# Dial indicators / Dial test indicators / Center instruments Edge finders / Probes / MF measuring fixture system



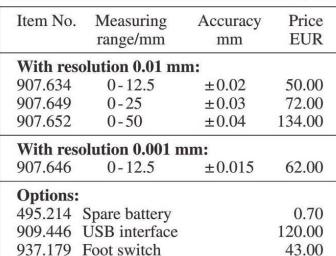
Digital dial indicators for a favourable price.

- Measuring range: 0-50 mm.
- Resolution: 0.01 or 0.001 mm.
- mm/inch conversion.
- ABS/INC switchable.
- On/off switch.
- Reset.
- Clamping stem: Ø8 mm.

- Dial diameter: 57 mm.
- Adjustable tolerance limits.
- Flat back and additional back with lug.
- Delivery with an inspection report.
- Power supply: 1 battery type CR2025.









#### **USB** interface:

- For data transfer to PC (e.g. Excel, Word).
- Operating system:
  Windows 2000/XP/Vista/7.
- PC connection: USB data output (cable length 2 m).
- No software or driver to install.
- Foot switch (optional).

907.649

### **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.
- Max. measuring speed: any.
- Measuring force:  $\leq 2$  N.
- Clamping stem: Ø8 mm.
- Dial diameter: 60 mm.

- Reversible measuring direction.
- With determination of the reversal point (only 910.004).
- Adjustable tolerance limits (except 910.004).
- Flat back and additional back with lug.
- Protection: IP54.
- Delivery in a case with an inspection report.
- Power supply: 1 battery type CR2032.



909.998









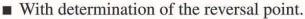


Item No.	Measuring	Resolution	Accuracy	Price
	range/mm	mm	mm	EUR
909.998	0-12.7	0.001	±0.004	140.00
909.999	0-25.4	0.001	$\pm 0.005$	183.00
910.000	0-50.8	0.001	$\pm 0.006$	253.00
910.001	0-12.7	0.01	±0.01	78.00
910.002	0-25.4	0.01	$\pm 0.01$	100.00
910.003	0-50.8	0.01	$\pm 0.015$	140.00
For inter	nal measurem	ents:		
910.004	0-12.7	0.001	$\pm 0.004$	153.00
Options:				
495.157	Spare battery			0.50
909.686	USB interface			101.00
909.687	Footswitch			17.30
909.611	Retraction leve	er		1.00
909.613	909.613 Cable retraction device (1 m)			13.60
	(maximum trav	vel 10 mm)		
909.614				6.00
	(maximum trav	vel 12.7 mm)		

### **Digital dial indicators**

Digital dial indicators with digital and digital-analog read-out.

- Measuring range: 0-12.5 mm.
- Resolution: 0.002 or 0.001 mm.
- mm/inch conversion.
- ABS/INC switchable.
- On/off switch.
- Automatic switch-off.
- Reset/preset.
- Clamping stem: Ø8 mm.
- Dial diameter: 62 mm.
- Dial 360° rotatable.
- Reversible measuring direction.



■ Adjustable tolerance limits.

■ Power supply: 1 battery type CR2032.



Item No.	Measuring range/mm	Resolution mm	Accuracy mm	Measuring force/N	Price EUR
909.250 909.251	0-12.5 0-12.5	0.002 0.001	±0.015 ±0.006	1.8-3.0 2.2-3.5	92.00 206.00
<b>Option:</b> 495.157	Spare battery				0.50

### **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: Ø8 mm.
- Dial diameter: 61 mm.
- Dial 340° rotatable.
- Reversible measuring direction.



Item No.	Measuring range/mm	Accuracy mm	Price EUR
907.879 907.878	0-12.7 0-12.7	±0.01 ±0.005	106.00 163.00
<b>Option:</b> 495.157	Spare battery		0.50

- With determination of the reversal point.
- Adjustable tolerance limits.
- Protection: IP54.

■ Power supply: 1 battery type CR2032.



#### Dial indicators 0.01 mm

Indicators with an excellent price-performance ratio.

- Measuring range: 0 10 mm.
- Graduation: 0.01 mm.
- Clamping stem: Ø8 mm.
- Dial diameter: 55 mm.
- Rotatable dial.
- Shockproof.
- Adjustable tolerance markers.
- Flat back.
- Delivery with an inspection report.



Item No.	Measuring range/mm	Price EUR
907.928	0- 3	14.00
907.929	0- 5	14.40
907.930	0-10	15.10
Option:		
	Back with lug	1.90

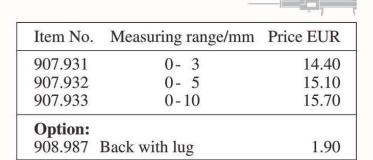


#### Dial indicators 0.01 mm

Indicators with a large dial and a locking screw. Shockproof design.

- Measuring range: 0 10 mm.
- Graduation: 0.01 mm.
- Clamping stem: Ø8 mm.
- Dial diameter: 60 mm.
- Rotatable dial.
- Shockproof.
- Adjustable tolerance markers.
- Locking screw.
- Flat back.
- Delivery with an inspection report.







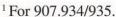
#### Dial indicators 0.01 mm

Indicators with a large measuring range. Shockproof design.

- Measuring range: 0 100 mm.
- Graduation: 0.01 mm.
- Clamping stem: Ø8 mm.
- Rotatable dial.
- Shockproof.
- Adjustable tolerance markers (except 907.916).
- Locking screw.
- Flat back.
- Delivery with an inspection report.



Item No.	Measuring range/mm	Dial ø/mm	Price EUR
907.934	0- 25	60	27.10
907.935	0- 30	60	28.20
907.936	0- 50	76	63.00
907.916	0 - 100	80	119.00
Options:			
908.987 <sup>1</sup> I	Back with lug		1.90
$908.988^2$ I	Back with lug		2.70



<sup>&</sup>lt;sup>2</sup> 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: Ø8 mm.
- Dial diameter: 55 mm.
- Rotatable dial.
- Shockproof.
- Adjustable tolerance markers.
- Locking screw.
- Back with lug.
- Protection: IP54.
- Conforms to factory standard.



Item No.	Measuring range/mm	Price EUR
908.777	0- 3	37.40
908.778	0- 5	39.10
908.779	0-10	41.00

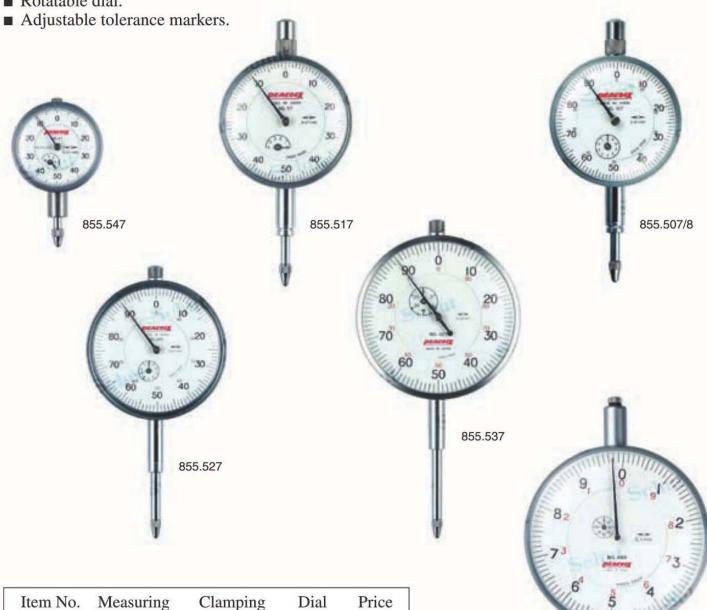




### Peacock dial indicators 0.1 and 0.01 mm

- Measuring range: 0-80 mm.
- Graduation: 0.1 or 0.01 mm.
- Clamping stem: Ø8, 10 or 14 mm.
- Rotatable dial.

- Flat back or back with lug\*.
- DIN 878.
- Delivery in a case.



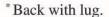
Item No.	Measuring range/mm	Clamping stem ø/mm	Dial ø/mm	Price EUR
Graduati	on 0.01 mm:			
855.547	0-4	8	36	50.00
855.536	0-3	8	40	94.00
855.517	0-5	8	53	35.30
855.507	0-10	8	53	32.10
855.508*	0-10	8	53	32.10
855.527*	0-20	8	66.5	63.00
855.537*	0-30	8	76	109.00
855.557*	0-50	10	83	163.00
Graduati	on 0.1 mm:			
855.589*	0-80	14	112	384.00

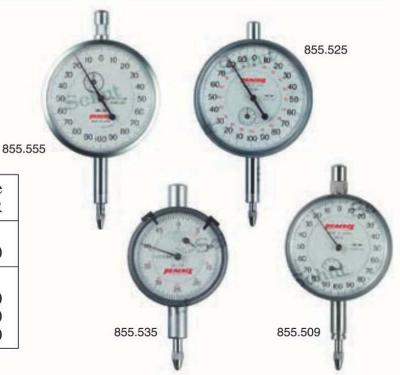
<sup>\*</sup>Back with lug.

#### Peacock dial indicators 0.005 and 0.001 mm

- Measuring range: 0-5 mm.
- Graduation: 0.005 or 0.001 mm.
- Clamping stem: Ø8 mm.
- Rotatable dial.
- Flat back or back with lug\*.
- DIN 878.
- Delivery in a case.

Item No.	Measuring range/mm	Dial ø/mm	Price EUR
Graduatio	on 0.005 mm:		
855.535*	0-3	47	100.00
Graduatio	on 0.001 mm:		
855.509	0-1	53	65.00
855.525*	0-2	66.5	128.00
855.555*	0-5	66.5	129.00



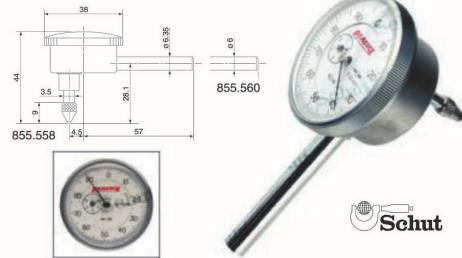


## Peacock dial indicators with back plunger

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 of the table of the machine tool, with measuring jigs, in restricted areas and on locations where scale reading is difficult.

- Measuring range: 0-5 mm.
- Graduation: 0.01 mm.
- Repeatability: 0.005 mm.
- Hysteresis:  $\pm 0.006$  mm.
- Measuring force: 1.4 N.
- Rotatable dial.
- Scale numbering: 0-100.
- DIN 878.
- Delivery in a case.





Item No.	Measuring range/mm	Clamping stem ø/mm	Accuracy mm	Price EUR
855.558	0-5	6.35	±0.02	65.00
855.560	0-5	6	$\pm 0.02$	69.00
Clamping	stem on bac	k side:		
855.559	0-5	8	$\pm 0.02$	65.00

#### 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: Ø8 mm.
- Dial diameter: 40 mm.
- Scale numbering: 0-50 (852.291: 0-100).
- Adjustable tolerance markers.
- Flat back.
- Clamping stem and measuring pin out of hardened stainless steel.

Item No.	Measuring range/mm	Graduation mm	Price EUR
852.350	0- 3	0.01	38.40
852.352	0- 5	0.01	49.00
Shockpro	of design:		
852.351	0-3	0.01	47.00
852.353	0- 5	0.01	61.00
852.291	0-10	0.01	68.00

- DIN 878.
- Delivery in a case.



#### 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: Ø8 mm.
- Dial diameter: 58 mm.
- Scale numbering: 0-100.
- Adjustable tolerance markers.
- Flat back.
- DIN 878.
- Delivery in a case.

Item No.	Measuring range/mm	Graduation mm	Price EUR
852.354	0-10	0.01	39.70
Shockpro	of design:		
852.355	0-10	0.01	39.50



#### 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: Ø8 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.

■ Delivery in a case.



Item No.	Measuring range/mm	Accuracy mm	Scale numbering	Price EUR
852.356	0- 30	$\pm 0.02$	0-100	87.00
852.357	0- 50	$\pm 0.025$	0-100	125.00
852.290	0-80	$\pm 0.030$	0 - 100	257.00
852.289	0 - 100	$\pm 0.050$	0 - 100	326.00

#### 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  $\mu$ m, 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:  $\leq 0.0015$  mm.
- Clamping stem: Ø8 mm.
- Shockproof.
- Adjustable tolerance markers.
- Conforms to factory standard.
- Delivery in a case.

Item No.	Measuring range/mm	Accuracy mm	Dial ø/mm	Scale numbering	Price EUR
852.358	0-1	$\pm 0.004$	40	0-100	159.00
852.359	0 - 1	$\pm 0.004$	58	0-100	159.00

#### Precision dial indicator

Highly accurate shockproof 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: Ø8 mm.
- Travel: 3 mm.

Item No.

907.939

- Adjustable tolerance markers.
- Fine adjustment.
- Conforms to factory standard.



Measuring

range/mm

0.1



138.00



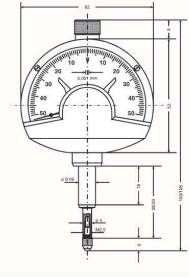


### Käfer Compika precision dial indicators

63.5

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: Ø8 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 case.





Item No.	Measuring range/mm	Waterproof	Dial ø/mm	Scale numbering	Price EUR
852.360	0.1	no	62	50-0-50	151.00
852.386	0.1	yes	62	50-0-50	193.00

### 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.
- Max. probe travel: 3 mm.
- Ball bearing probe rod.
- Adjustable tolerance markers.
- DIN 879.
- Delivery in a case.



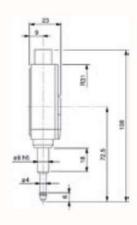




Item No. Type	Measuring range/mm	Graduation mm	Price EUR
852.640 Mytast	0.1	0.001	171.00
852.641 Centitast	0.5	0.01	136.00

### **Etalon 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.
- Waterproof (only 781.700).
- Adjustable tolerance markers.
- Fine adjustment.
- Clamping stem and measuring pin out of hardened stainless steel.
- DIN 879.
- Delivery in a case with a lifting cable.





Item No.	Measuring range/mm	Waterproof	Dial ø/mm	Price EUR
781.699	0.1	no	62	283.00
781.700	0.1	yes	62	321.00

### Lever-type digital test indicator

Lever-type digital test indicator with tolerance judgement. Suitable for measurements in both directions. Equipped with three dovetail mountings.

- Measuring range: up to 0.5 mm.
- Resolution: 0.001 mm.
- Accuracy: ±0.02 mm.
- mm/inch conversion.
- On/off switch.
- Reset.
- Measuring force:  $\leq 0.6$  N.
- With dovetail joint and clamping stems Ø6 and Ø8 mm.
- Ruby stylus tip: ø2 mm.
- 230° adjustable measuring insert.
- Adjustable tolerance limits.
- Power supply: 1 battery type V357.



Item No.	Measuring range/mm	Resolution mm	Insert length/mm	Price EUR
907.574	0.5	0.001	20	166.00
<b>Option:</b> 836.535	Spare battery			1.60



### Lever-type test indicators

- Measuring range: up to 0.8 mm.
- Graduation: 0.01 or 0.002 mm.
- With dovetail joint and clamping stems Ø6 and Ø8 mm.
- Dial diameter: 40 mm.
- Rotatable dial.
- Stylus tip: ø2 mm.
- Conforms to factory standard.





Item No.	Measuring range/mm	Graduation mm	Scale numbering	Insert length/mm	Price EUR
907.941 907.942	0.8 0.2	0.01 0.002	0-40-0 0-100-0	19 12	31.70 57.00
	Spare stylus to Spare stylus to				7.60 7.60



### 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 ø6 mm.

■ Measuring force: <0.3 N.

■ Tungsten carbide stylus tip: ø2 mm.

■ Insert thread: M1.7.



#### Inserts for lever-type dial test indicators

Item No.	Effective	Ball	Price
	length (EL)/mm	ø/mm	EUR
For 855.6	501:		
859.016	17.74	2	5.80
859.152	17.74	1	11.60
859.151	17.74	0.8	11.60
859.290	17.74	0.5	58.00
For 855.6	502:		
859.126	39.00	2	9.30
859.291	39.00	1	13.90
859.292	39.00	0.8	13.90
859.293	39.00	0.5	58.00
For 855.6	603, 855.605 and	855.606	<b>:</b>
859.200	14.18	2	7.00
859.294	14.18	1	11.60
859.295	14.18	0.8	11.60
859.296	14.18	0.5	58.00
For 855.6	604:		
859.259	8.13	2	7.00
859.297	8.13	1	11.60
859.298	8.13	0.8	11.60
859.299	8.13	0.5	58.00
For 855.6	511:		
859.464	19.24	2	5.80
859.465	19.24	1	11.60
859.466	19.24	0.8	11.60
859.467	19.24	0.5	58.00

Item No.	Measuring range/mm	Graduation mm	Dial ø/mm	Scale numbering	Insert	Total insert length (TL)/mm	Price EUR
Horizonta	ıl:						
855.601	0.5	0.01	35	0-25-0	859.016	21.3	80.00
855.602	1	0.01	35	0-50-0	859.126	42.8	86.00
855.603	0.28	0.002	35	0-140-0	859.200	17.8	86.00
855.604	0.14	0.001	30	0-70-0	859.259	11.7	101.00
855.605	0.5	0.01	35	0-25-0	859.200	17.8	87.00
Perpendic	ular:						
855.606	0.28	0.002	35	0-140-0	859.200	17.8	91.00
855.611	0.8	0.01	35	0-40-0	859.464	21.8	136.00

### 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  $\emptyset$  8 mm.

- Measuring range: up to 0.8 mm.
- Graduation: 0.01 or 0.002 mm.
- With dovetail joint and clamping stem Ø 8 mm.
- Rotatable dial.
- Tungsten carbide stylus tip: ø2 mm.
- Insert thread: M1.6 (optional inserts on request).
- 240° adjustable measuring insert.
- Ruby ball bearing.
- DIN 2270.
- Delivery in a case incl. key.
- Various different models available.



Item No.	Measuring range/mm	Graduation mm	Dial ø/mm	Scale numbering	Insert length/mm	Price EUR
852.361	0.8	0.01	32	0-40-0	12	71.00
852.362	0.5	0.01	32	0 - 25 - 0	35	95.00
852.363	0.2	0.002	40	0-100-0	12	88.00

#### 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	60.00

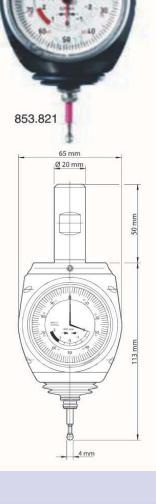


### 3D probes for centering and measuring

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: Ø20 mm.
- Insert length 25 mm, stylus tip ø4 mm (insert length 65 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.

Committee of the Commit	2000
.00	X 0 0
853.822	Ø 7,5 mm
Ø 7,5 m	— M3
Danastak ilita	4mm 8mm



Item No.	Description	Accuracy mm	Repeatability mm	Price EUR
	Analog 3D probe Digital 3D probe	±0.01 ±0.005	0.01 0.001	279.00 496.00
Options:	Spare battery			0.50
853.823	Spare insert 25 mm, tip diameter 4 mm Spare insert 65 mm, tip diameter 8 mm			25.20 42.00

# **Edge finders**

Edge finders for both stationary and rotating use. As soon as the workpiece is touched by the ball-probe 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 wil 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.

■ Delivery in a case.

■ Power supply:

907.456/460: 2 batteries type V357, 907.454/458: 1 battery type 23A.



907.456

907.458

Item No.	Clamping stem ø/mm	Length mm	Price EUR
907.454	20	162	49.00
907.456	20	100	44.00
With sou	ınd signal:		
907.458	20	162	63.00
907.460	20	100	54.00
Options			
836.535	Spare battery (2 n	eeded)	1.60
497.931	Spare battery		1.00

#### **Edge finders**

Rotating edge finders for accurate edge location.

■ Resolution: 0.005 mm.

■ Repeatability: 0.005 mm.

■ Range of use: approx. 600 rpm.

■ Hardness TiN measuring face: 2200 HV.



Item No.	Clamping stem ø/mm	Probe ø/mm	Material (measuring face)	Price EUR
909.360	8	10	steel	17.50
909.361	10	10	steel	17.50
909.362	8	4 and 10	steel	18.90
909.363	10	4 and 10	steel	18.90
909.364	6	6	steel	18.90
909.365	10	10	steel+ceramic	54.00
909.366	10	10	steel+TiN	31.60
909.367	10	4 and 10	steel+TiN	31.60
<b>Options:</b>				
909.368	Spring for 909	.360/362		2.10
909.369	Spring for 909	0.364		3.00
909.359	Spring for 909	0.365		3.00
909.349	Spring for 909	.361/363/3	66/367	3.00

### **Z-axis setting gauge**

For easy presetting the Z-axis with a tool, with or without 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.



Item No.	Description	Price EUR
908.804	Z-axis setting gauge	161.00
Option:		
498.823	Spare battery (2 needed)	1.40

- Dimensions:
  - ø54 x 50 mm (precise height to determine with external measuring instrument).
- Weight: 450 g.
- Power supply: 2 batteries type V389.



#### Z-axis setting gauge

For easy presetting the Z-axis with a tool, with or without in combination with parallel blocks to set a specific height.

- Graduation: 0.01 mm.
- Repeatability: 0.02 mm.
- Diameter dial indicator: ø35 mm.



- Dimensions: Ø 50 x 50 mm (precise height to determine with external measuring instrument).
- Weight: 654 g.
- Delivery with protective cover and reference pin (length 60 mm, ø 15 mm) for insert in tool holder.



Item No.	Description	Price EUR
909.460	Z-axis setting gauge	148.00