

ORION® Vee blocks made of special cast iron

Application:

For checking, marking off and aligning cylindrical parts.

- **No. 35180:** Finely milled
- **No. 35181:** Finely ground

Execution:

- Machined in pairs
- Vee block faces and base machined level and parallel

Delivery:
In pairs

Technical data:
▪ Angle: 90 Degree



Length x width x height	Flatness tolerance (mm)	Min./max. workpiece Ø	35180... Ident. No.		35181... Ident. No.	
50 x 40 x 30 mm	0.04	4-30 mm	005	●	-	-
75 x 40 x 30 mm	0.04	6-40 mm	007	●	-	-
100 x 40 x 30 mm	0.04	6-50 mm	010	●	-	-
150 x 50 x 40 mm	0.05	8-60 mm	015	●	-	-
200 x 70 x 50 mm	0.05	8-70 mm	020	●	-	-
50 x 40 x 30 mm	0.016	4-30 mm	-	-	005	●
100 x 40 x 30 mm	0.016	6-50 mm	-	-	010	●
150 x 50 x 40 mm	0.016	8-60 mm	-	-	015	●
200 x 70 x 50 mm	0.016	8-70 mm	-	-	020	●

Price/pair, €

Prod. Gr. 3BE

ORION® Pair of vee blocks Made of hardened steel

Application:

For checking, marking off and aligning cylindrical parts.

- Finely ground

Execution:

- Machined in pairs
- Vee block faces and base machined level and parallel

Delivery:
In pairs

Technical data:
▪ Flatness tolerance: 0.004 mm
▪ Angle: 90 Degree



Length x width x height	75 x 35 x 30 mm	100 x 47 x 40 mm	150 x 55 x 45 mm	200 x 65 x 55 mm	250 x 85 x 70 mm
Min./max. workpiece Ø	5-40 mm	5-55 mm	5-60 mm	5-75 mm	5-100 mm
35182... Ident. No.	075	100	150	200	250
Price/pair, €	●	●	●	●	●

Prod. Gr. 3BE

ATORN® Double vee blocks made of hardened steel/INOX steel

Application:

For checking, marking off and aligning cylindrical parts.

- Finely ground
- **No. 35188:** INOX steel

Execution:

- With clamping bracket
- Vee block faces and base machined level and parallel

Technical data:
▪ Flatness tolerance: 0.004 mm
▪ Angle: 90 Degree



Length x width x height	50 x 40 x 40 mm	75 x 55 x 55 mm	100 x 75 x 75 mm
Min./max. workpiece Ø	5-30 mm	5-50 mm	7-70 mm
35185... in pairs	Ident. No. 031	Ident. No. 051	Ident. No. 071
Price/unit, €	●	●	●
35186... single	Ident. No. 031	-	-
Price/unit, €	●	-	-
35186... Single	-	Ident. No. 051	Ident. No. 071
Price/unit, €	-	●	●
35188... in pairs	Ident. No. 031	Ident. No. 051	Ident. No. 071
Price/unit, €	●	●	●

Prod. Gr. 3AB

Replacement clamp available on request.

ATORN® Magnetic measuring and clamping vee block

Application:

For checking, marking off and aligning cylindrical parts.

Delivery:

In a wooden case

Execution:

- Level and parallel and rectangular machined
- Magnetic force can be turned on/off
- The side opposite the switch is designed as a magnetic surface

Technical data:

- Flatness tolerance: 0.004 mm
- Angle: 90 Degree



Version		Standard	Standard	Hardened	Hardened	Hardened
Length x width x height		80 x 67 x 96 mm	100 x 70 x 96 mm	70 x 45 x 70 mm	80 x 67 x 96 mm	100 x 70 x 96 mm
Min./max. workpiece Ø		6-66 mm	6-70 mm	2-40 mm	6-66 mm	6-70 mm
35209...	Single	Ident. No. 010	Ident. No. 020	Ident. No. 105	Ident. No. 110	Ident. No. 120
		Price/unit, € ●	Price/unit, € ●	Price/unit, € ●	Price/unit, € ●	Price/unit, € ●
35209...	In pairs	Ident. No. 011	Ident. No. 021	Ident. No. 106	Ident. No. 111	Ident. No. 121
		Price/pair, € ●	Price/pair, € ●	Price/pair, € ●	Price/pair, € ●	Price/pair, € ●

Prod. Gr. 3AB

ORION® Parallels with v-shaped recesses Special cast iron

Application:

For checking, marking off and aligning cylindrical parts.

- Finely ground

Execution:

- Machined in pairs

Technical data:

- Flatness tolerance: 0.016 mm
- Angle: 90 Degree



Length x width x height		75 x 150 x 130 mm	90 x 200 x 170 mm
Min./max. workpiece Ø		8-120 mm	10-180 mm
35213...	Ident. No.	011	021
	Price/pair, €	●	●

Prod. Gr. 3BE

HELIOS-PREISSER Marking-off and surface plates (DIN 876-2)

Application:

For use as a base for control, spot-grinding and assembly tools

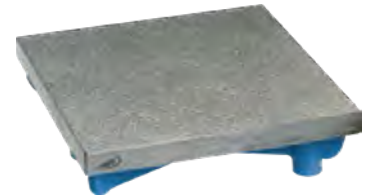
- The 4 outer faces are finely machined

Execution:

- Made from special cast iron in ribbed structure

Advantage:

- Suitable for use in a wide range of workshop processes



Length x width x height	Flatness tolerance (µm)	Weight (kg)	Accuracy class	I
300 x 300 x 70 mm	13	18		35350...
400 x 300 x 80 mm	14	25		Ident. No. 130 ●
500 x 400 x 70 mm	15	40		140 ●
600 x 500 x 95 mm	16	66		150 (○) [†]
800 x 500 x 95 mm	18	88		160 ●
1000 x 600 x 120 mm	20	136		180 (○) [†]
				200 ●
				Price/unit, €

Prod. Gr. 308

HELIOS-PREISSER Open base frame For marking-off and surface plates

35350...	For 500 x 400 plate	Ident. No. 555	○
		Price/unit, €	○
35350...	For 600 x 500 plate	Ident. No. 565	○
		Price/unit, €	○
35350...	For 800 x 500 plate	Ident. No. 585	○
		Price/unit, €	○
35350...	For 1000 x 600 plate	Ident. No. 605	○
		Price/unit, €	○



Prod. Gr. 308

Base frame in cabinet form

For marking-off and surface plates

- Colour of front: Gentian blue RAL 5010
- Body colour: Light grey RAL 7035

Technical data:

Width x height x depth			455 x 650 x 370 mm	500 x 650 x 420 mm	760 x 650 x 460 mm	960 x 650 x 560 mm
Number of doors (PCS)			1	1	2	2
Weight (kg)			35	42	50	60
35350...	For 500 x 400 plate	Ident. No. Price/unit, €	655 (○)*	-	-	-
35350...	For 600 x 500 plate	Ident. No. Price/unit, €	-	665 ○	-	-
35350...	For 800 x 500 plate	Ident. No. Price/unit, €	-	-	685 (○)*	-
35350...	For 1000 x 600 plate	Ident. No. Price/unit, €	-	-	-	705 (○)*

Prod. Gr. 308



Fig. base frame in cabinet form including marking-off and surface plates



evenness tolerances for the JFA measuring and control plates no. 35444 - 35466

Length x width x thickness	in mm	500 x 400 x 100	600 x 500 x 120	800 x 600 x 140	1000 x 800 x 160	1200 x 800 x 190	1500 x 1000 x 220	2000 x 1000 x 250
evenness in accordance with DIN 876, accuracy level I	µm	15	16	18	20	22	25	30
evenness in accordance with DIN 876, accuracy level 0	µm	6	6	7	8	8	10	12
evenness in accordance with DIN 876, accuracy level 00	µm	3	3	3,5	4	4	5	6
evenness in accordance with JFA accuracy level LAB	µm	1	1	2	2	2	2	2

JFA measuring and control plates, more precise than DIN 876
made from natural South African hard stone – Gabbro Impala

Application:

Ideal for use as a base for 1D/2D height measuring devices. Optionally available with T guide and clamping grooves or with thread inserts for a multitude of other measuring tasks requiring high basic accuracy.

Execution:

- untreated, not coloured, waxed or oiled
- non-rusting, alkaline, anti-magnetic
- optimum geometric dimensional stability
- Outer edges finely machined
- Edges chamfered for protection against damage
- underside with steel ball inserts, for statically correct storage on table bearings, individual supports and underframes
- Calibration certificate included in the scope of delivery. measurement results are based on national standards
- DAKKS calibration certificate available on request

- No. 35444:** LAB accuracy: surface finely ground and lapped to maximum fineness
- No. 35461:** DIN 876-I: surface finely ground and lapped
- No. 35462:** DIN 876-0: Surface particularly finely ground and lapped
- No. 35466:** DIN 876-00: surface finely ground and lapped

Advantage:

- carefully selected natural hard stone - Gabbro Impala - with superb properties
- naturally aged, for maximum dimensional stability

Delivery:

Calibration certificate.

Notes:

Measuring and control plates with other dimensions and accuracies upon request.



No. 35462 120
Hard stone plate without underframe



Hard stone plate without underframe

Length x width x thickness			500 x 400 x 100 mm	600 x 500 x 120 mm	800 x 600 x 140 mm	1000 x 800 x 160 mm	1200 x 800 x 190 mm	1500 x 1000 x 220 mm	2000 x 1000 x 250 mm
Weight (kg)			60	110	205	385	550	990	1500
35444...	LAB	Ident. No.	050	060	080	120	150	180	210
		Price/unit, €	(0)*	(0)*	(0)*	(0)*	(0)*	(0)*	(0)*
35461...	I	Ident. No.	050	060	080	108	120	150	200
		Price/unit, €	(0)*	●	●	(0)*	(0)*	(0)*	(0)*
35462...	0	Ident. No.	050	060	080	108	120	150	200
		Price/unit, €	(0)*	(0)*	(0)*	(0)*	(0)*	(0)*	(0)*
35466...	00	Ident. No.	050	060	080	108	120	150	200
		Price/unit, €	(0)*	(0)*	(0)*	(0)*	(0)*	(0)*	(0)*

Prod. Gr. 341
see info block for flatness tolerance

JFA base frame for measuring and control plates
in cabinet form

Application:

Sturdy underframe in cabinet form, for the secure placement of hard stone bases in production facilities and measuring rooms. The support and bearing fittings supplied allow simple and neat alignment of the hard stone plate using fine threads.

- design for base length from 1000 mm with one storage compartment and one drawer
- steel support and bearing fittings with adjusting thread
- working height approx. 850 mm
- lockable hinged doors

Execution:

- design for base length 600 or 800 mm with one storage compartment

Notes:

underframe with auto-levelling spring elements and/or vibration-damping spring elements deliverable upon request



Ident. No. 150

		Weight (kg)	Ident. No.	
35456...	For plate length 600 mm	35	060	(0)*
35456...	For plate length 800 mm	45	080	(0)*
35456...	For plate length 1000 mm	60	120	(0)*
35456...	For plate length 1200 mm	70	150	(0)*
35456...	For plate length 1500 mm	110	180	(0)*
35456...	For plate length 2000 mm	150	210	(0)*

Prod. Gr. 341

JFA base frame for measuring and control plates
in open design

Application:

Sturdy underframe with an open design, for the secure placement of hard stone bases in production facilities and measuring rooms. The support and bearing fittings supplied allow simple and neat alignment of the hard stone plate using fine threads.

Execution:

- steel support and bearing fittings with adjusting thread
- working height approx. 850 mm

Notes:

underframe with auto-levelling spring elements and/or vibration-damping spring elements deliverable upon request



Ident. No. 120

		Weight (kg)		
35463...	For plate length 600 mm	25	Ident. No. Price/unit, €	060 •
35463...	For plate length 800 mm	30	Ident. No. Price/unit, €	080 (o)†
35463...	For plate length 1000 mm	40	Ident. No. Price/unit, €	108 (o)†
35463...	For plate length 1200 mm	50	Ident. No. Price/unit, €	120 (o)†
35463...	For plate length 1500 mm	70	Ident. No. Price/unit, €	150 (o)†
35463...	For plate length 2000 mm	100	Ident. No. Price/unit, €	200 (o)†

Prod. Gr. 341



Supplementary features for measuring and control plates

T-slot guide and clamping rails made from steel in line with DIN 650 for defined fixing of tailstocks, roller blocks, workpieces etc. T-slot guide and clamping groove rails are installed in measuring and control plates in longitudinal or transverse direction as required. Embedded chromium-plated surface, non-detachable and free from distortion.

Type A: T-slot rails nominal dimension 14 H12.

Type B: T-slot guide and clamping rails nominal dimension 14 H8, manufactured with precise flatness and parallelism tolerance of the two slot sides.

Metric thread inserts for mounting workpieces and equipment. Size, position and number depending on specifications, made from special steel, non-detachable and free from distortions, anchored in the measuring and control plate.

tailstocks with clamping lever or hand wheel adjustment

e.g. JFA tailstocks, tip height 150 mm with MT 3 holder, precision 0.012 mm

crankshaft vee blocks in special cast iron with 90° vee block recesses at high position. Height and side difference 0.008 mm. Also deliverable with mechanoceramic-coated vee block surfaces.

roller blocks for precise retention of cylinders, rollers, crank shafts, etc.

Type A: rigid design.

Type B: height-adjustable (± 5 mm) design.

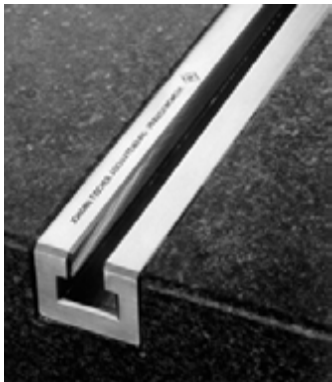
Precision roller blocks can be pre-adjusted with high precision using gauge blocks so that the axis of a workpiece is laterally aligned and at the same height as the measuring axis.

Vacuum-mounted measuring stands for making high-precision straightness and parallelism measurements on your measuring and control plate. JFA vacuum mounting: Compressed air allows the stand to be moved precisely and easily on the measuring and control plate surface. The vacuum prevents it lifting from the lateral surface. To clamp the stand in place, the supporting air is switched off on one bearing side.

Method:

- Column: \varnothing 25 mm, measuring height 300 mm
- Cross arm: \varnothing 20, length 250 mm
- Fine adjustment device with shank holder \varnothing 8 mm for dial gauges, precision pointers or electronic length-measuring probes
- Operation with fine-filtered, oil- and water-free compressed air, 5 bar
-

Note: To operate this JFA stand system, the top surface and at least one lateral surface of the measuring and control plate must be precisely machined.



ATORN® 90° triangular angle standards

Application:

For testing 90° angles and straightness.

Execution:

- Made from natural hard stone
- Horizontally and vertically adjustable
- Diamond-lapped surface
- **Ident. No. 010:** The two narrow surfaces are finely machined to a high-quality finish at an angle of 90°. The remaining surfaces are finely machined

Ident. No. 025–040:

- the two narrow surfaces are finely machined to a high-quality finish at an angle of 90°. The remaining surfaces are finely machined
- weight-reducing hole(s)

Delivery:

In box

Technical data:

- Accuracy class: 00



Limb length (mm)		250	300	400	500
Limb length 2 (mm)		400	500	600	800
Width (mm)		50	60	70	80
Perpendicularity deviation (µm)		3	4	5	6
Number of drill holes (PCS)		0	1	2	2
Weight (kg)		10	17	30	55
35278...	Ident. No.	010	025	030	040
	Price/unit, €	●	●	(○)*	(○)*

Prod. Gr. 340

JFA 90° triangular angle standards
Made of natural hard stone

Application:

For simple and precise checking of the 90° angle. Ideal for use on hard stone bases, e.g. for checking straightness in vertical height measuring devices; also suitable as a contact surface for large components. Also suitable for checking the 90° angle e.g. in coordinate measuring instruments and machine tools.

Execution:

- Carefully selected and flawless South African hard stone material – Diabas.
- with through-bore(s) for weight reduction
- Exactly 2-sided. The two precisely shaped surfaces are finely machined to a high-quality finish to be flat and at exact angles to one another. The remaining surfaces are finely machined

- can be used horizontally and vertically
- Calibration certificate included in the scope of delivery. measurement results are based on national standards
- DAKS calibration certificate available on request
- **No. 35281:** accuracy I++: finely ground and lapped
- **No. 35283:** LAB accuracy: surface finely ground and lapped to maximum fineness

Delivery:

Calibration certificate. Measurement results are based on national standards from the German National Metrology Institute in Brunswick, Germany.

Technical data:

- Number of drill holes: 1 PCS



Limb length (mm)		300	400	500	600	800	300	400	500	600	800
Limb length 2 (mm)		200	250	300	400	500	200	250	300	400	500
Width (mm)		50	60	60	70	80	50	60	60	70	80
JFA accuracy I++ (mm)		0.002	0.002	0.002	0.002	0.004	-	-	-	-	-
Weight (kg)		6	11	16	30	55	6	11	16	30	55
JFA precision LAB (mm)		-	-	-	-	-	0.001	0.001	0.001	0.001	0.002
35281...	Ident. No.	031	041	051	061	081	-	-	-	-	-
	Price/unit, €	○	○	○	(○)*	(○)*	-	-	-	-	-
35283...	Ident. No.	-	-	-	-	-	030	040	050	060	081
	Price/unit, €	-	-	-	-	-	○	○	(○)*	(○)*	(○)*

Prod. Gr. 341

Lightweight design available upon request. Weight savings of over 35%.

HELIOS-PREISSER Small concentricity test devices

Application:

For measuring the axial and radial run-out precision of shafts.

Execution:

- 2 movable tailstocks and 1 measuring stand for holding a dial gauge or precision pointer
- 1 tailstock with fixed tip and 1 tailstock with movable tip, adjustable using hand lever (sleeve and centre point made from one piece)

- Evenness tolerance of measuring surfaces in line with DIN 876-2. Tailstocks with 75 mm tip height have vee block surfaces
- Location hole for a dial gauge or precision pointer 8 H 7
- **Ident. No. 010:** With vee block support on tailstock



Point height (mm)		50	75	100	150
Max. point width (mm)		200	350	450	450
Base plate length (mm)		350	500	700	700
Base plate width (mm)		110	110	180	180
Groove width (mm)		10	10	12	12
Weight (kg)		8	12	35	38
35480...	Ident. No.	005	010	020	030
	Price/unit, €	●	●	●*	(○)*

Prod. Gr. 308



Accessories

for small concentricity test devices, no. 35480

Application:

Ident. No. 032-035: For use in HP small concentricity testing devices. The points replace standard tailstocks for testing non-centred and long components.



Ident. No. 032-035

Height (mm)	Max. Ø (mm)	Groove width (mm)	35482... Ident. No.	
-	15	-	032	○
-	45	-	035	○
65	25	10	042 052	○ ●

Ident. No. 042-045: For use in HP small concentricity testing devices. Vee blocks are placed on the base plate instead of the tailstocks.



Ident. No. 042-045

Ident. No. 052-055: For use in HP small concentricity devices. Roller blocks with ball bearings are placed on the base plate instead of the tailstocks.



Ident. No. 052-055

Height (mm)	Max. Ø (mm)	Groove width (mm)	35482... Ident. No.	
100	50	12	045 055	○ ●

Price/pair, €

Prod. Gr. 308



Concentricity gauge

Application:

For measuring the axial and radial run-out precision of shafts.

Execution:

- Clamping table made from natural hard stone, flatness tolerance in line with DIN 876, precision 1. Adjustable 3-point table bearing rest with steel ball inserts.
- Tailstocks in high-quality, aged cast iron, right tailstock with movable sleeve (stroke 20 mm), adjusted using hand lever. Left tailstock with fixed sleeve. Finely ground surfaces.

- Centring points replaceable thanks to MT 2 socket with standard pressure fixture

Delivery:

1 clamping table, 1 measuring stand, 1 pair of tailstocks with a 60° MT 2 centring point

Technical data:

- Point height: 200 mm
- Max. point width: 650 mm
- Base plate length: 1100 mm
- Base plate width: 180 mm
- Groove width: 14 mm
- Weight: 135 kg



35485...

Ident. No. 100
Price/unit, € (○)*

Prod. Gr. 308

Concentricity test bench, without centre point

With disc brackets, height adjustable

Application:

For rational testing of outer and inner surfaces of rotationally symmetrical parts during production and in measuring rooms.

Execution:

- Both disc brackets can be moved on the base plate
- Fixed in the required position using a lever

- The height of one bracket can be adjusted by max. 30 mm to compensate for different diameters in the parts being tested

Advantage:

- Play-free roller discs bearings guarantee concentricity tolerances of < 5 µm
- Workpieces can be easily rotated without force

Delivery:

Without measuring stand, without dial gauge

Min. workpiece Ø (mm)	2	2
Max. Ø of workpiece (mm)	240	240
Max. workpiece weight (kg)	25	25
Concentricity tolerance (µm)	5	5
Base plate length (mm)	500	1000
Groove width (mm)	14	14
35490...	Ident. No. 050	100
	Price/unit, € (○)*	(○)*

Prod. Gr. 378



ORION® Twist drill grinding gauges

Application:

For inspecting the tip angle (118°) of twist drills

Execution:

- Suitable for drills up to 50 mm
- Grinding gauge angle 121° (produces tip angle 118°)

36001...

Ident. No. 011
Price/unit, € ●

Prod. Gr. 3BF



ORION® Chamfer vernier callipers

Application:
For inspecting chamfer angles and dimensional accuracy

Delivery:
In wooden case

Execution:
▪ With interchangeable inspection straight edges for 30°, 45° and 60° chamfers

Technical data:
▪ Min./max. length measuring range: 0-10 mm
▪ Vernier scale: 0.1 mm

36030...	Ident. No.	010
	Price/unit, €	•

Prod. Gr. 3BF



ORION® radius gauges concave and convex

Application:
For testing inner and outer radii

Execution:
▪ Blades fixed with clamping screws

Number of sheets (PCS)	34	32	30
Radius sizes in assortment	1-3 mm, increasing by 0.25 mm, 3.5-7 mm, increasing by 0.5 mm	7.5-15 mm, increasing by 0.5 mm	15.5-20 mm, increasing by 0.5 mm, 21-25 mm, increasing by 1 mm
Cutting edge length (mm)	70	85	85
Material	36130... Ident. No.	36131... Ident. No.	36132... Ident. No.
Steel	010	010	010
Stainless steel	020	020	020
Set price, €			

Prod. Gr. 3BF



No. 36130

ORION® Thread pitch gauges Milled

Application:
For testing thread pitch using the light gap method

Execution:
▪ No. 36053: For metric threads, Whitworth threads
▪ No. 36054: For metric threads, Whitworth threads and Whitworth pipe threads



No. 36053



No. 36054

Number of sheets (PCS)	36053... Ident. No.	36054... Ident. No.
52	011	-
58	-	011
Price/unit, €		

Prod. Gr. 3BF

ORION® Thread cutting gauges

Application:
For testing flank angles of thread cutting tools.

Execution:
▪ No. 36060: For 55° Whitworth threads
▪ No. 36061: For 60° metric threads

36060...	Ident. No.	011
	Price/unit, €	•
36061...	Ident. No.	011
	Price/unit, €	•

Prod. Gr. 3BF



No. 36060

ORION® Thread lathe tool gauge

Application:

For inspecting thread cutting tools

- Trapezoidal thread in line with DIN 103, pitch 2-12 mm
- Flank angle 30°
- Sharp V thread 55° and 60°

Execution:

- With recesses for square threads, 2-8 starts per 1"

36075...

Ident. No.	010
Price/unit, €	●

Prod. Gr. 3BF



TOLERATOR/FILETOR

display unit for tolerances and thread data

Application:

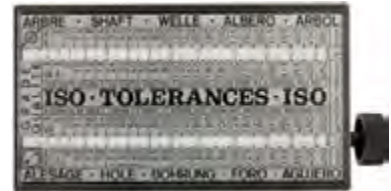
Ident. No. 011: For direct reading of all ISO tolerances up to a nominal dimension of 500 mm

Ident. No. 020: For direct reading of all standard

specifications for determining threads and core hole diameters.

Execution:

- **Ident. No. 011:** Printed in multiple languages



Ident. No. 011



Ident. No. 020

36095...

TOLERATOR

Ident. No.
Price/unit, €

011

36095...

FILETOR

Ident. No.
Price/unit, €

020

Prod. Gr. 361

Welding seam gauges

Application:

No. 36155 010, 36165 010: For measuring flat welded seams in corners and seam angles 60°, 80° and 90°

No. 36160: For rapid inspection of welded seam dimensions

Execution:

- Made of hardened stainless steel

No. 36155:

- Vernier scale and scale with brushed chromium-plated finish
- Locking screw

No. 36165:

- ON/OFF
- mm/inch switch-over
- Reading precision +/- 0.01 mm



No. 36155



No. 36160



No. 36165

Min./max. length measuring range	0-20 mm	-	0-20 mm
Vernier scale	0.1 mm	-	-
Scale value (mm)	-	0.01	-
Digit increment (mm)	-	-	0.01
36155... Ident. No.	36160... Ident. No.	36165... Ident. No.	
010 ●	010 ●	010 ●	
		Price/unit, €	

Prod. Gr. 361

ORION® Feeler gauges

Application:

Suitable for inspecting gap dimensions and setting clearances.

- Conical
- Can be fixed in sheath

Execution:

- Gauge blades made from hardened spring steel

Notes:

Cannot be calibrated

	Min./max. length of application area	Nominal dimension in assortment	Number of sheets (PCS)	Length (mm)	Width (mm)	Ident. No. Set price, €
36180...	0.04-0.15 mm	0.04-0.10 mm, increasing by 0.01 mm, 0.15 mm	8	100	13	010 ●
36181...	0.05-0.5 mm	0.05-0.3 mm, increasing by 0.05 mm, 0.4 mm, 0.5 mm	8	100	13	010 ●
36182...	0.05-1 mm	0.05-0.3 mm, increasing by 0.05 mm, 0.4-1.0 mm, increasing by 0.1 mm	13	100	13	010 ●
36183...	0.05-1 mm	0.05-1.0 mm, increasing by 0.05 mm	20	100	13	010 ●
36184...	0.1-2 mm	0.1-2.0 mm, increasing by 0.1 mm	20	100	13	010 ●

Prod. Gr. 3BF

ORION® Feeler gauges (DIN 2275) precision design

Application:

Suitable for inspecting gap dimensions and setting clearances.

Execution:

- Gauge blades made from hardened spring steel
- Conical
- Can be fixed in nickel-plated sheath



Min./max. length of application area	0.05-0.5 mm	0.05-1 mm	0.05-1 mm
Nominal dimension in assortment	0.05-0.3 mm, increasing by 0.05 mm, 0.4 mm, 0.5 mm	0.05-0.3 mm, increasing by 0.05 mm, 0.4-1.0 mm, increasing by 0.1 mm	0.05-1.0 mm, increasing by 0.05 mm
Number of sheets (PCS)	8	13	20
Length (mm)	100	100	100
Width (mm)	13	13	13
Ident. No.	36189... 008	36189... 013	36189... 020
Set price, €	●	●	●

Prod. Gr. 3BF

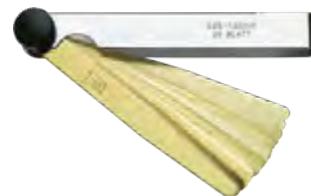
ORION® Feeler gauges Non-magnetic

Application:

Suitable for inspecting gap dimensions and setting clearances.

Execution:

- Brass gauge blades
- Conical
- Can be fixed in nickel-plated sheath



	Min./max. length of application area	Nominal dimension in assortment	Number of sheets (PCS)	Length (mm)	Width (mm)	Ident. No. Set price, €
36196...	0.1-0.8 mm	0.1-0.4 mm, increasing by 0.05 mm, 0.5 mm, 0.6 mm, 0.7 mm, 0.75 mm, 0.8 mm	12	100	13	010 ●

Prod. Gr. 361

ORION® Feeler gauges
Extra long

Application:

Suitable for inspecting gap dimensions and setting clearances.

Execution:

- Gauge blades made from hardened spring steel
- Blades held in ring



No. 36201

	Min./max. length of application area	Nominal dimension in assortment	Number of sheets (PCS)	Length (mm)	Width (mm)	Ident. No.	Set price, €
36201...	0.05-1 mm	0.05-0.3 mm, increasing by 0.05 mm, 0.4-1.0 mm, increasing by 0.1 mm	13	300	13		010
36202...	0.1-2 mm	0.1-2.0 mm, increasing by 0.1 mm	20	300	13		010

Prod. Gr. 361

ORION® Feeler gauge strips, dimensions 13 mm x 5 m

Application:

For use in various areas of mechanical engineering, e.g. measuring dimensional tolerance between 2 components, as alignment references etc.

- **Ident. No. 008-100:** Gauge strip marked with dimensions

Delivery:
In can



Execution:

- Made from high carbon steel, hardened
- Suitable for feeler gauge assortment in wall bracket

- Technical data:**
- Length: 5 m
 - Width: 12.7 mm

Nominal thickness (mm)	36225... Ident. No.	Nominal thickness (mm)	36225... Ident. No.
0.01	001	0.35	035
0.02	002	0.4	040
0.03	003	0.45	045
0.04	004	0.5	050
0.05	005	0.55	055
0.06	006	0.6	060
0.07	007	0.65	065
0.08	008	0.7	070
0.09	009	0.75	075
0.1	010	0.8	080
0.12	012	0.85	085
0.15	015	0.9	090
0.18	018	0.95	095
0.2	020	1	100
0.25	025		Price/unit, €
0.3	030		

Prod. Gr. 3BF

ORION® Feeler gauge strip assortment in wall support
The organisation system for your workshop

Application:

For use in various areas of mechanical engineering, e.g. measuring dimensional tolerance between 2 components, as alignment references etc.

Execution:

- Practical holder for clamping sections of feeler gauge strip
- 15 feeler gauge cans 12.7 mm x 5 m
- Wall-mounted holder made of sheet steel, paint: RAL 7035, light grey



Min./max. length of application area	0.01-0.25 mm	0.30-1.00 mm
Nominal dimension in assortment	0.01-0.1 mm increasing by 0.01 mm 0.12 mm 0.15 mm 0.18 mm 0.2 mm 0.25 mm	0.3-1.0 mm increasing by 0.05 mm
Length x width x height	330 x 100 x 110 mm	330 x 210 x 220 mm
36225...	Ident. No. 400	Ident. No. 410
	Set price, € ●	Set price, € ●

Prod. Gr. 3BF

ORION® Feeler gauge strip assortment in wall support INOX

The organisation system for your workshop

Application:

For use in various areas of mechanical engineering, e.g. measuring dimensional tolerance between 2 components, as alignment references etc.

Execution:

- Practical bracket for clamping sections of feeler gauge strip
- 15 feeler gauge cans 12.7 mm x 5 m STAINLESS STEEL

- Wall-mounted holder made of sheet steel, paint: RAL 7035, light grey

Technical data:

- Min./max. length of application area: 0.01-0.25 mm
- Nominal dimension in assortment: 0.01-0.1 mm, increasing by 0.01 mm | 0.12 mm | 0.15 mm | 0.18 mm | 0.2 mm | 0.25 mm
- Length x width x height: 330 x 100 x 110 mm



36225...	Ident. No.	420
	Price/unit, €	●

Prod. Gr. 3BF

Underlay foils in precision design

Standard widths 12.7/50/100/150/300 mm

Application:

For setting up tools, adjusting devices, compensating for tolerances, supporting instruments, aligning machines, setting up forms, adjusting bearing play, adjusting composite units, readjusting cutting blades, aligning workpieces, etc.

The following materials are available:

▪ **hardened spring steel, material no. 1.1274**
With a carbon content of over 1%, this material is ideally suited for feeler gauge bands, support sheets and springs subject to high loads for which there are no corrosion requirements. This material is magnetic.

- **cold-rolled INOX spring steel, material no. 1.4310**

This material is an alloy of 17% chromium and 7% nickel and has good corrosion resistance. This material is cold-rolled to achieve high strength. The material is therefore ideal for stainless precision gauge bands, underlay foils, stainless steel springs and higher-strengths parts. This material is only slightly magnetic and therefore cannot be clamped when grinding on magnetic chucks.

- **cold-rolled, spring-tempered brass band, material no. 2.0321**

With a composition of 63% copper and 37% zinc, this material is the standard grade for spring-tempered rolled brass. This material is not magnetic.



Bore plug gauge

Application:

For measuring bores

Execution:

- Knurled handle
- Hardened and ground bolt

Technical data:

- Scale value: 0.1 mm
- Material: Stainless steel
- Taper ratio: 01:10

Min./max. length measuring range	1-6 mm	4-15 mm	15-30 mm	30-45 mm
36360...	Ident. No. 010	040	150	300
	Price/unit, € ●	●	●	○

Prod. Gr. 361



Wedge gauge

Application:

For measuring gaps and clearances

Execution:

- Made from hardened steel, hard-chrome plated

Advantage:

- Fast and reliable reading of measured values

Technical data:

- Scale value: 0.1 mm
- Material: Steel

Min./max. length measuring range	0.5-7 mm	0.5-11 mm
36370...	Ident. No. 010	020
	Price/unit, € ●	●

Prod. Gr. 361



Metric drill gauge

Application:

For quickly determining drill and mill diameters.

Execution:

- Made from special steel, nitrided

Technical data:

- Min. diameter of measuring range: 0.1 mm
- Max. diameter of measuring range: 10 mm
- Pitch: 0.1 mm
- Number of holes: 100 PCS

36380...	Ident. No.	020
	Price/unit, €	●

Prod. Gr. 361



ATORN® Folding rule

Wooden

Execution:

- Angle scale
- Decimal numbers in white/black
- Brass end caps

- Sturdy joints

Advantage:

- First segment with identical graduation on both sides



	Length (m)	Width (mm)	Number of chain links (PCS)	Material	Accuracy class	Ident. No.	Price/unit, €
37331...	2	16	10	Wood	III		010

Prod. Gr. 3AA

Folding rules

Execution:

- **No. 37315:**
 - Black anodised
 - Graduation embedded in anodised layer
 - Decimal numbers in white
- **No. 37330:** Decimal numbers in black
- **No. 37330-37340:** Brass end caps
- **No. 37332-37340:** Durable, sturdy joints
- **No. 37332-37350:** Decimal numbers in black/red

No. 37350:

- Reinforced with fibre glass
- 90° angle locking
- Extremely durable

No. 37360:

- Longitudinal fibre glass coating
- Undetachable metal ends on first and last section

Advantage:

- **No. 37360:** High rigidity



No. 37315

No. 37330

No. 37332

No. 37340

No. 37350

No. 37360

		Length (m)	Width (mm)	Number of chain links (PCS)	Material	Accuracy class	Ident. No.	Price/unit, €
BMI	37315...	2	14	10	Light metal	II		010
BMI	37330...	2	16	10	Wood	III		010
BMI	37332...	2	16	10	Wood	III		005
BMI	37340...	2	16	10	Wood	III		005
wiha	37350...	1	13	10	Plastic	III		010
wiha	37350...	2	15	10	Plastic	III		020
wiha	37360...	2	15	10	Plastic	II		010

Prod. Gr. 373

Tape measure



Application:

For measuring distances with mm precision

Execution:

- Convex curved stainless steel
- Abrasion-resistant stoved enamel coating
- Highly flexible
- Stopper function

Advantage:

- Rolls out to a full-length, non-kinking, non-breakable 2 meter rule
- Instantly to hand
- Unrolls automatically
- Automatic stop
- Belt clip



	Length (m)	Width (mm)	Ident. No.	Price/unit, €
37305...	2	16		011

Prod. Gr. 3BL

ATORN® tape measure



Application:

For measuring distances with mm precision

Execution:

- ergonomic, robust plastic housing made of ABS
- with practical belt loop
- self-locking system (automatic tape locking); the tape is automatically retracted when the stop button is activated

- durable return mechanism for the tape
- steel tape, painted white, with additional polyamide coating for optimum protective properties
- mm graduation in line with accuracy class EC II and CE marking
- Screwed-on belt clip



Ident. No. 055-085

	Without magnet	Without magnet	Without magnet
Length (m)	3	5	8
Width (mm)	16	19	25
	37003... Ident. No.	37003... Ident. No.	37003... Ident. No.
	035 ●	055 ●	085 ●
	Price/unit, €		

Prod. Gr. 3AA

BMI pocket tape measures
In chrome look



Application:
For measuring distances with mm precision

Execution:

- Housing made of impact-resistant ABS, with soft-feel components

- Automatic tape retract, tape lock mechanism
- Wide, deeply curved tape for high stability
- Housing with clip
- With CE marking



	Length (m)	Width (mm)	Ident. No.	Price/unit, €
37017...	3	16	020	●
37018...	5	19	020	●
37019...	8	25	020	●

Prod. Gr. 371

ORION® tape measure



Application:
For measuring distances with mm precision

Execution:

- compact, robust plastic housing made of ABS
- automatic tape rewind

- with tape lock and additional quick stop button on underside of housing
- steel tape, painted white, with mm graduation in line with accuracy class EC II and CE marking
- Screwed-on belt clip



	Length (m)	2	3	5
	Width (mm)	13	13	19
	37005... Ident. No.	37005... Ident. No.	37005... Ident. No.	
	025 ●	035 ●	055 ●	
	Price/unit, €			

Prod. Gr. 3BL

BMI pocket tape measures
with viewing window



Application:
For measuring distances with mm precision

Execution:

- Direct reading of internal and external dimensions
- No. 37025:

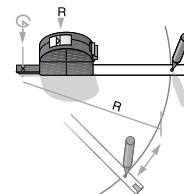
- Robust polyamide housing
- Fold-out compass point for marking-off and drawing arcs
- Tape lock
- No. 37027:
 - Impact-resistance plastic housing
 - Automatic tape retract



No. 37025
With fold-out compass tip



No. 37027



No. 37025

Measuring aids \ Tape rules

Length (m)	3	2	3
Width (mm)	16	13	13
37025... Ident. No.		37027... Ident. No.	37027... Ident. No.
	030 ●	020 ●	030 ●
Price/unit, €			

Prod. Gr. 371

circumferential tape measures for circumference and diameter

Application:

For measuring circumferences and outer diameters

- **No. 37087:** Made of INOX spring steel, black, plastic-coated

Execution:

- With 2 graduations on the front for reading circumferences and average diameters simultaneously
- **No. 37086:** Made of INOX spring steel

Technical data:

- Scale value: 0.1 mm
- Width of band: 16 mm



No. 37086



No. 37087

Min./max. circumference of measuring range	Min./max. Ø of measuring range	37086... Ident. No.	37087... Ident. No.
60-950 mm	20-300 mm	010 ●	010 ●
940-2200 mm	300-700 mm	020 ●	020 ●
2190-3460 mm	700-1100 mm	030 ●	030 ●
3450-4720 mm	1100-1500 mm	040 ●	040 ●
4710-5980 mm	1500-1900 mm	050 ●	050 ○
5970-7230 mm	1900-2300 mm	060 ●	060 ○
Price/unit, €			

Prod. Gr. 371

tape rules on a reel

Application:

No. 37038-37047: For measuring distances with mm precision

No. 37048: For measuring distances with cm precision

Execution:

- On aluminium reel
- Impact-resistant plastic grip
- Crank arm can be easily and quickly remounted from the right side to the left
- For right-handed and left-handed use

- Two ball bearings guarantee smooth unwinding and winding

- Scale starts after approx. 10 cm

- Flextop tape end prevents tape breaking

- **No. 37038:** Steel tape rule, painted white

- **No. 37038-37047:** Continuous mm graduation

- **No. 37047:** Plastic-coated steel tape rule, yellow

- **No. 37048:**

- Fibre glass tape rule, yellow

- Continuous centimetre graduation

Technical data:

- Width: 13 mm



No. 37038



No. 37047

Length (m)	37038... Ident. No.	37047... Ident. No.	37048... Ident. No.
20	020 ●	020 ●	021 ○
30	030 ●	030 ●	031 ●
50	050 ●	050 ●	051 ●
Price/unit, €			

Prod. Gr. 371

BMI tape rules
in case

Application:

No. 37051: For measuring distances with cm precision

No. 37052-37054: For measuring distances with mm precision

Execution:

- Highly impact-resistant plastic capsule
- SoftFinish surface (similar to sprayed rubber coating)
- Flextop tape end prevents tape breaking

▪ Scale starts after approx. 10 cm

No. 37051:

- Fibre glass tape rule, yellow
- Continuous centimetre graduation

No. 37052: Steel tape rule, painted white

No. 37052-37054: Continuous mm graduation

No. 37054: Stainless steel

Technical data:

- Width: 13 mm



No. 37052-37054



No. 37052

The crank is very easy to reassemble on the other side e.g. for left-handed people

Length (m)	37051... Ident. No.	37052... Ident. No.	37054... Ident. No.
10	011	010	010
20	021	020	020
30	031	030	030
50	-	050	050
	Price/unit, €		

Prod. Gr. 371

BOSCH Multipurpose line laser
GLL 3-80 P

Application:

for simultaneous marking, alignment and levelling in interior applications

Execution:

- app control possible
- reference lines visible in 360°
- **Ident. No. 032:** Simultaneous horizontal and vertical levelling

Advantage:

- **Ident. No. 032:**
 - Green laser lines offer up to four times better visibility than red lines
 - Dual Power Source technology: Can be operated with a 12V Li-ion battery or standard alkaline batteries
 - Controlling the tool on an app prevents inaccuracies

Delivery:

Ident. No. 031: Universal mount BM 1, 1 x battery 12 V/2 Ah, charger GAL 1230 CV, homing board, cloth bag, L-Boxx 136

Ident. No. 032: 1x 12 V/2 Ah battery, quick charger GAL 1230 CV, universal mount BM1, homing board, cloth pouch in L-Boxx

Technical data:

- Coverage distance: 120 m
- Levelling measuring accuracy (+/- per length): 0.2 mm/m
- Self-levelling range (+/-): 4 Degree
- Levelling time: 4 s
- Laser category: 2
- IP protection class: IP 54



Ident. No. 031



Ident. No. 032

Model	Ident. No.	GLL 3-80 C	GLL 3-80 CG
38382...	Price/unit, €	031	032

Prod. Gr. 731

BOSCH Combination laser

Dot and line laser

Execution:

- Horizontal and vertical laser lines, as well as two-centric solder points with optimal visibility
- Ident. No. 040:** Position the laser lines around the solder points

Advantage:

- Ident. No. 042:**
 - Best used with Bluetooth connection in combination with Levelling Remote app to position the tool on your smartphone
 - Dual Power Source technology: Can be operated with a 12V Li-ion battery or standard alkaline batteries

Delivery:

- Ident. No. 040:** 3x AA batteries, rotating mount RM1, homing board, protective case, L-Boxx insert; in box
- Ident. No. 042:** 4x AA batteries, battery adapter, rotating mount RM 2, construction tripod BT 150, protective case, homing board; in cardboard packaging

Technical data:

- Self-levelling range (+/-): 4 Degree
- Levelling time: 4 s
- Laser category: 2
- IP protection class: IP 54



Ident. No. 040



Ident. No. 042

Model	GCL 2-15	GCL 2-50 C
Length (mm)	146	136
Width (mm)	117	55
Height (mm)	83	122
38382...	Ident. No. 040	Ident. No. 042
	Price/unit, €	
	●	●

Prod. Gr. 731

RIDGID Cross-line laser

micro CL-100

Application:

For simultaneous alignment and levelling in interior applications

Execution:

- Single button operation
- Immediate projection of extremely bright vertical and horizontal lines
- Integrated 360° turntable
- Adjustable tripod and laser enhancing glasses

Delivery:

In plastic case, 3x AAA batteries, laser enhancing glasses, tripod

Technical data:

- Coverage distance: 30 m
- Levelling measuring accuracy (+/- per length): 0.2 mm/m
- Self-levelling range (+/-): 6 Degree
- Laser category: 2
- IP protection class: IP 54
- Width: 45 mm
- Height: 60 mm

38382...

Ident. No. 100
Price/unit, €
●

Prod. Gr. 412



BOSCH Laser distance measuring instruments

Application:

Ident. No. 031, 151: for non-contact measurement of lengths, areas and volumes.

Ident. No. 091-100: For non-contact measurement of lengths, areas and volumes.

Execution:

- Ident. No. 031:** Illuminated three-line display for optimal readability
- Ident. No. 151:**
 - quick and easy alignment, especially outdoors and over long distances
 - quick access to required functions + voice guidance + help function
 - data transfer to the Bosch Measuring Master app

Advantage:

- Ident. No. 031:**
 - fast and accurate measurement thanks to the visible laser target point

- Very easy to operate with a single function key
- Memory function allows easy access to last ten measurements
- Ident. No. 091-100:**
 - Enormous savings of time and money
 - Fast and accurate measurement thanks to the visible laser target point
- Ident. No. 100:** Integrated rechargeable lithium-ion battery for high battery life: up to 25,000 measurements per battery charge

Delivery:

- Ident. No. 031:** 2x AAA batteries, protective case
- Ident. No. 091:** Measuring instrument, batteries, manufacturer certificate, protective case
- Ident. No. 100:** Measuring instrument, batteries, manufacturer certificate, protective case, charger
- Ident. No. 151:** bare tool, cloth pouch, operating instructions, manufacturer's certificate, wrist strap, micro-USB cable



Ident. No. 031



Ident. No. 091



Ident. No. 100



Ident. No. 151

Model	GLM 40	GLM 50 C	GLM 80	GLM 120 C
Coverage distance (m)	40	50	80	120
Measuring accuracy	+/- 1.5 mm	+/- 1.5 mm	+/- 1.5 mm	+/- 1.5 mm
IP protection class	IP 54	IP 54	IP 54	IP 54
Laser category	2	2	2	2
Measuring functions	Length measurement Area measurement	Angle and distance measurement Length measurement Area measurement Volume measurement Continuous measurement	Volume measurement Area measurement Length measurement Continuous measurement Timer function	Volume measurement Area measurement Length measurement Continuous measurement Timer function
With addition/subtraction	Yes	Yes	Yes	Yes
Tilt sensor (Degree)	-	-	360	360
Space calculation	Yes	Yes	Yes	Yes
Automatic switch-off	Yes	Yes	Yes	Yes
Indirect measurement	Yes	Yes	Yes	Yes
With tripod socket	Yes	Yes	Yes	Yes
Measured value memory	Yes	Yes	Yes	Yes
Length x width x height	105 x 41 x 24 mm	106 x 45 x 24 mm	111 x 51 x 30 mm	142 x 64 x 28 mm
Display rotate automatically	-	Yes	Yes	Yes
Weight (g)	100	100	140	210
37065...	Ident. No. 031 Price/unit, € ●	Ident. No. 091 Price/unit, € ●	Ident. No. 100 Price/unit, € ●	Ident. No. 151 Price/unit, € ●

Prod. Gr. 731

ORION® Laser distance measuring instruments

Application:

For non-contact measurement of lengths, areas and volumes.

- Fast and accurate measurement thanks to the visible laser target point

Advantage:

- Enormous savings of time and money

Delivery:

Measuring instrument, batteries, operating instructions, protective case

Coverage distance (m)	40	100
Measuring accuracy	+/- 2 mm	+/- 2 mm
IP protection class	IP 54	IP 54
Laser category	2M	2M
Measuring functions	Continuous measurement Area measurement Volume measurement Length measurement	Continuous measurement Area measurement Volume measurement Length measurement
With addition/subtraction	Yes	Yes
Space calculation	Yes	Yes
Automatic switch-off	Yes	Yes
Indirect measurement	Yes	Yes
With tripod socket	Yes	Yes
Measured value memory	No	No
Length x width x height	121 x 56 x 28 mm	121 x 56 x 28 mm
Weight (g)	150	150
37062...	Ident. No. 040 Price/unit, € ●	Ident. No. 100 Price/unit, € ●

Prod. Gr. 371



Leica DISTO™ Laser distance measuring instruments

Application:

Ident. No. 004: for non-contact measurement of lengths, areas and volumes.

Ident. No. 023-035: For non-contact measurement of lengths, areas and volumes.

Advantage:

- Ident. No. 004:**
 - extensive time and cost savings
 - fast and accurate measurement thanks to the visible laser target point

Ident. No. 023-035:

- Enormous savings of time and money
- Fast and accurate measurement thanks to the visible laser target point
- Ident. No. 035:**
 - Integrated camera for length measurement using photos
 - Leica DISTO™ sketch app creates floor plans based on measured data

Delivery:

Leica DISTO™, bag, batteries, wrist strap, operating instructions



Ident. No. 004



Ident. No. 023



Ident. No. 035

Measuring aids \ Laser distance measuring instruments

Model	D2	D510	D810
Coverage distance (m)	100	200	200
Measuring accuracy	+/- 1.5 mm	+/- 1 mm	+/- 1 mm
IP protection class	IP 54	IP 65	IP 54
Laser category	2	2	2
Measuring functions	Volume measurement Area measurement Length measurement	Volume measurement Area measurement Length measurement Continuous measurement Angle and distance measurement Trapezoid measurement Timer function Height profile measurement	Volume measurement Area measurement Length measurement Continuous measurement Angle and distance measurement Trapezoid measurement Timer function Height profile measurement
With addition/subtraction	Yes	Yes	Yes
With homing device	No	Yes	Yes
Tilt sensor (Degree)	-	360	360
Space calculation	Yes	Yes	Yes
Automatic switch-off	Yes	Yes	Yes
Indirect measurement	Yes	Yes	Yes
With tripod socket	Yes	Yes	Yes
Measured value memory	Yes	Yes	Yes
Length x width x height	116 x 44 x 26 mm	134.5 x 55 x 30 mm	164 x 61 x 31 mm
Weight (g)	100	198	238
37060...	Ident. No. 004 Price/unit, € ●	Ident. No. 023 Price/unit, € ●	Ident. No. 035 Price/unit, € ●

Prod. Gr. 376

ORION® Rulers



Execution:

- Made of INOX spring steel
- Small cross-section for flexible design
- All edges ground and burr-free
- Anti-glare, matt surface
- Graduations insensitive to many chemicals, greases and oils

- **No. 37101:** 2 scale graduations: Scale graduation 1 mm top and bottom
- **No. 37102:** 2 scale graduations: Scale graduations top 0.5 mm/bottom 1 mm

- Technical data:**
- Accuracy class: II

Length (mm)	150	200	300	500	1000	2000
Cross-section length x cross-section width	13 x 0.5 mm	13 x 0.5 mm	13 x 0.5 mm	18 x 0.5 mm	18 x 0.5 mm	18 x 0.5 mm
37101...	Ident. No. 015 Price/unit, € ●	Ident. No. 020 Price/unit, € ●	Ident. No. 030 Price/unit, € ●	Ident. No. 050 Price/unit, € ●	Ident. No. 100 Price/unit, € ●	Ident. No. 200 Price/unit, € ●
37102...	Ident. No. 015 Price/unit, € ●	Ident. No. 020 Price/unit, € ●	Ident. No. 030 Price/unit, € ●	Ident. No. 050 Price/unit, € ●	Ident. No. 100 Price/unit, € ●	Ident. No. 200 Price/unit, € ●

Prod. Gr. 38G

Rulers



Execution:

- Made of INOX spring steel
- Wide cross-section for rigid design
- 2 scale graduations: Scale graduation 1 mm top and bottom
- **No. 37151:** Anti-glare, matt surface

- **No. 37152:** Highly anti-glare, brushed chromium-plated surface

- Technical data:**
- Accuracy class: II

Length (mm)	300	500	1000	1500	2000	1500	2000
Cross-section length x cross-section width	30 x 1 mm	30 x 1 mm	30 x 1 mm	30 x 1 mm	30 x 1 mm	35 x 1.5 mm	35 x 1.5 mm
37151...	Ident. No. 030 Price/unit, € ●	Ident. No. 050 Price/unit, € ●	Ident. No. 100 Price/unit, € ●	Ident. No. 150 Price/unit, € ●	Ident. No. 200 Price/unit, € ●	-	-
37152...	Ident. No. 030 Price/unit, € ●	Ident. No. 050 Price/unit, € ●	Ident. No. 100 Price/unit, € ●	-	-	Ident. No. 150 Price/unit, € ●	Ident. No. 200 Price/unit, € ●

Prod. Gr. 373

ATORN® Light metal scale



Execution:

- Made of anti-glare, anodised aluminium alloy
- Graduation with scale interval 1 mm
- Boldly coloured decimal numbers
- Suspension hole
- Lightweight and corrosion-resistant

- Inking edge to avoid smearing when drawing
- Contrasting print is particularly easy to read and anti-glare

- Technical data:**
- Cross-section length x cross-section width: 50 x 5 mm
 - Accuracy class: II

Advantage:

- With convenient recessed handle for improved handling

Length (mm)	300	400	600	1000
37170...	Ident. No. 030 Price/unit, € ●	Ident. No. 040 Price/unit, € ●	Ident. No. 060 Price/unit, € ●	Ident. No. 100 Price/unit, € ●

Prod. Gr. 3AA

Rulers (DIN 866)



Execution:

- Graduation with scale interval 1 mm
- Ground and aligned top edge for use as a ruler

- **No. 37200:** Steel
- **No. 37201:** Made of INOX steel

Length (mm)		500	1000	1500	2000	3000	4000
Cross-section length x cross-section width		25 x 5 mm	30 x 6 mm	30 x 6 mm	40 x 8 mm	40 x 8 mm	50 x 10 mm
Weight (kg)		0.5	1.4	2.1	5	7.5	15.7
37200...	Ident. No.	050	100	150	200	300	400
	Price/unit, €	●	●	●	(○) ⁺	(○) ⁺	(○) ⁺
37201...	Ident. No.	050	100	150	200	300	400
	Price/unit, €	●	●	●	(○) ⁺	(○) ⁺	(○) ⁺

Prod. Gr. 373

Steel rulers

With test report



Execution:

- Rectangular section
- Test surfaces finely sanded
- Straightness of test surfaces according to DIN 874
- **No. 37420-37425:** Top edges finely ground, flat sides cleanly ground
- **No. 37435-37436:** Top edges finely ground and calibrated, flat side precision-ground. Rulers up to

- 1500 mm have rectangular section, rulers above 2000 mm have a double-T section and 2 hand slots
- **No. 37450-37451:** Precision design: top edges and flat sides precisely machined, ground and calibrated. Rulers up to 1500 mm have rectangular section, rulers above 2000 mm have a double-T section and 2 hand slots



Length (mm)	Cross-section length x cross-section width	Weight (kg)	Accuracy class II		Accuracy class I		Accuracy class 0	
			Steel	Stainless steel	Steel	Stainless steel	Steel	Stainless steel
			37420...	37425...	37435...	37436...	37450...	37451...
			Ident. No.	Ident. No.	Ident. No.	Ident. No.	Ident. No.	Ident. No.
500	30 x 6 mm	0.7	050 ●	050 ●	-	-	-	-
500	40 x 8 mm	1.3	-	-	050 ●	050 ●	-	-
500	50 x 10 mm	2	-	-	-	-	050 ●	050 ●
750	40 x 8 mm	2	-	075 ●	-	-	-	-
750	50 x 10 mm	3	-	-	-	075 ●	-	075 ●
1000	40 x 8 mm	2.5	100 ●	100 ●	-	-	-	-
1000	50 x 10 mm	4	-	-	100 ●	100 ●	-	-
1000	60 x 12 mm	5.7	-	-	-	-	100 ●	100 ●
1500	50 x 10 mm	5.8	150 ● ⁺	150 (○) ⁺	-	-	-	-
1500	60 x 12 mm	8.4	-	-	150 (○) ⁺	150 (○) ⁺	-	-
1500	70 x 15 mm	12.4	-	-	-	-	150 (○) ⁺	-
1500	70 x 14 mm	12.4	-	-	-	-	-	150 (○) ⁺
2000	60 x 12 mm	11.2	200 ● ⁺	200 (○) ⁺	-	-	-	-
2000	70 x 15 mm	12	-	-	200 (○) ⁺	200 (○) ⁺	-	-
2000	80 x 15 mm	13	-	-	-	-	200 (○) ⁺	-

Price/unit, €

Prod. Gr. 375

ATORN® Straight edges (DIN 874)



Application:

For inspecting the flatness and straightness of surfaces

Execution:

- Hardened measuring edge, ground and finely lapped
- Hand warmth insulation
- **No. 37550:** Made from special steel, both inclines with anti-glare burnished finish

- **No. 37551:** Made from INOX steel, both incline surfaces with anti-glare matt finish

Delivery:

In synthetic leather case

Notes:

From 1000 mm on request

Technical data:

- Material: Hardened steel



No. 37550



No. 37551

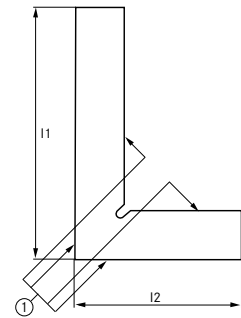
Length (mm)		75	100	125	150	200	300	400	500
37550...	Ident. No.	007	010	012	015	020	030	040	050
	Price/unit, €	●	●	●	●	●	●	●	●
37551...	Ident. No.	007	010	012	015	020	030	040	050
	Price/unit, €	●	●	●	●	●	●	●	●

Prod. Gr. 3AF



90° steel square, right-angle tolerances Excerpt from DIN 875

Length l1 (mm)	Right-angle tolerances t in µm with accuracy level			
	00	0	1	2
50	3	-	-	-
75	3	7	14	28
100	3	7	15	30
150	4	8	18	35
200	4	9	20	40
250	5	10	23	45
300	5	11	25	50
500	7	15	35	70
750	10	20	43	85
1000	12	25	60	120



ATORN® flat squares and try squares (DIN 875)
accuracy 2



Application:
For testing angles and marking offs workpieces

- Test and side surfaces finely ground

Execution:
▪ Made from special steel, unhardened

- Technical data:**
- Accuracy class: II



No. 38062



No. 38063

Limb length x limb length 2			75 x 50 mm	100 x 70 mm	150 x 100 mm	200 x 130 mm	250 x 165 mm	300 x 175 mm	500 x 250 mm	600 x 300 mm	750 x 375 mm	1000 x 500 mm
Cross-section length x cross-section width			15 x 5 mm	20 x 5 mm	25 x 5 mm	30 x 6 mm	35 x 7 mm	35 x 7 mm	40 x 8 mm	40 x 8 mm	45 x 10 mm	50 x 10 mm
38062...	Flat square	Ident. No. Price/unit, €	007 ●	010 ●	015 ●	020 ●	025 ●	030 ●	050 ●	060 ●	075 ○	100 (○) ⁺
38063...	Try square	Ident. No. Price/unit, €	007 ●	010 ●	015 ●	020 ●	025 ●	030 ●	050 ●	060 ●	075 ○	100 (○) ⁺

Prod. Gr. 3AF

ATORN® flat squares and try squares (DIN 875)
Accuracy 1



Application:
For testing angles and marking offs workpieces

- **No. 38060–38061:** Made from special steel, unhardened

Execution:
▪ Test and side surfaces finely ground
▪ **No. 38058–38059:** Made from INOX steel, unhardened

- Technical data:**
- Accuracy class: I



No. 38058 007–38058 100, 38060 007–38060 100



No. 38059 007–38059 100, 38061 007–38061 100

Limb length x limb length 2			75 x 50 mm	100 x 70 mm	150 x 100 mm	200 x 130 mm	250 x 165 mm	300 x 200 mm	500 x 330 mm	1000 x 660 mm
Cross-section length x cross-section width			15 x 5 mm	20 x 5 mm	25 x 5 mm	30 x 6 mm	35 x 7 mm	40 x 8 mm	50 x 10 mm	70 x 15 mm
38058...	Flat square	Ident. No. Price/unit, €	007 ●	010 ●	015 ●	020 ●	025 ●	030 ●	050 ●	100 (○) ⁺
38059...	Try square	Ident. No. Price/unit, €	007 ●	010 ●	015 ●	020 ●	025 ●	030 ●	050 ●	100 (○) ⁺
38060...	Flat square	Ident. No. Price/unit, €	007 ●	010 ●	015 ●	020 ●	025 ●	030 ●	050 ●	100 (○) ⁺

Limb length x limb length 2			75 x 50 mm	100 x 70 mm	150 x 100 mm	200 x 130 mm	250 x 165 mm	300 x 200 mm	500 x 330 mm	1000 x 660 mm
Cross-section length x cross-section width			15 x 5 mm	20 x 5 mm	25 x 5 mm	30 x 6 mm	35 x 7 mm	40 x 8 mm	50 x 10 mm	70 x 15 mm
38061...	Try square	Ident. No. Price/unit, €	007	010	015	020	025	030	050	100 (○)

Prod. Gr. 3AF

ATORN® Flat and try square (DIN 875)
Accuracy 0



Application:
For testing angles and marking offs workpieces

- Execution:**
- Side faces finely ground
 - Lapped test surfaces

- **No. 38051–38052:** Made from special steel, unhardened
- **No. 38073–38074:** Made from hardened INOX steel

Technical data:
▪ Accuracy class: 0



No. 38051 010–38051 050, 38073 005–38073 020



No. 38052 010–38052 050, 38074 005–38074 020

Limb length x limb length 2			50 x 40 mm	75 x 50 mm	100 x 70 mm	100 x 70 mm	150 x 100 mm	200 x 130 mm	250 x 165 mm	300 x 200 mm	500 x 330 mm
Cross-section length x cross-section width			12 x 5 mm	15 x 5 mm	20 x 5 mm	25 x 5 mm	25 x 5 mm	30 x 6 mm	35 x 7 mm	40 x 8 mm	50 x 10 mm
38073...	Flat square	Ident. No. Price/unit, €	005	007	-	010	015	020	-	-	-
38051...	Flat square	Ident. No. Price/unit, €	-	-	010	-	015	020	025	030	050
38074...	Try square	Ident. No. Price/unit, €	005	007	-	010	015	020	-	-	-
38052...	Try square	Ident. No. Price/unit, €	-	-	010	-	015	020	025	030	050

Prod. Gr. 3AF

ATORN® try square (DIN 875)
Thick stock and thin blade



Application:
For testing angles and marking offs workpieces

- Execution:**
- Made from special steel, hardened

- Test surfaces and side surfaces finely ground and precise
- Lapped test surfaces

Technical data:
▪ Accuracy class: 0



Limb length x limb length 2		75 x 50 mm	100 x 70 mm	150 x 100 mm	200 x 130 mm
Cross-section length x cross-section width		18 x 2 mm	18 x 2 mm	22 x 3 mm	26 x 3 mm
Cross-section length 2 x cross-section width 2		14 x 10 mm	16 x 10 mm	20 x 12 mm	24 x 14 mm
38111...	Ident. No. Price/unit, €	007	010	015	020

Prod. Gr. 3AF

ATORN® Knife-edge square, hardened (DIN 875)



Application:
For testing planar surfaces using the light gap method

- Execution:**
- Test and side surfaces finely ground
 - Test edges lapped

- With 2 lapped, graduated knife edges
- Hardened
- **No. 38125:** Made from special steel
- **No. 38126:** Made of INOX steel

Technical data:
▪ Accuracy class: 00



Measuring aids \ Angle measuring and setting devices

Limb length x limb length 2		50 x 40 mm	75 x 50 mm	100 x 70 mm	150 x 100 mm	200 x 130 mm	300 x 200 mm
Cross-section length x cross-section width		13 x 4 mm	15 x 4.5 mm	19 x 6 mm	25 x 7 mm	32 x 7 mm	40 x 8 mm
38 125...	Ident. No.	005	007	010	015	020	030
	Price/unit, €	●	●	●	●	●	●
38 126...	Ident. No.	005	007	010	015	020	030
	Price/unit, €	●	●	●	●	●	●

Prod. Gr. 3AF

ATORN® Knife-edge square (DIN 875) Thick stock and thin blade



Application:

For testing planar surfaces using the light gap method

- Test edges lapped
- Made from special steel
- Hardened

Execution:

- Test and side surfaces finely ground

Technical data:

- Accuracy class: 00



Limb length x limb length 2		50 x 40 mm	75 x 50 mm	100 x 70 mm	150 x 100 mm	200 x 130 mm	300 x 200 mm
Cross-section length x cross-section width		16 x 2 mm	18 x 2 mm	18 x 2 mm	22 x 3 mm	26 x 3 mm	32 x 3 mm
Cross-section length 2 x cross-section width 2		14 x 10 mm	14 x 10 mm	16 x 10 mm	20 x 12 mm	24 x 14 mm	30 x 18 mm
38 136...	Ident. No.	005	007	010	015	020	030
	Price/unit, €	●	●	●	●	●	●

Prod. Gr. 3AF

ATORN® Incision square



Application:

For inspection during toolmaking and manufacturing

- Inspection edges hardened and lapped

Execution:

- Made from hardened INOX steel
- Test and side surfaces finely ground
- Graduated knife edge on inner side

Technical data:

- Cross-section length 2 x cross-section width 2: 5 x 3.5 mm
- Accuracy class: 00



Limb length x limb length 2		25 x 20 mm	40 x 28 mm
Cross-section length x cross-section width		6 x 3.5 mm	8 x 3.5 mm
38 154...	Ident. No.	025	040
	Price/unit, €	●	●

Prod. Gr. 3AF

ORION® Knife-edge square, adjustable



Application:

For testing planar surfaces using the light gap method

Advantage:

- Very good accessibility in recesses etc.

Execution:

- Continuously sliding straight edge
- Clamp spindle lock mechanism
- Hardened
- Lapped test surfaces on basic body and lapped straight test edge

Technical data:

- Length: 60 mm
- Cross-section length x cross-section width: 4 x 4 mm
- Base body dimension: 40 x 9 x 23 mm



38 160...	Ident. No.	012
	Price/unit, €	●

Prod. Gr. 3BG

ATORN® Measuring instrument set 5 pieces

Execution:

- Straight edge 100 mm, knife-edge square 75 x 50 mm, 1 incision square each 40 x 28 mm and 25

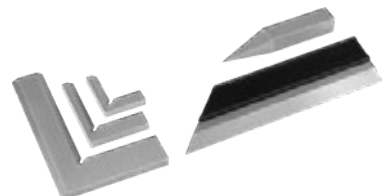
x 20 mm, gauge block scriber 60 x 8 x 8 mm

Delivery:

In a case

38 170...	Ident. No.	006
	Price/unit, €	●

Prod. Gr. 3AF



ATORN® Mitre try square

Application:
For precise 45° mark-off and inspection for 90° corner joints

▪ Made from special steel

Technical data:
▪ Angle: 135 Degree

Execution:

▪ Test and side surfaces finely ground

Limb length x limb length 2	120 x 80 mm	150 x 100 mm	200 x 130 mm
Cross-section length x cross-section width	20 x 5 mm	20 x 5 mm	25 x 5 mm
38175...	Ident. No. 120	Ident. No. 150	Ident. No. 200
	Price/unit, € ●	Price/unit, € ●	Price/unit, € ●

Prod. Gr. 3AF



ATORN® Acute mitre square 45°

Application:
For marking off and inspecting 45° angles

▪ Test surfaces precisely ground and lapped, side surfaces ground
▪ Made from special steel

Execution:

▪ With stop

Limb length x limb length 2	120 x 80 mm	150 x 100 mm	200 x 130 mm
Cross-section length x cross-section width	20 x 5 mm	20 x 5 mm	25 x 5 mm
38176...	Ident. No. 120	Ident. No. 150	Ident. No. 200
	Price/unit, € ●	Price/unit, € ●	Price/unit, € ●

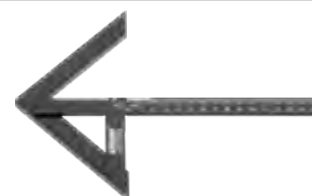
Prod. Gr. 3AF



ORION® Universal centring square

Application:
For centring and marking off centre points of round discs and shafts.

Execution:
▪ Function faces finely ground
▪ mm graduation on rail



Ident. No. 016

Limb length x limb length 2	100 x 70 mm	150 x 130 mm	200 x 150 mm	250 x 160 mm	300 x 180 mm	400 x 240 mm	500 x 300 mm
38191...	Ident. No. 011	Ident. No. 016	Ident. No. 021	Ident. No. 026	Ident. No. 031	Ident. No. 041	Ident. No. 051
	Price/unit, € ●	Price/unit, € ●	Price/unit, € ●	Price/unit, € ●	Price/unit, € ●	Price/unit, € ●	Price/unit, € ○

Prod. Gr. 3BG

ORION® Adjustable square

Application:
For setting angles, e.g. using a reference part

Execution:
▪ Galvanised
▪ 3-part with locking screw
▪ Top edges precisely machined, flat sides smoothed

Length (mm)	150	200	300	500
Cross-section length x cross-section width	16 x 4 mm	16 x 4 mm	18 x 4 mm	25 x 5 mm
38201...	Ident. No. 015	Ident. No. 020	Ident. No. 030	Ident. No. 050
	Price/unit, € ●	Price/unit, € ●	Price/unit, € ●	Price/unit, € ●

Prod. Gr. 3BG



ATORN® Protractor, analogue



Application:
For measuring 10–170° angles

▪ Made of chromium-plated special steel
▪ Anti-glare, brushed chromium-plated scale
▪ No. 38231: Double blade for ease of use

Execution:

▪ Locking screw

Limb length (mm)	150	300	400	600
Degree arc Ø (mm)	100	150	200	300
38230...	Ident. No. 010	Ident. No. 015	Ident. No. 020	Ident. No. 030
	Price/unit, € ●	Price/unit, € ●	Price/unit, € ●	Price/unit, € ●
38231...	Ident. No. 010	Ident. No. 015	Ident. No. 020	Ident. No. 030
	Price/unit, € ●	Price/unit, € ●	Price/unit, € ○	Price/unit, € ○

Prod. Gr. 382



No. 38230

ORION® Protractor



Application:
For measuring 0-180° angles

- Execution:**
- Locking screw
 - Made of chromium-plated special steel
 - Anti-glare, brushed chromium-plated scale



Limb length (mm)		120	150	200	300	500
Degree arc Ø (mm)		80	120	150	200	300
38217...	Ident. No.	008	012	015	020	030
	Price/unit, €	●	●	●	●	●

Prod. Gr. 3BG

ORION® Electronic protractor



Application:
For measuring 0-180° angles

- Execution:**
- Mobile measuring arm fixed using knurled thumb screw
 - Adjust or set to zero on any flat surface
 - 0.05° digit increment
 - Made of stainless steel
 - Error limit ±0.3°
 - Overhead display



Limb length (mm)		150	200	300
Degree arc Ø (mm)		120	150	200
38235...	Ident. No.	010	015	020
	Price/unit, €	●	●	●

Prod. Gr. 3BM

ATORN® Universal goniometer With magnifying glass



Application:
For measuring 0-360° angles

- Execution:**
- Precision adjustment
 - Parallax-free reading
 - Made from hardened INOX steel
 - Vernier scale 1/12° = 5'
 - Scale and vernier scale with brushed chromium-plated finish
 - Error limit 5'

Delivery:
With panoramic magnifying glass, in wooden case



Rail length (mm)		150	200	300	500
38240...	Ident. No.	015	020	030	050
	Price/unit, €	●	●	●	●

Prod. Gr. 382

TESA® Goniometer Dial reading



Application:
For measuring 0-360° angles

- Execution:**
- Body and rule made of INOX steel, hardened and ground
 - The measuring rule can be moved to any position
 - A second clamping system holds the mobile part in the measuring position
 - Spindle compensation in the measuring mechanism prevents any tooth flank play
 - Dial diameter 35 mm
 - Error limit 5'

Delivery:
In a case

Technical data:
▪ Rail length: 200 mm



38271...	Ident. No.	020
	Price/unit, €	●

Prod. Gr. 362

ATORN® Electronic universal goniometer



Application:
For measuring 0-360° angles

- Execution:**
- Adjust or set to zero on any flat surface
 - LCD display with very large digits (size 8.5 mm)
 - Measuring surfaces, hardened and fine ground
 - Switchable measuring range: 1 x 360° 2 x 180°
 - Zero setting (RESET) possible at any position

- Digit increment 0.01° or 1'
- Error limit 2'

Delivery:
Includes battery and sturdy wooden case

Technical data:
Data transmission type: RS232 opto coupled



Rail length (mm)		150	200	300
38265...	Ident. No.	150	200	300
	Price/unit, €	●	●	●

Prod. Gr. 382

Universal goniometer

Magnetic base

Application:
For setting angles directly on the workpiece being machined

- 2 x 180° setting
- Error limit 30'

Execution:
Swivelling dial gauge

Delivery:
In a wooden case

Meter Ø (mm)		82
Base Ø (mm)		35
Base height (mm)		30
38277...	Ident. No.	040
	Price/unit, €	●

Prod. Gr. 378



Example application

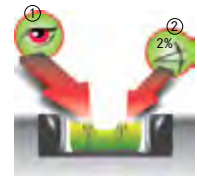
ATORN® Spirit levels and spirit levels with magnetic base

Made of light metal

Application:
For horizontal and vertical alignment of objects

- Execution:**
- Laser-scaled horizontal round vials
 - Read off 2% inclines
 - Magnifying effect for improved reading
 - 270° view of bubble from all positions without any interfering edges
 - Made from high-strength non-breakable polycarbonate
 - Strong aluminium rectangular profile

- Scratch-proof thanks to special anodising treatment
 - Rubber end caps for impact protection
 - No. 38291:** Magnetic base
- Advantage:**
- Silicone pads on rear side surface for non-slip positioning on walls
 - Additional divisions for exact 0-position of bubble in the horizontal vial for precise reading (zero-point deviation in normal position: 0.5 mm/m)
 - No. 38290 080-38290 120:**
 - Scale printed on upper measuring surface
 - 2 sliding measuring and marking-off tabs



38290080-120

Length (mm)			200	300	400	500	600	800	1000	1200	1500	1800	2000
Measuring accuracy (per length) (mm/m)													
38290...	0.5	Ident. No.	020	030	040	050	060	080	100	120	150	180	200
		Price/unit, €	●	●	●	●	●	●	●	●	●	●	●
38291...	0.5	Ident. No.	-	-	040	-	060	080	100	-	-	-	-
		Price/unit, €			●		●	●	●				

Prod. Gr. 3AG

BMI Pocket spirit level
With PICO tape measure

Application:
For accurate vertical and horizontal marking

Execution:
 ▪ Magnet on base and side
 ▪ Stainless steel tape measure

- Waterproof
- Tape measure can be locked in an extended position

Technical data:
 ▪ Length: 1 m



	Measuring accuracy (per length) (mm/m)	Ident. No.	010
37030...	1	Price/unit, €	●

Prod. Gr. 371

BMI spirit levels
with unbreakable, barrel-shaped Plexiglas vials

Application:
For horizontal and vertical alignment of objects

Execution:

- **No. 38300:**
 - Hardwood
 - Oiled and kiln-dried
- **No. 38300 030–38307 100, 38312 040–38320 080:** Unbreakable, barrel-shaped plexiglas bubble vials
- **No. 38304:**
 - Made from reinforced square profile
 - Non-reflective round bubble vials with magnifying effect
 - Read off 2% inclines
- **No. 38307:**
 - Made of powder-coated, aluminium hollow profile

- 1 milled measuring surface with magnet system
- **No. 38310:**
 - With 3 unbreakable, barrel-shaped plexiglas bubble vials
 - With impact-resistant, plastic protective end caps
 - 2 milled measuring surfaces for normal and reverse measurement
 - Rigid 4-chamber aluminium profile
- **No. 38312:**
 - Made of strong, rectangular aluminium profile
 - Scratch-proof thanks to special anodising treatment
 - 1 additional rotating level for reading the angle in degrees and %
- **No. 38320:**
 - Aluminium die-cast body
 - With 2 milled measuring faces for measuring in normal position
 - Extremely robust, impact-resistant, moisture resistant
- **No. 38320 080:** With 3 levels



Length (mm)			300	400	500	600	800	1000
	Measuring accuracy (per length) (mm/m)							
38300...	1	Ident. No.	030	040	050	060	080	100
		Price/unit, €	●	●	●	●	●	●
38304...	0.5	Ident. No.	030	040	050	060	080	100
		Price/unit, €	●	●	●	●	●	●
38307...	0.5	Ident. No.	-	040	-	060	080	100
		Price/unit, €	-	●	-	●	●	●
38310...	0.5	Ident. No.	-	040	-	060	080	100
		Price/unit, €	-	●	-	●	●	●
38312...	0.5	Ident. No.	-	040	-	060	080	100
		Price/unit, €	-	●	-	●	●	●
38320...	1	Ident. No.	-	-	-	060	080	-
		Price/unit, €	-	-	-	●	●	-

Prod. Gr. 384

BMI spirit levels with magnet

Application:
For horizontal and vertical alignment of objects

Execution:

- **Ident. No. 010:**
 - Made of highly impact-resistant plastic with magnetic tape on the underside
 - 3 unbreakable plexiglas bubble vials for 0°, 45° and 90°

- **Ident. No. 020:**
 - Round horizontal bubble vial with magnifying effect
 - Edgeless horizontal spirit level for undistorted view of bubble even during reverse measuring
 - Reverse measuring possible (0.5 mm/m)
 - Solid body and impact-resistant rubber end flap maintain high measuring precision
 - With internal magnet



Ident. No. 010



Ident. No. 020

Length (mm)			200
	Measuring accuracy (per length) (mm/m)		
38325...		Ident. No.	010
		Price/unit, €	●
38325...	0.5	Ident. No.	020
		Price/unit, €	●

Prod. Gr. 384

BMI Electronic inclinometer
With integrated laser point

Application:
For measuring in the horizontal (as with a spirit level) or in any other direction (as with an inclinometer)

- Execution:**
- Length of test face: 400 mm
 - Zero point deviation of horizontal bubble vial in normal position: 0.25 mm/m
 - Parallelism deviation of laser beam to test face: 0.25 mm/m
 - Laser class 2
 - Laser wavelength 635 nm
 - Laser power < 1 mW

- Range approx. 50 m
- Digit increments 0.1° or 0.1%
- Error limit 0° and 90° = 0.05° intermediate dimensions = ±0.2°
- 8 h continuous light

Delivery:
With batteries (1x E-Block 9 V type 6LR61) in sturdy plastic tubes

Technical data:
▪ Length x width x height: 443 x 40 x 70 mm



38446...

Ident. No.
Price/unit, €

015

Prod. Gr. 383

RÖCKLE Light metal spirit level

Application:
For adjusting horizontal surfaces and shafts

- Execution:**
- With prismatic base
 - Silver-anodised surface
 - Milled longitudinal bubble vial

Delivery:
In plastic protective sleeve

Technical data:
▪ Width: 22 mm
▪ Other standard: Company standard

Length (mm)	Scale value, longitudinal spirit level (mm/m)	Ident. No.	150	200	250	300
38330...	0.6	Price/unit, €	015	020	025	030

Prod. Gr. 3FA



RÖCKLE Crankpin spirit levels (DIN 877)

Application:
For aligning very short, horizontal surfaces, crank shafts and pins in engines or machines

- Execution:**
- Precision design
 - With longitudinal and transverse bubble vials
 - With longitudinal and transverse v-shaped recesses
 - Finely ground measuring surfaces

▪ Robust design in high-quality special cast iron, structural paint finish

Delivery:
In case

Technical data:
▪ Scale value, lateral spirit level: 0.8 mm/m
▪ Width: 42 mm

Length (mm)	Scale value, longitudinal spirit level (mm/m)	Spirit level error limit (mm/m)	Ident. No.	60	90	120
38402...			Price/unit, €	060	090	120

Prod. Gr. 3FA



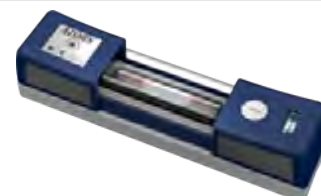
ATORN® Precision spirit levels (DIN 877)
adjustable

Application:
For the exact levelling of surfaces, shafts etc.. The adjustment feature allows the precision spirit level to be readjusted manually at any time.

- Execution:**
- Prismatic base 150°
 - Longitudinal and transverse bubble vials

- Full insulation against heat from hands and breath
- Bubble can be viewed from the side
- Finely ground test surfaces
- Adjustable

Delivery:
In a plastic case



Measuring aids \ Spirit levels and levelling devices

Scale value, longitudinal spirit level (mm/m)	0.3		0.1		0.04		0.02		0.01	
Length (mm)	38424... Ident. No.		38424... Ident. No.		38424... Ident. No.		38424... Ident. No.		38424... Ident. No.	
160	016	●	116	●	216	●	316	●	-	-
200	020	●	120	●	220	●	320	●	420	○
250	025	○	125	●	225	●	325	●	425	○
300	030	●	130	●	230	○	330	●	430	○
500	050	○	150	○	250	●	350	●	450	○
	Price/unit, €									

Prod. Gr. 3FA

Precision frame spirit levels (DIN 877)

Application:

For aligning horizontal and vertical faces and shafts

- Vial can also be viewed from the side
- Finely ground test surfaces

Execution:

- 3 prismatic measuring faces 150°, 1 vertical, flat face
- With longitudinal and transverse bubble vials
- Full insulation against hand and breath warmth

Delivery:

In case

Technical data:

- Width: 34 mm



Scale value, longitudinal spirit level (mm/m)	0.3		0.1		0.04		0.02	
Length (mm)	38440... Ident. No.		38441... Ident. No.		38442... Ident. No.		38443... Ident. No.	
100	010	●	010	●	010	●	-	-
150	015	●	015	●	015	●	015	●
200	020	●	020	●	020	●	020	●
300	030	○	030	○	030	○	030	●
	Price/unit, €							

Prod. Gr. 3FA

Electronic inclinometer



Application:

For easy and rapid measurement of inclinations

- Digit increments 0.1° or 0.1%
- Error limit 0° and 90° = 0.05° intermediate dimensions = ±0.2°

Execution:

- Display in degrees or percentages
- Arrow in display shows direction of inclination
- Simple adjustment in normal position (reset)
- Switchable acoustic signal for the 0° or 90° position
- Hold function

Delivery:

Battery (1x E-Block 9 V type 6LR61) in sturdy plastic tube

Technical data:

- Length x width x height: 256 x 50 x 60 mm



38445...

Ident. No.
Price/unit, €

100

Prod. Gr. 383

Electronic inclinometer



Application:

For easy and rapid measurement of inclinations

- Error limit 0.5°
- Large LCD display

Execution:

- Display in degrees
- Arrow in display shows direction of inclination
- Simple adjustment in normal position (reset)
- Hold function
- 0.05 ° digit increment

Advantage:

- Adhesive magnets on 3 sides
- Rotating display for overhead measurements

Technical data:

- Length x width x height: 57 x 30 x 57 mm



38600...

Ident. No.
Price/unit, €

100

Prod. Gr. 383

ORION® Electronic inclinometer



Application:
For easy and rapid measurement of inclinations

- Execution:**
- Display in degrees or percentages
 - Arrow in display shows direction of inclination
 - Simple adjustment in normal position (reset)
 - Hold function
 - Made from hard-anodised light metal
 - Base with narrow V-shaped recess for attachment to shafts
 - 1 base with adhesive magnets
 - Digit increments 0.1° or 0.1%

- Error limit 0° and 90° = 0.1° intermediate dimensions = 0.2°

- Advantage:**
- Short and compact shape
 - Rotating display for overhead measurements

Delivery:
With battery (1 x 3 V lithium type CR2032) and holster

Technical data:
▪ Length x width x height: 151 x 35 x 60 mm



38600...

Ident. No.	010
Price/unit, €	•

Prod. Gr. 383

TESA® Electronic inclinometer Clino Bevel 1 USB

Application:
For fast and easy measurement of inclines using absolute and comparative measuring procedures

- Execution:**
- 4 precisely machined measuring bases
 - Splash-proof housing (IP65)
 - Data output
 - Selectable units of measure: Degrees (2 dec.), degrees/min., mm/m (2 dec.), inch/10 or 12 inch

- (4 dec.), mm or inch/rel. basis (optional), milliradians and others
- Battery operation
 - Error limit: 2' + 1 digit increment

Delivery:
With battery (1x1.5 V type AA), USB data cable, Clinsoft software, in a case.

Technical data:
▪ Length x width x height: 100 x 35 x 75 mm



38448...

Ident. No.	011
Price/unit, €	•

Prod. Gr. 366

TESA® Electronic levels NIVELTRONIC

Application:
For adjustment of horizontal machine beds and for checking the planarity of machine tables and guide surfaces.

- Execution:**
- Cast steel housing
 - Battery operation (4x 1.5 V micro type AA)
 - Displays in mm/m and angular seconds
 - Inductive measuring system
 - **No. 38450:**
 - With prismatic base
 - With 2 level and prismatic measuring surfaces

- **No. 38455:**
 - Flat base and recesses for mounting hard stone bases no. 38460
 - With 1 level measuring surface

Delivery:
In wooden box

Technical data:

- Measuring range 1, level (+/-): 0.75 mm/m
- Measuring range 2, level (+/-): 0.15 mm/m
- Spirit level error limit: 0.005 mm/m
- Repetition accuracy, spirit level: 0.001 mm/m



No. 38450



No. 38455
With 38460

Length (mm)		200	150
Height (mm)		200	210
Scale value (mm)		0.01	0.05
38450...	Ident. No.	010	-
	Price/unit, €	•	
38455...	Ident. No.	-	010
	Price/unit, €		•

Prod. Gr. 366

Source: Hahn+Kolb Werkzeuge GmbH
Technical data subject to change.
Availability subject to country specific rules and regulations.

www.iconridge.com

TESA Hard stone base
For NIVELTRONIC level, horizontal model

Application:

For use as a base for Niveltronic electronic level

Technical data:

■ Width: 50 mm

Length (mm)		200	250	500
38460...	Ident. No.	020	025	050
	Price/unit, €	●	○	○

Prod. Gr. 366



With 38460