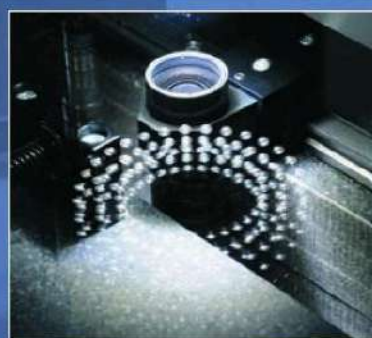




Measuring instruments and systems



more than
75 years
of quality
in Europe

precision measuring instruments
mechanical - optical - electronical
3D CNC coordinate measuring machines

2025/2026

Schut Geometrical Metrology



Schut Netherlands



SGM Germany

Expert advice

Our technical advisors provide you a clear explanation and expert advice. Speak directly to a specialist. Our advisors are happy to discuss the possibilities with you and find a suitable measurement solution.



Besides products displayed in this catalog, various other products can be supplied. You can also contact us for products that vary with the standard design or for custom measuring fixtures.

Selection and quality

We aim at supplying a wide lineup of geometrical measuring instruments and systems. In this specialized catalog we made an extensive selection of more than 38000 sales products in different price ranges. Besides products from well-known manufacturers we supply our own brand Filetta with an attractive price.



ISO 9001 certification

Schut Geometrical Metrology is ISO 9001-2015 certified. We have established a quality management system that meets the demands of the international quality standards. Our quality management ensures that all activities are comprehensively planned, managed and controlled.

The management of Schut Geometrische Meettechniek b.v. commits itself to conducting all activities in accordance with the defined requirements in the scope of the ISO-9001 declaration.



SCHUT.COM

Service and support

Our specialized service and support departments assist you with various technical assignments.

For repairs, our service department can assist you, with many years of experience in geometrical metrology and a large stock of spare parts. The possibility of performing most repairs internally, saves you cost and time.

Our support department provides you advice, training, online support and custom applications for the DeMeet measuring machines.



Calibration service

Some products are supplied with an manufacturer measuring report or declaration of conformity. In many cases this suits a quality system. When a traceable measuring report is required we can arrange this through one of our calibration-partners.



DeMeet 3D CNC

DeMeet 3D CNC measuring machines Video, multi-sensor and touch probe

The DeMeet 3D CNC coordinate measuring machines provide automatic, user-independent quality control with measuring results traceable to the international length standard. The DeMeet measuring machines are available in Video (optical) and Combo model (multi-sensor for combined video and touch probe measurements).

Logistics

You can reach our sales department on working days from 8.30 until 17.00 (Friday: 16.00). Orders can be placed by e-mail or telephone. We guarantee a fast and accurate processing. We aim for orders placed before 15.00 to ship within the same day (provided that the items are in stock). The terms of sales and delivery can be found in the last part of this catalog.

A large stock of products is essential to serve you as quickly as possible. That is why we have more than 170000 items on stock that we ship directly from our warehouse.



Regional coverage

Schut Geometrical Metrology (Schut Geometrische Meettechniek bv) is an international organization, founded in 1949, with five offices throughout Europe, specialized in the development, production and sales of precision measuring instruments and systems.

Service and sales activities are performed by our company group or through an international network of experienced distributors.



Schut in Europe

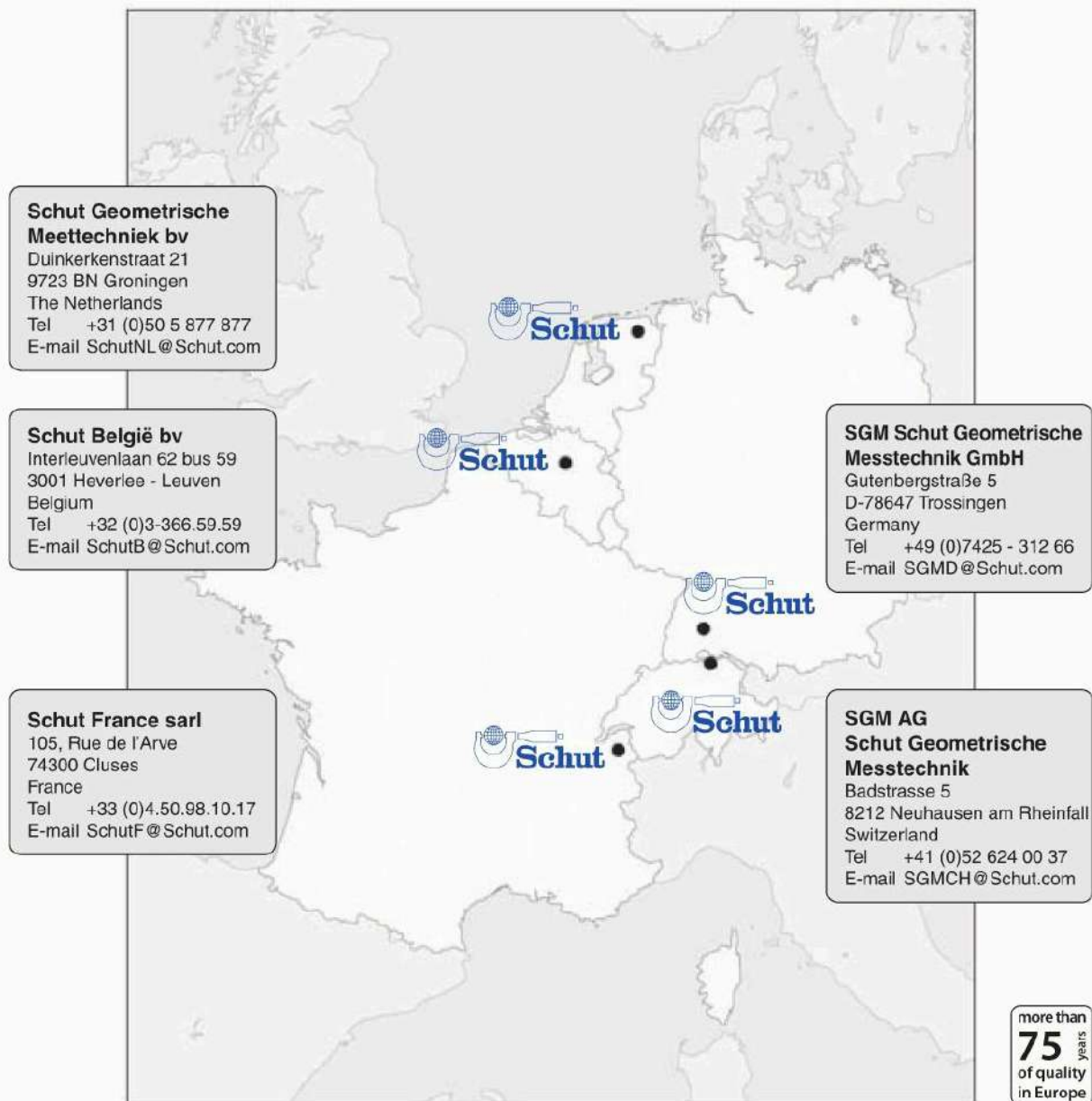


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Magnescale digital length measuring and gauge systems

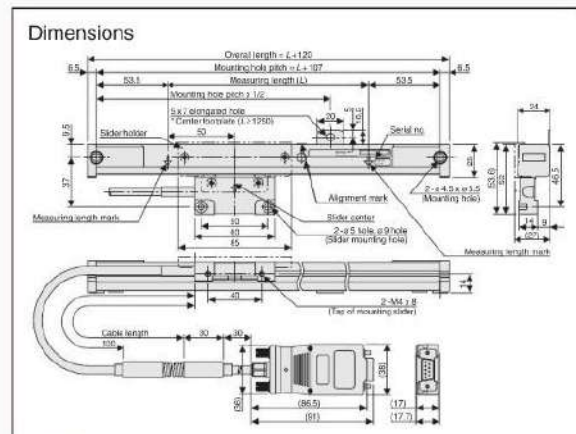


001.001.1 EN 20250702

Magnescale SJ700A scale systems with favourable price-performance ratio

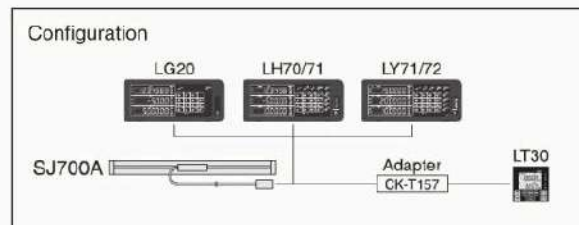
The SJ700A scales are an excellent choice for applications (lathes, milling machines) where a resolution of 5 µm is sufficient. A real Magnescale with a favourable price-performance ratio.

- Measuring range: 0 - 1600 mm.
- Highest resolution: 5 µm.
- Accuracy at 20°C:
 - $L \leq 1250 \text{ mm}$: $\pm 10 \text{ µm}$,
 - $L \leq 1600 \text{ mm}$: $\pm 15 \text{ µm}$.
- Linear expansion coefficient: $(12 \pm 1) \cdot 10^{-6} / ^\circ\text{C}$.
- Operating temperature: 0 to 40°C.
- Cross-section: 24 x 25 mm.
- Total length = $L + 120 \text{ mm}$.
- Cable length (standard):
 - $L \leq 800 \text{ mm}$: 3 m,
 - $L \leq 1600 \text{ mm}$: 5 m.
- Resistant to oil, chips and shocks, and reliable in the harshest environments.
- Protection: IP54.



Item No.	Type	Measuring range/mm	Price EUR
346.823	SJ700A-015	150	407.00
346.824	SJ700A-025	250	407.00
346.825	SJ700A-035	350	407.00
346.826	SJ700A-040	400	421.00
346.827	SJ700A-050	500	444.00
346.828	SJ700A-065	650	478.00
346.829	SJ700A-080	800	514.00
346.830	SJ700A-095	950	622.00
346.831	SJ700A-105	1050	689.00
346.832	SJ700A-125	1250	810.00
346.833	SJ700A-140	1400	946.00
346.834 ¹	SJ700A-160	1600	1,150.00
495.302	Mounting kit for lathes (2 axes)		140.00
495.303	Mounting kit for milling machines (3 axes)		192.00
346.867	Adapter cable CK-T157		92.00

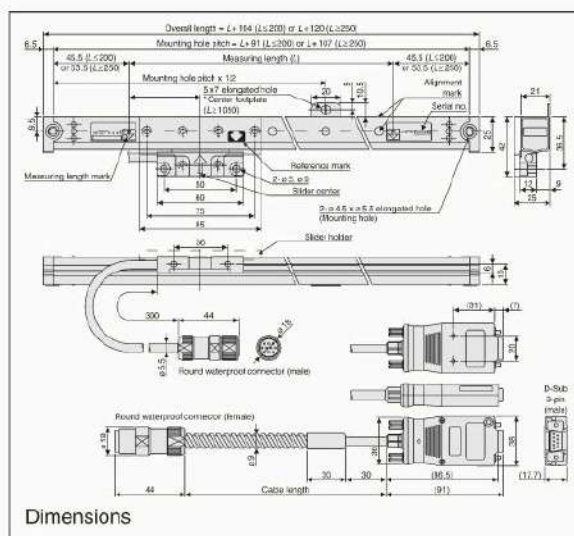
¹ Delivery ex Groningen, Netherlands.



Magnescale GB-ER universal scale systems IP65

The GB-ER beats all competition. An excellent resistance against workshop conditions (oil, chips and shocks), a high resolution (0.5 μm) and an expansion coefficient the same as the machine itself. Reliable for many years and almost maintenance free as all magnetic scales of Magnescale.

- Measuring range: 0 - 2200 mm.
- Highest resolution: 0.5 μm .
- Accuracy at 20°C: $\pm(2.5 + 2.5L) \mu\text{m}$ (L in m).
- Max. measuring speed: 60 m/min.
- Output: A/B phase and reference point Z (TTL line driver RS422).
- Linear expansion coefficient: $(11 \pm 1) \cdot 10^{-6}/^\circ\text{C}$.
- Operating temperature: 0 to 40°C.
- Cross-section: 21 x 25 mm.
- Total length =
 $L \leq 200 \text{ mm: } L + 104 \text{ mm,}$
 $L \leq 2200 \text{ mm: } L + 120 \text{ mm.}$
- Cable length: 3 m.
- Reference point in the center (standard).
- Protection: IP65.
- Power supply: $5 \pm 5\%$ Vdc, 200 mA.



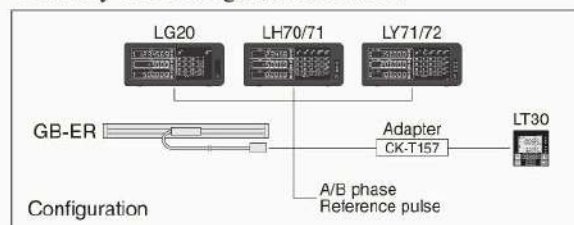
Dimensions



Item No.	Type	Measuring range/mm	Price EUR
346.800	GB-5ER	50	543.00
346.801	GB-10ER	100	543.00
346.802	GB-15ER	150	543.00
346.803	GB-20ER	200	543.00
346.804	GB-25ER	250	543.00
346.805	GB-30ER	300	543.00
346.806	GB-35ER	350	543.00
346.807	GB-40ER	400	603.00
346.808	GB-45ER	450	649.00
346.809	GB-50ER	500	700.00
346.810	GB-55ER	550	750.00
346.811	GB-60ER	600	798.00
346.812	GB-65ER	650	848.00
346.813	GB-75ER	750	946.00
346.814	GB-85ER	850	1,057.00
346.815	GB-95ER	950	1,182.00
346.816	GB-105ER	1050	1,289.00
346.817	GB-125ER	1250	1,491.00
346.818	GB-140ER	1400	1,663.00
346.819 ¹	GB-160ER	1600	1,856.00
346.820 ¹	GB-185ER	1850	2,136.00
346.821 ¹	GB-205ER	2050	2,407.00
346.822 ¹	GB-220ER	2200	2,611.00
324.099	Lubricant 300 ml		12.40

For mounting kits refer to SJ700A.

¹ Delivery ex Groningen, Netherlands.

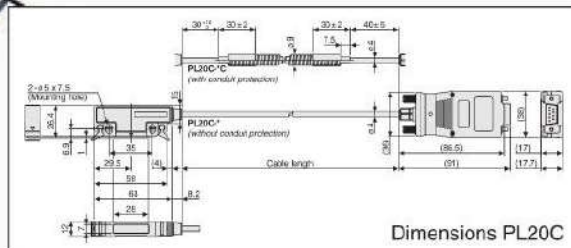
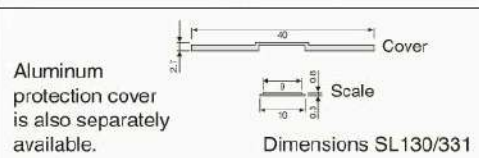


Item No.	Type	Length/m	Price EUR
Extension cables with stainless steel conduit protection:			
346.260	CE10-01C	1	146.00
346.261	CE10-03C	3	146.00
346.262	CE10-05C	5	174.00
346.263	CE10-10C	10	268.00
346.867	Adapter cable CK-T157		92.00

Magnescale Digiruler SL130 scale systems for a large measuring range IP65

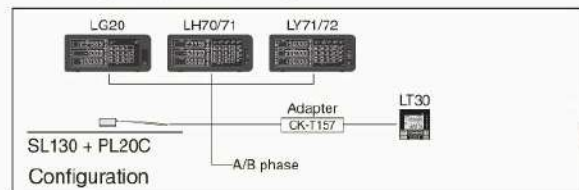
The Digiruler SL130 is very suitable as a low-priced longitudinal axis scale, for example in combination with the SJ700A or GB-ER scales on the other axes. The scale is mounted with the self-adhesive back on a flat surface and protected by a standard supplied aluminum (optionally stainless steel) cover.

- Measuring range: 0 - 30 000 mm.
- Highest resolution: 0.01 mm.
- Accuracy at 20°C (L in m):
 - $L \leq 7000$ mm: $\pm(25 + 5L) \mu\text{m}$,
 - $L \leq 10000$ mm: $\pm(35 + 5L) \mu\text{m}$,
 - $L \leq 20000$ mm: $\pm(45 + 5L) \mu\text{m}$,
 - $L \leq 30000$ mm: $\pm(55 + 5L) \mu\text{m}$.
- The maximum allowed distance between reading head and scale is 1.5 mm.
- Max. measuring speed: 300 m/min.
- Total length = $L + 100$ mm.
- Protection: IP65.
- SL130 scales standard supplied with aluminum protection cover.



Item No.	Measuring range/mm	Price EUR
Digiruler SL130 scales:		
345.920	200	148.00
345.921	300	150.00
345.922	400	151.00
345.923	500	151.00
345.924	600	163.00
345.925	700	184.00
345.926	800	199.00
345.928	1000	239.00
345.930	1200	280.00
345.933	1500	330.00
345.936	1800	376.00
345.938	2000	414.00
345.948	3000	604.00
345.958	4000	799.00
345.968	5000	982.00
345.978	6000	1,155.00
345.988	7000	1,341.00
345.998	8000	1,527.00
346.008	9000	1,718.00
346.018	10000	1,897.00
346.028	20000	3,870.00
346.038	30000	5,708.00
344.922	Aluminum cover per meter, incl. bolts	31.50

Other lengths available on request.



Item No. Type Length/m Price EUR

PL20¹ without conduit protection:

346.835	PL20C-3	3	321.00
346.836	PL20C-5	5	343.00
346.837	PL20C-10	10	445.00
346.838	PL20C-15	15	547.00
346.839	PL20C-20	20	610.00
346.840	PL20C-30	30	815.00

PL20¹ with stainless steel conduit protection:

346.841	PL20C-3C	3	374.00
346.842	PL20C-5C	5	425.00
346.843	PL20C-10C	10	662.00
346.844	PL20C-15C	15	896.00
346.845	PL20C-20C	20	1,091.00

346.867	Adapter cable CK-T157	92.00
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¹ Cable unit consists of a reading head, a cable and a connector.

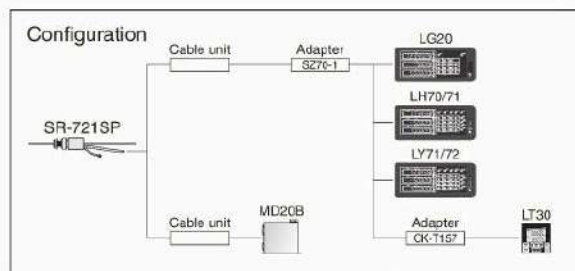
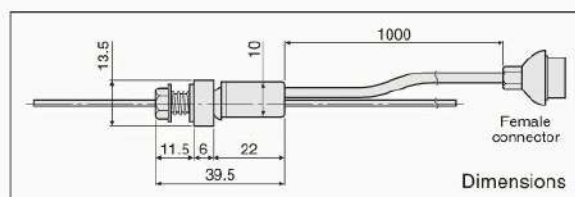


001.209 EN 20260702

Magnescale SR-721SP scale systems for confined spaces

The SR-721SP is a real Magnescale, without housing. By fixing the reading head in place and displacing the scale through the reading head, the mounting size is minimal (for measuring microscopes, robotics and in cylinders).

- Measuring range: 0 - 475 mm.
- Highest resolution: 0.1 μm .
- Accuracy: ± 1 to 3 μm (depending on the measuring range), as specified on the laser measuring report.
- Linear expansion coefficient: $(14 \pm 1) \cdot 10^{-6} / ^\circ\text{C}$.
- Total length = $L + 100$ mm.
- Standard supplied with braided cable (1 m) and connector.
- Connecting cable unit has to be ordered separately.
- Dimensions reading head (without mounting plate): 14 x 16 x 40 mm.
- Measuring axis: $\varnothing 2$ mm.



Item No.	Measuring range/mm	Price EUR
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Magnescale SR-721SP scales:

344.160	50	661.00
344.161	75	678.00
344.162	100	698.00
344.163	125	731.00
344.164	150	753.00
344.165	175	761.00
344.167	200	768.00
344.168	225	782.00
344.169	250	807.00
344.170	275	858.00
344.171	300	898.00
344.172	325	939.00
344.173	350	961.00
344.140	375	978.00
344.141	400	994.00
344.142	425	1,005.00
344.143	450	1,022.00
344.144	475	1,075.00

Item No.	To	Length/m	Price EUR
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Standard cables:

324.005	Displays ¹	3	215.00
324.006	Displays ¹	5	221.00
324.007	Displays ¹	10	236.00
324.695	Detectors ²	3	96.00
324.696	Detectors ²	5	101.00
324.697	Detectors ²	10	116.00

Cables with stainless steel conduit protection:

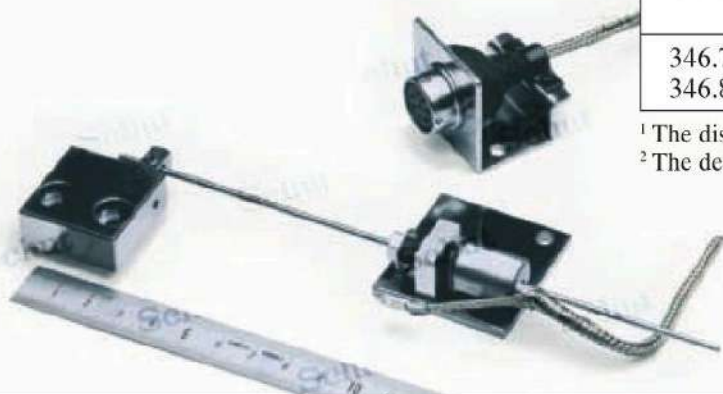
324.000	Displays ¹	3	264.00
324.698	Displays ¹	5	307.00
324.001	Displays ¹	10	357.00
324.002	Detectors ²	3	152.00
324.699	Detectors ²	5	188.00
324.003	Detectors ²	10	258.00

324.004	Extension cable (10 m) for all cables	285.00
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346.793	Adapter SZ70-1 ¹	128.00
346.867	Adapter cable CK-T157 ¹	92.00

¹ The displays LG20, LH70/71, LY71/72, LT30.

² The detector MD20B.



Magnescale Rolling Mill

Magnescale Rolling Mill is a feedback scale system used in rolling mills where metal is rolled into sheets and bars. Magnescale is a proven and reliable system, which is shock- and waterproof and resistant against high pressure. HA-705LK reading heads can be provided with short cables up to 2.5 m and pre-soldered connector or open-ended up to 10 m. MSS-976R magnetic rod scales range from 200 mm up to 600 mm. The maximum distance to the MD50 detector is 150 m.



Magnescale specials

Due to the slim design and resistance against harsh environments the Magnescale scales can be implemented in various systems and processes. The SR-721SP can for example be built into linear actuator cylinders.



Magnescale MG modular multi-interface system

The MG-series is a modular multi-interface system designed to be incorporated into assembly lines and inspection equipment. Different MG modules with various outputs are available for the various Magnescale probes and scales.

The MG40/80 series enables output through Ethernet, EtherCat, CC-link, RS232C, EthernetIP or Profinet. By connecting different modules multiple probes can be connected.



MG41

*Detailed
information
available*

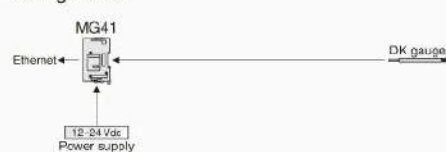


MG80-NE / EI / PN

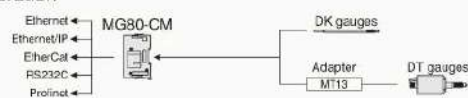


MG80-EC / SC / CM

Configuration



Configuration



Magnescale gauge systems

The Magnescale LU20 is a portable display to read out the Magnescale DM10 digital lever gauge or a Magnescale USB gauge (see Magnescale USB gauges elsewhere in this catalog). The LU20 has a lithium-ion battery with a very long operating life (up to 80 hours). With the standard included magnetic stand, the LU20 can be securely positioned. The 2.7" color touch-screen is easy to set up and displays, both digitally and through an analog pointer, very accurately any movements with a resolution starting at 0.1 μm . By setting tolerance limits, Go and NoGo graphs can be displayed.

The LU20 has the following functions: current, max, min, max-min, and tolerance value display, and even a graphical display of straightness and roundness. This makes the LU20 extremely useful for evaluating geometry and the alignment of mechanical parts. Data can be sent using the Bluetooth transmitter. To utilize this, apps are available for iOS-, Android- and Windows operating systems. Storage of data is possible by using a MicroSD card.

LU20 display

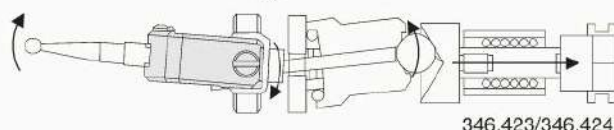
- USB Type-A connector rechargeable lithium-ion battery (charger not included).
- Key lock.
- Operating temperature: 0 - 40°C.
- Battery operating life: 80 hours (DM10), 8 hours (USB gauge).
- Dimensions: 64(W) x 40(D) x 91(H) mm.
- **Standard included:**
Magnetic stand, extension cable, manual, 2 lithium-ion batteries (interchangeable).
- USB Type-A connector gauge input.
- Storage for min, max, and max-min values.
- Reset/preset.
- Zero setting possible at any position.
- Measure with or without tolerance limits; Go/NoGo displayed.
- Bluetooth data transfer, storage on MicroSD card.



Magnescale gauge systems (continued)

DM10 electronic probes

- Measuring range: 346.423: 1 mm,
346.424: 2 mm.
- Stylus length: 346.423: 11 mm,
346.424: 41 mm.
- Resolution: 346.423: 0.1 μm ,
346.424: 0.2 μm .
- Cable length: 200 mm.
- Connector: USB Type-A.



NEW



UMATE⁺

DS805S/812S/830S USB probes

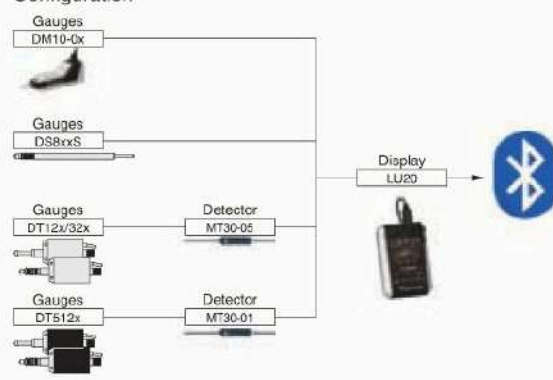
- Measuring range: 5, 12 or 30 mm.
- Resolution: 0.5 μm (0.1 μm on request),
346.061: 0.1 μm .
- Cable length: approx. 2.5 m.
- Reference point.
- Operating temperature: 0 to 50°C.
- Clamping stem: $\varnothing 8$ mm.
- Resistant to oil, dirt, shocks and vibrations.
- Also available up to 100 mm measuring range.

Type designation

DS8 05/12/30^① S -/F^② -/L^③ R

- ① Measuring range in mm.
- ② With (F) or without (-) flange.
- ③ Cable connection:
axial, with spring push (-),
radial, with vacuum retract (L), or
radial, with pneumatic push (V).

Configuration



Item No.	Type/description	Price EUR
346.425	LU20 display	1,013.00
346.423	DM10-01 electronic probe	
346.424	DM10-02 electronic probe	
{2} With connection to LU20 or a PC*:		
346.089	DS805SR5	572.00
346.095	DS812SR5	589.00
346.061	DS830SLR	994.00
346.418	MT30-01 USB adapter for DT512 probes	259.00
346.419	MT30-05 USB adapter for DT12 and DT32 probes	222.00

* Simple PC software for connecting the USB probe can be downloaded for free. Measured values can be displayed with the software and stored in a CSV file.

Magnescale digital dial indicators

By using the same display as the LU20, this very robust Magnescale DU10 digital dial indicator offers the same functions. This means that graphs are shown directly and in real-time, as well as that data can be stored, or sent through Bluetooth. To utilize this, apps are available for iOS-, Android- and Windows operating systems. Storage of data is possible by using a MicroSD card. The DU10 digital dial indicator has an exceptionally high accuracy suitable for high precision measurements, but is also very suitable for use in the workshop due to its robust construction.

DU10-12/DU10-30

- Measuring range: 0 - 30.
- Resolution: 346.426: 0.1 μm
346.427: 0.5 μm .
- Storage for min, max, and max-min values.
- Reset/preset.
- Zero setting possible at any position.
- Measure with or without tolerance limits; Go/No-Go displayed.
- Bluetooth data transfer, storage on MicroSD card.
- USB Type-C connector rechargeable lithium-ion battery (charger not included).
- Key lock.
- Operating temperature: 0 - 40°C.
- Dimensions: 64(W) x 49(D) x 156(H) mm.



NEW



Item No.	Type/description	Measuring range/mm	Accuracy/ μm	Price EUR
346.426	DU10-12 digital dial indicator	0 - 12	1	
346.427	DU10-30 digital dial indicator	0 - 30	1.5	

001.330 EN 20260702

Magnescale DK805SB/812SB gauges IP67

The Magnescale DK gauges are developed using the MR (magnetoresistance) sensor principle and have direct A/B phase output. The MR technology enables a 0.1 µm detection resolution. The gauges have a built-in reference point at 1 mm from the idle point of the spindle. Various models are available, e.g. with pneumatic push or vacuum retract.

- Measuring range: 5 or 12 mm.
- Resolution: 0.1 or 0.5 µm.
- Accuracy (p-p) at 20°C: resolution 0.1 µm: 1 µm,
resolution 0.5 µm: 1.5 µm.
- Max. measuring speed: resolution 0.1 µm: 42 m/min,
resolution 0.5 µm: 100 m/min.

Types with a higher measuring speed are available on request.

- Output: A/B phase and reference point Z (TTL line driver RS422).
- Cable length: 2.5 m (with extension cable: max. 22 m).
- Dimensions: ø8 x 79.6 mm (DK805SB) or ø8 x 105 mm (DK812SB).
- Measuring force at 20°C:
 - DK805SB: upward: 0.35 ± 0.25 N,
lateral: 0.4 ± 0.25 N,
downward: 0.45 ± 0.25 N,
 - DK812SB: upward: 0.4 ± 0.3 N,
lateral: 0.5 ± 0.3 N,
downward: 0.6 ± 0.3 N.
- Reference point.
- Clamping stem: ø8 mm.
- Protection: IP67.
- Resistant to oil, dirt, shocks and vibrations.
- Delivery incl. air fittings.
- Power supply: 5^{±5%} Vdc, 1 W.
- Also available with 30 mm measuring range (DK830S series).



DK812SBR

DK812SBLR



Ball spline structure.
Zero rotational backlash.

Type designation

DK8 05/12^① SB -F^② -L/V^③ R -5^④

- ① Measuring range in mm.
- ② With (F) or without (-) flange.
- ③ Cable connection:
axial, with spring push (-),
radial, with vacuum retract (L), or
radial, with pneumatic push (V).
- ④ Resolution: 0.1 µm (-) or 0.5 µm (5).

Option for L types

Item No.	Description	Price EUR
344.465	Pneumatic retraction device DZ-801	168.00

Item No.	Type	Price EUR
Resolution 0.1 µm:		
346.512	DK805SBR	926.00
346.513	DK805SBLR	926.00
346.514	DK805SBFR	992.00
346.515	DK805SBFLR	992.00
346.516	DK812SBR	950.00
346.517	DK812SBLR	970.00
346.518	DK812SBFR	1,009.00
346.519	DK812SBFLR	1,024.00
346.520	DK812SBVR	1,024.00
Resolution 0.5 µm:		
346.521	DK805SBR5	716.00
346.522	DK805SBLR5	716.00
346.523	DK805SBFR5	813.00
346.524	DK805SBFLR5	813.00
346.525	DK812SBR5	746.00
346.526	DK812SBLR5	764.00
346.527	DK812SBFR5	838.00
346.528	DK812SBFLR5	851.00
346.529	DK812SBVR5	851.00

Magnescale DK10/25/50/100/155/205 gauges

The Magnescale DK gauges are developed using the MR (magnetoresistance) sensor principle and have direct A/B phase output. The gauges either have a spring push and a built-in reference point at 1 mm (DK10-100) or no spring push, and with a built-in reference point at 5 mm (DK155/205) from the idle point of the spindle.

- Measuring range: up to 205 mm.
- Resolution: 0.5 μm .
- Max. measuring speed: 250 m/min.
- Clamping stem: $\varnothing 20$ mm (DK155/205: $\varnothing 32$ mm).
- Output: A/B phase and reference point Z (TTL line driver RS422).
- Cable length: 2.5 m (with extension cable: max. 22 m).
- DK10-100: carbide ball tip $\varnothing 2.5$ mm.
- DK155/205: flat magnet $\varnothing 22$ mm (10 N) with in the center a ball $\varnothing 4$ mm.
- Reference point.
- Operating temperature: 0 to 50°C.
- Protection: IP50 or IP64.
- Resistant to shocks and vibrations.
- Power supply: 5 $\pm 5\%$ Vdc, 1 W.



For measuring stands with clamping shaft $\varnothing 20$ mm, $\varnothing 25$ mm or $\varnothing 32$ mm see measuring stands elsewhere in this catalog.



Type designation

DK 10/25/50/100/155/205₁ N/P₂ -/L₃ R5

- ① Measuring range in mm.
 ② Protection:
 IP50 and with a reduced measuring force (N), or IP64 (P).
 ③ Cable connection:
 axial (-) or radial (L).

Item No.	Type	Accuracy p-p/ μm	Measuring force ¹ /N	Dimensions mm	Price EUR
346.853	DK10NR5 ²	2	0.3/0.6/0.8	$\varnothing 20 \times 122$	864.00
346.854	DK10PR5	2	≤ 4.9	$\varnothing 20 \times 122$	864.00
346.855	DK10PLR5	2	≤ 4.9	$\varnothing 20 \times 102.5$	864.00
346.857	DK25NR5 ²	2	0.4/0.7/1	$\varnothing 20 \times 179.5$	942.00
346.856	DK25NLR5 ²	2	0.4/0.7/1	$\varnothing 20 \times 160$	942.00
346.858	DK25PR5	2	≤ 4.9	$\varnothing 20 \times 179.5$	942.00
346.859	DK25PLR5	2	≤ 4.9	$\varnothing 20 \times 160$	942.00
346.860	DK50NR5 ²	2	-/0.9/1.3	$\varnothing 20 \times 286$	1,039.00
346.861	DK50PR5 ²	2	6.2	$\varnothing 20 \times 286$	1,039.00
346.862	DK100NR5 ²	4	-/1.8/2.7	$\varnothing 25 \times 443.5$	1,457.00
346.863	DK100PR5 ²	4	9.3	$\varnothing 25 \times 443.5$	1,457.00
346.864	DK155PR5	5	2.7	$\varnothing 32 \times 571$	1,654.00
346.865	DK205PR5	6	2.7	$\varnothing 32 \times 721$	1,835.00

¹ In case of reduced measuring force (N types): measuring force upward, lateral and downward, respectively.

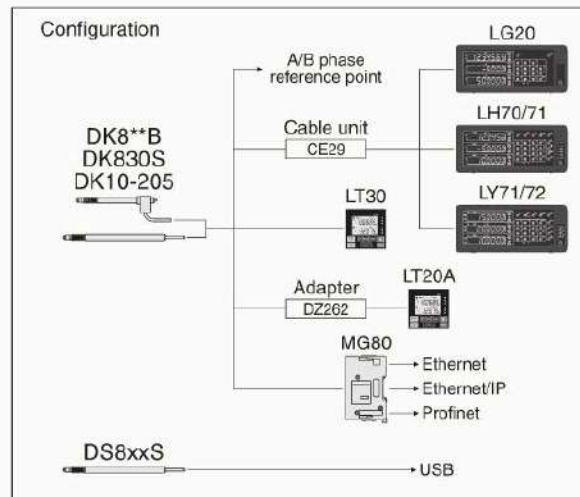
² Also available as models with USB interface.



Cables and configuration Magnescale DK gauges

Item No.	Type	Length/m	Price EUR
Adapter cables:			
346.145	CE29-003	0.3	77.00
346.146	CE29-01	1	77.00
346.147	CE29-03	3	92.00
346.148	CE29-05	5	115.00
346.149	CE29-10	10	152.00
Adapter:			
346.005	DZ262		98.00
Extension cables:			
346.741	CK-T12	1	82.00
346.742	CK-T13	3	105.00
346.743	CK-T14	5	129.00
346.744	CK-T15	10	187.00
346.745	CE22-01 ¹	1	68.00
346.746	CE22-03 ¹	3	84.00
346.747	CE22-05 ¹	5	104.00
346.748	CE22-10 ¹	10	149.00

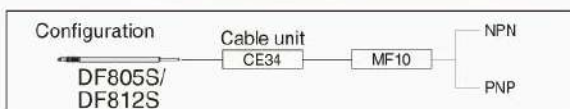
¹ Open end, TTL line driver RS422.



Magnescale DF805S/812S gauges + MF10 Digital Tolerance Indicator

The robust DF probes combine a high resolution with a compact body. The MF10 counter module is suitable for the DF and DT probes. The module has a clear display and can also generate Go/NoGo output.

- Measuring range: 5 or 12 mm.
- Resolution: 0.1 μm .
- Go/NoGo tolerance evaluation.



Type designation

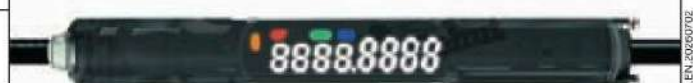
DF8 05/12^① S -/F^② -/L^③ R

- ① Measuring range in mm.
- ② With (F) or without (-) flange.
- ③ Cable connection:
axial, with spring push (-),
radial, with vacuum retract (L).

Item No.	Type/description	Price EUR
346.414	MF10-P1 NPN output	216.00
346.415	MF10-P2 PNP output	216.00

Item No.	Type	Price EUR
346.540	DF805SR	787.00
346.541	DF805SLR	827.00
346.542	DF805SFR	827.00
346.543	DF805SFLR	865.00
346.544	DF812SR	813.00
346.545	DF812SLR	855.00
346.546	DF812SFR	855.00
346.547	DF812SFLR	891.00

Item No.	Type	Length/m	Price EUR
Extension cables:			
346.548	CE34-005	0.5	48.00
346.549	CE34-02	2	70.00
346.550	CE34-05	5	93.00
346.551	CE34-10	10	128.00
346.552	CE34-15	15	176.00
346.553	CE34-20	20	211.00



001.330 EN 20260702

Magnescale DT gauges

These gauges are especially suitable for the built-in display LT10A (DT12/32) and LT11A (DT512). Together they form an economically favourable and very compact measuring system. The gauges DT512 are the same as the DT12 gauges, but have a resolution of 1 μm (in combination with the detector MT12 this is 5 μm).

- Measuring range: 12 mm or 32 mm.
- Highest resolution:
DT12/32: 5 μm , DT512: 1 μm .
- Accuracy:
DT12/32: $\pm 5 \mu\text{m}$, DT512: $\pm 3 \mu\text{m}$.
- Measuring force at 20°C:
DT12/512N: upward: $0.7 \pm 0.5 \text{ N}$,
lateral: $0.8 \pm 0.5 \text{ N}$,
downward: $0.9 \pm 0.5 \text{ N}$,
DT12/512P: $\leq 1.7 \text{ N}$,
DT32N/NV: upward: $1.1 \pm 0.8 \text{ N}$,
lateral: $1.3 \pm 0.8 \text{ N}$,
downward: $1.5 \pm 0.8 \text{ N}$,
DT32P: $\leq 2.9 \text{ N}$,
DT32PV: $\leq 9 \text{ N}$.
- Spring push, except DT32NV/PV:
pneumatic push.
- Cable length: 2 m.



Item No.	Type	Measuring range/mm	Price EUR
344.855	DT12N	12	275.00
344.856	DT12P	12	322.00
346.495	DT32N	32	484.00
346.496	DT32P	32	537.00
346.497	DT32NV	32	604.00
346.498	DT32PV	32	659.00
344.853	DT512N	12	342.00
344.854	DT512P	12	405.00
346.477	Adapter DZ51		50.00
346.793	Adapter SZ70-1		128.00
346.145	CE29-003		77.00
344.426*	Pneumatic retraction device DZ176		235.00

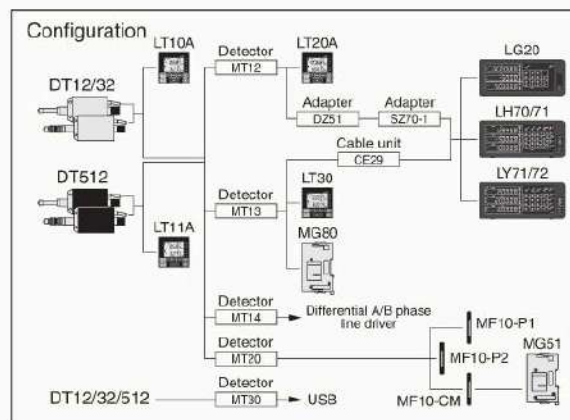
* Only for the DT12 and DT512 gauges.

Item No.	Type	Length/m	Price EUR
Extension cables:			
346.136	CE08-1	1	57.00
346.137	CE08-3	3	80.00
346.138	CE08-5	5	104.00
346.139	CE08-10	10	162.00
346.140	CE08-15	15	220.00

- Dimensions $l \times w \times t$ and weight (excl. cable unit):
DT12/512N: 116 x 35 x 12 mm, 75 g,
DT12/512P: 116 x 35 x 12 mm, 80 g,
DT32N/P: 218 x 35 x 12 mm, 120 g,
DT32NV/PV: 217.5 x 35 x 12 mm, 140 g.
- Protection DT12P/512P,
DT32P/PV: IP64.



Item No.	Type	Resolution μm	Price EUR
To LG20, LH70/71, LY71/72, LT20A:			
346.871	MT12-10	10	203.00
To LT30/MG80:			
346.852	MT13-05	5	217.00
A/B phase (TTL line driver RS422):			
346.874	MT14-01	1	280.00
346.875	MT14-05	5	217.00
334.684	AC adapter for MT14		22.70
To MF10:			
346.412	MT20-01	1	226.00
346.413	MT20-05	5	180.00



Retraction device DZ801

Pneumatic retraction device for the L type of the DK805/812 gauges.

Item No.	Type	Price EUR
344.465	DZ801	168.00



Retraction devices DZ174

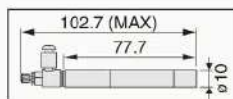
These pneumatic retraction devices are made for (DK) gauges with a clamping stem of $\varnothing 20$ mm. Working pressure: 30 - 50 N/cm².



Item No.	Type	For	Price EUR
344.416	DZ174-010	DK10	394.00
344.417	DZ174-025	DK25	394.00
344.418	DZ174-050	DK50	394.00

Retraction device DZ176

Retraction device for pneumatic push of the DT12 and DT512 gauges.



Item No.	Type	For	Price EUR
344.426	DZ176	DT12/512	235.00

Probe accessories



DZ210



DZ811



DZ100



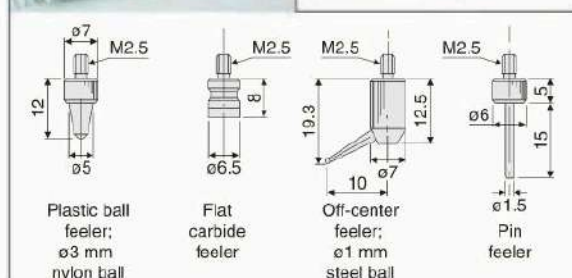
DZ181



DZ5100



DZ170



Item No.	Type/description	Price EUR
344.406	DZ210 Gauging bracket $\varnothing 20$ mm	120.00
344.470	DZ811 Adapting bush $\varnothing 20 - \varnothing 8$ mm	23.00
346.870	DZ161 Retraction lever bottom mounted with M2.5 thread	64.00
344.408	DZ170 Retraction device $\varnothing 20$ mm with lever	103.00
344.402	DZ100 Roller feeler	75.00
344.715	DZ181 Magnetic contact point $\varnothing 22$ mm for DK155/205	181.00
344.409	DZ5100 Set of 4 probes	207.00

Magnescale LG20 and LH70/71 display units

These Magnescale display units, for 1, 2 or 3 axes, have a clearly readable display, are easy to operate and equipped with many functions.

- For 1, 2 or 3 axes.
- Highest resolution: SJ700A: 5 μm , GB-ER: 0.5 μm , PL20C (Digiruler): 10 μm , SR-721SP: 0.5 μm , DK802/812: 0.1 μm , DK10-205: 0.5 μm , DT12/32/512: 5 μm .
- mm/inch conversion.
- Display: 7 digits, orange LED display and floating minus sign.
- Reset: resettable at any point on the scale.
- Preset: up to 3 values per axis.
- Recall: recall data stored by preset.
- Input: A/B phase (according EIA/RS422).
- Alarm signal for temporary power failure, exceeded max. measuring speed, error in stored data, disconnected scale or gauge and display overflow.
- Operating temperature: 0 to 40°C (with no condensation).
- Memory for the last display value and preset values at power loss.
- Diameter read-out.
- Linear error compensation:
LG20 max. $\pm 600 \mu\text{m/m}$,
LH70/71 max. $\pm 1000 \mu\text{m/m}$.
- Energy saving function.
- Power supply: 12 Vdc or 100 - 240 Vac (when using AC adapter).
- Power consumption: max. 32 VA.
- Dimensions: 289 x 123 x 80 mm.
- Weight: approx. 1.5 kg.

LH70/71 only:

- ABS/INC switchable. In the ABS mode the distance to the reference point is displayed.
- Midpoint calculation for centering purposes.
- Canned cycle functions (2-axes and 3-axes models): bolt hole circle function, line hole function (LH71 only), radius function for angles.
- Hold function: hold of display value and set as a tool offset value.
- Tool offset memory (3-axes models only):
LH70: 12 values,
LH71: 99 values.
- Addition function for two selectable axes: $\pm Z1 \pm Z2$ (3-axes models only).

- Reference point detection for scales with a fixed reference point.
- Reference point memory:
LH70: 10 reference points,
LH71: 150 reference points.



LH71 only:

- Read-out of arcs, highest resolution: 1" (Digiruler only).
- Segmented error compensation:
max. $\pm 600 \mu\text{m/m}$, up to 32 sections (requires scale with reference point).
- Scaling function: display value = actual movement distance x scaling value
0.100000 - 9.999999.
- Program function:
 - 1) by manual input,
 - 2) by data storage while functioning (teach-in);
 - 3) by using mirror image function while running the program;
 - 4) by inserting canned cycle functions.

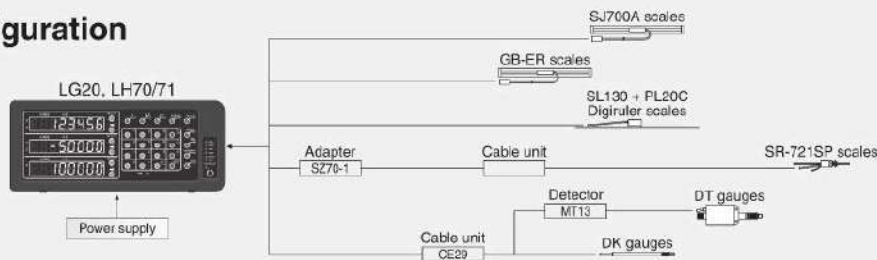


Item No.	Type/description	Price EUR
346.846	LG20-1 / 1 axis	530.00
346.847	LG20-2 / 2 axes	587.00
346.848	LG20-3 / 3 axes	683.00
346.774	LH70-1 / 1 axis	558.00
346.775	LH70-2 / 2 axes	628.00
346.776	LH70-3 / 3 axes	726.00
346.777	LH71-1 / 1 axis	738.00
346.778	LH71-2 / 2 axes	823.00
346.779	LH71-3 / 3 axes	947.00
346.780	AC adapter 12 Vdc, 3 A	78.00

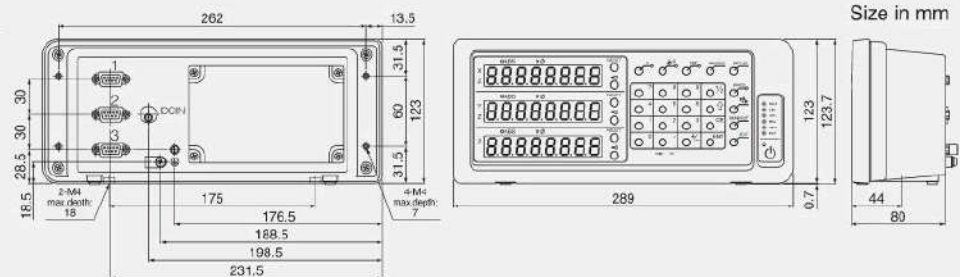
001.3081 EN 20260702

Magnescale LG20, LH70/71 and LY71/72 display units

■ Configuration



■ Dimensions



Display support

Display support with a steel plate tray which is rotatable.

- Dimensions tray: 73 x 200 mm.
- Height: 130 mm.

Item No.	Type/description	Price EUR
911.188	Display support	39.90



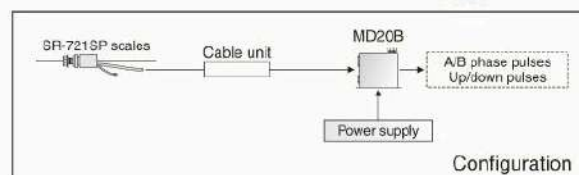
Magnescale MD20B detector (for SR-721SP)

Because not all Magnescale scales and gauges contain electronics, a detector is necessary as an interface to connect these sensors to the controls of a CNC system.

- Resolution: 0.1 - 0.2 - 0.5 - 1 - 2 - 2.5 - 4 - 5 - 10 μm .
- Output: A, B, Z, alarm, PCU, PCD, $\bar{A}$, $\bar{B}$, $\bar{Z}$, alarm, PCU, PCD.
- Dimensions: 171 x 144 x 32 mm.
- Power supply: 5 Vdc, 400 mA.
- Standard supplied with Honda output connector.

Item No.	Type/description	Price EUR
344.884	Detector box MD20B	761.00
430.115	Power supply, 94 - 264 Vac / 5 Vdc, 5 A*	183.00
344.878	Connector set reference point PZ001	29.30

* To connect per power supply: 10 pcs. MD20B.



Magnescale LY71/72 display units

Multifunctional display units of which the LY71 is expandable with optional interchangeable expansion boards and the LY72 is equipped with an RS232C interface and programmable I/O connector.

- Highest resolution: SJ700A: 5 μm , GB-ER: 0.5 μm , PL20C (Digiruler): 10 μm , SR-721SP: 0.5 μm , DK802/812: 0.1 μm , DK10-205: 0.5 μm , DT12/32/512: 5 μm .
- mm/inch conversion.
- ABS/INC switchable. In the ABS mode the distance to the reference point is displayed.
- Display: 7 digits, orange LED display and floating minus sign.
- Display data: current/min/max/P-P values (LY72 applications with scale: only current).
- Preset/reset/restart.
- Input: A/B phase (according EIA/RS422).
- Alarm signal for temporary power failure, exceeded max. measuring speed, error in stored data, disconnected scale or gauge and display overflow.
- Operating temperature: 0 to 40°C (with no condensation).
- Memory for the last display value and preset values at power loss.
- Two hold functions: hold of display value (while latched) and peak calculation hold (while paused). LY72 applications with scale: only hold of display value.
- Peak hold function convenient for statistical measurement.
- External input functions for automatic measurement.
- Multiplier function: display value = actual movement distance x multiplier 0.100000-9.999999.
- Linear error compensation: max. $\pm 1000 \mu\text{m}/\text{m}$.

- Power supply: 12 Vdc or 100 - 240 Vac (when using AC adapter).
- Power consumption: max. 32 VA.
- Dimensions: 289 x 123 x 80 mm.
- Weight: approx. 1.5 kg.

LY71 only:

- Input for 1 or 2 axes.
- Addition function.
- Optional expansion boards.

LY72 only:

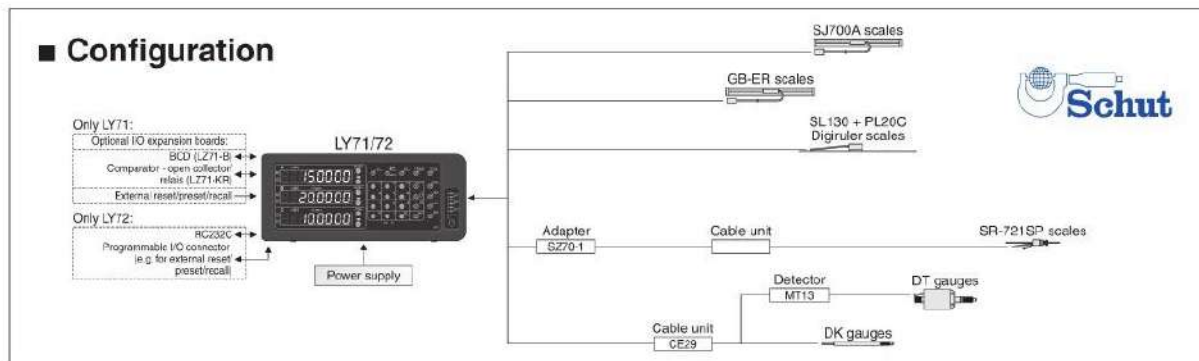
- Up to 3 axes can be connected.
- RS232C data output.

Item No.	Type/description	Price EUR
346.849	LY71	1,033.00
346.850	LY72	2,048.00
346.780	AC adapter 12 Vdc, 3 A	78.00
Options LY71:		
346.868	BCD-I/O board LZ71-B	290.00
346.869	Comparator I/O open collector/relay LZ71-KR	422.00
Options LY72:		
495.169	RS232C cable for PC connection (D sub 9 pin)	30.30
264.506	Mitutoyo DP-1VA SPC printer ¹	
348.042	RS232C→Mitutoyo interface ²	63.00
900.825	Printing paper (5 rolls)	36.00

¹ Incl. AC adapter (6 Vdc) and a roll of printing paper.

² Makes e.g. the Magnescale signal suitable for the SPC printer (495.169 required).

Configuration



Magnescale LT10A/11A display units

Very compact display unit, which is easy to install into measuring systems due to its small size. Display unit with one or two DT12/32 (LT10A) or DT512 (LT11A) measuring gauge connections and several functions and output signals.

- Highest resolution:
5 μm (LT10A) or 1 μm (LT11A).
- Illuminated LCD display with 5 digits and floating minus sign.
- Output: BCD (type B), RS232C (type C).
- Reset/preset.
- Min/max/P-P function, recall function.
- Addition function: $\pm A \pm B$ (2-axes models).
- Comparator values for Go/NoGo indication and output signals (open collector). The BCD models have 4 different preset selections.
- Max. measuring speed: 60 m/min.
- Dimensions: 72 x 72 x 80 mm.
- Weight: 200-270 g.
- Power supply: 12-24 Vdc (max. 9 W).

Item No.	Type/description	Price EUR
Display unit for 1 measuring gauge:		
344.857	LT10A-105	489.00
344.858	LT10A-105B (BCD)	811.00
344.859	LT10A-105C (RS232C)	716.00
344.863	LT11A-101	564.00
344.864	LT11A-101B (BCD)	933.00
344.865	LT11A-101C (RS232C)	822.00
Display unit for 2 measuring gauges:		
344.860	LT10A-205	764.00
344.861	LT10A-205B (BCD)	1,303.00
344.862	LT10A-205C (RS232C)	1,097.00
344.866	LT11A-201	879.00
344.867	LT11A-201B (BCD)	1,498.00
344.868	LT11A-201C (RS232C)	1,261.00
334.695	Mini AC adapter 12 Vdc, 1 A	29.70
Options:		
348.276	Stand-alone housing with on/off switch	109.00
348.122	RS232C cable for PC connection (D sub 9 pin)	46.00

Display unit for 1 measuring gauge:

344.857	LT10A-105	489.00
344.858	LT10A-105B (BCD)	811.00
344.859	LT10A-105C (RS232C)	716.00
344.863	LT11A-101	564.00
344.864	LT11A-101B (BCD)	933.00
344.865	LT11A-101C (RS232C)	822.00

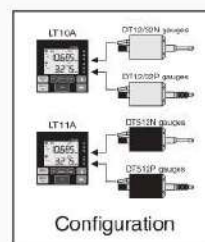
Display unit for 2 measuring gauges:

344.860	LT10A-205	764.00
344.861	LT10A-205B (BCD)	1,303.00
344.862	LT10A-205C (RS232C)	1,097.00
344.866	LT11A-201	879.00
344.867	LT11A-201B (BCD)	1,498.00
344.868	LT11A-201C (RS232C)	1,261.00

334.695	Mini AC adapter 12 Vdc, 1 A	29.70
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Options:

348.276	Stand-alone housing with on/off switch	109.00
348.122	RS232C cable for PC connection (D sub 9 pin)	46.00

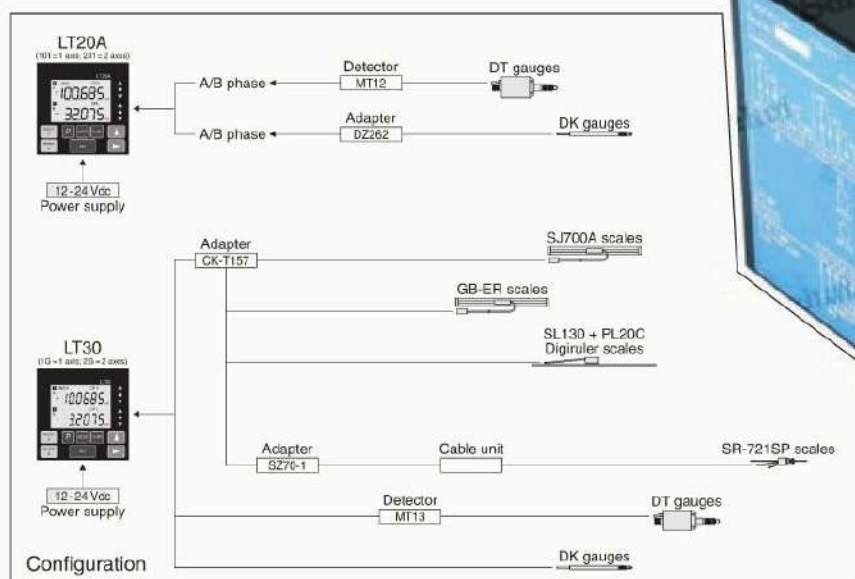


Magnescale LT20A/30 display units

Very compact display unit, which is easy to install into measuring systems due to its small size. Can be used for many Magnescale scales and gauges.

- Highest resolution:
0.5 μm (LT20A) or 0.1 μm (LT30).
- Display: backlight LCD display with 6 digits, floating minus sign and mode indication.
- Measuring mode setting by key switch or external signal.
- Input: A/B phase (10p DIN plug).
Output: BCD (type B), RS232C (type C).
- Terminal connection:
Input: reset, peak-hold start, preset, recall.
Output: Go/NoGo.
- Reference point detection (only LT30).
- Alarm signals.
- Data storage of: resolution, measuring direction, preset value, tolerance limits, measuring mode, BCD logic (positive/negative) and RS232C communication parameters.
- Reset/preset/recall.
- Min/max/P-P function.
- Addition function: $\pm A \pm B$ (2-axes models).
- Comparator values for Go/NoGo indication and output signals (open collector). The BCD models have 4 different preset selections.
- Dimensions: LT20A: 72 x 72 x 104.5 mm,
LT30: 72 x 72 x 71.8 mm.
- Weight: 200-270 g.
- Power supply: 12-24 Vdc (max. 9 W).

Item No.	Type/description	Price EUR
Display unit for 1 measuring gauge:		
346.460	LT20A-101	611.00
346.461	LT20A-101B (BCD)	1,013.00
346.462	LT20A-101C (RS232C)	889.00
346.787	LT30-1G	616.00
346.788	LT30-1GB (BCD)	970.00
346.789	LT30-1GC (RS232C)	884.00
Display unit for 2 measuring gauges:		
346.463	LT20A-201	914.00
346.464	LT20A-201B (BCD)	1,549.00
346.465	LT20A-201C (RS232C)	1,309.00
346.790	LT30-2G	919.00
346.791	LT30-2GB (BCD)	1,407.00
346.792	LT30-2GC (RS232C)	1,285.00
334.695	Mini AC adapter 12 Vdc, 1 A	29.70
Options:		
348.276	Stand-alone housing with on/off switch	109.00
348.122	RS232C cable for PC connection (D sub 9 pin)	46.00





Digital calipers

- Measuring range: 0 - 300 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- On/off switch.
- Automatic switch-off.

- Reset.
- Thumb wheel/locking screw.
- Flat depth rod (except 910.467: round depth rod).
- Delivery in a plastic case with a manufacturer measuring report.
- Power supply: 1 battery type CR2032.



910.464

ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Jaw length mm	Price EUR
910.464	0 - 150	0.03	40	34.50
910.467 ¹	0 - 150	0.03	40	
910.465	0 - 200	0.03	50	49.00
910.466	0 - 300	0.03	60	69.00
Option: 495.157 Battery type CR2032				0.50



Round depth rod

910.467

¹ With round depth rod.

Absolute digital calipers

Calipers with an absolute measuring system for easy incremental and absolute conversion.

- Measuring range: 0 - 300 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- ABS/INC switchable.

- On/off switch.
- Automatic switch-off.
- Reset.
- Thumb wheel/locking screw/flat depth rod.
- Delivery in a plastic case with a manufacturer measuring report.
- Power supply: 1 battery type CR2032.



910.468

ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Jaw length mm	Price EUR
910.468	0 - 150	0.03	40	44.00
910.469	0 - 200	0.03	50	61.00
910.470	0 - 300	0.03	60	84.00
Option: 495.157 Battery type CR2032				0.50



002-372-EN-20060702

Digital calipers with hold function

Digital calipers with a function to hold the display value at any position.

- Measuring range: 0 - 300 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- On/off switch.
- Reset.
- Hold function (except 906.299).
- Large LCD display.
- Thumb wheel (except 906.299).
- Locking screw/flat depth rod.
- Power supply: 1 battery type V357.



ECONOMY LINE ✓



Item No.	Measuring range/mm	Jaw length mm	Price EUR
907.543	0 - 150	40	38.30
907.544	0 - 200	50	47.00
907.545	0 - 300	60	86.00
Left-handed model (without hold function):			
906.299	0 - 150	40	67.00
Option:			
836.535	Battery type V357		0.90

Digital calipers with min/max function

By keeping the mode button pressed you can hold the minimum and maximum measuring values.

- Measuring range: 0 - 300 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- On/off switch.
- Reset.
- Min/max function.
- Large LCD display.
- Thumb wheel/locking screw/flat depth rod.
- Power supply: 1 battery type V357.



ECONOMY LINE ✓



Item No.	Measuring range/mm	Jaw length mm	Price EUR
907.549	0 - 150	40	38.90
907.550	0 - 200	50	49.00
907.551	0 - 300	60	87.00
Option:			
836.535	Battery type V357		0.90

Digital calipers 0.005 mm

Calipers with a higher resolution and a measuring range up to 300 mm.

- Measuring range: 0 - 300 mm.
- Resolution: **0.005 mm**.
- Accuracy: ± 0.03 mm.
- mm/inch conversion.
- ABS/INC switchable.
- On/off switch.
- Automatic switch-off.
- Reset.
- Thumb wheel/locking screw/flat depth rod.
- Power supply: 1 battery type CR2032.



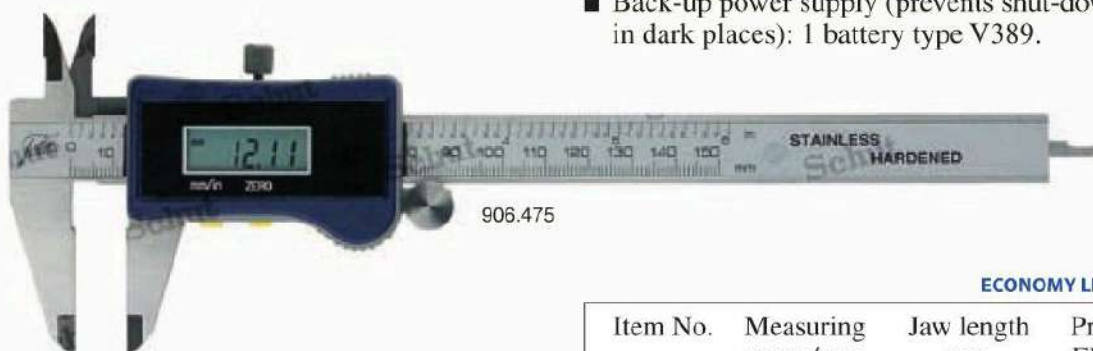
ECONOMY LINE ✓

Item No.	Measuring range/mm	Jaw length mm	Price EUR
906.821	0 - 150	40	76.00
906.822	0 - 200	50	91.00
906.823	0 - 300	60	154.00
Option:			
495.157	Battery type CR2032		0.50

Digital solar calipers

The solar power supply functions already with a low illumination level.

- Measuring range: 0 - 300 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- Automatic switch-off.
- Reset.
- Thumb wheel/locking screw/flat depth rod.
- Back-up power supply (prevents shut-down in dark places): 1 battery type V389.



ECONOMY LINE ✓

Item No.	Measuring range/mm	Jaw length mm	Price EUR
906.475	0 - 150	40	52.00
906.492	0 - 200	50	85.00
906.493	0 - 300	60	135.00
Option:			
498.823	Battery type V389		2.40



Digital calipers with glass ruler

Equipped with a glass ruler. Very smooth displacement by non-contact movement.

- Measuring range: 0 - 300 mm.
- Resolution: 0.01 mm.
- Accuracy: ± 0.03 mm.
- mm/inch conversion.
- ABS/INC switchable (only 909.443/444/445).
- On/off switch.
- Automatic switch-off.
- Reset.
- Large LCD display.
- Thumb wheel/locking screw/flat depth rod.
- Delivery in a plastic case with a manufacturer measuring report.
- Power supply: 1 battery type CR2025.



ECONOMY LINE ✓

Item No.	Measuring range/mm	Jaw length mm	Price EUR
909.440	0 - 150	40	49.00
909.441	0 - 200	50	72.00
909.442	0 - 300	60	116.00
Absolute calipers:			
909.443	0 - 150	40	54.00
909.444	0 - 200	50	76.00
909.445	0 - 300	60	123.00
Option:			
495.214	Battery type CR2025		0.40



Digital calipers with tolerance function

Digital calipers with a function to set tolerance limits with Go/NoGo reading.

- Measuring range: 0 - 300 mm.
- Resolution: 0.01 mm.
- Accuracy: ± 0.03 mm.
- mm/inch conversion.
- Tolerance function.
- On/off switch.
- Automatic switch-off.
- Reset.
- Large LCD display.
- Thumb wheel/locking screw/flat depth rod.
- Delivery in a plastic case with a manufacturer measuring report.
- Power supply: 1 battery type CR2025.



ECONOMY LINE ✓

Item No.	Measuring range/mm	Jaw length mm	Price EUR
906.412	0 - 150	40	51.00
906.413	0 - 200	50	73.00
906.414	0 - 300	60	110.00
Option:			
495.214	Battery type CR2025		0.40



Digital carbon fiber calipers

Digital calipers made of carbon fiber.

- Measuring range: 0 - 300 mm.
- Resolution: 0.1 mm.
- mm/inch conversion.
- On/off switch.
- Automatic switch-off.
- Reset.
- Flat depth rod (only 909.420).
- Power supply:
909.420/688: 1 battery type CR2032,
909.689: 1 battery type V357.



909.420

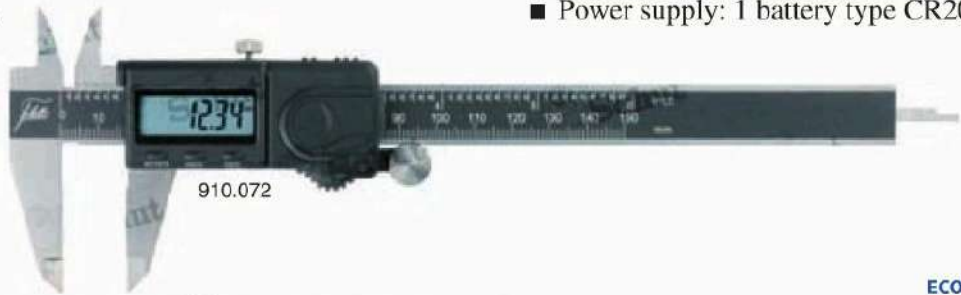


ECONOMY LINE ✓

Item No.	Measuring range/mm	Jaw length mm	Price EUR
909.420	0 - 150	40	9.80
909.688	0 - 150	75	13.80
909.689	0 - 300	90	31.80
Options:			
495.157	Battery type CR2032		0.50
836.535	Battery type V357		0.90

Digital calipers with rotatable LCD display

- Measuring range: 0 - 300 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- On/off switch.
- Automatic switch-off.
- Reset.
- Rotatable display.
- Rotatable display value.
- Thumb wheel/locking screw/flat depth rod.
- Delivery in a plastic case with a manufacturer measuring report.
- Power supply: 1 battery type CR2032.



910.072

ECONOMY LINE ✓



Item No.	Measuring range/mm	Jaw length mm	Price EUR
910.072	0 - 150	40	43.00
910.073	0 - 200	50	65.00
910.074	0 - 300	60	96.00
Option:			
495.157	Battery type CR2032		0.50

Absolute digital calipers IP54

Calipers with an absolute measuring system for easy incremental and absolute conversion. The advantage of these calipers is the one-time setting of the absolute zero position until the battery has to be changed. This reduces the chance of measuring errors and enables you to use the calipers without having to reset the zero position at every use. These calipers have a protection degree of IP54 and are therefore protected against splash water and resistant to oil and dust. The models with the tolerance limit function are provided with a clear optical Go (NoGo) indication.

- Measuring range: 0 - 300 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- ABS/INC switchable.
- With data output.
- On/off switch.
- Automatic switch-off.
- Reset.
- Max. measuring speed: unlimited.
- Locking screw/flat depth rod.
- Protection: IP54.
- Delivery in a plastic case with a manufacturer measuring report.
- Power supply: 1 battery type CR2032.

Models with tolerance display:

- Adjustable tolerance limits.
- Tolerance display by means of illuminated green LED at GO value.



ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Jaw length mm	Price EUR
906.838	0 - 150	0.02	40	51.00
906.839	0 - 200	0.03	50	72.00
906.840	0 - 300	0.03	60	93.00
Models with tolerance display:				
906.835	0 - 150	0.02	40	59.00
906.836	0 - 200	0.03	50	79.00
906.837	0 - 300	0.03	60	100.00
Options:				
495.157	Battery type CR2032			0.50
906.618 ^{1,2}	USB interface			83.00
909.687	Footswitch for USB interface			19.20
910.038	Wireless USB receiver			50.00
906.619 ²	Wireless transmitter			53.00

¹ Standard configured for PC with English (US) keyboard.
Also available on request for alternative keyboards.

² With micro-USB connection.

USB interface:

- For data transfer to PC (e.g. Excel, Word).
- Operating system: Windows and other.
- PC connection: USB.
- No software or driver to install.
- Foot switch (optional).



Absolute digital calipers IP54

Calipers with an absolute measuring system for easy incremental and absolute conversion. This gives you the advantage that the caliper stores the one-time setting of the absolute zero position until the battery has to be changed. This reduces the chance of measuring errors and enables you to use the caliper without having to reset the zero point with each use. These calipers have a protection degree of IP54 and are therefore protected against splash water and resistant to oil and dust.

- Measuring range: 0 - 300 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- ABS/INC switchable.
- Digimatic data output.
- On/off switch.
- Reset.
- Max. measuring speed: unlimited.
- Thumb wheel supplied separately.
- Locking screw/flat depth rod.
- Protection: IP54.
- Delivery in a plastic case with a manufacturer measuring report.
- Power supply: 1 battery type CR2032.



USB interface:

- For data transfer to PC (e.g. Excel, Word).
- Operating system: Windows and other.
- PC connection: USB.
- No software or driver to install.
- Foot switch (optional).



ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Jaw length mm	Price EUR
909.602	0 - 150	0.02	40	61.00
909.603	0 - 200	0.03	50	81.00
909.604	0 - 300	0.03	60	101.00
Options:				
495.157	Battery type CR2032			0.50
909.686 ^{1,2}	USB interface			112.00
909.687	Footswitch for USB interface			19.20
910.038	Wireless USB receiver			50.00
910.039 ²	Wireless transmitter			51.00

¹ Standard configured for PC with English (US) keyboard. Also available on request for alternative keyboards.

² For instruments with a Digimatic data output.

Absolute digital calipers IP54

Calipers with an absolute measuring system for easy incremental and absolute conversion. This gives you the advantage that the caliper stores the one-time setting of the absolute zero position until the battery has to be changed. This reduces the chance of measuring errors and enables you to use the caliper without having to reset the zero point with each use. These calipers have a protection degree of IP54 and are therefore protected against splash water and resistant to oil and dust.

- Measuring range: 0 - 300 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- ABS/INC switchable.
- On/off switch.
- Automatic switch-off.
- Reset.
- Thumb wheel/locking screw/flat depth rod.
- Protection: IP54.
- Delivery in a plastic case with a manufacturer measuring report.
- Power supply: 1 battery type CR2032.



906.177

ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Jaw length mm	Price EUR
906.177	0 - 150	0.02	40	49.00
906.178	0 - 200	0.03	50	68.00
906.179	0 - 300	0.03	60	97.00
Option: 495.157 Battery type CR2032				0.50



Digital calipers IP54

These calipers have a protection degree of IP54 and are therefore protected against splash water and resistant to oil and dust.

- Measuring range: 0 - 300 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- On/off switch.
- Reset.
- Thumb wheel/locking screw/flat depth rod.
- Protection: IP54.
- Power supply: 1 battery type V357.



907.900

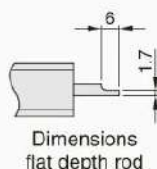
ECONOMY LINE ✓

Item No.	Measuring range/mm	Jaw length mm	Price EUR
907.900	0 - 150	40	45.00
907.901	0 - 200	50	61.00
907.902	0 - 300	60	81.00
Option: 836.535 Battery type V357			0.90

TESA TWIN-Cal absolute digital calipers

New generation IP40 calipers, TESA TWIN-Cal, with an excellent price-performance ratio. These calipers have a unique connectivity concept TESA LINK. All TWIN-Cal calipers are equipped with a data output. Connect the TESA Link Connector to the TWIN-Cal for “plug and play” (wireless) data transfer in combination with the free to download TESA Data-Viewer software.

- Measuring range: 0 - 300 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- Digit height: 11 mm.
- Automatic switch-off.
- Reset.
- Max. measuring speed: approx. 2.5 m/s.
- Thumb wheel (except 783.334).
- Locking screw.
- Flat depth rod (except 783.331: round depth rod $\varnothing 1.5$ mm).
- Protection: IP40.
- ISO 13385-1.
- Standard supplied with data output (USB, Digimatic or wireless).
- Delivery in a plastic case with a manufacturer measuring report.
- Power supply: 1 battery type CR2032.



Also available as a set.

Item No.	Measuring range/mm	Jaw length mm	Depth rod	Price EUR
783.334	0 - 150	40	flat	147.00
783.331	0 - 150	40	round	150.00
783.332	0 - 200	50	flat	219.00
783.333	0 - 300	64	flat	293.00
Options:				
495.157	Battery type CR2032			0.50
779.362 ¹	Depth measuring base 75 x 6 mm			42.00
783.300 ¹	Thumb wheel			13.00
783.301 ²	TESA Link Connector USB			147.00
783.302 ²	TESA Link Connector Digimatic			304.00
783.555 ²	TESA Link Connector Bluetooth			59.00

¹ Only suitable for 783.334.

² The TESA Link Connector will replace the battery cover.



Mitutoyo Absolute Digimatic calipers

Mitutoyo digital calipers equipped with an AOS inductive encoder. The measuring signal is not affected by dirt (water, oil, etc.) on the ruler surface due to the electromagnetic inductive ABS encoder. The one-time setting of origin remains as the absolute zero position until the battery has to be changed.

- Measuring range: 0 - 300 mm.
- Resolution: 0.01 mm.
- ABS/INC switchable.
- With or without Digimatic data output.
- Reset.
- Max. measuring speed: unlimited.
- Flat depth rod (except 500.158, 500.180, 500.184 and 500.203: round depth rod $\varnothing 1.9$ mm).
- Protection: IP40.
- Delivery in a plastic case with a manufacturer measuring report.
- Power supply: 1 battery type V357.



Item No.	Measuring range/mm	Accuracy mm	Jaw length mm	Price EUR
Without Digimatic data output:				
500.180 ¹	0-100	0.02	40	253.00
500.181	0-150	0.02	40	139.00
500.184 ¹	0-150	0.02	40	139.00
500.182	0-200	0.02	50	222.00
With Digimatic data output:				
500.161	0-150	0.02	40	177.00
500.203 ¹	0-150	0.02	40	203.00
500.158 ^{1,2}	0-150	0.02	40	206.00
500.151 ²	0-150	0.02	40	202.00
500.162	0-200	0.02	50	249.00
500.152 ²	0-200	0.02	50	286.00
500.205	0-300	0.03	64	349.00
500.153 ²	0-300	0.03	64	396.00

¹ With round depth rod $\varnothing 1.9$ mm.

² With thumb wheel.

³ With data switch.

⁴ Connector + transmitter are needed.



Round depth rod



Options

Item No.	Description	Price EUR
836.535	Battery type V357	0.90
959.149 ³	Digimatic signal cable 1 m	51.00
959.150 ³	Digimatic signal cable 2 m	60.00
106.382 ³	USB Input Tool Direct cable 2 m	128.00
102.300 ^{3,4}	U-WAVE fit connector	109.00
264.620 ⁴	U-WAVE fit transmitter IP67	189.00
264.621 ⁴	U-WAVE fit transmitter	189.00
264.624 ⁴	U-WAVE Bluetooth transmitter IP 67	197.00
264.625 ⁴	U-WAVE Bluetooth transmitter	197.00

Digital calipers IP67

These IP67 protected calipers are especially suitable for use in production environments: they are fully protected against dust intrusion and even temporary immersion.

- Measuring range: 0 - 300 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- Automatic switch-off.
- Reset.
- Large LCD display.
- Thumb wheel/locking screw/flat depth rod.
- Protection: IP67.
- Delivery in a plastic case with a manufacturer measuring report.
- Power supply: 1 battery type CR2032.



ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Jaw length mm	Price EUR
910.066	0 - 150	0.02	40	70.00
910.067	0 - 200	0.03	50	89.00
910.068	0 - 300	0.03	60	122.00
With Bluetooth:				
910.069	0 - 150	0.03	40	89.00
Option: 495.157 Battery type CR2032				0.50

Absolute digital calipers IP67

These IP67 protected calipers are especially suitable for use in production environments: they are fully protected against dust intrusion and even temporary immersion.

Calipers with an absolute measuring system for easy incremental and absolute conversion. The advantage of these calipers is the one-time setting of the absolute zero position until the battery has to be changed. This reduces the chance of measuring errors and enables you to use the calipers without having to reset the zero position at every use.

- Measuring range: 0 - 300 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- ABS/INC switchable.
- On/off switch.
- Automatic switch-off.
- Reset.
- Locking screw/flat depth rod.
- Protection: IP67.
- Power supply: 1 battery type CR2032.



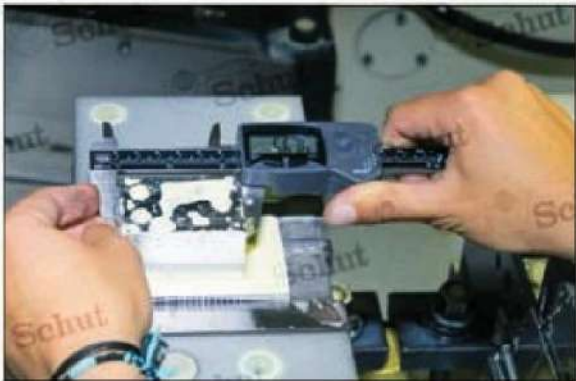
ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Jaw length mm	Price EUR
908.801	0 - 150	0.02	40	89.00
908.802	0 - 200	0.03	50	138.00
908.803	0 - 300	0.03	60	170.00
Option: 495.157 Battery type CR2032				0.50

TESA-Cal absolute digital calipers IP67

As an alternative to the TESA TWIN-Cal caliper line, TESA offers these TESA-Cal calipers with an excellent price-performance ratio. These IP67 rated TESA-Cal calipers are especially suitable for use in the production environments: they are fully protected against dust and can even withstand temporary immersion.

- Measuring range: 0 - 300 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- Automatic switch-off.
- Reset.
- Thumb wheel (only 783.593 and 783.594).
- Locking screw.
- Flat depth rod (except 783.595: round depth rod $\varnothing$ 1.5 mm).
- Protection: IP67.
- ISO 13385-1.
- Delivery in a plastic case with a manufacturer measuring report.
- Power supply: 1 battery type CR2032.



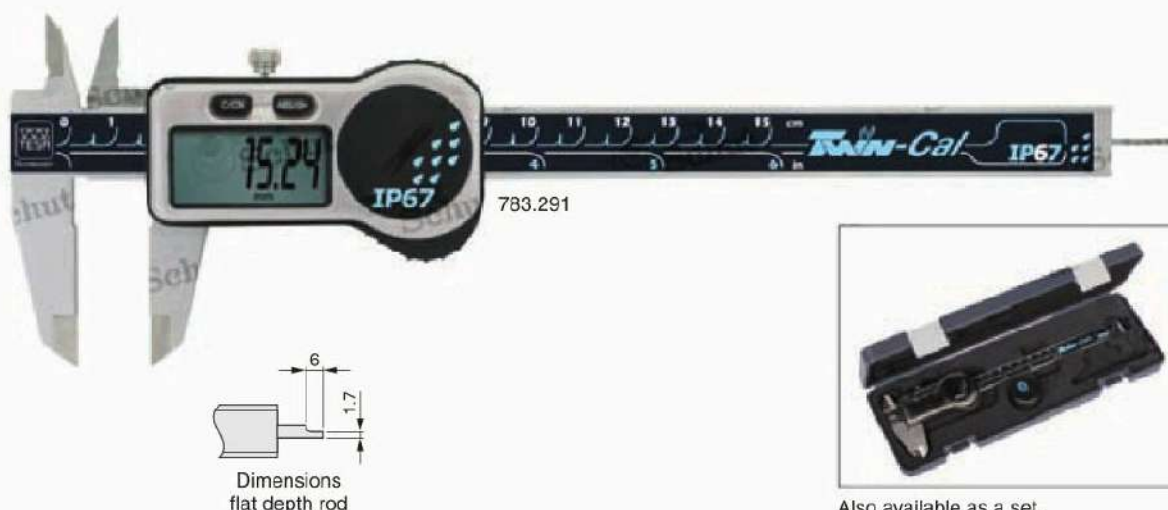
Item No.	Measuring range/mm	Jaw length mm	Depth rod	Price EUR
783.592	0 - 150	40	flat	139.00
783.595	0 - 150	40	round	139.00
783.594	0 - 200	50	flat	201.00
783.593	0 - 300	64	flat	273.00
Option: 495.157 Battery type CR2032				0.50

002-303-EN-20060702

TESA TWIN-Cal absolute digital calipers IP67

New generation IP67 calipers, TESA TWIN-Cal, with an absolute measuring system and a “soft touch” grip. These calipers have a unique connectivity concept TESA LINK. All TWIN-Cal calipers are equipped with a data output. Connect the TESA Link Connector to the TWIN-Cal for “plug and play” (wireless) data transfer in combination with the free to download TESA Data-Viewer software.

- Measuring range: 0 - 300 mm.
- Resolution: 0.01 mm.
- Repeatability: 0.01 mm.
- mm/inch conversion.
- Digit height: 11 mm.
- Automatic switch-off.
- Reset.
- Max. measuring speed: approx. 2.5 m/s.
- Thumb wheel (except 783.290/291); also optionally available.
- Locking screw.
- Round (ø 1.5 mm) or flat depth rod.
- Protection: IP67 (also in combination with data output cable).
- ISO 13385-1.
- Standard supplied with data output (USB, Digimatic or wireless).
- Delivery in a plastic case with a manufacturer measuring report.
- Power supply: 1 battery type CR2032.



Also available as a set.

Item No.	Measuring range/mm	Jaw length mm	Depth rod	Price EUR
783.290	0 - 150	40	flat	218.00
783.291	0 - 150	40	round	218.00
783.292	0 - 150	40	round	219.00
783.293	0 - 200	50	flat	294.00
783.294	0 - 300	64	flat	378.00
Options:				
495.157	Battery type CR2032			0.50
779.362 ¹	Depth measuring base 75 x 6 mm			42.00
783.300 ¹	Thumb wheel			13.00
783.301 ²	TESA Link Connector USB			147.00
783.302 ²	TESA Link Connector Digimatic			304.00
783.555 ²	TESA Link Connector Bluetooth			59.00

¹ Only suitable for the calipers with measuring range 0 - 150 mm.

² The TESA Link Connector will replace the battery cover.



TESA Link Connector USB



TESA Link Connector Digimatic



TESA Link Connector Bluetooth

Mitutoyo Absolute Digimatic Coolant Proof calipers IP67

Series digital calipers with the unique Absolute measuring system to prevent inaccuracy due to an incorrect zero position. These IP67 protected calipers are especially suitable for use in production environments; they even last temporary immersion. The one-time setting of origin remains as the absolute zero position until the battery has to be changed.

- Measuring range: 0 - 300 mm.
- Resolution: 0.01 mm.
- With or without Digimatic data output.
- Digit height: 9 mm.
- Automatic switch-off.
- Reset.
- Max. measuring speed: unlimited.
- Thumb wheel (only 500.719).
- Locking screw.
- Flat depth rod (except 500.709 and 500.719: round depth rod $\varnothing$ 1.9 mm).
- Protection: IP67.
- Battery life: approx. 18 000 hours.
- Delivery in a plastic case with a manufacturer measuring report.
- Power supply: 1 battery type V357.
- Also available with thumb wheel.



Item No.	Measuring range/mm	Accuracy mm	Jaw length mm	Price EUR
Without Digimatic data output:				
500.706	0 - 150	0.02	40	209.00
500.709 ¹	0 - 150	0.02	40	210.00
500.707	0 - 200	0.02	50	288.00
500.708	0 - 300	0.03	64	414.00
With Digimatic data output:				
500.716	0 - 150	0.02	40	264.00
500.719 ¹	0 - 150	0.02	40	
500.727 ²	0 - 150	0.02	40	523.00
500.717	0 - 200	0.02	50	335.00
500.728 ²	0 - 200	0.02	50	583.00
500.718	0 - 300	0.03	64	440.00



¹ With round depth rod $\varnothing$ 1.9 mm.

² Provided with tungsten carbide measuring faces.

³ With data switch.

⁴ Connector + transmitter are needed.

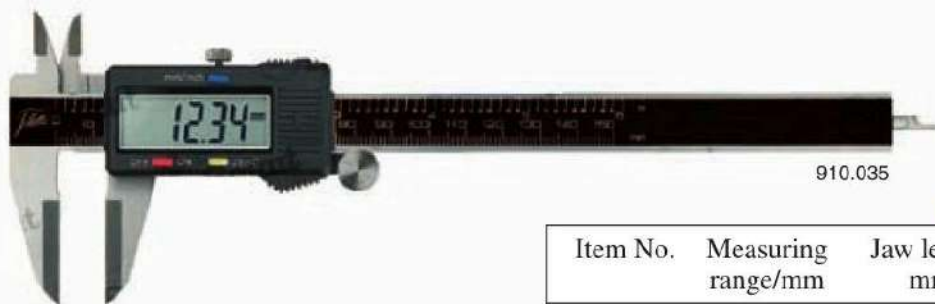
Options

Item No.	Description	Price EUR
836.535	Battery type V357	0.90
105.624 ³	Digimatic signal cable, 1 m	105.00
105.625 ³	Digimatic signal cable, 2 m	113.00
106.381 ³	USB Input Tool Direct cable 2 m	146.00
102.310 ^{3,4}	U-WAVE fit connector IP67	114.00
264.620 ⁴	U-WAVE fit transmitter IP67	189.00
264.621 ⁴	U-WAVE fit transmitter	189.00
264.624 ⁴	U-WAVE Bluetooth transmitter IP 67	197.00
264.625 ⁴	U-WAVE Bluetooth transmitter	197.00



Digital calipers with tungsten carbide measuring faces

- Measuring range: 0 - 300 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- On/off switch.
- Reset.
- Large LCD display.
- Thumb wheel/locking screw/flat depth rod.
- Tungsten carbide measuring faces.
- Power supply: 1 battery type V357.



910.035

ECONOMY LINE ✓

Item No.	Measuring range/mm	Jaw length mm	Price EUR
910.035	0 - 150	40	90.00
910.036	0 - 200	50	120.00
910.037	0 - 300	60	191.00
Option: 836.535 Battery type V357			0.90



Digital Caliper with long measuring jaw

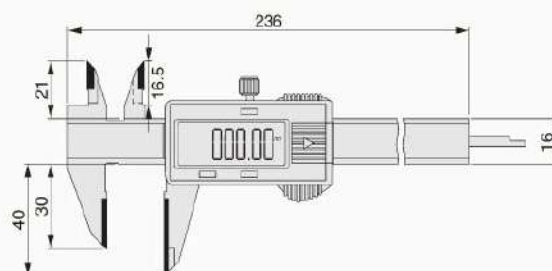
Digital caliper with long measuring jaw for use as scribing tool.

- Measuring range: 0 - 150 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- On/off switch.
- Reset.
- Large LCD display.
- Thumb wheel/locking screw/flat depth rod.
- Tungsten carbide measuring faces.
- Power supply: 1 battery type V357.



ECONOMY LINE ✓

Item No.	Measuring range/mm	Price EUR
910.284	0 - 150	93.00
Option: 836.535 Battery type V357		0.90

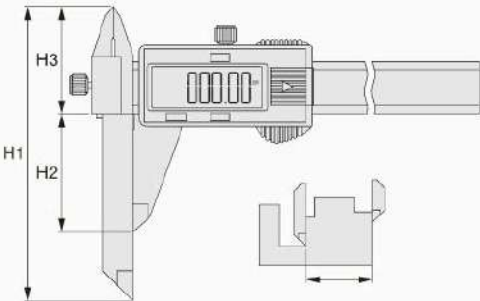


002-334 EN 20060702

Digital calipers with slidable measuring jaw

For measuring distances between planes at different levels. Very suitable as scribing tool!

- Measuring range: 0 - 500 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- On/off switch.
- Reset.
- Large LCD display.
- Thumb wheel/locking screw.
- Power supply: 1 battery type V357 (except 906.348).



* Model with absolute digital display, without thumb wheel, with fine adjustment and preset function.

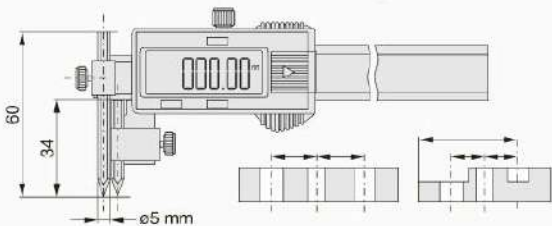
ECONOMY LINE ✓

Item No.	Measuring range/mm	Jaw length/mm			Price EUR
		H1	H2	H3	
906.345	0 - 150	110	40	37	121.00
906.346	0 - 200	120	50	40	163.00
906.347	0 - 300	130	60	42	235.00
906.348*	0 - 500	210	100	66	300.00
Options:					
836.535	Battery type V357				0.90
495.157	Battery type CR2032				0.50

Digital calipers for measuring center distances

Suited for measuring center distances between bores from $\varnothing 1$ up to 4.5 mm. Because both measuring jaws are adjustable in height it is possible to measure center distances between bores that are positioned at different levels.

- Measuring range: 5 - 300 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- On/off switch.
- Reset.
- Large LCD display.
- Locking screw.
- Power supply: 1 battery type V357.



ECONOMY LINE ✓

Item No.	Measuring range/mm	Price EUR
906.395	5 - 150	146.00
906.396	5 - 200	168.00
906.397	5 - 300	226.00
Option:		
836.535	Battery type V357	0.90

Digital caliper with pin-shaped anvil

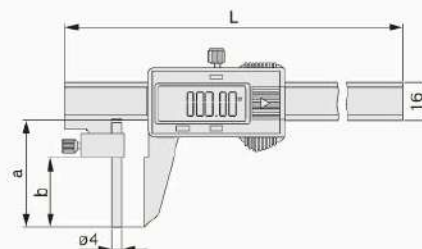
Digital caliper for measuring e.g. (tube) wall thickness.

- Measuring range: 0 - 150 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- On/off switch.
- Reset.
- Large LCD display.
- Pin-shaped anvil: $\varnothing 4$ mm.
- Locking screw.
- Power supply: 1 battery type V357.



ECONOMY LINE ✓

Item No.	Measuring range/mm	a mm	b mm	Price EUR
910.262	0 - 150	46	30	119.00
Option: 836.535 Battery type V357				0.90



Digital calipers with large measuring faces

Calipers with large rectangular measuring faces for the measurements of for example round shafts and cables.

- Measuring range: 0 - 300 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- On/off switch.
- Reset.
- Large LCD display.
- Locking screw.
- Power supply: 1 battery type V357.



ECONOMY LINE ✓



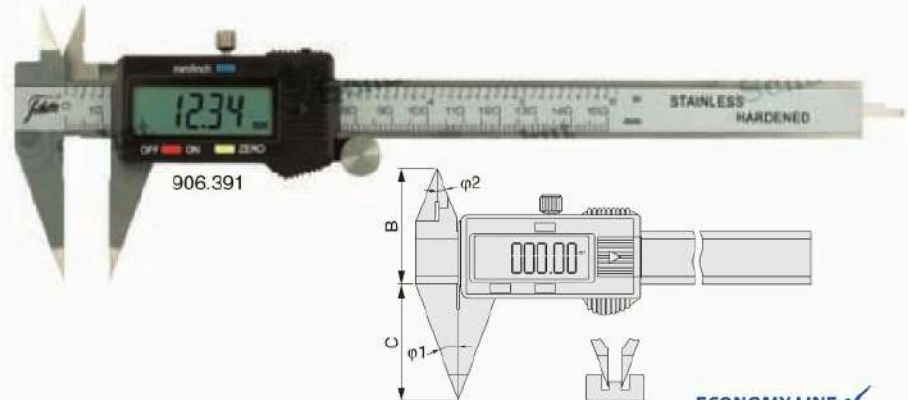
Item No.	Measuring range/mm	Measuring face width/mm	Measuring face height/mm	Price EUR
910.166	0 - 150	20	30	104.00
910.167	0 - 200	30	40	152.00
910.168	0 - 300	40	50	239.00
Option: 836.535 Battery type V357				0.90

002-344 EN 20060702

Digital calipers with pointed measuring jaws

The pointed measuring jaws of these calipers enable you to measure distances in places that are hard to reach.

- Measuring range: 0 - 300 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- On/off switch.
- Reset.
- Large LCD display.
- Thumb wheel/locking screw/flat depth rod.
- Power supply: 1 battery type V357.



ECONOMY LINE ✓



Item No.	Measuring range/mm	Jaw length C/mm	Length B/mm	Angle φ1	Angle φ2	Price EUR
906.391	0 - 150	40	37	20°	20°	71.00
906.392	0 - 200	50	40	20°	22.5°	103.00
906.393	0 - 300	60	42	20°	22.5°	158.00
Option: 836.535 Battery type V357						0.90

Digital calipers with thin measuring jaws

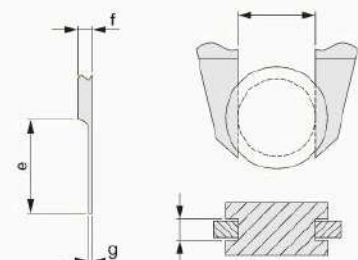
Digital calipers with extra thin measuring jaws for measuring inside small grooves.

- Measuring range: 0 - 300 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- On/off switch.
- Reset.
- Large LCD display.
- Locking screw/flat depth rod.
- Delivery in a case.
- Power supply: 1 battery type V357.



ECONOMY LINE ✓

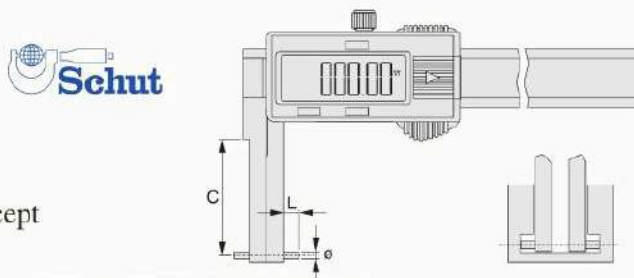
Item No.	Measuring range/mm	Accuracy mm	e mm	f mm	g mm	Price EUR
910.274	0 - 150	±0.06	20	3.6	0.75	105.00
910.275	0 - 200	±0.10	20	3.6	0.75	135.00
910.276	0 - 300	±0.10	20	3.8	1	181.00
Option: 836.535 Battery type V357						0.90



Digital calipers with outside angled measuring pins

These calipers are equipped with outward angled rounded pins.

- Measuring range: 35 - 500 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- On/off switch.
- Reset.
- Large LCD display.
- Thumb wheel/locking screw.
- Power supply: 1 battery type V357 (except 906.383).



906.374

ECONOMY LINE ✓

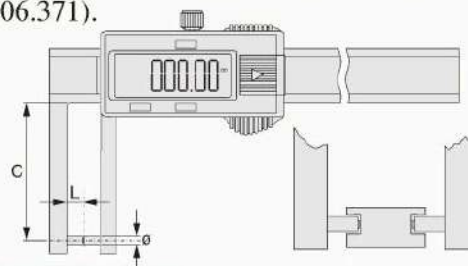
*Model with absolute digital display, without thumb wheel, with fine adjustment and preset function.

Item No.	Measuring range/mm	Jaw length C/mm	Pin Ø/mm	Pin length L/mm	Price EUR
906.374	35 - 150	60	2	6	150.00
906.377	40 - 200	70	3	7	196.00
906.380	50 - 300	80	3	10	232.00
906.383 *	60 - 500	105	3	10	375.00
Options:					
836.535	Battery type V357				0.90
495.157	Battery type CR2032				0.50

Digital calipers with inside angled measuring pins

These calipers are equipped with inward angled rounded pins.

- Measuring range: 0 - 500 mm.
 - Resolution: 0.01 mm.
 - mm/inch conversion.
 - On/off switch.
 - Reset.
 - Large LCD display.
 - Thumb wheel/locking screw.
- Power supply: 1 battery type V357 (except 906.371).



906.368

ECONOMY LINE ✓

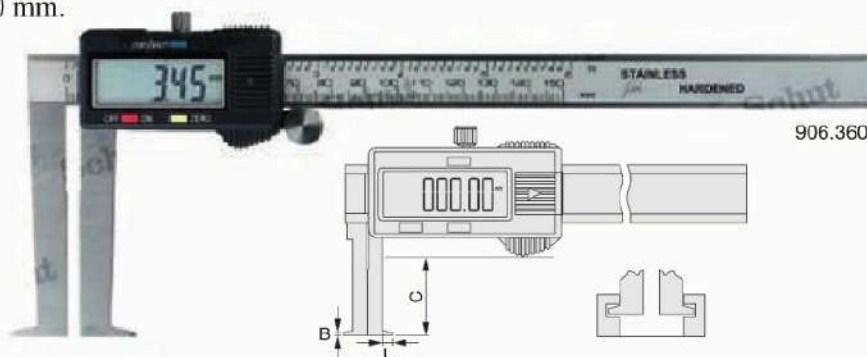
*Model with absolute digital display, without thumb wheel, with fine adjustment and preset function.

Item No.	Measuring range/mm	Jaw length C/mm	Pin Ø/mm	Pin length L/mm	Price EUR
906.368	0 - 150	40	2	5	97.00
906.369	0 - 200	50	2.5	8	112.00
906.370	0 - 300	60	2.5	10	171.00
906.371 *	0 - 500	100	3	12	237.00
Options:					
836.535	Battery type V357				0.90
495.157	Battery type CR2032				0.50

Digital calipers with outside angled measuring jaws

These calipers are equipped with outward angled V-shaped measuring jaws.

- Measuring range: 35 - 500 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- On/off switch.
- Reset.
- Large LCD display.
- Thumb wheel/locking screw.
- Power supply:
1 battery type V357
(except 906.363).



906.360

ECONOMY LINE ✓



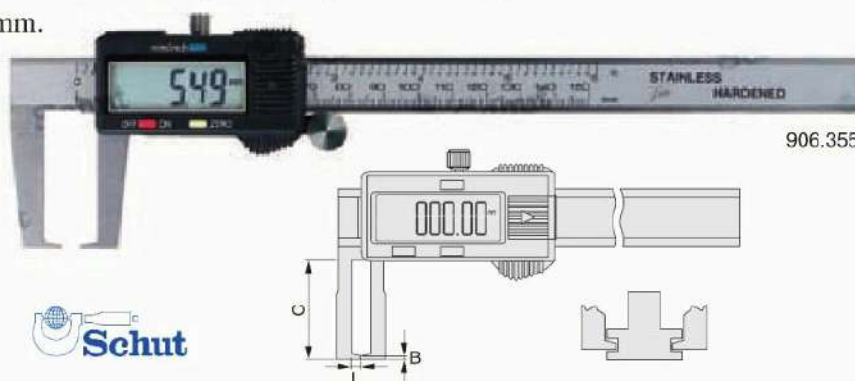
* Model with absolute digital display, without thumb wheel, with fine adjustment and preset function.

Item No.	Measuring range/mm	Jaw length C/mm	Measuring face B/mm	Jaw length L/mm	Price EUR
906.360	35 - 150	50	1.5	6	120.00
906.361	40 - 200	60	1.5	7	140.00
906.362	50 - 300	70	1.5	8	207.00
906.363*	60 - 500	110	2	10	329.00
Options:					
836.535	Battery type V357				0.90
495.157	Battery type CR2032				0.50

Digital calipers with inside angled measuring jaws

These calipers are equipped with inward angled V-shaped measuring jaws.

- Measuring range: 0 - 500 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- On/off switch.
- Reset.
- Large LCD display.
- Thumb wheel/locking screw.
- Power supply:
1 battery type V357
(except 906.358).



906.355

ECONOMY LINE ✓



* Model with absolute digital display, without thumb wheel, with fine adjustment and preset function.

Item No.	Measuring range/mm	Jaw length C/mm	Measuring face B/mm	Jaw length L/mm	Price EUR
906.355	0 - 150	40	1	5	95.00
906.356	0 - 200	50	1	7	116.00
906.357	0 - 300	60	1.5	8	166.00
906.358*	0 - 500	100	2	12	259.00
Options:					
836.535	Battery type V357				0.90
495.157	Battery type CR2032				0.50

Digital calipers for internal length measurement

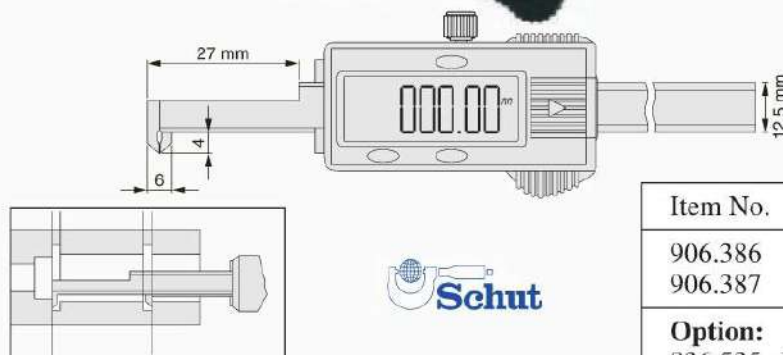
Calipers with outward angled, pointed measuring jaws for the measurement of for example internal grooves.

- Measuring range: 3 - 200 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.

- On/off switch.
- Reset.
- Large LCD display.
- Locking screw.
- Power supply: 1 battery type V357.



906.386



ECONOMY LINE ✓

Item No.	Measuring range/mm	Price EUR
906.386	3 - 125	120.00
906.387	3 - 200	143.00
Option:		
836.535	Battery type V357	0.90

Digital caliper for groove measurements

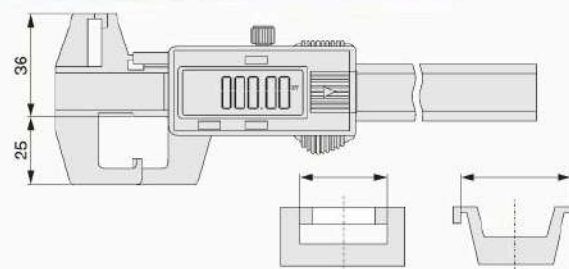
- Measuring range: 0 - 125 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- On/off switch.
- Reset.
- Large LCD display.
- Equipped with small measuring jaws on top of the caliper.
- Thumb wheel/locking screw.

- Also suitable for:
 - internal diameter attached collar,
 - internal diameter U-shaped flange on axis,
 - center distances blind holes under-surface flange on axis,
 - hole diameter hard-to-reach places,
 - height measurement,
 - groove width and groove distance.
- Power supply: 1 battery type V357.



ECONOMY LINE ✓

Item No.	Measuring range/mm	Price EUR
906.365	0 - 125	155.00
Option:		
836.535	Battery type V357	0.90

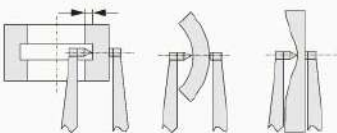
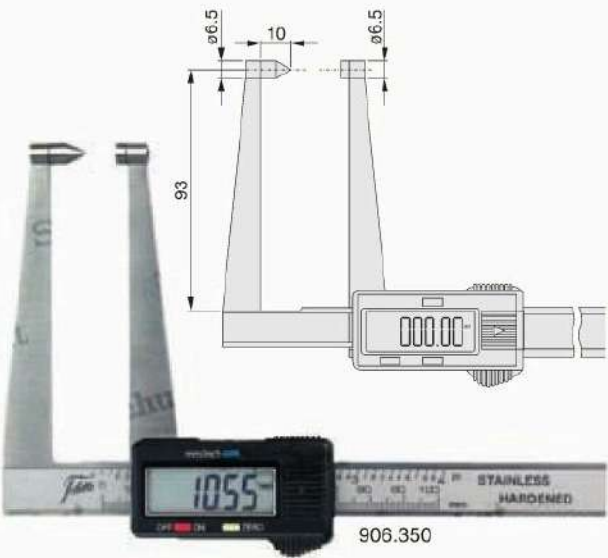


002 207 EN 20260702

Digital calipers with pointed anvil

With the pointed anvil and the long measuring jaws you can measure all sorts of wall thicknesses in places that are hard to reach and of for example round surfaces.

- Measuring range: 0 - 150 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- On/off switch.
- Reset.
- Large LCD display.
- Power supply: 1 battery type V357.



ECONOMY LINE ✓

Item No.	Measuring range/mm	Price EUR
906.350	0 - 75	124.00
906.351	0 - 125	138.00
906.352	0 - 150	153.00
Option: 836.535 Battery type V357		0.90

Digital gear tooth thickness calipers

The vertical slider sets the height (H) from the top of the tooth to the pitch line. Subsequently, the horizontal slider measures the tooth thickness (G) at the pitch line.



Item No.	H	G
907.238	0 - 30	0 - 40
907.239	0 - 55	0 - 80

- Measuring range: module 1 - 50.
- Resolution: 0.01 mm.
- mm/inch conversion.
- On/off switch.
- Reset.
- Large LCD display.
- Fine adjustment.
- Locking screw.
- Tungsten carbide measuring faces.
- Power supply: 2 batteries type V357.

ECONOMY LINE ✓

Item No.	Module	Price EUR
907.238	1 - 30	219.00
907.239	5 - 50	274.00
Option: 836.535 Battery type V357 (2 needed)		0.90

002-360-EN-20060702

Digital calipers with long measuring knives

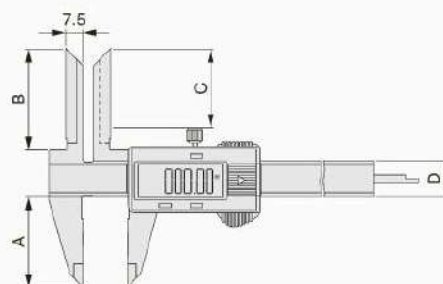
Digital calipers with long measuring knives for internal measurements.

- Measuring range: 0 - 200 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- On/off switch.
- Reset.
- Large LCD display.
- Locking screw/flat depth rod.
- Power supply: 1 battery type V357.



ECONOMY LINE ✓

Item No.	Measuring range/mm	A mm	B mm	C mm	D mm	Price EUR
910.280	0 - 150	40	45	35	16	131.00
910.281	0 - 200	50	50	40	16	141.00
Option: 836.535 Battery type V357						0.90



Digital calipers for internal measurements

Calipers with long measuring jaws for internal measurements.

- Measuring range: 15 - 300 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- On/off switch.
- Reset.
- Large LCD display.
- Locking screw.
- Power supply: 1 battery type V357 (except 906.825/827/829).



ECONOMY LINE ✓

Item No.	Measuring range/mm	Effective jaw length mm	Price EUR
906.824	15 - 150	50	100.00
906.825*	25 - 150	130	171.00
906.826	18 - 200	65	103.00
906.827*	25 - 200	130	174.00
906.828	20 - 300	80	171.00
906.829*	25 - 300	130	201.00



* Model with absolute digital display, fine adjustment and preset function.

Options:

836.535	Battery type V357	0.90
495.157	Battery type CR2032	0.50

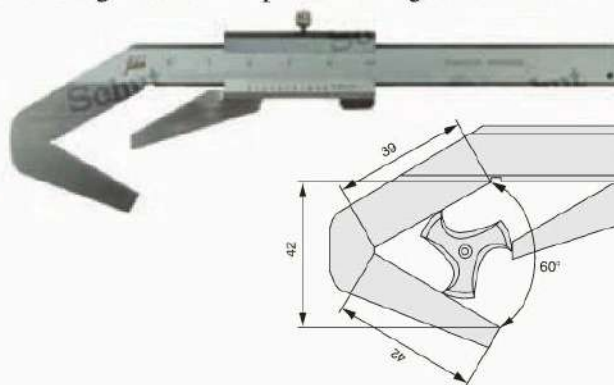
Caliper with prismatic anvil

Caliper with prismatic anvil for measuring objects with an uneven number of grooves like cutters, reamers and drills. The angle of the prism aperture is designed for workpieces having a number of 3 flutes.

- Measuring range: 4 - 40 mm.
- Locking screw.
- Graduation: 0.05 mm.
- Accuracy: ± 0.05 mm.

ECONOMY LINE ✓

Item No.	For work-pieces with	Measuring range/mm	Price EUR
Analog 910.431	3 flutes	4 - 40	101.00



Brake disc calipers

Brake disc calipers especially designed for measuring the groove depth of brake discs.

- Measuring range: 0 - 90 mm.
- Vernier: 0.1 mm.
- Locking screw.
- Stainless steel construction.



ECONOMY LINE ✓

Item No.	Measuring range/mm	Jaw length mm	Price EUR
907.215	0 - 60	55	33.90
907.216	0 - 60	80	54.00
907.217	0 - 90	120	96.00

Digital radius caliper

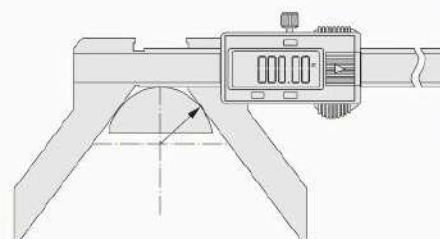
Digital caliper for direct measurement of a radius for an arc that has an opening angle smaller than 180° (min. 107°).

- Measuring range: 3 - 150 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- On/off switch.
- Reset.
- Large LCD display.
- Locking screw.
- Power supply: 1 battery type V357.

Item No.	Measuring range/mm	Price EUR
910.272	3 - 150	189.00
Option: 836.535	Battery type V357	0.90



ECONOMY LINE ✓

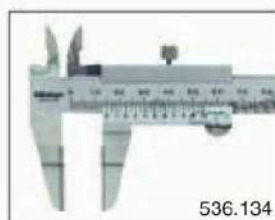


Mitutoyo special-purpose calipers

Mitutoyo special-purpose analog (vernier) and digital (Absolute Digimatic *Coolant Proof* IP67) calipers. For more information please contact our sales department.

Item No.	Measuring range/mm	Read-out* mm	Price EUR
With thinner tungsten carbide measuring jaws (thickness 0.75 mm):			
536.134	0-150	0.05 (V)	452.00
536.135	0-200	0.05 (V)	489.00
573.635	0-150	0.01 (D)	765.00
With pointed measuring jaws:			
536.121	0-150	0.05 (V)	237.00
573.622	0-150	0.01 (D)	529.00
With thin pointed measuring jaws:			
573.626	0-150	0.01 (D)	595.00
For scribing, with tungsten carbide measuring jaws:			
536.221	0-150	0.05 (V)	179.00
536.222	0-200	0.05 (V)	216.00
536.223	0-300	0.05 (V)	450.00
573.676	0-150	0.01 (D)	394.00
573.677	0-200	0.01 (D)	517.00
573.679	0-300	0.01 (D)	1,353.00
With slidable measuring jaw:			
536.101	0-150	0.05 (V)	330.00
536.102	0-200	0.05 (V)	400.00
536.103	0-300	0.05 (V)	535.00
573.611	0-150	0.01 (D)	675.00
573.612	0-200	0.01 (D)	752.00
573.614	0-300	0.01 (D)	898.00
For center distances:			
536.105	10-150	0.05 (V)	443.00
536.106	10-200	0.05 (V)	518.00
536.107	10-300	0.05 (V)	625.00
573.615	10-160	0.01 (D)	642.00
573.616	10-210	0.01 (D)	712.00
573.618	10-310	0.01 (D)	961.00

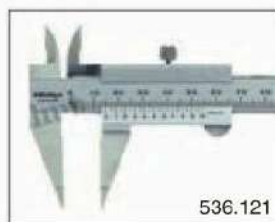
* V = vernier read-out, D = digital read-out.



536.134



573.635



536.121



573.622



573.626



536.221



573.676



536.101



573.611



536.106



573.615

Mitutoyo special-purpose calipers (continued)



536.152



573.654



536.146



573.648



536.151



573.653



536.145



573.647



536.161



573.662



536.142



573.643



536.212

Item No.	Measuring range/mm	Read-out* mm	Price EUR
With inside angled measuring pins:			
536.152	0-150	0.05 (V)	568.00
573.654	0-150	0.01 (D)	791.00
With inside angled measuring jaws:			
536.151	0-150	0.05 (V)	442.00
573.653	0-150	0.01 (D)	675.00
With outside angled measuring pins:			
536.146	20-150	0.05 (V)	521.00
536.147	30-300	0.05 (V)	572.00
536.148	70-450	0.05 (V)	1,072.00
536.149	70-600	0.05 (V)	1,101.00
573.648	20-170	0.01 (D)	806.00
With outside angled measuring jaws:			
536.145	10-150	0.05 (V)	539.00
573.647	10-160	0.01 (D)	765.00
For tube wall thickness measurements:			
536.161	0-150	0.05 (V)	398.00
573.662	0-150	0.01 (D)	675.00
For internal measurements:			
536.142	10-200	0.05 (V)	720.00
573.643	10-200	0.01 (D)	871.00
With swivelling measuring jaw:			
536.212	0-200	0.05 (V)	706.00

* V=vernier read-out, D=digital read-out.

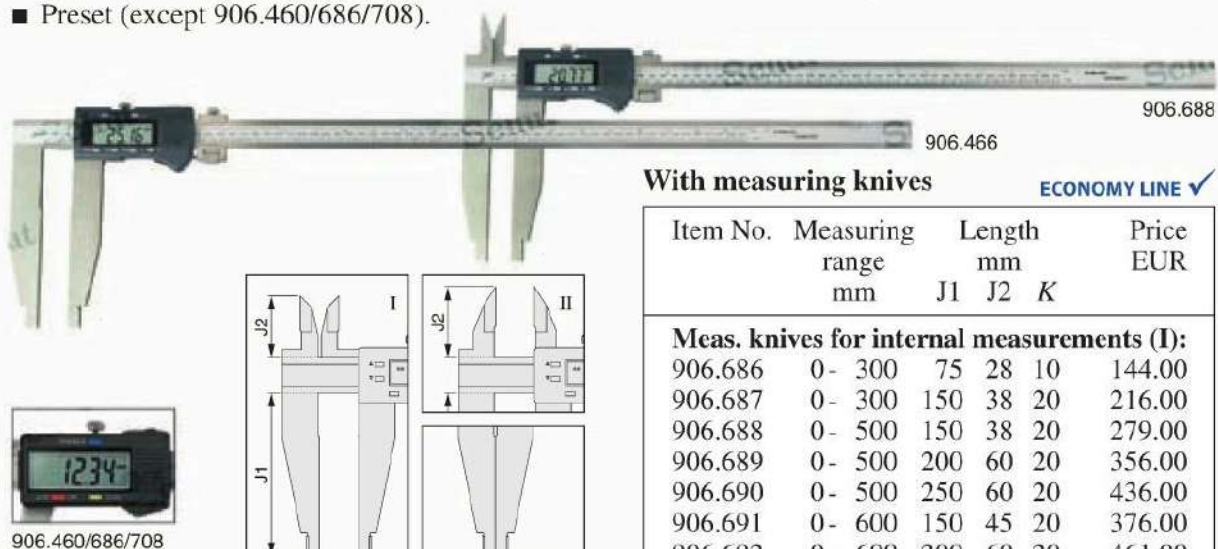
Absolute digital workshop calipers

Large and solid, stainless steel digital calipers with no-glare chrome finished beam.

- Measuring range: 0 - 2000 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- ABS/INC switchable (except 906.460/686/708).
- On/off switch.
- Reset.
- Preset (except 906.460/686/708).



- Memory for measuring values when the display is switched off.
- Rounded jaw ends for internal measurements.
- Fine adjustment and locking screw.
- Delivery in a plastic case or a wooden case.
- Power supply: 1 battery type CR2032 (except 906.460/686/708).



Without measuring knives

Item No.	Measuring range mm	Length mm		Price EUR
		J1	K	
906.708	0 - 300	75	10	129.00
906.709	0 - 300	150	20	178.00
906.465	0 - 500	150	20	244.00
906.470	0 - 500	200	20	310.00
906.718	0 - 500	250	20	380.00
906.466	0 - 600	150	20	327.00
906.471	0 - 600	200	20	422.00
906.719	0 - 600	300	20	570.00
906.467	0 - 1000	200	20	741.00
906.472	0 - 1000	300	20	1,044.00
906.468 ^{1,2}	0 - 1500	200	20	1,185.00
906.473 ^{1,2}	0 - 1500	300	20	1,591.00
906.469 ^{1,2}	0 - 2000	200	20	1,755.00
906.474 ^{1,2}	0 - 2000	300	20	2,350.00

Item No.	Description	Price EUR
495.157	Battery type CR2032	0.50
836.535	Battery type V357	0.90

With measuring knives

ECONOMY LINE ✓

Item No.	Measuring range mm	Length mm			Price EUR
		J1	J2	K	
Meas. knives for internal measurements (I):					
906.686	0 - 300	75	28	10	144.00
906.687	0 - 300	150	38	20	216.00
906.688	0 - 500	150	38	20	279.00
906.689	0 - 500	200	60	20	356.00
906.690	0 - 500	250	60	20	436.00
906.691	0 - 600	150	45	20	376.00
906.692	0 - 600	200	60	20	461.00
906.693	0 - 600	300	60	20	657.00
906.694	0 - 1000	200	60	20	860.00
906.695	0 - 1000	300	60	20	1,147.00
906.696 ^{1,2}	0 - 1500	200	60	20	1,243.00
906.697 ^{1,2}	0 - 1500	300	60	20	1,826.00
906.698 ^{1,2}	0 - 2000	200	60	20	2,020.00
906.699 ^{1,2}	0 - 2000	300	60	20	2,710.00
Meas. knives for external measurements (II):					
906.460	0 - 300	75	38	10	144.00
906.758	0 - 300	150	56	20	214.00
906.461	0 - 500	150	56	20	280.00
906.759	0 - 500	200	67	20	356.00
906.760	0 - 500	250	80	20	436.00
906.761	0 - 600	150	56	20	376.00
906.762	0 - 600	200	67	20	461.00
906.763	0 - 600	300	80	20	658.00
906.462	0 - 1000	200	67	20	860.00
906.764	0 - 1000	300	80	20	1,147.00
906.463 ^{1,2}	0 - 1500	200	80	20	1,364.00
906.765 ^{1,2}	0 - 1500	300	80	20	1,828.00
906.464 ^{1,2}	0 - 2000	200	80	20	1,574.00
906.766 ^{1,2}	0 - 2000	300	80	20	2,490.00

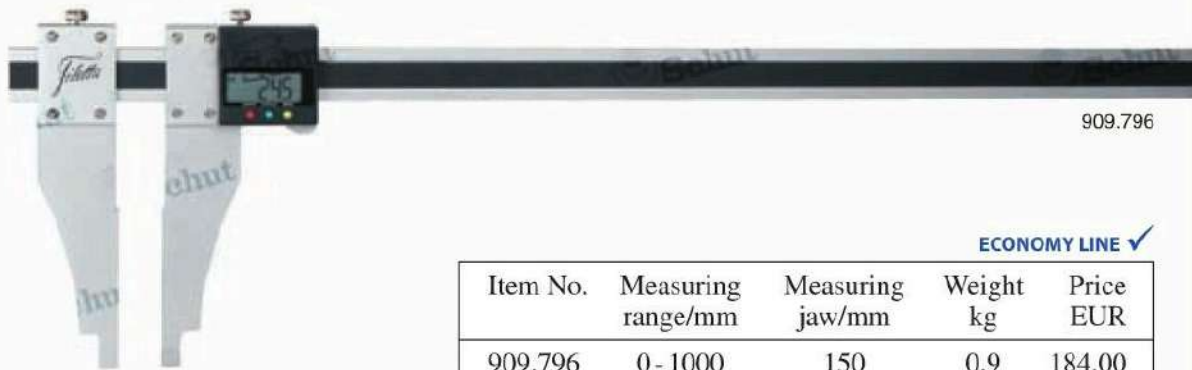
¹ Without graduation on the caliper beam.

² Delivery ex Groningen, Netherlands.

Digital aluminum workshop caliper

Lightweight digital aluminum workshop caliper with both measuring jaws being moveable.

- Measuring range: 0 - 1000 mm.
 - Resolution: 0.1 mm.
 - mm/inch conversion.
 - On/off switch.
 - Reset.
- Aluminum scale with hollow construction (8 x 30 mm).
 - Both of the measuring jaws can be moved.
 - Power supply: 1 battery type V357.



909.796

ECONOMY LINE ✓

Item No.	Measuring range/mm	Measuring jaw/mm	Weight kg	Price EUR
909.796	0 - 1000	150	0.9	184.00
Option: 836.535 Battery type V357				0.90

Digital lightweight carbon workshop calipers

Different models are available in many lengths. Calipers can be supplied with for instance extra long measuring jaws, TiN coated or hardened measuring jaws or both measuring jaws being moveable. There are also models where special inserts or slide on probes can be used for measuring for instance center distances, grooves or diameters.



002-329 EN 20060702

TESA TWIN-Cal absolute digital workshop calipers IP67

New generation IP67 workshop calipers with measuring ranges up to 1000 mm, TESA TWIN-Cal, with an absolute measuring system and a “soft touch” grip. These workshop calipers have a unique connectivity concept TESA LINK. All TWIN-Cal workshop calipers are equipped with a data output. Connect the TESA Link Connector to the TWIN-Cal for “plug and play” (wireless) data transfer in combination with the free to download TESA Data-Viewer software. Hardened stainless steel measuring jaws, with rounded jaw ends for internal and external measurements. Available with or without measuring knives for internal or external measurements.

- Measuring range: 0 - 1000 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- Digit height: 11 mm.
- Automatic switch-off.
- Reset.
- Hold function.
- Max. measuring speed: approx. 2.5 m/s.
- Locking screw.
- Protection: IP67 (also in combination with data output cable).
- ISO 13385-1.

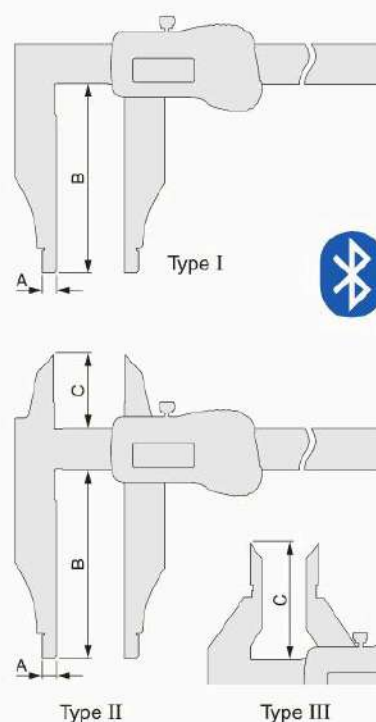


- Standard supplied with data output (USB, Digimatic or wireless).
- Delivery in a plastic case with a manufacturer measuring report.
- Power supply: 1 battery type CR2032.



Item No.	Measuring range/mm	Length/mm			Price EUR
		A	B	C	
Without measuring knives (I):					
783.335	0- 200	5	80	—	494.00
783.337	0- 300	5	90	—	557.00
783.338	0- 500	10	150	—	953.00
783.339	0- 600	10	150	—	1,175.00
783.340	0- 800	10	150	—	1,430.00
783.341	0-1000	10	150	—	1,816.00
With measuring knives for external measurements (II):					
783.342	0- 200	5	80	30	531.00
783.344	0- 300	5	90	37	629.00
783.345	0- 500	10	150	60	1,077.00
783.346	0- 600	10	150	60	1,293.00
783.347	0- 800	10	150	56	1,629.00
783.348	0-1000	10	150	56	2,050.00
With measuring knives for internal measurements (III):					
783.349	0- 250	5	80	54	604.00
Options:					
495.157	Battery type CR2032				0.50
783.301 ¹	TESA Link Connector USB				147.00
783.302 ¹	TESA Link Connector Digimatic				304.00
783.555 ¹	TESA Link Connector Bluetooth				59.00

¹ The TESA Link Connector will replace the battery cover.



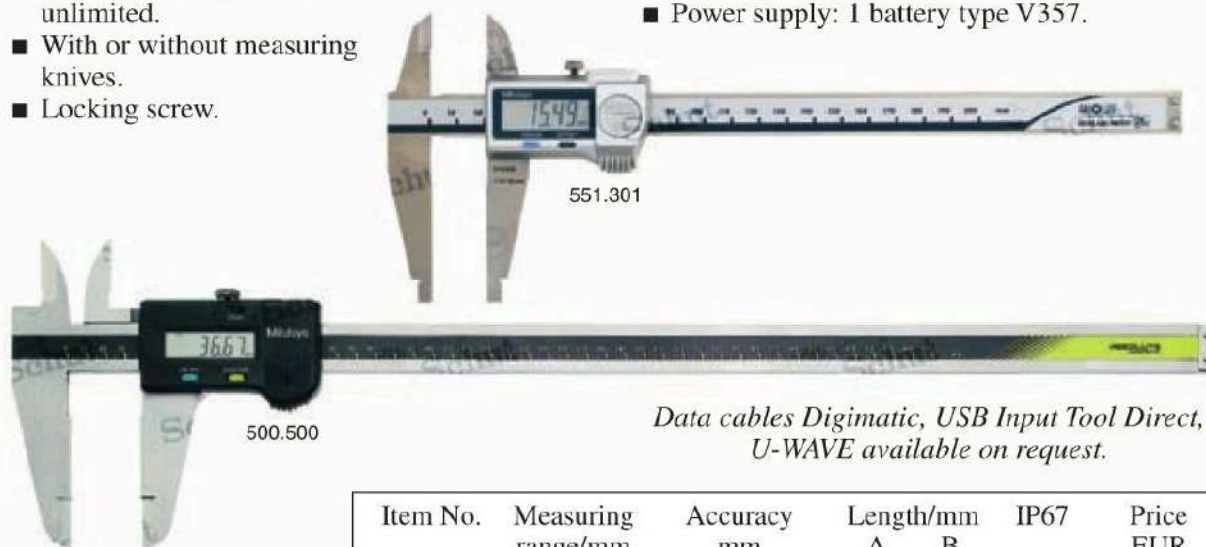
Mitutoyo Absolute Digimatic workshop calipers

Series of large digital calipers with the unique Absolute measuring system to prevent inaccuracy due to an incorrect zero position. The one-time setting of origin remains as the absolute zero position until the battery has to be changed.

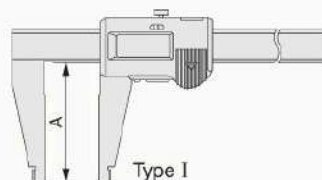
- Measuring range: 0 - 1000 mm.
- Resolution: 0.01 mm.
- ABS/INC switchable.
- Digimatic data output.
- On/off switch.
- Reset.
- Max. measuring speed: unlimited.
- With or without measuring knives.
- Locking screw.



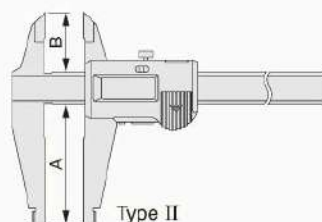
- Types I and II with rounded jaw ends for internal measurements:
- measuring range ≤ 300 mm: from 10 mm,
- measuring range ≥ 450 mm: from 20 mm.
- Protection: IP40 or IP67.
- Conforms to factory standard.
- Delivery in a plastic case.
- Power supply: 1 battery type V357.



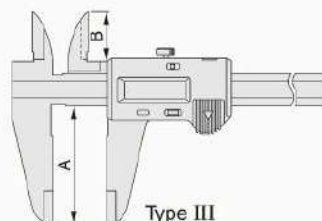
Data cables Digimatic, USB Input Tool Direct, U-WAVE available on request.



Type I



Type II



Type III

Item No.	Measuring range/mm	Accuracy mm	Length/mm		IP67	Price EUR
Without measuring knives (I):						
550.301 ¹	0- 200	±0.03	60	—	IP67	426.00
550.331 ²	0- 300	±0.04	75	—	IP67	567.00
550.203	0- 450	±0.05	100	—	—	781.00
550.205	0- 600	±0.05	100	—	—	890.00
550.207	0-1000	±0.07	140	—	—	1,506.00
With measuring knives for external measurements (II):						
551.301 ¹	0- 200	±0.03	60	30	IP67	465.00
551.331 ²	0- 300	±0.04	90	40	IP67	614.00
551.204	0- 500	±0.06	150	56	—	989.00
551.206	0- 750	±0.06	150	56	—	1,354.00
551.207	0-1000	±0.07	150	56	—	1,642.00
With measuring knives for internal measurements (III):						
500.500	0- 450	±0.05	90	38	—	1,046.00
500.501	0- 600	±0.05	90	38	—	1,140.00
500.502	0-1000	±0.07	130	50	—	1,971.00
Option:						
836.535	Battery type V357					0.90

¹ Offset function.

² Offset and preset function.

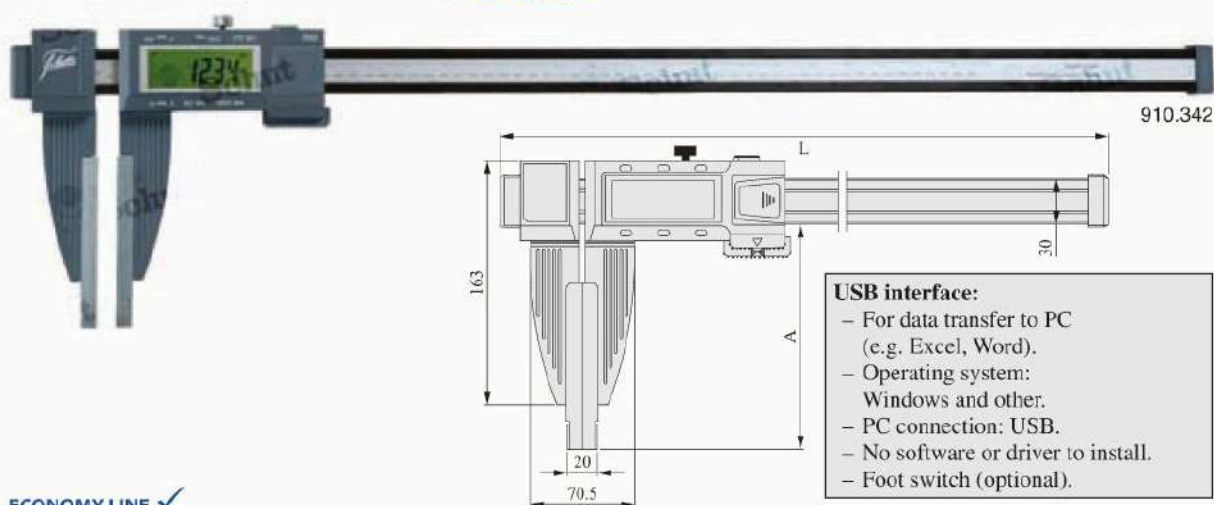
Digital carbon workshop calipers IP65

Workshop calipers with large measuring jaws, Bluetooth, and an ultra lightweight carbon fiber construction that saves up to 65% of the total weight compared to a steel workshop caliper.

- Measuring range: 0 - 2000 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- ABS/INC switchable.
- Digimatic data output.
- Bluetooth data output.
- On/off switch.
- Reset/preset.
- Hold function.



- Fine adjustment by means of carriage for constant measuring force between 5 - 10 N.
- Carbon jaws with steel measuring faces.
- Rounded jaw ends for internal measurements.
- Locking screw.
- Protection: IP65.
- Delivery in a wooden case with a manufacturer measuring report.
- Power supply: 1 battery type CR2032.



USB interface:

- For data transfer to PC (e.g. Excel, Word).
- Operating system: Windows and other.
- PC connection: USB.
- No software or driver to install.
- Foot switch (optional).

ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Jaw length A/mm	Weight kg	Length L/mm	Price EUR
910.342	0 - 600	±0.06	130	1.3	826	408.00
910.343	0 - 600	±0.08	200	1.4	826	473.00
910.344	0 - 600	±0.12 ²	300	1.5	826	541.00
910.345	0 - 1000	±0.08	130	1.5	1226	569.00
910.346	0 - 1000	±0.12	200	1.6	1226	654.00
910.347	0 - 1000	±0.16 ²	300	1.7	1226	731.00
910.349 ¹	0 - 1500	±0.16	150	2.0	1736	881.00
910.350 ¹	0 - 1500	±0.21 ²	300	2.1	1736	992.00
910.352 ¹	0 - 2000	±0.21	200	2.6	2246	1,745.00
910.353 ¹	0 - 2000	±0.25 ²	300	2.7	2246	1,917.00

Options:

495.157	Battery type CR2032	0.50
909.686 ³	USB interface	112.00
909.687	Footswitch for USB interface	19.20
910.038	Wireless USB receiver	50.00
910.039 ³	Wireless transmitter	51.00

¹ Delivery ex Groningen, Netherlands.

² Depending on the measuring force, only valid in the upper part of the measuring jaws.

³ For instruments with a Digimatic data output.

Mitutoyo Digimatic carbon workshop calipers IP66

Workshop calipers, with a data output and an ultra lightweight carbon fiber construction that saves up to 50% of the total weight compared to a steel workshop caliper. Interchangeable measuring jaws for special purposes (and the necessary holders) are optionally available.

- Measuring range: 0 - 2000 mm, internal measurements from 20 mm.
- Resolution: 0.01 mm.
- ABS/INC switchable.
- Digimatic data output.
- On/off switch.
- Reset/preset.
- Hold function.
- Offset function for direct read-out of internal measurements.
- Max. measuring speed: unlimited.
- Protection: IP66.
- Conforms to factory standard.
- Delivery in a plastic case.
- Power supply: 1 battery type V357.



Data cables Digimatic, USB Input Tool Direct, U-WAVE available on request.

Item No.	Measuring range/mm	Accuracy/mm	Jaw length/mm	Weight/kg	Price EUR
With steel measuring faces:					
552.302	0- 450	±0.04	100	0.7	1,187.00
552.303	0- 600	±0.04	100	0.8	1,342.00
552.304	0- 1000	±0.05	150	1.8	1,959.00
552.305 ¹	0- 1500	±0.09	150	2.2	2,491.00
552.306 ¹	0- 2000	±0.12	150	2.6	3,183.00
With ceramic measuring faces:					
552.155	0- 450	±0.04	100	0.7	1,746.00
552.156	0- 600	±0.04	100	0.8	1,894.00
Long measuring jaws with steel measuring faces:					
552.150	0- 450	±0.06	200	1.2	1,746.00
552.151	0- 600	±0.06	200	1.3	1,894.00
552.152	0- 1000	±0.07	200	2.1	2,458.00
552.153 ¹	0- 1500	±0.11	200	2.5	3,212.00
552.154 ¹	0- 2000	±0.14	200	2.9	4,040.00
Options:					
836.535	Battery type V357				0.90
914.055 ²	Measuring jaws (pair) for center distances from 10 mm				281.00
914.057 ²	Measuring jaws (pair) for internal groove diameters from 50 mm				322.00
914.053 ²	Holders (pair) for separate measuring jaws, up to measuring range 0 - 600 mm				216.00
914.054 ²	Holders (pair) for separate measuring jaws, from measuring range 0 - 1000 mm				221.00

¹ Delivery ex Groningen, Netherlands.

² Not suited for use with the workshop calipers with long measuring jaws (552.150 - 154).

Universal digital calipers

Large universal digital calipers for internal and external measurements.

In combination with these universal calipers many inserts are available e.g. for internal/external measurements or measuring center distances between bores up to $\varnothing 14.5$ mm.

- Internal measuring range¹: 20 - 300 mm.
- External measuring range¹: 0 - 300 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- On/off switch.



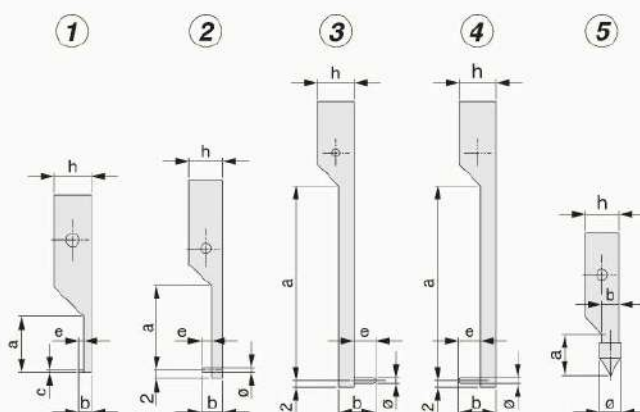
- Reset.
- Large LCD display.
- Locking screw.
- Power supply: 1 battery type V357.
- Delivery without inserts.
- Setting gauges available, see setting gauges elsewhere in this catalog.



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Item No.	Measuring range/mm internal ¹	external ¹	Price EUR
910.285	20 - 200	0 - 200	204.00
910.286	20 - 300	0 - 300	264.00
Option: 836.535 Battery type V357			0.90

¹ The measuring range can change depending on inserts.



Inserts

ECONOMY LINE ✓

No.	Item No.	Description	Length/mm					Ø mm	Price EUR
			a	b	c	e	h		
①	910.287	For internal/external measurements	12	2.5	0.4	1	8		44.00
①	910.288	For internal/external measurements	16	3.5	0.4	2	8		44.00
①	910.289	For internal/external measurements	25	7.5	0.6	5	8		44.00
①	910.290	For internal/external measurements	30	10	1	6.5	8		44.00
①	910.292	For internal/external measurements	80	22	1	10	12		48.00
②	910.293	For internal/external measurements	20	5		2	8	1	50.00
②	910.294	For internal/external measurements	40	10		5	8	2	50.00
②	910.295	For internal/external measurements	80	22		10	12	2	52.00
③	910.296	For external measurements	70	12		7	12	2	60.00
③	910.297	For external measurements	70	12		7	12	4	60.00
④	910.298	For internal measurements	70	12		7	12	2	60.00
④	910.299	For internal measurements	70	12		7	12	4	60.00
⑤	910.300	For center distances	10	4	—		8	5	78.00
⑤	910.301	For center distances	20	4	—		8	10	80.00
⑤	910.302	For center distances	25	8	—		12	15	85.00

Universal digital calipers

Universal digital calipers with exchangeable measuring inserts for special purposes. Thanks to the seven interchangeable measuring inserts, which are available as an option, you are very flexible with these universal calipers.

- Internal measuring range¹: 40-500 mm.
- External measuring range¹: 0-500 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- On/off switch.
- Reset.
- Large LCD display.
- Locking screw.

- Power supply: 1 battery type V357.
- Standard supplied with measuring insert 1.
- Setting gauges available, see setting gauges elsewhere in this catalog.

Only 910.306:

- Absolute digital display.
- Reset/preset.
- Power supply: 1 battery type CR2032.

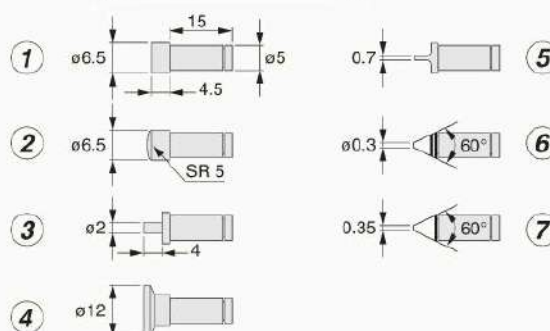
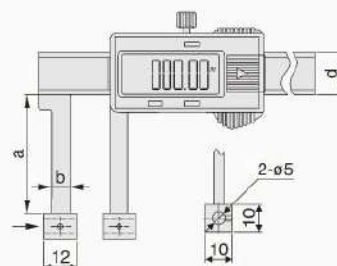


ECONOMY LINE ✓

Item No.	Measuring range/mm internal ¹	external ¹	a/mm	b/mm	Price EUR
910.303	40-150	0-150	45	7	166.00
910.304	40-200	0-200	85	10	194.00
910.305	40-300	0-300	100	15	258.00
910.306*	40-500	0-500	140	20	509.00
Options:					
836.535	Battery type V357				0.90
495.157	Battery type CR2032				0.50

¹ The measuring range can change depending on inserts.
The measuring range indicated is with standard inserts.

No.	Item No.	Description measuring faces	Price EUR
Measuring inserts, per pair:			
①	906.788	flat	16.30
②	906.789	spherical	19.80
③	906.790	small	29.50
④	906.791	disc	29.50
⑤	906.792	knife/flat	39.00
⑥	906.793	point	29.50
⑦	906.794	knife	50.00
	906.795	Set of 7 pairs	167.00



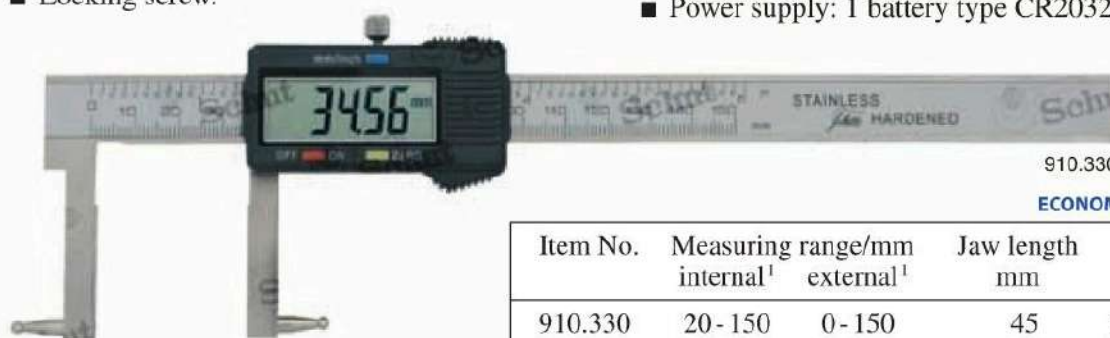
Universal digital calipers

Universal digital calipers with interchangeable measuring inserts for varying purposes. By using M2.5 thread, many different measuring inserts can be used in combination with these calipers. Please see the dial indicator accessories for these inserts.

- Internal measuring range¹: 20 - 500 mm.
- External measuring range¹: 0 - 500 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- On/off switch.
- Reset.
- Large LCD display.
- Locking screw.
- Power supply: 1 battery type V357.
- Standard supplied without inserts.
- Setting gauges available, see setting gauges elsewhere in this catalog.

Only 910.333 and 910.370:

- Absolute digital display.
- Reset/preset.
- Power supply: 1 battery type CR2032.



910.330

ECONOMY LINE ✓

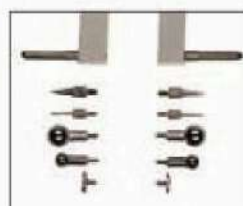


Item No.	Measuring range/mm		Jaw length	Price
	internal ¹	external ¹	mm	EUR
910.330	20 - 150	0 - 150	45	177.00
910.331	25 - 200	0 - 200	85	206.00
910.332	30 - 300	0 - 300	90	274.00
910.370*	35 - 500	0 - 500	100	
910.333*	35 - 500	0 - 500	150	542.00
Options:				
836.535	Battery type V357			0.90
495.157	Battery type CR2032			0.50

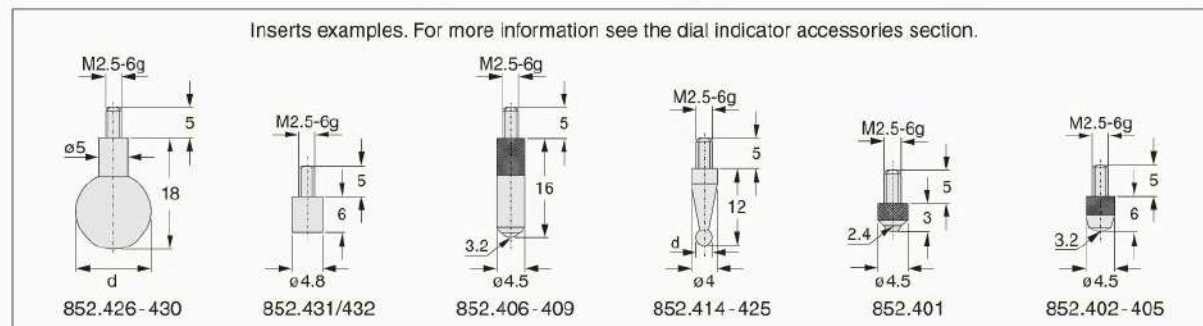
¹ The measuring range can change depending on inserts.



* Model with absolute digital display, fine adjustment and preset function.



Inserts examples. For more information see the dial indicator accessories section.



HELIOS-PREISSER universal digital calipers IP65

Universal calipers with interchangeable measuring inserts for special purposes. All inserts with M2.5 thread can be used with these calipers. Please see the dial indicator accessories section for these inserts.

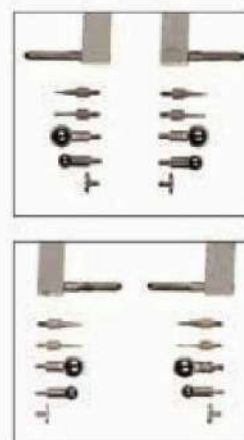
- Measuring range¹: 0-500 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- ABS/INC switchable.
- Variable data output (Digimatic/USB/RS232C).
- On/off switch.
- Reset/preset.
- Hold function.
- Interchangeable measuring inserts:
 - 200 mm: 2 pairs included (ball $\varnothing 5$ mm and planar $\varnothing 4.8$ mm),
 - 300/500 mm: not included.
- Locking screw.
- Flat depth rod (only 836.548).
- Stainless steel construction.
- Protection: IP65 (836.548: IP67).
- Delivered with accurate setting standard 50 mm (only 836.548).
- Delivery in a plastic case (only 836.548/569).
- Delivery in a wooden case (only 836.570).
- Power supply: 1 battery type CR2032.



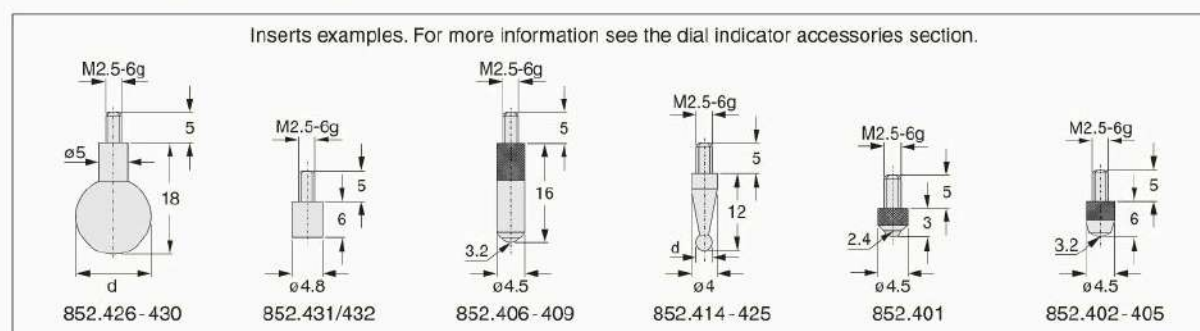
Setting gauges available, see setting gauges elsewhere in this catalog.

Item No.	Measuring range mm ¹	Jaw length mm	Jaw width mm	Price EUR
836.548	0-200	47	5	415.00
836.569	0-300	90	12	702.00
836.570	0-500	100	16	899.00

Options:				
495.157	Battery type CR2032			0.50
836.119	Digimatic output cable (2 m)			75.00
836.552	USB output cable (2 m) incl. software			84.00
836.571	RS232C output cable (2 m)			58.00



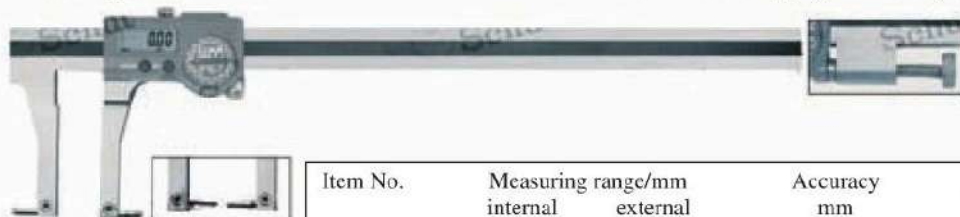
¹ The measuring range can change depending on inserts.



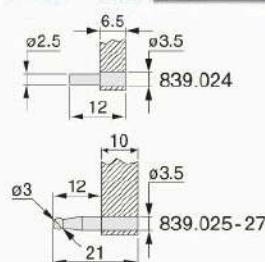
DEMM universal digital calipers IP67

Large universal digital calipers made of stainless steel for internal and external measurements. In combination with these universal calipers many inserts are available e.g. for measuring thread. See accessories universal digital calipers.

- Internal measuring range: 24 - 650 mm.
- External measuring range: 0 - 570 mm.
- Resolution: 0.01 mm.
- Accuracy: ± 0.02 or ± 0.03 mm.
- mm/inch conversion.
- Proximity data output.
- On/off switch.
- Reset/preset.
- Interchangeable measuring inserts.
- Many extensions and inserts available.
- Protection: IP67.
- Conforms to factory standard.
- Delivery in a wooden case with a manufacturer measuring report, two inserts and two insert holders.
- Power supply: 1 battery type CR2032.



Also models with spring system available.



Item No.	Measuring range/mm		Accuracy mm	Jaw length mm	Price EUR
	internal	external			
839.024	24 - 250	0 - 210	± 0.02	64	932.00
839.025 ¹	42 - 350	0 - 270	± 0.03	103	1,041.00
839.026 ¹	42 - 450	0 - 370	± 0.03	103	1,309.00
839.027 ¹	42 - 650	0 - 570	± 0.03	103	1,724.00
Options:					
495.157	Battery type CR2032				0.50
840.666	Proximity USB cable (2 m)				257.00

¹ Inserts 837.821 and insert holders standard included.

Digital lightweight universal workshop caliper

Universal lightweight aluminum workshop caliper with interchangeable measuring inserts for special purposes with both measuring jaws being moveable. All inserts with M2.5 thread can be used with this caliper.

- Internal measuring range¹: 30 - 300 mm.
- External measuring range¹: 0 - 300 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- Tolerance function.
- On/off switch.
- Reset/preset.
- Interchangeable measuring inserts: 1 pair included (ball attachment $\varnothing 3.2$ mm, $l = 6$ mm).
- Fine adjustment.
- Locking screws.
- Delivery in a plastic case.
- Power supply: 1 battery type CR2032.

Item No.	Measuring range/mm		Accuracy mm	Weight kg	Price EUR
	internal ¹	external ¹			
853.206	30 - 300	0 - 300	0.04	1	756.00
Option:					
495.157	Battery type CR2032				0.50

¹ The measuring range can change depending on inserts.



002-379 EN 20260702

Digital dial calipers IP67

Dial calipers with digital color display for both digital and digital-analog readout. The tolerance function colors the measuring value green or red to indicate whether the value falls within the tolerance limits or out of the tolerance limits. Also available with Bluetooth for wireless data transfer.

- Measuring range: 0 - 300 mm.
- Resolution: 0.01 mm.
- 1 pointer revolution = 1 mm.
- mm/inch conversion.
- ABS/INC switchable.
- Tolerance function with color display.
- Illuminated LCD color display, with day and night option.
- Bluetooth (910.474 only).
- On/off switch.
- Automatic switch-off (adjustable).
- Reset.
- Hold function.
- Thumb wheel/locking screw/flat depth rod.
- Protection: IP67.
- Delivery in a plastic case with manufacturer measuring report.
- Power supply: rechargeable lithium battery (with battery level display), magnetic charging cable to USB-A included (excluding AC adapter).



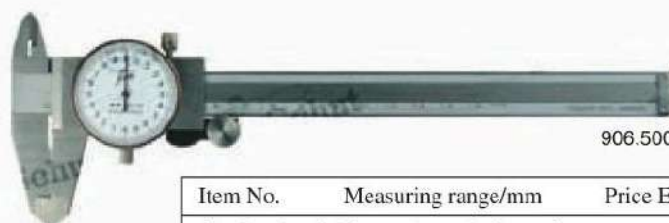
ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Jaw length mm	Price EUR
910.471	0 - 150	±0.02	40	99.00
910.472	0 - 200	±0.03	50	125.00
910.473	0 - 300	±0.03	60	164.00
With Bluetooth:				
910.474	0 - 150	±0.02	40	121.00

Dial calipers

Stainless steel dial calipers with protected rack.

- Measuring range: 0 - 300 mm.
- Graduation: 0.01 or 0.02 mm.
- Accuracy: ±0.03 mm.
- 1 pointer revolution = 1 or 2 mm.
- Rotatable dial.
- Thumb wheel.
- Delivery in a plastic case.



Item No.	Measuring range/mm	Price EUR
Graduation 0.02 mm, 1 revolution = 2 mm:		
906.500	0 - 150	42.00
906.499	0 - 200	64.00
906.501	0 - 300	80.00
Graduation 0.01 mm, 1 revolution = 1 mm:		
906.498	0 - 150	51.00



ECONOMY LINE ✓

TESA dial calipers

Rugged dial calipers model CCMA-M and CCMA-P, out of hardened stainless steel and with patented shockproof design. Ideal for use in the workshop.

- Measuring range: 0 - 300 mm.
- Graduation: 0.01 or 0.02 mm.
- Rotatable dial, $\varnothing 32$ mm.
- Shockproof.
- Thumb wheel (only 782.528/529).
- Hardened stainless steel construction.
- ISO 13385-1.
- Delivery in a plastic case with a manufacturer measuring report.



779.290



782.444



779.289

Item No.	Measuring range/mm	Price EUR
Graduation 0.02 mm, 1 revolution = 2 mm:		
779.289 ¹	0 - 150	155.00
779.290	0 - 150	168.00
782.528 ²	0 - 200	272.00
782.529 ²	0 - 300	380.00
Graduation 0.01 mm, 1 revolution = 1 mm:		
782.444	0 - 150	179.00

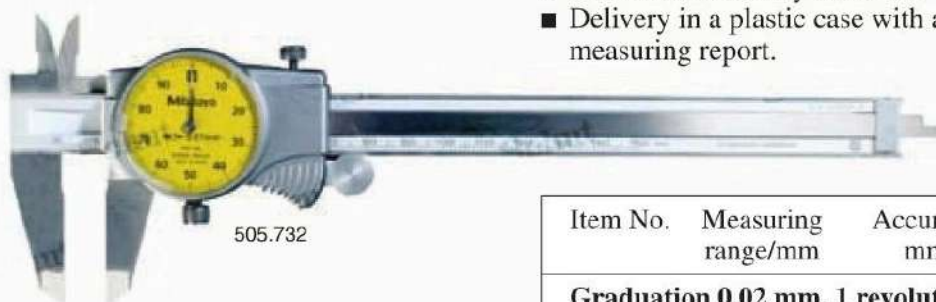
¹ Plastic dial housing.

² With thumb wheel.

Mitutoyo dial calipers

Mitutoyo dial calipers, made of special corrosion-free steel, with hardened and lapped measuring faces and protected rack. The slider is titanium coated (except 505.745).

- Measuring range: 0 - 300 mm.
- Graduation: 0.01 mm or 0.02 mm.
- Rotatable dial.
- Shockproof.
- Caliper and dial with locking screw.
- Dial indicator jewel beared.
- Conforms to factory standard.
- Delivery in a plastic case with a manufacturer measuring report.



505.732



Item No.	Measuring range/mm	Accuracy mm	Price EUR
Graduation 0.02 mm, 1 revolution = 2 mm:			
505.730	0 - 150	± 0.03	140.00
505.731	0 - 200	± 0.03	254.00
505.745	0 - 300	± 0.04	381.00
Graduation 0.01 mm, 1 revolution = 1 mm:			
505.732	0 - 150	± 0.02	161.00

002-215-EN-20060702

High-quality plastic calipers

These modern designed Swiss calipers are made of fiberglass reinforced plastic, which makes them very firm and light, wear-proof, and resistant to all kinds of chemicals – ideal for the workshop!

- Measuring range: 0 - 150 mm.
- Thumb wheel.
- Flat depth rod.

Vernier caliper

- Vernier: 0.1 mm / 1/64 inch.
- The scale lights up with minimal light.

Dial caliper

- Graduation: 0.1 mm.
- 1 pointer revolution = 10 mm.
- Rotatable dial, $\varnothing 32$ mm.
- The dial is shockproof and can be set to zero.

Digital caliper

- Resolution: 0.01 mm.
- mm/inch conversion.
- On/reset switch.
- Off switch.
- Power supply: 1 battery type V357.



837.207



837.205



837.201



Item No.	Description	Price EUR
837.207	Vernier caliper	21.90
837.205	Dial caliper	26.70
837.201	Digital caliper	76.00
Option:		
836.535	Battery type V357	0.90

Brass caliper

Brass caliper with a vernier.

- Measuring range: 0 - 100 mm.
- Vernier: 0.1 mm, parallax-free.
- Dovetail guide.
- Antimagnetic.



841.629

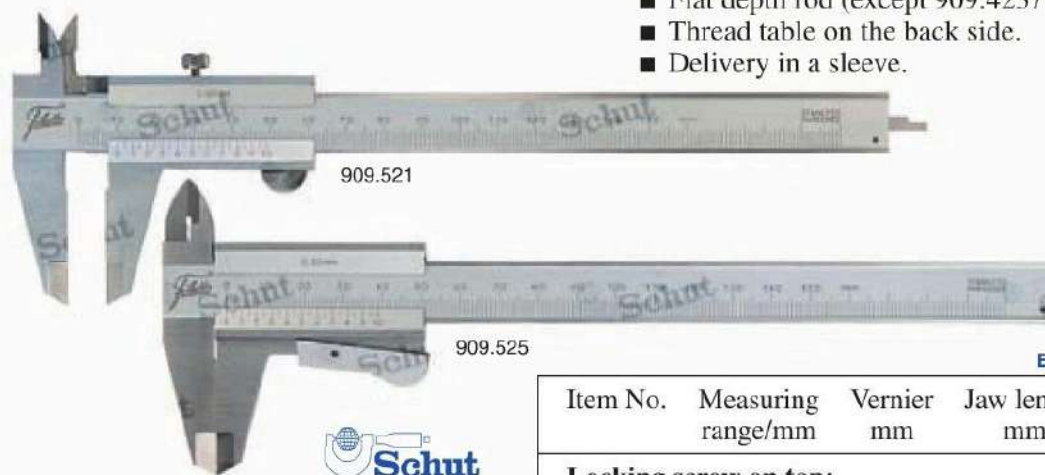


Item No.	Measuring range/mm	Jaw length mm	Price EUR
841.628	0 - 80	20	5.30
841.629	0 - 100	20	5.90

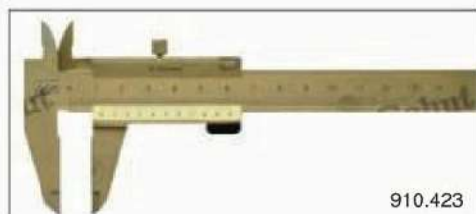
Calipers

Hardened stainless steel calipers with a matt chrome-plated beam and vernier.

- Measuring range: 0 - 300 mm.
- Vernier: 0.05 or 0.02 mm.
- Raised sliders (except 909.538).
- Accuracy: ± 0.03 mm.
- Monoblock.
- Locking screw or spring release.
- Flat depth rod (except 909.423/424).
- Thread table on the back side.
- Delivery in a sleeve.



ECONOMY LINE ✓



Item No.	Measuring range/mm	Vernier mm	Jaw length mm	Price EUR
Locking screw on top:				
909.541	0-150	0.02	40	21.20
909.542	0-160	0.02	40	26.50
909.543	0-200	0.02	50	30.10
909.544	0-300	0.02	62	58.00
Locking screw on top:				
909.520	0-100	0.05	30	20.00
909.521	0-150	0.05	40	21.20
909.522	0-160	0.05	40	26.50
909.523	0-200	0.05	50	30.10
909.524	0-300	0.05	62	58.00
With thumb wheel (locking screw on top):				
909.553	0-150	0.05	40	22.00
909.554	0-200	0.05	50	31.30
909.555	0-300	0.05	62	60.00
Spring release:				
909.525	0-150	0.05	40	22.00
909.526	0-160	0.05	40	27.30
909.527	0-200	0.05	50	31.30
909.528	0-300	0.05	62	58.00
Brass calipers (without depth rod):				
910.424	0-150	0.05	40	116.00
910.423	0-150	0.02	40	116.00
Parallax-free (spring release):				
909.538	0-150	0.05	40	56.00
Spring release, left-handed model:				
906.046	0-150	0.05	40	26.10
906.047	0-150	0.02	40	27.60

Mitutoyo calipers

Mitutoyo calipers suitable for outside, inside, height and depth measurements. Measuring jaws and knives with beveled measuring faces for measuring small grooves and bores.

- Measuring range: 0 - 300 mm.
- Vernier: 0.05 mm / 1/128 inch or 0.02 mm.
- Flat depth rod (except 530.102: round depth rod $\varnothing$ 1.9 mm).
- Raised sliders.
- Thread table on the back side (only 531.122/530.316).
- Matt chrome-plated beam and vernier.
- Lapped, hardened steel measuring faces.
- Tungsten carbide outside measuring jaws (only 530.320/335).
- Tungsten carbide inside measuring jaws (only 530.335).



530.104



531.122



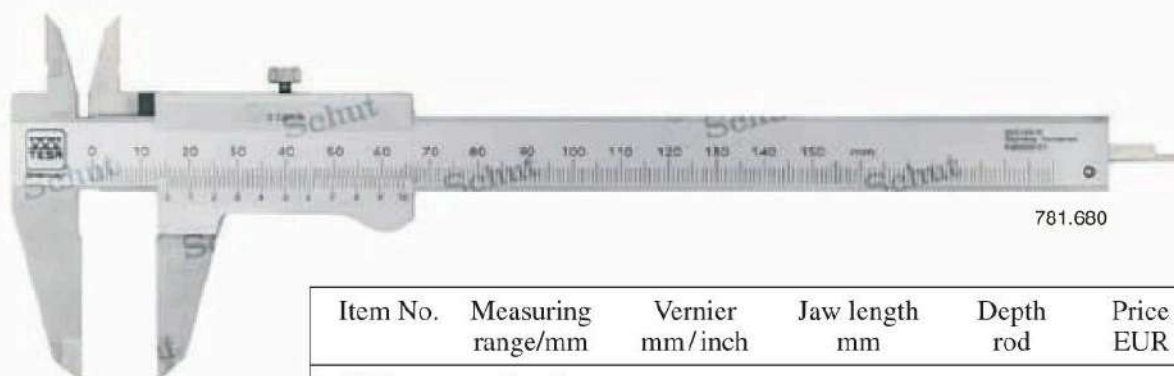
Item No.	Measuring range/mm	Vernier mm	Accuracy mm	Jaw length mm	Price EUR
Locking screw on top:					
530.122 ¹	0 - 150	0.02	±0.03	40	48.00
530.123 ¹	0 - 200	0.02	±0.03	50	78.00
530.124 ¹	0 - 300	0.02	±0.04	64	236.00
Locking screw on top:					
530.104	0 - 150	0.05	±0.05	40	41.00
530.114	0 - 200	0.05	±0.05	50	97.00
530.115	0 - 300	0.05	±0.08	64	231.00
Locking screw on top:					
530.102 ¹	0 - 150	0.05	±0.05	40	61.00
530.101 ¹	0 - 150	0.05	±0.05	40	40.00
Locking screw on top:					
530.320 ¹	0 - 150	0.05	±0.05	40	151.00
Locking screw on top:					
530.335 ¹	0 - 150	0.05	±0.05	40	237.00
Locking screw on the bottom-side:					
530.316	0 - 150	0.05	±0.05	40	68.00
Spring release:					
531.122	0 - 150	0.05	±0.05	40	49.00
531.108	0 - 200	0.05	±0.05	50	114.00
531.109	0 - 300	0.05	±0.08	64	253.00

¹ Without inch graduation.

TESA calipers

Swiss high-precision stainless steel caliper with a matt chrome-plated beam and vernier.

- Measuring range: 0 - 300 mm.
- Vernier: 0.02 mm, 0.05 mm or 0.05 mm / 1/128 inch.
- Locking screw.
- ISO 13385-1.
- Delivery in a plastic case with a declaration of conformity.



781.680



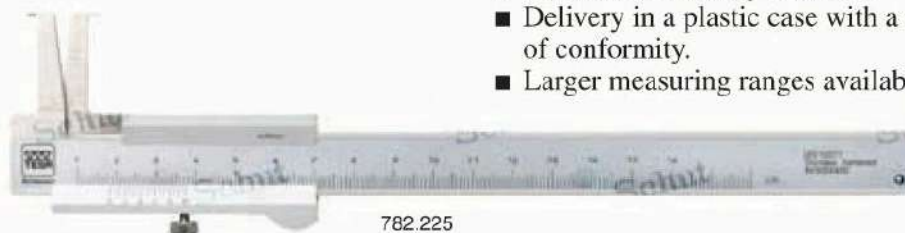
783.276

Item No.	Measuring range/mm	Vernier mm/inch	Jaw length mm	Depth rod	Price EUR
With mm graduation:					
781.680	0 - 150	0.02	40	flat	45.00
783.275	0 - 150	0.05	40	flat	45.00
With mm/inch graduation:					
783.489	0 - 150	0.02 / 0.001	40	flat	45.00
783.276	0 - 150	0.05 / 1/128	40	round	45.00
783.277	0 - 200	0.05 / 1/128	50	flat	67.00
783.278	0 - 300	0.05 / 1/128	64	—	120.00

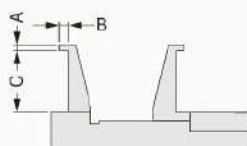
TESA calipers with outside angled measuring jaws

Specially designed for measuring bore and internal groove diameters, e.g. on internal safety rings.

- Measuring range: 10 - 160 mm.
- Vernier: 0.05 mm.
- Locking screw.
- Hardened stainless steel construction.
- Conforms to factory standard.
- Delivery in a plastic case with a declaration of conformity.
- Larger measuring ranges available on request.



782.225



Item No.	Measuring range/mm	Length/mm	Price EUR
		A B C	
782.225	10 - 160	0.9 3 25	120.00
782.226	20 - 160	2 5 40	132.00

Parallax-free lightweight workshop calipers

Lightweight parallax-free aluminum workshop calipers with interchangeable hardened stainless steel measuring jaws, with rounded jaw ends for internal and external measurements. High contrast reading due to white print on black background. Excellent sliding properties due to double prismatic joint.

- Measuring range: 0 - 900 mm.
- Vernier: 0.05 mm / 1/128 inch.
- Jaw length standard delivered jaw: 90 mm.
- Length meas. knives for external measurements: 40 mm.
- Parallax-free.
- Locking screw.
- Delivery in a plastic case.



Item No.	Measuring range/mm	Weight kg	Price EUR
853.217	0 - 500	0.6	178.00
853.218	0 - 900	0.8	324.00
Options:			
853.219 ¹	Pair measuring jaws 90 mm		37.30
853.220	Pair measuring jaws 125 mm		47.00
853.221	Pair measuring jaws 150 mm		53.00

¹ Standard included.

Workshop calipers

Hardened stainless steel workshop calipers with a matt chrome-plated beam and vernier.

- Measuring range: 0 - 1500 mm.
- Vernier: 0.02 mm.
- Raised sliders.
- Fine adjustment.
- With measuring knives or rounded jaw ends for internal measurements.
- Locking screws.
- Delivery in a plastic case.



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Item No.	Measuring range mm	Internal measurements from/mm	Jaw length mm	Price EUR
With measuring knives for internal measurements:				
906.230	0 - 300	—	65	75.00
With rounded jaw ends for internal measurements:				
906.231	0 - 300	10	90	81.00
906.233	0 - 500	10	100	97.00
906.234	0 - 600	10	100	97.00
906.235	0 - 1000	20	125	318.00
906.236 ¹	0 - 1500	20	125	773.00

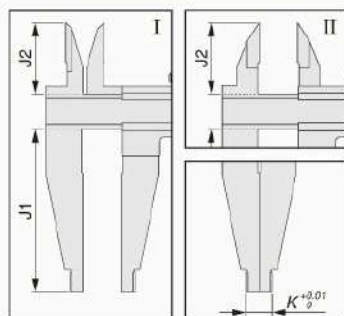
¹ Delivery ex Groningen, Netherlands.



Workshop calipers

Large and solid, stainless steel calipers with a matt chrome-plated beam and vernier.

- Measuring range: 0 - 2000 mm.
- Vernier: 0.02 mm / 1/1000 inch or 0.05 mm / 1/128 inch.
- Fine adjustment.
- With or without measuring knives for internal or external measurements.
- Monoblock.
- Rounded jaw ends for internal measurements; measuring range ≤ 600 mm: $K = 10$ mm, measuring range > 600 mm: $K = 20$ mm.
- Locking screws.
- Delivery in a wooden case.



ECONOMY LINE ✓

Vernier 0.05 mm / 1/128 inch

Item No.	Measuring range mm	Length mm			Price EUR
		J1	J2	K	
Without measuring knives:					
909.670	0- 300	90	—	10	105.00
909.620	0- 450	150	—	10	192.00
909.621	0- 500	150	—	10	198.00
909.622	0- 600	150	—	10	213.00
909.623	0- 800	150	—	20	415.00
909.624	0-1000	150	—	20	482.00
909.639 ¹	0-1500	200	—	20	1,061.00
909.640 ¹	0-2000	200	—	20	1,446.00
Meas. knives for internal measurements (I):					
909.672	0- 300	90	22	10	137.00
909.632	0- 400	100	46	10	191.00
909.633	0- 500	150	46	10	285.00
909.634	0- 600	150	46	10	341.00
909.635	0- 750	150	54	20	631.00
909.636	0-1000	150	54	20	724.00
909.637 ¹	0-1500	200	66	20	1,455.00
909.638 ¹	0-2000	200	66	20	1,768.00
Meas. knives for external measurements (II):					
909.674	0- 300	90	22	10	143.00
909.656	0- 400	100	46	10	200.00
909.657	0- 500	150	46	10	315.00
909.658	0- 600	150	46	10	358.00
909.659	0- 750	150	54	20	633.00
909.660	0-1000	150	54	20	760.00
909.661 ¹	0-1500	200	66	20	1,527.00
909.662 ¹	0-2000	200	66	20	1,856.00

¹ Delivery ex Groningen, Netherlands.

Vernier 0.02 mm / 1/1000 inch

Item No.	Measuring range mm	Length mm			Price EUR
		J1	J2	K	
Without measuring knives:					
909.671	0- 300	90	—	10	105.00
909.615	0- 450	150	—	10	192.00
909.616	0- 500	150	—	10	198.00
909.617	0- 600	150	—	10	213.00
909.618	0- 800	150	—	20	415.00
909.619	0-1000	150	—	20	511.00
909.641 ¹	0-1500	200	—	20	1,061.00
909.642 ¹	0-2000	200	—	20	1,446.00
Meas. knives for internal measurements (I):					
909.673	0- 300	90	22	10	137.00
909.625	0- 400	100	46	10	200.00
909.626	0- 500	150	46	10	285.00
909.627	0- 600	150	46	10	341.00
909.628	0- 750	150	55	20	631.00
909.629	0-1000	150	55	20	724.00
909.630 ¹	0-1500	200	66	20	1,455.00
909.631 ¹	0-2000	200	66	20	1,768.00
Meas. knives for external measurements (II):					
909.675	0- 300	90	22	10	143.00
909.663	0- 400	100	46	10	210.00
909.664	0- 500	150	46	10	314.00
909.665	0- 600	150	46	10	358.00
909.666	0- 750	150	55	20	633.00
909.667	0-1000	150	55	20	761.00
909.668 ¹	0-1500	200	66	20	1,527.00
909.669 ¹	0-2000	200	66	20	1,856.00

¹ Delivery ex Groningen, Netherlands.

HELIOS-PREISSER workshop calipers

Large and solid, stainless steel calipers with a matt chrome-plated beam and vernier. The calipers only have a metric graduation.

- Measuring range: 0 - 2000 mm.
- Vernier: 0.05 mm.
- Rounded jaw ends for internal measurements.
- With or without fine adjustment.
- With or without measuring knives for external measurements.
- Locking screw.
- Delivery with a manufacturer measuring report.



Without measuring knives

Item No.	Measuring range/mm	Jaw length mm	Price EUR
With fine adjustment:			
836.340 ¹	0 - 2000	300	2,130.00

¹ Delivery ex Groningen, Netherlands.

With meas. knives for external measurements

Item No.	Measuring range/mm	Jaw length mm	Price EUR
Without fine adjustment:			
836.375	0 - 800	150	726.00

002.219.EN.20060702

Probe set for calipers

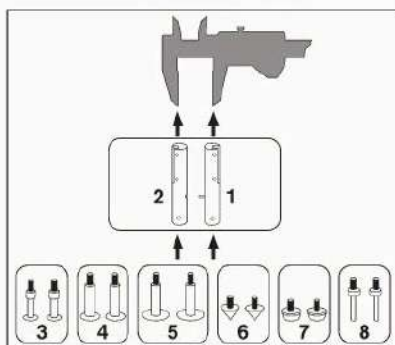
This probe set enlarges the possibilities with a regular caliper. Probe holders are slid on the measuring jaw of the caliper. The different probes can be screwed into them. The probe set makes it possible to perform measurements which are not possible with a regular caliper, such as measuring internal grooves and center distances.

- Screw thread probe holder: M3.
- Maximum caliper jaw thickness: 3.5 mm (mostly compatible with calipers with a measuring range ≤ 150 mm).
- Delivery in a wooden case.



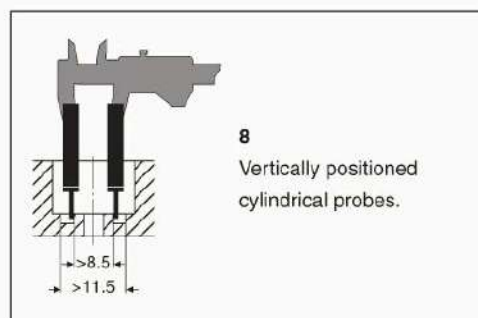
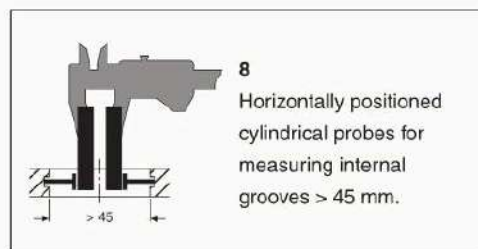
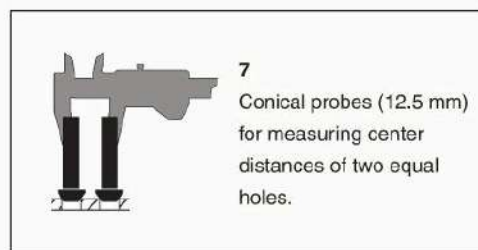
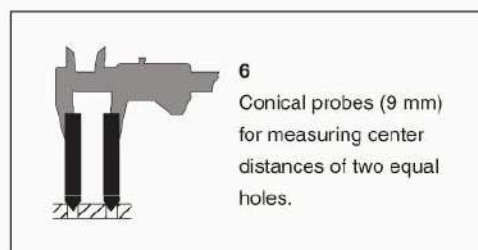
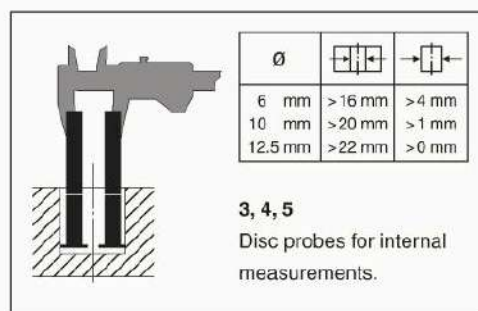
The set consists of:

- ① right probe holder,
- ② left probe holder,
- ③ pair of disc probes $\varnothing 6$ mm,
- ④ pair of disc probes $\varnothing 10$ mm,
- ⑤ pair of disc probes $\varnothing 12.5$ mm,
- ⑥ pair of cone probes $\varnothing 9$ mm, 60° ,
- ⑦ pair of cone probes $\varnothing 12.5$ mm, 60° ,
- ⑧ pair of cylindrical probes $\varnothing 1.5 \times 9$ mm,
- ⑨ hexagon key.



ECONOMY LINE ✓

Item No.	Description	Price EUR
909.655	Probe set for calipers	63.00



Caliper inspection sets

For checking the accuracy of DIN 862 or DIN EN ISO 13385-1:2020-03 calipers.

DIN 862 set: three special steel gauge blocks (30 mm, 41,3 mm and 131,4 mm, ISO 3650 class 1), two steel setting rings ($\varnothing 4$ mm and $\varnothing 25$ mm) and a pair of gloves M/L (910.489).

DIN EN ISO 13385-1:2020-03 set: five special steel gauge blocks (30 mm, 41,3 mm, 90 mm, 131,4 mm and 150 mm, ISO 3650 class 1), two steel setting rings ($\varnothing 4$ mm and $\varnothing 25$ mm) and a pair of gloves M/L (910.489).

- Delivery in a wooden case with a manufacturer measuring report.



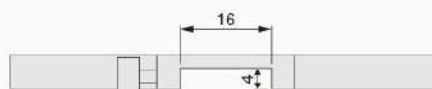
909.347

ECONOMY LINE ✓

Item No.	Description	Price EUR
909.347	Caliper inspection set DIN 862	255.00
910.561	Caliper inspection set DIN EN ISO 13385-1:2020-03 (class 1)	

Depth measuring base for calipers

Universal depth measuring base for stable and accurate depth measurements. Suitable for most of the calipers with a depth rod and a measuring range up to 200 mm. For more information please contact our sales department.



ECONOMY LINE ✓

Item No.	Measuring face l x w/mm	Price EUR
909.156	75 x 6	20.20

Depth measuring bases for calipers

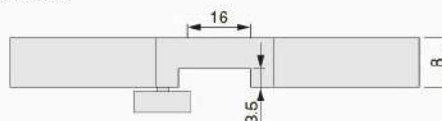
Universal depth measuring bases for stable and accurate depth measurements. Suitable for most of the calipers with a depth rod and a measuring range up to 200 mm. For more information please contact our sales department.

ECONOMY LINE ✓

Item No.	Measuring face l x w/mm	Price EUR
909.386	80 x 8	18.70
909.387	100 x 8	20.80



909.386



Mitutoyo caliper inspection set

For checking the accuracy of DIN 862 or ISO 13385-1: 2011.

516.124: steel gauge blocks 30, 41.3 and 131.4 mm (ISO 3650 class 1), setting rings $\varnothing 4$ and $\varnothing 25$ mm.

516.526: steel gauge blocks 10, 30, 50 and 125 mm (ISO 3650 class 1), setting rings $\varnothing 4$ and $\varnothing 25$ mm, measuring pin $\varnothing 10$ mm.

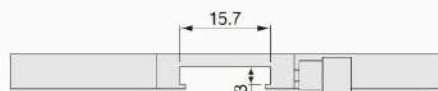
- Delivery in a wooden case with a manufacturer measuring report.



Item No.	Description	Price EUR
516.124	Inspection set DIN 862	938.00
516.526	Inspection set ISO 13385-1: 2011	1,251.00

TESA depth measuring base for calipers

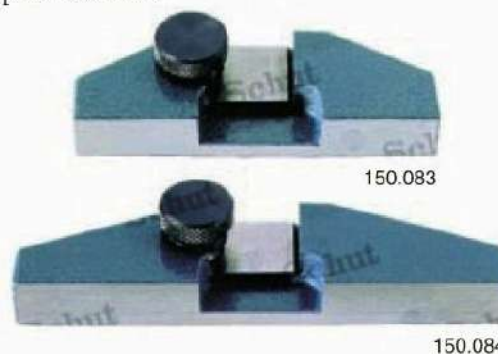
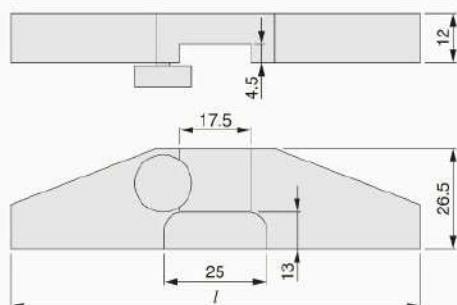
Suitable for most of the TESA calipers with a depth rod and measuring range 150 mm.



Item No.	Measuring face l x w/mm	Price EUR
779.362	75 x 6	42.00

Mitutoyo depth measuring bases for calipers

Universal depth measuring bases for stable and accurate depth measurements. Suitable for most of the calipers with a depth rod and a measuring range up to 200 mm.



Item No.	Measuring face l x w/mm	Price EUR
150.083	75 x 12	62.00
150.084	100 x 12	70.00

Wooden cases for calipers

Wooden cases of high quality with foam inlay for calipers.



836.416

Item No.	Inside dimensions <i>l x w x h/mm</i>	Price EUR
836.455	250 x 90 x 20	8.90
836.437	315 x 145 x 20	10.70
836.416	435 x 175 x 20	18.60
836.406	610 x 180 x 20	31.30
836.400	690 x 200 x 20	54.00
836.349	690 x 250 x 25	55.00
836.399	1000 x 270 x 25	77.00



Caliper holder

Plastic holder for calipers (analog and digital; regular shaped) of 150 mm.

- For regular shaped calipers (analog and digital).
- Delivery including mounting set (belt clip and mounting clip).
- Rotatable 360°.



ECONOMY LINE ✓

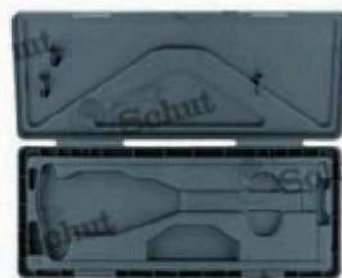
Item No.	For meas. range/mm	Price EUR
360.000	150	16.20

Cases for calipers

- For regular shaped vernier calipers.
- For regular shaped calipers (analog, digital and dial type) (only 910.108-910.110).



909.495



910.108

ECONOMY LINE ✓

Item No.	For meas. range/mm	Price EUR
Plastic cases:		
910.108	150	6.50
910.109	200	9.80
910.110	300	14.50
Soft cases made of synthetic leather:		
909.494	100	3.40
909.495	150	4.20
909.496	160	4.60
909.497	200	6.90
909.498	300	9.40

Digital protractor

Compact digital protractor to attach to a caliper or height gauge.

- Measuring range: 180°.
- Resolution: 0.01° or 1'.
- Accuracy: $\pm 5'$.
- Digimatic data output.
- On/off switch.
- Automatic switch-off (adjustable).
- Preset or hold function.
- Reset.
- Reversible measuring direction.
- Weight: 160 g.
- Delivery in a wooden case including assembly key, mounting bracket (clamping shaft 9x9 mm) and clamping screw for height gauge.
- Power supply: 2 batteries type AAA.



Item No.	Description	Price EUR
855.803	Digital protractor	495.00
Options:		
497.914	Battery type AAA (2 needed)	0.80
905.338	Digimatic cable, 1 m	39.00
905.409	Digimatic cable, 2 m	47.00

002-350-EN-20060702

Measuring instruments set

For specifications see relevant pages elsewhere in this catalog.

- Digital caliper 906.838: measuring range 0-150 mm, resolution 0.01 mm.
- Digital micrometer 906.862: measuring range 0-25 mm, resolution 0.001 mm, with tolerance indication.
- Bevelled edge square 907.252: dimensions 100 x 70 mm, DIN 875/00.
- Delivery in a plastic carrying case.



ECONOMY LINE ✓

Item No.	Description	Price EUR
910.338	Meas. instruments set	140.00

Measuring instruments set

For specifications see relevant pages elsewhere in this catalog.

- Caliper 909.521: measuring range 0-150 mm, vernier 0.05 mm.
- Micrometer 906.000: measuring range 0-25 mm, graduation 0.01 mm.
- Bevelled edge square 907.252: dimensions 100 x 70 mm, DIN 875/00.
- Ruler 835.421: measuring range 0-150 mm, graduation 0.5 mm.
- Delivery in a plastic case.



ECONOMY LINE ✓

Item No.	Description	Price EUR
910.339	Meas. instruments set	72.00

Measuring instruments set

- Caliper: measuring range 0-150 mm, vernier 0.02 mm.
- Micrometer: measuring range 0-25 mm, graduation 0.01 mm.
- Bevelled edge square: dimensions 100 x 70 mm.
- Ruler: measuring range 0-150 mm, 0-50 mm: graduation 0.5 mm.
- Delivery in a plastic case.



ECONOMY LINE ✓

Item No.	Description	Price EUR
906.176	Meas. instruments set	71.00



Depth calipers

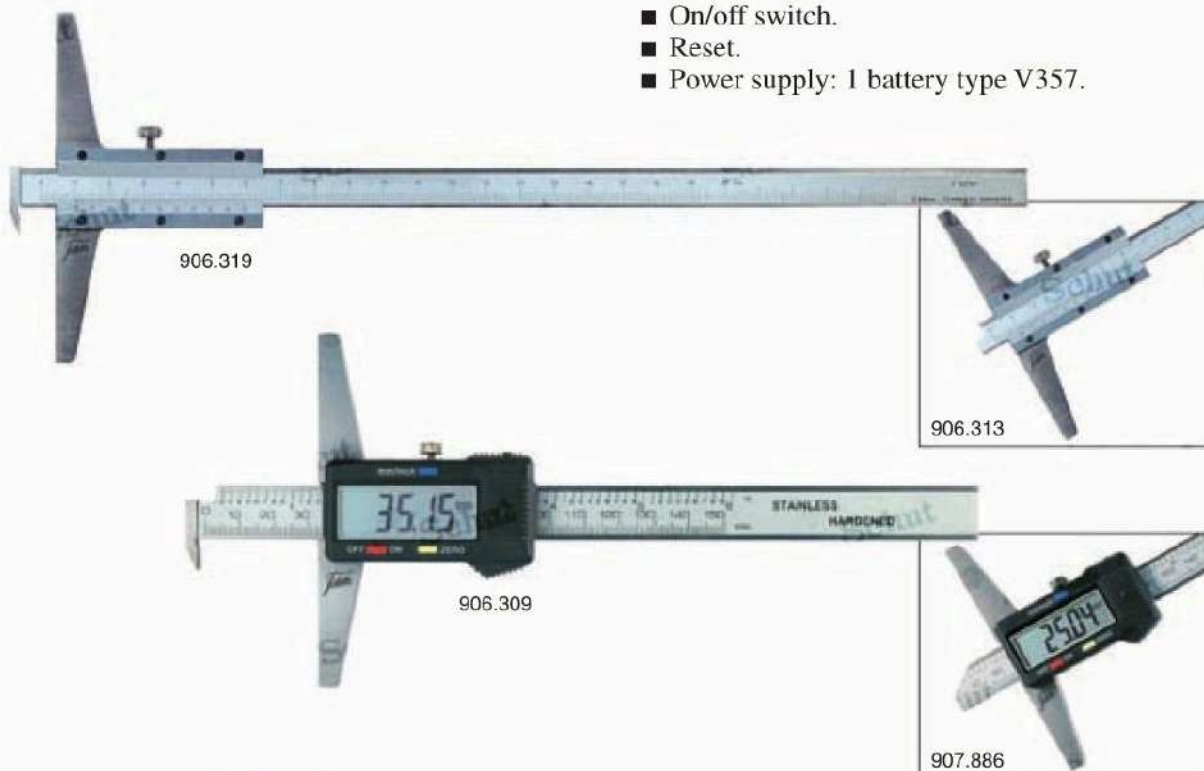
- Measuring range: 0 - 500 mm.
- Analog: vernier 0.02 mm, digital: resolution 0.01 mm.
- With or without hook (8 x 3 mm, l x w).
- Locking screw.

Analog

- Stainless steel construction.
- Matt chrome-plated beam and vernier.

Digital

- mm/inch conversion.
- On/off switch.
- Reset.
- Power supply: 1 battery type V357.



Analog

ECONOMY LINE ✓

Item No.	Measuring range/mm	Base length/mm	Price EUR
Without hook:			
906.314	0 - 150	100	39.80
906.313	0 - 200	100	39.80
906.315	0 - 300	100	47.00
906.317	0 - 500	100	66.00
With hook:			
906.318	0 - 150	100	45.00
906.319	0 - 200	100	45.00
906.321	0 - 300	100	49.00
906.322	0 - 500	100	75.00

Digital

ECONOMY LINE ✓

Item No.	Measuring range/mm	Base length/mm	Price EUR
Without hook:			
907.886	0 - 150	100	51.00
907.887	0 - 200	100	51.00
907.888	0 - 300	100	75.00
907.898	0 - 500	100	135.00
With hook:			
906.309	0 - 150	100	54.00
906.310	0 - 200	100	54.00
906.311	0 - 300	100	78.00
906.312	0 - 500	100	134.00
Option:			
836.535	Battery type V357		0.90

Depth calipers

Depth calipers with or without hook.

- Measuring range: 0 - 300 mm.
- Vernier: 0.05 mm.
- Accuracy: ± 0.03 mm.
- Locking screw.
- Matt chrome-plated beam and vernier.
- Monoblock.
- Stainless steel construction.



909.910

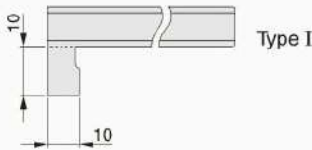


909.916

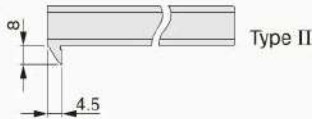


909.922

ECONOMY LINE ✓



Type I



Type II

Item No.	Measuring range/mm	Base length/mm	Price EUR
Without hook:			
909.910	0 - 150	100	35.60
909.911	0 - 200	100	48.00
909.912	0 - 300	100	63.00
With hook (type I):			
909.916	0 - 150	100	55.00
909.917	0 - 200	100	69.00
909.918	0 - 300	100	105.00
With hook (type II):			
909.922	0 - 150	100	55.00
909.923	0 - 200	100	69.00
909.924	0 - 300	100	105.00

002-330-EN-20060702

HELIOS-PREISSER depth calipers

Depth calipers with or without hook. The models with a hook have graduations on both sides of the scale, allowing reverse usage (i.e. without hook) of the instrument.

- Measuring range: 0 - 1000 mm.
- Vernier: 0.05 mm.
- Accuracy: ± 0.03 mm.

- Locking screw.
- Matt chrome-plated vernier.
- Length (*l*) and width (*w*) of the hook at a scale cross-section of 8 x 3 mm: 12 x 5 mm, 12 x 4 mm: 16 x 10 mm.



Stainless steel

Item No.	Meas. range mm	Base length mm	Cross-section scale/mm	Price EUR
Without hook:				
836.622	0-200	100	8 x 3	74.00
With hook:				
836.628	0-500	150	12 x 4	167.00

Stainless steel, matt chrome-plated beam

Item No.	Meas. range mm	Base length mm	Cross-section scale/mm	Price EUR
Without hook:				
836.402	0- 200	100	8 x 3	95.00
836.403	0- 300	150	12 x 4	115.00
836.404	0- 500	150	12 x 4	176.00
836.405	0- 500	250	20 x 5	269.00
836.407	0- 800	250	20 x 5	448.00
836.410	0-1000	250	20 x 5	633.00
With hook:				
836.412	0- 200	100	8 x 3	109.00
836.413	0- 300	150	12 x 4	133.00
836.414	0- 500	150	12 x 4	213.00

Mitutoyo depth calipers

Depth calipers also available with hook or with fine adjustment.

- Measuring range: 0 - 300 mm.
- Vernier: 0.05 mm or 0.02 mm.
- Locking screw.
- Length measuring base: 100 mm.
- Stainless steel construction.
- Available up to 1000 mm.



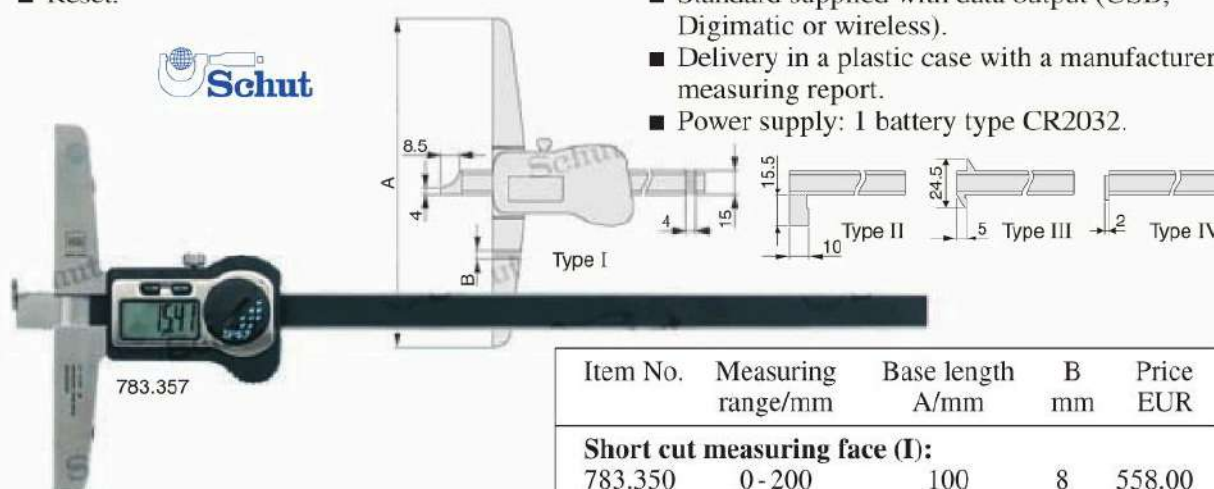
Item No.	Meas. range mm	Vernier mm	Price EUR
527.201	0-150	0.05	158.00
527.202	0-200	0.05	173.00
527.203	0-300	0.05	211.00
527.121	0-150	0.02	150.00
527.122	0-200	0.02	166.00
527.123	0-300	0.02	211.00
Options:			
900.370	Measuring base 180 mm		72.00
900.371	Measuring base 260 mm		96.00
900.372	Measuring base 320 mm		111.00

TESA TWIN-Cal absolute digital depth calipers IP67

New generation IP67 depth calipers, TESA TWIN-Cal, with an absolute measuring system and a “soft touch” grip. These depth calipers have a unique connectivity concept TESA LINK. All TWIN-Cal depth calipers are equipped with a data output. Connect the TESA Link Connector to the TWIN-Cal for “plug and play” (wireless) data transfer in combination with the free to download TESA Data-Viewer software. Waterproof, hardened stainless steel depth calipers, in different versions of the beam’s measuring face. Suited for use with removable bridges. There is also a small depth gauge available.

- Measuring range: 0 - 500 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- Digit height: 11 mm.
- Automatic switch-off.
- Reset.

- Max. measuring speed: approx. 2.5 m/s.
- Locking screw.
- Protection: IP67 (also in combination with data output cable).
- ISO 13385-2.
- Standard supplied with data output (USB, Digimatic or wireless).
- Delivery in a plastic case with a manufacturer measuring report.
- Power supply: 1 battery type CR2032.



Removable bridges*

Item No.	Meas. face l x w/mm	Height h/mm	Price EUR
782.886	200 x 8	10 $\pm$ 0.005	248.00
782.949	300 x 8	16 $\pm$ 0.005	266.00
782.887	400 x 8	16 $\pm$ 0.005	275.00



* Not suited for use with 783.360.



Item No.	Measuring range/mm	Base length A/mm	B mm	Price EUR
Short cut measuring face (I):				
783.350	0 - 200	100	8	558.00
783.352	0 - 300	150	8	617.00
783.353	0 - 500	150	8	762.00
Measuring face with one hook (II):				
783.354	0 - 300	150	8	721.00
783.355	0 - 500	150	8	848.00
Measuring face with two hooks (III):				
783.356	0 - 300	150	8	801.00
Measuring face with rotary stop (IV):				
783.357	0 - 250	100	8.5	635.00
783.358	0 - 350	100	8.5	705.00
783.359	0 - 500	150	8.5	889.00
Small depth gauge with steel depth rod:				
783.360	0 - 25	50	7.4	462.00
Options:				
495.157	Battery type CR2032			0.50
783.301 ¹	TESA Link Connector USB			147.00
783.302 ¹	TESA Link Connector Digimatic			304.00
783.555 ¹	TESA Link Connector Bluetooth			59.00

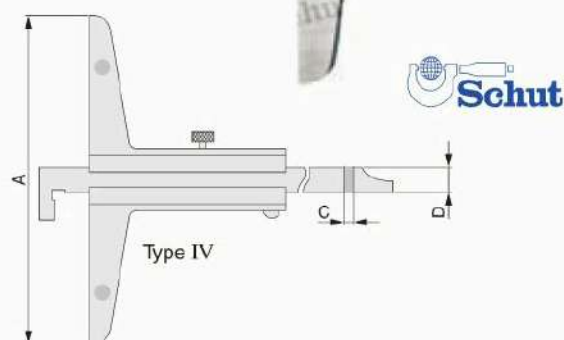
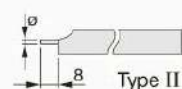
¹ The TESA Link Connector will replace the battery cover.

TESA depth calipers

Hardened stainless steel depth calipers with a matt chrome-plated beam and vernier. Reduced scale section for easy access to difficult measuring points. The main scale is slightly set back for wear protection. Suited for use with removable bridges.

- Measuring range: 0 - 500 mm.
- Vernier: 0.02 or 0.05 mm.
- Locking screw.

- ISO 13385-2.
- Delivery in a plastic case with a declaration of conformity.



Removable bridges*

Item No.	Measuring face l x w/mm	Height h/mm	Price EUR
783.627	180 x 8	17	70.00
783.628	260 x 8	17	94.00
783.629	320 x 8	17	107.00



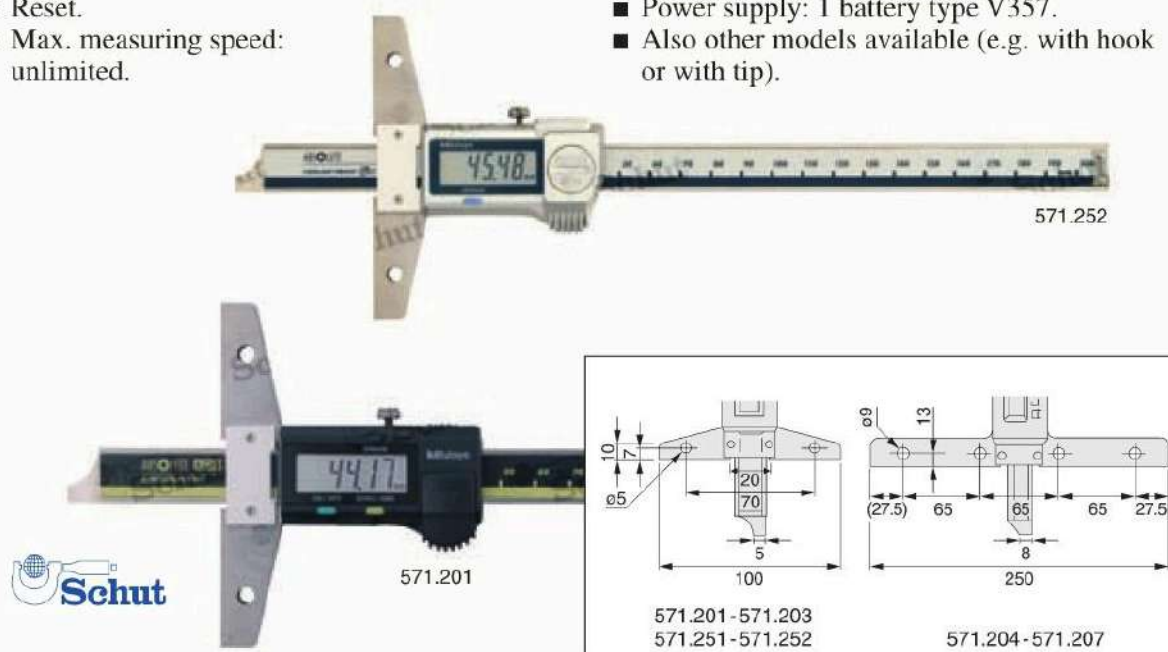
* For depth calipers from 300 mm.

Measuring range/mm	Base length A/mm	Dimensions/mm			Vernier 0.05 mm		Vernier 0.02 mm	
		C	D	ø	Item No.	Price EUR	Item No.	Price EUR
Short cut measuring face (I):								
0-150	100	3	8	—	782.872	100.00	782.300	100.00
0-200	100	3	8	—	782.075	111.00	783.571	111.00
0-300	150	4	12	—	782.076	124.00	783.572	124.00
0-500	150	4	12	—	782.873	157.00	783.612	157.00
Steel tip (II):								
0-150	100	3	8	1.5	782.304	122.00	782.870	122.00
0-200	100	3	8	1.5	782.079	138.00	783.573	138.00
0-300	150	4	12	2	782.161	149.00	783.574	149.00
Measuring face with rotary stop (III):								
0-150	150	4	12	—	782.858	150.00	782.306	150.00
0-250	150	4	12	—	782.876	187.00	782.307	187.00
0-500	150	4	12	—	782.877	239.00	782.308	239.00
Convertible models with a hook and a short cut measuring face (IV):								
0-150	100	3	8	—	782.879	143.00	782.878	143.00
0-200	100	3	8	—	782.162	155.00	783.575	155.00
0-300	150	4	10	—	782.883	168.00	782.882	168.00
0-500	150	4	10	—	782.885	195.00	782.884	195.00

Mitutoyo Absolute Digimatic depth calipers

Mitutoyo depth calipers with the Absolute measuring system. For use in workshop conditions, Mitutoyo has also developed *Coolant Proof* models with high protection degree (IP67); these are resistant to oil and coolants, and even last temporary immersion.

- Measuring range: 0 - 1000 mm.
- Resolution: 0.01 mm.
- ABS/INC switchable (except 571.251 - 253).
- Digimatic data output.
- Reset.
- Max. measuring speed: unlimited.
- Beam: 16 x 3.5 mm.
- Protection: IP67 (only *Coolant Proof* models).
- Conforms to factory standard.
- Delivery in a plastic case.
- Power supply: 1 battery type V357.
- Also other models available (e.g. with hook or with tip).



Data cables Digimatic, USB Input Tool Direct, U-WAVE available on request.

Item No.	Measuring range/mm	Base length/mm	Accuracy/mm	Price EUR
571.201	0- 150	100	±0.02	419.00
571.202	0- 200	100	±0.02	505.00
571.203	0- 300	100	±0.03	515.00
571.204	0- 450	250	±0.05	1,032.00
571.205	0- 600	250	±0.05	1,095.00
571.206	0- 750	250	±0.06	1,182.00
571.207	0-1000	250	±0.07	1,302.00
Protection IP67 (Coolant Proof):				
571.251	0- 150	100	±0.02	474.00
571.252	0- 200	100	±0.02	551.00
571.253	0- 300	100	±0.03	615.00
Options:				
836.535	Battery type V357			0.90
900.370	Removable bridge, length 180 mm (for depth calipers up to 300 mm)			72.00
900.371	Removable bridge, length 260 mm (for depth calipers up to 300 mm)			96.00
900.372	Removable bridge, length 320 mm (for depth calipers up to 300 mm)			111.00

Digital depth calipers

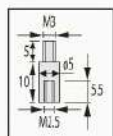
Digital depth calipers with interchangeable inserts such as a (double) hook, disc attachment and a measuring pin. Additionally, there is an adapter from M3 thread to M2.5 thread. This adapter allows the use of inserts from dial indicators. For these inserts, see dial indicator accessories elsewhere in this catalog.

- Measuring range: 0 - 500 mm.
- Resolution: 0.01 mm.
- Accuracy: ± 0.03 mm.
- mm/inch conversion.
- ABS/INC switchable.
- On/off switch.
- Automatic switch-off.
- Reset/preset.
- Hold function.
- Tolerance function.
- Locking screw.

- Interchangeable measuring inserts included:
3 measuring inserts: a (double) hook,
a disk attachment $\varnothing 30$ mm, $d = 3$ mm,
a measuring pin $\varnothing 3$ mm, $l = 8$ mm,
an adapter $\varnothing 5$ mm, $l = 10$ mm, from M3
thread to M2.5 thread,
4 measuring inserts M2.5: 2 ball probes,
knife-edged probe, needle-shaped probe.
- Delivery in a wooden box.
- Power supply: 1 battery type V357.

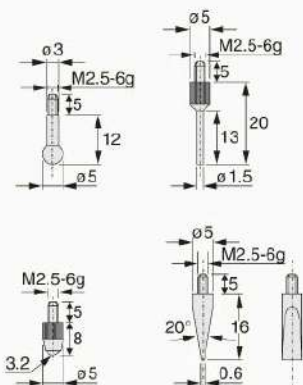


910.497



Adapter

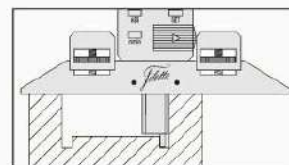
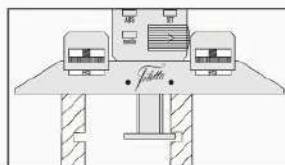
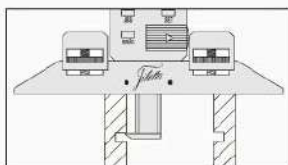
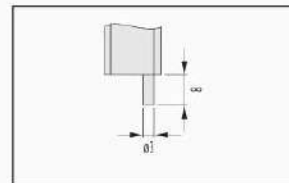
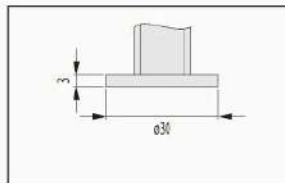
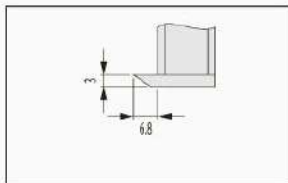
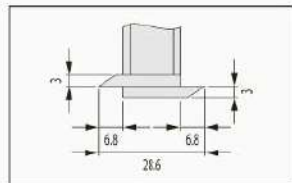
ECONOMY LINE ✓



Item No.	Measuring range/mm	Price EUR
910.497	0 - 300	307.00
910.498	0 - 500	519.00
Option: 836.535 Battery type V357		0.90

Moveable bridges

Item No.	Measuring face $l \times w$ /mm	Height h /mm	Price EUR
910.499	300 x 15	25	93.00
910.500	500 x 15	25	142.00



DEMM digital depth calipers IP67

Waterproof, hardened stainless steel depth calipers, in different versions of the beam's measuring face. Suited for use with removable bridges.

- Measuring range: 0 - 800 mm.
 - Resolution: 0.01 mm.
 - Accuracy: ± 0.03 mm or ± 0.04 mm.
 - Proximity data output.
 - On/off switch.
- Automatic switch-off.
 - Reset/preset.
 - Hold function.
 - Locking screw.
 - Protection: IP67.
 - Standard supplied with insert 839.077.
 - Conforms to factory standard.
 - Delivery in a wooden case with a manufacturer measuring report.
 - Power supply: 1 battery type CR2032.



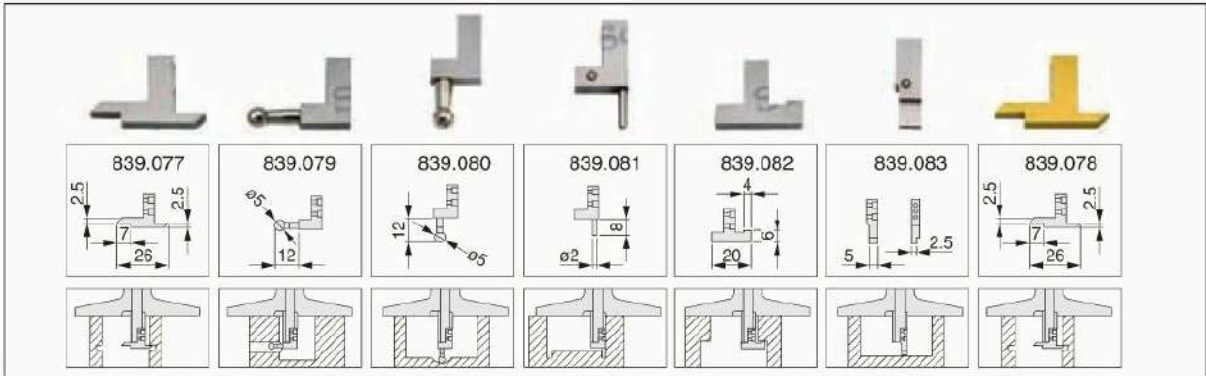
Removable bridges

Item No.	Length/mm	Price EUR
839.074	400	491.00
839.075	500	567.00
839.076	600	742.00

Inserts

Item No.	Description	Price EUR
839.077	Insert	150.00
839.079	Insert	150.00
839.080	Insert	150.00
839.081	Insert	150.00
839.082	Insert	150.00
839.083	Insert	150.00
839.078	Insert	197.00

Item No.	Measuring range/mm	Accuracy mm	Price EUR
839.069	0 - 300	± 0.03	862.00
839.070	0 - 400	± 0.03	1,003.00
839.071	0 - 500	± 0.03	1,179.00
839.072	0 - 600	± 0.03	1,310.00
839.073	0 - 800	± 0.04	1,963.00
Option:			
495.157	Battery type CR2032		0.50
840.666	Proximity USB cable (2 m)		257.00



002-388-EN-20260702

Digital depth calipers with with round depth rod

Universal depth calipers with round depth rod with M2.5 threaded hole for exchangeable inserts. Inserts with M2.5 thread can be used with these calipers. Please see the dial indicator accessories section for these inserts.

- Measuring range: 0 - 150 mm.
- Diameter depth rod: 4 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- On/off switch.
- Reset.
- Large LCD display.
- Locking screw.
- Length measuring base: 85 mm.
- Interchangeable measuring inserts: disc attachment included $\varnothing 8$ mm, $d=1$ mm.
- Power supply: 1 battery type V357.



910.355

ECONOMY LINE ✓

Item No.	Measuring range/mm	Price EUR
910.355	0 - 100	152.00
910.356	0 - 150	189.00
Option:		
836.535	Battery type V357	0.90



Digital depth gauge

- Measuring range: 0 - 21.5 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- On/off switch.
- Reset.
- Hold function.
- Large LCD display.
- Locking screw.
- Measuring face: 45 x 6 mm.
- Measuring pin: 6 x 2.3 mm, taper to 4 x 2.3 mm.
- Power supply: 1 battery type V357.

NEW



ECONOMY LINE ✓

Item No.	Measuring range/mm	Price EUR
907.861	0 - 21.5	38.20
Option:		
836.535	Battery type V357	0.90

Digital depth gauge

Digital tire tread depth gauge made of high quality plastic.

- Measuring range: 0 - 25 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- On/off switch.
- Reset.
- Large LCD display.
- Measuring face: 60 x 5.7 mm.
- Measuring pin: $\varnothing 4$ mm.
- Measuring tip: 2.6 x 0.9 mm.
- Power supply: 1 battery type V357.



ECONOMY LINE ✓

Item No.	Measuring range/mm	Price EUR
910.357	0 - 25	14.40
Option:		
836.535	Battery type V357	0.90

Depth caliper for keyway depths

- Measuring range: keyway depths 0-25 mm.
- Application range: cylinders $\varnothing$ 5 - 200 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- On/off switch.
- Reset.
- Large LCD display.
- Locking screw.
- Measuring pin: $\varnothing$ 2 mm.
- Power supply: 1 battery type V357.



ECONOMY LINE ✓

Item No.	Application range/mm	Price EUR
910.258	$\varnothing$ 5 - 200	173.00
Option:		
836.535	Battery type V357	0.90

Depth calipers for keyway depths

- Measuring range: keyway depths 0-60 mm.
- Application range: cylinders $\varnothing$ 5 - 200 mm.
- Vernier: 0.05 mm.
- Stainless steel construction.



ECONOMY LINE ✓

Item No.	Application range/mm	Price EUR
907.192	$\varnothing$ 5 - 80	117.00
907.193	$\varnothing$ 6 - 120	142.00
907.194	$\varnothing$ 7 - 160	165.00
907.195	$\varnothing$ 8 - 200	191.00

Digital depth gauge

- Measuring range: 0-80 mm.
- Resolution: 0.05 mm.
- mm/inch conversion.
- On/off switch.
- Detachable measuring pin $\varnothing$ 4.3 mm, length 50 mm.
- Power supply: 1 battery type CR2032.



ECONOMY LINE ✓

Item No.	Measuring range/mm	Price EUR
906.428	0 - 80	32.40
Option:		
495.157	Battery type CR2032	0.50

Käfer depth dial indicators

- Measuring range: 0-30 mm.
- Graduation: 0.01 mm.
- Measuring pin shaft: $\varnothing$ 2 mm.
- Measuring depth with pin 852.385: 200 mm.
- Excl. measuring pin and measuring base.
- Accuracy according DIN 878 (852.383) or factory standard (852.384).



Item No.	Measuring range/mm	Price EUR
852.383	0 - 10	172.00
852.384	0 - 30	303.00
Options:		
852.385	Measuring pin $\varnothing$ 2 mm, 340 mm	11.90
907.153	Meas. base 63 x 17 mm	22.90
907.165	Meas. base 101.5 x 17 mm*	23.90

* Larger sizes available on request.

Micrometers / Micrometer heads



003.001 EN 20260702

Digital micrometers

Rugged digital micrometers with simple functions and an excellent price-performance ratio.

- Measuring range: 0 - 200 mm.
- Resolution: 0.001 mm.
- Automatic switch-off.
- Reset/preset.
- Tungsten carbide measuring faces: $\varnothing 6.5$ mm.
- From measuring range 25 - 50 mm including setting gauge.
- Power supply: 1 battery type V357 or 1 battery type CR2032.



908.758



908.769



Setting gauge

ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Price EUR
Not switchable:			
908.752	50 - 75	± 0.005	53.00
908.753	75 - 100	± 0.005	59.00
Switchable mm/inch and ABS/INC:			
908.758	0 - 25	± 0.004	67.00
908.759	25 - 50	± 0.004	79.00
908.760	50 - 75	± 0.005	87.00
908.761	75 - 100	± 0.005	95.00
908.762	100 - 125	± 0.006	104.00
908.763	125 - 150	± 0.006	115.00
908.764	150 - 175	± 0.007	125.00
908.765	175 - 200	± 0.007	137.00

Sets

ECONOMY LINE ✓

Item No.	Measuring range/mm	Pieces	Price EUR
Switchable mm/inch and ABS/INC:			
908.769	0 - 75	3	233.00
908.770	0 - 100	4	328.00
908.771	0 - 150	6	547.00

Options

Item No.	Description	Price EUR
836.535	Battery type V357	0.90
495.157	Battery type CR2032	0.50

Digital micrometers

Rugged digital micrometers with simple functions and an excellent price-performance ratio.

- Measuring range: 0 - 150 mm.
- Resolution: 0.001 mm.
- mm/inch conversion.
- ABS/INC switchable.
- On/off switch.
- Automatic switch-off.
- Reset/preset.
- Tungsten carbide measuring faces: $\varnothing 6.5$ mm.
- From measuring range 25 - 50 mm including setting gauge.
- Delivery in a plastic case with a manufacturer measuring report.
- Power supply: 1 battery type CR2032.

ECONOMY LINE ✓



Item No.	Measuring range/mm	Accuracy mm	Price EUR
909.982	0 - 25	± 0.003	57.00
909.983	25 - 50	± 0.003	72.00
909.984	50 - 75	± 0.004	83.00
909.985	75 - 100	± 0.004	96.00
909.986	100 - 125	± 0.005	122.00
909.987	125 - 150	± 0.005	144.00
Option:			
495.157	Battery type CR2032		0.50

Digital micrometers with double display

This patented micrometer distinguishes itself with its two large displays on both sides of the instrument, which can also display the read-out upside-down. Therefore the measuring value can always be presented upright, which enables ergonomic read-out at all times. Add to this its measuring range of 30 mm, the tungsten carbide measuring faces and you have a micrometer with a great price-performance ratio.

- Measuring range: 0 - 205 mm.
- Resolution: 0.001 mm.
- mm/inch conversion.
- ABS/INC switchable.
- Double LCD display.
- On/off switch.
- Second display can be switched on/off separately.
- Automatic switch-off.
- Reset/preset.
- Tungsten carbide measuring faces: $\varnothing 6.5$ mm.
- From measuring range 25 - 55 mm including setting gauge.
- Delivery in a plastic case.
- Power supply: 1 battery type CR2032.



Item No.	Measuring range/mm	Accuracy mm	Price EUR
907.682	0 - 30	± 0.004	151.00
907.683	25 - 55	± 0.004	185.00
907.684	50 - 80	± 0.005	213.00
907.685	75 - 105	± 0.005	240.00
907.686	100 - 130	± 0.006	267.00
907.687	125 - 155	± 0.006	294.00
907.688	150 - 180	± 0.007	321.00
907.689	175 - 205	± 0.007	348.00
Option:			
495.157	Battery type CR2032		0.50

ECONOMY LINE ✓

Digital micrometers with tolerance indication

These absolute digital micrometers are provided with both a tolerance and a hold function, as well as a large display.

- Measuring range: 0 - 75 mm.
- Resolution: 0.001 mm.
- mm/inch conversion.
- ABS/INC switchable.
- Digit height: 9 mm.
- On/off switch.
- Automatic switch-off.
- Reset/preset.
- Hold function.
- Adjustable tolerance limits.
- Tungsten carbide measuring faces: $\varnothing 6.5$ mm.
- From measuring range 25 - 50 mm including setting gauge.
- Power supply: 1 battery type V357.



907.570



Setting gauge

ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Price EUR
907.570	0 - 25	± 0.004	100.00
907.571	25 - 50	± 0.004	110.00
907.572	50 - 75	± 0.005	151.00
Option:			
836.535	Battery type V357		0.90

Micrometers with counter

These solid micrometers have a counter with a resolution of 0.01 mm for an error free read-out of the measuring value, and a very favourable price-performance ratio.

- Measuring range: 0 - 200 mm.
- Resolution: 0.01 mm.
- Numerical counter adjustable.
- Tungsten carbide measuring faces: $\varnothing 6.5$ mm.
- From measuring range 25 - 50 mm including setting gauge.



906.556



Setting gauge

ECONOMY LINE ✓

Sets (delivered incl. setting gauges)

Item No.	Measuring range/mm	Pieces	Price EUR
906.564	0 - 75	3	218.00
906.565	0 - 100	4	307.00
906.566	0 - 150	6	535.00

Item No.	Measuring range/mm	Accuracy mm	Price EUR
906.556	0 - 25	± 0.01	65.00
906.557	25 - 50	± 0.01	72.00
906.558	50 - 75	± 0.01	81.00
906.559	75 - 100	± 0.01	89.00
906.560	100 - 125	± 0.02	106.00
906.561	125 - 150	± 0.02	122.00
906.562	150 - 175	± 0.02	146.00
906.563	175 - 200	± 0.02	164.00

Mitutoyo Digimatic micrometer

Digital micrometer with a very compact design.

- Measuring range: 0 - 25 mm.
- Resolution: 0.001 mm.
- Reset.
- Measuring force: 5 - 10 N.
- Spindle: $\varnothing 6.35$ mm.
- Ground and lapped tungsten carbide measuring faces.
- Varnished frame.
- Weight: 275 g.
- Delivery in a plastic case with a manufacturer measuring report.
- Power supply: 1 battery type V357.



Item No.	Measuring range/mm	Accuracy mm	Price EUR
293.821	0 - 25	± 0.002	196.00
Option:			
836.535	Battery type V357		0.90

Mitutoyo Absolute Digimatic Quick micrometers

Very fast adjustable digital micrometer (10 mm/rotation!) with the absolute system and a non-rotating spindle. It works according to the Abbe principle and has an almost unlimited measuring speed. All this makes the Quick Micrometer the most accurate 'quick meter' of its kind.

The model with adjustable measuring force is for measurements of small, vulnerable and deformable objects. Should be used in horizontal position for optimal accuracy of the measuring force.

- Measuring range: 0 - 30 mm.
- Resolution: 0.001 mm.
- Digimatic data output.
- On/off switch.
- Reset/preset.
- Hold function.
- Max. measuring speed: unlimited.
- 1 revolution of the thimble = 10 mm.
- Flatness measuring faces: $\leq 0.3 \mu\text{m}$.
- Parallelism measuring faces: $\leq 2.0 \mu\text{m}$.
- Non-rotating spindle.
- Ground and lapped tungsten carbide measuring faces: $\varnothing 6.35$ mm.
- Varnished frame.
- Protection: 293.666: IP65.
- Conforms to factory standard.
- Delivery in a plastic case.
- Power supply: 1 battery type V357.
- Also larger sizes available.
- Also available with disk-shaped measuring jaws.



293.666

Item No.	Measuring range/mm	Accuracy mm	Measuring force/N	Price EUR
293.666	0 - 30	± 0.002	5 - 12	605.00
With adjustable measuring force:				
227.205	0 - 10	± 0.002	2 - 10	1,302.00
227.202	0 - 15	± 0.002	2 - 10	702.00
227.201	0 - 15	± 0.002	0.5 - 2.5	1,251.00
Option:				
836.535	Battery type V357			0.90

Data cables Digimatic, USB Input Tool Direct, U-WAVE available on request.



Setting measuring force (227.201/202/205)

Absolute digital micrometers with tolerance indication IP54

Digital micrometers with a function to set tolerance limits with clear optical Go (NoGo) reading.

- Measuring range: 0 - 100 mm.
- Resolution: 0.001 mm.
- mm/inch conversion.
- ABS/INC switchable.
- With data output.
- Adjustable tolerance limits.
- **Tolerance display** by means of illuminated green LED at GO value.
- On/off switch.
- Automatic switch-off.
- Reset.
- Tungsten carbide measuring faces: $\varnothing 6.5$ mm.
- Protection: IP54.
- From measuring range 25 - 50 mm including setting gauge.
- Delivery in a plastic case with a manufacturer measuring report.
- Power supply: 1 battery type CR2032.



USB interface:

- For data transfer to PC (e.g. Excel, Word).
- Operating system: Windows and other.
- PC connection: USB.
- No software or driver to install.
- Foot switch (optional).



ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Price EUR
906.862	0 - 25	± 0.003	69.00
906.863	25 - 50	± 0.003	84.00
906.864	50 - 75	± 0.004	98.00
906.865	75 - 100	± 0.004	112.00
Options:			
495.157	Battery type CR2032		0.50
906.618 ^{1,2}	USB interface		83.00
909.687	Footswitch for USB interface		19.20
910.038	Wireless USB receiver		50.00
906.619 ²	Wireless transmitter		53.00

¹ Standard configured for PC with English (US) keyboard. Also available on request for alternative keyboards.

² With micro-USB connection.

003-323 EN 20060702

Digital micrometers IP54

- Measuring range: 0 - 150 mm.
- Resolution: 0.001 mm.
- mm/inch conversion.
- Automatic switch-off.
- Reset.
- Tungsten carbide measuring faces: $\varnothing 6.5$ mm.

- Protection: IP54.
- From measuring range 25 - 50 mm including setting gauge.
- Delivery in a plastic case.
- Power supply: 1 battery type V357 or 1 battery type CR2032.



910.041



Setting gauge

ECONOMY LINE ✓

Sets

ECONOMY LINE ✓

Item No.	Measuring range/mm	Pieces	Price EUR
910.053	0 - 75	3	258.00
910.055	0 - 150	6	634.00

Item No.	Measuring range/mm	Accuracy mm	Price EUR
910.041	0 - 25	± 0.004	73.00
910.042	25 - 50	± 0.004	87.00
910.043	50 - 75	± 0.005	98.00
910.044	75 - 100	± 0.005	109.00
910.045	100 - 125	± 0.006	128.00
910.046	125 - 150	± 0.006	139.00
Options:			
836.535	Battery type V357		0.90
495.157	Battery type CR2032		0.50

Digital micrometers IP65

These IP65 protected micrometers are especially suitable for use in production environments.

- Measuring range: 0 - 100 mm.
- Resolution: 0.001 mm.
- mm/inch conversion.
- ABS/INC switchable.
- On/off switch.
- Automatic switch-off.
- Reset.

- Tungsten carbide measuring faces: $\varnothing 6.5$ mm.
- Protection: IP65.
- From measuring range 25 - 50 mm including setting gauge.
- Delivery in a plastic case with a manufacturer measuring report and ball attachment.
- Power supply: 1 battery type CR2032.



909.988



Setting gauge

ECONOMY LINE ✓



Item No.	Measuring range/mm	Accuracy mm	Price EUR
909.988	0 - 25	± 0.003	96.00
909.989	25 - 50	± 0.003	116.00
909.990	50 - 75	± 0.004	132.00
909.991	75 - 100	± 0.004	150.00
Option:			
495.157	Battery type CR2032		0.50

Digital fast adjustable external measuring instruments IP65

These digital external measuring instruments have an IP65 classification and are therefore not only resistant to dust, but can also withstand water jets. The non-rotating spindle is solely lever operated and fast adjustable.

- Measuring range: 0 - 100 mm.
- Resolution: 0.001 mm.
- mm/inch conversion.
- ABS/INC switchable.
- Digimatic data output.
- On/off switch.
- Reset.
- Non-rotating spindle.
- Tungsten carbide measuring faces: $\varnothing 6.5$ mm.
- Protection: IP65.
- From measuring range 25 - 50 mm including setting gauge.
- Delivery in a plastic case with a manufacturer measuring report and ball attachment.
- Power supply: 1 battery type CR2032.



909.994



Setting gauge



USB interface:

- For data transfer to PC (e.g. Excel, Word).
- Operating system: Windows and other.
- PC connection: USB.
- No software or driver to install.
- Foot switch (optional).

ECONOMY LINE ✓



909.686



909.687



910.039/038

Item No.	Measuring range/mm	Accuracy mm	Price EUR
909.994	0 - 25	± 0.003	178.00
909.995	25 - 50	± 0.003	203.00
909.996	50 - 75	± 0.004	228.00
909.997	75 - 100	± 0.004	252.00

With Bluetooth:

910.075	0 - 25	± 0.003	170.00
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Options:

495.157	Battery type CR2032	0.50
909.686 ^{1,2}	USB interface	112.00
909.687	Footswitch for USB interface	19.20
910.038	Wireless USB receiver	50.00
910.039 ²	Wireless transmitter	51.00

¹ Standard configured for PC with English (US) keyboard.

Also available on request for alternative keyboards.

² For instruments with a Digimatic data output.

Digital micrometers IP65

These digital micrometers have an IP65 classification and are therefore not only resistant to dust but can also withstand water jets. Also available as fast adjustable micrometers with a pitch of 2 mm.

- Measuring range: 0 - 300 mm.
- Resolution: 0.001 mm.
- mm/inch conversion.
- ABS/INC switchable.
- On/off switch.
- Automatic switch-off.
- Tungsten carbide measuring faces: $\varnothing 6.5$ mm.
- Protection: IP65.
- From measuring range 25 - 50 mm including setting gauge.
- Delivery in a plastic case or a wooden case.
- Power supply: 1 battery type V357 or 1 battery type CR2032.
- Also available in sets.

Fast adjustable micrometers

- 1 revolution of the thimble = 2 mm.



909.549



909.545



Setting gauge

ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Price EUR
909.549	0 - 25	± 0.002	86.00
909.550	25 - 50	± 0.002	106.00
909.551	50 - 75	± 0.003	126.00
909.552	75 - 100	± 0.003	147.00
909.556	100 - 125	± 0.003	167.00
909.557	125 - 150	± 0.003	187.00
909.558	150 - 175	± 0.004	207.00
909.559	175 - 200	± 0.004	227.00
909.560	200 - 225	± 0.004	247.00
909.561	225 - 250	± 0.004	267.00
909.562	250 - 275	± 0.005	287.00
909.563	275 - 300	± 0.005	307.00
Options:			
836.535	Battery type V357		0.90
495.157	Battery type CR2032		0.50

Sets

ECONOMY LINE ✓

Item No.	Measuring range/mm	Pieces	Price EUR
909.577	0 - 75	3	319.00
909.578	0 - 100	4	466.00
909.579	0 - 150	6	819.00

Fast adjustable micrometers

Item No.	Measuring range/mm	Accuracy mm	Price EUR
909.545	0 - 25	± 0.002	157.00
909.546	25 - 50	± 0.002	176.00
909.547	50 - 75	± 0.003	196.00
909.548	75 - 100	± 0.003	216.00

TESA Micromaster digital *capa* μ micrometers IP54

This line of digital micrometers with the patented *capa* μ measuring system has a very light-weight and ergonomic design and is equipped with a large easy-to-read LCD display with 7 mm large digits. Especially the high protection degree – IP54 against dust and splash water – makes this series of micrometers very suitable for use in workshop conditions. The friction thimble ensures a constant measuring force of approximately 10 N for optimal repeatability. The models with Opto-RS232C data output are suitable for data transfer by means of a cable, or wireless with the TESA Link Connector-Bluetooth and Opto-RS232/TLC adapter in combination with the free to download TESA Data-Viewer software.

- Measuring range: 0 - 100 mm.
- Resolution: 0.001 mm.
- mm/inch conversion.
- ABS/INC switchable.
- With or without bidirectional Opto-RS232C data output.
- Automatic switch-off.
- Reset/preset and hold function.
- Locking screw.
- Friction thimble.
- Tungsten carbide measuring faces: $\varnothing 6.5$ mm.
- Matt chrome-plated frame with insulating grip.
- Protection: IP54.
- (When using data output: IP40.)
- Delivery in a plastic case or a wooden case with a manufacturer measuring report.
- Power supply: 1 battery type CR2032.



Item No.	Measuring range/mm	Accuracy mm	Price EUR
Without Opto-RS232C data output:			
782.100 ¹	0 - 30	±0.004	435.00
782.101	0 - 30	±0.004	448.00
782.102	25 - 50	±0.004	565.00
782.103	50 - 75	±0.005	631.00
782.104	75 - 100	±0.005	703.00
With Opto-RS232C data output:			
782.105	0 - 30	±0.004	490.00
782.106	25 - 50	±0.004	611.00
782.107	50 - 75	±0.005	712.00
782.108	75 - 100	±0.005	789.00
With small measuring faces $\varnothing 2$ mm:			
782.111	0 - 30	±0.004	974.00
Options:			
495.157	Battery type CR2032		0.50
783.556	TESA Link Connector Adapter Opto-RS232/TLC		209.00
783.555	TESA Link Connector Bluetooth		59.00
781.887	Opto-RS232C cable 9p (2 m)		157.00
783.027	Cable USB-Opto RS232 duplex (2 m)		331.00

¹ Micromaster "Easy": simple model with protection IP40 and without preset function.

Mitutoyo *QuantuMike* micrometers IP65

These digital *Coolant Proof* micrometers have an IP65 classification and are therefore not only resistant to dust but can also withstand water jets and splashing coolant. The large and clear LCD with 7.5 mm high digits enables easy read-out. The revolutionary *QuantuMike* has a spindle pitch of 2 mm. The spindle feed is therefore 4x faster compared to a standard micrometer. The *QuantuMike* is easy to set up using a PC. Even a calculation function is possible and setting a calibration date.

- Measuring range: 0 - 100 mm.
- Resolution: 0.001 mm.
- ABS/INC switchable.
- Automatic switch-off.
- Reset.
- ABS reset by means of origin.
- Hold function.
- Protection against incorrect measuring speed.
- 1 revolution of the thimble = 2 mm.
- Tungsten carbide measuring faces: $\varnothing 6.35$ mm.
- Varnished frame with insulating grip.
- Protection: IP65.
- Conforms to factory standard.
- Delivery in a plastic case with a manufacturer measuring report (0 - 50 mm).
- Power supply: 1 battery type V357.
- Battery life: approx. 2.4 years.



Item No.	Measuring range/mm	Accuracy mm	Digimatic S1 output	Price EUR
293.140	0 - 25	± 0.001	yes	392.00
293.141	25 - 50	± 0.001	yes	483.00
293.142	50 - 75	± 0.002	yes	573.00
293.143	75 - 100	± 0.002	yes	647.00
Options:				
836.535	Battery type V357			0.90
106.111 ¹	Digimatic S1 data cable, 1 m			138.00
106.121 ¹	Digimatic S1 data cable, 2 m			148.00
206.001 ¹	Digimatic S1 USB Input Tool Direct cable, 2 m			150.00
102.960 ^{1,2}	Digimatic S1 U-WAVE fit connector			111.00
264.622 ²	U-WAVE fit transmitter IP67			189.00
264.626 ²	U-WAVE Bluetooth transmitter IP 67			197.00



¹ With data switch.

² Connector + transmitter are needed.

Mitutoyo Digimatic micrometers IP65

These digital *Coolant Proof* micrometers have an IP65 classification and are therefore not only resistant to dust but can also withstand water jets and splashing coolant. The large and clear LCD with 7.5 mm high digits enables easy read-out.

- Measuring range: 0 - 150 mm.
- Resolution: 0.001 mm.
- ABS/INC switchable.
- Automatic switch-off.
- Reset.
- ABS reset by means of origin.
- Hold function.
- Tungsten carbide measuring faces: $\varnothing 6.35$ mm.
- Varnished frame with insulating grip.
- Protection: IP65.
- Conforms to factory standard.
- Delivery in a plastic case with a manufacturer measuring report (0 - 50 mm).
- Power supply: 1 battery type V357.
- Battery life: approx. 2.4 years.
- The standard model with data output is available up to 300 mm, and is also available in sets.
- Models with ratchet thimble or with non-rotating spindle are available up to 100 mm measuring range.

Available up to 300 mm measuring range.



Item No.	Measuring range/mm	Accuracy mm	Digimatic output	Price EUR
293.240	0- 25	± 0.001	no	252.00
293.241	25- 50	± 0.001	no	353.00
293.242	50- 75	± 0.002	no	425.00
293.243	75-100	± 0.002	no	484.00
293.230	0- 25	± 0.001	yes	325.00
293.231	25- 50	± 0.001	yes	385.00
293.232	50- 75	± 0.002	yes	505.00
293.233	75-100	± 0.002	yes	546.00
293.250	100-125	± 0.002	yes	741.00
293.251	125-150	± 0.002	yes	763.00
293.252	150-175	± 0.003	yes	782.00
293.253	175-200	± 0.003	yes	788.00
293.234 ¹	0- 25	± 0.001	yes	391.00
293.244 ¹	0- 25	± 0.001	no	269.00

Options:

836.535	Battery type V357	0.90
105.662 ²	Digimatic data cable, 1 m	111.00
105.663 ²	Digimatic data cable, 2 m	113.00
106.380 ²	USB Input Tool Direct cable, 2 m	146.00
102.310 ^{2,3}	U-WAVE fit connector	114.00
264.622 ³	U-WAVE fit transmitter IP67	189.00
264.626 ³	U-WAVE Bluetooth transmitter IP 67	197.00

¹ With ratchet thimble.

² With data switch.

³ Connector + transmitter are needed.



Sets

Item No.	Measuring range/mm	Pieces	Price EUR
293.966	0- 50	2	755.00
293.962	0- 75	3	1,290.00
293.963	0-100	4	1,865.00

Mitutoyo Absolute Digimatic Submicrometer MDH

Micrometer with a higher resolution (switchable) and accuracy.

- Measuring range: 0 - 25 mm.
- Resolution: **0.0001** or 0,0005 mm.
- Digimatic data output.
- On/off switch.
- Automatic switch-off.
- Reset/preset.
- Hold function.
- Measuring force: 7 - 9 N.
- Spindle: $\varnothing 6.35$ mm.
- Locking screw.
- Tungsten carbide measuring faces: $\varnothing 3.2$ mm.
- Varnished frame with insulating grip.
- Absolute rotary sensor.
- Weight: 400 g.
- Conforms to factory standard.
- Delivery in a plastic case with a manufacturer measuring report.
- Power supply: 1 battery type CR2032.



Item No.	Measuring range/mm	Accuracy mm	Price EUR
293.100	0 - 25	± 0.0005	2,067.00
Options:			
495.157	Battery type CR2032		0.50
105.662 ¹	Digimatic data cable, 1 m		111.00
105.663 ¹	Digimatic data cable, 2 m		113.00
106.380 ¹	USB Input Tool Direct cable, 2 m		146.00
102.791 ¹	U-WAVE adapter cable		110.00
102.880	U-WAVE transmitter standard		189.00
102.810	U-WAVE receiver and software		380.00

¹ With data switch.

Mitutoyo Quick Mini digital quick thickness gauge

The measuring instrument to always carry with you. Pull back the lever, insert the sample, release the lever and read the value!

- Measuring range: 0 - 12 mm.
- Resolution: 0.01 mm.
- Accuracy: ± 0.02 mm.
- Repeatability: 0.01 mm.
- ABS/INC switchable.
- Reset.
- Measuring force: 2 N.
- Anvil measuring face: $\varnothing 6.5$ mm.
- Pin measuring face: $\varnothing 5$ mm.
- Delivery in a plastic case.
- Power supply: 1 battery type V357.



Item No.	Measuring range/mm	Price EUR
700.119	0 - 12	204.00
Option:		
836.535	Battery type V357	0.90

Micrometers

- Measuring range: 0 - 300 mm.
- Graduation: 0.01 mm.
- Friction thimble.
- Tungsten carbide measuring faces: $\varnothing 6.5$ mm.
- From measuring range 25 - 50 mm including setting gauge.
- Delivery in a plastic case or a wooden case.
Sets delivered in a plastic case, a wooden carrying case, a plastic carrying case or an aluminum carrying case.



906.000



906.008



906.059



906.057



906.056



Setting gauge

ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Price EUR
906.000	0 - 25	± 0.004	23.90
906.001	25 - 50	± 0.004	26.20
906.002	50 - 75	± 0.005	29.10
906.003	75 - 100	± 0.005	31.90
906.004	100 - 125	± 0.006	37.00
906.005	125 - 150	± 0.006	43.00
906.006	150 - 175	± 0.007	52.00
906.007	175 - 200	± 0.007	57.00
906.008	200 - 225	± 0.008	63.00
906.009	225 - 250	± 0.008	69.00
906.010	250 - 275	± 0.009	75.00
906.011	275 - 300	± 0.009	81.00

Model for left- and right-handed use:

907.167	0 - 25	± 0.004	36.70
907.168	25 - 50	± 0.004	41.00
907.169	50 - 75	± 0.005	44.00
907.170	75 - 100	± 0.005	49.00

Sets

ECONOMY LINE ✓

Item No.	Measuring range/mm	Price EUR
906.055	0 - 75	79.00
906.056	0 - 100	111.00
906.057	0 - 150	191.00
906.058	150 - 300	395.00
906.059	0 - 300	586.00



907.168

Double graduation: for left- and right-handed use.

Micrometers 0.001 mm, parallax-free

Rugged micrometers with a vernier graduation of 0.001 mm and a favourable price-performance ratio.

- Measuring range: 0 - 200 mm.
- Vernier: 0.001 mm, parallax-free by enlarged thimble.
- Friction thimble.
- Tungsten carbide measuring faces: $\varnothing 6.5$ mm.
- Delivery incl. adjustment tool.
- From measuring range 25 - 50 mm including setting gauge.



906.280



Setting gauge

ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Price EUR
906.280	0 - 25	± 0.004	69.00
906.281	25 - 50	± 0.004	75.00
906.282	50 - 75	± 0.005	81.00
906.283	75 - 100	± 0.005	86.00
906.284	100 - 125	± 0.006	100.00
906.285	125 - 150	± 0.006	112.00
906.286	150 - 175	± 0.007	117.00
906.287	175 - 200	± 0.007	129.00

Fast adjustable micrometers

Fast adjustable micrometers due to one revolution resulting in a displacement of 1 mm. The measuring value can be read directly from the 100 step graduation on the thimble.

- Measuring range: 0 - 200 mm.
- Graduation: 0.01 mm.
- 1 revolution of the thimble = 1 mm.
- Thimble with 100 step graduation.
- Tungsten carbide measuring faces: $\varnothing 8$ mm.
- From measuring range 25 - 50 mm including setting gauge.



907.000



Setting gauge

ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Price EUR
907.000	0 - 25	± 0.004	58.00
907.001	25 - 50	± 0.004	64.00
907.002	50 - 75	± 0.005	70.00
907.003	75 - 100	± 0.005	76.00
907.004	100 - 125	± 0.006	94.00
907.005	125 - 150	± 0.006	106.00
907.006	150 - 175	± 0.007	117.00
907.007	175 - 200	± 0.007	129.00

Mitutoyo lightweight micrometers

Mitutoyo micrometers in a lightweight workshop design.

- Measuring range: 0 - 300 mm.
- Graduation: 0.01 mm.
- Measuring force: 5 - 10 N (from 100 mm: 5 - 15 N).
- Locking screw.
- Tungsten carbide measuring faces: $\varnothing 6.35$ mm.
- Varnished frame, from 75 mm with insulating grip.
- Delivery in a plastic case with a manufacturer measuring report (0 - 50 mm), adjustment tool and setting gauge (except 103.137). Sets delivered in a wooden case.
- Available up to 1000 mm.



Schut

Item No.	Measuring range/mm	Accuracy mm	Price EUR
103.137	0 - 25	± 0.002	62.00
103.138	25 - 50	± 0.002	88.00
103.139	50 - 75	± 0.002	115.00
103.140	75 - 100	± 0.003	123.00
103.141	100 - 125	± 0.003	194.00
103.142	125 - 150	± 0.003	216.00
103.143	150 - 175	± 0.004	240.00
103.144	175 - 200	± 0.004	262.00
103.145	200 - 225	± 0.004	285.00
103.146	225 - 250	± 0.005	316.00
103.147	250 - 275	± 0.005	332.00
103.148	275 - 300	± 0.005	355.00



Sets (delivered incl. setting gauges)

Item No.	Measuring range/mm	Pieces	Price EUR
103.927	0 - 75	3	302.00
103.913	0 - 150	6	624.00
103.915	150 - 300	6	1,566.00
103.914	0 - 300	12	2,425.00

TESA micrometers

- Measuring range: 0 - 100 mm.
- Graduation: 0.01 mm.
- Tungsten carbide measuring faces: $\varnothing 6.5$ mm.
- No-glare chrome finished frame and thimble.
- DIN 863 T1.
- Delivery in a plastic case with a manufacturer measuring report.

Item No.	Measuring range/mm	Accuracy mm	Price EUR
TESA Isomaster			
779.005	0 - 25	± 0.004	212.00
779.006	25 - 50	± 0.004	310.00
779.007	50 - 75	± 0.005	331.00
779.008	75 - 100	± 0.005	378.00



Sets

Item No.	Measuring range/mm	Price EUR
781.975	0 - 100	1,222.00

Mitutoyo micrometers

- Measuring range: 0 - 100 mm.
- Graduation: 0.01 mm.
- Measuring force: 5 - 10 N.
- Locking screw.
- Tungsten carbide measuring faces: $\varnothing 6.35$ mm.
- Varnished frame with insulating grip.
- Delivery in a plastic case with a manufacturer measuring report (0 - 50 mm), adjustment tool and setting gauge (except 102.301).



102.301



Set (delivered incl. setting gauges)

Item No.	Measuring range/mm	Pieces	Price EUR
102.911	0 - 100	4	433.00

Item No.	Measuring range/mm	Accuracy mm	Price EUR
102.301	0 - 25	± 0.002	77.00
102.302	25 - 50	± 0.002	101.00
102.303	50 - 75	± 0.002	132.00
102.304	75 - 100	± 0.003	152.00

Mitutoyo micrometers with ratchet thimble

Mitutoyo micrometers with a special ratchet thimble, it works both from the thimble and the speeder. For easy one-handed operation.

- Measuring range: 0 - 50 mm.
- Graduation: 0.01 mm or vernier 0.001 mm.
- Measuring force: 5 - 10 N.
- Locking screw.
- Tungsten carbide measuring faces: $\varnothing 6.35$ mm.
- Varnished frame with insulating grip.
- Delivery in a plastic case with a manufacturer measuring report, adjustment tool and setting gauge (except 102.701/707).



102.707

Item No.	Measuring range/mm	Graduation mm	Accuracy mm	Price EUR
102.701	0 - 25	0.01	± 0.002	83.00
102.702	25 - 50	0.01	± 0.002	113.00
102.707	0 - 25	0.001	± 0.002	101.00
102.708	25 - 50	0.001	± 0.002	165.00



102.701

Micrometers with a large measuring range

ECONOMY LINE ✓

The varnished tubular frame is very stable and equipped with heat insulating grips. With two spacers for a large measuring span.

- Measuring range: 300 - 2000 mm.
- Measuring span:
 - 300 - 1000 mm: 100 mm (travel 25 mm, spacers 25 and 50 mm),
 - 1000 - 2000 mm: 200 mm (travel 50 mm, spacers 50 and 100 mm).
- Graduation: 0.01 mm.
- Rotating spindle.
- Tungsten carbide measuring faces: $\varnothing 8$ mm.
- Matt chrome-plated thimble.
- With two setting gauges.

Item No.	Measuring range/mm	Accuracy mm	Price EUR
Measuring span 100 mm:			
906.012	300 - 400	± 0.011	281.00
906.013	400 - 500	± 0.013	318.00
906.014	500 - 600	± 0.015	375.00
906.015	600 - 700	± 0.016	449.00
906.016	700 - 800	± 0.018	529.00
906.017	800 - 900	± 0.020	616.00
906.018	900 - 1000	± 0.020	690.00
Measuring span 200 mm:			
906.019	1000 - 1200	± 0.020	1,404.00
906.020	1200 - 1400	± 0.024	1,500.00
906.021	1400 - 1600	± 0.028	1,670.00
906.022	1600 - 1800	± 0.031	1,773.00
906.023	1800 - 2000	± 0.034	1,876.00



Delivery ex Groningen, Netherlands

003-214-EN-20060702

Micrometers with a large measuring range

Micrometers with a large measuring range, with very accurate, interchangeable anvils.

- Measuring range: 0 - 300 mm.
- Graduation: 0.01 mm.
- Tungsten carbide measuring faces: $\varnothing 6.35$ mm.
- Delivery in a plastic case, incl. setting gauges and interchangeable anvils (increasing per 25 mm).



ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Number of anvils	Number of setting gauges	Price EUR
906.290	0 - 50	± 0.004	2	1	71.00
906.294	0 - 100	± 0.005	4	3	139.00
906.292	0 - 150	± 0.006	6	5	177.00
906.291	50 - 100	± 0.005	2	2	84.00
906.295	100 - 200	± 0.007	4	4	201.00
906.293	150 - 300	± 0.009	6	6	223.00
906.296	200 - 300	± 0.009	4	4	216.00

Micrometers with adjustable anvil with dial indicator

Micrometers with an adjustable anvil with dial indicator, for measurements in a wide measuring range.

- Measuring range: 0 - 1000 mm.
- Graduation: 0.01 mm.
- Clamping shaft: $\varnothing 8$ mm.
- Tungsten carbide measuring faces: $\varnothing 8$ mm.
- Delivery in a plastic case, incl. setting gauges.

Specifications dial indicator:

- Graduation: 0.01 mm.
- Range adjustable anvil: 5 mm.
- Max. measuring force anvil with dial indicator: 10 N.
- Adjustable tolerance markers.



ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Number of setting gauges	Price EUR
907.015	0 - 100	± 0.006	3	220.00
907.016	100 - 200	± 0.007	4	297.00
907.017	200 - 300	± 0.008	4	313.00
907.018	300 - 400	± 0.009	2	484.00
907.019	400 - 500	± 0.010	2	543.00
907.020	500 - 600	± 0.011	2	609.00
907.021	600 - 700	± 0.012	2	720.00
907.022	700 - 800	± 0.013	2	831.00
907.023	800 - 900	± 0.014	2	936.00
907.024	900 - 1000	± 0.015	2	1,067.00

Schut

Digital micrometers IP65 with a large measuring range

- Measuring range: 0 - 1000 mm.
- Resolution: 0.001 mm.
- mm/inch conversion.
- ABS/INC switchable.
- On/off switch.
- Automatic switch-off.
- Reset/preset.
- Rotating spindle.
- Adjustable tolerance limits.
- Tungsten carbide measuring faces: $\varnothing 6.35$ mm.
- 0 - 300 mm: cast iron frame,
300 - 1000 mm: tubular steel frame with insulating grips.
- Protection: IP65.
- Delivery in a wooden case with setting gauges interchangeable anvils.
- Power supply: 1 battery type V357 or
1 battery type CR2032.



ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Number of anvils	Number of setting gauges	Price EUR
909.580	0 - 100	± 0.005	4	3	213.00
909.581	100 - 200	± 0.007	4	4	229.00
909.582	200 - 300	± 0.008	4	4	253.00
909.583	300 - 400	± 0.009	4	2	297.00
909.584	400 - 500	± 0.010	4	2	325.00
909.585	500 - 600	± 0.010	4	2	365.00
909.586	600 - 700	± 0.011	4	2	418.00
909.587	700 - 800	± 0.012	4	2	474.00
909.588	800 - 900	± 0.013	4	2	538.00
909.589	900 - 1000	± 0.013	4	2	590.00
Options:					
836.535	Battery type V357				0.90
495.157	Battery type CR2032				0.50

Micrometers with dial indicator

Micrometers with adjustable anvil and clamping shaft for a dial indicator. Especially suitable for Go/NoGo determination and batch measurements.

- Measuring range: 0 - 175 mm.
- Graduation thimble and dial indicator: 0.01 mm.
- Range adjustable anvil: 8 mm.
- Trigger for (fast) adjustment.
- Clamping shaft: $\varnothing 8$ mm.
- Tungsten carbide measuring faces: $\varnothing 6.5$ mm.
- From measuring range 25 - 50 mm including setting gauge.
- Delivery in a wooden case.
- Can also be used in combination with various other dial indicators with clamping stem $\varnothing 8$ mm.



Setting gauge

ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Price EUR
907.008	0 - 25	± 0.004	177.00
907.009	25 - 50	± 0.004	188.00
907.010	50 - 75	± 0.005	200.00
907.011	75 - 100	± 0.005	211.00
907.012	100 - 125	± 0.006	223.00
907.013	125 - 150	± 0.006	234.00
907.014	150 - 175	± 0.007	246.00

Mini-micrometer

- Measuring range: 0 - 15 mm.
- Graduation: 0.01 mm.
- Measuring faces: $\varnothing 5$ mm.
- Without friction thimble.
- Dimensions:
total length: 70 mm,
throat depth: 14 mm.
- Delivery in a plastic case.



ECONOMY LINE ✓

Item No.	Measuring range/mm	Price EUR
906.180	0 - 15	42.00

Micrometer with an extra large measuring range

The measuring range of this micrometer can be 'switched' from 25 - 50 to 0 - 25 mm by easy mounting of the extension anvil.

- Measuring range: 0 - 50 mm.
- Graduation: 0.01 mm.
- Accuracy: ± 0.004 mm.
- Tungsten carbide measuring faces: $\varnothing 6.5$ mm.
- Delivery in a wooden case, incl. adjustment tool and extension anvil.



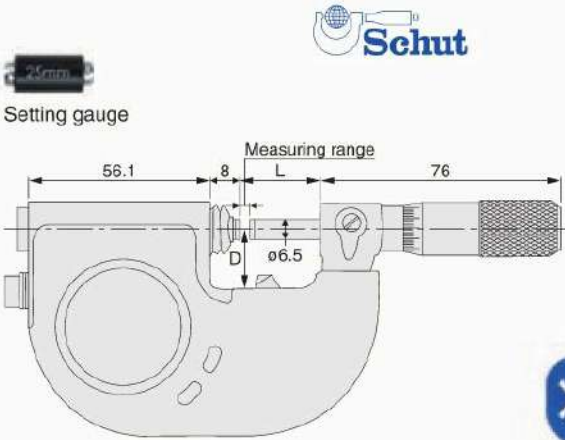
ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Price EUR
906.567	0 - 50	± 0.004	86.00

Tolerance micrometers with digital precision dial indicator IP54

Micrometers with digital color display for both digital and digital-analog readout. Because of the retractable anvil, the fine adjustment and the tolerance markers, these micrometers are very suitable for batch inspection and tolerance measurements. The measuring value colors yellow, green, or red, depending on whether the measurement falls under, within or above the set tolerance limits.

- Measuring range: 0 - 100 mm.
- Resolution (dial indicator): 0.0005 mm (except 910.506: 0.0002 mm).
- Accuracy:
micrometer: ± 0.003 mm,
dial indicator: ± 0.001 mm.
- mm/inch conversion.
- On/off switch.
- Automatic switch-off.
- Bluetooth (only 910.506).
- Measuring force: 5 - 10 N.
- Display with digital dial, or simple digital readout.
- Tolerance function with color display.
- Tungsten carbide measuring faces: $\varnothing 6.5$ mm.
- Protection: IP54.
- From measuring range 25 - 50 mm including setting gauge.
- Delivery in a plastic case.
- Power supply: rechargeable lithium battery, USB cable included (excluding AC adapter).



ECONOMY LINE ✓				
Item No.	Measuring range/mm	D mm	L mm	Price EUR
910.502	0- 25	15	27.5	289.00
910.503	25- 50	25	53	323.00
910.504	50- 75	39.5	78	393.00
910.505	75-100	50	103	445.00
With Bluetooth:				
910.506	0- 25	15	27.5	337.00

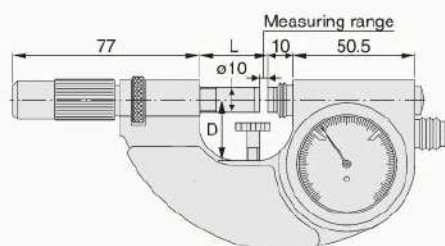
Tolerance micrometers with precision dial indicator

Because of the retractable anvil, the fine adjustment and the tolerance markers, this micrometer is very suitable for batch inspection and tolerance measurements.

- Measuring range: 0 - 100 mm.
- Measuring range dial indicator: ± 0.04 mm.
- Graduation (dial indicator): 0.001 mm.
- Accuracy:
micrometer: ± 0.003 mm (only 906.568),
dial indicator: ± 0.001 mm.
- Measuring force: 5 - 10 N
(only 906.569/570/571/614).
- Adjustable tolerance markers.
- Tungsten carbide measuring faces:
906.568 - 599: $\varnothing 6.5$ mm,
906.569 - 614: $\varnothing 10$ mm.
- From measuring range 25 - 50 mm including setting gauge.
- Delivery in an aluminum case.



Schut



Item No.	D/mm	L/mm
906.569	25	28.5
906.570	35	53.5
906.571	47.5	78.5
906.614	60	103.5



Setting gauge

ECONOMY LINE ✓

Item No.	Measuring range/mm	Graduation mm	Vernier thimble/mm	Price EUR
906.568	0 - 25	0.001	0.002	254.00
906.597	25 - 50	0.001	0.002	292.00
906.598	50 - 75	0.001	0.002	331.00
906.599	75 - 100	0.001	0.002	384.00
With protection IP54:				
906.569	0 - 25	0.001	—	341.00
906.570	25 - 50	0.001	—	375.00
906.571	50 - 75	0.001	—	401.00
906.614	75 - 100	0.001	—	432.00

Tolerance micrometers with two spindles

Can be used as a Go/NoGo micrometer by setting of the lower and upper limits.



906.288



Setting gauge

- Measuring range: 0 - 50 mm.
- Vernier: 0.002 mm.
- Accuracy: ± 0.003 mm.
- Tungsten carbide measuring faces: $\varnothing 6.5$ mm.
- From measuring range 25 - 50 mm including setting gauge.

ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Price EUR
906.288	0 - 25	± 0.003	81.00
906.289	25 - 50	± 0.003	97.00

Dial snap gauges

Snap gauges with adjustable anvil and clamping shaft for a dial indicator. Especially suitable for Go/NoGo determination and batch measurements.

- Measuring range: 0 - 300 mm.
- Measuring force: 6 - 9 N.
- Clamping shaft: $\varnothing 8$ mm (dial gauge not included).
- Travel of moving anvil: 3 mm.
- Anvil size: 14 x 11 mm.
- Chamfered anvils for easy insertion.
- Delivery in a wooden case.

- For suitable dial indicators refer to the dial indicators elsewhere in this catalog.

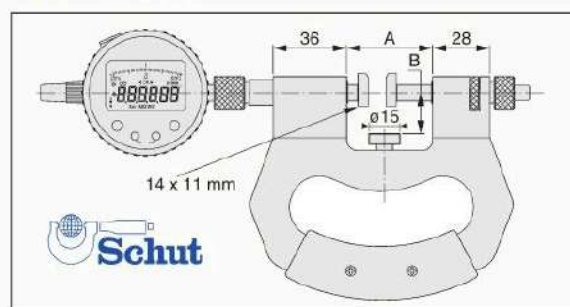


ECONOMY LINE ✓

Item No.	Measuring range/mm	Length/mm		Price EUR
		A	B	
906.237	0 - 25	42	20	219.00
906.238	25 - 50	69	32.5	245.00
906.239	50 - 75	94	45	275.00
906.240	75 - 100	119	57.5	309.00
906.241	100 - 125	144	70	335.00
906.242	125 - 150	169	82.5	361.00
906.243	150 - 175	194	95	387.00
906.244	175 - 200	219	107.5	413.00
906.245	200 - 225	244	120	438.00
906.246	225 - 250	269	132.5	464.00
906.247	250 - 275	294	145	490.00
906.248	275 - 300	319	157.5	516.00



906.237
+ 907.879



Digital vertical micrometers IP65

Digital vertical micrometers for easy reading, for example, when measuring the thickness of metal or plastic sheet. These micrometers have an IP65 classification and are therefore not only resistant to dust but can also withstand water jets.

- Measuring range: 0 - 50 mm.
- Resolution: 0.001 mm.
- Accuracy: ± 0.002 mm.
- mm/inch conversion.
- ABS/INC switchable.
- On/off switch.

- Automatic switch-off.
- Reset/preset.
- Tungsten carbide measuring faces: $\varnothing 6.5$ mm.
- Protection: IP65.
- From measuring range 25 - 50 mm including setting gauge.
- Delivery in a wooden case.
- Power supply: 1 battery type V357.



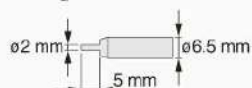
ECONOMY LINE ✓

Item No.	Measuring range/mm	Price EUR
909.458	0 - 25	181.00
909.459	25 - 50	212.00
Option:		
836.535	Battery type V357	0.90

Micrometers with small measuring faces

For measuring hard-to-reach measuring points such as grooves.

- Measuring range: 0 - 175 mm.
- Analog: graduation 0.01 mm, digital: resolution 0.001 mm.
- Tungsten carbide measuring pins: $\varnothing 2 \times 5$ mm.
- From measuring range 25 - 50 mm including setting gauge.
- Delivery in a plastic case.



Digital

- mm/inch conversion.
- ABS/INC switchable.
- On/off switch.
- Automatic switch-off.
- Reset/preset.
- Protection: IP65.
- Power supply: 1 battery type V357 or 1 battery type CR2032.



906.135



909.591



Setting gauge

Analog

ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Price EUR
906.135	0 - 25	±0.004	66.00
906.136	25 - 50	±0.004	71.00
906.137	50 - 75	±0.005	77.00
906.119	75 - 100	±0.005	92.00
909.320	100 - 125	±0.006	111.00
909.321	125 - 150	±0.006	133.00
909.322	150 - 175	±0.007	159.00

Digital

ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Price EUR
909.591	0 - 25	±0.002	177.00
909.592	25 - 50	±0.002	189.00
909.593	50 - 75	±0.003	201.00
909.594	75 - 100	±0.003	213.00
909.595	100 - 125	±0.003	224.00
909.596	125 - 150	±0.003	232.00
909.597	150 - 175	±0.004	244.00

Options:

836.535	Battery type V357	0.90
495.157	Battery type CR2032	0.50

Micrometers with spherical anvil

Micrometers for measuring bent surfaces and wall thicknesses of tubes, bearings, rings, etc.

- Measuring range: 0 - 100 mm.
 - Analog: graduation 0.01 mm, digital: resolution 0.001 mm.
 - Tungsten carbide measuring faces: $\varnothing 6.5$ mm.
 - From measuring range 25 - 50 mm including setting gauge.
 - Delivery in a plastic case.
- Digital**

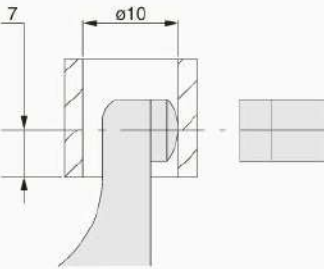
 - mm/inch conversion.
 - ABS/INC switchable.
 - On/off switch.
 - Automatic switch-off.
 - Reset/preset.
 - Protection: IP65.
 - Power supply: 1 battery type V357 or 1 battery type CR2032.



906.155



909.598



Setting gauge

Analog ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Price EUR
906.155	0 - 25	± 0.004	33.10
907.044	25 - 50	± 0.004	42.00
907.045	50 - 75	± 0.005	69.00
907.046	75 - 100	± 0.005	83.00

Digital ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Price EUR
909.598	0 - 25	± 0.002	156.00
909.599	25 - 50	± 0.002	171.00
909.600	50 - 75	± 0.003	188.00
909.601	75 - 100	± 0.003	207.00

- Options:**
- | | | |
|---------|---------------------|------|
| 836.535 | Battery type V357 | 0.90 |
| 495.157 | Battery type CR2032 | 0.50 |

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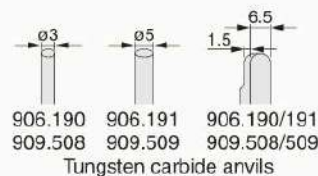
Universal micrometers with interchangeable anvils

With these micrometers you are an all-rounder. The instruments have two interchangeable anvils, which gives them a lot of application possibilities. They can also be used as a height gauge, when the clamp for clamping the anvils is removed.

- Measuring range: 0 - 50 mm.
- Analog: graduation 0.01 mm, digital: resolution 0.001 mm.
- Accuracy: ± 0.004 mm.
- Tungsten carbide measuring face: $\varnothing 6.5$ mm.
- From measuring range 25 - 50 mm including setting gauge.
- Delivery in a plastic case, incl. 2 tungsten carbide anvils.

Digital

- mm/inch conversion.
- ABS/INC switchable.
- On/off switch.
- Automatic switch-off.
- Reset/preset.
- Protection: IP65.
- Power supply: 1 battery type CR2032.



Setting gauge

Analog

ECONOMY LINE ✓

Item No.	Measuring range/mm	Price EUR
906.190	0 - 25	144.00
906.191	25 - 50	168.00

Digital

ECONOMY LINE ✓

Item No.	Measuring range/mm	Price EUR
909.508	0 - 25	185.00
909.509	25 - 50	205.00

Option:

495.157	Battery type CR2032	0.50
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Digital micrometers IP65 with pin-shaped anvil

Digital micrometers for measuring e.g. (tube) wall thickness.

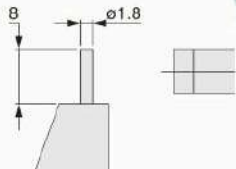
- Measuring range: 0 - 50 mm.
- Resolution: 0.001 mm.
- mm/inch conversion.
- ABS/INC switchable.
- On/off switch.
- Automatic switch-off.
- Reset/preset.
- Pin-shaped anvil: $\varnothing 1.8$ mm.
- Tungsten carbide measuring face: $\varnothing 6.5$ mm.
- Protection: IP65.
- From measuring range 25 - 50 mm including setting gauge.
- Delivery in a plastic case.
- Power supply: 1 battery type V357 or 1 battery type CR2032.



909.684

Setting gauge
ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Price EUR
909.684	0 - 25	± 0.005	173.00
909.685	25 - 50	± 0.005	189.00
Options:			
836.535	Battery type V357		0.90
495.157	Battery type CR2032		0.50



Digital micrometers with special measuring jaws

Digital micrometers with special measuring jaws for measurements in hard-to-reach places such as cut-outs in workpieces, gear pitches, etc.

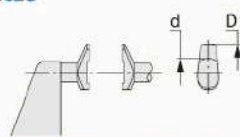
- Measuring range: 0 - 200 mm.
- Resolution: 0.001 mm.
- mm/inch conversion.
- ABS/INC switchable.
- On/off switch.
- Automatic switch-off.
- Reset/preset.
- Non-rotating spindle.
- From measuring range 25 - 50 mm including setting gauge.
- Delivery in a plastic case.
- Power supply: 1 battery type V357 or 1 battery type CR2032.



909.676

Setting gauge
ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	D mm	d $\varnothing$ /mm	Price EUR
909.676	0 - 25	± 0.006	R10	8	197.00
909.677	25 - 50	± 0.006	R10	8	213.00
909.678	50 - 75	± 0.007	R10	8	229.00
909.679	75 - 100	± 0.007	R10	8	253.00
909.680	100 - 125	± 0.009	R15	12	275.00
909.681	125 - 150	± 0.009	R15	12	299.00
909.682	150 - 175	± 0.010	R15	12	326.00
909.683	175 - 200	± 0.010	R15	12	353.00
Options:					
836.535	Battery type V357				0.90
495.157	Battery type CR2032				0.50



Alternative: www.schut.com/PDFs/2025-p115-EN.pdf

Gear pitch micrometers

Micrometers with large, disk-shaped measuring faces for measuring e.g. gear pitches, paper and foil thickness.

- Measuring range: 0 - 200 mm.
- Analog: graduation 0.01 mm, digital: resolution 0.001 mm.
- Non-rotating spindle: $\varnothing$ 8 mm.
- Measuring faces: stainless steel (HRC 52 - 54).
- From measuring range 25 - 50 mm including setting gauge.
- Delivery in a plastic case.

Digital

- mm/inch conversion.
- ABS/INC switchable.
- On/off switch.
- Automatic switch-off.
- Reset/preset.
- Power supply: 1 battery type CR2032.



Setting gauge



ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Measuring faces $\varnothing$ /mm	Price EUR
Analog:				
906.580	0- 25	± 0.006	20	144.00
906.581	25- 50	± 0.006	20	156.00
906.582	50- 75	± 0.007	20	167.00
906.583	75-100	± 0.007	20	178.00
906.584	100-125	± 0.009	30	191.00
906.585	125-150	± 0.009	30	205.00
906.586	150-175	± 0.010	30	220.00
906.587	175-200	± 0.010	30	234.00
Digital:				
909.777	0- 25	± 0.006	20	197.00
909.778	25- 50	± 0.006	20	213.00
909.779	50- 75	± 0.007	20	229.00
909.780	75-100	± 0.007	20	253.00
909.781	100-125	± 0.009	30	275.00
909.782	125-150	± 0.009	30	299.00
909.783	150-175	± 0.010	30	326.00
909.784	175-200	± 0.010	30	353.00
Option:				
495.157	Battery type CR2032			0.50

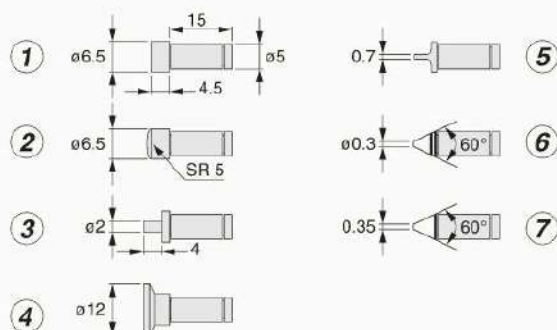
Universal micrometers

With the seven interchangeable measuring inserts, which are available as an option, you are very flexible with these micrometers.

- Measuring range: 0 - 200 mm.
- Analog: graduation 0.01 mm, digital: resolution 0.001 mm.
- Non-rotating spindle.
- Insert shaft: $\varnothing 5$ mm.
- From measuring range 25 - 50 mm including setting gauge.
- Delivery in a plastic case with cut-outs for inserts.

Digital

- mm/inch conversion.
- ABS/INC switchable.
- On/off switch.
- Automatic switch-off.
- Reset/preset.
- Power supply: 1 battery type V357 or 1 battery type CR2032.



No.	Item No.	Description measuring faces	Price EUR
Measuring inserts, per pair:			
①	906.788	flat	16.30
②	906.789	spherical	19.80
③	906.790	small	29.50
④	906.791	disc	29.50
⑤	906.792	knife/flat	39.00
⑥	906.793	point	29.50
⑦	906.794	knife	50.00
	906.795	Set of 7 pairs	167.00

Item No.	Measuring range/mm	Accuracy mm	Price EUR
Analog, without measuring inserts:			
906.780	0 - 25	± 0.004	85.00
906.781	25 - 50	± 0.004	94.00
906.782	50 - 75	± 0.005	110.00
906.783	75 - 100	± 0.005	119.00
906.784	100 - 125	± 0.008	136.00
906.785	125 - 150	± 0.008	153.00
906.786	150 - 175	± 0.009	169.00
906.787	175 - 200	± 0.009	186.00
Digital, without measuring inserts:			
909.785	0 - 25	± 0.004	173.00
909.786	25 - 50	± 0.004	181.00
909.787	50 - 75	± 0.005	189.00
909.788	75 - 100	± 0.005	201.00
909.789	100 - 125	± 0.008	215.00
909.790	125 - 150	± 0.008	229.00
909.791	150 - 175	± 0.009	244.00
909.792	175 - 200	± 0.009	259.00
Options:			
836.535	Battery type V357		0.90
495.157	Battery type CR2032		0.50

Deep frame micrometers

Micrometers with a deep frame especially for measuring the thickness of e.g. sheet metal, paper and plastic sheets.

- Measuring range: 0 - 50 mm.
- Analog: graduation 0.01 mm, digital: resolution 0.001 mm.
- Tungsten carbide measuring faces: $\varnothing 6.5$ mm.
- From measuring range 25 - 50 mm including setting gauge.
- Delivery in a wooden case.

Digital

- mm/inch conversion.
- ABS/INC switchable.
- On/off switch.
- Automatic switch-off.
- Reset/preset.
- Protection: IP65.
- Power supply: 1 battery type V357 or 1 battery type CR2032.



907.068



909.694



Setting gauge

ECONOMY LINE ✓



Item No.	Measuring range/mm	Accuracy mm	Throat depth/mm	Price EUR
Analog:				
907.068	0-25	± 0.004	50	84.00
907.069	25-50	± 0.004	50	95.00
907.070	0-25	± 0.005	100	90.00
907.071	25-50	± 0.005	100	101.00
907.072	0-25	± 0.006	150	111.00
907.073	25-50	± 0.006	150	117.00
Digital:				
909.694	0-25	± 0.004	50	184.00
909.695	25-50	± 0.004	50	191.00
909.696	0-25	± 0.005	100	187.00
909.697	25-50	± 0.005	100	195.00
909.698	0-25	± 0.006	150	200.00
909.699	25-50	± 0.006	150	208.00
Options:				
836.535	Battery type V357			0.90
495.157	Battery type CR2032			0.50

Brake disc micrometers

Micrometers especially suited for measuring the groove depth of brake discs.

- Measuring range: 7.6 - 50 mm.
- Analog: graduation 0.01 mm, digital: resolution 0.001 mm.
- Anvil with 60° point.
- Tungsten carbide measuring face: $\varnothing 6.5$ mm.
- Throat depth: 88 mm.
- From measuring range 25 - 50 mm including setting gauge.
- Delivery in a wooden case (except 909.794: delivery in a plastic case).



Analog

ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Price EUR
907.056	7.6 - 33	± 0.004	55.00
907.057	25 - 50	± 0.004	74.00

Digital

- mm/inch conversion.
- ABS/INC switchable.
- On/off switch.
- Automatic switch-off.
- Reset/preset.
- Protection: IP65.
- Power supply: 1 battery type V357 or 1 battery type CR2032.



Digital

ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Price EUR
909.793	7.6 - 33	± 0.004	164.00
909.794	25 - 50	± 0.004	176.00
Options:			
836.535	Battery type V357		0.90
495.157	Battery type CR2032		0.50

Digital micrometers IP65 with large anvils

- Measuring range: 0 - 50 mm.
- Resolution: 0.001 mm.
- mm/inch conversion.
- ABS/INC switchable.
- On/off switch.
- Automatic switch-off.
- Reset/preset.
- Tungsten carbide measuring face: $\varnothing 6.5$ mm.
- Anvil size:
909.488: 50 x 14 mm,
909.489: 60 x 14 mm.
- Protection: IP65.
- From measuring range 25 - 50 mm including setting gauge.



- Delivery in a wooden case.
- Power supply: 1 battery type V357 or 1 battery type CR2032.



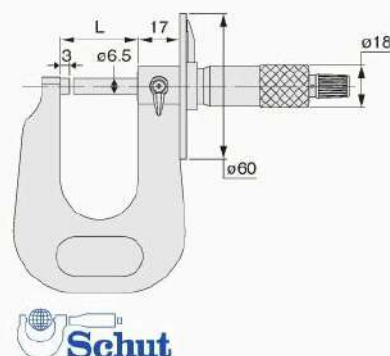
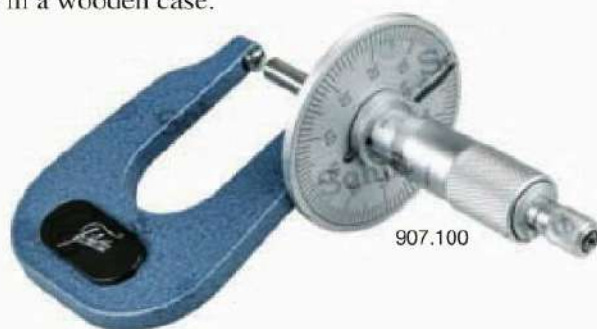
ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Price EUR
909.488	0 - 25	± 0.004	245.00
909.489	25 - 50	± 0.004	281.00
Options:			
836.535	Battery type V357		0.90
495.157	Battery type CR2032		0.50

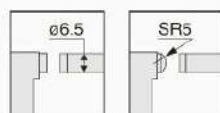
Sheet metal micrometers

Micrometers especially suited for measuring the thickness of metal sheets, e.g. sheet metal. The large dial makes the reading very easy and quick.

- Measuring range: 0 - 25 mm.
- Graduation: 0.01 mm.
- Tungsten carbide measuring faces: $\varnothing 6.5$ mm.
- Throat depth: 50.
- Delivery in a wooden case.



ECONOMY LINE ✓



Item No.	Measuring range/mm	Accuracy mm	Measuring faces	L mm	Price EUR
907.058	0 - 15	± 0.004	flat/flat	22	87.00
907.059	0 - 25	± 0.004	flat/flat	32	105.00
907.099	0 - 15	± 0.004	spherical/flat	22	87.00
907.100	0 - 25	± 0.004	spherical/flat	32	105.00

Micrometers with extra large measuring faces

Micrometers with extra large disk-shaped measuring faces for measurements of e.g. paper thickness and soft materials.

- Measuring range: 0 - 100 mm.
- Graduation: 0.01 mm.
- Non-rotating spindle.
- Tungsten carbide measuring faces: $\varnothing 60$ mm.
- Delivery in a wooden case.



ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Price EUR
906.588	0 - 25	± 0.008	195.00
906.589	25 - 50	± 0.008	226.00
906.590	50 - 75	± 0.010	272.00
906.591	75 - 100	± 0.010	322.00

Gear micrometers

Micrometers with ball-tipped measuring faces for measurements of straight and tapered external gears. Several measuring inserts optionally available.

- Measuring range: 0 - 175 mm.
 - Analog: graduation 0.01 mm, digital: resolution 0.001 mm.
 - Dimensions of anvil-tail: $\varnothing 5 \times 15$ mm.
 - Tungsten carbide, ball-tipped measuring faces.
 - From measuring range 25 - 50 mm including setting gauge.
 - Delivery in a plastic case with cut-outs for inserts.
- Digital**
 - mm/inch conversion.
 - ABS/INC switchable.
 - On/off switch.
 - Automatic switch-off.
 - Reset/preset.
 - Protection: IP65.
 - Power supply: 1 battery type V357 or 1 battery type CR2032.



907.081

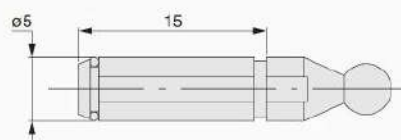


909.859



Setting gauge

ECONOMY LINE ✓



Item No.	Ball $\varnothing$ /mm	Module	Price EUR
Measuring inserts, per pair:			
907.088	1.0	0.6 - 0.65	63.00
907.089	1.5	0.9 - 1.0	63.00
907.090	2.0	1.25	63.00
907.091	2.5	1.5	63.00
907.092	3.0	1.75	63.00
907.093	3.5	2	63.00
907.094	4.0	2.25	63.00
907.095	4.5	2.5	63.00
907.096	5.0	2.75	63.00
907.097	6.0	3.5	63.00
907.098	Set 907.088 - 907.097		571.00

Item No.	Measuring range/mm	Accuracy mm	Price EUR
Analog, without measuring inserts:			
907.081	0 - 25	± 0.004	105.00
907.082	25 - 50	± 0.004	118.00
907.083	50 - 75	± 0.005	130.00
907.084	75 - 100	± 0.005	143.00
907.085	100 - 125	± 0.006	156.00
907.086	125 - 150	± 0.006	168.00
907.087	150 - 175	± 0.007	180.00
Digital, without measuring inserts:			
909.859	0 - 25	± 0.004	180.00
909.860	25 - 50	± 0.004	188.00
909.861	50 - 75	± 0.005	196.00
909.862	75 - 100	± 0.005	204.00
909.863	100 - 125	± 0.006	212.00
909.864	125 - 150	± 0.006	220.00
909.865	150 - 175	± 0.007	228.00
Options:			
836.535	Battery type V357		0.90
495.157	Battery type CR2032		0.50

Micrometers with prism-shaped anvil

Analog and digital micrometers with prism-shaped anvil for measuring the diameters of objects with an odd number of flutes such as taps, reamers and mills. The angle of the prism aperture is designed for 3-, 5- or 7-fluted workpieces.

- Measuring range: 1 - 105 mm.
- Analog: graduation 0.01 mm, digital: resolution 0.001 mm.
- Spindle: $\varnothing 6.5$ mm.
- Tungsten carbide measuring faces. The 906.160 and 909.866 have a pointed spindle (60°) for the smallest objects.
- V-groove for:
3-fluted objects: 60° ,
5-fluted objects: 108° ,
7-fluted objects: $128^\circ 34' 17''$.
- Delivery in a plastic case, with a setting standard.

Digital

- mm/inch conversion.
- ABS/INC switchable.
- On/off switch.
- Automatic switch-off.
- Reset/preset.
- Protection: IP65.
- Power supply: 1 battery type V357 or 1 battery type CR2032.



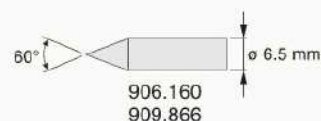
906.161



909.866

ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Price EUR	Item No.	Price EUR
For 3-fluted objects (60°), analog:				Digital:	
906.160	1 - 15	± 0.004	163.00	909.866	245.00
906.161	5 - 20	± 0.004	170.00	909.867	250.00
906.162	20 - 35	± 0.005	203.00	909.868	273.00
906.163	35 - 50	± 0.005	250.00	909.869	308.00
906.164	50 - 65	± 0.006	268.00	909.870	312.00
906.165	65 - 80	± 0.006	290.00	909.871	327.00
907.060	80 - 95	± 0.007	313.00	909.872	344.00
For 5-fluted objects (108°), analog:				Digital:	
906.166	5 - 25	± 0.004	169.00	909.873	249.00
906.167	25 - 45	± 0.005	217.00	909.874	283.00
906.168	45 - 65	± 0.006	250.00	909.875	307.00
906.169	65 - 85	± 0.007	290.00	909.876	335.00
907.061	85 - 105	± 0.008	330.00	909.877	364.00
For 7-fluted objects ($128^\circ 34' 17''$), analog:				Digital:	
906.170	5 - 25	± 0.004	169.00	909.878	249.00
906.171	25 - 45	± 0.005	217.00	909.879	283.00
906.172	45 - 65	± 0.006	250.00	909.880	307.00
906.173	65 - 85	± 0.007	290.00	909.881	335.00
Options:					
836.535	Battery type V357		0.90		
495.157	Battery type CR2032		0.50		



Setting standards

Item No.	$\varnothing$ mm	Price EUR
909.323	5	13.20
909.324	20	38.80
909.325	25	43.00
909.326	35	45.00
909.327	45	48.00
909.328	50	55.00
909.329	65	78.00
909.330	80	105.00
909.331	85	113.00



909.326

Micrometers with pointed measuring faces

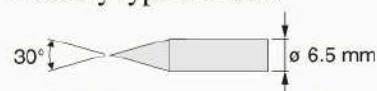
- Measuring range: 0 - 100 mm.
- Analog: graduation 0.01 mm, digital: resolution 0.001 mm.
- Spindle: $\varnothing 6.5$ mm.
- From measuring range 25 - 50 mm including setting gauge.
- Delivery in a plastic case.

Digital

- mm/inch conversion.
- ABS/INC switchable.
- On/off switch.
- Automatic switch-off.
- Reset/preset.
- Protection: IP65.
- Power supply: 1 battery type V357 or 1 battery type CR2032.



906.145



909.643



Setting gauge

Analog

ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Price EUR
906.145	0- 25	± 0.004	66.00
906.146	25- 50	± 0.004	71.00
906.147	50- 75	± 0.005	77.00
906.199	75-100	± 0.005	92.00

Digital

ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Price EUR
909.643	0- 25	± 0.004	177.00
909.644	25- 50	± 0.004	189.00
909.645	50- 75	± 0.005	201.00
909.646	75-100	± 0.005	213.00

Options:

836.535	Battery type V357	0.90
495.157	Battery type CR2032	0.50

Micrometers with one pointed measuring face

- Measuring range: 0 - 50 mm.
- Graduation: 0.01 mm.
- Spindle: $\varnothing 6.5$ mm.

- From measuring range 25 - 50 mm including setting gauge.
- Delivery in a plastic case.



906.151



ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Price EUR
906.151	0-25	± 0.004	66.00
906.153	25-50	± 0.004	71.00



Setting gauge

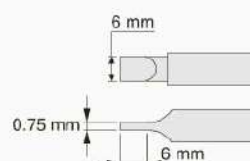
Blade micrometers

For measuring grooves, keyways and other hard-to-reach places.

- Measuring range: 0 - 175 mm.
- Analog: graduation 0.01 mm, digital: resolution 0.001 mm.
- Non-rotating spindle: $\varnothing 8$ mm.
- Blade width: 0.75 mm, blade length: 6 mm, blade thickness: 6 mm.
- From measuring range 25 - 50 mm including setting gauge.
- Delivery in a plastic case.

Digital

- mm/inch conversion.
- ABS/INC switchable.
- On/off switch.
- Automatic switch-off.
- Reset/preset.
- Power supply: 1 battery type V357 or 1 battery type CR2032.



Setting gauge

Analog

ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Price EUR
906.141	0 - 25	± 0.004	138.00
906.142	25 - 50	± 0.004	149.00
906.143	50 - 75	± 0.005	160.00
906.144	75 - 100	± 0.005	176.00
906.222	100 - 125	± 0.006	192.00
906.223	125 - 150	± 0.006	209.00
906.224	150 - 175	± 0.007	227.00

Digital

ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Price EUR
909.882	0 - 25	± 0.004	201.00
909.883	25 - 50	± 0.004	213.00
909.884	50 - 75	± 0.005	225.00
909.885	75 - 100	± 0.005	241.00
909.886	100 - 125	± 0.006	253.00
909.887	125 - 150	± 0.006	265.00
909.888	150 - 175	± 0.007	277.00

Options:

836.535	Battery type V357	0.90
495.157	Battery type CR2032	0.50

Screw thread micrometers

- Measuring range: 0 - 200 mm.
- Analog: graduation 0.01 mm, digital: resolution 0.001 mm.
- Non-rotating spindle: $\varnothing$ 8 mm.
- Insert shaft: $\varnothing$ 5 mm.
- From measuring range 25 - 50 mm including setting gauge 60°.
- Delivery in a plastic case with cut-outs for inserts.

Digital

- mm/inch conversion.
- ABS/INC switchable.
- On/off switch.
- Automatic switch-off.
- Reset/preset.
- Protection: IP65.
- Power supply: 1 battery type V357 or 1 battery type CR2032.



906.751



909.889



Setting gauge

Analog, without measuring inserts

Item No.	Measuring range/mm	Accuracy mm	Price EUR
906.750	0 - 25	± 0.004	89.00
906.751	25 - 50	± 0.004	98.00
906.752	50 - 75	± 0.005	114.00
906.753	75 - 100	± 0.005	124.00
906.754	100 - 125	± 0.006	142.00
906.755	125 - 150	± 0.006	160.00
906.756	150 - 175	± 0.007	176.00
906.757	175 - 200	± 0.007	194.00

Digital, without measuring inserts

Item No.	Measuring range/mm	Accuracy mm	Price EUR
909.889	0 - 25	± 0.004	145.00
909.890	25 - 50	± 0.004	156.00
909.891	50 - 75	± 0.005	168.00
909.892	75 - 100	± 0.005	183.00
909.893	100 - 125	± 0.006	269.00
909.894	125 - 150	± 0.006	293.00
909.895	150 - 175	± 0.007	320.00
909.896	175 - 200	± 0.007	348.00

Options:

836.535	Battery type V357	0.90
495.157	Battery type CR2032	0.50

ECONOMY LINE ✓

Screw thread micrometers (continued)

Measuring inserts for screw thread micrometers with clamping shaft $\varnothing 5$ mm.

ECONOMY LINE ✓



906.725

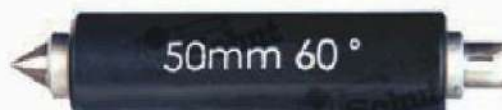
Item No.	Threads per inch	Price EUR
Measuring inserts for Whitworth threads, 55° flank angle, per pair:		
906.730	60 -48	24.60
906.731	48 -40	24.60
906.732	40 -32	24.60
906.733	32 -24	24.90
906.734	24 -18	24.90
906.735	18 -14	24.90
906.736	14 -10	24.90
906.737	10 - 7.0	24.90
906.738	7.0- 4.5	24.90
906.739	4.5- 3.5	24.60
906.740	Set 60 -3.5	193.00

ECONOMY LINE ✓

Item No.	Pitch/mm	Price EUR
Measuring inserts for metric threads, 60° flank angle, per pair:		
906.720	0.4-0.5	24.90
906.721	0.6-0.9	24.90
906.722	1.0-1.75	24.90
906.723	2.0-3.0	24.90
906.724	3.5-5.0	24.90
906.725	5.5-7.0	24.90
906.726	Set 0.4-7.0	116.00

ECONOMY LINE ✓

Item No.	Threads per inch	Price EUR
Measuring inserts for UN, UNC and UNF threads, 60° flank angle, per pair:		
906.741	64 -48	24.90
906.742	44 -28	24.90
906.743	24 -14	24.90
906.744	13 - 9	24.90
906.745	8 - 5	24.90
906.746	4.5- 3.5	24.90
906.747	Set 64 -3.5	116.00



909.305



ECONOMY LINE ✓

Item No.	Length/mm	Price EUR
Hardened steel setting standards for threads with 60° flank angle:		
909.304	25	45.00
909.305	50	52.00
909.306	75	59.00
909.307	100	69.00
909.308	125	79.00
909.309	150	90.00
909.310	175	104.00
909.311	200	119.00

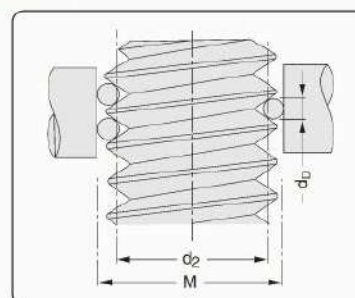
ECONOMY LINE ✓

Item No.	Length/mm	Price EUR
Hardened steel setting standards for threads with 55° flank angle:		
909.312	25	45.00
909.313	50	52.00
909.314	75	59.00
909.315	100	69.00
909.316	125	79.00
909.317	150	90.00
909.318	175	104.00
909.319	200	119.00

Martin + Tschopp thread measuring wires

For measuring external threads using the three-wire method. The flank diameter can be determined according to the measured diameter, using tables.

- For micrometers with measuring faces $\varnothing 6.35$, $\varnothing 6.5$ or $\varnothing 8$ mm. (Also available for measuring faces $\varnothing 6.8$ and $\varnothing 7.5$ mm.)
- Very high measuring accuracy: ± 0.001 mm.
- In pairs or in a set.
- The wire holders are held in position on the anvil and spindle by a spring clamp.
- The wires are mounted on the holder in such a way that they position themselves on the thread.



Thread measuring wires for micrometers with measuring faces $\varnothing 6.35$, $\varnothing 6.5$ or $\varnothing 8$ mm

$\varnothing 6.35$ mm		$\varnothing 6.5$ mm		$\varnothing 8$ mm		Wire diameter d_0 /mm	Metric, pitch in mm	Whitworth, threads per inch	UN/UNC/UNF, threads per inch
Item No.	Price EUR	Item No.	Price EUR	Item No.	Price EUR				
833.442	164.00	779.161	164.00	836.689	164.00	0.17	0.25; 0.3	—	—
833.443	164.00	781.651	164.00	836.690	164.00	0.195	—	—	80
833.444	164.00	779.162	164.00	836.691	164.00	0.22	0.35	—	72
833.445	164.00	779.163	164.00	835.844	164.00	0.25	0.4	—	64
833.446	164.00	779.164	164.00	834.499	164.00	0.29	0.45; 0.5	—	56
833.447	164.00	779.165	164.00	834.498	164.00	0.335	0.6	40	48; 44
833.448	164.00	781.652	164.00	837.848	164.00	0.390	—	—	40
833.449	164.00	779.166	164.00	833.872	164.00	0.455	0.7-0.8	—	36
833.450	164.00	779.167	164.00	834.585	164.00	0.53	—	32; 28	32; 28
833.451	164.00	779.168	164.00	834.480	164.00	0.62	1	26; 24	24
833.452	164.00	779.169	164.00	834.586	164.00	0.725	1.25	22; 20; 19	20
833.453	164.00	779.170	164.00	834.290	164.00	0.895	1.5	18; 16	18; 16
833.454	164.00	779.171	164.00	834.502	164.00	1.10	1.75	14	14; 13
833.455	164.00	779.172	164.00	834.291	164.00	1.35	2	12; 11	12; 11
833.456	164.00	779.173	164.00	833.871	164.00	1.65	2.5	10; 9	10; 9
833.457	164.00	779.174	164.00	834.292	164.00	2.05	3.0; 3.5	8; 7	8; 7
833.458	164.00	779.175	164.00	834.416	164.00	2.55	4.0; 4.5	6	6
833.459	164.00	779.176	164.00	834.483	164.00	3.20	5.0; 5.5	5; 4.5	5; 4.5
837.501	512.00	837.642	512.00	834.509	512.00	4.00	6.0	4; 3.5	4
834.580	3,040.00	779.160	3,040.00	834.581	3,040.00	Set with wire diameters 0.17 to 3.20 mm			

Hub micrometers

Micrometers with a shallow bracket for measuring the thickness of bearing bushes, bore shoulders and other hard-to-reach places.

- Measuring range: 0 - 100 mm.
- Graduation: 0.01 mm.
- Tungsten carbide measuring faces: $\varnothing 6.5$ mm.
- Varnished frame.
- Throat depth: 10.2 mm.
- Throat height: 21.2 mm (907.133: 18.7 mm).



907.133

ECONOMY LINE ✓



Item No.	Measuring range/mm	Accuracy mm	Price EUR
907.133	0 - 25	± 0.004	78.00
907.134	25 - 50	± 0.004	91.00
907.135	50 - 75	± 0.004	104.00
907.136	75 - 100	± 0.005	117.00

Can seam micrometer

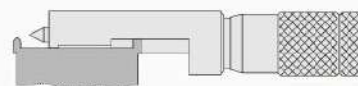
Micrometer especially for measuring the depth and thickness of e.g. the seams of steel cans.

- Measuring range: 0 - 13 mm.
- Graduation: 0.01 mm.
- Accuracy: ± 0.004 mm.
- Tungsten carbide measuring faces: $\varnothing 5$ mm.



Item No.	Measuring range/mm	Price EUR
907.175	0 - 13	78.00

ECONOMY LINE ✓



Wire and ball micrometer

- Measuring range: 0 - 10 mm.
- Graduation: 0.01 mm.
- Accuracy: ± 0.004 mm.
- Tungsten carbide measuring faces: $\varnothing 6.5$ mm.



ECONOMY LINE ✓

Item No.	Measuring range/mm	Price EUR
906.175	0 - 10	83.00

Alternative: www.schut.com/PDFs/2025-p128-EN.pdf



Mitutoyo special-purpose micrometers

Mitutoyo special-purpose analog and digital micrometers. For more information please contact our sales department.



Item No.	Measuring range/mm	Read-out ¹ mm	Price EUR
With small measuring faces ø 3 mm:			
111.115	0 - 25	0.01 (A)	250.00
111.116	25 - 50	0.01 (A)	305.00
111.117	50 - 75	0.01 (A)	347.00
111.118	75 - 100	0.01 (A)	370.00
331.251 ²	0 - 25	0.001 (D)	839.00
331.252 ²	25 - 50	0.001 (D)	890.00
331.253 ²	50 - 75	0.001 (D)	950.00
331.254 ²	75 - 100	0.001 (D)	992.00

With small measuring faces ø 2 mm:			
111.215	0 - 25	0.01 (A)	250.00
331.261 ²	0 - 25	0.001 (D)	818.00
331.262 ²	25 - 50	0.001 (D)	890.00
331.263 ²	50 - 75	0.001 (D)	950.00
331.264 ²	75 - 100	0.001 (D)	992.00

With prism-shaped anvil (with grooves):			
114.101	1 - 15	0.01 (A)	422.00
114.102	10 - 25	0.01 (A)	496.00
314.251	1 - 15	0.001 (D)	1,040.00
314.252	10 - 25	0.001 (D)	1,086.00

With prism-shaped anvil (without grooves):			
114.161	1 - 15	0.01 (A)	396.00
114.204 ³	2.3 - 25	0.01 (A)	578.00
114.162	10 - 25	0.01 (A)	490.00
114.103	25 - 40	0.01 (A)	505.00
314.261	1 - 15	0.001 (D)	1,040.00
314.262	10 - 25	0.001 (D)	1,086.00
314.253	25 - 40	0.001 (D)	1,114.00



111.115



331.251



114.102



314.251



114.204



314.252

¹ A = analog read-out, D = digital read-out.

² Digimatic Coolant Proof (IP65) model.

³ With tungsten carbide measuring faces.



112.201



342.251



112.401



342.271



122.101



422.230

Item No.	Measuring range/mm	Read-out ¹ mm	Price EUR
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With pointed measuring faces 15°:

112.153	0 - 25	0.01 (A)	250.00
112.154	25 - 50	0.01 (A)	305.00
342.251 ²	0 - 25	0.001 (D)	789.00
342.252 ²	25 - 50	0.001 (D)	869.00
342.253 ²	50 - 75	0.001 (D)	917.00
342.254 ²	75 - 100	0.001 (D)	966.00

With pointed measuring faces 30°:

112.201	0 - 25	0.01 (A)	250.00
112.202	25 - 50	0.01 (A)	305.00
342.261 ²	0 - 25	0.001 (D)	793.00
342.262 ²	25 - 50	0.001 (D)	869.00
342.263 ²	50 - 75	0.001 (D)	917.00
342.264 ²	75 - 100	0.001 (D)	966.00

With pointed measuring face and lamellar anvil:

112.401	0 - 25	0.01 (A)	313.00
342.271 ²	0 - 20	0.001 (D)	742.00

With lamellar measuring faces:

122.101	0 - 25	0.01 (A)	316.00
122.102	25 - 50	0.01 (A)	382.00
122.103	50 - 75	0.01 (A)	408.00
122.104	75 - 100	0.01 (A)	444.00
122.105	100 - 125	0.01 (A)	472.00
122.106	125 - 150	0.01 (A)	500.00
122.107	150 - 175	0.01 (A)	538.00
122.108	175 - 200	0.01 (A)	588.00
422.230	0 - 25	0.001 (D)	1,186.00
422.231	25 - 50	0.001 (D)	1,245.00
422.232	50 - 75	0.001 (D)	1,295.00
422.233	75 - 100	0.001 (D)	1,350.00

Mitutoyo special-purpose micrometers (continued)

Item No.	Measuring range/mm	Read-out ¹ mm	Price EUR
With disk-shaped measuring faces for gear pitch measurements:			
123.101	0 - 25	0.01 (A)	280.00
123.102	25 - 50	0.01 (A)	313.00
123.103	50 - 75	0.01 (A)	345.00
123.104	75 - 100	0.01 (A)	400.00
123.105	100 - 125	0.01 (A)	422.00
123.106	125 - 150	0.01 (A)	446.00
123.107	150 - 175	0.01 (A)	478.00
123.108	175 - 200	0.01 (A)	517.00
123.109	200 - 225	0.01 (A)	528.00
123.110	225 - 250	0.01 (A)	544.00
123.111	250 - 275	0.01 (A)	573.00
123.112	275 - 300	0.01 (A)	597.00
323.250 ²	0 - 25	0.001 (D)	877.00
323.251 ²	25 - 50	0.001 (D)	977.00
323.252 ²	50 - 75	0.001 (D)	1,020.00
323.253 ²	75 - 100	0.001 (D)	1,058.00
With non-rotating spindle and disk-shaped measuring faces for soft materials:			
169.101	0 - 25	0.01 (A)	339.00
169.201 ³	0 - 25	0.01 (A)	344.00
369.250 ³	0 - 25	0.001 (D)	975.00
369.251 ³	25 - 50	0.001 (D)	1,068.00
369.252 ³	50 - 75	0.001 (D)	1,113.00
369.253 ³	75 - 100	0.001 (D)	1,166.00
Universal, with interchangeable anvils:			
117.101	0 - 25	0.01 (A)	347.00
117.102	25 - 50	0.01 (A)	438.00
317.251 ²	0 - 25	0.001 (D)	733.00
317.252 ²	25 - 50	0.001 (D)	815.00
With measuring jaws for hard-to-reach places:			
143.101	0 - 25	0.01 (A)	406.00
143.102	25 - 50	0.01 (A)	431.00
143.103	50 - 75	0.01 (A)	515.00
143.104	75 - 100	0.01 (A)	539.00
343.250	0 - 25	0.001 (D)	943.00
343.251	25 - 50	0.001 (D)	1,012.00
343.252	50 - 75	0.001 (D)	1,069.00
343.253	75 - 100	0.001 (D)	1,114.00
With exchangeable ball inserts for external gears⁴:			
224.251 ²	0 - 25	0.001 (D)	1,058.00
224.252 ²	25 - 50	0.001 (D)	1,080.00
224.253 ²	50 - 75	0.001 (D)	1,106.00
224.254 ²	75 - 100	0.001 (D)	1,133.00

¹ A = analog read-out, D = digital read-out.² Digimatic Coolant Proof (IP65) model.

Item No.	Measuring range/mm	Read-out ¹ mm	Price EUR
For thread measurements (pitch diameters)⁴:			
126.125	0 - 25	0.01 (A)	386.00
126.126	25 - 50	0.01 (A)	462.00
126.127	50 - 75	0.01 (A)	515.00
126.128	75 - 100	0.01 (A)	544.00
126.129	100 - 125	0.01 (A)	562.00
126.130	125 - 150	0.01 (A)	680.00
326.251 ²	0 - 25	0.001 (D)	901.00
326.252 ²	25 - 50	0.001 (D)	1,106.00
326.253 ²	50 - 75	0.001 (D)	1,133.00
326.254 ²	75 - 100	0.001 (D)	1,193.00

³ Offset measuring faces.⁴ Measuring inserts separately available.

Setting gauges

Cylindrical gauges for micrometers with flat parallel measuring faces.

- Measuring faces $L < 100$ mm: $\varnothing 7$ mm, flat,
 $L < 300$ mm: $\varnothing 8$ mm, flat,
 $L \geq 300$ mm: $\varnothing 8$ mm, spherical.
- With plastic insulating grip.
- Larger sizes available on request.



907.464

ECONOMY LINE ✓

Item No.	Length mm	Accuracy μm	Price EUR
907.464	25	± 2	5.00
907.465	50	± 2	5.70
907.466	75	± 2.5	7.20
907.467	100	± 2.5	9.20
907.468	125	± 3	11.40
907.469	150	± 3	12.80
907.470	175	± 3.5	15.00
907.471	200	± 4	17.10
907.472	225	± 4	19.00
907.473	250	± 4	21.90
907.474	275	± 4.5	23.80
907.475	300	± 4.5	47.00
907.476	325	± 5	47.00
907.477	350	± 5	56.00
907.478	375	± 5.5	47.00
907.479	400	± 5.5	56.00
907.480	425	± 6	49.00
907.481	450	± 6	59.00
907.482	475	± 6.5	49.00
907.483	500	± 6.5	59.00
907.484	525	± 7	61.00
907.485	575	± 7.5	61.00
907.486	625	± 7.5	72.00
907.487	675	± 8	72.00
907.488	725	± 8.5	82.00
907.489	775	± 9.5	82.00
907.490	825	± 10	94.00
907.491	875	± 10.5	94.00
907.492	925	± 11	114.00
907.493	975	± 11.5	114.00
907.494	1050	± 12	159.00
907.495	1150	± 13	159.00
907.496	1250	± 14	192.00
907.497	1350	± 15	192.00
907.498	1450	± 16	230.00
909.529 ¹	1550	± 17	230.00
909.530 ¹	1650	± 18	275.00
909.531 ¹	1750	± 19	275.00
909.532 ¹	1850	± 20	330.00
909.533 ¹	1950	± 21	330.00

¹ Delivery ex Groningen, Netherlands.

Setting standards

Cylindrical setting standards for micrometers with prism-shaped anvil.



909.326

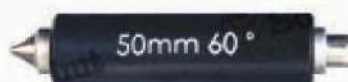


ECONOMY LINE ✓

Item No.	Diameter/mm	Price EUR
909.323	5	13.20
909.324	20	38.80
909.325	25	43.00
909.326	35	45.00
909.327	45	48.00
909.328	50	55.00
909.329	65	78.00
909.330	80	105.00
909.331	85	113.00

Setting standards

Hardened steel setting standards for threads with 55° or 60° flank angle.



909.305

ECONOMY LINE ✓

Item No.	Length/mm	Price EUR
For threads with 60° flank angle:		
909.304	25	45.00
909.305	50	52.00
909.306	75	59.00
909.307	100	69.00
909.308	125	79.00
909.309	150	90.00
909.310	175	104.00
909.311	200	119.00
For threads with 55° flank angle:		
909.312	25	45.00
909.313	50	52.00
909.314	75	59.00
909.315	100	69.00
909.316	125	79.00
909.317	150	90.00
909.318	175	104.00
909.319	200	119.00

Micrometer stand

Rigid table stand for micrometers.

- Inclination adjustable.
- Weight: 1.1 kg.



ECONOMY LINE ✓

Item No.	Clamping range/mm	Price EUR
906.212	0 - 18	22.30

Micrometer stand

Cast steel stand for micrometers.

- Fixed inclination: 45°.
- Weight: 0.7 kg.



ECONOMY LINE ✓

Item No.	Clamping range/mm	Price EUR
908.983	4 - 12	27.60

Foldable micrometer stand

Portable stand with a folded structure for micrometers.

- Inclination adjustable.
- Weight: 1 kg.

ECONOMY LINE ✓

Item No.	Clamping range/mm	Price EUR
907.152	7 - 14	31.90



Schut

Ball attachments

These ball attachments can be clamped on any anvil and spindle with a diameter of 6.5 or 8 mm.

- Ball: $\varnothing 5$ mm.



ECONOMY LINE ✓

Item No.	Description	Price EUR
907.150	Ball attachment, $\varnothing 6.5$ mm	19.30
907.166	Ball attachment, $\varnothing 8$ mm	19.30

Measuring force indicators

Within the range of 5 to 12 N these measuring force indicators can show the measuring force of micrometers.



907.151

ECONOMY LINE ✓

Item No.	For micrometers	Price EUR
907.151	0 - 25 mm	11.50
908.947	25 - 50 mm	39.30
908.948	50 - 75 mm	54.00
908.949	75 - 100 mm	54.00

Probe set for micrometers

These attachments can be clamped on any anvil and spindle with a diameter of 6.5 mm. The set consists of a point-shaped, knife-edged, blade-shaped, disk-shaped, ball-shaped probe and one with a small and one with a very small measuring face.

- Delivery in a plastic case.

ECONOMY LINE ✓

Item No.	Description	Price EUR
909.118	Probe set for micrometers	23.10



Micrometer inspection sets

For the inspection of micrometers according to DIN 863. Suitable for micrometers with a measuring range up to 25 mm.

- Nominal sizes (mm):
2.5 - 5.1 - 7.7 - 10.3 - 12.9 - 15.0 - 17.6 - 20.2 - 22.8 - 25.0.
- Including plan parallel optical flat $\varnothing 30 \times 12$ mm.
- Delivery in a wooden case with a manufacturer measuring report.

ECONOMY LINE ✓

Item No.	Material	Grade	Price EUR
909.346	steel	1	226.00
909.345	steel	0	300.00
909.162	ceramic	1	509.00
909.340	ceramic	0	561.00



909.340

Thread and tolerance tables

Thread table

Table with all standard international thread indications: metric, BSW, Gas, BSF, Pg, BA, UNC, UNF, UNEF, EG-M and EG-MF.

Tolerance table

Table comprising all tolerances and fits according to ISO 286-2, up to 500 mm (table with over 6400 pairs of tolerance values for internal and external measurements).

Conversion table mm/inch

For converting from mm to inch and from inch to mm.

Item No.	Description	Price EUR
835.162	Thread table	62.00
835.163	Tolerance table	62.00
835.164	Conversion table mm/inch	62.00



835.162

835.163

835.164

Digital depth micrometers IP65

Digital depth micrometers with interchangeable, spherical rods or flat rods. With the flat rods mainly flat and spherical surfaces can be measured very accurately. The spherical rods are especially suitable for beveled and hollow surfaces. The high accuracy of the rods makes resetting after exchanging the rods unnecessary. Two models with different base lengths available.

- Measuring range: 0 - 300 mm.
- Resolution: 0.001 mm.
- mm/inch conversion.
- ABS/INC switchable.
- Automatic switch-off.
- Preset.
- Measuring rods: $\varnothing 4.5$ mm.
- Locking screw.
- Protection: IP65.
- Power supply: 1 battery type V357 or 1 battery type CR2032.



ECONOMY LINE ✓

Model with spherical rods especially for hollow and beveled surfaces

Item No.	Price EUR	Item No.	Price EUR	Measuring range/mm	Accuracy mm	Number of rods
Base 63 mm:		Base 101.5 mm:				
909.753	173.00	909.759	173.00	0- 25	± 0.005	1
909.754	181.00	909.760	181.00	0- 50	± 0.005	2
909.755	197.00	909.761	197.00	0-100	± 0.006	4
909.756	213.00	909.762	213.00	0-150	± 0.007	6
909.757	229.00	909.763	229.00	0-200	± 0.008	8
909.758	269.00	909.764	269.00	0-300	± 0.009	12

Model with flat rods especially for flat and spherical surfaces

Item No.	Price EUR	Item No.	Price EUR	Measuring range/mm	Accuracy mm	Number of rods
Base 63 mm:		Base 101.5 mm:				
909.765	173.00	909.771	173.00	0- 25	± 0.005	1
909.766	181.00	909.772	181.00	0- 50	± 0.005	2
909.767	197.00	909.773	197.00	0-100	± 0.006	4
909.768	213.00	909.774	213.00	0-150	± 0.007	6
909.769	229.00	909.775	229.00	0-200	± 0.008	8
909.770	269.00	909.776	269.00	0-300	± 0.009	12

Options

Item No.	Description	Price EUR
836.535	Battery type V357	0.90
495.157	Battery type CR2032	0.50



Depth micrometers

Depth micrometers with interchangeable, spherical or flat rods. With the flat rods mainly flat and spherical surfaces can be measured very accurately. The spherical rods are especially suitable for beveled and hollow surfaces. The high accuracy of the rods makes recalibration after exchanging the rods unnecessary. Two models with different base lengths available.

- Measuring range: 0 - 300 mm.
- Graduation: 0.01 mm.
- Measuring rods: $\varnothing 4.5$ mm.
- Locking screw.



906.970



906.040



ECONOMY LINE ✓

Model with spherical rods especially for hollow and beveled surfaces

Item No.	Price EUR	Item No.	Price EUR	Measuring range/mm	Accuracy mm	Number of rods
Base 63 mm:		Base 101.5 mm:				
906.964	52.00	906.040	52.00	0- 25	± 0.005	1
906.965	62.00	906.039	62.00	0- 50	± 0.005	2
906.966	79.00	906.041	79.00	0-100	± 0.006	4
906.967	101.00	906.042	101.00	0-150	± 0.007	6
906.968	146.00	906.043	146.00	0-200	± 0.008	8
906.969	202.00	906.044	202.00	0-300	± 0.009	12

Model with flat rods especially for flat and spherical surfaces

Item No.	Price EUR	Item No.	Price EUR	Measuring range/mm	Accuracy mm	Number of rods
Base 63 mm:		Base 101.5 mm:				
906.970	73.00	906.976	73.00	0- 25	± 0.005	1
906.971	88.00	906.977	88.00	0- 50	± 0.005	2
906.972	121.00	906.978	121.00	0-100	± 0.006	4
906.973	146.00	906.979	146.00	0-150	± 0.007	6
906.974	181.00	906.980	181.00	0-200	± 0.008	8
906.975	237.00	906.981	237.00	0-300	± 0.009	12

Mitutoyo depth micrometers

- Measuring range: 0 - 300 mm.
- Analog: graduation 0.01 mm, digital: resolution 0.001 mm.
- Accuracy micrometer: ± 0.003 mm (0 - 25 mm).
- Increment of measuring rods: 25 mm.
- Length tolerance measuring rods: ± 0.004 mm (0 - 150 mm) ± 0.006 mm (0 - 300 mm).
- Hardened steel measuring rods: $\varnothing 4$ mm.
- Conforms to factory standard.
- Delivery in a plastic case with adjustment tool.

Digital (Mitutoyo Digimatic)

- ABS/INC switchable.
- Digimatic data output.
- Reset/preset.
- Hold function.
- Power supply: 1 battery type V357.



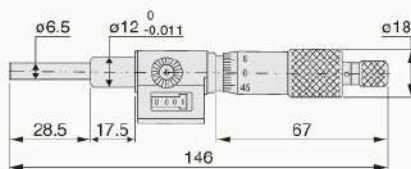
Item No.	Measuring range/mm	Base l x w/mm	Number of rods	Price EUR
Mitutoyo analog depth micrometers:				
128.101	0 - 25	63.5 x 16	1	181.00
128.102	0 - 25	101.6 x 16	1	225.00
129.109	0 - 50	63.5 x 16	2	211.00
129.113	0 - 50	101.6 x 16	2	247.00
129.110	0 - 75	63.5 x 16	3	224.00
129.114	0 - 75	101.6 x 16	3	263.00
129.111	0 - 100	63.5 x 16	4	278.00
129.115	0 - 100	101.6 x 16	4	305.00
129.112	0 - 150	63.5 x 16	6	384.00
129.116	0 - 150	101.6 x 16	6	398.00
129.152	0 - 300	63.5 x 16	12	579.00
129.153	0 - 300	101.6 x 16	12	607.00
Mitutoyo Digimatic digital depth micrometers:				
329.250	0 - 150	101.6 x 16	6	967.00
329.251	0 - 300	101.6 x 16	12	1,235.00
Option:				
836.535	Battery type V357			0.90

Data cables Digimatic, USB Input Tool Direct, U-WAVE available on request.

Micrometer head with counter

Micrometer head with an easy read-out at 0.01 mm by means of the counter mechanism.

- Measuring range: 0 - 25 mm.
- Resolution: 0.01 mm.
- Accuracy: ± 0.003 mm.
- Numerical counter adjustable.
- Rotating spindle: $\varnothing 6.5$ mm.
- Tungsten carbide measuring face.
- Delivery with adjustment tool.



ECONOMY LINE ✓

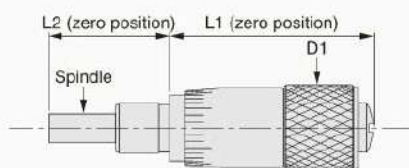
Item No.	Measuring range/mm	Spindle $\varnothing$ /mm	Price EUR
906.543	0 - 25	6.5	44.00

Micrometer heads

- Measuring range: 0 - 25 mm.
- Graduation: 0.01 mm or vernier 0.002 mm.



906.072



906.074

906.070

ECONOMY LINE ✓

Item No.	Measuring range/mm	Graduation mm	Accuracy mm	Spindle $\varnothing$ /mm	Dimensions/mm clamping				Price EUR
Without friction thimble, steel measuring face:									
906.070	0- 6.5	0.01	± 0.005	3.5 (flat)	$\varnothing$ 6 x 6	$\varnothing$ 10	23	14	18.50
906.074	0- 6.5	0.01	± 0.005	3.5 (spherical)	$\varnothing$ 6 x 6	$\varnothing$ 10	23	14	18.50
906.071	0- 13	0.01	± 0.004	5.0 (flat)	$\varnothing$ 9.5x 9.5	$\varnothing$ 14	33	26	20.10
Friction thimble with spring click in measuring thimble, tungsten carbide measuring face:									
906.072	0-25	0.01	± 0.003	6.5 (flat)	$\varnothing$ 12 x 17	$\varnothing$ 19	65	46	21.30
906.073	0-25	0.002	± 0.003	6.5 (flat)	$\varnothing$ 12 x 17	$\varnothing$ 19	65	46	21.30

Digital micrometer heads

Several digital micrometer heads with different possibilities.

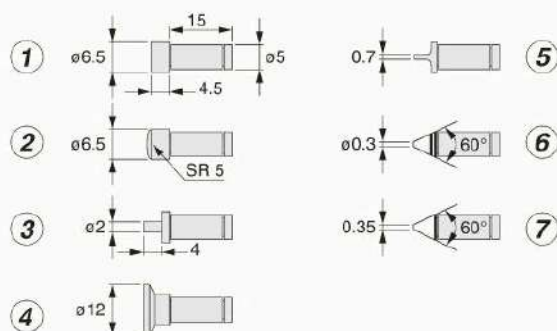
- Measuring range: 0 - 50 mm.
- Resolution: 0.001 mm.
- Accuracy: ± 0.003 mm
(909.900/901: ± 0.005 mm).
- mm/inch conversion.
- ABS/INC switchable.
- On/off switch.
- Automatic switch-off.
- Memory absolute measuring value.
- Preset for ABS measurement.
- Friction thimble.
- Power supply: 1 battery type V357 or
1 battery type CR2032.



ECONOMY LINE ✓

Item No.	Measuring range/mm	Dimensions/mm				Description	Price
		spindle	clamping	L1	L2	measuring faces	EUR
With IP65 protection:							
909.897	0 - 25	ø 6.5	ø 12 x 17.5	115	46	flat, tungsten carbide measuring face	120.00
909.898	0 - 25	ø 6.5	ø 12 x 17.5	115	46	spherical	120.00
909.899	0 - 25	ø 6.5	ø 12 x 17.5	116	56	flat, non-rotating tip	123.00
909.900	0 - 50	ø 7.5	ø 12 x 35.5	140	89	flat, tungsten carbide measuring face	193.00
909.901	0 - 50	ø 7.5	ø 12 x 35.5	140	89	spherical	193.00
With non-rotating spindle:							
909.902	0 - 25	ø 7.5	ø 12 x 10	124	39	flat, tungsten carbide measuring face	157.00
909.903	0 - 25	ø 7.5	ø 12 x 10	123	39	interchangeable measuring inserts	161.00
Options:							
836.535	Battery type V357						0.90
495.157	Battery type CR2032						0.50

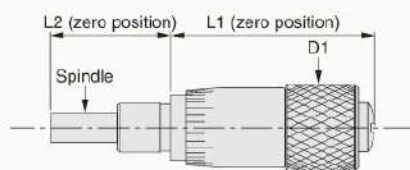
Interchangeable measuring inserts for 909.903



No.	Item No.	Description	Price
		measuring faces	EUR
Measuring inserts, per pair:			
①	906.788	flat	16.30
②	906.789	spherical	19.80
③	906.790	small	29.50
④	906.791	disc	29.50
⑤	906.792	knife/flat	39.00
⑥	906.793	point	29.50
⑦	906.794	knife	50.00
	906.795	Set of 7 pairs	167.00

Mitutoyo micrometer heads

- Measuring range: 0 - 25 mm.
- Graduation: 0.01 or 0.02 mm.
- Clamping stem: with or without clamp nut.
- Conforms to factory standard.
- Many models available, like:
 - with reversed reading,
 - with rotating or non-rotating spindle,
 - with spindle lock,
 - with large thimble diameter, for easy reading.



148.216

148.103

149.131

149.183

Item No.	Measuring range/mm	Graduation mm	Accuracy mm	Clamp nut	Dimensions/mm				Price EUR
					spindle	D1	L1	L2	
For general applications:									
148.104	0- 13	0.01	±0.002	no	ø5	ø13	31.5	27	65.00
148.103	0- 13	0.01	±0.002	yes	ø5	ø13	31.5	27	71.00
For general applications with spherical measuring face:									
148.801	0- 13	0.01	±0.002	no	ø5	ø13	31.5	27	66.00
148.802	0- 13	0.01	±0.002	yes	ø5	ø13	31.5	27	72.00
Ultra-small micrometer heads with spherical measuring face:									
148.215	0- 5	0.02	±0.005	no	ø2	ø 6	20.5	11.5	124.00
148.216	0- 5	0.02	±0.005	yes	ø2	ø 6	20.5	11.5	128.00
148.205	0- 6.5	0.01	±0.005	no	ø3.5	ø 9	21.7	15	65.00
148.207	0- 6.5	0.01	±0.005	yes	ø3.5	ø 9	21.7	15	70.00
With lapped tungsten carbide measuring face:									
149.132	0- 15	0.01	±0.002	no	ø6.35	ø15	43.5	32	75.00
149.131	0- 15	0.01	±0.002	yes	ø6.35	ø15	43.5	32	78.00
With lapped tungsten carbide spherical measuring face:									
149.801	0- 15	0.01	±0.002	no	ø6.35	ø15	43.5	32	83.00
149.802	0- 15	0.01	±0.002	yes	ø6.35	ø15	43.5	32	86.00
With lapped tungsten carbide measuring face, with spindle lock:									
149.183	0- 15	0.01	±0.002	no	ø6.35	ø15	49	26.5	88.00
149.184	0- 15	0.01	±0.002	yes	ø6.35	ø15	49	26.5	91.00
With lapped tungsten carbide measuring face, with ratchet:									
150.192	0- 25	0.01	±0.002	no	ø6.35	ø18	67	42	75.00
150.191	0- 25	0.01	±0.002	yes	ø6.35	ø18	67	42	87.00
With lapped tungsten carbide spherical measuring face, with ratchet:									
150.801	0- 25	0.01	±0.002	no	ø6.35	ø18	67	42	88.00
150.802	0- 25	0.01	±0.002	yes	ø6.35	ø18	67	42	95.00

Mitutoyo Digimatic micrometer heads IP65

These digital micrometer heads have an ergonomic design and a high protection degree against water jets (IP65).

- Measuring range: 0 - 25 mm.
- Resolution: 0.001 mm.
- ABS/INC switchable.
- Digimatic data output.
- Reset/preset.
- Hold function.
- Non-rotating spindle (only 350.261).
- Protection: IP65.
- Resistant to workshop conditions.
- Conforms to factory standard.
- Power supply: 1 battery type V357.



Data cables Digimatic, USB Input Tool Direct,
U-WAVE available on request.

Item No.	Measuring range/mm	Accuracy/mm	Spindle $\varnothing$ /mm	Clamp nut	Price EUR
350.261	0 - 25	± 0.002	6.35	no	573.00
350.271	0 - 25	± 0.002	6.35	no	532.00
350.272	0 - 25	± 0.002	6.35	yes	545.00
Option: 836.535 Battery type V357					0.90

Mitutoyo Digimatic micrometer head

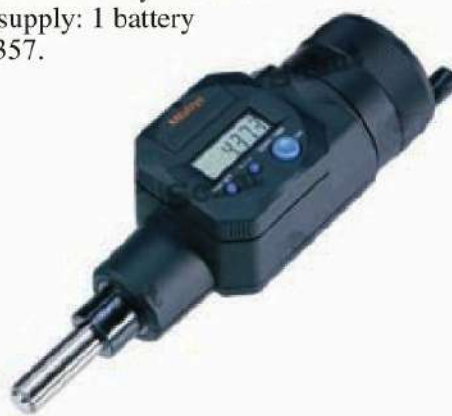
Digital micrometer head with non-rotating spindle for integration into machinery and measuring systems such as XY measuring tables of microscopes and projectors. The display and operating unit is rotatable over 330° and guarantees an ideal read-out in any position.

- Measuring range: 0 - 50 mm.
- Resolution: 0.001 mm.
- ABS/INC switchable.
- LCD display 330° rotatable.
- Digimatic data output.
- On/off switch.
- Reset/preset.
- Clamping stem without clamp nut.
- Non-rotating spindle.
- Reversible measuring direction.
- Lapped tungsten carbide measuring face: $\varnothing 8$ mm.
- Conforms to factory standard.
- Power supply: 1 battery type V357.



Data cables Digimatic, USB Input Tool Direct,
U-WAVE available on request.

Item No.	Measuring range/mm	Accuracy mm	Spindle $\varnothing$ /mm	Price EUR
164.163	0 - 50	± 0.003	8	982.00
Option: 836.535 Battery type V357				0.90



Internal micrometers / Internal & external measuring instruments



Measuring range (mm)	Max. permissible errors (μm)
3 - 10	4
10 - 50	4
50 - 100	5
100 - 150	6
150 - 200	7
200 - 250	8
250 - 300	9

Three-point internal micrometers

Three-point internal micrometers for quick and accurate measurement of internal dimensions, within a large measuring range.

- Measuring range: $\varnothing$ 3.5 - 300 mm.
- Graduation: 0.001 mm ($\varnothing$ 3.5 - 12 mm),
0.005 mm ($\varnothing$ 12 - 300 mm).
- Self-centering.
- Tungsten carbide measuring faces.
- Sets are delivered incl. setting rings and extension (836.730 without extension).
- Setting rings are conform to factory standard.
- Delivery in a wooden case.



836.708



836.718



836.745



Measuring head
(measuring range)
 $\varnothing$ 3.5 - 50 mm

 $\varnothing$ 50 - 100 mm $\varnothing$ 100 - 300 mm $\varnothing$ 100 - 300 mm

17.5 mm

ECONOMY LINE ✓

004 202 EN 20060702

Three-point internal micrometers (continued)

Item No.	Measuring range/mm	Accuracy mm	Length L/mm	Length A/mm	Price EUR
836.700	∅ 3.5 - 4	±0.005	19	1.5	163.00
836.701	∅ 4.0 - 4.5	±0.005	19	1.5	163.00
836.702	∅ 4.5 - 5.5	±0.005	19	1.5	163.00
836.703	∅ 5.5 - 6.5	±0.005	19	1.5	163.00
836.704	∅ 6 - 8	±0.005	52	1.5	163.00
836.705	∅ 8 - 10	±0.005	52	1.5	163.00
836.706	∅ 10 - 12	±0.005	52	1.5	163.00
836.707	∅ 12 - 16	±0.005	71	1.5	163.00
836.708	∅ 16 - 20	±0.005	71	1.5	163.00
836.709	∅ 20 - 25	±0.005	82	1.5	163.00
836.710	∅ 25 - 30	±0.005	82	1.5	163.00
836.711	∅ 30 - 35	±0.005	84	1.5	163.00
836.712	∅ 35 - 40	±0.005	84	1.5	163.00
836.713	∅ 40 - 50	±0.006	100	1.5	190.00
836.714	∅ 50 - 60	±0.006	100	1.5	190.00
836.715	∅ 60 - 70	±0.006	100	1.5	190.00
836.716	∅ 70 - 80	±0.006	100	1.5	190.00
836.717	∅ 80 - 90	±0.006	100	1.5	190.00
836.718	∅ 90 - 100	±0.006	100	1.5	190.00
836.719	∅ 100 - 125	±0.008	110	17.5	326.00
836.720	∅ 125 - 150	±0.008	110	17.5	326.00
836.721	∅ 150 - 175	±0.008	110	17.5	326.00
836.722	∅ 175 - 200	±0.008	110	17.5	326.00
836.723	∅ 200 - 225	±0.012	110	17.5	408.00
836.724	∅ 225 - 250	±0.012	110	17.5	408.00
836.725	∅ 250 - 275	±0.012	110	17.5	408.00
836.726	∅ 275 - 300	±0.012	110	17.5	408.00



Extensions

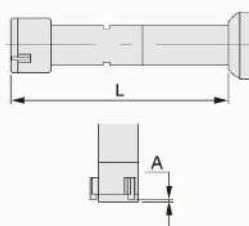
Item No.	Extension mm	For measuring range/mm	Price EUR
836.780	100	∅ 6 - 12	72.00
836.782	150	∅ 12 - 20	72.00
836.784	150	∅ 20 - 40	72.00
836.786	150	∅ 40 - 100	72.00
836.788	150	∅ 100 - 300	72.00



836.784

Sets

ECONOMY LINE ✓



Item No.	Measuring range/mm	Setting rings mm	Extension mm	Number of instruments	Price EUR
836.730*	∅ 3.5 - 6.5	∅ 4, 5.5	—	4	679.00
836.735	∅ 6 - 12	∅ 8, 10	100	3	435.00
836.740	∅ 12 - 20	∅ 16	150	2	380.00
836.745	∅ 20 - 40	∅ 25, 35	150	4	679.00
836.750	∅ 40 - 100	∅ 50, 70, 90	150	6	1,087.00

* Without extension.

Three-point internal micrometers

Three-point internal micrometers, with a manufacturer measuring report, for accurately measuring (blind) bores.

- Measuring range: $\varnothing$ 6 - 300 mm.
- Self-centering.
- Tungsten carbide measuring faces (measuring range $\varnothing$ 6 - 12 mm: hardened steel).
- Separate instruments within measuring range $\varnothing$ 6 - 100 mm and the sets are delivered incl. setting ring(s) and extension.
- Setting rings are conform to factory standard.
- To $\varnothing$ 100 mm: implementation for blind bores. From $\varnothing$ 100 mm: implementation for through holes or blind bores.
- Delivery in an aluminum case ($\varnothing$ 6 - 40 mm) or an aluminum carrying case ($\varnothing$ 40 - 300 mm and sets) with a manufacturer measuring report.

Analog

- Graduation: 0.001 mm ($\varnothing$ 6 - 12 mm), 0.005 mm ($\varnothing$ 12 - 300 mm).

Digital

- Resolution: 0.001 mm.
- mm/inch conversion.
- On/off switch.
- Reset.
- Preset.
- Hold function.
- Protection: IP54.
- Power supply: 1 battery type V357.



909.811



909.832

Measuring head (measuring range) $\varnothing$ 6-50 mm $\varnothing$ 50 - 100 mm $\varnothing$ 100 - 175 mm $\varnothing$ 175 - 300 mm

For blind bores

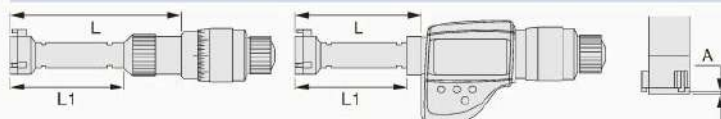


For through holes



ECONOMY LINE ✓

Three-point internal micrometers (continued)



ECONOMY LINE ✓

Item No.	Price EUR	Item No.	Price EUR	Measuring range/mm	Accuracy mm	L/mm	Length L/mm	A/mm
Analog (blind bores):		Digital (blind bores):				Analog: L1 L	Digital: L1 L	
909.807	276.00	909.828	420.00	∅ 6- 8	±0.004	27 -	43 -	1
909.808	276.00	909.829	420.00	∅ 8- 10	±0.004	50 -	43 -	1
909.809	276.00	909.830	420.00	∅ 10- 12	±0.004	50 -	43 -	1
909.810	191.00	909.831	408.00	∅ 12- 16	±0.004	50 -	45 -	0.4
909.811	191.00	909.832	408.00	∅ 16- 20	±0.004	50 -	45 -	0.4
909.812	270.00	909.833	424.00	∅ 20- 25	±0.004	- 80	53 -	0.4
909.813	270.00	909.834	424.00	∅ 25- 30	±0.004	- 80	53 -	0.4
909.814	297.00	909.835	475.00	∅ 30- 40	±0.004	- 90	- 80	0.4
909.815	344.00	909.836	475.00	∅ 40- 50	±0.005	- 90	- 80	0.4
909.816	364.00	909.837	505.00	∅ 50- 63	±0.005	- 100	- 80	0.5
909.817	390.00	909.838	535.00	∅ 62- 75	±0.005	- 100	- 80	0.5
909.818	408.00	909.839	556.00	∅ 75- 88	±0.005	- 100	- 80	0.5
909.819	428.00	909.840	582.00	∅ 87- 100	±0.005	- 100	- 80	0.5
910.150	641.00	910.158	737.00	∅ 100- 125	±0.008	- 140	- 140	0.5
910.151	641.00	910.159	777.00	∅ 125- 150	±0.008	- 140	- 140	0.5
910.152	789.00	910.160	873.00	∅ 150- 175	±0.008	- 140	- 140	0.5
910.153	807.00	910.161	921.00	∅ 175- 200	±0.008	- 140	- 140	0.5
910.154	1,020.00	910.162	1,140.00	∅ 200- 225	±0.008	- 140	- 140	0.5
910.155	1,052.00	910.163	1,183.00	∅ 225- 250	±0.008	- 140	- 140	0.5
910.156	1,210.00	910.164	1,351.00	∅ 250- 275	±0.008	- 140	- 140	0.5
910.157	1,447.00	910.165	1,597.00	∅ 275- 300	±0.008	- 140	- 140	0.5
Analog (through holes):		Digital (through holes):				Analog: L1 L	Digital: L1 L	
909.820	520.00	909.841	593.00	∅ 100- 125	±0.008	- 140	- 140	20
909.821	552.00	909.842	682.00	∅ 125- 150	±0.008	- 140	- 140	20
909.822	679.00	909.843	772.00	∅ 150- 175	±0.008	- 140	- 140	20
909.823	696.00	909.844	815.00	∅ 175- 200	±0.008	- 140	- 140	20
909.824	902.00	909.845	1,014.00	∅ 200- 225	±0.008	- 140	- 140	20
909.825	984.00	909.846	1,105.00	∅ 225- 250	±0.008	- 140	- 140	20
909.826	1,132.00	909.847	1,263.00	∅ 250- 275	±0.008	- 140	- 140	20
909.827	1,353.00	909.848	1,499.00	∅ 275- 300	±0.008	- 140	- 140	20

Sets

Item No.	Price EUR	Item No.	Price EUR	Measuring range/mm	Setting rings ∅/mm	Extension mm	Number of instruments
Analog:		Digital:					
909.849	773.00	909.853	1,149.00	∅ 6- 12	8, 10	50	3
909.850	348.00	909.854	656.00	∅ 12- 20	16	100	2
909.851	1,004.00	909.855	1,562.00	∅ 20- 50	25, 40	150	4
909.852	1,323.00	909.856	1,811.00	∅ 50- 100	62, 87	150	4

Options

Item No.	Description	Price EUR
836.535	Battery type V357	0.90
For meas. range ∅ 100 - 300 mm:		
909.857	Extension with length 150 mm	89.00

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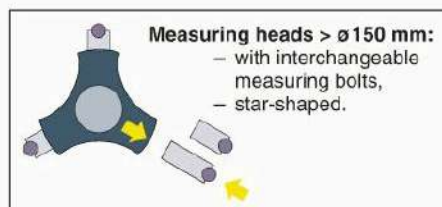
909.850

004-323-EN-20260702

Three-point internal micrometers

Three-point internal micrometers for accurately measuring (blind) bores.

- Measuring range: $\varnothing 6 - 300$ mm.
- Graduation: 0.001 mm ($\varnothing 6 - 12$ mm),
0.005 mm ($\varnothing 12 - 300$ mm).
- Self-centering.
- Tungsten carbide measuring faces.
- Interchangeable measuring bolts from measuring range $\varnothing 150 - 175$ mm.
- Delivery in an aluminum case ($\varnothing 6 - 40$ mm) or an aluminum carrying case ($\varnothing 40 - 300$ mm and sets) with extension 150 mm ($\varnothing 6 - 12$ mm: 100 mm).
- Separate instruments within measuring range $\varnothing 6 - 100$ mm and the sets are delivered incl. setting ring(s).
- Setting rings are conform to factory standard.



908.654



908.662



Measuring head
(measuring range)
 $\varnothing 6 - 50$ mm



$\varnothing 50 - 100$ mm



$\varnothing 100 - 300$ mm



For blind bores

ECONOMY LINE ✓

C04 203 EN 20060702

Three-point internal micrometers (continued)



Per piece

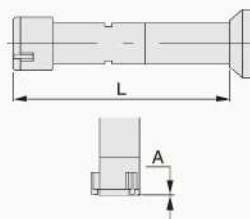
908.672

ECONOMY LINE ✓

Item No.	Measuring range/mm	Setting ring ø/mm	Accuracy mm	Length L/mm	Length A/mm	Price EUR
908.650	ø 6 - 8	6	±0.004	54.5	0.7	250.00
908.651	ø 8 - 10	8	±0.004	54.5	0.7	250.00
908.652	ø 10 - 12	10	±0.004	54.5	0.7	250.00
908.653	ø 12 - 16	16	±0.004	80	0.7	169.00
908.654	ø 16 - 20	16	±0.004	80	0.7	169.00
908.655	ø 20 - 25	25	±0.004	90	0.7	238.00
908.656	ø 25 - 30	25	±0.004	90	0.7	238.00
908.657	ø 30 - 40	40	±0.004	97	0.7	262.00
908.658	ø 40 - 50	40	±0.005	97	0.7	303.00
908.659	ø 50 - 63	62	±0.005	114	0.7	320.00
908.660	ø 62 - 75	62	±0.005	114	0.7	344.00
908.661	ø 75 - 88	87	±0.005	114	0.7	360.00
908.662	ø 87 - 100	87	±0.005	114	0.7	377.00
908.663	ø 100 - 125	—	±0.005	145	0.7	416.00
908.664	ø 125 - 150	—	±0.005	145	0.7	499.00
908.665	ø 150 - 175	—	±0.005	145	0.7	598.00
908.666	ø 175 - 200	—	±0.005	145	0.7	722.00
908.667	ø 200 - 225	—	±0.007	145	0.7	862.00
908.668	ø 225 - 250	—	±0.007	145	0.7	1,036.00
908.669	ø 250 - 275	—	±0.007	145	0.7	1,246.00
908.670	ø 275 - 300	—	±0.007	145	0.7	1,493.00

Sets

ECONOMY LINE ✓



Item No.	Measuring range/mm	Setting rings ø/mm	Extension mm	Number of instruments	Price EUR
908.671	ø 6 - 12	6, 8, 10	100	3	682.00
908.672	ø 12 - 20	16	150	2	306.00
908.673	ø 20 - 50	25, 40	150	4	884.00
908.674	ø 50 - 100	62, 87	150	4	1,165.00

Digital three-point internal micrometers IP65

Digital three-point internal micrometers with a resolution of 0.001 mm for accurately measuring (blind) bores. These micrometers have several functions, and combined with the accurate read-out this results in a favourable price-performance ratio.

- Measuring range: $\varnothing 6 - 300$ mm.
- Resolution: 0.001 mm.
- mm/inch conversion.
- ABS/INC switchable.
- On/off switch.
- Automatic switch-off.
- Reset/preset.
- Self-centering.
- Tungsten carbide measuring faces.
- Complete measuring range without changing the measuring bolts.
- Protection: IP65.
- Delivery in an aluminum case ($\varnothing 6 - 40$ mm) or an aluminum carrying case ($\varnothing 40 - 300$ mm and sets) with extension 150 mm ($\varnothing 6 - 12$ mm: 100 mm).
- Separate instruments within measuring range $\varnothing 6 - 100$ mm and the sets are delivered incl. setting ring(s) (conforms to factory standard).
- Power supply: 1 battery type V357 or 1 battery type CR2032.



910.125



910.119



Measuring head
(measuring range)
 $\varnothing 6 - 50$ mm

 $\varnothing 50 - 100$ mm $\varnothing 100 - 300$ mm

For blind bores

ECONOMY LINE ✓

004-322-EN-20060702

Digital three-point internal micrometers IP65 (continued)



Per piece

910.134

ECONOMY LINE ✓

Item No.	Measuring range/mm	Setting ring ø/mm	Accuracy mm	Length L/mm	Length A/mm	Price EUR
910.113	ø 6 - 8	6	±0.004	54.5	1.5	404.00
910.114	ø 8 - 10	8	±0.004	54.5	1.5	404.00
910.115	ø 10 - 12	10	±0.004	54.5	1.5	404.00
910.116	ø 12 - 16	16	±0.004	80	0.7	393.00
910.117	ø 16 - 20	16	±0.004	80	0.7	393.00
910.118	ø 20 - 25	25	±0.004	90	0.7	408.00
910.119	ø 25 - 30	25	±0.004	90	0.7	408.00
910.120	ø 30 - 40	40	±0.004	97	0.7	455.00
910.121	ø 40 - 50	40	±0.005	97	0.7	455.00
910.122	ø 50 - 63	62	±0.005	114	0.7	483.00
910.123	ø 62 - 75	62	±0.005	114	0.7	510.00
910.124	ø 75 - 88	87	±0.005	114	0.7	530.00
910.125	ø 87 - 100	87	±0.005	114	0.7	554.00
910.126	ø 100 - 125	—	±0.005	150	0.7	564.00
910.127	ø 125 - 150	—	±0.005	150	0.7	647.00
910.128	ø 150 - 175	—	±0.005	150	0.7	746.00
910.129	ø 175 - 200	—	±0.005	150	0.7	870.00
910.130	ø 200 - 225	—	±0.007	150	0.7	1,010.00
910.131	ø 225 - 250	—	±0.007	150	0.7	1,183.00
910.132	ø 250 - 275	—	±0.007	150	0.7	1,391.00
910.133	ø 275 - 300	—	±0.007	150	0.7	1,638.00

Options:

836.535 Battery type V357

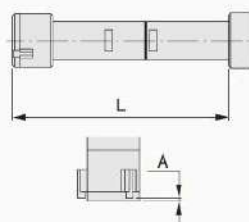
0.90

495.157 Battery type CR2032

0.50

Sets

ECONOMY LINE ✓



Item No.	Measuring range/mm	Setting rings ø/mm	Extension mm	Number of instruments	Price EUR
910.134	ø 6 - 12	6, 8, 10	100	3	1,053.00
910.135	ø 12 - 20	16	150	2	714.00
910.136	ø 20 - 50	25, 40	150	4	1,507.00
910.137	ø 50 - 100	62, 87	150	4	1,738.00

Digital three-point internal micrometers

Digital three-point internal micrometers with a large measuring range. With optional extensions, also for measuring in deep (blind) bores.

- Measuring range: $\varnothing$ 50 - 300 mm.
- Max. measuring depth: 1100 mm.
- Resolution: 0.001 mm.
- mm/inch conversion.
- ABS/INC switchable.
- On/off switch.
- Automatic switch-off.
- Reset/preset.
- Self-centering.
- Tungsten carbide measuring faces.
- Protection: IP54.
- Delivery in an aluminum carrying case with extension 150 mm.
- Separate instruments within measuring range $\varnothing$ 50 - 100 mm and the sets are delivered incl. setting ring(s).
- Setting rings are conform to factory standard.
- Power supply: 1 battery type V357.



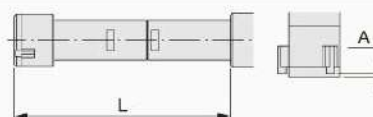
ECONOMY LINE ✓

Item No.	Measuring range/mm	Setting ring $\varnothing$ /mm	Accuracy mm	Length L/mm	Length A/mm	Price EUR
906.904	$\varnothing$ 50 - 70	50	± 0.004	107	0.5	392.00
906.905	$\varnothing$ 70 - 100	70	± 0.004	107	0.5	525.00
906.906	$\varnothing$ 100 - 150	—	± 0.005	107	0.5	865.00
906.907	$\varnothing$ 150 - 250	—	± 0.007	107	0.5	1,774.00
906.908	$\varnothing$ 200 - 300	—	± 0.007	107	0.5	2,490.00

Sets

ECONOMY LINE ✓

Item No.	Measuring range/mm	Setting ring $\varnothing$ /mm	Number of instruments	Price EUR
906.909	$\varnothing$ 50 - 100	70	2	916.00
906.910	$\varnothing$ 100 - 250	150	2	2,640.00



Extensions

Item No.	Extension mm	Price EUR
906.227	150	33.50
906.228	500	202.00
906.229	1000	606.00

Option

Item No.	Description	Price EUR
836.535	Battery type V357	0.90

Digital three-point internal micrometers up to 1000 mm

Digital three-point internal micrometers with a large measuring range. With optional extensions, also for measuring in deep bores.

- Measuring range: $\varnothing$ 200 - 1000 mm.
 - Resolution: 0.001 mm.
 - mm/inch conversion.
 - ABS/INC switchable.
 - On/off switch.
 - Automatic switch-off.
- Reset/preset.
 - Self-centering.
 - Tungsten carbide measuring faces.
 - Protection: IP54.
 - Delivered incl. setting ring.
 - Power supply: 1 battery type V357.



907.787

With interchangeable measuring bolts

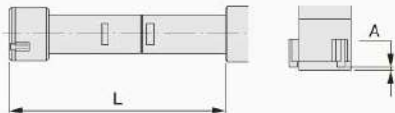
The measuring range is extra large because of the interchangeable measuring bolts. The high accuracy of the measuring bolts enables exchanging without recalibrating the read-out.

- Max. measuring depth:
907.787: 750 mm,
907.788: 1750 mm.
- Accuracy:
 $\pm(1+0.02L)\text{ }\mu\text{m}$ (L in mm).
- Delivery in a wooden case with extensions and setting ring.



ECONOMY LINE ✓

Item No.	Measuring range/mm	Setting ring $\varnothing$ /mm	Length L/mm	Length A/mm	Extensions mm	Price EUR
907.787	$\varnothing$ 200- 500	200	105	0.5	150, 500	6,320.00
907.788	$\varnothing$ 200-1000	200	105	0.5	150, 500, 1000	7,200.00



Option

Item No.	Description	Price EUR
836.535	Battery type V357	0.90

Extensions

Item No.	Extension mm	Price EUR
906.227	150	33.50
906.228	500	202.00
906.229	1000	606.00

004-320-EN-20060702

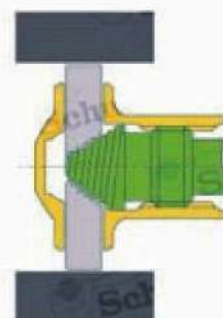
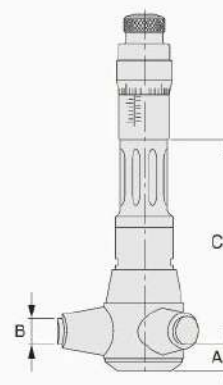
TESA Imicro three-point internal micrometers

The Imicro measuring system has a unique combination of a threaded cone and three measuring arms. This makes the TESA Imicro a highly accurate measuring instrument.

- Measuring range: $\varnothing$ 3.5 - 300 mm.
- Graduation: 0.001 mm ($\varnothing$ 3.5 - 12 mm),
0.005 mm ($\varnothing$ 11 - 100 mm),
0.01 mm ($\varnothing$ 100 - 300 mm).
- Measuring faces:
 $\varnothing$ 3.5 - 12 mm: hardened steel,
 $\varnothing$ 11 - 100 mm: titanium nitride (TiN),
 $\varnothing$ 100 - 300 mm: tungsten carbide.
- DIN 863 T4.
- Delivery in a plastic case with a manufacturer measuring report.



Item No.	Measuring range mm	Accuracy mm	Repeat-ability mm	Length/mm			Price EUR
				A	B	C	
779.571	$\varnothing$ 3.5 - 4	± 0.004	0.004	2	1.5	20	1,106.00
779.572	$\varnothing$ 4 - 4.5	± 0.004	0.004	2	1.5	20	1,106.00
779.573	$\varnothing$ 4.5 - 5.5	± 0.004	0.004	2	1.5	25	1,110.00
779.574	$\varnothing$ 5.5 - 6.5	± 0.004	0.004	2	1.5	25	1,110.00
779.481	$\varnothing$ 6 - 8	± 0.004	0.004	2.5	2.5	52	554.00
779.482	$\varnothing$ 8 - 10	± 0.004	0.004	2.5	2.5	52	558.00
779.483	$\varnothing$ 10 - 12	± 0.004	0.004	2.5	2.5	52	567.00
779.497	$\varnothing$ 11 - 14	± 0.004	0.004	3.5	4	77	616.00
779.498	$\varnothing$ 14 - 17	± 0.004	0.004	3.5	4	77	622.00
779.499	$\varnothing$ 17 - 20	± 0.004	0.004	3.5	4	77	628.00
779.515	$\varnothing$ 20 - 25	± 0.004	0.004	7	7	78	705.00
779.516	$\varnothing$ 25 - 30	± 0.004	0.004	7	7	78	727.00
779.517	$\varnothing$ 30 - 35	± 0.004	0.004	7	7	78	726.00
779.518	$\varnothing$ 35 - 40	± 0.004	0.004	7	7	78	800.00
779.539	$\varnothing$ 40 - 50	± 0.004	0.004	11	12	84	934.00
779.540	$\varnothing$ 50 - 60	± 0.005	0.005	11	12	84	898.00
779.541	$\varnothing$ 60 - 70	± 0.005	0.005	11	12	84	990.00
779.542	$\varnothing$ 70 - 80	± 0.005	0.005	11	12	84	931.00
779.543	$\varnothing$ 80 - 90	± 0.005	0.005	11	12	84	937.00
779.544	$\varnothing$ 90 - 100	± 0.005	0.005	11	12	84	978.00
779.553	$\varnothing$ 100 - 125	± 0.006	0.006	26	18	81	1,646.00
779.554	$\varnothing$ 125 - 150	± 0.006	0.006	26	18	81	1,653.00
779.555	$\varnothing$ 150 - 175	± 0.007	0.007	26	18	81	1,662.00
779.556	$\varnothing$ 175 - 200	± 0.007	0.007	26	18	81	1,714.00
779.562	$\varnothing$ 200 - 225	± 0.008	0.008	26	18	81	2,487.00
779.563	$\varnothing$ 225 - 250	± 0.008	0.008	26	18	81	2,517.00
779.564	$\varnothing$ 250 - 275	± 0.008	0.008	26	18	81	2,551.00
779.565	$\varnothing$ 275 - 300	± 0.008	0.008	26	18	81	2,591.00



The threaded cone prevents spindle errors (Abbe-comparator principle).

TESA Imicro three-point internal micrometers in sets

- Measuring range: $\varnothing$ 3.5 - 200 mm.
- Graduation: 0.001 mm ($\varnothing$ 3.5 - 12 mm),
0.005 mm ($\varnothing$ 11 - 100 mm),
0.01 mm ($\varnothing$ 100 - 200 mm).



- Measuring faces:
 $\varnothing$ 3.5 - 12 mm: hardened steel,
 $\varnothing$ 11 - 100 mm: titanium nitride (TiN),
 $\varnothing$ 100 - 200 mm: tungsten carbide.
- Sets delivered in a plastic carrying case with a manufacturer measuring report incl. setting rings, extension, screw driver and adjustment tool.

Item No.	Measuring range/mm	Extension mm	Price EUR
779.570	$\varnothing$ 3.5 - 6.5	–	4,854.00
779.480	$\varnothing$ 6 - 12	100	2,074.00
779.496	$\varnothing$ 11 - 20	150	2,320.00
779.514	$\varnothing$ 20 - 40	150	3,529.00
779.538	$\varnothing$ 40 - 100	150	7,332.00
779.552	$\varnothing$ 100 - 200	150	9,527.00

TESA centering device



Item No.	For meas. range/mm	Price EUR
779.664	$\varnothing$ 40 - 100	2,959.00
779.681	$\varnothing$ 100 - 200	3,615.00

TESA Imicro extensions

TESA Imicro extensions for measuring in deep bores.



Imicro + extension + centering device

Item No.	Extension mm	For meas. range/mm	Price EUR
779.609	100	$\varnothing$ 6 - 12	113.00
779.623	150	$\varnothing$ 11 - 20	249.00
779.624	500	$\varnothing$ 11 - 20	1,243.00
779.625	150	$\varnothing$ 20 - 40	172.00
779.626	500	$\varnothing$ 20 - 40	1,718.00
779.627	1000	$\varnothing$ 20 - 40	1,967.00

Item No.	Extension mm	For meas. range/mm	Price EUR
779.628	150	$\varnothing$ 40 - 100	195.00
779.629	500	$\varnothing$ 40 - 100	2,098.00
779.630	1000	$\varnothing$ 40 - 100	2,754.00
779.631	150	$\varnothing$ 100 - 300	240.00
779.632	500	$\varnothing$ 100 - 300	1,364.00
779.633	1000	$\varnothing$ 100 - 300	2,091.00

TESA Imicro digital *capa μ* three-point internal micrometers

These TESA Imicro internal micrometers combine the unique measuring cone, that prevents spindle errors, with the patented *capa μ* measuring system.

- Measuring range: $\varnothing$ 3.5 - 300 mm.
- Resolution: 0.001 mm.
- mm/inch conversion.
- ABS/INC switchable.
- Opto-RS232C data output, bidirectional.
- Automatic switch-off.
- Reset/preset.
- Measuring faces:
 - $\varnothing$ 3.5 - 12 mm: hardened steel,
 - $\varnothing$ 11 - 100 mm: titanium nitride (TiN),
 - $\varnothing$ 100 - 300 mm: tungsten carbide.
- Protection: IP54.
(When using data output: IP40.)
- DIN 863 T4.
- Delivery in a plastic case ($\varnothing$ 3.5 - 40 mm) or a wooden case with a manufacturer measuring report.
- Sets delivered in a plastic carrying case with a manufacturer measuring report.
- Power supply: 1 battery type CR2032.
- Electronic measuring elements, several sets, individual measuring heads and extensions available.



Sets with individual measuring heads

Consist of 1 electronic measuring element with interchangeable measuring heads, setting rings and an extension (no extension for the 782.564).

Item No.	Measuring range/mm	Price EUR
782.564	$\varnothing$ 3.5 - 6.5	5,888.00
782.565	$\varnothing$ 6 - 12	3,012.00
782.566	$\varnothing$ 11 - 20	3,241.00
782.567	$\varnothing$ 20 - 40	4,238.00
782.568	$\varnothing$ 40 - 100	7,809.00
782.569	$\varnothing$ 100 - 200	10,833.00

Extensions

Item No.	Extension mm	For measuring range/mm	Price EUR
779.609	100	$\varnothing$ 6 - 12	113.00
779.623	150	$\varnothing$ 11 - 20	249.00
779.625	150	$\varnothing$ 20 - 40	172.00
779.628	150	$\varnothing$ 40 - 100	195.00
779.631	150	$\varnothing$ 100 - 200	240.00

Complete sets

Consist of all the instruments of the measuring range, setting rings and an extension (no extension for the 782.558).

Item No.	Measuring range/mm	Price EUR
782.558	$\varnothing$ 3.5 - 6.5	7,357.00
782.559	$\varnothing$ 6 - 12	4,458.00
782.560	$\varnothing$ 11 - 20	4,624.00
782.561	$\varnothing$ 20 - 40	6,292.00
782.562	$\varnothing$ 40 - 100	11,406.00
782.563	$\varnothing$ 100 - 200	14,022.00

Option

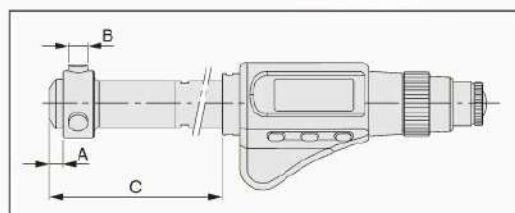
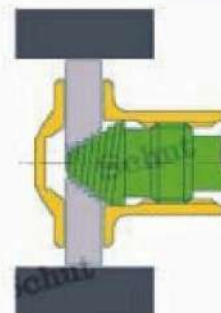
Item No.	Description	Price EUR
495.157	Battery type CR2032	0.50

Accessories for (wireless) data transfer available on request.

TESA Imicro digital three-point internal micrometers (continued)



The threaded cone prevents spindle errors (Abbe-comparator principle).



Complete instruments

Item No.	Measuring range/mm	Accuracy mm	Repeatability mm	Length/mm			Price EUR
				A	B	C	
782.530	∅ 3.5 - 4	±0.004	0.004	2	1.5	20	1,840.00
782.531	∅ 4 - 4.5	±0.004	0.004	2	1.5	20	1,840.00
782.532	∅ 4.5 - 5.5	±0.004	0.004	2	1.5	25	1,840.00
782.533	∅ 5.5 - 6.5	±0.004	0.004	2	1.5	25	1,840.00
782.534	∅ 6 - 8	±0.004	0.004	2.5	2.5	79	1,474.00
782.535	∅ 8 - 10	±0.004	0.004	2.5	2.5	79	1,486.00
782.536	∅ 10 - 12	±0.004	0.004	2.5	2.5	79	1,500.00
782.537	∅ 11 - 14	±0.004	0.004	3.5	4	93	1,507.00
782.538	∅ 14 - 17	±0.004	0.004	3.5	4	93	1,516.00
782.539	∅ 17 - 20	±0.004	0.004	3.5	4	93	1,525.00
782.540	∅ 20 - 25	±0.004	0.004	7	7	91	1,535.00
782.541	∅ 25 - 30	±0.004	0.004	7	7	91	1,551.00
782.542	∅ 30 - 35	±0.004	0.004	7	7	91	1,569.00
782.543	∅ 35 - 40	±0.004	0.004	7	7	91	1,587.00
782.544	∅ 40 - 50	±0.005	0.005	11	12	104	1,647.00
782.545	∅ 50 - 60	±0.005	0.005	11	12	104	1,673.00
782.546	∅ 60 - 70	±0.005	0.005	11	12	104	1,720.00
782.547	∅ 70 - 80	±0.005	0.005	11	12	104	1,753.00
782.548	∅ 80 - 90	±0.005	0.005	11	12	104	1,795.00
782.549	∅ 90 - 100	±0.005	0.005	11	12	104	1,827.00
782.550	∅ 100 - 125	±0.006	0.006	26	18	100	2,834.00
782.551	∅ 125 - 150	±0.006	0.006	26	18	100	2,842.00
782.552	∅ 150 - 175	±0.007	0.007	26	18	100	2,849.00
782.553	∅ 175 - 200	±0.007	0.007	26	18	100	2,861.00
782.554	∅ 200 - 225	±0.008	0.008	26	18	100	3,210.00
782.555	∅ 225 - 250	±0.008	0.008	26	18	100	3,265.00
782.556	∅ 250 - 275	±0.008	0.008	26	18	100	3,321.00
782.557	∅ 275 - 300	±0.008	0.008	26	18	100	3,377.00

Mitutoyo Holtest two-point and three-point internal micrometers

Two-point and three-point internal micrometers for quick and accurate measurement of internal dimensions, within a large measuring range. These instruments have an improved ratchet mechanism and the application of high-quality materials ensures a long life span.

- Measuring range: $\varnothing$ 2 - 300 mm.
- Graduation: 0.001 mm ($\varnothing$ 2 - 12 mm), 0.005 mm ($\varnothing$ 12 - 300 mm).
- $\varnothing$ 2 - 6 mm: two-point internal micrometers.
- Tungsten carbide cone and contact point of the spindle.
- Matt chrome-plated thimble.

Measuring range/mm	Accuracy mm	Item No.	Price EUR	Item No.	Price EUR
		Measuring faces with with titanium nitride (TiN) coating:		Tungsten carbide measuring faces:	
$\varnothing$ 2 - 2.5	± 0.002			368.001 ¹	1,163.00
$\varnothing$ 2.5 - 3	± 0.002			368.002 ¹	1,163.00
$\varnothing$ 3 - 4	± 0.002			368.003 ¹	930.00
$\varnothing$ 4 - 5	± 0.002			368.004 ¹	930.00
$\varnothing$ 5 - 6	± 0.002			368.005 ¹	930.00
$\varnothing$ 6 - 8	± 0.002	368.161	413.00		
$\varnothing$ 8 - 10	± 0.002	368.162	413.00		
$\varnothing$ 10 - 12	± 0.002	368.163	413.00		
$\varnothing$ 12 - 16	± 0.002	368.164	501.00	368.764	399.00
$\varnothing$ 16 - 20	± 0.002	368.165	521.00	368.765	403.00
$\varnothing$ 20 - 25	± 0.003	368.166	521.00	368.766	406.00
$\varnothing$ 25 - 30	± 0.003	368.167	528.00	368.767	443.00
$\varnothing$ 30 - 40	± 0.003	368.168	585.00	368.768	497.00
$\varnothing$ 40 - 50	± 0.003	368.169	602.00	368.769	501.00
$\varnothing$ 50 - 63	± 0.003	368.170	653.00	368.770	562.00
$\varnothing$ 62 - 75	± 0.003	368.171	653.00	368.771	562.00
$\varnothing$ 75 - 88	± 0.003	368.172	676.00	368.772	585.00
$\varnothing$ 87 - 100	± 0.003	368.173	690.00	368.773	622.00
$\varnothing$ 100 - 125	± 0.005	368.174	1,031.00	368.774	964.00
$\varnothing$ 125 - 150	± 0.005	368.175	1,096.00	368.775	1,031.00
$\varnothing$ 150 - 175	± 0.005	368.176	1,197.00	368.776	1,133.00
$\varnothing$ 175 - 200	± 0.005	368.177	1,234.00	368.777	1,156.00
$\varnothing$ 200 - 225	± 0.005	368.178	1,234.00	368.778	1,156.00
$\varnothing$ 225 - 250	± 0.005	368.179	1,234.00	368.779	1,156.00
$\varnothing$ 250 - 275	± 0.005	368.180	1,322.00	368.780	1,234.00
$\varnothing$ 275 - 300	± 0.005	368.181	1,508.00	368.781	1,417.00

¹ Two-point internal micrometers.

Sets

Measuring range/mm	Extension mm	Item No.	Price EUR	Item No.	Price EUR
		Measuring faces with with titanium nitride (TiN) coating:		Tungsten carbide measuring faces:	
$\varnothing$ 2 - 3	—	—		368.906 ¹	2,392.00
$\varnothing$ 3 - 6	—	—		368.907 ¹	2,871.00
$\varnothing$ 6 - 12	100	368.911	1,270.00	—	
$\varnothing$ 12 - 20	150	368.912	965.00	368.991	898.00
$\varnothing$ 20 - 50	150	368.913	2,128.00	368.992	1,809.00
$\varnothing$ 50 - 100	150	368.914	2,858.00	368.993	2,587.00
$\varnothing$ 100 - 200	150	368.915	6,164.00	368.994	5,025.00

¹ Two-point internal micrometers.

- To $\varnothing$ 100 mm: implementation for blind bores (only with TiN coating).
From $\varnothing$ 100 mm: implementation for through holes.
- Delivery in a plastic case or wooden case with a manufacturer measuring report.
Sets delivered in a wooden carrying case with a manufacturer measuring report.



Extensions

Item No.	Extension mm	For measuring range/mm	Price EUR
952.322	100	$\varnothing$ 6 - 12	124.00
952.621	150	$\varnothing$ 12 - 20	124.00
952.622	150	$\varnothing$ 20 - 50	135.00
952.623	150	$\varnothing$ 50 - 300	234.00



Schut

368.914

Mitutoyo Holtest digital three-point internal micrometers IP65

Digital three-point internal micrometers for quick and accurate measurement of internal dimensions, within a large measuring range. These instruments have an improved ratchet mechanism and the application of high-quality materials ensures a long life span.

- Measuring range: $\varnothing$ 6 - 300 mm.
- Resolution: 0.001 mm.
- Measuring faces with titanium nitride (TiN) coating.
- Tungsten carbide cone and contact point of the spindle.
- Matt chrome-plated thimble.
- Digimatic data output.
- Automatic switch-off.
- Reset/preset.
- Hold function.



Item No.	Measuring range/mm	Accuracy mm	Price EUR
468.161	$\varnothing$ 6 - 8	± 0.002	1,314.00
468.162	$\varnothing$ 8 - 10	± 0.002	1,314.00
468.163	$\varnothing$ 10 - 12	± 0.002	1,314.00
468.164	$\varnothing$ 12 - 16	± 0.002	1,478.00
468.165	$\varnothing$ 16 - 20	± 0.002	1,478.00
468.166	$\varnothing$ 20 - 25	± 0.003	1,515.00
468.167	$\varnothing$ 25 - 30	± 0.003	1,515.00
468.168	$\varnothing$ 30 - 40	± 0.003	1,515.00
468.169	$\varnothing$ 40 - 50	± 0.003	1,518.00
468.170	$\varnothing$ 50 - 63	± 0.003	1,662.00
468.171	$\varnothing$ 62 - 75	± 0.003	1,672.00
468.172	$\varnothing$ 75 - 88	± 0.003	1,692.00
468.173	$\varnothing$ 87 - 100	± 0.003	1,712.00
468.174	$\varnothing$ 100 - 125	± 0.005	2,225.00
468.175	$\varnothing$ 125 - 150	± 0.005	2,329.00
468.176	$\varnothing$ 150 - 175	± 0.005	2,436.00
468.177	$\varnothing$ 175 - 200	± 0.005	2,567.00
468.178	$\varnothing$ 200 - 225	± 0.005	2,721.00
468.179	$\varnothing$ 225 - 250	± 0.005	2,784.00
468.180	$\varnothing$ 250 - 275	± 0.005	2,871.00
468.181	$\varnothing$ 275 - 300	± 0.005	3,022.00

Sets

Item No.	Measuring range/mm	Extension mm	Price EUR
One instrument with multiple measuring heads and extension			
468.971	$\varnothing$ 6 - 12	100	2,275.00
468.972	$\varnothing$ 12 - 20	150	1,868.00
468.973	$\varnothing$ 20 - 50	150	3,245.00
468.974	$\varnothing$ 50 - 100	150	4,505.00
468.975	$\varnothing$ 100 - 200	150	6,489.00
Multiple instruments			
468.981	$\varnothing$ 6 - 12		3,717.00
468.982	$\varnothing$ 12 - 25		3,938.00
468.983	$\varnothing$ 25 - 50		4,568.00
468.984	$\varnothing$ 50 - 75		3,339.00
468.985	$\varnothing$ 75 - 100		3,591.00

- To $\varnothing$ 100 mm: implementation for blind bores. From $\varnothing$ 100 mm: implementation for through holes.
- Protection: IP65.
- Delivery in a plastic case or wooden case with a manufacturer measuring report. Sets are delivered with setting rings.
- Power supply: 1 battery type V357.



468.161



468.168



468.174

Extensions

Item No.	Extension mm	For measuring range/mm	Price EUR
952.322	100	$\varnothing$ 6 - 12	124.00
952.621	150	$\varnothing$ 12 - 20	124.00
952.622	150	$\varnothing$ 20 - 50	135.00
952.623	150	$\varnothing$ 50 - 300	234.00

Options

Item No.	Description	Price EUR
836.535	Battery type V357	0.90
104.157	Mounting bracket for micrometer stand	64.00
105.662	Digimatic data cable, 1 m	111.00
105.663	Digimatic data cable, 2 m	113.00
106.380	USB Input Tool Direct cable, 2 m	146.00
102.791	U-WAVE data cable	110.00
102.730	U-WAVE transmitter IP67	189.00



468.973



468.983

Mitutoyo Borematic digital three-point internal micrometers

Three-point internal micrometers with the absolute measuring system and a large 6-digit LCD display for an easy read-out of the measurement and tolerance indication. The tolerance values are shown graphically above the current measurement or full size on the display. The 330° rotatable display guarantees an ideal read-out in any position. Easy and fast one-handed operation.

- Measuring range: $\varnothing$ 6 - 125 mm.
- Resolution: 0.001 mm.
- Accuracy: refer to the table. Only valid with close contact of all measuring surfaces.
- ABS/INC switchable.
- LCD display 330° rotatable.
- Digimatic data output.
- On/off switch.
- Reset/preset.
- Hold function.
- Adjustable tolerance limits.
- Measuring faces of hardened steel, with titanium nitride (TiN) coating.
- Conforms to factory standard.
- Delivery in a wooden case with a manufacturer measuring report.
- Power supply: 1 battery type V357.

Item No.	Measuring range/mm	Accuracy/mm	Price EUR
568.361	$\varnothing$ 6 - 8	± 0.005	1,506.00
568.362	$\varnothing$ 8 - 10	± 0.005	1,476.00
568.363	$\varnothing$ 10 - 12	± 0.005	1,506.00
568.364	$\varnothing$ 12 - 16	± 0.005	1,566.00
568.365	$\varnothing$ 16 - 20	± 0.005	1,566.00
568.366	$\varnothing$ 20 - 25	± 0.006	1,626.00
568.367	$\varnothing$ 25 - 30	± 0.006	1,626.00
568.368	$\varnothing$ 30 - 40	± 0.006	1,780.00
568.369	$\varnothing$ 40 - 50	± 0.006	1,780.00
568.370	$\varnothing$ 50 - 63	± 0.006	1,801.00
568.371	$\varnothing$ 62 - 75	± 0.006	1,833.00
568.372	$\varnothing$ 75 - 88	± 0.006	1,920.00
568.373	$\varnothing$ 87 - 100	± 0.006	1,924.00
568.374	$\varnothing$ 100 - 113	± 0.006	2,008.00
568.375	$\varnothing$ 112 - 125	± 0.006	2,040.00

Options:

836.535	Battery type V357	0.90
952.322	Extension 100 mm for Borematic $\varnothing$ 6 - 12 mm	124.00
952.621	Extension 150 mm for Borematic $\varnothing$ 12 - 20 mm	124.00
952.622	Extension 150 mm for Borematic $\varnothing$ 20 - 50 mm	135.00
952.623	Extension 150 mm for Borematic $\varnothing$ 50 - 300 mm	234.00

Sets

Sets consist of one measuring instrument with interchangeable measuring heads and setting rings.

Item No.	Measuring range/mm	Setting rings $\varnothing$ /mm	Price EUR
568.924	$\varnothing$ 6 - 12	8, 10	2,194.00
568.925	$\varnothing$ 12 - 25	16, 20	2,389.00
568.926	$\varnothing$ 25 - 50	30, 40	2,851.00
568.927	$\varnothing$ 50 - 100 ¹	62, 87	4,713.00

¹ Measuring range by means of two sets of interchangeable measuring inserts per measuring head.



568.368

Data cables Digimatic, USB Input Tool Direct, U-WAVE available on request.



Three-point internal micrometers

Three-point internal micrometers with a clever pistol-shaped base instrument for quick, easy and accurate measurements of internal measures such as (blind) bores. Easy single handed operation for both right and left handed use. Available as single instruments and as sets, with setting ring(s) and extension.

- Measuring range: $\varnothing$ 6 - 100 mm.
- Measuring depth: 0 - 270 mm.
- Read-out depends on the type of dial indicator or measuring probe.
- Clamping shaft: $\varnothing$ 8 mm.
- Self-centering.
- Excl. dial indicator or measuring probe.
- Tungsten carbide measuring faces.
- Setting rings are conform to factory standard.
- Delivery in an aluminum carrying case.



Separate instruments

ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm ¹	Setting ring $\varnothing$ /mm	Extension mm	Length/mm		Price EUR
					L	A	
907.770	$\varnothing$ 6 - 8	± 0.004	8	100	50	2	275.00
907.771	$\varnothing$ 8 - 10	± 0.004	8	100	50	2	270.00
907.772	$\varnothing$ 10 - 12	± 0.004	10	100	50	2	286.00
907.773	$\varnothing$ 12 - 16	± 0.004	16	150	65	0.5	289.00
907.774	$\varnothing$ 16 - 20	± 0.004	16	150	65	0.5	307.00
907.775	$\varnothing$ 20 - 25	± 0.004	25	150	91	0.5	327.00
907.776	$\varnothing$ 25 - 30	± 0.004	25	150	91	0.5	348.00
907.777	$\varnothing$ 30 - 40	± 0.004	40	150	97	0.5	374.00
907.778	$\varnothing$ 40 - 50	± 0.005	40	150	97	0.5	399.00
907.779	$\varnothing$ 50 - 63	± 0.005	62	150	112	0.5	425.00
907.780	$\varnothing$ 62 - 75	± 0.005	62	150	112	0.5	452.00
907.781	$\varnothing$ 75 - 88	± 0.005	87	150	112	0.5	482.00
907.782	$\varnothing$ 87 - 100	± 0.005	87	150	112	0.5	513.00

¹ Excl. accuracy of dial indicator or measuring probe.

Sets

ECONOMY LINE ✓

Item No.	Measuring range/mm	Setting ring(s) $\varnothing$ /mm	Number of pistol grips	Extension mm	Price EUR
907.783	$\varnothing$ 6 - 12	8, 10	1	100	687.00
907.784	$\varnothing$ 12 - 20	16	1	150	507.00
907.785	$\varnothing$ 20 - 50	25, 40	2	150	1,248.00
907.786	$\varnothing$ 50 - 100	62, 87	1	150	1,533.00

Dial bore gauge for through bores

Dial bore gauge consisting of a grip (clamping shaft $\varnothing$ 8 mm), with a two point split contact point with a needle.

- Measuring range: 3 - 18 mm.
- Measuring elements: hardened steel.
- Measuring needles: hardened steel.
- Including standard dial indicator 0 - 3 mm / 0.01 mm.
- Constant measuring force as a result of a built-in spring, thus eliminating user influence.
- Delivery in a plastic case.



ECONOMY LINE ✓

Item No.	Measuring range/mm	Measuring depth/mm	Number of inserts	Price EUR
910.326	3 - 4	20	4	406.00
910.327	4 - 6	30	4	329.00
910.328	6 - 10	40	4	224.00
910.329	10 - 18	130	8	257.00



910.329

Optional dial indicators

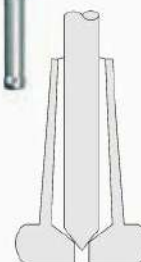
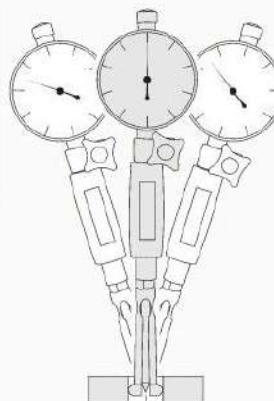
Item No.	Measuring range/mm	Graduation mm	Accuracy mm	Price EUR
Analog:				
907.933 ¹	0 - 10	0.01	—	21.70
Digital (with determination of the reversal point):				
910.004 ¹	0 - 12.7	0.001	± 0.004	180.00
909.250 ¹	0 - 12.5	0.002	± 0.015	124.00
909.251 ¹	0 - 12.5	0.0005	± 0.006	233.00
910.340 ²	0 - 15	0.0005	± 0.002	190.00
Option:				
852.446	Probe extension 10 mm			5.60

¹ Extension 10 mm 852.446 required (only for 910.326 and 910.327).

² Only suitable for 910.326 and 910.327.



910.327



910.004



910.340

Schwenk Osimes dial bore gauges for through bores

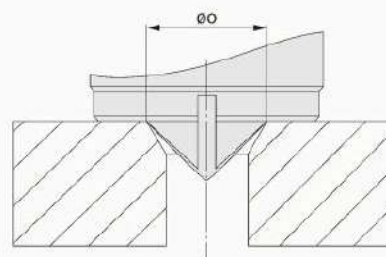
Schwenk dial bore gauges consisting of a grip (clamping shaft $\varnothing 8$ mm), with a two point split contact point with a needle. Constant measuring force as a result of a built-in spring, thus eliminating user influence. For more information please contact our sales department.



Schwenk internal chamfer gauges

For measuring the large diameter of the countersink of a bore.

- Supplied with a special dial indicator (scale division 0.1 mm) for direct display of the measurement result.



Item No.	Angle	Measuring range/mm	Price EUR
852.069	90°	0.5 - 20	520.00
852.300	90°	20 - 40	746.00
852.267	127°	0.5 - 20	875.00
851.954	127°	20 - 40	1,104.00

Internal measuring instruments

Internal measuring instruments used for measuring diameters of cylindrical bores and form deviations for instance roundness and cylindricity, compared to standards such as setting rings. In order to read out the measured values, any existing dial indicator or measuring probe with a clamping stem of $\varnothing 8$ mm can be used. The reversal point marks the diameter of the bores. When using digital indicators a model with a hold function for minimal measuring value is recommended. Please see the dial indicators section for these dial indicators.

- Measuring range: 6 - 450 mm.
- Read-out depends on the type of dial indicator or measuring probe.
- Incl. standard dial indicator 0 - 3 mm / 0.01 mm.
- Clamping shaft: $\varnothing 8$ mm.
- Self-centering (except 907.230).
- Interchangeable measuring inserts with tungsten carbide stylus tip (907.230 with spherical measuring face).
- Delivery in a plastic case incl. standard dial indicator and measuring inserts.



907.230



907.231



907.232



907.233



907.235



907.236

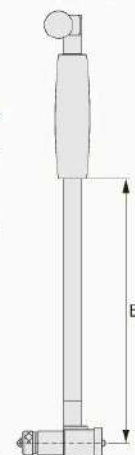


907.237



907.235 + 907.933

907.235 + 907.933



ECONOMY LINE ✓

Item No.	Measuring range/mm	Effective measuring range/mm	Measuring depth (B)/mm	Number of probes	Price EUR
907.230	6 - 10	0.5	40	9	101.00
907.231	10 - 18	0.5	100	9	114.00
907.232	18 - 35	1.2	150	9	89.00
907.233	35 - 50	1.2	150	4	89.00
907.235	50 - 160	1.2	150	12	89.00
907.236	160 - 250	1.2	400	5	119.00
907.237	250 - 450	1.2	400	5	128.00

Peacock internal measuring instruments

Internal measuring instruments used for measuring diameters of cylindrical bores and form deviations for instance roundness and cylindricity, compared to standards such as setting rings. In order to read out the measured values, any existing dial indicator or measuring probe with a clamping stem of $\varnothing 8$ mm can be used. The reversal point marks the diameter of the bores. When using digital indicators a model with a hold function for minimal measuring value is recommended. Please see the dial indicators section for these dial indicators.

- Measuring range: 6 - 400 mm.
- Read-out depends on the type of dial indicator or measuring probe.
- Clamping shaft: $\varnothing 8$ mm.
- Self-centering bridge.
- Interchangeable measuring inserts with tungsten carbide stylus tip.
- Delivery in a plastic case or a wooden case.
- Excl. dial indicator or measuring probe.



855.010



855.018



855.035



855.060



855.150



855.160



855.250



855.260



855.150 + 855.517



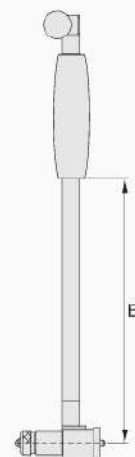
859.557 + 855.517



855.150 + 855.517

Item No.	Measuring range/mm	Effective measuring range/mm	Measuring depth (B)/mm	Number of probes	Price EUR
855.010	6 - 10	0.5	50	9	235.00
855.018	10 - 18	0.5	100	9	214.00
855.035	18 - 35	1.2	150	9	171.00
855.060	35 - 60	1.2	150	6	163.00
855.150	50 - 150	1.2	150	11	180.00
855.160	100 - 160	1.2	250	7	333.00
855.250	160 - 250	1.2	250	10	404.00
855.260	250 - 400	1.2	400	16	582.00
Options:					
855.517	Peacock dial indicator 0 - 5 mm, graduation 0.01 mm				43.00
859.557	Protection for dial indicator				25.70

Alternative: www.schut.com/PDFs/2025-p163-EN.pdf

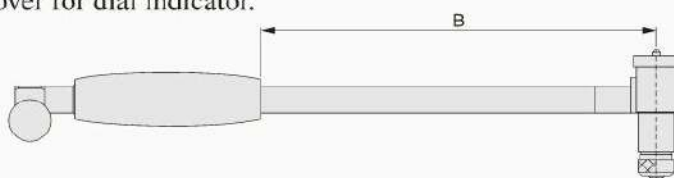


004 Z24 EN 20060702

Mitutoyo bore gauges with dial indicator

Internal measuring instruments used for measuring diameters of cylindrical bores and form deviations for instance roundness compared to standards such as setting rings. In order to read out the measured values, any existing dial indicator or measuring probe with a clamping stem of $\varnothing 8$ mm can be used. The reversal point marks the diameter of the bores. When using digital indicators a model with a hold function for minimal measuring value is recommended. Please see the dial indicators section for these dial indicators.

- Measuring range: 18 - 400 mm.
- Measuring range dial indicator:
 - 204.601: 0 - 10 mm,
 - 210.912: 0 - 1 mm,
 - 543.310: 0 - 12.7 mm.
- Read-out depends on the type of dial indicator or measuring probe.
- Accuracy: 0.002 mm.
- Repeatability: 0.0005 mm.
- Clamping shaft: $\varnothing 8$ mm.
- Interchangeable measuring inserts with tungsten carbide stylus tip.
- Plastic cover for dial indicator.
- Several accessories available.
- Delivery in a plastic case with dial indicator and measuring inserts.
- Other models also available, including for the measurement of blind bores.



Item No.	Measuring range/mm	Dial indicator No.	Read-out mm	Measuring depth (B)/mm	Price EUR
511.711	18 - 35	204.601	0.01	100	315.00
511.712	35 - 60	204.601	0.01	150	321.00
511.713	50 - 150	204.601	0.01	150	334.00
511.714	100 - 160	204.601	0.01	150	526.00
511.715	160 - 250	204.601	0.01	250	650.00
511.716	250 - 400	204.601	0.01	250	774.00
511.721	18 - 35	210.912	0.001	100	382.00
511.722	35 - 60	210.912	0.001	150	389.00
511.723	50 - 150	210.912	0.001	150	401.00
511.724	100 - 160	210.912	0.001	150	604.00
511.725	160 - 250	210.912	0.001	250	729.00
511.726	250 - 400	210.912	0.001	250	858.00

Sets

Item No.	Measuring range/mm	Dial indicator No.	Read-out mm	Price EUR
Analog:				
511.921	18 - 150	204.601	0.01	615.00
511.922	18 - 150	210.912	0.001	668.00
Digital (with determination of the reversal point):				
511.925	18 - 150	543.310	0.001	1,178.00

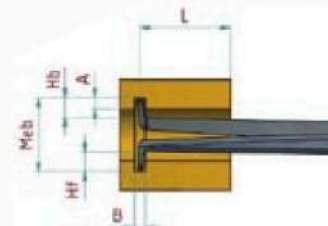


511.921

Kröplin digital internal measuring instruments (3-point) IP67

Kröplin digital internal measuring instruments (3-point) for easier centering.

- Measuring range: 7 - 105 mm.
- Resolution: 0.001, 0.002, 0.005, 0.01, 0.02 or 0.05 mm, adjustable.
- mm/inch conversion.
- ABS/INC switchable.
- Mitutoyo Digimatic, Mitutoyo U-WAVE, Bluetooth and USB data outputs optionally available.
- Automatic switch-off.
- Storage for 100 measuring values.
- Reset/preset.
- With tolerance display by means of red/green LED.
- Hold and min/max functions.
- Protection: IP67.
- Delivery with a manufacturer measuring report.
- Power supply: 2 batteries AAA.



Item No.	Type	Meas. depth L/mm	Groove depth A/mm	Groove width B/mm	Type of insert	Insert length Hb/mm
854.715	L107P3	34	2.2	0.8	①	2.5
854.716	L210P3	75	3.5	1.6	②	4.6
854.717	L215P3	77	5.0	1.6	②	5.8
854.718	L225P3	84	7.0	1.6	③	7.3
854.719	L240P3	84	8.0	1.6	③	12.2
854.720	L255P3	84	8.0	1.6	③	12.2
854.721	L270P3	84	8.5	1.6	③	12.2
854.722	L285P3	84	9.0	1.6	③	12.2

Item No.	Measuring range/mm	Accuracy mm	Repeatability mm	Price EUR
854.715	7 - 14	±0.01	0.004	544.00
854.716	10 - 20	±0.02	0.01	544.00
854.717	15 - 30	±0.02	0.01	544.00
854.718	25 - 45	±0.02	0.01	544.00
854.719	40 - 60	±0.02	0.01	544.00
854.720	55 - 75	±0.02	0.01	544.00
854.721	70 - 90	±0.02	0.01	544.00
854.722	85 - 105	±0.02	0.01	544.00

Options:

497.914	Battery type AAA (2 needed)	0.80
854.952 ¹	Interface type 1961-09	48.30
965.013 ¹	Digimatic cable	76.00
206.380 ¹	USB cable	128.00
102.790 ¹	U-WAVE cable	98.00
854.092 ²	Bluetooth interface adapter type 1961-13 (only K and L series)	111.90
854.073	Bluetooth PC dongle type 0682-60	9.80
854.113	Wooden case type 1732-65 (only K and L series)	54.70
859.233	Wooden case type 1732-45 (only C and G series)	32.70



¹ For data output an interface and cable are needed.

² Bluetooth interface adapter is delivered with a Bluetooth PC dongle (854.073).

Types of inserts



TC-ball
ø 0.6 mm



TC-ball
ø 1 mm



TC-ball
ø 1 mm

Schwenk internal measuring instruments

Internal measuring instruments used for measuring diameters of cylindrical bores and form deviations for instance roundness and cylindricity, compared to standards such as setting rings. In order to read out the measured values, any existing dial indicator or measuring probe with a clamping stem of $\varnothing 8$ mm can be used. The reversal point marks the diameter of the bores. When using digital indicators a model with a hold function for minimal measuring value is recommended.

- Measuring range: 4.5 - 800 mm.
- Read-out depends on the type of dial indicator or measuring probe.
- Accuracy: 4.5 - 290 mm: ≤ 0.002 mm,
280 - 800 mm: ≤ 0.003 mm.
- Repeatability: 4.5 - 290 mm: ≤ 0.0005 mm,
280 - 800 mm: ≤ 0.0015 mm.
- Clamping shaft: $\varnothing 8$ mm.
- Self-centering bridge.
- Measuring pins supplied with tungsten carbide ball tip.
- Interchangeable pins also available with steel or ruby ball tip.
- Centering bridge also available with a wear-resistant coating.
- Delivery in a wooden case with measuring inserts and spacer rings (from 12 mm).
- Excl. dial indicator or measuring probe.
- Measuring depth extensions available on request.
- Sets consist of 2 or 3 instruments in one wooden case.

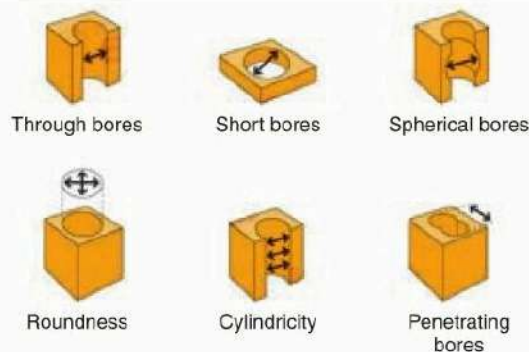


See for dial indicators the page
"Schwenk precision dial indicators".
See for measuring probes the pages
"Measuring probes".

Sets

Item No.	Measuring range/mm	Measuring depth/mm	Price EUR
852.500	4.5 - 6	80	1,044.00
852.501	6 - 8	100	727.00
852.502	8 - 12	100	693.00
852.503	12 - 20	110	472.00
852.504	18 - 35	110	487.00
852.505	35 - 60	177	468.00
852.506	50 - 100	177	534.00
852.507	50 - 150	177	552.00
852.508	100 - 160	234	694.00
852.509	100 - 230	234	720.00
852.510	160 - 290	234	936.00
852.511	160 - 360	234	962.00
852.512	280 - 410	400	2,180.00
852.513	280 - 510	400	2,210.00
852.514	400 - 800	400	3,280.00

Item No.	Measuring range/mm	Number of instruments	Price EUR
851.925	18 - 100	3	1,319.00
852.752	18 - 150	3	1,335.00
851.926	50 - 160	2	1,113.00
852.624	50 - 230	2	1,139.00



Schwenk internal measuring instruments for great depths

Special series of internal measuring instruments with extra long handles for measuring cylindric bores and form deviations of bores up to 2.5 meters.

- Measuring range: 4.5 - 800 mm.
- Measuring depth: 250 - 2500 mm.
- Read-out depends on the type of dial indicator or measuring probe.
- Clamping shaft: $\varnothing 8$ mm.
- Self-centering bridge with wear-resistant coating.
- Fixed measuring probe supplied with tungsten carbide ball tip.
- Interchangeable probes supplied with tungsten carbide ball tip.
- Delivery in a wooden case with measuring inserts and spacer rings (from 12 mm).
- Excl. dial indicator or measuring probe.



Meas. depth	250 mm	500 mm	750 mm	1000 mm	1250 mm	1500 mm	2000 mm	2500 mm
Measuring range/mm	Item No. Price EUR	Item No. Price EUR	Item No. Price EUR	Item No. Price EUR	Item No. Price EUR	Item No. Price EUR	Item No. Price EUR	Item No. Price EUR
4.5 - 6	852.520 2,090.00							
6 - 8	852.521 1,509.00	852.522 1,664.00	852.523 1,738.00	852.524 1,843.00				
8 - 12	852.525 1,456.00	852.526 1,602.00	852.527 1,699.00	852.528 1,779.00				
12 - 20	852.529 897.00	852.530 1,157.00	852.531 1,214.00	852.532 1,329.00				
18 - 35	852.533 880.00	852.534 1,070.00	852.535 1,231.00	852.536 1,404.00	852.537 1,566.00			
35 - 60	852.538 856.00	852.539 1,053.00	852.540 1,208.00	852.541 1,502.00	852.542 1,549.00	852.543 1,571.00	852.544 1,692.00	852.545 2,120.00
50 - 100	852.546 1,041.00	852.547 1,231.00	852.548 1,271.00	852.549 1,630.00	852.550 1,699.00	852.551 1,768.00	852.552 1,998.00	852.553 2,300.00
50 - 150	852.554 1,070.00	852.555 1,260.00	852.556 1,301.00	852.557 1,658.00	852.558 1,728.00	852.559 1,803.00	852.560 2,030.00	852.561 2,340.00
100 - 160		852.562 1,432.00	852.563 1,635.00	852.564 1,838.00	852.565 1,946.00	852.566 2,170.00	852.567 2,310.00	852.568 2,620.00
100 - 230		852.569 1,479.00	852.570 1,681.00	852.571 1,884.00	852.572 1,998.00	852.573 2,220.00	852.574 2,360.00	852.575 2,660.00
160 - 290		852.576 1,952.00	852.577 2,150.00	852.578 2,340.00	852.579 2,470.00	852.580 3,110.00	852.581 3,280.00	852.582 3,580.00
160 - 360		852.583 2,010.00	852.584 2,210.00	852.585 2,390.00	852.586 2,510.00	852.587 3,150.00	852.588 3,330.00	852.589 3,630.00
280 - 410		852.590 3,440.00	852.591 3,600.00	852.592 4,310.00	852.593 4,380.00	852.594 4,710.00	852.595 5,380.00	852.596 5,890.00
280 - 510		852.597 3,500.00	852.598 3,660.00	852.599 4,370.00	852.600 4,450.00	852.601 4,770.00	852.602 5,440.00	852.603 5,960.00
500 - 800				852.604 5,650.00	852.605 5,800.00	852.606 6,030.00	852.607 6,750.00	852.608 7,250.00

See for dial indicators the page "Schwenk precision dial indicators".

Schwenk internal measuring instruments with ball probes

Special internal measuring instruments for measuring profiles and internal gearing without a centering bridge. The fixed pin gauge and interchangeable inserts come with internal screw thread, in which ball probes can be placed.

- Measuring range: 8 - 510 mm.
- Read-out depends on the type of dial indicator or measuring probe.
- Accuracy: ≤ 0.002 mm.
- Repeatability: ≤ 0.0005 mm.
- Clamping shaft: $\varnothing 8$ mm.
- Ball probes available from $\varnothing 0.5$ mm, incrementing with 0.001 mm.
Deviation diameter: < 0.002 mm.
- Delivery in a wooden case with measuring inserts and spacer rings (from 12 mm).
- Excl. ball probes and dial indicator or measuring probe.



Internal measuring instruments

Item No.	Measuring range/mm	Measuring depth/mm	Price EUR
852.625	8 - 12	100	957.00
852.627	12 - 22	102	909.00
852.629	22 - 55	110	678.00
852.632	55 - 250	177	742.00
852.636	100 - 510	235	878.00
852.635	Adapter for ball probes (M1.6/M2.5)		36.00
852.091	Adapter for ball probes (M2.5/M4)		36.00

See for dial indicators the page "Schwenk precision dial indicators".

See for measuring probes the pages "Measuring probes".

Item No.	Diameter mm	Thread	Price EUR
Set of ball probes (pair)¹ for 852.625:			
852.107	1	M1.6	180.00
852.004	1.5	M1.6	180.00
852.005	2	M1.6	180.00
Set of ball probes (pair)¹ for 852.627:			
852.982	1	M1.6	170.00
852.006	1.5	M1.6	170.00
852.007	2	M1.6	170.00
852.008	2.5	M1.6	170.00
852.009	3	M1.6	170.00
852.675	3.5	M1.6	170.00
852.671	4	M1.6	170.00
Set of ball probes (pair)¹ for 852.629:			
852.092	1	M2.5	170.00
852.010	1.5	M2.5	170.00
852.011	2	M2.5	170.00
852.012	2.5	M2.5	170.00
852.674	3	M2.5	170.00
852.650	3.5	M2.5	170.00
852.676	4	M2.5	170.00
852.651	4.5	M2.5	170.00
852.677	5	M2.5	170.00
852.013	5.5	M2.5	170.00
852.655	6	M2.5	170.00
852.014	6.5	M2.5	170.00
852.678	7	M2.5	170.00
852.015	7.5	M2.5	228.00
852.016	8	M2.5	228.00
852.017	8.5	M2.5	228.00
852.018	9	M2.5	228.00
852.019	9.5	M2.5	228.00
852.020	10	M2.5	228.00
Set of ball probes (pair)¹ for 852.632/852.636:			
852.021	1	M4	170.00
852.022	1.5	M4	170.00
852.023	2	M4	170.00
852.116	2.5	M4	170.00
852.670	3	M4	170.00
852.653	3.5	M4	170.00
852.913	4	M4	170.00
852.186	4.5	M4	170.00
852.672	5	M4	170.00
852.195	5.5	M4	170.00
852.673	6	M4	170.00
852.024	6.5	M4	170.00
852.914	7	M4	170.00
852.025	7.5	M4	228.00
852.026	8	M4	228.00
852.027	8.5	M4	228.00
852.657	9	M4	228.00
852.028	9.5	M4	228.00
852.656	10	M4	228.00

¹ Special sizes on request.

Schwenk Vario internal measuring instruments

The Vario internal measuring instruments come with an extra high centering bridge that gives a more stable alignment, which means that it is no longer necessary to look for the reversal point. Therefore, these internal measuring instruments are highly useful for serial inspection.

- Measuring range: 20 - 170 mm.
- Read-out depends on the type of dial indicator or measuring probe.
- Accuracy: ≤ 0.002 mm.
- Repeatability: ≤ 0.001 mm.
- Clamping shaft: $\varnothing 8$ mm.
- High self-centering and self-aligning bridge.
- Fixed measuring probe supplied with tungsten carbide ball tip.

- Interchangeable probes supplied with tungsten carbide ball tip.
- Short handle.
- Delivery in a wooden case with measuring inserts and spacer rings.
- Excl. dial indicator or measuring probe.

Item No.	Measuring range/mm	a mm	Price EUR
852.610	20 - 35	21	567.00
852.611	35 - 55	23	546.00
852.612	50 - 80	24	
852.613	80 - 120	24	609.00
852.614	120 - 170	30	622.00



See for dial indicators the page "Schwenk precision dial indicators".

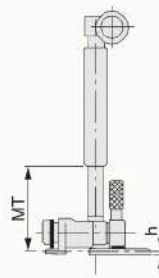
Schwenk internal measuring instruments for blind bores

These internal measuring instruments have been designed in such a way that they can measure the roundness and cylindricity of blind bores almost to the bottom. The adjustable measuring axis can be changed easily, and is equipped with graduations and gearing, so it can't move during measurement.

- Measuring range: 20 - 400 mm (up to 600 mm on request).
- Read-out depends on the type of dial indicator or measuring probe.
- Accuracy: 20 - 60 mm: ≤ 0.004 mm,
50 - 400 mm: ≤ 0.0025 mm.
- Repeatability: ≤ 0.001 mm.
- Clamping shaft: $\varnothing 8$ mm.
- Self-centering bridge.
- Fixed measuring probe supplied with tungsten carbide ball tip.

- Interchangeable, adjustable measuring axes standard supplied with tungsten carbide ball tip.
- Fixed probe and interchangeable axes also available with ruby ball tip.
- Distance ball tips to bottom blind bores (h):
20 - 140 mm: 1.5 mm, 110 - 400 mm: 2.0 mm.
- Delivery in a wooden case with interchangeable axes.
- Excl. dial indicator or measuring probe.

Item No.	Measuring range/mm	MT mm	h mm	Price EUR
852.615	20 - 50	77	1.5	903.00
852.616	20 - 60	77	1.5	954.00
852.617	50 - 110	60	1.5	874.00
852.618	50 - 140	60	1.5	933.00
852.619	110 - 300	90	2.0	1,222.00
852.620	110 - 400	90	2.0	1,478.00



See for dial indicators the page "Schwenk precision dial indicators".

Schwenk Rabito internal measuring instruments

The design of the Rabito internal measuring instruments is based on Schwenk's well-proven principle, and has been developed to offer a high accuracy at a low price. Due to the robust construction very suited for use in the clean room as well as for batch measurements on the production floor.

- Measuring range: 18 - 150 mm.
- Read-out depends on the type of dial indicator or measuring probe.
- Accuracy: ≤ 0.004 mm.
- Repeatability: ≤ 0.002 mm.
- Clamping shaft: $\varnothing 8$ mm.
- Travel: 1.4 mm (18-25 mm: 1.3 mm).
- Fixed and interchangeable measuring probes supplied with tungsten carbide ball tip.
- Item 852.957 consists of item 852.954, an extension up to 50 mm and item 852.956.
- Delivery in a wooden case with measuring inserts and spacer rings.
- Excl. dial indicator or measuring probe.



Item No.	Measuring range/mm	Measuring depth/mm	Price EUR
852.954	18 - 35	176	269.00
852.955	35 - 60	178	261.00
852.956	50 - 150	178	303.00
852.957	18 - 150	178	527.00

See for dial indicators the page "Schwenk precision dial indicators".
See for measuring probes the pages "Measuring probes".

Schwenk internal measuring instruments/contourmeters

Internal measuring instruments to measure the cross-sections of round and not-round bores. The surface of the bores can either be smooth or rough.

- Measuring range: 14 - 330 mm.
- Graduation: 0.1 mm.
- Stainless steel strip.
- Tape width: 20 mm.
- Delivery in a plastic tube.
- Available on request:
 - for outer diameters,
 - with measuring report,
 - digital model (incl. display).



Item No.	Measuring range/mm	Price EUR
852.683	14 - 24	469.00
852.684	22 - 40	436.00
852.685	35 - 60	355.00
852.697	55 - 100	377.00
852.937	95 - 180	471.00
852.991	170 - 255	516.00
852.992	245 - 330	603.00



Marposs M1 Star internal bore gauges

The Marposs bore gauges are ideal for checking bores with high accuracy. The measurements can be performed quickly and extremely repetitively by everyone, even in the workshop. The measuring heads are supplied based on the minimum value to be measured. The transfer of measurements to, for example, Microsoft Excel is possible via an optional digital dial indicator. Both wireless and wired.

- Measuring range: 3 - 300 mm.
- Read-out depends on the type of dial indicator or measuring probe.
- Accuracy (L = measuring range):
 - 0 - 26 mm: $\pm(3\%L + 1 \mu\text{m})$,
 - 26 - 300 mm: $\pm(1\%L + 1 \mu\text{m})$.
- Repeatability: $\leq 0.001 \text{ mm}$.
- Clamping shaft: $\varnothing 8 \text{ mm}$.
- Tungsten carbide stylus tip.
- Available for blind bores and through bores.
- Excl. dial indicator or measuring probe.
- Special-purpose gauge heads and extensions available on request.
- Also available with stylus tip for $RA \geq 2 \mu\text{m}$.
- Several accessories available.
- Robust holders with an integrated display and Bluetooth transmitter can also be ordered on request. These can be used stand-alone or together with other holders. An external graphic display with product drawing is also possible.

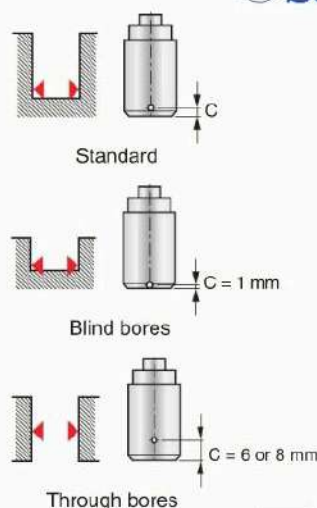


Standard measuring heads

Diameter mm	Thread	C mm	Measuring range/mm	Price EUR
3 - 4	M3.5	2.5	0.055	418.00
4 - 4.5	M3.5	2.5	0.055	366.00
4.5 - 5.5	M3.5	2.5	0.070	366.00
5.5 - 7.5	M3.5	3	0.120	366.00
7.5 - 9.5	M3.5	3	0.120	331.00
9.5 - 15	M6	3	0.120	331.00
15 - 20	M6	3	0.120	331.00
20 - 26	M6	3.5	0.120	384.00
26 - 40	M10	3.5	0.150	431.00
40 - 50	M10	3.5	0.150	470.00
50 - 60	M10	3.5	0.150	513.00
60 - 70	M10	3.5	0.150	544.00
70 - 80	M10	3.5	0.150	570.00
80 - 90	M10	3.5	0.150	603.00
90 - 100	M10	3.5	0.150	629.00

Larger sizes available on request.

Item No.	Description	Price EUR
880.000	M1 Star handle with M3.5 thread	195.00
880.001	M1 Star handle with M6 thread	183.00
880.002	M1 Star handle with M10 thread	212.00
880.003	M1 Star handle with M3.5 thread compact	96.00
880.004	M1 Star handle with M6 thread compact	82.00
880.005	M1 Star handle with M10 thread compact	106.00
Options:		
880.007	Dial indicator protector depth 39 mm	49.00
880.006	Dial indicator protector depth 52 mm	49.00
880.008	Adapter M3.5 for M6 handle	14.50
880.009	Adapter M3.5 for M10 handle	18.10
880.010	Adapter M6 for M10 handle	22.00



Basic instrument compact model



Mitutoyo setting instrument for internal measuring instruments

This instrument offers you the best way to accurately set the zero position of your internal measuring instruments with dial indicator. Gauge blocks are used to set the exact reference value. The special mounting holes assure that the centering device of the micrometer also functions when in use on this instrument, making the checking just as easy as measuring.

The complete instrument (excl. gauge blocks) consists of:

- 1 stand with double guidance, for measuring ranges up to 400 mm,
- 1 receiver for measuring ranges 18 - 35 and 35 - 60 mm,
- 1 receiver for measuring ranges 50 - 100 and 100 - 160 mm,
- 1 receiver for measuring ranges 100 - 250 and 250 - 400 mm,
- 2 flat measuring jaws.

■ Delivery in a wooden box.



Item No.	Adjustment range/mm	Price EUR
515.590	18 - 400	1,625.00

Mitutoyo setting instruments for stick micrometers

This instrument has been especially developed for the calibration of stick micrometers. It consists of a step gauge with ceramic gauge blocks, two clamping elements with V-shaped supports and two 10 mm ceramic gauge blocks.

The ceramic gauge blocks can be clamped to the step gauge at any desired distance of each other. In that way the stick micrometer that has to be checked rests perfectly aligned on the V-shaped supports and touches the gauge blocks with its measuring points. Only suited for mechanical stick micrometers.

- Adjustment range: 25 - 600 mm.
- Increment: 25 mm.
- Max. deviation: 25 - 300 mm: 0.003 mm,
300 - 600 mm: 0.005 mm.
- Conforms to factory standard.



515.585

Item No.	Adjustment range/mm	Price EUR
515.585	25 - 300	1,812.00
515.586	25 - 600	3,824.00

Setting instrument for internal measuring instruments

This instrument offers you the best way to accurately set the zero position of your internal measuring instruments with dial indicator. Gauge blocks are used to set the exact reference value. The special mounting hole assures that the centering device of the micrometer also functions when in use on this instrument, making the checking just as easy as measuring.

- Adjustment range: 18-400 mm.
- The setting instrument consists of a stand with double guidance and a flat measuring jaw.
- Excl. gauge blocks.
- Delivery in a wooden box.



ECONOMY LINE ✓

Item No.	Adjustment range/mm	Price EUR
907.877	18-400	687.00

Alternative: www.schut.com/PDFs/2025-p173-EN.pdf

Setting gauges for inside micrometers

Used for setting of inside micrometers.

- Measuring range: 50-275 mm.
- Delivery in a wooden case.



910.005

ECONOMY LINE ✓

Item No.	Length mm	Accuracy mm	Parallelism mm	Price EUR
910.005	50	±0.003	0.003	37.10
910.006	75	±0.004	0.004	52.00
910.007	100	±0.005	0.005	67.00
910.008	150	±0.005	0.005	96.00
910.009	200	±0.005	0.005	133.00
910.010	250	±0.005	0.005	184.00
910.011	275	±0.005	0.005	214.00



Stick micrometers

- Measuring range: 50 - 600 mm.
- Graduation: 0.01 mm.
- Locking screw (except 906.078).
- Spherical tungsten carbide measuring faces: $\varnothing 8 \times 8$ mm (906.078/079: $\varnothing 9 \times 2.5$ mm).
- With insulating grips (only 906.083 - 906.099).
- Delivery in a wooden case.
- Excl. setting gauge.



906.080



906.096



ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Price EUR
906.078	50 - 75	± 0.006	50.00
906.079	75 - 100	± 0.006	56.00
906.080	100 - 125	± 0.006	63.00
906.081	125 - 150	± 0.008	70.00
906.082	150 - 175	± 0.008	76.00
906.083	175 - 200	± 0.008	81.00
906.084	200 - 225	± 0.009	88.00
906.085	225 - 250	± 0.009	94.00
906.086	250 - 275	± 0.009	101.00
906.087	275 - 300	± 0.009	107.00
906.088	300 - 325	± 0.009	114.00

ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Price EUR
906.089	325 - 350	± 0.009	121.00
906.090	350 - 375	± 0.010	132.00
906.091	375 - 400	± 0.010	141.00
906.092	400 - 425	± 0.010	149.00
906.093	425 - 450	± 0.010	156.00
906.094	450 - 475	± 0.011	163.00
906.095	475 - 500	± 0.011	169.00
906.096	500 - 525	± 0.011	176.00
906.097	525 - 550	± 0.011	183.00
906.098	550 - 575	± 0.011	189.00
906.099	575 - 600	± 0.012	197.00

Stick micrometer sets

- Measuring range: 50-5000 mm.
- Measuring range micrometer:
906.911-906.917: 50- 63 mm,
906.918: 150- 175 mm,
906.919-906.923: 1000-1050 mm.
- Graduation: 0.01 mm.
- Accuracy:
906.911-906.918: $\pm(3+n+L/50)$ μm ,
906.919-906.923: $\pm(7+n+L/50)$ μm
(n = number of extensions,
 L = max. measuring length in mm).
- Locking screw.
- Spherical tungsten carbide measuring faces.
- With insulating grips
(only 906.918-906.923).
- External diameter micrometer/extensions:
906.911-906.917: 15.5 mm,
906.918: 22 mm,
906.919-906.923: 28 mm.
- Incl. setting gauge
(only 906.911-917: 50 mm,
906.918: 150 mm).
- Delivery in a wooden case.



906.918

ECONOMY LINE ✓

Item No.	Measuring range/mm	Number of extensions	Price EUR
906.911*	50- 63	—	86.00
906.912	50- 100	2	91.00
906.913	50- 150	3	97.00
906.914	50- 300	5	132.00
906.915	50- 500	6	165.00
906.916	50-1000	8	395.00
906.917	50-1500	10	589.00
906.918	150-2000	9	1,183.00
906.919*	1000-1050	—	506.00
906.920	1000-2000	5	1,013.00
906.921	1000-3000	6	2,030.00
906.922	1000-4000	7	3,220.00
906.923	1000-5000	8	4,750.00

* Single instrument (without extensions).

Digital stick micrometer sets IP65

- Measuring range: 150-2000 mm.
- Measuring range micrometer: 150-175 mm.
- Resolution: 0.001 mm.
- mm/inch conversion.
- ABS/INC switchable.
- On/off switch.
- Reset/preset.
- Locking screw.
- Spherical tungsten carbide measuring faces.
- With insulating grips
(only 906.797-906.799).
- External diameter micrometer/extensions: 22 mm.
- Protection: IP65.
- Incl. setting gauge: 150 mm.
- Delivery in a wooden case or a plastic case.
- Power supply: 1 battery type V357 or
1 battery type CR2032.



906.796

ECONOMY LINE ✓



906.798

Item No.	Measuring range/mm	Number of extensions	Accuracy μm	Price EUR
906.796*	150- 175	—	6.5	275.00
906.797	150-1000	6	29	578.00
906.798	150-1500	8	39	853.00
906.799	150-2000	9	52	970.00
Options:				
836.535	Battery type V357			0.90
495.157	Battery type CR2032			0.50

* Single instrument (without extensions).

Inside micrometers with interchangeable anvils

Screw thread micrometers for internal measurements of pitch diameters. The interchangeable anvils allow measurements of several kinds of screw thread.

- Measuring range: 75 - 300 mm.
- Graduation: 0.01 mm.
- Locking screw (125 - 300 mm).
- Insert shaft: $\varnothing 5$ mm.
- Delivery incl. setting gauge for metric thread, 60° flank angle.



ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Price EUR
Inside micrometers without inserts:			
906.924	75 - 100	± 0.035	98.00
906.925	100 - 125	± 0.035	110.00
906.926	125 - 150	± 0.035	122.00
906.927	150 - 175	± 0.035	133.00
906.928	175 - 200	± 0.045	145.00
906.929	200 - 225	± 0.045	157.00
906.930	225 - 250	± 0.045	168.00
906.931	250 - 275	± 0.045	180.00
906.932	275 - 300	± 0.055	192.00

ECONOMY LINE ✓

Item No.	Threads per inch	Price EUR
Inserts for Whitworth threads, 55° flank angle, per pair:		
906.940	60 - 48	23.40
906.941	48 - 40	23.40
906.942	40 - 32	23.40
906.944	32 - 24	23.40
906.945	24 - 18	23.40
906.946	18 - 14	23.40
906.947	14 - 10	23.40
906.948	10 - 7	23.40
906.949	7 - 4.5	23.40
906.950	4.5 - 3.5	23.40
906.951	Set 60 - 3.5	196.00

ECONOMY LINE ✓

Item No.	Pitch/mm	Price EUR
Inserts for metric threads, 60° flank angle, per pair:		
906.933	0.4 - 0.5	23.40
906.934	0.6 - 0.9	23.40
906.935	1 - 1.75	23.40
906.936	2 - 3	23.40
906.937	3.5 - 5	23.40
906.938	5.5 - 7	23.40
906.939	Set 0.4 - 7	118.00

ECONOMY LINE ✓

Item No.	Threads per inch	Price EUR
Inserts for UN, UNC and UNF threads, 60° flank angle, per pair:		
906.952	64 - 48	23.40
906.953	44 - 28	23.40
906.954	24 - 14	23.40
906.955	13 - 9	23.40
906.956	8 - 5	23.40
906.957	4.5 - 3.5	23.40
906.958	Set 64 - 3.5	118.00

Internal micrometers

Internal micrometers with special measuring jaws for measurements in hard-to-reach places.

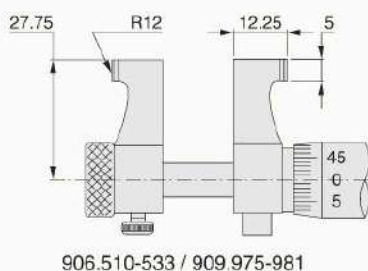
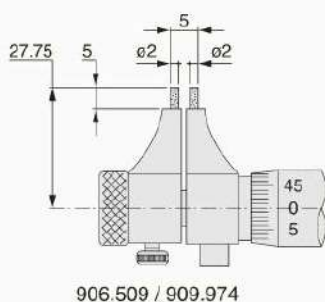
- Measuring range: 5 - 200 mm.
- Analog: graduation 0.01 mm,
digital: resolution 0.001 mm.
- Tungsten carbide cylindrical measuring faces.
- Internal micrometers within measuring range
5 - 50 mm are delivered incl. setting ring.
- Delivery in a plastic case.

Analog

- Matt chrome-plated design.

Digital

- mm/inch conversion.
- ABS/INC switchable.
- Automatic switch-off.
- Reset/preset.
- Power supply: 1 battery type V357 or
1 battery type CR2032.



ECONOMY LINE ✓

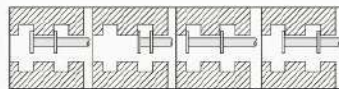
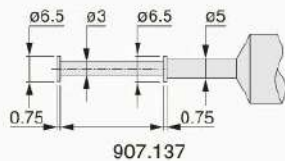
Item No.	Measuring range/mm	Accuracy mm	Price EUR
Analog:			
906.509	5- 30	±0.005	67.00
906.510	25- 50	±0.006	73.00
906.511	50- 75	±0.007	84.00
906.512	75- 100	±0.008	95.00
906.530	100- 125	±0.009	107.00
906.531	125- 150	±0.009	118.00
906.532	150- 175	±0.010	130.00
906.533	175- 200	±0.010	141.00
Digital:			
909.974	5- 30	±0.005	181.00
909.975	25- 50	±0.006	189.00
909.976	50- 75	±0.007	197.00
909.977	75- 100	±0.008	205.00
909.978	100- 125	±0.009	213.00
909.979	125- 150	±0.009	225.00
909.980	150- 175	±0.010	237.00
909.981	175- 200	±0.010	253.00
Options:			
836.535	Battery type V357		0.90
495.157	Battery type CR2032		0.50

Groove micrometers

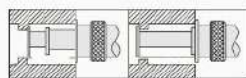
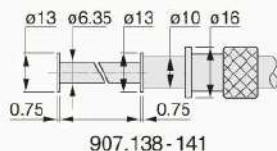
Micrometers for measuring e.g. steps in bores and internal cross grooves. With double graduation for internal and external measurements. By means of the disk-shaped measuring faces the wide, depth and location of grooves in bores can be determined.

- Measuring range:
external measuring: 0 - 100 mm,
internal measuring: 1.6 - 101.5 mm.
- Graduation: 0.01 mm.
- Accuracy: ± 0.01 mm.

- Diameter measuring faces:
907.137: 6.5 mm,
907.138-907.141: 13 mm.
- Double graduation.



907.137



907.138-141

ECONOMY LINE ✓

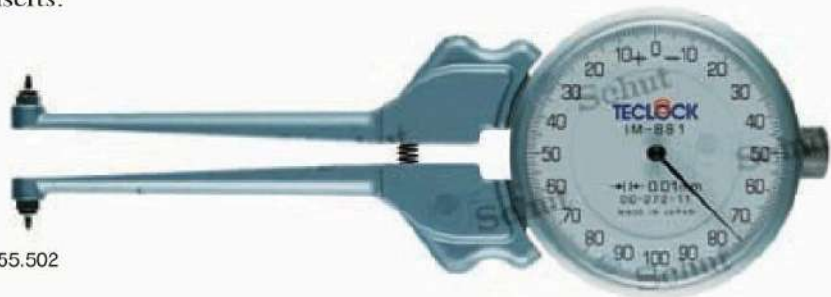
Item No.	Ext. measuring range/mm	Int. measuring range/mm	Price EUR
907.137	0 - 25	1.6 - 26.5	331.00
907.138	0 - 25	1.6 - 26.5	331.00
907.139	25 - 50	26.5 - 51.5	384.00
907.140	50 - 75	51.5 - 76.5	443.00
907.141	75 - 100	76.5 - 101.5	510.00

Two-point internal measuring instruments

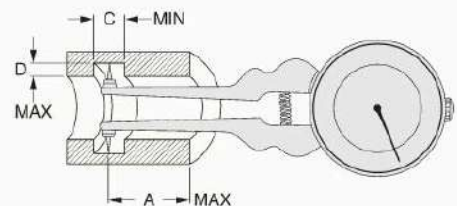
- Measuring range: 20 - 153 mm.
- Graduation: 0.01 mm.
- Accuracy: ± 0.02 mm.
- Interchangeable measuring inserts:
855.501: 6 sets ϕ 1,5 mm,
855.502: 4 sets ϕ 1,5 mm,
855.503: 5 sets ϕ 2 mm.
- Delivery in a plastic case with measuring inserts.



855.502



Item No.	Measuring range/mm	A _{max} mm	C _{min} mm	D _{max} mm	Price EUR
855.501	20 - 35	70	2.5	3	344.00
855.502	30 - 62	75	2.5	5	344.00
855.503	55 - 153	90	3.5	9	362.00

Alternative: www.schut.com/PDFs/2025-p178-EN.pdf


004.261-EN-20250702

Diatest crankshaft meters

- Measuring range: 45 - 500 mm.
- Graduation: 0.01 mm.
- Rotatable dial.

- Delivery in a wooden case with dial indicator, counter-weight and extensions.



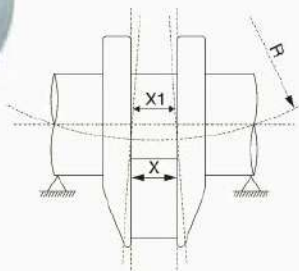
Item No.	Measuring range/mm	Price EUR
831.469	45 - 150	466.00
831.470	60 - 300	423.00
831.471	60 - 500	474.00
Options:		
831.472	Separate dial indicator for 831.469	269.00
831.473	Counterweight for 831.469	12.00
831.474	Separate dial indicator for 831.470 and 831.471	228.00
831.475	Counterweight for 831.470 and 831.471	13.00

Crankshaft meters

- Measuring range: 60 - 500 mm.
- Graduation: 0.01 mm.
- Rotatable dial.
- Delivery in a wooden case with dial indicator, counter-weight and extensions.



907.917



907.919

ECONOMY LINE ✓

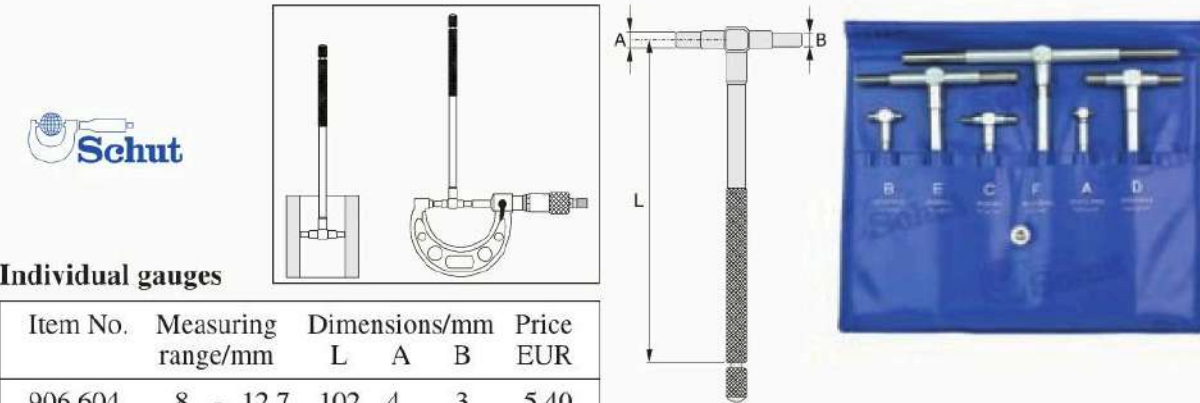
Item No.	Measuring range/mm	Price EUR
907.918	60 - 300	187.00
907.919	60 - 500	197.00
Option:		
907.917	Separate dial indicator	103.00

004.223 EN 20060702

Telescopic gauges

In places that are hard to reach with standard measuring instruments, you can use these telescopic gauges. The spring gauge is put into the bore and centers itself, after that you can turn on the locking screw. Then the gauge is pulled out and you can measure the result, for instance with a micrometer.

- Measuring range: 8 - 150 mm.
- Chrome finished.



Individual gauges

Item No.	Measuring range/mm	Dimensions/mm			Price EUR
		L	A	B	
906.604	8 - 12.7	102	4	3	5.40
906.605	12.7 - 19	102	5	4	5.40
906.606	19 - 32	102	5	4	5.40
906.607	32 - 54	127	7.5	6	5.40
906.608	54 - 90	127	7.5	6	5.40
906.609	90 - 150	127	7.5	6	5.80

Set of gauges

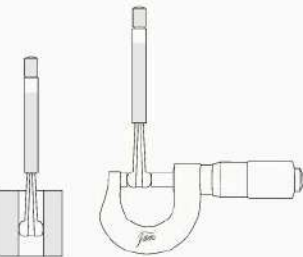
ECONOMY LINE ✓

Item No.	Measuring range/mm	Price EUR
906.610	8 - 150	29.30

Plug gauges for small bores (blind/through)

Ideal for measuring of small bores (blind and through) and grooves. The spring gauge is put into the bore and centers itself, after that you can turn on the locking screw. Then the gauge is pulled out and you can measure the result, for instance with a micrometer. Seperate set for blind bores and through bores.

- Measuring range: 3 - 13 mm (4 gauges: 3 - 5 mm, 5 - 7.5 mm, 7.5 - 10 mm and 10 - 13 mm).
- Chrome finished.



Set of gauges

ECONOMY LINE ✓

Item No.	Description	Price EUR
907.747	For blind bores	21.00
907.748	For through bores	21.00



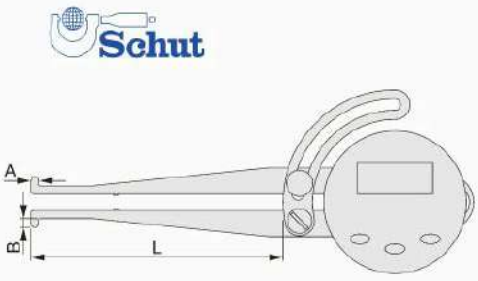
907.747



907.748

Digital internal measuring instrument

- Measuring range: 12.7 - 170 mm.
- Resolution: 0.1 mm.
- Accuracy: ± 0.2 mm.
- mm/inch conversion.
- On/off switch.
- Automatic switch-off.
- Reset.
- Hold function.
- Locking screw.
- Power supply: 1 battery type CR2032.



ECONOMY LINE ✓

Item No.	Measuring range/mm	Length/mm			Price EUR
		L	A	B	
909.409	12.7 - 170	85	3	3	72.00
Option: 495.157 Battery type CR2032					0.50

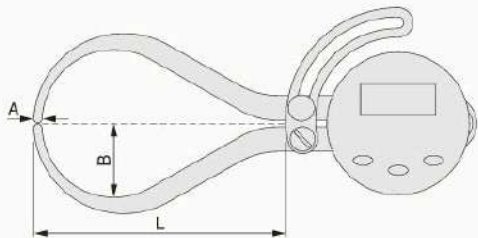
Digital external measuring instrument

- Measuring range: 0 - 160 mm.
- Resolution: 0.1 mm.
- Accuracy: ± 0.2 mm.
- mm/inch conversion.
- On/off switch.
- Automatic switch-off.
- Reset.
- Hold function.
- Locking screw.
- Power supply: 1 battery type CR2032.



ECONOMY LINE ✓

Item No.	Measuring range/mm	Length/mm			Price EUR
		L	A	B	
909.408	0 - 160	85	3	25	72.00
Option: 495.157 Battery type CR2032					0.50



004-314-EN-20200702

Digital internal measuring instruments

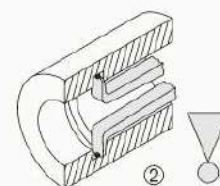
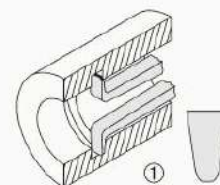
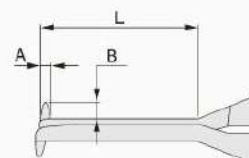
Digital internal measuring instruments for measurements of bores, internal grooves and other hard-to-reach places.

- Measuring range: 5 - 60 mm.
- Resolution: 0.005 mm. Digital-analog display changes automatically between 0.01, 0.02 and 0.05 mm (± 20 scale divisions).
- mm/inch conversion.
- ABS/INC switchable.
- Large LCD display, 340° rotatable.
- On/off switch.
- Automatic switch-off.
- Reset/preset.
- Hold and min/max functions.
- Adjustable tolerance limits.
- Measuring faces with different contact points.
- Delivery in an aluminum case.
- Power supply: 1 battery type CR2032.



ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Length/mm			Contact point/mm	Price EUR
Range 10 mm:			L	A	B		
908.810	5 - 15	±0.02	20	1	1.5	① R 0.3	141.00
908.811	10 - 20	±0.02	25	1.5	3.0	① R 0.3	153.00
908.812	20 - 30	±0.02	30	2	6.5	① R 0.5	153.00
908.813	30 - 40	±0.02	30	2.5	9.0	① R 0.5	153.00
908.814	40 - 50	±0.02	30	2.5	9.0	① R 0.5	153.00
908.816	10 - 20	±0.02	25	1.5	3.0	② ø1.5	176.00
908.817	20 - 30	±0.02	30	2	6.5	② ø1.5	176.00
908.818	30 - 40	±0.02	30	2.5	9.0	② ø1.5	176.00
908.819	40 - 50	±0.02	30	2.5	9.0	② ø1.5	176.00
Range 20 mm:							
908.820	5 - 25	±0.03	35	1	1.5	① R 0.3	153.00
908.821	10 - 30	±0.03	55	2	3.5	① R 0.5	169.00
908.822	20 - 40	±0.03	80	3	6.5	① R 0.5	169.00
908.823	30 - 50	±0.03	80	3	8.5	① R 0.5	169.00
908.824	40 - 60	±0.03	80	3	8.5	① R 0.5	176.00
908.826	10 - 30	±0.03	55	2	3.5	② ø1.5	194.00
908.827	20 - 40	±0.03	80	3	6.5	② ø1.5	194.00
908.828	30 - 50	±0.03	80	3	8.5	② ø1.5	194.00
908.829	40 - 60	±0.03	80	3	8.5	② ø1.5	202.00
Option: 495.157 Battery type CR2032							0.50



Internal measuring instruments

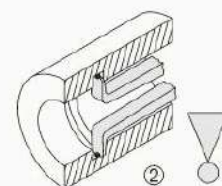
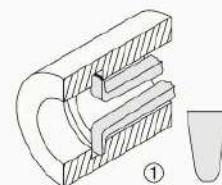
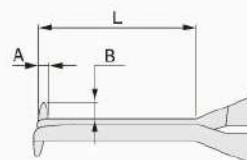
Internal measuring instruments for measurements of bores, internal grooves and other hard-to-reach places.

- Measuring range: 5 - 60 mm.
- Graduation: 0.01 mm.
- Rotatable dial.
- Adjustable tolerance markers.
- Measuring faces with different contact points.
- Delivery in an aluminum case.



ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Length/mm L A B	Contact point/mm	Price EUR
Range 10 mm:					
908.830	5 - 15	±0.02	20 1 1.5	① R 0.3	143.00
908.831	10 - 20	±0.02	25 1.5 3.0	① R 0.3	155.00
908.832	20 - 30	±0.02	30 2 6.5	① R 0.5	155.00
908.833	30 - 40	±0.02	30 2.5 9.0	① R 0.5	155.00
908.834	40 - 50	±0.02	30 2.5 9.0	① R 0.5	155.00
908.836	10 - 20	±0.02	25 1.5 3.0	② ø 1.5	178.00
908.837	20 - 30	±0.02	30 2 6.5	② ø 1.5	178.00
908.838	30 - 40	±0.02	30 2.5 9.0	② ø 1.5	178.00
908.839	40 - 50	±0.02	30 2.5 9.0	② ø 1.5	178.00
Range 20 mm:					
908.840	5 - 25	±0.03	35 1 1.5	① R 0.3	155.00
908.841	10 - 30	±0.03	55 2 3.5	① R 0.5	170.00
908.842	20 - 40	±0.03	80 3 6.5	① R 0.5	170.00
908.843	30 - 50	±0.03	80 3 8.5	① R 0.5	170.00
908.844	40 - 60	±0.03	80 3 8.5	① R 0.5	177.00
908.846	10 - 30	±0.03	55 2 3.5	② ø 1.5	196.00
908.847	20 - 40	±0.03	80 3 6.5	② ø 1.5	196.00
908.848	30 - 50	±0.03	80 3 8.5	② ø 1.5	196.00
908.849	40 - 60	±0.03	80 3 8.5	② ø 1.5	204.00



Digital external measuring instruments

Digital external measuring instruments for measurements of external grooves, axis diameters, wall thicknesses and other hard-to-reach places.

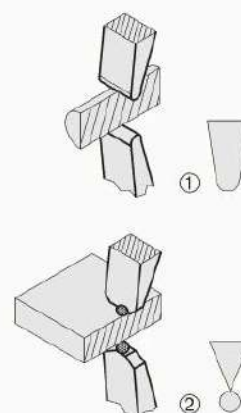
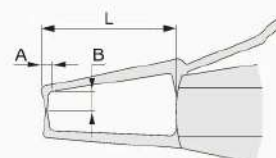
- Measuring range: 0 - 60 mm.
- Resolution: 0.005 mm. Digital-analog display changes automatically between 0.01, 0.02 and 0.05 mm (± 20 scale divisions).
- mm/inch conversion.
- ABS/INC switchable.
- Large LCD display, 340° rotatable.
- On/off switch.
- Automatic switch-off.
- Reset/preset.
- Hold and min/max functions.
- Adjustable tolerance limits.
- Measuring faces with different contact points.
- Delivery in an aluminum case.
- Power supply: 1 battery type CR2032.



908.850

ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Length/mm			Contact point/mm	Price EUR
Range 10 mm:							
908.850	0 - 10	±0.02	40	3	8	① R 0.5	141.00
908.851	10 - 20	±0.02	40	3	8	① R 0.5	153.00
908.852	20 - 30	±0.02	40	3	8	① R 0.5	153.00
908.853	30 - 40	±0.02	40	3	8	① R 0.5	153.00
908.854	40 - 50	±0.02	40	3	8	① R 0.5	153.00
908.855	0 - 10	±0.02	40	3	8	② ø 1.5	163.00
908.856	10 - 20	±0.02	40	3	8	② ø 1.5	176.00
908.857	20 - 30	±0.02	40	3	8	② ø 1.5	176.00
908.858	30 - 40	±0.02	40	3	8	② ø 1.5	176.00
908.859	40 - 50	±0.02	40	3	8	② ø 1.5	176.00
Range 20 mm:							
908.860	0 - 20	±0.03	80	6.5	25	① R 0.75	153.00
908.861	10 - 30	±0.03	80	6.5	25	① R 0.75	169.00
908.862	20 - 40	±0.03	80	6.5	25	① R 0.75	169.00
908.863	30 - 50	±0.03	80	6.5	25	① R 0.75	169.00
908.864	40 - 60	±0.03	80	6.5	25	① R 0.75	176.00
908.865	0 - 20	±0.03	80	6.5	25	② ø 1.5	176.00
908.866	10 - 30	±0.03	80	6.5	25	② ø 1.5	194.00
908.867	20 - 40	±0.03	80	6.5	25	② ø 1.5	194.00
908.868	30 - 50	±0.03	80	6.5	25	② ø 1.5	194.00
908.869	40 - 60	±0.03	80	6.5	25	② ø 1.5	202.00
Option:							
495.157	Battery type CR2032						0.50



External measuring instruments

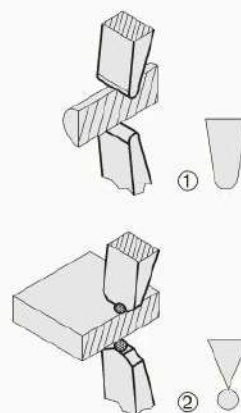
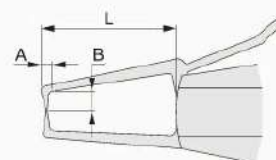
External measuring instruments for measurements of external grooves, axis diameters, wall thicknesses and other hard-to-reach places.

- Measuring range: 0 - 60 mm.
- Graduation: 0.01 mm.
- Rotatable dial.
- Adjustable tolerance markers.
- Measuring faces with different contact points.
- Delivery in an aluminum case.



ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Length/mm			Contact point/mm	Price EUR
Range 10 mm:							
908.870	0 - 10	±0.02	40	3	8	① R 0.5	143.00
908.871	10 - 20	±0.02	40	3	8	① R 0.5	155.00
908.872	20 - 30	±0.02	40	3	8	① R 0.5	155.00
908.873	30 - 40	±0.02	40	3	8	① R 0.5	155.00
908.874	40 - 50	±0.02	40	3	8	① R 0.5	155.00
908.875	0 - 10	±0.02	40	3	8	② ø 1.5	164.00
908.876	10 - 20	±0.02	40	3	8	② ø 1.5	178.00
908.877	20 - 30	±0.02	40	3	8	② ø 1.5	178.00
908.878	30 - 40	±0.02	40	3	8	② ø 1.5	178.00
908.879	40 - 50	±0.02	40	3	8	② ø 1.5	178.00
Range 20 mm:							
908.880	0 - 20	±0.03	80	6.5	25	① R 0.75	155.00
908.881	10 - 30	±0.03	80	6.5	25	① R 0.75	170.00
908.882	20 - 40	±0.03	80	6.5	25	① R 0.75	170.00
908.883	30 - 50	±0.03	80	6.5	25	① R 0.75	170.00
908.884	40 - 60	±0.03	80	6.5	25	① R 0.75	177.00
908.885	0 - 20	±0.03	80	6.5	25	② ø 1.5	178.00
908.886	10 - 30	±0.03	80	6.5	25	② ø 1.5	196.00
908.887	20 - 40	±0.03	80	6.5	25	② ø 1.5	196.00
908.888	30 - 50	±0.03	80	6.5	25	② ø 1.5	196.00
908.889	40 - 60	±0.03	80	6.5	25	② ø 1.5	204.00



Krœplin digital internal and external measuring instruments IP67

Krœplin's new generation of QuickTest measuring instruments has a compact, ergonomical design. The digital-analog display makes read-out easier. Now with wireless rechargeable battery and Bluetooth data interface.

- Measuring range: 0 - 25 mm.
- Resolution: 0.001, 0.002, 0.005 or 0.01 mm, adjustable.
- mm/inch conversion.
- ABS/INC switchable.
- Mitutoyo Digimatic, Mitutoyo U-WAVE, USB or Bluetooth data outputs optionally available.
- With tolerance display by means of red/green LED.
- Hold and min/max functions.
- Bluetooth: up to 8 gauges simultaneously.
- Automatic switch-off.
- Storage for 100 measuring values.
- Reset/preset.
- Protection: IP67.
- Wireless charging.
- Delivery with a manufacturer measuring report and charging pad.
- Power supply: rechargeable li-polymer battery.



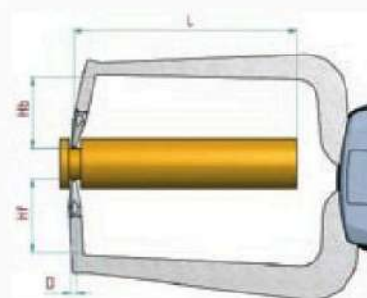
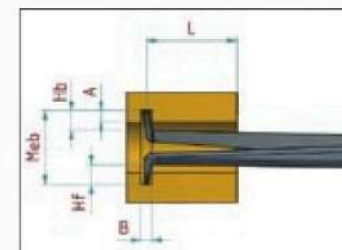
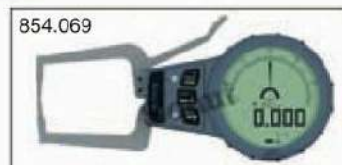
Item No.	Type	Measuring range/mm	Resolution mm	Accuracy mm	Repeatability mm	Price EUR
Internal measuring instruments:						
854.066	G002	2.5 - 12.5	0.001	±0.01	0.005	506.60
854.067	G005	5 - 20	0.001	±0.01	0.005	506.60
854.068	G010	10 - 25	0.001	±0.01	0.005	506.60
External measuring instruments:						
854.069	C015	0 - 15	0.001	±0.01	0.005	506.60
854.070	C015S	0 - 15	0.001	±0.015	0.005	506.60
Options:						
854.071	Digimatic interface type 8006-17					107.50
965.013 ¹	Digimatic cable					76.00
206.380 ¹	USB cable					128.00
102.790 ¹	U-WAVE cable					98.00
854.072 ²	Bluetooth interface adapter type 8006-16					107.50
854.073	Bluetooth PC dongle type 0682-60					9.80
854.074	Wooden case type 1732-38					48.30

¹ For data output the Digimatic interface and cable are needed.

² Bluetooth interface adapter is delivered with a Bluetooth PC dongle (854.073).

Item No.	Meas. depth L/mm	Groove depth A/mm	Groove width B/mm	Type of insert	Insert length Hb/mm	Insert length Hf/mm
854.066	12	0.7	0.6	① R0.12	0.9	0.9
854.067	44	2.2	0.8	② ø0.6	2.2	2.2
854.068	46	4	1.5	② ø1	4.4	4.4
854.069	45	—	—	③ ø1.5	17	17
854.070	45	—	—	④ R0.4	12	12

See for ① and ②: ① and ② on the page "Overview Krœplin internal measuring instruments".
See for ③ and ④: ① and ② on the page "Overview Krœplin external measuring instruments".



Kröplin digital internal measuring instruments IP67

Kröplin's new generation of quicktest measuring instruments has a compact, ergonomic design. The digital-analog display makes read-out easier.

- Measuring range: 2.5 - 200 mm.
- Resolution: 0.001, 0.002, 0.005, 0.01, 0.02 or 0.05 mm, adjustable.
- mm/inch conversion.
- ABS/INC switchable.
- Mitutoyo Digimatic, Mitutoyo U-WAVE, Bluetooth and USB data outputs optionally available.
- Automatic switch-off.
- Storage for 100 measuring values.
- Reset/preset.
- With tolerance display by means of red/green LED.
- Hold and min/max functions.
- Protection: IP67.
- Delivery with a manufacturer measuring report.
- Power supply: 2 batteries type AAA.



854.915

Item No.	Type	Measuring range/mm	Accuracy mm	Repeatability mm	Price EUR
854.913 ^①	L102	2.5 - 12.5	±0.015	0.005	452.60
854.914 ^①	L105	5 - 15	±0.015	0.005	452.60
854.915 ^①	L210	10 - 30	±0.03	0.01	452.60
854.916 ^①	L220	20 - 40	±0.03	0.01	452.60
854.917 ^①	L230	30 - 50	±0.03	0.01	452.60
854.918 ^①	L240	40 - 60	±0.03	0.01	452.60
854.919 ^①	L250	50 - 70	±0.03	0.01	452.60
854.920 ^①	L260	60 - 80	±0.03	0.01	452.60
854.921 ^①	L270	70 - 90	±0.03	0.01	452.60
854.960 ^①	L280	80 - 100	±0.03	0.01	452.60
854.012 ^②	L313	13 - 43	±0.04	0.02	452.60
854.013 ^②	L330	30 - 60	±0.04	0.02	452.60
854.014 ^②	L350	50 - 80	±0.04	0.02	452.60
854.015 ^②	L370	70 - 100	±0.04	0.02	452.60
854.016 ^②	L390	90 - 120	±0.04	0.02	452.60
854.017 ^②	L415	15 - 65	±0.05	0.03	625.90
854.018 ^②	L440	40 - 90	±0.05	0.03	625.90
854.042 ^②	L470	70 - 120	±0.05	0.03	625.90
854.100 ^②	L4100	100 - 150	±0.05	0.03	625.90
854.700 [*]	L4150	150 - 200	±0.05	0.03	672.00
Options:					
497.914	Battery type AAA (2 needed)				0.80
854.952 ¹	Interface type 1961-09				48.30
965.013 ¹	Digimatic cable				76.00
206.380 ¹	USB cable				128.00
102.790 ¹	U-WAVE cable				98.00
854.092 ²	Bluetooth interface adapter type 1961-13 (only K and L series)				111.90
854.073	Bluetooth PC dongle type 0682-60				9.80
854.113 ^③	Wooden case type 1732-65 (only K and L series)				54.70
854.084 ^③	Wooden case type 1732-71 (only K and L series)				55.60

¹ For data output an interface and cable are needed.

² Bluetooth interface adapter is delivered with a Bluetooth PC dongle (854.073).

^{*} Delivery incl. wooden case.



854.113

For specifications refer to the Kröplin internal measuring instruments overview.

Kröplin internal measuring instruments Intertest IP65

Measuring instruments for accurate and reliable measurements of internal dimensions.

- Measuring range: 2.5 - 430 mm.
- Graduation: 0.005, 0.01, 0.05, 0.1 or 0.2 mm.
- Very fine tolerances on the various parts.
- Impact and shock-resistant housing.
- Dust and drip proof.
- Damped movement of the measuring arm.
- Adjustable tolerance markers.
- Protection: IP65.
- Delivery with a manufacturer measuring report.



854.922



854.924

Item No.	Type	Meas. range mm	Graduation mm	Accuracy mm	Repeatability mm	Price EUR
854.922 ^①	H102	2.5 - 12.5	0.005	±0.015	0.005	440.20
854.923 ^①	H105	5 - 15	0.005	±0.015	0.005	440.20
854.924 ^①	H210	10 - 30	0.01	±0.03	0.01	440.20
854.925 ^①	H220	20 - 40	0.01	±0.03	0.01	440.20
854.926 ^①	H230	30 - 50	0.01	±0.03	0.01	440.20
854.927 ^①	H240	40 - 60	0.01	±0.03	0.01	440.20
854.928 ^①	H250	50 - 70	0.01	±0.03	0.01	440.20
854.929 ^①	H260	60 - 80	0.01	±0.03	0.01	440.20
854.930 ^①	H270	70 - 90	0.01	±0.03	0.01	440.20
854.931 ^①	H280	80 - 100	0.01	±0.03	0.01	440.20
854.019 ^②	H415	15 - 65	0.05	±0.05	0.025	506.60
854.020 ^②	H440	40 - 90	0.05	±0.05	0.025	506.60
854.021 ^②	H470	70 - 120	0.05	±0.05	0.025	583.60
854.022 ^②	H4100	100 - 150	0.05	±0.05	0.025	583.60
854.023 ^②	H4130	130 - 180	0.05	±0.05	0.025	583.60
854.024 ^②	H4150	150 - 200	0.05	±0.05	0.025	625.90
854.227 ^③	H850	50 - 150	0.1	±0.15	0.1	955.80
854.228 ^③	H870	70 - 170	0.1	±0.15	0.1	955.80
854.361 ^④	H1290	90 - 190	0.1	±0.3	0.1	1,180.60
854.360 ^④	H12150	150 - 250	0.1	±0.3	0.1	1,180.60
854.362 ^④	H16200	200 - 400	0.2	±0.4	0.2	1,266.90
854.932 ^⑤	H2M50	50 - 100	0.01	±0.03	0.015	672.00
854.933 ^⑤	H2M90	90 - 140	0.01	±0.03	0.015	672.00
854.957 ^⑤	H2M130	130 - 180	0.01	±0.03	0.015	720.90
854.025 ^⑥	H4M180	180 - 310	0.05	±0.1	0.05	773.50
854.026 ^⑥	H4M300	300 - 430	0.05	±0.15	0.05	830.20
Options:						
859.233 ^⑦	Wooden case type 1732-45					32.70
854.098 ^②	Wooden case type 1732-51					48.30
854.099 ^②	Wooden case type 1732-53					54.70

^① Delivery incl. wooden case.

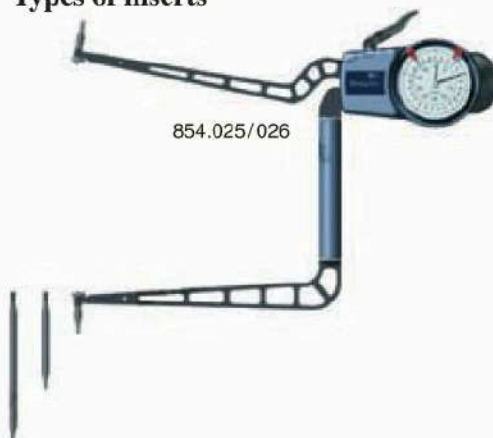
For specifications refer to the Kröplin internal measuring instruments overview.



859.233



Types of inserts



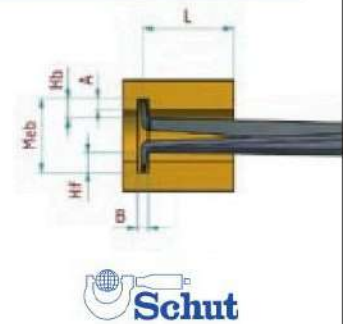
854.025/026



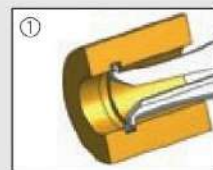
854.932/933/957

Overview Kröplin internal measuring instruments

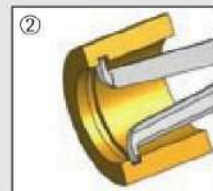
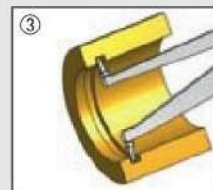
Item No.	Measuring range mm	Meas. depth L/mm	Groove depth A/mm	Groove width B/mm	Type of insert	Insert length/mm Hb Hf	
Digital internal measuring instruments:							
854.913	2.5 - 12.5	12	0.7	0.5	① R0.12	0.9	0.9
854.914	5 - 15	35	2.3	0.8	② ø0.6	2.5	2.5
854.915	10 - 30	85	5.2	1.5	② ø1	5.3	5.3
854.916	20 - 40	85	7	1.5	② ø1	7.3	7.3
854.917	30 - 50	85	7	1.5	② ø1	7.3	7.3
854.918	40 - 60	85	8.3	1.5	③ ø1	8.5	8.5
854.919	50 - 70	85	8.3	1.5	③ ø1	8.5	8.5
854.920	60 - 80	85	8.3	1.5	③ ø1	8.5	8.5
854.921	70 - 90	85	8.3	1.5	③ ø1	8.5	8.5
854.960	80 -100	85	8.3	1.5	③ ø1	8.5	8.5
854.012	13 - 43	127	5.7	1.6	② ø1.3	5.9	5.9
854.013	30 - 60	132	6.2	1.8	③ ø1.5	6.5	6.5
854.014	50 - 80	132	8.3	2.5	② ø2	8.5	8.5
854.015	70 -100	132	8.3	2.5	③ ø2	8.5	8.5
854.016	90 -120	132	8.3	2.5	③ ø2	8.5	8.5
854.017	15 - 65	188	5.5	2	② ø1.5	6	6
854.018	40 - 90	192	8.3	2.5	③ ø2	8.5	8.5
854.042	70 -120	192	8.3	2.5	③ ø2	8.5	8.5
854.100	100 -150	192	8.3	2.4	③ ø2	8.5	8.5
854.700	150 -200	192	8.3	2.4	③ ø2	8.5	8.5
Internal measuring instruments Intertest:							
854.922	2.5- 12.5	12	0.7	0.5	① R0.12	0.9	0.9
854.923	5 - 15	35	2.3	0.8	② ø0.6	2.5	2.5
854.924	10 - 30	85	5.2	1.5	② ø1	5.3	5.3
854.925	20 - 40	85	7	1.5	② ø1	7.3	7.3
854.926	30 - 50	85	7	1.5	② ø1	7.3	7.3
854.927	40 - 60	85	8.3	1.5	③ ø1	8.5	8.5
854.928	50 - 70	85	8.3	1.5	③ ø1	8.5	8.5
854.929	60 - 80	85	8.3	1.5	③ ø1	8.5	8.5
854.930	70 - 90	85	8.3	1.5	③ ø1	8.5	8.5
854.931	80 -100	85	8.3	1.5	③ ø1	8.5	8.5
854.019	15 - 65	188	5.5	2	② ø1.5	6	6
854.020	40 - 90	192	8.3	2.5	③ ø2	8.5	8.5
854.021	70 -120	192	8.3	2.5	③ ø2	8.5	8.5
854.022	100 -150	192	8.3	2.4	③ ø2	8.5	8.5
854.023	130 -180	192	8.3	2.4	③ ø2	8.5	8.5
854.024	150 -200	192	8.3	2.4	③ ø2	8.5	8.5
854.227	50 -150	395	3	5.5	④ ø5	4	4
854.228	70 -170	395	13	5.5	④ ø5	14	14
854.361	90 -190	535	12	5.5	④ ø5	13	13
854.360	150 -250	535	29	5.5	④ ø5	30	30
854.362	200 -400	720	28	21	⑤ SR20	29	29
Item No.	Measuring range mm	Number of inserts	Measuring range per insert/mm	Meas. depth L/mm	Type of insert	Insert length/mm Hb Hf	
Internal measuring instruments Intertest:							
854.932	50 -100	4	20	85	③ ø1	12	21/31/41/51
854.933	90 -140	4	20	85	③ ø1	12	21/31/41/51
854.957	130 -180	4	20	85	③ ø1	12	21/31/41/51
854.025	180 -310	3	50	170	③ ø2	21	20/60/100
854.026	300 -430	3	50	170	③ ø2	21	20/60/100



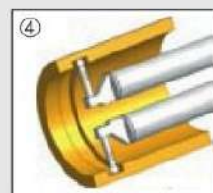
Types of inserts



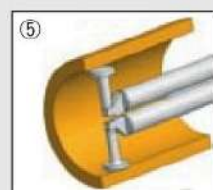
R=0.1 mm

TC-ball
ø 0.6, 1, 1.3 or 1.5 mm

TC-ball ø 1 or 2 mm



ø 5 mm



SR 20 mm

Wooden cases for Krœplin internal and external measuring instruments

Wooden cases of high quality with foam inlay for Krœplin internal and external measuring instruments. For more information please contact our sales department.



Item No.	Type	Description	Price EUR
854.113	1732-65	Wooden case for K1.., K2.., L1.., L2.. models	54.70
854.084	1732-71	Wooden case for K3.., K4.., L3.., L4.. models	55.60
859.233	1732-45	Wooden case for C1.., C2.., D1.., D2.., G1.., G2.., H1.., H2.. models	32.70
854.098	1732-51	Wooden case for C3.., C4.., D4.., G3.., G4.., H4.. models	48.30
854.074	1732-38	Wooden case for C0.., G0.. models	48.30
854.099	1732-53	Wooden case for D8.., H8.. models	54.70

Holders for Krœplin internal and external measuring instruments

These holders are intended for mounting Krœplin internal and external measuring instruments in your measurement setup. With the $\varnothing 8$ mm clamping shank, these holders can be used with most dial indicator stands. For these stands see dial indicator stands elsewhere in the catalog. For more information please contact our sales department.



Item No.	Type	Description	Price EUR
854.725	8007-10	Holder for K and L models	92.70
854.850	8004-50	Holder for C1.., C2.., D1.., D2.., G1.., G2.., H1.., H2.. models	92.70
854.711	8004-55	Holder for C3.., C4.., D4.., G3.., G4.., H4.. models	92.70
854.980	8004-58	Holder for C0.., G0.. models	92.70

Krøplin digital external measuring instruments IP67

Krøplin's new generation of QuickTest measuring instruments has a compact, ergonomic design. The digital-analog display makes read-out easier.

- Measuring range: 0 - 50 mm.
- Resolution: 0.001, 0.002, 0.005, 0.01, 0.02 or 0.05 mm, adjustable.
- mm/inch conversion.
- ABS/INC switchable.
- Mitutoyo Digimatic, Mitutoyo U-WAVE, Bluetooth and USB data outputs optionally available.
- Automatic switch-off.
- Storage for 100 measuring values.
- Reset/preset.
- With tolerance display by means of red/green LED.
- Hold and min/max functions.
- Protection: IP67.
- Delivery with a manufacturer measuring report.
- Power supply: 2 batteries type AAA.



854.908

Item No.	Type	Measuring range/mm	Accuracy mm	Repeatability mm	Price EUR
854.905 ^①	K110	0 - 10	±0.015	0.005	452.60
854.961 ^①	K110S	0 - 10	±0.015	0.005	452.60
854.906 ^①	K110T	0 - 10	±0.02	0.005	452.60
854.907 ^①	K1R10	0 - 10	±0.015	0.005	452.60
854.962 ^①	K1R10S	0 - 10	±0.015	0.005	452.60
854.908 ^①	K220	0 - 20	±0.03	0.01	452.60
854.963 ^①	K220S	0 - 20	±0.03	0.01	452.60
854.955 ^①	K220T	0 - 20	±0.04	0.01	452.60
854.950 ^①	K2R20	0 - 20	±0.03	0.01	452.60
854.956 ^①	K2R20S	0 - 20	±0.03	0.01	452.60
854.027 ^②	K330	0 - 30	±0.04	0.02	452.60
854.036 ^②	K330S	0 - 30	±0.04	0.02	452.60
854.029 ^②	K330T	0 - 30	±0.06	0.04	452.60
854.028 ^②	K3R30	0 - 30	±0.04	0.02	452.60
854.037 ^②	K3R30S	0 - 30	±0.04	0.02	452.60
854.030 ^②	K450	0 - 50	±0.05	0.03	625.90
854.032 ^②	K450T	0 - 50	±0.06	0.04	625.90
854.031 ^②	K4R50	0 - 50	±0.05	0.03	625.90
Options:					
497.914	Battery type AAA (2 needed)				0.80
854.952 ¹	Interface type 1961-09				48.30
965.013 ¹	Digimatic cable				76.00
206.380 ¹	USB cable				128.00
102.790 ¹	U-WAVE cable				98.00
854.092 ²	Bluetooth interface adapter type 1961-13 (only K and L series)				111.90
854.073	Bluetooth PC dongle type 0682-60				9.80
854.113 ^①	Wooden case type 1732-65 (only K and L series)				54.70
854.084 ^②	Wooden case type 1732-71 (only K and L series)				55.60



854.113

For specifications refer to the Krøplin external measuring instruments overview.

¹ For data output an interface and cable are needed.

² Bluetooth interface adapter is delivered with a Bluetooth PC dongle (854.073).

Krœplin external measuring instruments Oditest IP65

External measuring instrument in a version which is highly accurate and reliable.

- Measuring range: 0 - 200 mm.
- Graduation: 0.005, 0.01, 0.05, 0.1 or 0.2 mm.
- Very fine tolerances on the various parts.
- Impact and shock-resistant housing.
- Dust and drip proof.
- Damped movement of the measuring arm.
- Adjustable tolerance markers.
- Protection: IP65.
- Delivery with a manufacturer measuring report.



854.934

For specifications refer to the Krœplin external measuring instruments overview.

Item No.	Type	Meas. range mm	Graduation mm	Accuracy mm	Repeatability mm	Price EUR
854.909 ^①	D110	0- 10	0.005	±0.015	0.005	440.20
854.910 ^①	D110T	0- 10	0.005	±0.02	0.005	440.20
854.911 ^①	D1R10	0- 10	0.005	±0.015	0.005	440.20
854.912 ^①	D1R10S	0- 10	0.005	±0.015	0.005	440.20
854.934 ^①	D220	0- 20	0.01	±0.03	0.01	440.20
854.935 ^①	D220S	0- 20	0.01	±0.03	0.01	440.20
854.936 ^①	D220T	0- 20	0.01	±0.04	0.01	440.20
854.937 ^①	D2R20	0- 20	0.01	±0.03	0.01	440.20
854.938 ^①	D2R20S	0- 20	0.01	±0.03	0.01	440.20
854.033 ^②	D450	0- 50	0.05	±0.05	0.025	506.60
854.034 ^②	D450S	0- 50	0.05	±0.05	0.025	506.60
854.035 ^②	D450T	0- 50	0.05	±0.1	0.05	544.00
854.038 ^②	D4R50	0- 50	0.05	±0.05	0.025	506.60
854.039 ^②	D4R50S	0- 50	0.05	±0.05	0.025	506.60
854.225 ^③	D8100	0-100	0.1	±0.15	0.1	955.80
854.109 ^③	D8R100	0-100	0.1	±0.15	0.1	955.80
854.226 ^③	D8100T	0-100	0.1	±0.15	0.1	955.80
854.363 ^④	D12100	0-100	0.1	±0.3	0.2	1,180.60
854.364 ^④	D12100BJ	0-100	0.1	±0.3	0.2	1,266.90
854.365 ^④	D12100T	0-100	0.1	±0.3	0.2	1,266.90
854.366 ^④	D16200	0-200	0.2	±0.4	0.2	1,266.90
Options:						
859.233 ^⑤	Wooden case type 1732-45					32.70
854.098 ^⑤	Wooden case type 1732-51					48.30
854.099 ^⑤	Wooden case type 1732-53					54.70

* Delivery incl. wooden case.



859.233

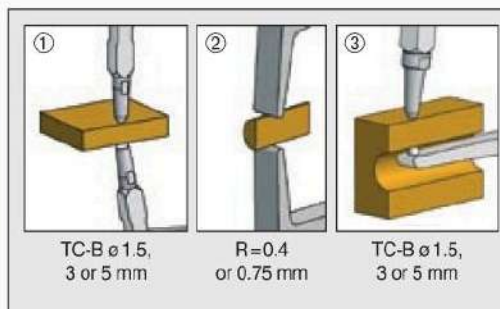
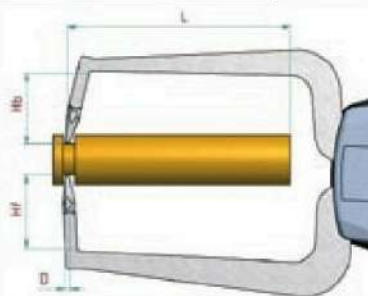
Overview Krœplin external measuring instruments

External measuring instruments Oditest

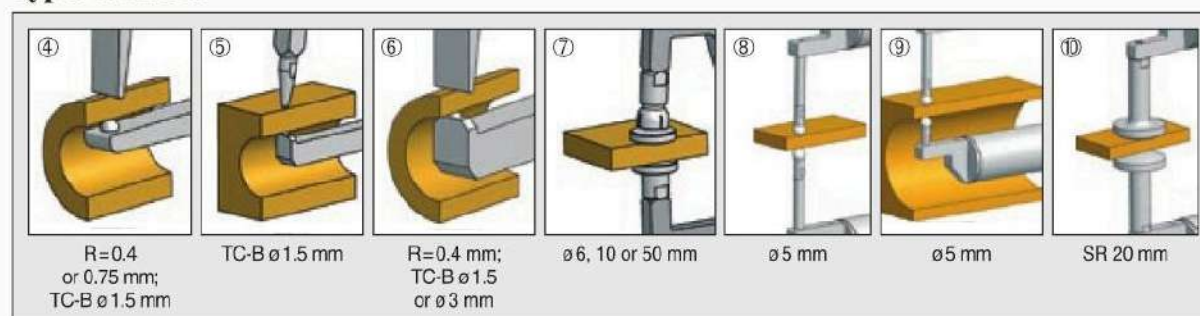
Item No.	Measuring range/mm	Meas. depth L/mm	Type of insert	Insert length Hb	Hf
854.909	0- 10	35	① $\phi 1.5$	19.1	18.6
854.910	0- 10	35	⑦ $\phi 6$	21.7	14.8
854.911	0- 10	35	③ $\phi 1.5$	19.1	0.9
854.912	0- 10	35	④ R0.4	18.8	0.9
854.934	0- 20	85	① $\phi 1.5$	24.7	24.6
854.935	0- 20	85	② R0.4	24.7	24.6
854.936	0- 20	85	⑦ $\phi 10$	28.2	20.7
854.937	0- 20	80	⑤ $\phi 1.5$	24.7	2.5
854.938	0- 20	80	⑥ R0.4	24.7	2.5
854.033	0- 50	167	① $\phi 3$	30	30
854.034	0- 50	167	② R0.75	30	30
854.035	0- 50	167	⑦ $\phi 50$	36	24
854.038	0- 50	169	③ $\phi 3$	30	4.3
854.039	0- 50	169	④ R0.75	30	4.3
854.225	0-100	375	⑧ $\phi 5$	33	33
854.109	0-100	382	⑨ $\phi 5$	35	15
854.226	0-100	375	⑦ $\phi 50$	39	7
854.363	0-100	530	⑧ $\phi 5$	30	30
854.364	0-100	530	⑧ $\phi 5$	30	124
854.365	0-100	550	⑦ $\phi 50$	34	14
854.366	0-200	728	⑩ 20	98	98

Digital external measuring instruments

Item No.	Measuring range/mm	Meas. depth L/mm	Type of insert	Insert length Hb	Hf
854.905	0- 10	35	① $\phi 1.5$	19.1	18.6
854.961	0- 10	35	② R0.4	18.8	18.5
854.906	0- 10	35	⑦ $\phi 6$	21.7	14.8
854.907	0- 10	35	③ $\phi 1.5$	19.1	0.9
854.962	0- 10	35	④ $\phi 1.5$	18.8	0.9
854.908	0- 20	85	① $\phi 1.5$	24.7	24.6
854.963	0- 20	85	② R0.4	24.7	24.6
854.955	0- 20	85	⑦ $\phi 10$	28.2	20.7
854.950	0- 20	80	⑤ $\phi 1.5$	24.7	2.5
854.956	0- 20	80	⑥ $\phi 1.5$	24.7	2.5
854.027	0- 30	116	① $\phi 3$	30	30
854.036	0- 30	116	② R0.75	30	30
854.029	0- 30	116	⑦ $\phi 50$	36	24
854.028	0- 30	116	⑤ $\phi 3$	30	4
854.037	0- 30	116	⑥ $\phi 3$	30	4
854.030	0- 50	167	① $\phi 3$	30	30
854.032	0- 50	167	⑦ $\phi 50$	36	24
854.031	0- 50	169	⑤ $\phi 3$	30	4.3



Types of inserts



Krœplin measuring instruments for aerosol

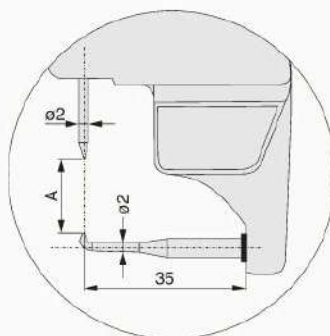
Krœplin has multiple measuring instruments to measure different parts of spray-cans. Available in both analog and digital versions.



Digital thickness gauge

This digital thickness gauge has special, pointed measuring faces for measuring in hard-to-reach places of metal parts.

- Measuring range: 0 - 15 mm.
- Resolution: 0.01 mm.
- Accuracy: ± 0.03 mm.
- mm/inch conversion.
- On/off switch.
- Reset.
- Weight: 100 g.
- Power supply:
1 battery type V357.



ECONOMY LINE ✓

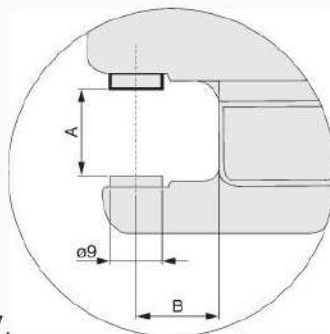
Item No.	Measuring face	Throat depth/mm	Price EUR
906.450	Pointed	35	130.00
Option: 836.535 Battery type V357			0.90



Digital thickness gauges

The shape of the measuring faces makes this digital thickness gauge especially suitable for measuring metal or plastic film, leather, paper, etc.

- Measuring range: 0 - 25 mm.
- Resolution: 0.01 mm.
- Accuracy:
0 - 15 mm: ± 0.03 mm,
0 - 25 mm: ± 0.04 mm.
- mm/inch conversion.
- On/off switch.
- Reset.
- Weight: 100 g.
- Power supply: 1 battery type V357.



ECONOMY LINE ✓

Item No.	Measuring range/mm	Measuring face ϕ /mm	Throat depth/mm	Price EUR
906.451	0 - 15	9	15.0	122.00
906.452	0 - 25	9	14.5	171.00
Option: 836.535 Battery type V357				0.90

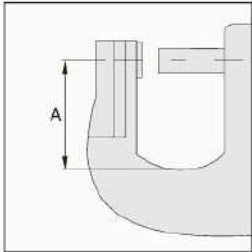


906.451

C04 244 EN 20060702

Digital quick thickness gauges

- Measuring range: 0 - 25 mm.
- Resolution: 0.01 mm.
- Accuracy 910.313: ± 0.03 mm.
- Accuracy 910.314: ± 0.04 mm.
- mm/inch conversion.
- On/off switch.
- Reset.
- Anvil 910.313: $\varnothing 6.3$ mm.
- Pin measuring face 910.313: $\varnothing 5$ mm.
- Measuring face 910.314: $\varnothing 14.5$ mm.
- Power supply: 1 battery type V357.



ECONOMY LINE ✓

Item No.	Measuring range/mm	Throat depth A/mm	Price EUR
910.313	0 - 12	19.7	147.00
910.314	0 - 25	25	190.00
Option: 836.535 Battery type V357			0.90

Digital external measuring instruments

- Measuring range: 0 - 10 mm.
- Resolution: 0.01 mm.
- Repeatability: 0.01 mm.
- mm/inch conversion.
- Automatic switch-off.
- Reset.
- Max. measuring speed: 1.5 m/s.
- Non-interchangeable inserts.
- Power supply: 1 battery type V357.



ECONOMY LINE ✓

Item No.	Measuring range/mm	Measuring faces $\varnothing$ /mm	Throat depth/mm	Price EUR
906.453	0 - 10	9	30	148.00
906.454	0 - 10	9	120	184.00
Option: 836.535 Battery type V357				0.90

004-330-EN-20060702

Thickness gauges

- Measuring range: 0 - 20 mm.
- Graduation: 0.01 mm.
- Rotatable dial.

- Non-interchangeable inserts.
- Measuring face: $\varnothing 6$ mm (906.448: $\varnothing 10$ mm).



906.446



906.447



906.448

ECONOMY LINE ✓



Item No.	Measuring range/mm	Throat depth/mm	Price EUR
906.446	0 - 10	10	49.00
906.447	0 - 10	30	71.00
906.448	0 - 20	110	107.00

Thickness gauges with roller measuring inserts

- Measuring range: 0 - 10 mm.
- Measuring face roller measuring inserts: 7 mm/ $\varnothing 22$ mm.
- Throat depth: 100 mm.
- Anvil: 28 x 22 mm (3 mm wheel height in anvil).

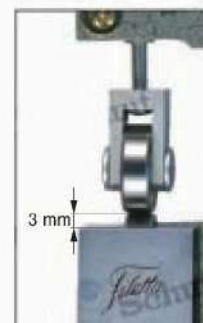
Analog

- Graduation: 0.01 mm.
- Rotatable dial with locking screw.
- Adjustable tolerance markers.

Digital

- Resolution: 0.01 mm.
- mm/inch conversion.
- On/off switch.
- Reset.
- Power supply: 1 battery type CR2032.

906.388



ECONOMY LINE ✓

Item No.	Description	Price EUR
906.388	Thickness gauge	114.00
906.389	Digital thickness gauge	158.00
Option:		
495.157	Battery type CR2032	0.50



906.389

Käfer thickness gauges

- Measuring range: 0 - 50 mm.
- Graduation: 0.1 mm, 0.01 mm or 0.001 mm.
- Standard type of insert: C, $\varnothing 10$ mm.
- Interchangeable measuring inserts.

- Different types of inserts available (a, b, c, d, e).

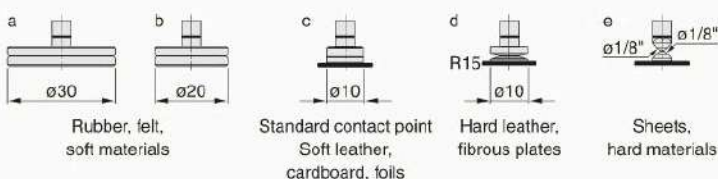
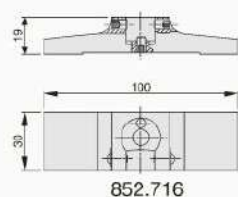


Item No.	Measuring range/mm	Graduation mm	Throat depth/mm	Price EUR
852.346	0 - 10	0.1	50	136.00
851.714	0 - 20	0.1	50	138.00
852.370	0 - 30	0.1	50	158.00
852.747	0 - 50	0.1	50	239.00
852.100	0 - 30	0.1	100	180.00
852.277	0 - 30	0.1	200	206.00
851.819	0 - 30	0.1	300	243.00
851.969	0 - 30	0.1	400	277.00
851.713	0 - 10	0.01	50	157.00
851.785	0 - 10	0.01	100	198.00
851.702	0 - 10	0.01	200	238.00
851.816	0 - 5	0.001	50	245.00

Options:

495.157 Battery type CR2032	0.50
852.716* Stand for thickness gauges	85.00

*For thickness gauges with a throat depth of 100 mm or less.



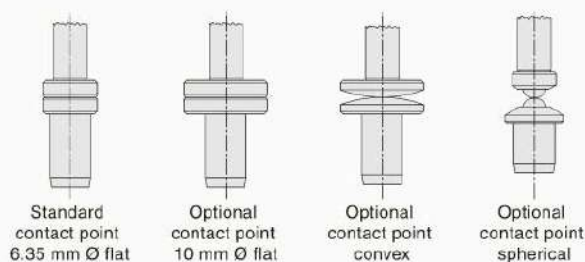
Käfer pocket thickness gauges

- Measuring range: 0 - 20 mm.
- Graduation: 0.1 mm or 0.01 mm.

- Different types of inserts available.
- Standard type of insert: $\varnothing 6.35$ mm flat insert.



Item No.	Measuring range/mm	Graduation mm	Throat depth/mm	Price EUR
851.967	0 - 10	0.1	15	66.00
851.712	0 - 20	0.1	15	76.00
851.783	0 - 8	0.01	12	136.00
852.744	0 - 10	0.01	18	133.00



Käfer foil thickness gauges

- Measuring range: 0 - 3 mm.
- Resolution: 0.001 mm.
- Standard type of insert: $\varnothing 6.35$ mm flat.
- Different types of inserts available.

Available types of inserts:

- $\varnothing 6.35$ mm flat.
- $\varnothing 10$ mm flat.
- Upper insert convex r 15 or r 40, lower insert $\varnothing 6.35$ mm flat.
- Lower insert convex r 15.
- Spherical.



Item No.	Measuring range/mm	Type of insert	1 pointer revolution	Throat depth/mm	Price EUR
851.760	1	6.35 mm	0.2 mm	30	289.00
852.368	1	6.35 mm	0.1 mm	30	315.00
851.711	0.1	6.35 mm	0.1 mm	30	344.00
852.263	3	6.35 mm	–	30	745.00
Option:					
495.157	Battery type CR2032				0.50

Käfer thickness gauges with roller measuring inserts

- Measuring range: 0 - 10 mm.
- Resolution: 0.01 mm.

- Measuring face roller measuring inserts: 8.7 mm / $\varnothing 8.4$ mm.
- Throat depth: 50 mm.



Item No.	Description	Measuring range/mm	Graduation mm	Price EUR
852.377	Thickness gauge	5	0.01	295.00
853.286	Digital thickness gauge	10	0.01	
Option:				
495.157	Battery type CR2032			0.50

Käfer digital thickness gauges

- Measuring range: 0 - 25 mm.
- Resolution: 0.01 mm or 0.001 mm.
- Interchangeable measuring inserts.
- Different types of inserts available (a, b, c, d, e).

- Standard type of insert: C, $\varnothing 10$ mm.
- Delivery in a plastic carrying case.
- Power supply: 1 battery type CR2032.



Item No.	Measuring range/mm	Resolution mm	Throat depth/mm	Price EUR
852.768	0 - 12.5	0.01	50	568.00
852.715	0 - 25	0.01	50	657.00
852.754	0 - 25	0.01	100	702.00
852.396	0 - 12.5	0.001	50	632.00
852.741	0 - 25	0.001	200	844.00
Options:				
495.157	Battery type CR2032			0.50
852.117	RS232C cable 9p (2 m)			154.00
852.118	USB cable (2 m)			154.00
852.716*	Stand for thickness gauges			85.00

* For thickness gauges with a throat depth of 100 mm or less.

Peacock external measuring instruments

- Measuring range: 0 - 10 mm.
- Graduation: 0.01 mm.
- Accuracy: ± 0.02 mm.
- Measuring force: approx. 1.8 N.
- Non-interchangeable measuring inserts.
- Ceramic measuring faces (except 855.761: steel).



855.750



855.761



855.751

Item No.	Measuring range/mm	Measuring faces ϕ /mm	Throat depth/mm	Price EUR
855.750	0 - 10	10	20	63.00
855.761	0 - 10	10	20	82.00
855.751	0 - 10	10	120	75.00

External measuring instruments

- Measuring range: 0 - 10 mm.
- Graduation: 0.01 mm.
- Different types of inserts available, with hardened steel measuring faces.
- Throat depth: 50 mm.

Item No.	Type of insert	Price EUR
853.002	B	274.00
853.003	C	274.00
853.004	D	274.00
853.005	E	274.00
853.007	G	274.00



853.007



853.002

Types of inserts

- B** Wood, rubber, soft leather
- C** Soft rubber
- D** Rubber rings, round material
- E** Paper, cardboard, fibrous plates
- G** Metal

Thickness gauge for film measurement

- Measuring range: 0 - 1 mm.
- Graduation: 0.001 mm.
- Measuring force: approx. 3 N.
- Non-interchangeable measuring inserts.
- Throat depth: 25 mm.
- Frame with insulating grip.

- Ceramic measuring faces.
- Delivery in a plastic case with a manufacturer measuring report.



Item No.	Measuring range/mm	Meas. faces ϕ /mm	Price EUR
907.859	0 - 1	10	117.00

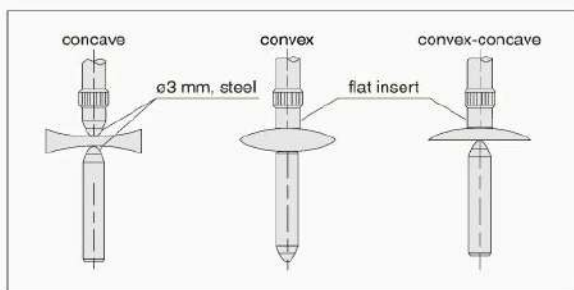
ECONOMY LINE ✓



Peacock universal thickness gauge

Measuring instrument with dial indicator and adjustable anvil, multi-purpose.

- Span frame: 0 - 20 mm.
- Measuring range dial indicator: 10 mm.
- Graduation: 0.01 mm.
- Accuracy: ± 0.02 mm.
- Throat depth: 25 mm.
- With additional flat insert.



Item No.	Measuring range dial indicator/mm	Price EUR
855.752	0 - 10	83.00

Tube wall thickness gauge

- Measuring range: 0 - 10 mm.
- Graduation: 0.01 mm.
- Measuring force: approx. 1 N.
- Throat depth: 25 mm.
- From inner diameter 8 mm.



Item No.	Measuring range/mm	Price EUR
853.137	0 - 10	159.00

Thickness gauges

- Measuring range: 0 - 30 mm.
- Graduation: 0.1 mm.
- Different types of inserts.
- Hardened steel measuring faces.
- Other models available on request.



853.053



853.022



853.034



853.064

Types of inserts

- A**
① General applications
 R 6
- B**
② Wood, rubber, soft leather
 Ø 10
- C**
③ Soft rubber
 Ø 25
- E**
④ Paper, cardboard, fibrous plates
 Ø 16
- F**
⑤ Rubber rings, round materials
 Ø 3.5
- G**
⑥ Metal
 R 1.5

Item No.	Measuring range/mm	Type of insert	Throat depth/mm	Price EUR
853.022	0 - 10	②	15	59.00
853.031	0 - 30	⑤	50	89.00
853.034	0 - 30	④	50	89.00
853.037	0 - 30	①	50	102.00
853.052	0 - 25	②	150	168.00
853.053	0 - 25	③	150	168.00
853.055	0 - 25	④	150	168.00
853.062	0 - 25	②	300	220.00
853.063	0 - 25	③	300	220.00
853.064	0 - 25	①	300	234.00
853.065	0 - 25	④	300	220.00
853.066	0 - 25	⑥	300	220.00
853.082	0 - 25	②	500	259.00
853.083	0 - 25	③	500	259.00
853.084	0 - 25	①	500	273.00
853.085	0 - 25	④	500	259.00
853.087	0 - 25	⑥	500	259.00

Alternative: www.schut.com/PDFs/2025-p201-EN.pdf

Digital external measuring instruments

- Measuring range: 0 - 25 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- On/off switch.
- Reset.
- Different types of inserts.
- Hardened steel measuring faces.
- Protection: IP54.
- Other models available on request.
- Power supply: 1 battery type CR2032.



853.074



853.060



Types of inserts

- A**
① General applications
 R 6
- B**
② Wood, rubber, soft leather
 $\varnothing 10$
- C**
③ Soft rubber
 $\varnothing 25$
- E**
④ Paper, cardboard, fibrous plates
 $\varnothing 16$
- F**
⑤ Rubber rings, round materials
 $\varnothing 3.5$
- G**
⑥ Metal
 R 1.5

Item No.	Measuring range/mm	Type of insert	Throat depth/mm	Price EUR
853.072	0 - 25	①	50	340.00
853.073	0 - 25	②	50	327.00
853.074	0 - 25	③	50	327.00
853.075	0 - 25	④	50	327.00
853.076	0 - 25	⑤	50	327.00
853.077	0 - 25	⑥	50	327.00
853.057	0 - 25	①	200	414.00
853.078	0 - 25	②	200	400.00
853.079	0 - 25	③	200	400.00
853.080	0 - 25	④	200	400.00
853.081	0 - 25	⑥	200	400.00
853.060	0 - 25	①	300	452.00
853.091	0 - 25	②	300	438.00
853.092	0 - 25	③	300	438.00
853.093	0 - 25	④	300	438.00
853.094	0 - 25	⑥	300	438.00
Option: 495.157 Battery type CR2032				0.50

Universal measuring instruments

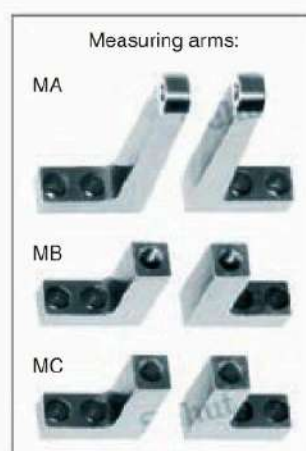
Robust universal measuring instruments for measuring by comparison, consisting of a steel precision cylinder with one fixed (adjustable) and one mobile measuring arm holder. The measuring direction is reversible by a simple turn of the adjusting screw at the end of the instruments. This feature enables measurements of internal and external dimensions. Clamping shaft 8H7 for dial indicator or measuring probe (measuring range 0 - 10 mm) not included. The nominal size is set with gauge blocks, setting rings or something similar.

Base instrument, with a wooden case

Item No.	Type	Measuring range (internal/external) in mm, with:				Price EUR
		Spherical disc inserts	Spherical needle insert $\varnothing 2 \times 5$ mm	Ball insert $\varnothing 3$ mm	Measuring disc $\varnothing 15 \times 4$ mm	
856.340	2-MR	29-254/9-234	38-263/0-225	36-261/2-227	46-256/16-226	2,540.00
856.341	2L-MR	29-354/9-334	38-363/0-325	36-361/2-327	46-356/16-326	2,700.00
856.342	2EL-MR	29-454/9-434	38-463/0-425	36-461/2-427	46-456/16-426	2,940.00



Base instrument
type MR



Measuring arms (2 needed)

Item No.	Length mm	Price EUR per piece
Type MA, with $\varnothing 3.5$ mm bore for interchangeable inserts:		
856.343	25	176.00
856.344	50	176.00
856.345	75	221.00
856.346	100	221.00
Type MB, with internal thread M6 for interchangeable measuring disc:		
856.347	30	176.00
856.348	50	221.00
Type MC, with bore 4H7 for various interchangeable inserts:		
856.349	30	176.00
856.350	50	221.00

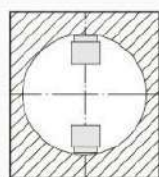
Internal measuring instruments (type I) and external measuring instruments (type O) with non-exchangeable measuring jaws are available on request. Excl. dial indicator or measuring probe.



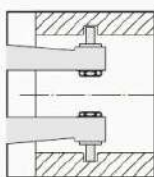
Universal measuring instruments (continued)

Interchangeable inserts for type MA

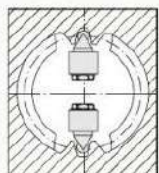
Item No.	Description (2 needed)	Price EUR per piece
856.351	Spherical disc insert	116.00
856.372	Flat disc insert	174.00
856.352	Spherical needle $\varnothing 2 \times 5$ mm	149.00
856.376	Spherical needle $\varnothing 2 \times 25$ mm	204.00
856.353	Ball insert $\varnothing 3$ mm	192.00



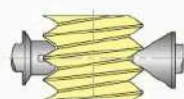
856.351:
measuring
of bores



856.352:
measuring
of narrow
grooves



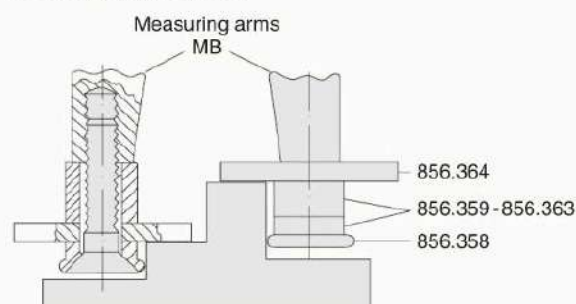
856.353: measuring
of internal gear teeth,
V-grooves, etc.



Available on request: inserts for thread
pitch diameters (metric: pitch 0.5-7.0;
BSW: 14-3.0 t.p.i.; UN: 32-3.0 t.p.i.). The
measuring anvils rotate to follow the helix
of the thread.

Interchangeable measuring disc for type MB

A measuring disc, which can be fitted by means of spacers and a support washer, is available for measuring arms MB with internal thread M6. For measuring of shoulders at different levels, locating flanges, etc.



Item No.	Description (2 needed)	Price EUR per piece
856.358	Measuring disc $\varnothing 15 \times 4$ mm	112.00
856.359	Spacer 1 mm	36.80
856.360	Spacer 2 mm	36.80
856.361	Spacer 3 mm	36.80
856.362	Spacer 6 mm	36.80
856.363	Spacer 10 mm	36.80
856.364	Support washer $\varnothing 30 \times 3$ mm	50.00

Example of
a complete
instrument with
measuring
arms type MB,
measuring discs
and a dial indicator.



Extensions and connecting elements

Item No.	Description	Price EUR
856.354	Extension 300 mm	357.00
856.355	Extension 500 mm	583.00
856.356	Connecting element for measuring element and extension	332.00
856.357	End cover for extension	54.00

Before placing the extension the measuring direction
has to be determined with the adjusting screw.

HELIOS-PREISSER universal gauge

Universal measuring instrument consisting of a steel tube with two mobile measuring arms. The measuring direction is reversible, which enables measurements of internal and external dimensions.

- Measuring range:
external measurements: 5 - 220 mm,
internal measurements: 15 - 230 mm.
- Measuring range with optional
extensions: up to 2000 mm.
- Clamping shaft: $\varnothing 8$ mm.
- Reversible measuring direction.
- Large choice of measuring probes and inserts.
- Inserts also for internal and external screw
thread measurements available.
- Base instrument: incl. adapter 856.717, excl.
dial indicator, measuring probes and inserts.
- Delivery in a wooden case.

Item No.	Description	Price EUR
856.721	Base instrument	2,151.00
Options:		
856.732	Measuring probe mounting blocks (pair) for external dimensions	296.00
856.735	Measuring probe mounting blocks (pair) for internal dimensions	296.00
856.723	Extension 100 mm	299.00
856.722	Extension 200 mm	318.00
856.724	Extension 400 mm	486.00
856.319	Ball inserts (pair) $l = 23$ mm	133.00
856.387	Ball inserts (pair) $l = 53$ mm	133.00
856.388	Cylindrical inserts (pair)	133.00
856.389	Offset inserts (pair)	221.00
856.725	Shoulder insert (pair) for external dimensions	360.00
856.733	Shoulder insert (pair) for internal dimensions	360.00
856.736	Measuring insert discs (pair) 0 - 20 mm $l = 30$ mm	114.00
856.734	Measuring insert discs (pair) 20 - 40 mm $l = 50$ mm	114.00
856.726	Measuring arms (pair) $l = 35$ mm	334.00
856.727	Measuring arms (pair) $l = 70$ mm	357.00
856.731	Depth stop attachments for measuring arms (pair)	304.00
856.728	Adapters 5 mm for inserts M2.5 (pair)	35.10
856.737	Measuring inserts flat	72.00
856.738	Measuring inserts spherical	72.00
856.713 ¹	Adapters new to old (pair)	91.00
856.717 ²	Adapters old to new (pair)	91.00

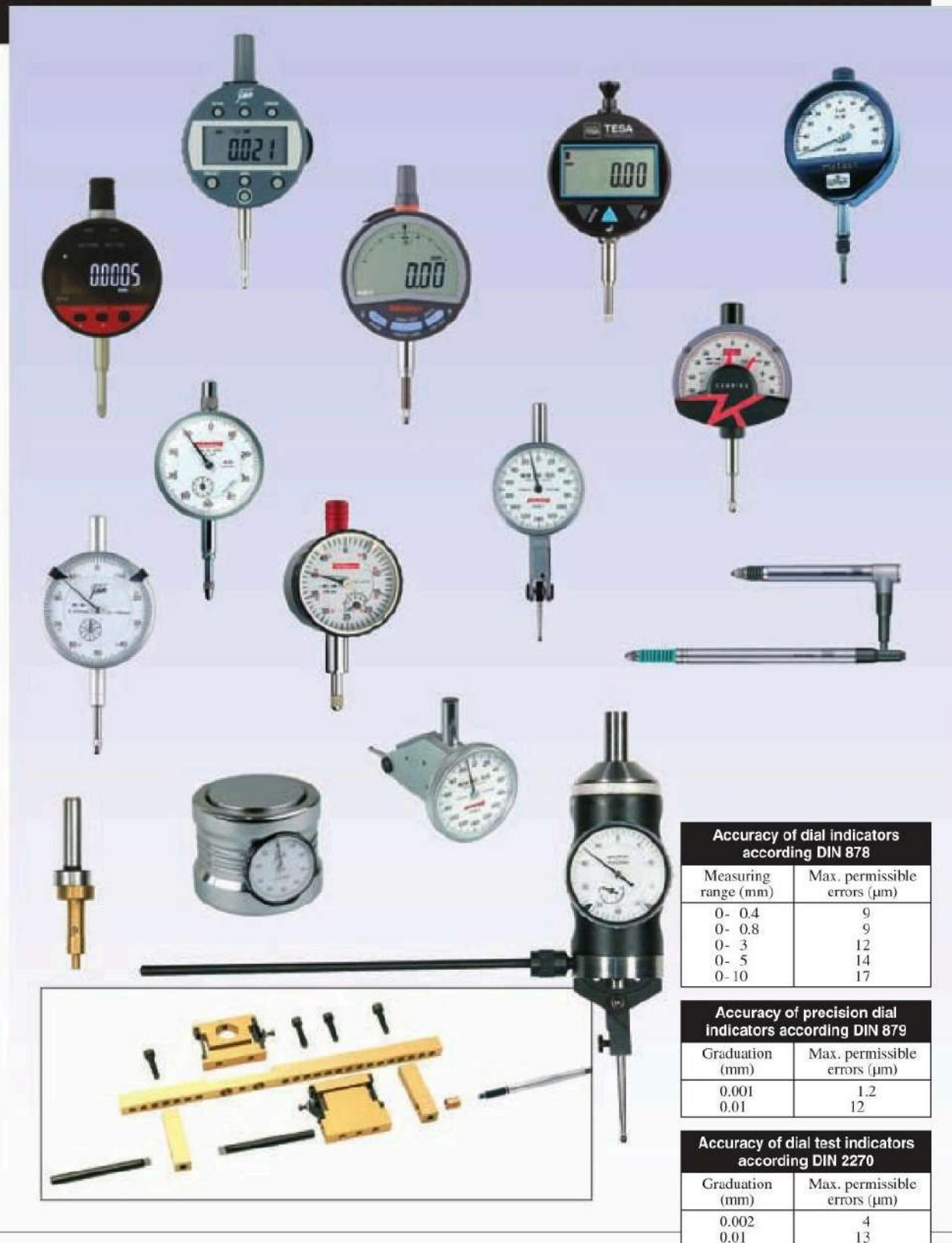
¹ For new model accessories on an old 856.380.

² For old model accessories on a new 856.721.



Illustrated:
base instrument, measuring
arms, ball inserts, extension
and dial indicator.

**Dial indicators / Dial test indicators / Center instruments
Edge finders / Probes / MF measuring fixture system**



The image displays a variety of precision measuring tools. At the top, there are several digital and analog dial indicators and dial test indicators, some with probes. Below these are several center instruments (analog and digital) and edge finders. In the bottom left, there is a set of MF measuring fixture systems, including a yellow base and various probes. On the right side, there are three tables providing accuracy data for different types of instruments.

Measuring range (mm)	Max. permissible errors (μm)
0- 0.4	9
0- 0.8	9
0- 3	12
0- 5	14
0- 10	17

Graduation (mm)	Max. permissible errors (μm)
0.001	1.2
0.01	12

Graduation (mm)	Max. permissible errors (μm)
0.002	4
0.01	13

005.001 EN 20260702

Absolute digital dial indicators

Absolute digital dial indicators with a function to set tolerance limits with clear optical Go (NoGo) reading.

- Measuring range: 0 - 50 mm.
- Resolution: 0.01 mm or 0.001 mm.
- mm/inch conversion.
- ABS/INC switchable.
- With data output.
- Adjustable tolerance limits.
- **Tolerance display** by means of illuminated green LED at GO value.
- On/off switch.
- Reset/preset.
- Ceramic stylus tip.



- Max. measuring speed: unlimited.
- Clamping stem: $\varnothing 8$ mm.
- Dial diameter: 60 mm.
- Reversible measuring direction.
- Flat back and additional back with lug.
- Protection: IP54.
- Delivery with a manufacturer measuring report.
- Power supply: 1 battery type CR2032.



906.870



906.618

USB interface:

- For data transfer to PC (e.g. Excel, Word).
- Operating system: Windows and other.
- PC connection: USB.
- No software or driver to install.
- Foot switch (optional).

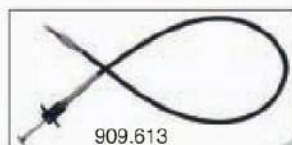
ECONOMY LINE ✓



909.687



906.619/910.038



909.613

909.611

909.614

Item No.	Measuring range/mm	Resolution mm	Accuracy mm	Price EUR
910.221	0 - 12.7	0.001	± 0.004	159.00
910.222	0 - 25.4	0.001	± 0.004	187.00
910.223	0 - 50.8	0.001	± 0.005	272.00
906.870	0 - 12.7	0.01	± 0.01	95.00
906.871	0 - 25.4	0.01	± 0.01	116.00
906.872	0 - 50.8	0.01	± 0.015	159.00

Options:

495.157	Battery type CR2032	0.50
906.618 ^{1,2}	USB interface	83.00
909.687	Footswitch for USB interface	19.20
910.038	Wireless USB receiver	50.00
906.619 ²	Wireless transmitter	53.00
909.611	Retraction lever	1.10
909.613	Cable retraction device (0.4 m) (maximum travel 10 mm)	14.90
909.614	Retraction lever (maximum travel 12.7 mm)	6.60

¹ Standard configured for PC with English (US) keyboard. Also available on request for alternative keyboards.

² With micro-USB connection.

Absolute digital dial indicators

- Measuring range: 0 - 50.8 mm.
- Resolution: 0.01 mm or 0.001 mm.
- mm/inch conversion.
- ABS/INC switchable.
- LCD display 330° rotatable.
- Digimatic data output.
- On/off switch.
- Reset/preset.
- Ceramic stylus tip.
- Max. measuring speed: unlimited.
- Measuring force: ≤ 2 N.
- Clamping stem: $\varnothing 8$ mm.
- Dial diameter: 60 mm.
- Reversible measuring direction.
- With determination of the reversal point (only 910.004).

USB interface:

- For data transfer to PC (e.g. Excel, Word).
- Operating system: Windows and other.
- PC connection: USB.
- No software or driver to install.
- Foot switch (optional).



909.686

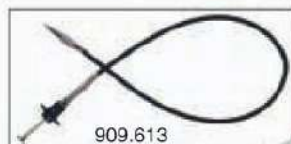


909.687

909.611



910.039/038



909.613

909.614



- Adjustable tolerance limits (except 910.004).
- Flat back.
- With additional back with lug.
- Protection: IP54.
- Delivery with a manufacturer measuring report.
- Power supply: 1 battery type CR2032.



909.998



910.004

ECONOMY LINE ✓

Item No.	Measuring range/mm	Resolution mm	Accuracy mm	Price EUR
909.998	0 - 12.7	0.001	± 0.004	164.00
909.999	0 - 25.4	0.001	± 0.005	216.00
910.000	0 - 50.8	0.001	± 0.006	298.00
910.001	0 - 12.7	0.01	± 0.01	92.00
910.002	0 - 25.4	0.01	± 0.01	118.00
910.003	0 - 50.8	0.01	± 0.015	164.00
For internal measurements:				
910.004	0 - 12.7	0.001	± 0.004	180.00
With Bluetooth:				
910.079	0 - 12.7	0.001	± 0.004	168.00
910.082	0 - 12.7	0.01	± 0.01	105.00
Options:				
495.157	Battery type CR2032			0.50
909.686 ^{1,2}	USB interface			112.00
909.687	Footswitch for USB interface			19.20
910.038	Wireless USB receiver			50.00
910.039 ²	Wireless transmitter			51.00
909.611	Retraction lever			1.10
909.613	Cable retraction device (0.4 m) (maximum travel 10 mm)			14.90
909.614	Retraction lever (maximum travel 12.7 mm)			6.60

¹ Standard configured for PC with English (US) keyboard. Also available on request for alternative keyboards.

² For instruments with a Digimatic data output.

Digital dial indicators with high resolution

Digital dial indicators with digital read-out and a high resolution of 0.001 / 0.0005 mm.

- Measuring range: 0 - 50.8 mm.
- Resolution: 0.001 / 0.0005.
- mm/inch conversion.
- ABS/INC switchable.
- On/off switch.
- With Bluetooth.
- USB-C data output: for data transfer to PC (e.g. Excel, Word), operating system Windows and other.
- Data transfer: singular or continuous.
- Multifunctional dial indicator: adjustable tolerance limits, reversible measuring direction, hold-function, min/max-function.
- Reset/preset.
- Clamping stem: ø8 mm.
- Dial diameter: 60.5 mm.
- Dial 270° rotatable.
- With determination of the reversal point.
- Protection: IP54.
- Delivery with USB-C cable and a manufacturer measuring report; excluding USB charger.
- Power supply: rechargeable battery.



ECONOMY LINE ✓

Item No.	Measuring range/mm	Resolution mm	Accuracy mm	Measuring force/N	Price EUR
910.477	0 - 15	0.001 / 0.0005	±0.002	≤1.5	256.00
910.478	0 - 25.4	0.001 / 0.0005	±0.002	≤1.8	269.00
910.479	0 - 50.8	0.001 / 0.0005	±0.004	≤2.3	304.00

Alternative: www.schut.com/PDFs/2025-p209-EN.pdf



COC-301-EN-20250702

Digital dial indicators with high resolution

Digital dial indicators with digital and digital-analog read-out and a high resolution of 0.0005 mm.

- Measuring range: 0 - 50.8 mm.
- Resolution: 0.0005.
- mm/inch conversion.
- ABS/INC switchable.
- On/off switch.
- With data output.
- USB-C data output: for data transfer to PC (e.g. Excel, Word), operating system Windows and other.
- Multifunctional functions: automatic switch-off, adjustable tolerance limits, reversible measuring direction, hold-function, min/max-function.
- Reset/preset.
- Clamping stem: $\varnothing 8$ mm.
- Dial diameter: 62 mm.
- Dial 270° rotatable.
- With determination of the reversal point.
- Protection: IP54.
- Delivery with USB-C and a manufacturer measuring report; excluding USB charger.
- Power supply: rechargeable battery.

ECONOMY LINE ✓

Item No.	Measuring range/mm	Resolution mm	Accuracy mm	Measuring force/N	Price EUR
910.340	0 - 15	0.0005	± 0.002	≤ 1.5	190.00
911.184	0 - 25.4	0.0005	± 0.002	≤ 1.8	208.00
911.185	0 - 50.8	0.0005	± 0.004	≤ 2.3	251.00
Option: 910.457* Bluetooth transmitter					88.00

* With USB-C connection.



910.340



Digital dial indicators

Digital dial indicators with digital and digital-analog read-out.

- Measuring range: 0 - 12.5 mm.
- Resolution: 0.002 or 0.0005 mm.
- mm/inch conversion.
- ABS/INC switchable.
- On/off switch.
- Multifunctional functions: automatic switch-off, adjustable tolerance limits, reversible measuring direction.
- Reset/preset.
- Clamping stem: $\varnothing 8$ mm.
- Dial diameter: 62 mm.
- Dial 315° rotatable.
- With determination of the reversal point.
- Delivery in a plastic case.
- Power supply: 1 battery type CR2032.

ECONOMY LINE ✓

Item No.	Measuring range/mm	Resolution mm	Accuracy mm	Measuring force/N	Price EUR
909.250	0 - 12.5	0.002	± 0.015	1.2	124.00
909.251	0 - 12.5	0.0005	± 0.006	1.2	233.00
Option: 495.157 Battery type CR2032					0.50



909.251

COD-3462-EN-20060702

Digital dial indicators

Universal digital indicators with both digital and digital-analog display of the measuring value, and can also be rotated over 340° to ensure easy read-out in all positions.

- Measuring range: 0 - 12.7 mm.
- Resolution: 0.001 mm.
- Analog resolution: 0.001/0.002/0.01/0.02/0.05 mm.
- mm/inch conversion.
- ABS/INC switchable.
- On/off switch.
- Automatic switch-off.
- Reset/preset.
- Clamping stem: $\varnothing 8$ mm.
- Dial diameter: 61 mm.
- Dial 340° rotatable.
- Reversible measuring direction.
- Adjustable tolerance limits.
- Protection: IP54.
- Delivery in a plastic case.
- Power supply: 1 battery type CR2032.



ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Price EUR
907.879	0 - 12.7	± 0.01	126.00
907.878	0 - 12.7	± 0.005	187.00
Option: 495.157 Battery type CR2032			0.50



Digital indicators

- Measuring range: 0 - 100 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- On/off switch.
- Reset.
- Clamping shaft: $\varnothing 6$ mm.
- Clamping stem: $\varnothing 8$ mm.
- Insert thread: M2.5.
- Power supply: 1 battery type V357.



ECONOMY LINE ✓

Item No.	Measuring range/mm	Measuring force/N	Total length/mm	Price EUR
910.311	0 - 50	< 2.5	148	148.00
910.312	0 - 100	< 3.2	330	153.00
Option: 836.535 Battery type V357				0.90



Digital dial indicator

Digital dial indicator for a favourable price.

- Measuring range: 0 - 50 mm.
- Resolution: 0.01.
- mm/inch conversion.
- ABS/INC switchable.
- On/off switch.
- Reset.
- Clamping stem: $\varnothing 8$ mm.
- Dial diameter: 57 mm.
- Adjustable tolerance limits.
- Flat back and additional back with lug.
- Delivery in a plastic case with a manufacturer measuring report.
- Power supply: 1 battery type CR2025.



ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Price EUR
With resolution 0.01 mm:			
907.652	0-50	± 0.04	161.00
Option:			
495.214	Battery type CR2025		0.40

Absolute horizontal digital dial indicators

- Measuring range: 0 - 30 mm.
- Resolution: 0.001 mm.
- mm/inch conversion.
- Digimatic data output.
- On/off switch.
- Reset/preset.
- Ceramic stylus tip.
- With dovetail joint (incl. lug) and clamping stem $\varnothing 8$ mm.
- Measuring force: ≤ 2 N.

- Reversible measuring direction.
- Protection: IP54.
- Delivery with a manufacturer measuring report.
- Power supply:
910.085: 1 battery type CR1632,
910.086: 1 battery type CR2032.

USB interface and wireless USB receiver and transmitter available on request.



ECONOMY LINE ✓

Item No.	Measuring range/mm	Resolution mm	Accuracy mm	Price EUR
910.085	0 - 12.7	0.001	± 0.005	100.00
910.086	0 - 30	0.001	± 0.006	122.00
Options:				
497.955	Battery type CR1632			1.80
495.157	Battery type CR2032			0.50



Digital dial indicator with calculation function

Robust digital dial indicator with built-in calculation function for easy determination of diameters by means of measuring a curved surface. Suitable for measuring both inside and outside diameters and multifunctional dial indicator applications. Delivery with measuring bases of 10, 20, 30, 60 and 100 mm.

- Measuring range: 0 - 13 mm.
- Resolution: 0.005 mm.
- mm/inch conversion.
- On/off switch.
- Reset.

ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Price EUR
907.884	0-13	±0.005*	343.00
Option:			
495.157	Battery type CR2032		0.50

* Accuracy of the indicator without the use of measuring bases. The accuracy with measuring bases depends on the radius and form deviation of the workpiece.

- Hold function.
- Clamping stem: $\varnothing 8$ mm.
- Aluminum construction.
- Delivery in a plastic case.
- Power supply: 1 battery type CR2032.



Mitutoyo Absolute Digimatic dial indicators ID-S

Standard digital dial indicators with the absolute measuring system and a very good price-performance ratio.

- Measuring range: 0 - 12.7 mm.
- Resolution: 0.01 or 0.001 mm.
- Digimatic data output.
- Max. measuring speed: unlimited.
- Measuring force:
 - 543.781/790: ≤ 1.5 N,
 - 543.794: ≤ 2.5 N.
- Clamping stem: $\varnothing 8$ mm.
- Tungsten carbide stylus tip.
- Reversible measuring direction.
- Protection: IP42 (543.794: IP53).
- Conforms to factory standard.
- Delivery with a manufacturer measuring report.
- Power supply: 1 battery type V357.

Item No.	Measuring range/mm	Resolution mm	Accuracy mm	Price EUR
543.781	0 - 12.7	0.01	± 0.02	193.00
543.790	0 - 12.7	0.001	± 0.003	368.00
543.794	0 - 12.7	0.001	± 0.003	414.00
Option: 836.535 Battery type V357				0.90



Data cables Digimatic, USB Input Tool Direct, U-WAVE available on request.

Mitutoyo Absolute Digimatic dial indicator ID-U

Dial indicator from Mitutoyo that combines the absolute system with a measuring range of 25.4 mm.

- Measuring range: 0 - 25.4 mm.
- Resolution: 0.01 mm.
- Digimatic data output.
- On/off switch.
- Reset.
- Max. measuring speed: unlimited.
- Measuring force: ≤ 1.8 N.
- Clamping stem: $\varnothing 8$ mm.
- Tungsten carbide stylus tip.
- Reversible measuring direction.
- Dimensions: 207.3 x 38 x 23 mm.
- Protection: IP42.
- Conforms to factory standard.
- Power supply: 1 battery type V357.

Item No.	Measuring range/mm	Accuracy mm	Price EUR
575.121	0 - 25.4	± 0.02	262.00
Options:			
836.535	Battery type V357		0.90
540.774	Lift lever (12 mm)		71.00



Data cables Digimatic, USB Input Tool Direct, U-WAVE available on request.



Mitutoyo Absolute Digimatic dial indicators ID-C

Digital dial indicators with the absolute measuring system and a large display for easy reading of the measuring values and the tolerance judgement. The tolerance values are shown graphically above the current measurement on the display. The 330° rotatable display guarantees an ideal read-out in any position.

- Measuring range: 0 - 50.8 mm.
- Resolution: 0.01 or 0.0005/0.001/0.01 mm.
- Repeatability: 0.01 mm.
- ABS/INC switchable.
- Bidirectional data output.
- LCD display 330° rotatable.
- Digimatic S1 data output.
- On/off switch.
- Reset/preset.
- Hold function.
- Min/max/P-P function.
- Max. measuring speed: unlimited.
- Clamping stem: $\varnothing 8$ mm.
- Tungsten carbide stylus tip.
- Reversible measuring direction.
- Adjustable tolerance limits.
- Protection: IP42.
- Conforms to factory standard.
- Calibration date warning.
- Delivery with a manufacturer measuring report.
- Programmable with the free to download USB-ITPAK 3.0 (simplified version).
- Power supply: 1 battery type CR2032.



Item No.	Measuring range/mm	Resolution mm	Accuracy mm	Measuring force/N	Price EUR
543.710	0-12.7	0.01	± 0.02	≤ 0.9	343.00
543.725	0-25.4	0.01	± 0.02	≤ 1.8	464.00
543.735	0-50.8	0.01	± 0.04	≤ 2.3	724.00
543.700	0-12.7	0.0005/0.001/0.01	± 0.003	≤ 1.5	460.00
543.720	0-25.4	0.0005/0.001/0.01	± 0.003	≤ 1.8	585.00
543.730	0-50.8	0.0005/0.001/0.01	± 0.005	≤ 2.3	874.00
With a reduced measuring force:					
543.715	0-12.7	0.01	± 0.02	$\leq 0.2-0.5$	406.00
543.705	0-12.7	0.0005/0.001/0.01	± 0.003	$\leq 0.4-0.7$	557.00
Options:					
495.157	Battery type CR2032				0.50
106.011	Digimatic S1 signal cable without data switch, 1 m				83.00
106.021	Digimatic S1 signal cable without data switch, 2 m				89.00
106.001	USB Input Tool Direct cable S1, 2 m				169.00
102.011	U-WAVE S1 adapter cable				131.00
106.543	USB-ITPAK V3.0 Full version software				351.00
102.700	Connector (only for 12.7 mm models)				128.00
102.670	U-WAVE Transmitter mounting plate				
264.623	U-WAVE fit transmitter				189.00
264.627	U-WAVE fit Bluetooth transmitter				197.00
102.810	U-WAVE receiver and software				380.00

Mitutoyo Absolute Digimatic dial indicators ID-C (continued)

Multifunctional dial indicators with special functions for various applications. Which includes a version with min/max/P-P function, a version especially made for internal measurements, and a version with built-in calculation function. The results, for example, inside and outside diameter, groove width, bore diameter, and curve radius, are determined based on the spindle displacement x ; formula: $Ax + B + Cx^{-1}$. The coefficients A, B and C can be set and the calculations are processed and displayed in real-time.

- Measuring range: 0 - 50.8 mm.
- Resolution: 0.0002 to 1 mm, switchable.
- ABS/INC switchable (except 543.310).
- LCD 330° rotatable.
- Digimatic data output.
- On/off switch.
- Reset/preset.
- Hold function.
- Max. measuring speed: unlimited.
- Clamping stem: $\varnothing 8$ mm.
- Adjustable tolerance limits.
- Protection: IP42.
- Delivery with a manufacturer measuring report.
- Power supply: 1 battery type CR2032.

Model with min/max/P-P function (543.300)

- Key lock function.

Item No.	Measuring range/mm	Accuracy mm	Measuring force/N	Price EUR
With min/max/P-P function:				
543.300	0 - 12.7	± 0.003	≤ 1.5	527.00
For internal measurements:				
543.310	0 - 12.7	± 0.003	≤ 1.5	580.00
With calculation function:				
543.340	0 - 12.7	± 0.003	≤ 1.5	648.00
543.590	0 - 25.4	± 0.003	≤ 1.8	729.00
543.595	0 - 50.8	± 0.006	≤ 2.3	874.00
Options:				
495.157	Battery type CR2032			0.50
905.338	Digimatic signal cable, 1 m			39.00
905.409	Digimatic signal cable, 2 m			47.00
106.384	USB Input Tool Direct cable, 2 m			128.00
102.795	U-WAVE adapter cable			98.00
210.198	Retraction lever			8.00
211.301	Cable retraction device			83.80
101.040	Back plate with lug			16.00
106.543	USB-ITPAK V3.0			351.00
	Full version software			
102.670	U-WAVE Transmitter mounting plate			
264.623	U-WAVE fit transmitter			189.00
264.627	U-WAVE fit Bluetooth transmitter			197.00
102.810	U-WAVE receiver and software			380.00

Model for internal measurements (543.310)

- Spindle movement is displayed graphically (determination of the reversal point).
- Storage for 3 preset values (for example size setting ring).

Bridges for dial indicators with calculation function.

Especially made for dial indicators with calculation function. Combined with these dial indicators, these bridges can provide a multitude of solutions. For these bridges, see bridges elsewhere in the catalog.



Mitutoyo Absolute Digimatic dial indicators ID-B and ID-N IP66

Compact digital dial indicators with the Absolute measuring system and with protection degree IP66. Flexible mounting because the display can also display upside-down.

- Measuring range: 0 - 12.7 mm.
- Resolution: 0.01 or 0.001 mm.
- ABS/INC switchable.
- Digimatic data output.
- On/off switch.
- Reset/preset.
- Hold function.
- Max. measuring speed: unlimited.
- Measuring force: ≤ 2 N (0 - 5 mm),
 ≤ 2.5 N (0 - 12.7 mm).
- Clamping stem: $\varnothing 8$ mm.
- Tungsten carbide stylus tip.
- Reversible measuring direction.
- Adjustable tolerance limits.
- Protection: IP66.
- Conforms to factory standard.
- Power supply: 1 battery type V357.



Top view 543.580



543.580
(543.585)



543.575
(543.570)

Data cables Digimatic, USB Input Tool Direct,
U-WAVE available on request.

Item No.	Measuring range/mm	Resolution mm	Accuracy mm	Price EUR
543.580	0 - 5	0.01	± 0.02	328.00
543.585	0 - 5	0.001 / 0.01	$\pm 0.003 / \pm 0.01$	429.00
543.570	0 - 12.7	0.01	± 0.02	292.00
543.575	0 - 12.7	0.001 / 0.01	$\pm 0.003 / \pm 0.01$	401.00
Option:				
836.535	Battery type V357			0.90



TESA Dialtronic Easy and Dialtronic digital dial indicators

Digital dial indicators with a measuring range up to 150 mm. The Dialtronic indicators have a tolerance judgement by means of a red/green coloring LED. Data output possible by means of the free to download TESA Data-Viewer software.

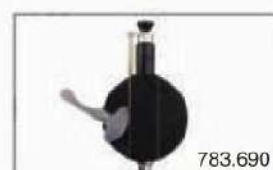
- Measuring range: 0 - 150 mm.
- Resolution: 0.01 or 0.001 mm.
- Repeatability: 0.002 mm.
- mm/inch conversion.
- Bidirectional data transfer.
- On/off switch.
- Reset/preset.
- Hold function.
- Reversible measuring direction.
- Measuring force: 0.65 - 0.90 N, except IP67 models: 0.7 - 1.4 N.
- Max. measuring speed: 1.7 m/s.
- Display 270° rotatable.
- Delivery with a manufacturer measuring report.
- Power supply: 1 battery type CR2032.

Only Dialtronic models:

- Tolerance judgement.
- Function for dynamic measurements (min, max, max-min) and memory for maximum and minimum values.
- Programmable button.
- Multiplication factor.
- Key lock function.
- Resolution: 0.01 mm or 0.001 mm, switchable.



Item No.	Measuring range/mm	Accuracy mm	Resolution mm	Protection	Dial ø/mm	Price EUR
TESA Dialtronic Easy:						
783.677	0- 12.5	±0.01	0.01	IP51	59.8	595.00
783.678	0- 12.5	±0.004	0.001	IP51	59.8	691.00
TESA Dialtronic:						
783.679	0- 12.5	±0.01	0.01	IP54	59.8	708.00
783.680	0- 12.5	±0.003	0.001	IP54	59.8	857.00
783.681	0- 12.5	±0.003	0.001	IP67	59.8	1,014.00
783.682	0- 25	±0.01	0.01	IP54	59.8	804.00
783.683	0- 25	±0.004	0.001	IP54	59.8	979.00
783.684	0- 25	±0.004	0.001	IP67	59.8	1,128.00
783.685	0- 50	±0.005	0.001	IP54	58	1,626.00
783.686	0- 100	±0.006	0.001	IP54	58	2,045.00
783.687	0- 150	±0.01	0.001	IP54	58	2,220.00
TESA Dialtronic with Bluetooth:						
783.704	0- 12.5	±0.003	0.001	IP54	59.8	1,012.00
783.705	0- 25	±0.004	0.001	IP54	59.8	1,124.00
Options:						
495.157	Battery type CR2032					0.50
783.688	Back with lug					105.00
783.689	Retraction lever for Dialtronic, measuring range up to 12.5 mm					110.00
783.690	Retraction lever for Dialtronic, measuring range up to 25 mm					117.00
783.691	Inductive USB cable for Dialtronic, 3 m					224.00
783.673	Power USB cable for Dialtronic, 3 m					392.00
783.674	90 deg. power USB cable for Dialtronic, 3 m					341.00



TESA Dialtronic Compact digital mini dial indicators

Designed to be used in tight spaces thanks to the small dial diameter of just 45 mm. Protected against dust, spraying water, oil and coolants due to the IP54 and IP67 protection.

- Measuring range: 0 - 12.5 mm.
- Resolution: 0.01 mm or 0.001 mm.
- Accuracy: ± 0.004 mm, except 783.670: ± 0.01 mm.
- Repeatability: 0.002 mm.
- mm/inch conversion.
- USB data output with external power supply.
- Bidirectional data transfer.
- Automatic switch-off.
- Reset/preset.
- Max. measuring speed: 1.7 m/s.
- Measuring force: 0.5 - 0.9 (± 0.20) N except 783.672: 0.6 - 1.3 (± 0.20) N.
- Reversible measuring direction.
- Protection: IP54 except 783.672: IP67.
- Delivery with a manufacturer measuring report.
- Power supply: 1 battery type CR2032, external power supply via a USB cable.



783.672



783.670



783.230 +
783.670



783.672 + 781.727



783.673

Item No.	Measuring range/mm	Resolution mm	Price EUR
783.670	0 - 12.5	0.01	498.00
783.671	0 - 12.5	0.001	708.00
783.672	0 - 12.5	0.001	752.00
Options:			
495.157	Battery type CR2032		0.50
783.230	Retraction lever		140.00
781.727	Retraction lever		31.00
783.673	USB cable (3 m)		392.00

000-340-EN-20060702

TESA Digico digital mini dial indicators 12/12-HP IP65

Designed to work in the toughest conditions, protected against spraying water, oil and coolants. The diameter of the housing is only 44 mm. Patented, inductive measuring system. The Digico 12-HP dial indicators (*) are high-precision models.

- Measuring range: 0 - 12.5 mm.
- Resolution: 0.01 mm or 0.001/0.01 mm.
- Accuracy: ± 0.01 mm.
- Repeatability: 0.005 mm.
- mm/inch conversion.
- ABS/INC switchable (except 12-HP).
- RS232C data output with external power supply.
- Automatic switch-off.
- Preset (except 12-HP) and reset.
- Max. measuring speed: 2 m/s.
- Measuring force: 0.5 - 0.9 (± 0.15) N.
- Reversible measuring direction (except 12-HP).
- Protection: IP65.
- Delivery with a manufacturer measuring report (except the 0.01 mm models).
- Power supply: 1 battery type CR2032.

TESA Digico 12-HP*

- Accuracy: ± 0.002 mm.
- Repeatability: 0.002 mm.
- With digital-analog display of the measured value (± 0.025 to ± 1.25 mm).
- Lock of automatic switch-off.
- Min/max/P-P function.



Item No.	Measuring range/mm	Resolution mm	Price EUR
Mechanics and electronics IP65 protected:			
782.433	0 - 12.5	0.01	305.00
782.435	0 - 12.5	0.001/0.01	419.00
782.437*	0 - 5	0.001/0.01	417.00
Option:			
495.157	Battery type CR2032		0.50

Mitutoyo Absolute Digimatic dial indicators ID-F/ID-H

Very advanced Mitutoyo Absolute dial indicators for the demanding user. Besides the high accuracy, these indicators are equipped with many practical functions, among which an automatic hold function for the maximum and minimum measuring value, calculation of min-max difference value and tolerance judgements with help of a color changing display (red/green).

To optimise the reproducibility and stability of measurements for the ID-H dial indicators an optional remote control device is available with which the indicator can be set up without actually physically making contact.

- Measuring range: 0 - 60.9 mm.
- Resolution: 0.01, 0.001 or 0.0005 mm, switchable.
- RS232C data output (only 543.561/563).
- Digimatic data output.
- On/off switch.
- Reset/preset.
- Hold function.
- Clamping stem: $\varnothing 8$ mm.
- Tungsten carbide stylus tip: $\varnothing 3$ mm.
- Reversible measuring direction.
- Adjustable tolerance limits.
- Conforms to factory standard.
- Power supply: AC adapter.

ID-F

- LCD display 330° rotatable.
- Bidirectional data transfer.
- Digimatic S1 data output.



Item No.	Measuring range/mm	Resolution mm	Accuracy mm	Measuring force/N	Price EUR
ID-F					
543.851	0 - 25.4	0.0005/0.001/0.01	± 0.0025	≤ 1.8	966.00
543.853	0 - 50.8	0.0005/0.001/0.01	± 0.004	≤ 2.3	1,046.00
543.857	0 - 50.8	0.0005/0.001/0.01	± 0.003	≤ 2.3	1,115.00
ID-H					
543.561	0 - 30.4	0.001/0.0005	± 0.0015	≤ 2.0	969.00
543.563	0 - 60.9	0.001/0.0005	± 0.0025	≤ 2.5	1,199.00
Options:					
210.099 ¹	Remote control				101.00
540.774 ¹	Cable retraction device, 12 mm stroke				71.00
210.131 ¹	RS232C cable, 2 m				253.00
936.937 ¹	Digimatic signal cable without data switch, 1 m				60.00
965.014 ¹	Digimatic signal cable without data switch, 2 m				76.00
106.021 ²	Digimatic S1 signal cable without data switch, 2 m				89.00
264.020	USB Input Tool Interface box				267.00
106.383 ¹	USB Input Tool Direct cable, 2 m				128.00
106.001 ²	USB Input Tool Direct cable S1, 2 m				169.00
102.794 ¹	U-WAVE data cable				98.00
106.543	USB ITPAK V3.0				351.00



¹ Only for ID-H.

² Only for ID-F.

Dial indicators 0.01 mm

Indicators with an excellent price-performance ratio.

- Measuring range: 0 - 10 mm.
- Graduation: 0.01 mm.
- Clamping stem: $\varnothing 8$ mm.
- Dial diameter: 55 mm.
- Rotatable dial.
- Adjustable tolerance markers.
- Flat back.
- Delivery with a manufacturer measuring report.

ECONOMY LINE ✓

Item No.	Measuring range/mm	Price EUR
907.928	0 - 3	20.80
907.929	0 - 5	20.80
907.930	0 - 10	21.70
Option:		
908.799	Back with lug	2.40



Dial indicators 0.01 mm

Indicators with a large dial and a locking screw. Shockproof design.

- Measuring range: 0 - 10 mm.
- Graduation: 0.01 mm.
- Clamping stem: $\varnothing 8$ mm.
- Dial diameter: 60 mm.
- Rotatable dial.
- Adjustable tolerance markers.
- Locking screw.
- Flat back.
- Delivery with a manufacturer measuring report.



ECONOMY LINE ✓

Item No.	Measuring range/mm	Price EUR
907.931	0 - 3	20.80
907.932	0 - 5	20.80
907.933	0 - 10	21.70
Options:		
908.987	Back with lug	2.40
906.359	Retraction lever	5.00



Dial indicators 0.01 mm

Indicators with a large measuring range.

- Measuring range: 0 - 100 mm.
- Graduation: 0.01 mm.
- Clamping stem: $\varnothing 8$ mm.
- Rotatable dial.
- Adjustable tolerance markers (except 907.916).
- Locking screw.
- Flat back.
- Delivery with a manufacturer measuring report.



907.934



907.935

907.936



907.916

ECONOMY LINE ✓

Item No.	Measuring range/mm	Dial $\varnothing$ /mm	Price EUR
907.934	0 - 25	60	38.70
907.935	0 - 30	60	40.00
907.936	0 - 50	76	84.00
907.916	0 - 100	80	184.00
Options:			
908.987 ¹	Back with lug		2.40
908.988 ²	Back with lug		3.40

¹ For 907.934/935.

² For 907.936/916.

Splashproof dial indicators 0.01 mm

Indicators with splashproof design.

- Measuring range: 0 - 10 mm.
- Graduation: 0.01 mm.
- Clamping stem: $\varnothing 8$ mm.
- Dial diameter: 55 mm.
- Rotatable dial.
- Shockproof.
- Adjustable tolerance markers.
- Locking screw.
- Back with lug.
- Protection: IP54.
- Conforms to factory standard.

ECONOMY LINE ✓

Item No.	Measuring range/mm	Price EUR
908.777	0 - 3	50.00
908.778	0 - 5	52.00
908.779	0 - 10	55.00



908.779



Miniature dial indicator 0.01 mm

Indicator with very small dimensions and an excellent price-performance ratio.

- Measuring range: 0 - 10 mm.
- Graduation: 0.01 mm.
- Clamping stem: $\varnothing 8$ mm.
- Dial diameter: 40 mm.
- Rotatable dial.
- Adjustable tolerance markers.
- Locking screw.
- Flat back.
- Delivery with a manufacturer measuring report.

ECONOMY LINE ✓

Item No.	Measuring range/mm	Price EUR
Graduation 0.01 mm:		
907.925	0 - 3	21.90
907.926	0 - 5	21.90
907.927	0 - 8	23.10
907.914	0 - 10	27.40
Option:		
908.986	Back with lug	1.70



907.925

Dial indicators 0.001 mm

Indicators with micrometer reading. Shockproof design.

- Measuring range: 0 - 5 mm.
- Graduation: 0.001 mm.
- Clamping stem: $\varnothing 8$ mm.
- Dial diameter: 60 mm.
- Rotatable dial.
- Scale numbering: 0 - 100 - 0.
- Shockproof.
- Adjustable tolerance markers.
- Locking screw.
- Flat back.
- Delivery with a manufacturer measuring report.

ECONOMY LINE ✓

Item No.	Measuring range/mm	Price EUR
907.921	0 - 1	54.00
907.922	0 - 2	82.00
907.923	0 - 3	82.00
907.924	0 - 5	144.00
Option:		
908.987	Back with lug	2.40



907.921



Peacock dial indicators 0.1 and 0.01 mm

- Measuring range: 0 - 80 mm.
- Graduation: 0.1 or 0.01 mm.
- Clamping stem: $\varnothing$ 8 mm (except 855.557: $\varnothing$ 10 mm and 855.589: $\varnothing$ 14 mm).
- Rotatable dial.
- Adjustable tolerance markers.
- Flat back or back with lug*.
- DIN 878.



Item No.	Measuring range/mm	Dial $\varnothing$ /mm	Max. hysteresis mm	Measuring force/N	Accuracy mm	Price EUR
Graduation 0.01 mm:						
855.547	0 - 4	36	0.004	<1.4	± 0.018	61.00
855.536	0 - 3	40	0.004	<1.4	± 0.016	113.00
855.517	0 - 5	53	0.004	<1.4	± 0.015	43.00
855.507	0 - 10	53	0.004	<1.4	± 0.015	39.20
855.508*	0 - 10	53	0.004	<1.4	± 0.015	39.20
855.527*	0 - 20	66.5	0.005	<2.0	± 0.025	86.00
855.537*	0 - 30	76	0.007	<2.2	± 0.030	134.00
855.557*	0 - 50	83	0.008	<2.5	± 0.100	279.00
Graduation 0.1 mm:						
855.589*	0 - 80	112	—	<2.5	± 0.100	442.00

* Back with lug.

Peacock dial indicators 0.005 and 0.001 mm

- Measuring range: 0 - 5 mm.
- Graduation: 0.005 or 0.001 mm.
- Clamping stem: $\varnothing 8$ mm.
- Rotatable dial.
- Flat back or back with lug*.
- DIN 878.



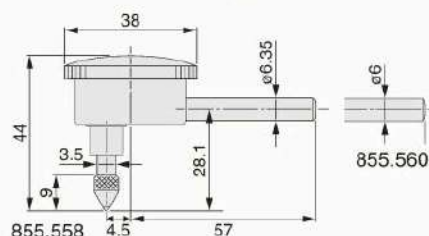
Item No.	Measuring range/mm	Dial $\varnothing$ /mm	Max. hysteresis mm	Measuring force/N	Accuracy mm	Price EUR
Graduation 0.005 mm:						
855.535*	0 - 3	47	0.004	<1.4	± 0.012	118.00
Graduation 0.001 mm:						
855.509	0 - 1	53	0.003	<1.5	± 0.006	74.00
855.525*	0 - 2	66.5	0.003	<1.5	± 0.007	151.00
855.555*	0 - 5	66.5	0.003	<1.5	± 0.010	197.00

* Back with lug.

Peacock dial indicators with back plunger

The back plunger dial indicator is characterized with easy handling since the spindle with the contact point is moving in the direction perpendicular to the dial face and the gauge is more compact. The dial indicator of this type is convenient for use in achieving a parallelism in machine guides and for applications where most other dial indicators are not applicable, give too great of a measurement error, or are difficult to read due to the applied arrangement.

- Measuring range: 0 - 5 mm.
- Graduation: 0.01 mm.
- Accuracy: ± 0.018 mm.
- Repeatability: 0.003 mm.
- Max. hysteresis: ± 0.004 mm.
- Measuring force: < 1.4 N.
- Rotatable dial.
- Scale numbering: 0 - 100.
- DIN 878.



Item No.	Measuring range/mm	Clamping stem $\varnothing$ /mm	Price EUR
855.558	0 - 5	6.35	84.00
855.560	0 - 5	6	98.00
Clamping stem on back side:			
855.559	0 - 5	8	84.00

Mitutoyo dial indicators 0.01 and 0.001 mm

Dial indicators from Mitutoyo with a very favourable price-performance ratio. In our catalog we represent a part of the Mitutoyo program, but we can supply all Mitutoyo products.

- Graduation: 0.01 or 0.001 mm.
- Clamping stem: $\varnothing 8$ mm.
- Dial diameter: 55.6 mm.
- Rotatable dial.
- Various models available.
- Locking screw and adjustable tolerance markers optionally available.

Graduation 0.01 mm

- Measuring range: 0 - 10 mm.
- Accuracy: ± 0.013 mm.
- Max. hysteresis: 0.003 mm.
- Measuring force: 1.4 N.
- 1 pointer revolution = 1 mm.
- Scale numbering: 0 - 100 (100 - 0).
- Flat back or back with lug¹.

Item No.	Measuring range/mm	Graduation mm	Price EUR
204.600 ¹	0 - 10	0.01	51.00
204.601	0 - 10	0.01	50.00
204.602 ²	0 - 10	0.01	146.00
204.613 ^{1,3}	0 - 10	0.01	76.00

¹ Back with lug.

² Splashproof model; measuring force 2.5 N.

³ Shockproof.

Graduation 0.001 mm

- Measuring range: 0 - 1 mm.
- Accuracy: ± 0.005 mm.
- Max. hysteresis: 0.002 mm.
- Flat back. (Back with lug available on request.)
- Conforms to factory standard.

Item No.	Measuring range/mm	Graduation mm	1 pointer revolution	Scale numbering	Measuring force/N	Price EUR
210.912	0 - 1	0.001	0.2 mm	0 - 100 - 0	1.5	110.00
211.010	0 - 1	0.001	0.1 mm	0 - 100 (100 - 0)	1.5	142.00
Options:						
211.148	Locking screw for 2 series dial indicators					7.40
211.195	Tolerance markers for 2 series dial indicators					2.40



204.600



210.912



211.010



211.148 + 211.195

Mitutoyo dial indicators 0.01

Dial indicators from Mitutoyo with wider range, compact build or back plunger. All with a high accuracy.

- Measuring range: 0 - 100 mm.
- Graduation: 0.01.
- Clamping stem: $\varnothing 8$ mm.
- Rotatable dial.
- Shockproof (except 100.302, 100.300, 104.401 and 116.000).
- Locking screw and adjustable tolerance markers optionally available.
- Flat back or back with lug.



Item No.	Measuring range/mm	Graduation mm	Accuracy mm	Dial $\varnothing$ /mm	Scale numbering	Measuring force/N	Price EUR
204.607 ²	0 - 10	0.01	0.015	57	0-100	1.4	
205.211 ²	0 - 30	0.01	0.025	57	0-100	2.5	126.00
205.212 ^{1,2}	0 - 30	0.01	0.025	57	0-100	2.5	129.00
305.219 ²	0 - 30	0.01	0.025	78	0-100	2.5	233.00
305.200 ^{1,2}	0 - 30	0.01	0.025	78	0-100	2.5	237.00
305.801 ²	0 - 50	0.01	0.030	78	0-100	3	245.00
305.800 ^{1,2}	0 - 50	0.01	0.030	78	0-100	3	247.00
306.000 ²	0 - 80	0.01	0.045	78	0-100	3	337.00
306.019 ^{1,2}	0 - 80	0.01	0.045	78	0-100	3	341.00
306.200 ²	0 - 100	0.01	0.050	78	0-100	3.5	498.00
306.219 ^{1,2}	0 - 100	0.01	0.050	78	0-100	3.5	498.00
Very compact dial indicators:							
100.302	0 - 4	0.01	0.014	36	0-50-0	1.4	141.00
100.300 ¹	0 - 4	0.01	0.014	36	0-50-0	1.4	141.00
104.401	0 - 5	0.01	0.012	40	0-100	1.4	
Dial indicator with back plunger:							
116.000	0 - 5	0.01	0.018	39	0-100	1.4	151.00

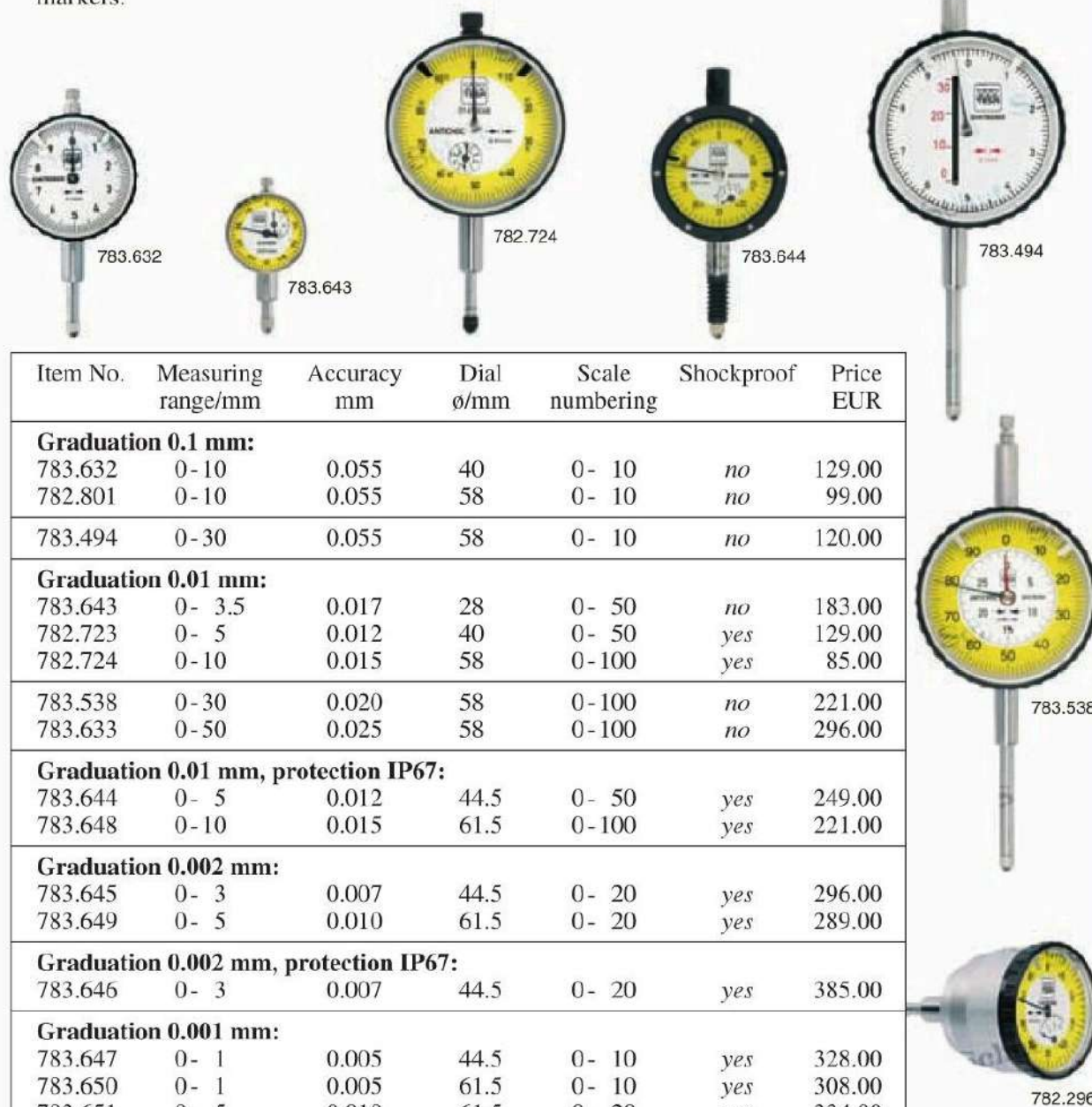
¹ Back with lug.

² Shockproof.

TESA dial indicators

TESA precision dial indicators with a high accuracy and a special construction guaranteeing a very long life.

- Measuring range: 0 - 50 mm.
- Graduation: 0.1 - 0.001 mm.
- Clamping stem: $\varnothing 8$ mm.
- Rotatable dial with adjustable tolerance markers.
- Flat back, except 782.296.
- Delivery with a declaration of conformity.



Item No.	Measuring range/mm	Accuracy mm	Dial $\varnothing$ /mm	Scale numbering	Shockproof	Price EUR
Graduation 0.1 mm:						
783.632	0 - 10	0.055	40	0 - 10	no	129.00
782.801	0 - 10	0.055	58	0 - 10	no	99.00
783.494	0 - 30	0.055	58	0 - 10	no	120.00
Graduation 0.01 mm:						
783.643	0 - 3.5	0.017	28	0 - 50	no	183.00
782.723	0 - 5	0.012	40	0 - 50	yes	129.00
782.724	0 - 10	0.015	58	0 - 100	yes	85.00
783.538	0 - 30	0.020	58	0 - 100	no	221.00
783.633	0 - 50	0.025	58	0 - 100	no	296.00
Graduation 0.01 mm, protection IP67:						
783.644	0 - 5	0.012	44.5	0 - 50	yes	249.00
783.648	0 - 10	0.015	61.5	0 - 100	yes	221.00
Graduation 0.002 mm:						
783.645	0 - 3	0.007	44.5	0 - 20	yes	296.00
783.649	0 - 5	0.010	61.5	0 - 20	yes	289.00
Graduation 0.002 mm, protection IP67:						
783.646	0 - 3	0.007	44.5	0 - 20	yes	385.00
Graduation 0.001 mm:						
783.647	0 - 1	0.005	44.5	0 - 10	yes	328.00
783.650	0 - 1	0.005	61.5	0 - 10	yes	308.00
783.651	0 - 5	0.010	61.5	0 - 20	yes	334.00
Clamping stem on back side:						
782.296	0 - 3	0.012	40	0 - 50	no	224.00

TESA dial indicators

TESA precision dial indicators with a high accuracy and a special construction guaranteeing a very long life.

- Measuring range: 0 - 10 mm.
- Graduation: 0.01 - 0.001 mm.
- Clamping stem: $\varnothing 8$ mm.
- Measuring force: approx. 1 N (only 781.682).
- Rotatable dial (except 781.682).
- Adjustable tolerance markers.
- Fine adjustment (only 781.682).
- Flat back.
- DIN 878 (except 781.682 and 783.221).
- DIN 879 (only 781.682).



779.925



783.221



781.682



Item No.	Measuring range/mm	Accuracy mm	Dial $\varnothing$ /mm	Scale numbering	Shock-proof	Graduation mm	Price EUR
781.681	0 - 5	0.014	40	0 - 50	no	0.01	197.00
781.693	0 - 1	0.005	58	0 - 100	yes	0.001	325.00
781.695	0 - 5	0.005	58	0 - 200	yes	0.001	322.00
781.691	0 - 10	0.017	58	0 - 100	no	0.01	200.00
781.686	0 - 10	0.017	58	0 - 100	yes	0.01	194.00
779.913 ¹	0 - 1	0.005	40	0 - 100	yes	0.001	336.00
781.685 ¹	0 - 1	0.005	40	0 - 100	yes	0.001	202.00
781.683 ¹	0 - 5	0.014	40	0 - 50	no	0.01	96.00
779.925 ¹	0 - 5	0.014	40	0 - 50	yes	0.01	225.00
783.253	0 - 0.4	0.014	40	20 - 0 - 20	no	0.01	118.00
783.221	0 - 1	0.009	58	50 - 0 - 50	yes	0.01	288.00
782.799	0 - 10	0.017	58	0 - 100	no	0.01	200.00
781.682 ¹	0 - 0.1	0.0012	62	50 - 0 - 50	yes	0.001	238.00

¹ Protection: IP54.

Käfer dial indicators 0.01 mm

These recently developed Käfer dial indicators are very stable and have a very good price-performance ratio. Also available in a shockproof design, where blows against the plunger can not damage the mechanics.

- Measuring range: 0 - 10 mm.
- Graduation: 0.01 mm.
- Clamping stem: $\varnothing 8$ mm.
- Dial diameter: 40 mm (851.700: 58 mm).
- Scale numbering: 0 - 50 (852.291: 0 - 100), (851.700: 0 - 50 - 0).
- Adjustable tolerance markers.
- Flat back.
- Clamping stem and measuring pin out of hardened stainless steel.
- DIN 878.
- Delivery in a plastic case.

Item No.	Measuring range/mm	Graduation mm	Price EUR
852.350	0 - 3	0.01	51.00
852.352	0 - 5	0.01	65.00
Shockproof design:			
851.700	0 - 0.8	0.01	82.00
852.351	0 - 3	0.01	63.00
852.353	0 - 5	0.01	81.00
852.291	0 - 10	0.01	92.00



852.353

Käfer dial indicators 0.01 mm

These dial indicators have an almost constant measuring force of 1 N over the total measuring range. This is achieved through a built-in lever construction. The shockproof design protects the mechanics against harsh blows and reduces the possibility of damage. The shockproof design has an unbreakable cover glass.

- Measuring range: 0 - 10 mm.
- Graduation: 0.01 mm.
- Measuring force: approx. 1 N.
- Clamping stem: $\varnothing 8$ mm.
- Dial diameter: 58 mm.
- Scale numbering: 0 - 100.
- Adjustable tolerance markers.
- Flat back.
- DIN 878.
- Delivery in a plastic case.

Item No.	Measuring range/mm	Graduation mm	Price EUR
852.354	0 - 10	0.01	49.00
Shockproof design:			
852.355	0 - 10	0.01	51.00



852.355



Käfer dial indicators 0.01 mm

These Käfer dial indicators combine a large measuring range with a high accuracy. The clear dials ensure an easy read-out. Thanks to the special construction, these dial indicators have an almost constant measuring force on the whole measuring range.

- Measuring range: 0 - 100 mm.
- Graduation: 0.01 mm.
- Measuring force: approx. 1 N
(852.290 approx. 1.5 N, 852.289 approx. 1.2 N).
- Clamping stem: $\varnothing 8$ mm
(except 852.289: $\varnothing 10$ mm).
- Dial diameter: 58 mm.
- Rotatable dial.
- Adjustable tolerance markers.
- Flat back.
- Clamping stem and measuring pin out of hardened stainless steel.
- Conforms to factory standard.

Item No.	Measuring range/mm	Accuracy mm	Scale numbering	Price EUR
852.356	0- 30	± 0.02	0-100	118.00
852.357	0- 50	± 0.025	0-100	169.00
852.290	0- 80	± 0.030	0-100	348.00
852.289	0-100	± 0.050	0-100	442.00



Käfer Feinika dial indicators 0.001 mm

The Käfer Feinika dial indicators have a special construction without gear wheels, comparable to the precision dial indicators. A special lever construction enlarges the measuring range up to 1 mm. This lever construction gives the Feinika a very low hysteresis of maximal 1.5 μm , making it very suitable for very accurate comparative measurements where a large measuring range is necessary. Just like the precision dial indicators the Feinika has a resolution of 0.001 mm.



- Measuring range: 0 - 1 mm.
- Graduation: 0.001 mm.
- Hysteresis: ≤ 0.0015 mm.
- Clamping stem: $\varnothing 8$ mm.
- Shockproof.
- Adjustable tolerance markers.
- Conforms to factory standard.
- Delivery in a plastic case.

Item No.	Measuring range/mm	Accuracy mm	Dial $\varnothing$ /mm	Scale numbering	Price EUR
852.358	0-1	± 0.004	40	0-100	215.00
852.359	0-1	± 0.004	58	0-100	215.00

Precision dial indicator

Highly accurate dial indicator for measurements from a fixed reference point. Very suitable for internal measuring instruments and dial indicator stands for example.

- Measuring range: 0.1 mm.
- Graduation: 0.001 mm.
- Measuring force: < 2 N.
- Clamping stem: ø 8 mm.
- Travel: 3 mm.
- Adjustable tolerance markers.
- Fine adjustment.
- Delivery in a plastic case with a manufacturer measuring report.



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Item No.	Measuring range/mm	Dial ø/mm	Price EUR
907.939	0.1	63.5	208.00



Precision dial indicators

- Measuring range: 0.06 mm.
- Graduation: 0.0005 mm or 0.001 mm.
- Measuring force: approx. 1 N.
- Clamping stem: ø 28 mm.
- Shockproof.
- Fine adjustment.
- Delivery with an inspection report.

For dial indicator stands see dial indicator stands elsewhere in this catalog.



906.333



999.679

ECONOMY LINE ✓

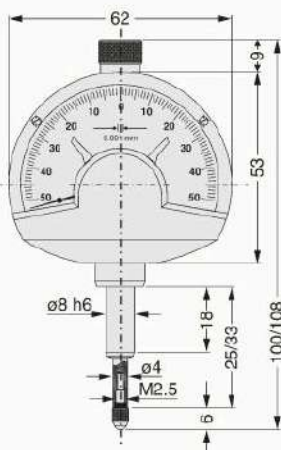
Item No.	Measuring range/mm	Resolution mm	Scale numbering	Price EUR
906.332	0.03	0.0005	15 - 0 - 15	156.00
906.333	0.06	0.001	30 - 0 - 30	127.00
Option: 999.679 ¹ Clamp ø 28 mm				178.00

¹ Excl. stand.

Käfer Compika precision dial indicators

Accurate precision dial indicators with stable, multiple ball-bearing mechanics. Because of that the Compika has a very low hysteresis. Easy to set by the fine adjustment on top of the dial indicator, that has a protective knob to prevent unintentional displacement of the pointer.

- Measuring range: 0.1 mm.
- Graduation: 0.001 mm.
- Measuring force: approx. 1 N.
- Clamping stem: $\varnothing 8$ mm.
- Max. probe travel: 3 mm.
- Ball bearing probe rod.
- Protective knob.
- Shockproof.
- Waterproof (only 852.386).
- Adjustable tolerance markers.
- Fine adjustment.
- Clamping stem and measuring pin out of hardened stainless steel.
- DIN 879.
- Delivery in a plastic case.



Item No.	Measuring range/mm	Waterproof	Dial $\varnothing$ /mm	Scale numbering	Price EUR
852.360	0.1	no	62	50-0-50	204.00
852.386	0.1	yes	62	50-0-50	262.00

Käfer Sensikator low force precision dial indicator

The precision dial indicator Sensikator combines the advantages of high precision with an exceptionally low measuring force. A fine glass pointer allows for a large reduction in inertia. The pointer and scale lines cover each other perfectly, this achieves a very accurate reading.

- Measuring range: 0.1 mm.
- Graduation: 0.001 mm.
- Measuring force: approx. 0.14 N $\pm 20\%$.
- Clamping stem: $\varnothing 8$ mm.
- Max. probe travel: 2.4 mm.
- Shockproof.
- Adjustable tolerance markers.
- Fine adjustment.
- DIN 879.
- Due to the exceptionally low measuring force, only useable in upright position.
- Delivery in a plastic case.



Item No.	Measuring range/mm	Dial $\varnothing$ /mm	Scale numbering	Price EUR
851.671	0.1	66	50-0-50	719.00

Schwenk precision dial indicators

Highly accurate shockproof dial indicators for measurements from a fixed reference point. Very suitable for internal measuring instruments and dial indicator stands for example.

- Measuring range: up to 0.5 mm.
- Graduation: 0.01 or 0.001 mm.
- Measuring force: approx. 1 N.
- Clamping stem: ø8 mm.
- Dial diameter: 63 mm.
- Max. probe travel: 3 mm.
- Ball bearing probe rod.
- Adjustable tolerance markers.
- DIN 879.
- Delivery in a plastic case.

Item No.	Type	Measuring range/mm	Graduation mm	Price EUR
852.640	Mytast	0.1	0.001	231.00
852.641	Centitast	0.5	0.01	183.00



852.640



852.641

TESA precision dial indicators

- Measuring range: 0.1 mm.
- Graduation: 0.001 mm.
- Measuring force: approx. 1 N.
- Clamping stem: ø8 mm.
- Max. probe travel: 3 mm.
- Shockproof.
- Protection: IP54 (only 781.700).
- Adjustable tolerance markers.
- Fine adjustment.
- Clamping stem and measuring pin out of hardened stainless steel.
- DIN 879.



781.699

781.700

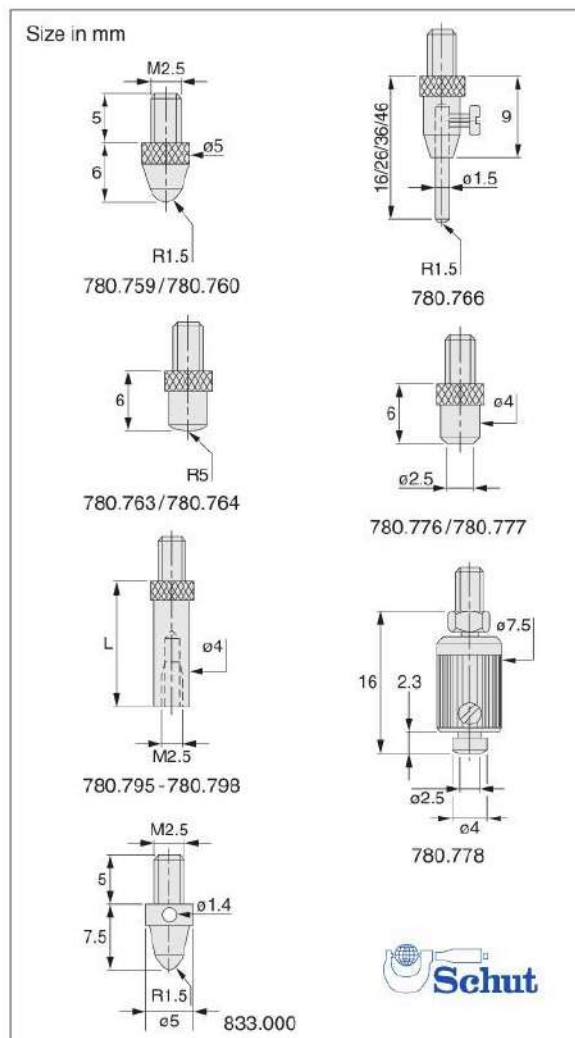


Item No.	Measuring range/mm	Accuracy mm	IP54	Dial ø/mm	Price EUR
781.699	0.1	0.0012	no	62	361.00
781.700	0.1	0.0012	yes	62	399.00

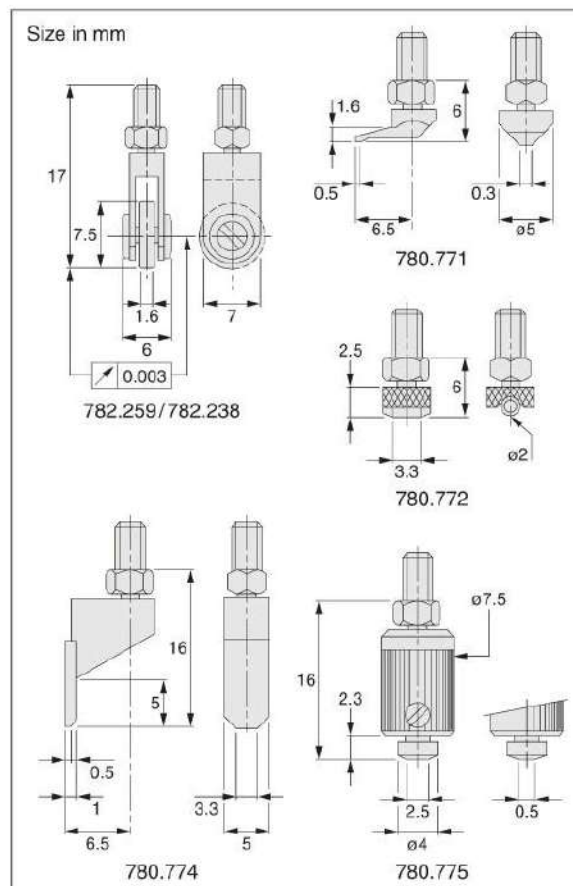
COC-357 EN 20060702

Inserts and extensions

Most dial indicators are equipped with an interchangeable insert with thread M2.5. Besides the inserts shown below various other types are available.



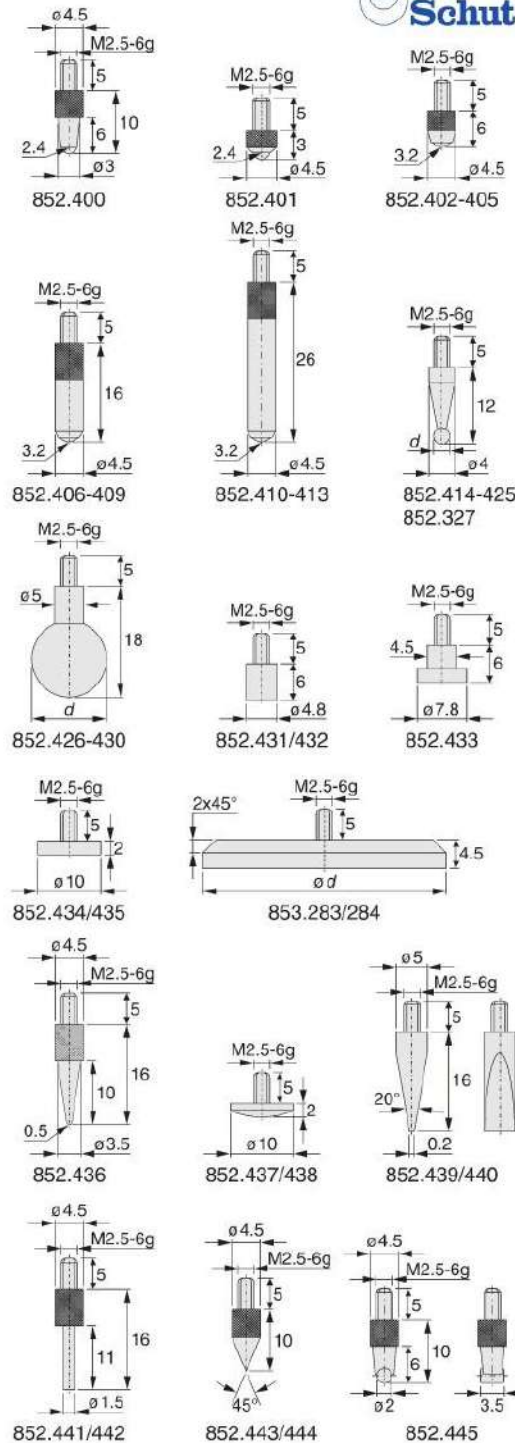
Item No.	Type	Price EUR
Ball radius 1.5 mm:		
780.759	Steel	7.00
780.760	Tungsten carbide	13.00
780.766	4 interchangeable inserts	40.00
Ball radius 5 mm:		
780.763	Steel	36.00
780.764	Tungsten carbide	61.00
Flat:		
780.776	Steel	34.00
780.777	Tungsten carbide	65.00
780.778	Flat, adjustable meas. face	530.00



Item No.	Type	Price EUR
Special forms:		
782.259	Roller with a cylindrical measuring face	155.00
782.238	Roller with a ball-shaped measuring face	149.00
780.771	Offset point	62.00
780.772	Cylindrical point	62.00
780.774	Offset line contact face	102.00
780.775	V-shaped adjustable point	785.00
Extensions:		
780.795	10 mm	11.00
780.796	15 mm	11.00
780.797	20 mm	11.00
780.798	40 mm	11.00
Special probe head:		
833.000	Ceramic ball $\varnothing 3$ mm	57.00

Käfer inserts

Inserts with thread M2.5. The inserts are made of steel unless otherwise indicated; tungsten carbide (TC), ruby (R) or sapphire (S).



Item No.	Description	Price EUR
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Ball probes:

852.400	d= 2.4 mm	l= 10 mm		4.70
852.401	d= 2.4 mm	l= 3.0 mm		1.80
852.402	d= 3.2 mm	l= 6.0 mm		1.40
852.403	d= 3.2 mm	l= 6.0 mm	TC	6.80
852.404	d= 3.2 mm	l= 6.0 mm	R	9.00
852.405	d= 3.2 mm	l= 6.0 mm	S	9.00
852.406	d= 3.2 mm	l= 16 mm		4.80
852.407	d= 3.2 mm	l= 16 mm	TC	16.20
852.408	d= 3.2 mm	l= 16 mm	R	12.90
852.409	d= 3.2 mm	l= 16 mm	S	12.90
852.410	d= 3.2 mm	l= 26 mm		4.80
852.411	d= 3.2 mm	l= 26 mm	TC	16.20
852.412	d= 3.2 mm	l= 26 mm	R	12.90
852.413	d= 3.2 mm	l= 26 mm	S	12.90
852.414	d= 1.0 mm	l= 12 mm		10.30
852.420	d= 1.0 mm	l= 12 mm	TC	31.40
852.327	d= 1.5 mm	l= 12 mm		9.80
852.415	d= 2.0 mm	l= 12 mm		10.30
852.421	d= 2.0 mm	l= 12 mm	TC	31.40
852.416	d= 3.0 mm	l= 12 mm		10.30
852.422	d= 3.0 mm	l= 12 mm	TC	31.40
852.417	d= 4.0 mm	l= 12 mm		10.30
852.423	d= 4.0 mm	l= 12 mm	TC	31.40
852.418	d= 5.0 mm	l= 12 mm		10.30
852.424	d= 5.0 mm	l= 12 mm	TC	31.40
852.419	d= 6.0 mm	l= 12 mm		10.30
852.425	d= 6.0 mm	l= 12 mm	TC	31.40
852.426	d= 7.0 mm	l= 18 mm		11.00
852.427	d= 8.0 mm	l= 18 mm		11.00
852.428	d= 9.0 mm	l= 18 mm		11.00
852.429	d= 10.0 mm	l= 18 mm		11.00
852.430	d= 11.0 mm	l= 18 mm		11.00

Flat probes:

852.431	d= 4.8 mm	l= 6 mm		5.80
852.432	d= 4.8 mm	l= 6 mm	TC	37.60
852.433	d= 7.8 mm	l= 6 mm		7.00
852.434	d= 10.0 mm	l= 2 mm		6.50
852.435	d= 10.0 mm	l= 2 mm	TC	61.00
853.283	d= 40.0 mm	l= 4.5 mm		
853.284	d= 50.0 mm	l= 4.5 mm		

Spherical probes:

852.436	conical	l= 16 mm		7.70
852.437	d= 10.0 mm	l= 2.0 mm		8.10
852.438	d= 10.0 mm	l= 2.0 mm	TC	127.00

Knife-edged probes:

852.439	d= 5.0 mm	l= 16 mm		12.40
852.440	d= 5.0 mm	l= 16 mm	TC	81.00

Needle-shaped probes:

852.441	d= 1.5 mm	l= 16 mm		9.70
852.442	d= 1.5 mm	l= 16 mm	TC	32.10

Tapered probes:

852.443	d= 4.5 mm	l= 10 mm		7.70
852.444	d= 4.5 mm	l= 10 mm	TC	67.00

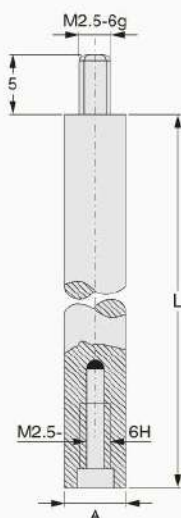
Probe with cylindrical measuring face:

852.445	d= 2 x 315 mm	l= 10 mm		13.90
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Extensions for inserts

Steel extensions for inserts with thread M2.5.

Item No.	Length mm	Price EUR
Extensions with A = $\varnothing$ 4 mm:		
852.446	10	5.60
852.447	15	5.60
852.448	20	5.60
852.449	25	5.60
852.450	30	5.60
852.451	35	5.60
852.452	40	5.60
852.453	45	5.60
852.454	50	5.60
852.455	55	5.60
852.456	60	5.60
852.457	65	5.60
852.458	70	5.60
852.459	75	5.60
852.460	80	5.60
852.461	85	5.60
852.462	90	5.60
852.463	95	5.60
852.464	100	5.60

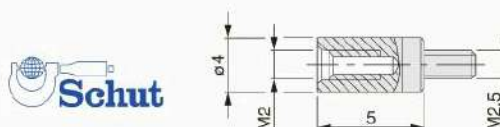


Item No.	Length mm	Price EUR
Extensions with A = $\varnothing$ 5 mm:		
852.465	10	5.80
852.466	15	5.80
852.467	20	5.80
852.468	25	5.80
852.469	30	5.80
852.470	35	5.80
852.471	40	5.80
852.472	45	5.80
852.473	50	5.80
852.474	55	5.80
852.475	60	5.80
852.476	65	5.80
852.477	70	5.80
852.478	75	5.80
852.479	80	5.80
852.480	85	5.80
852.481	90	5.80
852.482	95	5.80
852.483	100	5.80

Adapters for inserts

Adapter for attaching other inserts to dial indicators and probes with an interchangeable insert with thread M2.5.

Item No.	External/internal thread	Price EUR
960.276	M2.5/M2	13.40



Käfer long angular heads for dial indicators

- Clamping shaft: $\varnothing$ 8 mm.
- Extensions stem: $\varnothing$ 8 mm.
- Thread for inserts and extensions: M2.5.
- Max. probe travel: 4 mm.
- One extension and extra insert are needed for the angular head to function.

Please see the dial indicator accessories section for these inserts.



851.019



851.020



851.021



851.024

Item No.	Description	Price EUR
Long angular heads:		
851.019	Long angular head 90°	293.00
851.020	Long angular head 45°	293.00
851.021	Long angular head 0°	211.00
Extensions:		
851.022	Extension 15 mm	222.00
851.023	Extension 25 mm	222.00
851.024	Extension 50 mm	222.00
851.025	Extension 75 mm	222.00
851.026	Extension 100 mm	299.00

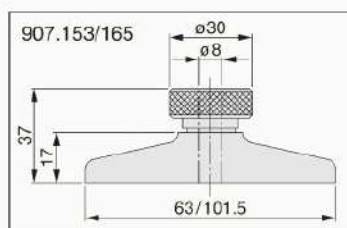
Depth measuring bases for dial indicators

Bases which make dial indicators and probes suitable for depth measurements.

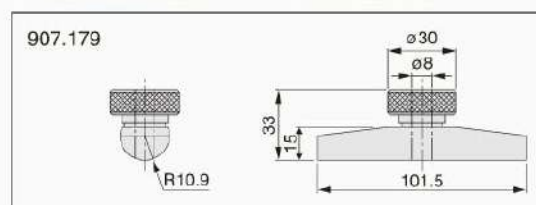
- Clamping shaft: 8H7.



907.153



907.179



906.644

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Item No.	Measuring face l x w/mm	Price EUR
907.153	63 x 17	22.90
907.165	101.5 x 17	23.90
With V-shaped measuring face:		
906.644	66 x 16	42.00
With cylindrical measuring face:		
907.179	101.5 x R10.9	28.50

Bridges

A number of standard bridges have been developed for arithmetic indicators to provide several convenient measuring solutions. The accuracy depends on the radius and form deviation of the workpiece. Custom-made bridges are also possible.



Item No.	Description	Price EUR
131.047	Bridge, $r = 15 - 80$ mm	213.00
131.040	Bridge, $r = 40 - 210$ mm	448.00
131.043	Bridge, $r > 40$ mm	206.00
131.044	Bridge, $r > 120$ mm	261.00
131.045	Bridge, $r > 420$ mm	281.00
131.046	Bridge, $r > 1000$ mm	301.00
131.042	Groove gauge 2 - 23 mm	269.00

131.042

Retraction levers

To determine the right type of retraction lever please contact our sales department.

Retraction lever

Universal retraction lever, bottom mounted. This lever is fully compatible with TESA dial indicators, but can also be used with a wide range of other dial indicators.



Item No.	Description	Price EUR
780.782	Retraction lever	191.00
Consisting of:		
780.779	Lever	177.00
780.780	Washer	11.00

Retraction lever

Universal retraction lever, bottom mounted and compatible with any dial indicator with an interchangeable probe with M2.5 thread.



Item No.	Description	Price EUR
781.727	Retraction lever	31.00

Retraction lever

Universal retraction lever, bottom mounted and compatible with any dial indicator.



Item No.	Description	Price EUR
137.693	Retraction lever	1.90

Retraction levers

Universal retraction levers, top mounted. These levers are fully compatible with TESA and Käfer dial indicators of the given diameters, but can also be used with a wide range of other dial indicators.



Item No.	Description	Dial ø/mm	Price EUR
782.320	TESA lever	40	101.00
782.321	TESA lever	58	116.00
852.387	Käfer lever	58	8.30

Mitutoyo retraction levers

Universal retraction levers, top mounted. These levers are fully compatible with Mitutoyo dial indicators of the given series, but can also be used with a wide range of other dial indicators.



Item No.	Description	Price EUR
210.198	For ID-C, S-SS, series 2, up to 12 mm measuring range	8.00
902.100	For S type and A type series 1	14.40

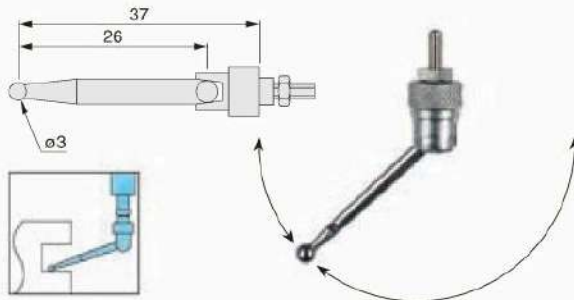
Clamping bush



Item No.	Description	Price EUR
780.398	Clamping bush VKE	10.10
780.397	Clamping screw VKD	3.80

Swivel-type probe

Swivel-type probe for dial indicators with M2.5 thread. The probe can be oriented over 180°. Equipped with a steel ball probe $\varnothing 3$ mm.



Item No.	Description	Price EUR
900.391	Swivel-type probe	35.00

Angle probe and special probe

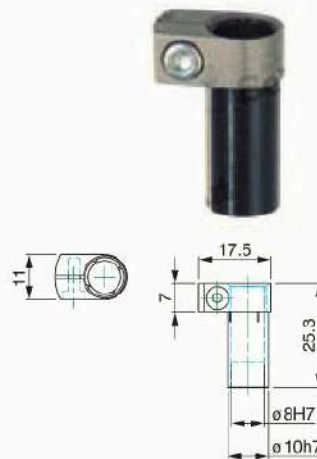
Probes e.g. for checks and alignments of bores on lathes.

- Probe measuring range: 10 mm.
- Measuring depth: 30 mm (856.149) or 60 mm (856.150).
- Clamping stem: $\varnothing 8$ mm.
- Clamping shaft: $\varnothing 8$ mm.



Item No.	Description	Price EUR
856.149	Angle probe	122.00
856.150	Special probe	115.00

Clamping bush

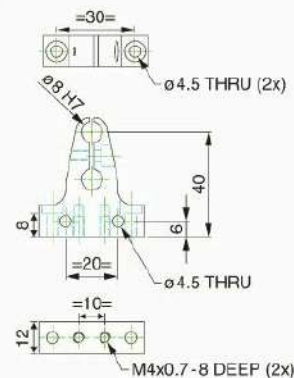


Item No.	Description	Price EUR
906.497	Clamping bush	26.10

Probe holder

Probe holder for for surfacemounting.

- Clamping shaft: $\varnothing 8$ mm.
- For attaching with M4 bolts.
- Material: anodized aluminum.



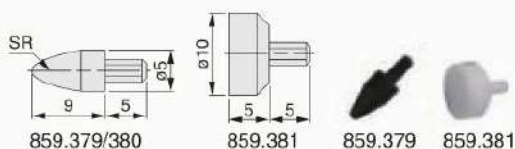
Item No.	Description	Price EUR
993.054	Probe holder	50.00

Peacock inserts for dial indicators

- Screw thread: M2.5.



859.378

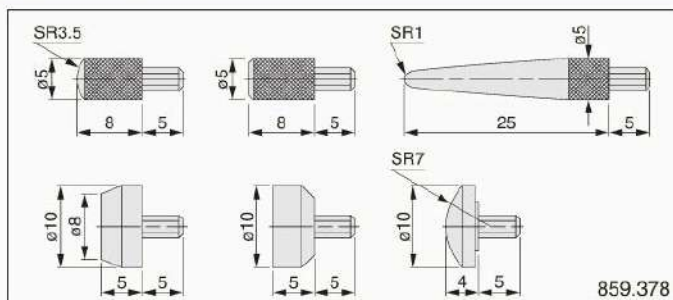


859.379/380

859.381

859.379

859.381



859.378

Item No.	Description	Price EUR
859.379	Bakelite probe	19.40
859.380	Teflon probe	19.40
859.381	Teflon probe	24.20
859.378	Steel probe set	73.00

Peacock dial indicator tester

For checking the accuracy of dial indicators, lever-type dial test indicators and gauges.

- Measuring range: 20 mm (max. spindle thread pitch: 25 mm).
- Graduation: 0.001 mm.
- Accuracy: ± 0.002 mm.
- Several mounting possibilities: vertical intake $\varnothing 8$ mm, horizontal intake $\varnothing 6$ mm.
- Please see the dial test indicator accessories section for other mounting possibilities.
- Provided with mirror for dials facing upward.
- Type NB.
- Delivery in an aluminum carrying case with a manufacturer measuring report.



Item No.	Description	Price EUR
855.620	Dial indicator tester	1,269.00

Dial indicator backs

Dial indicators are by default delivered with either a flat back or a back with lug. For many dial indicators alternative back plates are available, which considerably increases the flexibility for mounting the dial indicators. The many possible combinations make it impossible to specify them all. The given selection is an impression of the possibilities.



With lug in the middle



With fixing shank



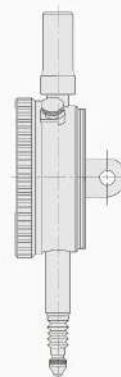
With threaded bush



Flat back



With magnet

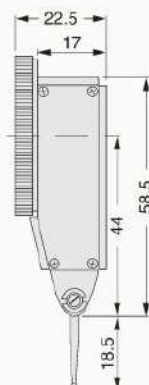


Lever-type dial test indicators

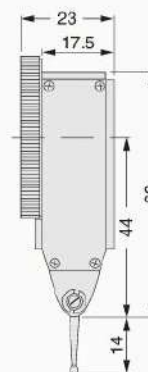
- Measuring range: up to 0.8 mm.
- Graduation: 0.01 or 0.002 mm.
- With dovetail joint and clamping stems $\varnothing 6$ and $\varnothing 8$ mm.
- Dial diameter: 40 mm.
- Rotatable dial.
- Stylus tip: $\varnothing 2$ mm.
- Insert thread: M1.8.
- Delivery with a manufacturer measuring report.



907.941



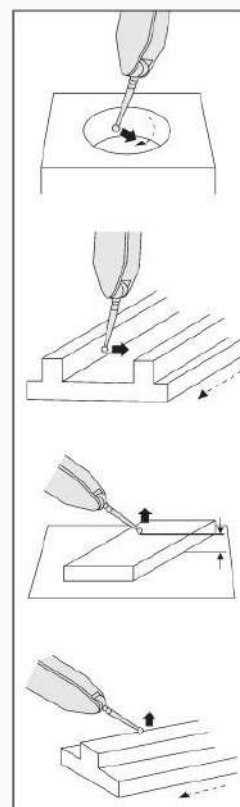
907.942



909.114/115



906.663/664

Clamping stem $\varnothing 6/\varnothing 8$ mm.

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Item No.	Measuring range/mm	Graduation mm	Scale numbering	Insert length/mm	Price EUR
907.941	0.8	0.01	0-40-0	19	42.00
907.942	0.2	0.002	0-100-0	13	75.00
Options:					
909.114	Steel spare stylus tip for 907.941				9.20
909.115	Steel spare stylus tip for 907.942				9.20
906.663	Ruby spare stylus tip for 907.941				10.20
906.664	Ruby spare stylus tip for 907.942				10.20

Peacock lever-type dial test indicators

- Measuring range: up to 1 mm.
- Graduation: 0.01, 0.002 or 0.001 mm.
- With dovetail joint and clamping stem $\varnothing 6$ mm.
- Measuring force: <0.3 N (except 855.610: 0.05 N).
- Dial diameter: $\varnothing 35$ mm.
- Rotatable dial.
- Tungsten carbide stylus tip: $\varnothing 2$ mm.
- Insert thread: M1.7.
- Reversible measuring direction (only 855.611).
- Delivery in a plastic case with a manufacturer measuring report.



Inserts

Item No.	Ball $\varnothing$ /mm	Price EUR
For 855.601/605/610/613:		
859.016 ¹	2	8.40
859.152 ¹	1	15.20
859.151 ¹	0.8	15.20
859.290 ¹	0.5	55.00
859.576 ²	2	44.00
For 855.602/609/614:		
859.126 ¹	2	12.10
859.291 ¹	1	17.80
859.292 ¹	0.8	17.80
859.293 ¹	0.5	55.00
859.577 ²	2	44.00
For 855.603/606/622:		
859.200 ¹	2	10.10
859.294 ¹	1	15.20
859.295 ¹	0.8	15.20
859.296 ¹	0.5	55.00
859.578 ²	2	44.00
For 855.612:		
859.571 ¹	2	11.00
859.572 ¹	1	15.20
859.573 ¹	0.8	15.20
859.574 ¹	0.5	55.00
859.575 ²	2	44.00
For 855.604:		
859.259 ¹	2	10.10
859.297 ¹	1	15.20
859.298 ¹	0.8	15.20
859.299 ¹	0.5	55.00
859.579 ²	2	44.00
For 855.611:		
859.464 ¹	2	8.40
859.465 ¹	1	15.20
859.466 ¹	0.8	15.20
859.467 ¹	0.5	55.00
859.580 ²	2	44.00

¹ Tungsten carbide.

² Ruby.

Item No.	Measuring range/mm	Max. hysteresis mm	Accuracy mm	Graduation mm	Scale numbering	Insert	Total insert length (TL/EL)/mm	Price EUR
Horizontal:								
855.601	0.5	0.005	± 0.007	0.01	0-25-0	859.016	21.3 /17.74	97.00
855.602	1	0.006	± 0.011	0.01	0-50-0	859.126	42.8 /39.00	115.00
855.603	0.28	0.004	± 0.005	0.002	0-140-0	859.200	17.94/14.33	115.00
855.612	0.28	0.004	± 0.005	0.002	0-140-0	859.571	23.47/19.86	130.00
855.604	0.14	0.004	± 0.005	0.001	0-70-0	859.259	11.7 / 8.13	126.00
855.610	0.5	0.005	± 0.007	0.01	0-25-0	859.016	21.3 /17.74	109.00
855.611	0.8	0.005	± 0.010	0.01	0-40-0	859.464	22.4 /19.24	168.00
Perpendicular:								
855.605	0.5	0.005	± 0.007	0.01	0-25-0	859.016	21.3 /17.74	97.00
855.606	0.28	0.004	± 0.005	0.002	0-140-0	859.200	17.94/14.33	109.00

Alternative: www.schut.com/PDFs/2025-p244-EN.pdf

Mitutoyo lever-type dial test indicators 0.01 mm

These dial test indicators are able to measure in both directions without having to switch direction.

- Measuring range: up to 1 mm.
- Graduation: 0.01 mm.
- With dovetail joint and clamping stem $\varnothing 8$ mm.
- Dial diameter: $\varnothing 40$ mm.
- Rotatable dial.
- Tungsten carbide stylus tip: $\varnothing 2$ mm.
- Insert thread: M1.7.
- Jewel beared clockwork.
- Antimagnetic.
- Delivery in a plastic case with a manufacturer measuring report and a clamping stem.
- Various different models available.



Inserts

Item No.	Ball $\varnothing$ /mm	Price EUR
For 513.424/426:		
137.557 ¹	2	23.00
290.654 ²	0.5	32.00
190.653 ²	0.7	26.00
137.558 ¹	1	17.00
137.559 ¹	3	17.00
For 513.414:		
131.324 ¹	2	13.00
131.316 ¹	1	13.00
For 513.403/454/484:		
103.006 ¹	2	23.00
290.549 ²	0.5	32.00
290.550 ²	0.7	26.00
103.013 ¹	1	17.00
210.201 ³	2	35.00
103.014 ¹	3	17.00
For 513.415:		
136.013 ¹	2	19.00
290.656 ²	0.5	34.00
290.655 ²	0.7	31.00
136.235 ¹	1	16.00
211.211 ³	2	35.00
136.236 ¹	3	16.00

¹ Tungsten carbide.

² Steel.

³ Ruby.

Item No.	Measuring range/mm	Accuracy f_{ges} /mm	Hysteresis mm	Measuring force/N	Scale numbering	Insert	Insert length (L1/L2)/mm	Price EUR
Horizontal model:								
513.424	0.5	0.006	0.004	≤ 0.3	0-25-0	137.557	22.2/18.7	173.00
513.426	1.5	0.016	0.005	≤ 0.4	0-25-0	137.557	22.2/18.7	181.00
513.414	0.5	0.010	0.005	≤ 0.2	0-25-0	131.324	37.4/33.9	177.00
513.403	0.8	0.009	0.004	≤ 0.3	0-40-0	103.006	20.9/17.4	109.00
513.415	1	0.010	0.005	≤ 0.2	0-50-0	136.013	44.5/41.0	178.00
Vertical model:								
513.454	0.8	0.009	0.004	≤ 0.3	0-40-0	103.006	20.9/17.4	134.00
Parallel model:								
513.484	0.8	0.009	0.004	≤ 0.3	0-40-0	103.006	20.9/17.4	152.00

Mitutoyo lever-type dial test indicators 0.001 and 0.002 mm

These dial test indicators are able to measure in both directions without having to switch direction.

- Measuring range: up to 0.6 mm.
- Graduation: 513.401: 0.001 mm,
513.465/406/425/475: 0.002 mm.
- With dovetail joint and clamping stem $\varnothing 8$ mm.
- Dial diameter: 513.465: $\varnothing 29$ mm,
513.401/406/425/475: $\varnothing 40$ mm.
- Rotatable dial.
- Tungsten carbide stylus tip: $\varnothing 2$ mm, (except
513.475, ruby stylus tip: $\varnothing 2$ mm).
- Insert thread: M1.7.
- Jewel beared clockwork.
- Antimagnetic.
- Delivery in a plastic case with a manufacturer
measuring report and a clamping stem.
- Various different models available.



513.401

Inserts

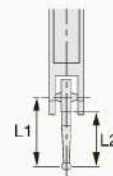
Item No.	Ball $\varnothing$ /mm	Price EUR
For 513.401:		
103.010 ¹	2	23.00
290.547 ³	0.5	32.00
290.548 ³	0.7	26.00
103.017 ¹	1	17.00
210.209 ²	2	35.00
103.018 ¹	3	17.00
For 513.465/406/425/475:		
103.011 ¹	2	23.00
131.314 ¹	1	11.00
131.315 ¹	3	13.00
210.068 ²	2	27.00

¹ Tungsten carbide.

² Ruby.

³ Steel.

Item No.	Measuring range/mm	Accuracy mm	Measuring force/N	Scale numbering	Insert	Insert length (L1/L2)/mm	Price EUR
513.401	0.14	0.003	≤ 0.3	0-70-0	103.010	14.7/11.2	193.00
513.465	0.2	0.003	≤ 0.3	0-100-0	103.011	18.7/15.2	184.00
513.406	0.2	0.003	≤ 0.3	0-100-0	103.011	18.7/15.2	142.00
513.425	0.6	0.007	≤ 0.4	0-100-0	103.011	18.7/15.2	194.00
513.475	0.2	0.003	≤ 0.3	0-100-0	210.068	18.7/15.2	169.00



Mitutoyo lever-type dial test indicator sets

The sets 513.404/408 consist of:

- lever-type dial test indicator,
- insert with tungsten carbide tip $\varnothing 1$ mm, $\varnothing 2$ mm and $\varnothing 3$ mm,
- union nut, clamping stem $\varnothing 4$ mm and $\varnothing 8$ mm,
- universal rotatable holder,
- clamping stem for height gauge (9 x 9 x 100 mm),
- manufacturer measuring report and plastic case.

Set 513.908 consists of:

- lever-type dial test indicator,
- insert with tungsten carbide tip $\varnothing 2$ mm,
- small magnetic dial indicator stand (150 N
magnetic force, holder $\varnothing 6$ mm and $\varnothing 8$ mm),
- shaft with serrated clamping ring,
- manufacturer measuring report and plastic case.



513.404

513.908

Item No.	Description	Accuracy/mm	Price EUR
513.404	Lever-type dial test indicator 0.8 mm (513.403) with several accessories	0.008	148.00
513.408	Lever-type dial test indicator 0.2 mm (513.406) with several accessories	0.003	181.00
513.908	Lever-type dial test indicator 0.8 mm (513.403) with small magnetic dial indicator stand	0.008	173.00

TESA P-Line lever-type dial test indicators

The P-Line range reflects all the quality and high precision of the well-known COMPAC brand.

- Measuring range: up to 3 mm.
- Graduation: 0.01, 0.002 or 0.001 mm.
- With dovetail joint.
- Rotatable dial.
- Tungsten carbide stylus tip.
- Insert thread: M1.6.
- ISO 9493.
- Delivery in a plastic case with an inspection report and two clamping stems (783.698 and 782.867).

Inserts

Item No.	Ball ø/mm	Insert length (L1/L2)/mm	Price EUR
783.329 ¹	0.8	18/14.26	34.00
783.120 ¹	2	18/14.26	33.00
783.699 ¹	3	18/14.26	36.00
783.036 ¹	0.8	36/32.26	36.00
782.488 ¹	2	36/32.26	39.00
783.419 ¹	3	36/32.26	36.00
783.596 ²	2	18/14.26	111.00
783.700 ²	2	36/32.26	111.00

¹ Tungsten carbide.

² Ruby.

NEW



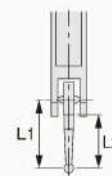
783.422



783.425



782.999



Item No.	Measuring range/mm	Accuracy mm	Graduation mm	Measuring force/N	Dial ø/mm	Scale numbering	Insert length (L1/L2)/mm	Price EUR
P-Line, horizontal:								
783.422	1.5	0.010	0.01	0.35	27	0-25-50	18/14.26	586.00
782.414	1.5	0.010	0.01	0.35	40	0-25-50	18/14.26	598.00
782.370	3	0.020	0.01	0.2	27	0-50-100	36/32.26	607.00
782.347	3	0.020	0.01	0.2	40	0-50-100	36/32.26	614.00
783.321	0.6	0.010	0.002	0.3	27	0-5-10	18/14.26	623.00
782.994	0.6	0.010	0.002	0.3	40	0-5-10	18/14.26	628.00
783.165	1.2	0.020	0.002	0.2	40	0-10-20	36/32.26	635.00
782.998	0.6	0.010	0.001	0.3	40	0-5-10	18/14.26	637.00
P-Line, lateral:								
783.425	3	0.020	0.01	0.2	40	0-50-100	36/32.26	614.00
P-Line, perpendicular:								
782.999	3	0.020	0.01	0.2	40	0-50-100	36/32.26	614.00

TESA lever-type dial test indicators

- Measuring range: up to 2 mm.
- Graduation: 0.02, 0.01, 0.002 or 0.001 mm.
- With dovetail joint.
- Rotatable dial.
- Tungsten carbide (Tesatast) or ruby (Rubytast) stylus tip, $\varnothing 2$ mm.
- Insert thread: M1.4.
- DIN 2270.
- Delivery in a plastic case with a clamping stem (780.172).



Item No.	Measuring range/mm	Accuracy mm	Graduation mm	Dial $\varnothing$ /mm	Scale numbering	Insert length/mm	Price EUR
Tesatast, horizontal:							
780.143	0.8	0.010	0.01	28	0-0.4-0	12.53	179.00
780.144	0.8	0.010	0.01	38	0-0.4-0	12.53	191.00
780.145	0.5	0.010	0.01	28	0-0.25-0	36.53	204.00
780.146	0.5	0.010	0.01	38	0-0.25-0	36.53	221.00
780.147	0.2	0.002	0.002	28	0-100-0	12.53	204.00
780.148	0.2	0.002	0.002	38	0-100-0	12.53	222.00
780.820	0.2	0.002	0.001	38	0-100-0	12.53	230.00
Tesatast, lateral:							
780.149	0.8	0.010	0.01	28	0-0.4-0	12.53	322.00
780.150	2.0	0.027	0.02	38	0-1.0-0	36.53	344.00
780.151	0.2	0.002	0.002	28	0-100-0	12.53	361.00
Tesatast, perpendicular:							
780.152	0.8	0.010	0.01	28	0-0.4-0	12.53	341.00
780.153	0.5	0.010	0.01	28	0-0.25-0	36.53	476.00
780.154	0.2	0.002	0.002	38	0-100-0	12.53	427.00
Rubytast, horizontal:							
781.466	0.8	0.010	0.01	28	0-0.4-0	12.53	201.00
781.467	0.2	0.0027	0.002	38	0-100-0	12.53	239.00

Interapid lever-type dial test indicators

- Measuring range: up to 1.6 mm.
- Graduation: 0.01 or 0.002 mm.
- Angle between insert and workpiece for true reading: 12°.
- With dovetail joint and clamping stem $\varnothing 4$ mm.
- Rotatable dial.
- Hardened steel stylus tip: $\varnothing 2$ mm.
- Insert thread: M1.7 (optional inserts on request).
- Delivery in a plastic case.

The sets consist of:

- dial test indicator,
- rectangular holder with clamp,
- reducing sleeve,
- swivel holder,
- key,
- case.



781.526



781.524



781.526

Item No.	Measuring range/mm	Accuracy mm	Graduation mm	Dial $\varnothing$ /mm	Scale numbering	Insert length/mm	Price EUR	Item No.	Price EUR
Horizontal:								In a set:	
781.521	1.6	0.023	0.01	37.5	0-40-0	16.5	405.00	781.526	513.00
781.522	1.6	0.023	0.01	30	0-40-0	16.5	405.00	781.527	507.00
781.523	0.4	0.010	0.002	37.5	0-10-0	15.2	431.00	781.528	583.00
781.524	0.4	0.010	0.002	30	0-10-0	15.2	474.00	781.529	593.00
Perpendicular:									
781.524	1.6	0.023	0.01	37.5	0-40-0	16.5	439.00		
781.525	1.6	0.023	0.01	30	0-40-0	16.5	439.00		

COC-226-EN-20060702

Käfer lever-type dial test indicators

Käfer lever-type dial test indicators have a very high accuracy because of the ruby ball bearing. The direction of the rotation is independent of the measuring direction. Equipped with three dovetail mountings. Are standard delivered with a clamping stem $\varnothing 8$ mm.

- Measuring range: up to 0.8 mm.
- Graduation: 0.01 or 0.002 mm.
- With dovetail joint and clamping stem $\varnothing 8$ mm.
- Rotatable dial.
- Tungsten carbide stylus tip: $\varnothing 2$ mm.
- Insert thread: M1.6 (optional inserts on request).
- 240° adjustable measuring insert.
- Ruby ball bearing.
- DIN 2270.
- Delivery in a plastic case with a key.
- Various different models available.



Item No.	Measuring range/mm	Graduation mm	Dial $\varnothing$ /mm	Scale numbering	Insert length/mm	Price EUR
852.361	0.8	0.01	32	0-40-0	12	92.00
852.362	0.5	0.01	32	0-25-0	35	129.00
852.363	0.2	0.002	40	0-100-0	12	114.00

Käfer saw tooth indicator

By placing the indicator on the saw blade you can easily measure the flatness of the blade, enabling you to saw very precisely. With the indicator you can also measure the height difference between the saw blade and the tooth. This principal of differential measuring of thickness or heights is not only suited for saw blades, but has many other applications.

Because the indicator has a two-sided read-out, it is usable for left- as well as right-handers.

- Measuring range: 0-2 mm.
- Graduation: 0.05 mm.
- Rotatable dial.
- Adjustable tolerance marker.

Item No.	Description	Price EUR
852.364	Saw tooth indicator	81.00



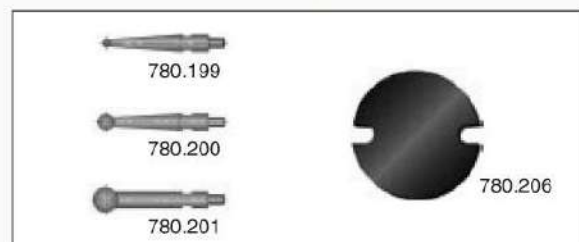
TESA dial test indicator accessories

Item No.	Description	Price EUR
783.698 ⑫	Knurled fixing shaft $\varnothing 4 \times 15$ mm (only for TESA P-Line)	36.00
782.867 ⑬	Knurled fixing shaft $\varnothing 8 \times 15$ mm (only for TESA P-Line)	36.00
780.171 ①	Fixing shaft $\varnothing 4 \times 12$ mm	34.00
780.172 ②	Fixing shaft $\varnothing 8 \times 12$ mm	20.00
780.173 ③	Cylindrical fixing shaft $\varnothing 8 \times 80$ mm, clamping shaft $\varnothing 5.6$ mm	119.00
783.697 ⑭	Swivelling fixing shaft $\varnothing 4 \times 64$ mm	40.00
783.534 ⑮	Swivelling fixing shaft $\varnothing 8 \times 64$ mm	40.00
780.175 ④	Swivelling holder $\varnothing 8 \times 25$ mm	67.00
780.176 ⑤	Swivelling holder $\varnothing 8 \times 90$ mm	73.00
780.177 ⑥	Angle holder $\varnothing 8 \times 25$ mm, clamping shaft $\varnothing 8$ mm	92.00
780.178 ⑦	Centering support $\varnothing 8 \times 25$ mm, clamping shaft $\varnothing 4$ mm	157.00
780.208 ⑧	Double fixing clamp $\varnothing 5.6/\varnothing 9.5$ mm, with dovetail clamp	34.00
782.787 ⑨	Swivelling holder $\varnothing 8 \times 125$ mm, with fine adjustment	294.00
782.590 ⑩	Fixing shaft $\varnothing 6 \times 12$ mm	39.00
855.600 ⑪	Fixing shaft $9 \times 11 \times 106$ mm complete with dovetail clamp and clamping shaft $\varnothing 6$ mm	53.00



TESA measuring inserts for lever-type dial test indicators

Inserts for TESA lever-type dial test indicators, with tungsten carbide* tip and thread M1.4



* Also available with ruby tip.

Item No.	Length/mm	$\varnothing$ /mm	Price EUR
780.199	12.53	1	15.00
780.200	12.53	2	17.00
780.201	12.53	3	18.00
780.202	36.53	1	39.00
780.203	36.53	2	36.00
780.204	36.53	3	39.00
780.206	Key		4.00

Accessories dial indicators/dial test indicators

Item No.	Description	Price EUR
909.433	Centering support $\varnothing 8 \times 25$ mm, holder $\varnothing 4$ mm	22.10
909.434	Rectangular fixing shaft $12 \times 6 \times 76$ mm, holder $\varnothing 4/\varnothing 8$ mm and dovetail clamp	15.50
909.435	Rectangular fixing shaft $12 \times 6 \times 76$ mm, holder $\varnothing 6/\varnothing 8$ mm and dovetail clamp	15.50
909.436	Rectangular fixing shaft $9 \times 9 \times 76$ mm, holder $\varnothing 4/\varnothing 8$ mm and dovetail clamp	15.50
909.437	Rectangular fixing shaft $9 \times 9 \times 76$ mm, holder $\varnothing 6/\varnothing 8$ mm and dovetail clamp	15.50
909.438	Round, swivelling fixing shaft $\varnothing 6 \times 70$ mm, holder with dovetail clamp	15.50
909.439	Round, swivelling fixing shaft $\varnothing 8 \times 70$ mm, holder with dovetail clamp	15.50

ECONOMY LINE ✓



Reducer



781.819



837.190



Item No.	Diameter	Price EUR
781.819	$\varnothing 8 \rightarrow 4$ mm stainless steel	22.00
837.190	$\varnothing 8 \rightarrow 6$ mm brass	1.30

Center-accessory

Small magnetic dial indicator stand which, in combination with a lever, could also be used as center-accessory to align bores in workpieces. For use in combination with a machine center.

- Permanent magnet $\varnothing 25$ mm.
- Universal pivot with dovetail clamp.
- Fine adjustment.
- Cylindrical support $\varnothing 10$ mm for insert in the collet chuck of a machine center.



910.341



960.490

ECONOMY LINE ✓

Item No.	Description	Price EUR
910.341	Center-accessory	24.10
960.490	Cylindrical support	21.60

Centering device

Convenient tool to find and set up the position of a workpiece on vertical and horizontal machines. It can also be used to determine the position of a workpiece when the spindle is rotated by hand or automatic. Easy read-out from stationary dial indicator. Instrument with compact dimensions.

- Max. range of use: 300 mm.
- Scale read-out per rotation: 0 - 3 mm.
- Graduation: 0.01 mm.
- Centering inside and outside with various probes.
- 3 straight and 3 bended probes included.
- Center feeler included.
- Spindle rotating speed max. 700 rpm.
- Compact dimensions (length basic instrument: 140 mm).
- For horizontal and vertical use suitable.
- Clamping stem: $\varnothing$ 10 mm.
- Delivery in a plastic carrying case.



ECONOMY LINE ✓

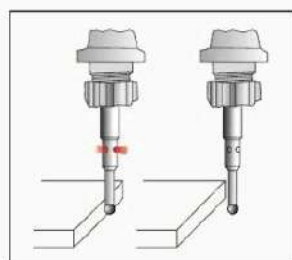
Item No.	Description	Price EUR
907.451	Centering device	145.00
Options:		
907.445	Probe set (7 pieces)	28.90
910.584	Retaining arm	

 **Schut**

Edge finders

Edge finders for both stationary and rotating use. As soon as the workpiece is touched by the ballprobe the all around visible LED will light up due to galvanic contact. The ballprobe is held in place by a spring. When the pressure on the tip becomes too large the ball will flip away sideways. The edge finders are also available with additional sound signal for extra working comfort.

- Concentricity: <0.01 mm.
- Diameter ballprobe: 10 mm.
- Power supply:
 - 907.456: 2 batteries type V357,
 - 907.458: 1 battery type 23A.



ECONOMY LINE ✓

Item No.	Clamping stem $\varnothing$ /mm	Length mm	Price EUR
907.456	20	100	49.00
With sound signal:			
907.458	20	162	70.00
Options:			
836.535	Battery type V357 (2 needed)		0.90
497.931	Battery type 23A		1.20

3D probes for centering and measuring

For easy and with high accurate setting the reference point of workpiece in all three axes (X, Y and Z), vertically and horizontally.

- Measuring range: max. ± 2 mm (rupture point in probe).
- Analog: graduation 0.01 mm, digital: resolution 0.001 mm.
- Clamping stem: $\varnothing 20$ mm.
- Insert length 27 mm, stylus tip $\varnothing 4$ mm (insert length 69 mm and diameter 8 mm optional).
- mm/inch conversion (only 853.822).
- Digit height: 8.5 mm (only 853.822).
- Isolation between insert and insert thread; for use on all machining centres and EDM machines.
- Insert thread: M3.
- Protection:
analog: IP67,
digital: IP64.
- Delivery with a manufacturer measuring report.



Item No.	Description	Accuracy mm	Repeatability mm	Price EUR
853.821	Analog 3D probe	± 0.01	0.01	378.00
853.822	Digital 3D probe	± 0.005	0.001	664.00
Options:				
495.157	Battery type CR2032			0.50
853.823	Spare insert 27 mm, tip diameter 4 mm			33.80
853.824	Spare insert 69 mm, tip diameter 8 mm			55.00

Edge finders

Rotating edge finders for accurate edge location.

ECONOMY LINE ✓

- Resolution: 0.005 mm.
- Repeatability: 0.005 mm.
- Range of use: 400 - 600 rpm.
- Hardness TiN measuring face: 2200 HV.



Item No.	Clamping stem $\varnothing$ /mm	Probe $\varnothing$ /mm	Material (measuring face)	Price EUR
909.360	8	10	steel	21.80
909.361	10	10	steel	21.80
909.362	8	4 and 10	steel	23.50
909.363	10	4 and 10	steel	23.50
909.364	6	6	steel	23.50
909.365	10	10	steel+ceramic	68.00
909.366	10	10	steel+TiN	39.30
909.367	10	4 and 10	steel+TiN	39.30
Options:				
909.368	Spring for 909.360/362			2.30
909.369	Spring for 909.364			2.80
909.359	Spring for 909.365			3.20
909.349	Spring for 909.361/363/366/367			3.20

Z-axis setting gauge

For easy pre-setting of the Z-axis with tools, whether or not in combination with parallel blocks to set a specific height. As soon as the tool touches the setting gauge (with floating top) the built-in red LED illumination will light up. After this the axis will move in opposite direction until the lamp turns off, this is the turning point, and so the setting gauge, to determine the accuracy.

- Repeatability: 0.01 mm.
- With magnetic base.
- Galvanic contact principle.

ECONOMY LINE ✓

Item No.	Description	Price EUR
908.804	Z-axis setting gauge	187.00
Option:		
498.823	Battery type V389 (2 needed)	2.40

- Dimensions:
ø 54 x 50 mm (precise height to determine with external measuring instrument).
- Weight: 450 g.
- Power supply:
2 batteries type V389.



Digital Z-axis setting gauge

For easy pre-setting of the Z-axis with tools, whether or not in combination with parallel blocks to set a specific height.

- Graduation: 0.01 mm.
- Repeatability: 0.01 mm.
- With magnetic base.
- mm/inch conversion.



- Automatic switch-off.
- Height: 50 mm (precise height to be determined using an external measuring instrument).
- Weight: 377 g.
- Power supply: 1 battery type V357.
- Delivery with reference pin for insert in tool holder.

ECONOMY LINE ✓

Item No.	Description	Price EUR
910.169	Z-axis setting gauge	135.00
Option:		
836.535	Battery type V357	0.90

Z-axis setting gauge

For easy pre-setting of the Z-axis with tools, whether or not in combination with parallel blocks to set a specific height.

- Graduation: 0.01 mm.
- Repeatability:
0.02 mm.
- With magnetic base.
- Diameter dial
indicator: ø 35 mm.



- Height: 50 mm (precise height to determine with external measuring instrument).
- Weight: 1013 g.
- Delivery with reference pin for insert in tool holder.

ECONOMY LINE ✓

Item No.	Description	Price EUR
909.460	Z-axis setting gauge	124.00

TESA TWIN-T10 display unit

Portable electronic display unit for TESA inductive probe with a very long battery operating time (up to 400 hours). The function keys can be operated separately and the soft rubber casing makes the TWIN-T10 very robust and easy to hold.

The large display with a high contrast and the design of the detailed segmentation of the analog scale (5-fold zoom function) makes it possible to visualize very precise movements and slight variations in form or to detect the reversal point. The TWIN-T10 features max, min, max-min and tolerance functions. The TWIN-T10 is very suitable for the evaluation of straightness, run-out, form or geometry during fine adjustment, alignment or fitting of mechanical parts.

The probe is automatically recognized. In the display 7 different measuring ranges can be set and an automatic setting. With the calibration function it is possible to tune the TWIN-T10 in combination with the connected probe, or with a dummy probe. With the TLC-USB cable or the TLC-BLE transmitter (for wireless data transfer) bidirectional communication is possible with the PC. Digimatic data output is also possible with the TLC-Digimatic cable.

- 7 measuring ranges: ± 5 mm, ± 2 mm, ± 500 μ m, ± 200 μ m, ± 50 μ m, ± 20 μ m, ± 5 μ m and an automatic setting.
- Digital and digital-analog read-out.
- Resolution: 1 μ m or 0.1 μ m.
- 1 probe input.
- Measure with or without tolerance limits; Go/NoGo indication on display.
- Offset function: within 200 μ m directly set to zero.
- Memory for min., max. and max-min. value.
- mm/inch conversion.
- Frequency limit: 10 Hz (relative to the input signal).
- Response time: ≤ 100 ms.
- Calibration with gauge blocks or dummy probe.
- Bidirectional data transfer.
- RS232C data output.
- On/off switch.
- Automatic switch-off.
- Key lock function.
- Reversible measuring direction.
- Operating temperature: 10 to 40°C.
- Autonomy: up to 400 hours.
- Dimensions: 170 x 100 x 38 mm.
- Protection: IP63 (except connections for probe and switch).
- Delivery with 4 batteries type AA.



783.468

Also available in μ -FINDER set 783.548.

Item No.	Description	Price EUR
783.468	TESA TWIN-T10	1,641.00
Options:		
495.111	Battery type AA (4 needed)	0.70
780.652	GT31 probe	1,053.00
783.301	TESA Link Connector USB	147.00
783.302	TESA Link Connector Digimatic	304.00
783.555	TESA Link Connector Bluetooth	59.00
783.037	DATA-Direct software for data acquisition	496.00
783.038	STAT-Express for statistical analysis	1,201.00

TESA TWIN-T20 and TWIN-T40 display-units

The TWIN-T20 and TWIN-T40 are interfaces for reading multiple instruments simultaneously. Both digital (TWIN-T20 only) and analog probes, calipers, dial indicators and more can be connected. The measuring probes are automatically recognised, ensuring the reliability of the measurement. The 7" touchscreen allows multiple sensors to be displayed simultaneously and all settings can be changed intuitively. The TWIN-T20 and TWIN-T40 are very suitable for use in a laboratory or production environment. Measurement results can be stored on a PC by means of USB stick, an RS232/USB cable or the TLC-BLE Bluetooth transmitter. TESA provides the free downloadable software 'Data-Viewer' for this purpose.

- 2 USB-A inputs for peripherals such as keyboard, foot switch, memory stick, QR / barcode reader.
- 1 USB-B output for HID keyboard.
- Connection for TESA TLC Bluetooth Transmitter.
- RS232/TESA BUS output.
- Display of multiple probes/measuring instruments simultaneously.
- 4 display options.
- Storage of min., max., max-min value, average.
- Addition function: $\pm A \pm B$.
- Tolerance indication, go, no-go or rework.
- Switching of polarity, choice between internal and external measurements.
- Zero point can be set per channel.
- Holder to be mounted on DIN rail.
- Dimensions: 190 x 112 x 119 mm.
- Degree of protection: IP65 (front).
- Delivery with AC adapter, calibration certificate and quick start manual.

TWIN-T20

- 2 probe inputs for half bridge probes.
- 2 USB-A inputs for TESA measuring instruments (except USB probes).
- Display of 2 probes/measuring instruments simultaneously.
- 8 comparator values: $\pm 5000 \mu\text{m} - \pm 5 \mu\text{m}$ and an automatic setting.
- Resolution: $0.1 \mu\text{m}/0.00001 \text{ in.}$
- Static and dynamic measurements. 4300 samples per second.
- Storage for 2 measurement programs possible.
- Limited calculation functions.

TWIN-T40

- 4 probe inputs for half bridge probes.
- 4x USB-A inputs for TESA measuring instruments (except USB probes).
- Display of 4 probes/measuring instruments simultaneously.
- 16 tolerance classes.
- Resolution: $0.1 \mu\text{m}/0.000005 \text{ in.}$
- Static and dynamic measurements. 6500 samples per second.
- Storage for 4 measurement programs possible.
- Extensive calculation functions.



NEW

Item No.	Description	Price EUR
783.637	Tesatronic TWIN-T20	1,866.00
783.707	Tesatronic TWIN-T40	2,424.00
Options:		
783.639	Touch pen	157.00
783.301	TESA Link Connector USB	147.00
783.555	TESA Link Connector Bluetooth	59.00
783.027	Cable USB-Opto RS232 duplex (2 m)	331.00



Display-unit for measuring probes

Robust, splashproof display-unit, machined from a solid aluminum block, that can be employed in both simple and complex measurements. Both analog and digital display of up to 32 dimensions simultaneously, with (green, yellow, red) tolerance assessment per dimension. The display-unit is universally applicable due to its compatibility with many instrument brands, and powerful due to its ability to display up to 32 dimensions at the same time and its trigonometrical-, statistical and PLC functions. The device is very suitable for efficient quality control without the need for a PC in the workspace.

- 7" color touch screen.
- Up to 99 probes can be connected.
- Display up to 32 dimensions.
- Store up to 128 measurement configurations.
- Memory for max, min, difference, average.
- Dynamic or static measurements.
- mm/inch conversion.
- ABS/INC switchable.
- Hold function.
- Statistical functions, e.g. histograms with Gauss curve, Pareto graph, q-q plot, CM, CMK.
- Configuration protection by password.
- Multilingual software, English and French.
- Works with instruments such as TESA, Mitutoyo, Magnescale and more.

- Dimensions: 200 x 151.6 x 143 mm.
- Storage of measuring data.
- Modules can be mounted on a standard DIN rail.

Connections:

- Footswitch.
- USB port for USB stick.
- Ethernet (ASCII/Modbus TCP).
- RS232 (ASCII/Modbus RTU).
- M-Bus input for probes.



Item No.	Type/description	Price EUR
857.880	Display-unit	
Options:		
857.886	Power supply 24 Vdc (not supplied)	
420.300	Adapter cable (not supplied)	
857.806	Module for 4 Digimatic instruments	
857.881	Module for 8 TESA probes	
857.883	Module for 4 Magnescale probes	
857.884*	Power module	
348.287	Connecting cable display-unit/probe module (3 m)	

*For applications using more than 30 analog TESA probes, or 4 Magnescale probes on 1 display-unit.

Modules for various instruments from other brands available on request.



TESA analog and digital probes IP65

- Measuring range: ± 1.5 , ± 2 or ± 5 mm.
- Protection: IP65.
- Other models, ranges and voltages available on request.
- Also available wireless probes or as a model with detachable cable.

TESA analog DC probes

Probes that produce a linear voltage proportional to displacement that can be connected to AD converters in a PC or to PLCs and X-t plotters.

The probe consists of two parts that are connected by a cable (2 m):

- a conventional analog probe (diameter 8 mm),
- the electronics module that converts the signal to DC.

- Accuracy: from $(0.2 + 3.5L^2) \mu\text{m}$ (L in mm).
- Signal output: 782.977/978: ± 2 Vdc,
782.979/980: ± 5 Vdc.
- Power supply: ± 15 Vdc.

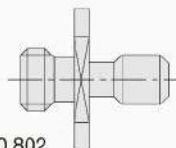
TESA digital USB probes

USB probes are easy to connect, using plug & play and without using interface boards. High accuracy guaranteed within the complete measuring range.

- Compatible with software Data-Direct, Stat-Express and Data-Viewer.
- Simple link with for example Excel files.



Item No.	Type	Measuring range/mm	Price EUR
Analog DC probes:			
782.977	GTL21DC	± 2	990.00
782.978	GTL22DC	± 2	1,008.00
782.979	GT61DC	± 5	1,172.00
782.980	GT62DC	± 5	1,198.00
Digital USB probes:			
783.097	GTL21 USB	± 2	661.00
783.098	GTL22 USB	± 2	702.00
783.226	GTL222 USB	± 1.5	831.00
783.099	GT61 USB	± 5	848.00
783.100	GT62 USB	± 5	866.00
Option:			
780.802*	Air tube connector, M4 thread for tube $\varnothing 4.7/\varnothing 2$ mm		30.00



780.802

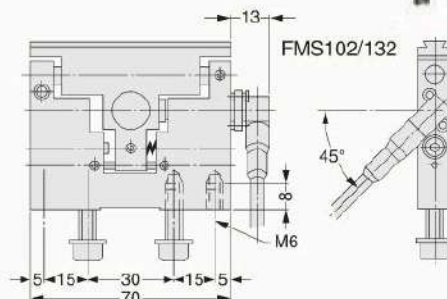
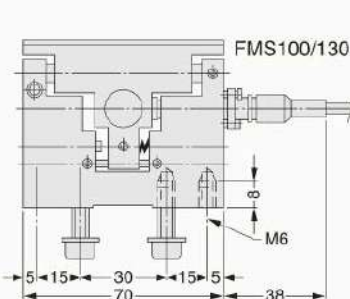
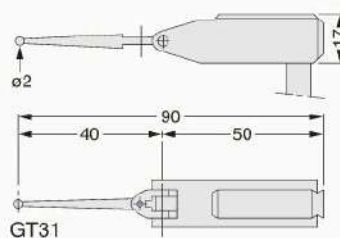
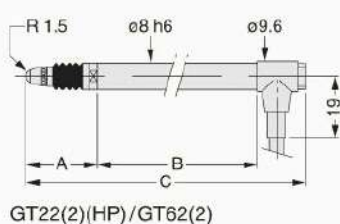
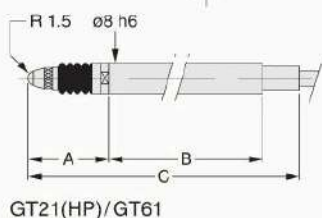
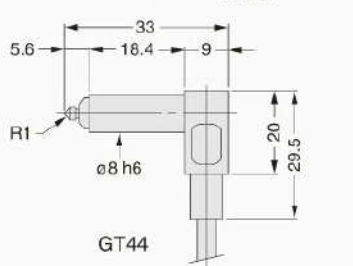
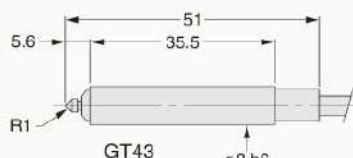
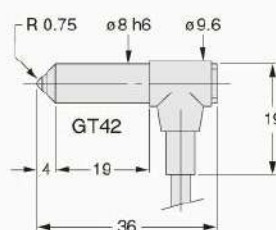
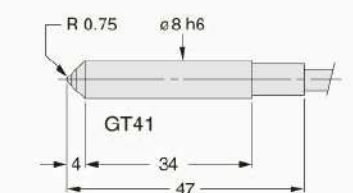
* Also other models available.

Type	Protection	Measuring force/N	Repeatability μm	Accuracy μm (L in mm)	Max. travel/mm	Cable exit	Probe movement
GTL21DC	IP65	0.63	0.1	$0.2 + 3.5L^2$	4.3	axial	spring, extend
GTL22DC	IP65	0.63	0.1	$0.2 + 3.5L^2$	4.3	square	vacuum, retract
GT61DC	IP65	0.9	0.1	$1 + 4L$	10.3	axial	spring, extend
GT62DC	IP65	0.9	0.1	$1 + 4L$	10.3	square	vacuum, retract
GTL21 USB	IP65	0.63	0.1	$0.4 + 2.4L^2$	4.3	axial	spring, extend
GTL22 USB	IP65	0.63	0.1	$0.4 + 2.4L^2$	4.3	square	vacuum, retract
GTL222 USB	IP65	1.2	0.1	$0.4 + 2.4L^2$	3.1	square	air pressure
GT61 USB	IP65	0.9	0.24	$1 + 4L$	10.3	axial	spring, extend
GT62 USB	IP65	0.9	0.24	$1 + 4L$	10.3	square	vacuum, retract

TESA analog probes

For years, TESA measuring probes have been used in both complex and simple measuring systems. The top quality and absolute reliability of these probes is reason enough to use TESA probes again and again. The most popular half-bridge probes, delivered calibrated, are noted in the following table. For more information, also on LVDT probes, please refer to the comprehensive TESA catalog.

- Sensitivity: 73.75 mV/V/mm
(GT61 and GT62: 29.5 mV/V/mm).



Item No.	Type	Measuring range/mm	Dimensions/mm			Price EUR
			A	B	C	
780.654	GT21	±1	20.5	61.5	92	415.00
780.687	GT21HP	±0.2	20.5	61.5	92	890.00
780.662	GT22	±1	20.5	47	81.5	436.00
780.673	GT22HP	±0.2	20.5	47	81.5	911.00
780.692	GT61	±5	29.5	81	120	658.00
780.693	GT62	±5	29.5	67.2	110.7	673.00
781.945	GT622	±5	29.5	67.2	110.7	747.00
780.667	GT41	±0.3	—	—	—	659.00
780.668	GT42	±0.3	—	—	—	689.00
780.686	GT43	±1	—	—	—	586.00
780.670	GT44	±1	—	—	—	593.00
780.652	GT31	±0.3	—	—	—	1,053.00
780.672	FMS100	±2	—	—	—	937.00
780.679	FMS102	±2	—	—	—	1,058.00
781.946	FMS130	±2.9	—	—	—	1,074.00
781.947	FMS132	±2.9	—	—	—	1,183.00
782.328	Set (10 pcs.) GT21					3,706.00
782.329	Set (10 pcs.) GT22					3,837.00
Options:						
783.225	DIN/USB adapter for analog probes with measuring range ±2 mm					397.00
783.284	DIN/USB adapter for analog probes with measuring range ±5 mm					397.00

TESA analog probes (continued)

Type	IEC 60529	Measuring force/N	Repeatability μm	Maximum inaccuracy/ μm	Max. travel/mm	Cable exit	Probe movement
GT21	IP65	0.63	0.01	$0.2 + 3L^3$	4.3	axial	spring, extend
GT21HP	IP64	0.63	0.01	$0.07 + 0.4L$	4.3	axial	spring, extend
GT22	IP65	0.63	0.01	$0.2 + 3L^3$	4.3	square	vacuum, retract
GT22HP	IP64	0.63	0.01	$0.07 + 0.4L$	4.3	square	vacuum, retract
GT61	IP65	0.9	0.05	$1 + 4L$	10.3	axial	spring, extend
GT62	IP65	0.9	0.05	$1 + 4L$	10.3	square	vacuum, retract
612-A ¹	IP50	1.0	0.05	$1 + 4L$	10.3	axial	air pressure
GT622	IP65	2.0	0.05	$1 + 4L$	10.3	square	1.1 bar, extend
GT41	IP65	0.63	0.01	$0.2 + 5L^2$	0.7	axial	spring, extend
GT42	IP65	0.63	0.01	$0.2 + 5L^2$	0.7	square	vacuum, retract
GT43	IP65	0.4	0.1	$0.2 + 5L^2$	2.1	axial	spring, extend
GT44	IP65	0.4	0.1	$0.2 + 5L^2$	2.1	square	vacuum, retract
GT31	IP40	0.1	0.1	$0.2 + 50L^2$	0.7	square	—
FMS100	IP50	2.0	0.5	$0.2 + 3L^3$	5.8	parallel	air pressure
FMS102	IP50	2.0	0.5	$0.2 + 3L^3$	5.8	square	air pressure
FMS130	IP50	2.0	0.5	$0.2 + 3L^3$	5.8	parallel	air pressure
FMS132	IP50	2.0	0.5	$0.2 + 3L^3$	5.8	square	air pressure

¹ No bellows.

Mitutoyo digital gauges

The LG100 is a gauge measuring system designed by Mitutoyo to be incorporated into assembly lines and inspection equipment. With the EH-counter or the EJ-counter modules, measurements can be read-out and saved. By combining multiple EJ-counters on a DIN-rail, they can be read-out at the same time with a maximum of 16 gauges. With the EJ-counters it is not only possible to have a USB output, but also an output to Profinet, Ethernet, or CC-link. Through these outputs, the gauges can be connected to a PLC-system. To process, and apply SPC to this data, optional software is available. Gauges with a measuring range up until 50 mm are available with which a resolution of 0.1 μm and a high accuracy are possible.



Analog probes

- Half-bridge probes.
- Measuring range: ± 0.25 to ± 10 mm.
- Repeatability: $< 0.15 \mu\text{m}$.
- Non-linearity: $< 0.3\%$.
- All non-pneumatic probes with cable guide have a cable exit square to probe body.



Feather Touch probes

Probes with a very small measuring force to measure sensitive materials like electronic components and thin-walled glass products.

Item No.	Type	Measuring range/mm	Max. travel mm	Measuring force/N	Total length mm	Price EUR
Feather Touch probes with a small measuring force and tungsten carbide probe tip:						
360.964	PRFC2P	± 1	3	0.18 / 1.10 ¹	75.6	
360.965	PRFC5P	± 2.5	6	0.18 / 1.10 ¹	99.6	
360.966	PRFC10P	± 5	11	0.18 / 1.10 ¹	130.1	
Option:						
360.967	Nylon probe tip					
Probes with regular measuring force³:						
360.916	PR05	± 0.25	0.6	0.70		
360.917	PR1	± 0.5	1.5	0.70		
360.911	PR2	± 1	2.5	0.70	26	
360.912	PR2P	± 1	3.5	0.80 ²	30.5	
360.926	PR101P	± 1	11	0.70 ²	62	
360.910	PR10	± 5	11	0.70	67	
360.909	PR10P	± 5	11	0.70 ²	117.5	
360.905	PR20	± 10	21	0.70	83.5	
360.904	PR20P	± 10	21	0.70 ²	87.5	

Measuring range, measuring force and extended probe length defined at electrical zero.

P = Pneumatic, probe is operated by air pressure.

¹ Air pressure 0.3 bar (nominal) / Air pressure 1.0 bar (nominal).

² Air pressure 0.4 bar (nominal).

³ Protection: IP65.

Digital absolute measuring probes IP65

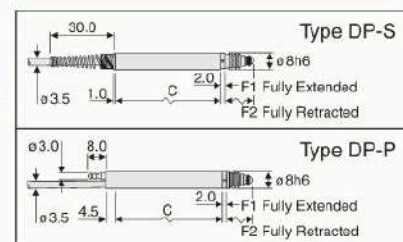
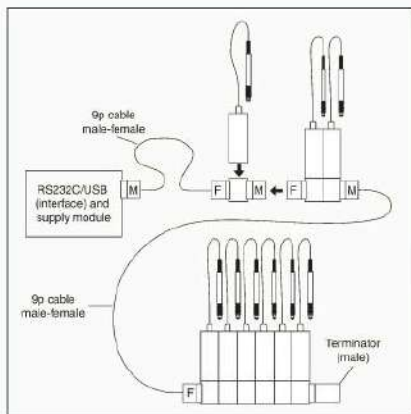
The measuring probe, which replaces the conventional analog probe more and more. These probes, that combine the advantages of the analog and not absolute digital models, are a solution to measuring systems which have to process the measuring data in a PC.

Configuration:

- Probe (clamping shaft 8h6) fixed via a cable (2 m) to the electronics module.
- T-CON connector.
- Cable (standard up to 5 m).
- Supply module (necessary with RS232C module, and with more than five probes on a board or module).
- RS232C/USB module or digital absolute measuring probe board (supports up to 100 probes).

Technical data:

- A maximum of 240 measurements per second.
- Repeatability: $<0.15 \mu\text{m}$.
- Accuracy:
 - DP-2S, DP-2P: $\pm 1 + 0.05 \%K$,
 - DP-5S, DP-5P: $\pm 1 + 0.05 \%K$,
 - DP-10S, DP-10P: $\pm 1 + 0.06 \%K$,
 - in which K is the displacement (in mm).
- Protection: IP65.
- Measuring force S-types: 0.7 N, P-types (at 0.4 bar pressure): 0.8 N.
- Also available on request as low measuring force *Feather Touch* models.



Item No.	Type	Measuring range/mm	Max. travel/mm	Probe movement	Dimensions/mm			Price EUR
					C	F1	F2	
360.880	DP-2S	± 1	3	spring push	46	13.9	10.9	
360.881	DP-5S	± 2.5	6	spring push	65	17.4	11.4	
360.882	DP-10S	± 5	11	spring push	89	25.4	14.4	
360.883	DP-2P	± 1	3	pneumatic push	52	13.9	10.9	
360.884	DP-5P	± 2.5	6	pneumatic push	71	17.4	11.4	
360.885	DP-10P	± 5	11	pneumatic push	96	25.4	14.4	
360.852	T-CON connector (has to be ordered separately per probe)							
360.835	Supply module (required when using a RS232C module and when connecting more than five probes to a board or module, excl. power cable)							
420.300	Power cable							
360.890	Digiprobe PCI board Orbit 3							
360.888	Digiprobe USB module Orbit 3							
348.287	Cable 3 m between electronic module and board/module							
348.288	Cable 5 m between electronic module and board/module							

Clamping bush



Item No.	Description	Price EUR
780.398	Clamping bush VKE	10.10
780.397	Clamping screw VKD	3.80

Clamping bush

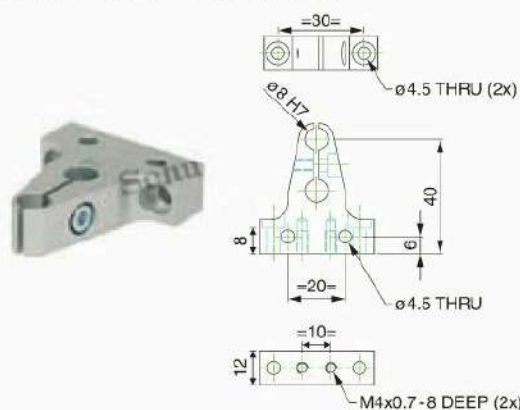


Item No.	Description	Price EUR
906.497	Clamping bush	26.10

Probe holder

Probe holder for for surfacemounting.

- Clamping shaft: $\varnothing 8$ mm.
- For attaching with M4 bolts.
- Material: anodized aluminum.



Item No.	Description	Price EUR
993.054	Probe holder	50.00

Inserts

Many inserts with thread M2.5 are available. See the dial indicator accessories section for more information.



Retraction levers

Universal retraction levers, bottom or top mounted, compatible with a wide range of probes and dial indicators. You can find various models in the dial indicator accessories section.



Retraction device DZ801

Pneumatic retraction device for Magnescale and TESA gauges, with 1 meter hose and air tube connector.

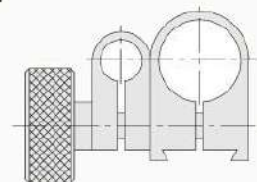


Item No.	Description	Price EUR
344.465	Retraction device	168.00

Clamp collar with dovetail

For clamping TESA GT31 probes and e.g. lever type dial indicators.

- Fastening points: $\varnothing 5.6$ mm, $\varnothing 9.5$ mm and with dovetail.



Item No.	Description	Price EUR
780.208	Clamp collar	34.00

MF measuring fixture system

MF is a universal construction system based on components to quickly and easily build custom measuring fixtures.

The system has been developed by Schut Geometrical Metrology. The parts of MF are made from high quality steel and colored, anodized aluminum.

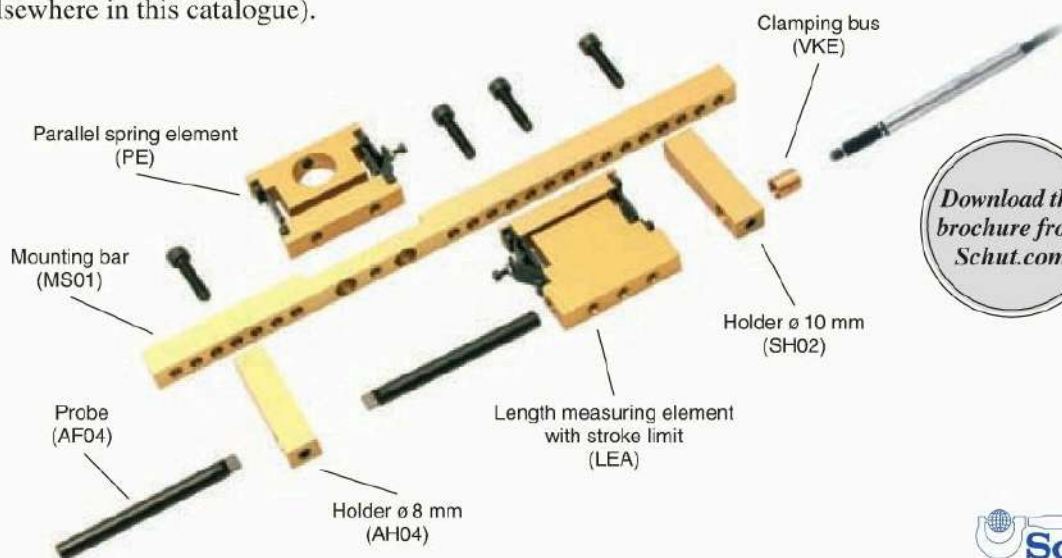
The system consists of, among other things, base plates, parallel spring elements, mounting bars, probe holders and probes. A stable product positioning is required for accurate measurements and because of the system's sophisticated composition, it is possible to generate a complete measuring system with only a few parts. Ideal for repeating measurements.

The components of MF are based on both horizontal support or vertical clamping. The wide range and shapes of probes make the system suitable for e.g. lathed parts but also for (more complicated) milling parts. For these various applications some complete sets are available, as a starter-set or for specific applications. Besides this, the variety of individual components and the ease of use enable almost endless possibilities of applying and incorporating MF in other measuring fixtures that may be custom built or composed of other construction systems.

All individual components are available separately, increasing flexibility of use. Schut Geometrical Metrology has incorporated MF many times in custom built measuring systems (see elsewhere in this catalogue).

MF's high quality and low price make an ideal addition to existing measuring systems and can be applied in production plants.

The universal properties of MF result in a highly flexible construction system. The use of internationally applied units of fit for e.g. dial indicators and electronic probes make the system's components widely applicable. With just some base elements it is very easy to create some individual measuring points on e.g. production machines.



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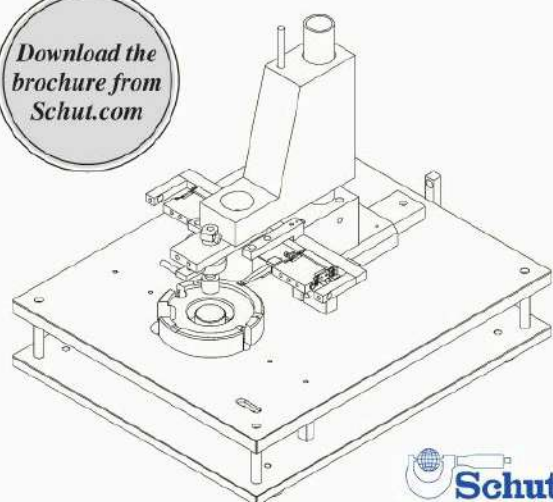
MF measuring fixture system (continued)

For a quick start MF is also available in standard sets for a complete and quick solution for both horizontal support or vertical clamping.

One of the big advantages of MF is the ease and flexibility to create a stable measuring fixture especially suitable for repeating measurements with only very little effort and investments. To make the start with MF as easy as possible some standard sets have been composed that can realize the most occurring measuring fixtures.



These sets consist of a composition of standard MF components, so it can be easily extended to your liking for specific applications. All in this catalogue depicted measuring fixtures are just a few of the many possibilities of MF.



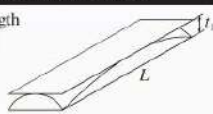
The easy assembly and modular setup make MF especially suitable for application in tailor-made and designed measuring systems.

For many years now Schut has been developing tailor-made solutions in measuring systems for its customers nationwide and abroad. On many occasions MF parts have been incorporated in these systems. We would be pleased to inform you about the possibilities to have your measuring system custom built, updated or extended.



Stands / Bench centers / Surface plates



Flatness tolerances according DIN 876		
Class	Flatness t_1 (μm)	L =length in mm
00	$2 + L/500$	
0	$4 + L/250$	
1	$10 + L/100$	
2	$20 + L/50$	
3	$40 + L/25$	

006.000 EN 20260702

Dial indicator stands

- With dovetail joint (only 908.958/972).
- With fine adjustment (except 908.958/974).
- On/off switchable magnetic base with V-groove, except 908.973 (*flexform* base with locking mechanism and permanent magnetic force) and 908.974 (flat on/off switchable magnetic base).
- Various bases available.



ECONOMY LINE ✓

Item No.	Clamping shaft/mm	Column mm	Arm mm	Desc. of base	Dimensions l x w x h/mm	Magn. force ¹ /N	Thread of base	Price EUR
908.950	ø 4/ø 8	ø 12 x 176	ø 10 x 150	V-groove	58 x 50 x 55	600 ^(S)	M8 x 1.25	20.70
908.951	ø 4/ø 8	ø 12 x 176	ø 10 x 150	V-groove	60 x 50 x 55	800 ^(S)	M8 x 1.25	22.80
908.952	ø 6/ø 8	ø 20 x 350	2 arms: ø 12 x 220 ø 10 x 150	V-groove	74 x 50 x 55	1000 ^(S)	M10 x 1.5	61.00
908.958	ø 8	ø 8 x 130	ø 8 x 130	V-groove	36 x 30 x 35	400 ^(S)	M5 x 0.8	27.40
908.972	ø 8	ø 12 x 176	ø 10 x 210	V-groove	60 x 50 x 55	800 ^(S)	M8 x 1.25	26.20
908.973	ø 4/ø 8	ø 12 x 176	ø 10 x 150	<i>flexform</i>	75 x 46 x 55	400 ^(P)	M8 x 1.25	48.00
908.974	ø 6	ø 7 x 50		flat	30 x 30 x 30	170 ^(S)	M5 x 0.8	30.10
908.946 ²	ø 8	ø 12 x 190	ø 10 x 160	V-groove	54 x 40 x 47	800 ^(S)	M8 x 1.25	117.00

¹ S=switchable magnet; P=permanent magnetic force.² V-groove on 3 sides.

COC 303 EN 20060702

Dial indicator stands

- Clamping shaft $\varnothing 8$ mm for dial indicators and probes (except 910.341: $\varnothing 6$ mm), and dovetail joint for lever-type dial test indicators (908.957 without dovetail joint).
- With fine adjustment (except 908.962/964/957).
- Arm with mechanical central clamping device (908.954/955: hydraulic).
- On/off switchable magnetic base with V-groove, except 908.964 and 910.341 (permanent magnetic force), 908.961 (vacuum base) and 908.975 (*flexform* base with locking mechanism and permanent magnetic force).
- Various bases available.



ECONOMY LINE ✓

Item No.	Clamping	Arm length ¹ /mm	Description of base	Dimensions l x w x h/mm	Magnetic force ² /N	Thread of base	Price EUR
908.953	mechanical	320	V-groove	58 x 50 x 55	600 ^(S)	M8 x 1.25	37.90
908.959	mechanical	340	V-groove	60 x 50 x 55	800 ^(S)	M8 x 1.25	41.00
908.960	mechanical	285	V-groove	60 x 50 x 55	800 ^(S)	M8 x 1.25	46.00
908.954	hydraulic	380	V-groove	58 x 50 x 55	600 ^(S)	M8 x 1.25	73.00
908.955	hydraulic	380	V-groove	60 x 50 x 55	800 ^(S)	M8 x 1.25	77.00
908.962	mechanical	150	V-groove	36 x 30 x 35	400 ^(S)	M5 x 0.8	43.00
908.964	mechanical	65	cylinder	$\varnothing 30 \times 25$	170 ^(P)	M8 x 1.25	28.80
910.341	mechanical	60	cylinder	$\varnothing 25 \times 25$	100 ^(P)	M5 x 0.8	24.10
908.975	mechanical	280	<i>flexform</i>	75 x 46 x 55	400 ^(P)	M8 x 1.25	54.00
908.961	mechanical	280	vacuum base	$\varnothing 90 \times 25$		M8 x 1.25	51.00
908.956	mechanical	360	V-groove	60 x 50 x 55	800 ^(S)	M8 x 1.25	42.00
908.957	mechanical	320	V-groove	60 x 50 x 55	800 ^(S)	M8 x 1.25	43.00

¹ The outstretched length between base and clamping shaft.

² S=switchable magnet; P=permanent magnetic force.

Bases for dial indicator stands

A solid base is essential for accurate measurements. The dial indicator arms can be mounted on a strong magnetic or vacuum base.



ECONOMY LINE ✓

Item No.	Description	Dimensions l x w x h/mm	Magnetic force* N	Thread	Price EUR
908.971	V-groove	60 x 50 x 55	800 ^(S)	M8 x 1.25	20.90
908.970	V-groove	74 x 50 x 55	1000 ^(S)	M8 x 1.25	29.50
908.969	flat base	118 x 50 x 52	1500 ^(S)	M8 x 1.25	89.00
908.967	V-groove	36 x 30 x 35	400 ^(S)	M5 x 0.8	23.00
908.976	flat base	30 x 30 x 30	170 ^(S)	M5 x 0.8	25.30
908.968	flexform	75 x 46 x 55	400 ^(P)	M8 x 1.25	41.00
908.965	cylinder	ø40 x 30	300 ^(P)	M8 x 1.25	22.20
908.977	vacuum base	ø90 x 25		M8 x 1.25	34.70
402.196	granite base	150 x 100 x 40		M8 x 1.25	98.00
910.511	V-groove and fine adjustment	60 x 50 x 55	800 ^(S)	M8 x 1.25	39.20
910.512	V-groove and fine adjustment	74 x 50 x 55	1000 ^(S)	M8 x 1.25	46.00
910.510	V-groove and fine adjustment	58 x 50 x 55	600 ^(S)	M8 x 1.25	36.70
910.513	clamping base	80 x 30 x 40		M8 x 1.25	24.10

* S=switchable magnet; P=permanent magnetic force.

Fixing clamps for dial indicator stands

Item No.	Fixing clamp ø/mm		Price EUR
	d1	d2	
907.443	10	8/4	9.50
907.442	10	8/6	9.50
906.398	12	8/6	9.20
907.440	12	10	9.50
907.444	14	8/6	13.90
906.399	20	12	28.10
907.441	20	14	32.10



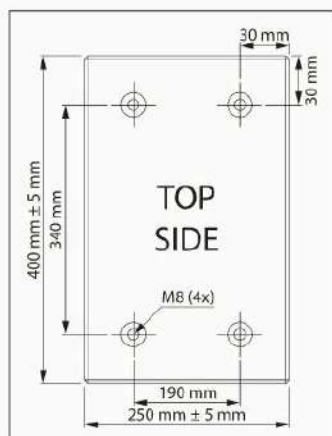
NEW

Granite surface plate with thread insert M8

Granite surface plate according DIN 876/0 with, on the top side, 4 M8 thread inserts. These inserts can be used to fix, for example, dial indicator stands. For these stands, see dial indicator stands elsewhere in this catalog.

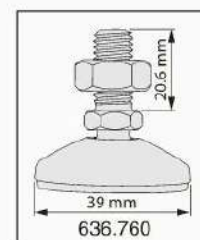
On the bottom side, 4 M10 thread inserts. These inserts can be used to fix the optional adjustable feet.

- Dimensions: 400 x 250 x 50 mm.
- Weight: 20 kg.
- According DIN 876/0.
- On the top side, 4 M8 thread inserts. Depth: 25 mm.
- Delivery with a manufacturer measuring report.
- Optional available: adjustable feet for stable placement (M10 thread, 4 needed).



NEW

Item No.	Dimensions/mm	Price EUR
402.038	400 x 250 x 50	163.00
Option:		
636.760	Adjustable foot with M10 thread (4 needed)	5.80



Magnetic dial indicator stands

Solid dial indicator stands with on/off switchable magnetic base.

- Clamping shaft: $\varnothing 6$ and $\varnothing 8$ mm.
- Magnetic base with V-groove.
- Magnetic face at the back (except 855.707).



855.701



855.705



855.707

Item No.	Dimensions base l x w x h/mm	Magnetic force/N	Column mm	Arm mm	Thread of base	Price EUR
855.701	58 x 50 x 55	800	$\varnothing 12 \times 176$	$\varnothing 10 \times 150$	M8	61.00
855.705	73 x 50 x 55	1000	$\varnothing 20 \times 178$	$\varnothing 14 \times 165$	M8	142.00
855.707	117 x 50 x 55	1300	$\varnothing 20 \times 365$	$\varnothing 14 \times 200$	M20	251.00

Magnetic dial indicator stands

Solid dial indicator stands with on/off switchable magnetic base.

- Clamping shaft: $\varnothing 6$ and $\varnothing 8$ mm.
- Screw thread base: M8.
- Magnetic base with V-groove.
- Magnetic face at the back.



855.706



855.710

Item No.	Clamping	Dimensions base l x w x h/mm	Magnetic force/N	Arm length* mm	Price EUR
855.706	hydraulic	73 x 50 x 55	1000	335	341.00
855.710	mechanical	58 x 50 x 55	800	335	147.00

* The outstretched length between base and clamping shaft.

Fisso Classic Line dial indicator stands

These dial indicator stands are manufactured according to the classic principle with chrome plated arm parts, joint together with the three hinge points by means of a central mechanic clamping device. Because this is done with one on/off switch control, the stand can be positioned easily and precisely.

- Fine adjustment: with clamping shaft $\varnothing 8$ mm (for dial indicators and probes) and dovetail joint (for lever-type dial test indicators).
- Dial indicator not included.
- Various bases, fine adjustments and other accessories available; see "Fisso dial indicator stand accessories".



839.870



837.290



837.287

Complete stands (incl. base and fine adjustment)

Item No.	Arm length/mm	Base type*	Magnetic force/N	Price EUR
839.870	130	S2	300	205.00
837.262	200	M	800	255.00
837.290	200	AMO	600	301.00
837.264	200	TM	300	222.00
837.237	200	V	—	307.00
837.245	288	M	800	295.00
837.265	288	SM	1000	312.00
837.287	450	SM	1000	505.00
837.266	450	MM	1500	581.00
837.246	630	MM	1500	784.00

* For an extensive description of the base types see "Fisso dial indicator stand accessories".

Item No.	Arm length/mm	Thread of head	Thread of base	Price EUR	Item No.	Price EUR
Separate arm without fine adjustment:					With fine adjustment:	
839.871	130	M6	M6	124.00	839.872	160.00
837.283	197	M6	M8	140.00	837.267	176.00
837.284	288	M6	M8	179.00	837.252	213.00
837.285	453	M8	M8	380.00	837.268	406.00
837.286	635	M8	M10x1.25	591.00	837.253	609.00



837.264



837.245



Fisso Strato Line and Strato μ -Line dial indicator stands

These dial indicator stands have a modern design with light metal arm parts in one piece, which, together with the three hinge points, are fixated by means of a mechanical clamping device. Because this is done with one on/off switch, the bases can be positioned easily and precisely.

Also available are the small dial indicator stands with an arm length of 130 mm – especially useful for places with confined space.

- Fine adjustment: with clamping shaft $\varnothing 8$ mm (for dial indicators and probes) and dovetail joint (for lever-type dial test indicators).
- Dial indicator not included.
- Various bases, fine adjustments and other accessories available; see “Fisso dial indicator stand accessories”.
- The Strato μ -Line models are equipped with a precision fine adjustment.

Complete stands (incl. base and fine adjustment)

Item No.	Arm length/mm	Base type ¹	Magnetic force/N	Price EUR
837.297 ⁴	130	S2	300	219.00
837.270	130	TMS	150	200.00
837.288	130	C ²	–	163.00
839.455 ³	130	S3	600	434.00
837.242 ⁵	200	M	800	278.00
837.243	200	TM	300	245.00
837.244	200	AM	600	286.00
837.289	200	AMO	600	299.00
839.456 ^{3,5}	200	M	800	474.00
837.240 ⁵	280	M	800	360.00
837.271 ⁵	280	SM	1000	380.00
837.241 ⁶	280	V	–	429.00
837.261 ⁶	280	G	–	514.00
839.457 ^{3,5}	287	M	800	562.00
839.873 ^{3,6}	287	V	–	631.00
839.874 ^{3,5}	287	SM	1000	582.00
837.230 ³	330	SM	1000	615.00
837.231 ³	330	G	–	750.00

¹ For an extensive description of the base types see “Fisso dial indicator stand accessories”.

² Long stem, $\varnothing 10 \times 40$ mm, thread M6 (not separately available).

³ With μ -Line precision fine adjustment (837.204).

⁴ Optional available plastic carrying case (C1: 841.580).

⁵ Optional available plastic carrying case (C2: 841.581).

⁶ Optional available plastic carrying case (C3: 841.582).



841.581



841.582



Fisso Strato Line and Strato μ -Line dial indicator stands (continued)

Item No.	Arm length/mm	Thread of head	Thread of base	Price EUR	Item No.	Price EUR
Separate arm without fine adjustment (Strato Line):					With fine adjustment (Strato Line):	
837.281	130	M6	M6	138.00	837.272	174.00
837.282	200	M6	M8	165.00	837.251	199.00
837.247	280	M6	M8	250.00	837.250	281.00
Separate arm without fine adjustment (Strato μ-Line):					With fine adjustment (μ-Line):	
839.875	130	M6	M6	160.00	839.878 ³	382.00
839.876	200	M6	M8	174.00	839.879 ³	396.00
839.877	287	M8	M8	266.00	839.880 ³	484.00
837.912	330	M8	M8	300.00	837.232 ³	517.00

Fisso Base Line dial indicator stands

Easy and handy dial indicator stands with high stability and accuracy.

- Fine adjustment: with clamping shaft $\varnothing 8$ mm (for dial indicators and probes) and dovetail joint (for lever-type dial test indicators).
- Mechanical clamping device.
- Dial indicator not included.



Complete stands (incl. base and fine adjustment)

Item No.	Column mm	Arm mm	Base type*	Magnetic force/N	Price EUR
837.224	$\varnothing 10 \times 106$	$\varnothing 8 \times 75$	S2	300	152.00
837.225	$\varnothing 12 \times 156$	$\varnothing 10 \times 106$	M	750	162.00
837.226	$\varnothing 14 \times 184$	$\varnothing 12 \times 164$	M	750	173.00

*For an extensive description of the base types see "Fisso dial indicator stand accessories".

837.224

COC-313-EN-20260702

Fisso dial indicator stand accessories



837.294



837.273



837.276

NEW



837.275



837.274



837.194



837.227



841.884



837.280



837.803



Item No.	Type/ description	Magnetic force ¹ /N	Dimensions l x w x h/mm	Thread	Price EUR
Magnetic bases:					
837.294	S2 V-groove	300 ^(S)	34 x 30 x 35	M6	46.00
837.750	S3 V-groove	600 ^(S)	40 x 40 x 40	M6	54.00
837.254	M V-groove	800 ^(S)	60 x 50 x 55	M8	82.00
837.255	SM V-groove	1000 ^(S)	75 x 50 x 55	M8	103.00
837.256	MM flat	1500 ^(S)	120 x 60 x 55	M10 x 1.25	182.00
837.275	AM anyform	600 ^(P)	77 x 48 x 55	M8	87.00
837.291	AMO anyform	600 ^(S)	91 x 52 x 55	M8	104.00
837.276	TMS cylinder	150 ^(P)	ø30 x 25	M6	27.60
837.257	TM cylinder	300 ^(P)	ø40 x 30	M8	34.20
Other bases:					
837.273	V vacuum base		ø88 x 27	M8	153.00
837.274	G granite base		150 x 120 x 50	M8	243.00
837.194	– steel base		ø100 x 20	3x M6	77.00
837.195	– steel base		ø100 x 20	M8	77.00
837.196	– steel base		ø150 x 20	M6	84.00
837.292	– steel base		ø150 x 20	M8	84.00
837.193	– clamping base		80 x 20 x 50	2x M6	43.00
837.227	– clamping base		80 x 30 x 50	2x M8	49.00
Mounting plates made of aluminum, compatible with Fisso T-slot frame:					
841.884	Mounting plate (slots 12 x 5 mm)		51.5 x 51.5 x 8	M6 ²	43.00
841.885	Mounting plate (slots 12 x 5 mm)		51.5 x 51.5 x 10	M8 ²	43.00
Adapters for internal thread/external thread:					
837.280	Adapter M6/M8 (hexagonal 13 x 25 mm, CrNi steel)				16.60
837.211	Adapter M8/M6 (hexagonal 13 x 25 mm, CrNi steel)				16.60
837.804	Adapter M8/M10 (ø20 x 37 mm, steel)				24.30
837.803	Adapter M8/M12 (ø20 x 40 mm, steel)				24.30

¹ S = switchable magnet; P = permanent magnetic force.² Thread in the middle.

Fisso dial indicator stand accessories (continued)

Item No.	Thread	Price EUR
Fine adjustments*:		
837.279	M6	43.00
837.260	M8	43.00
Precision fine adjustment (μ-Line)*:		
837.204	M8	237.00
Dial indicator holders*:		
837.192	M6	25.40
837.191	M8	25.40
Reducer:		
837.190	ø8 → 6 mm brass	1.30

* With clamping shaft ø8 mm and dovetail joint.



Item No.	Span	Thread	Clamping jaws	Price EUR
Quick clamps:				
837.220	25 mm	M6	steel	78.00
837.228	50 mm	M8	steel	93.00
837.221	75 mm	M8	steel	108.00
Spring quick clamps:				
837.219	15 mm	M6	rubber, 50 mm	66.00
837.218	15 mm	M6	plastic, 21 mm	30.90

For more clamping and positioning possibilities (e.g. for medical applications) please contact our sales department.

Plastic carrying cases for dial indicator stands

Plastic carrying cases with removeable foam inserts for safe storage of Fisso Strato Line and Strato μ-Line dial indicator stands.

- Carrying case C1 has an extra slot for storage of lever-type dial test indicators.
- Carrying case C2 has extra space for storage of dial indicators with a dial diameter of ø40 mm and ø60 mm, with a maximum measuring range of 0-12.5 mm.



Item No.	Description	Price EUR
841.580	Plastic carrying case C1	30.90
841.581	Plastic carrying case C2	65.00
841.582	Plastic carrying case C3	65.00

Flexible hoses for coolant with magnetic base

- Suitable for cooling on machines in places of the workpiece that are difficult to reach.
- With 1, 2 or 3 flexible hoses.
- Special coupling for supply hose $\varnothing 8.5$ mm.



Support with magnetic base

- On/off switchable magnetic base with V-groove.
- Magnetic force: 588 N.
- Separate on/off switch for every flexible hose.
- Dimensions base $l \times w \times h$:
906.213: 62 x 51 x 73 mm,
906.214: 62 x 51 x 74 mm,
906.215: 69 x 51 x 75 mm.

With round magnetic base

- Magnetic base $\varnothing 35$ mm, with high adhesive force.
- Metal protection plate under magnetic base.



ECONOMY LINE ✓

Item No.	Number of flexible hoses	Price EUR
Support with magnetic base:		
906.213	1	44.00
906.214	2	54.00
906.215	3	66.00

ECONOMY LINE ✓

Item No.	Number of flexible hoses	Price EUR
With round magnetic base:		
906.216	1	21.00
906.217	2	28.70
906.218	3	35.90

LED lamp on magnetic stand

- Total length: 215 mm.
- Magnetic force: 120 N.
- Power supply: 3 batteries type AAA.

ECONOMY LINE ✓

Item No.	Description	Price EUR
909.607	LED lamp on magnetic stand	30.20
Option:		
497.914	Battery type AAA (3 needed)	0.80



Measuring stands

- Clamping shaft: $\varnothing 8$ mm.
- Transverse arm with fine adjustment.
- Arm length: 150 mm.
- Ground base.
- Base with V-groove (only 857.120).

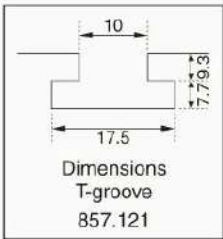


857.120



857.121

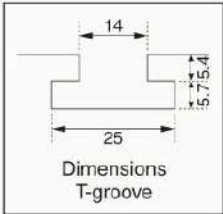
Item No.	Column $\varnothing$ /mm	Dimensions base/mm	Effective arm length/mm	Price EUR
857.120	16	65 x 40 x 140	250	202.00
857.121	22	60 x 55 x 250	300	314.00



Dimensions
T-groove
857.121

Measuring stand

- Clamping shaft: $\varnothing 8$ mm.
- Effective arm length: 180 mm.
- Fine adjustment.
- Ground base with V- and T-groove, 250 x 60 x 35 mm.
- Column: $\varnothing 16$ x 295 mm.
- Arm: $\varnothing 16$ x 235 mm.
- Mechanical clamping device.
- Dial indicator not included.

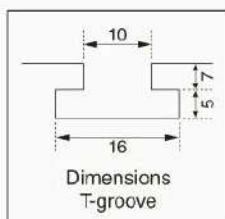


Dimensions
T-groove

Item No.	Description	Price EUR
856.720	Measuring stand	188.00

Measuring stands

- Clamping shaft: $\varnothing 8$ mm.
- Transverse arm with fine adjustment.
- Ground base with T-groove.
- Base with V-groove (only 909.376).



ECONOMY LINE ✓

Item No.	Column mm	Arm mm	Dimensions base/mm	Price EUR
906.219	$\varnothing 14 \times 185$	$\varnothing 12 \times 245$	220 x 60 x 35	63.00
909.376	$\varnothing 16 \times 290$	$\varnothing 16 \times 310$	260 x 60 x 50	164.00



906.219

Measuring stand with spindle adjustment

Measuring stand with clear graduation 0.02 mm on the spindle and a hand wheel for easy adjustment of the height setting.

- Clamping shaft: $\varnothing 8$ mm.
- Spindle thread pitch: 2 mm.
- Column: $\varnothing 35$ mm.
- Transverse arm: $\varnothing 20$ mm.
- Granite measuring table: 260 x 150 x 50 mm, measuring face: 250 x 150 mm, flatness according DIN 876/00.
- Total height: 410 mm.
- Max. measuring height: 160 mm.
- Delivery in a wooden box.

ECONOMY LINE ✓

Item No.	Description	Price EUR
907.789	Measuring stand	718.00



Measuring stand

Universal measuring stand, also suitable as a control measuring device.

- Clamping shaft $\varnothing 8$ mm and dovetail joint.
- Fine adjustment.
- Granite measuring table: 150 x 100 x 40 mm, flatness: $\leq 10 \mu\text{m}$.
- Base with groove in the center.
- Screw thread base: M8.
- Long, right side face with two mounting bores (thread M5, distance 120 mm).
- Mechanical clamping device.
- Arm length: 300 mm (the outstretched length between base and clamping shaft).
- Delivery in an aluminum carrying case.



ECONOMY LINE ✓

Item No.	Description	Price EUR
910.436	Measuring stand	213.00

Measuring stand

- Clamping shaft: $\varnothing 8$ mm.
- Total height: 200 mm.
- Max. measuring height: 90 mm.
- Effective arm length: 80 mm.
- Measuring table: 60x68 mm, ground and lapped.
- Dimensions transverse arm: $\varnothing 18 \times 120$ mm.
- Column: $\varnothing 22$ mm.
- Other dial gauge holders are available on request.



Item No.	Description	Price EUR
857.130	Measuring stand	282.00

Measuring stands

Universal measuring stands with a cast iron, ground measuring table.

- Clamping shaft: $\varnothing 8$ mm (optional available clamp with clamping shaft $\varnothing 28$ mm).
- Fine adjustment: 5 mm (906.506/508/516/518).
- Total height: 250 mm (906.508: 350 mm).
- Max. measuring height: 160 mm (906.508: 260 mm).
- Effective arm length: 68 mm (906.507: max. 105 mm, 906.517/519: max. 95 mm).
- Measuring table: ground, 906.506/507/508: flat anvil/base, 906.516/517: round flat anvil (height anvil: 13.5 mm), 906.518/519: round serrated anvil (height anvil: 13.5 mm).
- Flatness table: $\leq 10 \mu\text{m}$.
- Dimensions transverse arm: $\varnothing 20 \times 150$ mm (906.507/517/519).
- Column: $\varnothing 30 \times 200$ mm (906.508: helical threaded 300 mm with anti drop facility).



ECONOMY LINE ✓

Item No.	Measuring height/mm	Dimensions table l x w x h/mm	Price EUR
906.506	140	140 x 105 x 50	169.00
906.507	160	140 x 105 x 50	141.00
906.508	260	140 x 105 x 50	188.00
906.516	130	$\varnothing 60 \times 65$	169.00
906.517	145	$\varnothing 60 \times 65$	141.00
906.518	130	$\varnothing 60 \times 65$	188.00
906.519	145	$\varnothing 60 \times 65$	141.00
Option:			
999.679	Clamp $\varnothing 28$ mm		178.00



999.679

Measuring stands

Universal measuring stands with a granite measuring table.

- Clamping shaft: $\varnothing 8$ mm (optional available clamp with clamping shaft $\varnothing 28$ mm).
- Fine adjustment: 5 mm (999.680).
- Total height: 240 mm (999.680/681), 355 mm (999.682/683), 370 mm (999.684/685).
- Max. measuring height: 260 mm (999.682/683/684/685).
- Effective arm length: max. 165 mm (999.682/683/684/685), (999.681: max. 105 mm, 999.680: 68 mm).
- Measuring table: granite.
- DIN 876/0.
- Dimensions transverse arm: $\varnothing 20 \times 150$ mm (999.681), $\varnothing 20 \times 210$ mm (999.682/683/684/685).
- Column: $\varnothing 30 \times 200$ mm (999.680/681), $\varnothing 30 \times 300$ mm (999.682/684), $\varnothing 30 \times 300$ mm (999.683/685: helical threaded with anti drop facility).
- Measuring table delivered with a manufacturer measuring report (only 999.684/685).



999.680

999.681



999.682/684



999.683/685

ECONOMY LINE ✓

Item No.	Measuring height/mm	Dimensions table l x w x h/mm	Price EUR
999.680	140	150 x 100 x 40	259.00
999.681	160	150 x 100 x 40	232.00
999.682	260	250 x 200 x 55	317.00
999.683	260	250 x 200 x 55	337.00
999.684	260	400 x 400 x 70	382.00
999.685	260	400 x 400 x 70	402.00
Option:			
999.679	Clamp $\varnothing 28$ mm		178.00

Measuring stands

Measuring stands with a granite base in two models with a competitive price-performance ratio.

- Clamping shaft: $\varnothing 8$ mm.
- Max. measuring height: 250 mm.
- Anti drop facility.
- Granite table.
- DIN 876/0.
- Own product.



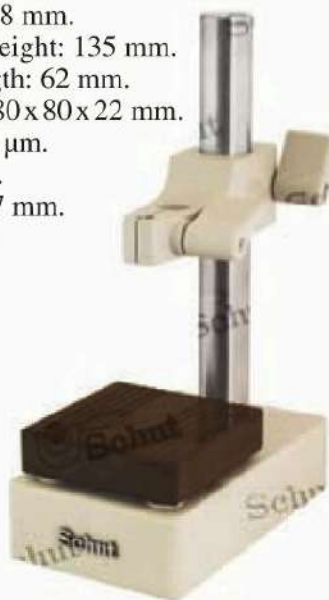
402.165

Item No.	Measuring height/mm	Flatness table/ μm	Dimensions table l x w x h/mm	Column $\varnothing$ /mm	Effective arm length/mm	Price EUR
402.165	150	10	150 x 100 x 40	25	62	295.00
402.168	250	10	250 x 200 x 55	35	100	398.00

Ceramic measuring stand

Heavy-duty precision stand with alumina ceramic grooved table and plain column.

- Clamping shaft: $\varnothing 8$ mm.
- Max. measuring height: 135 mm.
- Effective arm length: 62 mm.
- Measuring table: 80 x 80 x 22 mm.
- Flatness table: ± 2 μm .
- Column: $\varnothing 25$ mm.
- Base: 150 x 89 x 37 mm.
- Anti drop facility.
- Own product.

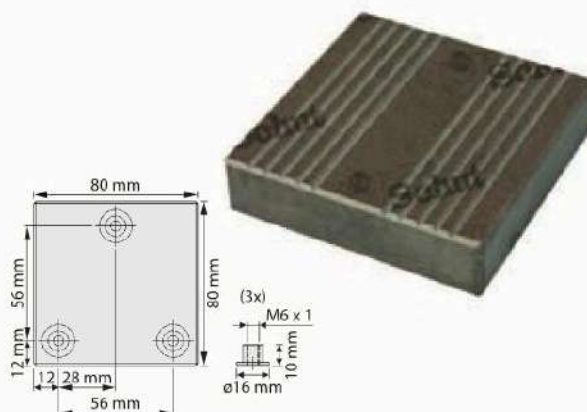


Item No.	Description	Price EUR
334.690	Precision stand	450.00

Ceramic measuring table

Grooved measuring table made of alumina ceramics as applied to measuring stand 334.690, with the typical advantages of ceramics: high degree of hardness and wear resistance.

- Flatness: ± 2 μm .
- Dimensions: 80 x 80 x 22 mm.
- Bottom-side: 3 tapped holes M6.



Item No.	Description	Price EUR
841.078	Measuring table	268.00

Measuring stands

- Clamping shaft: $\varnothing 8$ mm.
- Total height: 310 mm.
- Max. measuring height: 180 mm.
- Hard-chrome plated and ground column: $\varnothing 35$ mm.
- 857.126 and 857.128 with adjustable transverse arm ($\varnothing 22$ mm), length 220 mm.
- Granite measuring table: 260 x 150 x 48 mm (*l x w x h*), measuring face: 200 x 150 mm, flatness according DIN 876/00.



857.128



857.125

Item No.	Column	Effective arm length/mm	Price EUR
857.125	plain	104	603.00
857.126	plain	175	674.00
857.127	helical threaded	104	682.00
857.128	helical threaded	175	752.00

Measuring stands

- Clamping shaft: $\varnothing 20$ mm, $\varnothing 25$ mm or $\varnothing 32$ mm.
- Max. measuring height: 290 mm.
- Effective arm length: 167 mm.
- Column: $\varnothing 50$ x 365 mm.
- 996.190/315/820 with anti drop facility.
- Granite measuring table: 400 x 400 x 70 mm, flatness: $\leq 5 \mu\text{m}$.
- DIN 876/0.
- Measuring table delivered with a manufacturer measuring report.
- Own product.

Item No.	Column	Clamping shaft/mm	Price EUR
996.190	plain	$\varnothing 20$	665.00
996.189	helical threaded	$\varnothing 20$	689.00
996.820	plain	$\varnothing 25$	739.00
996.821	helical threaded	$\varnothing 25$	765.00
996.315	plain	$\varnothing 32$	739.00
Option:			
344.470	Reducing bush $\varnothing 20/8$ mm		23.00



996.190



996.189

Measuring stand with an accurately tiltable column

Measuring stand with stop and tiltable base. Ideal for checking squareness and straightness. Using for example a lever-type dial test indicator, after zero setting on an accurate reference standard, you can easily check the straightness or squareness of your workpiece. For lever-type dial test indicators and accurate reference standards (such as granite or steel squares), see elsewhere in this catalog.

- Front contact surface (53 x 3 mm).
- Dovetail joint for lever-type dial test indicators.
- Fine adjustment on base.
- Transverse arm with arm length: 120 mm.
- Column: $\varnothing 14.5 \times 190$ mm.
- Total height: 225 mm.
- Delivery in an aluminum carrying case.

NEW



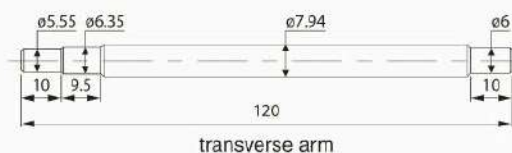
910.493 +
855.601 +
906.436

ECONOMY LINE ✓

Item No.	Description	Price EUR
910.493	Measuring stand	198.00



Schut



COC-322-EN-20060702

Bench center

Bench center with roller wheels and adjustable and rotatable collet chuck. Used to measure concentricity, roundness, circumferential runout, eccentricity section deviation, and end-face perpendicularity of shafts. Easy to operate for quick measurements.

- Measuring range: $\varnothing 3 - 25$ mm.
- For workpiece with a length up to 100 mm.
- Concentricity accuracy: ± 0.002 mm (distance between the measuring point and the pressure/support roller < 30 mm).
- Clamping shaft dial indicator holders: $\varnothing 6$ mm and $\varnothing 8$ mm.
- Main body made of aluminum alloy, black.
- Spring-loaded, height-adjustable pressure roller.
- With roller wheels.
- Stopper pin with 2.5 mm thread on one side.
- Manual operation by means of a rotating wheel.
- Fast horizontal movement along the axes and can be secured with built-in magnet.
- 2 holes with M8 thread to fix e.g. dial indicator stand arms.
- Dimensions: 300 x 130 x 180 mm.
- Weight: 3.5 kg.
- Delivery including pin gauge $\varnothing 7.56$ mm.
- Delivery in an aluminum carrying case.
- Excl. dial indicator, lever-type dial test indicator or dial indicator stand arm.
- Dial indicators, lever-type dial test indicators and accessories see elsewhere in this catalog.

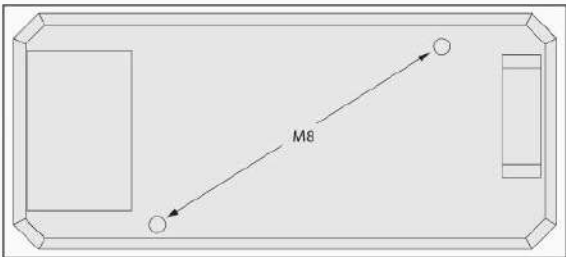
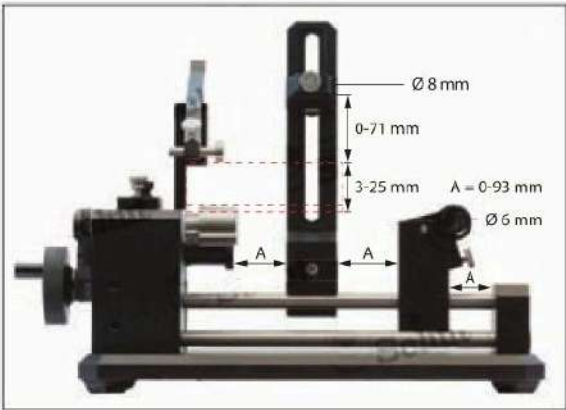


NEW

910.491 +
837.279 +
839.876 +
907.914 +
907.941



Application with Dino-Lite USB Microscope with edge detection. For Dino-Lite microscopes, see elsewhere in this catalog.



ECONOMY LINE ✓

Item No.	Description	Price EUR
910.491	Bench center	1.512.00

COC 320 EN 20260702

Bench center

Cast iron base with the measuring face's accuracy according DIN 876/1. Supplied with two tailstocks, one with a fixed center point and one with an adjustable center point by means of a lever.

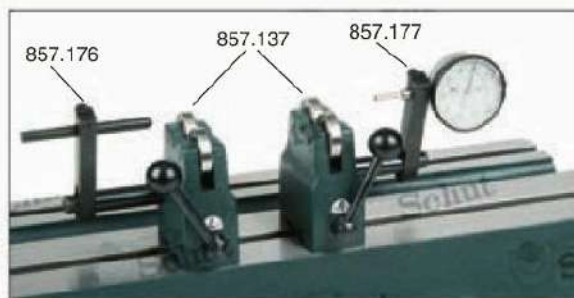
- Center height: 100 mm.
- Max. center distance: 450 mm.
- Center points: 60°.
- Stroke moveable center point: 8 mm.
- Delivery incl. measuring stand 857.141 (column $\varnothing 22 \times 230$ mm, clamping shaft 8H7, with fine adjustment), excl. dial indicator or measuring probe.
- Dimensions measuring face: 700 x 180 mm (incl. face for stand).
- Total height: 320 mm. (Height without stand: 200 mm.)
- Width T-slot: 12H7.
- Weight: 35 kg.

- Larger models with granite base are available on request.

Item No.	Type	Price EUR
857.131	RP 100-450	2,460.00



Item No.	Description	Price EUR
857.179	Pair of center points with tungsten carbide point 60°	207.00
857.178	Pair of center points with bore	126.00
857.175	Pair of prism inserts	219.00
857.136	Pair of V-blocks	323.00
857.137	Pair of roller blocks	363.00
857.176	Stop	127.00
857.177	Dial indicator holder	114.00
857.141	Extra measuring stand	179.00



Center points ($\varnothing 22$ mm)

- With tungsten carbide point 60°, or with bore according DIN 332-A 1.6 x 3.8.



Prism inserts 90°

- Capacity: $\varnothing 8 - 45$ mm.
- Center height at $\varnothing 10$ mm: 130 mm.



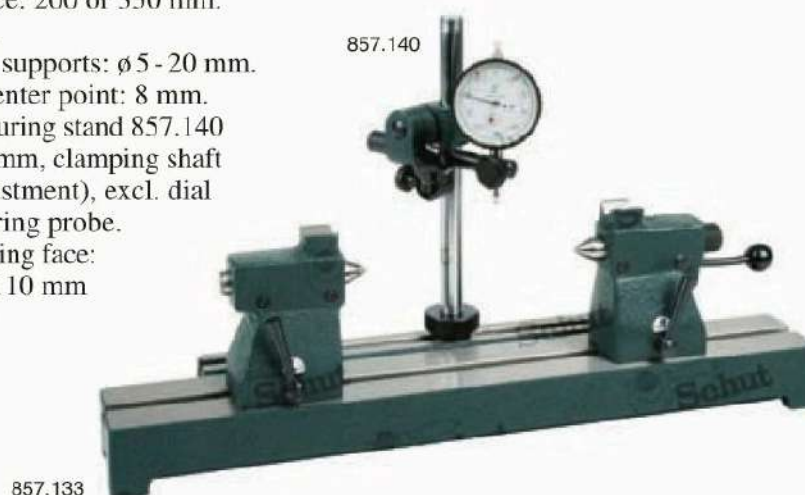
V-blocks 90° and roller blocks

- Capacity V-blocks: $\varnothing 8 - 50$ mm.
- Capacity roller blocks: $\varnothing 2 - 60$ mm.
- Center height at $\varnothing 10$ mm: 100 mm.
- Stop (857.176): $\varnothing 8$ mm.
- Dial indicator holder (857.177): shaft 8H7.

Bench centers

Cast iron base with the measuring face's accuracy according DIN 876/1. Supplied with two tailstocks, one with a fixed center point and one with an adjustable center point by means of a lever.

- Center height: 50 mm (without V-shaped supports) or 75 mm (P models; with V-shaped supports on the tailstocks).
- Max. center distance: 200 or 350 mm.
- Center points: 60°.
- Capacity V-shaped supports: $\varnothing$ 5 - 20 mm.
- Stroke moveable center point: 8 mm.
- Delivery incl. measuring stand 857.140 (column $\varnothing$ 16 x 220 mm, clamping shaft 8H7, with fine adjustment), excl. dial indicator or measuring probe.
- Dimensions measuring face: 350 x 110 or 500 x 110 mm (including face for measuring stand).
- Total height (incl. measuring stand): 260 mm.
- Width T-slot: 10H7.
- Vertical models are also available.



Item No.	Type	Center height mm	Max. center distance/mm	Measuring face/mm	Weight kg	Price EUR
857.132	RP 50-200	50	200	350x 110	8	799.00
857.133	RP 75-200P	75	200	350x 110	9	860.00
857.134	RP 50-350	50	350	500x 110	11	989.00
857.135	RP 75-350P	75	350	500x 110	12	1,047.00

Item No.	Description	Price EUR
857.174	Pair of center points with tungsten carbide point 60°	136.00
857.155	Pair of center points with bore	85.00
857.180	Pair of prism inserts	118.00
857.138	Pair of V-blocks	221.00
857.139	Pair of roller blocks	266.00
857.172	Stop	92.00
857.173	Dial indicator holder	90.00
857.140	Extra measuring stand	123.00



857.138



Center points ($\varnothing$ 16 mm)

- With tungsten carbide point 60°, or with bore according DIN 332-A 1.6 x 3.8.



857.174



857.155

Prism inserts 90°

- Capacity: $\varnothing$ 3 - 15 mm.
- Center height at $\varnothing$ 10 mm: 70 mm (RP 50) or 95 mm (RP 75).



857.180

V-blocks 90° and roller blocks

- Capacity V-blocks: $\varnothing$ 5 - 25 mm.
- Capacity roller blocks: $\varnothing$ 2 - 40 mm.
- Center height at $\varnothing$ 10 mm: 65 mm.
- Stop (857.172): $\varnothing$ 8 mm.
- Dial indicator holder (857.173): shaft 8H7.

Bench center

Bench center with rotatable collet chuck. Cast iron base with the measuring face's accuracy according DIN 876/1.

- Center height: 75 mm.
- Measuring range: 0 - 100 mm (up to center).
- Capacity: $\varnothing 0.5 - 9.5$ mm.
- Concentricity of the tailstock quill: $\pm 5 \mu\text{m}$.
- Delivery incl. measuring stand 857.140 (column $\varnothing 16 \times 220$ mm, clamping shaft 8H7, with fine adjustment), excl. dial indicator or measuring probe and collet chuck.
- Dimensions measuring face: 200 x 110 mm (DIN 876/1) (incl. face for stand).
- Weight: 5.6 kg (857.184).
- Total height (incl. measuring stand): 270 mm.
- Width T-slot: 10H7.
- Concentricity accuracy collet chucks: 0.03 mm.



Item No.	Center height/mm	Price EUR
857.184	75	798.00
Option:		
857.182	Separate tailstock	671.00



Collet chucks

Item No.	Clamping range	Price EUR
857.272	0.5 - 1	54.00
857.273	1 - 1.5	54.00
857.274	1.5 - 2	54.00
857.275	2 - 2.5	54.00
857.276	2.5 - 3	54.00
857.277	3 - 3.5	50.00
857.278	3.5 - 4	50.00
857.279	4 - 4.5	50.00
857.280	4.5 - 5	50.00
857.281	5 - 5.5	50.00
857.282	5.5 - 6	50.00
857.283	6 - 6.5	50.00
857.284	6.5 - 7	50.00
857.285	7 - 7.5	50.00
857.286	7.5 - 8	50.00
857.287	8 - 8.5	50.00
857.288	8.5 - 9	50.00
857.289	9 - 9.5	50.00

Bench center

Bench center with rotatable collet chuck.

- Measuring range: 0 - 50 mm (up to center).
- Capacity: $\varnothing 0.5 - 7$ mm.
- Clamping shaft: 8H7.
- Excl. dial indicator or measuring probe and collet chuck.
- Weight: 1.8 kg.
- Concentricity accuracy collet chucks: 0.03 mm.



Item No.	Description	Price EUR
857.185	Bench center	225.00



Collet chucks

Item No.	Clamping range	Price EUR
857.188	0.5 - 1	51.00
857.189	1 - 1.5	51.00
857.190	1.5 - 2	51.00
857.191	2 - 2.5	51.00
857.192	2.5 - 3	51.00
857.193	3 - 3.5	47.00
857.194	3.5 - 4	47.00
857.195	4 - 4.5	47.00
857.196	4.5 - 5	47.00
857.197	5 - 5.5	47.00
857.198	5.5 - 6	47.00
857.199	6 - 6.5	47.00
857.200	6.5 - 7	47.00

Fisso run out testers and balancing units

Run out tester with roller wheels or V-blocks for efficient testing of external, internal and surfaces of round products. Balancing unit with roller wheels for efficient testing of grinding wheels and other round products. The supports are adjustable and can be fixed on the base plate by means of a lever. Ideal for checking products in the production environment.

- Diameter compensation run out tester: max. 60 mm.
- Workpiece run out tester: max. $\varnothing$ 240 mm, workpiece balancing unit: max. $\varnothing$ 500 mm.
- Weight workpiece: max. 25 kg.
- Length base plate: run out tester: 500 or 1000 mm, balancing unit: 330 or 500 mm.
- Width T-slot: 14 mm.

Model with roller wheels

- Accuracy roller wheel: ± 0.005 mm.
- Roller wheel: $\varnothing$ 120 mm.

Model with V-blocks

- Tungsten carbide supports.



837.214 +
837.297 +
346.425 +
346.423



837.216



SWISS
MADE



837.222

Item No.	Length base plate/mm	Weight kg	Price EUR
Run out tester with roller wheels:			
837.214	500	approx. 14	3,580.00
837.215	1000	approx. 23	4,150.00
Run out tester with V-blocks:			
837.216	500	approx. 14	3,580.00
837.217	1000	approx. 23	4,150.00
Balancing unit:			
837.222	330	approx. 13	2,690.00
837.223	500	approx. 16	3,200.00



Granite surface plates

Black granite surface plates according to DIN 876 specifications. Sizes vary from 250x250 mm to 2000x1000 mm.

- Delivery with a manufacturer measuring report.
- Straight beveled edges.
- Cover (synthetic leather) optionally available.
- Surface plate stand optionally available (see “surface plate accessories” elsewhere in this catalog).
- Weight including wooden transport packaging.



131.201 +
131.113 +
131.127 +
402.028



Cover optionally available.



131.201 +
402.028

Delivery ex Groningen, Netherlands

ECONOMY LINE ✓

Dimensions l x w x h mm	Weight ¹ kg	Accuracy according DIN 876/1		Accuracy according DIN 876/0		Accuracy according DIN 876/00		Cover ²	
		Item No.	Price EUR	Item No.	Price EUR	Item No.	Price EUR	Item No.	Price EUR
250 x 250 x 50	13	402.000	82.00	402.020	91.00	402.040	102.00	402.250	45.00
400 x 250 x 50	20	402.001	112.00	402.021	123.00	402.041	138.00	402.251	50.00
400 x 400 x 70	41	402.002	212.00	402.022	234.00	402.042	251.00	402.252	53.00
630 x 400 x 70	65	402.003	366.00	402.023	391.00	402.043	418.00	402.253	65.00
630 x 630 x 80	108	402.004	519.00	402.024	556.00	402.044	593.00	402.254	71.00
800 x 500 x 100	136	402.005	579.00	402.025	624.00	402.045	671.00	402.255	83.00
900 x 600 x 100	188	402.006	764.00	402.026	823.00	402.046	876.00	402.256	89.00
1000 x 630 x 100	223	402.007	968.00	402.027	1,044.00	402.047	1,112.00	402.257	101.00
1000 x 630 x 150	317	402.008	1,253.00	402.028	1,350.00	402.048	1,437.00	402.257	101.00
1000 x 1000 x 100	342	402.009	1,424.00	402.029	1,496.00	402.049	1,600.00	402.258	118.00
1000 x 1000 x 150	504	402.010	1,846.00	402.030	1,938.00	402.050	2,070.00	402.258	118.00
1200 x 800 x 120	394	402.011	1,631.00	402.031	1,716.00	402.051	1,832.00	402.259	130.00
1200 x 800 x 150	467	402.012	1,875.00	402.032	1,970.00	402.052	2,100.00	402.259	130.00
1500 x 1000 x 150	750	402.013	2,960.00	402.033	3,110.00	402.053	3,370.00	402.260	166.00
1500 x 1000 x 200	971	402.014	3,550.00	402.034	3,650.00	402.054	3,950.00	402.260	166.00
2000 x 1000 x 200	1295	402.015	5,060.00	402.035	5,270.00	402.055	5,660.00	402.261	249.00
2000 x 1000 x 250	1600	402.016	5,790.00	402.036	6,030.00	402.056	6,460.00	402.261	249.00

¹ Weight including wooden packing.

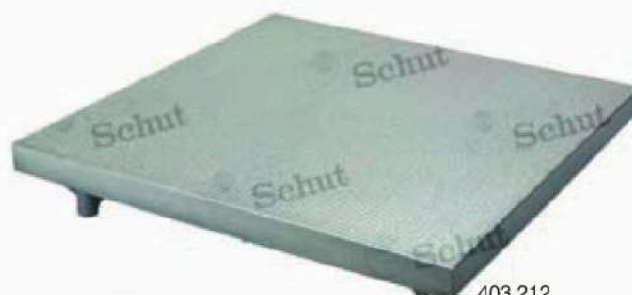
² Dimensions of the covers are equal to the length and the width of the surface plate, all covers have a depth of 50 mm.

Doc 325 EN 20060702

Cast iron surface plates

Extra heavy, cast iron surface plates.

- Three models:
 - milled (smoothened), accuracy according DIN 876/3,
 - hand scraped, accuracy according DIN 876/1,
 - fine scraped, accuracy according DIN 876/0.
- The side faces of all plates are milled and varnished.
- Surface plate stand optionally available (see “surface plate accessories” elsewhere in this catalog).



403.212



Delivery ex Groningen, Netherlands

Dimensions <i>l</i> x <i>w</i> mm	Weight kg (approx.)	Accuracy according DIN 876/3		Accuracy according DIN 876/1		Accuracy according DIN 876/0	
		Item No.	Price EUR	Item No.	Price EUR	Item No.	Price EUR
200 x 200	7	403.236	109.00	403.208	170.00	403.185	201.00
250 x 250	12	403.237	137.00	403.209	216.00	403.186	259.00
300 x 300	15	403.238	190.00	403.210	293.00	403.187	345.00
400 x 250	25	403.239	228.00	403.211	334.00	403.188	423.00
400 x 400	35	403.240	295.00	403.212	479.00	403.189	578.00
500 x 500	50	403.241	456.00	403.213	698.00	403.190	835.00
600 x 400	45	403.242	432.00	403.214	650.00	403.191	804.00
630 x 630	90	403.243	780.00	403.215	1,136.00	403.192	1,320.00
800 x 500	95	403.249	881.00	403.221	1,284.00	403.193	1,513.00
1000 x 600	140	403.245	1,347.00	403.217	1,867.00	403.194	2,330.00
1000 x 1000	270	403.246	2,070.00	403.218	2,850.00	403.195	3,340.00
1200 x 800	300	403.250	2,190.00	403.222	2,860.00		
2000 x 1000	1000	403.248	5,770.00				

Fine scraped plate (DIN 876/1) with lapp and inspection surface

Cast iron duplex plate with one flat inspection surface and one squared lapp surface, both finely scraped according to DIN 876/1. With the optional wooden box the surface plate can be used on both sides, because the top and bottom side of the case can be separated.

- Flatness: 14 µm.
- Dimensions *l* x *w* x *h*:
360 x 260 x 65 mm.
- Weight: approx. 24 kg.

Item No.	Description	Price EUR
403.150	Duplex plate	405.00
403.151	Wooden case (double sided use)	78.00

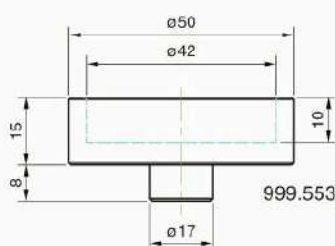


COR 218 EN 20060702

Surface plate supports

- For use with large granite or cast iron surface plates with a minimum size of 1000 x 630 mm.
- Support adjustable in height, with adjusting bolt and lock nut.
- For granite and cast iron surface plates, the sets are available with 5 surface plate supports, 3 for the Bessel points and 2 for tilt protection.

- Delivery incl. adjusting bolt and lock nut, excl. required supporting cup.



Delivery ex Groningen, Netherlands

403.298 + 999.553 (5 pieces) + 997.343



Item No.	Description	Height/mm		Price EUR
		min. ¹	max. ¹	
403.298 ²	Set of 5 supports	550	580	1,020.00
403.299 ²	Set of 5 supports	650	680	1,190.00
999.553 ³	Supporting cup (per piece)			28.00
997.343 ⁴	Support set			92.00

¹ Height without supporting cup and supporting set (incl. adjusting bolt and lock nut).

² Set consists of 3 supports and 2 tilt protectors.

³ Required for granite and cast iron surface plates.

⁴ Required for granite surface plates (in combination with supporting cups).



Support with supporting cup and supporting set.

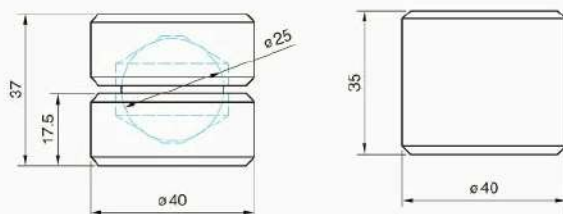


Sleeping point with supporting cup and supporting set.

Support set for surface plates

Support set for placing a small surface plate on a working table.

- Set consists of support based on 3 Bessel points and two tilt protectors.
- Stainless steel construction.
- Diameter: 40 mm.



Item No.	Description	Price EUR
997.343	Support set	92.00



Surface plate stands for granite surface plates

Extremely solid surface plate stands with excellent price-quality ratio. Support of the surface plate is determined on the basis of the bessel points and with the optional chest of drawers. Working height depends on the surface plate thickness. The models for surface plates equal to or larger than 1000 x 1000 and 1200 x 800 mm directly bear the load at the bessel points to the floor.

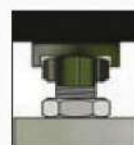
- Delivered incl. 3 support points (bessel) and 2 sleeping points as well as sturdy steel surface plate support feet (adjustable in height).
- Difference min. and max. height incl. surface plate: 25 mm.
- Delivered in color RAL 7035.



NEW



Sleeping point.



Bessel point.



131.131

Options

Item No.	For granite surface plates dimensions l x w x t/mm	Height incl. surface plate min./mm max./mm		Price EUR
Surface plate stand (prepared for chest of drawers):				
131.201 ¹	800 x 500 x 100	900	925	580.00
131.201 ¹	900 x 600 x 100	900	925	580.00
131.201 ¹	1000 x 630 x 100	900	925	580.00
131.201 ¹	1000 x 630 x 150	950	975	580.00
131.202	1000 x 1000 x 100	850	875	658.00
131.202	1000 x 1000 x 150	900	925	658.00
131.202	1200 x 800 x 120	870	895	658.00
131.202	1200 x 800 x 150	900	925	658.00
131.203	1500 x 1000 x 150	850	875	754.00
131.203	1500 x 1000 x 200	900	925	754.00
Surface plate stand (unsuited for chest of drawers):				
131.204	2000 x 1000 x 200	850	875	738.00
131.204	2000 x 1000 x 250	900	925	738.00

¹ Does not directly bear the load to the floor at the bessel points.

² Incl. fasteners.

³ Sleeping 2 and bessel points 3 needed.

⁴ Excl. supporting cup, use parts standard included with surface plate stand.

⁵ Excl. lock nut, use parts standard included with surface plate stand.

⁶ For 131.201, 131.202: 4 needed (M16).

For 131.203, 131.204: 5 needed (M16).

⁷ With ribbed rubber insert for storage of reference gauges such as setting rings, plug gauges and gauge blocks.

Item No.	For granite surface plates dimensions <i>l x w x t</i> /mm	Price EUR
Slide protection² for surface plate stands:		
131.125	800 x 500 x 100	68.00
131.126	900 x 600 x 100	68.00
131.127	1000 x 630 x 100/150	68.00
131.130	1000 x 1000 x 100/150	68.00
131.129	1200 x 800 x 120/150	68.00
131.128	1500 x 1000 x 150/200	68.00
131.128	2000 x 1000 x 200/250	68.00
Bessel and sleeping points:		
131.132 ^{3,5}	Sleeping point (tilt protection) (height: 30 mm higher than standard)	17.60
131.133 ^{3,4,5}	Bessel point (height: 30 mm higher than standard)	17.60
Surface plate support for extra working height:		
131.131 ⁶	Height: 125 mm higher than standard.	20.80
Chest of drawers:		
131.113 ^{2,7}	Chest of drawers (RAL 5015), incl. lock and fasteners, 610 x 480 x 470 mm (<i>w x d x h</i>); 3 drawers. Inside dimensions drawers (<i>w x d x h</i>): upper drawer: 515 x 395 x 90 mm, middle drawer: 515 x 395 x 105 mm, lower drawer: 515 x 395 x 135 mm.	532.00

Granite plate cleaner

Special granite plate cleaner to keep the surface of your granite surface plate clean and useable for a long period. Dust, dirt, grease stains, finger and hand prints can easily be removed. A clean and smooth surface provides low friction, less wear and the most accurate measurements. The non-corrosive property of the cleaner prevents corrosion damage to metal products.



Item No.	Description	Price EUR
407.304	Cleaner, 500 ml	9.40

Surface plate stands for cast iron surface plates

Extremely solid surface plate stand with a slide protection. Working height is standard 900 mm.



131.041 +
403.222

Delivery ex Groningen,
Netherlands

Item No.	For cast iron surface plates dimensions l x w/mm	Price EUR
131.030	1000 x 600	659.00
131.029	1000 x 1000	710.00
131.041	1200 x 800	710.00
131.031	2000 x 1000	853.00

V-blocks / Vises / Angle plates / Cylindrical squares
Squares / Parallels / Straight edges



Flatness tolerances according DIN 874	
Class	Flatness t_1 (μm)
00	$1 + L/150$
0	$2 + L/100$
1	$4 + L/60$
2	$8 + L/40$

Squareness tolerances according DIN 875	
Class	Squareness (μm)
00	$2 + L/100$
0	$5 + L/50$
1	$10 + L/20$
2	$20 + L/10$

Flatness tolerances according DIN 876		
Class	Flatness t_1 (μm)	L = length in mm
00	$2 + L/500$	
0	$4 + L/250$	
1	$10 + L/100$	
2	$20 + L/50$	
3	$40 + L/25$	



007 000 EN 20260702

V-blocks in pairs

V-blocks for clamping, processing, aligning and inspecting cylindrical objects, available in three classes.

- **Class 3:** Parallelism: 60 µm.
Base and prism face smooth planed, short and long side processed.
- **Class 1:** Parallelism: 16 µm.
Base and prism face hand scraped, short and long side processed.
- **Class 0:** Parallelism: 8 µm.
Base and prism face and short side fine scraped, long side processed.
- Ground in matched pairs.
- V-groove: 90°.



Dimensions <i>l x w x h</i> mm	Capa- city ø/mm	Weight p. pair kg	Class 3		Class 1		Class 0	
			Item No.	Price EUR p. pair	Item No.	Price EUR p. pair	Item No.	Price EUR p. pair
Steel:								
100x 40x 30	6- 50	1.4	403.396	55.00	403.390	73.00	403.380	99.00
150x 50x 40	8- 60	3.6	403.397	82.00	403.391	106.00	403.381	162.00
High-quality gray cast iron:								
200x 70x 50	8- 75	6.1	403.398	139.00	403.392	175.00	403.382	254.00
250x 85x 60	10-100	10	403.399	233.00	403.395	312.00	403.383	354.00
300x 100x 70	15-120	15	403.400	315.00	403.393	437.00	403.384	516.00

X-blocks in pairs

The X-blocks have four V-grooves of 90°, all varying in size.

- **Class 1:** Parallelism: 16 µm.
Flatness of the measuring faces according DIN 876/1.
All surfaces hand scraped.
- **Class 0:** Parallelism: 8 µm.
Flatness of the measuring faces according DIN 876/0.
All surfaces fine scraped.
- All four V-grooves are ground in matched pairs.
- Material: high-quality gray cast iron.
- V-groove: 90°.
- Holds workpieces on all faces.



Dimensions <i>l x w x h</i> mm	Capa- city ø/mm	Weight p. pair kg	Class 1		Class 0	
			Item No.	Price EUR p. pair	Item No.	Price EUR p. pair
120 x 100 x 60	8 - 90	6	403.370	241.00	403.360	284.00
150 x 130 x 75	8 - 110	10.4	403.371	329.00	403.361	386.00
200 x 170 x 90	8 - 150	25	403.372	513.00	403.362	606.00



Magnetic V-blocks

- Accuracy: ± 0.02 mm/100 mm.
- On/off switch.
- V-groove: 90° .



Item No.	Dimensions <i>l x w x h</i> /mm	Capacity ϕ /mm	Magnetic force/N	Weight kg	Price EUR
906.207	70 x 60 x 72	8 - 50	686	1.8	61.00
906.208	100 x 70 x 95	6 - 55	1178	3.7	103.00

ECONOMY LINE ✓

Magnetic V-blocks

- Magnetic force: 200 N.
- Ground in matched pairs.
- V-groove: 90° .
- Weight: 2.2 kg (per piece).

ECONOMY LINE ✓

Item No.	Dimensions <i>l x w x h</i> /mm	Capacity ϕ /mm	Price EUR
906.210	100 x 50 x 80	6 - 70	302.00



Magnetic V-block

- V-groove: 90° .
- Magnetic force of round spindle axis in V-groove: 450 N, magnetic force of base plate: 450 N.



Item No.	Dimensions <i>l x w x h</i> /mm	Capacity ϕ /mm	Price EUR
855.200	125 x 60 x 73	6 - 50	359.00



Adjustable V-blocks

V-blocks adjustable from 0 to +60 degrees and 0 to -15 degrees. Suitable for metal cutting machines and for various measuring purposes.

- Vernier: 10'.
- Accuracy: 15'.
- Capacity: $\varnothing$ 6 - 28 mm (906.600),
 $\varnothing$ 6 - 40 mm (906.601/602).
- Dial: 0 to +60°/0 to -15°.
- Flatness measuring faces: 0.01 mm.
- Hardness: 50 - 55 HRC (base),
58 - 62 HRC (V-block).
- V-groove: 90°.
- Adjustable angle by locking Allen.
- Delivery in a plastic case or a wooden case incl. Allen key.

ECONOMY LINE ✓

Item No.	Dimensions l x w x h/mm	Price EUR
906.600	75 x 25 x 32.5	68.00
906.601	102 x 30 x 48	68.00
906.602	102 x 46 x 48	78.00



906.601

V-blocks in pairs

- Parallelism measuring faces: $\pm 4 \mu\text{m}$.
- Squareness of front face with bottom face according DIN 2274.
- Hardened ($650 \pm 100 \text{ HV5}$).
- Ground in matched pairs.
- V-groove: 90°.
- Delivery incl. clamp.



666.550

Item No.	Dimensions l x w x h/mm	Capacity $\varnothing$ /mm	Price EUR
666.550	50 x 40 x 40	5 - 30	146.00
666.551	75 x 55 x 55	5 - 50	223.00
666.552	100 x 75 x 75	7 - 70	346.00

V-blocks in pairs

- Parallelism measuring faces: $\pm 4 \mu\text{m}$.
- Squareness of all side faces with each other according DIN 2274.
- Hardened ($650 \pm 100 \text{ HV5}$).
- Ground in matched pairs.
- V-groove: 90°.
- Delivery incl. clamp.



666.540

Item No.	Dimensions l x w x h/mm	Capacity $\varnothing$ /mm	Price EUR
666.540	60 x 58 x 40	5 - 30	188.00
666.541	75 x 70 x 54	5 - 50	285.00
666.542	100 x 96 x 75	7 - 70	432.00

V-blocks in pairs set

Set of V-blocks in pairs for clamping, processing, aligning and inspecting cylindrical objects. The included stopper can be used to accurately position your product.

- Accuracy: ± 0.005 mm.
- Parallelism measuring faces: ± 5 μ m.
- Hardness: 52 - 57 HRC (V-block).
- Ground in matched pairs.
- V-groove: 90°.
- Delivery incl. Clamps and stopper.
- Delivery in a plastic carrying case.

NEW



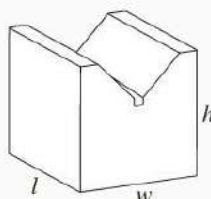
ECONOMY LINE ✓

Item No.	Dimensions <i>l x w x h</i> /mm	Capacity $\varnothing$ /mm	Price EUR
910.459	70 x 45 x 40	4 - 38	225.00

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Granite V-blocks in pairs

- V-groove: 90°.
- Material: granite.
- Processed in matched pairs.
- Delivery in a wooden box or an aluminum carrying case with a manufacturer measuring report.



ECONOMY LINE ✓

Dimensions $l \times w \times h$ /mm	Capacity ϕ /mm	Weight kg ¹	Item No.	Accuracy μm^2	Price EUR	Item No.	Accuracy μm^2	Price EUR
			Class 1:			Class 0:		
63 x 63 x 63	10 - 50	1.4	402.155	± 6	277.00	402.159	± 3	301.00
100 x 100 x 100	15 - 75	5.6	402.156	± 8	321.00	402.160	± 4	347.00
100 x 160 x 160	25 - 125	14.2	402.157	± 8	505.00	402.161	± 4	549.00
160 x 250 x 250	60 - 200	55.2	402.158	± 10	797.00	402.162	± 5	873.00

¹ Weight per pair.² Parallelism between measuring faces and base.

Magnetic induction blocks in pairs

These magnetic induction blocks are not magnetized themselves. They are placed on a magnetic chuck to induce, to hold objects as for example round bars.



909.377

ECONOMY LINE ✓

Item No.	Dimensions $l \times w \times h$ /mm	Weight kg	Price EUR
909.377	100 x 50 x 25	1.18	58.00
909.378	55 x 60 x 48	1.13	64.00

- Material: steel and aluminum alloy.
- Ground in matched pairs.

V-blocks (909.378)

- Capacity: $\phi 7 - 50$ mm.
- V-groove: 90°.



909.378

Magnetic holders

- Angles 45°, 90° and 135°.



ECONOMY LINE ✓

Item No.	Dimensions $h \times w$ /mm	Thickness mm	Holding power/kg	Price EUR
909.342	80 x 120	14	2.5	14.20
909.332	100 x 155	17	8	14.70

909.342



909.332

Mini precision clamping tools

Miniature clamping tools for clamping of small products. Very well suited for measuring for example with roughness testers, microscopes or measuring machines.

Mini precision vises

- Accuracy (parallelism, flatness and squareness): 0.02 mm.
- 856.081: brass, matt chrome-plated; 856.082 and 856.083: aluminum, matt anodized.
- Standard supplied with 2 pairs of jaws (hardened stainless steel and plastic): 1 side with a ground horizontal and vertical prism and 1 flat side.
- 856.081 and 856.082: on the bottom-side provided with 2 x M4 threaded bores with center distances 42 and 62.5 mm; 856.083: on the bottom-side provided with 2 x M6 threaded bores with center distance approx. 83 mm.

Clamp jaw sets

Sets consisting of 1 pair plastic jaws, 1 pair with stepped jaws and 1 jaw with a stopper in the horizontal prism.



856.081



Item No.	Jaw opening mm	Jaw width mm	Jaw depth mm	Length mm	Weight kg	Price EUR
856.081	14	15	8	50	0.075	109.00
856.082	23	25	15	75	0.16	145.00
856.083	32	35	21	100	0.4	206.00



Options

Item No.	Description	Price EUR
Clamp jaw sets:		
856.084	For 856.081	45.00
856.085	For 856.082	59.00
856.086	For 856.083	90.00



856.084



Mini precision vises in a set

Mini precision vises in a set, consists of 856.081, 856.082 and 856.083 with matching clamp jaws.

- Delivery in a plastic carrying case.
- Also available: sets with 2 mini precision vises with matching clamp jaws in a plastic carrying case.

Item No.	Description	Price EUR
856.175	Mini precision vises in a set	686.00



Mini indexable collets

- Clamping range: 0.4-6 mm.
- Per approx. 45 degrees indexable.
- Aluminum, blasted.



- Mounting by means of two M6 threaded bores on the bottom-side.

Item No.	Clamping range mm	Dimensions l x w x h/mm	Price EUR
856.090	0.4 - 3.5	26 x 21 x 34	139.00
856.091	1.2 - 6	26 x 26 x 39	139.00

Stands for mini precision vises

Stand for use with mini precision vises in combination with base plates. The base plates can also be used with other stands. For these stands see dial indicator stands elsewhere in the catalog.

Item No.	Description	Price EUR
670.057	Stand for 856.081 and 856.082	135.00
670.058	Stand for 856.083	
Base plates:		
856.087	For 856.081	27.20
856.088	For 856.082	29.10
856.089	For 856.083	32.70



XY table for mini precision vises

XY table for accurate positioning underneath a microscope, for example.

- Dimensions: 50 x 50 x 27 mm.
- Range: 10 x 10 mm.
- Graduation micrometers: 0.01 mm.

Item No.	Description	Price EUR
856.176	XY table	952.00
856.177	Adapter for mini precision vise 856.081	79.00
856.178	Adapter for mini precision vise 856.082	100.00



Mini V-block

- Dimensions: 25 x 20 x 20 mm.
- Hardened stainless steel construction.
- Delivery incl. aluminum clamp.



Item No.	Description	Price EUR
856.179	Mini V-block for shafts $\varnothing$ 2.5 - 18 mm	133.00

Mini magnetic V-blocks

- V-groove: 120°.
- Hardened and ground steel.



Item No.	Description	Price EUR
856.173	Mini V-block 20 x 20 x 17.5 mm for shafts $\varnothing$ 2.0 - 25 mm	170.00
856.174	Mini V-block 30 x 30 x 25 mm for shafts $\varnothing$ 4.0 - 35 mm	191.00

Precision vises

Hardened precision vises for accurate measurements and machine operations.

- Accuracy (parallelism, flatness and squareness):
 ≤ 100 mm jaw opening = 0.005 mm,
 > 100 mm jaw opening = 0.005 mm per 100 mm.
- With horizontally and vertically ground prism in the moveable jaw.



909.734



909.739

Precision and universal sine vises

- Stable and accurate to fix in each angle position (0 to 45°).

Universal precision vise

- With 360° rotatable base.
- Accurate degree scale.
- Stable and accurate to fix in each angle position (0 to 45°).



909.746

ECONOMY LINE ✓

Item No.	Jaw opening mm	Jaw width mm	Jaw depth mm	Length mm	Price EUR
Precision vises:					
909.733	60	50	25	150	87.00
909.734	80	75	35	200	121.00
909.735	120	100	40	255	232.00
909.736	155	125	50	300	389.00
909.737	25	25	10	65	48.00
909.738	65	50	25	140	69.00
909.739	100	75	35	190	87.00
909.740	120	100	45	240	183.00
909.741	155	125	50	280	266.00
Precision sine vises with swivelling front axis:					
909.742	60	50	25	140	126.00
909.743	100	75	35	190	161.00
909.744	120	100	45	250	359.00
Precision sine vises with swivelling rear axis:					
909.745	60	50	25	140	136.00
909.746	100	75	35	190	171.00
909.747	120	100	45	250	289.00
Universal sine vises:					
909.748	60	50	25	140	232.00
909.749	90	75	35	200	332.00
909.750	120	100	45	250	553.00
909.751	155	125	50	300	728.00
Universal precision vise:					
909.752	80	70	30	—	1,022.00



909.749



909.752



Modular precision vises

Hardened precision vises for fixation for various machine operations.

- With or without 90° rotatable base.
- Accuracy (parallelism, flatness and squareness):
 - ≤ 100 mm jaw opening = 0.005 mm,
 - > 100 mm jaw opening = 0.005 mm per 100 mm.
- Also available:
 - intermediate sizes with other jaw depths and jaw openings,
 - larger models with jaw width 200 or 300 mm and jaw opening up to 600 mm.



909.702



909.706

Jaw opening mm	Jaw width mm	Jaw depth mm	Length mm	Without rotatable base		With rotatable base	
				Item No.	Price EUR	Item No.	Price EUR
100	100	30	270	909.702	410.00	909.706	638.00
150	125	40	345	909.703	548.00	909.707	828.00
200	150	50	420	909.704	647.00	909.708	926.00
400	175	60	655	909.705	992.00	909.709	1,363.00

ECONOMY LINE ✓

Long modular vises

Long hardened vises for fixation for various machine operations.

- Single or two-sided model.
- Also available:
 - intermediate sizes with other jaw depths and jaw openings,
 - larger models with jaw width 200 mm and jaw opening up to 700 mm (single) or 250 mm (two-sided).



909.710



909.714

ECONOMY LINE ✓

Jaw width mm	Jaw depth mm	Length mm	Single			Two-sided		
			Item No.	Jaw opening/mm	Price EUR	Item No.	Jaw opening/mm	Price EUR
100	30	460	909.710	290	718.00	909.714	90	760.00
125	40	520	909.711	320	767.00	909.715	100	859.00
150	50	580	909.712	360	1,046.00	–	–	–
150	50	680	–	–	–	909.716	160	1,395.00
175	60	866	909.713	600	1,676.00	909.717	220	1,901.00

Short modular vises

Short hardened vises for fixation for various machine operations.

- With fixed jaw, fixed double jaw or moveable jaw.



909.723



909.728



909.718

ECONOMY LINE ✓

Jaw width mm	Jaw depth mm	Length mm	Height mm	Fixed jaw		Fixed double jaw		Moveable jaw	
				Item No.	Price EUR	Item No.	Price EUR	Item No.	Price EUR
100	30	140	65	909.723	187.00	909.728	209.00	909.718	209.00
125	40	160	80	909.724	203.00	909.729	228.00	909.719	228.00
150	50	230	100	909.725	276.00	909.730	312.00	909.720	312.00
175	60	240	118	909.726	404.00	909.731	469.00	909.721	469.00
200	65	300	135	909.727	566.00	909.732	657.00	909.722	639.00

Precision sine plates

- Stable and accurate to fix in each angle position (0 to 45°).

Precision sine plates

- Accuracy (parallelism and squareness):
 ≤ 100 mm dimension l or $w = 0.005$ mm,
 > 100 mm dimension l or $w = 0.005$ mm per 100 mm.
- Mounting hole pattern 909.690: 13x 1/4 inch,
909.691: 23x 1/4 inch.

Magnetic precision sine plates

Permanently magnetic sine plates for positioning and holding small or odd-shaped workpieces.

- Center distance of the support cylinders:
909.690/692: 76 mm,
909.691/693: 125 mm.

ECONOMY LINE ✓

Item No.	Dimensions/mm	Price EUR
Precision sine plates:		
909.690	100 x 100 x 50	156.00
909.691	152 x 152 x 57	182.00
Magnetic precision sine plates:		
909.692	100 x 100 x 117	429.00
909.693	152 x 152 x 117	536.00



909.690



909.692

Granite square blocks with V-nut and tapped holes

Multifunctional granite blocks for e.g. flatness and squareness measurements, with V-nut and several tapped holes. Hold workpieces on several faces.

- Accuracy measuring faces:
flatness conforms to DIN 876/0,
squareness conforms to DIN 875/1.
- Screw thread of tapping holes:
402.170: M6, 402.171: M8.
- Equilateral cubic.
- Delivery with a manufacturer's certificate.

ECONOMY LINE ✓

Item No.	Dimensions mm	Flatness μm	Squareness μm	Weight kg	Price EUR
402.170	160 x 160 x 160	4	8	9.6	502.00
402.171	200 x 200 x 200	5	9	17	777.00



402.170

Four-sided cast iron parallel blocks in pairs

Hollow but yet stable cast iron parallel blocks because of the internal bridge construction.

- **Class 3:** Parallelism: 64 μm. Smooth planed.
- **Class 1:** Parallelism: 16 μm. Hand scraped.
- **Class 0:** Parallelism: 8 μm. Fine scraped.
- Flatness conforms to DIN 876.
- Squareness conforms to DIN 875.
- Plan parallel and square matched in pairs.



403.622

Dimensions l x w x h/mm	Weight p. pair/kg	Class 3		Class 1		Class 0	
		Item No.	Price EUR	Item No.	Price EUR	Item No.	Price EUR
150 x 150 x 100	18	403.628	515.00	403.624	820.00	403.620	971.00
200 x 150 x 100	28	403.629 ¹	719.00	403.625 ¹	1,074.00	403.621 ¹	1,339.00
300 x 225 x 150	60	403.630 ¹	1,105.00	403.626 ¹	1,866.00	403.622 ¹	2,210.00
400 x 300 x 200	140	403.631 ¹	2,180.00	403.627 ¹	3,640.00	403.623 ¹	4,280.00

¹ Delivery ex Groningen, Netherlands.

Cast iron angle blocks with several clamping possibilities

Cast iron angle block, with four clamping faces with several slots and taps, for aligning and clamping of tools and products. The four faces are planparallel and square matched.

- Slot width: 18 mm (403.607: 20 mm).

Item No.	Dimensions l x w x h/mm	Parallelism μm	Squareness μm	Weight kg	Price EUR
403.605	250 x 150 x 100	50	35	13	295.00
403.606	300 x 200 x 150	52	40	23	545.00
403.607 ¹	400 x 250 x 200	56	46	55	879.00

¹ Delivery ex Groningen, Netherlands.



403.606

Cast iron clamping tables with several clamping possibilities

These cast iron clamping tables offer many possibilities for aligning and clamping products for mechanical processing. The six faces are parallel and square milled. Four of these faces are equipped with several clamping slots and the top face with T-slots.

- Flatness according DIN 876/3.
- T-slots according DIN 650.



403.613

Delivery ex Groningen, Netherlands



Item No.	Dimensions l x w x h/mm	Weight kg	Nom. value T-slots/mm	Slot width mm	Price EUR
403.610	250 x 180 x 150	25	14	16	584.00
403.611	300 x 220 x 200	37	14	18	822.00
403.612	350 x 280 x 250	70	22	22	1,171.00
403.613	400 x 350 x 300	115	22	22	1,594.00
403.614	500 x 450 x 400	180	22	22	2,160.00
403.615	800 x 700 x 600	670	28	30	4,140.00

Cast iron angle plates with several clamping slots

These cast iron angle plates have several clamping slots both in the base and the clamping face, which make them suitable for all kind of fixtures.

- Flatness according DIN 876.
- Squareness according DIN 875.
- Strengthened outsides.
- Slots in base and clamping face.



403.283

Item No.	Dimensions l x w x h/mm	Weight kg	Flatness and square- ness/ μ m	Slot width mm	Price EUR
Class 3, DIN 876/3, DIN 875/2:					
403.292	150 x 75 x 100	4	30	12	105.00
403.293	200 x 100 x 150	8	30	14	155.00
403.294	275 x 150 x 200	20	40	17	292.00
403.295	300 x 150 x 250	24	45	19	340.00
403.296 ¹	400 x 225 x 300	45	50	23	558.00
403.297 ¹	500 x 300 x 400	85	60	23	927.00
Class 1, DIN 876/2, DIN 875/1:					
403.286	150 x 75 x 100	4	15	12	150.00
403.287	200 x 100 x 150	8	15	14	242.00
403.288	275 x 150 x 200	20	20	17	407.00
403.289	300 x 150 x 250	24	22	19	506.00
403.290 ¹	400 x 225 x 300	45	25	23	859.00
403.291 ¹	500 x 300 x 400	85	30	23	1,402.00
Class 0, DIN 876/1, DIN 875/0:					
403.280	150 x 75 x 100	4	7	12	201.00
403.281	200 x 100 x 150	8	7	14	299.00
403.282	275 x 150 x 200	20	9	17	487.00
403.283	300 x 150 x 250	24	11	19	716.00
403.284 ¹	400 x 225 x 300	45	12	23	1,076.00
403.285 ¹	500 x 300 x 400	85	15	23	1,776.00

¹ Delivery ex Groningen, Netherlands.

Cast iron angle plates

- Ground faces.
- With T-slots.
- Accuracy: flatness according DIN 876, squareness according DIN 875.



Dimensions <i>l x w x h</i> /mm	Weight kg	DIN 876/3 and 875/2 Item No. Price EUR	DIN 876/2 and 875/1 Item No. Price EUR	DIN 876/1 and 875/0 Item No. Price EUR
150 x 75 x 100	6	403.264 145.00	403.261 184.00	403.267 228.00
200 x 100 x 150	11	403.276 198.00	403.273 275.00	403.270 327.00
275 x 150 x 200	24	403.265 363.00	403.262 463.00	403.268 534.00
300 x 150 x 250	33	403.277 ¹ 457.00	403.274 ¹ 644.00	403.271 ¹ 852.00
400 x 225 x 300	54	403.266 ¹ 689.00	403.263 ¹ 945.00	403.269 ¹ 1,151.00
500 x 300 x 400	105	403.278 ¹ 1,164.00	403.275 ¹ 1,588.00	403.272 ¹ 1,908.00

¹ Delivery ex Groningen, Netherlands.

LMW steel cylindrical squares

Ground and lapped steel cylinder for checking squareness e.g. during the acceptance process of machines and instruments. Out of roundness and straightness: $\leq 1.5 \mu\text{m}$.

Item No.	Dimensions mm	Squareness p-p/ μm	Price EUR
852.190	$\varnothing 90 \times 200$	2	
852.191	$\varnothing 90 \times 250$	2.2	
852.192	$\varnothing 90 \times 300$	2.5	
852.193	$\varnothing 90 \times 350$	2.8	
852.194	$\varnothing 90 \times 400$	3	



Steel cylindrical squares

Ground and lapped steel cylinder for checking squareness.

- Out of roundness and straightness: $\leq 5 \mu\text{m}$.
- Delivery in a wooden case with a manufacturer measuring report.

Item No.	Dimensions mm	Squareness p-p/ μm	Price EUR
906.436	$\varnothing 80 \times 200$	3	288.00
906.437	$\varnothing 80 \times 315$	4	334.00
906.438	$\varnothing 100 \times 500$	5	652.00
906.439	$\varnothing 140 \times 800$	7	1,221.00

ECONOMY LINE ✓



Granite squares

- Triangular model.
- Material: granite.
- Straight beveled edges.
- With weight-saving holes (except 402.120 and 910.437).

- Delivery in a wooden box or an aluminum carrying case (only height ≤ 400 mm) with a declaration of conformity.



910.439

ECONOMY LINE ✓

Item No.	Dimensions $h \times w \times t$ /mm	Squareness ¹ μm	Flatness ² μm	Weight kg	Price EUR
DIN 875/0:					
402.120	100 x 63 x 16	± 4	2	0.3	85.00
402.121	160 x 100 x 20	± 4	2	0.8	124.00
402.124 ³	630 x 400 x 63	± 9	3	25.5	395.00
DIN 875/00:					
910.437	100 x 63 x 16	± 2	1	0.3	127.00
910.438	160 x 100 x 20	± 2	1	0.8	183.00
910.439	250 x 160 x 25	± 2.5	1	2.4	206.00
910.440	400 x 250 x 40	± 3.5	1.2	7.5	379.00
910.441 ³	630 x 400 x 63	± 4.5	1.5	25.5	609.00
910.442 ^{3,4}	1000 x 630 x 80	± 6	2.5	102	1,083.00

¹ Squareness between measuring face and base.² Flatness of measuring face and base.³ Delivery ex Groningen, Netherlands.⁴ Weight included package.

Granite squares

- Square model.
- Material: granite.
- Straight beveled edges.
- With weight-saving holes.

- Delivery in a wooden box or an aluminum carrying case (only height ≤ 400 mm) with a declaration of conformity.

ECONOMY LINE ✓

Item No.	Dimensions $h \times w \times t$ /mm	Squareness μm ¹	Weight kg	Price EUR
Class 0:				
402.145	200 x 200 x 25	± 4	2.6	254.00
402.146	250 x 250 x 30	± 4.5	4.9	301.00
402.149 ²	500 x 500 x 50	± 7	33	781.00
Class 00:				
910.443	200 x 200 x 25	± 2	2.6	302.00
910.444	250 x 250 x 30	± 2.2	4.9	354.00
910.445	315 x 315 x 30	± 2.6	7.7	448.00
910.446	400 x 400 x 40	± 3	14.5	704.00
910.447 ²	500 x 500 x 50	± 3.5	33	998.00

¹ Squareness between adjacent measuring faces.² Delivery ex Groningen, Netherlands.

910.444

Flat steel squares

- Lapped measuring faces.
- Accuracy according DIN 875.



670.003

Item No.	Dimensions mm	Cross- section/mm	Price EUR
Class III:			
670.061	100 x 70	20 x 5	6.00
670.065	300 x 175	35 x 7	17.90
670.067	500 x 250	40 x 8	40.00
DIN 875/2:			
670.041	75 x 50	15 x 5	7.50
670.042	100 x 70	20 x 5	8.50
670.043	150 x 100	25 x 5	10.90
670.044	200 x 130	30 x 6	14.90
670.045	250 x 165	35 x 7	20.40
670.046	300 x 175	35 x 7	25.20
670.047	400 x 200	35 x 7	77.00
670.048	500 x 250	40 x 8	98.00
670.049	600 x 300	40 x 8	156.00
670.051 ¹	1000 x 500	50 x 10	321.00

Item No.	Dimensions mm	Cross- section/mm	Price EUR
DIN 875/1:			
670.022	75 x 50	15 x 5	8.90
670.023	100 x 70	20 x 5	10.50
670.024	150 x 100	25 x 5	12.80
670.025	200 x 130	30 x 6	17.80
670.026	250 x 165	35 x 7	25.60
670.027	300 x 200	40 x 8	36.00
670.028	400 x 265	45 x 10	
670.029	500 x 330	50 x 10	
670.030	600 x 400	50 x 10	
DIN 875/0 (with manufacturer measuring report):			
670.002	75 x 50	15 x 5	12.90
670.003	100 x 70	20 x 5	58.00
670.004	150 x 100	25 x 5	67.00
670.005	200 x 130	30 x 6	76.00
670.006	250 x 165	35 x 7	
670.007	300 x 200	40 x 8	
670.009	500 x 330	50 x 10	

¹ Delivery ex Groningen, Netherlands.

007.210.EN.20060702

Flat stainless steel squares

Item No.	Dimensions mm	Cross- section/mm	Price EUR
DIN 875/2:			
670.145	200 x 130	30 x 6	19.40
DIN 875/1:			
670.122	75 x 50	15 x 5	10.40
670.123	100 x 70	20 x 5	13.20
670.124	150 x 100	25 x 5	18.40
670.125	200 x 130	30 x 6	27.20
670.126	250 x 165	35 x 7	48.00
670.127	300 x 200	40 x 8	64.00
670.128	400 x 265	45 x 10	
670.129	500 x 330	50 x 10	
670.130	600 x 400	50 x 10	
DIN 875/0, hardened (with manufacturer measuring report):			
670.751	50 x 40	12 x 5	58.00
670.752	75 x 50	15 x 5	69.00
670.753	100 x 70	20 x 5	77.00
670.754	150 x 100	25 x 5	87.00
670.755	200 x 130	30 x 6	107.00
670.758	250 x 165	35 x 7	
670.759	300 x 200	40 x 8	
670.760	400 x 265	45 x 10	383.00
670.761	500 x 330	50 x 10	

- Stainless steel.
- Lapped measuring faces.
- Accuracy according DIN 875.



All squares can be delivered with an manufacturer measuring report or a certificate of an acknowledged measuring laboratory.

For the larger squares it is important to realize that external factors affect the stability of squares, which may influence the accuracy unfavourably.

Wooden cases for squares

Wooden cases for flat squares.



Item No.	Dimensions square/mm	Price EUR
670.465	50 x 40 / 75 x 50 / 100 x 70	10.40
670.466	150 x 100	13.00
670.885	150 x 100 / 200 x 130	21.20
670.467	200 x 130	16.20
670.887	250 x 165 / 300 x 200	54.00
670.470	500 x 330	76.00

Flat stainless steel squares

- Hardened stainless steel.
- Lapped measuring faces.
- Accuracy according DIN 875.

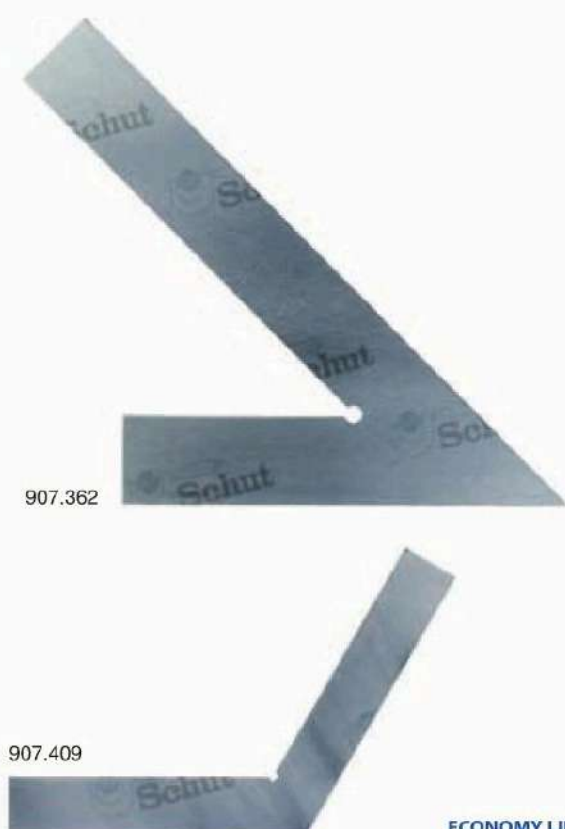
Item No.	Dimensions mm	Cross- section/mm	Price EUR
DIN 875/1:			
907.301	75 x 50	15 x 5	10.70
907.302	100 x 70	20 x 5	13.50
907.303	150 x 100	25 x 5	18.10
907.304	200 x 130	30 x 6	27.10
907.305	250 x 160	35 x 7	35.30
907.306	300 x 200	40 x 8	48.00
DIN 875/0:			
907.282	50 x 40	12 x 3.5	16.00
907.283	75 x 50	15 x 5	16.80
907.284	100 x 70	20 x 5	20.20
907.285	150 x 100	25 x 7	27.70
907.286	200 x 130	30 x 7	35.90



907.284

ECONOMY LINE ✓

Flat steel squares



907.362

907.409

ECONOMY LINE ✓

Item No.	Dimensions mm	Cross- section/mm	Price EUR
Acute angle squares 45°, DIN 875/2:			
907.359	100 x 70	20 x 5	13.00
907.360	120 x 80	20 x 5	13.90
907.361	150 x 100	20 x 5	17.90
907.362	200 x 130	25 x 5	19.70
Acute angle squares 60°, DIN 875/2:			
907.383	100 x 70	20 x 5	13.00
907.384	120 x 80	20 x 5	14.80
907.385	150 x 100	20 x 5	17.10
907.386	200 x 130	25 x 5	19.90
Hexagon squares 120°, DIN 875/2:			
907.407	50 x 50	15 x 5	10.30
907.408	75 x 75	18 x 5	12.40
907.409	100 x 100	20 x 5	15.70
907.410	150 x 150	25 x 5	20.30
907.411	200 x 200	30 x 6	22.90
Octagon squares 135°, DIN 875/2:			
907.417	50 x 50	15 x 5	14.20
907.418	75 x 75	18 x 5	16.70
907.419	100 x 100	20 x 5	19.70
907.420	150 x 150	25 x 5	25.40
907.421	200 x 200	30 x 6	29.60

Steel squares with base

- Lapped measuring faces.
- Accuracy according DIN 875.



670.203

Item No.	Dimensions mm	Cross- section/mm	Price EUR
DIN 875/2:			
670.241	75 x 50	15 x 5	10.10
670.242	100 x 70	20 x 5	11.80
670.243	150 x 100	25 x 5	17.30
670.244	200 x 130	30 x 6	21.10
670.245	250 x 165	35 x 7	28.80
670.246	300 x 175	35 x 7	36.20
670.247	400 x 200	35 x 7	107.00
670.248	500 x 250	40 x 8	179.00
670.249	600 x 300	40 x 8	208.00
670.250 ¹	750 x 375	45 x 10	295.00
670.251 ¹	1000 x 500	50 x 10	405.00

Item No.	Dimensions mm	Cross- section/mm	Price EUR
DIN 875/1:			
670.222	75 x 50	15 x 5	11.60
670.223	100 x 70	20 x 5	14.00
670.224	150 x 100	25 x 5	21.10
670.225	200 x 130	30 x 6	26.40
670.226	250 x 165	35 x 7	36.60
670.227	300 x 200	40 x 8	47.00
670.228	400 x 265	45 x 10	
670.229	500 x 330	50 x 10	
670.230	600 x 400	50 x 10	
DIN 875/0 (with manufacturer measuring report):			
670.203	100 x 70	20 x 5	69.00
670.204	150 x 100	25 x 5	79.00
670.205	200 x 130	30 x 6	96.00
670.206	250 x 165	35 x 7	
670.207	300 x 200	40 x 8	
670.208	400 x 265	45 x 10	358.00
670.209	500 x 330	50 x 10	547.00

¹ Delivery ex Groningen, Netherlands.

007.212 EN 20060702

Stainless steel squares with base

Item No.	Dimensions mm	Cross- section/mm	Price EUR
DIN 875/2:			
670.347	300 x 200	40 x 8	56.00
DIN 875/1:			
670.322	75 x 50	15 x 5	18.10
670.323	100 x 70	20 x 5	23.00
670.324	150 x 100	25 x 5	35.20
670.325	200 x 130	30 x 6	46.00
670.326	250 x 165	35 x 7	62.00
670.327	300 x 200	40 x 8	74.00
670.328	400 x 265	45 x 10	
670.329	500 x 330	50 x 10	
670.330	600 x 400	50 x 10	
DIN 875/0, hardened (with manufacturer measuring report):			
670.851	50 x 40	12 x 5	67.00
670.852	75 x 50	15 x 5	72.00
670.853	100 x 70	20 x 5	75.00
670.854	150 x 100	25 x 5	95.00
670.855	200 x 130	30 x 6	131.00
670.762	250 x 165	35 x 7	196.00
670.763	300 x 200	40 x 8	233.00

- Stainless steel.
- Lapped measuring faces.
- Accuracy according DIN 875.



All squares can be delivered with an manufacturer measuring report or a certificate of an acknowledged measuring laboratory.

For the larger squares it is important to realize that external factors affect the stability of squares, which may influence the accuracy unfavourably.

Wooden cases for squares

Wooden cases for squares with base.



Item No.	Dimensions square/mm	Price EUR
670.465	50 x 40/75 x 50/100 x 70	10.40
670.885	150 x 100/200 x 130	21.20
670.887	250 x 165/300 x 200	54.00

Stainless steel squares with base

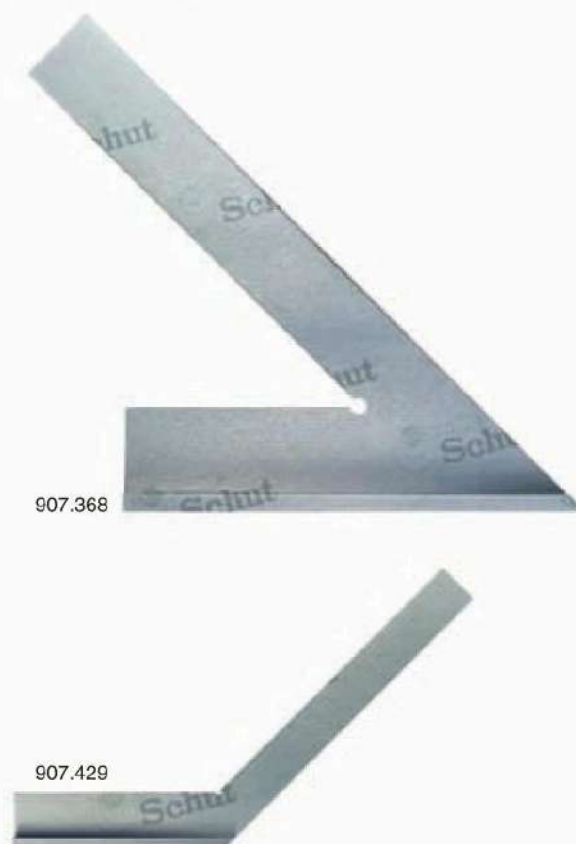
- Hardened stainless steel.
- Lapped measuring faces.
- Accuracy according DIN 875.

Item No.	Dimensions mm	Cross- section/mm	Price EUR
DIN 875/1:			
907.287	75 x 50	15 x 5	12.90
907.288	100 x 70	20 x 5	17.70
907.289	150 x 100	25 x 5	22.20
907.290	200 x 130	30 x 6	42.00
907.291	250 x 160	35 x 7	55.00
907.292	300 x 200	40 x 8	72.00
DIN 875/0:			
907.272	50 x 40	12 x 5	21.10
907.273	75 x 50	15 x 5	22.00
907.274	100 x 70	20 x 5	27.20
907.275	150 x 100	25 x 5	38.70
907.276	200 x 130	30 x 6	52.00



ECONOMY LINE ✓

Steel squares with base



ECONOMY LINE ✓

Item No.	Dimensions mm	Cross- section/mm	Price EUR
Acute angle squares 45°, DIN 875/2:			
907.365	100 x 70	20 x 5	17.70
907.366	120 x 80	20 x 5	16.70
907.367	150 x 100	20 x 5	26.90
907.368	200 x 130	25 x 5	28.40
Acute angle squares 60°, DIN 875/2:			
907.389	100 x 70	20 x 5	15.80
907.390	120 x 80	20 x 5	16.70
907.391	150 x 100	20 x 5	19.90
907.392	200 x 130	25 x 5	28.40
Mitre squares 135°, DIN 875/2:			
907.427	100 x 70	20 x 5	15.20
907.428	120 x 80	20 x 5	16.70
907.429	150 x 100	20 x 5	20.90
907.430	200 x 130	25 x 5	26.30

Hardened stainless steel squares with heavy beam

- Hardened stainless steel.
- Lapped measuring faces.
- Accuracy according DIN 875/00.



Item No.	Dimensions mm	Cross- section/mm	Price EUR
With knife-edges (DIN 875/00):			
670.601	50 x 40	14 x 10 / 16 x 2	61.00
670.602	75 x 50	14 x 10 / 18 x 2	83.00
670.603	100 x 70	16 x 10 / 18 x 2	94.00
670.604	150 x 100	20 x 12 / 22 x 2	110.00
670.605	200 x 130	24 x 14 / 26 x 3	133.00

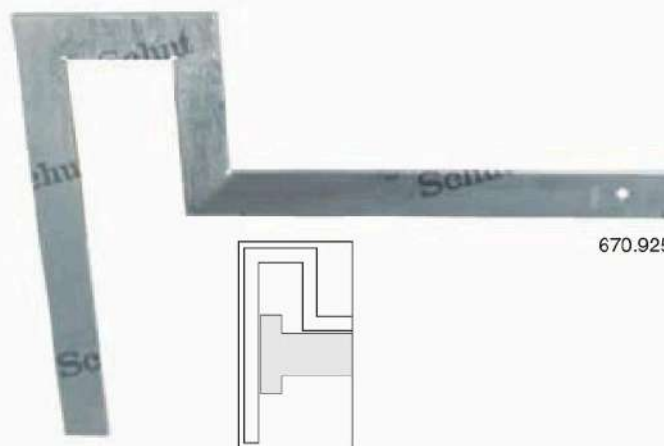
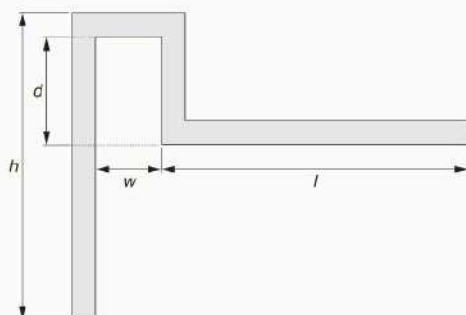


670.604

Flange squares

Special fitter's square. For instance for accurate alignment of flanges.

- Material: steel, galvanised.
- Cross-section: 30 x 5 mm.



670.925

Item No.	Dimensions/mm				Max. deviation from squareness of test surfaces/mm	Max. deviation from flatness of test surfaces/mm	Price EUR
	<i>l</i>	<i>h</i>	<i>w</i>	<i>d</i>			
670.925	300	300	65	105	0.3	0.12	21.10
670.926	400	400	65	115	0.3	0.12	25.00
670.927	500	500	70	125	0.4	0.16	30.70

Adjustable squares

Precise base with sliding straight edge. The straight edge can be moved continuously along the base and can be firmly clamped by the spindle. All measuring faces are ground and the complete square is hardened. The adjustable straight edge enables working with for instance short edges and grooves.

ECONOMY LINE ✓

Item No.	Dimensions straight edge/mm	Dimensions base/mm	Price EUR
907.874	60 x 4 x 4	23 x 40 x 10	91.00
909.407	125 x 8 x 8	30 x 75 x 12	174.00



907.874

Squares with heavy beam

- Hardened stainless steel.
- Lapped measuring faces.
- Accuracy according DIN 875/0.

ECONOMY LINE ✓

Item No.	Dimensions mm	Cross- section/mm	Price EUR
907.262	50 x 40	14 x 10/16 x 2	42.00
907.263	75 x 50	14 x 10/16 x 2	48.00
907.264	100 x 70	18 x 12/20 x 3	52.00
907.265	150 x 100	24 x 14/25 x 3	65.00
907.266	200 x 130	28 x 16/30 x 4	80.00

907.264



Squares with heavy beam and knife-edges

- Hardened stainless steel.
- Lapped measuring faces.
- Accuracy according DIN 875/00.

ECONOMY LINE ✓

Item No.	Dimensions mm	Cross- section/mm	Price EUR
907.245	50 x 40	14 x 10/16 x 2	33.50
907.246	75 x 50	14 x 10/16 x 2	37.50
907.247	100 x 70	18 x 12/20 x 3	44.00
907.248	150 x 100	24 x 14/25 x 3	51.00
907.249	200 x 130	28 x 16/30 x 4	84.00

907.247



Beveled edge squares

- Hardened stainless steel.
- Lapped measuring faces.
- Accuracy according DIN 875/00.

ECONOMY LINE ✓

Item No.	Dimensions mm	Cross- section/mm	Price EUR
907.250	50 x 40	12 x 4	18.90
907.251	75 x 50	16 x 4	21.90
907.252	100 x 70	20 x 5	26.80
907.253	150 x 100	25 x 6	41.00
907.254	200 x 130	30 x 7	55.00



907.252

Beveled edge squares

- Hardened steel.
- Ground and lapped measuring faces.
- Accuracy according DIN 875/00.



670.435

Item No.	Dimensions/mm	Price EUR
Bright steel:		
670.403	50 x 40	25.30
670.404	75 x 50	29.50
670.405	100 x 70	34.60
670.406	150 x 100	48.00
670.407	200 x 130	66.00
Stainless steel:		
670.433	50 x 40	28.00
670.434	75 x 50	32.00
670.435	100 x 70	38.20
670.436	150 x 100	53.00
670.437	200 x 130	78.00

Toolmakers' set

Consisting of:

- 1 beveled straight edge: 100 mm,
- 1 flat beveled edge square: 75 x 50 mm,
- 1 flat beveled edge square: 40 x 28 mm,
- 1 flat beveled edge square: 25 x 20 mm,
- 1 scriber: 8 x 8 x 60 mm.

Item No.	Description	Price EUR
852.201	Toolmakers' set	123.00



Toolmakers' squares

- Hardened stainless steel.
- Lapped measuring faces.
- Accuracy according DIN 875/00.

ECONOMY LINE ✓

Item No.	Dimensions mm	Cross- section/mm	Price EUR
907.255	25 x 20	6 x 3.5/5 x 3.5	16.40
907.256	40 x 28	8 x 3.5/5 x 3.5	17.60



907.256

Toolmakers' squares

Flat beveled edge squares, with the knife-edge on the inside.

Item No.	Dimensions mm	Angle	Price EUR
852.220	25 x 20	90°	33.00
852.221	25 x 20	90°30'	
852.222	40 x 28	90°	33.70
852.223	40 x 28	89°30'	37.20
852.224	40 x 28	90°30'	35.80

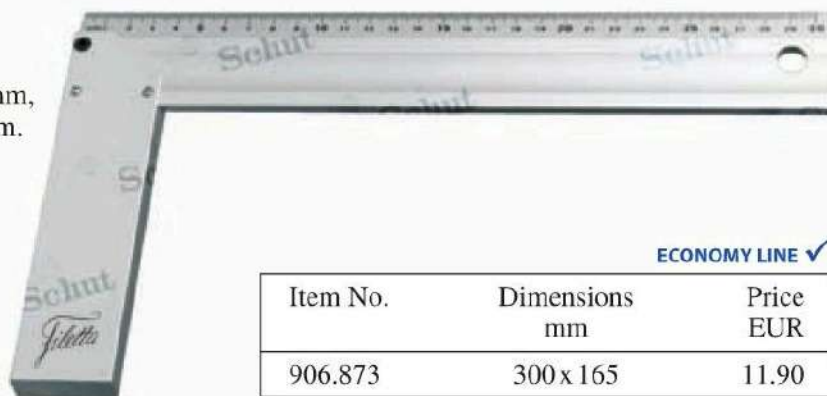


852.223

852.222

Aluminum square with graduation

- Measuring range: 0 - 300 mm.
- Graduation: 1 mm.
- Anodized aluminum.
- With base for scribing lines in 90° and 45°.
- Cross-section base: 40 x 14 mm, Cross-section ruler: 50 x 5 mm.



ECONOMY LINE ✓

Item No.	Dimensions mm	Price EUR
906.873	300 x 165	11.90

Sine bars

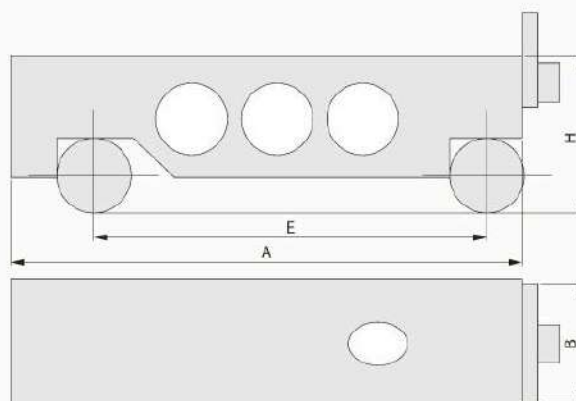
By means of a sine bar and with gauge blocks, a reference plane can be created at an angle of 0° to 60° with respect to the base. The base of the sine bar consists of two rollers with a center to center distance of 100 mm or 200 mm. In order to make a curve the gauge blocks are placed under one of the rollers.

- Straightness and parallelism: $5\text{ }\mu\text{m}$.
- Surface roughness: $Ra 0.8\text{ }\mu\text{m}$.
- Delivery in a plastic case.



ECONOMY LINE ✓

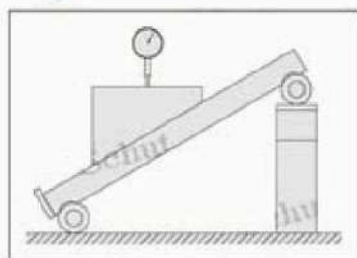
Item No.	A	B	H	E	Price EUR
910.374	130	30	40	100	143.00
910.375	230	30	40	200	253.00



Sine bar

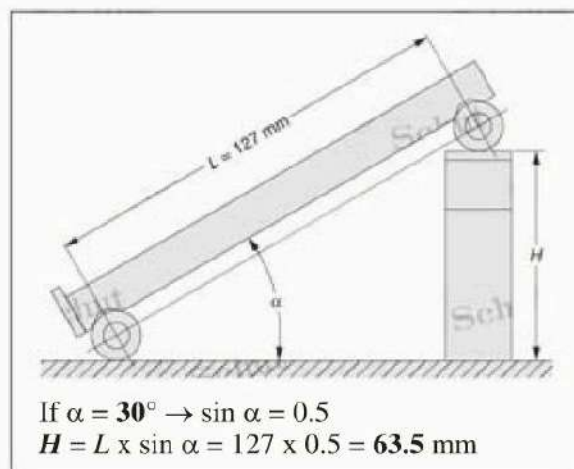
By means of a sine bar and with gauge blocks, a reference plane can be created ($l=150\text{ mm}$, $w=25\text{ mm}$) at an angle of 0° to 60° with respect to the base. The base of the sine bar consists of two rollers with a center to center distance of $127 \pm 0.004\text{ mm}$. In order to make a curve the gauge blocks are placed under one of the rollers.

- Straightness and parallelism: $5\text{ }\mu\text{m}$.



ECONOMY LINE ✓

Item No.	Description	Price EUR
909.417	Sine bar	63.00



Steel parallel blocks

Parallels to position and layout workpieces in e.g. clamping jaws for drilling, grinding, milling and measuring. The workpieces and assemblies can easily be set up to the desired working height.

- Parallelism of the two measuring faces: ± 0.005 mm.
- Size deviation (height): ± 0.01 mm.
- Hardness: 55 HRC.
- Ground in matched pairs.
- Produced of a high-grade steel alloy.
- Delivery in a wooden case with a declaration of conformity.



906.996



(Only available in sets.)

ECONOMY LINE ✓

Item No.	Length mm	Price EUR	Width mm	Height mm
Set of 12 pairs:			10	14-16-18-20-22-24- 26-28-30-32-35-40
909.800	100	87.00		
909.804	125	102.00		
906.995	150	120.00		
Set of 14 pairs:			10	14-16-18-20-22-24- 26-28-30-32-35-40- 45-50
909.802	100	95.00		
909.805	125	120.00		
906.996	150	136.00		
Set of 24 pairs:			8	11-16-21-26-31-36
909.803	100	225.00	10	13-18-23-28-33-38
909.806	125	248.00	12	15-20-25-30-35-40
906.997	150	297.00	14	17-22-27-32-37-42

Adjustable parallel set

Set of 6 adjustable parallels. The parallels consist of 2 precisely ground tapered parts dovetailed together to ensure easy setting. These allow you to quickly clamp a workpiece in the correct position on a workbench, set a measuring instrument or check the internal dimensions of two parallel surfaces.



Parallel	Measuring range/mm	Measuring face length/mm
A	9.5 - 12.7	45
B	12.7 - 17.5	54
C	17.5 - 23.8	69
D	23.8 - 33.3	90
E	33.3 - 44.5	107
F	44.5 - 57.1	117

ECONOMY LINE ✓

Item No.	Size/mm	Price EUR
910.400	9.5 - 57.1 mm	64.00

Granite parallels in pairs

Flatness, parallelism and straightness of measuring surfaces according DIN 874.

- Material: granite.
- Straight beveled edges.
- Delivery in a wooden case or an aluminum case with a declaration of conformity.



ECONOMY LINE ✓

Item No.	Flatness/ Parallelism μm^1	Price EUR	Item No.	Flatness/ Parallelism μm^1	Price EUR	Dimensions mm	Weight per pair kg
Class 0, 2-sided:			Class 00, 2-sided:				
402.104	± 3	140.00	402.113	± 2	201.00	160 x 25 x 16	0.5
402.106	± 8	277.00	402.114	± 4	311.00	250 x 40 x 25	1.6
			402.115	± 6	505.00	400 x 63 x 40	6.5
						630 x 100 x 63	24.7
Class 0, 4-sided:			Class 00, 4-sided:				
402.101	± 4	211.00	910.448	± 1.5	226.00	160 x 25 x 16	0.5
402.102	± 8	325.00	910.449	± 2	283.00	250 x 40 x 25	1.6
402.103	± 12	538.00	910.450	± 4	378.00	400 x 63 x 40	6.5
			910.451	± 6	707.00	630 x 100 x 63	24.7

¹ Flatness and parallelism between opposite surfaces.

Granite straight edges

Flatness, parallelism and straightness of measuring surfaces according DIN 874.

- From length 630 mm with weight-saving holes.
- Material: granite.
- Straight beveled edges.
- Delivery in a wooden case or an aluminum case with a declaration of conformity.



ECONOMY LINE ✓

Item No.	Dimensions mm	Weight kg	Straightness/ Flatness/ μm	Parallelism μm	Price EUR
Class 0:					
402.138 ^{1,2}	1600 x 250 x 80	138	± 7.4	± 37	1,048.00
402.139 ^{1,2}	2000 x 300 x 100	210	± 9	± 45	1,471.00
Class 00:					
910.452	400 x 60 x 25	2	± 1.6	± 8	259.00
910.453	630 x 100 x 35	6	± 2.1	± 10.5	407.00
910.454 ¹	1000 x 160 x 50	27	± 3	± 15	778.00
910.455 ^{1,2}	1600 x 250 x 80	138	± 4.4	± 22	1,212.00
910.456 ^{1,2}	2000 x 300 x 100	210	± 5.4	± 27	1,720.00



¹ Delivery ex Groningen, Netherlands.

² Weight included package.

Bright steel and stainless steel straight edges DIN 874

High quality wooden cases for straight edges are optionally available. Please see the wooden cases for straight edges section for these wooden cases.

- Length: 500-3000 mm.
- Class 0 and 1: rectangular cross-section up to length 1500 mm, from length 2000 mm I-shaped with two grip slots.
Class 2: rectangular cross-section.
- Flatness of the measuring faces according DIN 874.
- Delivery with a manufacturer measuring report (the rectangular version has the manufacturer measuring report engraved on the straight edge).



Class	Dimensions/mm	Weight/kg	Item No.	Price EUR	Item No.	Price EUR
			Bright steel		Stainless steel	
DIN 874/0	500 x 50 x 10	2.0	776.569	85.00	776.590	147.00
	750 x 50 x 10	3.0	776.570	120.00	776.591	223.00
	1000 x 60 x 12	5.7	776.571	214.00	776.592	359.00
	1500 x 70 x 15	12.4	776.572 ²	389.00	776.593 ²	662.00
	2000 x 80 x 15	13.0	776.573 ^{1,2}	728.00	776.594 ^{1,2}	1,323.00
	2500 x 100 x 16	22.0	776.574 ^{1,2}	1,068.00	776.595 ^{1,2}	2,110.00
	3000 x 120 x 20	36.0	776.575 ^{1,2}	1,635.00	776.596 ^{1,2}	3,730.00
DIN 874/1	500 x 40 x 8	1.3	776.576	48.00	776.597	86.00
	750 x 50 x 10	3.0	776.577	84.00	776.598	155.00
	1000 x 50 x 10	4.0	776.578	102.00	776.599	233.00
	1500 x 60 x 12	8.4	776.579 ²	189.00	776.600 ²	457.00
	2000 x 70 x 15	12.0	776.580 ^{1,2}	496.00	776.601 ^{1,2}	1,002.00
	2500 x 80 x 15	17.0	776.581 ^{1,2}	699.00	776.602 ^{1,2}	1,285.00
	3000 x 100 x 16	26.0	776.582 ^{1,2}	1,068.00	776.603 ^{1,2}	2,320.00
DIN 874/2	500 x 30 x 6	0.7	776.583	30.70	776.604	59.00
	750 x 40 x 8	2.0	776.584	56.00	776.605	117.00
	1000 x 40 x 8	2.5	776.585	68.00	776.606	154.00
	1500 x 50 x 10	5.8	776.586 ²	128.00	776.607 ²	293.00
	2000 x 60 x 12	11.2	776.587 ²	198.00	776.608 ²	543.00
	2500 x 70 x 15	20.6	776.588 ²	378.00	776.609 ²	992.00
	3000 x 80 x 15	28.2	776.589 ²	576.00	776.610 ²	1,436.00

¹ I-shaped with two grip slots.

² Delivery ex Groningen, Netherlands. Excluding required shipping box.

Aluminum straight edges

Light and therefore easy-to-use straight edges. Especially when using longer straight edges this is undoubtedly of great significance. High quality wooden cases for straight edges are optionally available. Please see the wooden cases for straight edges section for these wooden cases.

- Length: 500-3000 mm.
- I-shaped, from length 2000 mm with two grip slots.
- With protective coating, thickness: 50 $\mu\text{m} \pm 5$.
- Surface hardness: 500-550 HV.
- Highly wear resistant.
- Highly corrosion resistant.
- Highly insulating.
- Accuracy according DIN 874.
- Delivery with a manufacturer measuring report.



776.618

Item No.	Dimensions mm	Weight kg	Price EUR
DIN 874/0:			
776.611	500x 60x 12	0.7	359.00
776.612	1000x 60x 12	1.4	671.00
776.613 ²	1500x 100x 15	4.3	1,162.00
776.614 ^{1,2}	2000x 100x 15	5.9	1,521.00
776.615 ^{1,2}	2500x 100x 15	7.5	1,777.00
776.616 ^{1,2}	3000x 150x 20	15.9	3,260.00

¹ With two grip slots.

² Delivery ex Groningen, Netherlands.
Excluding required shipping box.

Item No.	Dimensions mm	Weight kg	Price EUR
DIN 874/1:			
776.617	500x 60x 12	0.7	263.00
776.618	1000x 60x 12	1.4	586.00
776.619 ²	1500x 100x 15	4.3	898.00
776.620 ^{1,2}	2000x 100x 15	5.9	1,266.00
776.621 ^{1,2}	2500x 100x 15	7.5	1,550.00
776.622 ^{1,2}	3000x 150x 20	15.9	2,680.00
DIN 874/2:			
776.623	500x 60x 12	0.7	236.00
776.624	1000x 60x 12	1.4	501.00
776.625 ²	1500x 60x 12	2.1	756.00
776.626 ^{1,2}	2000x 60x 12	2.8	1,011.00
776.627 ^{1,2}	2500x 100x 15	7.5	1,418.00
776.628 ^{1,2}	3000x 100x 15	8.7	1,862.00

Bright steel and stainless steel straight edges DIN 874

- Length: 750-3000 mm.
- Flatness of the measuring faces according DIN 874.
- Straight edges of length 1000 mm and longer are marked on the side face at the Bessel points.



Class	Dimensions/mm	Item No.	Price EUR	Item No.	Price EUR
		Bright steel		Stainless steel	
DIN 874/0	1500 x 70 x 15	776.123 ²	250.00	776.223 ²	425.00
	3000 x 120 x 20	776.126 ^{1,2}	960.00		
DIN 874/1	2500 x 80 x 15			776.235 ^{1,2}	1,143.00
DIN 874/3	750 x 30 x 6			776.162	64.00

¹ I-shaped with two grip slots.

² Delivery ex Groningen, Netherlands. Excluding required shipping box.

Aluminum straight edge

Light and therefore easy-to-use straight edges. Especially when using longer straight edges this is undoubtedly of great significance.

- Highly wear resistant.
- Highly corrosion resistant.
- Surface hardness: 500-550 HV.
- Highly insulating.
- With protective coating, thickness: 50 µm.
- With grip slots: class 2.
- Accuracy according DIN 874/2.



Item No.	Dimensions mm	Weight kg	Price EUR
DIN 874/2:			
776.196 ¹	3000 x 100 x 16	2.8	1,243.00

¹ Delivery ex Groningen, Netherlands.
Excluding required shipping box.

Wooden cases for straight edges

Wooden cases of high quality with foam inlay for straight edges and rulers up to 2 meters.



Item No.	Inside dimensions l x w x h/mm	Price EUR
776.568	525 x 70 x 35	47.00
776.263	765 x 70 x 30	63.00
776.468	1025 x 80 x 35	71.00
776.561 ¹	1525 x 90 x 35	103.00
776.562 ¹	2025 x 95 x 30	135.00

¹ Delivery ex Groningen, Netherlands.

Steel straight edges for mounting

I-shaped construction with wide and extra wide measuring faces for application of spirit levels.

- Length: 500-3000 mm.
- Flatness of the measuring faces according DIN 874.
- Delivery with a manufacturer measuring report.



776.638

With wide measuring faces

Dimensions/mm	Weight/kg	Item No.	Price EUR	Item No.	Price EUR
		DIN 874/0		DIN 874/1	
1000 x 100 x 30	5.0	776.631	633.00	776.645	539.00
1500 x 100 x 30	7.5	776.632 ¹	794.00	776.646 ¹	728.00
2000 x 120 x 40	15.0	776.633 ¹	1,030.00	776.647 ¹	992.00
2500 x 120 x 40	19.0	776.634 ¹	1,427.00	776.648 ¹	1,342.00
3000 x 140 x 40	26.0	776.635 ¹	1,814.00	776.649 ¹	1,748.00

¹ Delivery ex Groningen, Netherlands. Excluding required shipping box.

With extra wide measuring faces

Dimensions/mm	Weight/kg	Item No.	Price EUR	Item No.	Price EUR
		DIN 874/0		DIN 874/1	
500 x 80 x 40	2.0	776.636	506.00	776.650	406.00
750 x 80 x 40	3.5	776.637	558.00	776.651	482.00
1000 x 160 x 50	12.0	776.638	813.00	776.652	699.00
1500 x 160 x 50	18.0	776.639 ¹	1,153.00	776.653 ¹	945.00
2000 x 160 x 50	24.0	776.640 ¹	1,474.00	776.654 ¹	1,229.00
2500 x 160 x 50	30.0	776.641 ¹	2,110.00	776.655 ¹	1,559.00
3000 x 180 x 60	45.5	776.642 ¹	3,150.00	776.656 ¹	2,600.00

¹ Delivery ex Groningen, Netherlands. Excluding required shipping box.



Steel straight edges for mounting

I-shaped construction with wide and extra wide measuring faces for application of spirit levels.

- Length: 500-3000 mm.
- Flatness of the measuring faces according DIN 874.



DIN 874/1

Item No.	Dimensions/mm	Price EUR
With extra wide measuring faces:		
406.636	500 x 80 x 40	301.00
406.644 ¹	2500 x 160 x 50	1,129.00
406.631 ¹	3000 x 180 x 60	1,774.00
Aluminum straight edge		
406.651 ²	1000 x 100 x 40	1,306.00

¹ Delivery ex Groningen, Netherlands.

Excluding required shipping box.

² Highly corrosion resistant and high insulation.



Cast iron straight edges with handles

Especially suitable for measuring small surfaces.

- Tension free.
- Flatness and parallelism according DIN 876.
- DIN 876/1: hand scraped,
DIN 876/0: fine scraped.
- Both measuring faces are flat and parallel matched in pairs.



Dimensions l x w/mm	Weight approx./kg	DIN 876/1		DIN 876/0	
		Item No.	Price EUR	Item No.	Price EUR
500 x 35	12			403.700	340.00
750 x 50	17	403.706	396.00	403.701	517.00
1000 x 56	25	403.707 ¹	633.00	403.702 ¹	773.00
1500 x 70	65	403.708 ¹	1,255.00		
2000 x 80	90			403.704 ¹	2,480.00

¹ Delivery ex Groningen, Netherlands.

Bridge-type straight edges

These bridge-type straight edges are made of high-quality cast iron and are stable thanks to reinforcement ribs that prevent bending and expansion. Highly suitable for aligning narrow guides and surfaces.

- Tension free.
- Flatness according DIN 876:
class 1: hand scraped,
class 0: fine scraped.



Item No.	l x w mm	Weight kg	Flatness µm	Price EUR
DIN 876/1:				
403.658	500 x 40	6	15	218.00
403.659	750 x 45	9	18	242.00
403.680	1000 x 50	17	20	437.00
403.690 ¹	1500 x 60	45	25	931.00
403.692 ¹	2000 x 70	65	30	1,418.00
403.698 ¹	3000 x 90	210	40	2,740.00
DIN 876/0:				
403.657	500 x 40	6	6	262.00
403.660	750 x 45	9	7	284.00
403.679	1000 x 50	17	8	536.00
403.691 ¹	1500 x 60	45	10	1,190.00
403.696 ¹	2000 x 70	65	12	1,763.00
403.697 ¹	3000 x 90	210	16	3,140.00

¹ Delivery ex Groningen, Netherlands.

Triangular straight edges

On two sides scraped, triangular straight edge with screwed-in handles. The edge between the scraped sides (45° or 60°) has been accurately processed. The third side has been ground, and recessed for weight reduction at the larger types (from 500 mm).

- Tension free.
- Flatness of both scraped sides according DIN 876:
class 1: hand scraped,
class 0: fine scraped.



Item No.	l x w/mm	Weight/kg	Price EUR
Triangular straight edge 45°, DIN 876/1:			
403.525	250 x 50	2	163.00
403.550	500 x 75	7	351.00
403.575	750 x 90	15	553.00
403.600 ¹	1000 x 120	27	830.00
Triangular straight edge 45°, DIN 876/0:			
403.524	250 x 50	2	220.00
403.549	500 x 75	7	438.00
403.574	750 x 90	15	659.00
403.599 ¹	1000 x 120	27	996.00
Triangular straight edge 60°, DIN 876/1:			
403.425	250 x 45	3	176.00
403.450	500 x 60	6	332.00
403.475	750 x 90	16	527.00
403.500 ¹	1000 x 100	28	779.00
Triangular straight edge 60°, DIN 876/0:			
403.424	250 x 45	3	216.00
403.449	500 x 60	6	418.00
403.474	750 x 80	16	635.00
403.499 ¹	1000 x 100	28	970.00

¹ Delivery ex Groningen, Netherlands.

Beveled straight edges

High quality wooden cases for straight edges are optionally available. Please see the wooden cases for straight edges section for these wooden cases.

- Straightness tolerance according DIN 874/00.
- Hardened and ground.
- Lapped measuring faces.
- With insulated grip over the entire length.
- Delivery in a soft case.



Item No.	Length/mm	Price EUR
Bright steel:		
772.075	75	12.80
772.100	100	14.20
772.125	125	16.70
772.150	150	19.20
772.200	200	24.80
772.300	300	47.00
772.400	400	74.00
772.500	500	109.00

Item No.	Length/mm	Price EUR
Stainless steel:		
772.076	75	16.60
772.101	100	19.50
772.126	125	21.30
772.151	150	26.40
772.201	200	30.90
772.301	300	60.00
772.401	400	105.00
772.501	500	144.00

Beveled straight edges

High quality wooden cases for straight edges are optionally available. Please see the wooden cases for straight edges section for these wooden cases.

- Straightness tolerance according DIN 874/00.
- Hardened and ground.
- Lapped measuring faces.
- With insulated grip over the entire length.
- Delivery in a soft case.



ECONOMY LINE ✓

Item No.	Length/mm	Price EUR
Chrome finished steel:		
907.750	75	11.50
907.751	100	12.90
907.752	125	15.10
907.753	150	19.30
907.754	200	24.10
907.755	300	35.90
907.756	400	62.00
907.765	500	91.00
909.237	600	120.00

ECONOMY LINE ✓

Item No.	Length/mm	Price EUR
Stainless steel:		
907.757	75	12.80
907.758	100	14.00
907.759	125	16.40
907.760	150	21.00
907.761	200	26.20
907.762	300	42.00
907.763	400	73.00
907.764	500	101.00
909.240	600	133.00

Protractors / Clinometers / Spirit levels



Accuracy of clinometers/spirit levels according DIN 877

Graduation $\mu\text{m/m}$		Flatness (μm) (L =length in mm)
≤ 50	≤ 10	$4 + L/250$
$> 50 - 200$	$> 10 - 40$	$8 + L/125$
> 200	> 40	$16 + L/60$

C06.001-EN-20060702

Universal digital bevel protractor

Universal digital bevel protractor with fine adjustment and excellent price-performance ratio.

- Measuring range (switchable): 1x 360°,
2x 180°,
4x 90°.
- Resolution: 0.01° and 1'.
- Accuracy: ±0.07° or ±4'.
- Indication switchable from degrees and minutes to decimal degrees.
- + and - direction reversible.
- On/off switch.
- Automatic switch-off with storage of the displayed measuring value.
- Reset/preset/hold functions.
- Reversible measurement display.
- Fine adjustment.
- Locking screw.
- Delivery in an aluminum case with two blades (150 and 300 mm), an acute angle attachment for small angles and a manufacturer measuring report.
- Power supply: 1 battery type CR2032.



ECONOMY LINE ✓

Item No.	Description	Price EUR
910.553	Bevel protractor	
Option:		
495.157	Battery type CR2032	0.50

Single blades

Item No.	Blade length/mm	Price EUR
909.380	150	7.70
909.381	200	10.20
909.382	300	13.00
909.383	500	20.00

COR-302-EN-20250702

Universal digital bevel protractors

Digital bevel protractors made of stainless steel, with blades of 150, 200 or 300 mm. The blades and all the measuring faces are hardened.

- Measuring range (switchable): 1x 360°,
2x 180°,
4x 90°.
- Resolution: 1', or decimal 0.01°.
- Accuracy: $\pm 2'$.
- Clamping spring system for blade.
- Indication switchable from degrees and minutes to decimal degrees.
- Automatic switch-off after 10 minutes of idle time with storage of the displayed measuring value.
- Proximity data output.
- Reset/preset/hold functions.
- Fine adjustment.
- Power supply: 1 battery type CR2032.



Complete bevel protractors

Item No.	Blade length/mm	Price EUR
856.688	150	1,067.00
856.689	200	1,080.00
856.690	300	1,090.00

Options:

495.157	Battery type CR2032	0.50
856.694	Prism base	85.00
856.695	Ledge	59.00
840.666	Proximity USB cable (2 m)	257.00

Single blades

Item No.	Blade length/mm	Price EUR
856.685	150	47.00
856.693	200	59.00
856.687	300	63.00



Universal digital bevel protractor

This stainless steel, digital bevel protractor is available with blades from 150 to 1000 mm. The blades and all the measuring faces are hardened.

- Measuring range: $\pm 360^\circ$.
- Resolution: 1', or decimal 0.01°.
- Accuracy: $\pm 2'$.
- Repeatability: 1'.
- Indication switchable from degrees and minutes to decimal degrees.
- + and - direction reversible.
- Per 90° adjustable.
- Data output, Mitutoyo Digimatic compatible.
- On/off switch.
- Reset/preset/hold functions.
- Control with 5 keys for several functions.
- Fine adjustment.
- Delivery in a wooden case with 150 mm blade.
- Power supply: 1 battery type CR2032.
- Also available in heavy duty type (855.805).



Item No.	Description	Price EUR
855.820	Bevel protractor	883.00
Options:		
495.157	Battery type CR2032	0.50
855.812	Acute angle attachment	
855.813	Stand	
855.815	Height Gauge Holder 9x9 mm	
905.409	Data cable 2 m	47.00

Single blades

Item No.	Blade length/mm	Price EUR
909.380	150	7.70
909.381	200	10.20
909.382	300	13.00
909.383	500	20.00
855.827	1000	389.00

Dial bevel protractor

- Measuring range: $4 \times 90^\circ$.
- Graduation: $5'$.
- Fine adjustment.
- Hardened stainless steel construction.
- Delivery in a plastic case with 300 mm blade and an acute angle attachment.



ECONOMY LINE ✓

Item No.	Description	Price EUR
906.504	Bevel protractor	113.00

Single blades

Item No.	Blade length/mm	Price EUR
909.380	150	7.70
909.381	200	10.20
909.382	300	13.00
909.383	500	20.00

Bevel protractor with magnifier

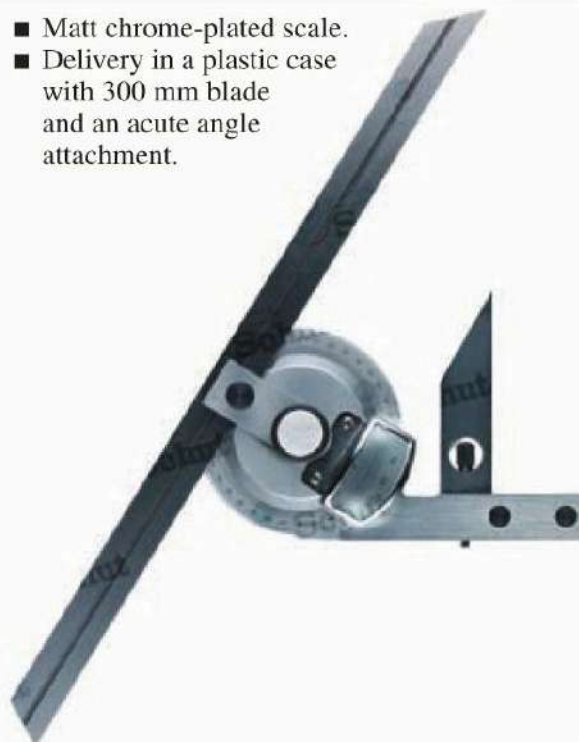
- Measuring range: $4 \times 90^\circ$.
- Vernier: $5'$, parallax-free.
- Hardened stainless steel construction.
- Matt chrome-plated scale.
- Delivery in a plastic case with 300 mm blade and an acute angle attachment.

ECONOMY LINE ✓

Item No.	Description	Price EUR
906.502	Bevel protractor with magnifier	85.00
Option:		
906.505	Spare magnifier	7.10

Single blades

Item No.	Blade length/mm	Price EUR
909.380	150	7.70
909.381	200	10.20
909.382	300	13.00
909.383	500	20.00



COR-204-EN-20060702

Bevel protractor with magnifier

- Measuring range: $4 \times 90^\circ$.
- Vernier: $5'$, parallax-free.
- Fine adjustment.
- Hardened stainless steel construction.
- Matt chrome-plated scale.

- Delivery in a plastic case with two blades (150 and 300 mm) and an acute angle attachment.
- Options: 855.812, 855.813 and 855.815.

Item No.	Description	Price EUR
855.801	Bevel protractor with magnifier	252.00
Option:		
859.179	Spare magnifier	42.00

Single blades

Item No.	Blade length/mm	Price EUR
909.380	150	7.70
909.381	200	10.20
909.382	300	13.00
909.383	500	20.00



Universal bevel protractor

Universal bevel protractor with micrometer screw adjustment. One rotation of the screw corresponds to an angular change of 1° . Retraction of the micrometer screw enables fast adjustment of the blade and the scale.

- Measuring range: $4 \times 90^\circ$.
- Graduation: $1'$.
- Stainless steel construction, main parts are hardened.
- Delivery in a wooden case with two blades (150 and 300 mm) and a reference square for checking the bevel protractor.

- Options: 855.812, 855.813 and 855.815.



Item No.	Description	Price EUR
855.811	Universal protractor with magnifier	708.00
Option:		
859.019	Spare magnifier	42.00

Single blades

Item No.	Blade length/mm	Price EUR
909.380	150	7.70
909.381	200	10.20
909.382	300	13.00
909.383	500	20.00

Combination bevel protractor

Can be used as bevel protractor, ruler, depth gauge, try square, center square and spirit level.

- Measuring range: 0 - 180° (90-0-90°).
- Graduation: 1°.
- Double graduation.
- Rotatable.
- Scriber (included in square head).
- Protractor head and square head provided with a spirit level.
- Ruler length: 300 mm.
- Delivery with protractor head, square head, center head, and ruler with mm/inch graduation.



ECONOMY LINE ✓

Item No.	Description	Price EUR
906.503	Combination bevel protractor	68.00



Combination bevel protractor

Stainless steel combination bevel protractor with blade and flat square.

- Measuring range: 0 - 320°.
- Measuring inside and outside angles.
- Accurate adjustment by rack railway.
- Vernier: 2'.
- Delivery in a plastic case.

ECONOMY LINE ✓

Item No.	Description	Price EUR
910.215	Combination bevel protractor	77.00



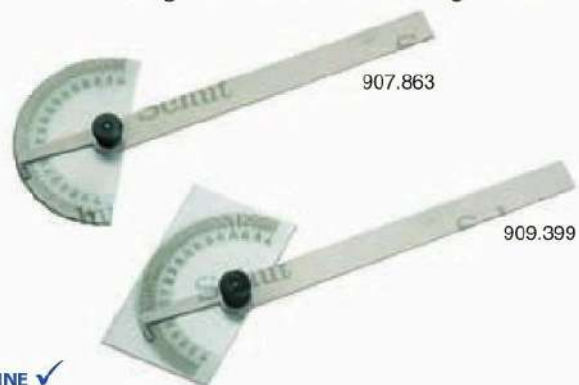
Bevel protractors

Simple and easy to use protractors with a semicircular or rectangular head and swivelling blade.

- Measuring range: 0 - 180°.
- Graduation: 1°.
- Scale diameter: 85 mm.
- Locking screw.
- Blade length: 150 mm.
- Hardened steel, matt chrome-plated.

Item No.	Shape	Price EUR
907.863	semicircular	23.10
909.399	rectangular	22.70

ECONOMY LINE ✓



Digital bevel protractors

- Measuring range: 0 - 180° (with swivelling blade) or 10 - 170° (with sliding blade).
- Graduation: 0.05°.
- Accuracy: 0.3°.
- On/off switch.
- Reset/hold function.
- Rotatable display value.
- Locking screw.
- Delivery in a plastic case.
- Power supply: 1 battery (CR2032).

ECONOMY LINE ✓

Item No.	Scale ø/mm	Blade length/mm	Price EUR
With swivelling blade:			
906.457	120	150	71.00
906.458	150	200	76.00
906.459	200	300	91.00
With sliding blade:			
906.767	100	150	71.00
906.768	150	300	92.00
906.769	200	400	109.00
Option:			
495.157	Battery type CR2032		0.50



C06-312-EN-20060702

Bevel protractors

- Measuring range: 0 - 180° (with swivelling blade) or 10 - 170° (with sliding blade).
- Graduation: 1°.
- Locking screw.
- Hardened steel, matt chrome-plated.
- Graduation placed by laser.

ECONOMY LINE ✓



Item No.	Scale ø/mm	Blade length/mm	Price EUR
With swivelling blade:			
907.864	80	120	16.60
907.865	120	150	20.20
907.866	150	200	25.50
907.867	200	300	31.80
907.868	300	500	70.00
With sliding blade:			
907.869	100	150	29.30
907.870	150	300	32.70
907.871	200	400	44.00
907.872	250	500	69.00
907.873	300	600	92.00

Setting bevel

- Special steel.
- Moveable blade locked with a wing nut.

ECONOMY LINE ✓



Item No.	Blade length/mm	Price EUR
910.088	200	16.90
910.089	300	21.40
910.090	500	25.90

Universal digital bevel protractor with spirit level

Digital bevel protractor for measuring both inside and outside angles. The measuring value is displayed upright at any time. Equipped with four holes and a locking knob for measuring a specific angle.

- Measuring range: 360°.
- Resolution: 0.05°.
- Accuracy: $\pm 0.2^\circ$.
- ABS/INC switchable.
- With digital-analog display of the measured value.
- Reversal of display value.
- On/off switch.
- Hold function.
- Reversible measuring direction.
- Aluminum casing.
- Rotatable blade of metal.
- Dimensions: 254 x 50 x 36 mm.
- Power supply: 1 battery type CR2032.

ECONOMY LINE ✓

Item No.	Description	Price EUR
909.503	Bevel protractor	55.00
Option:		
495.157	Battery type CR2032	0.50



Universal digital bevel protractors

Digital bevel protractors for measuring both inside and outside angles. Equipped with a locking knob for measuring a specific angle.

- Measuring range: $\pm 360^\circ$.
- Resolution: 0.1° .
- Accuracy: $\pm 0.3^\circ$.
- On/off switch.
- Automatic switch-off.
- Zero setting at any position.
- Graduation rulers: 1 mm and 1/32 inch.
- Cross-section rulers: 35 x 2.5 mm.
- With fixing holes.
- Locking screw.
- Power supply: 1 battery type CR2032.



ECONOMY LINE ✓

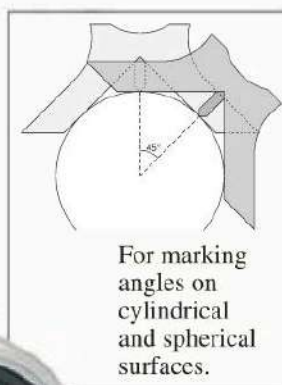
Item No.	Ruler length/mm	Price EUR
909.505	200	35.00
909.506	300	45.00
Option:		
495.157	Battery type CR2032	0.50

Magnetic clinometer with center point finder

Accurate clinometer with an extremely sensitive, balanced needle. The magnetic base with 90° V-groove is precision milled. The center point finder can be used as a center punch.

Very suitable for angular measurements, surface alignment, and the determination of center points and highest/lowest points of cylindrical and spherical surfaces. Therefore ideal as a universal aid to the installation of larger constructions.

- Measuring range: 360° .
- Graduation: 1° .
- Scale numbering: 0 - 360.
- Aperture V-groove (horizontal): 82 mm (for shafts up to $\varnothing 115$ mm).
- Dimensions $h \times w \times d$: 130 x 130 x 27 mm.



Item No.	Scale numbering	Price EUR
856.702	0 - 360	380.00
Option:		
856.712	Center pin $\varnothing 12 \times 125$ mm	

Digital clinometer

- Measuring range: $0 \pm 180^\circ$.
- Resolution: 0.1° .
- Accuracy: $\pm 0.2^\circ$.
- Rotatable display.
- Automatic switch-off.
- Hold function.
- Reference measurement function.

- With digital-analog read-out of the vial.
- With magnetic base with V-groove.
- Dimensions: $60 \times 56 \times 33$ mm.
- Power supply: 2 batteries type AAA.

ECONOMY LINE ✓

Item No.	Description	Price EUR
906.427	Digital clinometer	42.00
Option:		
497.914	Battery type AAA (2 needed)	0.80



Digital clinometers

- Measuring range: $\pm 180^\circ$
(with external sensor: $\pm 360^\circ$).
- Resolution: 0.1° .
- Accuracy: $0 - 10^\circ: \pm 0.1^\circ$,
 $10 - 170^\circ: \pm 0.2^\circ$,
 $170 - 180^\circ: \pm 0.1^\circ$.
- Repeatability: 0.1° .



906.476



906.479

- ABS/INC switchable (except 906.476).
- Automatic switch-off.
- Hold function (only 906.479).
- With magnetic base (906.476/479) or magnetic upper part (909.501/502).
- Dimensions: $51 \times 51 \times 33$ mm (906.476 and 909.501/502).
- Power supply: 1 battery type CR2032.

Models with external sensor

- Accuracy: $0 - 10^\circ: \pm 0.1^\circ$,
 $10 - 350^\circ: \pm 0.2^\circ$,
 $350 - 360^\circ: \pm 0.1^\circ$.
- Sensor with mounting holes.
- Cable length: 1 m.
- Max. rotation speed: 600 rpm.



909.501



909.502



ECONOMY LINE ✓

Item No.	Description	Price EUR
906.476	Standard model	52.00
906.479	With vial	62.00
909.501	With external sensor	80.00
909.502	With external sensor with axis $\varnothing 6$ mm	80.00
Option:		
495.157	Battery type CR2032	0.50

Digital clinometer IP65

Instrument for easy measurement of angles, flatness and squareness. All four sides are measuring faces. The measuring value is displayed upright at any time.

- Measuring range: $4 \times 90^\circ$.
- Resolution: 0.05° .
- Accuracy $0 - 10^\circ: \pm 0.1^\circ$,
 $10 - 80^\circ: \pm 0.2^\circ$,
 $80 - 90^\circ: \pm 0.1^\circ$.
- Repeatability: 0.1° .
- ABS/INC switchable.
- Large, easy-to-read LCD display.
- Automatic switch-off.
- Hold function.
- Blue backlight.
- Sound signal at stable value.
- $^\circ$, mm/m, %, inch/ft conversion.
- Reference plane function.
- Measuring faces bottom- and upper-side with V-groove.
- With magnetic base (2 magnets).
- Protection: IP65.
- Dimensions $l \times w \times h$: $151 \times 32 \times 60$ mm.
- Delivery in an aluminum case.
- Power supply: 2 batteries type AAA.

ECONOMY LINE ✓

Item No.	Description	Price EUR
909.504	With V-grooves and magnetic base	82.00
Option: 497.914	Battery type AAA (2 needed)	0.80



Digital clinometer

Instrument for easy measurement of inclination. Equipped with a horizontal and vertical vial. The measuring value is displayed upright at any time.

- Measuring range: $4 \times 90^\circ$.
- Resolution: 0.1° .
- Accuracy $0 - 10^\circ: \pm 0.1^\circ$,
 $10 - 80^\circ: \pm 0.2^\circ$,
 $80 - 90^\circ: \pm 0.1^\circ$.
- $^\circ$ and % conversion.
- Large, easy-to-read LCD display.
- On/off switch.
- Hold function.
- Sound signal at: 0° , 45° , 90° .
- Measuring face on the bottom- and upper-side.
- Length: 600 mm.
- Delivery in a carrying bag.
- Power supply: 2 batteries type AAA.

ECONOMY LINE ✓

Item No.	Description	Price EUR
906.477	Clinometer	74.00
Option: 497.914	Battery type AAA (2 needed)	0.80



Schut

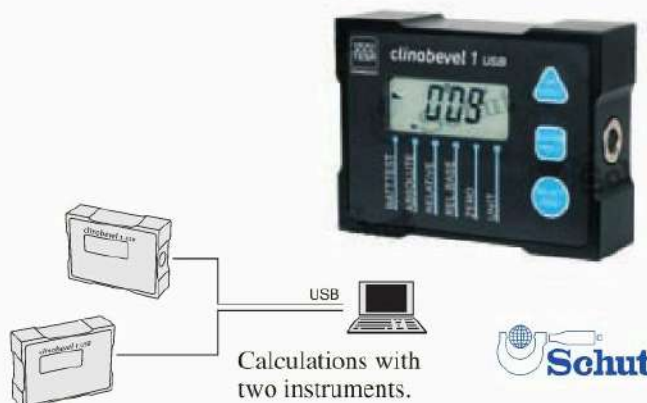
906.477

COR-318-EN-20060702

TESA Clinobevel 1-USB digital clinometer IP65

The TESA Clinobevel 1-USB is a compact and universal clinometer with four measuring faces and a reinforced aluminum housing, resistant to workshop conditions. For a higher accuracy 21 correction values can be stored. The software can perform calculations with two instruments and export automatic reports.

- Measuring range: $\pm 45^\circ$.
- Resolution: 0.020 mm/m (5").
- Accuracy: 2' + 1 sd.
- USB data output.
- Read-out after approx. 1 s when idle.
- Dimensions: 100 x 75 x 35 mm.
- Protection: IP65.
- DIN 2276.
- Delivery in a plastic carrying case with a manufacturer measuring report, batteries, USB cable (1.8 m), software and user manual.
- Power supply: 1 battery type AA.



Read-out angles:

- degrees (2 or 4 decimals)
- degrees and minutes

Read-out inclination:

- mm/m (2 decimals)
- inch/10 inch or inch/12 inch (4 decimals)
- mm or inch/basis length (comparative mode)
- milliradians (whole or 2 decimals)
- gon (2 decimals)

Item No.	Type/description	Price EUR
781.545	Clinobevel 1-USB	2,641.00
783.624*	Clinobevel 1-USB	2,281.00
Options:		
495.111	Battery type AA (1 needed)	0.70
783.625	USB cable (1.8 m)	391.00

* Without USB cable and software.

TESA Clinobevel 3 Square digital clinometer

The TESA Clinobevel 3 Square is a very accurate, robust and easy to use clinometer in cast iron housing. Measuring values can be easily read from the clear LCD screen. The Clinobevel 3 Square has two sides with a v-groove (left and under side for $\varnothing 30$ to 100 mm) and two flat sides (right and upper side). There are two models available:

- Measuring range: $\pm 60^\circ$ or $\pm 1^\circ$,
- Resolution: 0.020 mm/m (60° model), 0.001 mm/m (1° model).



Detailed
information
available

Especially suitable for calibration and measuring of straightness, flatness and squareness of high accuracy measuring and processing machines. For measurements in hard to reach places you can link the Clinobevel via bluetooth to the Android app and the readout will be displayed on your phone or tablet.

Clinometers

- Measuring range: 4 x 90°.
- Graduation: 1°.
- Dimensions: 100 x 15 x 100 mm.



Item No.	Description	Price EUR
857.302	Clinometer with removable base 100 mm	199.00
857.303	Clinometer with magnetic base 100 mm	323.00

Vernier clinometers

Clinometers with two ground bases with V-groove, or two flat magnetic bases. Vial holder with vernier and fine adjustment.

- Measuring range: 0 - 90°.
- Vernier: 10'.
- Graduation vial: 0.3 mm/m $\cong$ 1'.
- Dimensions: 150 x 39 x 150 mm.



Item No.	Description	Price EUR
857.300	Bases with V-groove	589.00
857.301	Flat magnetic bases	995.00

Clinometer

- Measuring range: 4 x 90°.
- Graduation: 1°.
- Graduation vial: 2 - 5 mm/m.
- Flat base: 300 x 25 mm.
- With mounting holes.



Item No.	Description	Price EUR
853.669	Clinometer	360.00

Clinometer

To determine inclinations accurately. Fine-tuning by means of a screw thread spindle, which, to ensure a quick tuning, can be disconnected by pressing the button on the micrometer.

- Measuring range: $\pm 180^\circ$.
- Read-out in degrees and minutes.
- Scale numbering black clockwise, red counterclockwise.
- Graduation vial: 0.3 mm/m $\cong$ 1'.
- Hardened and ground base, with V-groove.
- Base dimensions: 150 x 30 mm.
- Height: 124 mm.



Item No.	Description	Price EUR
857.310	Clinometer	1,610.00

COR-213-EN-20060702

Digital spirit level with digital vial in X and Y axis

Accurate digital spirit level with a high-quality cast iron base and fine ground measuring surfaces. Easy to calibrate due to the built-in calibration program. Digital vial in both X and Y axis. It can optionally be used in combination with a separate Bluetooth display unit for remote dual axis reading.

- Measuring range: $\pm 90^\circ$.
- Graduation: 0.01 mm/m or 0.001°.
- Accuracy according to DIN 2276-2: 0.02 mm/m.
- Measuring units: mm/m or °.
- Rotatable display value.
- On/off switch.
- Hold function.
- Color display with backlight.
- Bluetooth in combination with iOS and Android app.
- Bluetooth on 1 device.
- Calibration function.
- Digital vial in X and Y axis.
- Display Y-axis only as color blocks (graphic), not numerically.
- Base with V-groove.
- Base dimensions: 200 x 46 mm.
- Dimensions: 910.476: 200 x 49 x 59 mm, 910.492: 67 x 60 x 20 mm.
- Weight: 910.476: 1.5 kg, 910.492: 80 g.
- DIN 877 and DIN 2276.
- Robust cast iron base.
- With insulating grip.
- Delivery with a manufacturer measuring report.
- Delivery in an aluminum carrying case.
- Power supply: 910.476: 3 batteries type AAA, 910.492: rechargeable lithium battery (with battery level display), USB-C to USB-A cable included (excluding AC adapter).



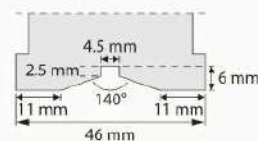
910.492

910.476

Phone

ECONOMY LINE ✓

Item No.	Description	Price EUR
910.476	Digital inspection spirit level	385.00
Options:		
497.914	Battery type AAA (3 needed)	0.80
910.492	Display unit for 910.476	114.00



COR-310-EN-20260702

Digital spirit level with digital vial in X and Y axis

Accurate digital spirit level with a high-quality cast iron base with finely ground measuring surfaces, for example for leveling machines. Easy to calibrate using the built-in calibration program. Includes digital level in the X and Y axes. Remotely readable two-axis measured values using an optional Bluetooth display or the free app (both iOS and Android). The Bluetooth display unit can display 4 instruments simultaneously. The data can then be saved to a MicroSD card (MicroSD card not included) and read for example into Excel. The app can display the X and Y axes of one spirit level and save and send data to the PC.

- Measuring range: $\pm 90^\circ$.
- Graduation: 0.01 mm/m or 0.001°.
- Accuracy: ± 0.02 mm/m.
- Measuring units: mm/m or °.
- On/off switch.
- Bluetooth in combination with iOS and Android app on 1 device.
- Bluetooth in combination with the optional display unit for up to 4 devices.
- Calibration function.
- Digital level in X and Y axis (not numerical, but on Bluetooth display unit and in the app).
- Dimensions: 910.519: 100 x 100 x 78 mm,
910.520: 150 x 77 x 22 mm.
- Weight: 910.519: 1.5 kg,
910.520: 270 g.
- Precisely ground cast iron base.
- With handle.
- Delivery in an aluminum carrying case.
- Power supply: 910.519: 3 batteries type AAA,
910.520: rechargeable lithium battery (with battery level display), USB-C to USB-A cable included (excluding AC adapter).



910.519



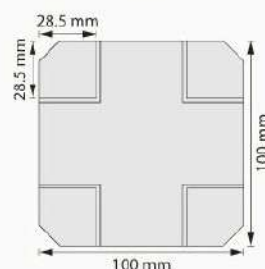
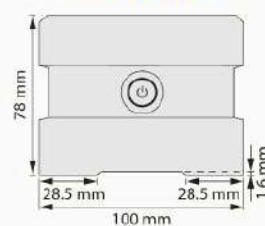
910.520

NEW



Phone

ECONOMY LINE ✓



Item No.	Description	Price EUR
910.519	Digital inspection spirit level	682.00
Options:		
497.914	Battery type AAA (3 needed)	0.80
910.520	Display unit for 910.519	215.00

Inspection spirit levels

- Graduation main vial: 0.01 - 0.3 mm/m.
- With cross test vial.
- Base with V-groove.
- Base width: 42 mm
(spirit levels with length 500 mm: 44 mm).
- DIN 877.
- Delivery in a plastic case or wooden case.

Item No.	Length mm	Graduation mm/m	Price EUR
853.601	160	0.3	196.00
853.606	160	0.1	211.00
853.611	160	0.04	289.00
853.616	160	0.02	347.00
853.602	200	0.3	226.00
853.607	200	0.1	250.00
853.612	200	0.04	337.00
853.617	200	0.02	412.00
853.621	200	0.01	512.00
853.603	250	0.3	255.00
853.608	250	0.1	272.00
853.613	250	0.04	393.00
853.618	250	0.02	453.00
853.622	250	0.01	551.00
853.604	300	0.3	273.00
853.609	300	0.1	302.00
853.614	300	0.04	434.00
853.619	300	0.02	487.00
853.623	300	0.01	619.00
853.605	500	0.3	555.00
853.610	500	0.1	596.00
853.615	500	0.04	743.00
853.620	500	0.02	823.00
853.624	500	0.01	949.00

Inspection spirit levels

- Graduation main vial: 0.02 - 0.5 mm/m.
- Adjustable main vial.
- With cross test vial.
- Base with V-groove, interrupted at the center over $\frac{1}{3}$ of the length.
- Base width: 40 mm.
- DIN 877.
- Delivery in a plastic case or wooden case.



853.345

Item No.	Length mm	Graduation mm/m	Price EUR
853.343	150	0.5	258.00
853.341	150	0.1	275.00
853.315	150	0.05	285.00
853.348	150	0.02	309.00
853.345	200	0.5	282.00
853.344	200	0.1	316.00
853.323	200	0.05	313.00
853.322	200	0.02	368.00
853.347	300	0.5	328.00
853.346	300	0.1	351.00
853.324	300	0.05	373.00
853.325	300	0.02	427.00



853.618



853.600

Digital model also available.

Inspection spirit levels

- Graduation main vial: 0.05 or 0.02 mm/m.
- Adjustable main vial.
- With cross test vial.
- Base with V-groove.
- Base width: 46 mm.
- Robust cast iron construction.
- With insulating grip.

- DIN 877.
- Delivery in a plastic case or wooden case.

ECONOMY LINE ✓

Item No.	Length mm	Graduation mm/m	Price EUR
908.688	150	0.05	78.00
908.684	150	0.02	78.00
908.689	200	0.05	95.00
908.685	200	0.02	95.00
908.690	250	0.05	117.00
908.686	250	0.02	117.00
908.691	300	0.05	137.00
908.687	300	0.02	137.00



908.685



Frame spirit levels

- Graduation main vial: 0.05 or 0.02 mm/m.
- Adjustable main vial.
- With cross test vial.
- Two faces with V-groove, two flat faces.
- Robust cast iron construction.
- With insulating grip.
- DIN 877.
- Delivery in a plastic case or wooden case.

ECONOMY LINE ✓

Item No.	Dimensions mm	Graduation mm/m	Price EUR
908.696	150 x 150 x 40	0.05	89.00
908.692	150 x 150 x 40	0.02	89.00
908.697	200 x 200 x 40	0.05	104.00
908.693	200 x 200 x 40	0.02	104.00
908.698	250 x 250 x 40	0.05	144.00
908.694	250 x 250 x 40	0.02	144.00
908.699	300 x 300 x 40	0.05	168.00
908.695	300 x 300 x 40	0.02	168.00



908.693

COR-301-EN-20260702

Frame spirit levels

- Graduation main vial: 0.01 - 0.3 mm/m.
- With cross test vial.
- Three faces with V-groove, one flat face.
- DIN 877.
- Delivery in a plastic case or wooden case.

Item No.	Dimensions mm	Graduation mm/m	Price EUR
853.625	100 x 100 x 34	0.3	326.00
853.629	100 x 100 x 34	0.1	398.00
853.633	100 x 100 x 34	0.04	498.00
853.626	150 x 150 x 42	0.3	388.00
853.630	150 x 150 x 42	0.1	453.00
853.634	150 x 150 x 42	0.04	606.00
853.637	150 x 150 x 42	0.02	667.00
853.627	200 x 200 x 42	0.3	462.00
853.631	200 x 200 x 42	0.1	557.00
853.635	200 x 200 x 42	0.04	726.00
853.638	200 x 200 x 42	0.02	809.00
853.640	200 x 200 x 42	0.01	1,182.00
853.628	300 x 300 x 44	0.3	767.00
853.632	300 x 300 x 44	0.1	945.00
853.636	300 x 300 x 44	0.04	1,113.00
853.639	300 x 300 x 44	0.02	1,157.00
853.641	300 x 300 x 44	0.01	1,536.00



853.638



853.651



Digital model also
available.

Frame spirit levels

- Graduation main vial: 0.02 - 0.5 mm/m.
- Adjustable main vial.
- With cross test vial.
- Three faces with V-groove, interrupted at the center over $\frac{1}{3}$ of the length. One flat face.
- DIN 877.
- Delivery in a plastic case or wooden case.

Item No.	Dimensions mm	Graduation mm/m	Price EUR
853.372	150 x 150 x 40	0.5	361.00
853.371	150 x 150 x 40	0.1	412.00
853.375	150 x 150 x 40	0.05	476.00
853.376	150 x 150 x 40	0.02	544.00
853.374	200 x 200 x 40	0.5	421.00
853.373	200 x 200 x 40	0.1	457.00
853.385	200 x 200 x 40	0.05	544.00
853.382	200 x 200 x 40	0.02	600.00
853.395	250 x 250 x 40	0.05	583.00
853.392	250 x 250 x 40	0.02	602.00



853.376

Crankshaft spirit levels

- Graduation main vial: 0.04-0.6 mm/m.
- With cross test vial.
- Base with a longitudinal and a lateral V-groove.



- Base width: 42 mm.
- DIN 877.

Item No.	Length mm	Graduation mm/m	Price EUR
853.684	60	0.6	220.00
853.687	60	0.2	246.00
853.682	90	0.3	238.00
853.685	90	0.1	263.00
853.688	90	0.04	319.00
853.683	120	0.3	264.00
853.686	120	0.1	293.00
853.689	120	0.04	363.00

Aluminum spirit levels

- Graduation vial: 0.6 mm/m.
- Base with V-groove.
- Base width: 22 mm.
- DIN 877.



Item No.	Length/mm	Price EUR
853.675	100	65.00
853.676	150	71.00
853.677	200	80.00
853.678	250	99.00
853.679	300	116.00

Small spirit levels

Intended for simple tasks.

- Graduation vial: 0.1 or 0.3 mm/m.
- With longitudinal spirit level.
- Width: 24 mm.

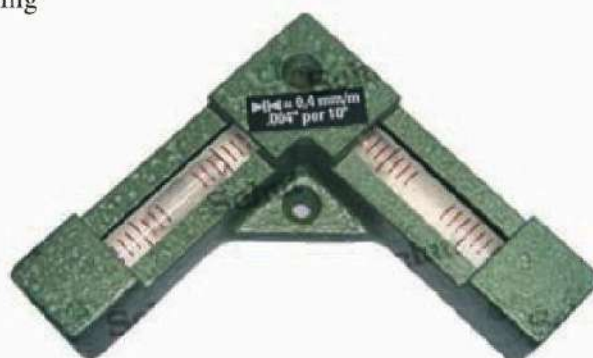
Item No.	Length mm	Graduation mm/m	Price EUR
853.665	100	0.3	161.00
853.666	100	0.1	173.00
853.667	150	0.3	166.00
853.668	150	0.1	182.00

- Equipped with mounting holes $\varnothing 5$ mm.
- Flat base.
- DIN 877.



Cross spirit levels

Cross spirit levels with two vials, in cast iron casing 80 x 80 mm, cross-section 20 x 20 mm, with two screw holes $\varnothing$ 4 mm.



857.338

Item No.	Graduation mm/m	Price EUR
857.338	0.4	370.00
857.339	0.1	542.00
857.340	0.05	555.00



857.342

Cross spirit levels with two vials, in circular chrome casing with three screw holes $\varnothing$ 4 mm.

Item No.	Graduation mm/m	Dimensions mm	Screw holes $\varnothing$ /mm	Price EUR
857.342	0.4	$\varnothing$ 80 x 23	4	321.00
857.343	0.1	$\varnothing$ 80 x 19.5	4	347.00

Alternative: www.schut.com/PDFs/2025-p353-EN.pdf

Spirit levels with flat base

Spirit levels with a stainless steel strip base, no screw mounting, with an adjustable plexiglass vial mounted onto it, graduation approx. 5 mm/m.

Item No.	Dimensions base l x w x t/mm	Price EUR
857.344	100 x 20 x 5	61.00
857.345	150 x 20 x 5	80.00
857.346	200 x 20 x 5	92.00



857.344

Spirit levels with a stainless steel strip base, no screw mounting, with two ground contact planes. Mounted onto this an adjustable spirit level with cast iron housing, graduation 1 mm/m.

Item No.	Dimensions base l x w x t/mm	Price EUR
857.347	100 x 20 x 5	134.00
857.348	150 x 20 x 5	146.00
857.349	200 x 20 x 5	158.00



857.347

Circular spirit levels

Item No.	Diameter mm	Height mm	Sensitivity* mm/m	Price EUR
Plexiglass model with yellow and green base:				
857.315	12	7	approx. 22	7.20
857.316	15	8	approx. 22	7.80
857.317	18	9	approx. 22	9.50
857.318	30	10	approx. 22	13.60
Black synthetic model with frame and screw holes $\varnothing 2.5$ mm and yellow and green base:				
857.320	26/17	7 +3	approx. 19	15.20
857.321	30/20	7.5+3.5	approx. 19	19.40
Chrome casing and white base:				
857.323	15	10	approx. 8	41.00
857.324	18	10	approx. 8	48.00
Chrome casing with frame and screw holes $\varnothing 2.5$ mm (857.325: $\varnothing 1.5$ mm; 857.330/331: $\varnothing 3.5$ mm) and white base:				
857.325	20/14	8 +2	approx. 8	54.00
857.326	25/17	7.5+2.5	approx. 8	56.00
857.327	30/17	6.5+3.5	approx. 8	63.00
857.328	35/20	8 +3.5	approx. 6	91.00
857.329	40/25	8.5+4	approx. 6	115.00
857.330	50/34	9.5+5.5	approx. 3	171.00
857.331	60/39	10 +7	approx. 3	185.00
857.332	25/17	8.5+2.5	approx. 2	71.00
White, synthetic casing with frame and screw holes $\varnothing 3$ mm, additional scale circles and white base:				
857.336	60/45	4+6	Reading $0^{\circ} - 2^{\circ} - 5^{\circ}$	119.00
Black, synthetic casing with frame and screw holes $\varnothing 5$ mm, additional scale circles and white base:				
857.337	100/75	5+10	Reading $0^{\circ} - 1^{\circ} - 2^{\circ} - 3^{\circ}$	132.00

* Sensitivity means: the angle at which the air bubble is moved to the next scale mark or edge of the vial.

Alternative: www.schut.com/PDFs/2025-p353-EN.pdf



Hose water level

- Measuring range: 15 cm.
- Graduation: 1 mm.
- Scale numbering: 0.5 - 15.5 cm.
- Hose length: 20 m (reducible).
- Hose cross-section: 9.5 mm.

ECONOMY LINE ✓

Item No.	Description	Price EUR
906.819	Hose water level	12.70



Surface roughness testers / Roughness specimens



©10.000 EN.20260702

Mitutoyo Surftest SJ-220 surface roughness tester

The portable Mitutoyo Surftest SJ-220 is a compact tester of surface roughness parameters, that can also function in hard-to-reach places because of the separable drive unit. The diamond stylus has a radius of 2 μm and is retracted by the drive unit. After selection of the desired parameters via the 2.8" color touch screen, they can be read out clearly on the display. The SJ-220 is equipped with a USB (type C), an RS232C and a Digimatic data output. The roughness meter also has connections for an optional foot pedal or Bluetooth transmitter.

An S-Drive unit is available on request, with a transverse tracing drive unit (5.6 mm) and as a front lift model for contactless return movement.

- All parameters according to JIS, ISO21920:2021, VDA, ASME. Among other things: Ra, Rz, Rt, Rp, Rv, Rmr, Rmr(c), Rpc, RSm.
- Resolution: 0.0035 μm , 0.0009 μm , 0.0002 μm .
- Traverse length: 0.3 - 17.5 mm.
- Primary profile (P), roughness profile (R), DF profile, R-Motif.
- 2.8" color touch screen.
- Display of: roughness profile and ADC/BAC curves.
- Automatic switch-off.
- Go/NoGo tolerance evaluation.
- Probe: 0.75 mN/2 μm /60°.
- Cut-off lengths: 0.08 mm, 0.25 mm, 0.8 mm, 2.5 mm and 8 mm.
- Probe measuring range: 360 μm .
- Filters: 2CR75, Gaussian and PC75.
- Dimensions: 164.7 x 67.1 x 51.9 mm.
- 25 languages selectable.
- Power supply: AC adapter and battery.
- After use the probe can be retracted to prevent the diamond stylus tip from being damaged.
- Memory card: micro-SD 2 GB optional. Storage for 500 measurement settings, 10,000 measured values and 500 graphs.
- Also probes available for example for deep grooves or small holes.
- USB data analysis software for Windows "SJ-Communication-Tool" and the Android app "SJ-App" can be downloaded for free.



NEW



Item No.	Type/description	Price EUR
178.741	Surftest SJ-220P	
Options:		
120.210	Extension 50 mm	
178.029*	Stand	
120.221	Adapter for stand (ø8 mm)	
120.222	Adapter for height gauge (9 x 9 mm)	
120.218	Nosepiece for cylindrical workpieces	
178.296	Standard insert	
178.604	Roughness normals 0.44/3.0 μm for checking the probe	
106.001	USB Input Tool Direct cable S1, 2 m	
264.628	U-WAVE-TIB Bluetooth transmitter	

* Adapter 120.221 required.

Standard accessories:

- standard probe,
- extension cable for the probe unit for measuring in small spaces,
- roughness normal 3.0 μm ,
- holder for roughness normal,
- AC adapter,
- USB 2.0 cable for charging and data communication,
- tool for battery switch,
- plastic carrying case.



Mitutoyo Surftest SJ-310 surface roughness tester

The Mitutoyo Surftest SJ-310 is a compact, portable roughness tester with the possibility to print on location the measuring results and roughness curves with the built-in thermo printer. Measurements can be set using the 5.7" color touch screen and measurements can be read. Measurements can be stored on a SD memory card. On request, as for the SJ-210, an S-Drive or Front Lift model is available.

- Parameters: Ra, Rc, Ry, Rz, Rt, Rp, Rq, Rv, Sm, Rmax, S, Pc, R3z, Rsk, Rku, Rz1max, Rir, Rpm, mr (c), Rpk, Rvk, δc , Rk, Mr1, Mr2, Lo, Ppi, R, AR, Rx, A1, A2, Vo, HSC, Rmr, SK, Tp, Htp, Δa , Δq , Wte, Wx, W, AW, λa , λq , RzJIS.
- Resolution: 0.002 μm -0.02 μm .
- Traverse length: 16 mm.
- Measuring accuracy according ISO, VDA, ANSI and JIS.
- Cut-off lengths: 0.08 mm, 0.25 mm, 0.8 mm, 2.5 mm and 8 mm.
- Probe measuring range: 360 μm .
- Built-in printer for statistical process control.
- ISO 4287.
- Power supply: AC adapter and battery.



Standard accessories:

- standard probe,
- roughness normal,
- support feet,
- nosepiece for flat surface,
- nosepiece for cylinder,
- extension cable for the probe unit,
- touch pen,
- touch panel protection foil,
- printer paper (5 rolls),
- setting piece for calibration,
- AC adapter and battery,
- handy carrying bag.

*Detailed
information
available*

Item No.	Type	Price EUR
178.570	Surftest SJ-310	

Mitutoyo Surftest SJ-410 surface roughness testers

The Mitutoyo Surftest SJ-410 is unique due to its skidless measuring. Only the stylus follows the product and no skid is used. The probe features a measuring range of 800 μm . The built-in straight guide enables measuring the primary profile, the roughness profile and the waves. By surface radius compensation it is possible to measure radially on a cylinder.

- Parameters: Ra, Rc, Ry, Rz, Rt, Rp, Rq, Rv, Sm, Rmax, S, Pc, R3z, Rsk, Rku, Rz1max, Rir, Rpm, mr (c), Rpk, Rvk, δc , Rk, Mr1, Mr2, Lo, Ppi, R, AR, Rx, A1, A2, Vo, HSC, Rmr, SK, Tp, Htp, Δa , Δq , Wte, Wx, W, AW, λa , λq , RzJIS.
- Resolution: 0.0001 μm -0.01 μm .
- Measuring accuracy according ISO, VDA, ANSI and JIS.
- Cut-off lengths: 0.08 mm, 0.25 mm, 0.8 mm, 2.5 mm and 8 mm.
- Probe measuring range: 800 μm .

- Straightness x-axis: SJ-411: 0.3 $\mu\text{m}/25\text{ mm}$, SJ-412: 0.5 $\mu\text{m}/50\text{ mm}$.
- Built-in printer for statistical process control.
- ISO 4287.
- Power supply: AC adapter and battery.

*Detailed
information
available*



Item No.	Type	Traverse length/mm	Price EUR
178.580	Surftest SJ-411	25	
178.582	Surftest SJ-412	50	
Option:			
120.731	Standard stylus 2 $\mu\text{m}/60^\circ$		

TESA Twin-Surf surface roughness tester

The TESA Twin-Surf is a compact, portable roughness tester made to measure diverse and hard to reach places. By means of the standard supplied 8 mm clamping shaft, it is possible to place the TESA Twin-Surf in any compatible stand. The TESA Twin-Surf has a rechargeable battery that enables 300 measurements without the need for mains voltage.

With the OLED display and the 3 buttons on top, the roughness tester is easy to set up and the needed parameters are easy to read.

The roughness parameters are determined through a dragging motion of the probe, which is fitted with a diamond stylus top with a radius of 2 μm . When the probe is rotated 90° horizontally, it is also possible to measure in the same direction, but perpendicular to the roughness tester. Because of this, it is possible to measure in hard to reach places like crankshafts or deeper parts of your workpiece.

The TESA Twin-Surf can be connected to a PC by means of a USB cable. The Bluetooth version offers wireless data transfer to PC or Android smartphone/tablet. With the standard supplied TESA Data-Studio basic software and the Android App, basic measurements and graphics can be stored. A more detailed analysis can be acquired through the TESA Data-Studio premium software.

- Standards according to ISO 3274, ISO 4287, ISO 12085, ISO 21920.

Parameters include: Ra, Rz, Rt, Rq, Rc, Rmax, Rpc, RSm.

- Parameters with premium software: Rp, Rv, Rsk, Rku, RΔq, RΔa, Rmr rel, Rδc, Rmr(c), Pa, Pq, Pp, Pv, Pt, Pc, R_{Pc}, R_{3z}, Psk, Pku, PSm, PΔq, Pmr rel, Pδc, Pmr(c), Rk, Rpk, Rvk, A1, A2, Mr1, Mr2, Rke, Rpk, Rvke, A1e, A2e, Mr1e, Mr2e.

- Measuring range: Ra 0 - 50 μm ,
Rt 0.05 - 200 μm .

- Resolution: 0.001 μm / 0.01 μinch .

- Measuring length: 0.25 - 16.0 mm).

- Cut-off length: 0.25 mm, 0.8 mm, 2.5 mm.

- mm/inch conversion.

- USB or Bluetooth data output (BT model).

- Automatic switch-off.

- Internal storage for 30 measurements with additional graphics or 18000 measurements with roughness parameters.

- Measuring force: 0.75 mN (ISO 3274).

- Diamond stylus tip: radius 2 μm , 90°.

- Dimensions: 160 x 34 x 34 mm.

- Weight: 200 g.

- Power supply: AC adapter and battery.

Standard accessories:

- Twin-Surf portable roughness tester,
- SB51 probe,
- roughness specimen ($R_a = 2.97 \mu\text{m}$),
- adapter for 8 mm diameter clamping shafts,
- key to remove the probe protection,
- main charger with EU and US charger adaptors,
- USB A-C cable,
- USB key including: user manual, measuring report, declaration of conformity, TESA Data-Studio PC software basic version and Android app,
- plastic carrying case.

NEW



783.656/657



783.657

Item No.	Type	Price EUR
783.656	TESA Twin-Surf	
783.657	TESA Twin-Surf BT (Bluetooth)	
Options:		
783.658	Printer for Twin-Surf	
783.659	TESA Data-Studio Premium software	
783.660	SB21 probe (for groove depth <5 mm)	
783.661	SB31 probe (for small bores $\phi 4$ mm)	
783.662	SB51 probe (standard)	
783.663	SB121 probe (for groove depth <20 mm)	
783.664	100 mm extension	

Roughness specimens

Series of roughness specimens, type Microsurf, covering the nine most frequently occurring manufacturing operations; per set eight specimens will be delivered. In addition to the roughness value R_a in μm , the roughness value CLA in μin and the R_z and N values are specified.



Item No.	Machining-method	Number of specimens per set	Roughness R_a μm	Roughness CLA μin	Roughness class N	Price EUR
850.315	Surface grinding	8	0.025 - 3.2	1 - 125	1 - 8	168.00
850.316	Cylindr. grinding	8	0.025 - 3.2	1 - 125	1 - 8	168.00
850.319	Face turning	8	0.4 - 50	16 - 2000	5 - 12	168.00
850.320	Cylindr. turning	8	0.4 - 50	16 - 2000	5 - 12	168.00
850.321	End milling	8	0.4 - 50	16 - 2000	5 - 12	168.00
850.322	Reaming & drilling	8	0.4 - 12.5	16 - 500	5 - 10	168.00
850.323	Horizontal milling	8	0.4 - 50	16 - 2000	5 - 12	168.00
850.325	Shaping or planing	8	0.8 - 100	32 - 4000	6 - 13	168.00
850.331	Spark erosion (EDM)	8	0.4 - 50	16 - 2000	5 - 12	168.00

Available with declaration of conformity on request.

Wall chart

Eight Microsurf roughness specimens, mounted on a general reference chart, can be obtained for the following manufacturing operations:

- Surface grinding, cylindrical grinding, face turning, turning, end milling, reaming & drilling, horizontal milling and shaping or planing.
- Dimensions $w \times h$: 740 x 310 mm.

Item No.	Description	Price EUR
850.314	Microsurf	1,102.00



Roughness specimens in a set



850.130

This set consists of 30 specimens, mounted in a practical case with instruction card. In addition to the R_a values, the standardized N values and the R_z values are specified.



Set composition

Item No.	Language	Price EUR
850.130	English	273.00
850.131	French	273.00
850.132	German	273.00

Available with declaration of conformity on request.

Number of specimens	Machining method	Roughness $R_a/\mu\text{m}$	Roughness class N
3	Flat lapping	0.05 - 0.2	2, 3, 4
3	Reaming	0.4 - 1.6	5, 6, 7
6	Grinding	0.05 - 1.6	2, 3, 4, 5, 6, 7
6	Horizontal milling	0.4 - 12.5	5, 6, 7, 8, 9, 10
6	Vertical milling	0.4 - 12.5	5, 6, 7, 8, 9, 10
6	Turning	0.4 - 12.5	5, 6, 7, 8, 9, 10

Roughness specimens for blasted surfaces

- Each plate consists of four roughness specimens for grit and shot blasting, in 4 segments.
- Delivered in a soft case.
- Standardized to ISO specifications.



Item No.	Description	Price EUR
850.017	Shot blasting	220.00
850.018	Grit blasting	220.00

**Gauge blocks / Measuring balls
Optical flats and parallel optical flats / Feeler gauges**



©11.001 EN 20260702

Gauge blocks general

Which gauge block is the most suitable for you?



MATERIALS

Steel

Steel is the oldest material and remains the most commonly accepted for gauge blocks. If well taken care of, steel gauges guarantee many years of useful life. They must be cleaned carefully before and after use and stored in a protective case in a dry environment.

Tungsten carbide

When a higher degree of hardness is needed, tungsten carbide is the material to choose. It is less sensitive to wear and damage compared to hardened steel. Especially when used frequently, tungsten carbide has an increased life span compared to steel gauge blocks.

Ceramics

Ceramics is relatively wear resistant and has a high degree of strength and stability. It will not rust and is unaffected by chemicals.

Class 2

Class 2 gauge blocks are intended for general workshop use by skilled workers to set up, for example, measuring instruments.

Class 1

Class 1 gauge blocks are used as working standards in inspection rooms within the production to set and calibrate measuring instruments and equipment as well as to inspect tools, fixtures and machines.

Class 0

Class 0 gauge blocks, with their high accuracy, are intended for use by measuring technicians in environmentally controlled inspection rooms, for example to calibrate measuring equipments.

Class K

Class K gauge blocks have the highest class of accuracy. They are the length standards in a calibration laboratory and other calibration values are derived from these gauges. Only with a UKAS certificate – or with another certificate, accepted by UKAS as equivalent (e.g. DAKKS, RvA and COFRAC) – will these gauge blocks be at their best. The most accurate gauges can meet a tolerance of $\pm 0.05 \mu\text{m}$.

ACCURACY CLASSES

Gauge blocks are classified in upgrading order of accuracy according EN ISO 3650: 1998 in the classes: 2, 1, 0, K. The ISO 3650 is an international standard, which is adopted by national standards such as RvA, DAKKS, UKAS, BKO, SCS and COFRAC.

Accuracy according ISO 3650

Nominal size mm	Class K		Class 0		Class 1		Class 2	
	Tolerance on nominal size μm	Deviation* μm	Tolerance on nominal size μm	Deviation* μm	Tolerance on nominal size μm	Deviation* μm	Tolerance on nominal size μm	Deviation* μm
0.5 - 10	± 0.20	0.05	± 0.12	0.10	± 0.20	0.16	± 0.45	0.30
10 - 25	± 0.30	0.05	± 0.14	0.10	± 0.30	0.16	± 0.60	0.30
25 - 50	± 0.40	0.06	± 0.20	0.10	± 0.40	0.18	± 0.80	0.30
50 - 75	± 0.50	0.06	± 0.25	0.12	± 0.50	0.18	± 1.00	0.35
75 - 100	± 0.60	0.07	± 0.30	0.12	± 0.60	0.20	± 1.20	0.35
100 - 150	± 0.80	0.08	± 0.40	0.14	± 0.80	0.20	± 1.60	0.40
150 - 200	± 1.00	0.09	± 0.50	0.16	± 1.00	0.25	± 2.00	0.40
200 - 250	± 1.20	0.10	± 0.60	0.16	± 1.20	0.25	± 2.40	0.45
250 - 300	± 1.40	0.10	± 0.70	0.18	± 1.40	0.25	± 2.80	0.50
300 - 400	± 1.80	0.12	± 0.90	0.20	± 1.80	0.30	± 3.60	0.50
400 - 500	± 2.20	0.14	± 1.10	0.25	± 2.20	0.35	± 4.40	0.60
500 - 600	± 2.60	0.16	± 1.30	0.25	± 2.60	0.40	± 5.00	0.70
600 - 700	± 3.00	0.18	± 1.50	0.30	± 3.00	0.45	± 6.00	0.70
700 - 800	± 3.40	0.20	± 1.70	0.30	± 3.40	0.50	± 6.50	0.80
800 - 900	± 3.80	0.20	± 1.90	0.35	± 3.80	0.50	± 7.50	0.90
900 - 1000	± 4.20	0.25	± 2.00	0.40	± 4.20	0.60	± 8.00	1.00

* Deviation of the measuring face.

Steel gauge blocks

Steel gauge blocks with an excellent price-performance ratio.

- Hardness: 63 - 65 HRC.
- Expansion coefficient: $(11.5 \pm 1) \cdot 10^{-6} / ^\circ\text{C}$.
- Cross-section: 0.5 - 10 mm: 30 x 9 mm,
> 10 mm: 35 x 9 mm.
- ISO 3650.
- Sets delivered with a manufacturer measuring report.
- Delivery in plastic case and sets in wooden case.
- Empty wooden cases with cutouts and size indications for gauge block sets are optionally available. For these cases see wooden cases for gauge block sets elsewhere in the catalog.



Steel gauge blocks in sets

ECONOMY LINE ✓

Item No.	Class	Price EUR	Size mm	Increment mm	Pieces
M32:			1.005	—	1
906.622	2	93.00	1.01 - 1.09	0.01	9
906.621	1	148.00	1.1 - 1.9	0.1	9
906.620	0	259.00	1 - 9	1	9
			10 - 30	10	3
			50	—	1
M47:			1.005	—	1
906.625	2	141.00	1.01 - 1.09	0.01	9
906.624	1	228.00	1.1 - 1.9	0.1	9
906.623	0	361.00	1 - 24	1	24
			25 - 100	25	4
M87:			1.001 - 1.009	0.001	9
906.613	2	228.00	1.01 - 1.49	0.01	49
906.612	1	401.00	0.5 - 9.5	0.5	19
906.611	0	607.00	10 - 100	10	10
M88:			1.0005	—	1
906.628	2	231.00	1.001 - 1.009	0.001	9
906.627	1	407.00	1.01 - 1.49	0.01	49
906.626	0	613.00	0.5 - 9.5	0.5	19
			10 - 100	10	10
M112:			1.0005	—	1
906.631	2	348.00	1.001 - 1.009	0.001	9
906.630	1	567.00	1.01 - 1.49	0.01	49
906.629	0	884.00	0.5 - 24.5	0.5	49
			25 - 100	25	4

More information: www.schut.com/PDFs/2025-p362-EN.pdf

Steel gauge blocks, per piece

ECONOMY LINE ✓

Size mm	Increment mm	ISO 3650/1 Price EUR	ISO 3650/0 Price EUR
0.5	—	22.10	26.00
1	—	11.20	16.60
1.0005	—	15.80	23.00
1.001 - 1.009	0.001	11.20	16.60
1.01 - 1.49	0.01	11.40	15.20
1.5 - 1.9	0.1	11.40	15.20
2.0 - 10.0	0.5	11.40	15.20
10.5 - 25.0	0.5	14.50	17.90
30	—	18.10	23.00
40	—	18.10	23.00
50	—	20.30	23.00
60	—	21.40	29.00
70	—	21.40	29.00
75	—	27.50	35.40
80	—	27.50	35.40
90	—	30.50	51.00
100	—	40.00	59.00

Select steel gauge blocks

High quality steel gauge blocks, can be very well wringed to make a combination size. The steel gauge blocks are available in all accuracy classes of ISO 3650 (2, 1, 0, K). Only the most commonly used sizes can be found in this catalog. Special sizes and sets are available on request, as well as special sets for calibration of micrometers and calipers.

- Hardness: approx. 800 HV.
- Expansion coefficient: $\alpha = 11.5 \cdot 10^{-6} \text{ K}^{-1}$.
- Cross-section: 0.5 - 10 mm: 30 x 9 mm,
> 10 mm: 35 x 9 mm.
- ISO 3650.
- Delivery with a traceable manufacturer measuring report.
- Delivery on request with a DAkkS certificate, UKAS acknowledged.
- Sets delivered in luxurious wooden case.
- Sets optionally available in an ABS case for ESD cleanroom (Material: ABS Acrylonitrile Butadiene Styrene).
- Plastic cases for separate gauge blocks are optionally available. For these cases see plastic cases for gauge blocks elsewhere in the catalog.



Steel gauge blocks, per piece

Size mm	Increment mm	ISO 3650/1 Price EUR	ISO 3650/0 Price EUR
0.5	—	55.00	67.00
1	—	52.00	55.00
1.0005	—	55.00	67.00
1.001 - 1.009	0.001	52.00	55.00
1.01 - 1.5	0.01	45.00	52.00
1.6 - 1.9	0.1	45.00	52.00
2.0 - 5.5	0.5	52.00	55.00
6.0 - 10.0	0.5	52.00	55.00
10.5 - 15.0	0.5	53.00	59.00
15.5 - 20.0	0.5	53.00	59.00
20.5 - 25.0	0.5	53.00	59.00
30	—	55.00	67.00
40	—	55.00	67.00
50	—	55.00	67.00
60	—	55.00	67.00
70	—	55.00	67.00
75	—	59.00	70.00
80	—	61.00	82.00
90	—	61.00	82.00
100	—	70.00	92.00

More information: www.schut.com/PDFs/2025-p363-EN.pdf

Steel gauge blocks in sets

Item No.	Class	Price EUR	Size mm	Increment mm	Pieces
M32:			1.005	—	1
831.915	1	825.00	1.01 - 1.09	0.01	9
831.914	0	1,026.00	1.1 - 1.9	0.1	9
			1 - 9	1	9
			10 - 30	10	3
			50	—	1
M47:			1.005	—	1
831.911	1	1,398.00	1.00 - 1.09	0.01	10
831.910	0	1,687.00	1.1 - 1.9	0.1	9
			2 - 25	1	24
			50 - 100	25	3
M87:			0.5	—	1
831.909	1	1,774.00	1.001 - 1.009	0.001	9
831.908	0	2,280.00	1.00 - 1.50	0.01	51
			2.0 - 10.0	0.5	17
			20 - 100	10	9
M103:			0.5	—	1
831.907	1	2,060.00	1.005	—	1
831.906	0	2,670.00	1.00 - 1.50	0.01	51
			2.0 - 25.0	0.5	47
			50 - 100	25	3
M112:			0.5	—	1
831.905	1	2,200.00	1.0005	—	1
831.904	0	2,840.00	1.001 - 1.009	0.001	9
			1.00 - 1.50	0.01	51
			2.0 - 25.0	0.5	47
			50 - 100	25	3
M122:			0.5	—	1
831.903	1	2,480.00	1.0005	—	1
831.902	0	3,290.00	1.001 - 1.009	0.001	9
			1.00 - 1.50	0.01	51
			1.6 - 1.9	0.1	4
			2.0 - 25.0	0.5	47
			30 - 70	10	5
			75	—	1
			80 - 100	10	3

Tungsten carbide gauge blocks

Tungsten carbide gauge blocks with an excellent price-performance ratio and a low expansion coefficient. High resistance against corrosion.

- Hardness: 70 - 72 HRC.
- Expansion coefficient: $(8.5 \pm 1) \cdot 10^{-6} / ^\circ\text{C}$.
- Cross-section: 0.5 - 10 mm: 30 x 9 mm,
> 10 mm: 35 x 9 mm.
- ISO 3650.
- Sets delivered with a manufacturer measuring report.
- Delivery in plastic case and sets in wooden case.
- Empty wooden cases with cutouts and size indications for gauge block sets are optionally available. For these cases see wooden cases for gauge block sets elsewhere in the catalog.



ECONOMY LINE ✓

Tungsten carbide gauge blocks, per piece

Size mm	Increment mm	ISO 3650/1 Price EUR	ISO 3650/0 Price EUR
0.5	—	48.00	55.00
1	—	48.00	55.00
1.0005	—	63.00	72.00
1.001 - 1.009	0.001	48.00	55.00
1.01 - 1.49	0.01	48.00	55.00
1.5 - 1.9	0.1	48.00	55.00
2.0 - 5.0	0.5	58.00	69.00
5.5 - 10.0	0.5		
10.5 - 15.0	0.5	93.00	102.00
15.5 - 25.0	0.5	119.00	131.00
30	—	176.00	185.00
40	—	227.00	237.00
50	—	287.00	296.00
60	—	330.00	338.00
70	—	386.00	398.00
75	—	411.00	420.00
80	—	432.00	442.00
90	—	488.00	501.00
100	—	547.00	561.00

ECONOMY LINE ✓

Tungsten carbide gauge blocks in sets

Item No.	Class	Price EUR	Size mm	Increment mm	Pieces
M32:			1.005	—	1
906.634	2	1,051.00	1.01 - 1.09	0.01	9
906.633	1	1,115.00	1.1 - 1.9	0.1	9
906.632	0	1,369.00	1 - 9	1	9
			10 - 30	10	3
			50	—	1
M47:			1.005	—	1
906.637	2	2,260.00	1.01 - 1.09	0.01	9
906.636	1	2,500.00	1.1 - 1.9	0.1	9
906.635	0	2,930.00	1 - 24	1	24
			25 - 100	25	4
M87:			1.001 - 1.009	0.001	9
906.662	2	2,710.00	1.01 - 1.49	0.01	49
906.661	1	2,930.00	0.5 - 9.5	0.5	19
906.660	0	3,760.00	10 - 100	10	10
M112:			1.0005	—	1
906.643	2	3,240.00	1.001 - 1.009	0.001	9
906.642	1	3,460.00	1.01 - 1.49	0.01	49
906.641	0	4,370.00	0.5 - 24.5	0.5	49
			25 - 100	25	4

More information: www.schut.com/PDFs/2025-p364-EN.pdf

G11.363 EN 20260702

Ceramic gauge blocks

Ceramic gauge blocks with an excellent price-performance ratio, made of Zirconia ceramics. Because of this, these gauge blocks are highly durable, corrosion proof and completely stable for long-term use.

- Highly wear-resistant. Can be used 5 to 10 times longer than steel gauge blocks.
- Rustproof.
- Hardness: 88 - 90 HRC.
- Expansion coefficient: $(9.2 \pm 1) \cdot 10^{-6} / ^\circ\text{C}$.
- Cross-section: 0.5 - 10 mm: 30 x 9 mm,
> 10 mm: 35 x 9 mm.
- ISO 3650.
- Sets delivered with a manufacturer measuring report.
- Delivery in plastic case and sets in wooden case.
- Empty wooden cases with cutouts and size indications for gauge block sets are optionally available. For these cases see wooden cases for gauge block sets elsewhere in the catalog.



ECONOMY LINE ✓

Ceramic gauge blocks in sets

Item No.	Class	Price EUR	Size mm	Increment mm	Pieces
M32:					
906.646	1	1,055.00	1.005	—	1
			1.01 - 1.09	0.01	9
906.645	0	1,321.00	1.1 - 1.9	0.1	9
			1 - 9	1	9
			10 - 30	10	3
			50	—	1
M47:					
906.649	1	1,747.00	1.005	—	1
			1.01 - 1.09	0.01	9
906.648	0	1,913.00	1.1 - 1.9	0.1	9
			1 - 24	1	24
			25 - 100	25	4
M87:					
906.652	1	3,520.00	1.001 - 1.009	0.001	9
			1.01 - 1.49	0.01	49
906.651	0	3,570.00	0.5 - 9.5	0.5	19
			10 - 100	10	10
M103:					
906.655	1	3,540.00	1.005	—	1
			1.01 - 1.49	0.01	49
906.654	0	4,290.00	0.5 - 24.5	0.5	49
			25 - 100	25	4
M112:					
906.658	1	3,610.00	1.0005	—	1
			1.001 - 1.009	0.001	9
906.657	0	4,590.00	1.01 - 1.49	0.01	49
			0.5 - 24.5	0.5	49
			25 - 100	25	4

Ceramic gauge blocks, per piece

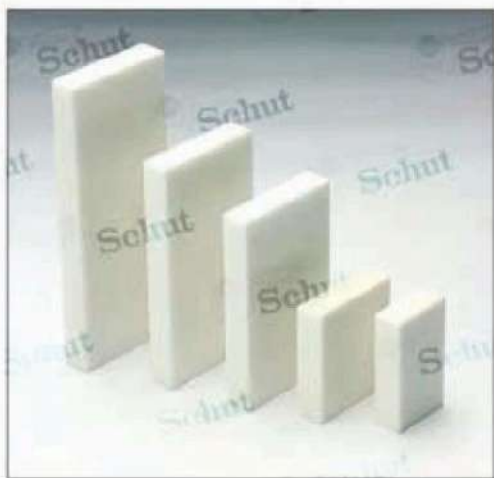
Size mm	Increment mm	ISO 3650/1 Price EUR	ISO 3650/0 Price EUR
0.5	—	53.00	56.00
1	—	46.00	53.00
1.0005	—	53.00	62.00
1.001 - 1.009	0.001	36.50	43.00
1.01 - 1.49	0.01	27.00	28.50
1.5 - 1.9	0.1	27.00	28.50
2.0 - 5.5	0.5	29.30	31.30
6.0 - 9.5	0.5	44.00	50.00
10.0 - 20.0	0.5	55.00	60.00
20.5 - 25.0	0.5	58.00	61.00
30	—	66.00	74.00
40	—	73.00	78.00
50	—	79.00	79.00
60	—	83.00	88.00
70	—	91.00	98.00
75	—	95.00	100.00
80	—	97.00	105.00
90	—	106.00	118.00
100	—	114.00	121.00

More information: www.schut.com/PDFs/2025-p366-EN.pdf

Select ceramic gauge blocks

High quality ceramic gauge blocks, can be very well wringed to make a combination size. The ceramic gauge blocks are available in all accuracy classes of ISO 3650 (2, 1, 0, K). Only the most commonly used sizes can be found in this catalog. Special sizes and sets are available on request, as well as special sets for calibration of micrometers and calipers.

- Hardness: approx. 1350 HV.
- Expansion coefficient: $\alpha = 9.3 \cdot 10^{-6} \text{ K}^{-1}$.
- Cross-section: 0.5 - 10 mm: 30 x 9 mm,
 > 10 mm: 35 x 9 mm.
- ISO 3650.



SELECT/

Ceramic gauge blocks, per piece

Size mm	Increment mm	ISO 3650/1 Price EUR	ISO 3650/0 Price EUR
0.5	—	63.00	92.00
1	—	52.00	72.00
1.0005	—	55.00	72.00
1.001 - 1.009	0.001	55.00	72.00
1.01 - 1.50	0.01	55.00	72.00
1.6 - 1.9	0.1	55.00	72.00
2.0 - 5.5	0.5	58.00	80.00
6.0 - 10.0	0.5	63.00	88.00
10.5 - 15.0	0.5	72.00	98.00
15.5 - 20.0	0.5	75.00	98.00
20.5 - 25.0	0.5	88.00	114.00
30	—	92.00	115.00
40	—	109.00	148.00
50	—	129.00	172.00
60	—	132.00	189.00
70	—	148.00	205.00
75	—	165.00	226.00
80	—	172.00	249.00
90	—	188.00	266.00
100	—	191.00	274.00

More information: www.schut.com/PDFs/2025-p367-EN.pdf

- Delivery with a traceable manufacturer measuring report.
- Delivery on request with a DAkkS certificate, UKAS acknowledged.
- Sets delivered in luxurious wooden case.
- Plastic cases for separate gauge blocks are optionally available. For these cases see plastic cases for gauge blocks elsewhere in the catalog.

Ceramic gauge blocks in sets

Item No.	Class	Price EUR	Size mm	Increment mm	Pieces
M32:			1.005	—	1
831.085	1	2,740.00	1.01-1.09	0.01	9
831.084	0	3,070.00	1.1-1.9	0.1	9
			1-9	1	9
			10-30	10	3
			50	—	1
M47:			1.005	—	1
831.081	1	4,590.00	1.00-1.09	0.01	10
831.080	0	5,650.00	1.1-1.9	0.1	9
			2-25	1	24
			50-100	25	3
M87:			0.5	—	1
831.079	1	5,670.00	1.001-1.009	0.001	9
831.078	0	6,720.00	1.00-1.50	0.01	51
			2.0-10.0	0.5	17
			20-100	10	9
M103:			0.5	—	1
831.077	1	6,870.00	1.005	—	1
831.076	0	8,140.00	1.00-1.50	0.01	51
			2.0-25.0	0.5	47
			50-100	25	3
M112:			0.5	—	1
831.075	1	7,270.00	1.0005	—	1
831.074	0	8,600.00	1.001-1.009	0.001	9
			1.00-1.50	0.01	51
			2.0-25.0	0.5	47
			50-100	25	3
M122:			0.5	—	1
831.073	1	7,940.00	1.0005	—	1
831.072	0	9,590.00	1.001-1.009	0.001	9
			1.00-1.50	0.01	51
			1.6-1.9	0.1	4
			2.0-25.0	0.5	47
			30-70	10	5
			75	—	1
			80-100	10	3

Mitutoyo steel and ceramic gauge blocks

The Mitutoyo gauge blocks are available in all accuracy classes of ISO 3650. Only the most commonly used sizes can be found in this catalog. Other accuracy classes and sizes are available on request.

Gauge blocks from 125 mm have two coupling holes on both ends so that they can be coupled by means of a toggle clamp. Individual gauge blocks and sets are delivered with a manufacturer measuring report.

Steel

These gauge blocks are made of alloy steel, and they are completely stress-relieved and very stable.

- Hardness: 800 HV.
- Available from 0.1 up to 1000 mm.
- Sets M8, M9, M103, M112 and M122 are available on request.

Steel gauge blocks, per piece

Size mm	Increment mm	ISO 3650/1 Price EUR	ISO 3650/0 Price EUR
0.1-0.19	0.01	98.90	119.00
0.2-0.29	0.01	82.40	99.10
0.3-0.39	0.01	76.80	91.90
0.4-0.49	0.01	71.70	86.00
0.5-0.69	0.01	38.30	45.80
0.7-0.89	0.01	37.00	44.40
0.90-0.99	0.01	35.90	42.90
1.0005	—	25.60	30.40
1.001-1.009	0.001	25.60	30.40
1.00-1.49	0.01	25.60	30.40
1.5-2.0	0.1	25.30	30.60
2.5-3.0	0.5	27.10	32.80
3.5-5.0	0.5	27.70	33.30
5.5	0.5	33.50	39.70
6.0-7.0	0.5	34.10	40.70
7.5-8.5	0.5	34.60	41.50
9.0-10.0	0.5	35.20	42.40
10.5	—	35.90	42.90
11.0	—	41.50	49.60
11.5-12.0	0.5	42.30	50.60
12.5-13.5	0.5	42.80	51.20
14.0-15.0	0.5	43.40	51.60
15.5	—	43.90	52.50
16.0	—	45.20	54.10
16.5-17.0	0.5	45.60	54.90
17.5-18.5	0.5	46.40	55.20
19.0-20.0	0.5	46.80	55.90
20.5	—	47.20	56.80
21.0-21.5	0.5	49.00	58.90
22.0-24.0	0.5	49.50	59.40
24.5-25.0	0.5	50.30	60.40
30	—	57.20	68.20
40	—	62.90	75.20
50	—	71.20	85.30
60	—	82.00	98.30
70	—	89.60	108.00
75	—	91.90	110.00
80	—	99.20	120.00
90	—	104.00	125.00
100	—	110.00	132.00

More information: www.schut.com/PDFs/2025-p368-EN.pdf

Ceramics

The ceramic gauge blocks are made of zirconia. Because of this, these gauge blocks are highly durable and corrosion proof.

- Hardness: 1350 HV.
- Available from 0.5 up to 500 mm.
- Sets M8 and M103 are available on request.
- Also separately available.



Gauge blocks in sets

Item No.	Class	Price EUR	Size mm	Increment mm	Pieces
M32, steel:					
517.967	1	961.00	1.005	—	1
517.966	0	1,248.00	1.01-1.09	0.01	9
			1.1-1.9	0.1	9
M32, ceramics:					
516.367	1	1,334.00	1-9	1	9
516.366	0	1,730.00	10-30	10	3
			60	—	1
M46, steel:					
516.996	1	1,723.00	1.001-1.009	0.001	9
516.995	0	2,238.00	1.01-1.09	0.01	9
			1.1-1.9	0.1	9
M46, ceramics:					
516.396	1	2,525.00	1-9	1	9
516.395	0	3,281.00	10-100	10	10
M47, steel:					
516.963	1	1,637.00	1.005	—	1
517.962	0	2,129.00	1.01-1.19	0.01	19
			1.2-1.9	0.1	8
M47, ceramics:					
516.363	1	3,050.00	1-9	1	9
516.362	0	3,498.00	10-100	10	10
M87, steel:					
516.947	1	2,525.00	1.001-1.009	0.001	9
516.946	0	3,281.00	1.01-1.49	0.01	49
			0.5-9.5	0.5	19
M87, ceramics:					
516.347	1	4,488.00	10-100	10	10
516.346	0	5,808.00			

Long gauge blocks from 125 mm

Long steel gauge blocks with an excellent price-performance ratio. These steel gauge blocks are available in the accuracy classes 0, 1 and 2 of ISO 3650. All gauge blocks have two coupling holes on both ends so that they can be coupled by means of a toggle clamp.

- Hardness: 63 - 65 HRC.
- Expansion coefficient: $(11.5 \pm 1) \cdot 10^{-6} / ^\circ\text{C}$.
- Cross-section: 35 x 9 mm.
- ISO 3650.
- Delivery in wooden case with a manufacturer measuring report.



907.741



907.707



ECONOMY LINE ✓

Size/mm	Item No.	Price EUR	Item No.	Price EUR	Item No.	Price EUR
	ISO 3650/2:		ISO 3650/1:		ISO 3650/0:	
125	907.728	57.00	907.715	68.00	907.702	115.00
150	907.729	93.00	907.716	95.00	907.703	173.00
175	907.730	95.00	907.717	111.00	907.704	186.00
200	907.731	102.00	907.718	127.00	907.705	190.00
250	907.732	114.00	907.719	152.00	907.706	237.00
300	907.733	163.00	907.720	163.00	907.707	365.00
400	907.734	185.00	907.721	285.00	907.708	381.00
500	907.735	206.00	907.722	428.00	907.709	491.00
600	907.736	528.00	907.723	784.00	907.710	1,068.00
700	907.737	591.00	907.724	927.00	907.711	1,642.00
800	907.738	707.00	907.725	1,069.00	907.712	2,010.00
900	907.739	871.00	907.726	1,316.00	907.713	2,240.00
1000	907.740	969.00	907.727	1,502.00	907.714	2,500.00
Gauge block set consisting of 125, 150, 175, 200, 250, 300, 400 and 500 mm:						
	907.743	598.00	907.742	748.00	907.741	1,431.00
Gauge block set consisting of 600, 700, 800, 900 and 1000 mm:						
	907.746	2,690.00	907.745	4,080.00	907.744	6,630.00

Select long gauge blocks from 125 mm

High quality long steel gauge blocks. These steel gauge blocks are available in the accuracy classes 0, 1 and 2 of ISO 3650. All gauge blocks have two coupling holes on both ends so that they can be coupled by means of a toggle clamp.

- Hardness: approx. 800 HV.
- Expansion coefficient: $\alpha = 11.5 \cdot 10^{-6} \text{ K}^{-1}$.
- Cross-section: 35 x 9 mm.
- ISO 3650.
- Delivery in a luxurious wooden case with a traceable manufacturer measuring report.
- Delivery on request with a DAkkS certificate, UKAS acknowledged.
- Gauge blocks of 1000 - 1500 mm incl. a DAkkS certificate, UKAS acknowledged available on request.



831.937

**SELECT/**

Size/mm	Item No.	Price EUR	Item No.	Price EUR	Item No.	Price EUR
	ISO 3650/2:		ISO 3650/1:		ISO 3650/0:	
125	831.019	313.00	831.008	398.00	831.000	456.00
150	831.020	335.00	831.009	426.00	831.001	489.00
175	831.021	402.00	831.010	497.00	831.002	580.00
200	831.022	431.00	831.011	517.00	831.003	620.00
250	831.023	486.00	831.012	610.00	831.936	679.00
300	831.024	542.00	831.013	653.00	831.937	772.00
400	831.025	640.00	831.981	808.00	831.946	926.00
500	831.026	701.00	831.738	931.00	831.004	1,115.00
600	831.027	1,085.00	831.014	1,256.00	831.947	1,504.00
700	831.028	1,286.00	831.015	1,519.00	831.005	1,816.00
800	831.029	1,631.00	831.016	1,944.00	831.948	2,410.00
900	831.030	2,010.00	831.017	2,490.00	831.006	3,150.00
1000	831.031	2,530.00	831.018	3,070.00	831.007	4,020.00
Gauge block set consisting of 125, 150, 175, 200, 250, 300, 400 and 500 mm:						
	831.088	2,750.00	831.087	3,600.00	831.086	4,300.00
Gauge block set consisting of 600, 700, 800, 900 and 1000 mm:						
	831.091	6,930.00	831.090	8,440.00	831.089	10,700.00

Mitutoyo toggle clamp for long series gauge blocks

Toggle clamp for the coupling of gauge blocks over 100 mm which have coupling holes on both ends. Very quick assembly by means of spring clamping device (with locking screw).

Item No.	Description	Price EUR
619.031	Toggle clamp for long series gauge blocks	164.00



Caliper inspection sets

For checking the accuracy of DIN 862 or DIN EN ISO 13385-1:2020-03 calipers.

DIN 862 set: three special steel gauge blocks (30 mm, 41,3 mm and 131,4 mm, ISO 3650 class 1), two steel setting rings ($\varnothing 4$ mm and $\varnothing 25$ mm) and a pair of gloves M/L (910.489).

DIN EN ISO 13385-1:2020-03 set: five special steel gauge blocks (30 mm, 41,3 mm, 90 mm, 131,4 mm and 150 mm, ISO 3650 class 1), two steel setting rings ($\varnothing 4$ mm and $\varnothing 25$ mm) and a pair of gloves M/L (910.489).

- Delivery in a wooden case with a manufacturer measuring report.



909.347

NEW

ECONOMY LINE ✓

Item No.	Description	Price EUR
909.347	Caliper inspection set DIN 862	255.00
910.561	Caliper inspection set DIN EN ISO 13385-1:2020-03 (class 1)	

Micrometer inspection sets

For the inspection of micrometers according DIN 863. Suitable for micrometers with a measuring range up to 25 mm.

- Nominal sizes (mm):
2.5 - 5.1 - 7.7 - 10.3 - 12.9 - 15.0 - 17.6 - 20.2 - 22.8 - 25.0.
- Including plan parallel optical flat $\varnothing 30 \times 12$ mm.

- Delivery in a wooden case with a manufacturer measuring report.



909.340

ECONOMY LINE ✓

Item No.	Material	Grade	Price EUR
909.346	steel	1	226.00
909.345	steel	0	300.00
909.162	ceramic	1	509.00
909.340	ceramic	0	561.00

G11.320 EN 20200702

Gauge block accessories

Various accessories to extract the resulting size of one or more gauge blocks outside or to convert it into an inside gauge. This also enables the creation of setting gauges and marking tools. These accessories considerably increase the applicability of standard gauge blocks.



907.202



907.204



907.210



907.209



907.207



907.213



907.211

907.212

ECONOMY LINE ✓

Item No.	Description	Price EUR	Set		
			M8	M10	M12
Holder for gauge blocks:					
907.203	Up to 50 mm	28.50	•	•	•
907.204	Up to 100 mm	39.50	•	•	•
907.205	Up to 200 mm	59.00	•	•	•
Pair of measuring jaws, with measuring faces:					
907.206	Cylindrical $\varnothing$ 2 mm and flat ($l=40$ mm)	81.00	•	•	•
907.207	Cylindrical $\varnothing$ 5 mm and flat ($l=45$ mm)	76.00	•	•	•
907.208	Cylindrical $\varnothing$ 10 mm and flat ($l=70$ mm)	67.00		•	•
907.209	Flat ($l=100$ mm, $h=19$ mm)	73.00		•	•
907.213	V-shaped ($l=60$ mm, max. $\varnothing$ 60 mm)	49.00		•	•
907.210	Straight edge ($l=100$ mm)	13.00			•
907.211	Scriber ($l=45$ mm)	50.00	•	•	•
907.212	Center point ($l=45$ mm)	79.00	•	•	•
907.214	Base for holder ($h=25$ mm)	177.00	•		•
Accessory sets, delivered in a case:			↑	↑	↑
907.200	M8	604.00	└─┘	└─┘	└─┘
907.201	M10	813.00	└─┘	└─┘	└─┘
907.202	M12	770.00	└─┘	└─┘	└─┘

G11.275-EN-20060702

Holder for gauge blocks

Holder for gauge blocks for fixation of gauge blocks for serial inspection. Can also be used in combination with inspection sets for micro-meters and calipers.

- Suited for use with 10 gauge blocks.
- Anodized aluminum with steel base and hard plastic clamping blocks.
- Thickness gauge block: 9 mm conform ISO 3650.
- Delivery in a plastic carrying case incl. Allen key.



ECONOMY LINE ✓

Item No.	Description	Price EUR
910.192	Holder for gauge blocks	112.00

Holder for gauge blocks

- Anodized aluminum.
- Thickness gauge block: 9 mm conform ISO 3650.



ECONOMY LINE ✓

Item No.	Description	Price EUR
906.434	Holder for gauge blocks	22.30

Gloves

Comfortable, flexible, lint-free gloves in two sizes. Ideal for working with gauge blocks and other measuring instruments.

- Excellent thermal insulation.
- Available in sizes M/L and XL.



ECONOMY LINE ✓

Item No.	Description	Price EUR
910.489	Pair of gloves M/L	2.20
910.490	Pair of gloves XL	2.60

Select microfibre cleaning cloth

Microfibre cleaning cloth for gauge blocks. Ideal for measuring rooms.

- Dimensions: 22.5 x 22.5 cm.

Item No.	Description	Price EUR
831.739	Microfibre cleaning cloth	7.30



Plastic cases for gauge blocks

Plastic cases with removeable foam inserts to store gauge blocks safely.
Available in 3 sizes.



ECONOMY LINE ✓

Item No.	Gauge blocks size/mm	Price EUR
906.998	0.50- 13.00	2.70
906.999	13.50- 50.00	3.00
908.808	60.00-100.00	5.90

Wooden cases for gauge block sets

Wooden cases with cutouts and size indications for gauge block sets.

ECONOMY LINE ✓



Item No.	Price EUR	Size mm	Increment mm	Pieces
M32: 910.361	34.80	1.005 1.01 - 1.09 1.1 - 1.9 1 - 9 10 - 30 50	— 0.01 0.1 1 10 —	1 9 9 9 3 1
M47: 910.362	34.10	1.005 1.01 - 1.09 1.1 - 1.9 1 - 24 25 - 100	— 0.01 0.1 1 25	1 9 9 24 4
M87: 910.363	48.00	1.001 - 1.009 1.01 - 1.49 0.5 - 9.5 10 - 100	0.001 0.01 0.5 10	9 49 19 10
M88: 910.364	48.00	1.0005 1.001 - 1.009 1.01 - 1.49 0.5 - 9.5 10 - 100	— 0.001 0.01 0.5 10	1 9 49 19 10
M103: 910.365	54.00	1.005 1.01 - 1.49 0.5 - 24.5 25 - 100	— 0.01 0.5 25	1 49 49 4
M112: 910.366	54.00	1.0005 1.001 - 1.009 1.01 - 1.49 0.5 - 24.5 25 - 100	— 0.001 0.01 0.5 25	1 9 49 49 4



Mitutoyo maintenance kit for steel gauge blocks

Contains all necessary requirements for the use, and maintenance, of steel gauge block.

The maintenance kit consists of:

- whetstone “Cerastone”, 100 x 25 x 12 mm,
- pair of tweezers,
- dust remover,
- cleaning cloths,
- washleather,
- pipette bottle for solvent, 100 ml,
- pair of gloves,
- wooden case.



Item No.	Description	Price EUR
516.650	Maintenance kit for steel gauge blocks	858.00

Mitutoyo micrometer inspection sets

These sets are composed for the inspection of micrometers according DIN 863. Micrometers with a measuring range over 25 mm can be inspected if an extra gauge block of 25, 50 or 75 mm is used in addition to the gauge blocks in these sets. Each set consists of ten special gauge blocks and a plan parallel optical flat.

- Nominal sizes (mm): 2.5 - 5.1 - 7.7 - 10.3 - 12.9 - 15.0 - 17.6 - 20.2 - 22.8 - 25.0.
- Including plan parallel optical flat $\varnothing 30 \times 12$ mm.

- Delivery in a wooden case with a manufacturer measuring report.

516.156

Item No.	Material	Grade	Price EUR
516.107	steel	1	472.00
516.106	steel	0	618.00
516.157	ceramic	1	839.00
516.156	ceramic	0	964.00



Mitutoyo caliper inspection set

For checking the accuracy of DIN 862 or ISO 13385-1: 2011.

- 516.124: steel gauge blocks 30, 41.3 and 131.4 mm (ISO 3650 class 1), setting rings $\varnothing 4$ and $\varnothing 25$ mm.
- 516.526: steel gauge blocks 10, 30, 50 and 125 mm (ISO 3650 class 1), setting rings $\varnothing 4$ and $\varnothing 25$ mm, measuring pin $\varnothing 10$ mm.

- Delivery in a wooden case with a manufacturer measuring report for the gauge blocks.



Item No.	Description	Price EUR
516.124	Inspection set DIN 862	938.00
516.526	Inspection set ISO 13385-1: 2011	1,251.00

Angle gauge block set

Set of twelve hardened steel angle gauge blocks, comprising the angles $\frac{1}{4}^\circ$ (15'), $\frac{1}{2}^\circ$ (30'), 1° , 2° , 3° , 4° , 5° , 10° , 15° , 20° , 25° and 30° . A combination of angle gauge blocks is possible.

- Accuracy: $\pm 30''$.
- Thickness gauge blocks: 6 mm.
- Delivery in a plastic case with a declaration of conformity.



Item No.	Description	Price EUR
909.799	Angle gauge block set	93.00

ECONOMY LINE ✓

Steel measuring balls

Steel measuring balls for measuring e.g. internal tapers.

- Material: chrome alloy steel.
- Hardness: 63 HRC.

- Nominal dimension tolerance: $\pm 3 \mu\text{m}$.
- Roundness: $< 1 \mu\text{m}$.
- Surface roughness: $< 0.05 \mu\text{m}$.
- Two balls of each size.
- Delivery with a declaration of conformity.
- Set 909.647: Delivery in a plastic case.

Item No.	Size mm	Number per size	Price EUR
910.224	1	2	5.30
910.225	2	2	5.30
910.226	3	2	5.30
910.227	4	2	5.30
910.228	5	2	6.60
910.229	6	2	6.60
910.230	7	2	6.60
910.231	8	2	6.60
910.232	9	2	6.60
910.233	10	2	7.50
910.234	11	2	7.50
910.235	12	2	7.90
910.237	13	2	7.90
910.238	14	2	8.30
910.239	15	2	8.30
910.240	16	2	9.10
910.241	17	2	9.10
910.242	18	2	9.10
910.243	19	2	10.50
910.244	20	2	11.70
910.245	21	2	11.70
910.246	22	2	13.10
910.247	23	2	13.10
910.248	24	2	14.40
910.249	25	2	14.40



Set steel measuring balls

ECONOMY LINE ✓

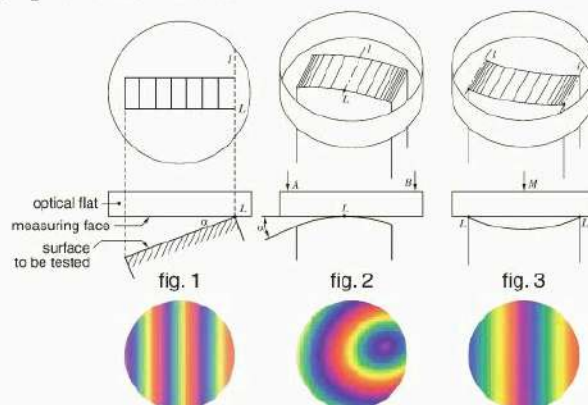
Item No.	Size mm	Incr. mm	Number per size	Total number	Price EUR
909.647	1 - 25	1	2	50	143.00

G11.212 EN 20060702

Select optical flats

Optical flats can be used for inspection of the flatness of reflecting surfaces or for example gauge blocks, settings gauges and other lapped surfaces by optical interference.

- Flatness measuring faces: $\leq 0.10 \mu\text{m}$.
- Wedge angle error: $> 10.0'$ (optical flats, double sided).
- On request with a DAkkS certificate, UKAS acknowledged.
- Delivery in an aluminum case.



Item No.	Diameter mm	Thickness mm	Price EUR
Single optical flats, single sided:			
826.625	30	15	87.00
826.626	45	15	150.00
826.627	50	20	179.00
826.628	60	20	241.00
826.629	75	20	264.00
Single optical flats, double sided:			
827.011	30	15	121.00
826.631	45	15	179.00
826.632	50	20	227.00
826.633	60	20	250.00
826.634	75	20	304.00



Select plan parallel optical flats

Plan parallel optical flats can be used for inspection of the parallelism and flatness of measuring surfaces of micrometers and other measuring instruments. Each set consists of 4 sizes plan parallel optical flats for inspection of micrometers on every fourth rotation of the spindle.

- For micrometers with a spindle pitch of 0.5 mm.
- Sets for micrometers with a measuring range of 0 - 25 mm, 25 - 50 mm, 50 - 75 mm and 75 - 100 mm.
- Diameter: 30 mm.
- On request with a DAkkS certificate, UKAS acknowledged.
- Delivery in an aluminum case.

826.635



Item No.	Thicknesses/mm	Flatness measuring faces:	Parallelism measuring faces:	Price EUR
826.635	12.00/12.12/12.25/12.37	$\leq 0.15 \mu\text{m}$	$\leq 0.3 \mu\text{m}$	352.00
826.636	25.00/25.12/25.25/25.37	$\leq 0.15 \mu\text{m}$	$\leq 0.3 \mu\text{m}$	516.00
827.873	50.00/50.12/50.25/50.37	$\leq 0.20 \mu\text{m}$	$\leq 0.5 \mu\text{m}$	718.00
827.874	75.00/75.12/75.25/75.37	$\leq 0.20 \mu\text{m}$	$\leq 0.5 \mu\text{m}$	939.00
Option:				
826.630	Single plan parallel optical flat, thickness 12.00 mm	$\leq 0.15 \mu\text{m}$	$\leq 0.3 \mu\text{m}$	144.00



Feeler gauges

Feeler gauge sets in a holder, for individual use or in combination to measure slits and gaps as well as checking the amount of clearance in sliding guides, bearings, pistons etc.

- Measuring range: 0.03 - 2.00 mm.
- Blade length: 100 mm.
- Nickel plated handle with locking screw.
- Blade width: 10 mm (except stainless steel models: 12 mm), tapered.
- Accuracy according DIN 2275 T2.
- Also available in brass model (anti-magnetic).



910.020



910.021

ECONOMY LINE ✓

Item No.	Number of blades	Increment(s)				Material	Price EUR
		0.01 mm	0.02 mm	0.05 mm	0.10 mm		
909.904	8			0.05 → 0.30	0.40 → 0.50	hardened steel	2.10
909.905	8			0.05 → 0.30	0.40 → 0.50	stainless steel	5.80
909.906	8			0.05 → 0.30	0.40 → 0.50	brass	7.60
909.907	13			0.05 → 0.30	0.40 → 1.00	hardened steel	2.40
909.908	13			0.05 → 0.30	0.40 → 1.00	stainless steel	6.40
909.909	13			0.05 → 0.30	0.40 → 1.00	brass	11.70
910.019	20			0.05 → 1.00		hardened steel	3.80
910.020	20			0.05 → 1.00		stainless steel	9.60
910.021	20			0.05 → 1.00		brass	18.10
910.022	8	0.03 → 0.10				hardened steel	2.10
910.023	10	0.03 → 0.05		0.10 → 0.30	0.40 → 0.50	hardened steel	2.50
910.024	10				0.10 → 1.00	hardened steel	2.50
910.026	14	0.03 → 0.10		0.15 → 0.30	0.40 → 0.50	hardened steel	2.50
910.027	18	0.05 → 0.10		0.15 → 0.40	0.50 → 1.00	hardened steel	3.50
910.028	19	0.03 → 0.10		0.15 → 0.30	0.40 → 1.00	hardened steel	3.80
910.029	20	0.04 → 0.10		0.15 → 0.50	0.60 → 1.00	hardened steel	3.80
908.978	22	0.03 → 0.05		0.10 → 1.00		hardened steel	4.20
908.979	28	0.03 → 0.10	0.12 → 0.50			hardened steel	6.20
910.034	21			0.05 → 0.10	0.20 → 2.00	hardened steel	6.90

Feeler gauges

- Measuring range: 0.05 - 1.00 mm;
20 blades: 0.05 / 0.10 → 1.00.
- Material: hardened steel.
- Blade width: 12.8 mm.



ECONOMY LINE ✓

Item No.	Blade length/mm	Price EUR
910.030	200	11.40
910.031	300	16.20
910.033	500	26.10



910.031

HELIOS-PREISSER feeler stock coils

Feeler stock coils made of steel.

- Measuring range: 0.005 - 1.00 mm.
- Length: 5 m.
- Width: 13 mm.



856.045



856.030



856.032

Options

Item No.	Description	Price EUR
856.030	Set 0.01 - 0.25 mm	268.00
856.031	Set 0.3 - 1.00 mm	290.00
856.032	Holder for feeler stock coils	3.50

Item No.	Thickness/mm	Price EUR
856.036	0.005	92.00
856.037	0.01	52.00
856.038	0.02	39.90
856.039	0.03	15.10
856.040	0.04	15.10
856.041	0.05	12.70
856.042	0.06	11.10
856.043	0.07	11.10
856.044	0.08	11.10
856.045	0.09	11.10
856.046	0.10	11.10
856.047	0.12	11.10
856.048	0.15	11.10
856.049	0.18	11.10
856.050	0.20	11.10
856.051	0.25	11.10
856.052	0.30	11.10
856.053	0.35	12.70
856.054	0.40	12.70
856.055	0.45	12.70
856.056	0.50	12.70
856.057	0.55	19.10
856.058	0.60	19.10
856.059	0.65	19.10
856.060	0.70	19.10
856.061	0.75	19.10
856.062	0.80	19.10
856.063	0.85	19.10
856.064	0.90	20.30
856.065	0.95	20.30
856.066	1.00	20.30

Gauges / Pin gauges / Thread and tolerance tables



LMW plug gauges

Manufactured according DIN 2245, 2246 and 2247. Available from 0.5 - 160 mm; up to 70 mm with Go and NoGo on one handle, over 70 mm in two parts. Prices are for H7 plug gauges with Go and NoGo ends in hardened steel.

- H7 fit size in hardened steel.
- Available from 0.5 - 160 mm; up to 70 mm with Go and NoGo on one handle, over 70 mm in two parts.
- Including wear allowance at the Go end.

Wear allowance

New gauges are supplemented with a wear allowance on the Go end: z (plus) for plug gauges. Accordingly, the size indicated on the handle is not similar to the measured value of the new Go end.

Example: plug gauge 20 H7

New Go end:

size	20.000 mm
wear allowance (+ z)	0.003 mm
	20.003 mm
manufacturing tolerance	± 0.002 mm
largest value measured	20.005 mm
smallest value measured	20.001 mm

Also available:

- larger sizes,
- without wear allowance,
- many other fit sizes, like H6, H8, P7, G7 etc.,
- hard-chrome plated plug gauges,
- tungsten carbide plug gauges,
- extended plug gauges,
- plug gauges with vent hole,
- plug gauges with easy-entry pilot.



Measuring reports

For all gauges also measuring reports can be ordered.

- ① Manufacturer measuring report (German) per gauge. Stating of product specifications, measured values after production, used traceable measuring devices, measuring inaccuracy and measuring date. A favourable choice when your quality system does not require traceable certificates.
- ② Traceable certificate (Dutch) with measuring reports of the ordered gauges. Besides stating of the measured values the extra assurance of an external inspection.

Item No.	Size H7/mm	Price EUR	Item No.	Size H7/mm	Price EUR	Item No.	Size H7/mm	Price EUR	Item No.	Size H7/mm	Price EUR	Item No.	Size H7/mm	Price EUR
832.101	1	71.00	832.119	10	48.00	832.133	24	70.00	832.151	42	102.00	832.179	70	176.00
832.102	1.5	65.00	832.120	11	50.00	832.134	25	71.00	832.153	44	108.00	832.181	72	184.00
832.103	2	57.00	832.121	12	51.00	832.135	26	73.00	832.154	45	111.00	832.184	75	192.00
832.104	2.5	57.00	832.122	13	53.00	832.136	27	74.00	832.155	46	114.00	832.187	78	201.00
832.105	3	50.00	832.123	14	54.00	832.137	28	76.00	832.156	47	118.00	832.189	80	204.00
832.106	3.5	45.00	832.124	15	56.00	832.139	30	77.00	832.157	48	121.00	832.191	82	219.00
832.107	4	45.00	832.125	16	57.00	832.141	32	83.00	832.159	50	124.00	832.194	85	225.00
832.108	4.5	45.00	832.126	17	59.00	832.142	33	86.00	832.161	52	130.00	832.197	88	235.00
832.109	5	42.00	832.127	18	60.00	832.143	34	88.00	832.164	55	136.00	832.199	90	241.00
832.110	5.5	42.00	832.128	19	62.00	832.144	35	90.00	832.167	58	145.00	832.201	92	247.00
832.111	6	42.00	832.129	20	62.00	832.145	36	91.00	832.169	60	152.00	832.204	95	254.00
832.113	7	43.00	832.130	21	65.00	832.146	37	93.00	832.171	62	158.00	832.207	98	264.00
832.115	8	45.00	832.131	22	67.00	832.147	38	96.00	832.174	65	162.00	832.209	100	270.00
832.117	9	46.00	832.132	23	68.00	832.149	40	99.00	832.177	68	173.00			

Larger sizes available on request.

Plug gauges H7

Manufactured according DIN 7162 and 7164. Available from 1 - 100 mm with Go and NoGo on one handle.

- DIN 7162 and 7164.
- H7 fit size in hardened steel.
- With serial number.
- Delivery with a manufacturer measuring report.
- Individual plug gauges delivered in a plastic tube. Set delivered in a plastic case.
- Including wear allowance at the Go end.

Wear allowance

New gauges are supplemented with a wear allowance on the Go end: z (plus) for plug gauges. Accordingly, the size indicated on the handle is not similar to the measured value of the new Go end.



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Item No.	Size H7 mm	Price EUR	Item No.	Size H7 mm	Price EUR	Item No.	Size H7 mm	Price EUR
911.000	1	35.40	911.023	19	20.70	911.047	47	52.00
911.001	1.5	31.80	911.024	20	22.80	911.048	48	52.00
911.002	2	18.20	911.025	21	22.80	911.049	50	52.00
911.003	2.5	16.90	911.026	22	22.80	911.050	52	60.00
911.004	3	16.90	911.027	23	22.90	911.051	55	60.00
911.005	3.5	16.90	911.028	24	22.90	911.052	58	65.00
911.006	4	16.90	911.029	25	22.90	911.053	60	65.00
911.007	4.5	16.90	911.030	26	25.90	911.054	62	65.00
911.008	5	16.90	911.031	27	25.90	911.055	65	81.00
911.009	5.5	16.90	911.032	28	25.90	911.056	68	81.00
911.010	6	13.60	911.033	30	28.90	911.057	70	85.00
911.011	7	15.30	911.034	32	28.90	911.058	72	85.00
911.012	8	15.30	911.035	33	30.90	911.059	75	94.00
911.013	9	15.30	911.036	34	31.80	911.060	78	94.00
911.014	10	15.30	911.037	35	33.60	911.061	80	99.00
911.015	11	16.40	911.038	36	33.60	911.062	82	118.00
911.016	12	16.40	911.039	37	33.60	911.063	85	118.00
911.017	13	16.40	911.040	38	33.60	911.064	88	118.00
911.018	14	16.40	911.041	40	33.60	911.065	90	125.00
911.019	15	17.90	911.042	42	41.00	911.066	92	129.00
911.020	16	18.80	911.043	44	46.00	911.067	95	132.00
911.021	17	18.80	911.044	45	52.00	911.068	98	142.00
911.022	18	18.80	911.045	46	52.00	911.069	100	146.00

Set plug gauges

Item No.	Description	Price EUR
911.157	Plug gauges (Go + NoGo) H7: 3, 4, 5, 6, 8, 10, 12 mm	116.00

Plug gauges G7 and P7

Manufactured according DIN 7162 and 7164. Available from 1 - 20 mm; with Go and NoGo on one handle.

- DIN 7162 and 7164.
- Fit size in hardened steel.
- Available from 1 - 20 mm; with Go and NoGo on one handle.
- With serial number.
- Delivery in a plastic tube with a manufacturer measuring report.
- Including wear allowance at the Go end.

Wear allowance

New gauges are supplemented with a wear allowance on the Go end: z (plus) for plug gauges. Accordingly, the size indicated on the handle is not similar to the measured value of the new Go end.



911.182



911.158



911.216

ECONOMY LINE ✓

Item No.	Size G7 mm	Price EUR
911.158	1	43.00
911.159	1.5	38.20
911.160	2	21.90
911.161	2.5	20.30
911.162	3	20.30
911.163	3.5	20.30
911.164	4	20.30
911.165	4.5	20.30
911.166	5	20.30
911.167	5.5	20.30
911.168	6	16.40
911.169	7	18.30
911.170	8	18.30
911.171	9	18.30
911.172	10	18.30
911.173	11	19.60
911.174	12	19.60
911.175	13	19.60
911.176	14	19.60
911.177	15	21.50
911.178	16	22.50
911.179	17	22.50
911.180	18	22.50
911.181	19	24.80
911.182	20	27.30



NEW

ECONOMY LINE ✓

Item No.	Size P7 mm	Price EUR
911.200	1	43.00
911.201	1.5	38.20
911.202	2	21.90
911.203	2.5	20.30
911.204	3	20.30
911.205	3.5	20.30
911.206	4	20.30
911.207	4.5	20.30
911.208	5	20.30
911.209	5.5	20.30
911.210	6	16.40
911.211	7	18.30
911.212	8	18.30
911.213	9	18.30
911.214	10	18.30
911.215	11	19.60
911.216	12	19.60
911.217	13	19.60
911.218	14	19.60
911.219	15	21.50
911.220	16	22.50
911.221	17	22.50
911.222	18	22.50
911.223	19	24.80
911.224	20	27.30

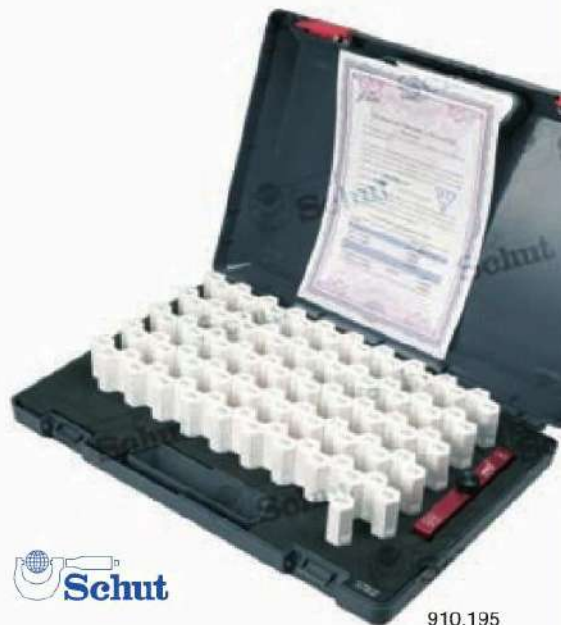
Pin gauges in sets

Hardened steel pin gauges in sets with favourable price-performance ratio, very well suited for workshop use. Delivery in a plastic carrying case with a declaration of conformity and holder for Go/NoGo determination.

- Hardened steel.
- Diameter range: 0.20 - 20.00 mm.
- Increment: 0.01 mm or 0.1 mm.
- Accuracy: ± 0.003 mm.
- Without handle.
- Pin gauges $\geq \varnothing 1.55$ mm with size indication.
- Length: 50 mm.
- Delivery in a plastic carrying case with a declaration of conformity with pin gauges in separate plastic tubes with size indication.
- Delivery with holder with Go/NoGo indication.

ECONOMY LINE ✓

Item No.	Diameter mm	Increment mm	Number per set	Price EUR
910.367	0.20-10.00	0.1	99	182.00
910.368	10.00-20.00	0.1	101	339.00
910.193	0.50- 1.00	0.01	51	125.00
910.194	1.00- 2.00	0.01	101	155.00
910.195	2.00- 3.00	0.01	101	155.00
910.196	3.00- 4.00	0.01	101	155.00
910.197	4.00- 5.00	0.01	101	168.00
910.198	5.00- 6.00	0.01	101	168.00
910.199	6.00- 7.00	0.01	101	171.00
910.200	7.00- 8.00	0.01	101	171.00
910.201	8.00- 9.00	0.01	101	177.00
910.202	9.00-10.00	0.01	101	177.00
910.203	10.00-11.00	0.01	101	227.00
910.204	11.00-12.00	0.01	101	227.00
910.205	12.00-13.00	0.01	101	266.00
910.206	13.00-14.00	0.01	101	266.00
910.207	14.00-15.00	0.01	101	286.00
910.208	15.00-16.00	0.01	101	286.00
910.209	16.00-17.00	0.01	101	345.00
910.210	17.00-18.00	0.01	101	345.00
910.211	18.00-19.00	0.01	101	394.00
910.212	19.00-20.00	0.01	101	394.00
Holders for Go/NoGo determination:				
910.213	Pin gauge handle			18.80
	Go-NoGo 0.5-13 mm			
910.214	Pin gauge handle			18.80
	Go-NoGo 13-20 mm			
Holders for Go/NoGo determination:				
910.378	0.30- 1.50			18.80
910.379	1.20- 6.50			23.20
910.380	5.00-14.00			28.80
910.381	12.00-16.50			34.50
910.382	14.00-19.50			41.00
910.383	18.00-22.00			46.00



910.195



910.213



910.379

910.378

Pin gauges in tool trolley

Hardened steel pin gauges in a set with favourable price-performance ratio, very well suited for workshop use. Delivery in tool trolley with a declaration of conformity and holders for Go/NoGo determination.

- Hardened steel.
- Diameter range: 0.50 - 12.00 mm.
- Total amount of pin gauges: 1151 pieces.
- Increment: 0.01 mm.
- Accuracy: ± 0.003 mm.
- Without handle.
- Pin gauges $\geq \varnothing 1.55$ mm with size indication.
- Length: 50 mm.
- Delivery with three holders with Go/NoGo indication (910.378, 910.379 and 910.380).
- Dimensions tool trolley: 670 x 350 x 540 mm.
- Total weight: 63 kg.

- Delivery in a tool trolley with a declaration of conformity with pin gauges in separate plastic cases with size indication.
- With safetylock per drawer.
- Tool trolley with robust wheels and extendable feet.



Delivery ex Groningen, Netherlands



ECONOMY LINE ✓

Item No.	Description	Price EUR
910.460	Set with 1151 pin gauges and 3 holders in a tool trolley	1,968.00



Tool trolley

Tool trolley with ribbed rubber insert for storage of reference gauges such as setting rings, plug gauges and gauge blocks.

Delivery ex Groningen, Netherlands

ECONOMY LINE ✓

Item No.	Description	Price EUR
910.461	Tool trolley	346.00

012.310.EN.20060702

Martin + Tschopp pin gauges

Swiss made, hardened and ground steel pin gauges, conforms to DIN 2269; available **separately and in sets**.

- Hardened, ground, and seasoned steel (HV 760 ± 50).
- Diameter range:
without handle: 0.06 - 20.00 mm,
with handle: 0.06 - 10.00 mm.
- Increment: 0.01 mm.
- Accuracy: ±0.0015 mm.
- Pin gauges ø 5.00 - 20.00 mm
without handle: indication on head.



Also available:

With an accuracy of ±0.0003 or ±0.001 mm;
– hardened steel ø 0.06 - 20.00 mm,
– tungsten carbide or ceramics ø 0.50 - 9.99 mm,
with 0.01 mm increments. The length may deviate. More information available on request.

Diameter/mm	Length/mm	Price EUR
Pin gauge without handle:		
0.06 - 0.09 ¹	30	124.00
0.10 - 0.19 ¹	40	89.00
0.20 - 0.29 ¹	40	56.00
0.30 - 0.49 ¹	40	31.40
0.50 - 0.99 ¹	40	17.70
1.00 - 2.99	70	13.70
3.00 - 4.00	70	17.70
4.01 - 5.00	70	17.70
5.01 - 5.99	70	17.70
6.00 - 9.99	70	23.40
10.00 - 11.99	70	28.20
12.00 - 13.99	70	32.70
14.00 - 15.99	70	41.00
16.00 - 18.99	70	
19.00 - 20.00	70	58.00
Pin gauge with handle²:		
0.06 - 0.09 ¹	23	139.00
0.10 - 0.19 ¹	33	105.00
0.20 - 0.29 ¹	33	71.00
0.30 - 0.49 ¹	33	41.00
0.50 - 0.99 ¹	33	26.90
1.00 - 2.99	62	22.90
3.00 - 4.00	62	42.00
4.01 - 5.00	62	42.00
5.01 - 5.99	62	42.00
6.00 - 10.00	62	48.00

¹ Delivered in a plastic transport case.

² The length here indicates the measuring length and not the total length of the pin gauges.

More information: www.schut.com/PDFs/2025-p386-EN.pdf

Item No.	Description	Price EUR
Wooden case (plastic tubes not included):		
842.103	For 50 pin gauges ø 0.06 - 0.99 mm without handle	236.00
842.104	For 50 pin gauges ø 1.00 - 3.00 mm without handle	236.00
842.105	For 50 pin gauges ø 3.00 - 4.00 mm without handle	116.00
842.106	For 50 pin gauges ø 4.00 - 7.00 mm without handle	116.00
842.107	For 50 pin gauges ø 7.00 - 9.00 mm without handle	116.00
842.108	For 50 pin gauges ø 9.00 - 10.00 mm without handle	116.00
842.109	For 100 pin gauges ø 0.06 - 0.99 mm without handle	444.00
842.110	For 100 pin gauges ø 1.00 - 3.00 mm without handle	444.00
842.111	For 100 pin gauges ø 3.00 - 4.00 mm without handle	205.00
842.112	For 100 pin gauges ø 4.00 - 7.00 mm without handle	205.00
842.113	For 100 pin gauges ø 7.00 - 9.00 mm without handle	205.00
842.114	For 100 pin gauges ø 9.00 - 10.00 mm without handle	205.00
842.115	For 50 pin gauges ø 0.06 - 2.00 mm with handle	138.00
842.116	For 50 pin gauges ø 2.00 - 3.50 mm with handle	138.00
842.117	For 50 pin gauges ø 3.50 - 6.00 mm with handle	138.00
842.118	For 50 pin gauges ø 6.00 - 9.00 mm with handle	138.00
842.119	For 50 pin gauges ø 9.00 - 10.00 mm with handle	138.00
Plastic tubes for pin gauges:		
833.066 ¹	Without handle up to ø 0.99 mm	2.40
838.224 ²	Without handle ø 1.00 - 7.00 mm	2.40
838.089	With handle up to ø 0.99 mm	2.30

¹ Standard supplied for cases: 842.103 and 842.109.

² Standard supplied for cases: 842.104 and 842.110.



NEW

Martin + Tschopp pin gauges without handle in sets

- Hardened, ground, and seasoned steel (HV 760 ± 50).
- Diameter range: 0.10 - 10.00 mm.
- Increment: 0.01 mm.
- Accuracy: ±0.0015 mm.
- Pin gauges ø 5.00 - 10.00 mm: indication on head.
- Length: ø 0.10 - 0.99 mm: 40 mm, ø 1.00 - 10.00 mm: 70 mm.
- Sets with larger diameters and/or with handle are available on request.



Set pin gauges without handle

Item No.	Diameter mm	Increment mm	Number per set	Price* EUR
833.901	0.10 - 1.00	0.01	91	2,190.00
833.902	1.00 - 2.00	0.01	101	1,456.00
833.903	2.00 - 3.00	0.01	101	1,443.00
833.904	3.00 - 4.00	0.01	101	1,790.00
833.905	4.00 - 5.00	0.01	101	1,790.00
833.906	5.00 - 6.00	0.01	101	1,790.00
833.907	6.00 - 7.00	0.01	101	2,190.00
833.908	7.00 - 8.00	0.01	101	2,190.00
833.909	8.00 - 9.00	0.01	101	2,190.00
833.910	9.00 - 10.00	0.01	101	2,190.00
834.190	1.00 - 10.00	0.10	91	1,724.00

* Prices per set, in a wooden case.



Individual pin gauges without handle

Martin + Tschopp pin gauges accessories

Interchangeable handles

- For pin gauges without handle.



Item No.	For diameter/mm	Price EUR
836.043	0.40 - 0.80	9.90
834.172	0.80 - 1.30	9.90
836.044	1.30 - 1.80	9.90
836.045	1.80 - 2.30	9.90
837.615	2.30 - 2.80	9.90
837.956	2.80 - 3.30	9.90
837.957	3.30 - 3.80	9.90
837.958	3.80 - 4.30	9.90
837.959	4.30 - 4.80	9.90
837.960	4.80 - 5.30	9.90

Holders for Go/NoGo determination

- For two pin gauges without handle.
- With NoGo indication.



Item No.	For diameter/mm	Price EUR
833.310	1.00 - 2.00	33.80
833.311	2.00 - 4.00	37.50
833.312	4.00 - 6.00	69.00
833.313	6.00 - 8.00	93.00
833.314	8.00 - 10.00	105.00



Martin + Tschopp plug gauges

Ground and lapped, hardened tool steel plug gauges with a high accuracy. Available per piece and in sets. Swiss made.

- Diameter range: $\varnothing 0.06 - 10.00$ mm.
- Increment: 0.01 mm.
- Accuracy: ± 0.0005 mm.
- Hardened tool steel (HV 760 $\pm$ 50). Ground and lapped.
- Measuring length (and total length):
 - $\varnothing 0.06 - 0.30$ mm: 2 mm (34 mm),
 - $\varnothing 0.31 - 0.50$ mm: 3.5 mm (35.5 mm),
 - $\varnothing 0.51 - 1.50$ mm: 5 mm (37 mm),
 - $\varnothing 1.51 - 2.00$ mm: 6 mm (38 mm),
 - $\varnothing 2.01 - 3.50$ mm: 8 mm (43 mm),
 - $\varnothing 3.51 - 6.00$ mm: 10 mm (55 mm),
 - $\varnothing 6.01 - 8.00$ mm: 14 mm (59 mm),
 - $\varnothing 8.01 - 10.00$ mm: 18 mm (63 mm).
- Size indication on the insulated handle.
- Also available in tungsten carbide and ceramic with an accuracy of ± 0.001 mm.



Per piece

Diameter/mm	Price EUR
0.06 - 0.09	35.90
0.10 - 0.19	28.30
0.20 - 0.29	25.80
0.30 - 0.49	16.30
0.50 - 0.99	15.80
1.00 - 2.99	
3.00 - 5.99	20.70
6.00 - 10.00	28.20

Sets

Item No.	Diameter mm	Pieces	Price EUR
833.761	0.06 - 0.50	45	1,176.00
833.762	0.51 - 1.00	50	927.00
833.763	1.01 - 1.50	50	907.00
833.764	1.51 - 2.00	50	907.00
833.765	2.01 - 2.50	50	907.00
833.766	2.51 - 3.00	50	907.00
833.767	3.01 - 3.50	50	1,101.00
833.768	3.51 - 4.00	50	1,101.00
837.311	4.01 - 4.50	50	1,101.00
837.312	4.51 - 5.00	50	1,101.00
837.313	5.01 - 5.50	50	1,101.00
837.314	5.51 - 6.00	50	1,101.00
837.315	6.01 - 6.50	50	1,568.00
837.316	6.51 - 7.00	50	1,568.00
837.317	7.01 - 7.50	50	1,568.00
837.318	7.51 - 8.00	50	1,568.00
837.319	8.01 - 8.50	50	1,568.00
837.320	8.51 - 9.00	50	1,568.00
837.321	9.01 - 9.50	50	1,568.00
837.322	9.51 - 10.00	50	1,568.00



More information: www.schut.com/PDFs/2025-p388-EN.pdf

Select setting rings

Setting rings, manufactured according DIN 2250 form C, 1 to 4 mm.

The size is indicated on the ring to three decimal places.

For all gauges also measuring reports can be ordered.

SELECT



Item No.	Size/mm	Price EUR
830.001	1	249.00
830.002	1.2	238.00
830.003	1.5	229.00
830.004	1.8	222.00
830.005	2	214.00
830.006	2.2	207.00
830.007	2.5	199.00
830.008	2.8	192.00
830.009	3	83.00
830.010	4	38.50

Setting rings

Manufactured according DIN 2250 form C. Available from 3 - 200 mm.

- DIN 2250 form C.
- Material: hardened steel.
- The size is indicated on the setting rings to three decimal places.
- With serial number.
- Delivery with a manufacturer measuring report.
- Individual setting rings from 3 - 32 mm: delivery in a plastic case, individual setting rings from 33 - 200 mm: delivery in a cardboard case.



ECONOMY LINE ✓

Item No.	Size mm	Price EUR	Item No.	Size mm	Price EUR	Item No.	Size mm	Price EUR
911.070	3	33.20	911.099	33	45.00	911.131	88	121.00
911.071	4	33.20	911.100	34	45.00	911.132	90	121.00
911.072	5	33.20	911.101	35	45.00	911.133	92	121.00
911.073	6	29.50	911.102	36	47.00	911.134	95	130.00
911.074	7	29.50	911.103	37	47.00	911.135	98	149.00
911.075	8	29.50	911.104	38	47.00	911.136	100	149.00
911.076	9	29.50	911.105	40	47.00	911.137	105	211.00
911.077	10	29.50	911.106	42	54.00	911.138	110	211.00
911.079	11	32.20	911.107	44	54.00	911.139	115	250.00
911.080	12	32.20	911.108	45	54.00	911.140	120	260.00
911.081	13	32.20	911.109	46	64.00	911.141	125	271.00
911.082	14	32.20	911.110	47	64.00	911.142	130	282.00
911.083	15	32.20	911.114	48	64.00	911.143	135	293.00
911.084	16	34.70	911.115	50	64.00	911.144	140	303.00
911.085	17	34.70	911.116	52	71.00	911.145	145	315.00
911.086	18	34.70	911.117	55	71.00	911.146	150	326.00
911.087	19	34.70	911.118	58	74.00	911.147	155	355.00
911.088	20	34.70	911.120	60	74.00	911.148	160	385.00
911.089	21	39.40	911.121	62	77.00	911.149	165	414.00
911.090	22	39.40	911.122	65	77.00	911.150	170	444.00
911.091	23	39.40	911.123	68	86.00	911.151	175	474.00
911.092	24	39.40	911.124	70	86.00	911.152	180	504.00
911.093	25	39.40	911.125	72	92.00	911.153	185	544.00
911.094	26	39.40	911.126	75	92.00	911.154	190	587.00
911.095	27	39.40	911.127	78	92.00	911.155	195	642.00
911.096	28	39.40	911.128	80	92.00	911.156	200	680.00
911.097	30	39.40	911.129	82	111.00			
911.098	32	45.00	911.130	85	111.00			

LMW setting rings

Setting rings, manufactured according DIN 2250 form C.

- Material: hardened steel.
- The size is indicated on the setting rings to three decimal places to 100 mm. From 100 mm the nominal size is indicated in mm and separately the deviation in μm .
- Price on request up to 3 mm.
- Optional: Manufacturer measuring report (German). Stating of product specifications, measured values after production.
- Optional: Traceable certificate (English) with measuring reports of the ordered gauges. Extra assurance of an external inspection.

Also available:

- intermediate and larger sizes,
- Higher accuracy,
- in tungsten carbide from 3 - 38 mm,
- form B rings for pneumatic measuring tools,
- with coating,
- Go and NoGo limit ring gauges.



Item No.	Size mm	Price EUR	Item No.	Size mm	Price EUR	Item No.	Size mm	Price EUR	Item No.	Size mm	Price EUR
832.970	1	305.00	832.431	23	61.00	832.463	55	111.00	832.511	115	292.00
832.971	1.2	305.00	832.432	24	62.00	832.464	56	114.00	832.512	120	304.00
832.972	1.5	305.00	832.433	25	64.00	832.466	58	116.00	832.513	125	317.00
832.973	1.8	305.00	832.434	26	65.00	832.468	60	118.00	832.514	130	329.00
832.974	2	305.00	832.435	27	65.00	832.470	62	123.00	832.515	135	342.00
832.975	2.2	305.00	832.436	28	66.00	832.472	64	133.00	832.516	140	354.00
832.976	2.5	305.00	832.437	29	67.00	832.473	65	136.00	832.517	145	367.00
832.977	2.8	305.00	832.438	30	68.00	832.474	66	138.00	832.518	150	381.00
832.402	3	243.00	832.439	31	69.00	832.476	68	141.00	832.978	155	415.00
832.404	3.5	54.00	832.440	32	70.00	832.478	70	144.00	832.519	160	450.00
832.406	4	53.00	832.441	33	70.00	832.480	72	149.00	832.979	165	484.00
832.407	4.5	53.00	832.442	34	71.00	832.482	74	156.00	832.520	170	519.00
832.408	5	51.00	832.443	35	72.00	832.483	75	160.00	832.521	175	553.00
832.410	6	51.00	832.444	36	73.00	832.484	76	163.00	832.522	180	588.00
832.412	7	51.00	832.445	37	74.00	832.486	78	167.00	832.980	185	623.00
832.414	8	51.00	832.446	38	75.00	832.488	80	169.00	832.523	190	657.00
832.416	9	51.00	832.447	39	76.00	832.490	82	178.00	832.524	195	692.00
832.418	10	51.00	832.448	40	78.00	832.492	84	186.00	832.525	200	726.00
832.419	11	51.00	832.449	41	80.00	832.493	85	190.00	832.981	210	763.00
832.420	12	53.00	832.450	42	82.00	832.494	86	203.00	832.982	220	801.00
832.421	13	54.00	832.451	43	85.00	832.496	88	207.00	832.983	230	838.00
832.422	14	54.00	832.452	44	86.00	832.498	90	212.00	832.984	240	875.00
832.423	15	55.00	832.453	45	87.00	832.500	92	219.00	832.527	250	1,022.00
832.424	16	56.00	832.454	46	89.00	832.502	94	233.00	832.985	260	1,063.00
832.425	17	57.00	832.455	47	91.00	832.503	95	239.00	832.986	270	1,104.00
832.426	18	57.00	832.456	48	93.00	832.504	96	245.00	832.987	280	1,146.00
832.427	19	58.00	832.457	49	98.00	832.506	98	249.00	832.988	290	1,188.00
832.428	20	59.00	832.458	50	99.00	832.508	100	253.00	832.529	300	1,230.00
832.429	21	60.00	832.460	52	101.00	832.509	105	266.00			
832.430	22	61.00	832.462	54	108.00	832.510	110	279.00			

LMW taper gauges

To increase the already large capacity to transmit moments, some taper gauges are furnished with a lip which functions as catch lock.



Morse taper gauges

Indica- tion Morse	Without lip, DIN 229				With lip, DIN 230			
	Item No.	Price EUR	Item No.	Price EUR	Item No.	Price EUR	Item No.	Price EUR
	Plug:		Ring:		Plug:		Ring:	
0	832.531	86.00	832.532	214.00	832.552	124.00	832.553	334.00
1	832.533	90.00	832.534	209.00	832.554	127.00	832.555	328.00
2	832.535	101.00	832.536	203.00	832.556	144.00	832.557	321.00
3	832.537	120.00	832.538	246.00	832.558	174.00	832.559	385.00
4	832.539	150.00	832.540	305.00	832.560	214.00	832.561	475.00
5	832.541	223.00	832.542	412.00	832.562	300.00	832.563	642.00
6	832.543	302.00	832.544	653.00	832.564	442.00	832.565	1,053.00

Metric taper gauges

Indica- tion metric	Without lip, DIN 234				With lip, DIN 235			
	Item No.	Price EUR	Item No.	Price EUR	Item No.	Price EUR	Item No.	Price EUR
	Plug:		Ring:		Plug:		Ring:	
4	804.001	110.00	804.011	343.00	–		–	
6	804.002	110.00	804.012	343.00	–		–	
80	804.003	531.00	804.013	1,117.00	804.021	696.00	804.031	1,818.00
100	804.004	829.00	804.014	1,504.00	804.022	1,094.00	804.032	2,470.00
120	804.005	1,244.00	804.015	2,350.00	804.023	1,581.00	804.033	3,520.00

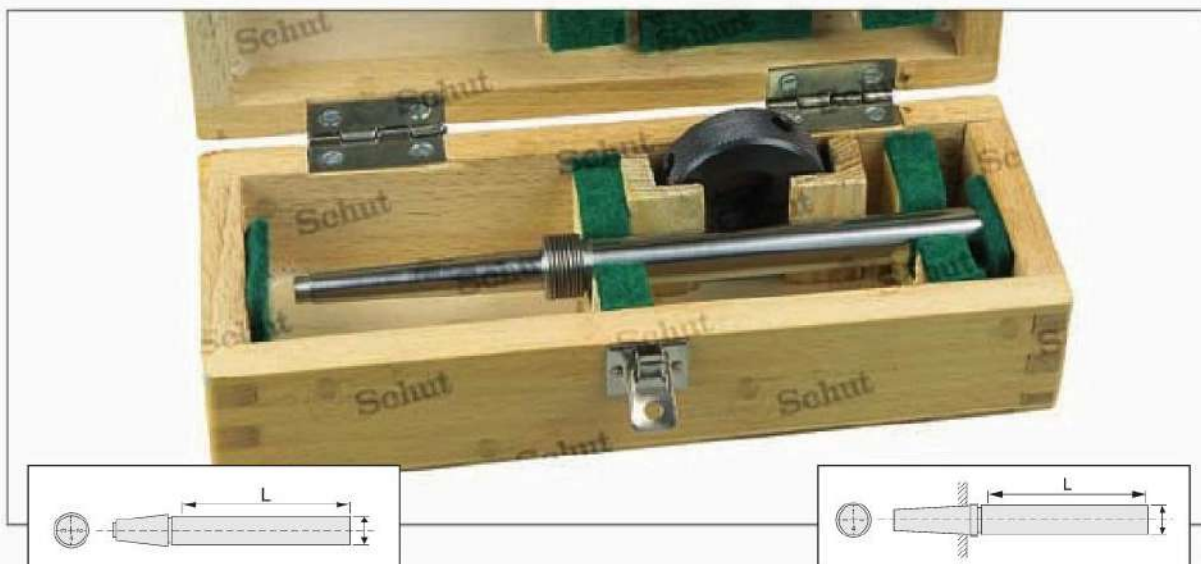
Short taper gauges

Indica- tion SK	Plug, DIN 2079		Ring, DIN 2080	
	Item No.	Price EUR	Item No.	Price EUR
30	832.568	193.00	832.569	310.00
40	832.570	236.00	832.571	407.00
50	832.572	332.00	832.573	674.00
60	832.574	669.00	832.575	1,145.00



LMW measuring mandrels

The cylinders are hollow and have four marks on the cylinder wall near the thread and numbered marks in successive distances of 90° on the face. The cylinder and the front face are ground and lapped. The hardness is (60 ± 2) HRc.



Measuring mandrels with internal thread, without external screw thread and nut

Item No.	Cone	Dimensions cylinder Ø/mm	length/mm	Price EUR
832.591	Sc 20	24	150	
832.592	Sc 30	32	200	
832.593	Sc 30	32	300	
832.594	Sc 40	40	300	
832.595	Sc 45	40	300	
832.596	Sc 50	40	300	
832.597	Sc 50	63	500	

Specifications of the accuracy:

straightness of the cylinder $\leq 3 \mu\text{m}$, out of roundness $\leq 3 \mu\text{m}$, eccentricity $\leq 3 \mu\text{m}$.

Measuring mandrels without draw bar thread, with external screw thread and nut

Item No.	Cone	Dimensions cylinder Ø/mm	length/mm	Price EUR
832.581	Mc 0	12	75	
832.582	Mc 1	12	75	
832.583	Mc 2	24	150	
832.584	Mc 3	32	200	
832.585	Mc 4	40	300	
832.586	Mc 5	40	300	
832.587	Mc 6	63	500	
832.588	Mec 80	80	500	

Other models are available.

LMW gauges for keyway depths on shafts

- Available in all common fits.
- Prices available on request.



LMW thread plug and ring gauges

Hardened steel thread plug gauges and thread ring gauges. Manufactured according ISO 1502 (DIN 13). All gauges on this page have the most standard pitch.

- Hardened steel LMW gauges of high quality.
- ISO 1502 (DIN 13).
- Tolerances thread plug gauges up to and incl. M1,4 5H and above that 6H, thread ring gauges up to and incl. M1,4 6h and above that 6g.
- Other tolerances, sizes, kinds of threads, left-hand screw thread, sets and special screw threads as per your design are available on request.
- Optional: Manufacturer measuring report (German). Stating of product specifications, measured values after production.
- Optional: Traceable certificate (English) with measuring reports of the ordered gauges. Extra assurance of an external inspection.



For metric screw thread with standard pitch

Indication M...	Thread plug Go/NoGo	Price EUR	Thread ring Go	Price EUR	Thread ring NoGo	Price EUR
1 x 0.25	832.602	207.00	832.603	148.00	804.393	148.00
1.2 x 0.25	805.131	198.00	832.605	140.00	807.942	140.00
1.4 x 0.3	806.578	175.00	832.607	129.00	808.391	129.00
1.6 x 0.35	832.608	166.00	832.609	113.00	804.980	113.00
1.8 x 0.35	832.612	144.00	832.613	100.00	822.055	100.00
2 x 0.4	832.614	144.00	832.615	100.00	803.090	100.00
2.2 x 0.45	832.616	132.00	832.617	89.00	811.036	89.00
2.5 x 0.45	832.620	124.00	832.621	76.00	832.916	76.00
3 x 0.5	832.624	70.00	832.625	55.00	832.853	55.00
3.5 x 0.6	832.626	68.00	832.627	51.00	803.091	51.00
4 x 0.7	832.628	65.00	832.629	50.00	832.854	50.00
4.5 x 0.75	832.630	65.00	832.631	50.00	805.496	50.00
5 x 0.8	832.632	63.00	832.633	50.00	832.855	50.00
6 x 1	832.636	61.00	832.637	50.00	832.856	50.00
8 x 1.25	832.640	63.00	832.641	51.00	832.857	51.00
10 x 1.5	832.644	68.00	832.645	59.00	832.858	59.00
12 x 1.75	832.648	72.00	832.649	69.00	832.859	69.00
14 x 2	832.650	78.00	832.651	76.00	802.014	76.00
16 x 2	832.652	83.00	832.653	84.00	803.039	84.00
18 x 2.5	832.654	90.00	832.655	102.00	802.016	102.00
20 x 2.5	832.656	96.00	832.657	113.00	802.009	113.00
22 x 2.5	832.658	102.00	832.659	124.00	832.860	124.00
24 x 3	832.660	115.00	832.661	132.00	802.022	132.00
27 x 3	832.662	128.00	832.663	147.00	803.358	147.00
30 x 3.5	832.664	141.00	832.665	162.00	803.058	162.00
33 x 3.5	832.666	154.00	832.667	177.00	803.607	177.00
36 x 4	832.668	167.00	832.669	190.00	822.112	190.00
39 x 4	832.670	184.00	832.671	207.00	801.595	207.00



832.648



832.649



832.859



805.806



805.807

Indication M...	Thread plug Go	Price EUR	Thread plug NoGo	Price EUR	Thread ring Go	Price EUR	Thread ring NoGo	Price EUR
42 x 4.5	832.001	111.00	832.002	100.00	832.673	224.00	822.115	224.00
45 x 4.5	805.000	120.00	805.001	108.00	832.675	238.00	803.768	238.00
48 x 5	805.002	129.00	805.003	118.00	832.677	252.00	802.328	252.00
52 x 5	805.004	138.00	805.005	125.00	832.679	271.00	806.915	271.00
56 x 5.5	805.006	153.00	805.007	138.00	832.681	290.00	806.712	290.00
60 x 5.5	805.008	162.00	805.009	147.00	832.683	310.00	806.916	310.00

Extra: www.schut.com/PDFs/2025-p393-EN.pdf

LMW thread plug and ring gauges (continued)

For metric screw thread with pitch 0.5

Indication M... x 0.5	Thread plug Go/NoGo	Price EUR	Thread ring Go	Price EUR	Thread ring NoGo	Price EUR
5	832.687	131.00	832.688	83.00	803.106	83.00
6	832.689	128.00	832.690	85.00	802.015	85.00
8	832.691	131.00	832.692	89.00	803.549	89.00
10	832.693	139.00	832.694	98.00	822.108	98.00
12	832.695	150.00	832.696	112.00	803.107	112.00
14	822.110	160.00	822.111	123.00	801.720	123.00
16	822.113	168.00	822.114	134.00	809.491	134.00
18	822.116	176.00	822.117	148.00	801.536	148.00
20	822.119	191.00	822.120	161.00	804.936	161.00



832.693



832.694

For metric screw thread with pitch 0.75

Indication M... x 0.75	Thread plug Go/NoGo	Price EUR	Thread ring Go	Price EUR	Thread ring NoGo	Price EUR
6	832.700	72.00	832.701	59.00	801.781	59.00
8	832.702	76.00	832.703	62.00	803.621	62.00
10	832.704	79.00	832.705	68.00	832.718	68.00
12	832.706	83.00	832.707	76.00	803.512	76.00
14	832.708	90.00	832.709	84.00	809.464	84.00
16	832.710	97.00	832.711	93.00	801.438	93.00
18	832.712	102.00	832.713	106.00	822.136	106.00
20	832.714	109.00	832.715	113.00	801.811	113.00
22	822.160	122.00	822.161	124.00	807.967	124.00
24	822.163	130.00	822.164	132.00	846.144	132.00
26	822.166	138.00	822.167	143.00	846.145	143.00
28	822.169	146.00	822.170	153.00	808.724	153.00
30	822.172	158.00	822.173	162.00	803.354	162.00



832.710



801.438

For metric screw thread with pitch 1

Indication M... x 1	Thread plug Go/NoGo	Price EUR	Thread ring Go	Price EUR	Thread ring NoGo	Price EUR
8	832.721	70.00	832.722	57.00	802.017	57.00
10	832.723	73.00	832.724	64.00	802.018	64.00
11	832.725	77.00	832.726	66.00	803.420	66.00
12	832.727	80.00	832.728	72.00	802.019	72.00
14	832.729	84.00	832.730	78.00	803.105	78.00
16	832.731	90.00	832.732	85.00	802.020	85.00
18	832.733	94.00	832.734	100.00	803.168	100.00
20	832.735	100.00	832.736	106.00	802.021	106.00
22	832.737	111.00	832.738	119.00	832.911	119.00
24	822.210	120.00	822.211	125.00	804.946	125.00
25	822.214	122.00	822.215	129.00	801.686	129.00
26	822.218	126.00	822.219	132.00	806.639	132.00
27	822.222	130.00	822.223	136.00	803.299	136.00
28	822.226	133.00	822.227	141.00	801.719	141.00
30	822.230	147.00	822.231	150.00	803.553	150.00



822.227



822.226

LMW thread plug and ring gauges (continued)

For metric screw thread with pitch 1.5

Indication M... x 1.5	Thread plug Go/NoGo	Price EUR	Thread ring Go	Price EUR	Thread ring NoGo	Price EUR
12	832.742	72.00	832.743	71.00	803.035	71.00
14	832.744	77.00	832.745	76.00	803.355	76.00
16	832.746	81.00	832.747	83.00	803.244	83.00
18	832.748	85.00	832.749	96.00	803.245	96.00
20	832.750	92.00	832.751	103.00	803.193	103.00
22	832.752	101.00	832.753	111.00	832.912	111.00
24	832.754	108.00	832.755	119.00	832.758	119.00
25	822.270	111.00	822.271	122.00	803.040	122.00
26	822.274	115.00	822.275	126.00	822.276	126.00
27	822.278	118.00	822.279	130.00	803.552	130.00
28	822.282	122.00	822.283	132.00	803.976	132.00
30	822.286	133.00	822.287	141.00	822.068	141.00
32	822.290	134.00	822.291	149.00	803.332	149.00
33	822.294	138.00	822.295	153.00	803.719	153.00
34	822.298	142.00	822.299	156.00	822.300	156.00
35	822.302	145.00	822.303	159.00	803.092	159.00
36	822.306	147.00	822.307	163.00	803.261	163.00
38	822.310	159.00	822.311	171.00	803.302	171.00
39	822.314	161.00	822.315	175.00	804.305	175.00
40	822.318	170.00	822.319	180.00	804.212	180.00



832.742



832.743



803.035

Indication M... x 1.5	Thread plug Go	Price EUR	Thread plug NoGo	Price EUR	Thread ring Go	Price EUR	Thread ring NoGo	Price EUR
42	801.913	98.00	805.010	89.00	822.323	188.00	800.019	188.00
45	801.756	105.00	801.757	96.00	822.327	198.00	803.720	198.00
48	805.011	110.00	805.012	100.00	822.331	211.00	803.410	211.00
50	805.013	114.00	805.014	103.00	822.335	217.00	822.336	217.00

For metric screw thread with pitch 2

Indication M... x 2	Thread plug Go/NoGo	Price EUR	Thread ring Go	Price EUR	Thread ring NoGo	Price EUR
20	822.374	92.00	822.375	103.00	807.881	103.00
22	822.378	101.00	822.379	111.00	804.468	111.00
24	822.382	108.00	822.383	119.00	803.274	119.00
26	822.386	115.00	822.387	126.00	825.699	126.00
28	822.390	122.00	822.391	132.00	803.501	132.00
30	822.394	133.00	822.395	141.00	822.396	141.00
32	822.398	134.00	822.399	149.00	804.042	149.00
34	822.402	142.00	822.403	156.00	824.822	156.00
36	822.406	147.00	822.407	163.00	803.956	163.00
38	822.410	159.00	822.411	171.00	806.996	171.00
40	822.414	170.00	822.415	180.00	803.781	180.00



801.677



804.234



822.420

Indication M... x 2	Thread plug Go	Price EUR	Thread plug NoGo	Price EUR	Thread ring Go	Price EUR	Thread ring NoGo	Price EUR
42	801.677	98.00	804.234	89.00	822.419	188.00	822.420	188.00
45	805.015	105.00	805.016	96.00	822.423	198.00	803.577	198.00
48	801.604	110.00	805.017	100.00	822.427	211.00	809.611	211.00
50	805.018	114.00	805.019	103.00	822.431	217.00	806.432	217.00

LMW thread plug and ring gauges (continued)

Hardened steel thread plug gauges and thread ring gauges. Manufactured according DIN EN ISO 228 (BSPP).

For non-sealing fixing pipe thread (G = Gas)

Indication G..."	Thread plug Go/NoGo	Price EUR	Thread ring Go	Price EUR	Thread ring NoGo	Price EUR
1/8	832.791	75.00	832.792	65.00	803.276	65.00
1/4	832.793	83.00	832.794	77.00	803.316	77.00
3/8	832.795	95.00	832.796	100.00	832.832	100.00
1/2	832.797	108.00	832.798	119.00	803.052	119.00
5/8	832.799	116.00	832.800	127.00	803.421	127.00
3/4	832.801	126.00	832.802	139.00	832.833	139.00
7/8	832.803	144.00	832.804	155.00	803.488	155.00
1	832.805	150.00	832.806	171.00	803.053	171.00



Indication G..."	Thread plug Go	Price EUR	Thread plug NoGo	Price EUR	Thread ring Go	Price EUR	Thread ring NoGo	Price EUR
1/8	805.020	99.00	805.021	90.00	832.808	194.00	822.020	194.00
1/4	805.022	105.00	805.023	95.00	832.810	214.00	832.831	214.00
1/2	805.024	122.00	805.025	110.00	832.814	242.00	832.834	242.00
3/4	805.026	137.00	805.027	124.00	832.818	269.00	805.087	269.00
2	805.028	152.00	805.029	138.00	832.820	296.00	832.835	296.00
2 1/4	805.030	165.00	805.031	150.00	832.822	319.00	806.478	319.00
2 1/2	822.873	192.00	822.874	173.00	832.824	365.00	803.748	365.00
2 3/4	805.032	210.00	805.033	190.00	832.826	393.00	846.146	393.00
3	803.600	225.00	803.601	204.00	832.828	426.00	803.940	426.00

Hardened steel tapered thread plug and thread ring gauges for sealing pipe thread.
Manufactured according DIN 2999¹.

For sealing pipe thread

Indication R..."	Thread plug Go/NoGo	Price EUR	Thread ring Go/NoGo	Price EUR
1/8	832.927	188.00	832.928	115.00
1/4	832.929	200.00	832.930	125.00
3/8	832.931	215.00	832.932	151.00
1/2	832.933	234.00	832.934	181.00
3/4	832.935	261.00	832.936	206.00
1	832.937	302.00	832.938	223.00
1 1/4	832.939	362.00	832.940	265.00
1 1/2	832.941	407.00	832.942	323.00
2	832.943	501.00	832.944	361.00

Larger sizes available on request



¹ DIN 2999 is replaced with DIN EN 10226 (ISO 7).

LMW thread plug and ring gauges (continued)

Hardened steel thread plug gauges and thread ring gauges. Manufactured according ANSI B1.2 class 2B (thread plug) and BS 919 2A (thread ring). Manufactured according ANSI B1.2 class 2A available on request.

For American screw thread UNC

Indication UNC	Thread plug Go/NoGo	Price EUR	Thread ring Go	Price EUR	Thread ring NoGo	Price EUR
No 1-64	823.074	146.00	823.075	104.00	823.076	104.00
No 2-56	823.077	137.00	823.078	98.00	823.079	98.00
No 3-48	823.080	128.00	823.081	93.00	823.082	93.00
No 4-40	823.083	126.00	823.084	88.00	823.085	88.00
No 5-40	823.086	73.00	823.087	63.00	823.088	63.00
No 6-32	823.089	71.00	823.090	61.00	823.091	61.00
No 8-32	823.092	68.00	823.093	56.00	823.094	56.00
No 10-24	823.095	66.00	823.096	55.00	823.097	55.00
No 12-24	823.098	64.00	823.099	53.00	823.100	53.00
1/4 -20	823.101	63.00	823.102	53.00	823.103	53.00
5/16 -18	823.104	65.00	823.105	57.00	823.106	57.00
3/8 -16	823.107	67.00	823.108	61.00	823.109	61.00
7/16 -14	823.110	71.00	823.111	65.00	823.112	65.00
1/2 -13	823.113	75.00	823.114	74.00	823.115	74.00
9/16 -12	823.116	79.00	823.117	82.00	823.118	82.00
5/8 -11	823.119	83.00	823.120	90.00	823.121	90.00
3/4 -10	823.122	96.00	823.123	111.00	823.124	111.00
7/8 -9	823.125	108.00	823.126	127.00	823.127	127.00
1 -8	823.128	122.00	823.129	146.00	823.130	146.00
1 1/8 -7	823.131	136.00	823.132	162.00	823.133	162.00
1 1/4 -7	823.134	153.00	823.135	184.00	823.136	184.00



Indication UNC	Thread plug Go	Price EUR	Thread plug NoGo	Price EUR	Thread ring Go	Price EUR	Thread ring NoGo	Price EUR
1 3/8 -6	823.137	94.00	823.138	84.00	823.139	203.00	823.140	203.00
1 1/2 -6	823.141	104.00	823.142	93.00	823.143	218.00	823.144	218.00
1 3/4 -5	823.145	124.00	823.146	111.00	823.147	254.00	823.148	254.00
2 -4 1/2	823.149	142.00	823.150	127.00	823.151	291.00	823.152	291.00
2 1/4 -4 1/2	823.153	159.00	823.154	144.00	823.155	332.00	823.156	332.00
2 1/2 -4	823.157	178.00	823.158	161.00	823.159	371.00	823.160	371.00
2 3/4 -4	823.161	198.00	823.162	178.00	823.163	413.00	823.164	413.00
3 -4	823.165	215.00	823.166	196.00	823.167	451.00	823.168	451.00
3 1/4 -4	823.169	234.00	823.170	212.00	823.171	493.00	823.172	493.00
3 1/2 -4	823.173	253.00	823.174	230.00	823.175	532.00	823.176	532.00
3 3/4 -4	823.177	271.00	823.178	245.00	823.179	571.00	823.180	571.00
4 -4	823.181	290.00	823.182	262.00	823.183	615.00	823.184	615.00



LMW thread plug and ring gauges (continued)

Hardened steel thread plug gauges and thread ring gauges. Manufactured according ANSI B1.2 class 2B (thread plug) and BS 919 2A (thread ring). Manufactured according ANSI B1.2 class 2A available on request.

For American screw thread UNF

Indication UNF	Thread plug Go/NoGo	Price EUR	Thread ring Go	Price EUR	Thread ring NoGo	Price EUR
No 0-80	823.000	172.00	823.001	125.00	823.002	125.00
No 1-72	823.003	146.00	823.004	104.00	823.005	104.00
No 2-64	823.006	137.00	823.007	98.00	823.008	98.00
No 3-56	823.009	128.00	823.010	93.00	823.011	93.00
No 4-48	823.012	126.00	823.013	86.00	823.014	86.00
No 5-44	823.015	73.00	823.016	63.00	823.017	63.00
No 6-40	823.018	71.00	823.019	61.00	823.020	61.00
No 8-36	823.021	68.00	823.022	56.00	823.023	56.00
No 10-32	823.024	66.00	823.025	55.00	823.026	55.00
No 12-28	823.027	64.00	823.028	53.00	823.029	53.00
1/4 -28	823.030	63.00	823.031	53.00	823.032	53.00
5/16 -24	823.033	65.00	823.034	57.00	823.035	57.00
3/8 -24	823.036	67.00	823.037	61.00	823.038	61.00
7/16 -20	823.039	71.00	823.040	65.00	823.041	65.00
1/2 -20	823.042	75.00	823.043	74.00	823.044	74.00
9/16 -18	823.045	79.00	823.046	82.00	823.047	82.00
5/8 -18	823.048	81.00	823.049	90.00	823.050	90.00
3/4 -16	823.051	90.00	823.052	111.00	823.053	111.00
7/8 -14	823.054	100.00	823.055	127.00	823.056	127.00
1 -12	823.057	110.00	823.058	146.00	823.059	146.00
1 1/8 -12	823.060	128.00	823.061	168.00	823.062	168.00
1 1/4 -12	823.063	135.00	823.064	184.00	823.065	184.00

Indication UNF	Thread plug Go	Price EUR	Thread plug NoGo	Price EUR	Thread ring Go	Price EUR	Thread ring NoGo	Price EUR
1 3/8 -12	823.066	83.00	823.067	75.00	823.068	203.00	823.069	203.00
1 1/2 -12	823.070	90.00	823.071	81.00	823.072	218.00	823.073	218.00

Hardened steel tapered thread plug and thread ring gauges NPT for sealing pipe thread. Manufactured according ANSI/ASME B1.20.1.

For sealing pipe thread

Indication NPT..."	Thread plug Go/NoGo	Price EUR	Thread ring Go/NoGo	Price EUR
1/16	822.600	182.00	822.601	263.00
1/8	832.841	188.00	832.842	269.00
1/4	832.843	200.00	832.844	283.00
3/8	832.845	215.00	832.846	299.00
1/2	832.847	234.00	832.848	324.00
3/4	832.849	261.00	832.850	356.00
1	832.851	302.00	832.852	403.00
1 1/4	822.620	362.00	822.621	472.00
1 1/2	822.622	407.00	822.623	521.00
2	822.624	501.00	822.625	635.00
2 1/2	822.626	571.00	822.627	727.00
3	822.628	696.00	822.629	931.00



Thread plug and ring gauges in sets

Sets of thread plug gauges or thread ring gauges for inspection of metric ISO threads.



- For threads M3, M4, M5, M6, M8, M10 and M12.
- Tolerance class:
thread plug gauges: 6H,
thread ring gauges: 6g.
- Hardened steel, thread plug gauges with aluminum grip.
- Manufactured according ISO 1502 (DIN 13).
- Delivery in a wooden case with a manufacturer measuring report.

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Item No.	Thread gauges set	Price EUR
836.561	Plug gauges (Go+ NoGo)	334.00
836.562	Ring gauges (Go)	371.00
836.563	Ring gauges (NoGo)	371.00

Plug gauges and setting rings in sets

- Hardened steel, plug gauges with aluminum grip.
- Set setting rings manufactured according DIN 2250 form C.
- Set plug gauges manufactured according DIN 2248/2249.
- Delivery in a wooden case with a manufacturer measuring report.

ECONOMY LINE ✓

Item No.	Description	Price EUR
836.564	Setting rings: $\varnothing 4$, $\varnothing 5$, $\varnothing 6$, $\varnothing 8$ mm	172.00
836.565	Setting rings: $\varnothing 10$, $\varnothing 12$, $\varnothing 16$, $\varnothing 20$, $\varnothing 25$ mm	226.00
836.566	Plug gauges (Go+NoGo) H7: 3, 4, 5, 6, 8, 10, 12 mm	208.00



Thread jaw gauges

Jaw-shaped gauge for inspection of external screw thread. For correct use, a setting thread plug gauge is needed. These can be purchased separately.



Setting thread plug gauge



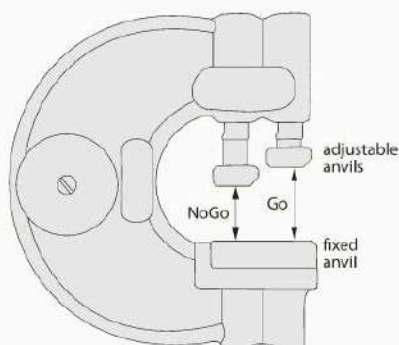
Available on request.

012.212 EN 20060702

Adjustable snap gauges

Snap gauges with adjustable anvil. Especially suitable for Go/NoGo determination and batch measurements.

- Tungsten carbide measuring faces.
- Flatness of anvil: 1.5 μm .
- Parallelism between anvils: 0 - 32 mm: 3 μm / 32 - 89 mm: 4 μm / 89 - 152 mm: 5 μm .
- To set for example with gauge blocks.
- Conforms to factory standard.
- Delivery with a manufacturer measuring report.



ECONOMY LINE ✓



860.016

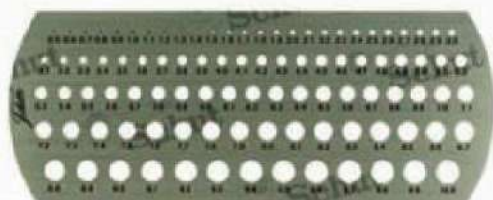
Item No.	Measuring range/mm	Price EUR
860.012	0 - 6	47.00
860.013	6 - 13	47.00
860.014	13 - 19	50.00
860.015	19 - 25	50.00
860.016	25 - 32	62.00
860.017	32 - 38	62.00
860.018	38 - 44	69.00
860.019	44 - 51	69.00
860.020	51 - 57	75.00
860.021	57 - 63	75.00
860.022	63 - 70	81.00
860.023	70 - 76	81.00
860.024	76 - 82	84.00
860.025	82 - 89	84.00
860.026	89 - 95	90.00
860.027	95 - 101	90.00
860.028	101 - 108	103.00
860.029	108 - 114	103.00
860.030	114 - 120	118.00
860.031	120 - 127	118.00
860.032	127 - 133	131.00
860.033	133 - 139	131.00
860.034	139 - 146	159.00
860.035	146 - 152	159.00

G12.309 EN 20260702

Drill gauges

Gauge in the form of a steel plate with bores of increasing diameters for determining drill diameters.

- Increment: 0.1 mm.



NEW

ECONOMY LINE ✓

Item No.	Measuring range/mm	Number of bores	Price EUR
910.501	0.5 - 10	96	31.10

Measuring wedges

Measuring wedges for quick measurements and checks of slits, key-ways, distances, etc.

- Measuring range: 0.4 - 26 mm.
- Graduation: 0.05, 0.1 or 0.2 mm.
- Laser engraving.



909.537



909.535



909.536



856.331

ECONOMY LINE ✓

Item No.	Measuring range/mm	Graduation mm	Price EUR
909.535	0.4 - 6	0.05	52.00
856.331	0.5 - 11	0.1	48.00
856.332*	0.5 - 11	0.1	48.00
909.536	1 - 15	0.1	46.00
909.537	2 - 26	0.2	21.90

* Plastic material.

Twist drill grinding gauges

For checking twist drills at their top and on the right value of 120° angle of the twist drill point. The maximum drill diameter is 50 mm.



910.372

Universal twist drill grinding gauge, also called *Y-gauge*. Besides the standard angle of 120°, this gauge also has a 90° angle for countersink drills, and some special angles for center drills.



856.443

ECONOMY LINE ✓

Item No.	Description	Price EUR
910.372	Twist drill grinding gauge	3.20
856.443	Y-gauge	11.90

Flat plug gauges

- Measuring range: 1 - 60 mm.
- Graduation: 0.1 mm.
- Stainless steel, matt chrome-plated finish.
- Graduation on both sides.
- Ground measuring faces.
- Laser engraving.



907.876

ECONOMY LINE ✓

Item No.	Measuring range/mm	Price EUR
907.876	1 - 15	21.50
909.516	15 - 30	25.00
909.517	30 - 45	31.50
909.534	45 - 60	41.00

Conical plug gauges

- Measuring range: $\varnothing$ 1 - 45 mm.
- Graduation: 0.1 mm.
- Hardened, ground and chrome finished.
- With anodized handle.



909.490



ECONOMY LINE ✓

Item No.	Measuring range/mm	Price EUR
909.490	$\varnothing$ 1 - 6	54.00
909.491	$\varnothing$ 4 - 15	77.00
909.492	$\varnothing$ 15 - 30	89.00
909.493	$\varnothing$ 30 - 45	124.00

Nozzle gauges

Set of pins in holder serving as a gauge to determine jet nozzle sizes.



856.107

Item No.	Number of pins	Sizes mm	Price EUR
856.107	20	$\varnothing$ 0.45 - 1.50	6.50
856.108	16	$\varnothing$ 1.50 - 3.00	6.50
856.124	16	$\varnothing$ 3.00 - 4.50	13.80
856.125	16	$\varnothing$ 4.50 - 6.00	13.80

Nozzle gauges with vernier

Nozzle gauges with a hardened and ground tapered needle.

- Measuring range: $\varnothing$ 0 - 5 mm.
- Vernier: 0.01 mm.



Item No.	Measuring range/mm	Price EUR
856.110	$\varnothing$ 0 - 5	59.00

Center gauges

For checking thread cutting tools for Whitworth thread 55° or metric thread 60°.



856.444



856.445

Item No.	Description	Price EUR
856.444	Whitworth 55°	2.70
856.445	Metric 60°	2.70

Thread cutting tool gauges



856.446



856.447

Item No.	Description	Price EUR
856.446	Universal thread cutting tool gauge for angular thread and flat thread	10.60
856.447	Trapezoidal thread cutting tool gauge for trapezoidal thread DIN 103 (30°, 2- 12 mm)	11.80
856.449	Combined lathe and thread cutting tool gauge for – cutting tool wedge angle, – trapezoidal thread DIN 103 (30°, 2- 12 mm), and – angular thread (40° - 80°)	11.80
856.451	Thread cutting tool gauge for – rectangular thread, – trapezoidal thread DIN 103 (30°, 2- 12 mm), and – angular thread (55° and 60°)	11.80



856.449

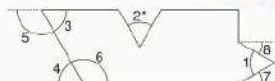


856.451

©17.202 EN.20200702

Angle gauge set

- Measuring range: 5 - 90°
(supplementary angles: 90 - 175°).
- Increment: 5° (18 pieces).
- Multiple angles per angle gauge:
 - primary angles (1, 2°, 3, 4),
 - supplementary angles (5, 6), and
 - ½ primary angles (7, 8).
- Delivery in a soft case.



* Angle 2: only with the angle gauges from 20°.

ECONOMY LINE ✓

Item No.	Description	Price EUR
909.410	Angle gauge set	31.40

Angle gauges

- Measuring range: 1 - 45°.
- Number of blades: 20.
- Angles: 1° - 2° - 3° - 4° - 5° - 6° - 7° - 8° - 9° - 10° - 12° - 14° - 16° - 18° - 20° - 25° - 30° - 35° - 40° - 45°.



ECONOMY LINE ✓

Item No.	Description	Price EUR
908.798	Angle gauges	28.30

Radius gauges

- Measuring range radius: 1 - 25 mm.
- Increment:
 - 1 - 3 mm: 0.25 mm,
 - 3.5 - 20 mm: 0.5 mm,
 - > 20 mm: 1.0 mm.
- Includes blades for both inside and outside radii.



ECONOMY LINE ✓

Item No.	Radius range/ mm	Number of blades	Price EUR
907.766	1 - 7	17 + 17	11.00
907.767	7.5 - 15	16 + 16	10.30
907.768	15.5 - 25	15 + 15	10.30

Shape and radius gauge

This stainless steel gauge can be used to adopt various complex shapes of tools and workpieces. When the gauge is pressed against the part which has to be checked, it takes on the shape of this part. Because of the graduation (mm) on the case, the shape can be checked easily.

Because the tracers were supported under pressure, they don't move on their own.



Item No.	Measuring range/mm	Price EUR
836.319	150 x 40	19.60

Set of welding seam gauges

- For weld thickness: 3 - 12 mm.
- Up to 7 mm increasing with 0.5 mm, plus 8, 10 and 12 mm.
- Total: 12 pieces.
- Bright steel.



Item No.	Description	Price EUR
856.452	Welding seam gauges	12.80

Welding seam gauge

For measurement of welding seams.

- Graduation: 0.2 mm.
- Stainless steel.
- Delivery in a soft case.



Item No.	Description	Price EUR
856.438	Welding seam gauge	47.00

Welding seam calipers

For measurement of welding seams.

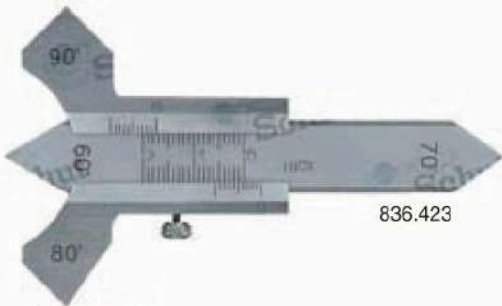
- Measuring range: 0 - 20 mm.
- Analog: vernier 0.1 mm, digital: resolution 0.01 mm.
- Delivery in a soft case (836.423) or a plastic case (906.429).

Analog

- Stainless construction.

Digital

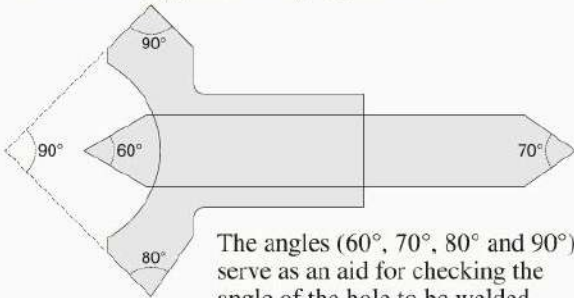
- mm/inch conversion.
- On/off switch.
- Reset.
- Power supply: 1 battery type V357.



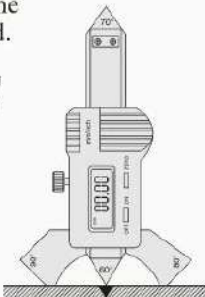
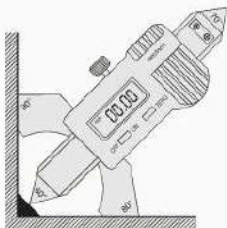
836.423



906.429



The angles (60°, 70°, 80° and 90°) serve as an aid for checking the angle of the hole to be welded.



ECONOMY LINE ✓

Item No.	Measuring range/mm	Price EUR
Analog: 836.423	0 - 20	20.60
Digital: 906.429	0 - 20	61.00
Option: 836.535 Battery type V357		0.90

Digital measuring wedge

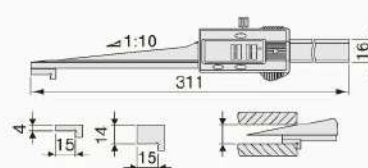
Digital measuring wedge for measurements and checks of slits, key-ways, distances, etc.

- Measuring range: 0.2 - 30 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- On/off switch.
- Reset.
- Large LCD display.
- Locking screw.
- Power supply: 1 battery type V357.



ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Price EUR
910.283	0.2 - 30	±0.02	270.00
Option: 836.535 Battery type V357			0.90



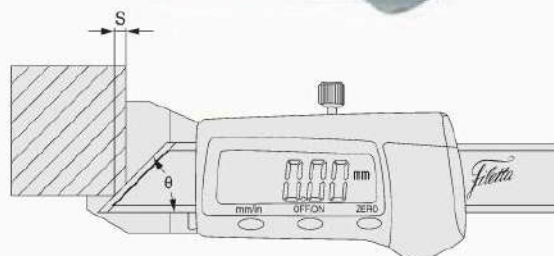
Chamfer calipers

- Measuring range: 0 - 8 mm.
- Resolution: 0.01 mm.
- Accuracy: ±0.03 mm.
- mm/inch conversion.
- On/off switch.
- Reset.
- Locking screw.
- Delivery in a case.
- Power supply: 1 battery type V357.



ECONOMY LINE ✓

Item No.	Angle	Price EUR
910.265	30°	105.00
910.266	45°	125.00
910.267	60°	175.00
Option: 836.535 Battery type V357		0.90



DEMM universal meter for bevels

Universal instrument for measurement of bevels from 0.5 to 10 mm.
Direct reading of the measured bevel (30°, 45°, 60°).

- Measuring range: 30°: 15 mm,
45°: 10 mm,
60°: 5 mm.
- Hardened stainless steel construction.
- Delivery in a wooden case.



Item No.	Description	Price EUR
838.727	Universal meter for bevels	534.00



Thread and tolerance tables

Thread table

Table with all standard international thread indications: metric, BSW, Gas, BSF, Pg, BA, UNC, UNF, UNEF, EG-M and EG-MF.

Tolerance table

Table comprising all tolerances and fits according ISO 286-2, up to 500 mm (table with over 6400 pairs of tolerance values for internal and external measurements).

Conversion table mm/inch

For converting from mm to inch and from inch to mm.

Item No.	Description	Price EUR
835.162	Thread table	62.00
835.163	Tolerance table	62.00
835.164	Conversion table mm/inch	62.00



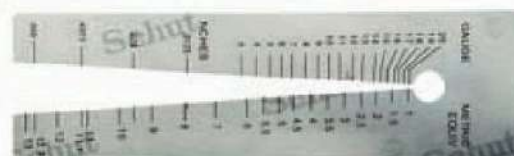
Flat thickness gauge

Gauge to measure, among others, the thickness of steel plating.

- Measuring range: 1 - 13 mm.
- Graduation: 0.5 mm.
- Stainless steel.

ECONOMY LINE ✓

Item No.	Measuring range/mm	Price EUR
907.899	1 - 13	6.90



Screw pitch gauges

Item No.	Type of thread	Number of blades	Price EUR
856.456	Metric	24	4.00
856.457	Whitworth	28	5.80
856.458	BSP	6	3.60
856.459	Metric/Whitworth	52	9.00
856.460	Metric/Whitworth/BSP	58	12.50
856.461	UNC/UNF	30	4.90

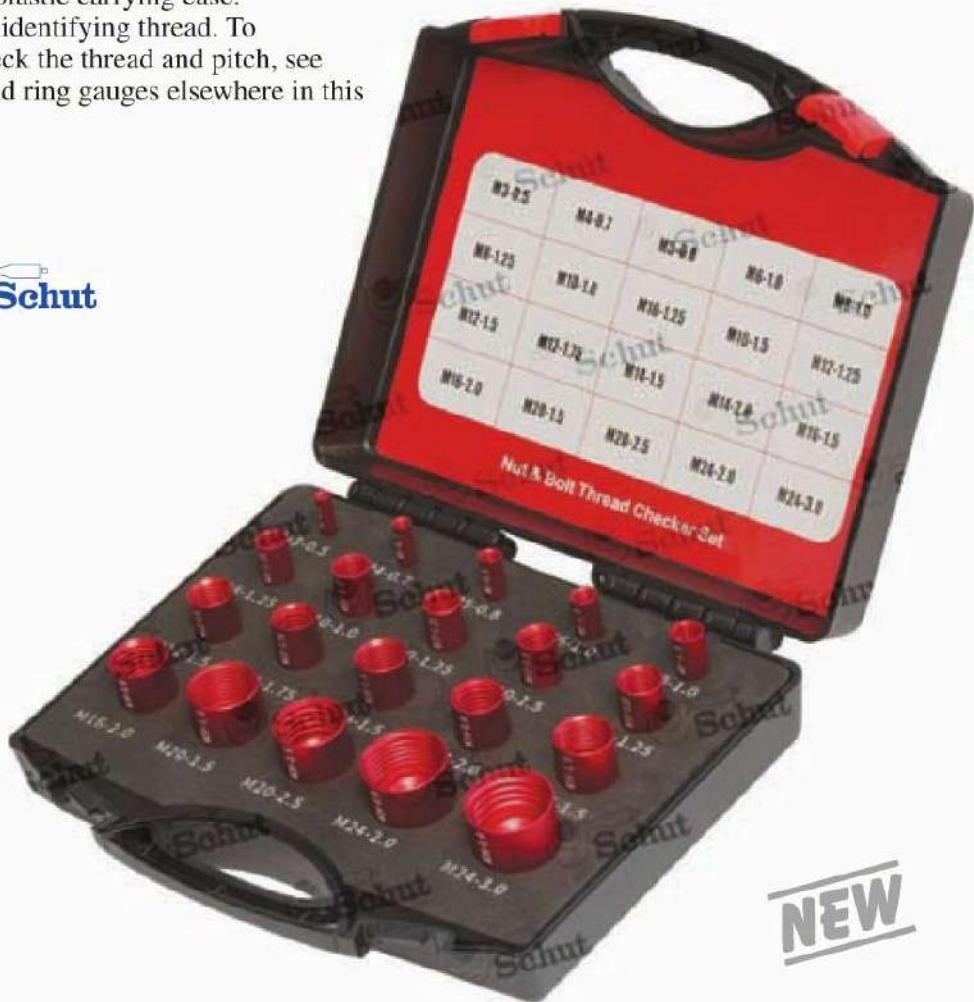
Thread	Angle	Number of blades	
Metric	60°	24	Pitch/mm: 0.25/0.3/0.35/0.4/0.45/0.5/0.6/0.7/0.75/0.8/0.9/1.0/1.25/1.5/1.75/2.0/2.5/3.0/3.5/4.0/4.5/5.0/5.5/6.0
Whitworth	55°	28	Threads per inch: 62/60/48/40/36/32/30/28/26/25/24/22/20/19/18/16/14/13/12/11/10/9/8/7/6/5/4.5/4
BSP	55°	6	Threads per inch: 28/19/14/11/10/8
UNC/UNF	60°	30	Threads per inch: 42/40/38/36/34/32/30/28/27/26/24/22/20/18/16/15/14/13/12/11.5/11/10/9/8/7/6/5.5/5/4.5/4



Thread checking set

Thread checking set to quickly determine and check the size (thread and pitch) of nuts and bolts. Easy to take with you thanks to plastic carrying case.

- Material: anodized aluminum.
- For internal and external thread.
- Delivery in a plastic carrying case.
- This set is for identifying thread. To accurately check the thread and pitch, see thread plug and ring gauges elsewhere in this catalogue.



ECONOMY LINE ✓

Item No.	Type of thread	Includes	Price EUR
910.425	Metric	M3x0.5, M4x0.7, M5x0.8, M6x1.0, M8x1.0, M8x1.25, M10x1.0, M10x1.25, M10x1.5, M12x1.25, M12x1.5, M12x1.75, M14x1.5, M14x2.0, M16x1.5, M16x2.0, M20x1.5, M20x2.5, M24x2.0, M24x3.0	30.10

012.314 EN 20060702

**Magnifiers / Microscopes / Glass rulers / Stereo microscopes
Video microscopes / Endoscopes / Profile projectors**



©13.000 EN 20260702

Peak stand magnifier 5x

Standard, all-purpose magnifier.

- Dimensions: $\varnothing 35 \times 55$ mm.

**Peak stand magnifier 10x**

Standard, all-purpose magnifier. Very suitable for inspection of tissues, structures and photographic negatives.

- Dimensions: $\varnothing 34 \times 41$ mm.

Item No.	Description	Price EUR
905.110	Stand magnifier 5x	8.70

Item No.	Description	Price EUR
905.112	Stand magnifier 10x	13.60

Peak stand magnifier 15x

Bright images with high contrast due to a coated achromatic lens. With wide acrylic tube.

- Dimensions: $\varnothing 27 / \varnothing 36 \times 33$ mm.

Peak stand magnifier 22x

Bright images with high contrast due to a coated achromatic lens. Suitable for inspection of high precision work.

- Dimensions: $\varnothing 28 \times 30$ mm.

Item No.	Description	Price EUR
905.114	Stand magnifier 15x	18.00

Item No.	Description	Price EUR
905.116	Stand magnifier 22x	36.60

Peak magnetic magnifier 5x

This magnifier has two small magnets which make sure that the magnifier can be put on a fixed position without moving. By placing this magnifier on hard to read scale divisions of, for example, graduated rulers, height gauges or micrometers, the possibility of reading errors substantially reduces.

- Field of view: $\varnothing 30$ mm.
- Dimensions: $\varnothing 44 \times 20 \times 30$ mm.
- Weight: 15 g.

Item No.	Description	Price EUR
905.210	Magnetic magnifier 5x	10.90



Peak zoom magnifiers 8-16x and 10-20x

Unique stepless zoom lens with sufficient brightness in each stage of magnification and a minimum of optical aberration. With click-stop on magnifications 8/10/12/14/16x and 10/15/20x, respectively. Equipped with scale.

- Field of view: $\varnothing$ 20 - 10 mm or $\varnothing$ 13 - 7 mm.
- Graduation: 0.1 mm.
- For optional scales: see "Peak scales $\varnothing$ 35 mm".



Item No.	Magnification	Field of view $\varnothing$ /mm	Adjustment range eye correction	Measuring range/mm	Dimensions mm	Price EUR
905.197	8 - 16x	20 - 10	+2.5D to -5D	16	$\varnothing$ 45 x 65	217.00
905.198	10 - 20x	13 - 7	+5D to -3.5D	12	$\varnothing$ 42 x 52	237.00
Options:						
904.028	Illumination					31.90
495.153	Battery type C (2 needed)					1.50

Peak telecentric magnifier 7x

A telecentric magnifier shows objects, which are at different distances, with the same magnification. In this way 3D objects, or e.g. a needle above a scale, can be shown and measured accurately without parallax error.

- Field of view:
 $\varnothing$ 24 mm.
- Measuring range
scale: 20 mm.
- Graduation: 0.1 mm.
- Adjustable diaphragm
with apertures $\varnothing$ 0.5,
1 and 3 mm.
- Dimensions:
 $\varnothing$ 38 x 74 mm.
- For optional scales:
see "Peak scales
 $\varnothing$ 26 mm".



Item No.	Description	Price EUR
905.136	Telecentric magnifier 7x including case and standard scale (for scales of $\varnothing$ 26 mm)	146.00

Peak stand magnifier 4x

This practical and convenient magnifier can be used for many purposes, like inspecting films. The magnifier is delivered with a clear and a black base, which allows you, depending on the amount of light, to choose the base which is most suitable for your application.

- Field of view: $\varnothing$ 45 mm.
- Dimensions: 51 x 51 x 65 mm.
- Weight: 80 g.



Item No.	Description	Price EUR
905.399	Stand magnifier 4x	61.00

Peak eye magnifiers 3.3x...20x

Eye magnifiers can be placed in front of the eye easily, which makes them ideal tools for working on small products like watches, clocks and jewelry.

- Made of aluminum.
- Weight: 10- 16 g.
- A small hole in the tube prevents the lens from becoming fogged up.



Item No.	Type	Magnification	Lenses	Price EUR
905.390	A13D	3.3x	1	30.60
905.391	A16D	4.0x	1	30.60
905.392	A20D	5.0x	1	30.60
905.393	A26D	6.7x	1	30.60
905.394	A40D	10.0x	2	38.50
905.299	A48D	12.0x	1	56.00
905.300	A60D	15.0x	1	56.00
905.301	A80D	20.0x	1	56.00

Peak light magnifier 3.5x

Large square lens (52 x 52 mm) of plastic with illumination, e.g. for reading maps and indicators, and for inspection of production processes.

- Dimensions: 60 x 75 x 190 mm.
- Weight (without batteries): 120 g.
- Power supply: 2 batteries type C.



Item No.	Description	Price EUR
905.212	Magnifier (w/o batteries)	30.60
Option:		
495.153	Battery type C (2 needed)	1.50

Peak monocular telescopes

Lightweight pocket-size telescopes with erect image.

- Dimensions 905.207: $\varnothing$ 22.5 x 50 mm,
905.208: $\varnothing$ 22.5 x 53 mm.
- Weight: 32 g.
- Delivery in a soft case.



Item No.	Magnification	Lens aperture $\varnothing$ /mm	Close focus distance/mm	Field of view (angle)	Field of view* $\varnothing$ /mm	Field of view* $\varnothing$ /m	Price EUR
905.207	2x	8	100	11°	12	192	185.00
905.208	4x	10	220	10°	29	175	185.00

* Field of view respectively at close focus distance and at 1000 m.

Peak head magnifier 2.2x ... 3.3x

Because of the velcro strip, the head magnifier can be used easily. The great advantage of a head magnifier is that the user has both hands free for e.g. production and assembly of precision instruments. The head magnifier is designed in such a way that people who wear glasses can use it as well. With the extra pair of lenses inside the head magnifier, the magnification can be enhanced from 2.2x to 3.3x.

- Clear, broad and 3-dimensional view.
- Weight: 100 g.



Item No.	Magnification	Price EUR
905.318	2.2x / 3.3x	34.40

Peak pen microscopes with EIM 25x ... 100x

These pen microscopes have a fixed scale and EIM system. With standard microscopes, the magnification is upside down, but because of the EIM system, this is not the case with these pen microscopes.

- Dimensions: $\varnothing 20.7 \times 111$ mm.
- Weight: 25-28 g.



905.404



Item No.	Magnification	Field of view $\varnothing$ /mm	Measuring range/mm	Graduation mm	Price EUR
905.404	25x	3.50	3.0	0.05	163.00
905.405	50x	1.70	1.6	0.02	183.00
905.406	75x	1.10	1.0	0.01	202.00
905.407	100x	0.86	0.8	0.005	223.00

Peak pen microscopes 25x ... 100x

- Dimensions: $\varnothing 12.4 \times 127$ mm.
- Weight: 13-16 g.
- With a fixed scale (only 905.263/264).



905.267



Item No.	Magnification	Field of view $\varnothing$ /mm	Measuring range/mm	Graduation mm	Price EUR
905.267	25x	3.30	—	—	41.00
905.268	50x	2.00	—	—	58.00
905.269	75x	1.09	—	—	65.00
905.266	100x	0.84	—	—	86.00
With fixed scale:					
905.263	25x	3.30	3.00	0.05	71.00
905.264	50x	2.00	1.60	0.02	83.00

Peak light magnifier 10x

Magnifier with illumination.

- Field of view: $\varnothing$ 25 mm.
- Dimensions: 175 x 35 x 41 mm.
- Weight: 81 g.
- Power supply: 2 batteries type C, not included.



Item No.	Magnification	Price EUR
905.118	10x	21.70
Option:		
495.153	Battery type C (2 needed)	1.50

Peak folding magnifiers 7x ... 20x

Steinheil magnifiers with an excellent chromatic correction and a large field of view.

- Dimensions: 39 x 24 x 22 mm.
- Weight: 18-22 g.



905.202

Item No.	Magnification	Field of view $\varnothing$ /mm	Price EUR
905.200	7x	16	46.00
905.202	10x	15.5	46.00
905.204	14x	12	46.00
905.206	20x	7	46.00

Peak folding magnifiers 6x ... 9x

Because of their small size, these folding magnifiers are easy to use. Available in several magnifications, with one or two lenses. The advantage of two lenses is that it gives a very sharp image, because the image error of the first lens is being corrected by the second one.

A mm scale is engraved at each of the four sides of the base. The scale length is equal to the width of the field of view (see table).



905.375



905.379

Item No.	Magnification	Field of view/mm	Number of lenses	Material/color	Price EUR
905.375	7x	15 x 15	1	Al/clear	13.40
905.376	6x	25 x 25	1	Al/clear	15.80
905.377	9x	10 x 10	1	Al/black	11.90
905.378	7x	15 x 15	1	Al/black	14.60
905.379	6x	25 x 25	1	Al/black	17.60
905.380	9x	10 x 10	2	Zn/black	14.40

Peak scale magnifier 7x

All-purpose scale magnifier. Aberrations are avoided by the excellent achromatic lenses.

- Field of view: $\varnothing$ 26 mm.
- Measuring range standard scale: 20 mm.
- Graduation: 0.1 mm.
- Dimensions: $\varnothing$ 36 x 62 mm.
- Weight: 56 g.



Scale magnifier with illumination 905.138

- Field of view: $\varnothing$ 22 mm.
- Dimensions: $\varnothing$ 36 x 58 x 175 mm.
- Weight (without batteries): 118 g.
- Power supply: 2 batteries type C.

Item No.	Description	Price EUR
905.140	Magnifier with standard scale in a soft case	42.00
905.155	Set of magnifier 7x and five scales in a plastic case	77.00
905.138	Magnifier 905.140 with illumination (without batteries)	61.00
Option:		
495.153	Battery type C (2 needed)	1.50



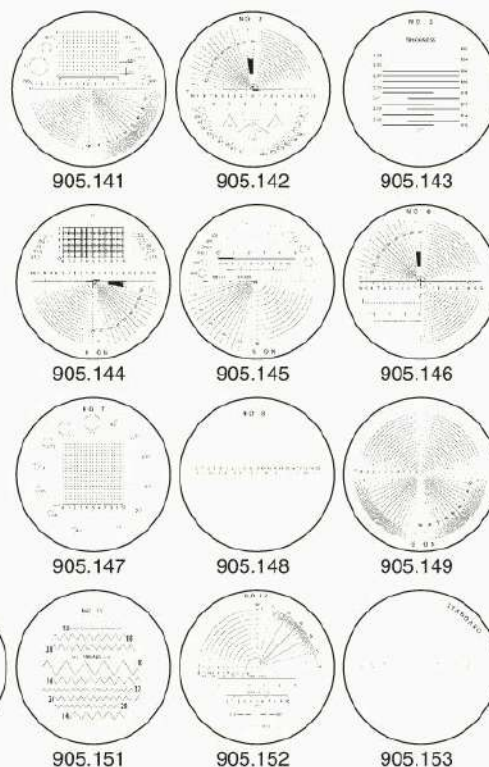
Set 905.155

Scale magnifier 7x in a set with the five most frequently used scales (2, 3, 7, 8 and 10).

Peak scales $\varnothing$ 26 mm

Aside from the standard scale, various other scales are available, each one with its own specific application. These scales are interchangeable in scale magnifiers like the one above.

Item No.	Scale	Price EUR
905.141	no. 1	9.80
905.142	no. 2	9.80
905.143	no. 3	9.80
905.144	no. 4	9.80
905.145	no. 5	9.80
905.146	no. 6	9.80
905.147	no. 7	9.80
905.148	no. 8	9.80
905.149	no. 9	9.80
905.150	no. 10	9.80
905.151	no. 11	9.80
905.152	no. 12	9.80
905.153	standard	9.80



Peak scale magnifier 10x

All-purpose scale magnifier. Aberrations are avoided by the excellent achromatic lenses. High resolution and large field of view.

- Field of view: $\varnothing 35$ mm.
- Measuring range standard scale: 30 mm.
- Graduation: 0.1 mm.
- Dimensions: $\varnothing 46 \times 44$ mm.
- Weight: 74 g.



Scale magnifier with illumination 905.178

- Field of view: $\varnothing 32$ mm.
- Dimensions: $\varnothing 47 \times 45 \times 185$ mm.
- Weight (without batteries): 134 g.
- Power supply: 2 batteries type C.



Set 905.195

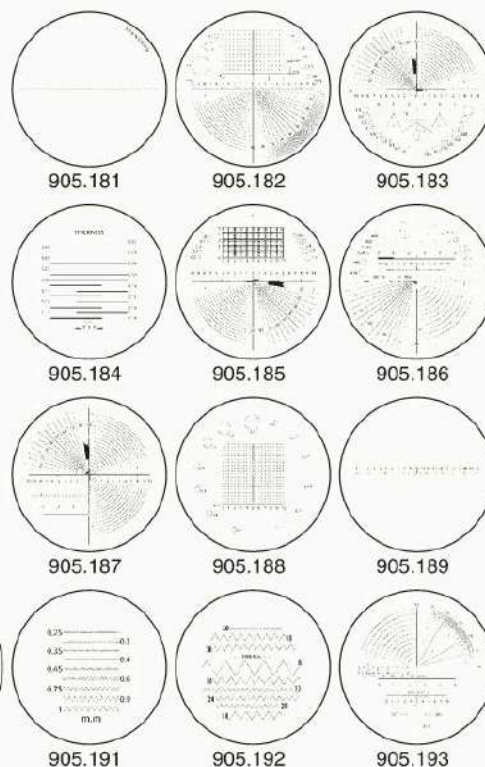
Scale magnifier 10x in a set with the five most frequently used scales (2, 3, 7, 8 and 10).

Item No.	Description	Price EUR
905.180	Magnifier with standard scale in a soft case	58.00
905.195	Set of magnifier 10x and five scales in a plastic case	109.00
905.178	Magnifier 905.180 with illumination (without batteries)	84.00
Option:		
495.153	Battery type C (2 needed)	1.50

Peak scales $\varnothing 35$ mm

Aside from the standard scale, various other scales are available, each one with its own specific application. These scales are interchangeable in scale magnifiers like the one above.

Item No.	Scale	Price EUR
905.181	standard	10.30
905.182	no. 1	10.70
905.183	no. 2	10.70
905.184	no. 3	10.70
905.185	no. 4	10.70
905.186	no. 5	10.70
905.187	no. 6	10.70
905.188	no. 7	10.70
905.189	no. 8	10.70
905.190	no. 9	10.70
905.191	no. 10	10.70
905.192	no. 11	10.70
905.193	no. 12	10.70



Peak scale magnifier 30x

- Field of view: $\varnothing 7$ mm.
- Measuring range standard scale: 5 mm.
- Graduation: 0.05 mm.
- Dimensions: $\varnothing 30 \times 19$ mm.
- Weight: 16 g.



Item No.	Description	Price EUR
905.285	Scale magnifier in a soft case	77.00
Option:		
905.286	Separate standard scale	17.20

Peak anastigmatic scale magnifiers 4x and 7x

Magnifier with anastigmatic lens. This is a combined objective which reflects a large, undistorted image with sharp features, very suitable for inspection of (photographic) films.

- Large field of view, 905.216: $\varnothing 58$ mm,
905.400: $\varnothing 41$ mm.
- Removable scale with mm graduation.
- Measuring range scale 905.217: 54 mm,
905.401: 36 mm.
- Graduation scale: 0.1 mm.
- Dimensions and weight:
905.216: $\varnothing 73 \times 77$ mm, 272 g,
905.400: $\varnothing 55 \times 53$ mm, 103 g.

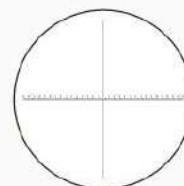


905.400



905.216

Item No.	Description	Price EUR
905.216	Scale magnifier 4x	170.00
905.400	Scale magnifier 7x	152.00
Options:		
905.217	Standard scale for magnifier 905.216	34.60
905.401	Standard scale for magnifier 905.400	22.30



Jeweler's magnifiers

Triplet Magnifying Glasses, achromatic and aplanatic magnifying glasses with three separate glass lenses bonded together to provide sharp, clear, magnifications without color distortion.

- Lens diameter: $\varnothing 21$ mm.
- Metal housing.
- Dimensions: 40 x 40 x 40 mm.
- Weight: 50 g.
- Delivery in a leather case.



Item No.	Magnification	Price EUR
911.186	10x	16.40
911.187	20x	18.20

ECONOMY LINE ✓

Peak magnifying glass 2.5-5x

This model of the classic magnifying glass has a lens-in-lens construction. In the big $\varnothing 75$ mm lens a smaller $\varnothing 20$ mm lens has been integrated which offers extra strong magnification. The big lens has a 2.5x magnification, the small lens 5x.

- Dimensions: $\varnothing 80 \times 170$ mm.
- Weight: 111 g.



Item No.	Description	Price EUR
905.214	Magnifying glass 2.5-5x	29.60

Magnifier on magnetic stand

- Magnification: 2x ($\varnothing 90$ mm).
- Total length: 280 mm.
- Magnetic force: 600 N.



ECONOMY LINE ✓

Item No.	Description	Price EUR
909.609	Magnifier on magnetic stand	27.20

Peak flexible stand magnifier

This magnifier has a flexible arm which can be adjusted freely from a solid and stabilized stand. The lens can be put in many positions for the most ergonomic use thus leaving both hands of the user free.

- Dimensions: 145 x 120 x 485 mm (maximum height).
- Weight: 1.5 kg.



905.279

Item No.	Magnification	Lens $\varnothing$ /mm	Price EUR
905.279	1.7x	115	87.00
905.428	2.2x	90	73.00

Stand microscopes 20x ... 100x

These stand microscopes are available in four versions. All four are compact and lightweight, but are especially characterized by their large field of view. Delivered in a case, including LED penlight, matching standard scale and objective. The microscopes come with a Huygens eyepiece (magnification 10x) and with a detachable soft rubber eye adapter. All-purpose use with high precision.

A scale graduation (with a 10 mm scale range) has been engraved on the focusing ring which allows height measurements at a resolution of 0.1 mm.

- Focusing with helicoil ring.
- Eyepiece: 10x.
- Dimensions: $\varnothing 41.5 \times 122$ mm.
- Weight (without batteries): 262 - 264 g.
- Power supply: 1 battery type AAA.

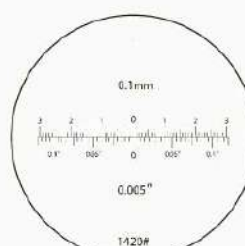


ECONOMY LINE ✓

Item No.	Magnification microscope	Price EUR
Standard scales:		
910.414	20x	13.90
910.415	40x	13.90
910.416	60x	13.90
910.417	100x	13.90
910.422	Individual eyepiece 10x	41.00
Objectives:		
910.418	Individual objective 2x	85.00
910.419	Individual objective 4x	88.00
910.420	Individual objective 6x	90.00
910.421	Individual objective 10x	93.00



910.411



910.414



910.422

910.418

ECONOMY LINE ✓

Item No.	Magnification	Objective	Field of view $\varnothing$ /mm	Working distance/mm	Measuring range/mm	Graduation mm	Price EUR
910.409	20x	2x	7.2	20	6	0.1	128.00
910.410	40x	4x	3.6	21	3	0.05	136.00
910.411	60x	6x	2.4	13.5	2	0.02	141.00
910.412	100x	10x	1.45	7	1	0.01	149.00
Options:							
497.914	Battery type AAA						0.80
910.413	LED penlight						13.30

Stand microscopes 20x ... 100x with LED illumination

These stand microscopes are available in four versions. All four are compact and lightweight, but are especially characterized by their large field of view. Delivered in a case, including LED ring light, matching standard scale and objective. The microscopes come with a Huygens eyepiece (magnification 10x) and with a detachable soft rubber eye adapter. All-purpose use with high precision.

A scale graduation (with a 10 mm scale range) has been engraved on the focusing ring which allows height measurements at a resolution of 0.1 mm.

- Focusing with helicoid ring.
- Eyepiece: 10x.
- Illumination: 3 LEDs.
- Dimensions: $\varnothing 41.5 \times 122$ mm.
- Weight (without batteries): 285 g.
- Power supply: 4 batteries type V394.



ECONOMY LINE ✓

Item No.	Magnification microscope	Price EUR
Standard scales:		
910.414	20x	13.90
910.415	40x	13.90
910.416	60x	13.90
910.417	100x	13.90
910.422	Individual eyepiece 10x	41.00
Objectives:		
910.418	Individual objective 2x	85.00
910.419	Individual objective 4x	88.00
910.420	Individual objective 6x	90.00
910.421	Individual objective 10x	93.00



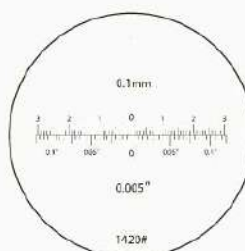
910.404



910.422



910.404



910.414



910.418

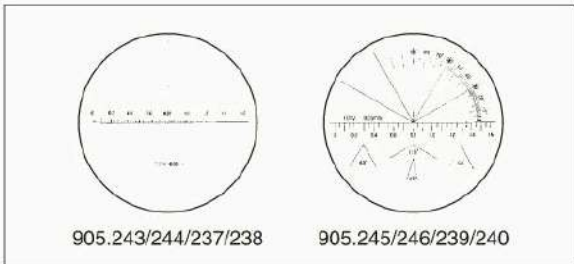
ECONOMY LINE ✓

Item No.	Magnification	Objective	Field of view $\varnothing$ /mm	Working distance/mm	Measuring range/mm	Graduation mm	Price EUR
910.404	20x	2x	7.2	20	6	0.1	138.00
910.405	40x	4x	3.6	21	3	0.05	144.00
910.406	60x	6x	2.4	13.5	2	0.02	154.00
910.407	100x	10x	1.45	7	1	0.01	161.00
Options:							
420.248	Battery type V394 (4 needed)						1.50
910.408	LED ring light						47.00

Peak stand microscopes 25x ... 100x

Compact and light-weight stand microscope with scale. The high resolution and bright images as well as its easy focusing make this instrument a practical measuring aid. A scale graduation (scale range 8 mm) has been engraved on the focusing ring which allows height measurements at a resolution of 0.1 mm. With detachable soft rubber eye adapter. Delivery in a case, with matching standard scale.

- Dimensions: $\varnothing 41.5 \times 122$ mm.
- Weight: 83 g.



Item No.	Type	Magnification	Price EUR
Standard scales:			
905.243	24	25x	23.40
905.244	13	50x	23.40
905.237	34	75x	23.40
905.238	44	100x	35.70
Scales for inspection of printed matter and tools:			
905.245	25	25x	23.40
905.246	14	50x	23.40
905.239	35	75x	23.40
905.240	45	100x	35.70



Item No.	Magnification	Field of view $\varnothing$ /mm	Working distance/mm	Measuring range/mm	Graduation mm	Price EUR
905.249	25x	3.3	17.0	3.0	0.05	131.00
905.250	50x	2.0	11.7	1.6	0.02	143.00
905.251	75x	1.1	11.7	1.0	0.01	152.00
905.258	100x	0.84	11.6	0.8	0.005	173.00

G13.215.EN.20060702

Robust Stand magnifier 5x with LED illumination

Robust stand magnifier with aluminum housing, LED illumination and a very large field of view.

- Field of view: $\varnothing 85$ mm.
- Lens diameter: $\varnothing 70$ mm.
- Illumination: 3 LEDs with 3 luminous intensity settings.
- Aluminum housing.
- Dimensions: $\varnothing 94 \times 52$ mm.
- Weight: 194 g.
- Delivery in a soft case with a micro fiber cleaning cloth and micro USB cable.
- Power supply: rechargeable battery with micro USB cable.



ECONOMY LINE ✓

Item No.	Magnification	Price EUR
910.254	5x	35.60

Scale magnifier 10x with LED illumination

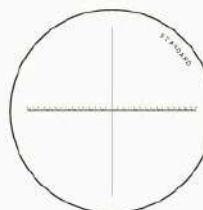
All-purpose scale magnifier with LED illumination and a large field of view.

- Field of view: $\varnothing 30$ mm.
- Measuring range standard scale: 30 mm.
- Graduation: 0.1 mm.
- Illumination: 8 LEDs.
- Dimensions: $\varnothing 45 \times 51$ mm.
- Weight: 106 g.
- For optional scales: see "Peak scales $\varnothing 35$ mm".
- Power supply: 4 batteries (V394).



ECONOMY LINE ✓

Item No.	Description	Price EUR
910.319	Magnifier with standard scale in a case (for scales of $\varnothing 35$ mm)	54.00
Option:		
420.248	Battery type V394 (4 needed)	1.50



Magnifying glass 2-20x with LED illumination

Handy magnifying glass with LED illumination. This magnifying glass has two lenses. One big lens and a small lens in the handle.

- Magnification: 2x (108 x 63 mm) and 20x (ø21 mm).
- Illumination: 2 COB-LED strips (big lens) and 1 LED (small lens).
- Two luminous intensity settings.
- Dimensions: 136 x 96 mm, handle 115 mm.
- Weight (without batteries): 206 g.
- Delivery with a micro fiber cleaning cloth.
- Power supply: 3 batteries 1.5 V (AAA).



ECONOMY LINE ✓

Item No.	Description	Price EUR
910.317	Magnifying glass 2-20x	10.20
Option:		
497.914	Battery type AAA (3 needed)	0.80

Magnifying glass 2-6x with LED and UV illumination

Handy magnifying glass with LED and UV illumination. This model of the classic magnifying glass has a lens-in-lens construction. In the big lens a smaller lens has been integrated which offers extra strong magnification.

- Magnification: 2x (ø85 mm) and 6x (ø21 mm).
- Illumination: switch between 3 LEDs and 1 UV LED.
- Weight (without batteries): 116 g.
- Dimensions: ø99 x 230 mm.
- Power supply: 3 batteries 1.5 V (AA).



ECONOMY LINE ✓

Item No.	Description	Price EUR
910.318	Magnifying glass 2-6x	6.00
Option:		
495.111	Battery type AA (3 needed)	0.70



Precision scale magnifiers 6x ... 12x

Precision scale magnifiers with parallax-free reading and black anodized aluminum open housing. The eyepiece can be removed to be used as a stand-alone magnifier.

- Precision aplanatic glass lenses.
- Adjustable for individual focus.
- Removable eyepiece.
- Scale accuracy $\pm (0.01 + L/1000)$ mm.
- Delivery in a plastic tube.



903.201



Item No.	Magnification	Scale length mm	Graduation mm	Graduation thickness/mm	Price EUR
903.200	6x	20	0.1	0.02	130.00
903.201	8x	10	0.1	0.02	125.00
903.202	10x	10	0.1	0.02	129.00
903.203	12x	6	0.05	0.01	150.00
Options:					
903.204	LED illumination				59.00
498.823	Battery type V389 (3 needed)				2.40



903.204

Scales with guided magnifying glass

Stainless steel scales of up to 400 mm for precise measurement on different surfaces. Delivered with one black anodized aluminum 10x magnifier with parallax-free reading. An optional second sliding magnifier can be added to the scale. The optional LED illumination can be used on these magnifiers as well.

- Measuring range: 0 - 400 mm.
- Graduation: 0.1 mm.
- Graduation thickness: 0.02 mm.
- Accuracy: ± 0.02 mm.
- Delivery in a plastic case.

Item No.	Measuring range/mm	Scale length mm	Price EUR
903.205	100	150	313.00
903.206	212	262	406.00
903.207	300	350	587.00
903.208	400	450	734.00
Options:			
903.209	Second magnifier with slider		96.00
903.204	LED illumination		59.00



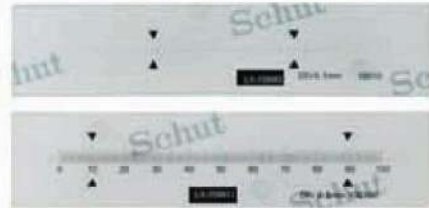
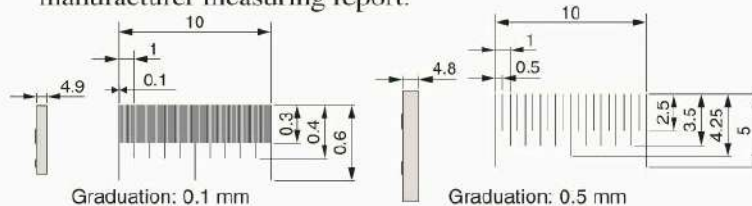
903.205 + 903.209



Glass rulers L = 50 ... 300 mm

Very accurate glass rulers, made from clear glass with a 0.1 or 0.5 mm graduation. Ideal for checking the magnification accuracy of profile projectors and microscopes, as well as the table feed accuracy of measuring equipment.

- Graduation: 0.1 or 0.5 mm.
- Accuracy: $(1.5 + 2L/1000) \mu\text{m}$;
L = measuring length in mm.
- Material: sodium glass.
- Expansion coefficient: $8.6 \cdot 10^{-6}/^{\circ}\text{C}$.
- Thickness: 5 mm.
- Width: 30 mm.
- With serial number.
- Delivery in an aluminum carrying case with a manufacturer measuring report.



910.255

910.521



ECONOMY LINE ✓

Item No.	Measuring range/mm	Graduation mm	Line thickness graduation/mm	Total length mm	Weight g	Price EUR
910.321	0 - 50	0.1	0.01	80	29	234.00
910.322	0 - 50	0.5	0.1	80	29	234.00
910.255	0 - 100	0.1	0.01	130	47	311.00
910.521	0 - 100	0.5	0.1	130	47	311.00
910.256	0 - 200	0.1	0.01	230	83	445.00
910.522	0 - 200	0.5	0.1	230	83	445.00
910.257	0 - 300	0.1	0.01	330	119	675.00
910.523	0 - 300	0.5	0.1	330	119	675.00

DEMM digital carbon scales for magnifier

- Measuring range: 0 - 1450 mm.
- Resolution: 0.01 mm.
- Intake magnifier: $\varnothing 41$ mm.
- mm/inch conversion.
- Proximity data output.
- Reset/preset.
- Excl. magnifier (905.180).
- Delivery in a wooden case with a manufacturer measuring report.
- Power supply: 1 battery type CR2032.



838.715

Item No.	Measuring range/mm	Accuracy mm	Length mm/A	Weight kg	Price EUR
838.715	0 - 450	± 0.03	720	1	1,691.00
838.716	0 - 750	± 0.03	1020	1.9	2,240.00
838.717	0 - 1150	± 0.05	1420	3	3,050.00
838.718	0 - 1450	± 0.06	1720	3.7	4,470.00
Options:					
495.157	Battery type CR2032				0.50
905.180	Magnifier with standard scale 905.181				58.00
996.664	Holder for Dino-Lite USB measuring microscopes ¹				56.00

¹ For Dino-Lite Edge models with normal working distance; magnification approx. 30x.

996.664



Light magnifiers with fluorescent or LED illumination

Large lens with a large field of view. Very suitable for production and assembly of precision instruments.

■ **Magnification:**

1.75x (3 dpt.): 909.648, 909.650,
1.75x + 4x (3 dpt. + 12 dpt.): 909.649,
2.25x (5 dpt.): 909.651.

■ **Lens:** $\varnothing$ 100 mm + $\varnothing$ 20 mm: 909.649,
 $\varnothing$ 120 mm: 909.650, 909.651,
 $\varnothing$ 127 mm: 909.648.

■ **Span table clamp:** 50 mm.

■ **Dimensions and weight base 910.430:**
310 x 215 mm, 4 kg.

■ **Power supply:** 230 V.



With circular fluorescent tube

ECONOMY LINE ✓

Item No.	Description	Price EUR
909.650	With table clamp	76.00
909.651	With base	96.00
Option:		
909.654	Spare bulb 22 W	8.90

With LED ring light

ECONOMY LINE ✓

Item No.	Description	Price EUR
909.648	56 SMD-LEDs, with table clamp	107.00
909.649	60 LEDs, with base	60.00



Options (only for 909.648 and 909.650):

Item No.	Description	Price EUR
910.427	Table clamp	11.90
910.428	Wall mount	11.90
910.429	Table mount	11.90
910.430	Base	43.00

Stereo zoom microscopes with auxiliary lenses SSM-10/20

Stereo zoom microscopes with a sharp erect image and a large field of view. Equipped with a double objective (2x/4x is used the most; also available 1x/2x and 1x/3x), so that the magnification can be changed with a simple rotary motion. The magnification of the eyepieces is 10x (optionally 5x, 15x and 20x). The magnification can be adjusted to your application even more with an optional auxiliary lens (0.5x, 0.75x, 1.5x or 2x). For all accessories, please refer to the pages "SSM stereo microscope accessories".

ECONOMY LINE ✓

- Stand with round (flattened) column and anti drop facility.
- Microscope head: 360° rotatable.
- Viewing angle: 45°.
- Interpupillary distance: adjustable (55 - 75 mm).
- Left eyepiece with diopter adjustment: ± 5 dpt.
- Working distance (without aux. lens): 72 mm.
- Stage plate: black/white (two-sided).
- Delivery incl. dust cover and soft rubber eye adapters.



909.036

Item No.	Type	Magnification	Price EUR
909.006	SSM-10	20x/40x	215.00
909.046	SSM-10	10x/20x	215.00
909.036	SSM-10	10x/30x	215.00
909.007 ¹	SSM-20C2	20x/40x	267.00
909.047 ¹	SSM-20C2	10x/20x	267.00
909.037 ¹	SSM-20C2	10x/30x	267.00

¹ With LED illumination.

See for accessories the pages "SSM stereo microscope accessories".

Illumination: LED incident light and LED backlight

Model SSM-20C2 is equipped with LED incident light and LED backlight, and the luminous intensity is adjustable.

- Stage plate: opal glass. Delivery incl. black/white stage plate.
- Power supply: 230 Vac (50 Hz).

Type		SSM-10	SSM-20C2
Eyepiece	M	10x	10x
Objective	M	2x/4x, 1x/2x or 1x/3x	
Total range*	M	5-160x, 2½-80x or 2½-120x	
Illumination		no	yes
Max. object height	mm	100	100
Travel of rack	mm	60	60
Stage plate	ø/mm	75	95
Dimensions	lxwxh/mm	260x170x290	270x235x330
Weight	kg	3.0	4.3

* The magnification range of the microscope in combination with the optional eyepieces 5-20x and auxiliary lenses 0.5-2x.



909.007

Stereo microscopes with stepless zoom SSM-E

Stereo zoom microscopes with a sharp erect image and a large field of view. The special microscope head is equipped with stepless zoom; in combination with the standard 10x eyepieces (optionally 20x) you can smoothly zoom in from 10x to 40x magnification. The magnification can be adjusted to your application even more with an optional auxiliary lens (0.5x, 0.75x, 1.5x or 2x). For all accessories, please refer to the pages "SSM stereo microscope accessories".

- Stand with round (flattened) column and anti drop facility.
- Microscope head: 360° rotatable.
- Viewing angle: 45°.
- Interpupillary distance: adjustable (55 - 75 mm).
- Both eyepieces with diopter adjustment: ± 5 dpt.
- Working distance (without aux. lens): 85 mm.
- Equipped with LED incident light and LED backlight, and the luminous intensity is adjustable.
- Stage plate: opal glass.

- Delivery incl. dust cover, soft rubber eye adapters and black/white stage plate.
- Power supply: 230 Vac (50 Hz).

ECONOMY LINE ✓

Item No.	Type	Magnification	Price EUR
909.010	SSM-EC2	10 - 40x	475.00
908.998	SSM-3EC2	10 - 40x	537.00

See for accessories the pages "SSM stereo microscope accessories".



909.010



908.998

Type		SSM-EC2	SSM-3EC2
Eyepiece	M	10x	10x
Objective	M	1-4x	1-4x
Total range*	M	5-160x	5-160x
Illumination		yes	yes
Max. object height	mm	110	110
Travel of rack	mm	60	60
Stage plate	ø/mm	95	95
Dimensions	lxwxh/mm	330x235x360	330x235x395
Weight	kg	4.8	5.4

*The magnification range of the microscope in combination with the 10x eyepieces, the optional 20x eyepieces and the optional auxiliary lenses 0.5-2x.



908.998

Camera connection

Model 3EC2 is equipped with camera connection. See the accessories page for the total magnification range with camera.

SSM stereo microscope accessories

USB microscope cameras

For viewing and saving images. They fit in the ocular ($\varnothing 30$ mm) of an SSM microscope and/or the adapter bushing ($\varnothing 23$ mm) of the models SSM-3E/3EC2.

- Field of view: see table.
- Resolution: 1.3 Mpx or 5 Mpx.
- Suitable for Windows and Mac OS X.
- Measuring of distances, radii and angles.

Auxiliary lenses

The magnification can be adjusted to your application even more with an optional auxiliary lens. Note concerning stereo microscopes with a fixed stand: auxiliary lens 0.5x is not suitable, and with auxiliary lenses 1.5x and 2x focusing on the stage plate is not possible (the product needs to be positioned higher).



Pairs of eyepieces



Soft rubber eye adapters

Item No.	Description	Price EUR
909.089	Per pair	4.80



ECONOMY LINE ✓

Item No.	Description	Price EUR
Pairs of eyepieces for SSM-2/3/5/10/20:		
909.050	M = 5x	51.00
909.051	M = 10x	51.00
909.052	M = 15x	45.00
909.053	M = 20x	45.00
Pairs of eyepieces for SSM-E:		
909.055	M = 10x	56.00
909.057	M = 20x	75.00
Eyepieces with crosshair for SSM-E:		
909.095	M = 10x (per piece)	60.00
909.096	M = 20x (per piece)	48.00
Auxiliary lenses (for SSM-10/20/E):		
909.018	M = 0.5x	62.00
909.019	M = 0.75x	62.00
909.020	M = 1.5x	62.00
909.021	M = 2x	62.00
USB microscope cameras:		
774.296	1.3 Mpx, $\varnothing 23/30/30.5$ mm	409.00
774.243	5 Mpx, $\varnothing 23/30/30.5$ mm	579.00

Magnification objective	Microscope magnification / Field of view/mm			
	Eyepiece 5x	Eyepiece 10x	Eyepiece 15x	Eyepiece 20x
Stereo microscope SSM-2:				
2x	10x / $\varnothing 10.0$	20x / $\varnothing 10.0$	30x / $\varnothing 7.0$	40x / $\varnothing 5.0$
Stereo zoom microscope SSM-3/5:				
1x	5x / $\varnothing 20.0$	10x / $\varnothing 20.0$	15x / $\varnothing 15.0$	20x / $\varnothing 10.0$
2x	10x / $\varnothing 10.0$	20x / $\varnothing 10.0$	30x / $\varnothing 7.0$	40x / $\varnothing 5.0$
3x	15x / $\varnothing 7.0$	30x / $\varnothing 7.0$	45x / $\varnothing 5.0$	60x / $\varnothing 3.5$
4x	20x / $\varnothing 5.0$	40x / $\varnothing 5.0$	60x / $\varnothing 3.5$	80x / $\varnothing 2.5$
Stereo zoom microscope SSM-10/20 (without auxiliary lens):				
1x	5x / $\varnothing 20.0$	10x / $\varnothing 20.0$	15x / $\varnothing 15.0$	20x / $\varnothing 10.0$
2x	10x / $\varnothing 10.0$	20x / $\varnothing 10.0$	30x / $\varnothing 7.0$	40x / $\varnothing 5.0$
3x	15x / $\varnothing 7.0$	30x / $\varnothing 7.0$	45x / $\varnothing 5.0$	60x / $\varnothing 3.5$
4x	20x / $\varnothing 5.0$	40x / $\varnothing 5.0$	60x / $\varnothing 3.5$	80x / $\varnothing 2.5$

Magnification objective	Magnification / Field of view/mm		Field of view camera/mm		
	Eyepiece 10x	Eyepiece 20x	774.145	774.296	774.243
Stereo microscope with stepless zoom SSM-E (without auxiliary lens):					
from 1x to 4x	10x / $\varnothing 20.0$ 40x / $\varnothing 5.0$	20x / $\varnothing 10.0$ 80x / $\varnothing 2.5$	4.5 x 3.3 ¹ 1.2 x 0.8 ¹	6.8 x 5.0 ¹ 1.4 x 1.0 ¹	19.0 x 14.0 ¹ 2.7 x 2.0 ¹
from 1x to 4x				5.6 x 4.1 ² 1.34 x 1.0 ²	18.0 x 12.0 ² 2.4 x 1.8 ²

¹ Camera intake in adapter bushing.

² Camera intake in ocular.

SSM stereo microscope accessories (continued)

LED optical fiber illumination

LED optical fiber ring light^{1,2}

Suitable for stereo microscopes SSM-10/20/E.
Note: not for use in combination with auxiliary lenses.

Ring light^{1,2}

Suitable for SSM-10/20/E (909.085).

Dark field condenser

The contrast of transparent objects is enhanced.
Suitable for all SSM stereo microscopes with backlight.

- Diameter: 94 mm.
- Stage: ø27 mm.



XY measuring table

- Range: X, Y: 25 mm.
- Intake microscope: ø94 mm.
- Turnable object plate with degree indication.
- Excl. two analog micrometer heads (intake ø12 mm; 906.072 measuring range 25 mm).



Item No. Description Price EUR

LED optical fiber illumination:

910.107	Light source LED, 20 W	424.00
909.030	Single flexible arm	148.00
909.028	Dual flexible arm	189.00
909.029	Optical fiber ring light ^{1,2}	307.00

Ring light^{1,2}:

909.085	Ring light 60 LEDs	139.00
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Spare bulbs (standard illumination):

499.377	For SSM-2/3/5	1.50
498.157	For SSM-20W/EW and for transmitted light SSM-3E	4.90
499.379	For incident light SSM-3E	4.10
438.211	Fuse F 0.5 A, 250 V for SSM-2/3/5/20W/EW/3E	0.50

Other options:

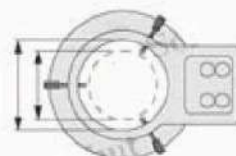
909.022	Dark field condenser	54.00
908.999	XY measuring table	588.00
960.255	Dial indicator holder	85.00
635.222	Field of view qualifier	160.00

¹ Delivery incl. adapter ring.

² Note: microscopes with standard provided incident light, this incident light must be removed before installing the ring light.

909.085: ø40 - 60 mm.

909.029: ø42 - 55 mm.



Dial indicator holder

Suitable for stereo microscopes with round column from the series SSM-10/20/E, for height measurements. The accuracy increases with higher magnification.

- Excl. dial indicator.
- The travel of the microscopes is 60 mm; see the dial indicators category for a suitable dial indicator with measuring range 50 or 60 mm.



Field of view qualifier

- Accuracy: ±0.002 mm.

635.222



SSM stereo microscope accessories (continued)

Large stand

- Base: 255 x 255 mm.
- Column height: 390 mm.
- Arm length: 490 mm.
- Height adjustment: 60 mm.



908.997

Stand with illumination

Equipped with LED incident light and back-light. The luminous intensity is adjustable.

- Column height: 185 mm.



909.405

LCD microscope head

- Screen: 8" color.
- CCD: 1/3" color.
- Zoom lens: 0.65-5.5.
- Magnification: 10-85x.
- Working distance: 10.5 cm.
- Crosshair can be toggled on/off.
- Field of view:
from 1.3 x 1.8 mm ($M=85x$)
to 12 x 16 mm ($M=10x$).



909.406

Microscope heads

- With or without camera connection.



909.093



909.092



909.405
+ 909.406



909.085
+ 909.405
+ 909.406

ECONOMY LINE ✓

Item No.	Description	Price EUR
Microscope stands:		
908.997	Large stand	249.00
909.405	Stand with illumination	145.00
870.006 ¹	Column 400 mm	33.60
Microscope heads:		
909.092	Microscope head	381.00
909.093	Microscope head with camera connection	441.00
909.406	LCD microscope head	1,149.00

¹ To be used with stand 909.405 for a larger Z axis range.

Dino-Lite USB video measuring microscopes

Very versatile and compact digital microscopes with measuring functions for various medical, industrial and educational applications. Optical product inspection can even be performed around your production machine; thanks to the stepless magnification and LED illumination you can display your products very clearly on the screen. Images can be saved as a picture or video file. Geometrical forms, such as distances, radius and angles can be measured.

- Magnification: stepless or fixed.
- Resolution: 1.3 Mpx (1280 x 1024 px) or 5 Mpx (2592 x 1944 px).
- Illumination: 8 LED white ring light.
- With software for Windows and Mac OS X (limited support under Mac OS X).
- Measuring and calibration function and edge detection.
- Plastic or aluminum housing.
- Dimensions: $\varnothing 32 \times 120$ mm.
- Connection and power supply: USB cable (1.8 m).

Also available:

- models with magnification up to 900x or coaxial light,
- models with laser pointer,
- with PAL, VGA or DVI connection for live images on TV screen, monitor or beamer,
- with special illumination by near-UV, near-IR, fluorescent or stroboscopic LEDs,
- WiFi streamer or WiFi module for a wireless connection with a tablet or a smartphone,
- ESD-safe models available,
- USB 3.0 models with a higher frame rate,
- models with extra long working distance for a large field of view.

NEW



774.228



774.278



774.278
+774.281



Dino-Lite USB video measuring microscopes (continued)

Item No.	774.081	774.088	774.210	774.024 ¹	774.277 ¹	774.306	774.278 ¹	774.280 ¹	774.314 ⁶
Type	AM4113T	AM4113ZT	AM4115TL	AM4115ZTL	AF4115ZT	AF4115ZT	AF4915ZT	AF4915ZTL	AM4917MZT
Price EUR	349.00	429.00	539.00	629.00	639.00	699.00	899.00	899.00	1,169.00
Magnification (stepless)	10-70x	10-70x	10-140x	10-140x	20-220x	20-220x	20-220x	10-140x	20-220x
Magnification (fixed)	200x	200x	–	–	–	–	–	–	–
Resolution px	1.3 M	1.3 M	1.3 M	1.3 M	1.3 M	1.3 M	1.3 M	1.3 M	1.3 M
FLC ²	–	–	–	–	–	✓	✓	✓	✓ eFLC
EDOF/EDR ³	–	–	–	–	–	–	✓	✓	✓
AMR ⁴	–	–	–	–	–	✓	✓	✓	✓
Field of view (mm) min. magnif. max. magnif.	19.8x14.9 1.7x1.2	19.8x14.9 1.7x1.2	39.0x31.2 2.8x2.2	39.0x31.2 2.8x2.2	19.5x15.6 1.8x1.4	19.5x15.6 1.8x1.4	19.5x15.6 1.8x1.4	39.0x31.2 2.8x2.2	19.5x14.7 1.8x1.3
Polarizer	–	✓	–	✓	✓	✓	✓	✓	✓
Long working distance mm	– -2..48	– -2..48	✓ 30..234	✓ 30..234	– 4..60	– 4..60	– 4..60	✓ 30..234	– 4..60
Removable front	–	–	✓	✓	✓	✓	✓	✓	✓
Aluminum housing	–	–	–	–	–	–	–	–	✓
Prepared for WiFi	–	–	–	–	✓	✓	✓	✓	–
USB interface	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0 ⁵

Item No.	774.216 ¹	774.246 ¹	774.350 ¹	774.351 ¹	774.249	774.252 ¹	774.253 ¹	774.359 ⁶	774.352 ⁶
Type	AM7115MZTL	AM73115MZT	AF7915MZT	AF7915MZTL	AM7515MT4A	AM73915MZT	AM73915MZTL	AM8117MZT	AM8917MZT
Price EUR	929.00	1,099.00	1,169.00	1,169.00	1,079.00	1,399.00	1,399.00	1,249.00	1,599.00
Magnification (stepless)	10-140x	10-220x	10-220x	10-140x	415-470x	10-220x	10-140x	10-220x	10-220x
Resolution px	5 M	5 M	5 M	5 M	5 M	5 M	5 M	8 M	8 M
FLC ²	✓	✓	✓	✓	✓	✓	✓	✓ eFLC	✓ eFLC
EDOF/EDR ³	–	–	✓	✓	–	✓	✓	–	✓
AMR ⁴	–	–	✓	✓	✓	✓	✓	–	✓
Field of view (mm) min. magnif. max. magnif.	39.0x31.2 2.8x2.2	37.8x28.3 1.8x1.3	37.8x28.3 1.8x1.3	39.0x31.2 2.8x2.2	0.95x0.69 0.82x0.60	37.8x28.3 1.8x1.3	39.0x31.2 2.8x2.2	60.7x34.1 2.7x1.5	60.7x34.1 2.7x1.5
Polarizer	✓	✓	✓	✓	–	✓	✓	✓	✓
Long working distance mm	✓ 30..234	– 12..136	– 12..136	✓ 30..234	– 6..11	– 12..136	✓ 30..234	– 3.6..142	– 4..142
Removable front	✓	✓	✓	✓	✓	✓	✓	✓	✓
Aluminum housing	✓	✓	✓	✓	✓	✓	✓	✓	✓
Prepared for WiFi	–	–	✓	✓	–	–	–	–	–
USB interface	2.0	3.0	2.0	2.0	2.0	3.0	3.0	2.0	2.0

¹ New Edge generation with better optics and exchangeable front sides.² FLC: Flexible Light Control. eFLC: 2 different intensities possible.³ EDOF: Extended Depth of Field / EDR: Extended Dynamic Range.⁴ AMR: Auto-Magnification Read.⁵ Detachable micro USB cable (included).⁶ New Edge plus generation with indicative depth measurement.

NEW



Dino-Lite microscope accessories

Stable positioning is required for sharp pictures and accurate measurements. The measuring microscopes can be positioned stably with a microscope stand.



NEW

Item No.	Description	Price EUR
Microscope stands:		
774.272	Basic stand type MS08B	69.00
774.298	Stand type RK-05F with fine adjustment and tiltable column	229.00
774.262 ¹	Stand type RK-06A with pivoting arm	240.00
774.115	Flexible arm type MSAK810 for 774.262	69.00
774.026	High precision aluminum stand type RK-10A	339.00
774.117	Heavy-duty stand type MS52B with table clamp and jointed arm	303.00
774.118	Heavy-duty stand type MS52BA2 with base and jointed arm	361.00
774.221 ²	Vertical arm type RK-10-VX for 774.026/774.262	32.00
774.237	XY-positioning arm type RK-10-PX2 for 774.026/774.262	139.00
774.065	Flexibele arm type RK-10-FX for 774.026/774.262	65.00
WiFi streamers:		
774.022 ³	WiFi streamer type WF-10	299.00
774.281 ⁴	WiFi streamer type WF-20	279.00
Other options:		
774.259	Calibration target type CS-41	13.95
774.155	Holder type HD-P1 for mounting on a microscope stand	14.50
996.390 ⁵	Reducing coupling $\varnothing$ 10/8 mm	6.90
774.130	Rolling stand type MS-W1 incl. aluminum holder	115.00
774.153	Aluminum holder type HD-M1	54.50
774.094	XY table type MS15X	175.00
774.363 ⁶	Polarized backlight stage (adjustable) type BL-ZW2	299.00
774.120 ⁶	Polarized LED illumination type SL-ZW1	42.50
774.060	Ring Light Cap type N3C-R for Dino-Lite Edge	89.00
419.030	USB extension cable (3 m)	6.20
774.121	USB foot switch type SW-F1	57.50
774.122	Plastic carrying case type CA 1070 (IP67)	32.50

¹ ESD-safe model available.

² In combination with microscopes with long working distance.

³ In combination with all recent USB 2.0 microscopes.

⁴ In combination with microscopes with removable cable.

⁵ For mounting holder 774.155 on a dial indicator stand.

⁶ More suitable in combination with the microscopes with polarizer.



774.259



774.115



774.272



774.262



774.298



774.026



774.237

774.281

855.710
+996.390
+774.155

774.130



774.118



774.363



774.094



774.122



774.060

774.120



774.121

Industrial endoscope

Industrial endoscope for inspecting hard-to-reach places by means of a flexible cable. Equipped with built-in illumination.

With the endoscope images can be watched on the integrated LCD color display. With a MicroSD card photos and videos can be made and saved.

- Automatic switch-off.
- Bendable camera cable: $\varnothing 5.5$ mm.
- Cable length: 1 m.
- Field of view: 70° .
- Focus distance: 30-60 mm.
- Camera resolution: 1.0 Mpx HD.
- Camera IP67.
- 5" LCD color display 720P HD.
- Video resolution: 1280 x 720 px.
- Photo resolution: 1920 x 1080.
- 2x digital zoom.
- 180° rotatable image.
- Illumination: 6 LEDs, intensity adjustable.
- Flashlight in the handle.
- Delivery with 45° mirror, magnet and hook.
- Delivery in a plastic carrying case.
- Power supply: 1 rechargeable lithium battery 3.7 V, 5000 mAh.
- USB charging cable included.



ECONOMY LINE ✓

Item No.	Camera $\varnothing$ /mm	Cable $\varnothing$ /mm	Cable length/m	Price EUR
910.170	5.5	5	1	289.00
Options:				
910.172* Cable length 1 m				116.00
910.176* Mirror, magnet and hook				20.30

* Standard included.

910.170

G13.319 EN 20200702

Mitutoyo profile projectors PJ-Plus series

Convenient and multifunctional profile projector for measurements on small and medium sized objects. Standard equipped with LED surface and contour illumination and a 10x projection lens. The rotatable screen with an effective diameter of 315 mm is provided with a digital protractor to eliminate the need to perform complex calculations. Easy to read digital counters located near the projection screen accurately display XY stage travel. Ergonomically placed hand wheels for normal table adjustments and 'free floating' quick adjustment for axes from 100 mm. Many optional accessories are available.

As an expansion for new and older projectors, a tablet PC with M2 software and optional edge detection is available. Measuring programs and results are saved in its memory. Besides measuring circle, point, line, ellipse, rectangle, distance, intersection and angle you have additional analysis options like squareness and parallelism.

- Measuring range: 100 x 100 or 200 x 100 mm.
- Resolution: 0.001 mm.
- ABS/INC switchable.
- RS232C data output.
- Reset.
- Reversible measuring direction.
- Built-in bevel protractor:
measuring range: $\pm 360^\circ$,
resolution: $1'/0.01^\circ$ switchable.
- Max. deviation of the enlargement:
0.1% with contour illumination,
0.15% with surface illumination.
- Dimensions: 741 x 1092 x 400 mm.
- Measuring table:
PJ-P1010A: 250 x 250 mm,
PJ-P2010A: 380 x 250 mm.
- Max. workpiece height:
PJ-P1010A: 91 mm,
PJ-P2010A: 90.5 mm.
- Illumination: LED lamp.
- Weight:
PJ-P1010A: 114 kg,
PJ-P2010A: 118 kg.
- Standard accessories:
– projection lens 10x,
– masking shield.
- Delivery without power cable (IEC C13).



M2 SET



Delivery ex Groningen, Netherlands

Item No.	Type	Measuring range/mm	Price EUR
302.801	PJ-P1010A	100 x 100	
302.802	PJ-P2010A	200 x 100	

C13-302-EN-20060702

LED optical fiber illumination

Consists of LED cold light source and fiber optic light guide with single or double arm gooseneck flexible arm. The adjustable flexible arm and adjustable brightness level give you the right angle of illumination and lighting of the product for every situation.



Item No.	Description	Price EUR
910.107	Light source LED, 20 W	424.00
909.030	Single flexible arm	148.00
909.028	Dual flexible arm	189.00

Special cleaner

Special cleaner (120 ml) for objectives, glass plates and other optical components.



Item No.	Description	Price EUR
111.534	Special cleaner	23.00

Field of view qualifier

Glass reference standard with a pattern consisting of wide variety of very accurate optical characteristics, produced with a coating (chrome). Very suitable for use with optical instruments as geometric accuracy standard or as a test and training object.

- Accuracy: ± 0.002 mm.
- Delivery including drawing with size indication.



Item No.	Description	Price EUR
635.222	Field of view qualifier	160.00

Optical cleaning kit

This cleaning kit is ideal to clean optics, microscopes and magnifying glasses, but can also be used on other products.

The set consists of:

- a bottle of cleaning solution (15 ml),
- a micro fiber cleaning cloth,
- a soft brush,
- an air blower.



Item No.	Description	Price EUR
909.432	Optical cleaning kit	7.20

Graduated rulers / Scale units / Circumference tapes Precision tapes / Distance meters



G14.000 EN 20260702

Precision rulers

- Measuring range: 0 - 3000 mm.
- Graduation: 1 mm.
- Material: bright steel or stainless steel.
- No graduation on first 5 mm at both ends.
- Accuracy and construction according DIN 866 form A.



Dimensions l x w x t/mm	Bright steel		Stainless steel		Wooden case	
	Item No.	Price EUR	Item No.	Price EUR	Item No.	Price EUR
500 x 30 x 6	771.000	32.10	771.005	57.00	776.568	47.00
1000 x 40 x 8	771.001	72.00	771.006	132.00	776.468	71.00
1500 x 40 x 8	771.002 ¹	132.00	771.007 ¹	213.00	776.561 ¹	103.00
2000 x 50 x 10	771.003 ¹	198.00	771.008 ¹	406.00	776.562 ¹	135.00
3000 x 50 x 10	771.004 ¹	425.00	771.009 ¹	709.00		

¹ Delivery ex Groningen, Netherlands. Excluding required shipping box.

Precision rulers

- Measuring range: 0 - 3000 mm.
- Graduation: 1 mm.
- Material: bright steel or stainless steel.
- Zero coincides with left end.
- Accuracy and construction according DIN 866 form B.



Dimensions l x w x t/mm	Bright steel		Stainless steel		Wooden case	
	Item No.	Price EUR	Item No.	Price EUR	Item No.	Price EUR
500 x 25 x 5	771.010	21.90	771.015	41.00	776.568	47.00
1000 x 30 x 6	771.011	44.00	771.016	89.00	776.468	71.00
1500 x 30 x 6	771.012 ¹	72.00	771.017 ¹	149.00	776.561 ¹	103.00
2000 x 40 x 8	771.013 ¹	123.00	771.018 ¹	255.00	776.562 ¹	135.00
3000 x 40 x 8	771.014 ¹	255.00	771.019 ¹	473.00		

¹ Delivery ex Groningen, Netherlands. Excluding required shipping box.

014.307 EN 20260702

Rulers

Rulers with beveled edge for parallax-free reading.

- Measuring range: 0 - 2000 mm.
- Graduation: 1 mm.
- Material: bright steel.
- Zero coincides with left end.
- With hanger hole.



910.216

ECONOMY LINE ✓

Item No.	Dimensions l x w x t/mm	Price EUR
910.216	300 x 40 x 5	18.80
910.217	500 x 40 x 5	23.50
910.218	1000 x 40 x 5	47.00
910.219 ¹	1500 x 40 x 5	85.00
910.220 ¹	2000 x 40 x 5	132.00



¹ Delivery ex Groningen, Netherlands.

Aluminum rulers

- Measuring range: 0 - 1000 mm.
- Graduation: 1 mm.
- Material: anodized aluminum.
- Zero coincides with left end.
- With hanger hole.



906.615

ECONOMY LINE ✓

Item No.	Dimensions l x w x t/mm	Price EUR
906.615	300 x 50 x 5	4.80
906.616	600 x 50 x 5	7.00
906.617	1000 x 50 x 5	10.80

Aluminum rulers

- Measuring range: 0 - 1000 mm.
- Graduation: 1 mm.
- Material: anodized aluminum.
- With hanger hole.



775.590



775.600



Item No.	Dimensions l x w x t/mm	Price EUR
775.590	300 x 35 x 5	2.60
775.592	600 x 35 x 5	5.70
775.593	1000 x 35 x 5	8.90
With handle and magnets:		
775.600	450 x 50 x 5	9.70
775.602	1000 x 50 x 5	20.70

Stainless steel rulers

- Measuring range: 0 - 2000 mm.
- Graduation: 1 mm.
- Matt chrome-plated stainless steel surface.
- With mm graduation on the upper edge.
- With 0.5 mm graduation on the lower edge.



Item No.	Dimensions l x w x t/mm	Price EUR
With mm/0.5 mm graduation:		
775.585	1500 x 40 x 2	73.00
775.586 ¹	2000 x 40 x 2	98.00
With mm/mm graduation:		
The first 100 mm on the lower edge have a 0.5 mm graduation.		
775.304 ¹	2000 x 41 x 2	196.00

¹ Delivery ex Groningen, Netherlands.

Stainless steel rulers

- Measuring range: 0 - 1000 mm.
- Graduation: 1 mm on the front side on the upper and lower edges, 0.5 mm on the back side on the upper and lower edges.
- Matt chrome-plated stainless steel surface.
- EC class II.
- Etched graduation.



910.323

ECONOMY LINE ✓



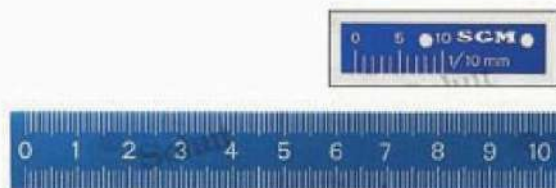
Item No.	Dimensions l x w x t/mm	Price EUR
910.323	300 x 30 x 1	4.80
910.324	500 x 30 x 1	6.00
910.325	1000 x 30 x 1	13.00

Self-adhesive rulers

- Measuring range: 0 - 400 mm.
- Graduation: 1 mm, vernier: 0.1 mm.
- Blue anodized aluminum.
- With self-adhesive back.
- Suitable for positioning on measuring devices and machine elements.

Vernier 0.1 mm

- 10 scale divisions on 19 mm.
- Non-adhesive, furnished with two fixing holes $\varnothing 2.5$ mm.



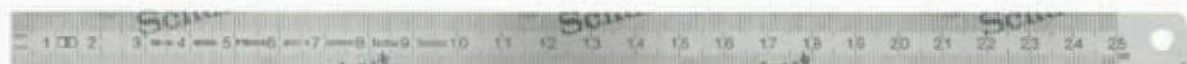
Item No.	Measuring range/mm	Dimensions l x w x t/mm	Price EUR
775.901	0 - 200	208 x 16 x 0.5	6.40
775.902	0 - 300	308 x 16 x 0.5	10.10
775.903	0 - 400	408 x 16 x 0.5	19.90
775.900	Vernier 0.1 mm	40 x 10 x 0.5	2.40

Stainless steel rulers with L → R or R → L numbering

- Measuring range: 0 - 12 000 mm.
- Graduation: 1 mm (type B: 0.5 mm).
- Matt chrome-plated stainless steel surface.
- Etched graduation.
- EC class II (up to 4000 mm).
- Rulers from the main table with hanger hole.

Available on request:

- with graduation from top to bottom or from bottom to top,
- with different combinations (mm/mm, mm/inch, mm/blanc, etc.),
- with 0-point in the middle.
- Thickness: from 300 mm: 1 mm,
from 500 mm: 2 mm.



835.124



835.266



Item No.	Price EUR	Item No.	Price EUR	Item No.	Price EUR	Item No.	Price EUR	Dimensions l x w x t/mm
L → R type A:		R → L type A:		L → R type B:		R → L type B:		
835.120	1.60	835.121	1.60	835.421	1.60	835.422	1.60	150 x 13 x 0.5
835.122	1.90	835.123	1.90	835.298	1.90	835.440	1.90	200 x 13 x 0.5
835.124	2.20	835.125	2.20	835.427	2.20	835.441	2.20	250 x 13 x 0.5
835.126	2.40	835.127	2.40	835.129	2.40	835.442	2.40	300 x 13 x 0.5
835.130	4.10	835.131	4.10	835.354	4.10	835.443	4.10	500 x 18 x 0.5
835.132	10.60	835.133	10.60	835.252	10.60	835.444	10.60	1000 x 18 x 0.5
835.134	15.80	835.135	15.80	835.428	15.80	835.445	15.80	1500 x 18 x 0.5
835.136	25.40	835.137	25.40	835.429	25.40	835.446	25.40	2000 x 18 x 0.5
835.138	34.10	835.139	34.10	835.430	34.10	835.447	34.10	2500 x 18 x 0.5
835.140	38.60	835.141	38.60	835.431	38.60	835.448	38.60	3000 x 18 x 0.5
835.142	42.00	835.143	42.00	835.432	42.00	835.449	42.00	3500 x 18 x 0.5
835.144	82.00	835.145	82.00	835.433	82.00	835.450	82.00	4000 x 18 x 0.5
835.146	94.00	835.147	94.00	835.413	94.00	835.451	94.00	5000 x 18 x 0.5
835.148	124.00	835.149	124.00	835.434	124.00	835.452	124.00	6000 x 18 x 0.5
835.150	206.00	835.151	206.00	835.035	206.00	835.453	206.00	7000 x 30 x 1
835.152	238.00	835.153	238.00	835.435	238.00	835.454	238.00	8000 x 30 x 1
835.154	261.00	835.155	261.00	835.436	261.00	835.455	261.00	9000 x 30 x 1
835.156	327.00	835.157	327.00	835.437	327.00	835.456	327.00	10000 x 30 x 1
835.158	353.00	835.159	353.00	835.438	353.00	835.457	353.00	11000 x 30 x 1
835.160	393.00	835.161	393.00	835.439	393.00	835.458	393.00	12000 x 30 x 1

835.355



Type A: mm/mm (bottom and top side 1 mm graduation).

Type B: 0.5 mm/1 mm (top side 0.5 mm, bottom side 1 mm graduation).

Rulers with a self-adhesive back

Item No.	Additional costs	Price EUR
835.165	For rulers up to 1000 mm (price per piece)	13.80
	For rulers from 1000 mm (price per meter)	13.80

The self-adhesive back is *not* separately available.



With 0-point in the middle

Item No.	Dimensions l x w x t/mm	Price EUR
835.266	200 x 13 x 0.5	4.70

Other sizes are also available.

Rulers

Stainless steel rulers with laser engraving

- With mm/mm graduation from left to right.
- Graduation: 1 mm.
- With identification number.
- EC class I.



835.462



Stainless steel rulers with magnet inserts

- Graduation from left to right.
- Laser engraving.
- With 2 flat edges without hanger hole.
- Graduation on front and back side.
- Graduation: front side: 1 mm, 0.5 mm, back side: 1/32", 1/64".
- With removeable magnet inserts.
- EC class II.

835.473

Rulers (black) with laser engraving

- Graduation on front and back side.
- Graduation: front side: 1 mm, 0.5 mm, back side: 1/10", 1/16", 1/20", 1/32", 1/64", 1/50", 1/100".
- EC class II.



835.466

Stainless steel rulers with 90° anvil hook

- Graduation from left to right.
- Laser engraving.
- Graduation: front side: 1 mm, back side: 0.5 mm.
- EC class II.



835.476



Item No.	Dimensions l x w x t/mm	Material	Class	Price EUR
Stainless steel rulers with laser engraving:				
835.096	150 x 13 x 0.5	Matt chrome-plated stainless steel surface	EC class I	2.80
835.459	300 x 13 x 0.5	Matt chrome-plated stainless steel surface	EC class I	5.10
835.460	500 x 20 x 0.5	Matt chrome-plated stainless steel surface	EC class I	8.70
835.461	1000 x 20 x 0.5	Matt chrome-plated stainless steel surface	EC class I	17.70
835.462	300 x 30 x 1.0	Matt chrome-plated stainless steel surface	EC class I	10.30
835.463	500 x 30 x 1.0	Matt chrome-plated stainless steel surface	EC class I	15.10
835.464	1000 x 30 x 1.0	Matt chrome-plated stainless steel surface	EC class I	26.90
835.465	2000 x 30 x 1.0	Matt chrome-plated stainless steel surface	EC class I	68.00
Rulers (black) with laser engraving:				
835.466	150 x 18 x 0.5	Steel, black surface	EC class II	8.20
835.467	300 x 30 x 1.0	Steel, black surface	EC class II	20.10
835.468	450 x 30 x 1.0	Steel, black surface	EC class II	29.90
835.469	600 x 30 x 1.0	Steel, black surface	EC class II	33.60
835.470	1000 x 30 x 1.0	Steel, black surface	EC class II	57.00
Stainless steel rulers with magnet inserts:				
835.471	150 x 20 x 1.0	Matt chrome-plated stainless steel surface	EC class II	20.20
835.472	300 x 30 x 1.0	Matt chrome-plated stainless steel surface	EC class II	28.10
835.473	600 x 30 x 1.0	Matt chrome-plated stainless steel surface	EC class II	37.30
835.474	900 x 30 x 1.0	Matt chrome-plated stainless steel surface	EC class II	51.00
835.475	1200 x 30 x 1.0	Matt chrome-plated stainless steel surface	EC class II	58.00
Stainless steel rulers with 90° anvil hook:				
835.476	200 x 13 x 0.5	Matt chrome-plated stainless steel surface	EC class II	13.70
835.477	300 x 13 x 0.5	Matt chrome-plated stainless steel surface	EC class II	18.40
835.478	500 x 18 x 0.5	Matt chrome-plated stainless steel surface	EC class II	23.30

Digital horizontal scale units

These scale units are available in two different models. Up to 300 mm the model matches the photo of the 906.403, from 450 mm the photo of the 906.406.

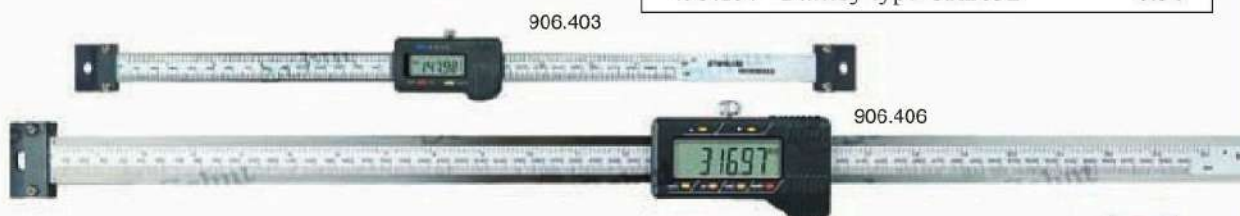
ECONOMY LINE ✓

- Measuring range: 0 - 1000 mm.
- Resolution: 0.01 mm.
- Repeatability: 0.01 mm.
- mm/inch conversion.
- ABS/INC switchable (from 450 mm).
- On/off switch.
- Reset.
- Preset (from 450 mm).
- Max. measuring speed:
 < 500 mm: 1.5 m/s,
 ≥ 500 mm: 1 m/s.
- Power supply:
 906.400-403: 1 battery type V357,
 906.404-409: 1 battery type CR2032.

Item No.	Measuring range/mm	Accuracy mm	Price EUR
906.400	0 - 100	± 0.03	36.60
906.401	0 - 150	± 0.03	36.60
906.402	0 - 200	± 0.03	53.00
906.403	0 - 300	± 0.04	86.00
906.404	0 - 450	± 0.05	144.00
906.405	0 - 500	± 0.05	172.00
906.406	0 - 600	± 0.05	237.00
906.408	0 - 800	± 0.06	360.00
906.409	0 - 1000	± 0.07	451.00

Options:

836.535	Battery type V357	0.90
495.157	Battery type CR2032	0.50



Digital vertical scale units

- Measuring range: 0 - 1000 mm.
- Resolution: 0.01 mm.
- Repeatability: 0.01 mm.
- mm/inch conversion.
- ABS/INC switchable.
- On/off switch.
- Reset.
- Preset (from 500 mm).
- Max. measuring speed: 1 m/s.
- Power supply:
 1 battery type V357
 (except 906.416 - 419).

ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Price EUR
906.415	0 - 100	± 0.03	66.00
906.416	0 - 150	± 0.03	66.00
906.417	0 - 200	± 0.03	84.00
906.418	0 - 300	± 0.04	116.00
906.419	0 - 450	± 0.05	156.00
906.420	0 - 500	± 0.05	197.00
906.421	0 - 600	± 0.05	257.00
906.423	0 - 800	± 0.06	338.00
906.424	0 - 1000	± 0.07	465.00
Options:			
836.535	Battery type V357		0.90
495.157	Battery type CR2032		0.50



906.417



Mitutoyo digital horizontal and vertical scale units

These scale units are ideal for a simple digital read-out of linear movements on e.g. machines and measuring systems.

- Measuring range: 0 - 300 mm.
- Resolution: 0.01 mm.
- ABS/INC switchable.
- Digimatic data output.
- On/off switch.
- Reset.
- Protection: IP66
(only *Coolant Proof* models).
- Conforms to factory standard.
- Power supply: 1 battery type V357.



*Data cables Digimatic,
USB Input Tool Direct, U-WAVE
available on request.*



Item No.	Measuring range/mm	Accuracy mm	Price EUR
Horizontal:			
572.200	0 - 100	±0.03	290.00
572.201	0 - 150	±0.03	304.00
572.202	0 - 200	±0.03	350.00
572.203	0 - 300	±0.04	618.00
Horizontal, IP66 (<i>Coolant Proof</i>):			
572.600	0 - 100	±0.03	335.00
572.601	0 - 150	±0.03	359.00
572.602	0 - 200	±0.03	425.00
Vertical:			
572.560	0 - 100	±0.03	542.00
572.561	0 - 150	±0.03	629.00
572.562	0 - 200	±0.03	699.00
572.563	0 - 300	±0.04	793.00

Option

Item No.	Description	Price EUR
836.535	Battery type V357	0.90



Schwenk internal circumference tapes

Circumference tapes to measure the internal circumferences and the average cross-section of round and not-round bores. The surface may be smooth or rough.

- Separate graduations for circumference and diameter in mm.
- Vernier: 0.1 mm.
- Tape width: 20 mm.
- Graduation placed by laser.
- Universal clamp for all types.
- Delivery without clamping jaw.
- Stainless steel construction.



Item No.	Diameter mm	Circumference mm	Price EUR
852.645	230- 490	720-1550	297.00
852.646	300- 700	940-2200	311.00
852.647	700-1100	2190-3460	332.00
852.648	1100-1500	3450-4720	380.00
852.770	1500-1900	4710-5980	555.00
852.771	1900-2300	5970-7230	659.00
852.262	2300-2700	7220-8500	766.00
852.649	Clamping jaw		447.00

Circumference tapes

- Separate graduations for circumference and diameter in mm.
- Vernier: 0.1 mm.
- Bright steel or stainless steel.
- Accuracy according EC class II.
- With manufacturer measuring report on request.



835.101

Bright steel

Item No.	Diameter mm	Circumference mm	Price EUR
835.111	20- 300	60- 950	58.00
835.112	300- 700	940- 2200	67.00
835.113	700-1100	2190- 3460	77.00
835.114	1100-1500	3450- 4720	88.00
835.115	1500-1900	4710- 5980	99.00
835.116	1900-2300	5960- 7230	120.00
835.117	2300-2700	7220- 8500	167.00
835.118	2700-3100	8480- 9760	172.00
835.119	3100-3500	9730-11010	213.00

Stainless steel

Item No.	Diameter mm	Circumference mm	Price EUR
835.101	20- 300	60- 950	68.00
835.102	300- 700	940- 2200	78.00
835.103	700-1100	2190- 3460	88.00
835.104	1100-1500	3450- 4720	99.00
835.105	1500-1900	4710- 5980	110.00
835.106	1900-2300	5960- 7230	153.00
835.107	2300-2700	7220- 8500	167.00
835.108	2700-3100	8480- 9760	181.00
835.109	3100-3500	9730-11010	213.00

Schwenk circumference tapes

Highly precise circumference tapes, on which the scales have been placed by means of a laser.

- Separate graduations for circumference and diameter in mm.
- Vernier: 0.1 mm.
- Tape width: 16 mm.
- Accuracy according DIN 866.
- The black model (stainless steel) is for a better contrast.
- Available on request:
 - circumference scale in inches,
 - for larger diameters up to 7500 mm,
 - with manufacturer measuring report for one or both scales,
 - vernier 0.05 mm on diameter reading.



Item No.	Diameter mm	Circumference mm	Price EUR
Bright steel:			
852.823	20 - 300	60 - 950	74.00
852.824	300 - 700	940 - 2200	90.00
852.825	700 - 1100	2190 - 3460	110.00
852.826	1100 - 1500	3450 - 4720	135.00
852.827	1500 - 1900	4710 - 5980	163.00
852.828	1900 - 2300	5960 - 7230	183.00
852.829	2300 - 2700	7220 - 8500	298.00
852.830	2700 - 3100	8480 - 9760	321.00
852.831	3100 - 3500	9730 - 11010	379.00
Stainless steel:			
852.832	20 - 300	60 - 950	90.00
852.833	300 - 700	940 - 2200	116.00
852.834	700 - 1100	2190 - 3460	158.00
852.835	1100 - 1500	3450 - 4720	198.00
852.836	1500 - 1900	4710 - 5980	238.00
852.837	1900 - 2300	5960 - 7230	276.00
852.838	2300 - 2700	7220 - 8500	325.00
852.839	2700 - 3100	8480 - 9760	392.00
852.840	3100 - 3500	9730 - 11010	480.00
Black model:			
852.699	20 - 300	60 - 950	124.00
852.915	300 - 700	940 - 2200	152.00
852.280	700 - 1100	2190 - 3460	197.00
852.281	1100 - 1500	3450 - 4720	240.00
852.282	1500 - 1900	4710 - 5980	285.00
852.283	1900 - 2300	5960 - 7230	331.00
852.284	2300 - 2700	7220 - 8500	390.00
852.285	2700 - 3100	8480 - 9760	459.00
852.286	3100 - 3500	9730 - 11010	562.00

Schwenk circumference tapes for diameters

Circumference tapes for measuring of diameters. The graduation has been placed by means of a laser.

- Graduation for diameter in mm.
- Vernier: 0.05 mm.
- Tape width: 12 mm.
- Stainless steel construction.
- The black model (stainless steel) is for a better contrast.
- With manufacturer measuring report on request.

Item No.	Diameter/mm	Price EUR
852.820	15 - 115	110.00
852.821	100 - 230	165.00
852.822	200 - 330	174.00
852.984	300 - 620	225.00
Black model:		
852.706	15 - 115	139.00
852.788	100 - 230	197.00
852.287	200 - 330	209.00
852.288	300 - 620	262.00

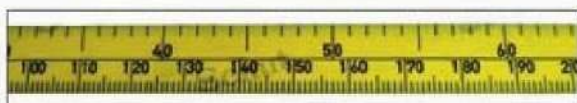


Circumference tapes

- Separate graduations for circumference and diameter in mm.
- Vernier: 0.1 mm.
- Tape width: 13 mm.



841.468



- Stainless steel with yellow plastic coating for easy reading.
- Accuracy according to EC class II.



841.663



Stainless steel with yellow plastic coating

Item No.	Diameter mm	Circumference mm	Price EUR
841.468	20 - 300	60 - 950	
841.469	20 - 1200	60 - 3780	
841.470	20 - 2400	60 - 7540	
841.471	20 - 3600	60 - 11310	

Stainless steel

Item No.	Diameter mm	Circumference mm	Price EUR
841.663	20 - 300	60 - 950	65.00
841.664	20 - 1200	60 - 3780	96.00
841.665	20 - 2400	60 - 7540	119.00
841.666	20 - 3600	60 - 11310	206.00

Circumference tapes for diameters

Circumference tapes for measuring of diameters.

- Graduation for diameter in mm.
- Vernier: 0.02 mm.
- Total tape width: 13 mm.
- Bright steel.



910.181

Item No.	Diameter mm	Price EUR
910.181	15 - 50	46.00
910.182	50 - 300	80.00
910.183	300 - 600	102.00
910.184	600 - 900	119.00
910.185	900 - 1200	134.00
910.186	1200 - 1500	145.00
910.187	1500 - 1800	165.00
910.188	1800 - 2100	173.00
910.189	2100 - 2400	188.00
910.190	2400 - 2700	204.00
910.191	2700 - 3000	215.00



ECONOMY LINE ✓



910.181

Precision tape for circumference and diameter

Precision tape for measuring of circumference and diameters.

- Separate graduations for circumference and diameter in mm.
- Graduation: 1 mm.
- Tape width: 12.5 mm.
- Lock.
- EC class II.
- White varnished very flexible steel strip with mm graduation.



ECONOMY LINE ✓

Item No.	Diameter mm	Circumference mm	Price EUR
911.183	20 - 960	60 - 3000	5.80



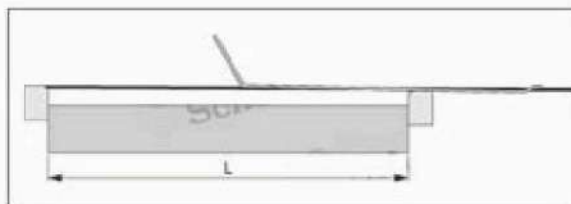
Schwenk length measuring tapes for plane parallel distances

Length measuring tapes for measuring plane parallel distances. The high contrast graduation has been placed by means of a laser.

- Graduation: 0.1 mm.
- Tape width: 20 mm.
- Tape thickness: 0.5 mm.
- Stainless steel construction.



Item No.	Measuring range/mm	Price EUR
852.734	60 - 950	167.00
852.735	940 - 2200	193.00
841.589	2190 - 3460	235.00
841.590	3450 - 4720	276.00
841.591	4710 - 5980	316.00
841.592	5970 - 7320	355.00



Precision tapes

Cost effective rubberized precision tapes.

- Yellow varnished steel strip with mm graduation.
- One-sided printed blade.
- Matt finished steel blade.
- EC class II.

- Standard EC-type hook.
- Lock.
- Standard packing of 12 pieces per carton box (except 910.060: 10 pieces).



ECONOMY LINE ✓

Item No.	Length m	Tape width mm	Price EUR
Precision tapes per piece:			
910.056	2	16	3.00
910.057	3	16	3.40
910.058	5	19	5.00
910.059	8	25	9.00
910.060	10	25	12.10

Precision tapes with magnetic dual hook

Precision tapes for professional use with double-sided printed blade and double hook with magnet.

- EC class II (except 910.064).
- EC class I (only 910.064).
- Shockproof til 2 m.

- Matt finished steel blade.
- Double-sided printed blade (except 910.064).
- Blade horizontal stand-out:
19 mm: 1.7 m, 27 mm: 2.8 m.
- EC-type magnet dual hook (except 910.064).
- Lock.
- Extra lock on the bottom-side (except 910.064).
- Standard packing of 10 pieces per carton box.



ECONOMY LINE ✓

Item No.	Length m	Tape width mm	Price EUR
Precision tapes per piece:			
910.061	3	19	7.30
910.062	5	27	12.70
910.063	10	27	22.20
EC class I:			
910.064	3	19	17.00

Long stroke precision tape

Long stroke precision tape with blade from fiberglass and with high speed retracting gear.



- Double-sided printed blade.
- Graduation: 2 mm.
- EC class II.

ECONOMY LINE ✓

Item No.	Length m	Tape width mm	Price EUR
910.065	30	15	19.80

Long stroke precision tapes

- Black plastic housing with wristlet.



775.540

- White varnished steel strip with mm graduation.
- Wind-up handle.
- EC class II.

Item No.	Length m	Tape width mm	Price EUR
775.540	10	9.5	4.20
775.541	15	9.5	5.20

Digital measuring tape

Digital measuring tape equipped with a 19 mm wide tape, with a clear graduation. The digital indication is convertible from external to internal measurements and can be reset to zero at any point on the tape.

- Measuring range: 0 - 5 m.
- Resolution: 1 mm.
- mm/cm/m/inch/ft conversion.
- With calculation formulas for surface area and volume.
- Display of center distance possible.
- LED display.
- Automatic switch-off.
- Reset.
- Rotatable display value.
- Automatic stop.
- Measurement reference: front or rear.
- Storage for 50 measuring values.
- EC class II.
- EC-type magnet hook.
- Dimensions: 84 x 68 x 35 mm.
- Weight: 248 g.
- Power supply: 1 rechargeable lithium battery 5 V, 500 mAh.

- USB charging cable included (excluding AC adapter).



ECONOMY LINE ✓

Item No.	Length m	Tape width mm	Price EUR
909.341	5	19	55.00

014.312 EN 20060702

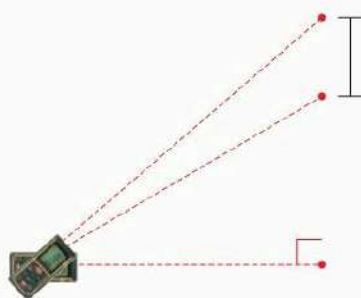
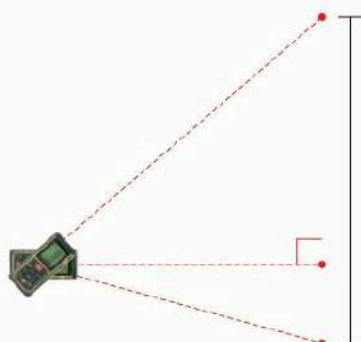
Laser distance meters

With these compact hand laser distance meters you aim a visual laser spot at the object for quick and accurate measurements of the distance without contact.

- Measuring range: 0 - 80 m.
- Resolution: 0.001 m/0.01 m.
- Accuracy: ± 2 mm.
- Distance, surface and volume measurements, continuous measurements, addition and subtraction, min/max function and Pythagoras function.
- mm/inch/ft conversion.
- Illuminated LCD display.
- On/off switch, automatic switch-off.
- Measurement reference: front or rear.
- Storage for 99 measuring values.
- With thread for tripod: UNC 1/4"-20, thread depth: 6 mm.
- Laser: 635 nm, class II according IEC 60825-1.
- Dimensions: 120 x 55 x 30 mm.
- Weight: 909.453: 180 g, 909.454: 128 g.
- With vial.
- Delivery in a carrying bag.
- Power supply: 2 batteries type AAA.



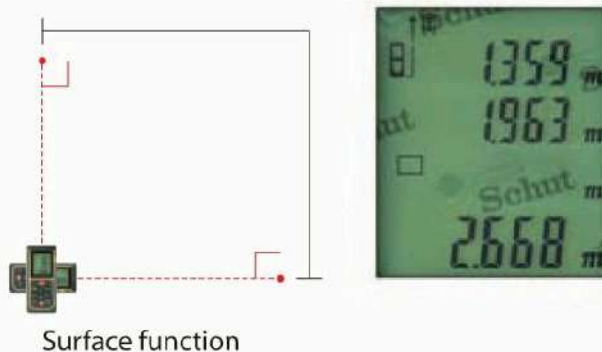
909.454



Pythagoras function

ECONOMY LINE ✓

Item No.	Measuring range/m	Price EUR
909.453	0 - 40	87.00
909.454	0 - 80	120.00
Option:		
497.914	Battery type AAA (2 needed)	0.80



Surface function

Scribing tools / Compasses / Center squares



©15.000 EN.20260702

Marking gauges

- Measuring range: 0 - 400 mm.
- Vernier: 0.1 mm.
- Matt chrome-plated beam.
- Roll stop.



ECONOMY LINE ✓



Item No.	Measuring range/mm	Price EUR
836.602	0 - 200	31.00
836.604	0 - 400	46.00
836.603	Spare scriber point	5.20

Marking gauges

- Measuring range: 0 - 500 mm.
- Vernier: 0.1 mm.
- With round rod and mm graduation.



ECONOMY LINE ✓



Item No.	Measuring range/mm	Price EUR
Without fine adjustment:		
907.183	0 - 200	42.00
907.184	0 - 300	49.00
907.185	0 - 400	69.00
907.186	0 - 500	76.00
With fine adjustment:		
907.187	0 - 200	51.00
907.188	0 - 300	58.00
907.189	0 - 400	73.00
907.190	0 - 500	85.00
907.191	Spare scriber point (TC)	5.30

Marking calipers

T-shaped stainless steel marking caliper with a large marking face/cross scale. The marking face is sunk into the U-shaped base face.

- Measuring range: 0 - 300 mm.
- Locking screw.
- Vernier: 0.05 mm.
- With or without fine adjustment.
- Matt chrome-plated beam.
- Marking face/cross scale with mm graduation (50 - 0 - 50 mm).



ECONOMY LINE ✓

Item No.	Measuring range/mm	Base length/mm	Price EUR
Without fine adjustment:			
907.575	0 - 160	140	78.00
907.576	0 - 250	140	99.00
907.577	0 - 300	160	114.00
With fine adjustment:			
907.196	0 - 160	100	84.00
907.197	0 - 250	140	106.00
907.198	0 - 300	160	135.00

Marking gauges

- Measuring range: 0 - 300 mm.
- Vernier: 0.1 mm.
- Matt chrome-plated beam.



ECONOMY LINE ✓

Item No.	Measuring range/mm	Price EUR
907.180	0 - 200	17.60
907.181	0 - 250	21.20
907.182	0 - 300	31.50

Digital marking gauge and protractor

- Measuring range: 0 - 300 mm.
- Resolution: protractor: 0.05°, scale: 0.01 mm.
- mm/inch conversion.
- On/off switch.
- Automatic switch-off.
- Reset.
- Hold function.
- Locking screw.
- Protection: IP40.
- Power supply: 1 battery type CR2032.



ECONOMY LINE ✓

Item No.	Measuring range/mm	Price EUR
906.669	0 - 300	66.00
Option:		
495.157	Battery type CR2032	0.50

Scriber

- Total length = 136 mm.
- With clip and magnetic upper part.
- Standard supplied with tungsten carbide exchangeable scriber point (909.389).



ECONOMY LINE ✓

Item No.	Description	Price EUR
909.388	Scriber with tungsten carbide exchangeable scriber point	5.30
Replacement point ø 3 mm:		
909.389	Tungsten carbide	2.80
910.488	Hardened steel	1.30

Trammels

- Round rod with graduation.
 - Milled key groove.
 - Vernier: 0.1 mm.
 - Fine adjustment.
- (Also available without fine adjustment.)



Item No.	Length/mm	Price EUR
671.275	500	223.00
671.277 ¹	1500	474.00
671.278 ¹	2000	580.00
Needles per pair:		
671.234	Hardened steel	18.90

¹ Delivery ex Groningen, Netherlands.

Scriber with two points

Metal scriber with two points; with one straight and one at a 90° angle.

- Length: 250 mm.



NEW

Schut

ECONOMY LINE ✓

Item No.	Description	Price EUR
910.486	Scriber	2.90

Trammels

- Flat beam with graduation.
- Vernier: 0.1 mm.
- Fine adjustment.
- Hardened steel construction.



Item No.	Length/mm	Price EUR
671.261	500	73.00
671.262	1000	204.00
671.263 ¹	1500	341.00
671.264 ¹	2000	401.00
Needles per pair:		
671.230	Hardened steel	7.00
671.235	Tungsten carbide	30.40

¹ Delivery ex Groningen, Netherlands.

Spring joint dividers

- Stainless steel construction.
- With adjustment screw.
- With interchangeable points (910.012 - 018, 907.447 - 448).
- With pencil holder (907.447 - 448).



ECONOMY LINE ✓

Item No.	Description	Price EUR
907.446	Spare divider point $\varnothing 2 \times 30$ mm	1.30

Length/mm	Item No.	Price EUR	Item No.	Price EUR	Item No.	Price EUR
100	910.252	7.60	910.012	10.40	—	—
125	910.253	6.90	910.013	11.80	—	—
150	907.827	9.20	910.014	12.50	907.447	8.00
175	—	—	910.015	13.80	—	—
200	907.828	11.10	910.016	15.60	907.448	10.80
250	907.829	13.40	910.017	17.60	—	—
300	907.830	14.90	910.018	19.00	—	—
400	907.831	23.40	—	—	—	—
500	907.832	30.50	—	—	—	—
600	907.833	41.00	—	—	—	—

Firm joint compasses

- Stainless steel construction.
- With adjustment arch and locking screw (907.818 - 826, 909.461 - 469).
- With pencil holder (909.461 - 469).



ECONOMY LINE ✓

Length/mm	Item No.	Price EUR	Item No.	Price EUR	Item No.	Price EUR
150	907.809	8.60	907.818	9.80	909.461	11.20
200	907.810	10.70	907.819	11.20	909.462	14.20
250	907.811	11.70	907.820	13.00	909.463	16.40
300	907.812	12.90	907.821	14.80	909.464	18.60
400	907.813	25.30	907.822	28.50	909.465	24.60
500	907.814	34.80	907.823	38.00	909.466	34.70
600	907.815	44.00	907.824	48.00	909.467	42.00
800	907.816	79.00	907.825	91.00	909.468	112.00
1000	907.817	114.00	907.826	117.00	909.469	138.00

Internal spring joint compasses

- Stainless steel construction.
- With adjustment screw.



ECONOMY LINE ✓

Item No.	Length/mm	Price EUR
907.793	100	7.70
907.794	125	8.80
907.795	150	10.90
907.796	200	12.00
907.797	250	12.20
907.798	300	13.50
907.799	400	23.40
907.800	500	30.50

External spring joint compasses

- Stainless steel construction.
- With adjustment screw.



ECONOMY LINE ✓

Item No.	Length/mm	Price EUR
907.801	100	9.20
907.802	125	8.80
907.803	150	9.20
907.804	200	11.10
907.805	250	12.20
907.806	300	13.50
907.807	400	27.90
907.808	500	30.50

Firm joint compasses

- Stainless steel construction.



ECONOMY LINE ✓

Item No.	Length/mm	Price EUR
907.836	100	6.30
907.837	125	7.10
907.838	150	7.40
907.839	200	7.60
907.840	250	10.60
907.841	300	11.40
907.842	400	22.10
907.843	500	25.30
907.844	600	38.00
907.845	800	67.00
907.846	1000	82.00

Firm joint compasses

- Stainless steel construction.



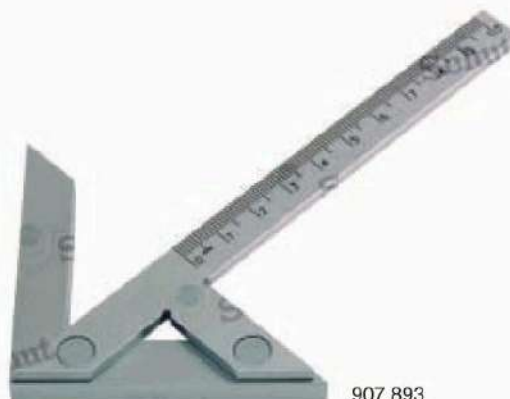
ECONOMY LINE ✓

Item No.	Length/mm	Price EUR
907.847	100	6.00
907.848	125	6.30
907.849	150	7.40
907.850	200	7.70
907.851	250	10.60
907.852	300	11.50
907.853	400	22.30
907.854	500	25.60
907.855	600	38.40
907.856	800	67.00
907.857	1000	83.00

Center squares

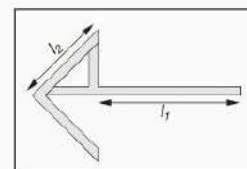
Center squares with mm graduation on the blade, to mark the center on round discs or axes.

- Stainless steel construction, no-glare chrome finished.
- Graduation placed by means of a laser.



ECONOMY LINE ✓

Item No.	Length/mm		Max. ϕ mm	Price EUR
	l_1	l_2		
907.893	100	70	90	37.10
907.894	150	130	190	42.00
907.895	200	150	220	48.00
907.896	250	160	230	80.00
907.897	300	180	280	99.00
909.972	400	250	380	132.00
909.973	500	330	530	189.00



Caliper compasses

- For scribing of diameters of 0-600 mm.
- Vernier: 0.1 mm.
- Stainless steel construction, matt chrome-plated.
- Fixed jaw and beam made out of one piece.
- Hardened, ground and lapped measuring faces.



ECONOMY LINE ✓

Item No.	For scri- bing up to ϕ /mm	Meas. range mm	Jaw length mm	Price EUR
909.424	300	150	40	53.00
909.425	400	200	40	64.00
909.426	500	250	40	76.00
909.427	600	300	40	87.00



Universal setting instrument

This versatile instrument is specially designed for manufacturers of very accurate products, such as gauges and toolmakers. The guide is installed under an angle of 20° and the components can be moved very accurately. The movable component has several threaded bores M4, by which the setting instrument also can be used as a scriber or height gauge.

- Max. height range incl. extensions: 270 mm.
- Dimensions: 133 x 64 x 18.5 mm.
- Delivery with extensions 25 mm and 75 mm (equipped with thread M4/thread hole M4).
- Base with vial.



ECONOMY LINE ✓

Item No.	Description	Price EUR
906.455	Universal setting instrument	111.00



Surface gauge

Stable foot with V-slot at the ground surface, grips at the side and is also equipped with two bores (ø5.5 mm).

- Foot ground all around (except for the V-slot).
- Fine adjustment.
- Dimensions:
 scriber: ø4 x 200 mm,
 arm: ø10 x 450 mm,
 foot: 85 x 65 x 25 mm.



ECONOMY LINE ✓

Item No.	Description	Price EUR
906.220	Surface gauge	35.70



Height and scribing gauges / Height gauges



©16.000 EN.20260702

Digital height and scribing gauges

- Measuring range: 0 - 1000 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- ABS/INC switchable.
- On/off switch.
- Reset.
- Hold function.
- Fine adjustment.

- Delivery incl. scriber.
- Delivery in a plastic carrying case.
- Power supply:
909.244/245: 1 battery type V357,
906.267/268, 909.246: 1 battery type
CR2032.

Measuring range 1000 mm:

- Tolerance function.
- Preset.



ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Price EUR
906.267	0 - 200	±0.03	146.00
906.268	0 - 300	±0.04	179.00
909.244	0 - 500	±0.05	250.00
909.245	0 - 600	±0.07	290.00
909.246 ¹	0 - 1000	±0.07	545.00
Options:			
836.535	Battery type V357		0.90
495.157	Battery type CR2032		0.50
906.029	Scriber for 906.267		16.40
906.049	Scriber for 906.268		16.40
906.054	Scriber for 909.244/245		26.80
906.077	Scriber for 909.246		45.00

¹ Delivery ex Groningen, Netherlands.

Absolute digital height and scribing gauges

Digital height and scribing gauges with an absolute measuring system. Combined with a Digimatic dial indicator quick and accurate measurements can be performed with a constant measuring force.

- Measuring range: 0 - 600 mm.
- Resolution: 0.01 mm.
- Handwheel drive for easy head displacement.
- Interchangeable scriber, intake 9 x 9 mm.
- ABS/INC switchable.
- Digimatic data output.
- On/off switch.
- Reset.
- Hold function.
- Locking screw.
- Delivery incl. scriber, dial indicator holder and Digimatic data cable for dial indicator.
- Delivery in a plastic carrying case.
- Power supply: 1 battery type CR2032.
- For suitable Digimatic dial indicators refer to the dial indicators elsewhere in this catalog.



Schut



USB interface:

- For data transfer to PC (e.g. Excel, Word).
- Operating system: Windows and other.
- PC connection: USB.
- No software or driver to install.
- Foot switch (optional).



ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Price EUR
910.096	0 - 300	0.03	312.00
910.097	0 - 600	0.05	448.00
With Bluetooth:			
910.098	0 - 300	0.03	333.00
Options:			
495.157	Battery type CR2032		0.50
909.686*	USB interface		112.00
909.687	Footswitch for USB interface		19.20
910.038	Wireless USB receiver		50.00
910.039	Wireless transmitter		51.00
906.256	Scriber		34.80

* Standard configured for PC with English (US) keyboard.
Also available on request for alternative keyboards.

Digital height and scribing gauges with dial indicator holder

Solid and stable instruments with integrated dial indicator holder and stainless measuring table.

- Measuring range: 0 - 500 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- ABS/INC switchable.
- On/off switch.
- Preset.
- Reset.
- Hold function.
- Tolerance function.
- Fine adjustment.
- Intake scriber: 8 x 6 mm.
- Delivery incl. scriber.



ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Price EUR
906.115	0 - 200	±0.04	244.00
906.116	0 - 300	±0.04	305.00
906.117	0 - 500	±0.06	446.00
Options:			
836.535	Battery type V357		0.90
906.343	Scriber		31.10

- Dial gauge clamping shaft 8 mm.
- Measuring table: 906.115/116: 80 x 80 mm, 906.117: 110 x 100 mm.
- Power supply: 1 battery type V357.



Digital double columns height and scribing gauges

This is a very stable digital height gauge because of its twin guide system. The measuring unit moves over two independent columns with high precision toothed racks, which generates an accurate measurement.

- Measuring range: 0 - 600 mm.
- Resolution: 0.01 mm.
- Repeatability: 0.01 mm.
- Handwheel drive for easy head displacement.
- mm/inch conversion.
- ABS/INC switchable.
- On/off switch.
- Reset/preset.

ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Price EUR
906.263	0 - 300	±0.04	391.00
906.264	0 - 450	±0.05	448.00
906.265	0 - 600	±0.05	581.00
Option:			
836.535	Battery type V357		0.90
906.118	Scriber 9 x 9 mm		22.10

- Intake scriber: 9 x 9 mm.
- Delivery incl. scriber.
- Power supply: 1 battery type V357.



Mitutoyo digital height and scribing gauges

Ergonomically designed height gauge with data output and a useful hand wheel for both fast and fine adjustment.

- Measuring range: 0 - 1000 mm.
- Resolution: 0.005/0.01 mm.
- Accuracy: refer to table.
- ABS/INC switchable.
- Digimatic data output.
- On/off switch.
- Reset/preset.
- Hold function.
- Max. measuring speed: 500 mm/s.
- Reversible measuring direction.
- Fast and fine adjustment.
- Interchangeable scriber, intake 9 x 9 mm.
- Delivery incl. cover and scriber.
- Conforms to factory standard.
- Power supply: 1 battery type V357.

*Data cables Digimatic,
USB Input Tool Direct, U-WAVE
available on request.*

With a connection for a probe

Item No.	Measuring range/mm	Resolution mm	Accuracy mm	Price EUR
192.663	0 - 300	0.005/0.01	±0.02	1,427.00
192.664	0 - 600	0.005/0.01	±0.04	1,858.00
192.665 ¹	0 - 1000	0.005/0.01	±0.06	3,161.00
Options:				
836.535	Battery type V357			0.90
905.201	Scriber			173.00
105.033	Scriber holder			49.00
192.007	Electronic probe			625.00

¹ Delivery ex Groningen, Netherlands.

Without connection for a probe

Item No.	Measuring range/mm	Resolution mm	Accuracy mm	Price EUR
192.613	0 - 300	0.005/0.01	±0.02	1,091.00
192.614	0 - 600	0.005/0.01	±0.05	1,498.00
192.615 ¹	0 - 1000	0.005/0.01	±0.07	2,829.00
Options:				
836.535	Battery type V357			0.90
107.001	Scriber 9 x 9 mm			72.00
105.033	Scriber holder			49.00

¹ Delivery ex Groningen, Netherlands.



192.007



192.613

Mitutoyo Absolute Digimatic height gauges

Mitutoyo Absolute Digimatic HDS digital height gauge with data output and useful hand wheel, just as easy to use as the popular 2-column height gauges. Equipped with locking lever, ideal for use as a scribing gauge. The unique Absolute measuring system prevents inaccuracy due to an incorrect zero position. Easy to link with the U-WAVE wireless communication system for fast and reliable data transfer.

- Measuring range: 0 - 600 mm.
- Resolution: 0.01 mm.
- ABS/INC switchable.
- Digimatic data output.
- On/off switch.
- Reset/preset.
- Hold function.
- Max. measuring speed: unlimited.
- Interchangeable scriber, intake 9 x 9 mm.
- Delivery incl. scriber.
- Weight: 570.402: 4.3 kg,
570.404: 6.3 kg.
- Conforms to factory standard.
- Power supply: 1 battery type V357.



Item No.	Measuring range/mm	Accuracy mm	Price EUR
570.402	0 - 300	±0.03	810.00
570.404	0 - 600	±0.05	1,424.00
Options:			
836.535	Battery type V357		0.90
107.001	Scriber 9 x 9 mm		72.00
953.638	Holder for 902.053, clamping shaft ø6 mm		14.80
902.053	Universal clamp for ø4 mm, ø8 mm, dovetail		38.00
900.872	Electrical contact indicator		140.00
900.764	Depth gauge attachment 9 x 9 mm		63.00
951.144	Center-accessory 9 x 9 mm		583.00
264.506	Mitutoyo DP-1VA SPC printer ¹		
905.338	Digimatic signal cable, 1 m		39.00
102.810	U-WAVE receiver and software		380.00
102.880	U-WAVE transmitter standard		189.00
264.625	U-WAVE Bluetooth transmitter		197.00
102.795	U-WAVE data cable		98.00
106.384	USB Input Tool Direct cable, 2 m		128.00
905.338	Digimatic signal cable, 1 m		39.00

¹ Incl. AC adapter (6 Vdc) and a roll of printing paper.



Height and scribing gauges with dial and counter

- Measuring range: 0 - 1000 mm.
- Graduation dial indicator: 0.01 mm.
- Resolution counter: 1 mm.
- 1 pointer revolution = 1 mm.
- Rotatable dial.
- Double counter, one indicator in plus direction and one in minus direction.
- Zero setting possible at any height.
- Intake scriber: 9 x 9 mm.
- Delivery incl. scriber.

ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Price EUR
906.250	0 - 300	±0.04	218.00
906.251	0 - 450	±0.05	339.00
906.252	0 - 600	±0.05	442.00
906.253	0 - 800	±0.06	2,000.00
906.254 ¹	0 - 1000	±0.07	2,180.00
Option:			
906.174	Scriber 9 x 9 mm		22.10

¹ Delivery ex Groningen, Netherlands.

Height and scribing gauges with dial

These height gauges are equipped with a rack, as used for dial calipers.

- Measuring range: 0 - 300 mm.
- Graduation: 0.02 mm.
- 1 pointer revolution = 2 mm.
- Rotatable dial.
- Fine adjustment.
- Delivery in a wooden case with a scriber.



ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Price EUR
906.260	0 - 150	±0.03	74.00
906.261	0 - 200	±0.03	79.00
906.262	0 - 300	±0.04	93.00
Options:			
906.029	Scriber for 906.260/261		16.40
906.049	Scriber for 906.262		16.40



Height and scribing gauges

- Measuring range: 0 - 1000 mm.
- Vernier: 0.02 mm.
- Fine adjustment.
- Delivery incl. scriber.
- Matt chrome-plated scale and vernier.

ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Price EUR
906.325	0 - 200	±0.03	71.00
906.326	0 - 300	±0.04	77.00
906.327	0 - 500	±0.05	125.00
906.328 ¹	0 - 1000	±0.07	492.00
Options:			
906.029	Scriber for 906.325		16.40
906.049	Scriber for 906.326		16.40
906.054	Scriber for 906.327		26.80
906.748	Scriber for 906.328		27.40

¹ Delivery ex Groningen, Netherlands.



Height and scribing gauges with magnifier

To minimize the possibility of reading errors these height gauges are equipped with a magnifier. The magnifier can be adjusted in height, so that it can always be positioned correctly with regard to the vernier.

- Measuring range: 0 - 500 mm.
- Vernier: 0.02 mm.
- Ruler adjustable in height.
- Fine adjustment.
- Intake scriber: 9 x 9 mm.
- Delivery incl. scriber.

ECONOMY LINE ✓

Item No.	Measuring range/mm	Accuracy mm	Price EUR
906.255	0 - 300	±0.04	160.00
906.257	0 - 500	±0.05	211.00
Options:			
906.269	Scriber for 906.255		29.00
906.323	Scriber for 906.257		29.00



TESA Micro-Hite/Micro-Hite+M 350/600/900

The TESA Micro-Hite and the TESA Micro-Hite+M (motorized) 350/600/900 are universal height gauges with air cushion for use in the measuring room as well as in the workshop for 1D as well as 2D measurements. Very suitable for accurate internal, external, height, depth and distance measurements of various measuring objects with flat, parallel or cylindrical surfaces. The measuring program in the control unit calculates all relations between the measuring features automatically. 2D measurements can be performed by rotating the work piece 90° (or other known angle) to determine for example bore coordinates, bolt hole circles or angles between circles.

These height gauges distinguish themselves from other height gauges by excellent performance and logical and easy operation using the rotatable and swivelable control unit. The control unit consists of a touchscreen and physical buttons for fast and intuitive operation. Due to the exclusive transport wheel the TESA Micro-Hite and the TESA Micro-Hite+M combine the speed of a manually operated height gauge with the precision and easy handling of a motorized one.

- Measuring range:
350: 365 mm, 600: 615 mm, 900: 920 mm.
- Max. range with standard holder and probe:
350: 520 mm, 600: 770 mm, 900: 1075 mm.
- Max. range with long probe holder:
350: 745 mm, 600: 995 mm, 900: 1300 mm.
- Resolution: 0.0001/0.001/0.01 mm.
- mm/inch conversion.
- Measuring force: 1.6 ± 0.25 N.
- Squareness (frontal):
350: 7 μ m, 600: 9 μ m, 900: 11 μ m
(with IG13 probe resp. 5 μ m, 7 μ m, 9 μ m).
- SCS certificate included.
- Complete stand-alone design, without cable. Ideal for incoming goods inspection and product inspection in a production environment.
- Air cushion for easy displacement on an optional surface plate (see surface plates elsewhere in this catalog).
- High accuracy in length, straightness and perpendicularity measurements through CAA (Computer Aided Accuracy).
- Fast, easy and reliable probing of the workpiece, in particular with bore measurements, through constant measuring force.
- Optical and acoustic signal to confirm the measuring value.
- Calculations are performed automatically.
- Integrated calculator to perform calculations using measurements.
- Automatic determination of the culmination point with cylindrical surfaces.
- Processing and saving of data through the optional mounted printer, USB stick or via (wireless) TLC connection to the PC.

- Weight: 350: 33 kg, 600: 37 kg, 900: 45 kg.
- For optional probes and accessories see "Probes and accessories TESA Micro-Hite / TESA-Hite".

TESA Micro-Hite 350/600/900

- Accuracy: $2 + 2L/1000$ (L in mm).
- Repeatability:
 ≤ 1 μ m (flat surfaces),
 ≤ 1 μ m (radius).

TESA Micro-Hite+M 350/600/900

- Accuracy: $1.8 + 2L/1000$ (L in mm).
- Repeatability:
 ≤ 0.5 μ m (flat surfaces),
 ≤ 1 μ m (radius).



TESA Micro-Hite/Micro-Hite+M 350/600/900 (continued)

Control unit

The Micro-Hite/Micro-Hite+M height gauges are equipped with a 2D control unit. This completely renewed control unit can be fully controlled using the touch screen, the physical buttons or a combination of both. Standard functions can be accessed with 1 button, making the height gauge accessible to everyone. During measurements the display shows graphical instructions to guide you through the measuring process. Measurements can be saved as a program. Data can be entered on the display for traceability purposes, for instance product or operator information. After completion of the measurements graphs and tables can be shown including go/nogo classification based on entered tolerance values. The adjustable mounting allows for optimal positioning of the control unit.

The control unit features the following interfaces: 3 x USB output, 1 x RS232 output, 1 x TLC output and can be connected to a PC using the de TLC-USB cable or the TLC-BLE transmitter (wireless). In combination with the free TESA DATA VIEWER PC software measurements can be exported directly to Excel. Using the STAT-EXPRES SPC software measurements can be saved and analysed. Measuring reports (PDF), programs and measuring results can be saved directly to a USB stick. An optional printer allows for printing of the measuring results.

Detailed
information
available



Accessories for (wireless) data transfer
available on request.

Item No.	Type/description	Price EUR
783.501 ¹	Micro-Hite 350	
783.502 ¹	Micro-Hite 600	
783.503 ¹	Micro-Hite 900	
783.504 ¹	Micro-Hite+M 350 (motorized)	
783.505 ¹	Micro-Hite+M 600 (motorized)	
783.506 ¹	Micro-Hite+M 900 (motorized)	
Options:		
783.555	TESA Link Connector Bluetooth	
783.509	USB printer for Micro-Hite	
783.524	Paper for USB printer (4 rolls)	

¹ Delivery ex Groningen, Netherlands.

Basic instrument		Micro-Hite/Micro-Hite+M		
		350	600	900
Measuring range	mm	365	615	920
Max. range with standard holder and probe	mm	520	770	1075
Max. range with long probe holder	mm	745	995	1300
Max. deviation of perpendicularity mech. (frontal)	µm	<7	<9	<11
Max. deviation of perpendicularity IG13 probe	µm	<5	<7	<9

Basic instruments

The Micro-Hite/Micro-Hite+M height gauges are standard supplied with:

- Micro-Hite(+M) panel with adjustable holder,
- standard probe holder 6 mm (783.511),
- standard probe with carbide ball tip ø 5 mm (782.215),
- reference standard 12.7 mm,
- electric air cushion,
- Li-ion battery,
- AC adapter (783.570) incl. power cable (782.202),
- SCS calibration certificate.

Probes and accessories TESA Micro-Hite / TESA-Hite

Besides the probes and accessories shown below there are various other types available.

Item No.	Type/description	Price EUR
779.442	Probe holder $l = 75$ mm	
779.443	Probe holder $l = 150$ mm	
779.429	Probe holder $l = 25$ mm	
779.433	TC ball probe $\phi 3$ mm	
779.432	TC ball probe $\phi 10$ mm	
779.435	Barrel-shaped probe $\phi 2.2$ mm for thread M3-M16	
779.436	Barrel-shaped probe $\phi 4.5$ mm for thread M6-M48	
779.437	Barrel-shaped probe $\phi 9.7$ mm for thread M12-M150	
779.438	Disc probe $E = 1$ mm, $D = 4.5$ mm	
779.439	Disc probe $E = 2$ mm, $D = 14$ mm	
779.440	Disc probe $E = 3$ mm, $D = 19$ mm	
779.441	Small probe, cylindrical measuring face $\phi 2$ mm	
780.314	$\phi 6$ mm probe, tungsten carbide, $\phi 1$ mm	
780.315	$\phi 6$ mm probe, tungsten carbide, $\phi 2$ mm	
780.316	$\phi 6$ mm probe, tungsten carbide, $\phi 3$ mm	
779.447	Probe holder with pin with 1 spherical and 1 flat face	
779.446	Probe holder with cylindrical measuring face $\phi 10$ mm	
783.383	Starter-set	
781.906	Partial set	
781.474	Complete set	
960.482	Adapter $\phi 6$ $l = 75$ mm for M2.5-threaded inserts from dial indicators	

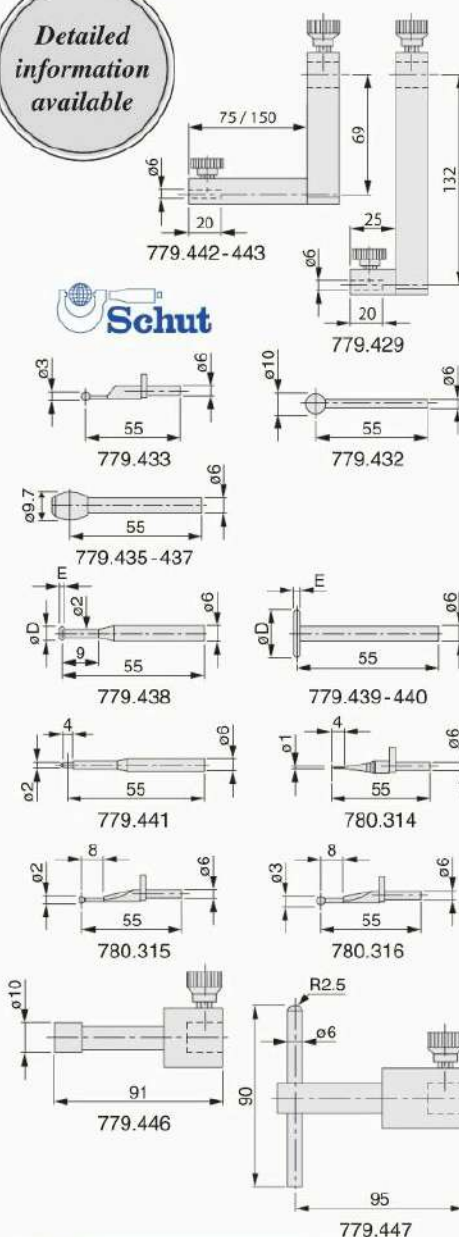
TESA electronic probe

Electronic probe with a measuring range of 13 mm, to measure perpendicularity, straightness, angle deviation, as well as parallelism in relation to the base plane and the roundness.

The probe can assume three positions: straight forward, to the right side and the left side. In these positions, fixed with a fixing piece, the correction factor of the Micro-Hite+M is incorporated automatically in the measurement.



Item No.	Type/description	Price EUR
781.590	Probe IG13 + attachment	



781.474

TESA-Hite Magna / TESA-Hite 400/700

The TESA-Hite height gauges have a simple and robust design and are therefore very suitable for use in a workshop to measure heights, grooves, diameters, pitch circle, center distances and parallelism using a constant measuring force.

Thanks to the robust magnetic measuring system, the TESA-Hite Magna is very suitable for use in harsh environments. The TESA-Hite is suitable for more accurate measurements due to the optical measuring system.

The clear and bright IP65 classified color screen only shows relevant data and has context-sensitive menus and built-in help for easy operation.

The height gauges are equipped with fine adjustment, locking screw and a stable cast iron base, with the TESA-Hite having a built-in air cushion for smooth movement.

Data can be sent to a PC for processing and storage using the (wireless) TESA Link Connector and the free TESA DATA VIEWER PC software.

- Measuring range: 415 and 715 mm resp.
- Max. range with standard probe holder: 570 and 870 mm resp.
- Max. range with long probe holder (782.358): 795 and 1095 mm resp.
- Easy-to-read LCD-color display.
- Process and store data on the PC using the TESA Link Connector data output.
- Measuring force: 1.5 ± 0.5 N.
- SCS certificate included.

- For optional probes and accessories see "Probes and accessories TESA Micro-Hite / TESA-Hite".

TESA-Hite Magna 400/700

Equipped with a robust magnetic measuring system.

- Resolution: 0.001/0.005/0.01 mm.
- Accuracy: $\pm 8 \mu\text{m}$.
- Repeatability: $\leq 3 \mu\text{m}$ (flat surfaces), $\leq 5 \mu\text{m}$ (radius).
- Weight: 783.565: 15 kg, 783.566: 18 kg.
- Protection: IP55, control panel: IP65.

TESA-Hite 400/700

Measuring with higher accuracy, also for measuring perpendicularity. Air cushion pump for easy movement on a surface plate. Squareness can be measured using optional probe, holder and display.

- Resolution: 0.0001/0.001/0.01 mm.
- Accuracy: $\pm (2.5 + 0.004L) \mu\text{m}$ (L in mm).
- Repeatability: $\leq 2 \mu\text{m}$ (flat surfaces), $\leq 3 \mu\text{m}$ (radius).
- Squareness (frontal): 9 and 13 μm resp.
- Weight: 783.567: 24 kg, 783.568: 30 kg.
- Protection control panel: IP65.



Standard accessories

The TESA-Hite Magna / TESA-Hite 400/700 is standard supplied with:

- standard probe holder (783.511),
- TC ball probe $\varnothing 5$ mm (782.215),
- reference standard 6.35 mm,
- electric pump (only TESA-Hite),
- Li-ion battery,
- AC adapter (783.570) incl. power cable (782.202),
- SCS calibration certificate.

Item No.	Type/description	Price EUR
783.565 ¹	TESA-Hite Magna 400	
783.566 ¹	TESA-Hite Magna 700	
783.567 ¹	TESA-Hite 400	
783.568 ¹	TESA-Hite 700	
Options:		
783.301	TESA Link Connector USB	
783.302	TESA Link Connector Digimatic	
783.555	TESA Link Connector Bluetooth	



¹ Delivery ex Groningen, Netherlands.

Mitutoyo CNC height gauges Linear Height LH-600F/FG

The integration of CNC technology in this height gauge enables fully automated measurements with a fixed measuring speed and measuring force. This ensures the best possible accuracy and repeatability.

The air-bearing of the base (with built-in compressor) allows almost feather-light movement on a surface plate. Equipped with the unique “semi-floating”, ideal for scanning purposes, for example to find a maximum value.

These height gauges distinguish themselves from other height gauges by excellent performance and logical and easy operation using the rotatable and tiltable control unit. The control unit consists of a touchscreen and physical buttons for fast and intuitive operation. The Linear Height has 21 (measuring) functions, motorized probe movement, storage space for 50 programs and 100000 measurements which can be statistically processed. The most occurring measurements can be done by the single press of a button.

A special and fully automated measuring program for squareness checks is included. By connecting an external Digimatic dial indicator, both squareness and position can be measured at the same time.

- Excellent accuracy and a special measuring system with a 0.1 μm resolution.
- Automatic repeat of measuring programs stored with the learning function.
- Direct display of Go/NoGo tolerance judgement after every measurement.
- Data entry from a Digimatic instrument.
- Air cushion for easy displacement on an optional surface plate (see surface plates elsewhere in this catalog).
- Complete stand-alone design, without cable. Ideal for incoming goods inspection and product inspection in a production environment.
- Clear and conveniently laid out graphical color touchscreen with numeric and alphanumeric keys.
- Internal storage for measurement values and measuring programs; optional external data storage with a USB stick or via a USB interface to a PC.
- Direct printing of measurement values on an external printer.
- Delivery with an inspection report.

LH-600 standard accessories

The Mitutoyo Linear Height is standard supplied with:

- probe holder including excentric ball probe $\varnothing 5\text{ mm}$,
- block for probe diameter calibration,
- rechargeable Ni-MH battery,
- control panel 1D/2D,
- AC adapter, 12V, 4A (without power cable),
- dust cover.

Item No.	Type	Price EUR
518.360 ¹	LH-600F	
518.361 ¹	LH-600FG	
Option:		
420.300	AC adapter cable (not supplied)	

¹ Delivery ex Groningen, Netherlands.



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Mitutoyo Linear Height LH-600F/FG (continued)

Control unit

The LH-600 height gauges are equipped with a 2D control unit. This completely renewed control unit can be fully controlled using the physical buttons, touch screen, or a combination of both. Standard functions can be accessed with one button, making the height gauge accessible to everyone. During measurements the display shows graphical instructions to guide you through the measuring process. Measurements can be saved as a program. Data can be entered by using the display, for example product or operator information, for traceability purposes. After completion of the measurements graphs and tables can be shown including go/nogo classification based on entered tolerance values. The adjustable mounting allows for optimal positioning of the control unit.

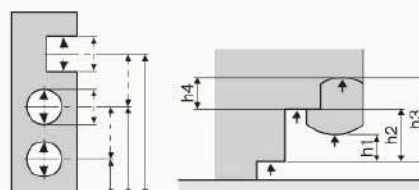
The control unit features the following interfaces: 1x USB-A/B output, 1x RS232 output, 1x Digimatic-S1 port, and the standard Digimatic input. Optionally, a footswitch can also be connected. Communication and data transfer to your PC can be done both wired, and wireless. This gives you the option to save the measurement values directly into Excel. Programs and measurement results can also be saved directly to a USB drive. The separately sold printer gives you the option to print out your measurement results.

- Measuring range: 0 - 600 mm.
- Max. measuring height: 977 mm.
- Resolution: 0.0001/0.001/0.01/0.1 mm.
- Accuracy:
($1.1 + 0.6L/600$) (L in mm).
- Repeatability:
flat 0.0004 mm, bore 0.0009 mm.
- USB/RS232C and Digimatic S2 data output.
- Max. measuring speed: 5 - 40 mm/s.
- Measuring force: 1 N.

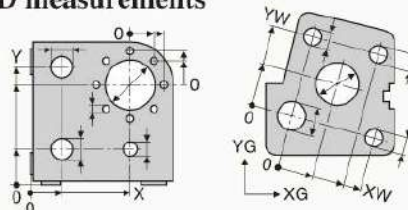
- Squareness: 0.005 mm.
- Straightness: 0.004 mm.
- Weight: 27 kg.
- Power supply: AC adapter 230 Vac and built-in rechargeable Ni-MH battery (approx. 4 hours operating time).
- Many display languages, such as English, Dutch, German and French.



1D measurements

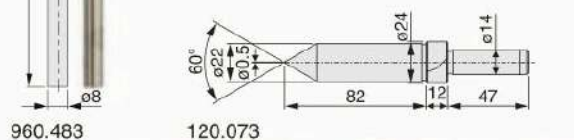
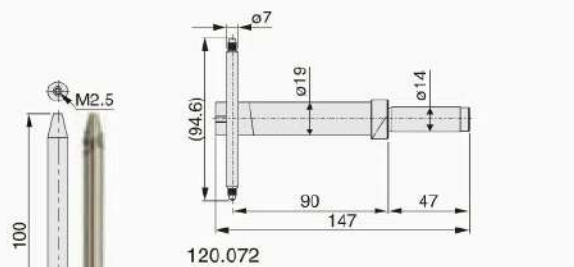
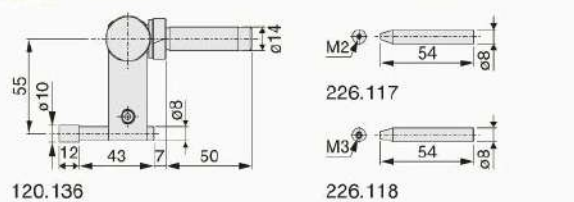
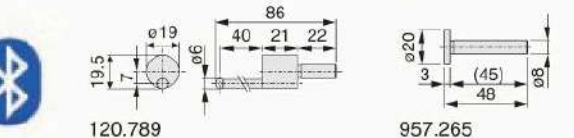
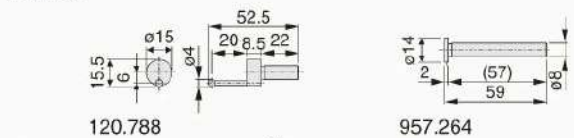
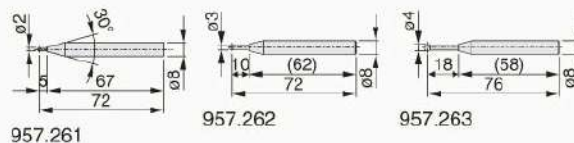
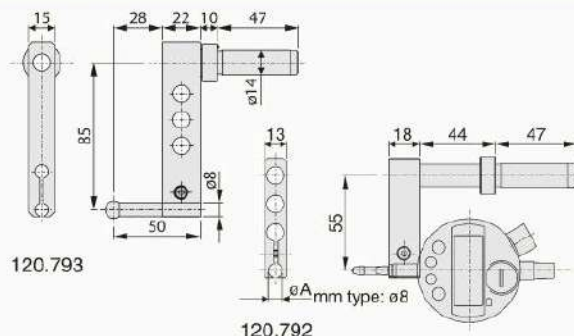


2D measurements



Mitutoyo LH-600 / QM-Height accessories

Item No.	Description	Price EUR
650.986	Probe set for LH-600	
120.793	Long probe holder	
120.792	Dial indicator holder (ø8 mm)	
957.261	Ball probe ø2 mm coaxial	
957.262	Ball probe ø3 mm coaxial	
957.263	Ball probe ø4 mm coaxial	
120.788	Excentric ball probe ø4 mm	
120.789	Excentric ball probe ø6 mm	
957.264	Disc probe ø14 mm	
957.265	Disc probe ø20 mm	
120.136	Cylindrical probe ø10 mm with holder	
226.117	Shank ø8 l = 54 mm for Renishaw M2-threaded probes	
226.118	Shank ø8 l = 54 mm for Renishaw M3-threaded probes	
960.483	Adapter ø8 l = 100 mm for M2.5-threaded inserts from dial indicators	
120.072	Depth probe	
120.073	Conical probe ø20 mm	
120.712	Extra battery for LH-600	
106.001	USB Input Tool Direct cable 2 m	
102.011	U-WAVE-T connector cable SF for Digimatic S1 interface	
264.627	U-WAVE Bluetooth transmitter	



Mitutoyo height gauges QM-Height 350/600

The Mitutoyo QM-Height height gauge, equipped with the highly accurate Absolute linear encoder, delivers high performance in combination with affordability. The high accuracy, repeatability and perpendicularity make the QM-Height very suitable to satisfy your most critical measurement needs. Yet the lightweight, compact design and the simplicity of the controls make this a user-friendly and flexible height gauge, suitable for use in both cleanroom and workshop. All measuring functions can be started by pressing just one button.

The QM-Height is equipped with many advanced measuring functions for measuring height, inside and outside diameters, min/max values and center distances. It is also equipped with a scanfunction, data-output, measuring memory and a Go/NoGo tolerance judgement, making human interpretation errors almost impossible. The QM-Height is available in two measuring ranges and Mitutoyo offers a wide range of accessories. See for all accessories "Mitutoyo LH-600 / QM-Height accessories".

- Measuring range: 0 - 600 mm.
- Resolution: 0.001/0.005 mm.
- Accuracy: $\pm(2.4 + 2.1L/600) \mu\text{m}$ (L in mm).
- Repeatability: 0.0018 mm.
- USB and Digimatic data output.
- Direct Go/NoGo tolerance judgement by LEDs after every measurement (also on display).
- An optional air-bearing of the base (with built-in compressor) allows almost feather-light movement on a surface plate.
- Measuring force: $1.5 \pm 0.5 \text{ N}$.
- Operating temperature: 0 to 40°C.
- Adjustable tolerance limits.
- Weight: 518.250: 25 kg, 518.252: 29 kg, 518.254: 26 kg, 518.256: 30 kg.
- Delivery with an inspection report.
- Power supply: 4 batteries type AA or optional AC adapter.

*Data cables Digimatic,
USB Input Tool Direct, U-WAVE
available on request.*



Item No.	Measuring range/mm	Squareness μm	Price EUR
Without air bearing:			
518.250 ¹	0 - 350	7	
518.252 ¹	0 - 600	12	
With air bearing:			
518.254 ¹	0 - 350	7	
518.256 ¹	0 - 600	12	
Options:			
495.111	Battery type AA (4 needed)		
106.369	AC adapter		

¹ Delivery ex Groningen, Netherlands.

Standard accessories:

- auxiliary grip,
- block for probe diameter calibration,
- probe holder including excentric ball probe $\varnothing 5 \text{ mm}$,
- 4 batteries.

Granite surface plate with stand for height gauges

Correct and accurate use of height gauges demand a robust and flat working table. Especially in combination with the very advanced and accurate Mitutoyo and TESA height gauges this is a necessity in order to benefit the full potential of these instruments.

In combination with the purchase of a TESA or Mitutoyo height gauge, Schut Geometrical Metrology offers granite surface plate and stand sets in various dimensions and accuracy classes for very competitive prices. Combinations that make the purchase of one of these height gauges even more attractive!



Digital protractor

Compact digital protractor to attach to a caliper or height gauge.

- Measuring range: 180°.
- Resolution: 0.01° or 1'.
- Accuracy: $\pm 5'$.
- Digimatic data output.
- On/off switch.
- Automatic switch-off (adjustable).
- Preset or hold function.
- Reset.
- Reversible measuring direction.
- Weight: 160 g.
- Delivery in a case including assembly key, mounting bracket (clamping shaft 9 x 9 mm) and clamping screw for height gauge.
- Power supply: 2 batteries type AAA.



Item No.	Description	Price EUR
855.803	Digital protractor	495.00
Options:		
497.914	Battery type AAA (2 needed)	0.80
905.338	Digimatic cable, 1 m	39.00
905.409	Digimatic cable, 2 m	47.00

The stands are very robust and the support of the surface plate is determined on the basis of the Bessel points. All sets are available in surface plate sizes from 630 x 630 mm up to 2000 x 1000 mm, all according DIN 876, accuracy classes 1, 0 en 00.

Check our website www.Schut.com for the most recent promotions and prices.



131.201 +
131.113 +
131.127 +
402.028

With the purchase of a height gauge:

UNIQUE SET PRICES

Surface plate 1000 x 630 x 150 mm, class 0 including stand: EUR 1,600.00

Surface plate 1000 x 630 x 150 mm, class 0 including stand, slide protection, cover, chest of drawers and cleaner: EUR 2,200.00

Delivery ex Groningen, Netherlands

Granite plate cleaner

Special granite plate cleaner to keep the surface of your granite surface plate clean and useable for a long period. Dust, dirt, grease stains, finger and hand prints can easily be removed. A clean and smooth surface provides low friction, less wear and the most accurate measurements. The non-corrosive property of the cleaner prevents corrosion damage to metal products.



Item No.	Description	Price EUR
407.304	Cleaner, 500 ml	9.40

**Hardness testers / Thickness gauges / Thermometers
Tachometers / Dynamometers / Inspection instruments**



Portable Shore hardness testers

Portable hardness testers to measure Shore hardness A or D, according to DIN ISO 48-4 and ISO 868.

- Measuring range: 0 - 100 Shore.
- Analog: graduation 1 Shore, digital: resolution 0.1 Shore.
- Measuring length: 2.5 mm.
- Material thickness: ≥ 6 mm.
- Delivery in a plastic case.

Analog

- Dial diameter: 57 mm.
- Dimensions: 110 x 58 x 30 mm.
- Weight: 230 g.



909.066



ECONOMY LINE ✓

Digital

Integrated sensor and equipped with comfortable buttons. Possibility for display of current, average and maximum measuring value.

- Accuracy: ± 1 Shore.
- RS232C data output.
- On/off switch.
- Automatic switch-off.
- Max function.
- Calculation of the average of at most 9 measurements in "max mode".
- Dimensions: 161 x 65 x 28 mm.
- Delivery with a manufacturer measuring report.
- Power supply: 2 batteries type AAA.

Item No.	Type	Meas. range/Shore	Price EUR
Analog:			
907.882	Shore A	20 - 90	155.00
907.889	Shore D	20 - 90	151.00
Digital:			
909.066	Shore A	0 - 100	347.00
909.068	Shore D	0 - 100	406.00
Options:			
497.914	Battery type AAA (2 needed)		0.80
909.078	RS232C cable and software		106.00
909.430*	Shore A (approx. 30 - 90) 6 pieces test block set 50 x 50 x 7.5 mm		119.00
909.431*	Shore D (approx. 15 - 90) 3 pieces test block set 50 x 50 x 7.5 mm		80.00

* Delivery with a declaration of conformity.

Type	Shore A	Shore D
Max. spring force	8.065 N	44.50 N
Impact module		
Applications	Soft rubber, elastomers, nature rubber, etc.	Hard rubber, thermoplastics, etc.



907.882



909.430



909.431

GTE-313-EN-20260702

Hildebrand portable Shore hardness testers

Portable hardness testers to measure Shore hardness A or D, according DIN ISO 48-4 and ISO 868.

- Measuring range: 0 - 100 Shore.
- Graduation: 1 Shore.
- Accuracy: ± 0.5 Shore.
- Measuring length: 2.5 mm.
- Material thickness: ≥ 6 mm.
- With or without extra pointer for maximum measuring value indication.
- Dial diameter: 57 mm.
- Total length: 121 mm.
- Weight: 184 g.
- Delivery in a plastic case.
- 2 year factory guarantee.



Type	Shore A	Shore D
Max. spring force	8.065 N	44.50 N
Impact module	 35°	 30°
Applications	Soft rubber, elastomers, nature rubber, etc.	Hard rubber, thermoplastics, etc.

Item No.	Type	Price EUR
856.005	Shore A	545.00
856.006	Shore D	545.00
With maximum value indication:		
856.007	Shore A	595.00
856.008	Shore D	595.00

Measuring stand for Hildebrand Shore hardness testers

To increase the accuracy and repeatability of the measurements, the use of this stand is recommended. It prevents possible errors that can occur by differences in the pressing force or when the hardness tester is not held up right.

- Max. measuring height: 180 mm.
- Measuring table: $\varnothing 98$ mm.
- Standard equipped with a weight (1000 g) for Shore A.
- Load weight: Shore A: 274 g, Shore D: 4000 g.
- Stable aluminum construction, table of stainless steel.
- Weight: 16.4 kg.

Item No.	Description	Price EUR
856.010	Measuring stand	1,286.00
Options:		
856.012	Weight for Shore D	168.00
856.028	Set of setting standards (20, 40, 60 and 80 Shore)	297.00



856.012



856.028

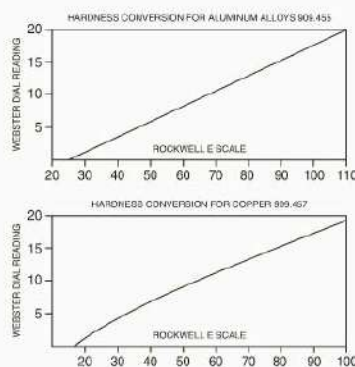


856.010

Portable hardness testers

For measuring the hardness of various materials like aluminum and copper. Fit for various forms like extrusion profiles, tubes and flat materials.

- Measuring range: 0 - 20 Webster.
Values to convert by means of graph (Rockwell E Scale).
- Material thickness: 0.4 - 6 mm; $\phi > 10$ mm.
- Round anvil 909.455: $\phi 6$ mm.
- Round anvil 909.457: $\phi \frac{3}{8}$ ".
- Delivery in a plastic carrying case with spare penetrator, screwdriver, adjusting wrench, standard test strip and manual.



ECONOMY LINE ✓

Item No.	Rockwell	Material	Price EUR
909.455	E25-E110	aluminum	964.00
909.457	E20-E100	copper	1,008.00

Portable digital hardness tester

This Swiss made quality product allows one to determine HRC hardness in the most simple way. Modern technology resulted in an extremely compact and easy to use tool. No switches, buttons or cables, simply pull up the ring, measure and immediately read out the value. The measurement causes hardly any damage to the product. Especially suitable for larger objects, installed machines and use in hard-to-reach places.

- Measuring range: 20 - 70 HRC.
- Resolution: 0.1 HRC.
- Accuracy: ± 1.0 HRC.
- Automatic switch-off.
- Operating temperature: 5 to 50°C.
- Dimensions: $\phi 12 \times 140$ mm.
- Weight: 36 g.
- Delivery in a plastic case with a manufacturer measuring report.
- Power supply: 2 batteries type V394.

Requirements

- Solid base (at least 5 kg) for objects < 5 kg.
- Minimum thickness of objects: 3 mm.
- Minimum thickness of a hardened top layer, if any: 0.7 mm.
- Minimum diameter of workpiece: 10 mm.
- Minimum radius of spherical measuring surface: 30 mm.

Item No.	Description	Price EUR
774.075	Digital hardness tester	1,247.00
Option:		
420.248	Battery type V394 (2 needed)	1.50



GTE-302-EN-20060702

Portable digital hardness testers

- Measuring range:
HL 174 - 900, HB 20 - 655,
HRC 19.6 - 68, HV 80 - 940,
HRB 13.5 - 101.7, HS 32.5 - 99.5.
- Accuracy: $\pm 0.5\%$ (at HL 800).
- On/off switch, automatic switch-off.
- Min. radius of spherical surface: 30 mm.
- Tungsten carbide stylus tip.
- USB data output.
- DIN 50156 and ISO 16859.

Requirements



Impact module	Min. weight workpiece/kg		Min. thickness/mm object	Max. hardened top layer ³	Max. roughness Ra/ μ m
	1	2			
C	0.5	1.5	1	0.2	0.4
D/DL	2	5	3	0.8	2
G	5	15	10	—	7

¹ On a solid base of at least 5 kg.

² Without solid base.

³ Minimum thickness of a hardened top layer, if any.

ECONOMY LINE ✓

Item No.	Description	Price EUR
909.470	Digital hardness tester	1,637.00
909.485	Digital hardness tester	1,807.00
Options:		
909.477	Set special support rings	322.00
909.478 ¹	Testblock D, 2.5 kg (HLD 790 $\pm$ 40)	181.00
909.479 ^{1,2}	Testblock G, 5.5 kg (HLD 590 $\pm$ 40)	361.00
Options (only for 909.470):		
495.111	Battery type AA (2 needed)	0.70
909.471	Ext. impact module D	790.00
909.472	Ext. impact module G	1,468.00
909.473	Ext. impact module C	790.00
909.474	Ext. impact module DL	1,920.00
909.481	Cable for ext. impact module	127.00

¹ Delivered with a manufacturer measuring report.

² For use in combination with impact module G.

Selection table materials for impact module D

Material	HLD	HRC	HRB	HB	HS	HV
bright steel	300-900	20.0-68.0	38.4- 99.5	80-647	32.5-99.5	80-940
tool steel	300-840	20.4-67.1				80-898
stainless steel	300-800	19.6-62.4	46.5- 101.7	85-655		85-802
gray cast iron	360-650			93-334 (30D ²)		
cast iron	400-660			131-387 (30D ²)		
cast aluminum	174-560			20-159 (10D ²)		
brass	200-550		13.5-95.3	40-173 (10D ²)		
bronze	300-700			60-290 (10D ²)		
copper	200-690			45-315 (10D ²)		

- Operating temperature: -20 to 40°C.
- Delivery with a manufacturer measuring report.
- Delivery in a plastic carrying case with cable, small supporting ring, cleaning brush and test block D (909.478).

Digital hardness tester (909.470)

- Storage for 10 000 measuring values.
- Dimensions basic instrument: 133 x 75 x 29 mm.
- Weight basic instrument: 260 g.
- Delivery with external impact module D (909.471).
- Power supply: 2 batteries type AA.



909.470



909.470

Digital hardness tester (909.485)

- Storage for 2000 measuring values.
- With integrated impact module D.
- OLED display.
- Dimensions basic instrument: 158 x 41 x 26 mm.
- Weight basic instrument: 120 g.
- Delivery with AC adapter/charger, software and integrated impact module D.
- Power supply: 1 rechargeable battery 3.7 V.
- AC adapter/charger.



909.485

Portable digital hardness testers (continued)

Optional impact devices (only for 909.470)

External impact module D

Standard module.

External impact module DL

With thin, long probe on the impact module for measuring in grooves, blind bores etc.

External impact module C

4x reduced impact energy for hardened components, thin-walled materials and coatings.

External impact module G

9x higher impact energy for rough casting pieces etc.



Impact devices	D	DL	C	G
Max. roughness (Ra)	2	2	0.4	7
Impacting energy (Nmm)	11	11	3	90
Mass of impact module (g)	5.5	7.8	3.0	20
Impact module length (mm)	147	250	141	254
Max. hardness of workpiece (HV)	940	940	1000	–
Max. hardness of workpiece (HB)	–	–	–	650
Min. weight of sample: of compact shape (kg)	5	5	1.5	15
on solid support (kg)	2	2	0.5	5
coupled on plate (kg)	0.1	0.1	0.02	0.5
Min. thickness of sample: coupled (mm)	3	3	1	10
min. thickness of hardened layers (mm)	0.8	0.8	0.2	–



909.471



909.472



909.473



909.474

Impact body tips (for 909.470)

Item No.	Description	Price EUR
909.482 ¹	Tip for impact body D	124.00
909.483	Tip for impact body G	248.00
909.564	Tip for impact body C	124.00
909.484	Tip for impact body DL	496.00

ECONOMY LINE ✓



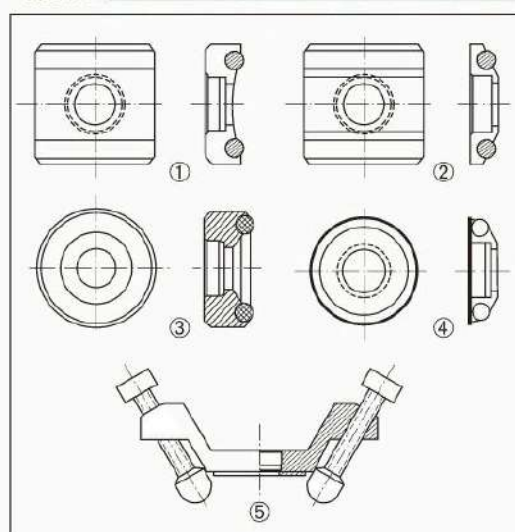
909.477

¹ Also for integrated impact body D 909.485.

Set special support rings

The set consists of

Type	Description
①	Cylindrical outside surface R10 - R15
①	Cylindrical outside surface R14.5 - R30
①	Cylindrical outside surface R25 - R50
②	Cylindrical inside surface R11 - R13
②	Cylindrical inside surface R12.5 - R17
②	Cylindrical inside surface R16.5 - R30
③	Spherical outside surface SR10 - SR15
③	Spherical outside surface SR14.5 - SR30
③	Spherical outside surface SR11 - SR13
④	Spherical inside surface SR12.5 - SR17
④	Spherical inside surface SR16.5 - SR30
⑤	Cylindrical outside surface, radius adjustable $\geq R10$

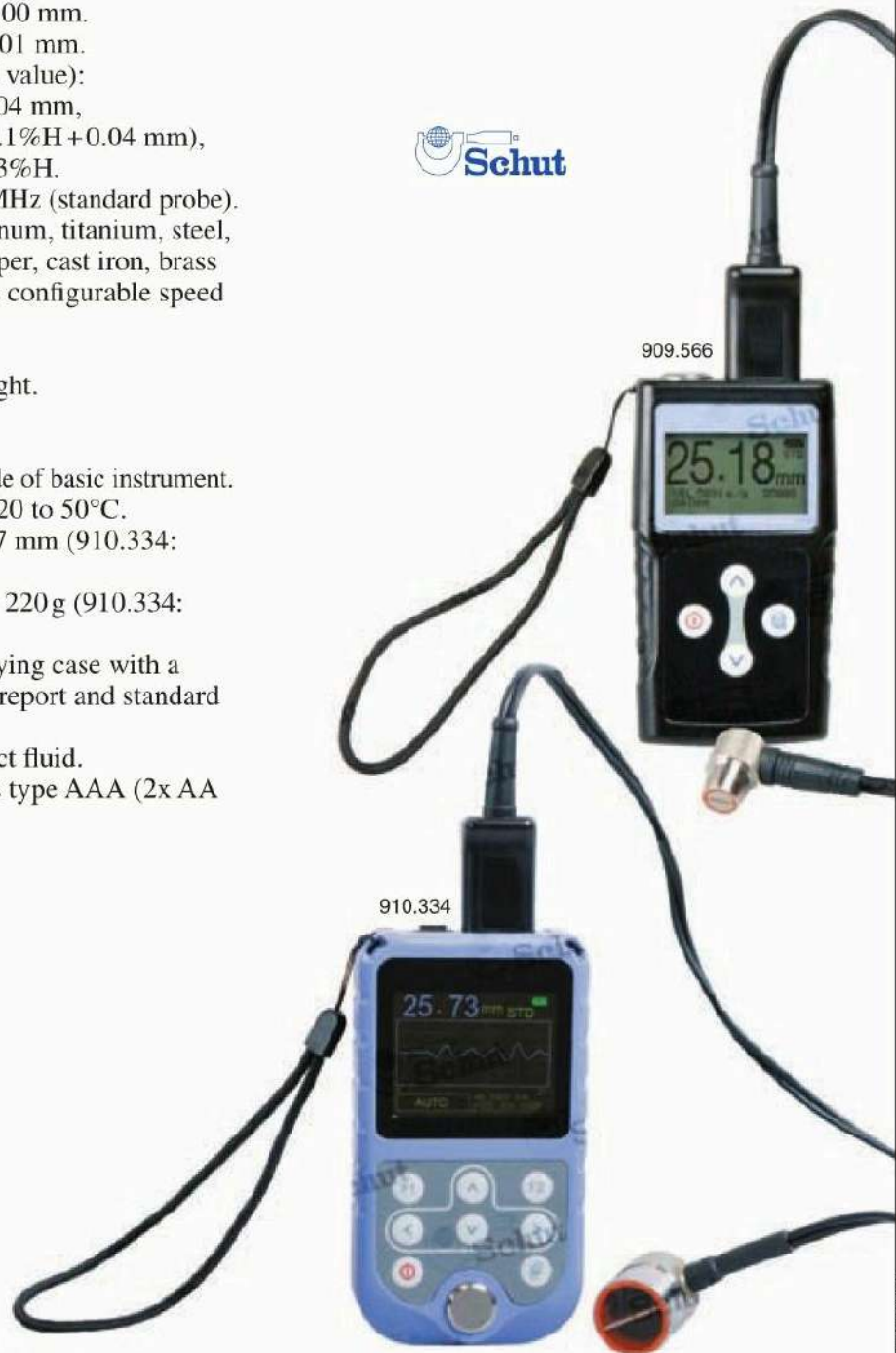


Digital thickness gauges

This thickness gauge measures in a non-destructive way the thickness from several materials according to the ultrasonic measuring principle. The Echo-Echo model is capable of measuring the material thickness even through coatings.

A thickness gauge with glass fiber / composite probe is available for measuring glass fiber parts. For example thicknesses of parts of cars, boats, airplanes and medical devices can be measured ultrasonically.

- Measuring range: 0.65 - 300 mm.
- Resolution: 0.1 mm or 0.01 mm.
- Accuracy (H = measured value):
 - 0.65 - 9.99 mm: ± 0.04 mm,
 - 10.00 - 99.99 mm: $\pm (0.1\%H + 0.04 \text{ mm})$,
 - 100.0 - 400.0 mm: $\pm 0.3\%H$.
- Measuring frequency: 5 MHz (standard probe).
- 9 preset materials (aluminum, titanium, steel, stainless steel, glass, copper, cast iron, brass and polystyrene) and one configurable speed of sound.
- mm/inch conversion.
- LCD display with backlight.
- On/off/reset switch.
- Automatic switch-off.
- Calibration standard on side of basic instrument.
- Operating temperature: -20 to 50°C.
- Dimensions: 116 x 64 x 27 mm (910.334: 133 x 75 x 29 mm).
- Weight basic instrument: 220 g (910.334: 260 g).
- Delivery in a plastic carrying case with a manufacturer measuring report and standard probe.
- Delivery including contact fluid.
- Power supply: 2 batteries type AAA (2x AA for 910.334).



C16-321 EN 20200702

Digital thickness gauges (continued)

Standard model

- Measuring range: 0.8 - 300 mm (standard probe).
- Delivery including standard probe (909.570).

Echo-Echo model

Echo-Echo mode is only available with the standard probe, 909.575.

- Measuring range:
normal mode: 1.44 - 200 mm (standard probe),
Echo-Echo mode: 3 - 25 mm (standard probe).
- Maximum coating thickness: 1 mm.
- Delivery including standard probe (909.575).

Models with USB output only

- Tolerance settings with alarm function.
- Memory for 5000 measurements.
- Delivery including USB cable.

Glass fiber/composite model

- Measuring range: 3 - 200 mm,
glass fiber/composite: 5 - 40 mm (standard probe).
- Delivery including standard probe (910.335).

Item No.	Description	Price EUR
Thickness gauges:		
909.566	Without USB data output	844.00
909.567	With USB data output	983.00
Echo-Echo model:		
909.568	Without USB data output	1,400.00
909.569	With USB data output	1,538.00
Glass fiber/composite model:		
910.334	With USB data output	2,080.00
Options:		
497.914	Battery type AAA (2 needed)	0.80
495.111	Battery type AA (2 needed)	0.70
909.576	Contact fluid (approx. 75 ml)	14.30
909.398	Test block for calibration	185.00

ECONOMY LINE ✓



Test block for calibration (909.398)

For the inspection and calibration of digital thickness gauges.

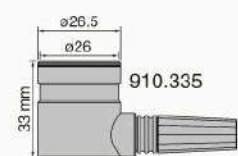
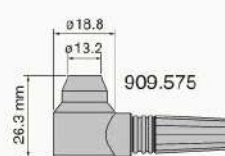
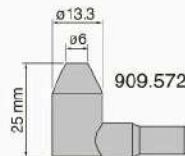
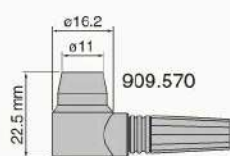
- Heights: 2.5 - 25 mm, incr. 2.5 mm.
- Tolerance: 0.1 mm (flatness: ± 0.05 mm).
- Material: steel.

909.398



Optional probes

Item No.	Mode	Measuring range/mm	Measuring frequency MHz	Minimum tube diameter/mm	Price EUR
909.570	Normal	0.8 - 300	5	ø 20 x 1.2	170.00
909.572	Normal	0.65 - 20	10	ø 10 x 4.0	291.00
For Echo-Echo model and glass fiber/composite model:					
909.575	Normal	1.44 - 200	5	ø 25 x 3	485.00
	Echo-Echo	3.0 - 25	5		
For glass fiber/composite model only:					
910.335	Normal	3 - 200	1		463.00
	Glass fiber	5 - 40	1		



Digital thickness gauge

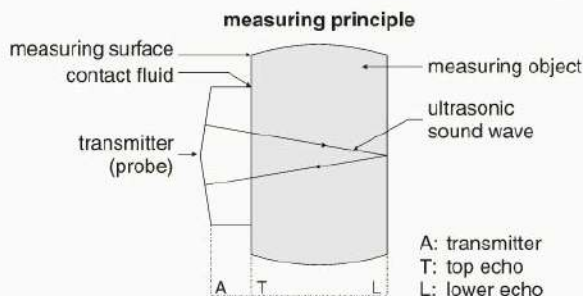
This thickness gauge measures in a non-destructive way the thickness from several materials according to the ultrasonic measuring principle (as illustrated).

- Measuring principle: ultrasonic.
- Measuring range for steel: 1.2 - 200 mm.
- Resolution: 0.1 mm.
- Accuracy: $\pm(0.5\%H + 0.1 \text{ mm})$ (H = measured value).
- Measuring frequency: 5 MHz.
- Speed of sound: 1000 - 9000 m/s.
- mm/inch conversion.
- RS232C data output.
- On/off switch.
- Automatic switch-off.
- 11 presets for the speed of sound of various materials (cd01 - cd11) and one configurable speed of sound (cd12).
- Calibration standard on side of basic instrument.
- Operating temperature: 0 to 50°C.
- Admissible relative humidity: <80%.
- Dimensions: 120 x 60 x 30 mm.
- Weight basic instrument: 260 g.
- Delivery in a plastic case with a manufacturer measuring report.
- Power supply: 4 batteries type AAA.

Test block for calibration (909.398)

For the inspection and calibration of digital thickness gauges.

- Heights: 2.5 - 25 mm, incr. 2.5 mm.
- Tolerance: 0.1 mm (flatness: $\pm 0.05 \text{ mm}$).
- Material: steel.



Delivery including:

- small, rectangular probe (measuring face $\varnothing 10 \text{ mm}$),
- contact fluid,
- manual,
- 4 batteries.

ECONOMY LINE ✓

Preset code	Material
cd01	steel
cd02	cast iron
cd03	aluminum
cd04	copper (red copper)
cd05	brass
cd06	zinc
cd07	quartz glass
cd08	polyethylene
cd09	PVC
cd10	gray cast iron
cd11	nodular/ductile cast iron

Item No.	Description	Price EUR
909.139	Thickness gauge	336.00
Options:		
497.914	Battery type AAA (4 needed)	0.80
909.075	RS232C cable and software	104.00
909.576	Contact fluid (approx. 75 ml)	14.30
909.398	Test block for calibration	185.00

909.398



GTE 307 EN 20060702

Electromagnetic ultrasonic digital thickness gauge

This thickness gauge measures in a non-destructive way the thickness of metal products through the principle of electromagnetic induction. This thickness gauge is capable of measuring thickness even through coatings, rust or corrosion. Due to the electromagnetic principle, no contact fluid is needed.

- Measuring range: 1.5 - 200 mm.
- Resolution: 0.01 mm.
- Accuracy: ± 0.01 mm.
- Measuring frequency: 2 per second, and 10 per second in fast mode.
- mm/inch conversion.
- LCD display with backlight.
- On/off switch.
- Automatic switch-off.
- Automatic zero setting.
- Large memory for 10000 measurements.
- Data transfer possible through USB cable.
- Operating temperature: -20°C - 50°C.
- Transducer operating temperature: -20°C - 120°C.
- Dimensions: 180 x 35 x 34 mm.
- Weight basic instrument: 300 g.
- Transducer with magnetic measuring face.
- Suited for use with: steel, cast iron, aluminum, copper (red copper) and brass.
- Delivery in plastic case with USB cable, an AC adapter, calibration block, factory measuring report and standard transducer (910.483).
- Power supply: 2 rechargeable batteries type Li 18650 (included).



ECONOMY LINE ✓

Item No.	Description	Price EUR
910.480	Electromagnetic ultrasonic digital thickness gauge	4,520.00
Options:		
497.963	Rechargeable battery type Li 18650 (2 needed)	13.60
910.483	Transducer 1.5 - 200 mm (standard)	1,355.00
910.481	Transducer 1.5 - 60 mm	1,581.00
909.398	Test block for calibration	185.00

GTB-330 EN 20260702

Digital coating thickness gauges

Measurements of coating thickness of paint, coating, foil etc. (non-magnetic layers) on a magnetic (ferro) and/or non-magnetic (non-ferro) metal substrate. Available with integrated or external sensor, in single or combined (automatically selecting magnetic/non-magnetic) model. Furthermore there is a one-button model, specifically designed for the automobile industry.

- Measuring principles: magnetic induction (ferro) and eddy current (non-ferro).
- Measuring range: 0 - 1250 µm.
- Resolution: 0.1 µm (< 100 µm), 1 µm (≥ 100 µm).
- Accuracy: ±3%H or 3 µm (H = measured value).
- µm/mil conversion.
- RS232C data output.
- Automatic switch-off.
- Minimum measuring area: 6 x 6 mm.
- Minimum substrate thickness: 0.3 mm.
- Minimum object radius:
ferro: 1.5 mm (convex), 25 mm (concave),
non-ferro: 3 mm (convex), 50 mm (concave).
- Dimensions: 131 x 65 x 28 mm.
- Delivery in a plastic case with ferro and non-ferro base plate and reference standards.
- Power supply: 4 batteries type AAA.



Item No.	Type/description	Price EUR
With integrated sensor:		
909.060	Ferro	333.00
909.069	Non-ferro	367.00
909.070	Non-ferro and ferro	437.00
With external sensor:		
909.061	Ferro	333.00
909.071	Non-ferro	367.00
909.072	Non-ferro and ferro	443.00
One-button model:		
909.062	Non-ferro and ferro	437.00
Options:		
497.914	Battery type AAA (4 needed)	0.80
909.073	RS232C cable and software	104.00
906.943	External sensor ferro (906.061/072)	162.00
906.959	External sensor non-ferro (906.071/072)	162.00



Digital coating thickness gauge

Measurements of coating thickness of paint, coating, foil etc. (non-magnetic layers) on a magnetic (ferro) and non-magnetic (non-ferro) metal substrate.

- Measuring principles: magnetic induction (ferro) and eddy current (non-ferro).
- Measuring range: 0 - 1300 µm.
- Resolution: 1 µm (0 - 999 µm), 10 µm (1000 - 1300 µm).
- Accuracy: ±(3% + 2 µm).
- Statistics: number of measurements, mean, minimum, maximum and standard deviation.
- µm/mil/mm conversion.
- USB data output.
- Illuminated LED display.
- On/off switch.
- Automatic switch-off.
- Minimum measuring area: ø6 mm.
- Minimum substrate thickness: ferro: 0.5 mm, non-ferro: 0.3 mm.
- Minimum object radius: 1.5 mm (convex), 25 mm (concave).
- Maximum measuring frequency: 2 times per second.
- Adjustable tolerance limits (alarm signal on display and acoustic).
- Operating temperature: 0 to 40°C.
- Admissible relative humidity: 20 - 90%.
- Dimensions: 110 x 53 x 24 mm.
- Weight: 92 g.
- Delivery in a plastic carrying case with a manufacturer measuring report, USB cable, software, ferro and non-ferro base plate and reference standards.
- Power supply: 2 batteries type AAA.



ECONOMY LINE ✓

Item No.	Description	Price EUR
909.116	Coating thickness gauge	274.00
Option:		
497.914	Battery type AAA (2 needed)	0.80

CTE-318-EN-20260702

Infrared thermometers

These hand-held infrared thermometers are extremely suitable for fast non-contact temperature measurements. Equipped with laser for easy aiming at the object. With adjustable emissivity for different surfaces. Applications: for example in the food, automotive and chemical industries, in the process technology and for research purposes.

- Measuring range: -60 to 760°C.
- Resolution: 0.1°C.
- Accuracy: $\pm 2^\circ\text{C}$ or $\pm 2\%$.
- °C/°F conversion.
- Emissivity preset (standard 0.95).

- Automatic switch-off.
- Hold function.
- Min/max function.
- Operating temperature: 0 to 50°C.
- Measuring time: 1000 ms.
- Laser: 635 - 660 nm, class 2.

Models

The infrared thermometers have different optics ratios, which makes them applicable for different working distances:

- 908.800: for measurements at small distances,
- 909.412: for measurements at large distances or with a large temperature range.



908.800

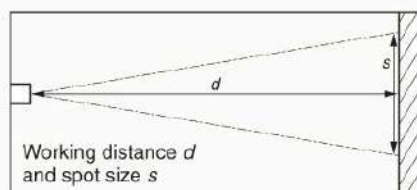


909.412



ECONOMY LINE ✓

Material	T/°C	Emissivity
Cement	0 - 200	0.96
Cloth	93	0.90
Paper	38 - 371	0.93
Granite	21	0.45
Steel	25	0.65
Cast iron	100	0.21
Cold milled steel	93	0.75 - 0.85
Stainless steel	24	0.28
White alumina ceramics	93	0.90
Hard rubber	23	0.94
Soft rubber	24	0.86



Batteries

Item No.	Type	Price EUR
495.157	CR2032	0.50
497.914	AAA	0.80

Item No.	908.800	909.412
Price EUR	67.00	168.00
Measuring range °C	-55 to 250	-60 to 760
Working distance d	small	large
Optics ratio $d:s$	6:1	30:1
Resolution °C	0.1	0.1
Wave length μm	5 - 14	8 - 14
Laser pointer	✓	✓
Emissivity	0.05 - 1 (incr. 0.01)	0.10 - 1 (incr. 0.01)
Emissivity preset	0.95	0.95
Illuminated LCD display	—	✓
Dimensions mm	103 x 50 x 23	146 x 133 x 49
Weight (incl. batteries) g	65	222
Power supply (batteries)	2x CR2032	2x AAA

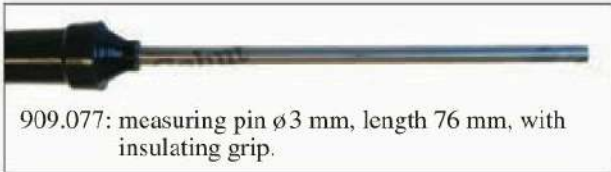
Digital thermometers

- Measuring range: -50 to 500°C (in combination with the NR-160 probe).
- Resolution: 909.145: 1°C, 910.434: -50°C to 199.9°C: 0.1°C; 200°C+: 1°C.
- Accuracy (H = measured value): 909.145: -50 to -20°C: ±4°C, -20 to 0°C: ±3°C, 0 to 500°C: ±(1+0.0075 H)°C 910.434: -50 to 199.9°C: ±(0.3% H+1°C), 200 to 500 °C: ±(0.3% H+2°C).
- °C/°F conversion (only 910.434).
- On/off switch.
- Hold function.
- Cable length standard TP01 probe: 1 m.
- Delivery incl. TP01 probe (909.076).
- Weight (incl. battery): 909.145: approx. 150 g, 910.434: approx. 190 g.
- Power supply: 1 battery type PP3 (9 V).



NEW

ECONOMY LINE ✓



909.077: measuring pin ø3 mm, length 76 mm, with insulating grip.

Item No.	Measuring range/°C	Price EUR
909.145	-50 to 500	34.20
910.434	-50 to 500	62.00
Option:		
495.161	Battery type PP3 (9 V)	2.50

Item No.	Type	Measuring range/°C	Applications	Material probe	Price EUR
909.076	TP01	-50 to 200	air	steel	6.70
909.077	TP02	-50 to 400	air, steam, liquids, gels	stainless steel	7.60
910.432	TP04	-50 to 400	surfaces (curved model)	steel	33.30
910.433	NR-160	-50 to 500	surfaces (straight model)	steel	33.30

Digital thermometer

- Measuring range: -40 to 200°C.
- Resolution: 0.1°C.
- Accuracy: 0 to 100°C: ±1°C, 100 to 200°C: ±2°C.
- Stainless steel measuring pin.
- °C/°F conversion.
- On/off switch.
- Power supply: 1 battery type V357.

ECONOMY LINE ✓



Item No.	Measuring range/°C	Price EUR
909.421	-40 to 200	9.60
Option:		
836.535	Battery type V357	0.90

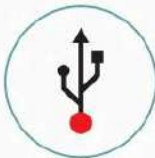
Digital thermohygrograph for permanent monitoring

The new technology for permanent 24 hours registering and checking the temperature and humidity in the area and measuring rooms. Typical metrology room temperature is $20 \pm 0.05^{\circ}\text{C}$, with a resolution of 0.1°C for registering the temperature.

- Measuring range: -10 to 60°C , 0 – $100\% \text{RH}$ (with no condensation).
- Resolution: 0.01°C , $0.1\% \text{RH}$.
- Accuracy temperature: $\pm(0.1 + |T-20|/250)^{\circ}\text{C}$ (T in $^{\circ}\text{C}$).
- Accuracy relative humidity: $4\% \text{RH}$.
- $^{\circ}\text{C}/^{\circ}\text{F}$ conversion.
- Min/max/P-P function.
- Stand-alone: memory for 500 000 measurements (interval: adjustable).
- Data-logger with Bluetooth, SD card and USB connection for data analysis (initial settings via PC).
- Including software for Windows (10 or later).
- Audiovisual alarms:
 - temperature: 2 upper und 2 lower limits,
 - humidity: 4 limits,
 - temperature change: 2 limits.
- Graphs: on e-paper display or PC.
- Including wall support and desk stand.
- Dimensions: $75 \times 110 \times 30 \text{ mm}$.
- Delivery in a plastic carrying case with a manufacturer measuring report.
- Power supply: 2 batteries type AA or USB (adapter not supplied).



MicroSD card



USB



Bluetooth

Item No.	Description	Price EUR
837.800	Thermohygrograph	
Option:		
495.111	Battery type AA (2 needed)	0.70

CTE-324 EN 20260702

Digital thermal imager

With this thermal imager one can easily measure and display (2.8" LCD color display) the thermal image and temperature.

- Measuring range: -20 to 250°C.
- Field of view: 40 x 40°.
- Accuracy: $\pm 2^\circ\text{C}$ or $\pm 2\%$.
- Thermal sensitivity: 0.1°C .
- Thermal image resolution: 32 x 31 px.
- Emissivity preset: 0.95, selectable 0.10 - 1.00 per 0.01.
- USB data output.
- On/off switch.
- Automatic switch-off.
- Adjustable tolerance limits.
- Backlight with 3 selectable levels of brightness.
- °C/°F/°K conversion.
- 4 selectable color palettes.
- Alarm for adjustable upper and lower limit of the temperature.
- Frame rate: 9 Hz.
- Spectral range: 8 - 14 μm .
- Time stamp for images.
- Storage for 25000 images.
- Memory card: micro SDHC 8 GB, including adapter for SD card reader.
- Dimensions: 95 x 75 x 233 mm.
- Weight (incl. batteries): 390 g.
- Protection: IP54.
(When using data output: IP40.)
- Delivery in a plastic carrying case with USB cable and software.
- Power supply: 4 batteries type AA.



ECONOMY LINE ✓

Item No.	Description	Price EUR
909.429	Thermal imager	424.00
Option:		
495.111	Battery type AA (4 needed)	0.70

Digital tachometers – contact, laser, laser/contact

With these digital laser tachometers very accurate non-contact and/or contact measurements can be done easily.

- Measuring range contact: 0.5 - 19 999 rpm, 0.05 - 1999.9 m/min.
- Measuring range laser: 2.5 - 99 999 rpm.
- Resolution:
 - < 1000 rpm: 0.1 rpm,
 - ≥ 1000 rpm: 1 rpm,
 - < 100 m/min: 0.01 m/min,
 - ≥ 100 m/min: 0.1 m/min.
- Range: 5 - 50 cm (laser).
- Accuracy: ±(0.05% + 1 digit).
- Laser/contact switchable (909.146).
- Automatic switch-off.
- Functions: max., min. and last measured value.
- Dimensions and weight:
 - 909.148: 174 x 72 x 38 mm, 240 g,
 - 909.152: 182 x 70 x 34 mm, 219 g,
 - 909.146: 208 x 70 x 34 mm, 241 g.
- Laser class 2 according IEC825-1 and EN60825-1.
- Delivery in a soft case (909.146) or a plastic case (909.148 and 909.152).
- Power supply: 3 batteries type AA.



909.148



909.152



909.146



909.348

ECONOMY LINE ✓

Item No.	Description	Price EUR
909.148	Digital contact tachometer	72.00
909.152	Digital laser tachometer	50.00
909.146	Digital laser/contact tachometer	91.00
Options:		
495.111	Battery type AA (3 needed)	0.70
906.811	Reflective tape per meter (width 25 mm, for laser tachometers)	9.70
909.348	Set contact points for tachometers 909.146/148	19.40

CTE-331-EN-20260702

Tachometer

- Measuring range:
0-10000 rpm and 0-1000 m/min.
- Graduation: 0.002 x the measuring range.
- Includes attachments.



Item No.	Measuring range		Price
	rpm	m/min	EUR
855.850	0-10000	0-1000	280.00
Options:			
855.853	Conical tip		6.70
855.855	Concave tip		6.70
855.856	Wheel		13.30

Torquemeters

- Measuring range: 1-20 Ncm.
- Intended for static measurements.
- Includes 6 attachments for
2 to 7 mm shafts for the small models, and
3 to 8 mm shafts for the large models.



Item No.	Measuring range/Ncm	Graduation Ncm	Price EUR
Small model:			
857.738	1-12	1	441.00
Large model:			
857.740	2-20	0.5	548.00

Strain gauges

Handy strain gauges suitable for measurements in two directions.

- Measuring range: 0.015-100 N.
- Indication accuracy:
 $\pm 2\%$ of the entire scale.
- With peak pointer.



Small model

Item No.	Measuring range/N	Graduation N	Price EUR
857.702	0.015-0.15	0.005	156.00
857.703	0.03-0.3	0.01	156.00
857.704	0.05-0.5	0.01	156.00
857.705	0.1-1	0.02	156.00



Large model

Item No.	Measuring range/N	Graduation N	Length mm	Price EUR
857.721	0.25-2.5	0.05	153.5	268.00
857.725	3-30	0.5	153.5	394.00
857.727	5-50	1	127.5	428.00
857.728	10-100	2	127.5	465.00

Strain gauges

Handy measuring instruments suitable for measurements in two directions. Used to check the measuring force of dial indicators, lever type indicators, CMM probes etc. Small model with flat touch surface has a $\varnothing 1$ mm bore. Large model with curved touch surface of $\varnothing 3.5$ mm.

- Measuring range: 0.01 - 20 N or 1 - 2000 g.
- Indication accuracy: $\pm 2\%$ of the entire scale except 910.143 and 910.149: $\pm 2.5\%$.
- With peak pointer.
- Metal housing.
- Delivery in a plastic case.



910.138



910.149

Newton model

ECONOMY LINE ✓

Item No.	Measuring range/N	Graduation N	Price EUR
Small model:			
910.138	0.01 - 0.05	0.001	63.00
910.139	0.025 - 0.15	0.005	63.00
910.140	0.1 - 0.5	0.01	63.00
910.141	0.25 - 1.5	0.05	63.00
910.142	1 - 5	0.1	63.00
Large model:			
910.143	4 - 20	0.5	127.00

Gram model

ECONOMY LINE ✓

Item No.	Measuring range/g	Graduation g	Price EUR
Small model:			
910.144	1 - 5	0.1	63.00
910.145	2.5 - 15	0.5	63.00
910.146	10 - 50	1	63.00
910.147	25 - 150	5	63.00
910.148	100 - 500	10	63.00
Large model:			
910.149	500 - 2000	50	127.00

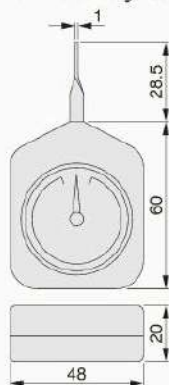
Strain gauges

Handy measuring instruments suitable for measurements in two directions. Used to check the measuring force of dial indicators, lever type indicators, CMM probes etc. The flat touch surface has a $\varnothing 1$ mm bore.

- Measuring range: 2 - 500 gram.
- Indication accuracy: $\pm 4\%$ of the entire scale.
- With peak pointer.
- Delivery in a plastic case.

ECONOMY LINE ✓

Item No.	Measuring range/g	Graduation g	Price EUR
909.391	2 - 10	0.5	36.20
909.392	5 - 30	1	36.20
909.393	10 - 50	2	36.20
909.394	20 - 100	5	36.20
909.395	25 - 150	5	36.20
909.396	50 - 300	10	36.20
909.397	100 - 500	20	36.20



909.395

Digital spring scale

- Measuring range: 0 - 50 kg.
- Resolution:
0.005 kg (measuring range 0 - 10 kg),
0.01 kg (measuring range 10 - 50 kg).
- Kg/lbs conversion.
- Illuminated LCD display.
- Automatic switch-off.
- Reset.
- Automatic hold function.
- Dimensions: 110 x 65 x 30 mm.
- Weight: 170 g.
- Power supply: 2 batteries type AAA.

ECONOMY LINE ✓

Item No.	Measuring range/kg	Price EUR
910.359	0 - 50	30.30
Option:		
497.914	Battery type AAA (2 needed)	0.80



Dynamometers

Robust dynamometers in analog and digital model with several set-up pieces.

- Measuring range: 0 - 500 N.
- Push and pull.
- Max/peak function.

Analog

- Accuracy: $\pm 1\%$.
- Graduation: N and kg.
- With 4 tapped holes M3 (for mounting).
- Dimensions: 225 x 60 x 51 mm.
- Weight: approx. 600 g.



909.174



909.182



Digital

- Accuracy: $\pm 0.2\%$.
- Kg/lb/N conversion.
- On/off switch.
- Automatic switch-off.
- Reversible display value.
- With 4 tapped holes M4 (for mounting).
- Dimensions: 147 x 75 x 38 mm.
- Weight: approx. 400 g.
- Power supply: AC adapter (12 Vdc, 1 A) and rechargeable battery.

ECONOMY LINE ✓

Item No.	Measuring range/N	Reading N	Price EUR
Analog:			
909.175	0 - 10	0.05	161.00
909.178	0 - 50	0.2	161.00
909.180	0 - 200	1	161.00
909.182	0 - 500	2	161.00
Digital:			
909.168	0 - 5	0.001	586.00
909.169	0 - 10	0.01	556.00
909.171	0 - 50	0.01	378.00
909.173	0 - 200	0.1	378.00
909.174	0 - 500	0.1	378.00

Digital vibration tester

Instrument with external sensor for quick checking of unbalance, misalignment, bearings and gears. For measuring velocity, acceleration, displacement and frequency.

Measuring range

- Velocity: 0.01 - 99.99 mm/s,
100.0-400.0 mm/s
(RMS, at frequency 10 Hz - 1 kHz).
- Acceleration: 0.1 - 400 m/s² (peak value,
at frequency 10 Hz - 1 kHz or 10 Hz - 10 kHz).
- Displacement: 0.001 - 4.0 mm
(P-P, at frequency 10 Hz - 1 kHz).
- Frequency: 0.1 - 20 kHz.

Further specifications

- Accuracy: $\pm 5\% + 2$ digits.
- mm/inch conversion.
- RS232C data output.
- Operating temperature: 0 to 50°C.
- Dimensions: 125 x 62 x 31 mm.
- Weight: 255 g.
- Delivery in a plastic case with a manufacturer measuring report, incl. magnet and 2 attachments.
- Power supply: 4 batteries type AAA.



ECONOMY LINE ✓

Item No.	Description	Price EUR
909.065	Vibration tester	448.00
Options:		
497.914	Battery type AAA (4 needed)	0.80
909.074	RS232C cable and software	101.00

Digital sound level meter

Instrument for measuring the sound level.

- Measuring range: 30 - 130 dB.
- Resolution: 0.1 dB.
- Accuracy: ± 1.5 dB.
- Frequency weighting: A and C.
- Frequency range: 31.5 Hz - 8.5 kHz.
- Measuring frequency: 2 times per second.
- Time weighting: fast/slow.
- The current measured value within the range of 50 dB is displayed graphically (adjustable).
- Over range indication.
- Automatic switch-off.
- Max function.
- Dimensions: 207 x 70 x 29 mm.
- Weight: 178 g.
- Delivery in a plastic case.

- Power supply: 1 battery type PP3 (9 V).



ECONOMY LINE ✓

Item No.	Measuring range/dB	Price EUR
909.131	30 - 130	142.00
Option:		
495.161	Battery type PP3 (9 V)	2.50

Digital refractometer IP65

Refractometer for checking the correct mixing ratio of various fluids, including, e.g. coolants.

- Measuring range: 0 - 50% Brix, 0 - 60°C.
- Graduation: 0.1% Brix, 0.1°C.
- Accuracy: $\pm 0.2\%$ Brix, 0.5°C.
- Automatic switch-off.
- Dimensions $l \times w \times h$: 120 x 58 x 26 mm.
- Weight: 125 g.
- Protection: IP65.
- Delivered in a plastic case with cleaning cloth, pipette.
- Power supply: rechargeable battery with USB cable (excluding AC adapter).

**NEW****ECONOMY LINE** ✓

Item No.	Meas. range % Brix	Graduation % Brix	Price EUR
910.518	0-45	0.1	224.00

Refractometers

Refractometers for regular checking of the correct mixing ratio of coolants. A correct ratio is very important.

- Measuring range: 0 - 32% Brix.
- Graduation: 0.1 or 0.2% Brix.
- Accuracy: $\pm 0.2\%$.
- Adjustable eyepiece.
- Adjustment screw for zero setting (protected by rubber cap).
- Rubber eye adapter.
- Ergonomic design.
- Weight: 200 g.
- Delivery in a plastic case with cleaning cloth, screwdriver, pipette.



909.079

ECONOMY LINE ✓

Item No.	Meas. range % Brix	Graduation % Brix	Price EUR
909.090	0-10	0.1	76.00
909.079	0-32	0.2	82.00

Telescopic mirror/magnet

- Magnetic force: 5 N.
- Max. length (extended length): 480 mm.



909.343



909.344

**ECONOMY LINE** ✓

Item No.	Description	Price EUR
909.343	Telescopic mirror	7.50
909.344	Telescopic magnet lifter	7.60

Sonarscope

For tracing mechanical problems by means of sound.

**ECONOMY LINE** ✓

Item No.	Description	Price EUR
909.418	Sonarscope	15.00

Measuring instrument displays and interfaces



Remote Instrument Display

The Remote Instrument Display (RID) is an easy to use 2-channel display unit for connecting both RS232C and Mitutoyo instruments and display the measurement value on a large, clearly readable display. For a quick Go/NoGo indication both channels have their own 24 position LED bar with a user-defined upper and lower tolerance limit. Using the RID can simplify batch measurements significantly and makes human interpretation errors almost impossible. Also a combination of the RID with one or two scale units can be a low-cost solution for a digital read-out system on e.g. a drill press or lathe.

The RID is equipped with a Mitutoyo Digimatic and a RS232C output, so the measured values can be sent directly to a printer or PC by pressing the print button on the RID, the optional foot switch or by sending commands from the PC. Its lightweight construction, compact design and the simplicity of the controls make this RID a user-friendly and flexible accessory for your measuring instruments, suitable for use in both cleanroom and workshop.

- 2 display channels.
- 2 LED bars with 22 positions each.
- LED bar indication option:
bar or individual LED.
- User defined upper and lower tolerance limit for Go/NoGo indication.
- 2 RS232C inputs.
- 2 Mitutoyo Digimatic inputs.
- RS232C data output for PC or printer.
- Mitutoyo Digimatic printer output.
- Foot switch input.
- Keyboard data output option (see Smartbox).
- Power supply: mini AC adapter (6 Vdc).



Item No.	Description	Price EUR
348.043	Remote Instrument Display	379.00
Options:		
348.286	RS232C cable 1.8 m	8.10
348.287	RS232C cable 3 m	17.40
348.288	RS232C cable 5 m	19.80
348.186	Foot switch metal Economic	44.00
348.190	Foot switch metal Herga	73.00
348.189	Foot switch metal Industrial	174.00
495.147	PS/2 keyboard cable 1.8 m	4.10

Smartbox

The Smartbox is an interface that connects various digital (measuring) instruments and indicators to computer programs, such as Approve, spreadsheets and databases. This will make a program-oriented software driver redundant.

The measuring value of the connected instrument is read into standard software as spreadsheet or Approve as if it has been entered by means of the keyboard. The USB Smartbox is linked directly to a USB port (cable is included).

It is possible to connect an instrument equipped with a Mitutoyo or RS232C data output with the Smartbox, for example TESA, Magnescale, Kroeplin, Helios Preisser. However, instruments need a specific data cable. See also table below.

The Smartbox is equipped with a 10p Mitutoyo compatible and an RS232C 9p (male) D-connector, and also has a program-controlled microprocessor. The DIP switches allow you to choose between the various instruments. The Smartbox is powered by your PC.



Item No.	Description	Price EUR
348.370	USB Smartbox for 1 instrument	157.00
Options:		
348.186	Metal foot switch Economic	44.00
348.190	Metal foot switch Herga (0.25 kg)	73.00
348.189	Metal foot switch Industrial (1 kg)	174.00
Besides all Mitutoyo Digimatic cables, the following cables are suitable for the Smartbox:		
348.122	Cable Magnescale U-serie and LT-serie / RS232C 9p (2 m)	46.00
348.142	RS232C-cable Sartorius 9p (3 m)	49.00
781.887	Opto-RS232C-cable 9p sub-D for TESA, Sylvac, Preisser etc. (2 m)	157.00
348.153	RS232C-cable Mettler 9p (female) (3 m)	46.00
348.154	Cable for Heidenhain RS232C 9p (3 m)	50.00
348.155	Cable for TESA-TT10 (2 m)	50.00
348.239	Cable LH20/LY10 RS232C 9p (female) (3 m)	54.00

D/RS Instrumentbox

With the D/RS Instrumentbox, RS232C and Mitutoyo Digimatic instruments can be read into a PC, making them available online for Approve or other software. The box is equipped with four 10p Digimatic and four 9p sub-D connectors, allowing the maximum of four RS232C or eight instruments with a Digimatic output to be connected. There is also a foot switch connection. The box can be connected to a PC's COM (RS232C) or, via an optional adapter, USB port.



348.041



495.208



348.186



348.190



348.189

Item No.	Type/description	Price EUR
348.041	D/RS Instrumentbox incl. AC adapter and cable 9p (3 m) (for RS232C cables: see Smartbox)	509.00
Options:		
495.208	RS232C-USB adapter	34.20
348.163	Adapter cable Digimatic - 9p sub-D	24.20
348.186	D/RS foot switch Economic	44.00
348.190	D/RS foot switch Herga	73.00
348.189	D/RS foot switch Industrial	174.00

DiMag converter

The DiMag is an interface for direct data collection from measuring instruments with a Digimatic data output, for example Mitutoyo. The USB connection provides a RS232C interface (according Magnescale U-series dial indicators). Data can also be requested through the built-in data button or foot switch. The USB interface is powered from the data connection and emulates a COM port.

Item No.	Type/description	Price EUR
348.052	DiMag converter USB	139.00
Options:		
348.186	D/RS foot switch Economic	44.00
348.190	D/RS foot switch Herga	73.00
348.189	D/RS foot switch Industrial	174.00



C20-300-EN-20250702

Mitutoyo data processing

Mitutoyo has several options for the collection of measuring data such as printing and statistical analysis using the Digimatic SPC printer, direct data collection via a USB cable or interface modules and wireless via the U-WAVE wireless communication system.

Mitutoyo Digimatic SPC printer

The thermal SPC printer DP-1 VA for fast and easy printing of the measuring values of calipers, micrometers and other measuring instruments. Suitable for statistics, calculations and reports. For measuring instruments with an RS232C output a special RS232C→Mitutoyo interface has been developed.

- Prints the measured values with statistical calculations of N, -NG, +NG, P, MAX, MIN, R, $\bar{x}$, σ_n , σ_{n-1} , Cp, Cpk, Histogram, Xd control charts, control limits, date and time in a clear and surveyable way.
- Timer for automatic input intervals.
- Capacity of 9999 measurement data.
- Delivery with AC adapter, batteries and a roll of printing paper.
- Power supply: AC adapter (6 Vdc) or 4 batteries type AA.

Item No.	Type/description	Price EUR
264.506 ¹	DP-1 VA SPC printer	
Options:		
495.111	Battery type AA (4 needed)	0.70
348.042	RS232C→Mitutoyo interface	63.00
937.179	Foot switch	58.00
900.825	Printing paper (5 rolls)	36.00

¹ Incl. AC adapter (6 Vdc) and a roll of printing paper.



Mitutoyo Digimatic USB interface

USB interface for sending measured values from a Digimatic measuring instrument into PC applications. Send the measured values by using the data switch or the optional foot switch.

With the free to download USB ITPAK 3.0 (simplified version) it is possible to program Mitutoyo measuring instruments with an S1 connector. Using the PC it is possible to set parameters such as preset value, tolerances, and the calibration date.

Please contact us for instrument specific cables and system requirements.

Item No.	Description	Price EUR
264.020	Digimatic USB interface	267.00
106.001	USB Input Tool Direct cable 2 m	169.00
937.179	Foot switch	58.00



Mitutoyo U-WAVE wireless communication system

Wireless system for the transmission of Digimatic instrument measuring data to a PC for data analysis in for instance Microsoft Excel. The system consists of a transmitter and receiver with a communication distance up to 20 meter within visible range. Up to 100 transmitters can be connected to a receiver and up to 16 receivers to a PC. Measuring data can be sent from the measuring instrument or requested by the PC. A multi-channel input of measured values into e.g. Microsoft Excel is possible. With the USB-ITPAK software (full version) Excel sheets can be easily created.

The U-Wave Fit transmitter system has the advantage that the transmitter fits on the back of the instrument, resulting in better ergonomics. The U-Wave Fit fits calipers with a measuring range up to and including 300 mm, and all standard micrometers. In addition, the U-Wave transmitter system is also available in a Bluetooth version. This enables direct data transfer to a smartphone, tablet, or PC. To do this, Mitutoyo offers free (downloadable) software apps for use with Microsoft Excel. Per PC it is possible to connect up to 7 instruments, and per smartphone or tablet up to 3 instruments.



Item No.	Description	Price EUR
102.880	U-WAVE transmitter standard	189.00
102.730	U-WAVE transmitter IP67	189.00
102.810	U-WAVE receiver and software	380.00
264.620 ^{1,5}	U-WAVE Fit transmitter IP67	189.00
264.621 ^{1,5}	U-WAVE Fit transmitter	189.00
264.622 ^{2,5}	U-WAVE Fit transmitter IP67	189.00
264.623 ^{2,5}	U-WAVE Fit transmitter	189.00
264.624 ^{1,5}	U-WAVE Bluetooth transmitter IP 67	197.00
264.625 ^{1,5}	U-WAVE Bluetooth transmitter	197.00
264.626 ^{2,5}	U-WAVE Bluetooth transmitter IP 67	197.00
264.627 ^{2,5}	U-WAVE Bluetooth transmitter	197.00
Options:		
937.179	Foot switch	58.00
102.310 ^{2,3,5}	U-WAVE Fit connector IP67	114.00
102.300 ^{4,5}	U-WAVE Fit connector	109.00
106.543	USB-ITPAK Vers. 3.0 Full version software	351.00

¹ For calipers up to and including 300 mm.

² For Coolant Proof micrometers.

³ For Coolant Proof calipers up to and including 300 mm.

⁴ For standard calipers up to and including 300 mm.

⁵ Connector + transmitter are needed.

Please contact us for instrument specific cables and system requirements.



TESA data processing

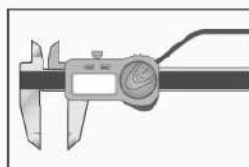
TESA offers multiple options for the processing of measuring data from eligible digital measuring instruments and gauges. This varies from importing data through the USB port, through interface modules, or wireless using the TESA TWIN & LINK connectivity concept. For data processing, several software options can be requested. The TESA DATA-Viewer is free to download and offers the possibility for simple data acquisition in, for example, Microsoft Excel. If a more elaborate data storage is required, such as the sorting of cells within Microsoft Excel or data polling, then DATA-Direct offers the solution. With the TESA software STAT-Express it is even possible to apply extensive process analysis (SPC).

TESA Link Connector (TLC)

TESA Link Connector-USB/Digimatic

Every instrument with an Opto-RS232, Sub-D-RS232, or TLC output, can be connected to USB or Digimatic interface by using the TLC cable. On instruments with the TLC output, the TLC cable can be connected directly. On instruments with an Opto-RS232 or Sub-D-RS232, an adapter is available.

Item No.	Type/description	Price EUR
783.301	TESA Link Connector (TLC)	147.00
783.302	TESA Link Connector-USB/Digimatic	304.00
Options:		
783.037	DATA-Direct software for data acquisition	496.00
783.038	STAT-Express for statistical analysis	1,201.00

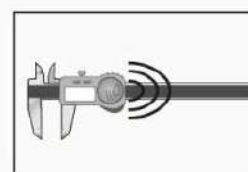


TESA Link Connector-Bluetooth

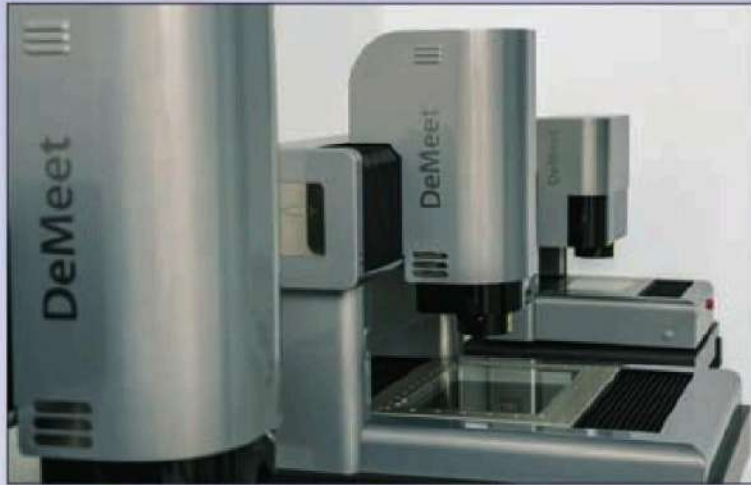
The TESA Link Connector-Bluetooth transmitter is available to send data using Bluetooth. This transmitter can be connected directly to instruments with the TLC connector. On instruments with an Opto-RS232 or Sub-D-RS232, an adapter is available. The startup set consists of a Bluetooth receiver (in case this isn't available) and one TLC-Bluetooth transmitter. On a single Bluetooth dongle, a maximum of eight instruments can be connected at the same time, with a maximum of 5 dongles per system (40 instruments).

Item No.	Type/description	Price EUR
783.555	TESA Link Connector Bluetooth	59.00
783.557	USB dongle receiver for TESA TLC Bluetooth	45.00
783.556	Adapter cable Opto-TLC	209.00
783.558	Adapter cable SUB-D RS232-TLC	112.00
783.449	Footswitch for USB HID interface	180.00
783.552 ¹	Startup set TESA TLC Bluetooth	102.00
Options:		
783.037	DATA-Direct software for data acquisition	496.00
783.038	STAT-Express for statistical analysis	1,201.00

¹ Consisting of a dongle receiver with 1.5 m cable and a TLC Bluetooth transmitter.



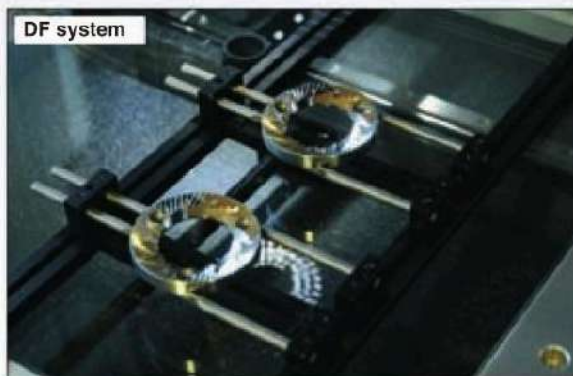
DeMeet 3D CNC coordinate measuring machines DF fixture system / Alufix fixture system



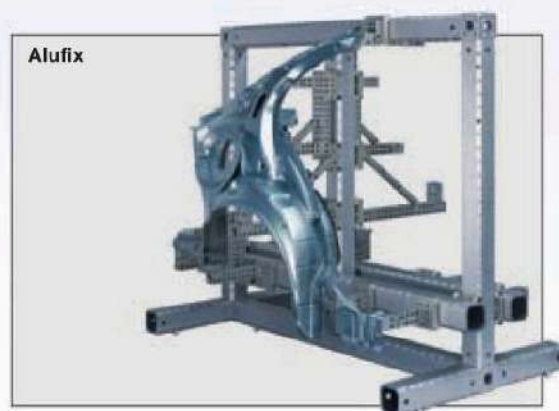
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*DeMeet-220 Video model
complete from:
EUR 22,900.00
(excl. PC system)*



DF system



Alufix

023.002 EN 20060702

DeMeet video and multi-sensor measuring machines



DeMeet coordinate measuring machines

The DeMeet 3D CNC coordinate measuring machines provide automatic, user-independent quality control with measuring results traceable to the international length standard. The DeMeet measuring machines are available in Video (optical) and Combo model (multi-sensor for combined video and touch probe measurements). The DeMeet multi-sensor measuring machines are an excellent all-in-one alternative to other measuring devices for example a measuring microscope, profile projector and height gauge.

With an excellent price-performance ratio the DeMeet measuring machines enable high precision quality control in measuring laboratories as well as on the production floor. Applications of optical and multi-sensor measuring are among others in the precision engineering, medical, plastics and electronics industry.

Design and quality

The application of quality components made by Schut and by well-known, specialized manufacturers ensures excellent performance and high accurate measurements.

With the new design of the DeMeet measuring machine series no concessions have been made to accuracy and reliability. The new visually screwless cover design provides a better protection in the production environment and is highlighted with nickel-plated aluminum details which can be personalized. The open design of the DeMeet allows for easy operation and loading of the machine from all sides.

The accuracy of the DeMeet measuring machines is guaranteed by a CAA 3D correction model (Computer-Aided Accuracy, error compensation).

Machine construction

The construction is a granite base plate with accuracy grade according to DIN 876/00, placed on well positioned shock absorbing points and resting on a welded base frame (for the DeMeet-220 the base plate is flat grinded cast iron).

The XYZ base structure for the THK precision preloaded caged ball linear guides is made from extremely tension relieved, flat grinded cast iron, as the basis for a mechanical accurate construction. The axis drive system consists of Faulhaber high torque DC servo motors, TFE coated Kerk lead screws and Renishaw TONIC optical linear encoders with low sub-divisional error.

The measuring table is made of tension relieved, wear-resistant, nickel-plated steel, with a mounting hole pattern for product fixtures and a flat aligned glass plate. The video model consists of a DeMeet camera with a Sony sensor and a telecentric optical system. In addition to the optical system the Combo model is equipped with a Renishaw touch probe system.



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DeMeet video measuring machines

Optical measurements

Optical measurements are performed using the camera system, optics and adjustable illumination. Due to the non-contact nature of the measurements there is no risk of product deformation. Optical measuring is very suitable for products with fine structures and contact sensitive products.

Another advantage of optical measurements is that edge information can be defined directly with high density of measuring points. Within the field of view of the DeMeet a very high accuracy can be achieved.



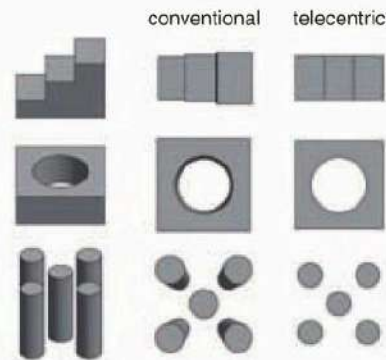
Optical system

A combination of high quality telecentric optics and DeMeet Sony sensor camera is integrated for a clear image with an excellent contrast and a high resolution. In combination with the image processing functionality of the DeMeet, this results in highly accurate measurements.

Telecentric optics are supplied as a standard to avoid perspective image distortion around the center of the field of view. The DeMeet is either equipped with Nikon, Leica-Design or Mitutoyo optics with a large working distance for a brilliant image with high contrast providing optimal edge detection.



Lenses with various magnifications from 1x to 10x are available and can be exchanged during a measuring run, generating a range in display magnification from 40x to 400x.

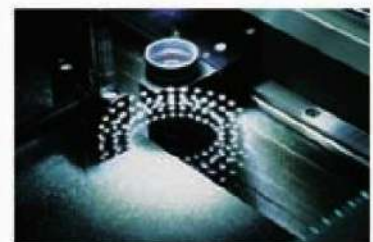


Illumination

Illumination is essential for accurate measurements. The DeMeet is standard equipped with LED based illumination (backlight, coaxial light and segmented ring light). A ring light consisting of a 3 rings, 16 segments and 48 cells LED pattern, that can be controlled per individual ring, segment and cell, is standard supplied for optimal light configuration.

The ring light can be set in intensity and angle to achieve the best contrast with clearly defined edges. The backlight is transmitted from below and is used to highlight the profile of the edges. Coaxial lighting can be used for illumination inside deep located structures. The LED based backlight and coaxial light can be adjusted in intensity.

The configuration of the illumination is automatically controlled during a CNC measuring run. A coaxial laser pointer assists navigation during creation of a measuring program.



DeMeet multi-sensor measuring machines



Multi-sensor measurements

The increasing miniaturization and complexity of product features results in more difficult measuring and inspection procedures. Measuring systems equipped for only optical or contact measurements are often no longer sufficient, in which case multi-sensor measuring machines are required for optimal geometrical quality control.

When measuring certain features encounters the physical limits of non-contact measurement, the DeMeet video machines can be additionally equipped with a touch probe system (contact measuring system).

With the DeMeet Combo model both optical and contact measuring principles are seamlessly integrated and measurements can be performed by the optical and the probing system within one measuring run and even within one feature. Touch probe measurements can also be useful to create a complex 3D product alignment.

Probe modules and styli

Standard a Renishaw TP20 system with a 5-way stylus configuration is supplied. On request various probe modules, systems and stylus configurations are available. Multiple probe modules can be used to leave the stylus configuration on the module to achieve a shorter set-up time for measurements requiring other stylus configurations.

In addition to the standard touch probe system, an optional stylus change rack (automatic probe configuration change) can be utilized. With the stylus change rack probe modules can automatically be exchanged within one measuring run.



DeMeet video and multi-sensor measuring machines (continued)

Approve for DeMeet multi-sensor measuring software

Approve for DeMeet is a true multi-sensor software package, where the difference in sensor origin of the measuring input is limited to only the necessary. All the measuring results of video and touch probe can be displayed, reported, exported and used in constructs together, and are dynamically updated. The measuring results can also be displayed together in a 3D view. *Approve for DeMeet* is designed to be a user-friendly software package, but is flexible and very elaborate to measure many products.



3D Movements

The 3D motor controller in *Approve for DeMeet* makes blended, smooth moves which makes the DeMeet run more fluent and faster. The DeMeet also moves during video image processing and other calculations, shortening the measuring time considerably. To eliminate hysteresis, and therefore improving accuracy, an approach direction and distance can be set for video measurements. Pretouch and average touch can be set for touch measurements.

Measurements

For video measurements our proprietary image processing algorithms were developed, which are completely different from algorithms used by competing products. The edge find algorithm finds complete curves instead of separate points, the interpolation of the pixels is virtually infinite and very accurate. Video targets larger than one field of view can be measured in one program step, and are automatically split into more images and combined for the fitted result. The illumination for video measurements can be set and changed using a graphical control for backlight, coaxial light and ring light.

For touch measurements it is normal that the targets are defined in 3D, but now this is also the case for video measurements. Features (like a circle) can be measured properly even if they are not parallel to the camera (optical) plane. The graphical touch probe configuration editor allows for building a custom configuration for a specific measurement by using an extensive touch probe library. Settings can be defined and shared between measuring steps which greatly reduces the complexity of a measuring program.



APPROVE
for DeMeet

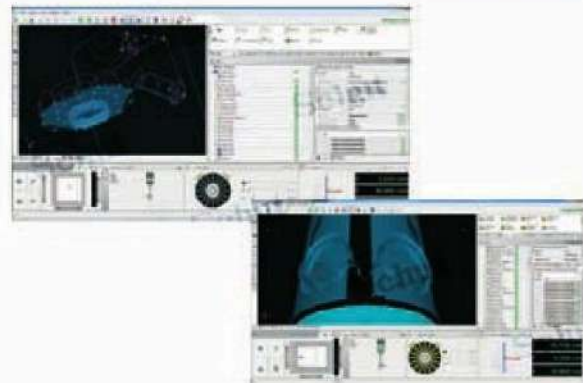
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Schut

DeMeet video and multi-sensor measuring machines (continued)

Measuring Program

A measuring program in *Approve for DeMeet* is a graphical program consisting of simple program steps. Program steps can be changed, added, copied, moved and removed very easily, inputs of a program step can be easily changed or linked to other results by using drag-and-drop. A program can be verified by running it step by step, even a single program step can be run for verification. After running a program step an icon appears behind it to indicate its status.



APPROVE
for DeMeet

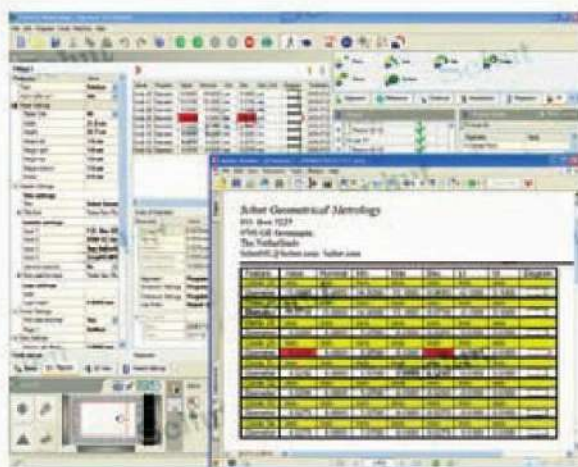
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Results, Report and Export

Results from measurements and calculations (constructs, fits, etc.) as well as from other program steps can be added to an export or report and saved or printed as PDF or CSV file for further analysis. If tolerances are used for a result a graphical tolerance bar is shown. Results and reports can be automatically printed or exported at the end of a measuring program run.

PTB software evaluation

Evaluation software for coordinate measuring machines. The accuracy of the *Approve for DeMeet* software was verified by comparing the results obtained from the software with reference results supplied by the PTB (Physikalisch-Technische Bundesanstalt, Braunschweig, Germany). The *Approve for DeMeet* software has been placed in the class of the smallest deviations.



Specifications DeMeet video and multi-sensor measuring machines

	Video model	Combo model
General		
Video system	DeMeet Sony sensor camera	
Nikon telecentric lenses	3.0x (1.0x, 5.0x and 10.0x optional)	
Leica-Design telecentric lenses	2.0x (1.0x, 5.0x and 10.0x optional)	
Mitutoyo telecentric lenses	3.0x (1.0x, 5.0x and 10.0x optional)	
Ring light ¹	3 rings, 16 segments and 48 cells (adjustable)	
Backlight and coaxial light	adjustable	
Probe system ²	-	Renishaw TP20
Construction ³	fixed bridge with granite base plate DIN 876/00	
Structure	extremely tension relieved, flat grinded cast iron	
Measuring table ⁴	tension relieved, nickel-plated steel	
Linear guides	THK linear guides	
Linear encoders	Renishaw TONIC linear encoders	
Drive system	Faulhaber DC servo motors	
Operating mode	motorized joystick / CNC	
Measuring specifications		
Resolution (μm)	0.1	
Accuracy standard ⁵ (μm)	X/Y/Z 3.9 + L/150	
(L in mm)	XY 4.5 + L/150	XYZ 4.9 + L/150
Accuracy high ⁵ (μm)	X/Y/Z 2.9 + L/200	
(L in mm)	XY 3.5 + L/200	XYZ 3.9 + L/200
Accuracy optional ⁵ (μm)	X/Y/Z 1.9 + L/250	
(L in mm)	XY 2.5 + L/250	XYZ 2.9 + L/250
Travel speed max. (mm/s)	X/Y 250, Z 55	
Acceleration max. (mm/s ²)	X/Y/Z 500	
Power requirements		
Voltage (V)	90 - 120, 210 - 240 (50 - 60 Hz)	
Power (VA)	400	
Environmental conditions		
Operating temperature (°C)	15 - 35	
Measuring temperature (°C)	20 ± 0.5	
Humidity (%)	40 - 70 (no condensation)	

¹ For video models (except DeMeet-220) a ring light with 4 rings, 16 segments and 64 cells can be supplied as an option.

² Other probe systems can be supplied as an option.

³ The base plate of the DeMeet-220 is made of flat grinded cast iron.

⁴ The measuring table of the DeMeet-220 is made of tension relieved, hard anodized aluminum.

⁵ The accuracy of the multi-sensor measuring system should be taken into account.

Specifications apply to all DeMeet models, unless otherwise specified.

Machines with higher specifications and/or modifications are available on request.

Specifications are subject to change without prior notice.

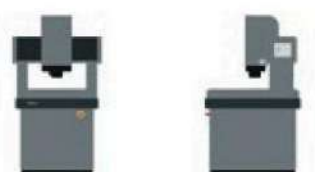
For more specifications refer to our website Schut.com.



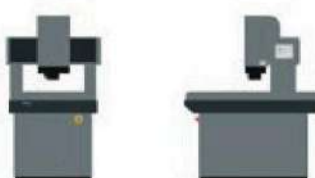
Specifications DeMeet video and multi-sensor measuring machines



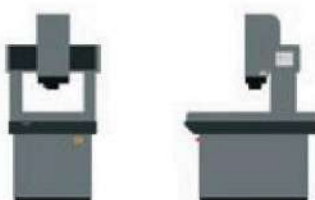
DeMeet-220		
Measuring range	(mm)	X 220, Y 150, Z 100
Dimensions	(mm)	W 520, L 700, H 615
Weight	(kg)	110
Measuring table	(mm)	X 357, Y 264
Max. load	(kg)	20



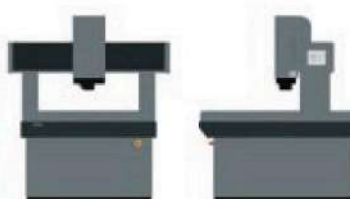
DeMeet-400		
Measuring range	(mm)	X 400, Y 250, Z 200
Dimensions	(mm)	W 870, L 930, H 1570
Weight	(kg)	530
Measuring table	(mm)	X 560, Y 426
Max. load	(kg)	50



DeMeet-404		
Measuring range	(mm)	X 400, Y 400, Z 200
Dimensions	(mm)	W 870, L 1245, H 1580
Weight	(kg)	700
Measuring table	(mm)	X 560, Y 584
Max. load	(kg)	50



DeMeet-443		
Measuring range	(mm)	X 400, Y 400, Z 300
Dimensions	(mm)	W 870, L 1245, H 1785
Weight	(kg)	720
Measuring table	(mm)	X 560, Y 584
Max. load	(kg)	50



DeMeet-705		
Measuring range	(mm)	X 700, Y 500, Z 300
Dimensions	(mm)	W 1520, L 1550, H 1820
Weight	(kg)	1400
Measuring table	(mm)	X 930, Y 704
Max. load	(kg)	60



Field of view qualifier

Glass reference standard with a pattern consisting of wide variety of very accurate optical characteristics, produced with a coating (chrome). Very suitable for use with optical instruments as geometric accuracy standard or as a test and training object.

- Accuracy: ± 0.002 mm.
- Delivery including drawing with size indication.



Item No.	Description	Price EUR
635.222	Field of view qualifier	160.00

Worktable DeMeet-220

The DeMeet-220 must be placed on a stable worktable for accurate measurements. Placing can be done on a strong work table or on a granite worktable like below.

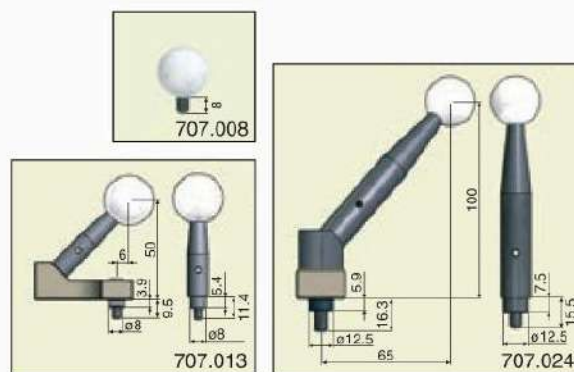


Delivery ex Groningen, Netherlands

Item No.	Description	Price EUR
402.004	Granite surface plate 630 x 630 x 80 mm, DIN 876/1	519.00
131.032	Support DeMeet-220 (working height 750 - 800 mm)	420.00

Qualification spheres

- Ball: $\varnothing 8$ or $\varnothing 25$ mm, made of ceramics.
- Delivery with a manufacturer measuring report.



Item No.	Description	Price EUR
Qualification sphere $\varnothing 8$ mm:		
707.025 ¹	For DeMeet-220	470.00
707.026 ²	For DeMeet-4xx/705	423.00
Qualification sphere $\varnothing 25$ mm:		
707.013 ¹	For DeMeet-220	415.00
707.024 ²	For DeMeet-4xx/705	390.00
707.008 ²	Ball only; M6 external thread	300.00

¹ Thread M4.

² Thread M6.

Training object



Item No.	Description	Price EUR
635.200	Touch probe training object	210.00

Fixture systems

Solid positioning of a measuring object with a fixture system is essential for accurate measurements and the fixing pattern can also be used for batch measurements. The measuring table of the DeMeet is prepared for DF and Alufix fixture systems.

DF product fixture system

DF-System is a fixture system developed and produced by Schut and designed for constructing 3D product fixtures, particularly for optical measurements, and is fully compatible with the measuring table of the DeMeet measuring machines. The DF-system is an easy to mount measurement fixture system and especially developed to use the most of the illumination possibilities for optical measurements. Easy to mount with single-screw couplings to build fixtures with a high repeatability and to realize a short set-up time for measuring tasks.

DF-System consists of a full range of fixture components: bars, connection components and fixing components. Produced from extruded or machined aluminum with either a black or silver anodized finishing. Technically the difference is only applicable for optical measurements in relation to (un)desirable light reflection.

DF is a universal fixture system and can be mounted on any type of measuring machine. With special couplings the system is fully compatible with the measuring tables of the DeMeet video and multi-sensor coordinate measuring machines.

Item No.	Description	Price EUR
717.057	Basic set I DeMeet-220 Black	1,086.00
717.088	Basic set I DeMeet-220 Silver	1,086.00
717.095	Basic set II DeMeet-400Y Black	1,139.00
717.096	Basic set II DeMeet-400Y Silver	1,139.00
717.058	Basic set III DeMeet-400X/4xxXY Black	1,219.00
717.089	Basic set III DeMeet-400X/4xxXY Silver	1,219.00



DF system

Alufix fixture system

Alufix is a flexible fixture system made of high-tensile aluminum. Alufix is a uniquely designed modular fixture system to prepare a product-fixture in a short time and is easy to mount and specially suitable for fixtures for heavier measuring objects. A wide range of components is available that can be combined to complete your measuring fixture such as base plates, bars, chucks, rotary plates, centers, magnetic holders, v-blocks, vises and optical targets.

Besides all the separate components two basic sets are composed for the DeMeet: an Alufix 16 set for light weight products and an Alufix 25 set for larger and heavier products.



Item No.	Description	Price EUR
381.100	Basic set Alufix 16 DeMeet for DeMeet-220 and DeMeet-400 (Y-axis)	3,310.00
381.101	Basic set Alufix 25 DeMeet for DeMeet-400 (X-axis), DeMeet-404 and DeMeet-443	3,130.00
381.099	Basic set Alufix 25 DeMeet-705 for DeMeet-705	3,640.00



Custom fixture systems for the DeMeet measuring machines

When products need to be measured in a batch and a standard fixture system does not provide the right solution for example caused by the extraordinary shape or small dimensions of the product, a custom made fixture can provide the solution. This is especially the case for products that need to be measured optically.



A certain repeatability of product positioning in the fixture is important for a quick set-up time in for example the production environment. We can assist you in the development and manufacturing of a custom fixture. There is a range of possibilities, from machined fixturing positions in acryl glass to magnet and vacuum fixture systems.

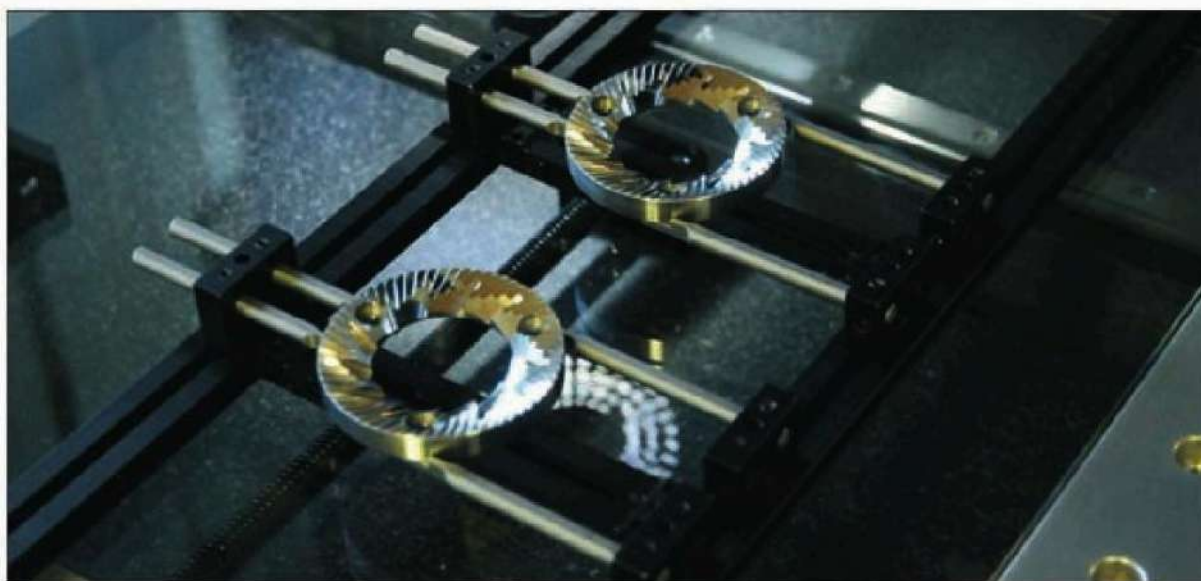


DF product fixture system

DF is a new fixture system developed and produced by Schut and designed for building 3D product fixtures, particularly for optical measurements.

Solid product positioning is essential for accurate measurements. DF is very easy to mount with single-screw couplings to build fixtures with a high repeatability and to realize a short lead-time for measuring jobs.

DF consists of a full range of fixture components: bars, connection components and fixing components. Produced from extruded or machined AlMgSi1 aluminum with either a black or silver anodized finishing. The black anodized version avoids light reflections. The silver components can be applied when light reflections from the fixture are required.



DF is a universal fixture system and can be mounted on any type of measuring machine. With special couplings the system is fully compatible with the measuring tables of the DeMeet video and multi-sensor coordinate measuring machines.

DeMeet



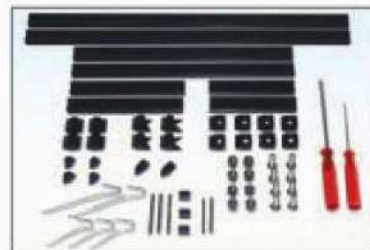
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DF product fixture system (continued)

DF is available in separate components and in three basic sets, in black or silver finishing. Basic set I is composed for the DeMeet-220, basic set II for the DeMeet-400 (Y-axis) and basic set III for the DeMeet-400 (X-axis) and the DeMeet-404/443 (X- and Y-axis).

Item No.	Description	Price EUR
717.057	Basic set I DeMeet-220 Black	1,086.00
717.088	Basic set I DeMeet-220 Silver	1,086.00
717.095	Basic set II DeMeet-400Y Black	1,139.00
717.096	Basic set II DeMeet-400Y Silver	1,139.00
717.058	Basic set III DeMeet-400X/4xxXY Black	1,219.00
717.089	Basic set III DeMeet-400X/4xxXY Silver	1,219.00



Item No.		Description	Number	Basic set		
black	silver			I	II	III
717.029	717.073	Mounting block perpendicular	8	•	•	•
717.030	717.074	One point anvil	4	•	•	•
717.031	717.075	One point anvil long	2	•	•	•
717.036	717.077	Mounting block for spring shaft	3	•	•	•
717.040	717.081	V-block 120°	2	•	•	•
717.042	717.083	V-block 90°	2	•	•	•
717.033	717.043	Mounting block side pattern 16	4	•	•	•
717.028	717.072	Mounting block end pattern 16	4	•	•	•
717.034	717.050	Mounting block side pattern 25	4	•	•	•
717.035	717.056	Mounting block end pattern 25	4	•	•	•
717.015	717.059	Bar 56 mm	2	•	•	•
717.016	717.060	Bar 88 mm	2	•	•	•
717.097	717.098	Bar 110 mm	2	•	•	•
717.017	717.061	Bar 120 mm	2	•	•	•
717.018	717.062	Bar 160 mm	2	•	•	•
717.022	717.066	Bar 246 mm	2	•	•	•
717.024	717.068	Bar 310 mm	2	•	•	•
717.026	717.070	Bar 344 mm	2	•	•	•
717.025	717.069	Bar 460 mm	2	•	•	•
717.044		Screw and adapter pattern 16	4	•	•	•
380.301		Distance tube with stop pattern 16	8	•	•	•
380.304		Distance tube with stop pattern 25	8	•	•	•
993.539		Screw M4 x 20 stainless steel	8	•	•	•
995.087		Screw M6 x 25 stainless steel	8	•	•	•
717.000		Shaft 60 mm for clamping spring	3	•	•	•
717.004		Shaft 50 mm for clamping spring	2	•	•	•
717.010		Clamping spring short	3	•	•	•
717.011		Clamping spring long	2	•	•	•
991.158		Hex screwdriver 2 mm	1	•	•	•
991.160		Hex screwdriver 3 mm	1	•	•	•
991.161		Hex screwdriver 4 mm	1	•	•	•
717.008		Screw mounting tool	1	•	•	•
851.888		Case for DF basic sets I and II	1	•	•	•
851.899		Case for DF basic set III	1	•	•	•



Item No.	Description	Price EUR
991.158	Hex screwdriver 2 mm	7.90
991.160	Hex screwdriver 3 mm	8.50
991.161	Hex screwdriver 4 mm	14.10
991.276	Adjustable torque hex screwdriver 2 mm with range 0.1 - 0.6 Nm	137.00

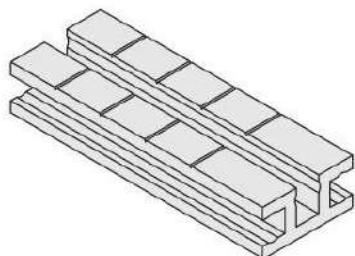


991.276

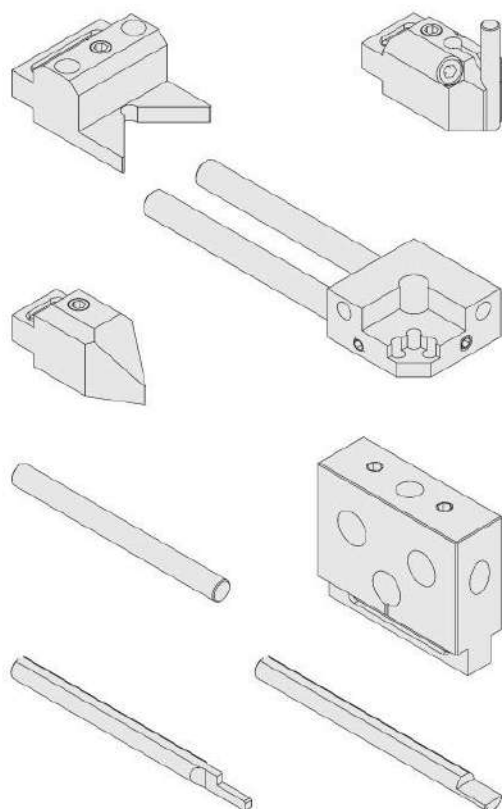
DF components

Besides the components shown below, there are various other types available.

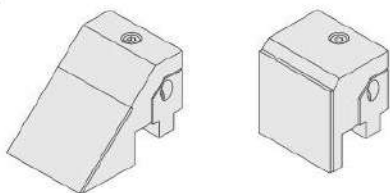
Bars



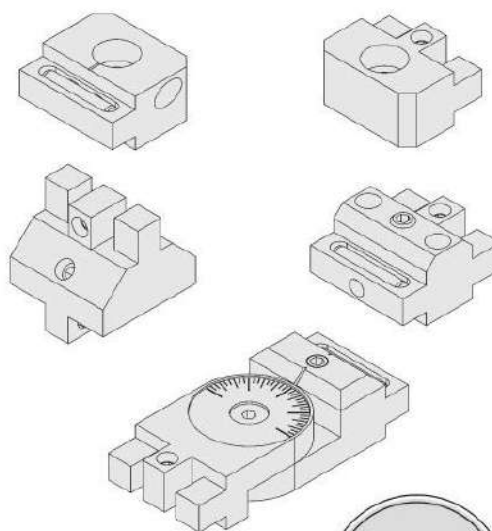
Positioning components



Mirrors

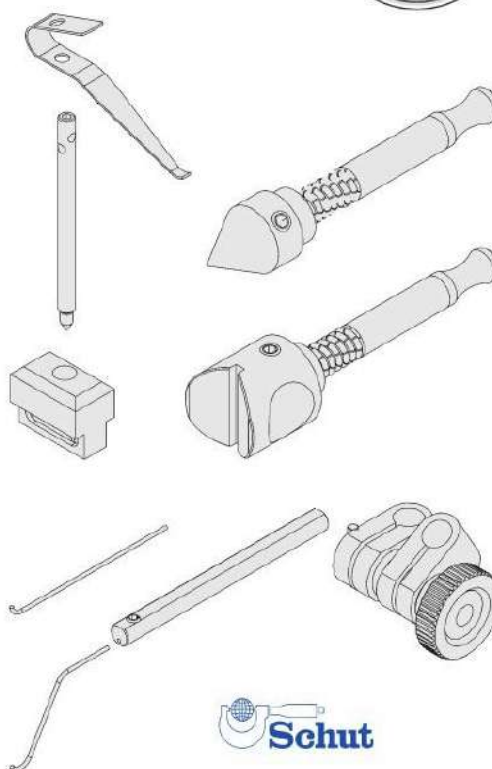


Connection components



Download the
brochure from
Schut.com

Fixing components



Schut

Alufix fixture system

Alufix is a flexible fixture system made of high-tensile aluminum, with which, due to the high production accuracy and ease of use, fixture solutions can be created in a short time.

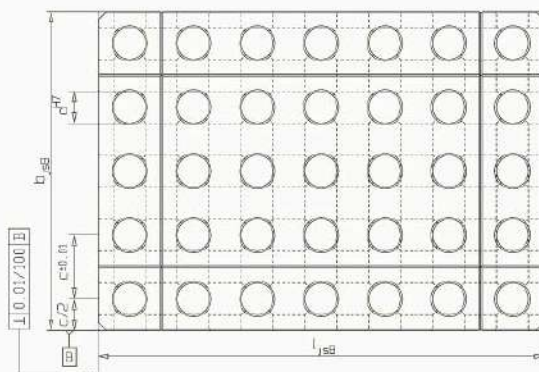
Applications of Alufix are for example:

- Product fixtures for coordinate measuring machines or other measuring systems such as probe/dial indicator measuring systems or height gauges.
- Product fixtures for various mounting purposes.
- Product fixtures for various production applications like welding.

The great diversity of accessories enables a fixture for almost any product. E.g. Alufix is used in aerospace, plastics and car manufacturing industries.



Example of an Alufix basic set: 438 pieces, delivery with workstation.



	Center distance c/mm	Bore diameter d/mm
Alufix 16	16	8
Alufix 25	25	12.5
Alufix 40	40	20
Alufix 50	50	25

Some advantages of the Alufix system:

- Alufix can save time and money, because the fixtures are quick and easy to assemble.
- All components are re-usable.
- Aluminum has a low weight and is corrosion free.
- High dimensional accuracy.

For many of the basic elements there is also a lighter ECO or Light version available with a favourable price-performance ratio.

The Alufix program can also be supplied black anodized as an option for avoiding light reflections with for example optical measurements.



Alufix is available in several base sizes. **Alufix 16** is the smallest version for fixturing small, light objects, **Alufix 25**, **Alufix 40**, **Alufix 50** and the **Fixinspect** system.

All Alufix parts are separately available, and can be assembled to create a product specific fixture. There are also sets of a more general composition.



Fixtures for height gauges can be rotated by 90° allowing 2 coordinates to be measured.



Detailed
information
available

Alufix fixture system (continued)



Alufix base plates



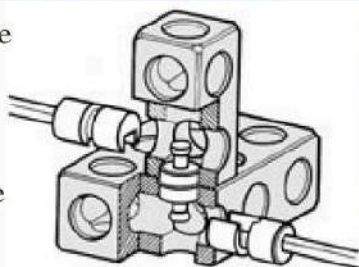
Alufix Full Bars Classic



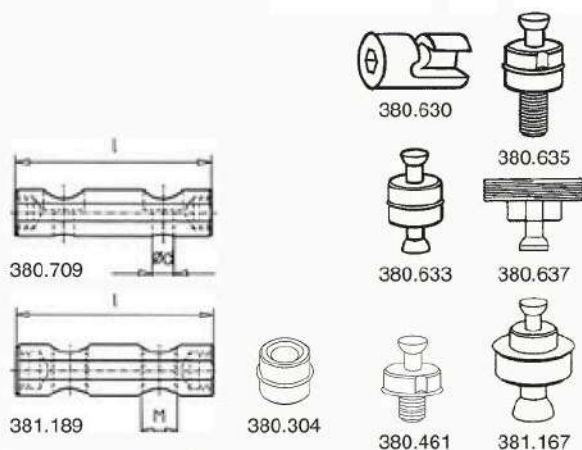
Alufix Bars Eco Plus

Alufix connection elements

For connecting base plates, quaders and other elements. With the positioning sleeves, the various Alufix systems can be connected.



381.115



380.630

380.635

380.633

380.637

380.709

380.304

380.461

381.167

Item No.	Description	Price EUR
Alufix 25:		
381.115	36 piece set	
380.630	Lock	
380.633	Twin bolt	
380.461	Twin bolt M6	
380.002	Twin bolt M8	
380.635	Combi bolt M6	
380.637	Bolt disk M24 x 1	
381.167	Pos. sleeve 25/16	

Alufix 25:

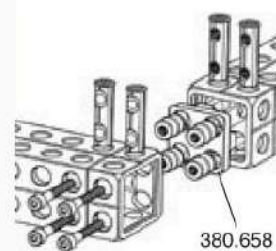
Also available for Alufix 16, 40 and 50.

Screw connections

Item No.	Type	Price EUR
Alufix 25 crosspieces nut:		
380.328	M6 x 25 ¹	
380.709	M6 x 50 ²	
381.185	M6 x 75 ³	
Alufix 25 crosspieces:		
380.325	M6 x 25 ¹	
381.189	M6 x 50 ²	
381.190	M6 x 75 ³	
380.304	Positioning sleeve AF 25	

¹ Single, ² double or ³ triple model.

Also available for Alufix 16, 40 and 50.



380.658

Couplings for Alufix 25, double model (w x h = 50 x 50 mm)

Item No.	Type	Price EUR
380.658	Single coupling	
380.717	Double coupling	

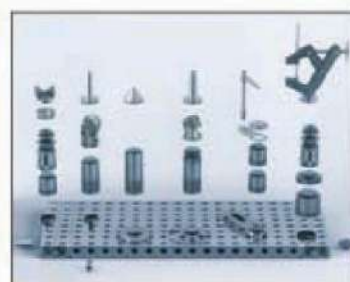
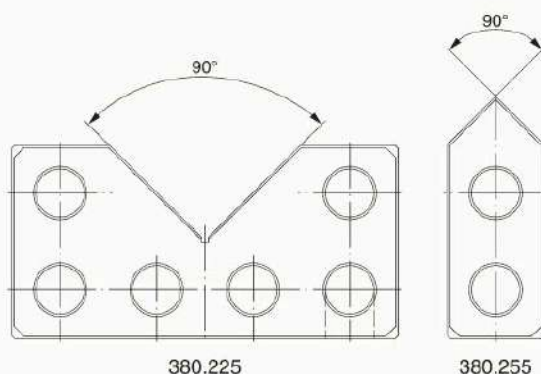
Also available for Alufix 40 and 50.

Alufix positioning and fixing components

Alufix offers a large variety of positioning and fixing components. All of these components are compatible with Alufix 16, 25, 40 and 50.

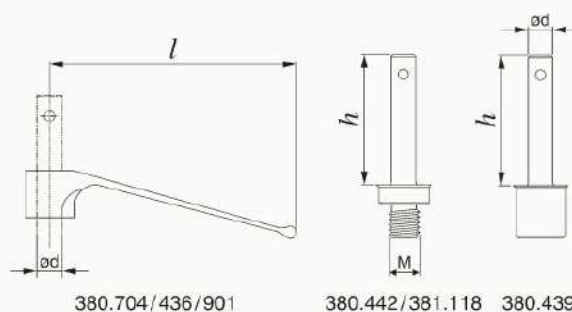
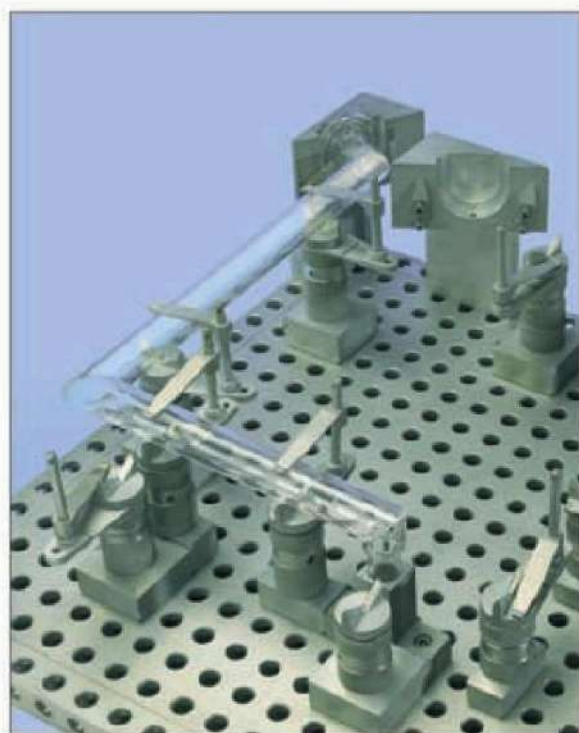
Alufix 25 positioning components

Item No.	Angle	Price EUR
Prisms:		
380.225	90°	
380.227	120°	
Delta blocks:		
380.255	90°	
380.261	120°	



Alufix 25 fixing components

Item No.	Dimensions/mm	Price EUR
Clamping spring:		
380.704	$l = 35$	
380.436	$l = 60$	
380.901	$l = 105$	
Stud for clamping spring:		
380.439	$h = 60$	
380.442	$h = 60$	
381.118	$h = 125$	



Alufix positioning and fixing components (continued)



381.075



381.077



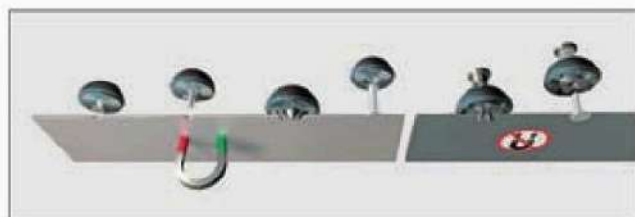
Item No.	Diameter/mm	Price EUR
For Alufix 25:		
381.162	50	
381.075	80	
381.078	125	

Item No.	Jaw width/mm	Price EUR
For Alufix 25:		
381.077	50	
381.164	75	
380.885	100	

Various sizes and base sizes (Alufix 16, 40 and 50) available.

Alufix Fixinspect

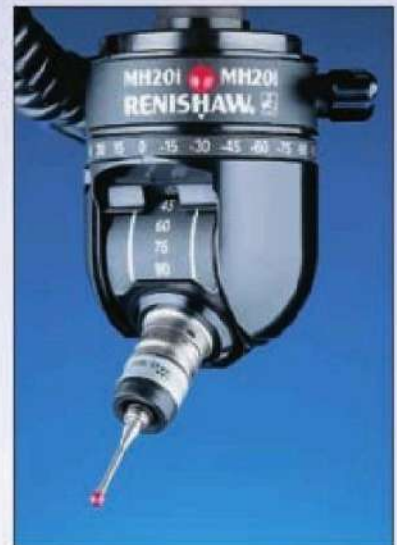
Fixinspect measuring tools are mounted on the workpiece features by use of magnetic coupling, spring clamp or screw connection. Thanks to the Fixinspect measuring tools, positional properties of workpiece features can be determined quickly and easily, both tactile and optical.



Detailed
information
available



Probes and probe systems



*Ask for
the detailed
catalog*

TP20 probe system

The TP20 probe consists of two parts; a probe body, and a detachable probe module that contains the kinematic touch sensor and carries the stylus assembly.

The probe body has a standard M8 x 1.25 screw connector, which enables simple fitment to all CMMs with a Renishaw standard probe head (including PH6). The body contains a

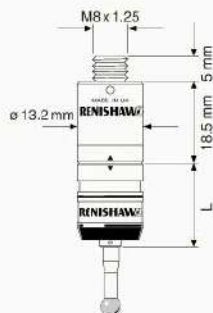
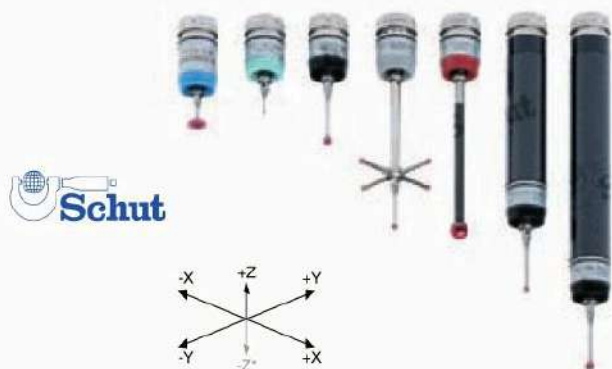


magnetic proximity switch to inhibit triggering of the probe during automatic module changing with the MCR20. (The TP20 NI, Non-Inhibit,

is not affected by magnetic fields and must be inhibited through software. The TP20 NI is available on request.)

The probe module is connected to the probe body by a highly repeatable magnetic kinematic coupling, which allows the automatic (CNC) or manual exchange of modules without the need to requalify the stylus tips.

Seven probe module options are available, each with a preset trigger force designed to ensure maximum probe performance when using different stylus configurations.



Module type ¹	Unidirectional repeatability (2σ)/μm	2D (XY) form meas. deviation PTV at 10 mm/μm	Trigger force/N (nominal at stylus tip)		Overall displacement (max at stylus tip)			Length L mm
			XY	Z	XY ²	+Z/mm	-Z/mm	
LF	0.35	±0.6	0.055	0.65	±14°	3.1	-	19.5
SF	0.35	±0.8	0.08	0.75	±14°	4.0	-	19.5
MF	0.5	±1.0	0.1	1.9	±14°	3.7	-	19.5
EF	0.65	±2.0	0.1	3.2	±14°	2.4	-	19.5
6-way	0.80	±1.5	0.14	1.6	±14°	4.5	-	24.5
EM1	0.35	±0.8	0.08	0.75	±14°	4.0	1.5	69.5
EM2	0.35	±0.8	0.08	0.75	±14°	4.0	-	94.5

¹ Probe length: 10 mm, except MF: 25 mm and EF: 50 mm.

² The probe module can get detached if this value is exceeded.

Item No.	Description	Price EUR
TP20 probe sets (incl. stylus tools/cleaning kit and manual):		
876.198	Probe body, probe module SF	2,725.00
876.244	Probe body, two probe modules SF	3,025.00
876.200	Probe body, probe modules SF and MF	3,025.00
<i>Other set compositions are available on request.</i>		
876.180	Probe module LF: with low force (green)	1,145.00
876.170	Probe module SF: with standard force (black)	1,040.00
876.171	Probe module MF: with medium force (gray)	1,040.00
876.172	Probe module EF: with extended force (brown)	1,070.00
876.194	Probe module 6W: 6-way (blue)	1,350.00
876.190	Extension module EM1 (standard force)	1,255.00
876.195	Extension module EM2 (standard force)	1,290.00
876.168	CK200 cleaning kit	

PH6 Fixed Probe Head

The PH6 is a compact, vertical probe head for a single probe, with a fixed cable. The correct shank with cable combination must be chosen to suit the mounting features of your CMM. Many combinations are possible and available on request.

- Weight: 48 g (without shank and cable).
- Probe status identification: 1 LED.
- Cable connection: fixed cable (specify on order).
- Probe mounting: M8 thread.

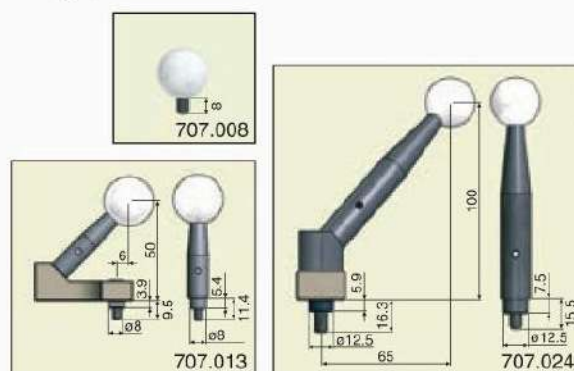


Item No.	Description	Price EUR
876.061 ¹	PH6 Fixed Probe Head	323.00

¹ Equipped with PL1 cable (0.71 m) and MS1/T shank (ø 9.500-9.512 mm).

Qualification spheres

- Ball: ø 8 or ø 25 mm, made of ceramics.
- Delivery with a manufacturer measuring report.



Item No.	Description	Price EUR
Qualification sphere ø 8 mm:		
707.025 ¹	For DeMeet-220	470.00
707.026 ²	For DeMeet-4xx/705	423.00
Qualification sphere ø 25 mm:		
707.013 ¹	For DeMeet-220	415.00
707.024 ²	For DeMeet-4xx/705	390.00
707.008 ²	Ball only; M6 external thread	300.00

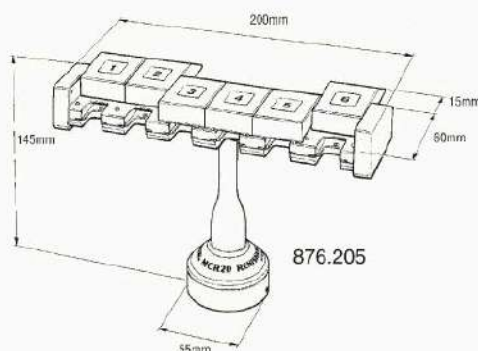
¹ Thread M4.

² Thread M6.

MCR20 Probe Module Changing Rack

The MCR20 is designed to securely hold up to six probe modules for automatic (CNC) changing and to protect them from airborne contaminants which may be present in the working environment.

- Height:
876.205: 145 mm,
635.141: 108.5 mm,
635.140: 110.5 mm.
- Capacity for 6 TP20 modules.
- Inhibit range: 50 mm.
- Delivery with base, without probe modules.



Item No.	Description	Price EUR
876.205	MCR20	2,685.00
635.141	MCR20 DeMeet-220	2,570.00
635.140	MCR20 DeMeet-4xx/705	2,610.00

Probes and accessories



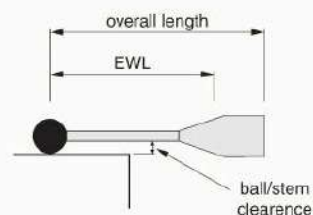
The element of the product to be measured determines the type and length of the probe. Maximum rigidity of the stem and perfect roundness of the ball are very important.

Only the M2 styli of the Renishaw probe program have been included in this catalog. M3, M4 and M5 are also available on request. The M2 probes are primarily suitable for the TP2, TP20 and TP200 probe systems.

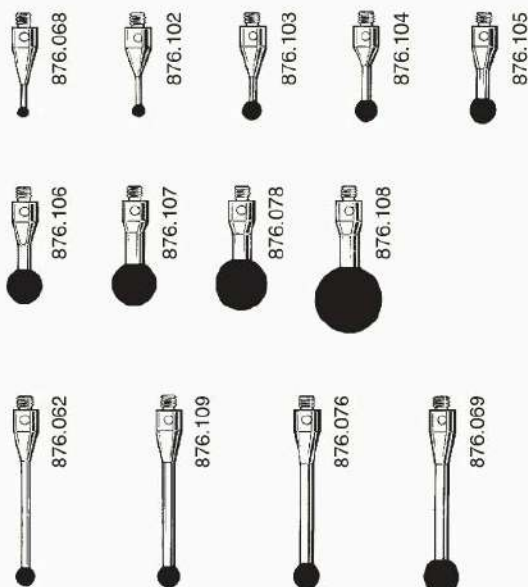
Choosing probes for inspections

In order to maximize the accuracy of the main part of the probe applications, we advise you to use:

- the shortest and stiffest probes possible; the more the probe bends or deviates, the lower the measuring accuracy.
- the largest possible probe ball; the bigger the probe ball, the greater the free space between the ball and the stem and the smaller the effect of the surface condition of the product that has to be measured.
- as little extensions as possible; every connection introduces a potential diffraction or deviation.



Ruby ball styli with stainless steel stem and thread M2

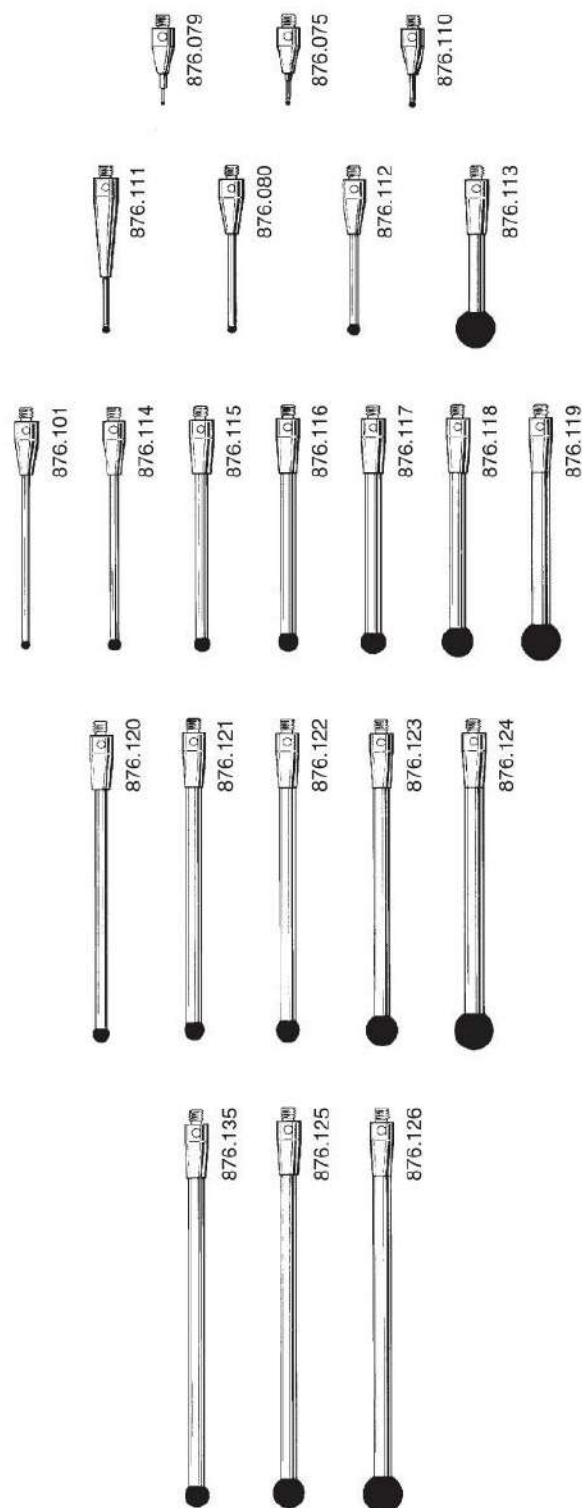


Item No.	Ball ø/mm	EWL* mm	Weight g	Price EUR
Total length* 10 mm:				
876.068	1	4.5	0.3	31.00
876.102	1.5	4.5	0.3	27.00
876.103	2	6	0.3	23.00
876.104	2.5	6	0.3	24.00
876.105	3	7.5	0.4	25.50
876.106	4	10	0.4	26.00
876.107	5	10	0.7	33.50
876.078	6	10	0.9	38.00
Total length* 11 mm:				
876.108	8	11	1.5	70.00
Total length* 20 mm:				
876.062	2	14	0.4	26.00
876.109	2.5	14	0.4	26.50
876.076	3	17.5	0.5	27.00
876.069	4	20.2	0.6	28.00

* Total length: from the base of the stem up to the center of the ball. EWL: effective working length.

Probes and accessories (continued)

Ruby ball styli with tungsten carbide stem and thread M2



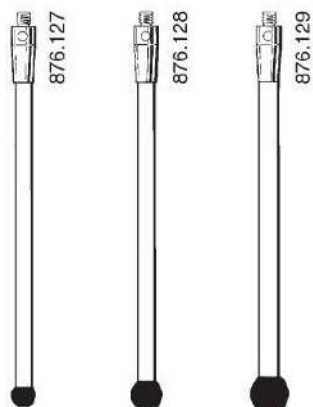
Item No.	Ball ø/mm	EWL* mm	Weight g	Price EUR
Total length* 10 mm:				
876.079	0.3	2	0.3	117.00
876.075	0.5	3	0.3	105.00
876.110	0.7	4	0.3	86.00
Total length* 20 mm:				
876.111	1	7	0.5	53.00
876.080	1	12.5	0.41	58.00
876.112	1.5	15	1.98	57.00
876.113	5	20	1.98	60.00
Total length* 30 mm:				
876.101	1	20.5	0.4	74.00
876.114	1.5	25	0.58	61.00
876.115	2	25	0.99	57.00
876.116	2.5	25	1.48	58.00
876.117	3	25	1.49	60.00
876.118	4	30	1.57	63.00
876.119	5	30	2.57	65.00
Total length* 40 mm:				
876.120	2	35	1.29	63.00
876.121	2.5	35	1.95	64.00
876.122	3	35	1.97	65.00
876.123	4	40	2.04	65.00
876.124	5	40	3.17	67.00
Total length* 50 mm:				
876.135	3	42.5	2.44	66.00
876.125	4	50	2.52	68.00
876.126	5	50	3.75	70.00

* Total length: from the base of the stem up to the center of the ball. EWL: effective working length.

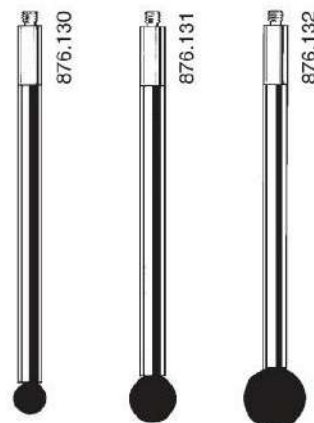


Probes and accessories (continued)

Ruby ball styli with ceramic stem and thread M2, total length¹ 50 mm



Ruby ball styli with carbon fiber stem and thread M2, total length¹ 50 mm

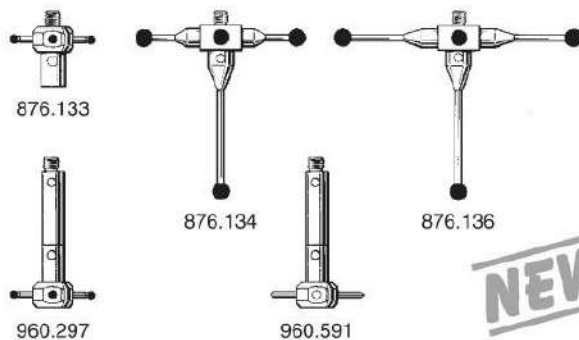


Item No.	Ball ø/mm	EWL ¹ mm	Weight g	Price EUR
876.127	3	42.5	0.83	73.00
876.128	4	50	0.91	74.00
876.129	5	50	1.31	75.00

Item No.	Ball ø/mm	EWL ¹ mm	Weight g	Price EUR
876.130	4	50.5	1	92.00
876.131	5	50.5	1.1	96.00
876.132	6	50.5	1.2	99.00

¹ Total length: from the base of the stem up to the center of the ball. EWL: effective working length.

Star styli (fixed) with thread M2

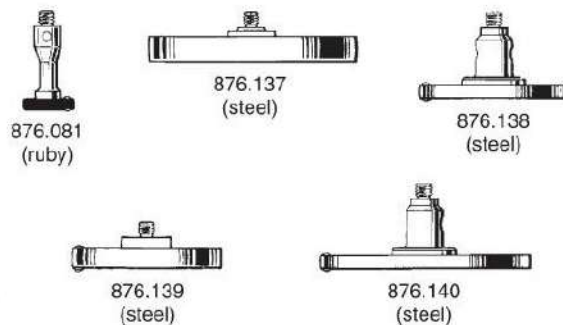


Item No.	Ball ø/mm	Work ³ ø/mm	Weight g	Price EUR
876.133	1	10	0.5	181.65
876.134	2	20	1.3	136.50
876.136	2	30	1.8	131.30
960.297	1	11	1.2	357.00
960.591	— ²	11.5	1.3	511.00

² Cylinder stylus, radius 0.5 mm.

³ Span (center distance).

Disc styli with thread M2



Item No.	Disc ø/mm	Disc thick- ness/mm	Weight g	Price EUR
876.081	6	2 ⁴	0.6	69.30
876.137	25	3	3.8	96.60
876.138	18	2.5 ⁴	3	117.60
876.139	18	3 ⁴	2.7	107.10
876.140	25	2.5 ⁴	4	117.60

⁴ Size is incl. ball probe on the disc.

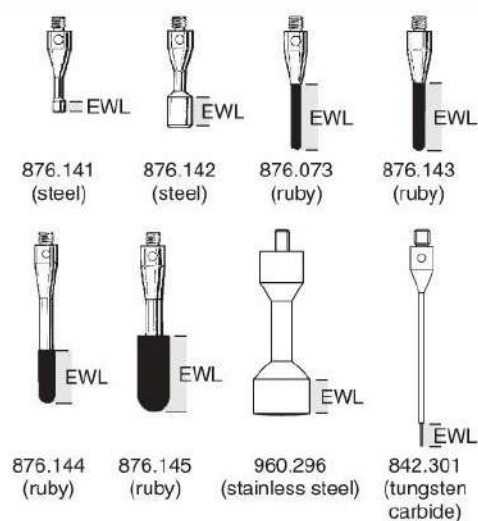
Probes and accessories (continued)

Cylinder styli with thread M2

Item No.	Cylinder ø/mm	Total length ¹ /mm	EWL ¹ mm	Weight g	Price EUR
876.141	1.5	11	1.5	0.3	19.95
876.142	3	13	3.8	0.6	19.95
876.073	1	15	8	0.3	244.65
876.143	1.5	15	8.5	0.3	215.25
876.144	2	20	7.2	0.5	149.10
876.145	4	20	10	0.9	197.40
960.296 ²	8	23	5	4.5	76.00
842.301	0.2	26	3	0.35	

¹ Total length: from the base of the stem up to the center of the ball.
EWL: effective working length.

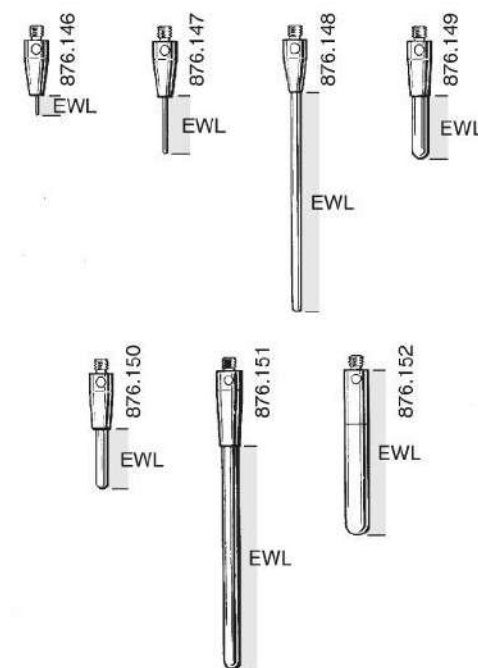
² Radius bottom side 40 mm.



Parallel hemispherical ended styli (tungsten carbide) with thread M2

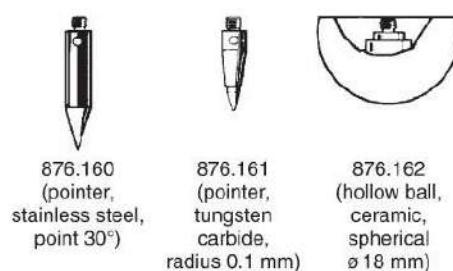
Item No.	Cylinder ø/mm	Total length [*] /mm	EWL [*] mm	Weight g	Price EUR
876.146	0.3	10.2	2.7	0.3	176.40
876.147	0.5	15.3	7.8	0.3	174.30
876.148	1	35.5	29.8	0.7	140.70
876.149	1.5	15.8	8.3	0.6	126.00
876.150	2	16	8.5	0.8	126.00
876.151	2	40	32	2	76.02
876.152	3	22.5	22.5	2	126.00

^{*} Total length: from the base of the stem up to the center of the ball.
EWL: effective working length.



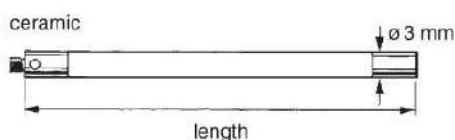
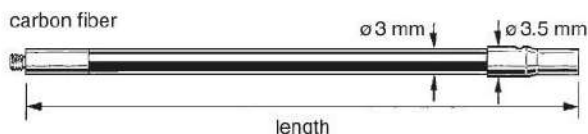
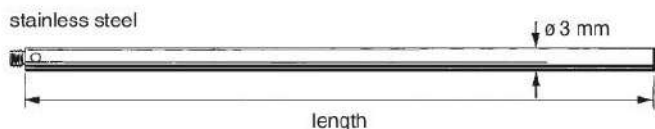
Special purpose styli with thread M2

Item No.	Length mm	Weight g	Material	Price EUR
876.160	15	0.7	stainless steel	25.20
876.161	10	0.7	tungsten carbide	91.40
876.162	11	3.3	ceramic	274.05



Probes and accessories (continued)

Stylus extensions with thread M2



Item No.	Length mm	Weight g	Price EUR
Stainless steel:			
876.067	5	0.2	11.60
876.077	10	0.4	13.65
876.070	20	0.9	14.70
876.164	30	1.4	15.75
876.165	40	1.8	17.85
Carbon fiber:			
876.153	40	0.9	84.00
876.154	50	1	87.15
876.155	70	1.3	90.30
876.156	90	1.5	93.45
Ceramic:			
876.157	30	0.97	64.90
876.158	40	1.22	67.60
876.159	50	1.51	70.35

Stylus knuckles to put the probe in any desired position



Item No.	Thread	EWL* mm	Center offset/mm	Weight g	Price EUR
876.072	M2	8	4.5	1.6	57.80
876.087	M2	16.5	—	1.3	61.74

* EWL: effective working length.

Stylus centers for a maximum of 5 styli



876.071
4-way:
3 side (120°)
1 bottom



876.064
5-way:
4 side (90°)
1 bottom

Item No.	Thread	EWL* mm	Center size/mm	Weight g	Price EUR
876.071	M2	7.5	7.5	1.1	68.60
876.064	M2	8	7.5	0.8	43.05

* EWL: effective working length.

Adapters (stainless steel)



Item No.	Thread external/internal	Length mm	Weight g	Price EUR
876.074	M2/M3	7	0.4	12.60
960.276	M2.5/M2	5		13.40
876.065	M3/M2	5	0.6	9.45

Styli tool for fitting styli to probe modules, couplings and extensions



Item No.	Description	Price EUR
876.166	Styli tool for M2 and M3 threaded styli	8.40

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- calipers 26, 29, 31-33, 35-36, 39, 50-52, 55
- depth calipers 83
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Schut Geometrical Metrology

Schut Geometrische Meettechniek bv

Duinkerkenstraat 21

9723 BN Groningen, The Netherlands

Chamber of Commerce, Groningen, The Netherlands, No. 02018313

VAT No. NL001360267B01

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Schut Geometrische Meettechniek bv

Duinkerkenstraat 21, 9723 BN Groningen

P.O. Box 5225, 9700 GE Groningen

The Netherlands

Tel: +31 (0)50 5 877 877

Fax: +31 (0)50 5 877 899

E-mail: SchutNL@Schut.com

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