)
Application range: SAF axle



			kg	
440.0385	6 pcs	Bushing set for SAF	11,73	

consists of:

		kg	
440.0387	Mounting ring 45mm	1,78	
440.0388	Disassembly/assembly ring 20mm	1,01	
440.0389	Disassembly/assembly disk 137mm	1,70	
440.0112	Pressure disk, Ø 167 mm	3,17	
440.0127	Pressure tube, Ø 170 mm	3,62	
440.0209	Pressure rod M22	0,45	

HYDRAULIC UNIVERSAL SYSTEMS

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:

		kg	
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 tool set for the commercial vehicle sector

- ideal hydraulic tool set for truck and bus workshops
- with 8.5 t and 32 t hydraulic cylinder sets for universal application
- optimum equipment in the area of kingpins, spring bushes and drawbar bolts
- Dismantling tool for brake lever, ball joint
- ideal tools for wheel hub and wheel bearing assembly in the commercial vehicle sector
- Very robust execution
- Secure and easy to use
- Special tool steel



			kg	
440.0690	52 pcs	Master tool set for the commercial vehicle sector	47,26	

consists of:

		kg	
440.0025	Pressure and pull hydraulic cylinder set, 32t, 6 pcs	9,35	
440.0007	Collar nut, M18	0,08	
440.0008	Pressure rod, M18/M22, L = 250 mm	0,44	
440.0675	Universal set for replacing king pins, 32 t, 10 pcs.	18,40	
440.0280	Universal ball joint pullers	2,08	
440.0020	Pressure and pull hydraulic cylinder set, 8.5t, 4 pcs	2,19	
440.0195	Pullers for brake lever arms	3,62	
440.0361	Pressure foot, Ø 155 mm, 90 mm	3,18	
440.0362	Pressure rod Ø 31 mm, 50 mm	0,26	
440.0363	Press plate	0,15	
440.0366	Screw M22 x 60 mm	0,26	
440.0215	Adapter for VBG shaft bolts	0,83	
440.0406	Pressure disk Ø 59mm	0,55	
440.0381	Pressure disk Ø 63mm	0,49	
440.0382	Pressure disk Ø 50mm	0,32	
440.0383	Pressure disk Ø 44mm	0,18	
440.0384	Pressure disk Ø 63mm	0,18	
440.0386	Pressure disk Ø 57mm	0,41	
440.0340	Securing ring tool set, 7 pcs	0,77	
440.0104	Drive nut, M22	0,20	



Hydraulic hand pump

- Single stage
- Reverse valve for advance and return stroke
- Safety valve for overload protection
- Includes pressure tube 1.8 meters
- Usable tank volume 2081cm³ = 2.081l





		L mm	B mm	H mm	Flow rate per hub cm³	kg
640.0010	3/8" - 18 NPT	585	133	119	2,62	9,00

SYSTEMS FOR 3D BEARINGS

3D bushing tool set for SAF axles, Mercedes DCA and HT axles

- ideally suited for disassembly and assembly of 3D bushings on SAF and Mercedes axles
- Sturdy design
- Trapezoid thread spindle for high removal power - drive 30 mm
- Special tool steel

Application range: SAF and **Mercedes** axles





			kg
460.4885	12 pcs	3D bushing tool set for SAF axles, Mercedes DCA and HT axles	14,52

consists of:

	x		kg
460.4886	1	Fitting sleeve, internal diameter 139 - 159 mm	2,30
460.4887	1	Threaded spindle, 30 x 500 mm	2,73
460.4888	1	Cover disk, external diameter 165 mm	3,40
460.4889	1	Cover disk	3,01
460.4890	1	Pressure disk, external diameter 138 mm	2,00
460.4891	1	Counternut, external diameter 138 mm	3,35
460.4892	2	Ring washer, exterior diameter 55 mm, internal diameter 30 mm	0,20
460.4893	1	Ring washer, exterior diameter 74 mm, internal diameter 30 mm	0,05
460.4894	1	Bearings, interior diameter 30 mm	0,14
460.4895	2	Bolts M12x1.75 mm	0,08

SYSTEMS FOR BEARINGS ON BPW AXLES

Steel-rubber bushes Assembly tool for BPW

- universally applicable for the removal and installation of steel-rubber bushings
- excellent for use in combination with a workshop press
- Easy to use
- Saves a lot of time
- for light and heavy trucks
- Special tool steel

Application range: BPW ECO Plus 2



	Ø mm	kg
460.4990	24,0	3,24
460.4991	30,0	3,48

Steel-rubber bushes Dismantling assembly tool for BPW

- Assembly and disassembly of bushings
- ideally suited for steel-rubber bushings on shackle stabilisers
- Enables de -and assembly directly on the vehicle
- Easy to use
- Saves a lot of time
- Special tool steel



			kg
460.4760	6 pcs	Steel-rubber bushes Dismantling assembly tool for BPW	3,50

consists of:

		kg
460.4761	Threaded spindle, 305 mm	1,01
460.4762	Nuts M24x3	0,09
460.4763	Sleeve, Ø 76 mm, 120 mm	1,60
460.4764	Pressure piece, 76 mm	0,76
460.4765	Ring washer, Ø 43 mm, 3 mm thickness	0,03
460.4766	Ring washer, Ø 43 mm, 3 mm thickness	0,01

Steel-rubber bushes Assembly tool for BPW ECO Air Compact

- Assembly and disassembly of bushings
- ideal for steel-rubber bushings on the guide arm of Eco Air Compact suspension systems
- Easy to use
- Saves a lot of time
- for light and heavy trucks
- Special tool steel

Application range: BPW ECO Air Compact



		kg
460.4985	Steel-rubber bushes Assembly tool for BPW ECO Air Compact	8,53

INDUCTION TOOLS

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
500.8420	4 pcs	Induction Heat Gun Set	3,30

consists of:

		kg
500.8420-1	Induction heat gun	1,83
500.8432	Induction coils 19mm, standard	0,05
500.8433	Induction coils 22mm, standard	0,05
500.8450	Induction coil, cable, fully flexible, standard	0,06

Induction Heat Gun Set

- For loosening rusted and seized connections
- For loosening "insoluble" glued connections
- Induction principle
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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

Operational voltage: 230V

Cable length: 2,3

			kg
500.8430	9 pcs	Induction Heat Gun Set	2,15

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	
500.8450	Induction coil, cable, fully flexible, standard	0,06	
500.8445	Induction coil, semi-rigid, deformable, universal	0,04	

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	



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





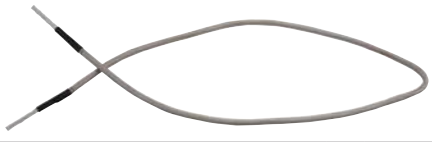
	Length mm	g	
500.8445	595,0	42	

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	

VIBRO IMPACT

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" - 10 mm
Connection thread:	1/4"NPT

	L mm	kg	
515.3881	292,0	2,17	

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:

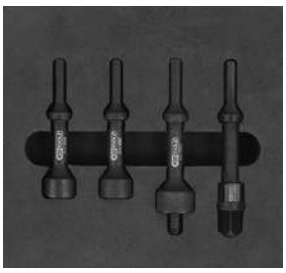
		kg	
515.3881	Pneumatic chisel hammer	2,17	
515.3882	Handle f. pneumatic-chisel hammer	1,55	
515.3886	Pneumatic chisel track rod loosener, 110 mm	0,14	
515.3887	Pneumatic chisel hammer, 110 mm	0,15	
515.3888	Pneumatic chisel loosening adapter, 130 mm	0,16	
515.3889	Pneumatic chisel loosening mandrel, 100x25x12 mm	0,19	

Vibro-Impact 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	

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
- Utilisation of vibration and shock pulse of Vibro Power pneumatic 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





	Width mm	g	
515.3967	20,0	295	
515.3968	24,0	375	
515.3969	35,0	395	

High-performance vibro-impact pneumatic chisel hammer

- With non slip handle
- Air exhaust through the handle
- Ergonomic designed handle
- Air exhaust integrated in the 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



Technical data:

Chisel holder:	15 mm
Number of blows:	2500 blows/min
Vibration acceleration:	20,4 m/s²
Noise performance level:	115 dbA
Noise pressure level:	104 dbA
Air consumption:	210 l/min
Operating pressure:	max. 6,3 bar (90 psi)
Connection thread:	1/4"NPT

		kg	
515.4880	High-performance vibro-impact pneumatic chisel hammer	5,40	

Vibro-Impact tie rod remover

- Pneumatic chisel adapter (15 mm) for use with pneumatic chisel hammers on the market
- Extension of the working range
- Utilisation of the vibration and impact impulse of the high-performance vibro-impact
- Robust chisel forged out of one piece
- Special tool steel



	Length mm	kg	
515.4881	300,0	1,43	

Vibro-Impact Flat Chisel, XL

- Pneumatic chisel adapter (15 mm) for use with pneumatic chisel hammers on the market
- Extension of the working range
- Utilisation of the vibration and impact impulse of the high-performance vibro-impact
- Robust chisel forged out of one piece
- Special tool steel



	Length mm	g	
515.4882	300,0	670	

Vibro-Impact hammer insert

- Pneumatic chisel adapter (15 mm) for use with pneumatic chisel hammers on the market
- Extension of the working range
- Utilisation of the vibration and impact impulse of the high-performance vibro-impact
- Robust chisel forged out of one piece
- Special tool steel



	Length mm	kg	
515.4883	300,0	1,46	

Vibro-Impact Pointed Chisel, XL

- Pneumatic chisel adapter (15 mm) for use with pneumatic chisel hammers on the market
- Extension of the working range
- Utilisation of the vibration and impact impulse of the high-performance vibro-impact
- Robust chisel forged out of one piece
- Special tool steel



	Length mm	g	
515.4884	300,0	630	



Vibro-Impact concave insert

- Pneumatic chisel adapter (15 mm) for use with pneumatic chisel hammers on the market
- Extension of the working range
- Utilisation of the vibration and impact impulse of the high-performance vibro-impact
- Robust chisel forged out of one piece
- Special tool steel



	Length mm	kg	
515.4885	300,0	1,42	

Vibro-Impact Drifters

- Pneumatic chisel adapter (15 mm) for use with pneumatic chisel hammers on the market
- Extension of the working range
- Utilisation of the vibration and impact impulse of the high-performance vibro-impact
- Robust chisel forged out of one piece
- Special tool steel



	Length mm	Width mm	g	
515.4886	235,0	20,0	550	

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	

consists of:

		g	
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	
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	

consists of:

		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	

LUBRICATION SYSTEMS

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





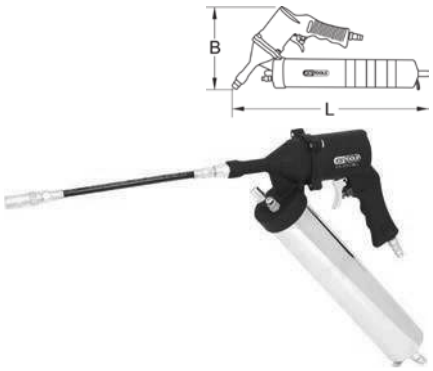
Technical data:

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	

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





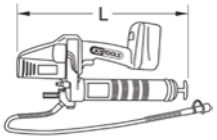
			kg	
980.1100	7 pcs	Grease gun adaptor set	1,99	

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	

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 batteries	Charger	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





Mobile compressed air lubricator, 50:1 pump ratio, 50-60 kg

- For working with grease up to NLGI2
- Optimal for narrow places or hard-to-reach places
- Practical one-man operation
- for barrel goods 50-60kg
- quick and clean drum change
- clean and complete emptying of the drum
- For mobile use as well as stationary



Technical data:

NLGI class:	< 2
Output pressure:	600 bar
Capacity:	60000 g
Tube length:	4 m
Air consumption:	230 l/min
Operating pressure:	5-12 bar
Connection thread:	1/4"PT

	Length mm	Width mm	Height mm	kg
460.5695	600,0	600,0	1180,0	27,00

Grease nipple assortment

- in accordance with DIN 71412
- In plastic storage case





			kg
970.0030	110 pcs	Grease nipple assortment	500
60 x		M6 x1 mm/0° / DIN 71412	
10 x		M8 x1 mm/0° / DIN 71412	
10 x		M10x1 mm/0° / DIN 71412	
5 x		M6 x1 mm/45° / DIN 71412	
5 x		M8 x1 mm/45° / DIN 71412	
5 x		M10x1 mm/45° / DIN 71412	
5 x		M6 x1 mm/90° / DIN 71412	
5 x		M8 x1 mm/90° / DIN 71412	
5 x		M10x1 mm/90° / DIN 71412	

Greasing nipples assortment, metric & imperial

- In plastic storage case



			kg
970.0360	70 pcs	Greasing nipples assortment, metric & imperial	410
10 x		1/8"x27,0 mm / DIN 71412	
20 x		1/4"x28,0 mm / DIN 71412	
10 x		6x 1,0 mm / DIN 71412	
5 x		8x 1,0 mm / DIN 71412	
5 x		10x 1,0 mm / DIN 71412	
5 x		1/8"x27,0 mm/45° / DIN 71412	
5 x		1/4"x28,0 mm/45° / DIN 71412	
5 x		1/8"x27,0 mm/90° / DIN 71412	
5 x		1/4"x28,0 mm/90° / DIN 71412	

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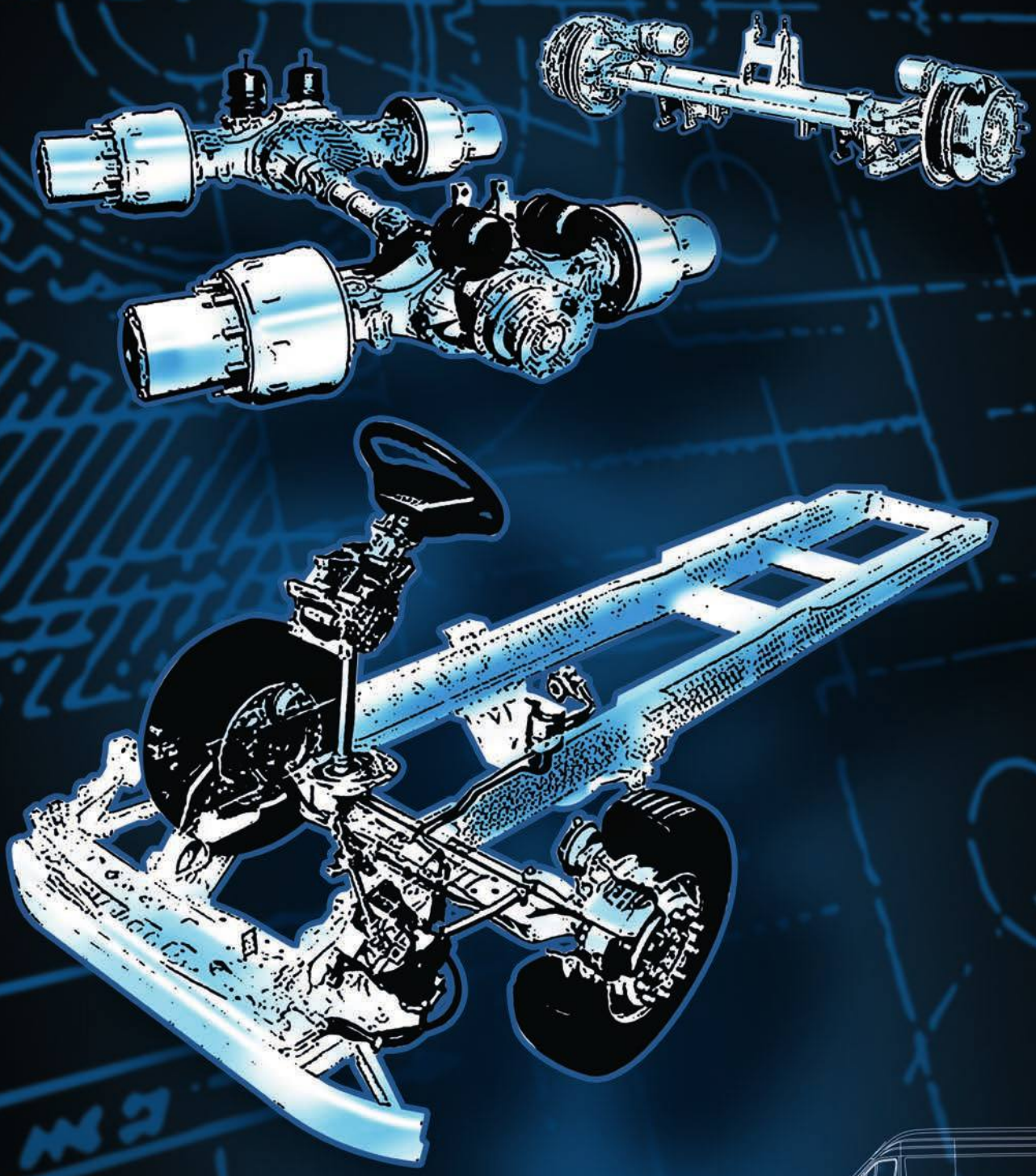
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17

STEERING AND STEERING GEOMETRY





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LEVER / PRY BARS

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	
911.8415	Pry bar, 45°, 1150mm	4,75	

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	

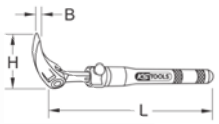
consists of:

		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	

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

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





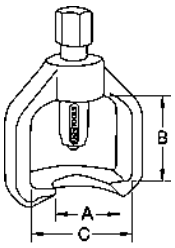
		g	
150.1690	Ultrasound leak detector	460	

UNIVERSAL PIVOT PIN EJECTOR

Universal ball joint separator

- For many automobiles and commercial vehicles
- Special tool steel



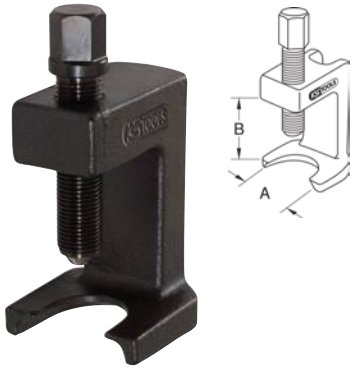


	A mm	B mm	C mm	max N·m	mm	mm	kg
670.0101	18	40	40	50	M14x1,5x60	17	0,30
670.0102	25	50	50	120	M16x1,5x60	17	0,70
670.0103	29	60	60	160	M18x1,5x75	19	1,00
670.0104	40	80	80	280	G1/2"x14gx110	22	2,10
670.0105	45	100	90	400	G3/4"x14gx125	27	2,80
670.0106	56	80	100	280	G1/2"x14gx110	22	2,10



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





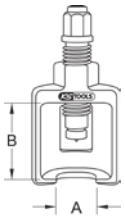
	A mm	B mm	C mm	mm	mm	kg
450.0075	45	75	63	24	M22 x 135	1,63
450.0076	55	100	76	24	M22 x 135	1,84

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







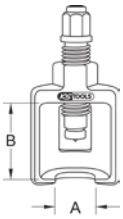
	A mm	B mm	mm	mm	kg
450.0060	30	58	22	18	1,10



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





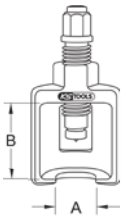


	A mm	B mm	mm	mm	kg
450.0061	32	90	24	25	2,51

Vibro-Impact Universal Ball Joint Puller Bell 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





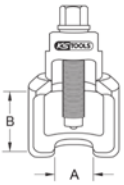


	A mm	B mm	mm	mm	kg
450.0062	39	58	24	25	2,83

Vibro-Impact Universal Ball Joint Puller Bell 39 x 60 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







	mm	A mm	B mm	mm	kg
450.0066	26	39	60	39	3,80

Vibro-Impact Universal Ball Joint Puller Bell 42 x 98 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
- Internal square drive to DIN 3120 / ISO 1174
- Special tool steel

Application range: e.g. **Mercedes** Actros



3/4"

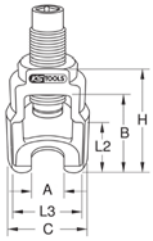
	A mm	B mm	C mm	H mm	L2 mm	L3 mm	kg
450.0067	42,0	98,0	105,0	144,0	60,0	90,0	3,72

Vibro-Impact Universal Ball Joint Puller Bell 58 x 115 mm

- 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
- Internal square drive to DIN 3120 / ISO 1174
- Special tool steel

Application range: e.g. **DAF** / **Scania** and other european commercial vehicle







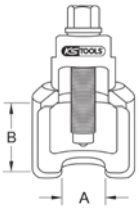
3/4"

	A mm	B mm	C mm	H mm	L2 mm	L3 mm	kg
450.0330	58,0	115,0	137,0	162,0	70,0	115,0	6,00

Vibro-Impact Universal Ball Joint Puller Bell 32 x 40 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





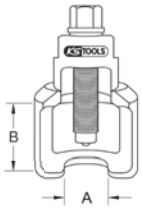


	mm	A mm	B mm	mm	kg
460.1020	22,0	32,0	40,0	19,0	1,50

Vibro-Impact Universal Ball Joint Puller Bell 39 x 59 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
- Without inspection panel
- Special tool steel





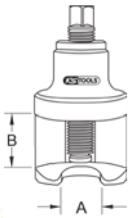


	A mm	B mm	mm	mm	kg
460.0470	39	59	24x128	26	1,70

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







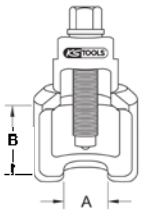
	A mm	B mm	mm	mm	kg
450.0085	35	60	M27 x 130	24	2,52

Vibro-Impact Universal Ball Joint Puller Bell 39 x 59 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

Application range: Universally applicable for commercial vehicles 3.5-8.8t







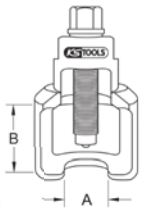
	mm	A mm	B mm	mm	kg
460.0475	24,0	32,0	90,0	26,0	2,70

Vibro-Impact Universal Ball Joint Puller Bell 67 x 75 mm

- 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
- Internal square drive to DIN 3120 / ISO 1174
- Special tool steel

Application range: MAN (FE410A/FE414)







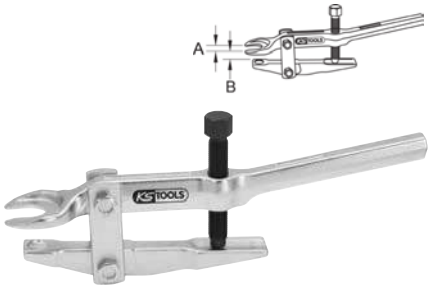
3/4"

	mm	A mm	B mm	kg
460.0750	42,0	67,0	75,0	4,58

UNIVERSAL BALL JOINT EJECTOR WITH LEVER

Universal ball joint separator

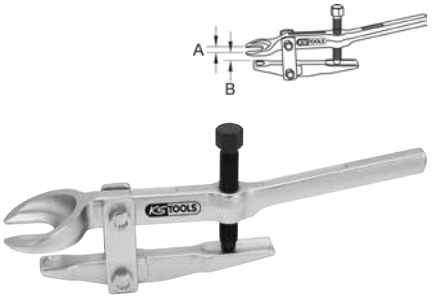
- Extra flat execution
- Forged
- Special tool steel



	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





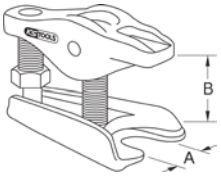


	A mm	B mm	mm	mm	kg
700.5610	24	0-55	M16 x 90	20	1,05

Universal ball joint separator

- For separating the ball plug when removing the ball joints
- Suitable for many vehicles
- Special tool steel



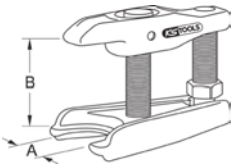




	A mm	B mm	max t	mm	mm	g
670.0111	18-22	50	3,5	19	M14x1,5x48	900

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



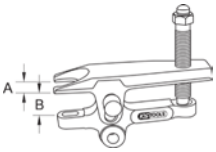


	A mm	B mm	mm	mm	kg
450.0070	32	75	M22 x 90	30	2,49
450.0071	45	80	M22 x 90	30	2,61

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





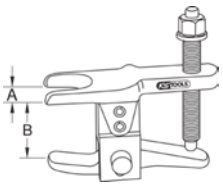


	A mm	B mm	mm	mm	kg
700.5630	20	24-45	M14 x 105	18	1,50

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



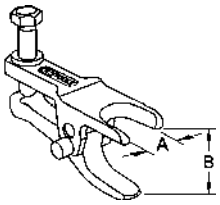


	A mm	B mm	mm	mm	kg
700.5615	18-24	23-110	M16 x 130	16	1,20

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

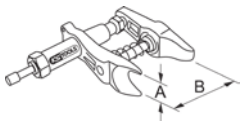




	A mm	B mm	max t	mm	mm	kg
670.0121	24	50	3,5	17	M16x1,5x70	1,40
670.0122	24	60-80	3,5	17	M15x1,5x90	1,80

Universal ball joint separator

- For separating the ball plug when removing the ball joints
- Suitable for many vehicles + moderately heavy trucks
- Special tool steel

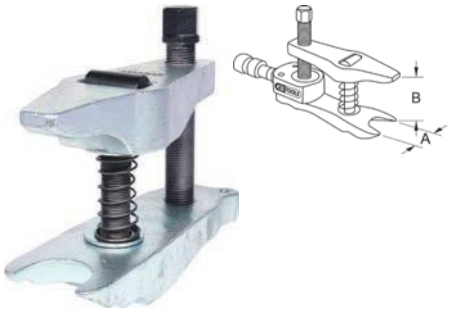




	A mm	B mm	max t	mm	mm	kg
670.0131	36	90	10	22	G1/2"x14gx110	3,70

Universal ball joint separator without hydraulic cylinder

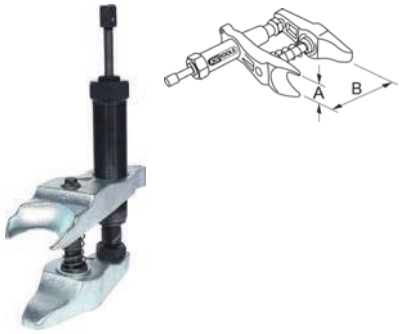
- For separating the ball plug when removing the ball joints
- Suitable for many vehicles + moderately heavy trucks
- For bolts Ø 27.0 - 36.0 mm
- Special tool steel
- For use with 640.0140



	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

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

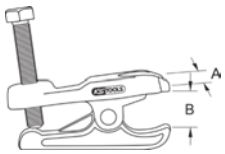


	A mm	B mm	max t	mm	mm	kg
670.0141	36	90	10	17	1.1/2"x16G	4,70

Universal ball joint separator

- Massive execution for loosening the track heads and push pole heads
- suitable for many heavy trucks, buses and low-floor buses
- Enormous power through lever transmission
- including 3 exchangeable pressure peaks
- Special tool steel





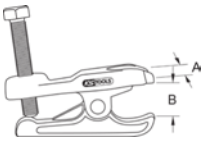


	A mm	B mm	mm	kg
460.1030	39,0	70,0	19,0	6,00

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

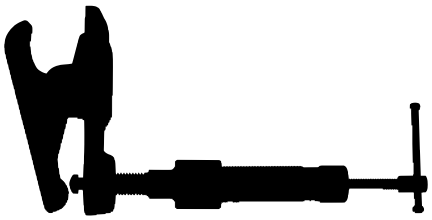




	A mm	B mm	mm	mm	kg
450.0051	36	70	M24x3x160	34	4,34

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

Hydraulic universal ball joint separator

- Massive execution for loosening the track heads and push pole heads
- for fork-opening diameters of up to 40 mm
- Enormous power through lever transmission
- Excellent power transfer
- Special tool steel





	A mm	max t	mm	mm	kg
460.4110	40	10	17	1.1/2"x16G	7,56

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

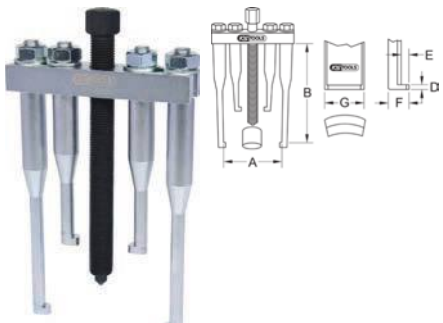
consists of:

		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

STEERING WHEEL PULLER

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	mm	D mm	E mm	F mm	G mm	g
670.0201	90	135	2,5	M14x1,5 x 130	17	5	3,5	11	7,5	900

PRESS AND PULL SLEEVE SET

700.1701 - 700.1704



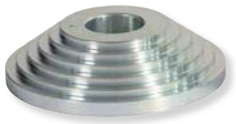
700.1800-19



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

STEERING WHEEL INSTALLATION BALANCE

Steering readout scale

- For fast and accurate alignment of the steering wheel during the wheel alignment
- For optimal use in the assembly and disassembly of steering wheels
- Large clamping range
- Ideally suitable for passenger cars, vans and trucks
- Aluminium





	Operation range mm	L mm	g	
515.3183	270-350	370,0	205	

PRESS AND PULL SLEEVE SET

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	

consists of:

		g	
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

- 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

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	

consists of:

	x		g	
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	
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:

	x		g	
700.1701	2	Thrust bolt, M10	125	
700.1702	2	Thrust bolt, M12	124	
700.1703	2	Thrust bolt, M14	130	
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	
700.1715	1	Pressure sleeve, internal Ø 36 mm, external Ø 46 mm	260	
700.1716	1	Pressure sleeve, internal Ø 38 mm, external Ø 48 mm	280	
700.1717	1	Pressure sleeve, internal Ø 40 mm, external Ø 50 mm	290	
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	

consists of:

	x		g	
700.1710	1	Spindle, M10, 350 mm	170	
700.1711	1	Spindle, M12, 350 mm	253	
700.1712	1	Spindle, M14, 350 mm	350	
700.1713	1	Spindle, M16, 350 mm	473	
700.1720	1	Pressure sleeve, internal Ø 46 mm, external Ø 56 mm	330	
700.1721	1	Pressure sleeve, internal Ø 48 mm, external Ø 58 mm	340	
700.1722	1	Pressure sleeve, internal Ø 50 mm, external Ø 60 mm	350	
700.1723	1	Pressure sleeve, internal Ø 52 mm, external Ø 62 mm	370	
700.1724	1	Pressure sleeve, internal Ø 54 mm, external Ø 64 mm	380	
700.1725	1	Pressure sleeve, internal Ø 56 mm, external Ø 66 mm	390	
700.1726	1	Pressure sleeve, internal Ø 58 mm, external Ø 68 mm	410	
700.1727	1	Pressure sleeve, internal Ø 60 mm, external Ø 70 mm	420	
700.1728	1	Pressure sleeve, internal Ø 62 mm, external Ø 72 mm	430	
700.1729	1	Pressure sleeve, internal Ø 64 mm, external Ø 74 mm	440	
700.1730	1	Pressure sleeve, internal Ø 66 mm, external Ø 76 mm	460	
700.1731	1	Pressure sleeve, internal Ø 68 mm, external Ø 78 mm	470	
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	

Compression and Tension Sleeve Extension Set, Level 1

- For the assembly and disassembly of bearings
- Ideally for silent bearings, hydro bearings, bushings, ball bearings, simmer rings etc.
- Universal use for construction machines, truck, municipally, country and forestery technology etc.
- 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
- Supplement set for 700.1700 / 700.1735

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
Spindle TR20x4 400 Nm



			kg	
700.1800	22 pcs	Compression and Tension Sleeve Extension Set, Level 1	16,60	

consists of:

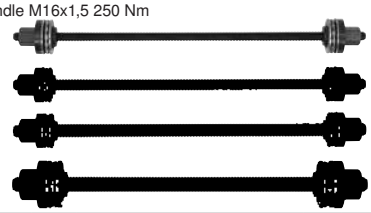
		g	
700.1800-01	Pressure sleeve, internal Ø 74 mm, external Ø 84 mm	240	
700.1800-02	Pressure sleeve, internal Ø 76 mm, external Ø 86 mm	240	
700.1800-03	Pressure sleeve, internal Ø 78 mm, external Ø 88 mm	240	
700.1800-04	Pressure sleeve, internal Ø 80 mm, external Ø 90 mm	240	
700.1800-05	Pressure sleeve, internal Ø 82 mm, external Ø 92 mm	240	
700.1800-06	Pressure sleeve, internal Ø 84 mm, external Ø 94 mm	240	
700.1800-07	Pressure sleeve, internal Ø 86 mm, external Ø 96 mm	240	
700.1800-08	Pressure sleeve, internal Ø 88 mm, external Ø 98 mm	240	
700.1800-09	Impact adaptor for step discs 2 pcs	350	
700.1800-10	Check nut M 10	350	
700.1800-11	Check nut M 12	350	
700.1800-12	Check nut M 14	350	
700.1800-13	Stepped plate, #1	350	
700.1800-14	Stepped plate, #2	350	
700.1800-15	Stepped plate, #3	350	
700.1800-16	Stepped plate, #4	350	
700.1800-17	Spindle TR 20, short	350	
700.1800-18	Spindle TR 20, long	350	
700.1800-19	Thrust bolt TR 20 with bearing 2 pcs	350	
980.1085	Special thread grease, gun	22	

Spindle set for press and pull sleeve set

- With 4 spindles for KS press and pull sleeve set
- Thread lead: 1.5
- Pressure bearing protects against increased friction during the process
- Incl. special thread grease
- Chrome molybdenum

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	
700.1735	13 pcs	Spindle set for press and pull sleeve set	2,20	

consists of:

	x		g	
700.1710	1	Spindle, M10, 350 mm	170	
700.1711	1	Spindle, M12, 350 mm	253	
700.1712	1	Spindle, M14, 350 mm	350	
700.1713	1	Spindle, M16, 350 mm	473	
700.1701	2	Thrust bolt, M10	125	
700.1702	2	Thrust bolt, M12	124	
700.1703	2	Thrust bolt, M14	130	
700.1704	2	Thrust bolt, M16	130	
980.1085	1	Special thread grease, gun	22	

Compression and Tension Sleeve Extension Set, Level 2

- For the assembly and disassembly of bearings
- Ideally for silent bearings, hydro bearings, bushings, ball bearings, simmer rings etc.
- Universal use for construction machines, truck, municipally, country and forestery technology etc.
- 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
- Supplement set for 700.1700 + 700.1800 / 700.1735 + 700.1800



			kg	
700.1805	14 pcs	Compression and Tension Sleeve Extension Set, Level 2	16,40	

consists of:

		kg	
700.1800-20	Thrust bolt big, M16 with bearing	0,31	
700.1800-21	Pressure sleeve, internal Ø 90 mm, external Ø 100 mm	0,90	
700.1800-22	Pressure sleeve, internal Ø 92 mm, external Ø 102 mm	0,92	
700.1800-23	Pressure sleeve, internal Ø 94 mm, external Ø 104 mm	0,94	
700.1800-24	Pressure sleeve, internal Ø 96 mm, external Ø 106 mm	0,96	
700.1800-25	Pressure sleeve, internal Ø 98 mm, external Ø 108 mm	0,98	
700.1800-26	Pressure sleeve, internal Ø 100 mm, external Ø 110 mm	0,99	
700.1800-27	Pressure sleeve, internal Ø 102 mm, external Ø 112 mm	1,00	
700.1800-28	Pressure sleeve, internal Ø 104 mm, external Ø 114 mm	1,03	
700.1800-29	Pressure sleeve, internal Ø 106 mm, external Ø 116 mm	1,05	
700.1800-30	Pressure sleeve, internal Ø 108 mm, external Ø 118 mm	1,06	
700.1800-31	Pressure sleeve, internal Ø 110 mm, external Ø 120 mm	1,10	
700.1800-32	Pressure sleeve, internal Ø 112 mm, external Ø 122 mm	1,10	

Master Compression and Tension Sleeve Set

- For the assembly and disassembly of bearings
- Ideally for silent bearings, hydro bearings, bushings, ball bearings, simmer rings etc.
- Universal use for construction machines, truck, municipally, country and forestery technology etc.
- 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
Spindle TR20x4 400 Nm



			kg	
700.1810	46 pcs	Master Compression and Tension Sleeve Set	31,20	

consists of:

	x		kg	
700.1701	2	Thrust bolt, M10	0,13	
700.1702	2	Thrust bolt, M12	0,12	
700.1703	2	Thrust bolt, M14	0,13	
700.1710	1	Spindle, M10, 350 mm	0,17	
700.1711	1	Spindle, M12, 350 mm	0,25	
700.1712	1	Spindle, M14, 350 mm	0,35	
700.1713	1	Spindle, M16, 350 mm	0,47	
700.1800-01	1	Pressure sleeve, internal Ø 74 mm, external Ø 84 mm	0,24	
700.1800-02	1	Pressure sleeve, internal Ø 76 mm, external Ø 86 mm	0,24	
700.1800-03	1	Pressure sleeve, internal Ø 78 mm, external Ø 88 mm	0,24	
700.1800-04	1	Pressure sleeve, internal Ø 80 mm, external Ø 90 mm	0,24	
700.1800-05	1	Pressure sleeve, internal Ø 82 mm, external Ø 92 mm	0,24	
700.1800-06	1	Pressure sleeve, internal Ø 84 mm, external Ø 94 mm	0,24	
700.1800-07	1	Pressure sleeve, internal Ø 86 mm, external Ø 96 mm	0,24	
700.1800-08	1	Pressure sleeve, internal Ø 88 mm, external Ø 98 mm	0,24	
700.1800-09	2	Impact adaptor for step discs 2 pcs	0,35	
700.1800-10	1	Check nut M 10	0,35	
700.1800-11	1	Check nut M 12	0,35	
700.1800-12	1	Check nut M 14	0,35	
700.1800-13	1	Stepped plate, #1	0,35	
700.1800-14	1	Stepped plate, #2	0,35	
700.1800-15	1	Stepped plate, #3	0,35	
700.1800-16	1	Stepped plate, #4	0,35	
700.1800-17	1	Spindle TR 20, short	0,35	
700.1800-18	1	Spindle TR 20, long	0,35	
700.1800-19	1	Thrust bolt TR 20 with bearing 2 pcs	0,35	
700.1800-20	2	Thrust bolt big, M16 with bearing	0,31	
700.1800-21	1	Pressure sleeve, internal Ø 90 mm, external Ø 100 mm	0,90	
700.1800-22	1	Pressure sleeve, internal Ø 92 mm, external Ø 102 mm	0,92	
700.1800-23	1	Pressure sleeve, internal Ø 94 mm, external Ø 104 mm	0,94	
700.1800-24	1	Pressure sleeve, internal Ø 96 mm, external Ø 106 mm	0,96	
700.1800-25	1	Pressure sleeve, internal Ø 98 mm, external Ø 108 mm	0,98	
700.1800-26	1	Pressure sleeve, internal Ø 100 mm, external Ø 110 mm	0,99	
700.1800-27	1	Pressure sleeve, internal Ø 102 mm, external Ø 112 mm	1,00	
700.1800-28	1	Pressure sleeve, internal Ø 104 mm, external Ø 114 mm	1,03	
700.1800-29	1	Pressure sleeve, internal Ø 106 mm, external Ø 116 mm	1,05	
700.1800-30	1	Pressure sleeve, internal Ø 108 mm, external Ø 118 mm	1,06	
700.1800-31	1	Pressure sleeve, internal Ø 110 mm, external Ø 120 mm	1,10	
700.1800-32	1	Pressure sleeve, internal Ø 112 mm, external Ø 122 mm	1,10	
980.1085	1	Special thread grease, gun	0,02	

Special thread grease for puller and pusher spindles and nuts subjected high loads

- Lubricant for components subjected to high static loads, e.g. threaded spindles
- Prevents excessive wear and seizing
- Irregularities in the surface to be protected are completely filled
- Minimises the friction thanks to the closed surface
- Effective protection against corrosion
- Increases the service life of threaded spindles
- Ensures reliable function even at high temperatures up to max. 1200 °C



			g	
980.1085		Special thread grease, gun	22	

Special thread grease for puller and pusher spindles

- Lubricant for components subjected to high static loads, e.g. threaded spindles
- Prevents excessive wear and seizing
- Irregularities in the surface to be protected are completely filled
- Minimises the friction thanks to the closed surface
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- Increases the service life of threaded spindles
- Ensures reliable function even at high temperatures up to max. 1200 °C

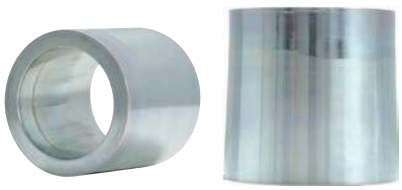


			g	
980.1090		Special thread grease, tube	5	

Assembly sleeves for slotted silent bearings on commercial vehicles

- Allows the pretensioning of slotted silent bearings on commercial vehicles
- Adaptor for original dimension to intake bore size with conical sleeve
- Universal solution
- For use with hydraulic and / or mechanical press tools
- Press the sleeve directly on the intake of the vehicle is possible
- Contains a selection of the most common diameters
- Polished inside wall for optimum sliding
- Sturdy design
- Low dimension

Application: Leaf spring, stabiliser, cab suspension etc.
Caution: This tool must be combined with parts of other sets (e.g. press and pull sleeve set)
Recommended mounting paste: e.g. MOLYKOTE G-Rapid Plus



	Size mm	Length mm	Suitable for	kg	
700.1821	58 ➞ 55	85,0	z.B.Gi-Metall-Lagerbuchse Iveco Eurostar Stabi/Blattfeder	1,60	
700.1823	63 ➞ 60	85,0	z.B.Gi-Metall-Lagerbuchse Iveco Eurostar Stabi/Blattfeder	1,60	
700.1825	68 ➞ 63	85,0	z.B.DB Stabilisator Actros, Atego	1,60	
700.1827	72 ➞ 68	85,0	z.B.MAN Vorderachse	1,60	
700.1829	74 ➞ 70	85,0	z.B.Lager mit Zapfen, DB Actros Classic	1,60	
700.1831	89 ➞ 84	85,0	z.B.Lager mit Zapfen, DB Stabilisator Actros	0,50	

Slot bushing tool set for silent bearing slot bushes

- Suitable for the installation and removal of the bearing bushes in commercial vehicle spring suspension
- The slotted bushes can be effortlessly preloaded using the clamping block and the accompanying half shells and thus adjusted to the installation dimensions
- Includes 12 t hydraulic cylinder, especially in the construction of fixed bushes
- The hydraulic cylinder is made for universal usage
- Supplied without hydraulic pump
- Optional: Hand pump 640.0010
- Optional: Air Hydraulic Pump 640.0020
- Optional: Electric Hydraulic Pump 640.0030
- Special installation method that protects the bush via parallel working tensioning elements
- The function of the bearing bush is retained
- Simple handling and quick assembly times
- Safe working
- Suitable for bush change directly on the vehicle

Application:
Ø 51 mm - Volvo FM12
Ø 60 mm - DB / Renault (430/450/460)
Ø 68 mm - MAN-TGA (140/414/460) front axle spring ROR, SAF





			kg	
460.1705	19 pcs	Slot bushing tool set for silent bearing slot bushes	14,90	

consists of:

		kg	
460.1706	Hydraulic cylinder 12t	6,13	
460.1707	Collecting sleeve Ø90x166mm	2,60	
460.1708	Supporting ring (removal) Ø 74x20mm	0,59	
460.1709	Supporting ring (removal) Ø 64x20mm	0,68	
460.1711	Pressure piece (removal) Ø 66x35mm	0,29	
460.1712	Pressure piece (removal) Ø 59x34mm	0,24	
460.1713	Pressure piece (removal) Ø 49x34mm	0,19	
460.1714	Clamping block Ø 90x54mm	3,08	
460.1715	Half shell set Ø 68x54mm	1,09	
460.1716	Half shell set Ø 60x54mm	1,42	
460.1717	Half shell set Ø 51x54mm	1,74	
460.1718	Insertion block Ø78x35	0,52	
460.1719	Counter-bearing (assembly) Ø 78x37mm	0,51	
460.1721	Counter-bearing (assembly) Ø 98x36mm	0,73	
460.1722	Supporting ring (assembly) Ø 108x26mm	0,92	
460.1723	Supporting ring (assembly) Ø 103x26mm	0,86	
460.1724	Supporting ring (assembly) Ø 108x25mm	1,04	
460.1725	Spindle (assembly) M16x2.0 L=280mm	0,52	
460.1726	Spindle (removal) M16x2.0 L=195mm	0,24	



Universally press frame with 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 de- and assembly directly on the vehicle
- Through the long trailing arm also especially high housings release themselves without problem on and pressing out
- Extremely robust spindle with inductively hardened thread
- Special tool steel



			kg	
700.1750	6 pcs	Universally press frame with hydraulic spindle	9,80	

consists of:

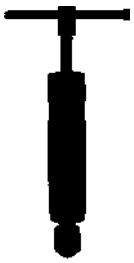
		kg	
700.1400-1	Hydraulic spindle 10 t, AG 1.1/2"x16G	1,34	
700.1751	Universal press frame, 5 pcs without hydraulic spindle	8,90	

HYDRAULIC SUPPORT SYSTEMS

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	

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 hollow piston cylinder set, 12 t with spindle

- For the dismantling and assembly of silent support, steering pin, track rod ends, wheel bearings etc.
- Extremely high and uniform power construction
- Maximum pressure with little effort
- Industrial execution with forged piston
- Suitable for both pressure and train uses
- Special tool steel



Technical data cylinder

Capacity:	12 t
Connection thread:	3/8" NPT IG
Piston:	industrial forged execution
Stroke:	42,0 mm

			kg	
700.1788	2 pcs	Hydraulic hollow piston cylinder set, 12 t with spindle	3,40	

consists of:

		kg	
700.1789	Hydraulic hollow piston cylinder 12 t	2,20	
700.1787	Feed shaft for hydraulic	1,20	

Hydraulic hollow piston cylinder set 20 t with spindle

- For the dismantling and assembly of silent support, steering pin, track rod ends, wheel bearings etc.
- Extremely high and uniform power construction
- Maximum pressure with little effort
- Industrial execution with forged piston
- Suitable for both pressure and train uses
- Special tool steel



Technical data cylinder

Capacity:	20 t
Connection thread:	3/8" NPT IG
Piston:	industrial forged execution
Stroke:	52,0

			kg	
700.1786	2 pcs	Hydraulic hollow piston cylinder set 20 t with spindle	8,80	

consists of:

		kg	
700.1796	Feed shaft for hydraulic M20 x 500 mm	1,50	
700.1791	Hydraulic hollow piston cylinder 20 t	7,30	



Hydraulic tension and pressure unit

- For the dismantling and assembly of silent support, steering pin, track rod ends, wheel bearings etc.
- Extremely high and uniform power construction
- Industrial execution with forged piston
- Suitable for both pressure and train uses
- Ideally suited for commercial vehicles
- Special tool steel
- In durable plastic storage case



			kg	
700.1790	4 pcs	Hydraulic tension and pressure unit	15,40	

consists of:

		kg	
700.1791	Hydraulic hollow piston cylinder 20 t	7,30	
700.1792	Hydraulic hand pump, 700 bar	5,50	
700.1793	Hydraulic hose, 2 m	1,10	
700.1796	Feed shaft for hydraulic M20 x 500 mm	1,50	

Spindle set for press and pull sleeve set

- With 4 spindles for KS press and pull sleeve set
- Thread lead: 1.5
- Pressure bearing protects against increased friction during the process
- Incl. special thread grease
- Chrome molybdenum

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	
700.1735	13 pcs	Spindle set for press and pull sleeve set	2,20	

consists of:

	x		g	
700.1710	1	Spindle, M10, 350 mm	170	
700.1711	1	Spindle, M12, 350 mm	253	
700.1712	1	Spindle, M14, 350 mm	350	
700.1713	1	Spindle, M16, 350 mm	473	
700.1701	2	Thrust bolt, M10	125	
700.1702	2	Thrust bolt, M12	124	
700.1703	2	Thrust bolt, M14	130	
700.1704	2	Thrust bolt, M16	130	
980.1085	1	Special thread grease, gun	22	

Hydraulic hand pump

- For the dismantling and assembly of silent support, steering pin, track rod ends, wheel bearings etc.
- Extremely high and uniform power construction
- Suitable for both pressure and train uses
- Ideally suited for commercial vehicles
- Supplied without manometer and hydraulic tube
- Special tool steel



Technical data:

Connection thread:	3/8" NPT IG
Hand pump:	700 bar high pressure pump
Dimensions:	410 x 150 x 135

		kg	
700.1792	Hydraulic hand pump	5,50	

Hydraulics tube, 2 m including connection

- Ideally suited for commercial vehicles



Technical data:

Connection thread:	3/8" NPT AG x 3/8" NPT AG
Length:	2000 mm

		kg	
700.1793	Hydraulics tube, 2 m including connection	1,10	

Manometer

- Max. 700 bar
- Special tool steel



	Ø mm	g	
700.1790-2	80,0	334	

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	



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
- Ideally suited to transporters
- 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	



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	

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	

Pressure and pull hydraulic cylinder set

- Optimal for universal use in car garages
- Suitable for both pressure and train uses
- 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
- With automatic piston return
- Ideally used with transporters and commercial vehicles
- Special tool steel



Technical data cylinder

Capacity:	45 t
Connection thread:	Cejn quick coupling
Piston:	industrial forged execution
Piston-inner thread:	M27
Outer thread:	2.1/2"
Stroke:	70,0 mm

			kg	
440.0480	7 pcs	Pressure and pull hydraulic cylinder set	14,92	

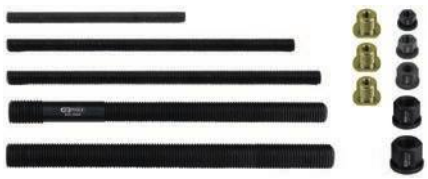
consists of:

		kg	
440.0481	Hydraulic cylinder, 45 t	11,92	
440.0027	Protective ring for thread, 2.5	0,20	
440.0482	Adjustable pressure sleeve, M30	0,72	
440.0483	Impact body M27	0,52	
440.0484	Collar nut, M27	0,30	
440.0485	Pressure rod M27, 330mm	1,26	
440.0009	(CEJN-) Nipple hydraulic for connection thread 1/4"	0,01	

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 hand pump

- Single stage
- Reverse valve for advance and return stroke
- Safety valve for overload protection
- Includes pressure tube 1.8 meters
- Usable tank volume 2081cm³ = 2.081l





		L mm	B mm	H mm	Flow rate per hub cm³	kg	
640.0010	3/8" - 18 NPT	585	133	119	2,62	9,00	

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

- Pneumatic working
- For simply agent press cylinders
- Safety valve for overload protection
- Includes pressure tube 1.8 meters
- Usable tank volume 2081cm³ = 2.081l
- Operating pressure max. 700 bar
- Output per stroke:
  0.8 l/min up to 200 bar
  0.1 l/min up to 700 bar



		L mm	B mm	H mm	kg	
640.0020	3/8" - 18 NPT	255	130	200	11,00	

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	



Electric hydraulic pump

- Two stepped for simply agent press cylinders
- Safety valve for overload protection
- Usable tank volume 1900 cm³ = 1.9l
- Includes pressure tube 1.8 meters
- Motor specification 0.37kW - 220/230 V - 50/60 hertz, single phase (3.2 amps)

1. Step: max. 13 bar
2. Step: max. 700 bar

- Output per stroke:

1. Step: 3.31 l/min
2. Step: 0.32 l/ min



		L mm	B mm	H mm	kg	
640.0030	3/8" - 18 NPT	244	244	362	14,00	

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 unit 22 t, with hydraulic pump and manometer

- For the dismantling and assembly of silent support, steering pin, track rod ends, wheel bearings etc.
- Includes hydraulic pump and manometer
- 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





			kg	
440.0580	15 pcs	Hydraulic unit 22 t, with hydraulic pump and manometer	15,23	

consists of:

		kg	
440.0010	Pressure and pull hydraulic cylinder set, 22t, 10 pcs	6,90	
440.0060	Hydraulic foot pump set, 4 pcs	7,83	
440.0063	Manometer, 150 mm	0,50	

Hydraulic unit 32 t, with hydraulic pump and manometer

- Optimal for universal use in car garages
- Includes hydraulic pump and manometer
- 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



			kg	
440.0585	11 pcs	Hydraulic unit 32 t, with hydraulic pump and manometer	9,35	

consists of:

		kg	
440.0025	Pressure and pull hydraulic cylinder set, 32t, 6 pcs	9,35	
440.0060	Hydraulic foot pump set, 4 pcs	7,83	
440.0063	Manometer, 150 mm	0,50	

Hydraulic unit 16-tonnes, with air hydraulic pump

- 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
- With pneumatic hydraulic pump
- Universal usage with reduction M10-M22
- With automatic piston return
- Special tool steel
- In durable steel storage case



			kg	
440.9991	13 pcs	Hydraulic unit 16-tonnes, with air hydraulic pump	11,80	

consists of:

440.0005	Pressure and pull hydraulic cylinder set, 16t, 10 pcs	5,48	
440.0055	Pneumatic hydraulic pump set, 3 pcs	6,32	

Hydraulic unit 22-tonnes, with air hydraulic pump

- 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
- With pneumatic hydraulic pump
- Universal usage with reduction M10-M22
- With automatic piston return
- Special tool steel
- In durable steel storage case



440.9995	13 pcs	Hydraulic unit 22-tonnes, with air hydraulic pump	13,22

consists of:

440.0010	Pressure and pull hydraulic cylinder set, 22t, 10 pcs	6,90	
440.0055	Pneumatic hydraulic pump set, 3 pcs	6,32	

Hydraulic unit 32-tonnes, with air hydraulic pump

- 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
- With pneumatic hydraulic pump
- 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



440.9996	9 pcs	Hydraulic unit 32-tonnes, with air hydraulic pump	15,67

consists of:

440.0025	Pressure and pull hydraulic cylinder set, 32t, 6 pcs	9,35	
440.0055	Pneumatic hydraulic pump set, 3 pcs	6,32	

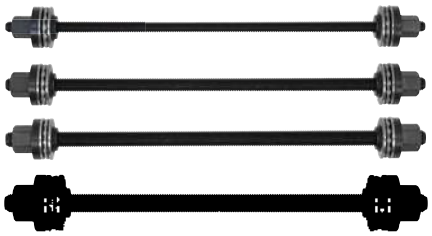
UNIVERSAL SPINDLE DRIVE

Spindle set for press and pull sleeve set

- With 4 spindles for KS press and pull sleeve set
- Thread lead: 1.5
- Pressure bearing protects against increased friction during the process
- Incl. special thread grease
- Chrome molybdenum

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



700.1735	13 pcs	Spindle set for press and pull sleeve set	2,20

consists of:

	x		
700.1710	1	Spindle, M10, 350 mm	170
700.1711	1	Spindle, M12, 350 mm	253
700.1712	1	Spindle, M14, 350 mm	350
700.1713	1	Spindle, M16, 350 mm	473
700.1701	2	Thrust bolt, M10	125
700.1702	2	Thrust bolt, M12	124
700.1703	2	Thrust bolt, M14	130
700.1704	2	Thrust bolt, M16	130
980.1085	1	Special thread grease, gun	22

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!



440.0035	4 pcs	Mechanical spindle set	1,11

consists of:

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

ADAPTERS FOR HYDRAULIC SYSTEMS

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



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



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



440.0409	KS hydraulic PP2 to Klann (commercial vehicles-special tools)	140

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



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 PRESS FRAME SYSTEMS

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	

Universally press frame with 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 de- and assembly directly on the vehicle
- Through the long trailing arm also especially high housings release themselves without problem on and pressing out
- Extremely robust spindle with inductively hardened thread
- Special tool steel



			kg	
700.1750	6 pcs	Universally press frame with hydraulic spindle	9,80	

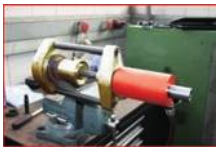
consists of:

		kg	
700.1400-1	Hydraulic spindle 10 t, AG 1.1/2"x16G	1,34	
700.1751	Universal press frame, 5 pcs without hydraulic spindle	8,90	

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	

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	

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)



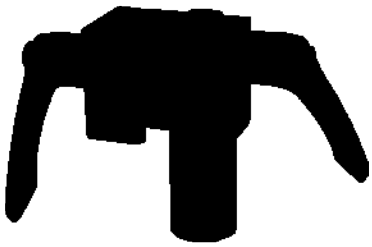


		kg	
440.0190	Press tool	5,78	

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	

HYDRAULIC C-FRAME SYSTEMS

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



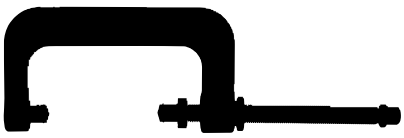
		Max span width mm	Max span depth mm	Length mm	Width mm	kg	
700.1780	4 pcs	170,0	65,0	320,0	150,0	6,42	

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	

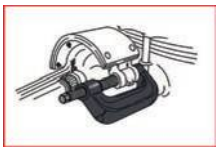
consists of:

		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	



Universal C clamp press frame set

- ideally suited for mounting and dismounting anchor bolts on drum brakes, support joints and universal joints
- Very robust execution
- Suitable for impact wrenches
- High release force due to rotary shock pulse with impact wrench
- with removable spindle and step plate holders on the bracket side
- Trapezoidal threaded spindle with ball-bearing pressure tip
- Special tool steel
- In durable plastic storage case





			kg	
460.1735	9 pcs	Universal C clamp press frame set	8,30	

consists of:

		kg	
460.1736	C-frame with trapezoid spindle, 235.0 mm	4,33	
460.1739	Sleeve for spindle, 100 mm	0,43	
460.1741	Sleeve for C-frame, 28 mm	0,21	
460.1742	Sleeve for C-frame, 71 mm	0,35	
460.1743	Sleeve with step plate, Ø 51 mm	0,15	
460.1744	Sleeve with step plate, Ø 64 mm	0,22	
460.1746	Sleeve with step plate, Ø 76 mm	0,29	
460.1737	Step plate for spindle	0,79	
460.1738	Step plate for C-frame	0,61	

HYDRAULIC SYSTEMS FOR BALL JOINTS

Hydraulic universal ball joint ejector set

- For extracting the ball joints and ball plug at track rod ends, direct transmissions and suspension axles
- Revolving cylinder reception
- Compact construction
- Excellent power transfer
- Special tool steel
- Connection thread 3/8" NPT
- Appropriate hand pumps 700.1792
- Appropriate hydraulics tube 700.1793



			kg	
450.0120	6 pcs	Hydraulic universal ball joint ejector set	9,57	

consists of:

		kg	
450.0121	Ball joint ejector	2,40	
450.0122	Clevis, Ø max 25mm	1,35	
450.0123	Clevis, Ø max 33mm	1,27	
450.0124	Clevis, Ø max 47mm	1,21	
450.0126	Hydraulic flat cylinder, 20 t	2,90	
450.0127	Safety chain	0,44	

HYDRAULIC SYSTEMS FOR SUPPORTING JOINTS

Universal ball joint puller

- for pushing out ball joint pins from steering levers, tie rods, stabilisers etc.
- extremely robust design
- For use with hydraulic cylinder
- Special tool steel
- In durable plastic storage case

Recommended hydraulic cylinder: 8.5t (440.0020)
Application range: Transport vehicles, trucks and buses





	Max span width mm	Max span depth mm	kg	
440.0280	40,0	72,0	2,08	

Hydraulic steering column lever puller with window for Scania

- for damage-free disassembly of the steering column lever
- enormous dissolving power through the use of hydraulic cylinders
- Cap with window for puller for drop arm with large reach
- Simple handling
- including removable pressure tip
- Cast forged execution

Recommended hydraulic pump: 640.0020

Application range: Scania (320/340)





		Max span width mm	Max span depth mm	kg	
460.1420	3 pcs	58,0	120,0	7,20	

consists of:

		kg	
460.1421	Hydraulic cylinder, 10 t	4,30	
460.1422	Puller for drop arm fork 58mm	2,60	
460.1423	Pressure tip, Ø 38 mm	0,28	

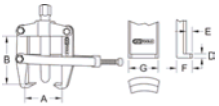




Universal 2-armed ball joint puller with clamping yoke

- Clamping yoke compresses the legs firmly
- Prevents slipping
- Pressure control rubber centres itself optimally
- Extremely robust spindle
- Special tool steel







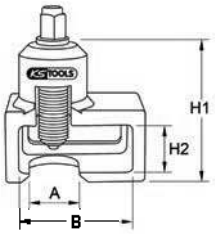
	A mm	B mm	max t	mm	mm	D mm	E mm	F mm	G mm	kg	
460.4430	69	84	5	TR22x125	19	5	16	25	24	1,70	

Ball joint pusher for Volvo

- Robust model for loosening the track heads and push pole heads
- Optimal placement due to special design
- Trapezoidal threaded spindle with ball bearing pressure ball
- Special tool steel

Application range: Volvo FM12 and FH







	A mm	B mm	H1 mm	H2 mm	mm	mm	kg	
460.3945	38	85	103,0	35,0	22x112	19	2,13	

Stabiliser puller set for Volvo

- For professional disassembly of the front and rear stabilizers
- Drive 19.0mm
- Hardened spindle with ball lock
- Less space required
- Including chain for fixing
- Special tool steel

Application range: Stabilizer **Volvo** FM12





			kg	
460.3960	3 pcs	Stabiliser puller set for Volvo	1,81	

consists of:

		kg	
460.3961	Pullers	1,37	
460.3962	Trapezoid thread spindle M 22	0,27	
460.3963	Safety chain	0,18	

HYDRAULIC SYSTEMS FOR KINGPINS

Universal set for replacing kingpins, 32 t

- for mounting and dismounting king pins
- with fixed bolts, the impact function allows an increase in force
- for use with 32 t hydraulic cylinder (440.0025)
- Use directly at the vehicle possible
- Secure and easy to use
- Special tool steel

Recommended hydraulic cylinder: 32 t hydraulic cylinder 440.0025



			kg	
440.0675	10 pcs	Universal set for replacing kingpins, 32 t	18,40	

consists of:

		kg	
440.0581	Press tool	8,90	
440.0357	Pressure pipe, 130 mm	1,78	
440.0582	Pressure pipe, 160 mm	1,20	
440.0358	Pressure pipe, 42 mm	0,67	
440.0583	Pressure pipe, 52 mm	0,80	
440.0584	Pressure sleeve, 65 mm	1,10	
440.0586	Adapter plate, 31 mm	1,40	
440.0352	Pressure rod Ø 31 mm, 250 mm	1,44	
440.0353	Pressure rod Ø 31 mm, 140 mm	0,80	
440.0362	Pressure rod Ø 31 mm, 50 mm	0,26	

Universal set for replacing king pins 45 t

- for mounting and dismounting king pins
- with fixed bolts, the impact function allows an increase in force
- for use with 45 t hydraulic cylinder (440.0480)
- Use directly at the vehicle possible
- Secure and easy to use
- Special tool steel

Recommended hydraulic cylinder: 45 t hydraulic cylinder 440.0480



			kg	
440.0665	12 pcs	Universal set for replacing king pins 45 t	20,10	

consists of:

		kg	
440.0581	Press tool	8,90	
440.0357	Pressure pipe, 130 mm	1,78	
440.0582	Pressure pipe, 160 mm	1,20	
440.0358	Pressure pipe, 42 mm	0,67	
440.0583	Pressure pipe, 52 mm	0,80	
440.0584	Pressure sleeve, 65 mm	1,10	
440.0586	Adapter plate, 31 mm	1,40	
440.0587	Pressure rod M30, 140mm	1,30	
440.0588	Pressure rod M30, 30mm	0,40	
440.0589	Extension, 100mm	0,90	
440.0591	Extension, 70mm	0,60	
440.0592	Extension, 50mm	0,50	

Extension set for replacing kingpins

- Extension for kingpin set (440.0675 and 440.0665)
- Secure and easy to use
- Special tool steel

Application range: Trailer



			kg	
440.0595	9 pcs	Extension set for replacing kingpins	13,30	

consists of:

		kg	
440.0596	Extension, Ø 58 mm	0,70	
440.0597	Extension, Ø 51 mm	0,91	
440.0598	Extension, Ø 51 mm	2,60	
440.0599	Press plate, Ø 85 mm	0,60	
440.0601	Press plate, Ø 84 mm	1,00	
440.0602	Support leg, 596 mm	7,50	

Extension set to replace stub axle bolts for Mercedes

- Extension for kingpin set (440.0675 and 440.0665)
- Secure and easy to use
- Special tool steel

Application range: Mercedes Actros and Atego



			kg	
440.0600	6 pcs	Extension set to replace stub axle bolts for Mercedes	6,00	

consists of:

		kg	
440.0597	Extension, Ø 51 mm	0,91	
440.0603	Pressure rod M30, 137 mm	1,60	
440.0598	Extension, Ø 51 mm	2,60	
440.0604	Guide ring, Ø 54 mm	0,10	
440.0260	Assembly ring lower bearing, Ø 90 mm	0,60	
440.0606	Centering piece, Ø 47.5 mm	0,20	

Extension set for replacing kingpins for MAN

- Extension for kingpin set (440.0675 and 440.0665)
- Secure and easy to use
- Special tool steel

Application range: MAN TGA, TGS and TGX



			kg	
440.0605	5 pcs	Extension set for replacing kingpins for MAN	7,42	

consists of:

		kg	
440.0607	Pressure pipe, Ø 84 mm	3,78	
440.0597	Extension, Ø 51 mm	0,91	
440.0598	Extension, Ø 51 mm	2,60	
440.0604	Guide ring, Ø 54 mm	0,10	

Kingpin press 75t with set of sleeves

- Suitable for quick insertion and removal of king pins
- Ideal for cylindrical and conical bolts
- No removal of the axle required
- Press unit is 360° rotatable
- Swivelling, rotatable and with height adjustment for components that are difficult to access
- Including pneumatic hydraulic foot pump with quick lift, hydraulic cylinder, most common sleeves and pressure pieces
- Secure and easy to use
- Special and compact design
- time- and cost-efficient





Technical data:

Capacity:	32 t
Stroke:	160,0 mm
Bolt spacing:	260 mm
Operating pressure max:	700 bar
Volume:	1,8 l

			kg	
460.3620	29 pcs	Kingpin press 75t with set of sleeves	217,00	

consists of:

		kg	
460.3621	Base rack	74,00	
460.3622	Hydraulic pump 700 bar	1,02	
460.3623	Hydraulic cylinder 75t	30,00	
460.3624	8-piece Pressing Frame Set	49,00	
460.3627	2-piece holding rod set, long	2,67	
460.3628	2-piece Fixing Screw Set for Press Frame	0,67	
460.3629	Mounting adapter for thrust pads	1,15	
460.3633	Pressure piece external Ø 24 mm	0,70	
460.3634	Pressure piece external Ø 34 mm	1,00	
460.3636	Pressure piece outer-Ø 47mm, short	0,90	
460.3637	Pressure piece outer-Ø 47mm, long	1,40	
460.3638	Pressure piece outer Ø 47mm, extra long	2,10	
460.3639	Sleeve inner-Ø 39.0mm	2,50	
460.3641	Sleeve inner-Ø 50.0mm	2,00	
460.3642	Sleeve inner-Ø 61.0mm	1,50	
460.3643	Sleeve inner-Ø 95.0mm	2,90	
460.3626	2-piece holding rod set, short	1,80	



HYDRAULIC SYSTEMS FOR STABILIZERS

Hydraulic connecting rod bushing set

- for mounting and dismounting the bushings on the connecting rod of the rear axle
- suitable for the front and rear bearing with a Ø 105 mm
- including 30 t hydraulic cylinder
- Secure and easy to use
- Special tool steel

Application range: BPW 12 t, 16 t





			kg	
460.4490	10 pcs	Hydraulic connecting rod bushing set	71,00	

consists of:

		kg	
460.4491	Pressure container, 390x190x150 mm	22,50	
460.4492	Hydraulic cylinder, 30t	3,35	
460.4493	Pressure sleeve, 103 x 98 mm	4,86	
460.4494	Pressure nuts, 138 x 35 mm	3,12	
460.4495	Pressure sleeve, 138 x 30 mm	2,04	
460.4496	Pressing tools, Ø90 mm	6,10	
460.4497	Attachment rod long, 580 mm	1,68	
460.4498	Mobile frame, 375x180x110 mm	7,34	
460.4499	Pneumatic hydraulic pump, 700 bar	10,53	
460.4489	Magnetic spacer	0,16	

Double wishbone bushes set for DAF Ø 70 mm

- For mounting and dismounting the bushings on the wishbone of the rear axle
- Suitable for the front bearing and for the rear bearings with Ø 70mm
- Secure and easy to use
- In conjunction with a workshop press
- Special tool steel

Application range: DAF wishbone at the rear axle





			kg	
460.3925	8 pcs	Double wishbone bushes set for DAF Ø 70 mm	11,30	

consists of:

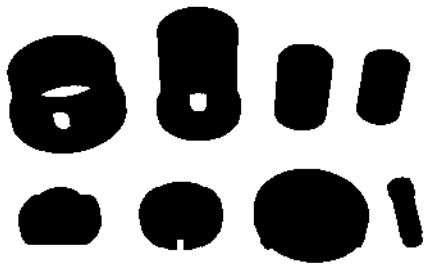
		kg	
460.3926	Disassembly sleeve with inspection panel, large bush	2,77	
460.3927	Disassembly pressure piece, large bush	1,96	
460.3928	Assembly retainer plate, large bush	1,45	
460.3929	Assembly pressure piece, large bush	0,90	
460.3931	Separating screw for double wishbone	0,28	
460.3932	Assembly and disassembly sleeve with inspection panel, small bush	2,96	
460.3933	Assembly and disassembly pressure piece, small bush	1,55	
460.3934	Adapter ring	0,27	

Socket and wishbone set for DAF Ø 75 mm

- For mounting and dismounting the bushings on the wishbone of the rear axle
- Suitable for the front and rear bearings with Ø 75mm
- Secure and easy to use
- In conjunction with a workshop press
- Special tool steel

Application range: DAF wishbone at the rear axle





			kg	
460.4160	8 pcs	Socket and wishbone set for DAF Ø 75 mm	11,44	

consists of:

		kg	
460.3926	Disassembly sleeve with inspection panel, large bush	2,77	
460.3927	Disassembly pressure piece, large bush	1,96	
460.3928	Assembly retainer plate, large bush	1,45	
460.3929	Assembly pressure piece, large bush	0,90	
460.3931	Separating screw for double wishbone	0,28	
460.4161	Assembly and disassembly pressure piece, small bush	2,96	
460.4162	Assembly pressure piece, small bush	1,55	
460.4163	Disassembly pressure piece, small bush	0,57	



COMPLETE HYDRAULIC AXLE SETS

Master tool set for the commercial vehicle sector

- ideal hydraulic tool set for truck and bus workshops
- with 8.5 t and 32 t hydraulic cylinder sets for universal application
- optimum equipment in the area of kingpins, spring bushes and drawbar bolts
- Dismantling tool for brake lever, ball joint
- ideal tools for wheel hub and wheel bearing assembly in the commercial vehicle sector
- Very robust execution
- Secure and easy to use
- Special tool steel



			kg	
440.0690	52 pcs	Master tool set for the commercial vehicle sector	47,26	

consists of:

		kg	
440.0025	Pressure and pull hydraulic cylinder set, 32t, 6 pcs	9,35	
440.0007	Collar nut, M18	0,08	
440.0008	Pressure rod, M18/M22, L = 250 mm	0,44	
440.0675	Universal set for replacing king pins, 32 t, 10 pcs.	18,40	
440.0280	Universal ball joint pullers	2,08	
440.0020	Pressure and pull hydraulic cylinder set, 8.5t, 4 pcs	2,19	
440.0195	Pullers for brake lever arms	3,62	
440.0361	Pressure foot, Ø 155 mm, 90 mm	3,18	
440.0362	Pressure rod Ø 31 mm, 50 mm	0,26	
440.0363	Press plate	0,15	
440.0366	Screw M22 x 60 mm	0,26	
440.0215	Adapter for VBG shaft bolts	0,83	
440.0406	Pressure disk Ø 59mm	0,55	
440.0381	Pressure disk Ø 63mm	0,49	
440.0382	Pressure disk Ø 50mm	0,32	
440.0383	Pressure disk Ø 44mm	0,18	
440.0384	Pressure disk Ø 63mm	0,18	
440.0386	Pressure disk Ø 57mm	0,41	
440.0340	Securing ring tool set, 7 pcs	0,77	
440.0104	Drive nut, M22	0,20	

Master tool set for commercial vehicles

- ideal hydraulic tool set for truck and bus workshops
- with 8.5 t and 32 t hydraulic cylinder sets for universal application
- optimum equipment in the area of kingpins, spring bushes and drawbar bolts
- Dismantling tool for brake lever, ball joint
- ideal tools for wheel hub and wheel bearing assembly in the commercial vehicle sector
- Very robust execution
- Secure and easy to use
- Special tool steel



			kg	
440.0695	36 pcs	Master tool set for commercial vehicles	49,61	

consists of:

		kg	
440.0361	Pressure foot, Ø 155 mm, 90 mm	3,18	
440.0366	Screw M22 x 60 mm	0,26	
440.0340	Securing ring tool set, 7 pcs	0,77	
440.0195	Pullers for brake lever arms	3,62	
440.0280	Universal ball joint pullers	2,08	
440.0020	Pressure and pull hydraulic cylinder set, 8.5t, 4 pcs	2,19	
440.0480	Pressure and pull hydraulic cylinder set, 7 pcs	14,92	
440.0665	Universal set for replacing king pins, 45 t, 12 pcs.	20,10	

SPECIAL TOOL FOR STEERING LINKAGE AND STEERING GEARBOX

Slotted nut wrench for steering linkage fastening with 4 pins for DAF

- ideal for tightening and loosening groove nuts on steering rods
- Internal square drive to DIN 3121 / ISO 1174
- High accuracy of fit
- Extremely robust version
- Slim design
- Suitable for exact torque possible
- Special tool steel



1/2"

	D1 mm	D2 mm	Stud	B mm	H mm	kg	
460.0610	52,0	41,0	4	5,0	78,0		

Special 12-sided key for Iveco

- 12-sided special wrench
- for mounting and dismounting the steering column screw connection
- Extremely robust
- Special tool steel

Application range: Iveco 12 t, 17 t





	mm	Length mm	kg	
460.3820	65	300,0	1,26	



Axle nut wrench for Volvo

- Internal square drive to DIN 3121 / ISO 1174
- 6 point
- Slim design
- Sturdy design
- Positive drive of the axle nut
- Any extensive slipping is avoided
- Milled out profile
- Can be used with an impact wrench or torque wrench
- Special tool steel

Application range: Axle nut **Volvo** FH front axle cover, steering pin (e.g. FM 12)



3/4"

	mm	D mm	T mm	H mm	kg	
450.0245	80	100,0	17,0	55,0	1,31	

Socket wrench for oil sealing rings on steering gears

- ideally suited for tightening and loosening the nut when changing oil sealing rings on steering gears
- prevents damage
- Internal square drive to DIN 3121 / ISO 1174
- High accuracy of fit
- Extremely robust version
- Suitable for exact torque possible
- Special tool steel





1/2"

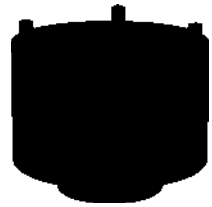
	D1 mm	D2 mm	D3 mm	H mm	Stud	kg	
460.0755	69,0	46,0	59,0	60,0	4	1,14	

Socket wrench for oil sealing rings on steering gears for Fuso

- ideally suited for tightening and loosening the nut when changing oil sealing rings on steering gears
- prevents damage
- Internal square drive to DIN 3121 / ISO 1174
- High accuracy of fit
- Extremely robust version
- Suitable for exact torque possible
- Special tool steel







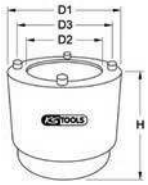
1/2"

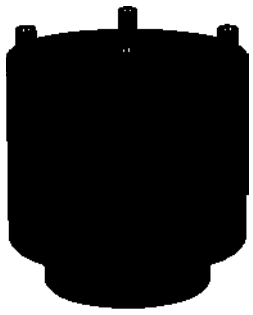
	D1 mm	D2 mm	D3 mm	Height mm	Stud	kg	
460.4405	82,0	57,0	71	65,0	4	1,39	

Socket wrench for oil sealing rings on steering gears for Fuso

- ideally suited for tightening and loosening the nut when changing oil sealing rings on steering gears
- prevents damage
- Internal square drive to DIN 3121 / ISO 1174
- High accuracy of fit
- Extremely robust version
- Suitable for exact torque possible
- Special tool steel







1/2"

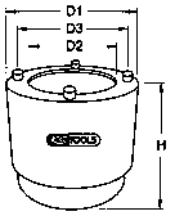
	D1 mm	D2 mm	D3 mm	Height mm	Stud	kg	
460.4410	64,0	41,0	53	65,0	4	0,97	

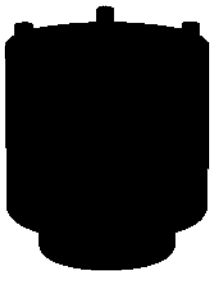
Socket wrench for oil sealing rings on steering gears for Fuso

- ideally suited for tightening and loosening the nut when changing oil sealing rings on steering gears
- prevents damage
- Internal square drive to DIN 3121 / ISO 1174
- High accuracy of fit
- Extremely robust version
- Suitable for exact torque possible
- Special tool steel

Application range: Fuso Canter 3.5 t







1/2"

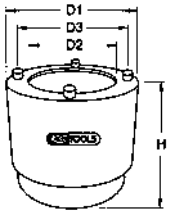
	D1 mm	D2 mm	D3 mm	Height mm	Stud	kg	
460.4415	60,0	38,0	19	65,0	4	0,96	



Socket wrench for oil sealing rings on steering gears for Hino

- ideally suited for tightening and loosening the nut when changing oil sealing rings on steering gears
- prevents damage
- Internal square drive to DIN 3121 / ISO 1174
- High accuracy of fit
- Extremely robust version
- Suitable for exact torque possible
- Special tool steel







1/2"

	D1 mm	D2 mm	D3 mm	Height mm	Stud	kg	
460.4425	72,0	48,0	61	65,0	2	1,18	

Special puller set for steering bearings

- ideally suited for dismantling the steering bearing when replacing the seal
- Spindle suitable for impact wrenches
- High release force due to rotary shock pulse with impact wrench
- Trapezoidal threaded spindle with ball-bearing pressure tip
- Very robust execution
- In durable steel storage case

Application range: Scania 320 and 340, **Volvo** FM12 and **MAN** 414



			kg	
460.1625	10 pcs	Special puller set for steering bearings	9,60	

consists of:

		kg	
460.1626	Draw-out bell with inspection window	3,36	
460.1627	Trapezoid spindle Tr.30 with pressure tip, length 285 mm	1,33	
460.1628	Half-shelf coupling Scania 320, internal Ø 71 mm	0,71	
460.1629	Half-shelf coupling Scania 340, internal Ø 77 mm	0,78	
460.1631	Half-shelf coupling Volvo FM12, internal Ø 78 mm	0,77	
460.1632	Half-shelf coupling MAN, internal Ø 80 mm	0,76	

VIBRO IMPACT

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" - 10 mm
Connection thread:	1/4"NPT

	L mm	kg	
515.3881	292,0	2,17	

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:

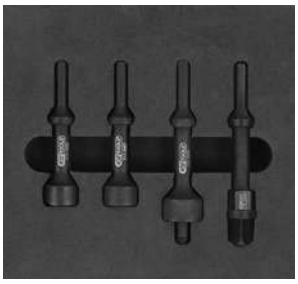
		kg	
515.3881	Pneumatic chisel hammer	2,17	
515.3882	Handle f. pneumatic-chisel hammer	1,55	
515.3886	Pneumatic chisel track rod loosener, 110 mm	0,14	
515.3887	Pneumatic chisel hammer, 110 mm	0,15	
515.3888	Pneumatic chisel loosening adapter, 130 mm	0,16	
515.3889	Pneumatic chisel loosening mandrel, 100x25x12 mm	0,19	

Vibro-Impact 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	

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
- Utilisation of vibration and shock pulse of Vibro Power pneumatic 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





	Width mm	g	
515.3967	20,0	295	
515.3968	24,0	375	
515.3969	35,0	395	

High-performance vibro-impact pneumatic chisel hammer

- With non slip handle
- Air exhaust through the handle
- Ergonomic designed handle
- Air exhaust integrated in the 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



Technical data:

Chisel holder:	15 mm
Number of blows:	2500 blows/min
Vibration acceleration:	20,4 m/s²
Noise performance level:	115 dbA
Noise pressure level:	104 dbA
Air consumption:	210 l/min
Operating pressure:	max. 6,3 bar (90 psi)
Connection thread:	1/4"NPT

	Length mm	kg	
515.4880	380,0	5,40	

Vibro-Impact tie rod remover

- Pneumatic chisel adapter (15 mm) for use with pneumatic chisel hammers on the market
- Extension of the working range
- Utilisation of the vibration and impact impulse of the high-performance vibro-impact
- Robust chisel forged out of one piece
- Special tool steel



	Length mm	kg	
515.4881	300,0	1,43	

Vibro-Impact Flat Chisel, XL

- Pneumatic chisel adapter (15 mm) for use with pneumatic chisel hammers on the market
- Extension of the working range
- Utilisation of the vibration and impact impulse of the high-performance vibro-impact
- Robust chisel forged out of one piece
- Special tool steel



	Length mm	g	
515.4882	300,0	670	

Vibro-Impact hammer insert

- Pneumatic chisel adapter (15 mm) for use with pneumatic chisel hammers on the market
- Extension of the working range
- Utilisation of the vibration and impact impulse of the high-performance vibro-impact
- Robust chisel forged out of one piece
- Special tool steel



	Length mm	kg	
515.4883	300,0	1,46	

Vibro-Impact Pointed Chisel, XL

- Pneumatic chisel adapter (15 mm) for use with pneumatic chisel hammers on the market
- Extension of the working range
- Utilisation of the vibration and impact impulse of the high-performance vibro-impact
- Robust chisel forged out of one piece
- Special tool steel



	Length mm	g	
515.4884	300,0	630	

Vibro-Impact concave insert

- Pneumatic chisel adapter (15 mm) for use with pneumatic chisel hammers on the market
- Extension of the working range
- Utilisation of the vibration and impact impulse of the high-performance vibro-impact
- Robust chisel forged out of one piece
- Special tool steel



	Length mm	kg	
515.4885	300,0	1,42	

Vibro-Impact Drifters

- Pneumatic chisel adapter (15 mm) for use with pneumatic chisel hammers on the market
- Extension of the working range
- Utilisation of the vibration and impact impulse of the high-performance vibro-impact
- Robust chisel forged out of one piece
- Special tool steel



	Length mm	Width mm	g	
515.4886	235,0	20,0	550	

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:

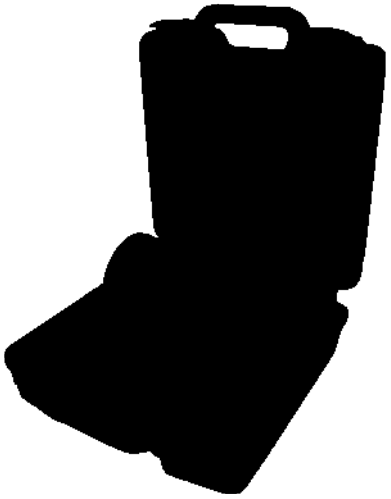
		g	
700.1348	Reception adaptor, 45mm	500	
700.1349	Impact drive knurled grip, 220mm	42	
700.1351	Pressure plate, 18mm	12	
700.1352	Pressure plate, 19mm	14	
700.1353	Pressure plate, 20mm	16	
700.1354	Pressure plate, 21mm	20	
700.1355	Pressure plate, 22mm	22	
700.1356	Pressure plate, 23mm	27	
700.1357	Pressure 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	
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	

consists of:

		g	
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	

consists of:

		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	



SEPARATION AND ASSEMBLY FORK

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	

LUBRICATION SYSTEMS

Manual lever grease gun with flexible tube

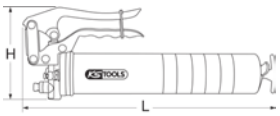
- For cartridges and buckets and/or also for loose grease
- Fill capacity 400g
- Flexible tube
- Mirror polished



	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





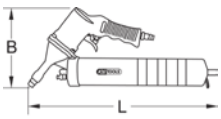
Technical data:

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





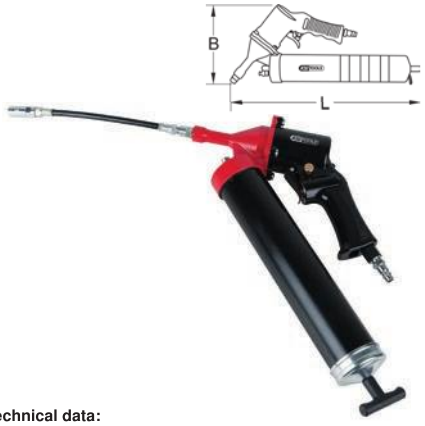
Technical data:

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	

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





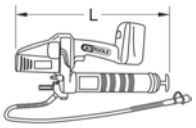
			kg
980.1100	7 pcs	Grease gun adaptor set	1,99

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

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 batteries	Charger	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

Mobile compressed air lubricator, 50:1 pump ratio, 50-60 kg

- For working with grease up to NLGI2
- Optimal for narrow places or hard-to-reach places
- Practical one-man operation
- for barrel goods 50-60kg
- quick and clean drum change
- clean and complete emptying of the drum
- For mobile use as well as stationary



Technical data:

NLGI class:	< 2
Output pressure:	600 bar
Capacity:	60000 g
Tube length:	4 m
Air consumption:	230 l/min
Operating pressure:	5-12 bar
Connection thread:	1/4"PT

	Length mm	Width mm	Height mm	kg
460.5695	600,0	600,0	1180,0	27,00

GREASE NIPPLES

Grease nipple assortment

- in accordance with DIN 71412
- In plastic storage case





			g
970.0030	110 pcs	Grease nipple assortment	500

60 x		M6 x1 mm/0° / DIN 71412
10 x		M8 x1 mm/0° / DIN 71412
10 x		M10x1 mm/0° / DIN 71412
5 x		M6 x1 mm/45° / DIN 71412
5 x		M8 x1 mm/45° / DIN 71412
5 x		M10x1 mm/45° / DIN 71412
5 x		M6 x1 mm/90° / DIN 71412
5 x		M8 x1 mm/90° / DIN 71412
5 x		M10x1 mm/90° / DIN 71412

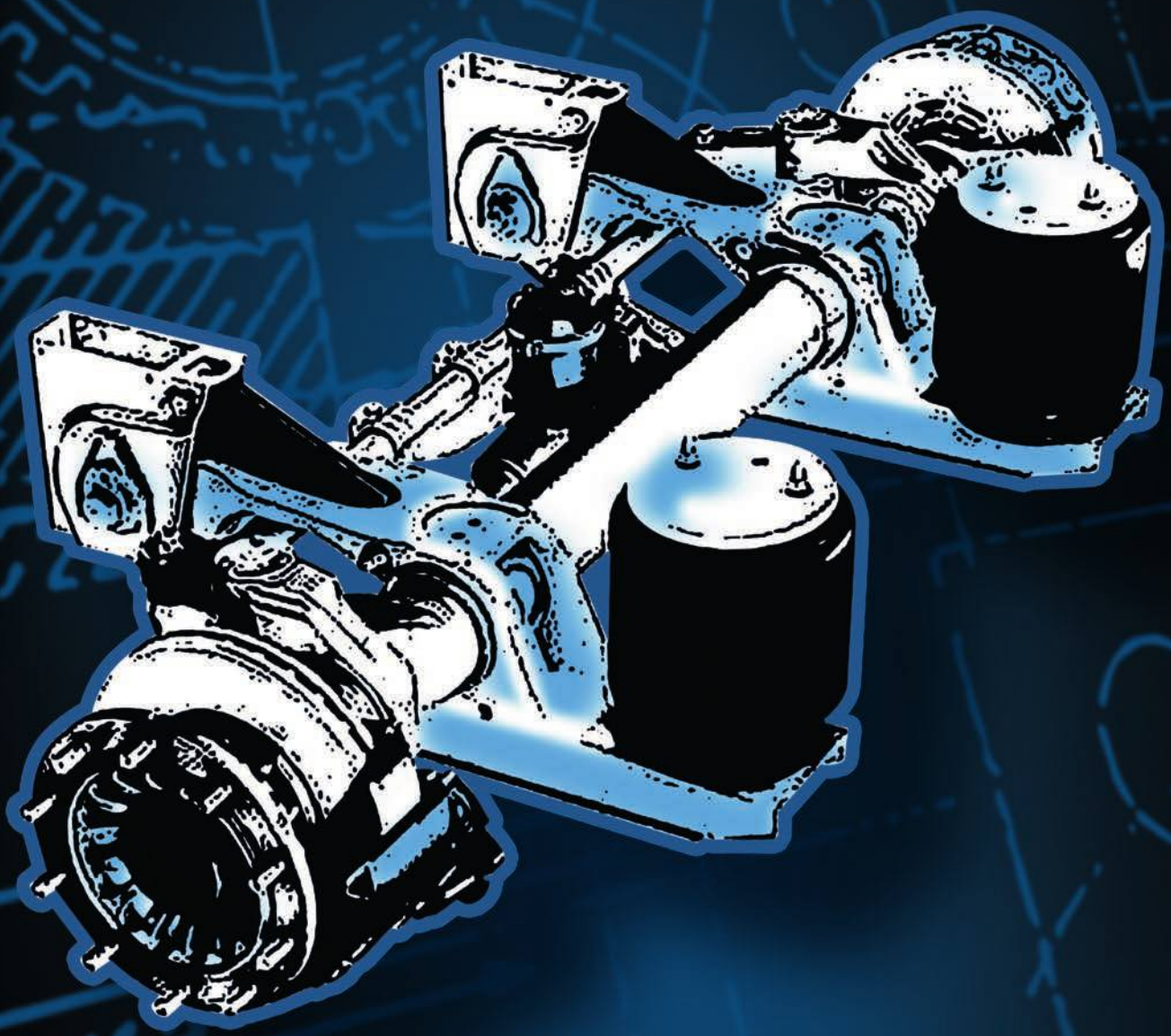
Greasing nipples assortment, metric & imperial

- In plastic storage case



			g
970.0360	70 pcs	Greasing nipples assortment, metric & imperial	410

10 x		1/8"x27,0 mm / DIN 71412
20 x		1/4"x28,0 mm / DIN 71412
10 x		6x 1,0 mm / DIN 71412
5 x		8x 1,0 mm / DIN 71412
5 x		10x 1,0 mm / DIN 71412
5 x		1/8"x27,0 mm/45° / DIN 71412
5 x		1/4"x28,0 mm/45° / DIN 71412
5 x		1/8"x27,0 mm/90° / DIN 71412
5 x		1/4"x28,0 mm/90° / DIN 71412





KS TOOLS®

Innovation is our mission!

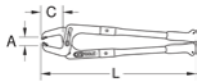
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HUB CAPS/ GREASE CAPS

Grease cap pliers

- Hard rubber handle
- For the damage free drawing off of grease caps
- 2x6 moveable adjustable steps
- Wedge shaped jaw profile
- Head burnished
- Special tool steel







	A mm	C mm	L mm	kg	
450.0210	0-100	85,0	500,0	1,20	

Vario nut and cap key set

- For the dismantling and assembly of vario nuts
- Suitable for exact torque with a 3/4" square drive
- Certain stop through clamping screws and adapter guides on the basic device
- Hole separation maximum 145 mm
- Slim design
- Suitable for narrow spaces
- Ideally suited for special nuts and caps
- Special tool steel

Application range: 6 point-, 8 point-, nuts- and round nuts





			kg	
450.0180	13 pcs	Vario nut and cap key set	3,68	

consists of:

		kg	
450.0181	Vario nut and cap key	2,81	
450.0182	2 Pieces round adapter 6 mm	0,04	
450.0183	2 Pieces round adapter 8 mm	0,04	
450.0184	2 Pieces round adapter 10 mm	0,04	
450.0185	2 Pieces square adapter 6 mm	0,04	
450.0186	2 Pieces square adapter 8 mm	0,04	
450.0187	2 Pieces square adapter 10 mm	0,04	

Vario nut and cap key set, heavy duty

- Extra heavy execution
- For the dismantling and assembly of vario nuts
- Suitable for exact torque with a 3/4" square drive
- Certain stop through clamping screws and adapter guides on the basic device
- Hole separation maximum 145 mm
- Includes clamping chain
- Slim design
- Suitable for narrow spaces
- Ideally suited for special nuts and caps
- Special tool steel

Application range: 6 point-, 8 point-, Nuts- and round nuts.





			kg	
450.0190	14 pcs	Vario nut and cap key set, heavy duty	4,80	

consists of:

		kg	
450.0191	Vario nut and cap key	3,71	
450.0192	2 Pieces round adapter 6 mm	0,47	
450.0193	2 Pieces round adapter 8 mm	0,06	
450.0194	2 Pieces round adapter 10 mm	0,06	
450.0195	2 Pieces square adapter 6 mm	0,05	
450.0196	2 Pieces square adapter 8 mm	0,05	
450.0197	2 Pieces square adapter 10 mm	0,06	
450.0198	Clamping chain	0,43	

3D bushing tool set for SAF axles, Mercedes DCA and HT axles

- ideally suited for disassembly and assembly of 3D bushings on SAF and Mercedes axles
- Sturdy design
- Trapezoid thread spindle for high removal power - drive 30 mm
- Special tool steel

Application range: SAF and **Mercedes** axles





			kg	
460.4885	12 pcs	3D bushing tool set for SAF axles, Mercedes DCA and HT axles	14,52	

consists of:

	X		kg	
460.4886	1	Fitting sleeve, internal diameter 139 - 159 mm	2,30	
460.4887	1	Threaded spindle, 30 x 500 mm	2,73	
460.4888	1	Cover disk, external diameter 165 mm	3,40	
460.4889	1	Cover disk	3,01	
460.4890	1	Pressure disk, external diameter 138 mm	2,00	
460.4891	1	Counternut, external diameter 138 mm	3,35	
460.4892	2	Ring washer, exterior diameter 55 mm, internal diameter 30 mm	0,20	
460.4893	1	Ring washer, exterior diameter 74 mm, internal diameter 30 mm	0,05	
460.4894	1	Bearings, interior diameter 30 mm	0,14	
460.4895	2	Bolts M12x1.75 mm	0,08	

Wheel cap impact wrench for BPW

- For the assembly and dismantling of grease caps on BPW axles
- 8-point
- Extremly versatile
- With impact area
- For heavy duty applications
- For manual use
- Special tool steel



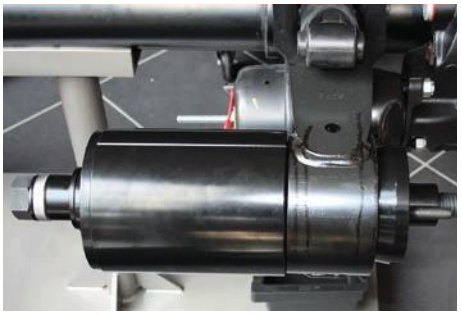
	mm	Length mm	kg	
460.4685	95	233,0	1,14	
460.4690	110	240,0	1,15	

Wheel cap impact wrench for BPW

- For the assembly and dismantling of grease caps on BPW axles
- Flat oval form
- Extremly versatile
- With impact area
- For heavy duty applications
- For manual use
- Special tool steel



	mm	Length mm	kg	
460.4675	95	233,0	1,16	
460.4680	110	240,0	1,25	



Hub cap socket for BPW

- for mounting and dismounting BPW hubcaps
- Internal square drive to DIN 3121 / ISO 1174
- 8-point
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- For machinery usage
- Special tool steel



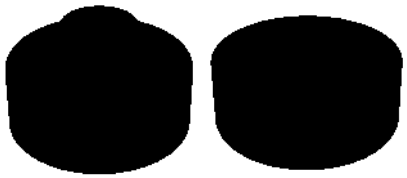
1"

	mm	Ø mm	Height mm	kg
460.4946	95	115	91,0	1,88

Hub cap socket for BPW

- Internal square drive to DIN 3121 / ISO 1174
- For the assembly and dismantling of grease caps on BPW axles
- 8-point
- Extremly versatile
- Suitable for exact torque on a hexagon head possible
- Suitable for high tightening and loosening torque
- For machinery usage
- Special tool steel





3/4"

	mm	Ø mm	Height mm	kg
460.1325	110,0	132,0	80,0	2,64

Leaf spring bolt socket for Scania

- for mounting and dismounting of leaf spring bolts
- Sturdy design
- Flat oval form
- Torque-precise tightening via square socket possible
- designed for high release and tightening torques
- For machinery usage
- Special tool steel



3/4"

	mm	D mm	T mm	H mm	g
450.0225	28	54,0	12,0	50,0	420

Hub cap socket for BPW

- For the assembly and dismantling of grease caps on BPW axles
- Extremly versatile
- Flat oval form
- Suitable for exact torque on a hexagon head possible
- Suitable for high tightening and loosening torque
- For machinery usage
- Special tool steel





	mm	mm	Ø mm	Height mm	kg
450.0208	111,0	41	132,0	90,0	2,75

Hub cap socket for BPW

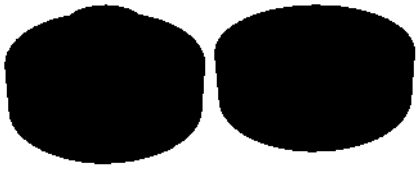
- For the assembly and dismantling of grease caps on BPW axles
- 8-point
- Extremly versatile
- Suitable for exact torque on a hexagon head possible
- Suitable for high tightening and loosening torque
- For machinery usage
- Special tool steel



	mm	mm	Ø mm	Height mm	kg
460.0415	111,0	41	130,0	95,0	1,52

Hub cap socket for SAF

- Internal square drive to DIN 3121 / ISO 1174
- for mounting and dismounting of grease caps on SAF axles
- 8-point
- Extremly versatile
- Suitable for exact torque on a hexagon head possible
- Suitable for high tightening and loosening torque
- For machinery usage
- Special tool steel



1"

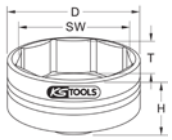
	mm	Ø mm	Height mm	kg
460.1105	130,0	155,0	77,0	3,37

Wheel cap and axle nut socket

- Internal square drive to DIN 3121 / ISO 1174
- 8-point
- Positive drive of the axle nut
- Any extensive slipping is avoided
- Milled out profile
- Sturdy design
- Can be used with an impact wrench or torque wrench
- Special tool steel

Application range: e.g. **Volvo** axle nut / dust grease caps FM and FH VA (450Nm)







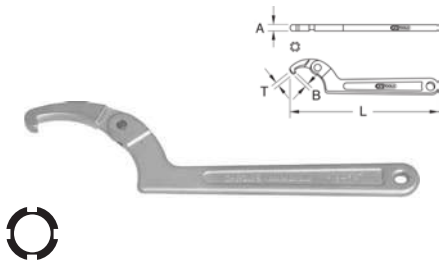
3/4"

	mm	D mm	T mm	H mm	kg
450.0241	115	138,0	45,0	80,0	2,53

AXLE NUT TOOLS

Hook wrench with nose

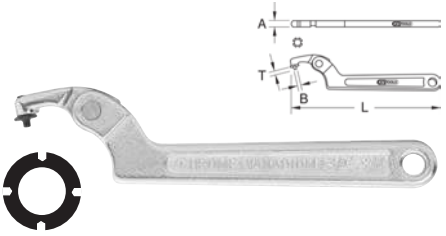
- In accordance to DIN 1810 Form A
- With flexible head
- With hanging hole
- For slotted nuts
- Matt finish
- Chrome vanadium



	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

Hexagon impact socket

- 6 point
- 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"

	mm		L mm	D2 mm	D1 mm	T mm	kg	
515.1750	50,0		74,0	54,0	74,0	26,0	1,07	
515.1755	55,0		85,0	54,0	81,0	28,0	1,44	
515.1760	60,0		89,0	54,0	87,0	31,0	1,78	
515.1765	65,0		93,0	54,0	93,0	32,0	1,80	
515.1770	70,0		98,0	54,0	99,0	35,0	2,04	
515.1775	75,0		100,0	86,0	106,0	40,0	3,48	
515.1780	80,0		100,0	86,0	112,0	47,0	4,10	
515.1785	85,0		102,0	86,0	119,0	47,0	4,80	
515.1790	90,0		107,0	86,0	124,0	47,0	5,10	
515.1795	95,0		107,0	86,0	131,0	50,0	5,25	
515.1891		1"	58,0	51,0	42,0	14,0	0,52	
515.1892		1.1/4"	60,0	51,0	51,0	16,0	0,61	
515.1893		1.7/16"	62,0	52,0	56,0	20,0	0,64	
515.1894		1.1/2"	62,0	52,0	58,0	22,0	0,67	
515.1895		1.5/8"	62,0	52,0	62,0	22,0	0,92	
515.1896		1.13/16"	64,0	58,0	68,0	23,0	1,00	
515.1897		1.7/8"	66,0	58,0	70,0	24,0	1,08	
515.1898		2.1/4"	75,0	62,0	84,0	30,0	1,52	

Axle nut wrench, long

- Internal square
- 8-point
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel



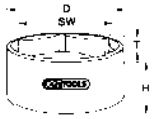


1/2"

	mm	Length mm	kg	
460.5323	80	205,0	1,72	
460.5327	100	205,0	2,12	
460.5330	115	205,0	2,50	

Axle nut socket, short

- Internal square drive to DIN 3121 / ISO 1174
- 6 point
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel





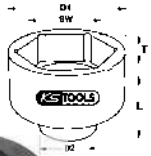
3/4"

	mm	D mm	H mm	T mm	kg	
460.0050	70	95,0	70,0	40,0	1,68	
460.0055	75	98,0	70,0	40,0	1,68	
460.0060	80	104,0	70,0	40,0	1,84	
460.0065	85	112,0	70,0	40,0	2,12	
460.0070	90	116,0	70,0	40,0	2,16	
460.0075	95	122,0	70,0	40,0	2,36	
460.0080	100	128,0	71,0	40,0	2,50	
460.0085	105	140,0	71,0	40,0	3,46	
460.0090	110	147,0	71,0	40,0	3,66	
460.0095	115	153,0	71,0	40,0	3,94	
460.0105	120	157,0	71,0	40,0	4,02	
460.0110	125	165,0	71,0	40,0	4,38	
460.0115	130	170,0	71,0	40,0	4,62	
460.0120	135	175,0	71,0	40,0	4,90	
460.0125	140	180,0	71,0	40,0	5,20	
460.0130	145	187,0	71,0	40,0	5,42	
460.0135	150	195,0	71,0	40,0	5,74	
460.0140	155	203,0	71,0	40,0	6,48	
460.0145	160	210,0	71,0	40,0	6,80	
460.0150	165	215,0	71,0	40,0	7,10	
460.0155	170	220,0	71,0	40,0	7,44	
460.0160	175	225,0	71,0	40,0	7,72	
460.0165	180	230,0	71,0	40,0	8,10	
460.0170	185	235,0	71,0	40,0	8,26	
460.0175	190	243,0	71,0	40,0	8,78	
460.0180	195	247,0	71,0	40,0	9,06	
460.0185	200	254,0	71,0	40,0	9,50	

Axle nut socket, short

- Internal square drive to DIN 3121 / ISO 1174
- 6 point
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: SW 85, MB Actros, **Scania**, Rockinger, **SAF**, SW 90, **Fiat** Eurocargo 4x4, SW 95, MB Actros, **Iveco**, **Fiat**, **Volvo**, SW 105, **DAF**, Kässbohrer, Setra, **Fiat**, **Volvo**, SW110, Fruehauf, SW 115, **DAF**, **Ford** Transcontinental, SW 120, **DAF**, **Scania**, **SAF** etc.



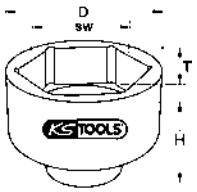


1"

	mm	D1 mm	D2 mm	L mm	T mm	kg	
911.1085	85,0	112,0	55,0	71,0	40,0	2,08	
911.1086	90,0	119,0	55,0	71,0	40,0	2,34	
911.1087	95,0	126,0	55,0	71,0	40,0	2,63	
911.1088	100,0	133,0	55,0	71,0	40,0	2,92	
911.1089	105,0	140,0	55,0	71,0	40,0	3,23	
911.1090	110,0	147,0	55,0	71,0	40,0	3,56	
911.1091	115,0	154,0	55,0	71,0	40,0	3,90	
911.1092	120,0	160,0	55,0	71,0	40,0	4,27	

Axle nut socket, short

- Internal square drive to DIN 3121 / ISO 1174
- 8-point
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- For machinery usage
- Special tool steel





1"

	mm	H mm	D mm	T mm	kg	
460.3415	70	77,0	90,0	40,0	1,65	
460.3420	75	77,0	95,0	40,0	1,70	
460.3425	80	81,0	103,0	40,0	2,00	
460.3430	85	72,5	104,0	40,0	1,76	
460.3435	90	84,0	112,0	40,0	2,13	
460.3440	95	84,0	114,0	40,0	2,03	
460.3310	100	77,0	127,0	40,0	3,00	
460.3315	105	84,0	127,0	40,0	2,60	
460.3320	110	77,0	137,0	40,0	2,92	
460.3325	115	77,0	143,0	40,0	3,20	
460.3330	120	77,0	143,0	40,0	2,91	
460.3335	125	77,0	153,0	40,0	3,50	
460.3340	130	77,0	158,0	40,0	3,64	
460.3345	135	77,0	162,0	40,0	3,84	
460.3350	140	84,0	167,0	40,0	4,05	
460.3355	145	84,0	172,0	40,0	4,27	
460.3360	150	84,0	178,0	40,0	4,48	
460.3365	155	84,0	183,0	40,0	4,57	
460.3370	160	84,0	190,0	40,0	4,82	
460.3375	165	84,0	194,0	40,0	4,98	
460.3380	170	84,0	200,0	40,0	5,20	
460.3385	175	84,0	205,0	40,0	5,42	
460.3390	180	88,0	212,0	40,0	5,67	
460.3395	185	84,0	216,0	40,0	5,91	
460.3400	190	84,0	221,0	40,0	6,18	
460.3405	195	84,0	227,0	40,0	6,40	
460.3410	200	81,0	230,0	40,0	6,65	

Axle nut socket with guide band

- Internal square drive to DIN 3121 / ISO 1174
- 12 point
- Any extensive slipping is avoided
- Extremely robust version
- Suitable for high tightening and loosening torque
- Can be used with an impact wrench or torque wrench
- Special tool steel

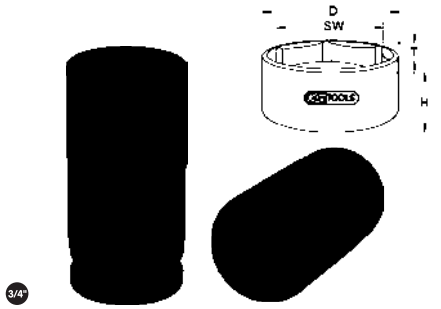


3/4"

	mm	H mm	Ø mm	kg	
460.4220	80	90,0	107,0	2,70	
460.4225	85	90,0	114,0	2,92	
460.4230	90	90,0	119,0	3,16	
460.4235	95	90,0	125,0	3,43	
460.4240	100	90,0	131,0	3,67	
460.4245	105	90,0	137,0	3,96	
460.4250	110	90,0	142,0	4,23	
460.4255	115	90,0	148,0	4,41	
460.4260	120	90,0	154,0	4,81	

Axle nut wrench, long

- Internal square drive to DIN 3121 / ISO 1174
- 6 point
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel



3/4"

	mm	D mm	H mm	T mm	kg	
460.0005	30	45,0	90,0	40,0	0,64	
460.0010	32	48,0	90,0	40,0	0,70	
460.0015	33	49,0	90,0	40,0	0,72	
460.0020	34	50,0	90,0	40,0	0,73	
460.0025	35	51,0	90,0	40,0	0,73	
460.0030	36	53,0	90,0	40,0	0,79	
460.0035	38	55,0	90,0	40,0	0,83	
460.0040	41	59,0	90,0	40,0	0,91	
460.0045	46	64,0	90,0	40,0	1,05	

Axle nut socket, short

- Internal square drive to DIN 3121 / ISO 1174
- 8-point
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- For machinery usage
- Special tool steel



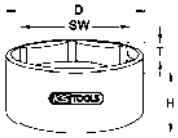
3/4"

	mm	H mm	D mm	T mm	kg	
460.2755	70	77,0	90,0	40,0	1,70	
460.2760	75	77,0	95,0	40,0	1,80	
460.2765	80	73,0	99,0	40,0	1,88	
460.2770	85	73,0	104,0	40,0	1,83	
460.2775	90	77,0	112,0	40,0	2,31	
460.2780	95	73,0	115,0	40,0	2,39	
460.2650	100	77,0	127,0	40,0	3,00	
460.2655	105	77,0	132,0	40,0	2,50	
460.2660	110	73,0	141,0	40,0	3,00	
460.2665	115	73,0	146,0	40,0	2,94	
460.2670	120	73,0	143,0	40,0	2,83	
460.2675	125	77,0	153,0	40,0	3,60	
460.2680	130	77,0	158,0	40,0	4,00	
460.2685	135	73,0	168,0	40,0	4,75	
460.2690	140	73,0	173,0	40,0	4,38	
460.2695	145	73,0	178,0	40,0	4,50	
460.2700	150	73,0	184,0	40,0	5,25	
460.2705	155	73,0	189,0	40,0	5,38	
460.2710	160	73,0	194,0	40,0	5,83	
460.2715	165	73,0	199,0	40,0	6,00	
460.2720	170	73,0	205,0	40,0	6,33	
460.2725	175	73,0	210,0	40,0	6,50	
460.2730	180	73,0	215,0	40,0	6,83	
460.2735	185	73,0	221,0	40,0	9,25	
460.2740	190	73,0	226,0	40,0	10,00	
460.2745	195	73,0	232,0	40,0	10,00	
460.2750	200	73,0	237,0	40,0	10,25	

Axle nut socket, short

- Internal square drive to DIN 3121 / ISO 1174
- 6 point
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel







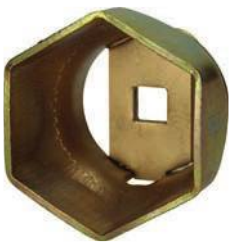
1"

	mm	D mm	H mm	T mm	kg	
460.0205	70	95,0	71,0	40,0	1,62	
460.0215	75	98,0	71,0	40,0	1,62	
460.0220	80	104,0	71,0	40,0	1,78	
460.0225	85	111,0	71,0	40,0	2,04	
460.0230	90	116,0	71,0	40,0	2,10	
460.0235	95	122,0	71,0	40,0	2,28	
460.0240	100	137,0	71,0	40,0	3,18	
460.0245	105	142,0	71,0	40,0	3,40	
460.0250	110	148,0	71,0	40,0	3,60	
460.0255	115	154,0	71,0	41,0	3,84	
460.0260	120	158,0	71,0	41,0	3,96	
460.0265	125	165,0	71,0	41,0	4,32	
460.0270	130	170,0	71,0	41,0	4,54	
460.0275	135	175,0	71,0	41,0	4,84	
460.0280	140	180,0	71,0	40,0	5,12	
460.0285	145	178,0	71,0	40,0	4,34	
460.0290	150	195,0	71,0	41,0	5,66	
460.0295	155	200,0	71,0	41,0	6,34	
460.0305	160	210,0	71,0	41,0	6,74	
460.0310	165	200,0	71,0	41,0	5,36	
460.0315	170	220,0	71,0	41,0	7,38	
460.0320	175	225,0	71,0	41,0	7,66	
460.0325	180	230,0	71,0	41,0	8,02	
460.0330	185	238,0	71,0	41,0	8,34	
460.0335	190	245,0	71,0	41,0	8,74	
460.0340	195	250,0	71,0	41,0	9,06	
460.0345	200	255,0	71,0	41,0	9,44	

AXLE NUT TOOLS BPW

Axle nut wrench for BPW

- Internal square
- 6 point
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel



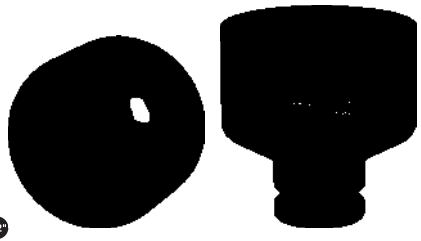
3/4"

	mm	Length mm	kg	
460.4933	46	155,0	0,73	
460.4936	70	80,0	0,66	
460.4938	85	300,0	2,90	
460.4939	95	85,0	1,14	
460.4940	100	80,0	0,93	

Axle nut wrench for BPW

- Internal square drive to DIN 3121 / ISO 1174
- 6 point
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- For machinery usage
- Special tool steel

Application range: BPW axles



1/2"

	mm	Ø mm	Height mm	kg	
460.4943	46	64	64,0	0,51	

Axle nut wrench for BPW

- Internal square drive to DIN 3121 / ISO 1174
- Flat oval form
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- For machinery usage
- Special tool steel



1/2"

	mm	Ø mm	Height mm	kg	
460.4944	65	82	78,0	0,90	
460.4945	80	100	78,0	1,37	

Axle nut wrench for BPW

- Internal square drive to DIN 3121 / ISO 1174
- Extremly versatile
- Flat oval form
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel





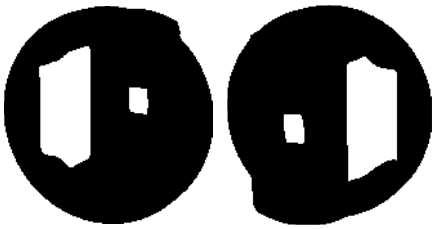
3/4"

	mm	□	Ø mm	Height mm	kg	
450.0204	65,0	3/4"	82,0	66,0	1,07	
450.0205	80,0	3/4"	100,0	80,0	1,50	

Axle nut wrench for BPW

- Internal square drive to DIN 3121 / ISO 1174
- Extremly versatile
- Flat oval form
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel





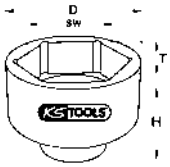
3/4"

	mm	Ø mm	Height mm	kg
460.4150	85	117	70,0	1,46

Axle nut wrench for BPW

- Internal square drive to DIN 3121 / ISO 1174
- 6 point
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- For machinery usage
- Special tool steel

Application range: BPW axle nuts (crown nuts) 16 tonne axles





3/4"

	mm	□	D mm	T mm	H mm	kg
450.0215	85,0	3/4"	110,0	33,0	84,0	2,78

Axle nut wrench for BPW

- With six sided drive 41 mm
- 8-point
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- For machinery usage
- Special tool steel

Application range: BPW axles 16 t



	mm	Ø mm	Height mm	kg
460.0410	120,0	142,0	95,0	1,90

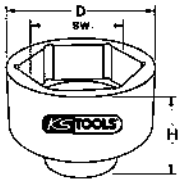
AXLE NUT TOOLS DAF

Axle nut socket for DAF

- Internal square drive to DIN 3121 / ISO 1174
- 6 point
- Any extensive slipping is avoided
- Extremely robust version
- Suitable for high tightening and loosening torque
- Can be used with an impact wrench or torque wrench
- Chrome molybdenum

Application range: DAF (CF) EURO 5 drive axle nut







1"

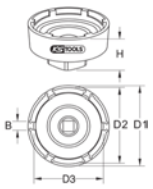
	mm	D mm	H mm	kg
460.4190	120,0	158,0	106,0	6,20



Wrench with 6 pins for DAF

- Internal square drive to DIN 3121 / ISO 1174
- High accuracy of fit
- Special profile with 6 internal studs
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: **DAF** CF85 transmission (EURO 4 and EURO 5)





3/4"

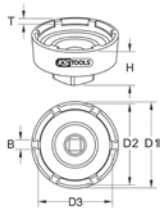
	D2 mm	D1 mm	H mm	D3 mm	Stud	kg
460.1085	74,0	91,0	55,0	66,0	6	1,10

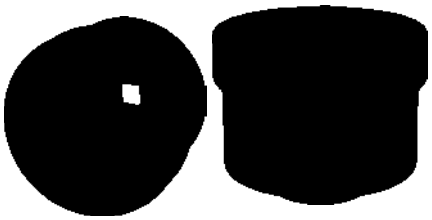
Wrench with 6 pins for DAF

- Internal square drive to DIN 3121 / ISO 1174
- High accuracy of fit
- Special profile with 6 internal studs
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: DAF LF45 rear axle







	D1 mm	D2 mm	D3 mm	B mm	Stud	T mm	H mm	kg
460.3730	109,0	98,0	86,0	10,5	6	20,0	87,0	2,36

AXLE NUT TOOLS FUSO

Axle nut wrench with 2 pins for Fuso

- Internal square drive to DIN 3121 / ISO 1174
- with 2 external pins, Ø 9.5 mm
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: IsuzuFuso Canter 3.5 tons





1/2"

	Ø mm	Stud	Length mm	Stud Ø mm	kg
460.4450	86	2	68,0	9,5	1,35

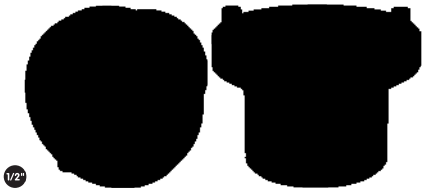


Axle nut wrench with 2 pins for Fuso

- Internal square drive to DIN 3121 / ISO 1174
- with 2 external pins, Ø 9.5 mm
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: Fuso Canter 3.5 tons, **Isuzu** 7.5 tons





1/2"

	Ø mm	Stud	Length mm	Stud Ø mm	kg
460.4295	100	2	68,0	9,5	1,54

Axle nut wrench for Fuso rear axle

- quick-action pin drive
- 8-point
- Extra long execution
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel





	mm	Ø mm	Height mm	kg
460.4385	120	142	360,0	8,55

AXLE NUT TOOLS HINO

Axle nut wrench for HINO

- For the dismantling and assembly of HINO axle nuts
- For 11.9 t axles
- 8-point
- Extremly versatile
- Suitable for exact torque with a 3/4" square drive
- For machinery usage
- Special tool steel



3/4"

	□	mm	Ø mm	H mm	kg
450.0230	3/4"	105,0	125,0	85,0	2,52

AXLE NUT TOOLS IVECO

Axle nut impact socket for Iveco

- Internal square drive to DIN 3121 / ISO 1174
- 12 point
- Any extensive slipping is avoided
- Extremely robust version
- Suitable for high tightening and loosening torque
- Can be used with an impact wrench or torque wrench
- Special tool steel





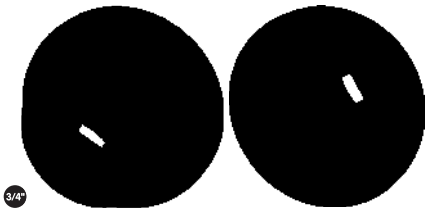
1"

	mm	Ø mm	H mm	kg
460.4170	85,0	83,0	58,0	2,10

Axle nut wrench for Iveco

- Internal square drive to DIN 3121 / ISO 1174
- 6 point
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: Iveco Euro Cargo HA



3/4"

	mm	Ø mm	Height mm	kg
460.5333	90	117	69,0	1,41

Axle nut wrench for Iveco

- Six sided drive 36 mm
- 6 point
- Any extensive slipping is avoided
- Extremely robust version
- Suitable for high tightening and loosening torque
- Can be used with an impact wrench or torque wrench
- Special tool steel

Application range: Iveco Euro Cargo



3/4"

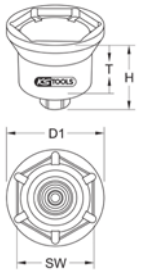
	mm	mm	Ø mm	H mm	kg
460.1040	98,0	36	122,0	115,0	3,00

Axle nut wrench for Iveco

- Six sided drive 36 mm
- Positive drive of the axle nut
- Any extensive slipping is avoided
- Milled out profile
- Sturdy design
- Can be used with an impact wrench or torque wrench
- Special tool steel

Application range: Iveco Euro Cargo etc.







	mm	mm	D1 mm	H mm	kg
450.0200	98,0	36	122,0	120,0	2,27

Axle nut socket for Iveco

- Six sided drive 36 mm
- 12 point
- Any extensive slipping is avoided
- Extremely robust version
- Suitable for high tightening and loosening torque
- Can be used with an impact wrench or torque wrench
- Special tool steel

Application range: Axle nut **Iveco** Eurotech-Cursor





	mm	mm	Ø mm	H mm	kg
460.4165	105,0	36	128,0	116,0	2,87

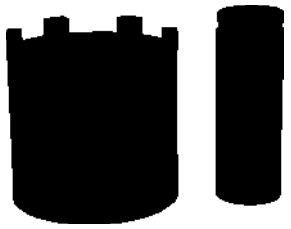


AXLE NUT TOOLS MAN

Grooved nut spanner set with guide tube for MAN

- Internal square drive to DIN 3121 / ISO 1174
- including threaded guide tube
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: MAN planetary hub rear axles (5MR, 3MR) and front axle (M series: 3ME DI)



			kg	
460.5340	2 pcs	Grooved nut spanner set with guide tube for MAN	2,55	

consists of:

		kg	
460.5341	Primary body, Ø 76.5 mm	2,22	
460.5342	Guide pipe with connecting thread, M36 x 1.5 mm, Ø 36.5 mm	0,33	

Grooved nut spanner set with guide tube for MAN

- Internal square drive to DIN 3121 / ISO 1174
- Screw-in guide tube
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: Mercedes and **MAN,** Atego, bus and transporter with grooved nut (A9763560026). The guide tube is not required for the following vehicles: **MAN** trucks (type H, L, M, N and 1) and bus (type A, J, P and R) with grooved nut (81.90620-0086)



			kg	
460.5350	2 pcs	Grooved nut spanner set with guide tube for MAN	3,60	

consists of:

		kg	
460.5351	Primary body, Ø 91 mm	3,01	
460.5352	Guide pipe with connecting thread, M56 x 1.5 mm, Ø 58 mm	0,59	

Wrench with 6 pins for MAN

- Internal square drive to DIN 3121 / ISO 1174
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: MAN Volkswagen2-**Volkswagen**4-**Volkswagen**6.1-6.8



	Outer Ø mm	Inner Ø mm	H mm	Stud	Stud width mm	kg	
460.5345	84,0	77,0	100,0	6	10,0	1,70	

Wrench with 6 pins for MAN and Mercedes

- Internal square drive to DIN 3121 / ISO 1174
- Rigid locating tube
- Optional with expander sleeve (bayonet locking system)
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: Mercedes Atego Rear axle, Vitaro 814, **MAN** etc.

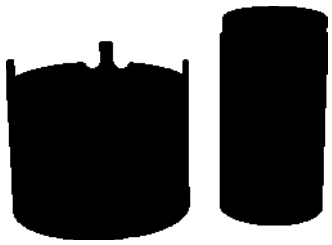


	Inner Ø mm	Outer Ø mm	Locating tube Ø mm	Stud Ø mm	Stud	Stud width mm	kg	
450.0160	80,0	95,0	49,0	87,0	6	10,0	2,60	

Grooved nut spanner set with guide tube for MAN

- Internal square drive to DIN 3121 / ISO 1174
- including threaded guide tube
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: MAN Hypoid rear axles M-series (16M-Soma axle, HY-0855, HY-0955, HY-1175)



			kg	
460.5355	2 pcs	Grooved nut spanner set with guide tube for MAN	2,38	

consists of:

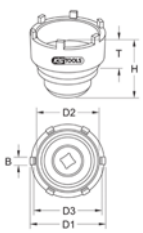
		kg	
460.5356	Primary body, Ø 92 mm	1,79	
460.5352	Guide pipe with connecting thread, M56 x 1.5 mm, Ø 58 mm	0,59	

Wrench with 6 pins for MAN and Mercedes

- Internal square drive to DIN 3121 / ISO 1174
- Optional with sleeve locating tube
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: Mercedes and **MAN** 10 + 13 t Reduction axle, Hypoid- and Trailer axle NR 7/4, Omnibus 0305 G + 0405 G etc.

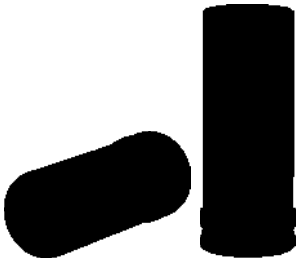




	D2 mm	D1 mm	H mm	D3 mm	Stud	B mm	kg	
450.0168	95,0	115,0	111,0	101	6	6,0	2,88	

Locating tube for groove nut sockets

- Practical connector system with fixing screw
- Usably for different groove socket nuts (module systems)
- Enables stable work position
- Prevents slippage of the socket
- Extremely robust version
- Change through loosening of the grub screw on the hexagon
- Special tool steel



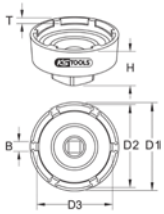
	Inner Ø mm	Outer Ø mm	L mm	g	
450.0150	46,0	52,0	140,0	520	
450.0152	60,0	67,0	140,0	820	

Wrench with 6 pins for Mercedes and MAN

- Internal square drive to DIN 3121 / ISO 1174
- Extremly versatile
- Suitable for exact torque
- Special profile with 6 internal studs
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: Mercedes + **MAN** drive axle







	B mm	D1 mm	D2 mm	D3 mm	Stud	T mm	H mm	kg	
450.0169	11,5	119,0	110,0	100,5	6	11,6	80,0	3,30	

Wrench with 6 pins for MAN

- Internal square drive to DIN 3121 / ISO 1174
- Six point size 60 mm
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: MAN TGA Front axle, V9-82L-01(Disk brake/ABS) etc.





	Inner Ø mm	Outer Ø mm	Height mm	Stud Ø mm	Stud	Stud width mm	kg	
450.0170	101,0	110,0	80,0	93,0	6	8,0	2,60	

MAN TGA groove nut spanner with locating tube

- Internal square drive to DIN 3121 / ISO 1174
- Six point size 60 mm
- High accuracy of fit
- Extremely robust version
- Optional with locating tube
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: MAN TGA rear axle, HY-1350 (Hypoid)



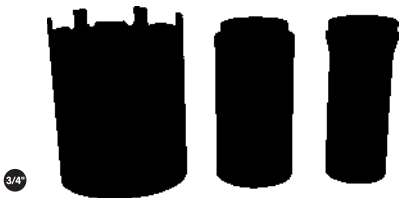


	mm	H2 mm	H1 mm	D1 mm	D2 mm	D3 mm	Stud	B mm	kg	
450.0175	60	160	98,0	148,0	133,0	117,0	6	11,5	4,50	

Grooved nut spanner set with 2 guide tubes for MAN

- Internal square drive to DIN 3121 / ISO 1174
- including threaded guide tubes
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: MAN with guide tube Ø 66.5 mm : Hypoid rear axles F-series (HY-1175, HDY-1175, HY-13110, HY-1180). With guide tube Ø 51.5 mm: Rear hub axles F-series (H7, HD7) and front axles F-series



3/4"

			kg	
460.5360	3 pcs	Grooved nut spanner set with 2 guide tubes for MAN	5,41	

consists of:

		kg	
460.5361	Primary body, Ø 102 mm	3,24	
460.5362	Guide pipe with connecting thread, M56 x 1.5 mm, Ø 51.5 mm	0,55	
460.5363	Guide pipe with connecting thread, M56 x 1.5 mm, Ø 66.5 mm	1,62	

Slotted nut wrench without guide tube for MAN TGA

- Internal square drive to DIN 3121 / ISO 1174
- Six point size 60 mm
- High accuracy of fit
- Extremely robust version
- With fixed locating tube
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: MAN TGA rear axle, HY-1350 (Hypoid)



3/4"



	D2 mm	D1 mm	H1 mm	D3 mm	Stud	B mm	kg	
450.0176	133,0	148,0	110,0	117,0	6	11,0	3,82	

Locating tube for groove nut sockets

- Practical connector system with fixing screw
- Usably for different groove socket nuts (module systems)
- Enables stable work position
- Prevents slippage of the socket
- Extremely robust version
- Change through loosening of the grub screw on the hexagon
- Special tool steel



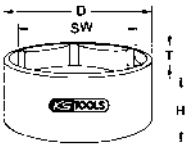


3/4"

	Inner Ø mm	Outer Ø mm	L mm	g	
450.0152	60,0	67,0	140,0	820	

Axle nut socket, short

- Internal square drive to DIN 3121 / ISO 1174
- 6 point
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel





3/4"

	mm	D mm	H mm	T mm	kg	
460.0175	190	243,0	71,0	40,0	8,78	

AXLE NUT TOOLS MERCEDES

Axle nut socket for Mercedes

- Six sided drive 36 mm
- 6 point
- Any extensive slipping is avoided
- Extremely robust version
- Suitable for high tightening and loosening torque
- Can be used with an impact wrench or torque wrench
- Special tool steel

Application range: Mercedes axle trailers etc.



	mm	mm	Ø mm	H mm	kg	
460.1035	95,0	36	118	158,0	2,93	

Axle nut socket for Mercedes

- Six sided drive 36 mm
- 12 point
- Any extensive slipping is avoided
- Extremely robust version
- Suitable for high tightening and loosening torque
- Can be used with an impact wrench or torque wrench
- Special tool steel

Application range: Mercedes axle trailers etc.





	mm	mm	Ø mm	H mm	kg	
460.0965	95,0	36	126,0	157,0	3,55	

Axle nut wrench for Mercedes

- Internal square drive to DIN 3121 / ISO 1174
- 6-round profile
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: Mercedes Truck- VA- and Discos Trailer (05.2000) with compact storage HUB Unit





3/4"

	mm	Ø mm	Height mm	kg	
460.5615	95	118	75,0	2,94	

T-nuts and wrench set with 4 guide tubes for Mercedes

- Internal square drive to DIN 3121 / ISO 1174
- including threaded guide tubes
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: Mercedes Hypoid rear axles HL2/2, HL2/3, HL2/5, HL2/9, HL2/11, HL2/12, HL2/15, HL0/3, HL0/6, HL0/7, HL1/2 (only Ø 63 mm required), HL1/3, HL1/8, HL1/9, HL2/30C



3/4"

			kg	
460.5370	5 pcs	T-nuts and wrench set with 4 guide tubes for Mercedes	2,86	

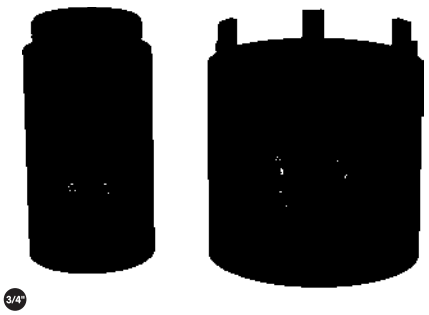
consists of:

		kg	
460.5371	Primary body, Ø 63 mm	0,94	
460.5372	Guide pipe with connecting thread, M36 x 1.5 mm, Ø 36 mm	0,35	
460.5373	Guide pipe with connecting thread, M36 x 1.5 mm, Ø 40.5 mm	0,54	
460.5375	Guide pipe with connecting thread, M36 x 1.5 mm, Ø 43 mm	0,66	
460.5374	Guide pipe with connecting thread, M36 x 1.5 mm, Ø 42.0 mm	0,36	

Grooved nut spanner set with guide tube for Mercedes

- Internal square drive to DIN 3121 / ISO 1174
- including threaded guide tube
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: Mercedes Hypoid rear axles HL0/3, HL0/6, HL0/7, HL1/2 (only Ø 63 mm necessary), HL1/3, HL1/8, HL1/9, HL2/30C



3/4"

			kg	
460.5625	2 pcs	Grooved nut spanner set with guide tube for Mercedes	1,30	

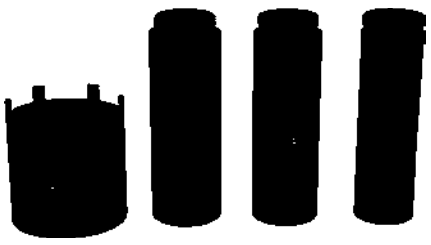
consists of:

		kg	
460.5371	Primary body, Ø 63 mm	0,94	
460.5374	Guide pipe with connecting thread, M36 x 1.5 mm, Ø 42.0 mm	0,36	

Grooved nut spanner set with 3 guide tubes for Mercedes

- Internal square drive to DIN 3121 / ISO 1174
- including threaded guide tubes
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: Mercedes Hypoid rear axles HL2/2, HL2/3, HL2/5, HL2/9, HL2/11, HL2/12, HL2/15



3/4"

			kg	
460.5620	4 pcs	Grooved nut spanner set with 3 guide tubes for Mercedes	2,49	

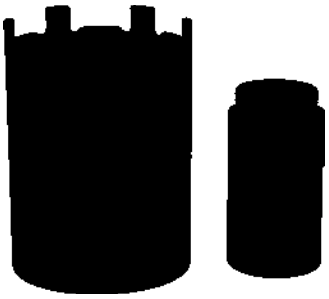
consists of:

		kg	
460.5371	Primary body, Ø 63 mm	0,94	
460.5372	Guide pipe with connecting thread, M36 x 1.5 mm, Ø 36 mm	0,35	
460.5373	Guide pipe with connecting thread, M36 x 1.5 mm, Ø 40.5 mm	0,54	
460.5375	Guide pipe with connecting thread, M36 x 1.5 mm, Ø 43 mm	0,66	

Grooved nut spanner set with guide tube for Mercedes

- Internal square drive to DIN 3121 / ISO 1174
- including threaded guide tube
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: Mercedes Hypoid rear axles HL2/2, HL2/7, HL2/13



3/4"

			kg	
460.5380	2 pcs	Grooved nut spanner set with guide tube for Mercedes	1,55	

consists of:

		kg	
460.5374	Guide pipe with connecting thread, M36 x 1.5 mm, Ø 42.0 mm	0,36	
460.5381	Primary body, Ø 71.5 mm	1,55	

T-nuts and wrench set with 4 guide tubes for Mercedes

- Internal square drive to DIN 3121 / ISO 1174
- including threaded guide tubes
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: Mercedes Hypoid rear axles HL2/14, KL2/16, KL4/1, HL4/16, HL4/17, HL4/23, HL4/28, HL4/29, HL4/30, HL4/4, HL4/8, HD4/6G, HO4/2, HO4/18, NR4/4 and palloid front axles AL3/1, AL3/2, AL3/4, AL3/7, AL3/8



3/4"

			kg	
460.5385	5 pcs	T-nuts and wrench set with 4 guide tubes for Mercedes	3,24	

consists of:

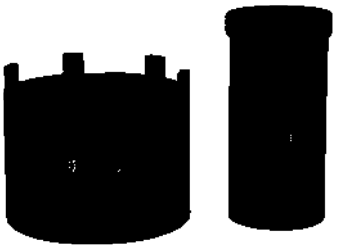
		kg	
460.5386	Primary body, Ø 75 mm	1,48	
460.5388	Guide pipe with connecting thread, M48 x 1.5 mm, Ø 44 mm	0,45	
460.5387	Guide pipe with connecting thread, M48 x 1.5 mm, Ø 43 mm	0,54	
460.5389	Guide pipe with connecting thread, M48 x 1.5 mm, Ø 48 mm	0,24	
460.5390	Guide pipe with connecting thread, M48 x 1.5 mm, Ø 51 mm	0,53	



Grooved nut spanner set with guide tube for Mercedes

- Internal square drive to DIN 3121 / ISO 1174
- including threaded guide tube
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: Mercedes Palloid front axles AL3/1, AL3/2, AL3/4, AL3/7, AL3/8



3/4"

			kg	
460.5630	2 pcs	Grooved nut spanner set with guide tube for Mercedes	1,93	

consists of:

		kg	
460.5386	Primary body, Ø 75 mm	1,48	
460.5388	Guide pipe with connecting thread, M48 x 1.5 mm, Ø 44 mm	0,45	

Grooved nut spanner set with 3 guide tubes for Mercedes

- Internal square drive to DIN 3121 / ISO 1174
- including threaded guide tubes
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: Mercedes Hypoid rear axles HL2/14, KL2/16, KL4/1, HL4/16, HL4/17, HL4/23, HL4/28, HL4/29, HL4/30, HL4/4, HL4/8, HD4/6G, HO4/2, HO4/18, NR4/4



3/4"

			kg	
460.5635	4 pcs	Grooved nut spanner set with 3 guide tubes for Mercedes	2,79	

consists of:

		kg	
460.5411	Primary body, Ø 100 mm	3,07	
460.5412	Guide pipe with connecting thread, M56 x 1.5 mm, Ø 59 mm	0,63	

Wrench with 6 pins for MAN and Mercedes

- Internal square drive to DIN 3121 / ISO 1174
- Rigid locating tube
- Optional with expander sleeve (bayonet locking system)
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: Mercedes Atego Rear axle, Vitaro 814, **MAN** etc.



3/4"

	Inner Ø mm	Outer Ø mm	Locating tube Ø mm	Stud Ø mm	Stud	Stud width mm	kg	
450.0160	80,0	95,0	49,0	87,0	6	10,0	2,60	

Expander sleeve for location tube

- Practical connector system with bayonet clasp
- Suitable for groove nut spanner 450.0160
- Enables stable work position
- Prevents slippage of the socket
- Extremely robust version
- Switched by turning the bayonet clasp
- Special tool steel



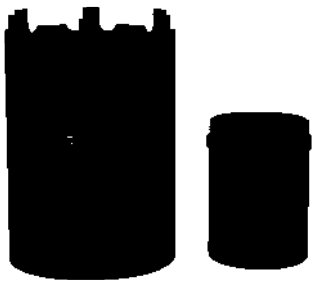


	Outer Ø mm	Inner Ø mm	L mm	g
450.0161	57,0	49,0	130,0	800

Grooved nut spanner set with guide tube for Mercedes

- Internal square drive to DIN 3121 / ISO 1174
- including threaded guide tube
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: Mercedes hypoid axles HO4/10, HO4/10DL, HO4/11DL, HO5/3, HO5/4, HO5/8, HD4/21G, HD4/2G, HD4/22, HD5/3, HL5/2, HL5/6



3/4"

			kg
460.5395	2 pcs	Grooved nut spanner set with guide tube for Mercedes	3,02

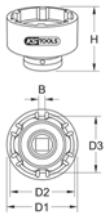
consists of:

		kg
460.5396	Primary body, Ø 88 mm	2,49
460.5397	Guide pipe with connecting thread, M56 x 1.5 mm, Ø 57 mm	0,52

Wrench with 6 pins for Mercedes

- Internal square drive to DIN 3121 / ISO 1174
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel







1"

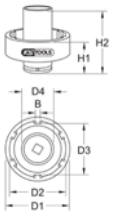
	D1 mm	D2 mm	D3 mm	H mm	Stud	B mm	kg
460.1075	110,0	96,0	86,0	82,0	6	11,0	2,62

Groove nut wrench with 6 pins with guide tube for Mercedes

- Internal square drive to DIN 3121 / ISO 1174
- Rigid locating tube
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: Mercedes lifting axle







3/4"

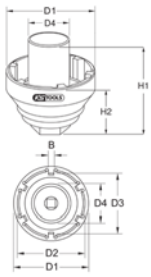
	D1 mm	D2 mm	D3 mm	D4 mm	H1 mm	H2 mm	Stud	B mm	kg
460.1070	115,0	100,0	91,0	46,0	82,0	142,0	6	11,0	3,30

Grooved nut wrench with 6 pins with guide tube for Mercedes trailer axles

- Internal square drive to DIN 3121 / ISO 1174
- Rigid locating tube
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: Mercedes trailer axle TZ5/2







3/4"

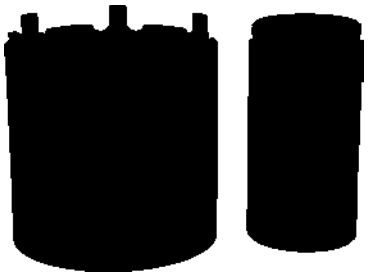
	D1 mm	D2 mm	D3 mm	D4 mm	H1 mm	H2 mm	Stud	B mm	kg
460.3790	100,0	82,0	92,0	47,0	142,0	230,0	6	9,8	2,82



Grooved nut spanner set with guide tube for Mercedes

- Internal square drive to DIN 3121 / ISO 1174
- including threaded guide tube
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: Mercedes hypoid axles HO 5/5



3/4"

			kg
460.5645	2 pcs	Grooved nut spanner set with guide tube for Mercedes	3,70

consists of:

		kg
460.5411	Primary body, Ø 100 mm	3,07
460.5412	Guide pipe with connecting thread, M56 x 1.5 mm, Ø 59 mm	0,63

Wrench with 6 pins for Mercedes

- Internal square drive to DIN 3121 / ISO 1174
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel



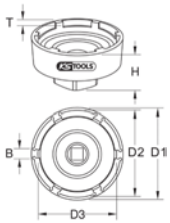
	Outer Ø mm	Inner Ø mm	H mm	Stud	Stud width mm	kg
460.5415	126,0	101,0	100,0	6	7,5	5,37

Wrench with 6 pins for Mercedes and MAN

- Internal square drive to DIN 3121 / ISO 1174
- Extremly versatile
- Suitable for exact torque
- Special profile with 6 internal studs
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: Mercedes + **MAN** drive axle







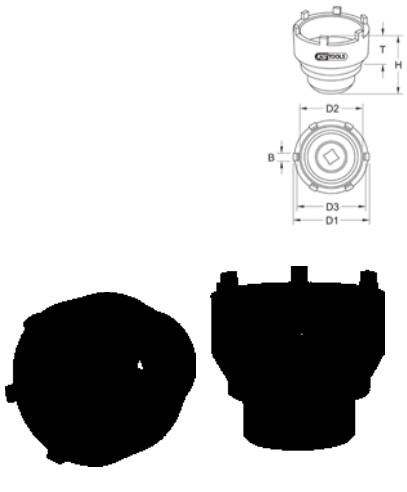
3/4"

	B mm	D1 mm	D2 mm	D3 mm	Stud	T mm	H mm	kg
450.0169	11,5	119,0	110,0	100,5	6	11,6	80,0	3,30

Wrench with 6 pins for MAN and Mercedes

- Internal square drive to DIN 3121 / ISO 1174
- Optional with sleeve locating tube
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: Mercedes and **MAN** 10 + 13 t Reduction axle, Hypoid- and Trailer axle NR 7/4, Omnibus 0305 G + 0405 G etc.



	D2 mm	D1 mm	H mm	D3 mm	Stud	B mm	kg
450.0168	95,0	115,0	111,0	101	6	6,0	2,88

Locating tube for groove nut sockets

- Practical connector system with fixing screw
- Usably for different groove socket nuts (module systems)
- Enables stable work position
- Prevents slippage of the socket
- Extremely robust version
- Change through loosening of the grub screw on the hexagon
- Special tool steel





	Inner Ø mm	Outer Ø mm	L mm	g
450.0150	46,0	52,0	140,0	520
450.0152	60,0	67,0	140,0	820

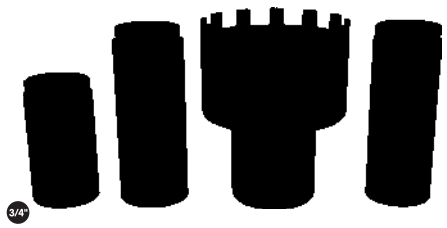


Grooved nut spanner set with 3 guide tubes for Mercedes

- Internal square drive to DIN 3121 / ISO 1174
- including threaded guide tubes
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: Mercedes planetary hub rear axles (European axles) 10 tons + 13 tons: HL7/1, HL7/2, HL7/18, HO7/8, HO7/9, HL7/0, HL7/015, HL7/021, HL7/3, HD7/2,HD7/19DG, HD7/016DG planetary hub front axle 7 tons: AL7/1

For the NR7/4 planetary hub axles / trailing axle, the base body can be used without a guide tube.



			kg
460.5420	4 pcs	Grooved nut spanner set with 3 guide tubes for Mercedes	4,54

consists of:

		kg
460.5390	Guide pipe with connecting thread, M48 x 1.5 mm, Ø 51 mm	0,53
460.5421	Primary body, Ø 105.5 mm	2,38
460.5422	Guide pipe with connecting thread, M48 x 1.5 mm, Ø 50 mm	0,71
460.5423	Guide pipe with connecting thread, M48 x 1.5 mm, Ø 53 mm	0,92



Wrench with 6 pins for Mercedes

- Internal square drive to DIN 3121 / ISO 1174
- Rigid locating tube
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: Mercedes Actros Rear axle, HL/HL 8 (Hypoid) etc.

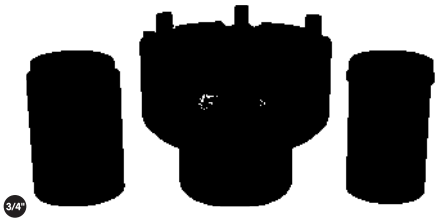


	Inner Ø mm	Outer Ø mm	Height mm	Stud Ø mm	Stud	Stud width mm	kg
450.0167	105,0	125,0	182,0	115,0	6	10,0	2,60

Grooved nut spanner set with 2 guide tubes for Mercedes

- Internal square drive to DIN 3121 / ISO 1174
- including threaded guide tubes
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: Mercedes rear axle 749.0, trailing rocker arm axle NS4/2, NS4/10 and pinion axles HL6/1, HL6/2, HL6/3, HD6/3



			kg
460.5425	3 pcs	Grooved nut spanner set with 2 guide tubes for Mercedes	7,04

consists of:

		kg
460.5426	Primary body, Ø 113 mm	5,61
460.5427	Guide pipe with connecting thread, M56 x 1.5 mm, Ø 55 mm	0,52
460.5428	Guide pipe with connecting thread, M56 x 1.5 mm, Ø 63 mm	0,91

Wrench with 6 pins for Mercedes

- ideally suited for loosening the rear nut on the differential
- Internal square drive to DIN 3121 / ISO 1174
- Extremly versatile
- Suitable for exact torque
- Special profile with 6 internal studs
- Suitable for high tightening and loosening torque
- Special tool steel



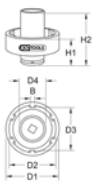
	D2 mm	D1 mm	H mm	D3 mm	Stud	B mm	kg
460.0870	126,0	135,0	103,0	102,0	6	8,7	4,16

Groove nut wrench with 6 pins with guide tube for Mercedes

- Internal square drive to DIN 3121 / ISO 1174
- Rigid locating tube
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: Mercedes (2640) drive axle







	D1 mm	D2 mm	D3 mm	D4 mm	H1 mm	H2 mm	Stud	B mm	kg
460.1065	145,0	125,0	116,0	64,0	84,0	145,0	6	11,0	4,78

Slotted nut wrench for rear axle nut for Mercedes

- With hexagon drive 32.0 mm
- For the dismantling and assembly of the rear axle nut
- High accuracy of fit
- Sturdy design
- Suitable for high tightening and loosening torque
- Drive tube Ø 35 mm
- Special tool steel

Application range: Mercedes Citaro



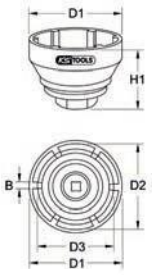
	Inner Ø mm	Outer Ø mm	H mm	Stud Ø mm	Stud	Stud width mm	kg
450.0251	122,0	139,0	310,0	123,5	6	10,4	3,87

Axle nut socket spanner for Mercedes

- Internal square drive to DIN 3121 / ISO 1174
- 8-point
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- For machinery usage
- Special tool steel

Application range: Axle nut rear axle **Mercedes** 2636, 2640, 414 (2006 - 2016)







3/4"

	D2 mm	D1 mm	D3 mm	H mm	B mm	Stud	kg
460.4205	107,0	121,0	98,0	82,0	12,0	6	2,74

AXLE NUT TOOLS RENAULT

Axle nut wrench for Volvo and Renault

- Internal square drive to DIN 3121 / ISO 1174
- 6 point
- Very high degree of accuracy
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel



1"

	mm	Ø mm	Height mm	kg
460.5450	77	94,5	101,5	1,59

Axle nut wrench for Renault

- Internal square drive to DIN 3121 / ISO 1174
- 6 point
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel



3/4"

	mm	Length mm	kg
460.5445	77	200,0	1,72

Axle nut wrench for Renault and Iveco

- Internal square drive to DIN 3121 / ISO 1174
- 6 point
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel



1"

	mm	Ø mm	Height mm	kg
460.5455	80	100	137,5	2,21

AXLE NUT TOOLS SAF

Axle nut wrench for SAF

- With hexagon drive 32.0 mm
- 6 point
- Very high degree of accuracy
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: SAF trailer axle



	mm	⬢	Ø mm	Height mm	kg
460.4790	85,0	32	140	102,0	1,70

Axle nut wrench for SAF

- Six sided drive 36 mm
- Positive drive of the axle nut
- Any extensive slipping is avoided
- Milled out profile
- Sturdy design
- Can be used with an impact wrench or torque wrench
- Special tool steel

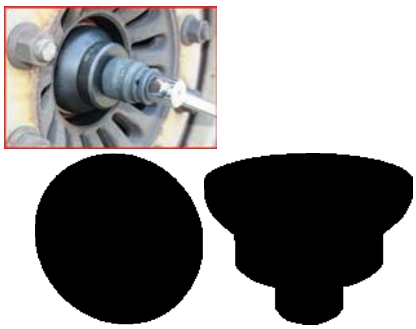
Application range: SAF axle trailers



	mm	mm	Ø mm	H mm	kg
450.0201	85,0	36	118,0	82,0	1,40

Axle nut wrench for SAF

- Six sided drive 36 mm
- 6 point
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel

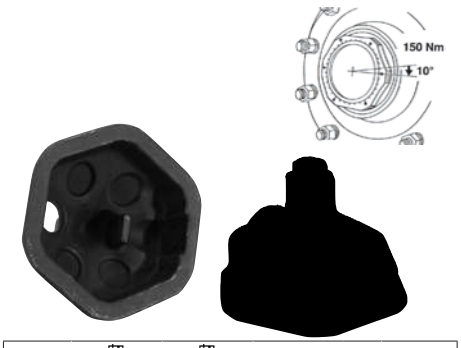


	mm	mm	Ø mm	Height mm	kg
460.5430	85	36	118	82,0	1,70

Axle nut wrench for SAF

- Positive drive of the axle nut
- Sturdy design
- Can be used with an impact wrench or torque wrench
- Ideally suited for brake restoration working
- Forward tension with SW 32 mm is at 150 Nm
- Angle of rotation 20-30° with SW 46
- Special tool steel

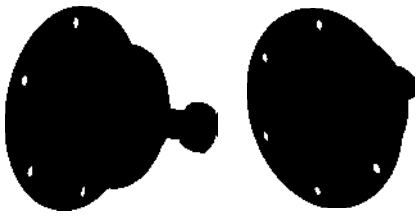
Application range: SAF Euro axle etc.



	mm	mm	H mm	kg
450.0110	140,0	32	100,0	2,27

Wheel hub puller set for SAF

- For 140 mm hole diameters
- Sturdy design
- Threaded spindle for high pull-off force - 32 mm drive
- Special tool steel



			kg	
460.4705	2 pcs	Wheel hub puller set for SAF	2,10	

consists of:

		kg	
460.4707	Wheel hub puller for perforated hole Ø 140 mm	1,71	
460.4706	Threaded spindle M22 x 134 mm	0,39	

AXLE NUT TOOLS SCANIA

Axle nut wrench for Scania

- for mounting and dismounting Scania axle nuts
- Internal square drive to DIN 3121 / ISO 1174
- 8-point
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- For machinery usage
- Special tool steel

Application range: Scania front axle (e.g. 124L / 144L) Series 4 from 1996 for vehicles from 16 t Mounting and dismounting the axle nut in front of the brake disc









1"

	mm	Ø mm	T mm	H mm	kg	
450.0221	80	98,0	25,0	75,0	1,67	



Axle nut wrench for Scania

- for mounting and dismounting Scania axle nuts
- Internal square drive to DIN 3121 / ISO 1174
- 8-point
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- For machinery usage
- Special tool steel

Application range: Axle nut **Scania** and **Fuso** front axle



3/4"

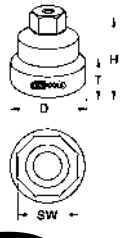
	mm	Ø mm	Height mm	kg	
460.1365	80,0	103,0	94,0	1,72	



Axle nut wrench for Scania

- With hexagon drive 41.0mm
- 8-point
- Positive drive of the axle nut
- Any extensive slipping is avoided
- Milled out profile
- Sturdy design
- Can be used with an impact wrench or torque wrench
- Special tool steel

Application range: Scania front axle (e.g. 124L / 144L), Series 4 from 96 for vehicles above 16 t, removal and fitting of the axle nuts in front of the brake disc





	mm	mm	D mm	T mm	H mm	kg	
450.0220	80	41	105,0	25,0	98,0	1,75	

Axle nut wrench for Scania, York and Fuso

- Internal square drive to DIN 3121 / ISO 1174
- 8-point
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: Scania, **York** and **Fuso** 10.5 t



3/4"

	mm	Ø mm	Height mm	Depth mm	kg	
460.0425	95,0	117,0	82,0	44,0	1,60	

Axle nut wrench for Scania

- for mounting and dismounting Scania axle nuts
- Internal square drive to DIN 3121 / ISO 1174
- 8-point
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- For machinery usage
- Special tool steel

Application range: Removal and installation of the axle nut of **Scania** rear axle



3/4"

	mm	Ø mm	Height mm	kg	
460.1370	100,0	123,0	84,0	2,70	

Nut wrench with 4 pins for Scania

- Internal square drive to DIN 3121 / ISO 1174
- High accuracy of fit
- Special profile with 4 internal studs
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: Scania locknut 1338267



3/4"

	D1 mm	D2 mm	D3 mm	Stud	B mm	H mm	kg	
460.1745	87,0	76,0	70,0	4	6,5	145,0	1,48	

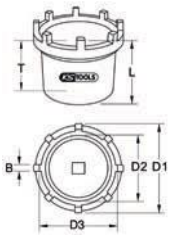
8-pin T-nuts wrench for Scania

- With 3/4" square drive to DIN 3121 / ISO 1174
- Special profile with 8 external studs
- Positive drive of the axle nut
- Any extensive slipping is avoided
- Milled out profile
- Sturdy design
- Can be used with an impact wrench or torque wrench
- Special tool steel

Application range: Scania 420 (heavy duty tipper axis) removal and installation of the mounting nut on the axle bearing







3/4"

	D1 mm	D2 mm	D3 mm	Stud	B mm	T mm	H mm	kg
450.0236	119,0	90,0	103,0	8	9,5	75,0	100,0	2,70

AXLE NUT TOOLS VOLVO

Axle nut wrench for Volvo and Renault

- Internal square drive to DIN 3121 / ISO 1174
- 6 point
- Very high degree of accuracy
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel



1"

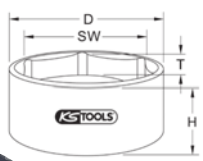
	mm	Ø mm	Height mm	kg
460.5450	77	94,5	101,5	1,59

Axle nut wrench for Volvo

- Internal square drive to DIN 3121 / ISO 1174
- 6 point
- Slim design
- Sturdy design
- Positive drive of the axle nut
- Any extensive slipping is avoided
- Milled out profile
- Can be used with an impact wrench or torque wrench
- Special tool steel

Application range: Axle nut **Volvo** FH front axle cover, steering pin (e.g. FM 12)







3/4"

	mm	D mm	T mm	H mm	kg
450.0245	80	100,0	17,0	55,0	1,31

Axle nut wrench for Volvo

- Internal square drive to DIN 3121 / ISO 1174
- 6 point
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel



1"

	mm	Ø mm	Height mm	kg
460.5435	95	118	175,5	3,59

Axle nut wrench with guide tube for Volvo

- Internal square drive to DIN 3121 / ISO 1174
- 6 point
- Extra long execution
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel



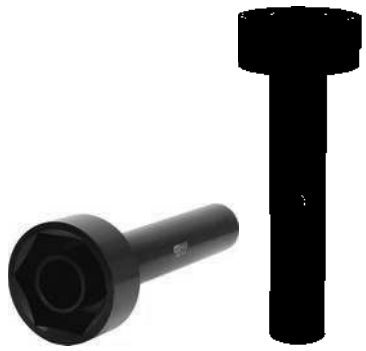
3/4"

	mm	D1 mm	Locating tube Ø mm	Height mm	Depth mm	kg
460.0680	105,0	135,0	60,0	355,0	40,0	3,70

Axle nut wrench with guide tube for Volvo

- Internal square drive to DIN 3121 / ISO 1174
- 6 point
- Extra long execution
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: Volvo FH rear axle



3/4"

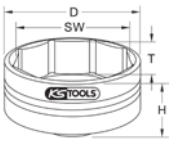
	mm	D1 mm	Locating tube Ø mm	Height mm	Depth mm	kg
460.1415	95,0	125,0	60,0	350,0	40,0	3,70

Wheel cap and axle nut socket

- Internal square drive to DIN 3121 / ISO 1174
- 8-point
- Positive drive of the axle nut
- Any extensive slipping is avoided
- Milled out profile
- Sturdy design
- Can be used with an impact wrench or torque wrench
- Special tool steel

Application range: e.g. **Volvo** axle nut / dust grease caps FM and FH VA (450Nm)







3/4"

	mm	D mm	T mm	H mm	kg
450.0241	115	138,0	45,0	80,0	2,53

AXLE NUT TOOLS SETRA AND KÄSSBOHRER

Axle nut wrench for Setra and Kässbohrer

- Six sided drive 36 mm
- 6 point
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel



	mm	⬣	Length mm	kg
460.5440	105	36	400,0	1,72

AXLE NUT TOOLS ROR

Axle nut wrench for ROR

- For assembly and disassembly of ROR axle nuts
- Internal square drive to DIN 3121 / ISO 1174
- 8-point
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- For machinery usage
- Special tool steel



1"

	mm	Ø mm	Height mm	kg
460.1015	83,0	102,0	75,0	1,35

PRESS AND PULL SLEEVE SET

700.1701 - 700.1704



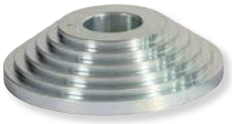
700.1800-19



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

TOOLS FOR CLAMPING NUTS

Clamp nut socket

- Internal square drive to DIN 3121 / ISO 1174
- For professional loosening and tightening
- Extremly versatile
- Rectangular form
- Usably with rectangular clamp nuts on the axle stub
- Milled out profile
- Suitable for high tightening and loosening torque
- For machinery usage
- Special tool steel





1/2"

	mm	□	H mm	g
460.5470	32,0	1/2"	36,0	380
460.5471	41,0	1/2"	50,0	510
460.5472	46,0	1/2"	52,0	550
460.5473	50,0	1/2"	62,0	630
460.5474	56,0	1/2"	68,0	670

Clamp nut socket

- Internal square drive to DIN 3121 / ISO 1174
- For professional loosening and tightening
- Extremly versatile
- Rectangular form
- Usably with rectangular clamp nuts on the axle stub
- Milled out profile
- Suitable for high tightening and loosening torque
- For machinery usage
- Special tool steel





3/4"

	mm	□	H mm	g
450.0106	56,0	3/4"	76,0	900
450.0107	60,0	3/4"	76,0	870



PROTECTION SLEEVE FOR AXLE THREAD AND THREAD REPAIR

Extension tube for MAN

- For the removal and installation of wheel hubs
- Extension tube for the protection of the wheel bearing and threaded bolts
- With knurling and bore for toggle lever
- Special tool steel

Application range: MAN TGA rear axle e.g. HY 1350



	Thread	Inner Ø mm	Outer Ø mm	L mm	kg
450.0155	M100 x 1.5	96,0	105,0	360,0	3,74

Extension tube for Mercedes and MAN

- With hexagon drive SW 41
- For the removal and installation of wheel hubs
- For the protection of the wheel bearing and threaded bolts
- Suitable for right and left handed threads
- Special tool steel

Application range:
Right handed thread = rear axle HL2 e.g. **MAN** L serie
Left handed thread = **Mercedes** Atego/Vario



	Thread	mm	Inner Ø mm	Outer Ø mm	L mm	kg
450.0156	M75 x 1.5	41	60,0	78,0	180,0	2,56
450.0157	M75 x 1.5 L	41	60,0	78,0	180,0	2,56

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 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
150.4911	Die nut M18 x 1.50	0,07
150.4902	Die nut M20 x 1.50	0,06
150.4904	Die nut M22 x 1.50	0,05

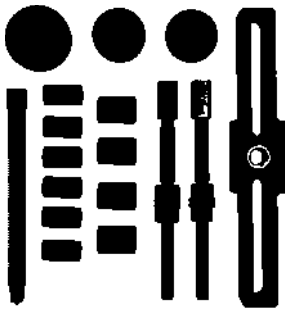


WHEEL HUB PULLERS

Universal commercial vehicle wheel hub extractor set

- Variable use for bolt circle diameter 110 mm - 448 mm
- Universal use for bolts up to max. Ø 30 mm
- With 2 rods and trapezoid thread spindle
- With 3 pressure pieces
- Includes 5 thread adaptor sets
- Special tool steel





			kg	
460.1765	27 pcs	Universal commercial vehicle wheel hub extractor set	27,00	

consists of:

		kg	
460.1766	Traverse 500mm	8,40	
460.1767	Locking screw for basic unit M8x1,25	0,01	
460.1768	Trapazoid thread insert ring	0,28	
460.1769	Trapazoid thread spindle Tr.30 x 350mm	1,80	
460.1770	Steel ball	0,01	
460.1771	Pressure tip	0,04	
460.1772	Pull rod set 340mm, 2 pcs	2,00	
460.1773	Nut set M22x2,5, 4 pcs	0,76	
460.1774	Thread adaptor set M18x1,5x65mm, 2 pcs	0,60	
460.1775	Thread adaptor set M20x1,5x65mm, 2 pcs	0,56	
460.1776	Thread adaptor set M22x1,5x65mm, 2 pcs	0,54	
460.1777	Thread adaptor set M24x1,5x65mm, 2 pcs	1,06	
460.1778	Thread adaptor set M30x1,5x65mm, 2 pcs	0,92	
460.1781	Thread adaptor set 7/8"x11G, 2 pcs	0,52	
460.1779	Pressure plate Ø 90x62.7mm	1,62	
460.1780	Pressure plate Ø 110x85.0mm	2,53	
460.1782	Pressure plate Ø 95x65.0mm	1,72	

Universal wheel hub puller

- Extracting the wheel hubs and/or housing over the grease cap thread
- Six sided drive enable unscrewing on the cap
- Sturdy design
- Trapezoid thread spindle for high removal power - drive 30 mm
- Special tool steel





	size outside thread	size internal thread	mm	mm	kg	
450.0000	M115 x 1,5		30x260	30	3,74	
450.0001	M125 x 2,0		30x260	30	1,56	
450.0002		M135 x 2,0	30x260	30	2,19	
450.0003		M136 x 2,5	30x260	30	1,48	
450.0004		M155 x 3,0	30x260	30	0,71	

Universal wheel hub puller

- Extracting the wheel hubs and/or housing over the grease cap thread
- Six sided drive enable unscrewing on the cap
- Sturdy design
- Special tool steel





	size outside thread	Suitable for	kg	
460.4810	M84 x 2 mm	610.1901	0,41	
460.4800	M115 x 3 mm	450.0077	1,01	

Universal commercial vehicle wheel hub extractor set

- variable use for bolt circle diameters up to 190 mm
- Sturdy design
- Trapezoidal threaded spindle for high pull-off force
- Special tool steel





			kg	
460.3700	5 pcs	Universal commercial vehicle wheel hub extractor set	4,90	

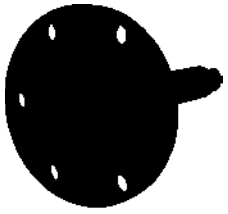
consists of:

		kg	
460.3701	Flange, Ø 100 - 190 mm	1,94	
460.3702	Trapezoid threaded spindle, 260 mm	1,22	
460.3703	Threaded socket for 460.3700	0,20	
460.3704	Pressure piece, 68 mm	0,72	
460.3705	Pressure piece, 74 mm	0,83	

Wheel hub puller for MAN

- Suitable for removing the wheel hub
- For 166 mm hole diameters
- Sturdy design
- Trapezoid thread spindle for high removal power - drive 30 mm
- Special tool steel

Application range: new **MAN** front axle wheel hub



			kg	
460.0685	2 pcs	Wheel hub puller for MAN	5,25	

consists of:

		kg	
460.0686	Wheel hub puller for Ø 166.0 mm hole	3,35	
460.0687	Trapezoid thread spindle Tr.42 x 295	1,90	

Wheel hub puller set for MAN

- including 20 t hydraulic cylinder
- Sturdy design
- Special tool steel

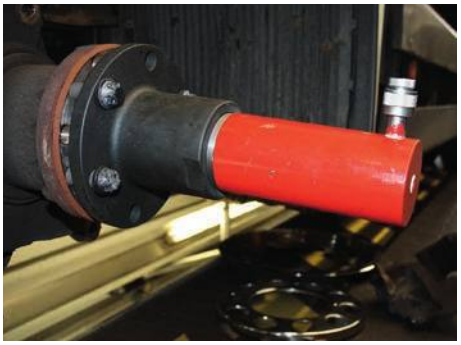




			kg	
460.3630	3 pcs	Wheel hub puller set for MAN	12,80	

consists of:

		kg	
460.3631	Wheel hub pickup	4,94	
460.3632	Pressure piece	0,42	
460.3635	Hydraulic cylinder, 20 t	7,46	



Wheel hub puller for Scania

- With pressure plate for support
- Sturdy design
- Trapezoid thread spindle for high removal power - drive 30 mm
- Special tool steel

Application range: Scania (310 / 320) rear axle wheel hub





			kg	
460.1080	3 pcs	Wheel hub puller for Scania	5,90	

consists of:

		kg	
460.1082	Trapezoid thread spindle Tr.30 with pressure tip, 285 mm	1,32	
460.1081	Wheel hub puller for 460.1080	4,00	
460.1083	Pressure plate for 460.1080	0,55	

Assembly and disassembly tool set for ZF axles

- ideally suited for mounting and dismounting wheel hubs with compact bearings
- can also be used with fixed wheel hubs
- for damage-free mounting of the shaft sealing rings
- for mounting the bellows with installed brake calliper
- Special tool steel

Application range: IF axles



			kg	
460.3795	11 pcs	Assembly and disassembly tool set for ZF axles	26,50	

consists of:

		kg	
460.3800	Shaft sealing ring assembly tool, external diameter 160 mm	1,00	
460.3801	Counterholder wrench, 430 mm	2,96	
460.0906	Press-in sleeve for pressure piece		
460.3796	Slotted nut wrench, interior diameter of stud 123.5 mm	4,68	
460.0907	Retainer		
460.3797	Slotted nut wrench, interior diameter of stud 90.5 mm	3,89	
460.0908	Screw with hammer cap		
460.0909	Pressure piece, long		
460.3802	Special spindle, 190 mm	1,22	
460.3798	Puller with spindle, perforated hole diameter 124 mm	4,47	
460.3799	Addition disc, hole diameters 130-170 mm	1,64	

HYDRAULIC SYSTEMS FOR WHEEL HUBS

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	



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
- Ideally suited to transporters
- 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	

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	

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	

Pressure and pull hydraulic cylinder set

- Optimal for universal use in car garages
- Suitable for both pressure and train uses
- 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
- With automatic piston return
- Ideally used with transporters and commercial vehicles
- Special tool steel



Technical data cylinder

Capacity:	45 t
Connection thread:	Cejn quick coupling
Piston:	industrial forged execution
Piston-inner thread:	M27
Outer thread:	2.1/2"
Stroke:	70,0 mm

			kg	
440.0480	7 pcs	Pressure and pull hydraulic cylinder set	14,92	

consists of:

		kg	
440.0481	Hydraulic cylinder, 45 t	11,92	
440.0027	Protective ring for thread, 2.5	0,20	
440.0482	Adjustable pressure sleeve, M30	0,72	
440.0483	Impact body M27	0,52	
440.0484	Collar nut, M27	0,30	
440.0485	Pressure rod M27, 330mm	1,26	
440.0009	(CEJN-) Nipple hydraulic for connection thread 1/4"	0,01	

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 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	

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 unit 22 t, with hydraulic pump and manometer

- For the dismantling and assembly of silent support, steering pin, track rod ends, wheel bearings etc.
- Includes hydraulic pump and manometer
- 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





			kg	
440.0580	15 pcs	Hydraulic unit 22 t, with hydraulic pump and manometer	15,23	

consists of:

		kg	
440.0010	Pressure and pull hydraulic cylinder set, 22t, 10 pcs	6,90	
440.0060	Hydraulic foot pump set, 4 pcs	7,83	
440.0063	Manometer, 150 mm	0,50	

Hydraulic unit 32 t, with hydraulic pump and manometer

- Optimal for universal use in car garages
- Includes hydraulic pump and manometer
- 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



			kg	
440.0585	11 pcs	Hydraulic unit 32 t, with hydraulic pump and manometer	9,35	

consists of:

		kg	
440.0025	Pressure and pull hydraulic cylinder set, 32t, 6 pcs	9,35	
440.0060	Hydraulic foot pump set, 4 pcs	7,83	
440.0063	Manometer, 150 mm	0,50	

Hydraulic unit 16-tonnes, with air hydraulic pump

- 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
- With pneumatic hydraulic pump
- Universal usage with reduction M10-M22
- With automatic piston return
- Special tool steel
- In durable steel storage case



			kg	
440.9991	13 pcs	Hydraulic unit 16-tonnes, with air hydraulic pump	11,80	

consists of:

		kg	
440.0005	Pressure and pull hydraulic cylinder set, 16t, 10 pcs	5,48	
440.0055	Pneumatic hydraulic pump set, 3 pcs	6,32	

Hydraulic unit 22-tonnes, with air hydraulic pump

- 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
- With pneumatic hydraulic pump
- Universal usage with reduction M10-M22
- With automatic piston return
- Special tool steel
- In durable steel storage case



			kg	
440.9995	13 pcs	Hydraulic unit 22-tonnes, with air hydraulic pump	13,22	

consists of:

		kg	
440.0010	Pressure and pull hydraulic cylinder set, 22t, 10 pcs	6,90	
440.0055	Pneumatic hydraulic pump set, 3 pcs	6,32	

Hydraulic unit 32-tonnes, with air hydraulic pump

- 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
- With pneumatic hydraulic pump
- 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



			kg	
440.9996	9 pcs	Hydraulic unit 32-tonnes, with air hydraulic pump	15,67	

consists of:

		kg	
440.0025	Pressure and pull hydraulic cylinder set, 32t, 6 pcs	9,35	
440.0055	Pneumatic hydraulic pump set, 3 pcs	6,32	

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	

Wheel hub puller set for 8 and 10 bolts for 32 t

- for disassembly of truck wheel hubs with 8 or 10 bolts (275 mm / 335 mm)
- Use in conjunction with 32t hydraulic cylinder (440.0025) with impact function
- ideal for pressing out wheel hub with compact bearing
- Sturdy design
- Secure and easy to use
- ideal for use with wheel bearing set for Scania (440.0375)
- Special tool steel
- In durable plastic storage case

Recommended hydraulic cylinder: 32t (440.0025)



			kg	
440.0590	11 pcs	Wheel hub puller set for 8 and 10 bolts for 32 t	8,72	

consists of:

	X		kg	
440.0361	2	Pressure foot, Ø 155 mm, 90 mm	3,18	
440.0352	1	Pressure rod Ø 31 mm, 250 mm	1,44	
440.0353	1	Pressure rod Ø 31 mm, 140 mm	0,80	
440.0362	1	Pressure rod Ø 31 mm, 50 mm	0,26	
440.0363	1	Press plate	0,15	
440.0593	1	Press frame traverse for Scania, 380 mm	9,30	
440.0366	4	Screw M22 x 60 mm	0,26	

Wheel hub puller set for 8 and 10 bolts for 45 t

- for disassembly of truck wheel hubs with 8 or 10 bolts (275 mm / 335 mm)
- Use in conjunction with 45t hydraulic cylinder (440.0480) with impact function
- ideal for pressing out wheel hub with compact bearing
- Sturdy design
- Secure and easy to use
- ideal for use with wheel bearing set for Scania (440.0375)
- Special tool steel
- In durable plastic storage case

Recommended hydraulic cylinder: 45t (440.0480)



			kg	
440.0610	12 pcs	Wheel hub puller set for 8 and 10 bolts for 45 t	19,66	

consists of:

	X		kg	
440.0361	2	Pressure foot, Ø 155 mm, 90 mm	3,18	
440.0587	1	Pressure rod M30, 140mm	1,30	
440.0588	1	Pressure rod M30, 30mm	0,40	
440.0589	1	Extension, 100mm	0,90	
440.0592	1	Extension, 50mm	0,50	
440.0591	1	Extension, 70mm	0,60	
440.0593	1	Press frame traverse for Scania, 380 mm	9,30	
440.0366	4	Screw M22 x 60 mm	0,26	

Spacer screw M22 for wheel hub puller set (440.0590)

- for extending the pressure rod
- ideal for axles with hub planetary gear in the wheel hub
- Special tool steel



		g	
440.0365	Spacer screw M22 for wheel hub puller set (440.0590)	290	

Puller set for hub without wheel stud rim for 32 t

- for the effective pressing out of firmly rusted bearings with external hubs of straight shafts
- Minimum work time
- Secure and easy to use
- Special tool steel

Recommended hydraulic cylinder: 32 t (440.0025)

Application range: Mercedes Atego, Actros, **MAN** TGA, TGS, TGX, **Volvo** FL, **Renault** Kerax, Magnum, Midlum, Premium and all brands with the same bolt arrangement



			kg	
440.0490	3 pcs	Puller set for hub without wheel stud rim for 32 t	8,54	

consists of:

			kg	
440.0491	Pressure rod M24		1,14	
440.0492	Adapter for main body with internal thread 2.1/2"		2,25	
440.0493	Main body with thread		4,50	

Puller set for hub without wheel stud rim for 45 t

- for the effective pressing out of firmly rusted bearings with external hubs of straight shafts
- Minimum work time
- Secure and easy to use
- Special tool steel

Recommended hydraulic cylinder: 45t (440.0480)

Application range: Mercedes Atego, Actros; **MAN** TGA, TGS, TGX; **Volvo** FL; **Renault** Kerax, Magnum, Midlum, Premium and all brands with the same bolt arrangement



			kg	
440.0615	3 pcs	Puller set for hub without wheel stud rim for 45 t	8,34	

consists of:

			kg	
440.0616	Pressure rod M30		1,36	
440.0492	Adapter for main body with internal thread 2.1/2"		2,25	
440.0493	Main body with thread		4,50	

Hub pullers for low trailers for 32 t and 45 t

- for pressing out the 225 mm hub with 10 screws
- Hubs with unit bearings on straight shafts can be released in this way
- Use in connection with threaded plate (440.0364)
- Sturdy design
- Secure and easy to use
- Special tool steel

Recommended hydraulic cylinder: 32 t (440.0025) and 45 t (440.0480)



			kg	
440.0495	15 pcs	Hub pullers for low trailers for 32 t and 45 t	11,52	

consists of:

	X		kg	
440.0366	8	Screw M22 x 60 mm	0,26	
440.0496	2	Traverse	2,10	
440.0497	4	Connecting struts	1,10	
440.0498	1	Pressure disk SAF Ø 76 mm	0,84	

Press frame crosshead for Scania

- for use with spring bolt set for Scania (440.0620 and 440.0625)
- with a maximum width of 380 mm
- Use directly at the vehicle possible
- Secure and easy to use
- Special tool steel

Application range: Scania leaf spring bolts



		Width mm	kg	
440.0593		380,0	9,30	

WHEEL HUB TOOL

Bearing assembly and deassembly tool set

- Can be used manually with a hammer or workshop press
- Optimal placing through the pressure plates
- For easy and damage free assembly
- For the correct dismantling and assembly of bearings
- Suitable for commercial, agricultural engineering and construction machines
- Forged, robust execution
- Special tool steel
- In durable plastic storage case



		Replacement jaws	kg	
450.0080	5 pcs	450.0081	6,45	

consists of:

		kg	
450.0082	Pressure plates (use with press)	0,51	
450.0083	Impact plates long (use with a hammer)	1,91	
450.0084	Special 6 point socket for mandral shaft	0,34	
450.0088	Universal 3 jaw thrust piece	0,32	
450.0087	Locking bolt for jaw spreading	0,02	

Separator set inclusive with yoke ø 30,0 - 220,0 mm

- For the removal of secure bearings and bushes
- Extremely robust spindle with inductively hardened thread
- Hydraulic thrust spindle available
- Special tool steel
- In durable steel storage case



			kg	
605.0005	3 pcs	Separator set inclusive with yoke ø 30,0 - 220,0 mm	29,00	

consists of:

		kg	
605.0505	Separator puller tool, 30-220mm	12,00	
605.0115	Yoke for bearing separator tool, 100-360mm	8,80	
605.0405	Extension for pull rod, M20 x 1,5 x 100mm	0,70	

MAN wheel bearing puller

- Ideally suited to the removal of old wheel bearings
- Sturdy design
- Trapezoid thread spindle for high removal power - drive 30 mm
- Special tool steel

Application range: MAN 33460, 410 and 414 -break disc bearing front axle





		kg	
460.1380	10 pcs	MAN wheel bearing puller	7,00	

consists of:

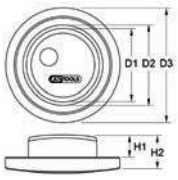
		kg	
460.0537	Trapezoid thread spindle Tr.30 with pressure tip, 375 mm	1,50	
460.1381	Traverse for 460.1380	2,00	
460.1382	Set of struts with nuts, 4 pcs.	1,10	
460.1383	Half-shell set internal Ø 108 mm, 2 pcs.	1,50	
460.0541	Ring for 460.0541	0,80	

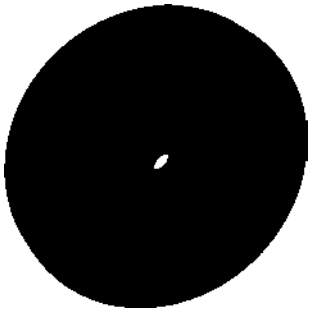
Wheel bearing installation aid for DAF

- Ideally suited for mounting the wheel bearing and the sealing ring on the front axle
- Facilitates installation due to constant force
- time- and cost-efficient
- Special tool steel

Application range: DAF CF





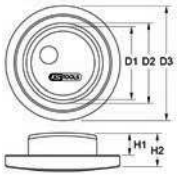


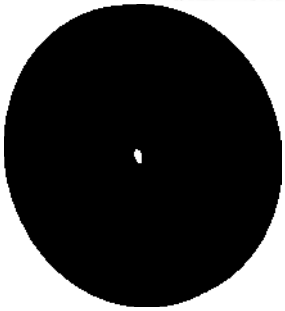
	D1 mm	D2 mm	D3 mm	H1 mm	H2 mm	kg	
460.4370	73,5	81,5	137,5	22,6	35,0	1,64	

Wheel bearing installation aid for DAF

- Ideally suited for mounting the wheel bearing and the sealing ring on the front axle
- Facilitates installation due to constant force
- time- and cost-efficient
- Special tool steel

Application range: DAF CF





	D1 mm	D2 mm	D3 mm	H1 mm	H2 mm	kg	
460.4380	91,5	99,5	147,5	22,6	35,0	1,90	

Wheel bearing mounting kit for Scania

- For mounting the inner wheel bearing on the rear axle
- Extra heavy and solid execution
- Including adapter ring
- Special tool steel





			kg	
460.4135	2 pcs	Wheel bearing mounting kit for Scania	7,67	

consists of:

		kg	
460.4136	Impact housing	7,07	
460.4137	Adapter ring	0,58	



Wheel bearing puller set for Scania

- ideally suited for removing stuck wheel bearings
- Sturdy design
- Threaded spindle for high pull-off force - 30.0 mm drive
- Special tool steel

Application range: Scania rear axle





			kg	
460.4130	14 pcs	Wheel bearing puller set for Scania	18,29	

consists of:

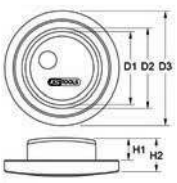
	x		kg	
460.4131	1	Traverse, Ø 150 - 310 mm	4,87	
460.4132	1	Threaded spindle, 370 mm	1,76	
460.4133	2	Pressure rod, 340 mm	1,99	
460.4134	4	Mounting nuts, M22 x 2.5 mm	0,88	
460.4125	2	Thread adapter, M22 x 1.5 mm	0,53	
460.4126	1	Pressure piece, 90 mm	1,10	
460.4127	1	Break link, Ø 135 mm	1,95	
460.4128	2	Connection shaft, 130 mm	0,79	



Wheel bearing installation aid for Volvo

- Ideally suited for mounting the wheel bearing and the sealing ring on the lift axle
- Facilitates installation due to constant force
- time- and cost-efficient
- Special tool steel

Application range: Volvo FM





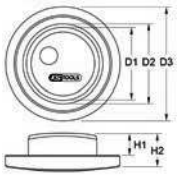
	D1 mm	D2 mm	D3 mm	H1 mm	H2 mm	kg	
460.4005	51,0	58,0	109,0	21,0	34,0	1,00	



Wheel bearing installation aid for Volvo

- Ideally suited for mounting the wheel bearing and the sealing ring on the front axle
- Facilitates installation due to constant force
- time- and cost-efficient
- Special tool steel

Application range: Volvo FM



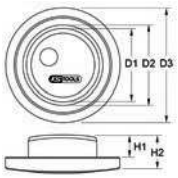


	D1 mm	D2 mm	D3 mm	H1 mm	H2 mm	kg	
460.4000	61,0	68,0	124,0	21,0	34,0	1,29	

Wheel bearing installation aid for Volvo

- Ideally suited for mounting the wheel bearing and the sealing ring on the rear axle
- Facilitates installation due to constant force
- time- and cost-efficient
- Special tool steel

Application range: Volvo FM





	D1 mm	D2 mm	D3 mm	H1 mm	H2 mm	kg	
460.3995	83,0	94,0	148,0	26,0	40,0	2,00	

HYDRAULIC SYSTEMS FOR WHEEL BEARINGS

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	



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
- Ideally suited to transporters
- 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	



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	

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	

consists of:

		kg	
440.0009	(CEJN-) Nipple hydraulic for connection thread 1/4"	0,01	

Pressure and pull hydraulic cylinder set

- Optimal for universal use in car garages
- Suitable for both pressure and train uses
- 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
- With automatic piston return
- Ideally used with transporters and commercial vehicles
- Special tool steel



Technical data cylinder

Capacity:	45 t
Connection thread:	Cejn quick coupling
Piston:	industrial forged execution
Piston-inner thread:	M27
Outer thread:	2.1/2"
Stroke:	70,0 mm

			kg	
440.0480	7 pcs	Pressure and pull hydraulic cylinder set	14,92	

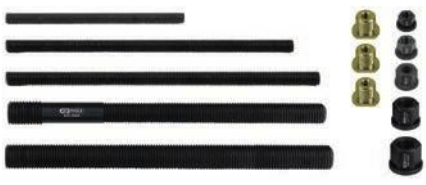
consists of:

		kg	
440.0481	Hydraulic cylinder, 45 t	11,92	
440.0027	Protective ring for thread, 2.5	0,20	
440.0482	Adjustable pressure sleeve, M30	0,72	
440.0483	Impact body M27	0,52	
440.0484	Collar nut, M27	0,30	
440.0485	Pressure rod M27, 330mm	1,26	
440.0009	(CEJN-) Nipple hydraulic for connection thread 1/4"	0,01	

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!



			g	
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	

consists of:

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 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

440.0060	4 pcs	Hydraulic foot pump set	7,83	

consists of:

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

440.0055	3 pcs	Pneumatic hydraulic pump set	6,32	

consists of:

440.0056	Pneumatic hydraulic pump	5,22	
440.0057	Hydraulic hose, 2200 mm	0,90	
440.0058	Cejn quick coupling	0,20	

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





440.0063	Manometer	500	

Hydraulic unit 22 t, with hydraulic pump and manometer

- For the dismantling and assembly of silent support, steering pin, track rod ends, wheel bearings etc.
- Includes hydraulic pump and manometer
- 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





440.0580	15 pcs	Hydraulic unit 22 t, with hydraulic pump and manometer	15,23	

consists of:

440.0010	Pressure and pull hydraulic cylinder set, 22t, 10 pcs	6,90	
440.0060	Hydraulic foot pump set, 4 pcs	7,83	
440.0063	Manometer, 150 mm	0,50	

Hydraulic unit 32 t, with hydraulic pump and manometer

- Optimal for universal use in car garages
- Includes hydraulic pump and manometer
- 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



440.0585	11 pcs	Hydraulic unit 32 t, with hydraulic pump and manometer	9,35	

consists of:

440.0025	Pressure and pull hydraulic cylinder set, 32t, 6 pcs	9,35	
440.0060	Hydraulic foot pump set, 4 pcs	7,83	
440.0063	Manometer, 150 mm	0,50	

Hydraulic unit 16-tonnes, with air hydraulic pump

- 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
- With pneumatic hydraulic pump
- Universal usage with reduction M10-M22
- With automatic piston return
- Special tool steel
- In durable steel storage case



440.9991	13 pcs	Hydraulic unit 16-tonnes, with air hydraulic pump	11,80	

consists of:

440.0005	Pressure and pull hydraulic cylinder set, 16t, 10 pcs	5,48	
440.0055	Pneumatic hydraulic pump set, 3 pcs	6,32	

Hydraulic unit 22-tonnes, with air hydraulic pump

- 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
- With pneumatic hydraulic pump
- Universal usage with reduction M10-M22
- With automatic piston return
- Special tool steel
- In durable steel storage case



			kg
440.9995	13 pcs	Hydraulic unit 22-tonnes, with air hydraulic pump	13,22

consists of:

		kg
440.0010	Pressure and pull hydraulic cylinder set, 22t, 10 pcs	6,90
440.0055	Pneumatic hydraulic pump set, 3 pcs	6,32

Hydraulic unit 32-tonnes, with air hydraulic pump

- 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
- With pneumatic hydraulic pump
- 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



			kg
440.9996	9 pcs	Hydraulic unit 32-tonnes, with air hydraulic pump	15,67

consists of:

		kg
440.0025	Pressure and pull hydraulic cylinder set, 32t, 6 pcs	9,35
440.0055	Pneumatic hydraulic pump set, 3 pcs	6,32

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

Wheel bearing set for Scania for 32t and 45t

- For the assembly and disassembly of compact bearings on the front axle
- ideal use with wheel hub puller set (440.0360) and 32t hydraulic cylinder (440.0025 with impact function)
- Sturdy design
- Secure and easy to use
- Special tool steel
- In durable plastic storage case

Recommended hydraulic cylinder: 32t (440.0025) and 45t (440.0480)

Application range: Wheel bearing front axle **Scania**



			kg
440.0375	7 pcs	Wheel bearing set for Scania for 32t and 45t	6,38

consists of:

		kg
440.0376	Pressure sleeve, 65 mm	1,10
440.0377	Pressure disk, Ø 130mm	2,10
440.0378	Pressure disk, Ø 125 mm	2,10
440.0379	Protective sleeve Ø 96 mm	0,38
440.0104	Drive nut, M22	0,20
440.0028	Collar nut, M22	0,16
440.0209	Pressure rod M22	0,45

LUBRICATION SYSTEMS

Manual lever grease gun with flexible tube

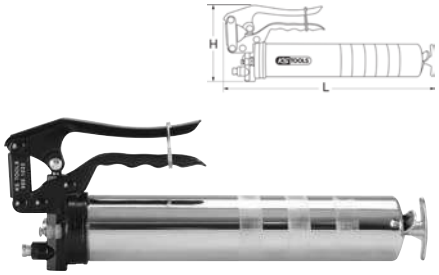
- For cartridges and buckets and/or also for loose grease
- Fill capacity 400g
- Flexible tube
- Mirror polished



	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:

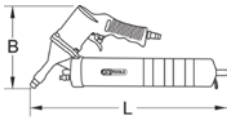
Connection thread:	M10 x 1,0
Operating pressure:	400 bar
Burst pressure system (bar):	850 bar
Burst pressure grease gun head (bar):	1200 bar
NLGI class:	< 2
Output per stroke cm³:	2,10 cm³
Capacity:	500 g

	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





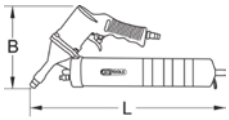
Technical data:

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





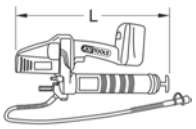
Technical data:

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 batteries	Charger	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	

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 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	

Nozzle

- Made from metal
- Four-jaw nozzle
- For use with the manually operated grease gun



		g	
980.1013	1/8"PT	30	

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	

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:

		kg	
980.1101	90° Lubricant adaptor		
980.1102	Tube extension, 300 mm		
980.1103	Straight extension		
980.1104	90° flat nipple adaptor		
980.1105	Rubber grease tip		
980.1106	Needle shaped tip		
980.1107	360° Adaptor, adjustable		

Bearing lubrication aid

- Ideally suited to greasing the bearings
- Residual grease is protected against dust and oxidation
- for different bearing diameters
- Permanently lockable
- Extremly versatile

Application range: tapered roller bearings



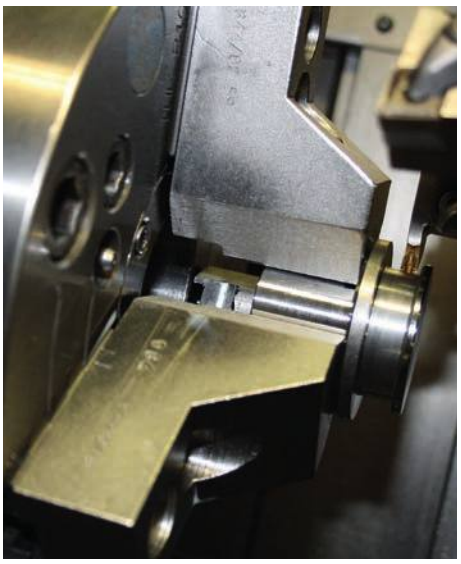
	Inner Ø mm	Height mm	Width mm	kg	
460.4965	126,0	130,0	160,0	1,27	
460.4970	104,0	130,0	160,0	1,07	
460.4975	149,0	130,0	160,0	1,70	

Bearing lubrication aid

- Ideally suited to greasing the bearings
- The grease is pressed through the rollers/barrels by pressing down on the piston
- For 150-200 mm bearing diameter
- Permanently lockable
- With triple sealing against grease leaks
- Residual grease is protected against dust and oxidation
- Aluminium
- Extremly versatile



	Height mm	Width mm	kg	
460.1210	240,0	240,0	6,80	



WHEEL STUDS ASSEMBLY AND DISASSEMBLY

Universal tool set for changing wheel bolts on trucks

- for quick and easy replacement of wheel bolts
- on trucks and trailers
- Changing the wheel studs without hammer or physical exertion
- Bolt change in less than 30 seconds
- Used in conjunction with press clamp (440.0190) and 14t (440.0015) or 8.5t hydraulic cylinder 440.0020



			kg	
440.0390	8 pcs	Universal tool set for changing wheel bolts on trucks	1,99	

consists of:

		g	
440.0391	Assembly sleeve	490	
440.0392	Retainer	210	
440.0393	Removal pipe, large VOLVO, SMB	145	
440.0394	Disassembly pipe, small VOLVO	200	
440.0396	Disassembly sleeve SCANIA	315	
440.0397	Adjustable pressure rod M24	227	
440.0398	Disassembly pipe SAF	225	
440.0399	Disassembly pipe BPW, ROR	182	

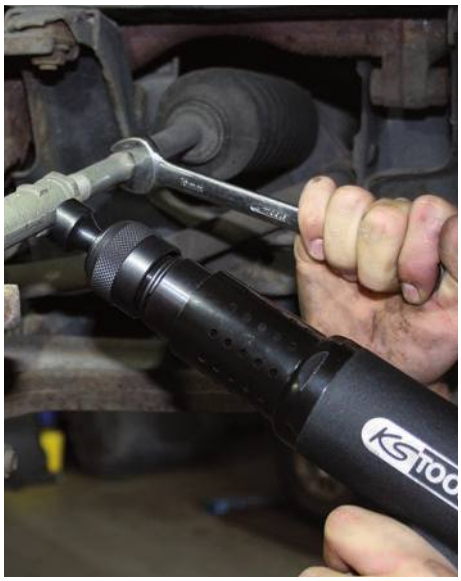
SILENT BEARING TOOL

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	



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" - 10 mm
Connection thread:	1/4"NPT

	L mm	kg	
515.3881	292,0	2,17	

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 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	

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
- Utilisation of vibration and shock pulse of Vibro Power pneumatic 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





	Width mm	g
515.3967	20,0	295
515.3968	24,0	375
515.3969	35,0	395

High-performance vibro-impact pneumatic chisel hammer

- With non slip handle
- Air exhaust through the handle
- Ergonomic designed handle
- Air exhaust integrated in the 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



Technical data:

Chisel holder:	15 mm
Number of blows:	2500 blows/min
Vibration acceleration:	20,4 m/s²
Noise performance level:	115 dbA
Noise pressure level:	104 dbA
Air consumption:	210 l/min
Operating pressure:	max. 6,3 bar (90 psi)
Connection thread:	1/4"NPT

		kg
515.4880	High-performance vibro-impact pneumatic chisel hammer	5,40

Vibro-Impact tie rod remover

- Pneumatic chisel adapter (15 mm) for use with pneumatic chisel hammers on the market
- Extension of the working range
- Utilisation of the vibration and impact impulse of the high-performance vibro-impact
- Robust chisel forged out of one piece
- Special tool steel



	Length mm	kg
515.4881	300,0	1,43

Vibro-Impact Flat Chisel, XL

- Pneumatic chisel adapter (15 mm) for use with pneumatic chisel hammers on the market
- Extension of the working range
- Utilisation of the vibration and impact impulse of the high-performance vibro-impact
- Robust chisel forged out of one piece
- Special tool steel



	Length mm	g	
515.4882	300,0	670	

Vibro-Impact hammer insert

- Pneumatic chisel adapter (15 mm) for use with pneumatic chisel hammers on the market
- Extension of the working range
- Utilisation of the vibration and impact impulse of the high-performance vibro-impact
- Robust chisel forged out of one piece
- Special tool steel



	Length mm	kg	
515.4883	300,0	1,46	

Vibro-Impact Pointed Chisel, XL

- Pneumatic chisel adapter (15 mm) for use with pneumatic chisel hammers on the market
- Extension of the working range
- Utilisation of the vibration and impact impulse of the high-performance vibro-impact
- Robust chisel forged out of one piece
- Special tool steel



	Length mm	g	
515.4884	300,0	630	

Vibro-Impact concave insert

- Pneumatic chisel adapter (15 mm) for use with pneumatic chisel hammers on the market
- Extension of the working range
- Utilisation of the vibration and impact impulse of the high-performance vibro-impact
- Robust chisel forged out of one piece
- Special tool steel



	Length mm	kg	
515.4885	300,0	1,42	

Vibro-Impact Drifters

- Pneumatic chisel adapter (15 mm) for use with pneumatic chisel hammers on the market
- Extension of the working range
- Utilisation of the vibration and impact impulse of the high-performance vibro-impact
- Robust chisel forged out of one piece
- Special tool steel



	Length mm	Width mm	g	
515.4886	235,0	20,0	550	

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



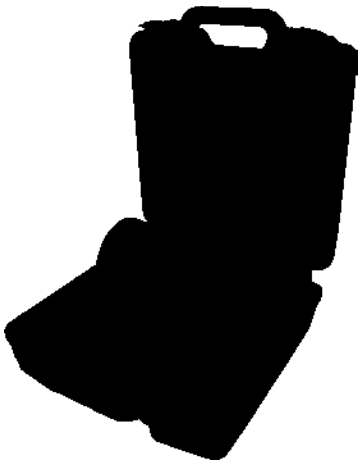
			kg	
700.1350	51 pcs	Universal bearing and bush driver set	8,00	

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	
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	

consists of:

		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	



Press and pull sleeve kit

- 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

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	0	Pull sleeve,internal Ø 34mm,external Ø 44mm, of 700.1550	250	
700.1550-36	0	Pull sleeve,internal Ø 36mm,external Ø 46mm, of 700.1550	260	
700.1550-38	0	Pull sleeve,internal Ø 38mm,external Ø 48mm, of 700.1550	280	
700.1550-40	0	Pull sleeve,internal Ø 40mm,external Ø 50mm, of 700.1550	290	
700.1550-42	0	Pull sleeve,internal Ø 42mm,external Ø 52mm, of 700.1550	300	
700.1550-44	0	Pull sleeve,internal Ø 44mm,external Ø 54mm, of 700.1550	320	
700.1550-46	0	Pull sleeve,internal Ø 46mm,external Ø 56mm, of 700.1550	330	
700.1550-48	0	Pull sleeve,internal Ø 48mm,external Ø 58mm, of 700.1550	340	
700.1550-50	0	Pull sleeve,internal Ø 50mm,external Ø 60mm, of 700.1550	350	
700.1550-52	0	Pull sleeve,internal Ø 52mm,external Ø 62mm, of 700.1550	360	
700.1550-54	0	Pull sleeve,internal Ø 54mm,external Ø 64mm, of 700.1550	380	
700.1550-56	0	Pull sleeve,internal Ø 56mm,external Ø 66mm, of 700.1550	390	
700.1550-58	0	Pull sleeve,internal Ø 58mm,external Ø 68mm, of 700.1550	410	
700.1550-60	0	Pull sleeve,internal Ø 60mm,external Ø 70mm, of 700.1550	420	
700.1550-62	0	Pull sleeve,internal Ø 62mm,external Ø 72mm, of 700.1550	430	
700.1550-64	0	Pull sleeve,internal Ø 64mm,external Ø 74mm, of 700.1550	440	
700.1550-66	0	Pull sleeve,internal Ø 66mm,external Ø 76mm, of 700.1550	460	
700.1550-68	0	Pull sleeve,internal Ø 68mm,external Ø 78mm, of 700.1550	470	
700.1550-70	0	Pull sleeve,internal Ø 70mm,external Ø 80mm, of 700.1550	480	
700.1550-72	0	Pull sleeve,internal Ø 72mm,external Ø 82mm, of 700.1550	490	
700.1550-75	0	Pull sleeve,internal Ø 75mm,external Ø 85mm, of 700.1550	500	
700.1550-80	0	Pull sleeve,internal Ø 80mm,external Ø 90mm, of 700.1550	520	
700.1551	0	Spindle M10x1.5	170	
700.1552	0	Spindle M12x2.0	200	
700.1553	0	Spindle M14x2.0	350	
700.1554	0	Spindle M16x2.5	380	

consists of:

	x		g	
700.1555	0	Pressure adapter for step panel commercial vehicle	350	
700.1556	0	Step panel adaptor with 3 holes, A+B side	350	
700.1551-01	0	Pressure nut with lock function for spindle M10 x P1,5	140	
700.1551-02	0	Pressure nut with bearing for spindle M10xP1,5	160	
700.1552-01	0	Pressure nut with lock function for spindle M12 x P1,75	120	
700.1552-02	0	Pressure nut with bearing for spindle M12xP1,75	160	
700.1553-01	0	Pressure nut with lock function for spindle M14 x P2,0	120	
700.1553-02	0	Pressure nut with bearing for spindle M14xP2,0	140	
700.1554-01	0	Pressure nut with lock function for spindle M16 x P2,0	100	
700.1554-02	0	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:

	x		g	
700.1701	2	Thrust bolt, M10	125	
700.1702	2	Thrust bolt, M12	124	
700.1703	2	Thrust bolt, M14	130	
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	
700.1715	1	Pressure sleeve, internal Ø 36 mm, external Ø 46 mm	260	
700.1716	1	Pressure sleeve, internal Ø 38 mm, external Ø 48 mm	280	
700.1717	1	Pressure sleeve, internal Ø 40 mm, external Ø 50 mm	290	
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	
700.1710	1	Spindle, M10, 350 mm	170	
700.1711	1	Spindle, M12, 350 mm	253	
700.1712	1	Spindle, M14, 350 mm	350	
700.1713	1	Spindle, M16, 350 mm	473	
700.1720	1	Pressure sleeve, internal Ø 46 mm, external Ø 56 mm	330	
700.1721	1	Pressure sleeve, internal Ø 48 mm, external Ø 58 mm	340	
700.1722	1	Pressure sleeve, internal Ø 50 mm, external Ø 60 mm	350	
700.1723	1	Pressure sleeve, internal Ø 52 mm, external Ø 62 mm	370	
700.1724	1	Pressure sleeve, internal Ø 54 mm, external Ø 64 mm	380	
700.1725	1	Pressure sleeve, internal Ø 56 mm, external Ø 66 mm	390	
700.1726	1	Pressure sleeve, internal Ø 58 mm, external Ø 68 mm	410	
700.1727	1	Pressure sleeve, internal Ø 60 mm, external Ø 70 mm	420	
700.1728	1	Pressure sleeve, internal Ø 62 mm, external Ø 72 mm	430	
700.1729	1	Pressure sleeve, internal Ø 64 mm, external Ø 74 mm	440	
700.1730	1	Pressure sleeve, internal Ø 66 mm, external Ø 76 mm	460	
700.1731	1	Pressure sleeve, internal Ø 68 mm, external Ø 78 mm	470	
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	

Compression and Tension Sleeve Extension Set, Level 1

- For the assembly and disassembly of bearings
- Ideally for silent bearings, hydro bearings, bushings, ball bearings, simmer rings etc.
- Universal use for construction machines, truck, municipally, country and forestery technology etc.
- 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
- Supplement set for 700.1700 / 700.1735

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
Spindle TR20x4 400 Nm



			kg	
700.1800	22 pcs	Compression and Tension Sleeve Extension Set, Level 1	16,60	

consists of:

		g	
700.1800-01	Pressure sleeve, internal Ø 74 mm, external Ø 84 mm	240	
700.1800-02	Pressure sleeve, internal Ø 76 mm, external Ø 86 mm	240	
700.1800-03	Pressure sleeve, internal Ø 78 mm, external Ø 88 mm	240	
700.1800-04	Pressure sleeve, internal Ø 80 mm, external Ø 90 mm	240	
700.1800-05	Pressure sleeve, internal Ø 82 mm, external Ø 92 mm	240	
700.1800-06	Pressure sleeve, internal Ø 84 mm, external Ø 94 mm	240	
700.1800-07	Pressure sleeve, internal Ø 86 mm, external Ø 96 mm	240	
700.1800-08	Pressure sleeve, internal Ø 88 mm, external Ø 98 mm	240	
700.1800-09	Impact adaptor for step discs 2 pcs	350	
700.1800-10	Check nut M 10	350	
700.1800-11	Check nut M 12	350	
700.1800-12	Check nut M 14	350	
700.1800-13	Stepped plate, #1	350	
700.1800-14	Stepped plate, #2	350	
700.1800-15	Stepped plate, #3	350	
700.1800-16	Stepped plate, #4	350	
700.1800-17	Spindle TR 20, short	350	
700.1800-18	Spindle TR 20, long	350	
700.1800-19	Thrust bolt TR 20 with bearing 2 pcs	350	
980.1085	Special thread grease, gun	22	

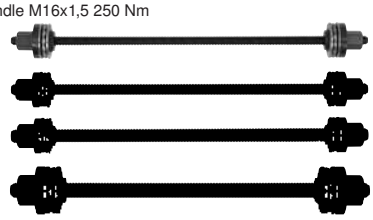


Spindle set for press and pull sleeve set

- With 4 spindles for KS press and pull sleeve set
- Thread lead: 1.5
- Pressure bearing protects against increased friction during the process
- Incl. special thread grease
- Chrome molybdenum

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	
700.1735	13 pcs	Spindle set for press and pull sleeve set	2,20	

consists of:

	x		g	
700.1710	1	Spindle, M10, 350 mm	170	
700.1711	1	Spindle, M12, 350 mm	253	
700.1712	1	Spindle, M14, 350 mm	350	
700.1713	1	Spindle, M16, 350 mm	473	
700.1701	2	Thrust bolt, M10	125	
700.1702	2	Thrust bolt, M12	124	
700.1703	2	Thrust bolt, M14	130	
700.1704	2	Thrust bolt, M16	130	
980.1085	1	Special thread grease, gun	22	

Compression and Tension Sleeve Extension Set, Level 2

- For the assembly and disassembly of bearings
- Ideally for silent bearings, hydro bearings, bushings, ball bearings, simmer rings etc.
- Universal use for construction machines, truck, municipally, country and forestery technology etc.
- 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
- Supplement set for 700.1700 + 700.1800 / 700.1735 + 700.1800



			kg	
700.1805	14 pcs	Compression and Tension Sleeve Extension Set, Level 2	16,40	

consists of:

		kg	
700.1800-20	Thrust bolt big, M16 with bearing	0,31	
700.1800-21	Pressure sleeve, internal Ø 90 mm, external Ø 100 mm	0,90	
700.1800-22	Pressure sleeve, internal Ø 92 mm, external Ø 102 mm	0,92	
700.1800-23	Pressure sleeve, internal Ø 94 mm, external Ø 104 mm	0,94	
700.1800-24	Pressure sleeve, internal Ø 96 mm, external Ø 106 mm	0,96	
700.1800-25	Pressure sleeve, internal Ø 98 mm, external Ø 108 mm	0,98	
700.1800-26	Pressure sleeve, internal Ø 100 mm, external Ø 110 mm	0,99	
700.1800-27	Pressure sleeve, internal Ø 102 mm, external Ø 112 mm	1,00	
700.1800-28	Pressure sleeve, internal Ø 104 mm, external Ø 114 mm	1,03	
700.1800-29	Pressure sleeve, internal Ø 106 mm, external Ø 116 mm	1,05	
700.1800-30	Pressure sleeve, internal Ø 108 mm, external Ø 118 mm	1,06	
700.1800-31	Pressure sleeve, internal Ø 110 mm, external Ø 120 mm	1,10	
700.1800-32	Pressure sleeve, internal Ø 112 mm, external Ø 122 mm	1,10	

Master Compression and Tension Sleeve Set

- For the assembly and disassembly of bearings
- Ideally for silent bearings, hydro bearings, bushings, ball bearings, simmer rings etc.
- Universal use for construction machines, truck, municipally, country and forestery technology etc.
- 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
Spindle TR20x4 400 Nm



			kg	
700.1810	46 pcs	Master Compression and Tension Sleeve Set	31,20	

consists of:

	x		kg	
700.1701	2	Thrust bolt, M10	0,13	
700.1702	2	Thrust bolt, M12	0,12	
700.1703	2	Thrust bolt, M14	0,13	
700.1710	1	Spindle, M10, 350 mm	0,17	
700.1711	1	Spindle, M12, 350 mm	0,25	
700.1712	1	Spindle, M14, 350 mm	0,35	
700.1713	1	Spindle, M16, 350 mm	0,47	
700.1800-01	1	Pressure sleeve, internal Ø 74 mm, external Ø 84 mm	0,24	
700.1800-02	1	Pressure sleeve, internal Ø 76 mm, external Ø 86 mm	0,24	
700.1800-03	1	Pressure sleeve, internal Ø 78 mm, external Ø 88 mm	0,24	
700.1800-04	1	Pressure sleeve, internal Ø 80 mm, external Ø 90 mm	0,24	
700.1800-05	1	Pressure sleeve, internal Ø 82 mm, external Ø 92 mm	0,24	
700.1800-06	1	Pressure sleeve, internal Ø 84 mm, external Ø 94 mm	0,24	
700.1800-07	1	Pressure sleeve, internal Ø 86 mm, external Ø 96 mm	0,24	
700.1800-08	1	Pressure sleeve, internal Ø 88 mm, external Ø 98 mm	0,24	
700.1800-09	2	Impact adaptor for step discs 2 pcs	0,35	
700.1800-10	1	Check nut M 10	0,35	
700.1800-11	1	Check nut M 12	0,35	
700.1800-12	1	Check nut M 14	0,35	
700.1800-13	1	Stepped plate, #1	0,35	
700.1800-14	1	Stepped plate, #2	0,35	
700.1800-15	1	Stepped plate, #3	0,35	
700.1800-16	1	Stepped plate, #4	0,35	
700.1800-17	1	Spindle TR 20, short	0,35	
700.1800-18	1	Spindle TR 20, long	0,35	
700.1800-19	1	Thrust bolt TR 20 with bearing 2 pcs	0,35	
700.1800-20	2	Thrust bolt big, M16 with bearing	0,31	
700.1800-21	1	Pressure sleeve, internal Ø 90 mm, external Ø 100 mm	0,90	
700.1800-22	1	Pressure sleeve, internal Ø 92 mm, external Ø 102 mm	0,92	
700.1800-23	1	Pressure sleeve, internal Ø 94 mm, external Ø 104 mm	0,94	
700.1800-24	1	Pressure sleeve, internal Ø 96 mm, external Ø 106 mm	0,96	
700.1800-25	1	Pressure sleeve, internal Ø 98 mm, external Ø 108 mm	0,98	
700.1800-26	1	Pressure sleeve, internal Ø 100 mm, external Ø 110 mm	0,99	
700.1800-27	1	Pressure sleeve, internal Ø 102 mm, external Ø 112 mm	1,00	
700.1800-28	1	Pressure sleeve, internal Ø 104 mm, external Ø 114 mm	1,03	
700.1800-29	1	Pressure sleeve, internal Ø 106 mm, external Ø 116 mm	1,05	
700.1800-30	1	Pressure sleeve, internal Ø 108 mm, external Ø 118 mm	1,06	
700.1800-31	1	Pressure sleeve, internal Ø 110 mm, external Ø 120 mm	1,10	
700.1800-32	1	Pressure sleeve, internal Ø 112 mm, external Ø 122 mm	1,10	
980.1085	1	Special thread grease, gun	0,02	

Special thread grease for puller and pusher spindles

- Lubricant for components subjected to high static loads, e.g. threaded spindles
- Prevents excessive wear and seizing
- Irregularities in the surface to be protected are completely filled
- Minimises the friction thanks to the closed surface
- Effective protection against corrosion
- Increases the service life of threaded spindles
- Ensures reliable function even at high temperatures up to max. 1200 °C



		g	
980.1090	Special thread grease, tube	5	

Special thread grease for puller and pusher spindles and nuts subjected high loads

- Lubricant for components subjected to high static loads, e.g. threaded spindles
- Prevents excessive wear and seizing
- Irregularities in the surface to be protected are completely filled
- Minimises the friction thanks to the closed surface
- Effective protection against corrosion
- Increases the service life of threaded spindles
- Ensures reliable function even at high temperatures up to max. 1200 °C

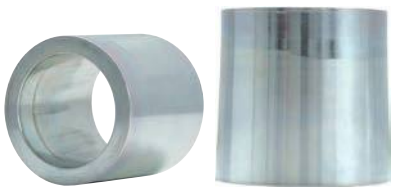


		g	
980.1085	Special thread grease, gun	22	

Assembly sleeves for slotted silent bearings on commercial vehicles

- Allows the pretensioning of slotted silent bearings on commercial vehicles
- Adaptor for original dimension to intake bore size with conical sleeve
- Universal solution
- For use with hydraulic and / or mechanical press tools
- Press the sleeve directly on the intake of the vehicle is possible
- Contains a selection of the most common diameters
- Polished inside wall for optimum sliding
- Sturdy design
- Low dimension

Application: Leaf spring, stabiliser, cab suspension etc.
Caution: This tool must be combined with parts of other sets (e.g. press and pull sleeve set)
Recommended mounting paste: e.g. MOLYKOTE G-Rapid Plus



	Size mm	Length mm	Suitable for	kg	
700.1821	58 ➞ 55	85,0	z.B.Gi-Metall-Lagerbuchse Iveco Eurostar Stabi/Blattfeder	1,60	
700.1823	63 ➞ 60	85,0	z.B.Gi-Metall-Lagerbuchse Iveco Eurostar Stabi/Blattfeder	1,60	
700.1825	68 ➞ 63	85,0	z.B.DB Stabilisator Actros, Atego	1,60	
700.1827	72 ➞ 68	85,0	z.B.MAN Vorderachse	1,60	
700.1829	74 ➞ 70	85,0	z.B.Lager mit Zapfen, DB Actros Classic	1,60	
700.1831	89 ➞ 84	85,0	z.B.Lager mit Zapfen, DB Stabilisator Actros	0,50	

HYDRAULIC SYSTEMS FOR SILENT BEARINGS

Hydraulic hand pump

- Single stage
- Reverse valve for advance and return stroke
- Safety valve for overload protection
- Includes pressure tube 1.8 meters
- Usable tank volume 2081cm³ = 2.081l



		L mm	B mm	H mm	Flow rate per hub cm³	kg	
640.0010	3/8" - 18 NPT	585	133	119	2,62	9,00	

Pneumatic hydraulic pump

- Pneumatic working
- For simply agent press cylinders
- Safety valve for overload protection
- Includes pressure tube 1.8 meters
- Usable tank volume 2081cm³ = 2.081l
- Operating pressure max. 700 bar
- Output per stroke:
  0.8 l/min up to 200 bar
  0.1 l/min up to 700 bar



		L mm	B mm	H mm	kg	
640.0020	3/8" - 18 NPT	255	130	200	11,00	

Electric hydraulic pump

- Two stepped for simply agent press cylinders
- Safety valve for overload protection
- Usable tank volume 1900 cm³ = 1.9l
- Includes pressure tube 1.8 meters
- Motor specification 0.37kW - 220/230 V - 50/60 hertz, single phase (3.2 amps)

1. Step: max. 13 bar
2. Step: max. 700 bar

- Output per stroke:

1. Step: 3.31 l/min
2. Step: 0.32 l/ min



		L mm	B mm	H mm	kg	
640.0030	3/8" - 18 NPT	244	244	362	14,00	

Universal Tension Sleeve Set with Hydraulic Cylinder 18 t

- For the assembly and disassembly of bearings
- ideal for silent bearings, hydromounts, bushings, ball bearings, oil seals, etc.
- universal design for construction machines, trucks, municipal, agricultural and forestry technology, etc.
- for use with supplied hydraulic cylinder
- Sturdy design
- Special tool steel



			kg	
460.3755	24 pcs	Universal Tension Sleeve Set with Hydraulic Cylinder 18 t	17,61	

consists of:

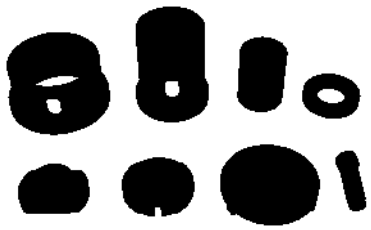
		kg	
460.3756	Protection sleeve, external Ø 80 mm, internal Ø 72 mm	0,82	
460.3757	Protection sleeve, outer-Ø 55 mm, internal Ø 48 mm	0,54	
460.3758	Pressure piece, external Ø 90 mm, internal Ø 45 mm	0,69	
460.3763	Pressure piece, external Ø 35 mm, internal Ø 16 mm	0,13	
460.3764	Pressure piece, external Ø 55 mm, internal Ø 20 mm	0,35	
460.3766	Pressure piece, external Ø 70 mm, internal Ø 24 mm	0,63	
460.3767	Pressure piece, external Ø 45 mm, internal Ø 16 mm	0,24	
460.3768	Pressure piece, external Ø 65 mm, internal Ø 20 mm	0,56	
460.3769	Hydraulic cylinder, 18 t	5,99	
460.3759	Threaded spindle M16 x 2 mm, 500 mm	0,75	
460.3761	Threaded spindle, M20 x 2.5 mm, 500 mm	1,16	
460.3762	Threaded spindle M24 x 3 mm, 500 mm	1,77	

Double wishbone bushes set for DAF Ø 70 mm

- For mounting and dismounting the bushings on the wishbone of the rear axle
- Suitable for the front bearing and for the rear bearings with Ø 70mm
- Secure and easy to use
- In conjunction with a workshop press
- Special tool steel

Application range: DAF wishbone at the rear axle





			kg	
460.3925	8 pcs	Double wishbone bushes set for DAF Ø 70 mm	11,30	

consists of:

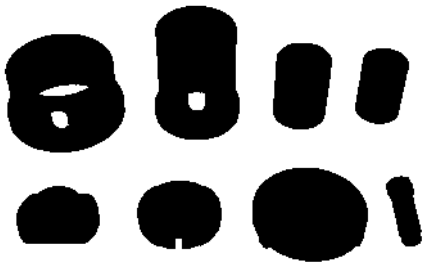
		kg	
460.3934	Adapter ring	0,27	
460.3926	Disassembly sleeve with inspection panel, large bush	2,77	
460.3927	Disassembly pressure piece, large bush	1,96	
460.3928	Assembly retainer plate, large bush	1,45	
460.3929	Assembly pressure piece, large bush	0,90	
460.3931	Separating screw for double wishbone	0,28	
460.3932	Assembly and disassembly sleeve with inspection panel, small bush	2,96	
460.3933	Assembly and disassembly pressure piece, small bush	1,55	

Socket and wishbone set for DAF Ø 75 mm

- For mounting and dismounting the bushings on the wishbone of the rear axle
- Suitable for the front and rear bearings with Ø 75mm
- Secure and easy to use
- In conjunction with a workshop press
- Special tool steel

Application range: DAF wishbone at the rear axle



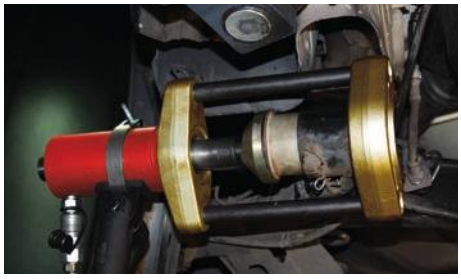


			kg	
460.4160	8 pcs	Socket and wishbone set for DAF Ø 75 mm	11,44	

consists of:

		kg	
460.3926	Disassembly sleeve with inspection panel, large bush	2,77	
460.3927	Disassembly pressure piece, large bush	1,96	
460.3928	Assembly retainer plate, large bush	1,45	
460.3929	Assembly pressure piece, large bush	0,90	
460.3931	Separating screw for double wishbone	0,28	
460.4161	Assembly and disassembly pressure piece, small bush	2,96	
460.4162	Assembly pressure piece, small bush	1,55	
460.4163	Disassembly pressure piece, small bush	0,57	





Slot bushing tool set for silent bearing slot bushes

- Suitable for the installation and removal of the bearing bushes in commercial vehicle spring suspension
- The slotted bushes can be effortlessly preloaded using the clamping block and the accompanying half shells and thus adjusted to the installation dimensions
- Includes 12 t hydraulic cylinder, especially in the construction of fixed bushes
- The hydraulic cylinder is made for universal usage
- Supplied without hydraulic pump
- Optional: Hand pump 640.0010
- Optional: Air Hydraulic Pump 640.0020
- Optional: Electric Hydraulic Pump 640.0030
- Special installation method that protects the bush via parallel working tensioning elements
- The function of the bearing bush is retained
- Simple handling and quick assembly times
- Safe working
- Suitable for bush change directly on the vehicle

Application:
Ø 51 mm - Volvo FM12
Ø 60 mm - DB / Renault (430/450/460)
Ø 68 mm - MAN-TGA (140/414/460) front axle spring ROR, SAF





			kg	
460.1705	19 pcs	Slot bushing tool set for silent bearing slot bushes	14,90	

consists of:

		kg	
460.1706	Hydraulic cylinder 12t	6,13	
460.1707	Collecting sleeve Ø90x166mm	2,60	
460.1708	Supporting ring (removal) Ø 74x20mm	0,59	
460.1709	Supporting ring (removal) Ø 64x20mm	0,68	
460.1711	Pressure piece (removal) Ø 66x35mm	0,29	
460.1712	Pressure piece (removal) Ø 59x34mm	0,24	
460.1713	Pressure piece (removal) Ø 49x34mm	0,19	
460.1714	Clamping block Ø 90x54mm	3,08	
460.1715	Half shell set Ø 68x54mm	1,09	
460.1716	Half shell set Ø 60x54mm	1,42	
460.1717	Half shell set Ø 51x54mm	1,74	
460.1718	Insertion block Ø78x35	0,52	
460.1719	Counter-bearing (assembly) Ø 78x37mm	0,51	
460.1721	Counter-bearing (assembly) Ø 98x36mm	0,73	
460.1722	Supporting ring (assembly) Ø 108x26mm	0,92	
460.1723	Supporting ring (assembly) Ø 103x26mm	0,86	
460.1724	Supporting ring (assembly) Ø 108x25mm	1,04	
460.1725	Spindle (assembly) M16x2.0 L=280mm	0,52	
460.1726	Spindle (removal) M16x2.0 L=195mm	0,24	

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	



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
- Ideally suited to transporters
- With automatic piston return
- Special tool steel
- In durable steel storage case





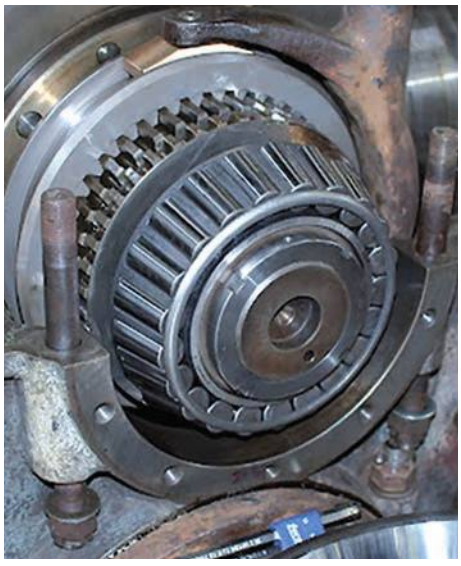
Technical data cylinder

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	



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	

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	

Pressure and pull hydraulic cylinder set

- Optimal for universal use in car garages
- Suitable for both pressure and train uses
- 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
- With automatic piston return
- Ideally used with transporters and commercial vehicles
- Special tool steel



Technical data cylinder

Capacity:	45 t
Connection thread:	Cejn quick coupling
Piston:	industrial forged execution
Piston-inner thread:	M27
Outer thread:	2.1/2"
Stroke:	70,0 mm

			kg	
440.0480	7 pcs	Pressure and pull hydraulic cylinder set	14,92	

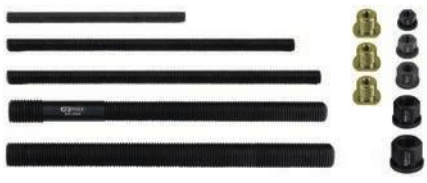
consists of:

		kg	
440.0481	Hydraulic cylinder, 45 t	11,92	
440.0027	Protective ring for thread, 2.5	0,20	
440.0482	Adjustable pressure sleeve, M30	0,72	
440.0483	Impact body M27	0,52	
440.0484	Collar nut, M27	0,30	
440.0485	Pressure rod M27, 330mm	1,26	
440.0009	(CEJN-) Nipple hydraulic for connection thread 1/4"	0,01	

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	

consists of:

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 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

440.0060	4 pcs	Hydraulic foot pump set	7,83

consists of:

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

440.0055	3 pcs	Pneumatic hydraulic pump set	6,32

consists of:

440.0056	Pneumatic hydraulic pump	5,22
440.0057	Hydraulic hose, 2200 mm	0,90
440.0058	Cejn quick coupling	0,20

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





440.0063	Manometer	500

Hydraulic unit 22 t, with hydraulic pump and manometer

- For the dismantling and assembly of silent support, steering pin, track rod ends, wheel bearings etc.
- Includes hydraulic pump and manometer
- 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





440.0580	15 pcs	Hydraulic unit 22 t, with hydraulic pump and manometer	15,23

consists of:

440.0010	Pressure and pull hydraulic cylinder set, 22t, 10 pcs	6,90
440.0060	Hydraulic foot pump set, 4 pcs	7,83
440.0063	Manometer, 150 mm	0,50

Hydraulic unit 32 t, with hydraulic pump and manometer

- Optimal for universal use in car garages
- Includes hydraulic pump and manometer
- 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



440.0585	11 pcs	Hydraulic unit 32 t, with hydraulic pump and manometer	9,35

consists of:

440.0025	Pressure and pull hydraulic cylinder set, 32t, 6 pcs	9,35
440.0060	Hydraulic foot pump set, 4 pcs	7,83
440.0063	Manometer, 150 mm	0,50

Hydraulic unit 16-tonnes, with air hydraulic pump

- 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
- With pneumatic hydraulic pump
- Universal usage with reduction M10-M22
- With automatic piston return
- Special tool steel
- In durable steel storage case



440.9991	13 pcs	Hydraulic unit 16-tonnes, with air hydraulic pump	11,80

consists of:

440.0005	Pressure and pull hydraulic cylinder set, 16t, 10 pcs	5,48
440.0055	Pneumatic hydraulic pump set, 3 pcs	6,32

Hydraulic unit 22-tonnes, with air hydraulic pump

- 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
- With pneumatic hydraulic pump
- Universal usage with reduction M10-M22
- With automatic piston return
- Special tool steel
- In durable steel storage case





			kg	
440.9995	13 pcs	Hydraulic unit 22-tonnes, with air hydraulic pump	13,22	

consists of:

440.0010	Pressure and pull hydraulic cylinder set, 22t, 10 pcs	6,90	
440.0055	Pneumatic hydraulic pump set, 3 pcs	6,32	

Hydraulic unit 32-tonnes, with air hydraulic pump

- 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
- With pneumatic hydraulic pump
- 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





			kg	
440.9996	9 pcs	Hydraulic unit 32-tonnes, with air hydraulic pump	15,67	

consists of:

440.0025	Pressure and pull hydraulic cylinder set, 32t, 6 pcs	9,35	
440.0055	Pneumatic hydraulic pump set, 3 pcs	6,32	

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	

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:

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 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





440.9997	38 pcs	Universal press tool set for axle parts	23,29

consists of:

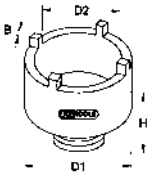
	X		
700.1550	1	Press and pull sleeve kit, 37 pcs	17,00
440.0176	1	Upper traverse with internal thread 1.1/2"	2,04
440.0179	4	Screw M16 x 40 mm	0,08
440.0204	1	Lower traverse with open side	2,04
440.0536	1	Set of struts, 2 pcs., 350.0 mm	1,85
440.0537	1	Adapter ring PPII Ø 90.0 mm	0,47
440.0538	1	Adapter with lock function Ø 35.0 mm	0,16

TOOLS FOR AXLE DIFFERENTIAL GEARBOX

KM Locknut Wrench, external spigot

- For loosening and tightening groove nuts DIN 981 on crimping or clamping sleeves
- Minimum space on nut size
- Slim design
- Suitable for exact torque possible
- Pin + rubber rings for safe holding
- Working range KM4 to KM12 (nuts of ball bearing)

Application range: Removal and installation of bearings, gear wheels, cone roll bearings, ball bearings etc.
Trucks, land and construction machines, municipally and forestery technology etc.





1/2" 3/4"

	□	for nut	D1 mm	D2 mm	Stud	B mm	H mm	kg
450.5004	1/2"	KM4	37,3	28,5	4	4,0	60,0	207
450.5005	1/2"	KM5	44,3	34,5	4	5,0	60,0	259
450.5006	1/2"	KM6	52,3	41,5	4	5,0	60,0	321
450.5007	1/2"	KM7	59,3	48,5	4	5,0	60,0	350
450.5008	1/2"	KM8	65,5	53,5	4	6,0	60,0	422
450.5009	3/4"	KM9	73,5	60,5	4	6,0	68,0	601
450.5010	3/4"	KM10	78,5	65,5	4	6,0	68,0	625
450.5011	3/4"	KM11	82,5	70,0	4	7,0	68,0	664
450.5012	3/4"	KM12	87,5	74,5	4	7,0	68,0	691

Socket set for KM groove nuts, studs exterior

- For loosening and tightening groove nuts DIN 981 on crimping or clamping sleeves
- Minimum space on nut size
- Slim design
- Suitable for exact torque possible
- Pin + rubber rings for safe holding
- Working range KM4 to KM12 (nuts of ball bearing)

Application range: Removal and installation of bearings, gear wheels, cone roll bearings, ball bearings etc.
Trucks, land and construction machines, municipally and forestery technology etc.





1/2" 3/4"

450.5000	9 pcs	1/2": KM4-KM5-KM6-KM7-KM8 3/4": KM9-KM10-KM11-KM12	4,14

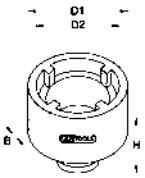
consists of:

	X		
450.5004	1	1/2" KM Locknut Wrench KM4, external spigot	0,21
450.5005	1	1/2" KM Locknut Wrench KM5, external spigot	0,26
450.5006	1	1/2" KM Locknut Wrench KM6, external spigot	0,32
450.5007	1	1/2" KM Locknut Wrench KM7, external spigot	0,35
450.5008	1	1/2" KM Locknut Wrench KM8, external spigot	0,42
450.5011	1	3/4" KM Locknut Wrench KM11, external spigot	0,66
450.5010	1	3/4" KM Locknut Wrench KM10, external spigot	0,63
450.5012	1	3/4" KM Locknut Wrench KM12, external spigot	0,69
450.5009	1	3/4" KM Locknut Wrench KM9, external spigot	0,60

KM Locknut Wrench, internal spigot

- For loosening and tightening groove nuts DIN 981 on crimping or clamping sleeves
- Minimum space on nut size
- Internal studs for high torque
- Suitable for exact torque possible
- Pin + rubber rings for safe holding
- Working range KM4 to KM12 (nuts of ball bearing)

Application range: Removal and installation of bearings, gear wheels, cone roll bearings, ball bearings etc.
Trucks, land and construction machines, municipally and forestery technology etc.





1/2" 3/4"

	□	for nut	D1 mm	D2 mm	Stud	B mm	H mm	kg
450.5024	1/2"	KM4	42,0	28,3	4	4,0	60,0	0,28
450.5025	1/2"	KM5	50,0	34,3	4	5,0	60,0	0,36
450.5026	1/2"	KM6	59,0	41,3	4	5,0	60,0	0,47
450.5027	1/2"	KM7	66,0	48,3	4	5,0	60,0	0,53
450.5028	1/2"	KM8	73,0	53,5	4	6,0	60,0	0,58
450.5029	3/4"	KM9	80,0	60,5	4	6,0	68,0	0,92
450.5030	3/4"	KM10	86,0	65,5	4	6,0	68,0	1,01
450.5031	3/4"	KM11	93,0	69,5	4	7,0	68,0	1,16
450.5032	3/4"	KM12	98,0	74,5	4	7,0	68,0	1,28



Socket set for KM groove nuts, studs internal

- For loosening and tightening groove nuts DIN 981 on crimping or clamping sleeves
- Minimum space on nut size
- Internal studs for high torque
- Use in conjunction with extensions, ratchets etc.
- Suitable for exact torque
- Pin + rubber rings for safe holding
- Working range KM4 to KM12 (nuts of ball bearing)

Application: Removal and installation of bearings, gear wheels, cone roll bearings, ball bearings etc.
Trucks, land and construction machines, municipally and forestery technology etc.





1/2" 3/4"

			kg	
450.5020	9 pcs	1/2": KM4-KM5-KM6-KM7-KM8 3/4": KM9-KM10-KM11-KM12	7,83	

consists of:

	X		kg	
450.5024	1	1/2" groove nuts KM4, studs internal	0,28	
450.5025	1	1/2" groove nuts KM5, studs internal	0,36	
450.5026	1	1/2" groove nuts KM6, studs internal	0,47	
450.5027	1	1/2" groove nuts KM7, studs internal	0,53	
450.5028	1	1/2" groove nuts KM8, studs internal	0,58	
450.5030	1	3/4" groove nuts KM10, studs internal	1,01	
450.5031	1	3/4" groove nuts KM11, studs internal	1,16	
450.5032	1	3/4" groove nuts KM12, studs internal	1,28	
450.5029	1	3/4" groove nuts KM9, studs internal	0,92	

Slotted nut wrench with 4 pins for DAF

- Internal square drive to DIN 3121 / ISO 1174
- High accuracy of fit
- Special profile with 4 internal studs
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: DAF XLR (Euro 4) centre drive shaft bearing



3/4"

	D1 mm	D2 mm	D3 mm	Stud	B mm	H mm	g	
460.1025	72,0	57,0	50,0	4	6,0	55,0	790	

Special socket for 8 point screws

- Special 8 point internal profile
- To the dismantling and assembly of the control switch for the differential lock
- Ideally suited also for various electric switches on the transmissions
- Mirror polished
- Special tool steel

Application range: MAN, **Mercedes** LKW Actros, SK Baureihe etc.



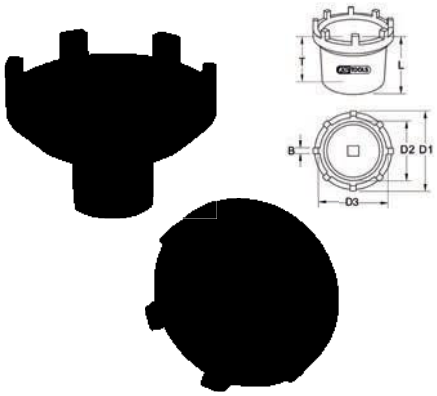
1/2"

	Profile	mm	Ø mm	L mm	g	
455.0100	8 point	27	34,0	57,0	200	

Wrench with 6 pins for Mercedes

- Removal and installation of differential nuts
- External drive hexagonal socket 32.0 mm
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: Mercedes Citaro and Evo-Bus (ZF axle)



	D1 mm	D2 mm	D3 mm	T mm	L mm	Stud	B mm	g	
460.3815	84,0	58,0	72,0	9,0	60,5	6	10,7	672	

Wrench with 6 pins for Mercedes

- ideally suited for loosening the rear nut on the differential
- Internal square drive to DIN 3121 / ISO 1174
- Extremly versatile
- Suitable for exact torque
- Special profile with 6 internal studs
- Suitable for high tightening and loosening torque
- Special tool steel



3/4"

	D2 mm	D1 mm	H mm	D3 mm	Stud	B mm	kg	
460.0870	126,0	135,0	103,0	102,0	6	8,7	4,16	

Differential main shaft bearings puller set for DAF

- For damage-free mounting and dismounting of the differential's main shaft bearings
- Extremely sturdy execution
- Including 2 half-shell pairs
- Trapezoid thread spindle for high removal power - drive 30 mm
- Special tool steel

Application range: DAF (CF) 35 t





			kg	
460.4155	8 pcs	Differential main shaft bearings puller set for DAF	17,74	

consists of:

		kg	
460.3906	Puller sleeve Ø 65 mm	2,96	
460.3907	Spindle, 290 mm	1,33	
460.4154	Half shell coupling Ø 147 mm	4,60	
460.3908	Half shell coupling Ø 148 mm	3,34	
460.3915	Holding ring Ø 125 mm	0,80	
460.4157	Assembly pin, 150 mm	0,86	
460.4158	Adaptor flange Ø 95 mm	1,92	
460.4159	Centring adapter Ø 64 mm	1,72	

Differential main shaft bearings puller set for DAF

- For damage-free mounting and dismounting of the differential's main shaft bearings
- Extremely sturdy execution
- Including 2 half-shell pairs
- Trapezoid thread spindle for high removal power - drive 30 mm
- Special tool steel

Application range: DAF (CF) 35 t





			kg	
460.3685	10 pcs	Differential main shaft bearings puller set for DAF	21,40	

consists of:

		kg	
460.3906	Puller sleeve Ø 65 mm	2,96	
460.3907	Spindle, 290 mm	1,33	
460.3914	Half shell coupling Ø 149 mm	3,70	
460.3915	Holding ring Ø 125 mm	0,80	
460.3911	Holding ring Ø 115 mm	0,75	
460.4157	Assembly pin, 150 mm	0,86	
460.3912	Half shell coupling Ø 60 mm	1,90	
460.3913	Pressure sleeve, Ø 42 mm, 70 mm	0,75	
460.3679	Adaptor flange, interior diameter 56 mm, external diameter 63 mm	0,63	
460.3674	Adaptor flange, interior diameter 106 mm, external diameter 114 mm	3,70	

Differential main shaft bearings puller set for DAF and Scania

- For damage-free removal of the main shaft bearings of the differential
- Extremely sturdy execution
- Including 4 half-shell pairs
- Trapezoid thread spindle for high removal power - drive 30 mm
- Special tool steel

Application range: DAF (CF) 35 t





			kg	
460.3690	14 pcs	Differential main shaft bearings puller set for DAF and Scania	3,60	

consists of:

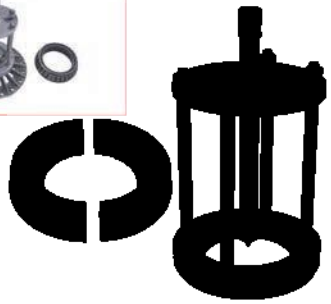
		kg	
460.3906	Puller sleeve Ø 65 mm	2,96	
460.3907	Spindle, 290 mm	1,33	
460.3914	Half shell coupling Ø 149 mm	3,70	
460.3908	Half shell coupling Ø 148 mm	3,34	
460.4154	Half shell coupling Ø 147 mm	4,60	
460.3912	Half shell coupling Ø 60 mm	1,90	
460.3915	Holding ring Ø 125 mm	0,80	
460.3911	Holding ring Ø 115 mm	0,75	
460.3913	Pressure sleeve, Ø 42 mm, 70 mm	0,75	
460.3692	Pressure sleeve, Ø 80 mm, 105 mm	1,73	
460.3679	Adaptor flange, interior diameter 56 mm, external diameter 63 mm	0,63	
460.3691	Adaptor flange, interior diameter 72 mm, external diameter 94 mm	1,90	
460.3674	Adaptor flange, interior diameter 106 mm, external diameter 114 mm	3,70	
460.4157	Assembly pin, 150 mm	0,86	

Differential tapered roller bearing puller for MAN

- Designed for the damage-free removal of the cone roll bearings at the differential
- Extremely sturdy execution
- Includes 2 half shell pairs Ø 115 and Ø 137 mm
- Trapezoid thread spindle for high removal power - drive 30 mm
- Special tool steel

Application range: MAN differential roll bearing





			kg	
460.0620	12 pcs	Differential tapered roller bearing puller for MAN	20,98	

consists of:

		kg	
460.0621	traverse for 460.0620	5,15	
460.0537	Trapezoid thread spindle Tr.30 with pressure tip, 375 mm	1,50	
460.0622	Set of struts with M16 x 2 nuts, 4 pcs.	2,80	
460.0623	Half-shell set Ø 115.0 mm, 2 pcs.	4,35	
460.0624	Half-shell set Ø 137.0 mm, 2 pcs.	5,50	
460.0626	Ring Ø 215.0 mm	1,37	

Differential main shaft bearings puller set for Scania

- For damage-free removal of the main shaft bearings of the differential
- Extremely sturdy execution
- Including 2 half-shell pairs
- Trapezoid thread spindle for high removal power - drive 30 mm
- Special tool steel

Application range: Scania (113/114) and **MAN** (410/414)





			kg	
460.3905	7 pcs	Differential main shaft bearings puller set for Scania	14,52	

consists of:

		kg	
460.3906	Puller sleeve Ø 65 mm	2,96	
460.3907	Spindle, 290 mm	1,33	
460.3908	Half shell coupling Ø 148 mm	3,34	
460.3912	Half shell coupling Ø 60 mm	1,90	
460.3911	Holding ring Ø 115 mm	0,75	
460.3915	Holding ring Ø 125 mm	0,80	
460.3913	Pressure sleeve, Ø 42 mm, 70 mm	0,75	

Differential main shaft bearings puller set for Volvo

- For damage-free removal of the main shaft bearings of the differential
- Extremely sturdy execution
- Including 2 half-shell pairs
- Trapezoid thread spindle for high removal power - drive 30 mm
- Special tool steel

Application range: Volvo (FM12)





			kg	
460.3910	8 pcs	Differential main shaft bearings puller set for Volvo	14,07	

consists of:

		kg	
460.3906	Puller sleeve Ø 65 mm	2,96	
460.3916	Puller sleeve Ø 71 mm	1,89	
460.3907	Spindle, 290 mm	1,33	
460.3908	Half shell coupling Ø 148 mm	3,34	
460.4364	Half shell coupling Ø 57 mm	1,90	
460.3915	Holding ring Ø 125 mm	0,80	
460.3911	Holding ring Ø 115 mm	0,75	
460.3913	Pressure sleeve, Ø 42 mm, 70 mm	0,75	

Differential main shaft bearings puller set for Volvo

- For damage-free removal of the main shaft bearings of the differential
- Extremely sturdy execution
- Including 3 half-shell pairs
- Trapezoid thread spindle for high removal power - drive 30 mm
- Special tool steel

Application range: Volvo FM12 (EV90/EV91)





			kg	
460.4360	12 pcs	Differential main shaft bearings puller set for Volvo	27,00	

consists of:

		kg	
460.3906	Puller sleeve Ø 65 mm	2,96	
460.3916	Puller sleeve Ø 71 mm	1,89	
460.3907	Spindle, 290 mm	1,33	
460.4364	Half shell coupling Ø 57 mm	1,90	
460.3908	Half shell coupling Ø 148 mm	3,34	
460.4362	Half shell coupling Ø 150 mm	4,15	
460.3911	Holding ring Ø 115 mm	0,75	
460.3915	Holding ring Ø 125 mm	0,80	
460.3913	Pressure sleeve, Ø 42 mm, 70 mm	0,75	
460.4363	Pressure sleeve, Ø 80 mm, 130 mm	2,00	
460.4157	Assembly pin, 150 mm	0,86	
460.4361	Adaptor flange, interior diameter 103 mm, external diameter 117 mm	2,00	



TOOLS FOR LIFT AXLES

Lifting cylinder tool set

- for mounting and dismounting the oil seal on the hydraulic lifting cylinder
- Internal square drive to DIN 3121 / ISO 1174
- Extremely sturdy execution
- For machinery usage
- Special tool steel

Application range: Volvo FM12 >2005 Lifting cylinder tandem axle lifter



			kg
460.1050	2 pcs	Lifting cylinder tool set	1,75

consists of:

		kg
460.1051	3/4" socket for lifting cylinder	1,18
460.1052	3/4" socket for lifting cylinder	0,57

TOOLS FOR ASSEMBLY AND REMOVAL OF SEALING RINGS

BPW seal assembly pin

- Ideal for the protective assembly of seals
- Suitable for manual operation
- To be used with a rubber hammer
- Special tool steel

Application range: BPW 12 t trailer



	Ø mm	L mm	kg
460.1010	159,0	166,0	2,00

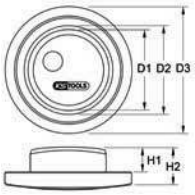


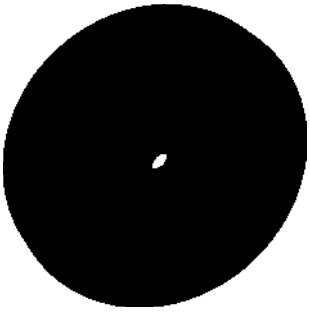
Wheel bearing installation aid for DAF

- Ideally suited for mounting the wheel bearing and the sealing ring on the front axle
- Facilitates installation due to constant force
- time- and cost-efficient
- Special tool steel

Application range: DAF CF



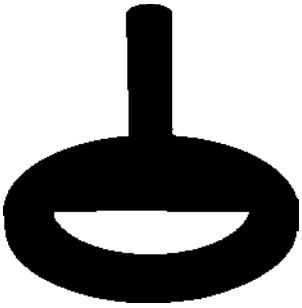




	D1 mm	D2 mm	D3 mm	H1 mm	H2 mm	kg
460.4375	61,5	69,5	124,5	22,6	35,0	1,36

Shaft seal assembly mandrel for Mercedes

- ideally suited for damage-free installation of the shaft sealing rings
- To be used with a rubber hammer
- Seal seats are spared
- Special tool steel

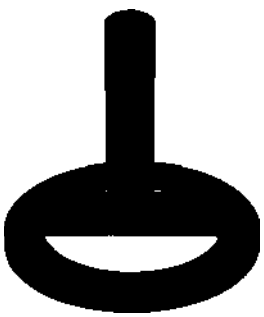


	Ø1 mm	Ø2 mm	Ø3 mm	Ø4 mm	Height mm	kg
460.5475	208,0	171,5	163,5	142,0	182,0	3,76

Shaft seal assembly mandrel for Mercedes

- ideally suited for damage-free assembly of the cassette shaft seals
- To be used with a rubber hammer
- Seal seats are spared
- Special tool steel

Application range: Mercedes Actros VA 739.5 - HA 749.108/30

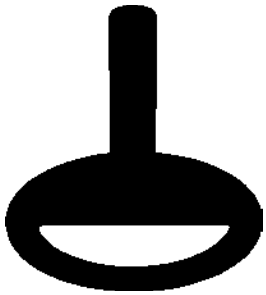


	Ø1 mm	Ø2 mm	Ø3 mm	Ø4 mm	Height mm	kg
460.5476	165,0	152,5	142,0	132,0	158,0	2,16

Shaft seal assembly mandrel for Mercedes

- ideally suited for damage-free installation of the shaft sealing rings
- To be used with a rubber hammer
- Seal seats are spared
- Special tool steel

Application range: Mercedes Actros AP rear axles

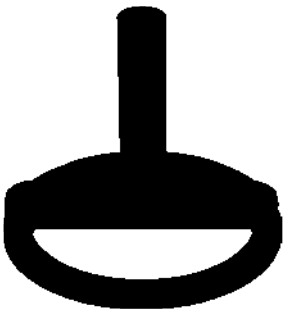


	Ø1 mm	Ø2 mm	Height mm	kg
460.5477	176,0	142,0	164,0	1,88

Pole wheel mounting mandrel for Mercedes

- ideally suited for damage-free installation of the pole wheels
- To be used with a rubber hammer
- Seal seats are spared
- Special tool steel

Application range: Mercedes Actros VA with brake discs and ABS, lift axles as well as identical axles of supports

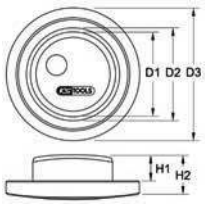


	Ø1 mm	Ø2 mm	Height mm	kg
460.5478	186,0	159,0	162,0	2,42

Wheel bearing installation aid for Volvo

- Ideally suited for mounting the wheel bearing and the sealing ring on the rear axle
- Facilitates installation due to constant force
- time- and cost-efficient
- Special tool steel

Application range: Volvo FM





	D1 mm	D2 mm	D3 mm	H1 mm	H2 mm	kg
460.3995	83,0	94,0	148,0	26,0	40,0	2,00

Wheel bearing installation aid for Volvo

- Ideally suited for mounting the wheel bearing and the sealing ring on the front axle
- Facilitates installation due to constant force
- time- and cost-efficient
- Special tool steel

Application range: Volvo FM



	D1 mm	D2 mm	D3 mm	H1 mm	H2 mm	kg
460.4000	61,0	68,0	124,0	21,0	34,0	1,29

Wheel bearing installation aid for Volvo

- Ideally suited for mounting the wheel bearing and the sealing ring on the lift axle
- Facilitates installation due to constant force
- time- and cost-efficient
- Special tool steel

Application range: Volvo FM



	D1 mm	D2 mm	D3 mm	H1 mm	H2 mm	kg
460.4005	51,0	58,0	109,0	21,0	34,0	1,00

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

SPECIAL TOOLS FOR SAF AXLES

Axle nut wrench for SAF

- With hexagon drive 32.0 mm
- 6 point
- Very high degree of accuracy
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: SAF trailer axle



	mm	⬣	Ø mm	Height mm	kg
460.4790	85,0	32	140	102,0	1,70

Axle nut wrench for SAF

- Six sided drive 36 mm
- Positive drive of the axle nut
- Any extensive slipping is avoided
- Milled out profile
- Sturdy design
- Can be used with an impact wrench or torque wrench
- Special tool steel

Application range: SAF axle trailers

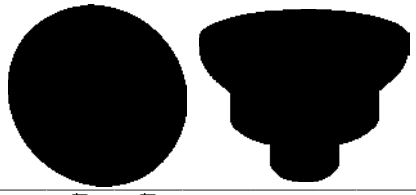


	mm	mm	Ø mm	H mm	kg
450.0201	85,0	36	118,0	82,0	1,40

Axle nut wrench for SAF

- Six sided drive 36 mm
- 6 point
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel



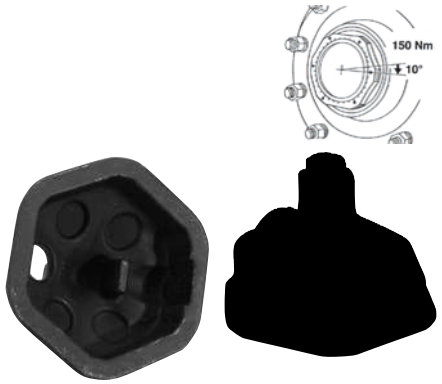


	mm	mm	Ø mm	Height mm	kg
460.5430	85	36	118	82,0	1,70

Axle nut wrench for SAF

- Positive drive of the axle nut
- Sturdy design
- Can be used with an impact wrench or torque wrench
- Ideally suited for brake restoration working
- Forward tension with SW 32 mm is at 150 Nm
- Angle of rotation 20-30° with SW 46
- Special tool steel

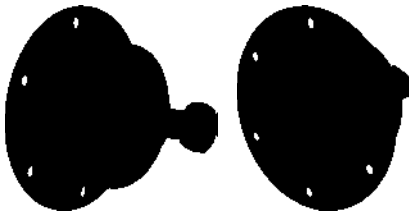
Application range: SAF Euro axle etc.



	mm	mm	H mm	kg
450.0110	140,0	32	100,0	2,27

Wheel hub puller set for SAF

- For 140 mm hole diameters
- Sturdy design
- Threaded spindle for high pull-off force - 32 mm drive
- Special tool steel



			kg
460.4705	2 pcs	Wheel hub puller set for SAF	2,10

consists of:

		kg
460.4707	Wheel hub puller for perforated hole Ø 140 mm	1,71
460.4706	Threaded spindle M22 x 134 mm	0,39

Wheel bearing mounting sleeve for SAF

- ideally suited for mounting and dismounting the compact wheel bearing with wheel hub on SAF axles
- with right and left-hand thread
- Sturdy design
- Special tool steel



	Thread	Ø mm	Length mm	kg
460.4845	M70 x 1.5	82,0	150,0	1,62

Wheel bearing mounting sleeve for SAF

- ideally suited for mounting and dismounting the compact wheel bearing with wheel hub on SAF axles
- with right and left-hand thread
- Sturdy design
- Special tool steel



	Thread	Ø mm	Length mm	kg
460.4795	M75 x 1.5	88,0	150,0	2,45



Mounting arbor for SAF wheel bearings

- for the professional assembly of wheel bearings
- Sturdy design
- Special tool steel

Application range: SAF wheel hubs

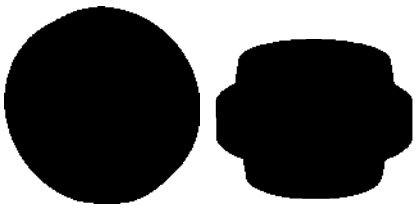


	Ø1 mm	Ø2 mm	Ø3 mm	Ø4 mm	kg
460.4785	185,0	174,0	165,0	158,0	7,59

Thrust piece for wheel hub for SAF

- Thrust piece for removing wheel hubs
- can be used with pullers 440.0590, 440.0610 and 450.1765
- Sturdy design
- Special tool steel

Application range: **SAF** wheel hubs



	Outer Ø mm	Inner Ø mm	kg
460.4815	88,0	82,0	1,03

HD bushing tool set for SAF

- ideally suited for disassembly and assembly of the HD bushings on SAF axles
- Sturdy design
- Threaded spindle for high pull-off force - 30.0 mm drive
- Special tool steel



			kg
460.4875	9 pcs	HD bushing tool set for SAF	14,44

consists of:

		kg
460.4876	Fitting sleeve Ø 177 mm	2,97
460.4877	Threaded spindle, 300 mm	1,21
460.4878	Pressure piece Ø 137 mm	3,42
460.4879	Pressure piece Ø 162 mm	2,90
460.4880	Sleeve Ø 80 mm	1,65
460.4881	Support Ø 55 mm	1,23
460.4882	Tension piece, 15 mm	0,35
460.4883	Mounting thread Ø 41 mm	0,63
460.4884	Screw, 82 mm	0,07

3D bushing tool set for SAF axles, Mercedes DCA and HT axles

- ideally suited for disassembly and assembly of 3D bushings on SAF and Mercedes axles
- Sturdy design
- Trapezoid thread spindle for high removal power - drive 30 mm
- Special tool steel

Application range: SAF and **Mercedes** axles





			kg
460.4885	12 pcs	3D bushing tool set for SAF axles, Mercedes DCA and HT axles	14,52

consists of:

	X		kg
460.4886	1	Fitting sleeve, internal diameter 139 - 159 mm	2,30
460.4887	1	Threaded spindle, 30 x 500 mm	2,73
460.4888	1	Cover disk, external diameter 165 mm	3,40
460.4889	1	Cover disk	3,01
460.4890	1	Pressure disk, external diameter 138 mm	2,00
460.4891	1	Counternut, external diameter 138 mm	3,35

consists of:

	X		kg
460.4892	2	Ring washer, exterior diameter 55 mm, internal diameter 30 mm	0,20
460.4893	1	Ring washer, exterior diameter 74 mm, internal diameter 30 mm	0,05
460.4894	1	Bearings, interior diameter 30 mm	0,14
460.4895	2	Bolts M12x1.75 mm	0,08

Arcing wheel mounting tool for SAF

- ideally suited for mounting pole wheels on SAF axles
- Sturdy design
- Special tool steel

Application range: SAF axles S-, Z-Series

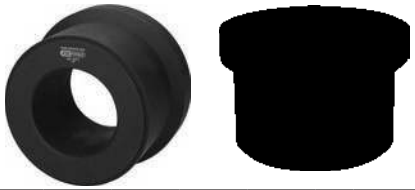


		kg
460.4900	Arcing wheel mounting tool for SAF	7,50

Assembly mandrel for bearing ring and exciter ring for SAF

- ideally suited for mounting bearing rings and pole wheels on SAF axles
- Sturdy design
- Special tool steel

Application range: SAF axles SK RB 9022 KI(01), SK RB 9019KI, SK RB 9019 WI, SK RB 9022WI, B(I)9-19K, B(I)9-19W, B(I)9-19K01, B(I)9-22W (6), BA9-22K01



	Ø1 mm	Ø2 mm	Ø3 mm	Height mm	kg
460.4670	159,0	138,0	80,0	104,0	7,88

Drive-in mandrel for cassette sealing ring on SAF axles

- ideally suited for mounting cassette sealing rings on SAF axles
- Sturdy design
- Special tool steel

Application range: SAF axles



			kg
460.4695	2 pcs	Drive-in mandrel for cassette sealing ring on SAF axles	5,10

consists of:

		kg
460.4696	Handle for drive-in mandrel, 173 mm	1,10
460.4697	Centring bell for drive-in mandrel, 155 mm	4,00

Brake caliper repair kit

- for the professional repair of callipers
- for the replacement of bellows, calliper bearings and the internal sealing of the bellow
- Secure and easy to use
- High accuracy of fit
- Enormous time and cost saving
- Special tool steel
- In durable plastic storage case

Application range: Knorr (SB, SN and SK), **Wabco** (PAN 19-1 and PAN 22-1), **SAF** (SBS2220 H0)



			kg	
460.4720	36 pcs	Brake caliper repair kit	13,00	

consists of:

		g	
460.4721	Pulling tool for floating bearings type SN, Ø 54 mm, 95 mm	795	
460.4722	Pulling sleeve, Ø 33 mm, 56 mm	413	
460.4723	Press-in top, Ø 73 mm, 36 mm	609	
460.4724	Press-in top adapter, Ø 68 mm	171	
460.4725	Insert with magnet, Ø 40 mm	142	
460.4726	Reamer with magnet, Ø 44 mm, 35 mm	258	
460.4727	Handle, Ø 29 mm, 170 mm	837	
460.4728	Press-in sleeve, Ø 47 mm, 83 mm	673	
460.4729	Press-in sleeve, 147 mm	905	
460.4730	Reamer for metal sleeve, Ø 29 mm, 32 mm	125	
460.4731	Press-in sleeve, Ø 48 mm, 46 mm	365	
460.4732	Threaded spindle TR20 x 2 mm, 256 mm	590	
460.4733	Pressure bearing, Ø 40 mm	78	
460.4734	Spindle Ø 30 mm, 84 mm	223	
460.4735	Press-on fork, 254 mm	351	
460.4736	Press-in sleeve, Ø 48 mm, 58 mm	462	
460.4737	Press-out sleeve, Ø 42 mm, 33 mm	231	
460.4738	Handrail, 152 mm	131	
460.4739	Puller plate, Ø 55 mm	153	
460.4740	Retractable sleeve for pair of bellows, Ø 51 mm, 41 mm	204	
460.4741	Reamer, Ø 57 mm, 30 mm	324	
460.4742	Insertable and retractable sleeve, Ø 39 mm, 15 mm	60	
460.4743	Adapter ring, Ø 55, 23 mm	138	
460.4744	Puller plate, Ø 60 mm	233	
460.4745	Pressure piece with hexagon, Ø 46 mm, 51 mm	301	
460.4746	Nut Tr20x2 mm, 48 mm	225	
460.4747	Pressure piece, 46 mm	120	
460.4748	Sleeve, Ø 25 mm, 70 mm	418	
460.4749	Sleeve, Ø 55 mm, 74 mm	623	
460.4750	Mounting tool, right, 50 mm	24	
460.4751	Mounting tool, left, Ø 50 mm	23	
460.4752	Assembly clamp, 35 mm	3	
460.4753	Press-in top, Ø 75 mm, 29 mm	111	
503.4212	GEARplus Combination ratchet spanner, 12mm	70	
460.2616	Special adaptor socket 6 point with magnet, 8,0 mm	16	
460.2617	Special adaptor socket 6 point with magnet, 10,0 mm	15	



Brake shoe clamping device for SAF

- suitable for mounting and dismounting brake shoes
- Sturdy design
- Special tool steel

Application range: SAF SK500, SK500 Plus, SK9042/11242 and SK9037/11037



			g	
460.4835	6 pcs	Brake shoe clamping device for SAF	950	

consists of:

	X		g	
460.4836	1	Bracket Ø 27 mm	300	
460.4837	1	Bracket Ø 20 mm	200	
460.4838	1	Spindle, 55 mm	70	
460.4839	1	Screws, 32 mm	30	
460.4840	2	Mandrel, 180 mm	350	

Clamping fixture set for drum lathe Ø 50 mm

- suitable for use with brake drum lathe
- Sturdy design
- Special tool steel

Application range: **SAF** (SK500, SK500 Plus, SK9042/11242 and SK9037/11037)



			kg	
460.4700	2 pcs	Clamping fixture set for drum lathe Ø 50 mm	9,70	

consists of:

			kg	
460.4701		Mounting flange, Ø 142 mm	3,20	
460.4702		Mounting flange, Ø 205 mm	6,50	

Double lever for snap ring rims

- ideally suited for dismantling snap ring rims
- Special shape
- Special tool steel



	Length mm	g	
460.4850	360,0	685	

Opening lever for three-piece rims

- ideally suited for the assembly and disassembly of three-piece rims
- Special shape
- Special tool steel



	Length mm	g	
460.4855	402,0	922	

Limit gauge 2" for checking the wear limit of the kingpin

- to check the wear limit of the kingpin
- relevant for the safety check
- Sturdy design

Application range: kingpin



		g	
460.4820	Limit gauge 2" for checking the wear limit of the kingpin	110	

3.1/2" limit gauge for checking the wear limit of the kingpin

- to check the wear limit of the kingpin
- relevant for the safety check
- Sturdy design

Application range: kingpin





		g	
460.4710	3.1/2" limit gauge for checking the wear limit of the kingpin	310	

Lock tester 2" for checking the wear limit of the fifth wheel coupling

- Relevant for the backup check
- Sturdy design
- Special tool steel

Application range: fifth-wheel coupling



		kg	
460.4925	Lock tester 2" for checking the wear limit of the fifth wheel coupling	9,98	

Bushing set for SAF

- for mounting and dismounting the 3D bearing (150mm) on SAF axles
- extremely robust 500mm tie rods with inductively hardened thread
- Enables use directly on the vehicle
- ideal for use with 32t hydraulic cylinder (440.0025)
- Simple handling
- Special tool steel

Recommended hydraulic cylinder: 32t (440.0025)
Application range: SAF axle



			kg	
440.0385	6 pcs	Bushing set for SAF	11,73	

consists of:

			kg	
440.0387		Mounting ring 45mm	1,78	
440.0388		Disassembly/assembly ring 20mm	1,01	
440.0389		Disassembly/assembly disk 137mm	1,70	
440.0112		Pressure disk, Ø 167 mm	3,17	
440.0127		Pressure tube, Ø 170 mm	3,62	
440.0209		Pressure rod M22	0,45	

SPECIAL TOOLS FOR BPW AXLES

3D bushing tool set for SAF axles, Mercedes DCA and HT axles

- ideally suited for disassembly and assembly of 3D bushings on SAF and Mercedes axles
- Sturdy design
- Trapezoid thread spindle for high removal power - drive 30 mm
- Special tool steel

Application range: SAF and **Mercedes** axles





			kg	
460.4885	12 pcs	3D bushing tool set for SAF axles, Mercedes DCA and HT axles	14,52	

consists of:

	X		kg	
460.4886	1	Fitting sleeve, internal diameter 139 - 159 mm	2,30	
460.4887	1	Threaded spindle, 30 x 500 mm	2,73	
460.4888	1	Cover disk, external diameter 165 mm	3,40	
460.4889	1	Cover disk	3,01	
460.4890	1	Pressure disk, external diameter 138 mm	2,00	
460.4891	1	Counternut, external diameter 138 mm	3,35	
460.4892	2	Ring washer, exterior diameter 55 mm, internal diameter 30 mm	0,20	
460.4893	1	Ring washer, exterior diameter 74 mm, internal diameter 30 mm	0,05	
460.4894	1	Bearings, interior diameter 30 mm	0,14	

consists of:

	X		kg	
460.4895	2	Bolts M12x1.75 mm	0,08	

Wheel cap impact wrench for BPW

- For the assembly and dismantling of grease caps on BPW axles
- 8-point
- Extremly versatile
- With impact area
- For heavy duty applications
- For manual use
- Special tool steel



	mm	Length mm	kg	
460.4685	95	233,0	1,14	
460.4690	110	240,0	1,15	

Wheel cap impact wrench for BPW

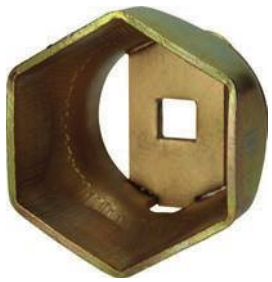
- For the assembly and dismantling of grease caps on BPW axles
- Flat oval form
- Extremly versatile
- With impact area
- For heavy duty applications
- For manual use
- Special tool steel



	mm	Length mm	kg	
460.4675	95	233,0	1,16	
460.4680	110	240,0	1,25	

Axle nut wrench for BPW

- Internal square
- 6 point
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel



3/4"

	mm	Length mm	kg	
460.4933	46	155,0	0,73	
460.4936	70	80,0	0,66	
460.4938	85	300,0	2,90	
460.4939	95	85,0	1,14	
460.4940	100	80,0	0,93	

Axle nut wrench for BPW

- Internal square drive to DIN 3121 / ISO 1174
- Extremly versatile
- Flat oval form
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel





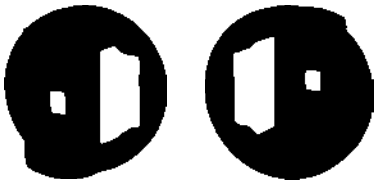
3/4"

	mm	□	Ø mm	Height mm	kg	
450.0204	65,0	3/4"	82,0	66,0	1,07	
450.0205	80,0	3/4"	100,0	80,0	1,50	

Axle nut wrench for BPW

- Internal square drive to DIN 3121 / ISO 1174
- Extremly versatile
- Flat oval form
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel





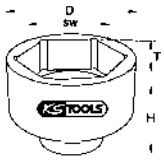
3/4"

	mm	Ø mm	Height mm	kg	
460.4150	85	117	70,0	1,46	

Axle nut wrench for BPW

- Internal square drive to DIN 3121 / ISO 1174
- 6 point
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- For machinery usage
- Special tool steel

Application range: BPW axle nuts (crown nuts) 16 tonne axles





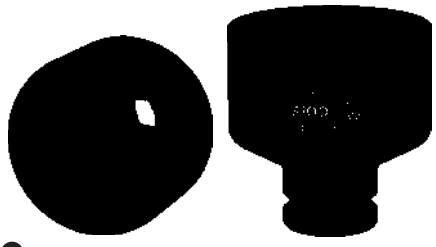
3/4"

	mm	□	D mm	T mm	H mm	kg	
450.0215	85,0	3/4"	110,0	33,0	84,0	2,78	

Axle nut wrench for BPW

- Internal square drive to DIN 3121 / ISO 1174
- 6 point
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- For machinery usage
- Special tool steel

Application range: BPW axles



1/2"

	mm	Ø mm	Height mm	kg
460.4943	46	64	64,0	0,51

Axle nut wrench for BPW

- Internal square drive to DIN 3121 / ISO 1174
- Flat oval form
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- For machinery usage
- Special tool steel

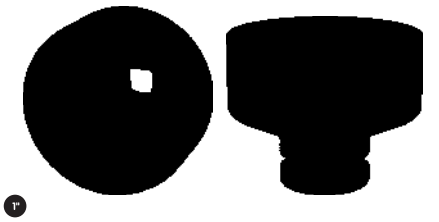


1/2"

	mm	Ø mm	Height mm	kg
460.4944	65	82	78,0	0,90
460.4945	80	100	78,0	1,37

Hub cap socket for BPW

- for mounting and dismounting BPW hubcaps
- Internal square drive to DIN 3121 / ISO 1174
- 8-point
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- For machinery usage
- Special tool steel



1"

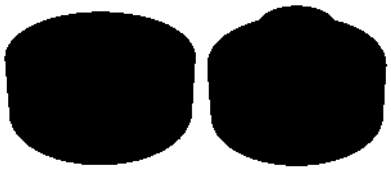
	mm	Ø mm	Height mm	kg
460.4946	95	115	91,0	1,88



Hub cap socket for BPW

- Internal square drive to DIN 3121 / ISO 1174
- For the assembly and dismantling of grease caps on BPW axles
- 8-point
- Extremely versatile
- Suitable for exact torque on a hexagon head possible
- Suitable for high tightening and loosening torque
- For machinery usage
- Special tool steel





3/4"

	mm	Ø mm	Height mm	kg
460.1325	110,0	132,0	80,0	2,64

Hub cap socket for BPW

- For the assembly and dismantling of grease caps on BPW axles
- 8-point
- Extremely versatile
- Suitable for exact torque on a hexagon head possible
- Suitable for high tightening and loosening torque
- For machinery usage
- Special tool steel



	mm	mm	Ø mm	Height mm	kg
460.0415	111,0	41	130,0	95,0	1,52



Hub cap socket for BPW

- For the assembly and dismantling of grease caps on BPW axles
- Extremly versatile
- Flat oval form
- Suitable for exact torque on a hexagon head possible
- Suitable for high tightening and loosening torque
- For machinery usage
- Special tool steel





	mm	Ø mm	mm	Height mm	kg
450.0207	41	110,0	95,0	90,0	2,50



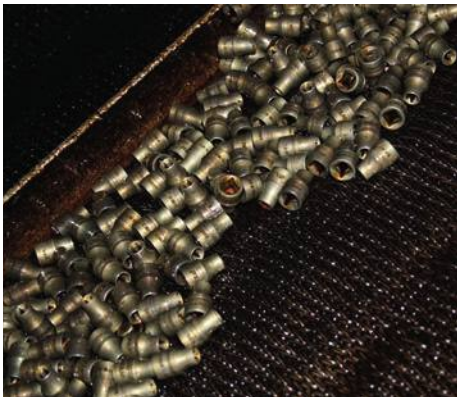
Leaf spring bolt socket for Scania

- for mounting and dismounting of leaf spring bolts
- Sturdy design
- Flat oval form
- Torque-precise tightening via square socket possible
- designed for high release and tightening torques
- For machinery usage
- Special tool steel



3/4"

	mm	D mm	T mm	H mm	g
450.0225	28	54,0	12,0	50,0	420



Hub cap socket for BPW

- For the assembly and dismantling of grease caps on BPW axles
- Extremly versatile
- Flat oval form
- Suitable for exact torque on a hexagon head possible
- Suitable for high tightening and loosening torque
- For machinery usage
- Special tool steel





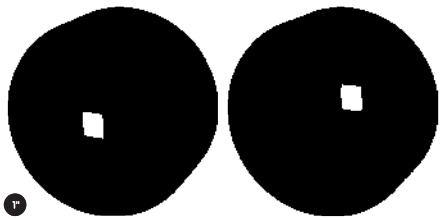
	mm	mm	Ø mm	Height mm	kg	
450.0208	111,0	41	132,0	90,0	2,75	

Axle nut wrench for BPW

- Internal square drive to DIN 3121 / ISO 1174
- Flat oval form
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- Special tool steel

Application range: BPW axles 12 t





	mm	Ø mm	Height mm	kg	
460.0420	111,0	132,0	80,0	2,00	

Axle nut wrench for BPW

- With six sided drive 41 mm
- 8-point
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- For machinery usage
- Special tool steel

Application range: BPW axles 16 t



	mm	Ø mm	Height mm	kg	
460.0410	120,0	142,0	95,0	1,90	

Wheel cap socket wrench for BPW

- for mounting and dismounting BPW hubcaps
- Internal square drive to DIN 3121 / ISO 1174
- Flat oval form
- High accuracy of fit
- Extremely robust version
- Suitable for high tightening and loosening torque
- For machinery usage
- Special tool steel

Application range: BPW axles ECO / ECO Plus 2





	mm	Ø mm	Height mm	kg	
460.1830	120	143,0	78,0	3,13	

Universal wheel hub puller

- Extracting the wheel hubs and/or housing over the grease cap thread
- Six sided drive enable unscrewing on the cap
- Sturdy design
- Special tool steel





	size outside thread	Suitable for	kg	
460.4810	M84 x 2 mm	610.1901	0,41	
460.4800	M115 x 3 mm	450.0077	1,01	



Universal wheel hub puller

- Extracting the wheel hubs and/or housing over the grease cap thread
- Six sided drive enable unscrewing on the cap
- Sturdy design
- Trapezoid thread spindle for high removal power - drive 30 mm
- Special tool steel





	size outside thread	size internal thread	mm	kg	
450.0001	M125 x 2,0		30x260	1,56	
450.0002		M135 x 2,0	30x260	2,19	
450.0003		M136 x 2,5	30x260	1,48	
450.0004		M155 x 3,0	30x260	0,71	



Tapered roller bearing press-in tool for BPW

- Bearing installation aid
- For damage free mounting
- Extremly versatile
- Special tool steel

Application range: Tapered roller bearing outer rings

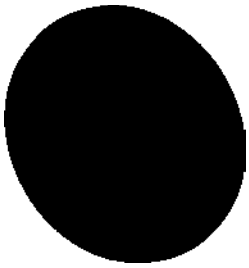


	Ø mm	kg	
460.4951	157,0	2,73	
460.4952	100,0	1,00	
460.4953	160,0	2,77	
460.4954	142,0	2,13	
460.4955	123,0	1,56	
460.4956	113,0	1,28	
460.4957	123,0	1,54	

Raceway press-in tool for BPW

- Raceway installation aid
- For damage free mounting
- Extremly versatile
- Special tool steel

Application range: Hub sealing rings



	Ø mm	Height mm	Suitable for	kg	
460.4958	139,0	48,0	02.5683.62.00	2,92	
460.4959	159,0	48,0	02.5683.63.00	3,55	
460.4960	159,0	38,0	02.5683.80.00	3,41	

Taper roller bearing extractor for BPW

- ideally suited for the removal of fixed tapered roller bearings with thrust ring
- Sturdy design
- Threaded spindle for high pull-off force
- Special tool steel

Application range: BPW axles 10-14 t



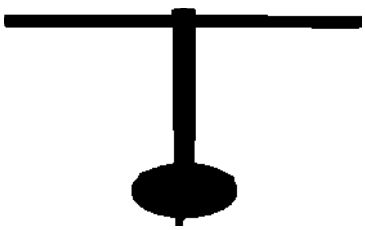
		kg	
460.4870	Taper roller bearing extractor for BPW	5,17	

Pole wheel mounting tool for BPW

- ideally suited for mounting pole wheels on BPW axles
- Sturdy design
- Special tool steel

Application range: BPW EcoPlus 8 - 9 t axles





		kg	
460.4755	Pole wheel mounting tool for BPW	1,15	



Installation tool for exciter ring on BPW axles

- ideally suited for mounting pole wheels on BPW axles
- Sturdy design
- Special tool steel

Application range: BPW EcoPlus 3 axles



		kg	
460.4961	Installation tool for exciter ring on BPW axles	2,08	

Bearing lubrication aid

- Ideally suited to greasing the bearings
- Residual grease is protected against dust and oxidation
- for different bearing diameters
- Permanently lockable
- Extremly versatile

Application range: tapered roller bearings



	Inner Ø mm	Height mm	Width mm	kg	
460.4965	126,0	130,0	160,0	1,27	
460.4970	104,0	130,0	160,0	1,07	
460.4975	149,0	130,0	160,0	1,70	

Lever for brake return spring mounting for BPW

- ideally suited for the disassembly and assembly of brake springs on drum brakes
- Used for cylindrical and conical retaining clips
- Special tool steel

Application range: BPW (SN300, SN360 and SN420)



	Length mm	kg	
460.4980	300,0	0,15	



Pulling device for brake pins on the drum brake

- ideally suited for the dismantling of brake pins on the drum brakes
- incl. threaded insert M 20 x 1.5 mm / M 20 x 1.5 mm
- Sturdy design
- Special tool steel



	Length mm	kg	
460.4770	320,0	5,37	



Driving pin for bearing bushes on brake pins / shafts

- ideally suited for mounting of bearing bushes on brake pins / shafts
- two driving mandrels included in delivery
- for use with the hammer
- Sturdy design
- Special tool steel



			kg	
460.4830	3 pcs	Driving pin for bearing bushes on brake pins / shafts	2,88	

consists of:

		kg	
460.4831	Drive mandrel Ø 42 mm	0,78	
460.4832	Drive mandrel Ø 36 mm	1,21	
460.4833	Handheld piece for driving mandrel	0,89	

Assembly tool set for brass bushing locating bearing

- ideally suited for disassembly and assembly of brass bushes Fixed bearing on disc brakes
- Sturdy design
- Special tool steel

Application range: BPW disc brakes



			kg	
460.4860	5 pcs	Assembly tool set for brass bushing locating bearing	1,70	

consists of:

		g	
460.4861	Sleeve, Ø55 mm	950	
460.4862	Threaded spindle, 215 mm	290	
460.4863	Pressure piece, Ø55 mm	260	
460.4864	Nuts with sliding bearing, Ø39 mm	190	
460.4865	Ring washer, Ø24 mm	10	

Pull-out and pull-in tool for floating bearings and guide sleeves BPW

- for professional brake repair
- for pulling out and in of the guide sleeves of the floating bearings
- Secure and easy to use
- Very high degree of accuracy
- Enormous time and cost saving
- Special tool steel

Application range: BPW SH and SKH



		kg	
460.4905	Pull-out and pull-in tool for floating bearings and guide sleeves BPW	2,21	



Steel-rubber bushes Dismantling assembly tool for BPW

- Assembly and disassembly of bushings
- ideally suited for steel-rubber bushings on shackle stabilisers
- Enables de -and assembly directly on the vehicle
- Easy to use
- Saves a lot of time
- Special tool steel



			kg	
460.4760	6 pcs	Steel-rubber bushes Dismantling assembly tool for BPW	3,50	

consists of:

		kg	
460.4761	Threaded spindle, 305 mm	1,01	

consists of:

		kg	
460.4762	Nuts M24x3	0,09	
460.4763	Sleeve, Ø 76 mm, 120 mm	1,60	
460.4764	Pressure piece, 76 mm	0,76	
460.4765	Ring washer, Ø 43 mm, 3 mm thickness	0,03	
460.4766	Ring washer, Ø 43 mm, 3 mm thickness	0,01	

Steel-rubber bushes Assembly tool for BPW

- universally applicable for the removal and installation of steel-rubber bushings
- excellent for use in combination with a workshop press
- Easy to use
- Saves a lot of time
- for light and heavy trucks
- Special tool steel

Application range: BPW ECO Plus 2



	Ø mm	kg	
460.4990	24,0	3,24	
460.4991	30,0	3,48	

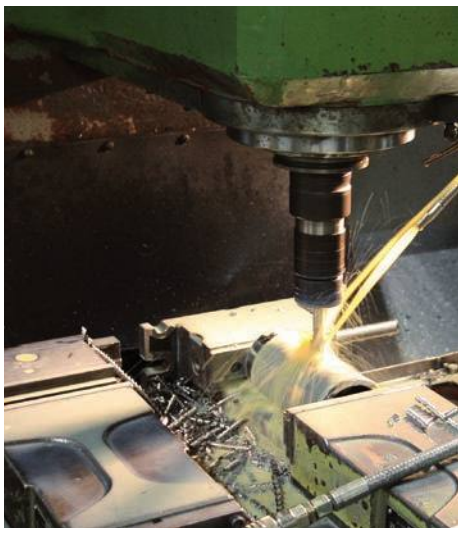
Screw-in head for BPW

- ideally suited for aligning axes and assemblies in conjunction with measuring tubes 460.4995 and 460.4996
- also suitable as extraction device for hubs in connection with the forcing-off screw 460.4997
- Sturdy design
- Special tool steel

Application range: **BPW** axles



	mm	kg	
460.4992	M125 x 2	6,21	
460.4993	M135 x 2	7,52	
460.4994	M136 x 2,5	7,49	



Measuring tube for BPW

- ideally suited for aligning axes and assemblies in conjunction with the screw-in heads 460.4992, 460.4993 and 460.4994
- Sturdy design
- Special tool steel

Application range: **BPW** axles



	Length mm	kg	
460.4995	620,0	3,00	

Measuring tube extension for BPW

- ideally suited for aligning axes and assemblies in conjunction with the screw-in heads 460.4992, 460.4993 and 460.4994
- Sturdy design
- Special tool steel

Application range: **BPW** axles



	Length mm	kg	
460.4996	620,0	3,69	

Jacking bolt for BPW

- ideally suited as extraction device for hubs in connection with the screw-in heads 460.4992, 460.4993 and 460.4994
- Sturdy design
- Special tool steel

Application range: **BPW** axles



		g	
460.4997	Set screw for BPW M30 x 1.5 mm	910	



19

AUTO GLASS







KS TOOLS®

Innovation is our mission!

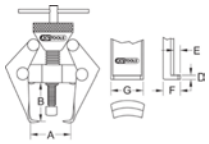
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WIPER ARM DISASSEMBLY

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





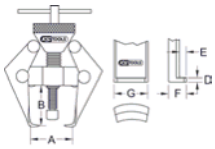


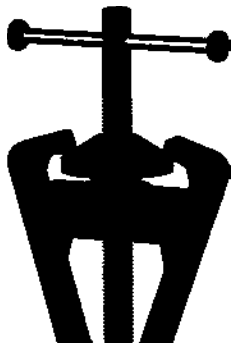
	A mm	B mm	max t	mm	D mm	E mm	F mm	G mm	g
700.1190	15	32	1,2	M8 x 50	2,5	9	10,5	11	300

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





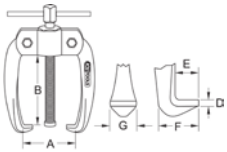


	A mm	B mm	max t	mm	D mm	E mm	F mm	G mm	g
700.1179	45	37	1,2	M10 x 105	5	8	16	8	284

Universal 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





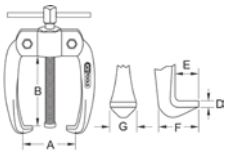


	A mm	B mm	max t	mm	D mm	E mm	F mm	G mm	g
700.1164	10-60	40	0,5	M10 x 60	2,6	5,5	12,8	10,0	145

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







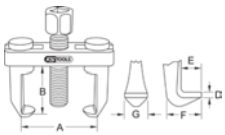
	A mm	B mm	max t	mm	D mm	E mm	F mm	G mm	g
700.1165	10-60	60	0,5	M10 x 80	3,7	5,8	12,4	10,1	173
700.1166	10-70	80	0,5	M10 x 100	4,0	9,2	16,8	14,0	245

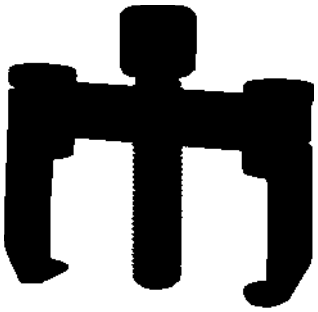
Universal windscreen wiper arm puller 2 arm

- 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	3/8"	3	5	14	15	1,00

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





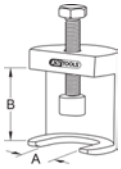


	A mm	B mm	mm	mm	g
700.1193	16	28	11	M8 x 45	140

Universal 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







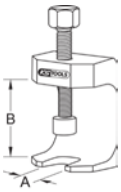
	A mm	B mm	mm	mm	g
700.1191	26	48	13	M8 x 75	450

Universal windscreen wiper arm puller with 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 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

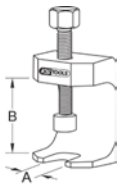
consists of:

	X		g
700.1245	1	Spindle M12 x 90 mm for 700.1242	150
700.1246	1	Traverse arm, 6 point	100
700.1247	2	Pair of legs – slim type	100
700.1248	2	Pair of legs – wide type	100

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





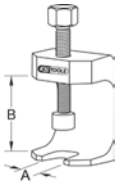


	A mm	B mm	mm	mm	g
700.1192	16	41	17	M10 x 80	510

Universal windscreen wiper arm puller with 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

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:

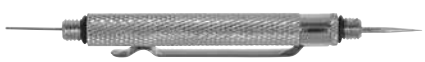
		g	
700.1232	Spindle, 95mm, M12	170	
700.1233	Fork #1, opening 22mm, H=50mm	110	
700.1234	Fork #2, opening 25mm, H=50mm	140	
700.1235	Fork #3, opening 16mm, H=60mm	150	
700.1236	Fork #4, opening 25mm, H=41mm	110	
700.1237	Fork #5, opening 30mm, H=50mm	150	
700.1238	Fork #6, opening 20mm, H=50mm	100	
700.1239	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

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	g	
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	g	
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	g	
550.1023	11,0	150,0 - 590,0	60	

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:

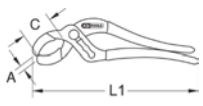
		g	
140.2321	Professional protection board straight 450 x 300 mm	450	
140.2322	Professional protection board angled 450 x 300 mm	450	
140.2323	Professional protection board straight 270 x 200 mm	230	
140.2324	Professional protection board angled 270 x 200 mm	230	

INTERIOR AND WING MIRROR

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	

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	

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	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

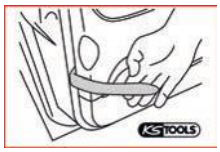
- With wedge shaped end
- Pulling eye for removal
- With 90° angled side
- Ideal for loosening panels without damage to the paintwork
- Special plastic

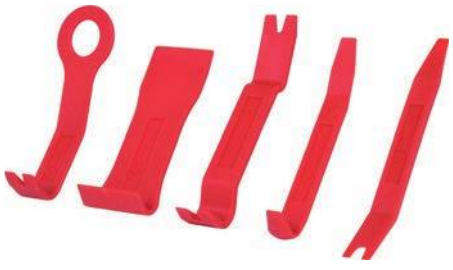


	L mm	B mm	g	
911.8124	180,0	30,0	70	

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:

		g	
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		
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





	Length mm	Width mm	Radius dimensions in mm		
911.8111	200,0	25,0	38,0	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

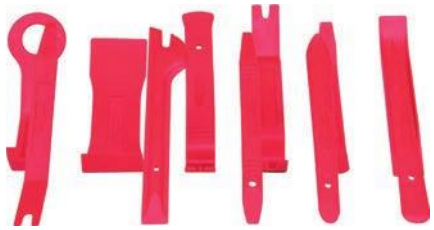
consists of:

911.8106	Double ended-clip 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





911.8205	11 pcs	Plastic lever wedge set	530

consists of:

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

consists of:

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	

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





911.8210	4 pcs	Plastic wedge and glass scraper set	120

consists of:

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		
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		
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		
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



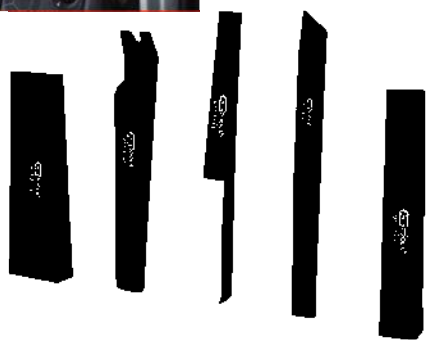


L mm	B mm		
911.8140	210,0	26,0	90

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





911.8160	5 pcs	Plastic lever wedge set	430

consists of:

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		
911.8119	600,0	340,0	200,0	30,0	340	

TRANSPORT AND STORAGE

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





	Length mm	Height mm	Suction cup Ø mm	Rubber pad		
140.2225	1030,0	1040,0	125,0	140.2225-1	8,40	

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	

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	
140.2352	Trim and air ventilation remover left handed	140	
140.2351	Trim and air ventilation remover right handed	140	

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



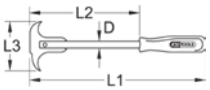


	Length mm	g	
140.2253	210,0	155	

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:

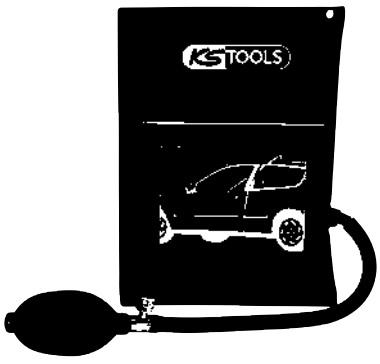
		g	
550.1046	Hook, straight	27	
550.1047	Hook, 45° offset	27	
550.1048	Hook, 90° offset	27	
550.1049	Hook, 135° bent	27	
550.1071	Hook, large, straight	91	
550.1072	Hook, large, 90° bent	105	
550.1073	Hook, large, sickle	88	
550.1074	T hook, S form small, 120mm	42	
550.1075	T hook, S form large, 165mm	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	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	

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		g	
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	g	
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	g	
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	g	
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





			kg	
140.2239	10 pcs	Pull knife set with quick change system	1,55	

consists of:

		g	
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	g	
140.2271	1	20	
140.2272	6	120	

Pull knife blade

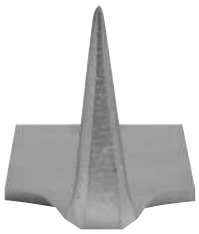
- Blade length 19 mm
- Blade tip tapered
- Slim execution
- Special tool steel



	Content	g	
140.2273	1	20	
140.2274	6	120	

Stainless steel pull knife blade

- Blade length 19 mm
- Blade tip tapered
- Extra slim design
- Stainless steel



	Content	g	
140.2267	1	20	
140.2268	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	g	
140.2296	1	20	
140.2297	6	120	

Pull knife blade

- Blade length 25 mm
- Blade tip tapered
- Slim execution
- Special tool steel



	Content	g	
140.2275	1	20	
140.2276	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	g	
140.2298	1	20	
140.2299	6	120	

Pull knife blade

- Blade length 38 mm
- Blade tip tapered
- Slim execution
- Special tool steel



	Content	g	
140.2277	1	20	
140.2278	6	100	

Stainless steel pull knife blade

- Blade length 25 mm
- Blade tip tapered
- Extra slim design
- Stainless steel



	Content	g	
140.2269	1	20	
140.2270	6	120	

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	g	
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	g	
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	g	
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
- 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:

		kg	
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 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
- Cold insulated handle
- Includes 1/4” coupling connector and blade changing spanner
- Ultra light robust housing special plastic
- In durable plastic storage case





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	

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



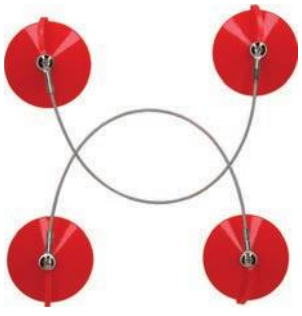
		g
515.5093	Scraper blade, curved, curved, blade length 18 mm	13
515.5094	Scraper blade, curved, curved, blade length 36 mm	13
515.5095	Scraper blade, curved, curved, blade length 63 mm	13
515.5096	Scraper blade, curved, curved, blade length 90 mm	25
515.5097	Scraper blade, curved, straight, blade length 24 mm	12

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	

XXL Suction lifter

- With sturdy handle
- For lifting, carrying and holding
- With suction cup
- ideally suited for the precise insertion of large discs
- with a maximum load capacity of 130 kg
- With release button





	Load capacity kg	Suction cup Ø mm	kg	
460.5055	130	240,0	2,64	

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	

consists of:

		g	
140.2532	Basic unit with 4 suction cups	20	
140.2533	Artificial resin hammer	4,5	
140.2536	Artificial resin, 1.5g	4	

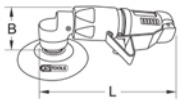
consists of:

		g
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:

			kg
515.5121		1/4" mini burnishing machine	1,00
515.5122		Burnishing pads yellow, Ø 85,0mm, pack of 5	0,06
515.5123		Burnishing pads white, Ø 85,0mm, pack of 5	0,06
515.5124		Burnishing pads lambskin Ø 80,0mm, pack of 5	0,08
515.5112		Grinding disc Ø76.5 mm	0,02

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 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

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



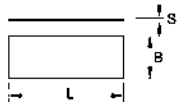


	Length mm	Width mm		g
907.2240	110,0	39,0	911.8127	90

Replacement scraper blades

- For all standard scrapers
- SK steel
- In a carton

Application range: for the removal of labels on bumpers, front windscreens etc.



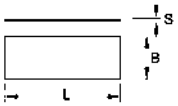


	Content	L mm	B mm	S mm	g	
911.8127	5	40,0	19,5	0,29	40	

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:

	X		g	
907.2170	1	Professional universal knife, with trapezoid blades	90	
907.2201	1	2 component scraper handle	60	

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	

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	

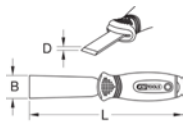
consists of:

		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
- 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





			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





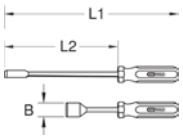


	B mm	L mm		g
140.2282	13,0	240,0	140.2283	200
140.2286	16,0	240,0	140.2287	200
140.2288	19,0	240,0	140.2289	200

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



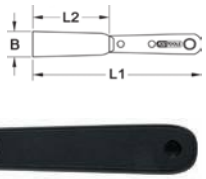


			kg	
907.2230	4 pcs	12,5 x 200; 25 x 200; 12,5 x 300; 25 x 300 mm	1,28	



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

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





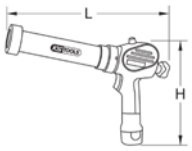
	L mm	H mm	g
980.3050	340,0	200,0	825

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	

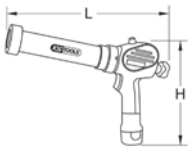




Cordless cartridge gun 400 ml

- 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:

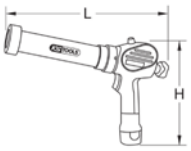
Electrical Voltage:	10,8 V
Capacity of the unit:	400 ml
Propulsion without load:	6,1 mm / sec
Output pressure:	392 kgf
Charging time:	1 hour
Rechargeable battery:	10,8 V - 2,0 Ah

	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

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

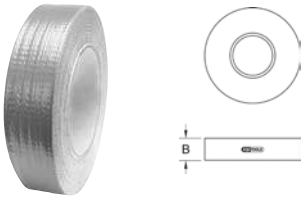




		Length mm	Width mm	Height mm	g	
150.1570	3 pcs	110,0	20,0	45,0	100	

Fabric adhesive tape, silver

- Fabric adhesive tape
- Laminated polyester/cotton fabric
- Sturdy, heat resistant and water repellent
- Rubber based adhesive



	B mm	Length m	g	
141.5001	40,0	50,00	305	
141.5000	50,0	50,00	410	

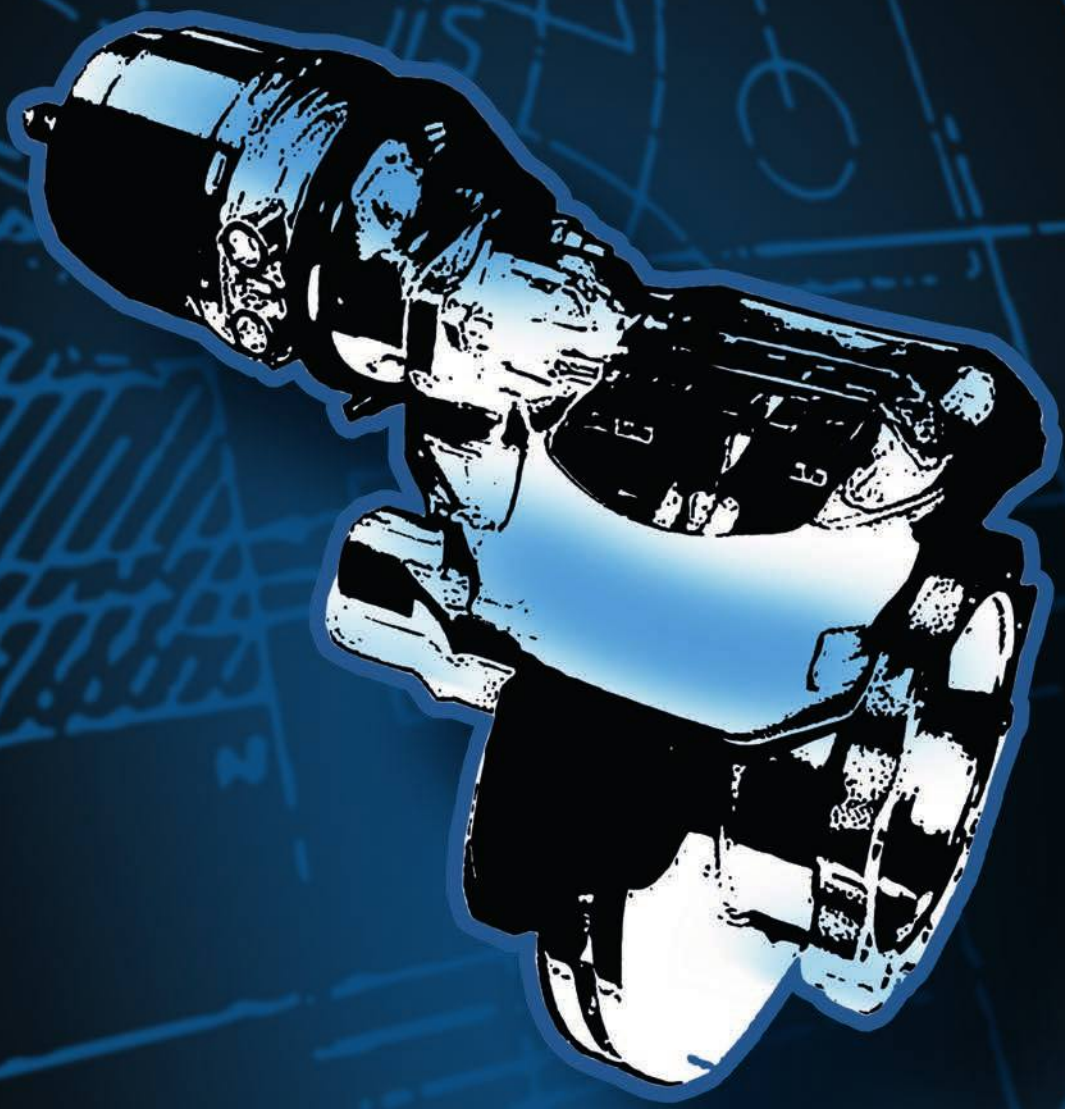
Ultrasound leak detector

- 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!

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BRAKE PISTON RESET TOOL

Brake piston special socket wrench set for WABCO and Knorr disk brakes

- Ideal for pushing back the brake piston damage-free
- Allows for safe and comfortable working
- Whilst carrying out maintenance work and when changing the brake pads it is necessary to lead the brake pistons back into the brake calliper
- High precision guarantees an easy and durable use
- Special adaptor sockets with magnet
- Saves a lot of time
- Matt finish
- Chrome vanadium





460.2615	5 pcs	Brake piston special socket wrench set for WABCO and Knorr disk brakes	200

consists of:

460.2616	Special adaptor socket 6 point with magnet, 8,0 mm	16
460.2617	Special adaptor socket 6 point with magnet, 10,0 mm	15
503.4212	GEARplus Combination ratchet spanner, 12mm	70
460.2618	Special adaptor socket 4-point with magnet, 8,0 mm, for SAF and Knorr calipers	17
460.2619	Special adaptor socket spline M9 with magnet, for SAF and Knorr calipers	17

Special adaptor socket 4-point with magnet, 8,0 mm, for SAF and Knorr calipers

- Ideal for pushing back the brake piston damage-free
- Allows for safe and comfortable working
- Whilst carrying out maintenance work and when changing the brake pads it is necessary to lead the brake pistons back into the brake calliper
- High precision guarantees an easy and durable use
- Special adaptor sockets with magnet
- Saves a lot of time
- For use with 12 mm gear wrench



	Profile	mm	Length mm	
460.2618	▢	8,0	16,0	17



Special adaptor socket spline M9 with magnet, for SAF and Knorr calipers

- Ideal for pushing back the brake piston damage-free
- Allows for safe and comfortable working
- Whilst carrying out maintenance work and when changing the brake pads it is necessary to lead the brake pistons back into the brake calliper
- High precision guarantees an easy and durable use
- Special adaptor sockets with magnet
- Saves a lot of time
- For use with 12 mm gear wrench



	Profile		Length mm	
460.2619	○	M9	16,0	17

Special adaptor socket 6 point with magnet, 8,0 mm, for SAF and Knorr calipers

- Ideal for pushing back the brake piston damage-free
- Allows for safe and comfortable working
- Whilst carrying out maintenance work and when changing the brake pads it is necessary to lead the brake pistons back into the brake calliper
- High precision guarantees an easy and durable use
- Special adaptor sockets with magnet
- Saves a lot of time
- For use with 12 mm gear wrench



	Profile	mm	Length mm	
460.2616	○	8	16,0	16

Special adaptor socket 6 point with magnet, 10,0 mm, for SAF and Knorr calipers

- Ideal for pushing back the brake piston damage-free
- Allows for safe and comfortable working
- Whilst carrying out maintenance work and when changing the brake pads it is necessary to lead the brake pistons back into the brake calliper
- High precision guarantees an easy and durable use
- Special adaptor sockets with magnet
- Saves a lot of time
- For use with 12 mm gear wrench



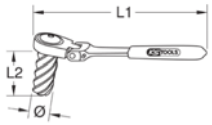
	Profile	mm	Length mm	
460.2617	○	10	16,0	15

ABS SYSTEM

Reamer for ABS sensors for commercial vehicle

- For cleaning the mounting bore of the ABS sensors
- For a correct and damage free assembly of the new sensor
- With fixable joint and ratchet function
- For working in hard to access areas







	Ø mm	L1 mm	L2 mm		
450.0340	18,0	150,0	45,0	180	

Reamer for ABS sensors

- For cleaning the mounting bore of the ABS sensors
- Makes possible simple and time-saving work
- For a correct and damage free assembly of the new sensor
- For working in hard to access areas
- Special tool steel





	Ø mm	mm	Length mm		
460.5660	16-18	16	130,0	190	



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:

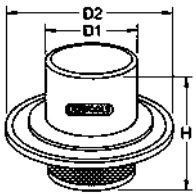
		g	
340.0061	1/4" handle with quick action lock	71	
340.0062	1/4" extension with quick action lock, 150 mm	51	
340.0063	1/4" brass brush Ø 8 mm	15	
340.0064	1/4" brass brush Ø 9 mm	15	
340.0065	1/4" brass brush Ø 10 mm	15	
340.0066	1/4" brass brush Ø 11 mm	16	
340.0067	1/4" brass brush Ø 12 mm	16	
340.0068	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	

ABS sensor ring assembly aid for Volvo

- Ideally suited for mounting the ABS sensor ring
- Suitable for manual operation
- Fixes the ABS sensor ring and it can then be attached without any problems
- The assembly aid can then be removed again
- Without this tool an ABS error message may occur
- Special tool steel

Application range: Volvo FM







	D1 mm	D2 mm	H mm	kg	
460.3965	94,0	175,0	130,0	3,45	

Pole wheel tool set for Hino

- for mounting and dismounting pole wheels
- Enables de -and assembly directly on the vehicle
- Minimum work time
- Safe and easy use
- Special tool steel





			kg	
460.4545	13 pcs	Pole wheel tool set for Hino	12,10	

consists of:

	x		kg	
460.4546	1	Traverse, Ø190 mm	3,19	
460.4547	1	Trapezoid spindle, 175 mm	0,50	
460.4548	6	Tension bolts with nuts, 140 mm	0,20	
460.4549	1	Half-shelf coupling, Ø145 mm	1,89	
460.4550	1	Pressure piece, Ø120 mm	1,34	
460.4157	1	Assembly pin, 150 mm	0,86	
460.4552	1	Assembly bell, Ø135 mm	2,57	

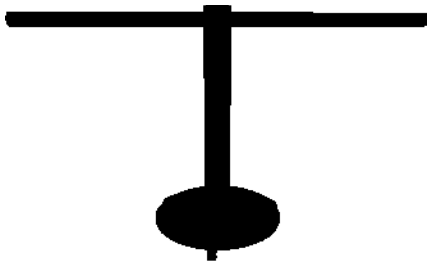


Pole wheel mounting tool for BPW

- ideally suited for mounting pole wheels on BPW axles
- Sturdy design
- Special tool steel

Application range: BPW EcoPlus 8 - 9 t axles





		kg	
460.4755	Pole wheel mounting tool for BPW	1,15	

Arcing wheel mounting tool for SAF

- ideally suited for mounting pole wheels on SAF axles
- Sturdy design
- Special tool steel

Application range: SAF axles S-, Z-Series



		kg	
460.4900	Arcing wheel mounting tool for SAF	7,50	

Assembly mandrel for bearing ring and exciter ring for SAF

- ideally suited for mounting bearing rings and pole wheels on SAF axles
- Sturdy design
- Special tool steel

Application range: SAF axles SK RB 9022 KI(01), SK RB 9019KI, SK RB 9019 WI, SK RB 9022WI, B(I)9-19K, B(I)9-19W, B(I)9-19K01, B(I)9-22W (6), BA9-22K01



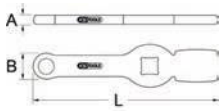
		kg	
460.4670	Assembly mandrel for bearing ring and exciter ring for SAF	7,88	

BRAKE SCREW FITTING

Slogging 6 point spanner with 2 striking faces

- 6 point
- Ideal for loosening and tightening TORX® screws on brake calliper screw connections to the rear axle
- Avoid disassembly of the steering tie lever
- With 3/4 " square drive for the correct tightening of the screw
- With lasered troque formula for calculating the correct effective length
- With 2 impact area
- Phosphate finish
- Chrome vanadium







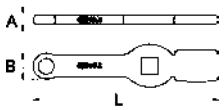
3/4"

	mm	A mm	B mm	Total length mm	g
460.5060	18	12,0	38,0	219	610
460.5061	30	12,0	48,0	224	620

Slogging 6 point spanner with 2 striking faces

- 6 point
- Ideal for loosening and tightening TORX® screws on brake calliper screw connections to the rear axle
- With 3/4 " square drive for the correct tightening of the screw
- With lasered troque formula for calculating the correct effective length
- With 2 impact area
- Phosphate finish
- Chrome vanadium







3/4"

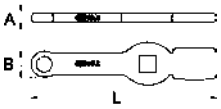
	mm	A mm	B mm	Total length mm	g
517.0925	24	11,0	37,0	218	550



Slogging 12 point spanner with 2 striking faces

- 12 point
- ideal for simple loosening and tightening of the brake cylinder screw connections
- this means that the dismantling does not apply
- with 1/2" square drive for correct tensioning of the screw connection
- With lasered troque formula for calculating the correct effective length
- With 2 impact area
- Phosphate finish
- Chrome vanadium





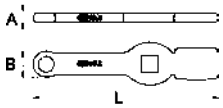


1/2"

	mm	A mm	B mm	Total length mm	g
460.5062	24	12,0	39,0	207	670

Slogging 6 point spanner with 2 striking faces

- 6 point
- Ideal for loosening and tightening TORX® screws on brake calliper screw connections to the rear axle
- With 3/4 " square drive for the correct tightening of the screw
- With lasered troque formula for calculating the correct effective length
- With 2 impact area
- Phosphate finish
- Chrome vanadium



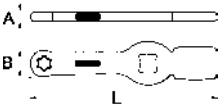


3/4"

	mm	A mm	B mm	Total length mm	g
517.0926	26	12,0	52,0	226	670

Slogging Torx-E spanner with 2 striking faces

- Torx-E-Profile
- Ideal for loosening and tightening TORX® screws on brake calliper screw connections
- Avoid disassembly of the steering tie lever
- With 3/4 " square drive for the correct tightening of the screw
- With lasered troque formula for calculating the correct effective length
- With 2 impact area
- Phosphate finish
- Chrome vanadium





3/4"

		A mm	B mm	L mm	g
517.0908	E18	10,0	30,0	215,0	540
517.0914	E24	12,0	38,0	220,0	550

Brake calliper socket set for MAN

- Special socket
- For the dismantling and assembly of brake line fittings
- Extra large drive for extremely tight fitting couplings
- Extremely robust
- Suitable for narrow spaces
- Chrome vanadium





			kg
450.0360	3 pcs	Brake calliper socket set for MAN	1,33

consists of:

		g
450.0361	MAN Brake calliper socket E 20	176
450.0362	MAN Brake calliper socket E 24	216
503.4228	GEAR*plus*® combination ratcheting spanner, straight form, 30 mm	860

Brake caliper socket for MAN

- For the dismantling and assembly of brake line fittings
- Extra large drive for extremely tight fitting couplings
- Extremely robust
- Suitable for narrow spaces
- Special tool steel





	mm		g
460.5263	22	E18	65
450.0361	30	E20	176
450.0362	30	E24	216

Brake caliper socket wrench for Volvo

- For the dismantling and assembly of brake line fittings
- Extra large drive for extremely tight fitting couplings
- Extremely robust
- Suitable for narrow spaces
- Special tool steel



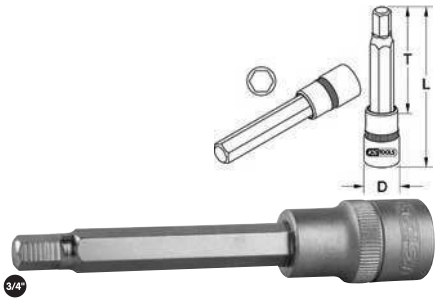


1"

	mm		kg
460.3990	27	Brake caliper socket wrench for Volvo	2,66

Bit socket for hexagon screws, long

- Hexagon socket
- 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



	mm	D mm	L mm	T mm	g	
911.3463	14,0	38,0	155,0	100,0	450	
911.3464	17,0	38,0	155,0	100,0	540	
911.3465	19,0	38,0	155,0	100,0	580	
911.3466	22,0	38,0	155,0	100,0	610	

Brake caliper socket for Renault/Scania/Volvo

- 11-point
- For the dismantling and assembly of brake line fittings
- Extremely robust
- Chrome molybdenum



	D mm	L mm	g	
460.0970	19,0	26,0	20	

Impact socket for Torx® screws, long

- For Torx screws
- Internal square drive to DIN 3121 / ISO 1174
- Long execution
- For machinery usage
- Phosphate finish
- Chrome molybdenum



		L mm	D mm	g	
450.0441	T60	140,0	44,0	630	
450.0442	T70	140,0	44,0	650	
450.0443	T80	140,0	44,0	656	
450.0444	T90	140,0	44,0	666	
450.0445	T100	140,0	44,0	680	

BRAKE DISCS ASSEMBLY/DISASSEMBLY

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	



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
- Ideally suited to transporters
- 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	



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	

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	

Pressure and pull hydraulic cylinder set

- Optimal for universal use in car garages
- Suitable for both pressure and train uses
- 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
- With automatic piston return
- Ideally used with transporters and commercial vehicles
- Special tool steel



Technical data cylinder

Capacity:	45 t
Connection thread:	Cejn quick coupling
Piston:	industrial forged execution
Piston-inner thread:	M27
Outer thread:	2.1/2"
Stroke:	70,0 mm

			kg	
440.0480	7 pcs	Pressure and pull hydraulic cylinder set	14,92	

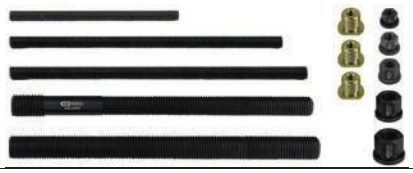
consists of:

		kg	
440.0481	Hydraulic cylinder, 45 t	11,92	
440.0027	Protective ring for thread, 2.5	0,20	
440.0482	Adjustable pressure sleeve, M30	0,72	
440.0483	Impact body M27	0,52	
440.0484	Collar nut, M27	0,30	
440.0485	Pressure rod M27, 330mm	1,26	
440.0009	(CEJN-) Nipple hydraulic for connection thread 1/4"	0,01	

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 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	

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 unit 22 t, with hydraulic pump and manometer

- For the dismantling and assembly of silent support, steering pin, track rod ends, wheel bearings etc.
- Includes hydraulic pump and manometer
- 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





			kg
440.0580	15 pcs	Hydraulic unit 22 t, with hydraulic pump and manometer	15,23

consists of:

		kg
440.0010	Pressure and pull hydraulic cylinder set, 22t, 10 pcs	6,90
440.0060	Hydraulic foot pump set, 4 pcs	7,83
440.0063	Manometer, 150 mm	0,50



Hydraulic unit 32 t, with hydraulic pump and manometer

- Optimal for universal use in car garages
- Includes hydraulic pump and manometer
- 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



			kg
440.0585	11 pcs	Hydraulic unit 32 t, with hydraulic pump and manometer	9,35

consists of:

		kg
440.0025	Pressure and pull hydraulic cylinder set, 32t, 6 pcs	9,35
440.0060	Hydraulic foot pump set, 4 pcs	7,83
440.0063	Manometer, 150 mm	0,50

Hydraulic unit 16-tonnes, with air hydraulic pump

- 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
- With pneumatic hydraulic pump
- Universal usage with reduction M10-M22
- With automatic piston return
- Special tool steel
- In durable steel storage case





			kg
440.9991	13 pcs	Hydraulic unit 16-tonnes, with air hydraulic pump	11,80

consists of:

		kg
440.0005	Pressure and pull hydraulic cylinder set, 16t, 10 pcs	5,48
440.0055	Pneumatic hydraulic pump set, 3 pcs	6,32

Hydraulic unit 22-tonnes, with air hydraulic pump

- 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
- With pneumatic hydraulic pump
- Universal usage with reduction M10-M22
- With automatic piston return
- Special tool steel
- In durable steel storage case





			kg
440.9995	13 pcs	Hydraulic unit 22-tonnes, with air hydraulic pump	13,22

consists of:

		kg
440.0010	Pressure and pull hydraulic cylinder set, 22t, 10 pcs	6,90
440.0055	Pneumatic hydraulic pump set, 3 pcs	6,32

Hydraulic unit 32-tonnes, with air hydraulic pump

- 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
- With pneumatic hydraulic pump
- 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





			kg
440.9996	9 pcs	Hydraulic unit 32-tonnes, with air hydraulic pump	15,67

consists of:

		kg
440.0025	Pressure and pull hydraulic cylinder set, 32t, 6 pcs	9,35
440.0055	Pneumatic hydraulic pump set, 3 pcs	6,32

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 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

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

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

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

Disassembly tool for floating brake discs

- for disassembly of floating brake discs
- Much easier work
- 2 special cylinders for better force distribution
- Control valve for alternating pressing
- With Cejn quick coupling for direct coupling to all KS Tools hydraulic pumps
- very time-saving and effective method
- Secure and easy to use
- Special tool steel



		kg
440.0345	Disassembly tool for floating brake discs	13,85

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 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

Special brake disc socket for SAF, 12-edge

- 12 point
- Ideally for the dismantling and/or assembly of brake discs
- For machinery usage
- Phosphate finish
- Chrome molybdenum



	mm	mm	g
450.0368	13,0	19	74
450.0367	15,0	19	98





BRAKE MAINTENANCE

Calliper repair case

- for the professional repair of callipers
- for the replacement of bellows, calliper bearings and the internal sealing of the bellow
- Secure and easy to use
- Very high degree of accuracy
- Enormous time and cost saving
- Special tool steel
- In durable plastic storage case

Application range: Knorr brake calliper SN6, SN7, SK7 and NA7





			kg	
460.0905	24 pcs	Calliper repair case	12,11	

consists of:

		g	
460.0906	Press-in sleeve for pressure piece	679	
460.0907	Retainer	134	
460.0908	Screw with hammer cap	102	
460.0909	Pressure piece, long	137	
460.0910	Pressure piece for guide sleeve, Ø 35 mm	98	
460.0911	Pressure piece for guide sleeve, Ø 39 mm	127	
460.0912	Mounting sleeve for pair of bellows	222	
460.0913	Guide sleeve	354	
460.0914	Press-in tool for pair of bellows	306	
460.0904	Spindle, M16 x 2 mm for pair of bellows	317	
460.0903	Press-in tool for cap	694	
460.0902	Disassembly sleeve for brass sleeve	876	
460.0901	Trapezoid spindle for brass socket	343	
460.0899	Brass nuts	208	
460.0898	Disassembly fork	380	
460.0897	Press stamp for brass socket	810	
460.0896	Assembly tool for cap, flat	246	
460.0894	Press-in holder for guide sleeve	448	
460.0893	Press-in mandrel for guide sleeve	510	
460.0892	Trapezoid spindle for guide sleeve	297	
460.0891	Counterholder for guide sleeve	587	
460.0889	Brass nuts	180	
460.0888	Insertion ring, plastic	77	
460.0887	Assembly tool for cap, high	276	



Brake caliper repair kit

- for the professional repair of callipers
- for the replacement of bellows, calliper bearings and the internal sealing of the bellow
- Secure and easy to use
- High accuracy of fit
- Enormous time and cost saving
- Special tool steel
- In durable plastic storage case

Application range: Knorr (SB, SN and SK), **Wabco** (PAN 19-1 and PAN 22-1), **SAF** (SBS2220 H0)



			kg	
460.4720	36 pcs	Brake caliper repair kit	13,00	

consists of:

		g	
460.4721	Pulling tool for floating bearings type SN, Ø 54 mm, 95 mm	795	
460.4722	Pulling sleeve, Ø 33 mm, 56 mm	413	
460.4723	Press-in top, Ø 73 mm, 36 mm	609	
460.4724	Press-in top adapter, Ø 68 mm	171	
460.4725	Insert with magnet, Ø 40 mm	142	
460.4726	Reamer with magnet, Ø 44 mm, 35 mm	258	
460.4727	Handle, Ø 29 mm, 170 mm	837	
460.4728	Press-in sleeve, Ø 47 mm, 83 mm	673	
460.4729	Press-in sleeve, 147 mm	905	
460.4730	Reamer for metal sleeve, Ø 29 mm, 32 mm	125	
460.4731	Press-in sleeve, Ø 48 mm, 46 mm	365	
460.4732	Threaded spindle TR20 x 2 mm, 256 mm	590	
460.4733	Pressure bearing, Ø 40 mm	78	
460.4734	Spindle Ø 30 mm, 84 mm	223	
460.4735	Press-on fork, 254 mm	351	
460.4736	Press-in sleeve, Ø 48 mm, 58 mm	462	
460.4737	Press-out sleeve, Ø 42 mm, 33 mm	231	
460.4738	Handrail, 152 mm	131	
460.4739	Puller plate, Ø 55 mm	153	
460.4740	Retractable sleeve for pair of bellows, Ø 51 mm, 41 mm	204	
460.4741	Reamer, Ø 57 mm, 30 mm	324	
460.4742	Insertable and retractable sleeve, Ø 39 mm, 15 mm	60	
460.4743	Adapter ring, Ø 55, 23 mm	138	
460.4744	Puller plate, Ø 60 mm	233	
460.4745	Pressure piece with hexagon, Ø 46 mm, 51 mm	301	
460.4746	Nut Tr20x2 mm, 48 mm	225	
460.4747	Pressure piece, 46 mm	120	
460.4748	Sleeve, Ø 25 mm, 70 mm	418	
460.4749	Sleeve, Ø 55 mm, 74 mm	623	
460.4750	Mounting tool, right, 50 mm	24	
460.4751	Mounting tool, left, Ø 50 mm	23	
460.4752	Assembly clamp, 35 mm	3	
460.4753	Press-in top, Ø 75 mm, 29 mm	111	
503.4212	GEARplus Combination ratchet spanner, 12mm	70	
460.2616	Special adaptor socket 6 point with magnet, 8,0 mm	16	
460.2617	Special adaptor socket 6 point with magnet, 10,0 mm	15	

Threaded pipe socket for Knorr brake calipers

- for readjustment of the threaded tubes
- Extremely robust
- Special tool steel





	mm	Length mm	g	
460.1755	24	46,0	155	

Brake tool set for BPW

- for the professional repair of callipers
- for the replacement of bellows, calliper bearings and the internal sealing of the bellow
- Secure and easy to use
- Very high degree of accuracy
- Enormous time and cost saving
- Special tool steel
- In durable plastic storage case

Application range: BPW SH and SKH axles with ECO Disc disk brakes



			kg	
460.5065	19 pcs	Brake tool set for BPW	7,00	

consists of:

		g	
460.5066	Trapezoid spindle Tr20 x 2 mm	600	
460.5067	Ball bearing Ø40 mm	76	
460.5068	Sleeve exterior diameter 40 mm, internal diameter 25.5 mm	669	
460.5069	Press-out tool for floating- and fixed bearing external diameter 40 mm, internal diameter 20.5 mm	392	
460.5070	Press-in tool for floating bearing external diameter 46 mm, internal diameter 20.5 mm	336	
460.5071	Nut Tr20 x 2 mm	224	
460.5072	Counterholder exterior diameter 55 mm, internal diameter 20.5 mm	149	
460.5073	Press-in tool for fixed bearing external diameter 46 mm, internal diameter 20.5 mm	655	
460.5074	Press-out tool for pair of bellows external diameter 50 mm, internal diameter 26 mm	138	
460.5076	Face pin spanner for rapid-removal seal	293	
460.5077	Bit for floating bearing screw	111	
460.5078	Bit for plastic cap	23	
460.5079	Plug-in tool torque wrench for floating bearing	152	
460.5080	Plug-in tool torque wrench for plastic cap	79	
460.5081	Pulling ring for wheel stud	145	
460.5082	Loosening adapter for fixed bearing screw	264	
460.5083	Loosening adapter for floating bearing screw	241	
460.5084	Assembly sleeve for pair of bellows	129	
158.8023	T-handle Torx key wrench short, T25	50	

Brake tool set for Knorr disc brakes

- for the professional repair of callipers
- For the replacement of calliper bearings
- Secure and easy to use
- Very high degree of accuracy
- Enormous time and cost saving
- Special tool steel



			kg	
460.5290	11 pcs	Brake tool set for Knorr disc brakes	1,60	

consists of:

		g	
460.5291	Spindle M16 x 2 mm, 200 mm	303	
460.5292	Step plate exterior diameter 40 mm, internal diameter 16 mm	43	
460.5293	Pressure piece M16 x 2 mm, external diameter 50 mm	208	
460.5294	Nut M16 x 2 mm	34	
460.5295	Retracted sleeve exterior diameter 40 mm, internal diameter 36 mm	139	
460.5296	Adapter from 14 mm external hexagon to 1/2" external square	66	
460.5297	Adapter from 14 mm external hexagon to 1/2" internal square	78	
460.5298	Disassembly and assembly sleeve for sockets	195	
460.5299	Support bushing	276	
700.2183	Counter nut M16	51	
460.5302	Collar nut M16 x 2 mm	99	

Hydraulic puller set for brake anchor bolts

- for professional brake repair
- for pulling out damaged brake anchor bolts
- Safe and easy use
- Very high degree of accuracy
- Enormous time and cost saving
- including 6 t hydraulic cylinder
- Special tool steel





			kg	
460.4435	7 pcs	Hydraulic puller set for brake anchor bolts	9,40	

consists of:

		kg	
460.4436	Hydraulic cylinder, 6 t	5,19	
460.4437	Tension bell, Ø67 mm	1,66	
460.4438	Counterholder, Ø42 mm	0,75	
460.4439	Puller bolt M16 x 1.5 mm	0,08	
460.4440	Puller bolt M14 x 1.5 mm	0,07	
460.4441	Puller bolt M12 x 1.25 mm	0,07	
460.4442	Puller bolt M12 x 1.0 mm	0,07	

Pull-out and pull-in tool for floating bearings and guide sleeves BPW

- for professional brake repair
- for pulling out and in of the guide sleeves of the floating bearings
- Secure and easy to use
- Very high degree of accuracy
- Enormous time and cost saving
- Special tool steel

Application range: BPW SH and SKH



			kg	
460.4905		Pull-out and pull-in tool for floating bearings and guide sleeves BPW	2,21	

Assembly tool set for brass bushing locating bearing

- ideally suited for disassembly and assembly of brass bushes Fixed bearing on disc brakes
- Sturdy design
- Special tool steel

Application range: BPW disc brakes



			kg	
460.4860	5 pcs	Assembly tool set for brass bushing locating bearing	1,70	

consists of:

		g	
460.4861	Sleeve, Ø55 mm	950	
460.4862	Threaded spindle, 215 mm	290	
460.4863	Pressure piece, Ø55 mm	260	
460.4864	Nuts with sliding bearing, Ø39 mm	190	
460.4865	Ring washer, Ø24 mm	10	

DRUM BRAKE

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	

Universal brake anchor bolt set

- Extension for universal wheel bolt set, truck (440.0390)
- Ideal for replacing the brake anchor bolts and the associated bushes
- Use together with press clamp (440.0190) and hydraulic cylinder
- Saves a lot of time
- Safe and easy use
- Special tool steel
- In durable plastic storage case

Recommended hydraulic cylinder: 14t (440.0015) and 8.5t (440.0020)

Application range: Drum brakes for trucks, buses, trailers



			g	
440.0400	3 pcs	Universal brake anchor bolt set	678	

consists of:

		g	
440.0401	Pressure pipe, Ø48 mm, 70 mm	300	
440.0402	Pressure sleeve, Ø39.5 mm, 24 mm	210	
440.0403	Pressure sleeve, Ø35.5 mm, 24 mm	168	

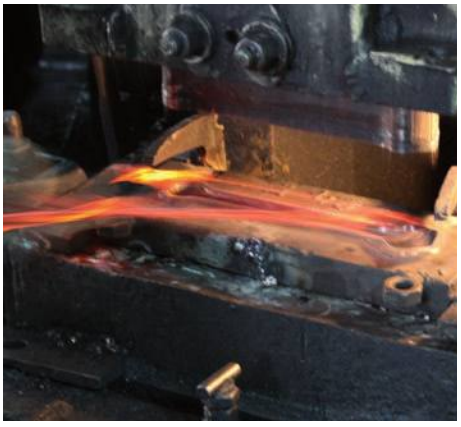
Puller for brake lever arms

- for disassembly of rusted brake adjusters on commercial vehicle drum brakes
- compact design for flexible use in narrow areas
- For use with hydraulic cylinder
- Special tool steel
- In durable plastic storage case

Recommended hydraulic cylinder: 8.5t (440.0020)
Application range: Drum brakes for trucks, buses, trailers



		Max span width mm	Max span depth mm	kg	
440.0195		55,0	91,0	3,62	



Universal C clamp press frame set

- ideally suited for mounting and dismounting anchor bolts on drum brakes, support joints and universal joints
- Very robust execution
- Suitable for impact wrenches
- High release force due to rotary shock pulse with impact wrench
- with removable spindle and step plate holders on the bracket side
- Trapezoidal threaded spindle with ball-bearing pressure tip
- Special tool steel
- In durable plastic storage case



			kg	
460.1735	9 pcs	Universal C clamp press frame set	8,30	

consists of:

		kg	
460.1736	C-frame with trapezoid spindle, 235.0 mm	4,33	
460.1739	Sleeve for spindle, 100 mm	0,43	
460.1741	Sleeve for C-frame, 28 mm	0,21	
460.1742	Sleeve for C-frame, 71 mm	0,35	
460.1743	Sleeve with step plate, Ø 51 mm	0,15	
460.1744	Sleeve with step plate, Ø 64 mm	0,22	
460.1746	Sleeve with step plate, Ø 76 mm	0,29	
460.1737	Step plate for spindle	0,79	
460.1738	Step plate for C-frame	0,61	

Brake shoes dismantling and assembly tool for Volvo

- For the restoration of the drum brake
- For opening and fixing the brake shoes retaining spring
- For the dismantling and assembly of the jaw pins
- With drive spindle for continuous opening
- Sturdy design
- Special tool steel

Application range: Volvo drum brake with Z cam e.g: N7 | N10 | N12 | F7 | F12 | F16 | FH12 | FH16 | FL7 |FL10 | ERF E series | EC series





		B mm	L mm	kg	
450.0240	17	220,0	320,0	1,90	

Truck rear brake shoes instal set for Hino

- For the restoration of the drum brake
- For opening and fixing the brake shoes retaining spring
- For the dismantling and assembly of the jaw pins
- With drive spindle for stepless adjusting
- Sturdy design
- Special tool steel



			kg	
460.4290	2 pcs	Truck rear brake shoes instal set for Hino	3,46	

consists of:

		g	
460.4291	Brake shoes Assembly and disassembly tool	640	
460.4292	Brake cylinder resetter	1840	

Brake shoe clamping device for SAF

- suitable for mounting and dismounting brake shoes
- Sturdy design
- Special tool steel

Application range: SAF SK500, SK500 Plus, SK9042/11242 and SK9037/11037



		g	
460.4835	Brake shoe clamping device for SAF	950	

consists of:

		g	
460.4836	Bracket Ø 27 mm	300	
460.4837	Bracket Ø 20 mm	200	
460.4838	Spindle, 55 mm	70	
460.4839	Screws, 32 mm	30	
460.4840	Mandrel, 180 mm	350	



Commercial vehicle spring lever

- Ideally suited for brake shoe release springs
- dismantling and assembly of the back plate not necessary
- Enables works within the wheel housing
- Two component handle
- Forged execution
- Special tool steel

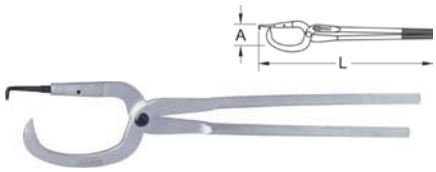




	Length mm	g	
450.0310	450,0	580	
450.0311	620,0	680	

Commercial vehicle brake spring pliers

- For attaching and dismantaling the brake shoes retaining spring
- For glued and riveted brake shoes
- Special surround
- Interchangeable tip
- Knurled handle
- Chrome vanadium



	A mm	L mm	Replacement tip	kg	
450.0320	205,0	500,0	450.0321	1,25	

Lever for brake return spring mounting for BPW

- ideally suited for the disassembly and assembly of brake springs on drum brakes
- Used for cylindrical and conical retaining clips
- Special tool steel

Application range: **BPW** (SN300, SN360 and SN420)



		g	
460.4980	Lever for brake return spring mounting for BPW	150	

Driving pin for bearing bushes on brake pins / shafts

- ideally suited for mounting of bearing bushes on brake pins / shafts
- two driving mandrels included in delivery
- for use with the hammer
- Sturdy design
- Special tool steel



		kg	
460.4830	Driving pin for bearing bushes on brake pins / shafts	2,88	

consists of:

		kg	
460.4831	Drive mandrel Ø 42 mm	0,78	
460.4832	Drive mandrel Ø 36 mm	1,21	
460.4833	Handheld piece for driving mandrel	0,89	

Brass bush dismantling mandrel

- for professional brake repair
- to remove the brass bushing of the camshaft
- Secure and easy to use
- Very high degree of accuracy
- Enormous time and cost saving
- Special tool steel

Application range: SAF SK



	Ø mm	kg	
460.4915	49	2,60	

Brass bush assembly mandrel

- for professional brake repair
- to remove the brass bushing of the camshaft
- Secure and easy to use
- Very high degree of accuracy
- Enormous time and cost saving
- Special tool steel

Application range: SAF SK



	Ø mm	kg	
460.4920	49	1,50	

Pulling device for brake pins on the drum brake

- ideally suited for the dismantling of brake pins on the drum brakes
- incl. threaded insert M 20 x 1.5 mm / M 20 x 1.5 mm
- Sturdy design
- Special tool steel



		kg	
460.4770	Pulling device for brake pins on the drum brake	5,37	

Brake introducer for Hino

- ideally suited for damage-free brake application
- Sturdy design
- Special tool steel

Application range: Hino 700



		g	
460.4500	Brake introducer for Hino	60	

Brake adjuster for Hino

- ideally suited for damage-free brake resetting
- Sturdy design
- Special tool steel

Application range: Hino 700



		g	
460.4315	Brake adjuster for Hino	60	

Installation and removal tool for rubber seals of the relay valve for Hino

- ideally suited for damage-free installation and removal of the rubber seal of the relay valve
- Sturdy design
- Special tool steel





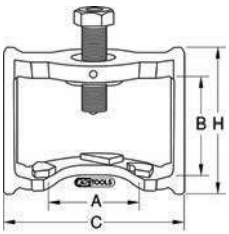
1/2"

		kg	
460.4275	Installation and removal tool for rubber seals of the relay valve for Hino	0,43	

Brake linkage adjuster extractor for BPW

- Substantial construction for drawing off firmly sitting BPW brake linkage adjusters
- Suitable for older and automatic linkage adjusters
- Special tool steel



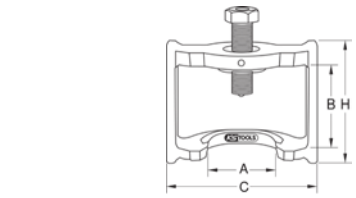




	A mm	B mm	C mm	H mm	kg	
450.0305	65	78	160	127	2,70	

Brake linkage adjuster extractor for HALDEX

- Substantial construction for drawing off firmly sitting brake linkage adjuster
- Certain stop through ring shaped bearing area
- Special tool steel





	A mm	B mm	C mm	H mm	kg	
450.0300	65	78	160	127	3,10	

Air-hydraulic riveting tool

- suitable for riveting and riveting brake shoes
- including air-hydraulic foot pump
- Short set-up time
- Sturdy design
- Special tool steel





			kg	
460.0605	19 pcs	Air-hydraulic riveting tool	42,00	

consists of:

		kg	
460.0606	Air-hydraulic riveting unit without accessories	31,20	
460.0607	Air-hydraulic foot pump	8,00	
460.0608	Setting spanner, 300 mm	0,70	
460.0609	Mounting mandrel, 225 mm	0,22	
460.0583	Pressure piece for rivet removal, Ø 4 mm, 91 mm	0,22	
460.0584	Pressure piece for rivet removal, Ø 6 mm, 92 mm	0,18	
460.0585	Pressure piece for rivet removal, Ø 6 mm, 110 mm	0,21	
460.0586	Pressure piece for rivet removal, Ø 8 mm, 94 mm	0,19	
460.0587	Pressure piece for riveting, Ø 9.5 mm, 75 mm	0,18	
460.0588	Pressure piece for riveting, Ø 13.5 mm, 75 mm	0,19	
460.0589	Pressure piece for riveting, Ø 13.5 mm, 97 mm	0,23	
460.0590	Pressure piece for riveting, Ø 16.5 mm, 75 mm	0,20	
460.0591	De-riveting protection sleeve Ø 9 mm	0,07	
460.0592	De-riveting protection sleeve Ø 13 mm	0,06	
460.0593	De-riveting protection sleeve Ø 16 mm	0,04	
460.0594	Rivet spacer Ø 7.4 / 15.9 mm	0,08	
460.0595	Rivet spacer Ø 9.4 / 11.8 mm	0,08	
460.0596	T-grip hexagon box spanner, 2.5 mm	0,02	
460.0597	Pressure manometer, 0-15000 psi	0,19	

Electro-hydraulic riveting tool

- suitable for riveting and riveting brake shoes
- Electro-hydraulic system
- Mains voltage 220 V
- Short set-up time
- Sturdy design
- Special tool steel



			kg	
460.0955	18 pcs	Electro-hydraulic riveting tool	200,00	

consists of:

		kg	
460.0956	Electro-hydraulic rivet device without accessories	196,00	
460.0583	Pressure piece for rivet removal, Ø 4 mm, 91 mm	0,22	
460.0584	Pressure piece for rivet removal, Ø 6 mm, 92 mm	0,18	
460.0585	Pressure piece for rivet removal, Ø 6 mm, 110 mm	0,21	
460.0586	Pressure piece for rivet removal, Ø 8 mm, 94 mm	0,19	
460.0587	Pressure piece for riveting, Ø 9.5 mm, 75 mm	0,18	
460.0588	Pressure piece for riveting, Ø 13.5 mm, 75 mm	0,19	
460.0589	Pressure piece for riveting, Ø 13.5 mm, 97 mm	0,23	
460.0590	Pressure piece for riveting, Ø 16.5 mm, 75 mm	0,20	
460.0957	De-riveting protection sleeve, Ø 9 mm	0,09	
460.0958	De-riveting protection sleeve, Ø 13 mm	0,08	
460.0959	De-riveting protection sleeve, Ø 16 mm	0,08	
460.0962	Rivet spacer, Ø 7.4 mm, 15.4 mm	0,11	
460.0963	Rivet spacer, Ø 9.4 mm, 11.9 mm	0,11	
460.0964	Pressure manometer, 0-3500 psi	0,19	
460.0966	Set of guide strips	0,34	
460.0967	Drip pan	0,59	
460.0596	T-grip hexagon box spanner, 2.5 mm	0,02	



COMPRESSED AIR TECHNOLOGY BRAKE

Compressed air plug connection system removal tool set

- for correct and destruction-free unlocking of compressed air quick connectors
- universally applicable for compressed air lines with the diameters 6 mm, 8 mm, 10 mm, 12 mm, 15 mm and 16 mm
- Secure and easy to use
- Special tool steel





			g	
460.4420	6 pcs	Compressed air plug connection system removal tool set	400	

consists of:

		g	
460.4421	Compressed air plug connection system removal tool, 6 mm	60	
460.4422	Compressed air plug connection system removal tool, 8 mm	60	
460.4423	Compressed air plug connection system removal tool, 10 mm	60	
460.4424	Compressed air plug connection system removal tool, 12 mm	60	
460.4426	Compressed air plug connection system removal tool, 15 mm	60	
460.4427	Compressed air plug connection system removal tool, 16 mm	60	

Compressed air quick connector release pliers

- for correct and destruction-free unlocking of compressed air quick connectors
- universally applicable for compressed air lines with the diameters 6 mm, 8 mm, 10 mm, 12 mm
- Secure and easy to use
- Special tool steel



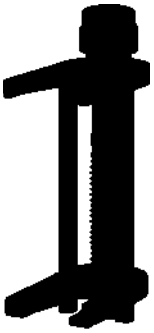


		g	
460.5095	Compressed air quick connector release pliers	375	

Compressed air quick connector release tool

- for correct and destruction-free unlocking of compressed air quick connectors
- universally applicable for compressed air lines with the diameters 6 mm, 8 mm, 10 mm, 12 mm
- Secure and easy to use
- Special tool steel





	mm	g	
460.5665	14	115	

Special Angle Pipe Connector Socket Set

- for safe disassembly and assembly of angle connections
- socket with side opening
- Slim design
- For difficult to access areas
- Internal square to DIN 3120 / ISO 1174 with ball reception
- Simple handling
- Matt finish
- Chrome vanadium
- In durable plastic storage case

Application range: Angle connections e.g. to lines and air suspension





3/8"

		g	
460.5085	Special Angle Pipe Connector Socket Set	564	

consists of:

		g	
460.5086	3/8" special angled pipe connector socket, 12 mm	49	
460.5087	3/8" special angled pipe connector socket, 14 mm	57	
460.5088	3/8" special angled pipe connector socket, 17 mm	83	
460.5089	3/8" special angled pipe connector socket, 19 mm	92	
460.5090	3/8" special angled pipe connector socket, 22 mm	116	





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





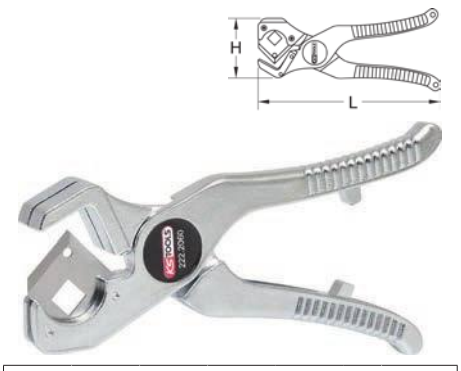
			kg	
913.1300	10 pcs	12 point crawfoot wrench set	2,14	

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	

Hose cutter

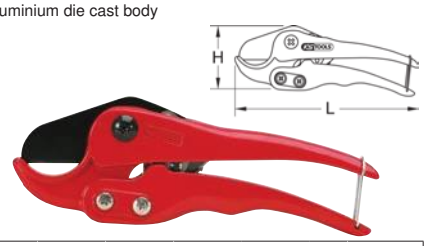
- Aluminium die cast body



	Ø mm	H mm	L mm		g	
222.2060	6,0 - 25,0	50,0	185,0	222.2061	300	

Plastic pipe cutter Ø 0 - 32 mm

- Teflon coated cutting blades
- Aluminium die cast body



	Ø mm	H mm	L mm		g	
222.1001M	0 - 32,0	71,0	205,0	222.1011M	320	

Special clamping gripping pliers

- For the cutting of plastic pipes
- Enormous time and cost saving
- Suitable for narrow hard to access areas
- Versatile use
- With loosening lever
- With easy locking action
- Size adjustment using the adjustment wheel
- Black lacquer
- Chrome molybdenum



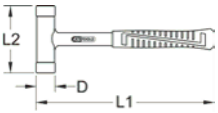


	Size mm	Ø mm	Length mm	g	
450.0350	1	8 / 9 / 10 / 11 / 12	260,0	775	
450.0351	2	7 / 9 / 10 / 12 / 14	265,0	775	
450.0352	3	15 / 16 / 18	255,0	636	

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





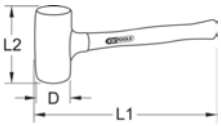


	g	D mm	L1 mm	L2 mm	head,spare	kg	
140.5270	360	25,0	270,0	105,0	140.5280	0,36	
140.5271	480	30,0	290,0	105,0	140.5281	0,48	
140.5272	590	35,0	295,0	110,0	140.5282	0,59	
140.5273	850	40,0	300,0	120,0	140.5283	0,85	
140.5274	990	45,0	305,0	120,0	140.5284	0,99	
140.5275	1110	50,0	310,0	125,0	140.5285	1,11	
140.5276	1290	55,0	325,0	135,0	140.5286	1,29	
140.5277	1670	60,0	335,0	140,0	140.5287	1,67	

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	

Oil filter strap

- strong and extra high webbing
- 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
- particularly great work area and light weight
- small space requirement on the exterior diameter of the filters
- strong nylon webbing offers secure grip on the filter and provides positive dismantling of the filter



1/2"

	Ø mm	Ø	H mm	g	
455.0055	150,0	6"	50,0	380	



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 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	



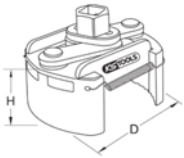


Universal oil filter wrench, 104 - 150 mm

- With self tensioning effect
- Work clockwise / anticlockwise - loose and tighten
- Serrated jaws
- Less space required
- With 24 mm or 1/2" drive
- Special tool steel

Application area: Oil and fuel filters, air dryer cartridges etc.







	mm	□	D mm	H mm	kg	
700.5008	24	1/2"	104 - 150	80,0	1,79	

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"

	mm	Ø mm	kg	
700.5001	24	80 - 120	0,63	
700.5002	30	105 - 165	1,40	

Pneumatic adaptor set

- With universal mouth piece
- For filling the air brake plant truck compressed from the manufacturer Bosch and Wabco+Grau
- Set contains 0° and 90° executions for different place ratios
- Applicably for the tyre abundance connection for the pressure regulator
- Unnecessary air load and sound load diminishes





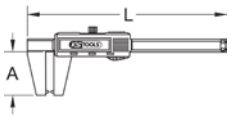
			g	
450.0315	2 pcs	Pneumatic adaptor set	450	

BRAKE MEASURING TOOL

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





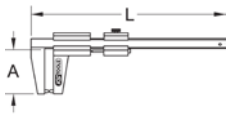


	Measuring range mm	A mm	L mm	Display accuracy mm	g	
300.0540	0 - 60	55,0	160,0	+/- 0,03	130	

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





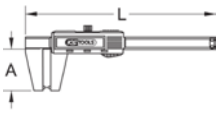


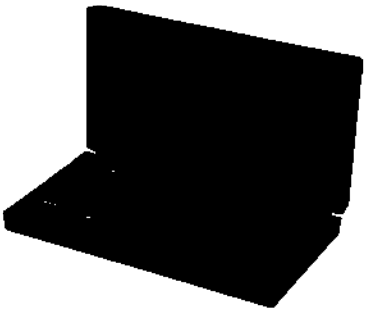
	Measuring range mm	A mm	L mm	Display accuracy mm	g
300.0535	0 - 60	55,0	162,0	+/- 0,01	130
300.0536	0 - 90	120,0	255,0	+/- 0,01	135

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	g
300.0539	0 - 100	95,0	207,0	+/- 0,03	155





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

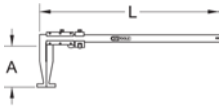


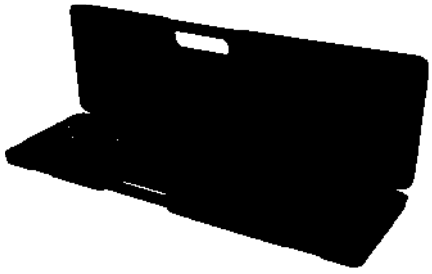


	Measuring range mm	Length mm	kg
300.0506	200 - 400	455,0	1,52

Brake 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



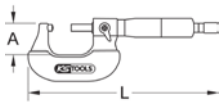


	Inner measuring range mm	Outer measuring range mm	A mm	L mm	Display accuracy mm	kg
300.0525	0 - 300	40 - 340	95,0	410,0	+/- 0,02	0,50
300.0530	0 - 500	60 - 560	150,0	660,0	+/- 0,05	1,38

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





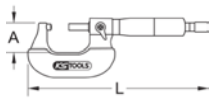


	Measuring range mm	A mm	L mm	Display accuracy mm	Ø Spindle mm	Ø Drum mm	Ø Spindle pitch mm	g
300.0555	0-25	30,0	130,0	+/- 0,01	6,5	17,0	0,5	300

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

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

GENERAL BRAKE TOOLS

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

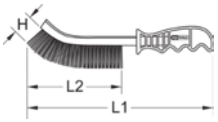





	H mm	L1 mm	L2 mm	g	
201.2300	28,0	250,0	145,0	90	

Stainless steel wire all purpose wire brush

- With plastic handle
- For surface preparation
- Curled and rust free steel wire

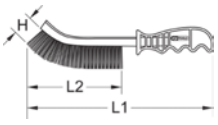





	H mm	L1 mm	L2 mm	g	
201.2301	28,0	250,0	145,0	90	

Brass steel all purpose wire brush

- With plastic handle
- For surface preparation
- Curved brass wire

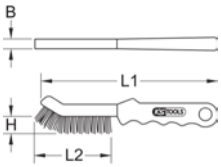





	H mm	L1 mm	L2 mm	g	
201.2302	28,0	250,0	145,0	90	

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

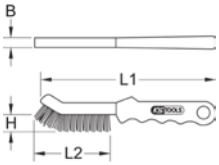





	B mm	H mm	L1 mm	L2 mm	g	
201.2320	12,0	22,0	225,0	90,0	90	

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

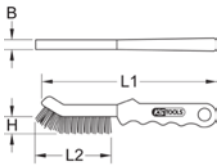





	B mm	H mm	L1 mm	L2 mm	g	
201.2321	12,0	14,0 - 22,0	225,0	90,0	90	

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	

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	

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

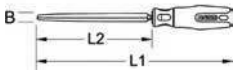


	Ø mm	Length mm	g	
150.1182	9,0	200,0	15	
150.1183	19,0	200,0	20	

WHEEL HUB CLEANING

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



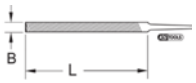


	L1 mm	L2 mm	g	
150.2241	270,0	150,0	120	
150.2242	320,0	205,0	160	

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





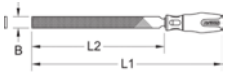


	L mm	B mm		
161.0960	150,0	10,0	161.0010	60

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





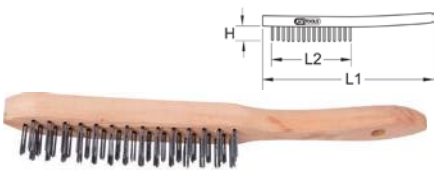


	B mm	L1 mm	L2 mm	File blade	
157.0960	10,0	270,0	150,0	161.0960	140

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	
201.2305	32,0	290,0	138,0	120



Steel hand wire brush 4 rowed

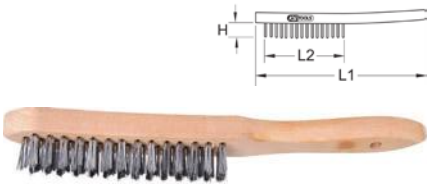
- 4 rowed
- Universal usage
- wooden handle
- For surface preparation
- With steel bristles



	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

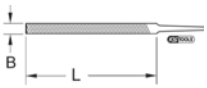


	H mm	L1 mm	L2 mm	
201.2325	25,0	285,0	130,0	120

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





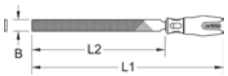


	B mm	L mm		
161.0950	12,0	150,0	161.0010	90

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





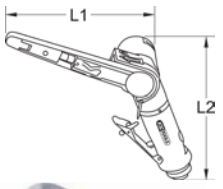


	B mm	L1 mm	L2 mm	File blade	
157.0950	12,0	270,0	150,0	161.0950	170

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	
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

MECHANICS LEVERS

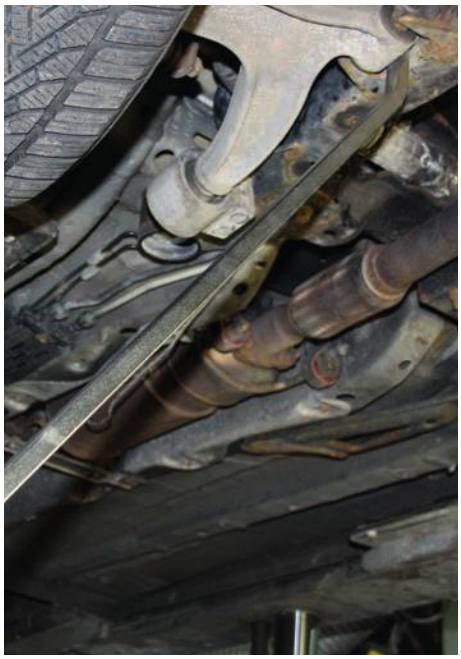
Pry bar

- 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





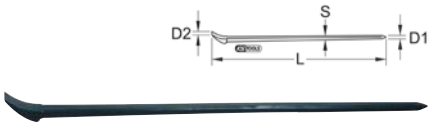
			kg
911.8410	4 pcs	Pry bar sets	8,70

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

Lever bar

- 4 point
- Quenched and tempered
- Black lacquer
- Special tool steel

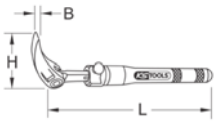


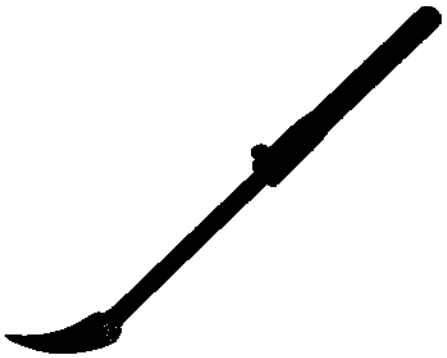
	D1 mm	D2 mm	Length m	S mm	Handle number	kg
156.0598	22,0	35,0	1,80	37,0	-	8,00

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



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... WITH THE PROTECTIVE RING FOR INCREASED SERVICE LIFE!



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OIL SUMP DRAIN PLUG RELEASE TOOL

Oil service special profile tool set for plastic oil drain plugs

- 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
- For manual operation
- Phosphate finish
- Special tool steel



460.5280	2 pcs	Oil service special profile tool set for plastic oil drain plugs	92

consists of:

460.5281	Special socket wrench for DAF, 17 mm	54
460.5282	Special socket wrench for Mercedes, 17 mm	38

OIL SUMP DRAIN PLUGS

Oil drain plug M24 x 1.5 x 16 mm for Renault

- Hexagon socket
- With washer



	Content			
430.0601	1	M24x1,5x16	14	54

Oil drain plug M22 x 1.5 x 13 mm for Renault

- Hexagon socket
- With washer



	Content			
430.0602	1	M22x1,5x13	12	35

Oil drain plug M16 x 1.5 x 15.5 mm for Renault

- Internal square
- With washer



	Content			
430.0603	1	M16x1,5x15,5	8	23

Oil drain plug M24 x 1.5 x 18 mm for Renault

- Hexagon socket
- With washer



	Content			
430.0604	1	M24x1,5x18	12	63

Oil drain plug M22 x 1.5 x 18 mm for MAN

- Hexagon socket
- With washer



	Content			
430.0605	1	M22x1,5x18	10	55

Oil drain plug M24 x 2 x 56 mm for Scania

- Hexagon socket
- With washer



	Content			
430.0606	1	M24x2x56	19	215

Oil drain plug M24 x 1.5 x 23 mm for Volvo

- External hexagon
- With washer



	Content			
430.0607	1	M24x1,5x23	32	87

Oil drain plug M24 x 1.5 x 27 mm for Volvo

- Hexagon socket
- with sealing surface



	Content			
430.0608	1	M24x1,5x27	12	68

Oil drain plug M26 x 1.5 x 31 mm for Volvo

- Hexagon socket
- with sealing surface



	Content			
430.0609	1	M26x1,5x31	12	65

Oil drain plug M22 x 1.5 x 21 mm for Iveco

- External hexagon
- With washer



	Content			
430.0610	1	M22x1,5x21	33	56

Oil drain plug M22 x 1.5 x 16 mm for Iveco

- Hexagon socket
- With washer



	Content		mm	g
430.0611	1	M22x1,5x16	12	51

Oil drain plug M22 x 1.5 x 13 mm for Iveco

- Hexagon socket
- With washer



	Content		mm	g
430.0612	1	M22x1,5x13	12	33

Oil drain plug M14 x 1.5 x 35 mm for Mercedes

- External hexagon
- With washer



	Content		mm	g
430.0613	1	M14x1,5x35	13	41

Oil drain plug M20 x 1.5 x 18 mm for Mercedes

- Hexagon socket
- With washer



	Content		mm	g
430.0614	1	M20x1,5x18	10	40

Oil drain plug M26 x 1.5 x 21.5 mm for Mercedes

- Internal square
- With washer



	Content		mm	g
430.0615	1	M22x1,5x21,5	14	85

Oil drain plug M22 x 1.5 x 17 mm for DAF

- Internal square
- With washer



	Content		mm	g
430.0616	1	M22x1,5x17	10	48

Oil drain plug M22 x 1.5 x 18 mm for DAF

- Hexagon socket
- With washer



	Content		mm	g
430.0617	1	M22x1,5x18	12	60

Oil drain plug M26 x 1.5 x 20 mm for DAF

- External hexagon
- With washer



	Content		mm	g
430.0618	1	M26x1,5x20	22	68

Oil drain plug for DAF and MAN

- Hexagon socket
- With washer



	Content	mm	g
430.0619	1	8,5	10

Oil drain plug for Mercedes

- slotted profile
- With washer



	Content		g
430.0621	1	15 x 3	90

OIL SUMP TOOL

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
150.1588	Cleaning disc set, 15 pcs	30
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
151.26025	Hexagon key wrench, phosphate finish, short, 2,5mm	10

OIL FILTER TENSION WRENCH

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

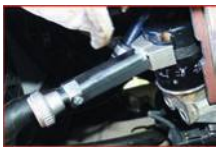




	Ø mm	L mm	g	
114.0150	110,0	190,0	180	

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	

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 strap

- strong and extra high webbing
- 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
- particularly great work area and light weight
- small space requirement on the exterior diameter of the filters
- strong nylon webbing offers secure grip on the filter and provides positive dismantling of the filter



1/2"

	Ø mm	Ø	H mm	g	
455.0055	150,0	6"	50,0	380	

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
- Special tool steel





1/2"

	Ø mm	Height mm	kg	
460.1130	100 - 110	58,0	1,03	
460.1570	125 - 140	58,0	1,14	

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





	Ø mm	Ø	▭ mm	L mm	Replacement band	g	
114.0170	140,0	9/64"	20,0	220,0	114.0170-1	323	
114.0171	200,0	13/64"	25,0	280,0	114.0171-1	590	

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 and air drying cartridges chain key

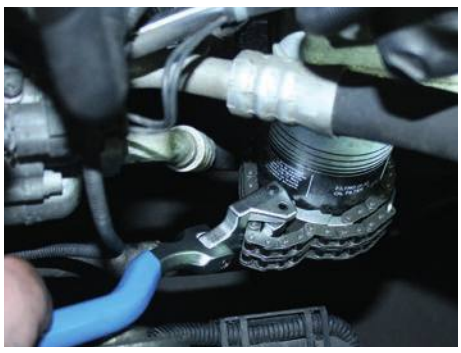
- Extremely robust double tension chain
- Ideally suited for the installation and removal of filters, filter cartridges and air dryer cartridges
- Internal square drive to DIN 3120 / ISO 1174
- Also for hard-to-reach filter housing
- Especially large working area
- Double tensioning chain provides a secure hold on the filter and ensures force-locking release of the filter

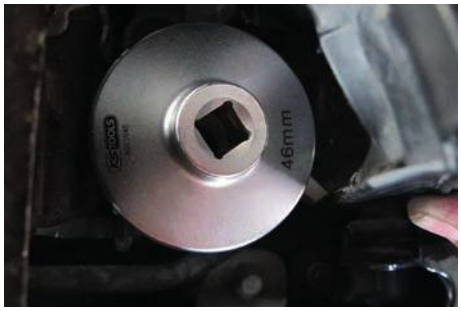




1/2"

	Ø mm	g	
460.5215	115	366	
460.5216	170	410	

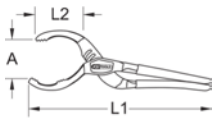




Oil filter pliers

- 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





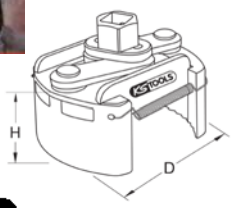
3/8" 1/2"

	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	kg	
700.5005	60 - 80	21	40,0	0,50	
700.5006	80 - 110	22	50,0	0,90	
700.5008	104 - 150	24	80,0	1,79	

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 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 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 89 mm / 15 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
- Special tool steel

Application range:

TRUCK: Isuzu N Series

CAR: Isuzu Trooper; **Mazda** 626; **Mitsubishi** Galant, Space Wagon; **Opel** Campo, Frontera, Monterey; **Suzuki** Grand Vitara, Vitara





1/2"

	mm	Stages	Sides	g
460.4570	89	1	15	354

Oil filter wrench Ø 92 mm / 10 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 adaptor to DIN 3120 / ISO 1174
- For manual operation
- Special tool steel

Application range: Avia D-Line; **DAF** CF65, LF45, LF55; **New Holland** T4000, T5000, T6, T7, TD5, TL-A, TN-A, TS-A; **Nissan** Atleon; Temsa Avenue





1/2"

	mm	Stages	Sides	g
460.1175	92	1	10	176

Oil filter wrench, Ø 93 mm / 15 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
- Special tool steel





1/2"

	mm	Stages	Sides	g
460.4625	93	1	15	367

Oil filter wrench Ø 94 mm / 14 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
- Special tool steel

Application range: MAN 403, 463





1/2"

	mm	Stages	Sides	kg
460.5217	94	1	14	1,10

Oil filter wrench, Ø 94.5 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: Iveco Daily (3.5 and 7t)





1/2"

	mm	Stages	Sides	g
460.3920	94,5	1	10	200

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





3/8"

	mm	Stages	Grooves	g
150.9429	96	1	6	220

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





3/8"

	mm	Stages	Sides	g
150.9335	100	1	15	150

Oil filter wrench Ø 100 mm / 15 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 adaptor to DIN 3120 / ISO 1174
- For manual operation
- Special tool steel





1/2"

	mm	Stages	Sides	g
460.4555	100	1	15	500

Oil filter wrench Ø 101 mm / 15 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 adaptor to DIN 3120 / ISO 1174
- For manual operation
- Special tool steel





1/2"

	mm	Stages	Sides	g
460.4560	101	1	15	487

Oil filter wrench Ø 101.5 mm / 15 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: Hino





1/2"

	mm	Stages	Sides	g
460.4615	101,5	1	15	642

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





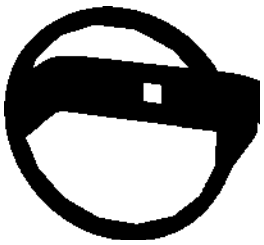
3/8"

	mm	Stages	Sides	g
150.9348	106	1	15	200

Oil filter wrench Ø 106.5 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
- Special tool steel

Application range: Fuso



1/2"

	mm	Stages	Sides	g
460.4590	106,5	1	16	541

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





1/2"

	mm	Stages	Sides	g
150.9294	107	1	15	360

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

Application range: Volvo



1/2"

	mm	Stages	Sides	g
460.1190	107	1	15	585

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 108 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
- Special tool steel

Application range: Hino





1/2"

	mm	Stages	Sides	g
460.4565	108	1	16	586

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 118 mm / 15 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
- Special tool steel

Application range: **Isuzu**





1/2"

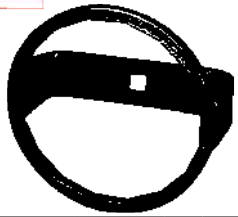
	mm	Stages	Sides	g
460.4610	118	1	15	720

Oil filter wrench Ø 118 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
- Special tool steel

Application range: Hino





1/2"

	mm	Stages	Sides	g
460.4585	118	1	16	637

Oil filter wrench Ø 119 mm / 15 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
- Special tool steel

Application range: Fuso





1/2"

	mm	Stages	Sides	g
460.4595	119	1	15	594

Oil filter wrench Ø 123 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
- Special tool steel

Application range: Fuso





1/2"

	mm	Stages	Sides	g
460.4620	123	1	16	705

OIL FILTER CAP WRENCH

Oil filter wrench Ø 46 mm / 6 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
- Special tool steel





3/8"

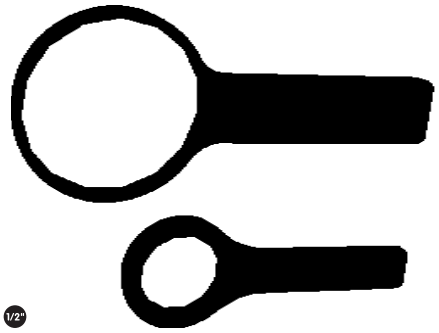
	mm	Ø mm	Height mm	g
460.1045	46	59	30,0	193

Oil filter wrench set Ø 86/41 mm / 15/12 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
- Special tool steel

Application range: Mitsubishi Canter





1/2"

			g
460.4630	2 pcs	Oil filter wrench set Ø 86/41 mm / 15/12 surfaces	552

consists of:

		g
460.4631	Oil filter wrench, Ø 93 mm / 15 surfaces	361
460.4632	Oil filter wrench, Ø 41 mm / 12 surfaces	191

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"

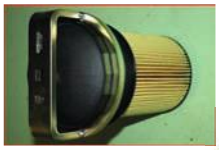
	mm	Stages	Sides	g
150.9297	135,0	1	18	510



Oil filter 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

Application range: MAN series F2000, FE and TGA





1/2"

	mm	Stages	Sides	kg	
460.1185	135	1	18	1,80	

WRENCH FOR CRANKSHAFT BLEEDING FILTER

Oil mist separator line wrench for Isuzu

- special profile
- for quick and professional removal and installation of the line connection at the oil mist separator
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Internal square drive adaptor to DIN 3120 / ISO 1174
- For manual operation
- Special tool steel





1/2"

		g	
460.4520	Oil mist separator line wrench for Isuzu	70	

Oil mist separator key for Isuzu Ø 87 mm

- for quick and professional removal and installation of the oil mist separator
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- Special tool steel
- For manual operation



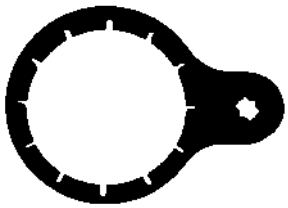


	mm	g	
460.4515	87	489	

Oil mist separator key for Mercedes Ø 96 mm

- For quick and professional installation and removal of the oil mist separator on the oil filter
- 12 point
- 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	
460.4180	96,0	1	12	616	

Oil mist separator key for Isuzu Ø 107 mm

- for quick and professional removal and installation of the oil mist separator
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- For manual operation
- Special tool steel





1/2"

	mm	g	
460.4605	107	603	

Oil mist separator key for Fuso Ø 109 mm

- for quick and professional removal and installation of the line connection at the oil mist separator
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- For manual operation
- Special tool steel





1/2"

	mm	g	
460.4600	109	630	

Oil mist separator key for Mitsubishi Ø 54 mm

- for quick and professional removal and installation of the oil mist separator
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- For manual operation
- Special tool steel

Application range: Mitsubishi Canter





1/2"

	mm	g	
460.4580	54	228	

OIL FILTER CAP WRENCH SET

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"

			kg	
150.9290	9 pcs	Oil service set for oil filter and filter housing cover	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 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

SENSOR WRENCH

Oil sensor special socket for MAN, 3 pins

- with 3 pins
- for professional mounting and dismounting of the oil pressure sensor
- Use according to the manufacturer's specification for torque
- Suitable for left and right side operation
- For manual operation
- Special tool steel



1/2"

	Inner Ø mm	Outer Ø mm	Stud width mm	kg
460.5218	46,0	52,0	10,0	1,17

Oil sensor special socket for Mercedes

- 6 point
- for professional mounting and dismounting of the oil pressure sensor
- Use according to the manufacturer's specification for torque
- with side window and open
- Suitable for left and right side operation
- For manual operation
- Special tool steel



1/2"

		Outer Ø mm	g
460.5219	27	35,5	289

OIL DIP STICK

Mercedes Transmission Oil Control Dipstick

- Ideal for the easy, quick and correct control of 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



	Length mm	g
460.0960	1035,0	800

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

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

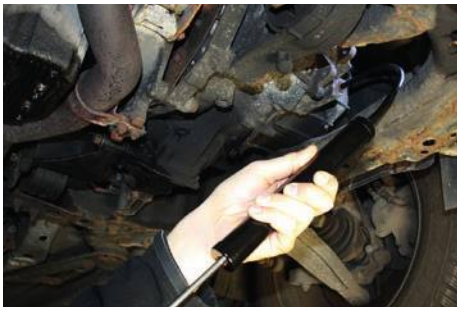
Transfer pump

- 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





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

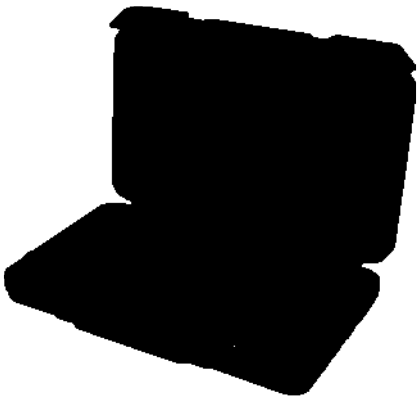
			kg	
150.9275	21 pcs	Universal transmission oil filling system set incl. 20 piece adapter set	5,06	

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:

		0	
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





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:

		kg	
160.0791	Vacuum fluid extractor suction pump 9.5 litre	3,71	
160.0792	Adaptor and tube 4x8mm x1,5m	0,20	
160.0793	Main probe 7.8 x 9.8 mm x 1 m	0,20	
160.0794	Probe 5.3 x 6.7 mm x 1 m	0,20	
160.0795	Probe 3.5 x 4.5 mm x 1 m	0,20	

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

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

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

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

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

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		
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	

COLLECTION CONTAINER

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



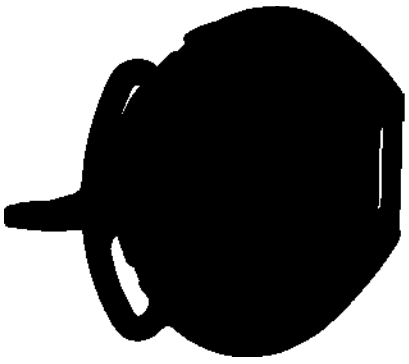


		Height mm	Ø mm		
150.9209	30	150,0	590,0	1,70	

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	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

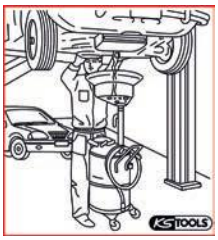




	L mm	B mm	H mm	kg
150.9358	1030,0	724,0	110,0	6,80

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

TRADE FAIRS AND EVENTS



KS Tools will be present at more than 30 national and international trade fairs and events throughout the year.
Take the opportunity to get a first-hand look at our products and test them out.

WE WILL BE COMING TO AN EVENT NEAR YOU SOON! WE LOOK FORWARD TO MEETING YOU THERE!







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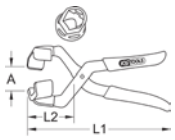
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LIFTING TOOLS	469
TYRE TRANSPORT	472

HUB CAP TOOLS

Hub nut pliers

- With PVC dipped handle
- For removing of wheel nut caps
- No slipping through specially coated jaws
- Ideally suited for commercial vehicles
- Special tool steel







	A mm	L1 mm	L2 mm	g	
150.1995	28-60	250,0	72,0	300	

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



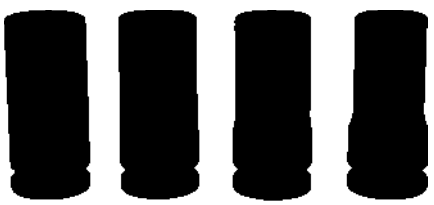
	Length mm	B mm	g	
800.0151	240,0	140,0	850	

WHEEL BOLTING SOCKET WRENCH

Square power socket set for Fuso

- especially suitable for the assembly and disassembly of the wheel bolts with square receptacle
- Internal square drive to DIN 3121 / ISO 1174
- Long execution
- For machinery usage
- Special tool steel





3/4"

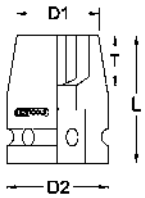
			kg	
460.4510	4 pcs	Square power socket set for Fuso	2,39	

consists of:

		g	
460.4501	3/4" square crank handle, 17 mm	552	
460.4502	3/4" square crank handle, 19 mm	603	
460.4503	3/4" square crank handle, 20 mm	608	
460.4504	3/4" square crank handle, 21 mm	627	

Hexagon impact socket

- 6 point
- According to DIN 3129 / ISO 2725-2
- Internal square drive to DIN 3121 / ISO 1174
- Short execution
- For machinery usage
- Phosphate finish
- Chrome molybdenum



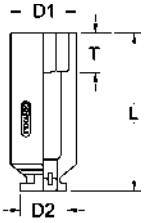


3/4"

	mm	L mm	D1 mm	D2 mm	T mm	g	
515.1324	24,0	50,0	39,0	44,0	14,0	250	
515.1327	27,0	53,0	43,0	44,0	14,0	280	
515.1330	30,0	53,0	46,0	44,0	15,0	370	
515.1332	32,0	56,0	49,0	44,0	15,0	380	
515.1333	33,0	56,0	51,0	44,0	18,0	410	
515.1334	34,0	56,0	51,0	44,0	18,0	410	
515.1336	36,0	56,0	54,0	44,0	18,0	470	
515.1338	38,0	57,0	57,0	44,0	18,0	470	
515.1341	41,0	57,0	60,0	44,0	22,0	590	

Hexagon impact socket, deep

- 6 point
- Internal square drive to DIN 3121 / ISO 1174
- Long execution
- For machinery usage
- Phosphate finish
- Chrome molybdenum





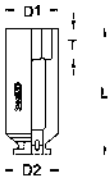
3/4"

	mm	L mm	D1 mm	D2 mm	T mm	g	
515.1424	24,0	90,0	39,0	44,0	38,0	640	
515.1427	27,0	90,0	43,0	44,0	38,0	650	
515.1430	30,0	90,0	46,0	44,0	38,0	680	
515.1432	32,0	90,0	49,0	44,0	38,0	740	
515.1433	33,0	90,0	51,0	44,0	38,0	770	
515.1434	34,0	90,0	51,0	44,0	38,0	790	
515.1436	36,0	90,0	54,0	44,0	38,0	840	
515.1438	38,0	90,0	56,0	44,0	38,0	880	
515.1441	41,0	90,0	60,0	44,0	38,0	970	

Hexagon impact socket, extra deep

- 6 point
- Internal square drive to DIN 3121 / ISO 1174
- Extra long execution
- For machinery usage
- Phosphate finish
- Chrome molybdenum







	mm	L mm	D1 mm	D2 mm	T mm	kg	
515.1182	27,0	270,0	42,0	44,0	27,0	1,09	
515.1183	30,0	270,0	46,0	44,0	30,0	1,14	
515.1184	32,0	270,0	49,0	44,0	32,0	1,16	
515.1191	27,0	400,0	42,0	44,0	27,0	1,25	
515.1192	30,0	400,0	46,0	44,0	30,0	1,32	
515.1193	32,0	400,0	49,0	44,0	32,0	1,36	
515.1194	33,0	400,0	50,0	44,0	32,0	1,38	

Impact socket adapter

- Square drive adaptor to DIN 3121 / ISO 1174 with ball lock
- Internal square drive to DIN 3121 / ISO 1174
- For machinery usage
- Phosphate finish
- Chrome molybdenum





	□	■	L mm	D mm	g	
515.1372	3/4"	1/2"	56,0	44,0	325	
515.1373	3/4"	1"	63,0	44,0	450	

Impact adaptor

- Square drive adaptor to DIN 3121 / ISO 1174 with ball lock
- Internal square drive to DIN 3121 / ISO 1174
- For machinery usage
- Phosphate finish
- Chrome molybdenum



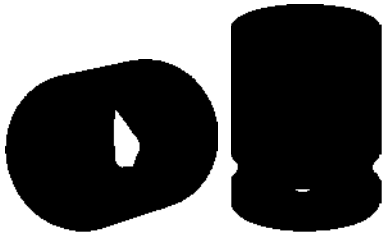


	□	■	L mm	D mm	kg	
515.1798	1"	3/4"	75,0	54,0	0,57	
515.1799	1"	1.1/2"	82,0	54,0	1,00	

Hexagon impact socket

- 6 point
- According to DIN 3129 / ISO 2725-2
- Internal square drive to DIN 3121 / ISO 1174
- Short execution
- For machinery usage
- Phosphate finish
- Chrome molybdenum

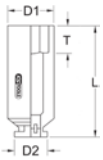




	mm	L mm	D2 mm	D1 mm	T mm	g	
515.1724	24,0	58,0	54,0	42,0	14,0	510	
515.1727	27,0	58,0	54,0	46,0	14,0	520	
515.1730	30,0	60,0	54,0	49,0	16,0	530	
515.1732	32,0	61,0	54,0	52,0	19,0	590	
515.1733	33,0	61,0	54,0	54,0	19,0	620	
515.1734	34,0	61,0	54,0	54,0	19,0	640	
515.1736	36,0	65,0	54,0	57,0	19,0	670	
515.1738	38,0	65,0	54,0	59,0	20,0	680	
515.1741	41,0	65,0	54,0	63,0	23,0	920	

Hexagon impact socket

- 6 point
- Internal square drive to DIN 3121 / ISO 1174
- Extra thick walled / long centre execution
- For machinery usage
- Phosphate finish
- Chrome molybdenum



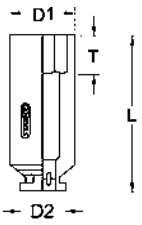


	mm	L mm	D1 mm	D2 mm	T mm	g	
515.2124	24,0	76,0	38,0	52,0	13,0	570	
515.2127	27,0	76,0	42,0	52,0	14,0	580	
515.2130	30,0	76,0	45,0	52,0	18,0	620	
515.2132	32,0	76,0	48,0	52,0	18,0	640	
515.2133	33,0	76,0	49,0	52,0	18,0	650	
515.2134	34,0	76,0	50,0	52,0	18,0	670	
515.2136	36,0	76,0	54,0	52,0	20,0	690	
515.2138	38,0	76,0	56,0	52,0	23,0	710	
515.2141	41,0	80,0	59,0	52,0	23,0	720	



Hexagon impact socket, deep

- 6 point
- Internal square drive to DIN 3121 / ISO 1174
- Long execution
- For machinery usage
- Phosphate finish
- Chrome molybdenum





	mm	L mm	D1 mm	D2 mm	T mm	kg	
515.1824	24,0	90,0	42,0	54,0	16,0	0,72	
515.1827	27,0	90,0	46,0	54,0	19,0	0,80	
515.1830	30,0	90,0	49,0	54,0	19,0	0,80	
515.1833	33,0	90,0	54,0	54,0	23,0	0,91	
515.1834	34,0	90,0	54,0	54,0	23,0	0,95	
515.1836	36,0	90,0	57,0	54,0	23,0	0,95	
515.1838	38,0	90,0	59,0	54,0	23,0	0,99	
515.1841	41,0	90,0	63,0	54,0	40,0	1,20	

POWER EXTENSIONS

Impact extension

- Square drive adaptor to DIN 3121 / ISO 1174 with ball lock
- Internal square drive to DIN 3121 / ISO 1174
- For machinery usage
- Phosphate finish
- Chrome molybdenum





	L mm	D mm	kg	
515.1375	90,0	44,0	0,50	
515.1376	100,0	44,0	0,54	
515.1377	150,0	44,0	0,75	
515.1378	175,0	44,0	0,85	
515.1379	200,0	44,0	0,95	
515.1381	250,0	44,0	1,11	

Impact extension

- Square drive adaptor to DIN 3121 / ISO 1174
- Internal square drive to DIN 3121 / ISO 1174
- For machinery usage
- Phosphate finish
- Chrome molybdenum





	L mm	D mm	kg	
515.1804	175,0	54,0	1,45	
515.1806	250,0	54,0	1,58	
515.1807	300,0	54,0	1,96	

SOCKET SET

Hexagon impact socket set

- 6 point
- According to DIN 3129 / ISO 2725-2
- Internal square drive to DIN 3121 / ISO 1174
- Short execution
- For machinery usage
- Phosphate finish
- Chrome molybdenum
- In durable plastic storage case



3/4"

			kg	
515.0210	8 pcs	24 - 27 - 29 - 30 - 32 - 34 - 36 - 38 mm	3,54	

Hexagon impact socket set

- 6 point
- Internal square drive to DIN 3121 / ISO 1174
- Long execution
- For machinery usage
- Phosphate finish
- Chrome molybdenum
- In durable steel storage case



3/4"

			kg	
515.0510	8 pcs	24 - 27 - 29 - 30 - 32 - 33 - 34 - 36 mm	4,20	

Impact socket set for light commercial hub nuts

- 6 point
- Internal square drive to DIN 3121 / ISO 1174
- Short and long execution
- For machinery usage
- Phosphate finish
- Chrome molybdenum



1"

			kg	
515.0305	2 pcs	515.1732, 32 mm + 515.1832, 32 mm, long	1,68	
515.0306	2 pcs	515.1733, 33 mm + 515.1833, 33 mm, long	1,68	

Hexagon impact socket set

- 6 point
- According to DIN 3129 / ISO 2725-2
- Internal square drive to DIN 3121 / ISO 1174
- Short execution
- For machinery usage
- Phosphate finish
- Chrome molybdenum
- In durable steel storage case



1"

			kg	
515.0610	8 pcs	27 - 29 - 30 - 32 - 33 - 34 - 36 - 38 mm	3,00	

Hexagon impact socket set, deep

- 6 point
- Internal square drive to DIN 3121 / ISO 1174
- Long execution
- For machinery usage
- Phosphate finish
- Chrome molybdenum
- In durable steel storage case



1"

			kg	
515.0308	8 pcs	24 - 27 - 30 - 32 - 33 - 34 - 36 - 38 mm	4,20	

WHEEL NUT WRENCH

Wheel spanner for commercial cars

- 6 point
- DIN 3319/ISO 6788
- Sturdy design
- Ideal for use with vans, commercial vehicles, tractors, agricultural and construction machines
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- Polished surface
- Chrome vanadium



	mm	Length mm	kg	
518.1155	24x27x32x3/4"	630,0	3,46	

Wheel spanner for commercial cars

- 6 point
- DIN 3319/ISO 6788
- Extremely sturdy design
- Forged middle piece
- Middle piece with screw locking
- High loads (tested up to 2,000 Nm)
- Ideal for use with vans, commercial vehicles, tractors, agricultural and construction machines
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- Polished heads
- Matt finish
- Special tool steel
- Delivery in canvas bag



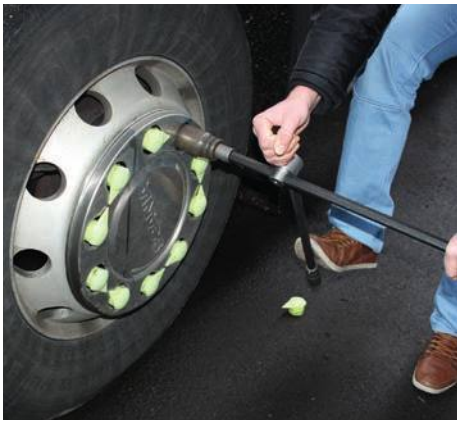
	mm	Length mm	kg	
518.1161	24x27x30x32	750,0	6,00	
518.1162	24x27x32x3/4"	750,0	5,90	

Wheel spanner for commercial cars

- 6 point
- DIN 3319/ISO 6788
- Extremely sturdy design
- Forged middle piece
- High loads (tested up to 2,000 Nm)
- Ideal for use with vans, commercial vehicles, tractors, agricultural and construction machines
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- Polished heads
- Matt finish
- Special tool steel



	mm	Length mm	kg	
518.1156	24x27x30x32	750,0	5,60	
518.1157	24x27x32x3/4"	750,0	5,60	
518.1158	27x30x32x33	750,0	5,60	
518.1159	27x30x32x3/4"	750,0	5,60	



Wheel spanner with slip joint for commercial vehicles

- 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 vans, commercial vehicles, tractors, agricultural and construction machines
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- Polished heads
- Matt finish
- Special tool steel





	mm	Length mm	kg	
518.1163	24x27x32x3/4"	600,0	3,18	

Wheel nut wrench for commercial vehicle

- Serviceable from both sides
- Large head depth for projecting bolts
- Alternative insert for tommy bar
- Ideally suited for commercial vehicles
- Matt finish
- Special tool steel



	mm	Length mm	kg	
518.0970	24x27	400,0	1,70	
518.0971	24x38	400,0	1,90	
518.0972	27x30	400,0	1,80	
518.0973	27x32	400,0	1,88	
518.0974	27x33	400,0	1,88	
518.0975	28x33	400,0	1,80	
518.0976	30x32	400,0	1,88	
518.0977	30x33	400,0	1,90	
518.0978	32x33	400,0	1,80	
518.0979	3/4"x32	400,0	1,90	

Tommy bar for commercial vehicle wheel nut wrench

- Matt finish
- Special tool steel



	Ø mm	Length mm	kg	
518.0981	19,0	630,0	2,89	

Extended bar for commercial vehicle wheel nut wrench

- Serviceable from both sides
- Large head depth for projecting bolts
- 1.200 mm extended drive bar
- Loading capacity at 1.000 Nm
- Ideally suited for commercial vehicles
- Matt finish
- Special tool steel



			kg	
518.0840	4 pcs	Extended bar for commercial vehicle wheel nut wrench	3,90	

MANUAL RELEASE TOOLS

Adjustable lengths high torque ratchet

- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- Reversible
- Exact gearing 24-teeth ratchet mechanism
- Infinitely variable
- Mirror polished
- Chrome vanadium







3/4"

	■	D mm	L mm	A mm	kg	
918.1805	3/4"	46,0	610-915	96,0	3,00	

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







3/4"

	L mm	head,spare	kg	
918.1801	1030,0	918.1801-1	3,80	

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"

	L mm	head,spare	kg	
918.1802	1050,0	918.1802-1	3,80	

WHEEL CENTRING SLEEVE

Hub nut centering and protecting sleeves set

- For fast disassembly and assembly of truck tyres
- To fix the brake drum
- No slipping while the disassembly and assembly
- Protects hub nut threads
- Exact centering of the wheel to hub nut
- Special tool steel

Application: DAF, Unimog, Iveco, MAN, Renault, Volvo



			Rim hole Ø mm		Length mm	g	
450.0372	2 pcs	M18x1,5	21,0	1/2	100,0	260	

Hub nut centering and protecting sleeves set

- For fast disassembly and assembly of truck tyres
- To fix the brake drum
- No slipping while the disassembly and assembly
- Protects hub nut threads
- Exact centering of the wheel to hub nut
- Special tool steel

Application: DAF, Iveco, MAN, Renault, Volvo



			Rim hole Ø mm		Length mm	g	
450.0373	2 pcs	M18x1,5	24,0	1/2"	100,0	460	

Hub nut centering and protecting sleeves set

- For fast disassembly and assembly of truck tyres
- To fix the brake drum
- No slipping while the disassembly and assembly
- Protects hub nut threads
- Exact centering of the wheel to hub nut
- Special tool steel

Application: Mercedes



			Rim hole Ø mm		Length mm	g	
450.0374	2 pcs	M20x1,5	23,0	1/2"	100,0	310	

Hub nut centering and protecting sleeves set

- For fast disassembly and assembly of truck tyres
- To fix the brake drum
- No slipping while the disassembly and assembly
- Protects hub nut threads
- Exact centering of the wheel to hub nut
- Special tool steel

Application: Scania



			Rim hole Ø mm		Length mm	g
450.0375	2 pcs	M20x1,5	26,0	1/2"	100,0	515

Hub nut centering and protecting sleeves set

- For fast disassembly and assembly of truck tyres
- To fix the brake drum
- No slipping while the disassembly and assembly
- Protects hub nut threads
- Exact centering of the wheel to hub nut
- Special tool steel

Application: DAF, MAN, Mercedes, Ford, Renault, Scania, Volvo



			Rim hole Ø mm	mm	Length mm	g
450.0370	2 pcs	M22x1,5	26,0	19,0	145,0	630

Hub nut centering and protecting sleeves set

- For fast disassembly and assembly of truck tyres
- To fix the brake drum
- No slipping while the disassembly and assembly
- Protects hub nut threads
- Exact centering of the wheel to hub nut
- Special tool steel

Application: for alloy wheels for **Mercedes**, **MAN**



			Rim hole Ø mm		Length mm	kg
450.0376	2 pcs	M22x1,5	32,0	1/2"	100,0	1,02

Hub nut centering and protecting sleeves set

- For fast disassembly and assembly of truck tyres
- To fix the brake drum
- No slipping while the disassembly and assembly
- Protects hub nut threads
- Exact centering of the wheel to hub nut
- Special tool steel

Application: for alloy wheels for **Scania**



			Rim hole Ø mm	mm	Length mm	g
450.0371	2 pcs	M7/8"x11G	26,0	19,0	145,0	630

Hub nut centering and protecting sleeves set

- For fast disassembly and assembly of truck tyres
- To fix the brake drum
- No slipping while the disassembly and assembly
- Protects hub nut threads
- Exact centering of the wheel to hub nut
- Special tool steel

Application: for alloy wheels for **Scania**



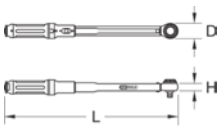
			Rim hole Ø mm		Length mm	g
450.0377	2 pcs	M7/8"x11G	30,0	1/2"	100,0	805

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







1/4" 3/8" 1/2" 3/4" 1"

		N·m	Division N·m	lbf·ft	L mm	D mm	H mm	kg
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
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
516.1482	1/2"	80-420	1,00	60 - 310	678,0	45,0	23,0	2,10
516.1490	3/4"	110-550	1,00	75 - 405	960,0	69,0	33,0	3,80
516.1493	3/4"	150-750	10,00	150 - 550	1250,0	69,0	33,0	7,30
516.1495	1"	200-1000	20,00	220 - 730	1500,0	90,0	36,0	5,80

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





1/4" 3/8" 1/2" 3/4" 1"

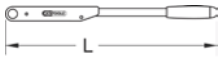
		Measuring range N·m	Tooth	Division N·m	lbf·ft		Division lbf·ft	D mm	L mm	kg
516.5150	1/4"	1-6	64	0,05				26,0	210,0	0,51
516.5151	1/4"	3-15	64	0,10				26,0	210,0	0,51
516.5152	1/4"	5-25	64	0,20				26,0	248,0	0,33
516.5153	3/8"	10-60	32	0,50	9,2-42,4		0,4	36,5	370,0	1,26
516.5154	3/8"	20-100	32	0,50	16,6-71,9		0,4	36,5	433,0	1,02
516.5156	1/2"	60-340	32	2,00	52-243		1,5	43,5	610,0	1,80
516.5155	1/2"	40-200	32	1,00	33-144		0,7	43,5	530,0	1,65
516.5157	3/4"	100-600	24	5,00	92-424		7,4	63,5	1050,0	4,97
516.5158	3/4"	150-800	24	5,00	129-572		7,4	63,5	1240,0	6,05
516.5159	3/4"	200-1000	24	5,00	166-719		7,4	63,5	1240,0	6,05
516.5160	1"	300-1500	24	10,00	258-1070		14,7	70,0	1850,0	10,51



Torque wrench with close gap release

- Actuation accuracy: ±4 % 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
- Four fold scale in Nm, Kg•fm, lbf•in und lbf•ft divisions for precise adjustment
- An audible and palpable signal when the desired torque value is achieved
- Torque setting is easy by pulling out, adjusting and pushing in the winder in the handle
- Secure locking possibility
- Ergonomic handle designed for comfortable 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







3/8" 1/2" 3/4" 1"

	■	N•m	lbf•ft	Division N•m	Division lbf•ft	L mm	kg	
516.3520	3/8"	12-68	10 - 50	2,00	2,0	480,0	1,00	
516.3515	3/8"	5-33	4 - 24	1,00	1,0	405,0	0,69	
516.3510	3/8"	2.5-11	2 - 8	0,50	0,5	300,0	0,56	
516.3525	1/2"	12-68	10 - 50	2,00	2,0	480,0	1,00	
516.3530	1/2"	25-150	20 - 110	5,00	2,0	575,0	1,70	
516.3535	1/2"	50-250	40 - 180	10,00	5,0	605,0	2,30	
516.3540	1/2"	70-350	50 - 260	10,00	10,0	815,0	3,00	
516.3545	3/4"	140-800	120 - 580	20,00	20,0	935,0	6,50	
516.3550	1"	200-1000	150 - 750	25,00	25,0	1030,0	9,70	
516.3555	1"	500-2000	350 - 1500	50,00	50,0	1400,0	18,00	

You can find our wide range of ALUTORQUEprecision torque wrenches in our hand tool catalogue on page 163.



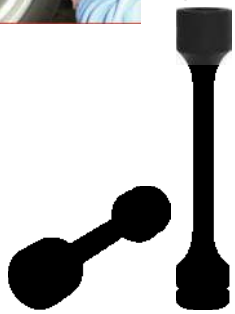
TORQUE TORSION BARS

Hexagon torque impact socket, extra deep

- Ideal for controlled loosening of wheel screws and nuts with impact wrenches
- Internal square drive to DIN 3121 / ISO 1174
- Extra long execution
- For machinery usage
- Phosphate finish
- Chrome molybdenum







1"

	mm	max N•m	L mm	D mm	T mm	kg	
515.1461	24,0	350	300,0	54,0	24,0	1,38	
515.1462	27,0	350	300,0	54,0	27,0	1,40	
515.1463	27,0	450	300,0	54,0	27,0	1,58	
515.1464	30,0	500	300,0	54,0	30,0	1,56	
515.1465	32,0	450	300,0	54,0	32,0	1,60	
515.1466	32,0	550	300,0	54,0	32,0	1,60	
515.1467	32,0	600	300,0	54,0	33,0	1,60	
515.1468	33,0	550	300,0	54,0	33,0	1,64	
515.1469	33,0	600	300,0	54,0	36,0	1,64	

UNIVERSAL TORQUE MULTIPLIER

Universal torque multiplier

- Robust loosening
- Designed for use with the crank handle supplied
- Intergrated support device
- Square drive adaptor to DIN 3120 / ISO 1174
- 1:64 Torque ratio
- 4.000 Nm maximum output torque
- Including crank handle and one extension
- Indispensable as essential equipment on service vehicles
- Ideal for trucks, construction machines and agricultural machines
- Not suited for use with impact wrenches
- In durable plastic storage case



1"

			kg	
516.1151	3 pcs	Universal torque multiplier	8,54	

consists of:

		g	
516.1152	1" Crank handle for 516.1151	500	
516.1153	1" Extension for 516.1151	300	

Universal torque convertor set

- Robust tightening and loosening
- Designed for use with the crank handle supplied
- Intergrated support device
- Square drive adaptor to DIN 3120 / ISO 1174
- 1:64 Torque ratio
- 4.000 Nm maximum output torque
- Includes crank handle and extension
- Indispensable as essential equipment on service vehicles
- Ideal for trucks, construction machines and agricultural machines
- Not suited for use with impact wrenches
- In durable plastic storage case





1"

			kg	
516.1150	5 pcs	Universal torque convertor set	11,00	

consists of:

		kg	
515.2130	Impact socket 30 mm	0,62	
515.2132	1" Hexagon impact socket, intermediate length, 32mm	0,64	
516.1151	1" Torque multiplier, 3 pcs, 1:64	8,54	

Universal torque convertor set

- Robust tightening and loosening
- Designed for use with the crank handle supplied
- Intergrated support device
- Square drive adaptor to DIN 3120 / ISO 1174
- 1:64 Torque ratio
- 4.000 Nm maximum output torque
- Includes crank handle and extension
- Indispensable as essential equipment on service vehicles
- Ideal for trucks, construction machines and agricultural machines
- Not suited for use with impact wrenches
- In durable plastic storage case





1"

			kg	
516.1156	5 pcs	Universal torque convertor set	12,00	

consists of:

		kg	
516.1151	1" Torque multiplier, 3 pcs, 1:64	8,54	
515.2133	1" Hexagon impact socket, intermediate length, 33mm	0,65	
515.2138	Impact socket 38 mm	0,71	

Universal torque convertor set

- Robust tightening and loosening
- Designed for use with the crank handle supplied
- Intergrated support device
- Square drive adaptor to DIN 3120 / ISO 1174
- 1:64 Torque ratio
- 4.000 Nm maximum output torque
- Includes crank handle and extension
- Indispensable as essential equipment on service vehicles
- Ideal for trucks, construction machines and agricultural machines
- Not suited for use with impact wrenches
- In durable plastic storage case





1"

			kg
516.1155	5 pcs	Universal torque convertor set	11,50

consists of:

		kg
516.1151	1" Torque multiplier, 3 pcs, 1:64	8,54
515.2130	Impact socket 30 mm	0,62
515.2133	1" Hexagon impact socket, intermediate length, 33mm	0,65

Universal torque convertor set

- Robust tightening and loosening
- Designed for use with the crank handle supplied
- Intergrated support device
- Square drive adaptor to DIN 3120 / ISO 1174
- 1:64 Torque ratio
- 4.000 Nm maximum output torque
- Includes crank handle and extension
- Indispensable as essential equipment on service vehicles
- Ideal for trucks, construction machines and agricultural machines
- Not suited for use with impact wrenches
- In durable plastic storage case





1"

			kg
516.1157	5 pcs	Universal torque convertor set	11,00

consists of:

		kg
516.1151	1" Torque multiplier, 3 pcs, 1:64	8,54
515.2132	1" Hexagon impact socket, intermediate length, 32mm	0,64
515.2133	1" Hexagon impact socket, intermediate length, 33mm	0,65

Universal torque multiplier set

- Robust loosening
- Designed for use with the crank handle supplied
- With integrated, adjustable support device
- Square drive adaptor to DIN 3120 / ISO 1174
- 1:64 Torque ratio
- 3.800 Nm maximum output torque
- Includes sockets and extension
- Indispensable as essential equipment on service vehicles
- Not suited for use in industry
- Not suited for use with impact wrenches
- In durable plastic storage case





1"

			kg
516.1180	7 pcs	Universal torque multiplier set	8,00

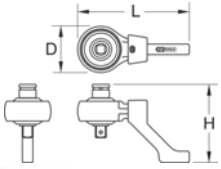
consists of:

		kg
516.1181	Toque multiplier, 1:64	5,98
516.1182	1" Socket, hexagonal 27 mm	0,55
516.1184	1" Socket, hexagonal 30 mm	0,59
516.1185	1" Socket, hexagonal 32 mm	0,65
516.1186	1" Socket, hexagonal 33 mm	0,65
516.1187	Extension for 516.1180	0,30
516.1188	Adaptor nut for 516.1180	0,35

Universal torque multiplier

- Accuracy: ±5 % Tolerance
- For controlled fastening in clockwise and counter clockwise directions
- Device for angle regulated fastening with a torque wrench
- Single stage precision planetary gear for both directions
- Two support devices
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- Not suited for use with impact wrenches
- Supplied in a metal storage case







1/2" 3/4" 1"

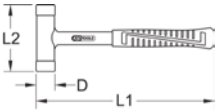
				→ Nm	← Nm	D mm	L mm	H mm	kg
516.3700	1/2"	5 : 1	3/4"	260	1300	110,0	395,0	127,0	8,60
516.3705	3/4"	5 : 1	1"	540	2700	110,0	395,0	127,0	4,40

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



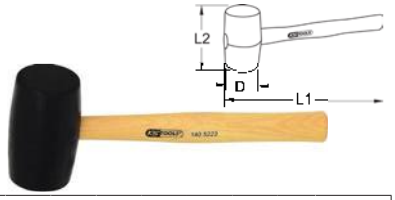




	g	D mm	L1 mm	L2 mm	head,spare		kg
140.5270	360	25,0	270,0	105,0	140.5280		0,36
140.5271	480	30,0	290,0	105,0	140.5281		0,48
140.5272	590	35,0	295,0	110,0	140.5282		0,59
140.5273	850	40,0	300,0	120,0	140.5283		0,85
140.5274	990	45,0	305,0	120,0	140.5284		0,99
140.5275	1110	50,0	310,0	125,0	140.5285		1,11
140.5276	1290	55,0	325,0	135,0	140.5286		1,29
140.5277	1670	60,0	335,0	140,0	140.5287		1,67

Rubber hammer

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

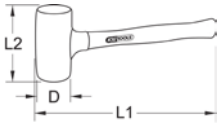


	g	D mm	L1 mm	L2 mm	Handle number		kg
140.5221	300	45,0	300,0	80,0	140.5304	140.5404	340
140.5222	500	58,0	310,0	95,0	140.5305	140.5405	560
140.5223	700	63,0	345,0	112,0	140.5306	140.5405	780

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





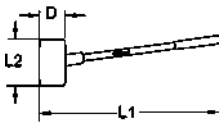


	g	D mm	L1 mm	L2 mm	kg
140.5252	400	40,0	270,0	81,0	0,48
140.5254	560	40,0	305,0	100,0	0,64
140.5255	645	42,0	325,0	100,0	0,73
140.5256	860	50,0	342,0	118,0	0,86
140.5257	1270	56,0	355,0	118,0	1,35
140.5258	1720	65,0	370,0	135,0	1,80

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





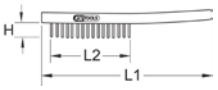


	g	D mm	L1 mm	L2 mm	kg
140.5259	5500	105,0	890,0	180,0	5,76

WHEEL HUB CLEANING

Steel hand wire brush 3 rowed

- 3 rowed
- Universal usage
- wooden handle
- For surface preparation
- With steel bristles

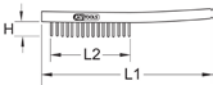




	H mm	L1 mm	L2 mm	g
201.2305	32,0	290,0	138,0	120

Steel hand wire brush 4 rowed

- 4 rowed
- Universal usage
- wooden handle
- For surface preparation
- With steel bristles

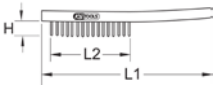




	H mm	L1 mm	L2 mm	g
201.2311	32,0	290,0	138,0	120

Stainless steel hand wire hand brush 3 rowed

- 3 rowed
- Universal usage
- wooden handle
- For surface preparation
- With stainless steel bristles

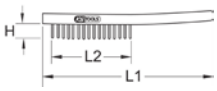




	H mm	L1 mm	L2 mm	g
201.2310	32,0	290,0	138,0	120

Stainless steel hand wire hand brush 4 rowed

- 4 rowed
- Universal usage
- wooden handle
- For surface preparation
- With stainless steel bristles

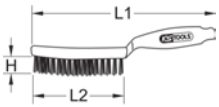




	H mm	L1 mm	L2 mm	g
201.2306	32,0	290,0	138,0	100

Steel wire hand brush 4 rowed

- 4 rowed
- Universal usage
- Plastic hand grip casing
- For surface preparation
- Smooth steel wire

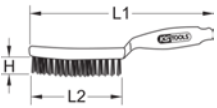




	H mm	L1 mm	L2 mm	g
201.2325	25,0	285,0	130,0	120

Brass wire hand brush 3 rowed

- 3 rowed
- Universal usage
- Plastic hand grip casing
- For surface preparation
- Straight brass wire



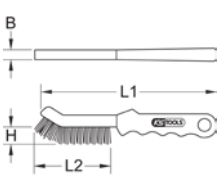


	H mm	L1 mm	L2 mm	g
201.2326	25,0	285,0	130,0	105

Steel wire 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





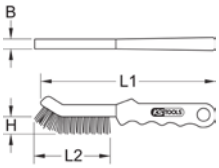


	B mm	H mm	L1 mm	L2 mm	g
201.2321	12,0	14,0 - 22,0	225,0	90,0	90

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







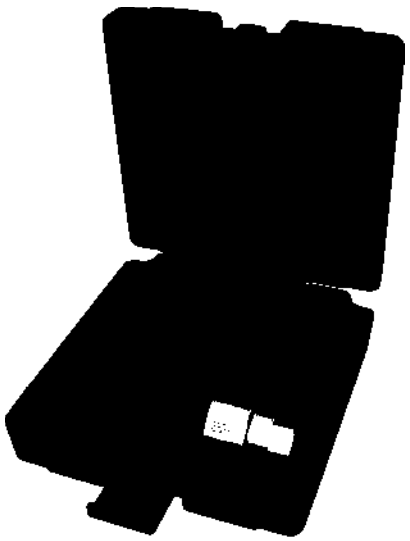
	B mm	H mm	L1 mm	L2 mm	g
201.2322	12,0	22,0	225,0	90,0	90

THREAD REPAIR

Wheel bolt thread repair set for commercial vehicles

- For re-cutting and cleaning of external threads
- Ideal composition for wheel bolts
- Ideal for difficult to access areas
- Right hand cutting
- High performance steel
- In durable plastic storage case

Application range: Commercial vehicles - wheel bolts with thread sizes: M20x1.25, M20x1.5, M22x1.0, M22.1.5, M24.1.5, M24x2, 13/16"- 20 UNEF, 3/4"-20 UNEF



			kg
460.5480	9 pcs	Wheel bolt thread repair set for commercial vehicles	1,42

consists of:

		g
150.1316	Drive tool, 32.0 mm	310
150.1318	Threading die M20x1,5	90
150.1319	Threading die M22x1,5	85
460.5481	Cutting dies M20x1.25	85
460.5482	Cutting dies M20x1.0	83
460.5483	Cutting dies M24x1.25	78
460.5484	Cutting dies M24x2.0	79
460.5486	Cutting dies 3/4"-20	86
460.5487	Cutting dies 13/16"-20	90

Wheel bolt thread repair set for commercial vehicle

- For re-cutting and cleaning damaged outer threads
- Ideal composition for wheel bolts
- Ideal for difficult to access areas
- External drive hexagonal socket 32.0 mm
- Right hand cutting
- High performance steel
- In durable plastic storage case





			g
150.1315	5 pcs	Wheel bolt thread repair set for commercial vehicle	840

consists of:

		g
150.1316	Drive tool, 32.0 mm	310
150.1317	Threading die M18x1,5	90
150.1318	Threading die M20x1,5	90
150.1319	Threading die M22x1,5	85
150.1321	Threading die 7/8"-11 BSF (Scania)	85

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
150.4911	Die nut M18 x 1.50	0,07
150.4902	Die nut M20 x 1.50	0,06
150.4904	Die nut M22 x 1.50	0,05

Drive shaft thread repair set

- For re-cutting and cleaning of external threads
- Hexagon drive without die holder
- 8 gang fine thread dimensions
- Colour coding for metric and imperial
- Special tool steel

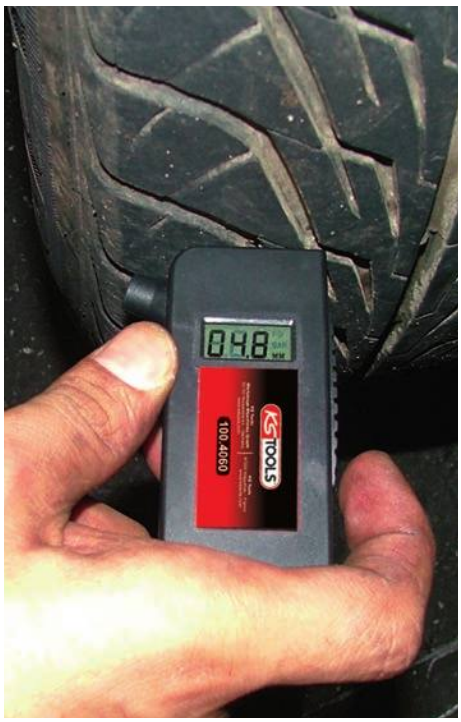
Application range: Drive shaft thread, hub nuts etc. on cars/transporter and commercial vehicle



			g
150.4900	8 pcs	Drive shaft thread repair set	420

consists of:

		g
150.4901	Die nut M20 x 1.25	57
150.4902	Die nut M20 x 1.50	56
150.4903	Die nut M22 x 1.00	50
150.4904	Die nut M22 x 1.50	50
150.4905	Die nut M24 x 1.50	44
150.4906	Die nut M24 x 2.00	44
150.4907	Die nut 3/4" x 20 UNEF	60
150.4908	Die nut 13/16" x 20 UNEF	55

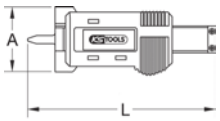


PROFILE DEPTH MEASURER

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





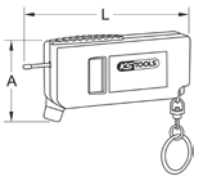


	Measuring range mm	A mm	L mm	Display accuracy mm	g
300.0550	0 - 25	40,0	125,0	+/- 0,03	100

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	

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
Tube 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
Tube length:	1000 mm
Operating pressure:	6,3 bar (90 psi)
Connection thread:	1/4"PT

		g	
515.1920	Tyre filling gauge	420	

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
- Tube with integrated locking male nipple
- With hanging hole
- Includes 1/4" coupling connector
- Robust rubber coated housing



Technical data:

Working range:	0 - 10 bar
	0 - 140 psi
Tube 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 hand operation
- with rubber-coated manometer
- Manometer with bar and psi scale
- With filling lever and pressure release button
- Tube with integrated locking male nipple
- Robust rubber coated housing



Technical data:

Working range:	0 - 15 bar
	0 - 220 psi
Tube 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
- Tube 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)
Tube 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	

RIM REMOVERS

Universal slide hammer set

- ideally suited for lightning fast removal of rims with ventilation holes
- the wheels are very often stuck to the hub due to environmental influences
- Extra heavy and solid execution
- Special tool steel



			kg	
460.5690	3 pcs	Universal slide hammer set, 850 mm	13,20	

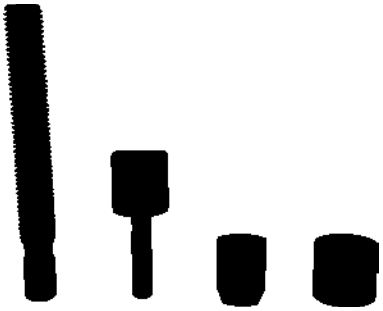
consists of:

		kg	
700.1415	Universal slide hammer 6+3kg, 850mm	12,00	
700.1423	Adaptor, p.e. double hook /pull hook	0,27	
700.1425	Double hook	0,75	

Cutting tool set for twin wheels

- ideally suited to release fixed twin wheels from each other
- also ideal as on-board tool (breakdown service)
- Enormous time and cost saving
- For machinery usage
- Special tool steel





			kg	
460.5285	4 pcs	Cutting tool set for twin wheels	2,38	

consists of:

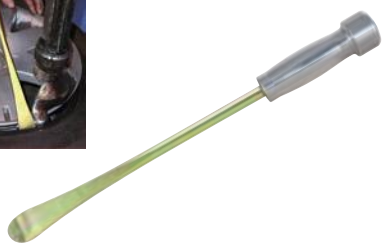
		g	
460.5286	Spindle, 230 mm	752	
460.5287	Pressure piece, Ø 44 mm	614	
460.5288	Removable nut, Ø 50 mm	419	
460.5289	Removable nut, Ø 48 mm	273	

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

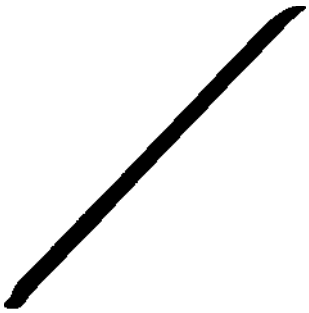




	Length mm	Replaceable plastic coating	g	
911.8199	500,0	911.8157	770	

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	

Rim closing lever for three-part rims

- ideally suited for the assembly of three-part rims
- Special shape
- Special tool steel



	Length mm	g	
460.4825	396,0	865	

double lever

- ideal geeignet für die Montage von TRILEX-Felgen
- Special shape
- Special tool steel



	Length mm	kg	
460.4780	1040,0	3,10	

Opening lever for three-piece rims

- ideally suited for the assembly and disassembly of three-piece rims
- Special shape
- Special tool steel



	Length mm	g	
460.4855	402,0	922	

Double lever for snap ring rims

- ideally suited for dismantling snap ring rims
- Special shape
- Special tool steel



	Length mm	g	
460.4850	360,0	685	

VALVE BORING TOOLS

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





	Ncm	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



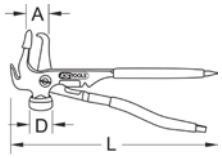


	Length mm	g	
150.2032	330,0	310	

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

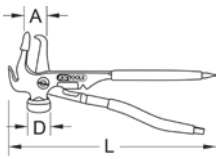




	A mm	D mm	L mm	g	
150.2025	26,0	22,0	250,0	450	

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 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	

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





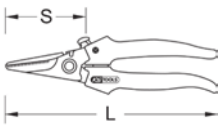
			g	
911.8130	4 pcs	19 - 22 - 26 - 38 mm	570	



Universal shear, serrated

- Toothing for cutting adhesive weights
- Self opening
- Safety locking device
- Also for cutting gaskets
- Ergonomic moulded plastic handle





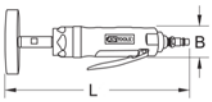


	Ø mm	L mm	S mm	g	
118.0075	24,0	145,0	32,0	130	

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	g	
515.5445	45,0	200,0	515.1243	760	

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	kg	
515.1249	26,5	100	1	0,26	
515.1369	26,5	100	6	1,56	

TYRE FITTING GREASE

	Ø mm	Length mm	g	



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, 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	

Tyre mounting grease 4 kg, gold

- Ideally suitable for the dismantling and assembly of tyres with steel or aluminium rims
- Very economical
- Preferably used for assembling of large and heavy tires (CV)
- 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
- Low power and time is needed through high lubricity
- The professional black paste advoids staining as with the white paste
- Working temperature -30° C to 50° C
- Supplied in a bucket

Application range: as for all large and heavy duty tires like trucks, agricultural and industrial tires. Not suitable for the assembly of car and motorcycle tires!



		kg	
100.4000	Tyre mounting grease 4 kg, gold	4,00	

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	

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	

TIRE PRESSURE SENSOR TOOLS

Commercial vehicle mounting 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	
100.1170	Commercial vehicle mounting tool for VDO REDI sensors	140	

TYRE REPAIR

Tyre vulcanisation set for commercial vehicles

- With 178 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: Vans, commercial vehicles, tractors, agricultural and construction machines





			g	
150.1080	5 pcs	Tyre vulcanisation set for commercial vehicles	900	

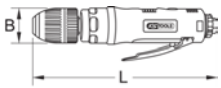
consists of:

		g	
150.1071	Seal paste, 70 g	70	
150.1082	Seal repair strips, 178mm, pack of 30	190	
150.1083	Seal nail remover short, long	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







3/8"

Technical data:

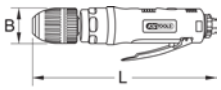
Chuck capacity:	0,6 - 6
Chuck thread reception:	3/8" x 24 UNF
Capacity:	186 Watt
No load current:	7000 r.p.m.
Vibration acceleration:	< 3,3 m/s²
Noise performance level:	97,4 dbA
Noise pressure level:	86,4 dbA
Air consumption:	240 l/min
Min. tube diameter:	3/8" - 10 mm
Operating pressure:	max. 6,3 bar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

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

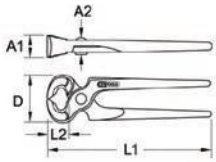




	Ø mm	Length mm	g	
331.0680	3,0	57,0	10	
331.0681	5,0	58,0	10	
331.0682	6,0	72,0	20	
331.0683	9,0	100,0	40	

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

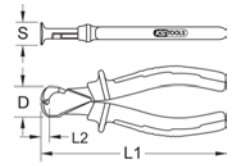




	A1 mm	A2 mm	D mm	L1 mm	L2 mm	g	
116.1404	18,0	19,0	26,0	190,0	17,0	350	
116.1401	20,0	19,0	29,0	220,0	17,0	400	
116.1400	25,0	20,0	36,0	250,0	17,0	400	
116.1403	26,0	20,0	37,0	280,0	17,0	500	

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

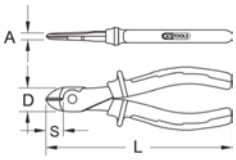




	D mm	L1 mm	L2 mm	S mm	g	
115.1015	31,0	160,0	7,0	24,0	270	

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)

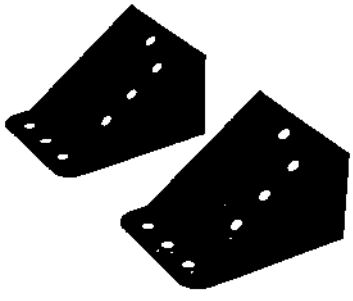
- for securing commercial vehicles and trailers against unintentional unrolling
- Optimal slip resistance
- No deformation
- Supplied in pairs
- Heavy execution
- made of robust steel



	Length mm	Height mm	Width mm	kg	
460.5535	326,0	204,0	161,0	4,80	

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	

LIFTING TOOLS

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	



Jack for forklifts, hydraulic 4 - 5 t

- Specially developed for forklifts, agricutural and industrial vehicles
- Combination lifting jack with scissor action
- Scissor capacity of 4 tons and cylinder capacity of 5 tons
- Steal wheels



	Max capacity t	Stroke way mm	min lift height mm	max lift height mm	Total length mm	kg	
160.0716	5,0	365,0	75,0	440,0	700,0	44,00	

Heavy duty jack / rack and pinion jack with long lever ratchet 2 t

- with a lifting capacity of 130 mm to 300 mm up to 2.0 t
- with a lifting capacity of 300 mm to 500 mm up to 1.6 t
- with a lifting capacity of 500 mm to 1,070 mm up to 0.5 t
- for daily use in vehicles, commercial vehicles and agricultural machinery
- also suitable for unloading vehicles, moving heavy objects and removing tree stumps

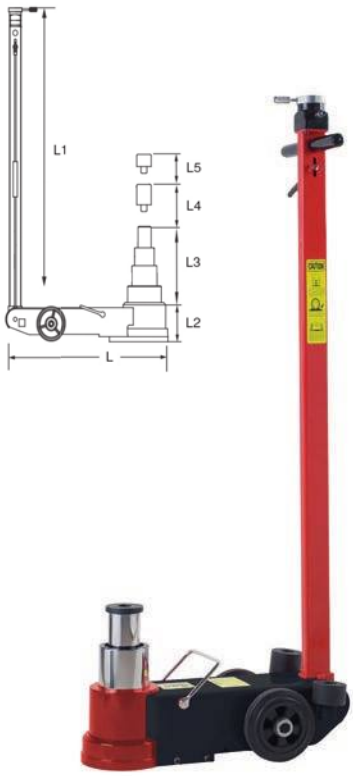




	Max capacity t	Stroke way mm	Min total height mm	Max total height mm	Length mm	kg	
460.5705	2,0	915,0	130,0	1060,0	1220,0	13,85	

Pneumatic hydraulic trolley jack 40 t / 20 t

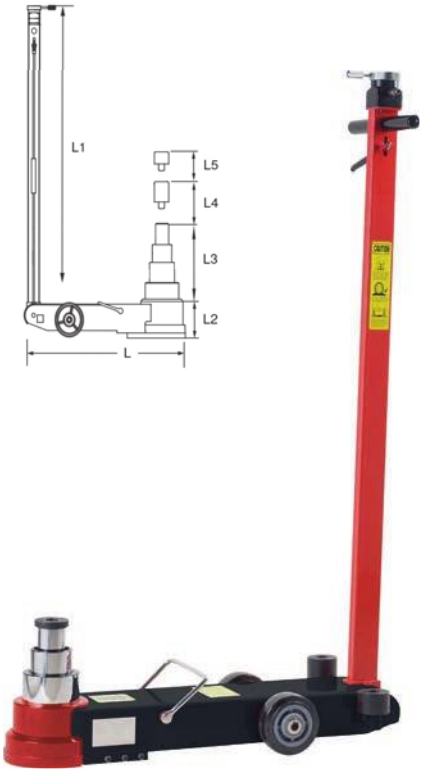
- Hydraulic jack for vehicles up to max. 40 t
- Large lifting base for safe standing
- Short and compact design
- Extremely light weight ideal for the mobile usage
- Overload protection through overload pressure valve
- Maximum lift is reached using one of the two adaptors included
- Very short and transportable design
- Folding handle
- Easy running oil and acid resistant solid rubber wheels
- Suitable for narrow spaces
- Ideally suited for daily workshop use
- Durable steel construction



	Max capacity t	L mm	L1 mm	L2 mm	L3 mm	L4 mm	L5 mm	kg
160.0742	40 / 20	600,0	1300,0	170,0	169,0	75,0	45,0	53,00

Pneumatic hydraulic trolley jack 40 t / 20 / 10 t

- Hydraulic jack for vehicles up to max. 40 t
- Large lifting base for safe standing
- Short and compact design
- Extremely light weight ideal for the mobile usage
- Overload protection through overload pressure valve
- Maximum lift is reached using one of the two adaptors included
- Very short and transportable design
- Folding handle
- Easy running oil and acid resistant solid rubber wheels
- Suitable for narrow spaces
- Ideally suited for daily workshop use
- Durable steel construction



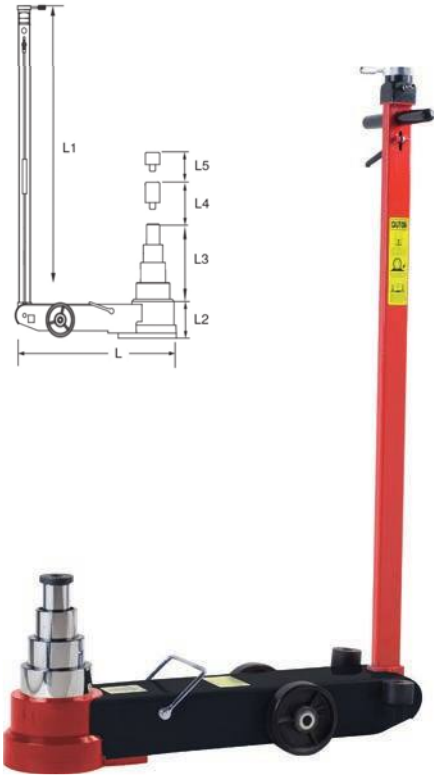
	Max capacity t	L mm	L1 mm	L2 mm	L3 mm	L4 mm	L5 mm	kg
160.0743	40 / 20 / 10	830,0	1380,0	130,0	159,0	75,0	45,0	44,00





Pneumatic hydraulic trolley jack 60 / 40 t / 22 / 11 t

- Hydraulic jack for vehicles up to max. 60 t
- Large lifting base for safe standing
- Short and compact design
- Extremely light weight ideal for the mobile usage
- Overload protection through overload pressure valve
- Maximum lift is reached using one of the two adaptors included
- Very short and transportable design
- Folding handle
- Easy running oil and acid resistant solid rubber wheels
- Suitable for narrow spaces
- Ideally suited for daily workshop use
- Durable steel construction

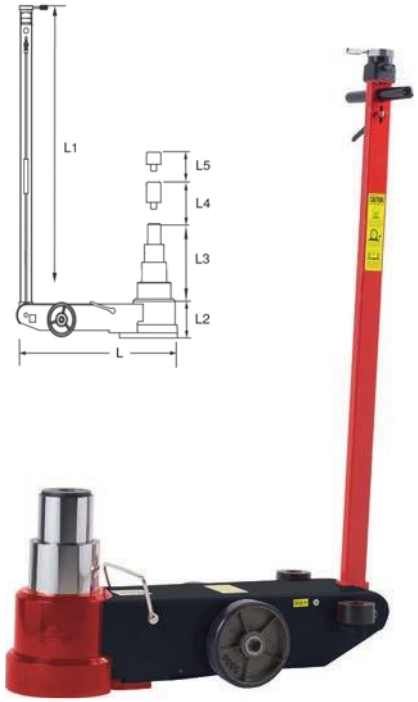


	Max capacity t	L mm	L1 mm	L2 mm	L3 mm	L4 mm	L5 mm	kg
160.0744	60/40/22/11	905,0	1380,0	150,0	243,0	75,0	45,0	66,00



Pneumatic hydraulic trolley jack 80 / 50 t

- Hydraulic jack for vehicles up to max. 80 t
- Large lifting base for safe standing
- Short and compact design
- Extremely light weight ideal for the mobile usage
- Overload protection through overload pressure valve
- Maximum lift is reached using one of the two adaptors included
- Very short and transportable design
- Folding handle
- Easy running oil and acid resistant solid rubber wheels
- Suitable for narrow spaces
- Ideally suited for daily workshop use
- Durable steel construction

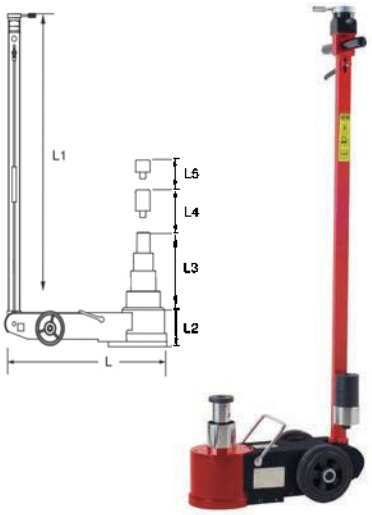


	Max capacity t	L mm	L1 mm	L2 mm	L3 mm	L4 mm	L5 mm	kg
160.0745	80 / 50	930,0	1380,0	230,0	213,0	75,0	45,0	106,00



Pneumatic hydraulic trolley jack 40 t / 20 t

- Hydraulic jack for vehicles up to max. 40 t
- Large lifting base for safe standing
- Short and compact design
- Extremely light weight ideal for the mobile usage
- Overload protection through overload pressure valve
- Maximum lift is reached using one of the two adaptors included
- Very short and transportable design
- Folding handle
- Easy running oil and acid resistant solid rubber wheels
- Suitable for narrow spaces
- Ideally suited for daily workshop use
- Durable steel construction



	Max capacity t	L mm	L1 mm	L2 mm	L3 mm	L4 mm	L5 mm	kg
160.0741	40 / 20	480,0	1300,0	150,0	139,0	75,0	45,0	40,00

Pneumatic hydraulic trolley jack 30 t / 15 t

- Hydraulic jack for vehicles up to max. 30t
- Large lifting base for safe standing
- Short and compact design
- Extremely light weight ideal for the mobile usage
- Overload protection through overload pressure valve
- Maximum lift is reached using one of the two adaptors included
- Very short and transportable design
- Folding handle
- Easy running oil and acid resistant solid rubber wheels
- Suitable for narrow spaces
- Ideally suited for daily workshop use
- Durable steel construction



	Max capacity t	L mm	L2 mm	L3 mm	L4 mm	L5 mm	kg
160.0739	30 / 15	430,0	150,0	139,0	75,0	45,0	24,00

Hydraulic steel trolley jack

- Slightly lower load depth for modern automobile car bodies
- Large base for safe standing
- Automatic ventilation of the hydraulic systems
- Overload protection through overload pressure valve
- Raising with the hand and foot lever is possible
- Foot pedal for the bridging of the empty stroke
- The lower area of the pump lever is coated with foam material
- Controlled releasing through the turning of the pump lever
- Lifting plate diameter 140 - 170 mm
- Good maneuverability through oil and acid resistant nylon direct castors
- Ideally suited for daily workshop use
- Durable steel construction



	Max capacity t	Stroke way mm	Min total height mm	Max total height mm	Total length mm	Spare lifting plate	kg
160.0703	10,0	400,0	170,0	570,0	1.560,0	160.0703-907	170,00

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

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 trestle 10 t

- 4 feet on each stand
- High level of stability
- Safety locking bolt with chain
- For heavy vehicles weights
- is particularly well suited in combination with a wheel gripper system for securing the load
- Made from solid steel



	Max load t	min lift height mm	max lift height mm	Stroke way mm	kg
460.5540	10	720,0	1190,0	470	23,50
460.5541	12	805,0	1213,0	408	29,30
460.5545	7	1295,0	1905,0	610	65,00
460.5546	12	1295,0	1905,0	610	78,00



TYRE TRANSPORT

Wheel lifter for commercial vehicle

- 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
- with 2 solid rubber guide rollers
- with improved stability and tilting safety
- ideal for changing truck, bus and fork lift tyres
- Triple adjustable tyre sizes
- perfect for tyre shops, garages and forwarding agents





Technical data:

Wheel carrier length:	220,0 mm
Effective stroke:	100,0 mm
Highest weight of the wheel:	250 kg
Reception of tyre:	6,5" - 22,5"
Smallest diameter of the wheel:	600,0 mm
Largest diameter of the wheel	1100,0 mm
Maximum clamping width:	620,0 mm
Average clamping width:	450,0 mm
Minimum clamping width:	290,0 mm

		kg
160.0250	Wheel lifter for commercial vehicle	13,50

Hydraulic wheel lift 1 t

- hydraulic wheel lift up to 1 t
- height infinitely variable
- with chain to secure
- easy and flexible transport even in small rooms
- for effortless collection and transport of tyres and rims
- 3 swivel castors ensure a secure footing
- Overload protection through pressure relief valve
- Durable steel construction





Technical data:

Highest weight of the wheel:	1000 kg
Wheel carrier length:	64,0 mm
Lift height min.:	75,0 mm
Lift height max.:	230,0 mm

	Length mm	Width mm	Height mm	kg
460.5490	1060,0	1090,0	860,0	68,00

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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

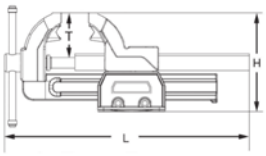


	Jaw length	Jaw length mm	Clamping range mm	kg	
914.0004	4"	100,0	120,0	8,70	
914.0005	5"	130,0	140,0	11,00	
914.0006	6"	150,0	170,0	14,50	
914.0008	8"	200,0	200,0	20,50	

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	100,0	125,0	70,0	140,0	320,0	12,0	5,00	
914.0031	125,0	155,0	80,0	180,0	395,0	14,0	11,00	
914.0036	150,0	180,0	98,0	220,0	485,0	16,0	20,00	
914.0041	175,0	205,0	110,0	240,0	550,0	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	

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 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

Service trolley

- Ideally suited as mobile PC station, exhaust gas test station or as storage and operation trolley for diagnostic equipment
- Also suitable for customer service entrainment
- Robust and stable steel construction with 1,0 mm sheet steel distortion resistant
- High level of stability
- Lockable door
- With several openings for passing the cord
- Ball bearing drawer runners
- Drawers are extendable
- Front side edges are rounded
- Internal hinges and cylinder lock
- 2 shelves, universal adjustable in height
- Four castor wheels Ø 125 mm with rolling and turning brake
- Electrostatic powder coating





Technical data:

Drawer internal dimensions:	300 x 450 x 55 mm
Total load capacity:	150 kg
Load capacity of each drawer:	25 kg

	Total depth mm	Width mm	Depth mm	kg
865.0020	1155,0	500,0	500,0	47,00

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 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 surrounds 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	

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	

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	

Universal Grubenbrück - at floor level including safety railing

- suitable for pits without rail guide
- with safety bar
- non-slip grate
- all parts plastic coated in signal colours
- required according to the safety regulations of the German professional association BGR 157, 5.6 (5.6.5)



		Max load kg	min. width mm	Max width mm	kg	
460.5670	2 pcs	400	870,0	1150,0	45,00	

consists of:

		kg	
460.5671	Pit bridge, level-floor, 870-1150mm	32,60	
460.5672	Safety landing, 1100 x 910 mm	12,40	

Universal pit bridge including safety railing

- suitable for pits with rail guide
- with safety bar
- non-slip grate
- all parts plastic coated in signal colours
- required according to the safety regulations of the German professional association BGR 157, 5.6 (5.6.5)



		Max load kg	min. width mm	Max width mm	kg	
460.5675	2 pcs	400	870,0	1150,0	45,00	

consists of:

		kg	
460.5676	Pit bridge, 870-1150mm	32,60	
460.5672	Safety landing, 1100 x 910 mm	12,40	



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 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 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





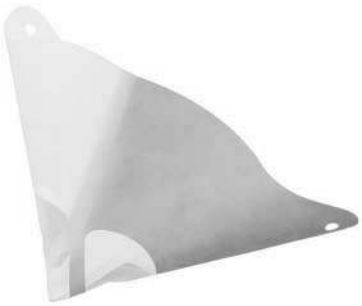
Technical data:
max. Load: 100 kg

	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

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	kg	
500.8056	polypropylene	transparent	0,4	25	0,42	
500.8057	polypropylene	transparent	0,65	25	0,62	
500.8058	polypropylene	transparent	1,3	25	1,10	
500.8059	polypropylene	transparent	2,24	25	1,70	

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

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 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 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

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

Wheel lifter for commercial vehicle

- 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
- with 2 solid rubber guide rollers
- with improved stability and tilting safety
- ideal for changing truck, bus and fork lift tyres
- Triple adjustable tyre sizes
- perfect for tyre shops, garages and forwarding agents





Technical data:

Wheel carrier length:	220,0 mm
Effective stroke:	100,0 mm
Highest weight of the wheel:	250 kg
Reception of tyre:	6,5" - 22,5"
Smallest diameter of the wheel:	600,0 mm
Largest diameter of the wheel	1100,0 mm
Maximum clamping width:	620,0 mm
Average clamping width:	450,0 mm
Minimum clamping width:	290,0 mm

		kg
160.0250	Wheel lifter for commercial vehicle	13,50

Hydraulic wheel lift 1 t

- hydraulic wheel lift up to 1 t
- height infinitely variable
- with chain to secure
- easy and flexible transport even in small rooms
- for effortless collection and transport of tyres and rims
- 3 swivel castors ensure a secure footing
- Overload protection through pressure relief valve
- Durable steel construction





Technical data:

Wheel carrier length:	64,0 mm
Lift height min.:	75,0 mm
Lift height max.:	230,0 mm

	Length mm	Width mm	Height mm	kg	
460.5490	1060,0	1090,0	860,0	68,00	

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, 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	

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
500.8115	100	5,45

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



	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



	B mm	Height min in mm	Height max in mm	kg
500.8030	370,0	400,0	540,0	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

	Substitute roll	kg
500.8004	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





	L mm	B mm	H mm	kg
500.8090	1030,0	480,0	115,0	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



	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
- 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





	L mm	B mm	H mm	kg
500.8000	1200,0	430,0	145,0	12,40

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





	L mm	B mm	H mm	kg
500.8011	1040,0	490,0	85,0	9,50

WHEEL CHOCKS

Wedge (pair)

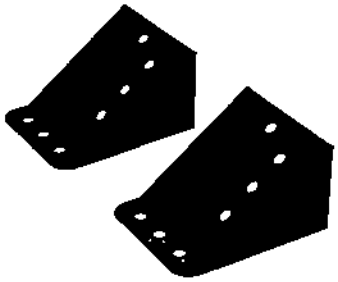
- for securing commercial vehicles and trailers against unintentional unrolling
- Optimal slip resistance
- No deformation
- Supplied in pairs
- Heavy execution
- made of robust steel



	Length mm	Height mm	Width mm	kg
460.5535	326,0	204,0	161,0	4,80

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

AXLE STANDS AND RAMPS

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

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 trestle 10 t

- 4 feet on each stand
- High level of stability
- Safety locking bolt with chain
- For heavy vehicles weights
- is particularly well suited in combination with a wheel gripper system for securing the load
- Made from solid steel



	Max load t	min lift height mm	max lift height mm	Stroke way mm	kg
460.5540	10	720,0	1190,0	470	23,50

Steel trestle 12 t

- 4 feet on each stand
- High level of stability
- Two rollers
- Safety locking bolt with chain
- For heavy vehicles weights
- is particularly well suited in combination with a wheel gripper system for securing the load
- Made from solid steel



	Max load t	min lift height mm	max lift height mm	Stroke way mm	kg
460.5541	12	805,0	1213,0	408	29,30

Steel trestle 7 t

- 3-foot chassis stand
- High level of stability
- with 3 swivel castors
- Safety locking bolt with chain
- For heavy vehicles weights
- is particularly well suited in combination with a wheel gripper system for securing the load
- Made from solid steel



	Max load t	min lift height mm	max lift height mm	Stroke way mm	kg
460.5545	7	1295,0	1905,0	610	65,00

Steel trestle 12 t

- 3-foot chassis stand
- High level of stability
- with 3 swivel castors
- Safety locking bolt with chain
- For heavy vehicles weights
- is particularly well suited in combination with a wheel gripper system for securing the load
- Made from solid steel



	Max load t	min lift height mm	max lift height mm	Stroke way mm	kg
460.5546	12	1295,0	1905,0	610	78,00

LIFT TECHNOLOGY

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

Jack for forklifts, hydraulic 4 - 5 t

- Specially developed for forklifts, agricultural and industrial vehicles
- Combination lifting jack with scissor action
- Scissor capacity of 4 tons and cylinder capacity of 5 tons
- Steal wheels



	Max capacity t	Stroke way mm	min lift height mm	max lift height mm	Total length mm	kg
160.0716	5,0	365,0	75,0	440,0	700,0	44,00

Heavy duty jack / rack and pinion jack with long lever ratchet 2 t

- with a lifting capacity of 130 mm to 300 mm up to 2.0 t
- with a lifting capacity of 300 mm to 500 mm up to 1.6 t
- with a lifting capacity of 500 mm to 1,070 mm up to 0.5 t
- for daily use in vehicles, commercial vehicles and agricultural machinery
- also suitable for unloading vehicles, moving heavy objects and removing tree stumps





	Max capacity t	Stroke way mm	Min total height mm	Max total height mm	Length mm	kg
460.5705	2,0	915,0	130,0	1060,0	1220,0	13,85



Hydraulic steel trolley jack 10 t

- Slightly lower load depth for modern automobile car bodies
- Large base for safe standing
- Automatic ventilation of the hydraulic systems
- Overload protection through overload pressure valve
- Raising with the hand and foot lever is possible
- Foot pedal for the bridging of the empty stroke
- The lower area of the pump lever is coated with foam material
- Controlled releasing through the turning of the pump lever
- Lifting plate diameter 140 - 170 mm
- Good maneuverability through oil and acid resistant nylon direct castors
- Ideally suited for daily workshop use
- Durable steel construction

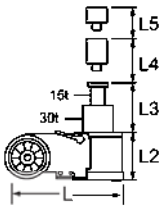


	Max capacity t	Stroke way mm	Min total height mm	Max total height mm	Total length mm	Spare lifting plate	kg
160.0703	10,0	400,0	170,0	570,0	1.560,0	160.0703-907	170,00

Pneumatic hydraulic trolley jack 30 t / 15 t

- Hydraulic jack for vehicles up to max. 30t
- Large lifting base for safe standing
- Short and compact design
- Extremely light weight ideal for the mobile usage
- Overload protection through overload pressure valve
- Maximum lift is reached using one of the two adaptors included
- Very short and transportable design
- Folding handle
- Easy running oil and acid resistant solid rubber wheels
- Suitable for narrow spaces
- Ideally suited for daily workshop use
- Durable steel construction







	Max capacity t	L mm	L2 mm	L3 mm	L4 mm	L5 mm	kg
160.0739	30 / 15	430,0	150,0	139,0	75,0	45,0	24,00

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



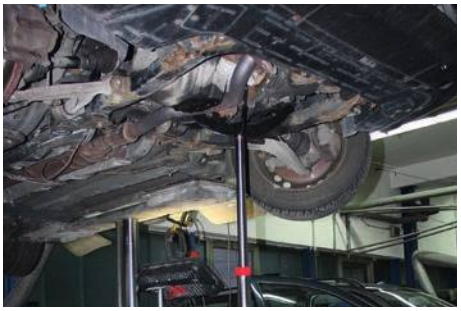
	Max load kg	min lift height mm	max lift height mm	Length mm	Width mm	kg
460.1180	1000	300,0	750,0	910,0	480,0	63,84

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



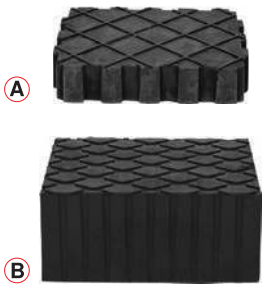
	Max load kg	min lift height mm	max lift height mm	Length mm	Width mm	kg
460.1195	1500	295,0	1005,0	1080,0	650,0	132,00



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	A	155,0	125,0	35,0	0,92	
160.0393	B	160,0	120,0	70,0	2,04	

ENGINE STAND

Universal engine and gear holder with rotary function

- ideally suited for work on dismantled engines, transmissions and differential gears
- Interchangeable mounting plates optionally available
- Mounting plate 360° rotatable by hand crank
- Stable construction
- Left- and right-hand rotation
- safe stand due to five rotating feet
- low space requirement when retracted
- Distance of telescopic arms 775 mm





Technical data:

max. Load: 1.360 kg

	Length mm	Width mm	Height mm	kg	
460.0850	1150-1600	1000,0	1350,0	347,00	

Gear holder plate for universal motor and gear holder

- ideally suited for work on dismounted gearboxes
- Stable construction
- Special plates optionally available
- Special tool steel
- for use with universal motor and gear holder (460.0850)





		kg	
460.1565	Gear holder plate for universal motor and gear holder	103,00	

Differential fixing plate for universal motor and gear holder

- ideally suited for work on dismounted differentials
- Stable construction
- Special plates optionally available
- Special tool steel
- for use with universal motor and gear holder (460.0850)



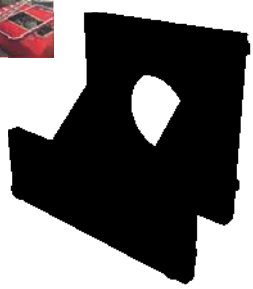


		kg	
460.1665	Differential fixing plate for universal motor and gear holder	28,00	

Motor mounting plate for DAF

- Ideally suited to working on removed engines
- Stable construction
- Special tool steel
- for use with universal motor and gear holder (460.0850)





		kg	
460.5550	Motor mounting plate for DAF	12,50	

Universal mounting plate for universal engine and gear holder

- ideally suited for work on dismantled engines, transmissions and differential gears
- 6 pickup points are adjustable in angle and distance
- Stable construction
- for use with universal motor and gear holder (460.1565)



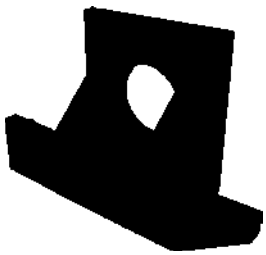


		kg	
460.5260	Universal mounting plate for universal engine and gear holder	23,00	

Motor mounting plate for Isuzu (6HK1)

- Ideally suited to working on removed engines
- Stable construction
- Special tool steel
- for use with universal motor and gear holder (460.0850)





		kg	
460.5551	Motor mounting plate for Isuzu (6HK1)	13,00	

Gearbox holder adapter plate for Isuzu

- ideally suited for work on dismounted gearboxes
- Stable construction
- Special tool steel
- for use with universal motor and gear holder (460.1565)

Application range: Isuzu Gearbox MZW 6P





		kg	
460.5261	Gearbox holder adapter plate for Isuzu	16,00	

Motor mounting plate for Isuzu (6WG1 / 6WF1)

- Ideally suited to working on removed engines
- Stable construction
- Special tool steel
- for use with universal motor and gear holder (460.0850)





		kg	
460.5553	Motor mounting plate for Isuzu (6WG1 / 6WF1)	27,00	

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	

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
- Centre distance: 400 mm
- Can be combined with work shop crane for units like the engine block, transmission, etc.

Application range: Volvo FH, FM, FMX and NH Series



Technical data:
max. Load: 2.000 kg

	Width mm	Height mm	kg	
460.5255	445,0	190,0	5,40	





COLLECTION CONTAINER

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

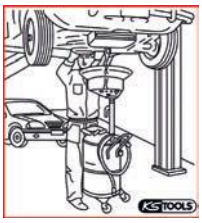
consists of:

		kg
160.0791	Vacuum fluid extractor suction pump 9.5 litre	3,71
160.0792	Adaptor and tube 4x8mm x1,5m	0,20
160.0793	Main probe 7.8 x 9.8 mm x 1 m	0,20
160.0794	Probe 5.3 x 6.7 mm x 1 m	0,20
160.0795	Probe 3.5 x 4.5 mm x 1 m	0,20



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

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

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

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:

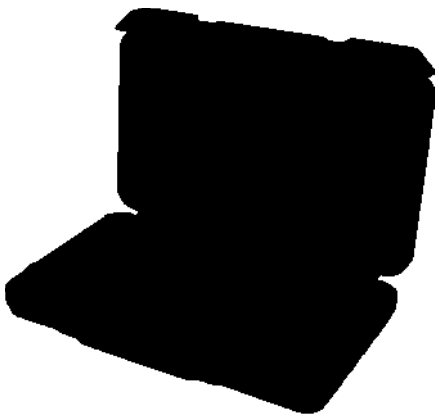
		kg
150.9258	Transmission oil filling device without adapter	3,50
150.9680	Transmission oil filling adapter set 20 pcs	1,56





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

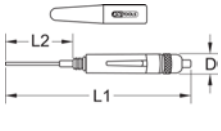


	Content	kg
515.3361	100 ml	0,25
515.3362	1000 ml	1,10

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	

consists of:

		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

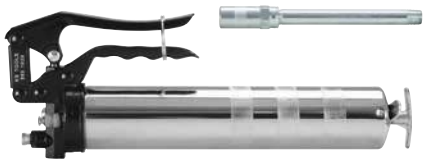
- For cartridges and buckets and/or also for loose grease
- Fill capacity 400g
- Flexible tube
- Mirror polished



	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





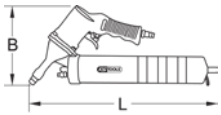
Technical data:

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





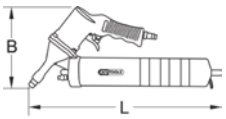
Technical data:

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	

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"	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





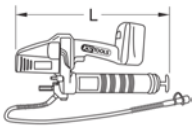
			kg	
980.1100	7 pcs	Grease gun adaptor set	1,99	

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	

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	

Grease nipple assortment

- in accordance with DIN 71412
- In plastic storage case





			g	
970.0030	110 pcs	Grease nipple assortment	500	

60 x		M6 x1 mm/0° / DIN 71412	
10 x		M8 x1 mm/0° / DIN 71412	
10 x		M10x1 mm/0° / DIN 71412	
5 x		M6 x1 mm/45° / DIN 71412	
5 x		M8 x1 mm/45° / DIN 71412	
5 x		M10x1 mm/45° / DIN 71412	
5 x		M6 x1 mm/90° / DIN 71412	
5 x		M8 x1 mm/90° / DIN 71412	
5 x		M10x1 mm/90° / DIN 71412	

Greasing nipples assortment, metric & imperial

- In plastic storage case



			g	
970.0360	70 pcs	Greasing nipples assortment, metric & imperial	410	

10 x		1/8"x27,0 mm / DIN 71412	
20 x		1/4"x28,0 mm / DIN 71412	
10 x		6x 1,0 mm / DIN 71412	
5 x		8x 1,0 mm / DIN 71412	
5 x		10x 1,0 mm / DIN 71412	
5 x		1/8"x27,0 mm/45° / DIN 71412	
5 x		1/4"x28,0 mm/45° / DIN 71412	
5 x		1/8"x27,0 mm/90° / DIN 71412	
5 x		1/4"x28,0 mm/90° / DIN 71412	

Mobile compressed air lubricator, 50:1 pump ratio, 50-60 kg

- For working with grease up to NLGI2
- Optimal for narrow places or hard-to-reach places
- Practical one-man operation
- for barrel goods 50-60kg
- quick and clean drum change
- clean and complete emptying of the drum
- For mobile use as well as stationary



Technical data:

NLGI class:	< 2
Output pressure:	600 bar
Capacity:	60000 g
Tube length:	4 m
Air consumption:	230 l/min
Operating pressure:	5-12 bar
Connection thread:	1/4"PT

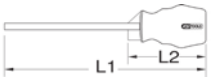
	Length mm	Width mm	Height mm	kg
460.5695	600,0	600,0	1180,0	27,00

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





	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





		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

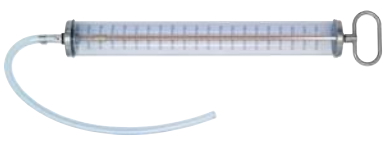
- Ideal for bleeding and filling of fluids
- With ball valve to select between suction and pressure
- Suck and press with every way
- Wear-resistant and temperature resistant
- For difficult to reach openings
- With 2 tubes
- Suction tube clear Ø I x E: 10x16 mm, length 600 mm
- Pressure tube fabric-reinforced 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

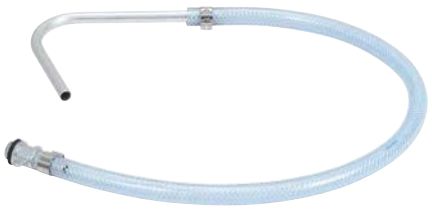
- Fabric-reinforced
- For 150.9250



	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



PRESSURE PUMP VAPORISER

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

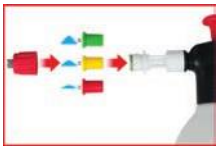




		kg
150.8261	5	1,14
150.8262	7	1,38

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





150.8267	1,8	440

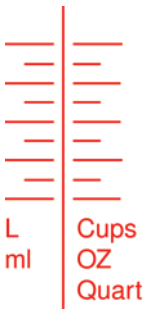
MEASURING BEAKER, JUG AND FUNNEL

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







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	
500.8056	polypropylene	transparent	0,4	25	0,42
500.8057	polypropylene	transparent	0,65	25	0,62
500.8058	polypropylene	transparent	1,3	25	1,10
500.8059	polypropylene	transparent	2,24	25	1,70

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	
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	930	

Floor stand for paper cleaning roll

- For all common paper cleaning rolls
- Wide roll attachment of max. 300 mm
- Stable steel pipe frame





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
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



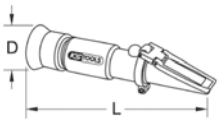
	Length mm	B mm	g	
800.0151	240,0	140,0	850	

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:

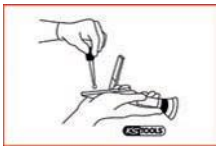
Battery acid:	acid density (measuring range 1.1 to 1.4 kg/l)
Coolant water Propylene:	temperature resistance (measuring range 0° to -50°C)
Coolant water Ethylene:	temperature resistance (measuring range 0° to -50°C)
Windscreen water:	antifreeze (measuring range 0° to -40° C)

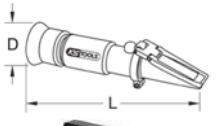
	D mm	L mm	Glass face mm	g	
550.1290	40,0	149,0	40 x 13	630	

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	

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	

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"

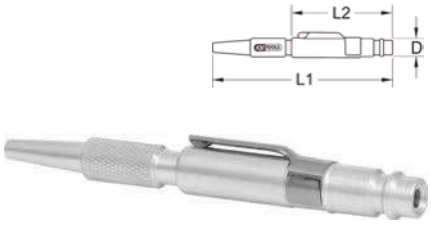
Tube length: 4 m

	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



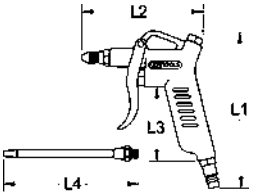
Technical data:

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	

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:

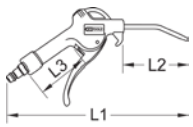
Input pressure:	max. 15 bar
Operating pressure:	max. 6,3 bar (90 psi)
Max. flow rate:	300 l/min
Noise pressure level:	90 dbA
Connection thread:	1/4"PT

	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







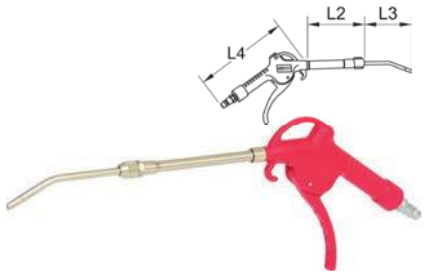
Technical data:

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	

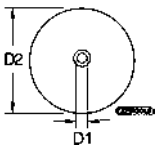
consists of:

		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	

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	

Telescopic pneumatic blow out pistol with protective shield

- 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





			g	
515.1906	2 pcs	Telescopic pneumatic blow out pistol with protective shield	250	

consists of:

		g	
515.1907	Air operated blow pistol, telescopic, 90-190mm	200	
515.1912	Protective shield for compressed-blowing pistols Ø100mm	50	

Pneumatic air blow gun, long

- With 90° side nozzle and Venturi nozzle
- Ideal for cleaning and removing of foreign objects also in hard to reach places
- Grip area with insulated lance to protect it from cold
- Controllable air volume
- With hanging function
- Direct air coupling suitable for connection
- Easy to operate
- Long execution
- Includes 1/4" coupling connector
- Increased efficiency due to Venturi nozzle
- 90° side nozzle enables cleaning of cooling fins
- Ultra light robust housing from special plastic
- Metal pipe





Technical data:

Input pressure:	max. 15 bar
Operating pressure:	max. 6,3 bar (90 psi)
Max. flow rate:	540 l/min
Noise pressure level:	90 dbA
Connection thread:	1/4"PT

			g	
515.1915	3 pcs	Pneumatic air blow gun, long	510	

consists of:

		g	
515.1916	Pneumatic blow out pistol, 1100 mm	400	
515.1917	90° side nozzle	20	
515.1918	Venturi nozzle	65	

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

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.





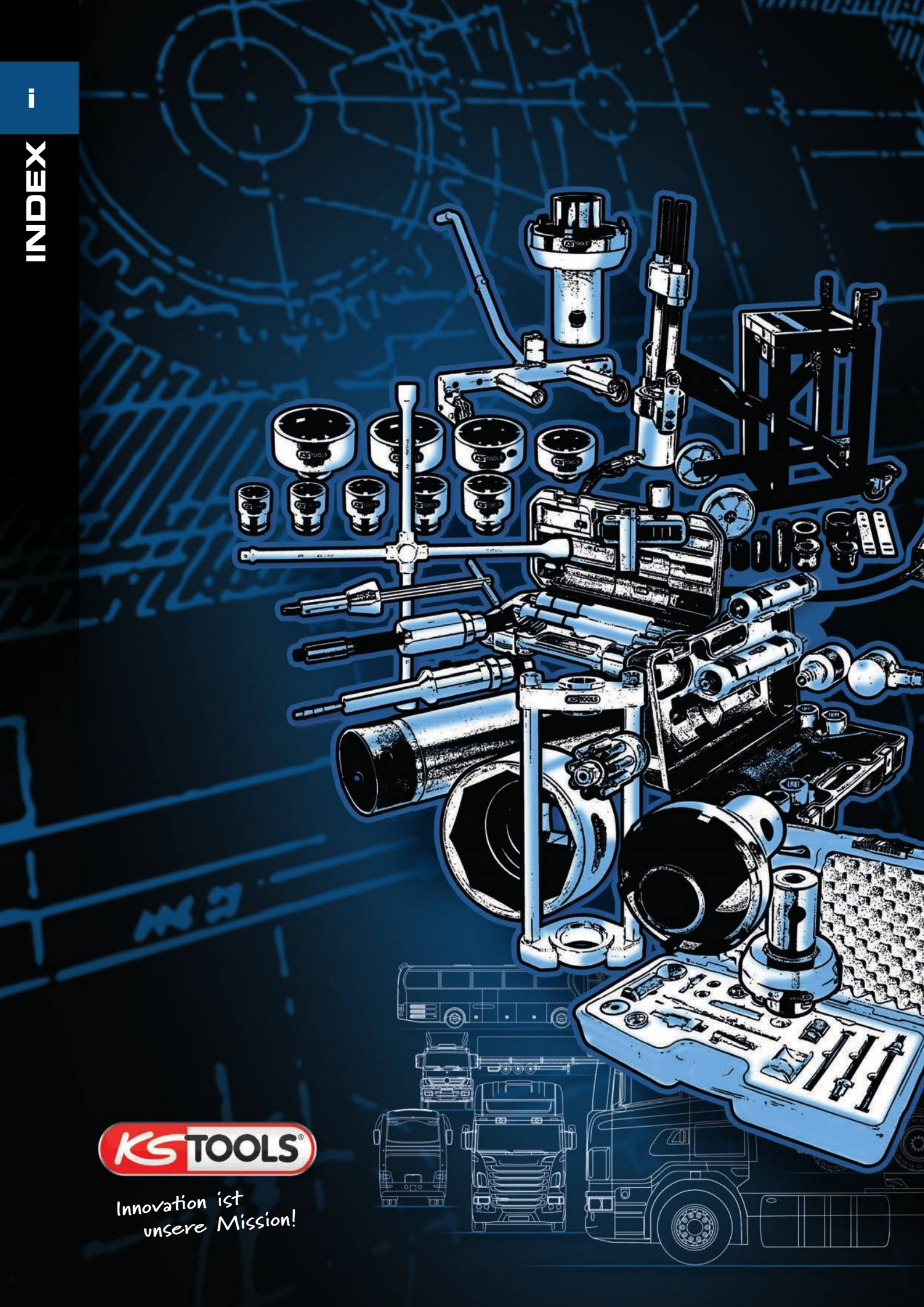
			g
960.1175	5 pcs	Digital heat blow gun set	850

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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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

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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 - AUXILIARY DRIVE BELT / ALTERNATOR

9 EXHAUST SYSTEM / CATALYSERS

10 AIR CONDITIONING

11 BATTERY SERVICE

12 ELECTRICAL / ELECTRONIC TOOLS

13 HYBRID / HIGH-VOLTAGE TOOLS

14 GEARBOX

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