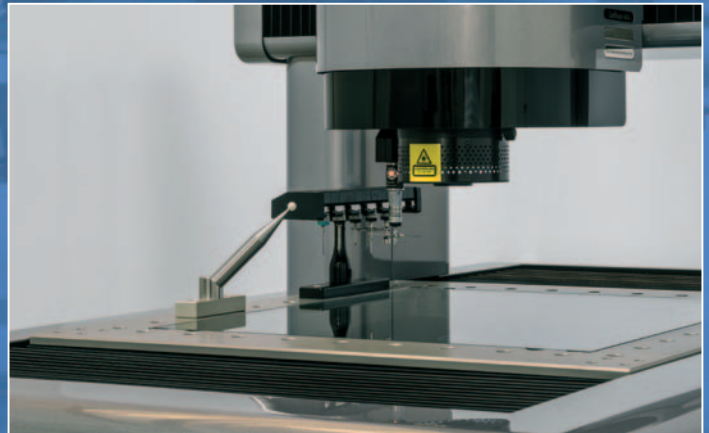
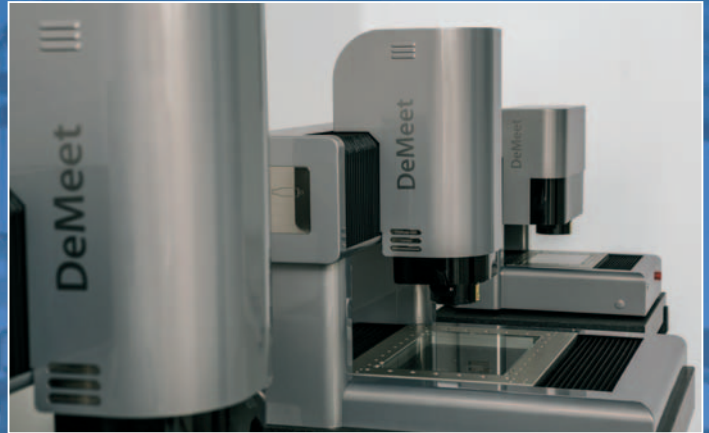


Measuring instruments and systems



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

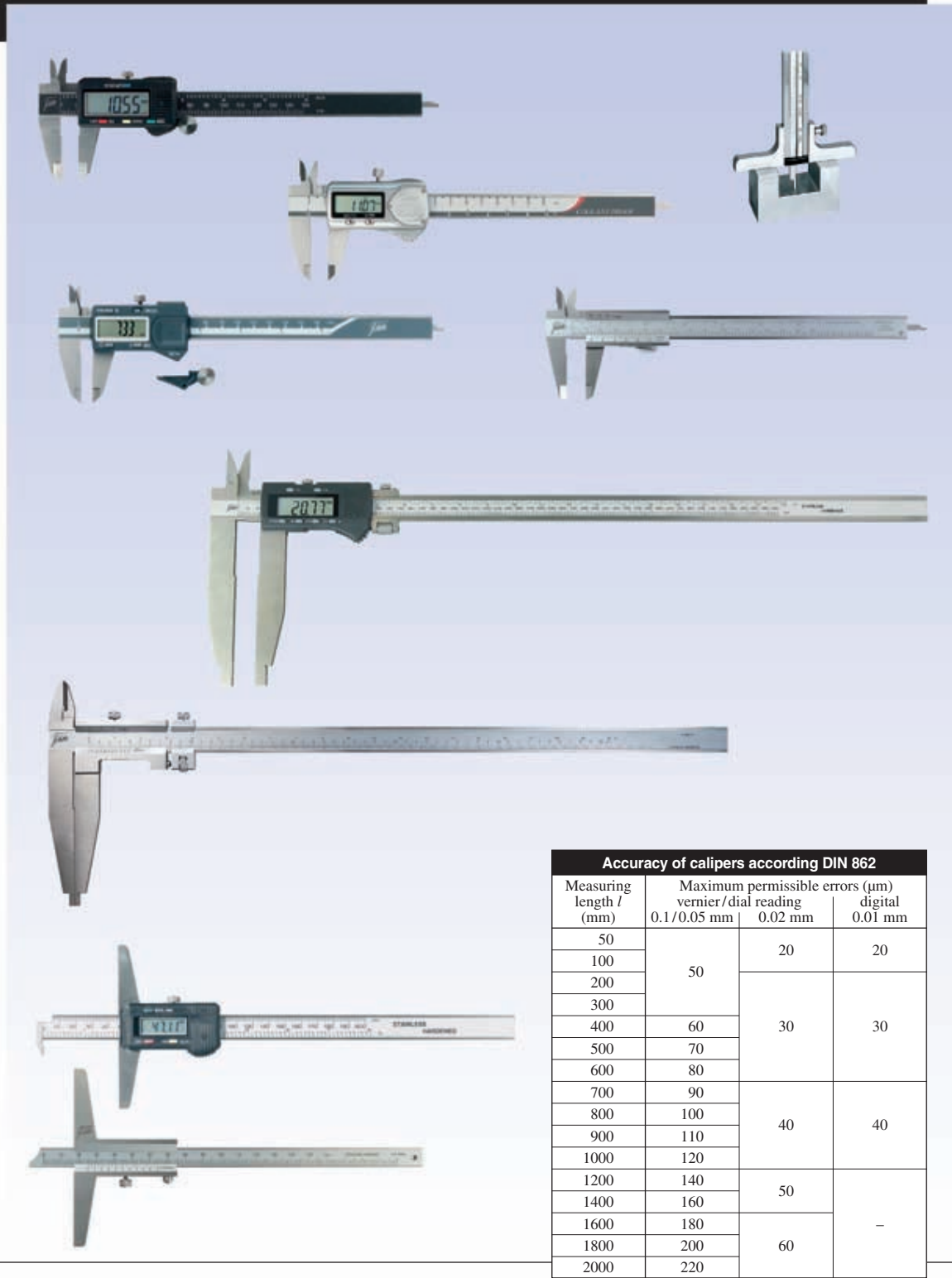
GENERAL  
CATALOG

# Measuring instruments and systems

***TECHNOBEARING***

**Technobearing OOO**  
Mitrofanievskoye shosse 10  
198095 Saint-Petersburg, Russia  
[www.technobearing.ru](http://www.technobearing.ru)

## Calipers / Depth calipers and micrometers

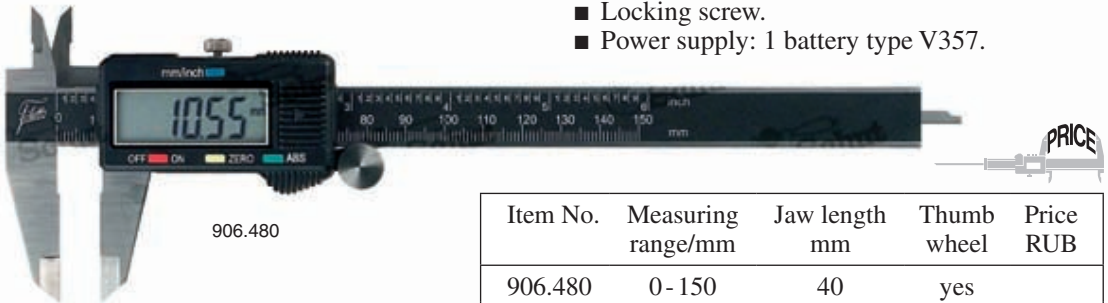


Accuracy of calipers according DIN 862			
Measuring length <i>l</i> (mm)	Maximum permissible errors (µm)		
	0.1/0.05 mm	0.02 mm	digital 0.01 mm
50	50	20	20
100			
200		30	30
300			
400			
500	70	40	40
600	80		
700	90		
800	100		
900	110	50	-
1000	120		
1200	140		
1400	160	60	-
1600	180		
1800	200		
2000	220		

## Absolute digital calipers

Calipers with an absolute measuring system. This gives you the advantage that the caliper stores the one-time setting of the absolute zero position until the battery has to be changed. This reduces the chance of measuring errors and enables you to use the caliper without zero setting.

- Measuring range: 0-300 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- ABS/INC switchable.
- Digit height: 11 mm.
- On/off switch.
- Max. measuring speed: 1.5 m/s.
- Locking screw.
- Power supply: 1 battery type V357.

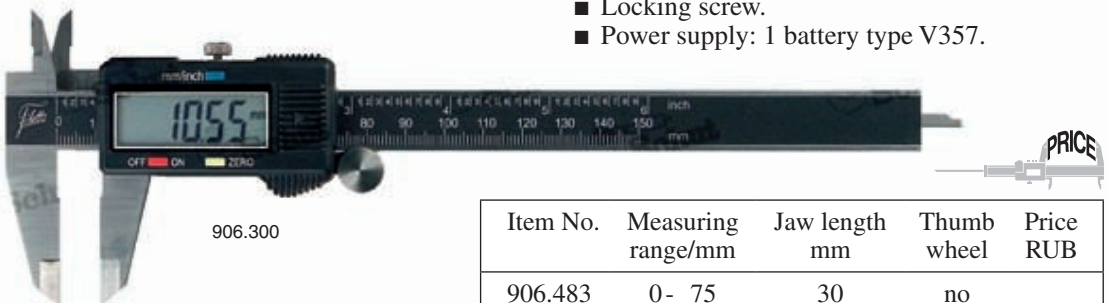


906.480

Item No.	Measuring range/mm	Jaw length mm	Thumb wheel	Price RUB
906.480	0-150	40	yes	
906.481	0-200	50	yes	
906.482	0-300	60	yes	
<b>Option:</b>				
836.535 Spare battery				

## Digital calipers with excellent price-performance ratio

- Measuring range: 0-300 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- On/off switch.
- Digit height: measuring range  $\leq 100$  mm: 8 mm, measuring range  $\geq 150$  mm: 11 mm.
- Reset.
- Locking screw.
- Power supply: 1 battery type V357.



906.300

Item No.	Measuring range/mm	Jaw length mm	Thumb wheel	Price RUB
906.483	0- 75	30	no	
906.484	0-100	30	no	
<b>906.300</b>	<b>0-150</b>	<b>40</b>	<b>yes</b>	
906.302	0-200	50	yes	
906.304	0-300	60	yes	
<b>Left-handed model:</b>				
906.299	0-150	40	yes	
<b>Option:</b>				
836.535 Spare battery				

TECHNOBEARING



## Absolute digital calipers

The advantage of these calipers is the one-time setting of the absolute zero position until the battery has to be changed. This reduces the chance of measuring errors and enables you to use the calipers without zero setting.

- Measuring range: 0-300 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- ABS/INC switchable.
- Digit height: 10 mm.
- On/off switch.
- Reset.
- Max. measuring speed: 1.5 m/s.
- DIN 862.
- Delivery with an inspection report.
- Power supply: 1 battery type V357.



907.546

Item No.	Measuring range/mm	Jaw length mm	Price RUB
907.546	0-150	40	
907.547	0-200	50	
907.548	0-300	60	

**Option:**

836.535 Spare battery

## Digital calipers

The advantage of these calipers is the one-time setting of the absolute zero position until the battery has to be changed. This reduces the chance of measuring errors and enables you to use the calipers without zero setting.

- Measuring range: 0-300 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- Digit height: 10 mm.
- On/reset switch.
- Max. measuring speed: 1.5 m/s.
- DIN 862.
- Delivery with an inspection report.
- Power supply: 1 battery type V357.



907.537

Item No.	Measuring range/mm	Jaw length mm	Price RUB
907.537	0-150	40	
907.538	0-200	50	
907.539	0-300	60	

**Option:**

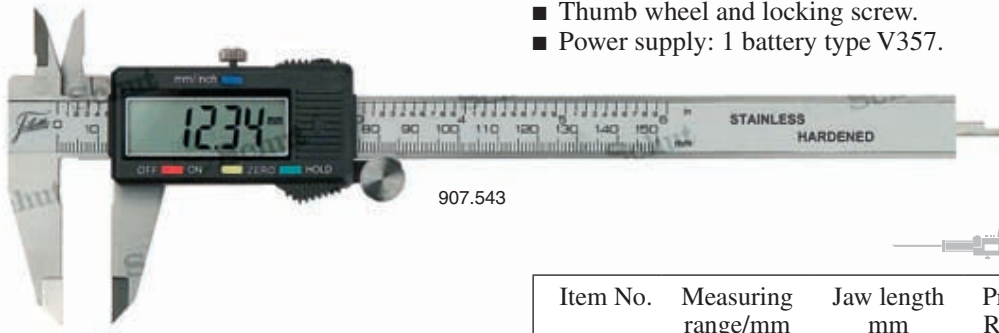
836.535 Spare battery

TECHNOBEARING

## Digital calipers with hold function

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

- Measuring range: 0-300 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- Digit height: 11 mm.
- On/off switch.
- Reset.
- Hold function.
- Thumb wheel and locking screw.
- Power supply: 1 battery type V357.



907.543

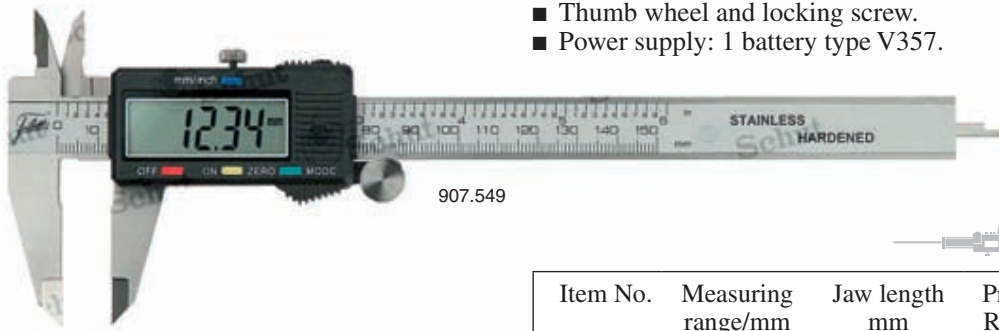
PRICE

Item No.	Measuring range/mm	Jaw length mm	Price RUB
907.543	0-150	40	
907.544	0-200	50	
907.545	0-300	60	
<b>Option:</b>			
836.535	Spare battery		

## Digital calipers with min/max function

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

- Measuring range: 0-300 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- Digit height: 11 mm.
- On/off switch.
- Reset.
- Min/max function.
- Thumb wheel and locking screw.
- Power supply: 1 battery type V357.



907.549

PRICE

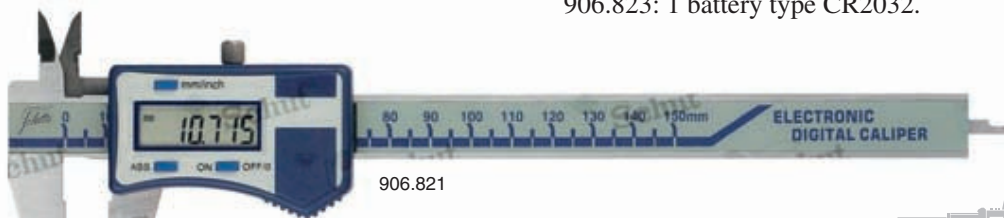
TECHNOBEARING

Item No.	Measuring range/mm	Jaw length mm	Price RUB
907.549	0-150	40	
907.550	0-200	50	
907.551	0-300	60	
<b>Option:</b>			
836.535	Spare battery		

## Digital calipers 0.005 mm

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

- Measuring range: 0-300 mm.
- Resolution: **0.005 mm**.
- mm/inch conversion.
- ABS/INC switchable.
- On/off switch.
- Thumb wheel (only 906.823).
- Flat depth rod.
- DIN 862.
- Power supply:  
906.821/822: 1 battery type V357,  
906.823: 1 battery type CR2032.



906.821



906.823

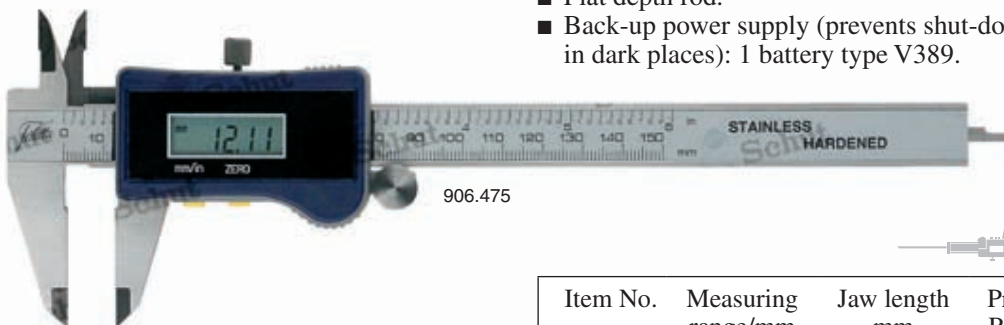
Item No.	Measuring range/mm	Jaw length mm	Price RUB
906.821	0-150	40	
906.822	0-200	50	
906.823	0-300	60	
<b>Option:</b>			
836.535	Spare battery type V357		
495.157	Spare battery type CR2032		

PRICE

## Digital solar calipers

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

- Measuring range: 0-300 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- Thumb wheel (except 906.493).
- Flat depth rod.
- Back-up power supply (prevents shut-down in dark places): 1 battery type V389.



906.475

TECHNOBEARING

Item No.	Measuring range/mm	Jaw length mm	Price RUB
906.475	0-150	40	
906.492	0-200	50	
906.493	0-300	60	
<b>Option:</b>			
498.823	Spare battery		

PRICE

## Digital calipers with glass ruler

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

- Measuring range: 0 - 300 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- ABS/INC switchable (only 909.443/444/445).

TECHNOBEARING

- Digit height: 12 mm.
- With data output.
- On/reset switch.
- Automatic switch-off.
- DIN 862.
- Delivery with an inspection report.
- Power supply: 1 battery type CR2025.



909.440



909.440



**USB interface:**

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



909.446

Item No.	Measuring range/mm	Jaw length mm	Price RUB
909.440	0 - 150	40	
909.441	0 - 200	50	
909.442	0 - 300	60	
<b>Absolute calipers:</b>			
909.443	0 - 150	40	
909.444	0 - 200	50	
909.445	0 - 300	60	
<b>Options:</b>			
495.214	Spare battery		
909.446	USB interface		
909.687	Foot switch		

## Digital calipers with tolerance function

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

- Measuring range: 0 - 300 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- With data output.
- Digit height: 12 mm.
- Tolerance function.
- On/reset switch.

NEW

- Automatic switch-off.
- DIN 862.
- Delivery with an inspection report.
- Power supply: 1 battery type CR2025.



906.412

Item No.	Measuring range/mm	Jaw length mm	Price RUB
906.412	0 - 150	40	
906.413	0 - 200	50	
906.414	0 - 300	60	
<b>Options:</b>			
495.214	Spare battery		
909.446	USB interface		
909.687	Foot switch		



909.446

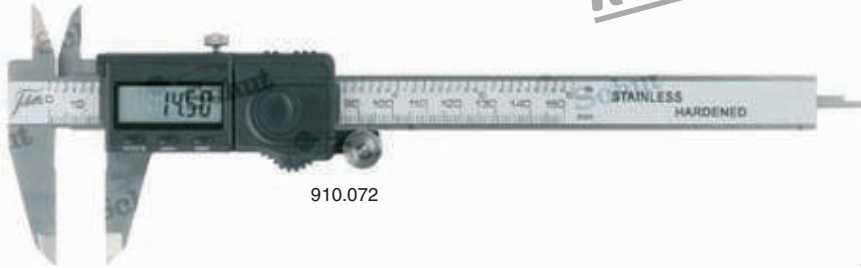
**USB interface:**

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

### Digital calipers with rotatable LCD display

- Measuring range: 0-300 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- On/off switch.
- Automatic switch-off.
- Rotatable display value.
- Thumb wheel and locking screw.
- Flat depth rod.
- Power supply: 1 battery type CR2032.

**NEW**



910.072



TECHNOBEARING

Item No.	Measuring range/mm	Jaw length mm	Price RUB
910.072	0-150	40	
910.073	0-200	50	
910.074	0-300	60	
<b>Option:</b> 495.157 Spare battery			

### Digital calipers with tungsten carbide measuring faces

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



910.035



**NEW**

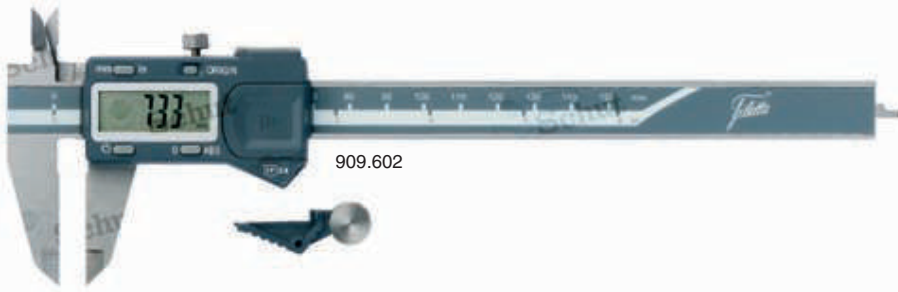
Item No.	Measuring range/mm	Jaw length mm	Price RUB
910.035	0-150	40	
910.036	0-200	50	
910.037	0-300	60	
<b>Option:</b> 836.535 Spare battery			

## Absolute digital calipers IP54

Calipers with an absolute measuring system. This gives you the advantage that the caliper stores the one-time setting of the absolute zero position until the battery has to be changed. This reduces the chance of measuring errors and enables you to use the caliper without zero setting.

- Measuring range: 0-300 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- ABS/INC switchable.
- Digimatic data output.
- On/off switch.
- Reset.
- Max. measuring speed: any.
- Protection: IP54.
- DIN 862.
- Delivery in a case with an inspection report.
- Power supply: 1 battery type CR2032.

TECHNOBEARING



**NEW**



Item No.	Measuring range/mm	Accuracy mm	Jaw length mm	Price RUB
909.602	0 - 150	0.02	40	
909.603	0 - 200	0.02	50	
909.604	0 - 300	0.03	60	

**Options:**

- 495.157 Spare battery
- 909.686 USB interface
- 909.687 Footswitch
- 910.038 Wireless USB receiver
- 910.039 Wireless sender



## Digital calipers IP54

These calipers have a protection degree of IP54 and are therefore protected against splash water and resistant to oil and dust. Zero setting at any position. Equipped with thumb wheel and locking screw.

- Measuring range: 0- 300 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- On/off switch.
- Reset.
- Max. measuring speed: 1.5 m/s.
- Thumb wheel and locking screw.
- Flat depth rod.
- Protection: IP54.
- Resistant to workshop conditions.
- Delivery in a case.
- Power supply: 1 battery type V357.



907.900

TECHNOBEARING

Item No.	Measuring range/mm	Jaw length mm	Price RUB
907.900	0-150	40	
907.901	0-200	50	
907.902	0-300	60	

**Option:**

836.535 Spare battery

## Digital calipers IP54

- Measuring range: 0- 300 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- ABS/INC switchable.
- On/off switch.
- Reset.
- Thumb wheel and locking screw.
- Protection: IP54.
- DIN 862.
- Delivery in a case with an inspection report.
- Power supply: 1 battery type CR2032.



906.177

**NEW**

Item No.	Measuring range/mm	Accuracy mm	Jaw length mm	Price RUB
906.177	0-150	0.03	40	
906.178	0-200	0.03	50	
906.179	0-300	0.04	60	

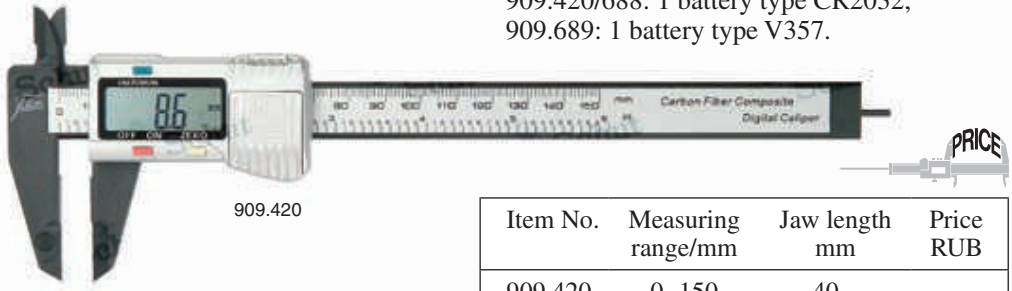
**Option:**

495.157 Spare battery

## Digital carbon fiber calipers

Digital calipers made of carbon fiber.

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



909.420

TECHNOBEARING

Item No.	Measuring range/mm	Jaw length mm	Price RUB
909.420	0-150	40	
909.688	0-150	75	
909.689	0-300	90.5	

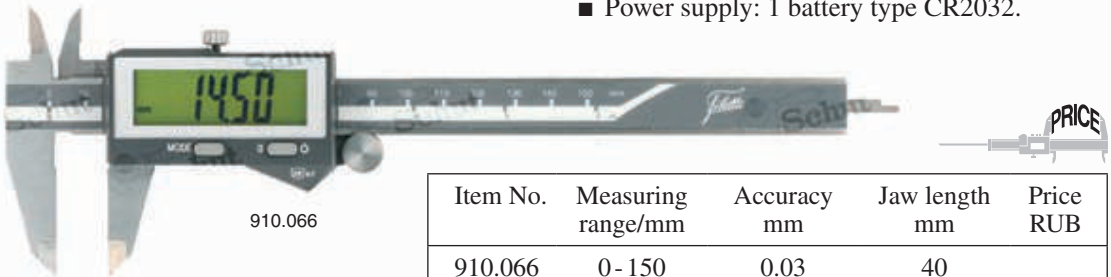
### Options:

- 495.157 Spare battery type CR2032
- 836.535 Spare battery type V357

## Digital calipers IP67

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

- Measuring range: 0-300 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- Automatic switch-off.
- Reset.
- Thumb wheel and locking screw.
- Flat depth rod.
- Protection: IP67.
- DIN 862.
- Delivery with an inspection report.
- Power supply: 1 battery type CR2032.



910.066

**NEW**



Item No.	Measuring range/mm	Accuracy mm	Jaw length mm	Price RUB
910.066	0-150	0.03	40	
910.067	0-200	0.03	50	
910.068	0-300	0.04	60	

### With Bluetooth:

- 910.069 0-150 0.03 40

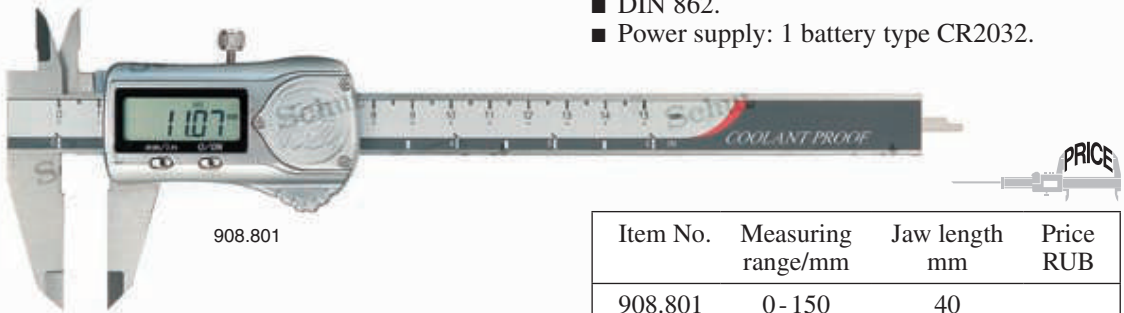
### Option:

- 495.157 Spare battery

## Digital calipers IP67

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

- Measuring range: 0-300 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- Automatic switch-off.
- Reset.
- Locking screw.
- Flat depth rod.
- Protection: IP67.
- DIN 862.
- Power supply: 1 battery type CR2032.



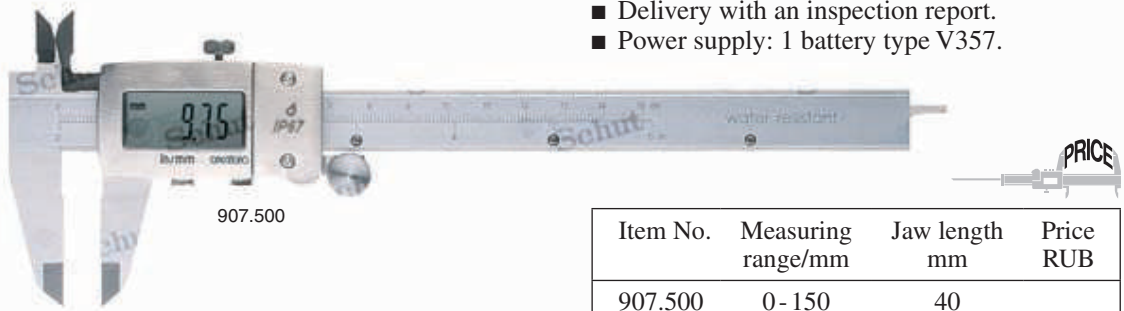
908.801

Item No.	Measuring range/mm	Jaw length mm	Price RUB
908.801	0 - 150	40	
908.802	0 - 200	50	
908.803	0 - 300	60	
<b>Option:</b>			
495.157	Spare battery		

## Digital calipers IP67

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

- Measuring range: 0-300 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- Large, easy to read LCD display.
- On/reset switch.
- Automatic switch-off.
- Thumb wheel and locking screw.
- Stable flat depth rod.
- Protected rack.
- Protection: IP67.
- DIN 862.
- Delivery with an inspection report.
- Power supply: 1 battery type V357.



907.500

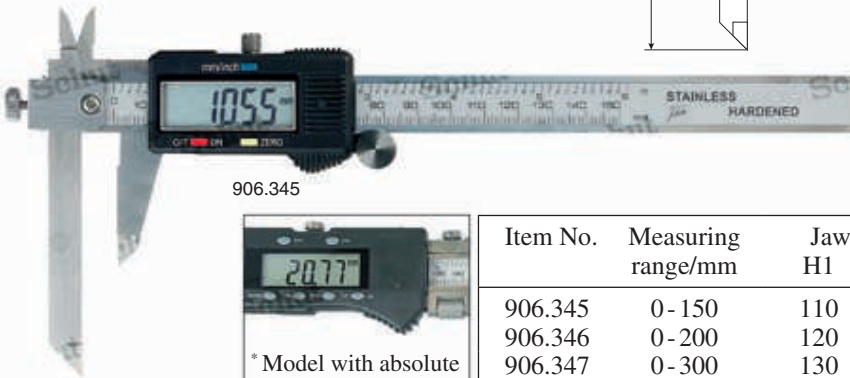
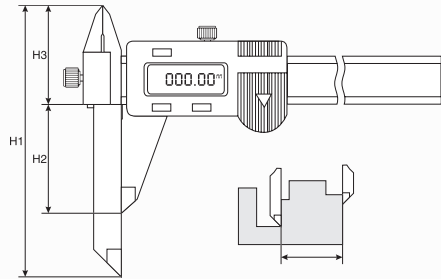
TECHNOBEARING

Item No.	Measuring range/mm	Jaw length mm	Price RUB
907.500	0 - 150	40	
907.501	0 - 200	50	
907.502	0 - 300	60	
<b>Option:</b>			
836.535	Spare battery		

## Digital calipers with slidable measuring jaw

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

- Measuring range: 0 - 500 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- On/off switch.
- Reset.
- Thumb wheel and locking screw.
- Power supply: 1 battery type V357.



906.345



Item No.	Measuring range/mm	Jaw length/mm			Price RUB
		H1	H2	H3	
906.345	0 - 150	110	40	37	
906.346	0 - 200	120	50	40	
906.347	0 - 300	130	60	42	
906.348*	0 - 500	210	100	66	
<b>Option:</b> 836.535 Spare battery					

TECHNOBEARING

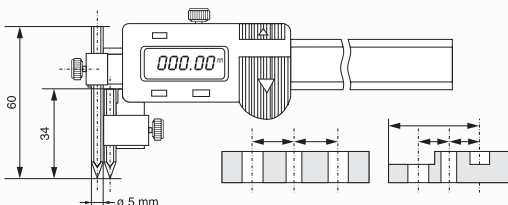
## Digital calipers for measuring center distances

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

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



906.395

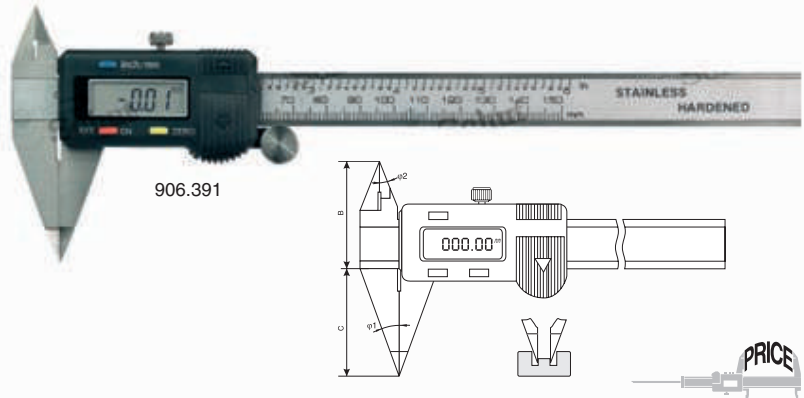


Item No.	Measuring range/mm	Price RUB
906.395	5 - 150	
906.396	5 - 200	
906.397	5 - 300	
<b>Option:</b> 836.535 Spare battery		

### Digital calipers with pointed measuring jaws

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

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



Item No.	Measuring range/mm	Jaw length C/mm	Length B/mm	Angle φ1	Angle φ2	Price RUB
906.391	0-150	40	37	20°	20°	
906.392	0-200	50	40	20°	22.5°	
906.393	0-300	60	42	20°	22.5°	

**Option:**  
836.535 Spare battery

TECHNOBEARING

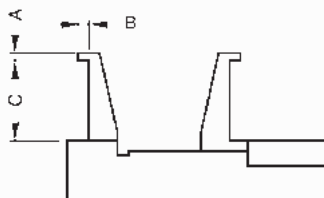
### Digital calipers with outside angled measuring jaws

These calipers have short, stable, V-shaped measuring jaws with a flat front. Specially designed for measuring bore and internal groove diameters.

- Measuring range: 8-200 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- On/off switch.
- Preset at 10 mm (delivery incl. setting ring).
- Preset through SET, + and – switches.
- Thickness measuring face: 0.5 mm.
- Power supply: 1 battery type V357.



907.556



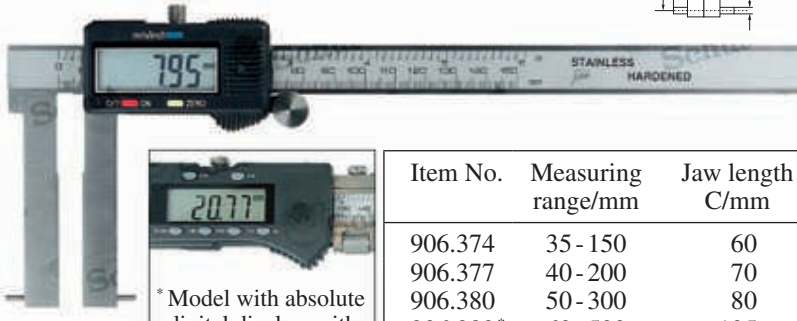
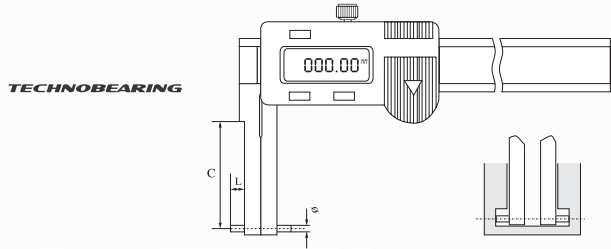
Item No.	Measuring range/mm	Length/mm	Price RUB
		A B C	
907.556	8-150	1.5 3.5 27.5	
907.557	8-200	1.5 3.5 27.5	

**Option:**  
836.535 Spare battery

## Digital calipers with outside angled measuring pins

These calipers are equipped with outside angled rounded pins.

- Measuring range: 35 - 500 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- On/off switch.
- Reset.
- Thumb wheel and locking screw.
- Power supply: 1 battery type V357.



906.374



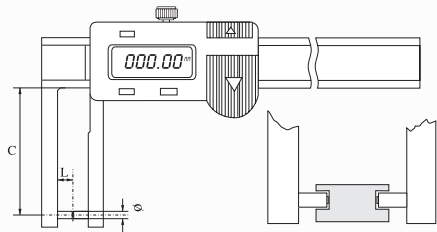
\* Model with absolute digital display, without thumb wheel, with fine adjustment and preset function.

Item No.	Measuring range/mm	Jaw length C/mm	Pin $\varnothing$ /mm	Pin length L/mm	Price RUB
906.374	35 - 150	60	2	6	
906.377	40 - 200	70	3	7	
906.380	50 - 300	80	3	10	
906.383*	60 - 500	105	3	10	
<b>Option:</b>					
836.535	Spare battery				

## Digital calipers with inside angled measuring pins

These calipers are equipped with inside angled rounded pins.

- Measuring range: 0 - 500 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- On/off switch.
- Reset.
- Thumb wheel and locking screw.
- Power supply: 1 battery type V357.



906.368



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

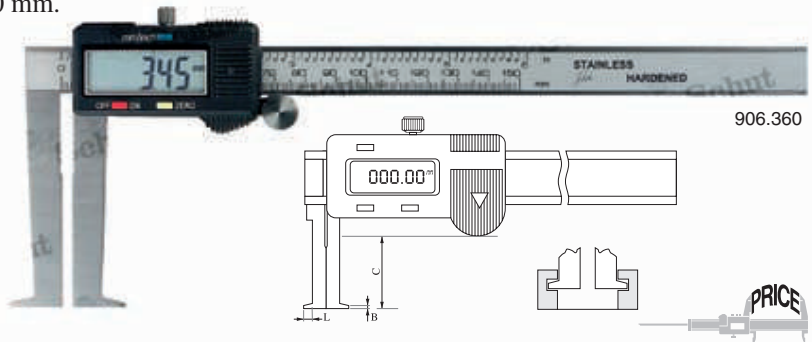
Item No.	Measuring range/mm	Jaw length C/mm	Pin $\varnothing$ /mm	Pin length L/mm	Price RUB
906.368	0 - 150	40	2	5	
906.369	0 - 200	50	2.5	8	
906.370	0 - 300	60	2.5	10	
906.371*	0 - 500	100	3	12	
<b>Option:</b>					
836.535	Spare battery				



## Digital calipers with outside angled measuring jaws

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

- Measuring range: 35 - 500 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- On/off switch.
- Reset.
- Thumb wheel and locking screw.
- Power supply:  
1 battery type V357.



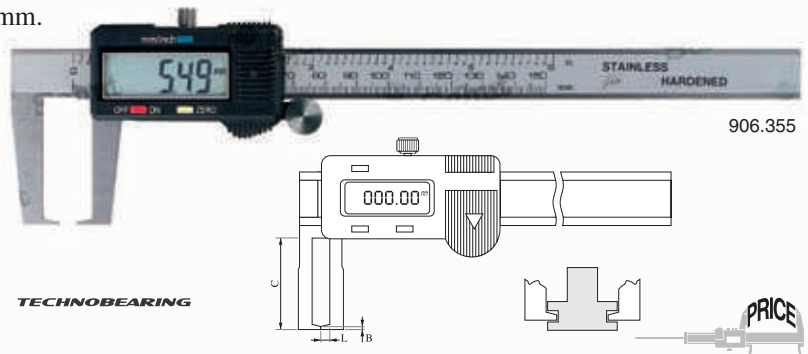
\* Model with absolute digital display, without thumb wheel, with fine adjustment and preset function.

Item No.	Measuring range/mm	Jaw length C/mm	Measuring face B/mm	Jaw length L/mm	Price RUB
906.360	35 - 150	50	1.5	6	
906.361	40 - 200	60	1.5	7	
906.362	50 - 300	70	1.5	8	
906.363 *	60 - 500	110	2	10	
<b>Option:</b>					
836.535	Spare battery				

## Digital calipers with inside angled measuring jaws

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

- Measuring range: 0 - 500 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- On/off switch.
- Reset.
- Thumb wheel and locking screw.
- Power supply:  
1 battery type V357.



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

Item No.	Measuring range/mm	Jaw length C/mm	Measuring face B/mm	Jaw length L/mm	Price RUB
906.355	0 - 150	40	1	5	
906.356	0 - 200	50	1	7	
906.357	0 - 300	60	1.5	8	
906.358 *	0 - 500	100	2	12	
<b>Option:</b>					
836.535	Spare battery				

## Digital calipers for internal length measurement

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

- Measuring range: 0-200 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- On/reset switch.
- Locking screw.
- Power supply: 1 battery type V357.



906.386

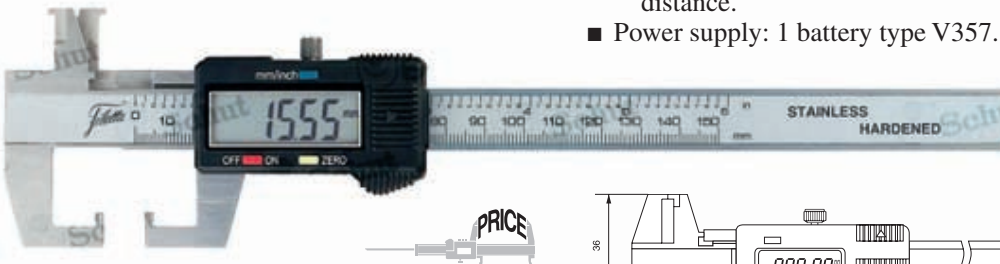
Item No.	Measuring range/mm	Price RUB
906.386	0 - 140	
906.387	0 - 200	

**Option:**  
836.535 Spare battery

TECHNOBEARING

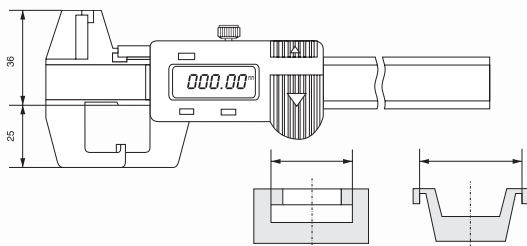
## Digital caliper for groove measurements

- Measuring range: 0-125 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- On/off switch.
- Reset.
- Equipped with small measuring jaws on top of the caliper.
- Thumb wheel and locking screw.
- Also suitable for:
  - internal diameter attached collar,
  - internal diameter U-shaped flange on axis,
  - center distances blind holes under-surface flange on axis,
  - hole diameter hard-to-reach places,
  - height measurement,
  - groove width and groove distance.
- Power supply: 1 battery type V357.



Item No.	Measuring range/mm	Price RUB
906.365	0 - 125	

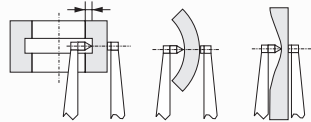
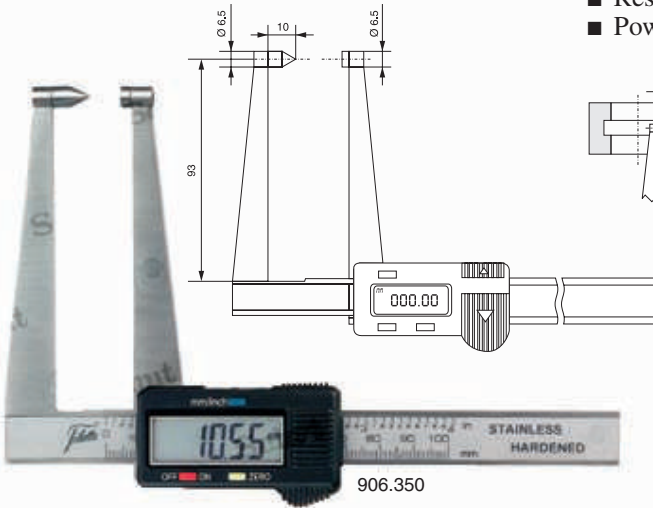
**Option:**  
836.535 Spare battery



## Digital calipers with pointed anvil

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

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

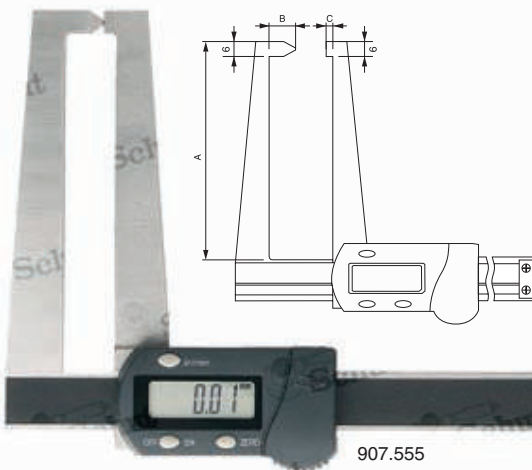


Item No.	Measuring range/mm	Price RUB
906.350	0- 75	
906.351	0- 125	
906.352	0- 150	
<b>Option:</b>		
836.535	Spare battery	

## Digital caliper with square, pointed anvil

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

- Measuring range: 0- 150 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- Digit height: 10 mm.
- On/off switch.
- Reset.
- Anvil: height 1 mm, width 0.5 mm.
- Measuring face: height 6 mm, width 3 mm.
- Power supply: 1 battery type V357.



Item No.	Measuring range/mm	Length/mm			Price RUB
		A	B	C	
907.555	0- 150	95	10	3	
<b>Option:</b>					
836.535	Spare battery				

TECHNOBEARING

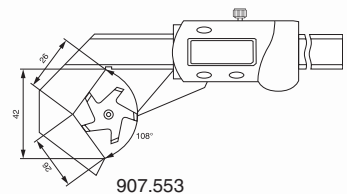
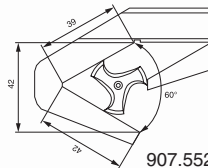
## Digital calipers with prismatic anvil

Digital calipers with prismatic anvil for measuring objects with an uneven number of grooves like cutters, reamers and drills. The angle of the prism aperture is designed for workpieces having a number of 3 or 5 flutes.

- Measuring range: 1 - 40 mm.
- Resolution: 0.01 mm.
- Accuracy:  $\pm 0.05$  mm.
- mm/inch conversion.
- On/off switch.
- Reset through SET switch.
- Max. measuring speed: 1.5 m/s.
- Including setting gauge  $\varnothing 4$  mm (907.552) or  $\varnothing 1$  mm (907.553).
- Power supply: 1 battery type V357.

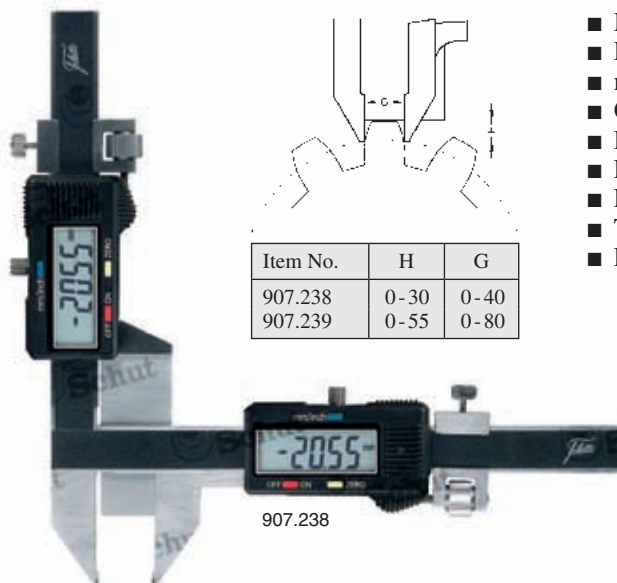


Item No.	For work-pieces with	Measuring range/mm	Price RUB
907.552	3 flutes	4 - 40	
907.553	5 flutes	1 - 40	
<b>Option:</b>			
836.535	Spare battery		



## Digital gear tooth thickness calipers

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



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

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



Item No.	Module	Price RUB
907.238	1 - 30	
907.239	5 - 50	
<b>Option:</b>		
836.535	Spare battery (2 needed)	

## Digital calipers for internal measurements

Calipers with long measuring jaws for internal measurements.

- Measuring range: 15 - 300 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- ABS/INC switchable.
- On/off switch.
- Reset.
- Locking screw.
- Delivery with an inspection report.
- Power supply: 1 battery type V357.



906.824

PRICE



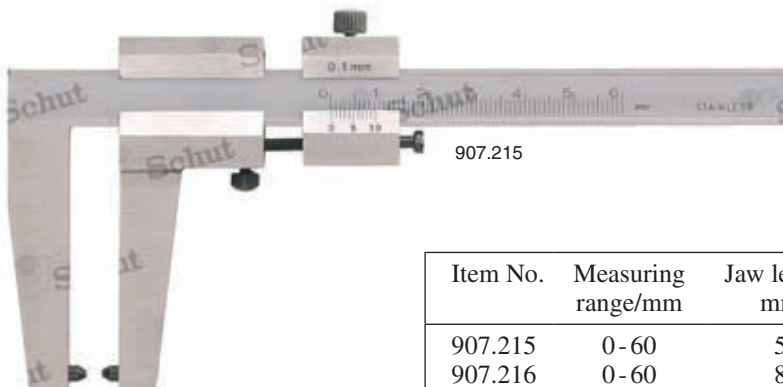
TECHNOBEARING

Item No.	Measuring range/mm	Effective jaw length mm	Price RUB
906.824	15 - 150	50	
906.825*	25 - 150	130	
906.826	18 - 200	65	
906.827*	25 - 200	130	
906.828	20 - 300	80	
906.829*	25 - 300	130	
<b>Option:</b>			
836.535	Spare battery		

## Brake disc calipers

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

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



907.215

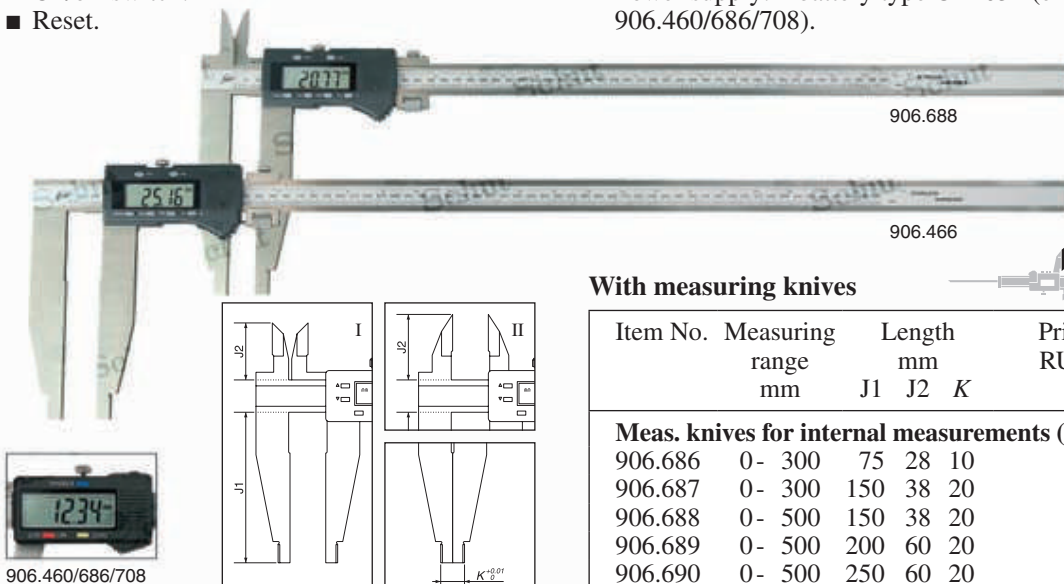
PRICE

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

## Absolute digital workshop calipers

- Measuring range: 0-2000 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- ABS/INC switchable (except 906.460/686/708).
- On/off switch.
- Reset.
- Preset (except 906.460/686/708).
- Memory for measuring values when the display is switched off.
- Fine adjustment.
- Rounded jaw ends for internal measurements.
- Power supply: 1 battery type CR2032 (except 906.460/686/708).

TECHNOBEARING



906.460/686/708

### Without measuring knives

Item No.	Measuring range mm	Length mm		Price RUB
		J1	K	
906.708	0- 300	75	10	
906.709	0- 300	150	20	
906.465	0- 500	150	20	
906.470	0- 500	200	20	
906.718	0- 500	250	20	
906.466	0- 600	150	20	
906.471	0- 600	200	20	
906.719	0- 600	300	20	
906.467	0-1000	200	20	
906.472	0-1000	300	20	
906.468	0-1500	200	20	
906.473	0-1500	300	20	
906.469	0-2000	200	20	
906.474	0-2000	300	20	

Item No.	Description	Price RUB
495.157	Spare battery type CR2032	
836.535	Spare battery type V357	

### With measuring knives

Item No.	Measuring range mm	Length mm			Price RUB
		J1	J2	K	
<b>Meas. knives for internal measurements (I):</b>					
906.686	0- 300	75	28	10	
906.687	0- 300	150	38	20	
906.688	0- 500	150	38	20	
906.689	0- 500	200	60	20	
906.690	0- 500	250	60	20	
906.691	0- 600	150	45	20	
906.692	0- 600	200	60	20	
906.693	0- 600	300	60	20	
906.694	0-1000	200	60	20	
906.695	0-1000	300	60	20	
906.696	0-1500	200	60	20	
906.697	0-1500	300	60	20	
906.698	0-2000	200	60	20	
906.699	0-2000	300	60	20	
<b>Meas. knives for external measurements (II):</b>					
906.460	0- 300	75	38	10	
906.758	0- 300	150	56	20	
906.461	0- 500	150	56	20	
906.759	0- 500	200	67	20	
906.760	0- 500	250	80	20	
906.761	0- 600	150	56	20	
906.762	0- 600	200	67	20	
906.763	0- 600	300	80	20	
906.462	0-1000	200	67	20	
906.764	0-1000	300	80	20	
906.463	0-1500	200	80	20	
906.765	0-1500	300	80	20	
906.464	0-2000	200	80	20	
906.766	0-2000	300	80	20	

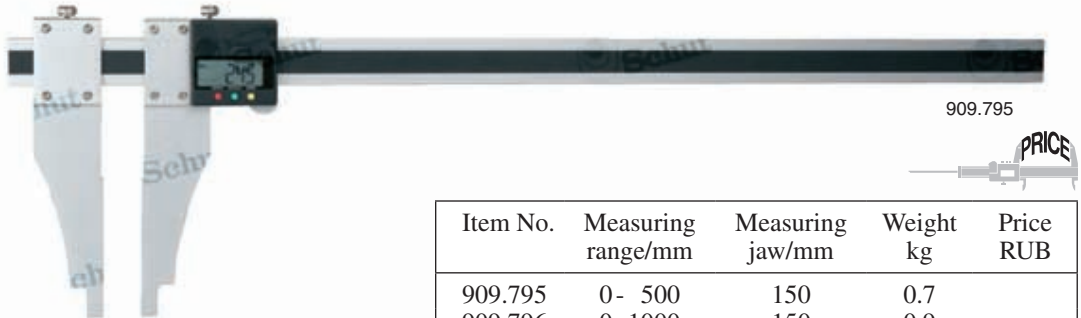


## Digital aluminum workshop calipers

Lightweight digital aluminum workshop calipers with both measuring jaws moveable.

- Measuring range: 0- 1500 mm.
- Resolution: 0.1 mm.
- mm/inch conversion.
- ABS/INC switchable.
- On/off switch.
- Reset.
- Aluminum scale with hollow construction (8 x 30 mm).
- Both of the measuring jaws can be moved.
- Delivery in a case.
- Power supply: 1 battery type V357.

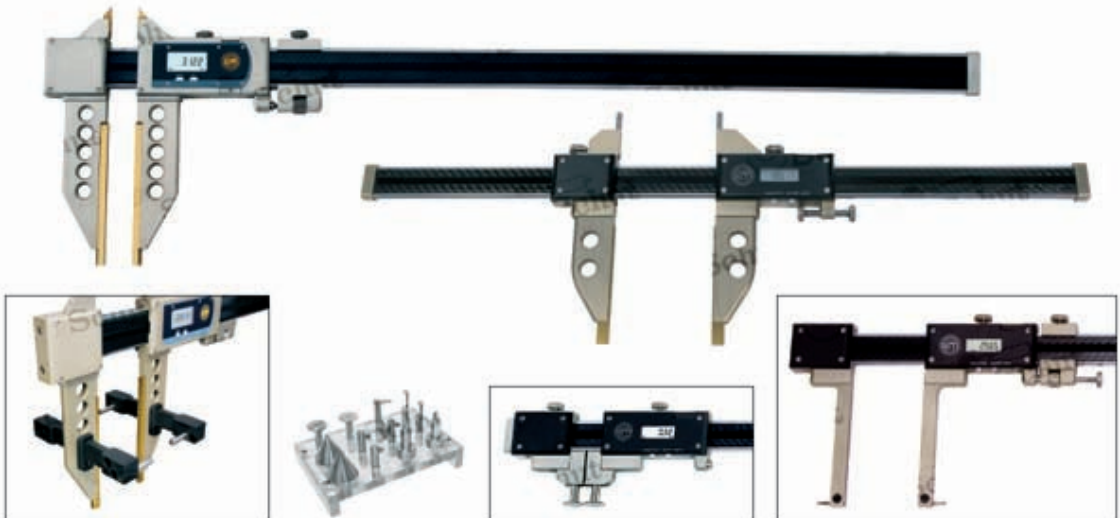
TECHNOBEARING



Item No.	Measuring range/mm	Measuring jaw/mm	Weight kg	Price RUB
909.795	0- 500	150	0.7	
909.796	0- 1000	150	0.9	
909.797	0- 1500	150	1.1	
<b>Option:</b>				
836.535	Spare battery			

## Digital lightweight carbon workshop calipers

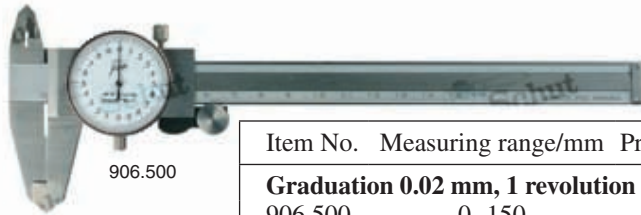
Different models are available in many lengths. Calipers can be supplied with for instance extra long measuring jaws, TiN coated or hardened measuring jaws or both measuring jaws moveable. There are also models where special inserts or slide on probes can be used for measuring for instance center distances,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



## Dial calipers

Stainless steel dial calipers with protected rack.

- Measuring range: 0 - 300 mm.
- Graduation: 0.01 or 0.02 mm.
- 1 pointer revolution = 1 or 2 mm.
- Rotatable dial.
- Thumb wheel.
- DIN 862.



Item No.	Measuring range/mm	Price RUB
<b>Graduation 0.02 mm, 1 revolution = 2 mm:</b>		
906.500	0 - 150	
906.499	0 - 200	
906.501	0 - 300	
<b>Graduation 0.01 mm, 1 revolution = 1 mm:</b>		
906.498	0 - 150	



## High-quality plastic calipers from Switzerland

These modern designed Swiss calipers are made of fiberglass re-enforced plastic, which makes them very firm and light, wear-proof, and resistant to all kinds of chemicals – ideal for the workshop! Each model is equipped with an easy read-out. Combined with the low price a line of very attractive calipers.

For 100 pieces or more the calipers and folding rules are available with prints. This gives you the opportunity to promote your company name or logo in an easy way and is within your own company, as well when used as a business gift, an outstanding marker. For more information about the printing possibilities please contact our sales department.

- Measuring range: 0 - 150 mm.
- Accuracy:  $\pm(0.1+0.001L)$  mm ( $L$  in mm).
- Thumb wheel.
- Delivery in a case.

### Vernier caliper

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

### Dial caliper

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

### Digital caliper

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



TECHNOBEARING



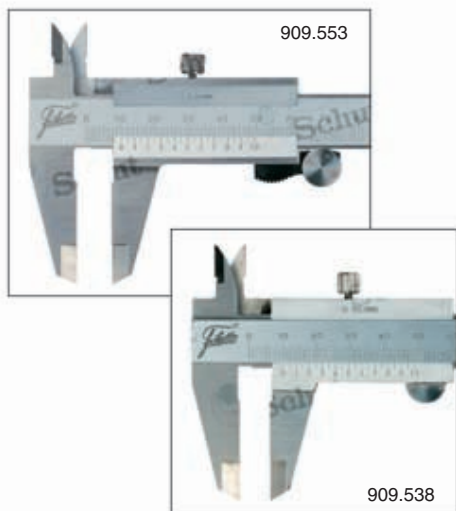
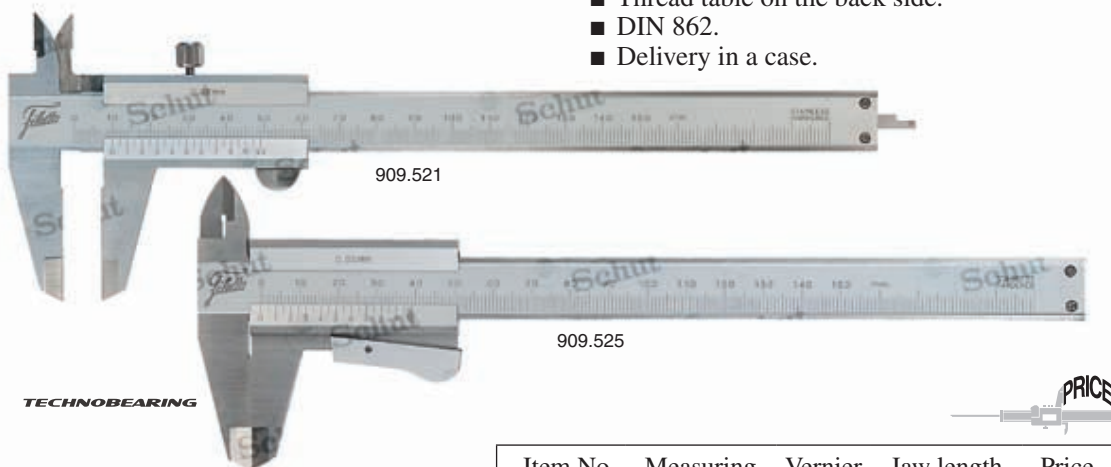
837.209:  
set with folding  
rule of 1 m

Item No.	Description	Price RUB
837.207	Vernier caliper	
837.205	Dial caliper	
837.209	Set of dial caliper 837.205 with a folding rule of 1 m	
837.201	Digital caliper	
<b>Option:</b>		
836.535	Spare battery	

## Calipers

Hardened stainless steel calipers with no-glare chrome finished scale and vernier.

- Measuring range: 0-300 mm.
- Vernier: 0.05 or 0.02 mm.
- Raised sliders (except 909.538).
- Monoblock.
- Locking screw or spring release.
- Flat depth rod.
- Thread table on the back side.
- DIN 862.
- Delivery in a case.



Item No.	Measuring range/mm	Vernier mm	Jaw length mm	Price RUB
<b>Locking screw on top:</b>				
909.541	0-150	0.02	40	
909.542	0-160	0.02	40	
909.543	0-200	0.02	50	
909.544	0-300	0.02	62	
<b>Locking screw on top:</b>				
909.520	0-100	0.05	30	
909.521	0-150	0.05	40	
909.522	0-160	0.05	40	
909.523	0-200	0.05	50	
909.524	0-300	0.05	62	
<b>With thumb wheel (locking screw on top):</b>				
909.553	0-150	0.05	40	
909.554	0-200	0.05	50	
909.555	0-300	0.05	62	
<b>Parallax-free (locking screw on top):</b>				
909.538	0-150	0.05	40	
<b>Spring release:</b>				
909.525	0-150	0.05	40	
909.526	0-160	0.05	40	
909.527	0-200	0.05	50	
909.528	0-300	0.05	62	
<b>Spring release, left-handed model:</b>				
906.046	0-150	0.05	40	
906.047	0-150	0.02	40	

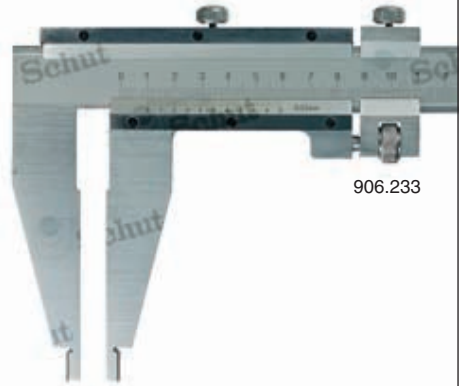
## Workshop calipers

Hardened stainless steel workshop calipers with no-glare chrome finished scale and vernier.

- Measuring range: 0- 1500 mm.
- Vernier: 0.02 mm.
- Raised sliders.
- Fine adjustment.
- With measuring knives or rounded jaw ends for internal measurements.
- Locking screws.
- DIN 862.
- Delivery in a case.



906.230



906.233

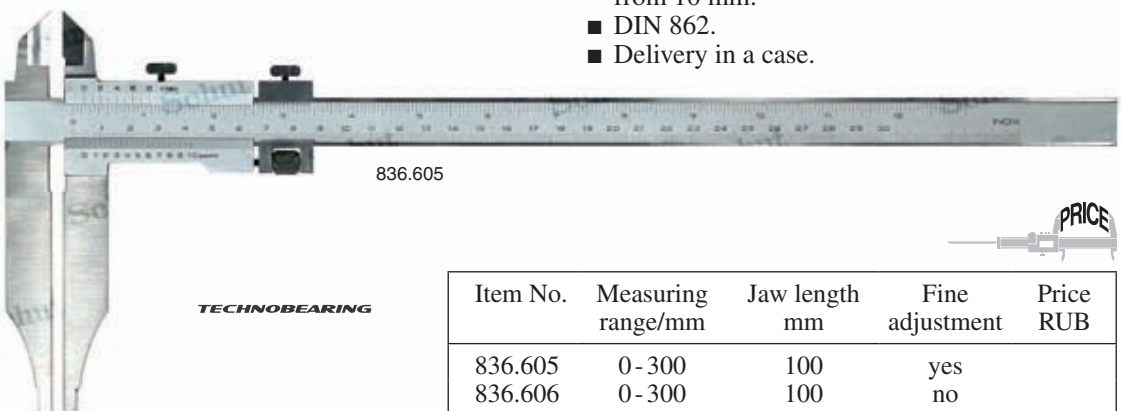


Item No.	Measuring range mm	Internal measurements from/mm	Jaw length mm	Price RUB
<b>With measuring knives for internal measurements:</b>				
906.230	0- 300	–	65	
<b>With rounded jaw ends for internal measurements:</b>				
906.231	0- 300	10	80	
906.233	0- 500	10	100	
906.234	0- 600	10	100	
906.235	0-1000	20	125	
906.236	0-1500	20	125	

## Workshop calipers with extended jaw lengths

Hardened stainless steel workshop calipers with no-glare chrome finished scale and vernier.

- Measuring range: 0-300 mm.
- Vernier: 0.05 mm / 1/128 inch.
- Raised sliders.
- With or without fine adjustment.
- Measuring knives for external measurements.
- Rounded jaw ends for internal measurements from 10 mm.
- DIN 862.
- Delivery in a case.



836.605



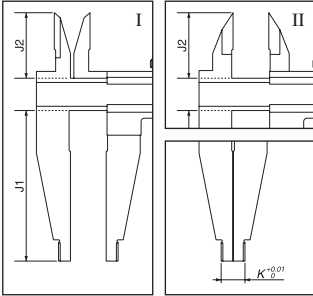
Item No.	Measuring range/mm	Jaw length mm	Fine adjustment	Price RUB
836.605	0-300	100	yes	
836.606	0-300	100	no	

TECHNOBEARING

## Workshop calipers

Large and solid, stainless steel calipers with no-glare chrome finished scale and vernier.

- Measuring range: 0-2000 mm.
- Vernier: 0.02 mm / 1/1000 inch or 0.05 mm / 1/128 inch.
- Fine adjustment.
- With or without measuring knives for internal or external measurements.
- Monoblock.
- Rounded jaw ends for internal measurements; measuring range ≤600 mm:  $K=10$  mm, measuring range >600 mm:  $K=20$  mm.
- DIN 862.
- Delivery in a case with a declaration of conformity.



### Vernier 0.05 mm / 1/128 inch

Item No.	Measuring range mm	Length mm			Price RUB
		J1	J2	K	
<b>Without measuring knives:</b>					
909.670	0- 300	90	-	10	
909.620	0- 450	150	-	10	
909.621	0- 500	150	-	10	
909.622	0- 600	150	-	10	
909.623	0- 800	150	-	20	
909.624	0-1000	150	-	20	
909.639	0-1500	200	-	20	
909.640	0-2000	200	-	20	
<b>Meas. knives for internal measurements (I):</b>					
909.672	0- 300	90	22	10	
909.632	0- 400	100	46	10	
909.633	0- 500	150	46	10	
909.634	0- 600	150	46	10	
909.635	0- 750	150	54	20	
909.636	0-1000	150	54	20	
909.637	0-1500	200	66	20	
909.638	0-2000	200	66	20	
<b>Meas. knives for external measurements (II):</b>					
909.674	0- 300	90	22	10	
909.656	0- 400	100	46	10	
909.657	0- 500	150	46	10	
909.658	0- 600	150	46	10	
909.659	0- 750	150	54	20	
909.660	0-1000	150	54	20	
909.661	0-1500	200	66	20	
909.662	0-2000	200	66	20	

### Vernier 0.02 mm / 1/1000 inch

Item No.	Measuring range mm	Length mm			Price RUB
		J1	J2	K	
<b>Without measuring knives:</b>					
909.671	0- 300	90	-	10	
909.615	0- 450	150	-	10	
909.616	0- 500	150	-	10	
909.617	0- 600	150	-	10	
909.618	0- 800	150	-	20	
909.619	0-1000	150	-	20	
909.641	0-1500	200	-	20	
909.642	0-2000	200	-	20	
<b>Meas. knives for internal measurements (I):</b>					
909.673	0- 300	90	22	10	
909.625	0- 400	100	46	10	
909.626	0- 500	150	46	10	
909.627	0- 600	150	46	10	
909.628	0- 750	150	55	20	
909.629	0-1000	150	55	20	
909.630	0-1500	200	66	20	
909.631	0-2000	200	66	20	
<b>Meas. knives for external measurements (II):</b>					
909.675	0- 300	90	22	10	
909.663	0- 400	100	46	10	
909.664	0- 500	150	46	10	
909.665	0- 600	150	46	10	
909.666	0- 750	150	55	20	
909.667	0-1000	150	55	20	
909.668	0-1500	200	66	20	
909.669	0-2000	200	66	20	

PRICE

## Probe set for calipers

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

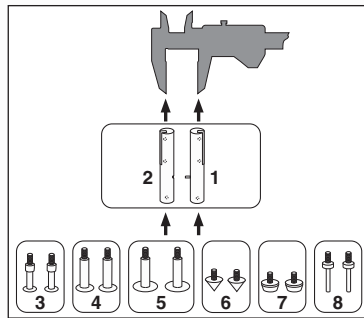
- Maximum jaw thickness: 3.2 mm.
- Delivery in a wooden case.

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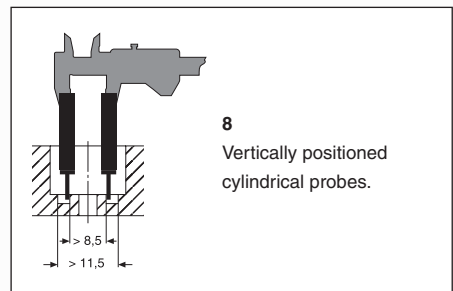
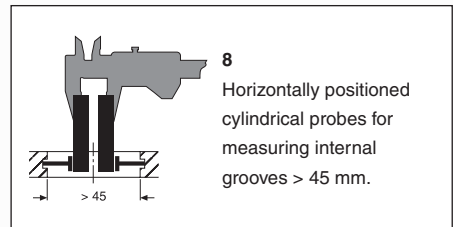
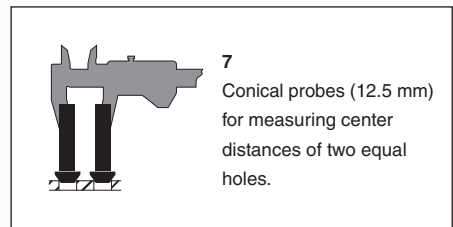
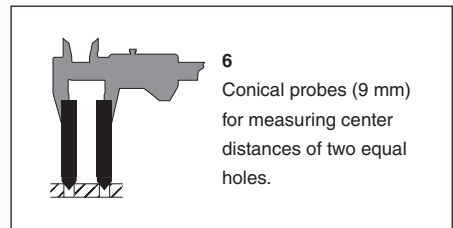
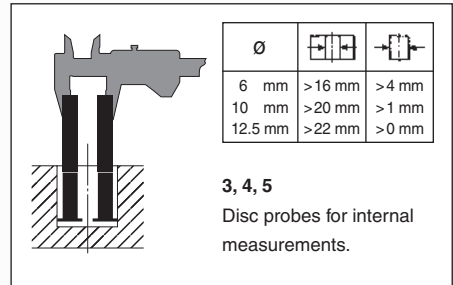


### The set consists of:

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



Item No.	Description	Price RUB
909.655	Probe set for calipers	





### Caliper inspection set

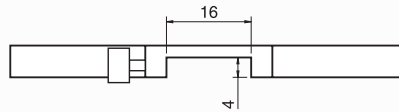
For checking the accuracy of DIN 862 calipers. The set consists of three special steel gauge blocks (30 mm, 41.3 mm and 131.4 mm, ISO 3650 class 1), two steel setting rings (ø4 mm and ø25 mm) and a pair of gloves.



Item No.	Description	Price RUB
909.347	Caliper inspection set	

### Depth measuring base for calipers

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



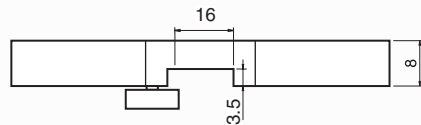
Item No.	Measuring face l x w/mm	Price RUB
909.156	75 x 6	

### Depth measuring bases for calipers

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



909.386



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

TECHNOBEARING

## Soft cases for calipers

Protect calipers during transport and storage.

- For regular shaped calipers (analog, digital and dial type).

- Made of synthetic leather.



Item No.	For meas. range/mm	Price RUB
909.494	100	
909.495	150	
909.496	160	
909.497	200	
909.498	300	

## Digital protractor

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

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

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Item No.	Description	Price RUB
855.803	Digital protractor	
<b>Options:</b>		
497.914	Spare battery (2 needed)	
905.338	Digimatic cable, 1 m	
905.409	Digimatic cable, 2 m	

## Measuring instruments set

- Caliper 0- 150 mm, vernier 0.02 mm.
- Micrometer 0- 25 mm, graduation 0.01 mm.
- Precision square 100 x 70 mm.
- Ruler 0- 150 mm.
- Adjustment tool.



Item No.	Description	Price RUB
906.176	Meas. instruments set	



## Depth calipers

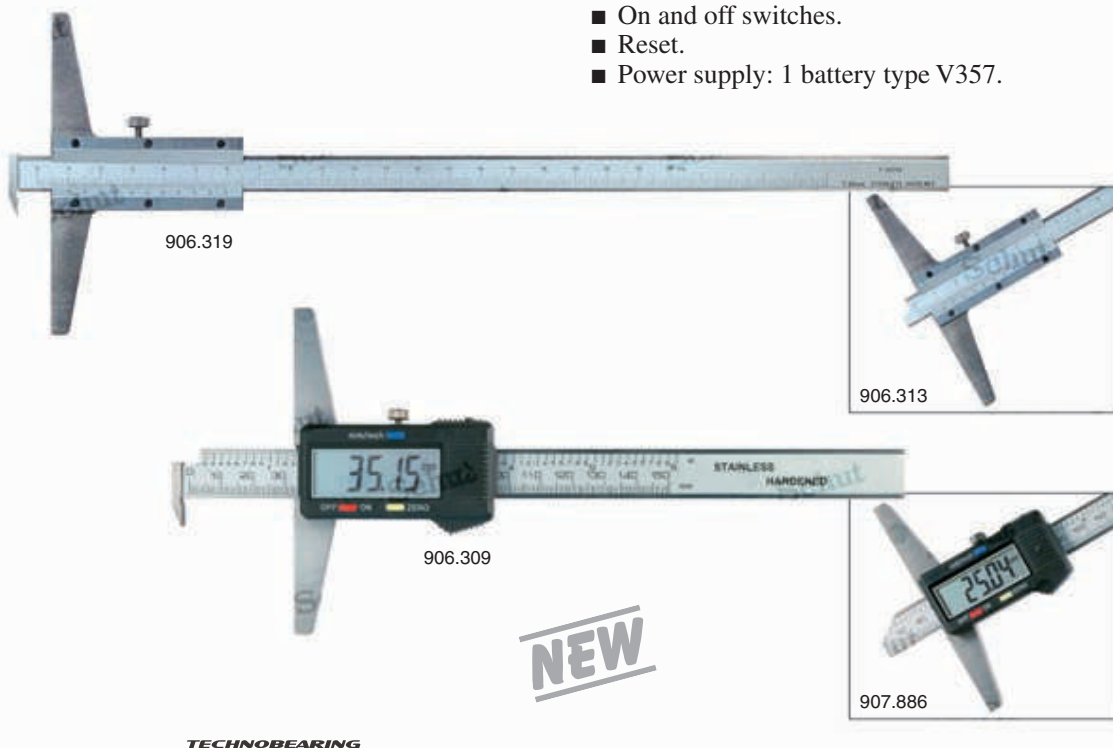
- Measuring range: 0 - 500 mm.
- Analog: vernier 0.02 mm, digital: resolution 0.01 mm.
- With or without hook (8 x 3 mm, l x w).
- Locking screw.

### Analog

- Stainless steel construction.
- No-glare chrome finished scale and vernier.

### Digital

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



### Analog

Item No.	Measuring range/mm	Base length/mm	Price RUB
<b>Without hook:</b>			
906.314	0 - 150	100	
906.313	0 - 200	100	
906.315	0 - 300	100	
906.317	0 - 500	100	
<b>With hook:</b>			
906.318	0 - 150	100	
906.319	0 - 200	100	
906.321	0 - 300	100	
906.322	0 - 500	100	

### Digital

Item No.	Measuring range/mm	Base length/mm	Price RUB
<b>Without hook:</b>			
907.886	0 - 150	100	
907.887	0 - 200	100	
907.888	0 - 300	100	
907.898	0 - 500	100	
<b>With hook:</b>			
906.309	0 - 150	100	
906.310	0 - 200	100	
906.311	0 - 300	100	
906.312	0 - 500	100	
<b>Option:</b>			
836.535	Spare battery		

## Depth calipers

Depth calipers with or without hook.

- Measuring range: 0-300 mm.
- Vernier: 0.05 mm.
- No-glare chrome finished scale and vernier.
- Monoblock.
- Stainless steel construction.
- DIN 862.
- Larger measuring ranges available on request.

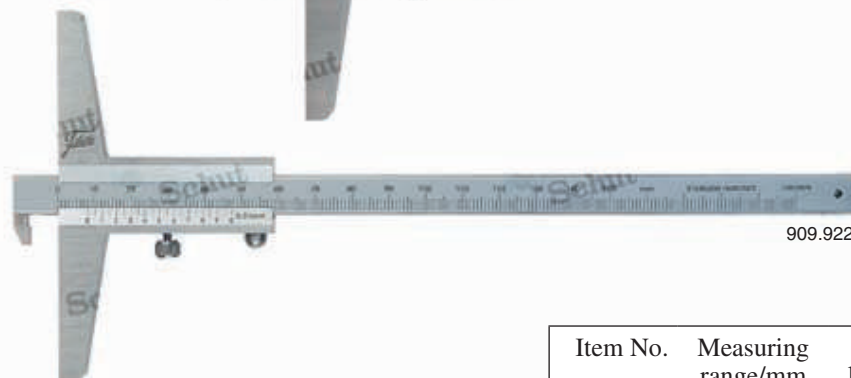
TECHNOBEARING



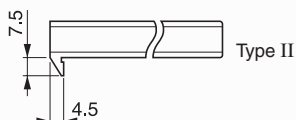
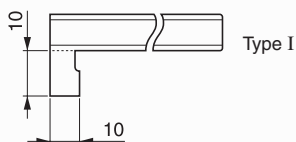
909.910



909.916



909.922



Item No.	Measuring range/mm	Base length/mm	Price RUB
<b>Without hook:</b>			
909.910	0-150	100	
909.911	0-200	100	
909.912	0-300	100	
<b>With hook (type I):</b>			
909.916	0-150	100	
909.917	0-200	100	
909.918	0-300	100	
<b>With hook (type II):</b>			
909.922	0-150	100	
909.923	0-200	100	
909.924	0-300	100	

### Digital depth gauge

- Measuring range: 0-21.5 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- On/off switch.
- Reset.
- Measuring face: 45 x 6 mm.
- Measuring pin: 6 x 2 mm, taper to 4 x 2 mm.
- Power supply: 1 battery type V357.



Item No.	Measuring range/mm	Price RUB
907.861	0-21.5	
<b>Option:</b>		
836.535	Spare battery	

### Depth gauge with dial

- Measuring range: 0-25 mm.
- Graduation: 0.1 mm.
- Measuring face: 60 x 25 mm.
- Measuring pin:  $\varnothing 3$  mm.

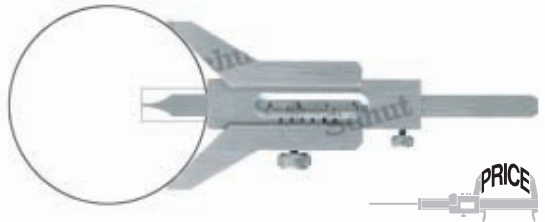


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Item No.	Measuring range/mm	Price RUB
853.110	0-25	

### Depth calipers for keyway depths

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



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

### Käfer depth dial indicators

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



Item No.	Measuring range/mm	Price RUB
852.383	0-10	
852.384	0-30	
<b>Options:</b>		
852.385	Measuring pin $\varnothing 2$ mm	
907.153	Meas. base 63 x 17 mm	
907.165	Meas. base 101.5 x 17 mm*	

\* Larger sizes available on request.

## Digital depth micrometers IP65

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

- Measuring range: 0-300 mm.
- Resolution: 0.001 mm.
- mm/inch conversion.
- ABS/INC switchable.
- Automatic switch-off.
- Preset.
- Measuring rods:  $\varnothing 4.5$  mm.
- Locking screw.
- Protection: IP65.
- DIN 863 T2.
- Power supply: 1 battery type V357.



### Model with spherical rods especially for hollow and beveled surfaces

Item No.	Price RUB	Item No.	Price RUB	Measuring range/mm	Accuracy mm	Number of rods
<b>Base 63 mm:</b>		<b>Base 101.5 mm:</b>				
909.753		909.759		0- 25	$\pm 0.005$	1
909.754		909.760		0- 50	$\pm 0.005$	2
909.755		909.761		0-100	$\pm 0.006$	4
909.756		909.762		0-150	$\pm 0.007$	6
909.757		909.763		0-200	$\pm 0.008$	8
909.758		909.764		0-300	$\pm 0.009$	12

### Model with flat rods especially for flat and spherical surfaces

Item No.	Price RUB	Item No.	Price RUB	Measuring range/mm	Accuracy mm	Number of rods
<b>Base 63 mm:</b>		<b>Base 101.5 mm:</b>				
909.765		909.771		0- 25	$\pm 0.005$	1
909.766		909.772		0- 50	$\pm 0.005$	2
909.767		909.773		0-100	$\pm 0.006$	4
909.768		909.774		0-150	$\pm 0.007$	6
909.769		909.775		0-200	$\pm 0.008$	8
909.770		909.776		0-300	$\pm 0.009$	12

### Option

Item No.	Description	Price RUB
836.535	Spare battery	

TECHNOBEARING



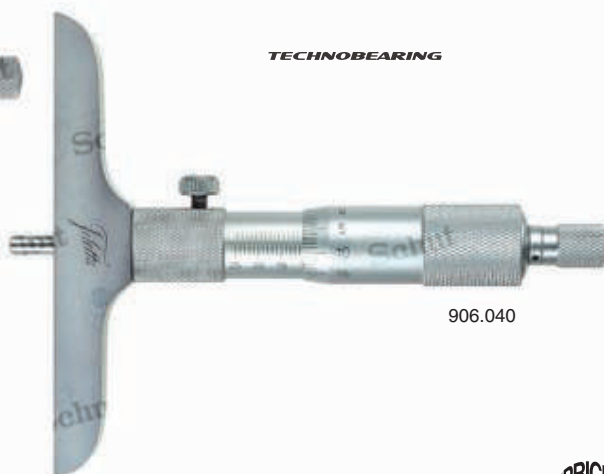
## Depth micrometers

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

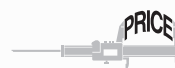
- Measuring range: 0-300 mm.
- Graduation: 0.01 mm.
- Measuring rods:  $\varnothing 4.5$  mm.
- Locking screw.
- DIN 863 T2.



906.970



906.040



### Model with spherical rods especially for hollow and beveled surfaces

Item No.	Price RUB	Item No.	Price RUB	Measuring range/mm	Accuracy mm	Number of rods
<b>Base 63 mm:</b>		<b>Base 101.5 mm:</b>				
906.964		906.040		0- 25	$\pm 0.005$	1
906.965		906.039		0- 50	$\pm 0.005$	2
906.966		906.041		0-100	$\pm 0.006$	4
906.967		906.042		0-150	$\pm 0.007$	6
906.968		906.043		0-200	$\pm 0.008$	8
906.969		906.044		0-300	$\pm 0.009$	12

### Model with flat rods especially for flat and spherical surfaces

Item No.	Price RUB	Item No.	Price RUB	Measuring range/mm	Accuracy mm	Number of rods
<b>Base 63 mm:</b>		<b>Base 101.5 mm:</b>				
906.970		906.976		0- 25	$\pm 0.005$	1
906.971		906.977		0- 50	$\pm 0.005$	2
906.972		906.978		0-100	$\pm 0.006$	4
906.973		906.979		0-150	$\pm 0.007$	6
906.974		906.980		0-200	$\pm 0.008$	8
906.975		906.981		0-300	$\pm 0.009$	12

## Micrometers / Micrometer heads



Accuracy of micrometers according DIN 863	
Measuring range (mm)	Max. permissible errors (µm)
0 - 25	4
25 - 50	4
50 - 75	5
75 - 100	5
100 - 125	6
125 - 150	6
150 - 175	7
175 - 200	7
200 - 225	8
225 - 250	8
250 - 275	9
275 - 300	9
300 - 325	10
325 - 350	10
350 - 375	11
375 - 400	11
400 - 425	12
425 - 450	12
450 - 475	13
475 - 500	13

## Digital micrometers

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

- Measuring range: 0-200 mm.
- Resolution: 0.001 mm.
- Automatic switch-off.
- Reset/preset.
- Tungsten carbide measuring faces:  $\varnothing 6.5$  mm.
- DIN 863 T1.
- From measuring range 25 - 50 mm including setting gauge.
- Power supply: 1 battery type V357.



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Item No.	Measuring range/mm	Accuracy mm	Price RUB
<b>Not switchable:</b>			
908.750	0- 25	$\pm 0.004$	
908.751	25- 50	$\pm 0.004$	
908.752	50- 75	$\pm 0.005$	
908.753	75- 100	$\pm 0.005$	
908.754	100- 125	$\pm 0.006$	
908.755	125- 150	$\pm 0.006$	
908.756	150- 175	$\pm 0.007$	
908.757	175- 200	$\pm 0.007$	
<b>Switchable mm/inch and ABS/INC:</b>			
908.758	0- 25	$\pm 0.004$	
908.759	25- 50	$\pm 0.004$	
908.760	50- 75	$\pm 0.005$	
908.761	75- 100	$\pm 0.005$	
908.762	100- 125	$\pm 0.006$	
908.763	125- 150	$\pm 0.006$	
908.764	150- 175	$\pm 0.007$	
908.765	175- 200	$\pm 0.007$	



908.766

### Sets

Item No.	Measuring range/mm	Pieces	Price RUB
<b>Not switchable:</b>			
908.766	0- 75	3	
908.767	0-100	4	
908.768	0- 150	6	
<b>Switchable mm/inch and ABS/INC:</b>			
908.769	0- 75	3	
908.770	0-100	4	
908.771	0- 150	6	

### Option

Item No.	Description	Price RUB
836.535	Spare battery	

## Digital micrometers

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

- Measuring range: 0- 150 mm.
- Resolution: 0.001 mm.
- mm/inch conversion.
- ABS/INC switchable.
- Automatic switch-off.
- Reset/preset.
- Tungsten carbide measuring faces:  $\phi 6.5$  mm.
- From measuring range 25- 50 mm including setting gauge.

- Delivery in a case with ball attachment and an inspection report.
- Power supply: 1 battery type CR2032.



Item No.	Measuring range/mm	Accuracy mm	Price RUB
909.982	0- 25	$\pm 0.003$	
909.983	25- 50	$\pm 0.003$	
909.984	50- 75	$\pm 0.004$	
909.985	75- 100	$\pm 0.004$	
909.986	100- 125	$\pm 0.005$	
909.987	125- 150	$\pm 0.005$	

**Option:**  
495.157 Spare battery

## Digital micrometers with double display

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

- Measuring range: 0- 205 mm.
- Resolution: 0.001 mm.
- mm/inch conversion.
- ABS/INC switchable.
- Double LCD display.
- Second display can be switched on/off separately.

TECHNOBEARING

- Automatic switch-off.
- Reset/preset.
- Tungsten carbide measuring faces:  $\phi 6.5$  mm.
- DIN 863 T1.
- From measuring range 25- 55 mm including setting gauge.
- Delivery in a case.
- Power supply: 1 battery type CR2032.



Item No.	Measuring range/mm	Accuracy mm	Price RUB
907.682	0- 30	$\pm 0.004$	
907.683	25- 55	$\pm 0.004$	
907.684	50- 80	$\pm 0.005$	
907.685	75- 105	$\pm 0.005$	
907.686	100- 130	$\pm 0.006$	
907.687	125- 155	$\pm 0.006$	
907.688	150- 180	$\pm 0.007$	
907.689	175- 205	$\pm 0.007$	

**Option:**  
495.157 Spare battery

## Digital micrometers with tolerance indication

These absolute digital micrometers are provided with both a tolerance and a hold function. They also have a large display.

- Measuring range: 0- 100 mm.
- Resolution: 0.001 mm.
- mm/inch conversion.
- ABS/INC switchable.
- Digit height: 9 mm.
- Automatic switch-off.
- Reset/preset.
- Hold function.
- Adjustable tolerance limits.
- Tungsten carbide measuring faces:  $\varnothing 6.5$  mm.
- DIN 863 T1.
- Power supply: 1 battery type V357.



907.570

TECHNOBEARING



Item No.	Measuring range/mm	Accuracy mm	Price RUB
907.570	0- 25	$\pm 0.004$	
907.571	25- 50	$\pm 0.004$	
907.572	50- 75	$\pm 0.005$	
907.573	75- 100	$\pm 0.005$	
<b>Option:</b>			
836.535	Spare battery		

## Micrometers with counter

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

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



906.556



### Sets (delivered incl. setting gauges)

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

Item No.	Measuring range/mm	Accuracy mm	Price RUB
906.556	0- 25	$\pm 0.01$	
906.557	25- 50	$\pm 0.01$	
906.558	50- 75	$\pm 0.01$	
906.559	75- 100	$\pm 0.01$	
906.560	100- 125	$\pm 0.02$	
906.561	125- 150	$\pm 0.02$	
906.562	150- 175	$\pm 0.02$	
906.563	175- 200	$\pm 0.02$	

## Digital micrometers IP54

- Measuring range: 0 - 150 mm.
- Resolution: 0.001 mm.
- mm/inch conversion.
- Automatic switch-off.
- Reset.
- Tungsten carbide measuring faces:  $\varnothing 6.5$  mm.
- Protection: IP54.
- DIN 863 T1.
- From measuring range 25 - 50 mm including setting gauge.
- Power supply: 1 battery type V357.



910.041

NEW



### Sets

Item No.	Measuring range/mm	Pieces	Price RUB
910.053	0 - 75	3	
910.054	0 - 100	4	
910.055	0 - 150	6	

Item No.	Measuring range/mm	Accuracy mm	Price RUB
910.041	0 - 25	$\pm 0.004$	
910.042	25 - 50	$\pm 0.004$	
910.043	50 - 75	$\pm 0.005$	
910.044	75 - 100	$\pm 0.005$	
910.045	100 - 125	$\pm 0.006$	
910.046	125 - 150	$\pm 0.006$	
<b>Option:</b>			
836.535	Spare battery		

## Digital micrometers IP65

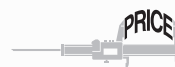
These IP65 protected micrometers are especially suitable for use in production environments.

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



909.988

TECHNOBEARING



Item No.	Measuring range/mm	Accuracy mm	Price RUB
909.988	0 - 25	$\pm 0.003$	
909.989	25 - 50	$\pm 0.003$	
909.990	50 - 75	$\pm 0.004$	
909.991	75 - 100	$\pm 0.004$	
<b>Option:</b>			
495.157	Spare battery		



## Digital fast adjustable external measuring instruments

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

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

TECHNOBEARING



**NEW**



Item No.	Measuring range/mm	Accuracy mm	Price RUB
909.994	0 - 25	$\pm 0.003$	
909.995	25 - 50	$\pm 0.003$	
909.996	50 - 75	$\pm 0.004$	
909.997	75 - 100	$\pm 0.004$	
<b>With Bluetooth:</b>			
910.075	0 - 25	$\pm 0.003$	
<b>Options:</b>			
495.157	Spare battery		
909.686	USB interface		
909.687	Footswitch		
910.038	Wireless USB receiver		
910.039	Wireless sender		

## Digital micrometers IP65

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

- Measuring range: 0- 300 mm.
- Resolution: 0.001 mm.
- mm/inch conversion.
- ABS/INC switchable.
- On/off switch.
- Automatic switch-off.
- Tungsten carbide measuring faces:  $\varnothing 6.5$  mm.
- Protection: IP65.
- DIN 863 T1.
- From measuring range 25 - 50 mm including setting gauge.
- Power supply: 1 battery type V357.

### Fast adjustable micrometers

- 1 revolution of the thimble = 2 mm.



909.549



909.545

TECHNOBEARING

### Fast adjustable micrometers



Item No.	Measuring range/mm	Accuracy mm	Price RUB
909.549	0- 25	$\pm 0.002$	
909.550	25- 50	$\pm 0.002$	
909.551	50- 75	$\pm 0.003$	
909.552	75- 100	$\pm 0.003$	
909.556	100- 125	$\pm 0.003$	
909.557	125- 150	$\pm 0.003$	
909.558	150- 175	$\pm 0.004$	
909.559	175- 200	$\pm 0.004$	
909.560	200- 225	$\pm 0.004$	
909.561	225- 250	$\pm 0.004$	
909.562	250- 275	$\pm 0.005$	
909.563	275- 300	$\pm 0.005$	

#### Option:

836.535 Spare battery

Item No.	Measuring range/mm	Accuracy mm	Price RUB
909.545	0- 25	$\pm 0.002$	
909.546	25- 50	$\pm 0.002$	
909.547	50- 75	$\pm 0.003$	
909.548	75- 100	$\pm 0.003$	

### Sets

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

## Micrometers

- Measuring range: 0 - 300 mm.
- Graduation: 0.01 mm.
- Friction thimble.
- Tungsten carbide measuring faces:  $\phi 6.5$  mm.
- DIN 863 T1.
- From measuring range 25 - 50 mm including setting gauge.



TECHNOBEARING



906.059



906.057



906.056



Item No.	Measuring range/mm	Accuracy mm	Price RUB
906.000	0 - 25	$\pm 0.004$	
906.001	25 - 50	$\pm 0.004$	
906.002	50 - 75	$\pm 0.005$	
906.003	75 - 100	$\pm 0.005$	
906.004	100 - 125	$\pm 0.006$	
906.005	125 - 150	$\pm 0.006$	
906.006	150 - 175	$\pm 0.007$	
906.007	175 - 200	$\pm 0.007$	
906.008	200 - 225	$\pm 0.008$	
906.009	225 - 250	$\pm 0.008$	
906.010	250 - 275	$\pm 0.009$	
906.011	275 - 300	$\pm 0.009$	
<b>Model for left- and right-handed use:</b>			
907.167	0 - 25	$\pm 0.004$	
907.168	25 - 50	$\pm 0.004$	
907.169	50 - 75	$\pm 0.005$	
907.170	75 - 100	$\pm 0.005$	

### Sets

Item No.	Measuring range/mm	Price RUB
906.055	0 - 75	
906.056	0 - 100	
906.057	0 - 150	
906.058	150 - 300	
906.059	0 - 300	



907.167

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

## Micrometers 0.001 mm, parallax-free

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

- Measuring range: 0-200 mm.
- Vernier: 0.001 mm, parallax-free by enlarged thimble.
- Friction thimble.
- Tungsten carbide measuring faces:  $\varnothing 6.5$  mm.
- DIN 863 T1.
- Delivery incl. adjustment tool.
- From measuring range 25 - 50 mm including setting gauge.



906.280

Item No.	Measuring range/mm	Accuracy mm	Price RUB
906.280	0- 25	$\pm 0.004$	
906.281	25- 50	$\pm 0.004$	
906.282	50- 75	$\pm 0.005$	
906.283	75-100	$\pm 0.005$	
906.284	100-125	$\pm 0.006$	
906.285	125-150	$\pm 0.006$	
906.286	150-175	$\pm 0.007$	
906.287	175-200	$\pm 0.007$	

## Fast adjustable micrometers

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

- Measuring range: 0-200 mm.
- Graduation: 0.01 mm.
- 1 revolution of the thimble = 1 mm.
- Thimble with 100 step graduation.
- Tungsten carbide measuring faces:  $\varnothing 8$  mm.
- DIN 863 T1.
- From measuring range 25 - 50 mm including setting gauge.



907.000

Item No.	Measuring range/mm	Accuracy mm	Price RUB
907.000	0- 25	$\pm 0.004$	
907.001	25- 50	$\pm 0.004$	
907.002	50- 75	$\pm 0.005$	
907.003	75-100	$\pm 0.005$	
907.004	100-125	$\pm 0.006$	
907.005	125-150	$\pm 0.006$	
907.006	150-175	$\pm 0.007$	
907.007	175-200	$\pm 0.007$	

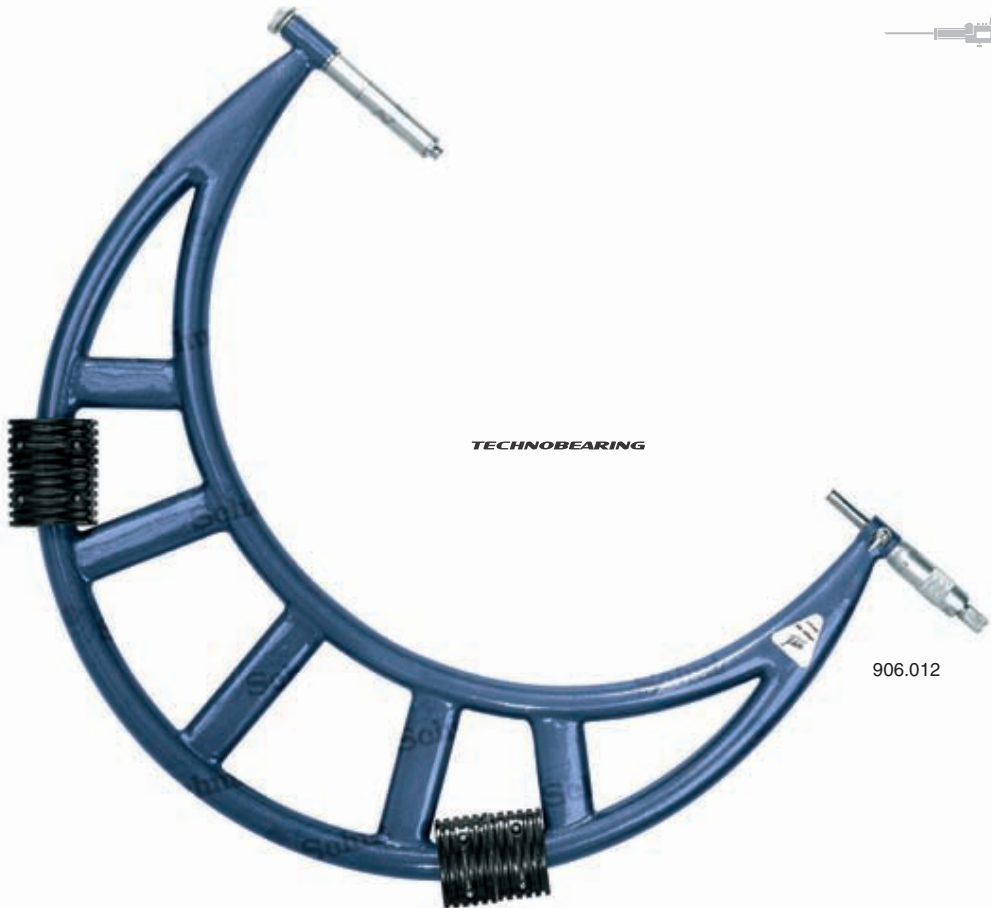
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## Micrometers with a large measuring range

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

- Measuring range: 300 - 2000 mm.
- Measuring span:
  - 300 - 1000 mm: 100 mm (travel 25 mm, spacers 25 and 50 mm),
  - 1000 - 2000 mm: 200 mm (travel 50 mm, spacers 50 and 100 mm).
- Graduation: 0.01 mm.
- Rotating spindle.
- Tungsten carbide measuring faces:  $\varnothing 8$  mm.
- No-glare chrome finished thimble.
- DIN 863 T3.
- With two setting gauges.

Item No.	Measuring range/mm	Accuracy mm	Price RUB
<b>Measuring span 100 mm:</b>			
906.012	300 - 400	$\pm 0.011$	
906.013	400 - 500	$\pm 0.013$	
906.014	500 - 600	$\pm 0.015$	
906.015	600 - 700	$\pm 0.016$	
906.016	700 - 800	$\pm 0.018$	
906.017	800 - 900	$\pm 0.020$	
906.018	900 - 1000	$\pm 0.020$	
<b>Measuring span 200 mm:</b>			
906.019	1000 - 1200	$\pm 0.020$	
906.020	1200 - 1400	$\pm 0.024$	
906.021	1400 - 1600	$\pm 0.028$	
906.022	1600 - 1800	$\pm 0.031$	
906.023	1800 - 2000	$\pm 0.034$	



906.012

Delivery ex Groningen, Netherlands

## Micrometers with a large measuring range

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

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



906.290



Item No.	Measuring range/mm	Accuracy mm	Number of anvils	Number of setting gauges	Price RUB
906.290	0- 50	$\pm 0.004$	2	1	
906.294	0-100	$\pm 0.005$	4	3	
906.292	0-150	$\pm 0.006$	6	5	
906.291	50-100	$\pm 0.005$	2	2	
906.295	100-200	$\pm 0.007$	4	4	
906.293	150-300	$\pm 0.009$	6	6	
906.296	200-300	$\pm 0.009$	4	4	

## Micrometers with adjustable anvil with dial indicator

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

- Measuring range: 0-1000 mm.
- Graduation: 0.01 mm.
- Tungsten carbide measuring faces:  $\varnothing 8$  mm.

### Specifications dial indicator:

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



907.015

Item No.	Measuring range/mm	Accuracy mm	Price RUB
907.015	0- 100	$\pm 0.006$	
907.016	100- 200	$\pm 0.007$	
907.017	200- 300	$\pm 0.008$	
907.018	300- 400	$\pm 0.009$	
907.019	400- 500	$\pm 0.010$	
907.020	500- 600	$\pm 0.011$	
907.021	600- 700	$\pm 0.012$	
907.022	700- 800	$\pm 0.013$	
907.023	800- 900	$\pm 0.014$	
907.024	900-1000	$\pm 0.015$	

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## Digital micrometers IP65 with a large measuring range

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

TECHNOBEARING



909.580



Item No.	Measuring range/mm	Accuracy mm	Number of anvils	Number of setting gauges	Price RUB
909.580	0 - 100	$\pm 0.005$	4	3	
909.581	100 - 200	$\pm 0.007$	4	4	
909.582	200 - 300	$\pm 0.008$	4	4	
909.583	300 - 400	$\pm 0.009$	4	2	
909.584	400 - 500	$\pm 0.010$	4	2	
909.585	500 - 600	$\pm 0.010$	4	2	
909.586	600 - 700	$\pm 0.011$	4	2	
909.587	700 - 800	$\pm 0.012$	4	2	
909.588	800 - 900	$\pm 0.013$	4	2	
909.589	900 - 1000	$\pm 0.013$	4	2	
<b>Option:</b>					
836.535	Spare battery				

## Micrometers with dial indicator

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

- Measuring range: 0- 175 mm.
- Graduation thimble and dial indicator: 0.01 mm.
- Range adjustable anvil: 8 mm.
- Trigger for (fast) adjustment.
- Tungsten carbide measuring faces:  $\varnothing 6.5$  mm.
- Can also be used in combination with various other dial indicators with clamping stem  $\varnothing 8$  mm.



907.008

TECHNOBEARING



Item No.	Measuring range/mm	Accuracy mm	Price RUB
907.008	0- 25	$\pm 0.004$	
907.009	25- 50	$\pm 0.004$	
907.010	50- 75	$\pm 0.005$	
907.011	75-100	$\pm 0.005$	
907.012	100-125	$\pm 0.006$	
907.013	125-150	$\pm 0.006$	
907.014	150-175	$\pm 0.007$	

## Mini-micrometer

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



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

## Micrometer with an extra large measuring range

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

- Measuring range: 0- 50 mm.
- Graduation: 0.01 mm.
- Accuracy:  $\pm 0.004$  mm.
- Tungsten carbide measuring faces:  $\varnothing 6.5$  mm.
- Delivery incl. adjustment tool and prolonged anvil.



Item No.	Measuring range/mm	Accuracy mm	Price RUB
906.567	0- 50	$\pm 0.004$	

### Tolerance micrometers with precision dial indicator

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

- Measuring range: 0- 100 mm.
- Measuring range dial indicator:  $\pm 0.04$  mm.
- Graduation (dial indicator): 0.001 mm.
- Accuracy:  
micrometer:  $\pm 0.003$  mm (only 906.568),  
dial indicator:  $\pm 0.001$  mm.
- Measuring force: 5- 10 N (only 906.569/570/571/614).
- Adjustable tolerance markers.
- Tungsten carbide measuring faces:  
906.568- 599:  $\varnothing 6.5$  mm,  
906.569- 614:  $\varnothing 10$  mm.



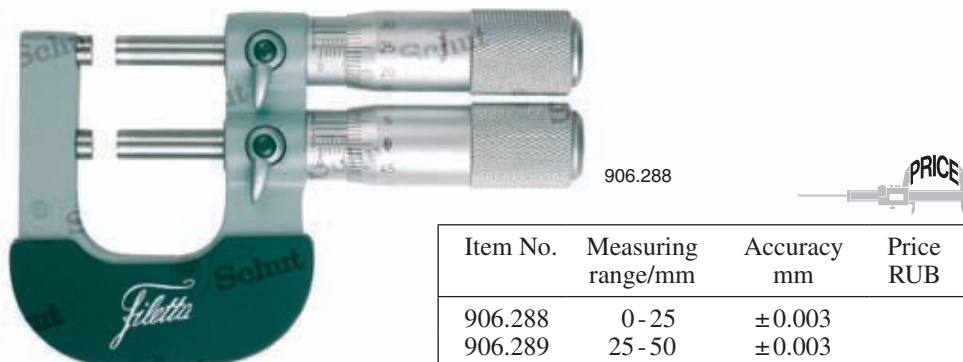
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Item No.	Measuring range/mm	Graduation mm	Vernier thimble/mm	Price RUB
906.568	0- 25	0.001	0.002	
906.597	25- 50	0.001	—	
906.598	50- 75	0.001	—	
906.599	75- 100	0.001	—	
<b>With protection IP54:</b>				
906.569	0- 25	0.001	—	
906.570	25- 50	0.001	—	
906.571	50- 75	0.001	—	
906.614	75- 100	0.001	—	

### Tolerance micrometers with two spindles

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

- Measuring range: 0- 50 mm.
- Vernier: 0.002 mm.
- Accuracy:  $\pm 0.003$  mm.
- Tungsten carbide measuring faces:  $\varnothing 6.5$  mm.



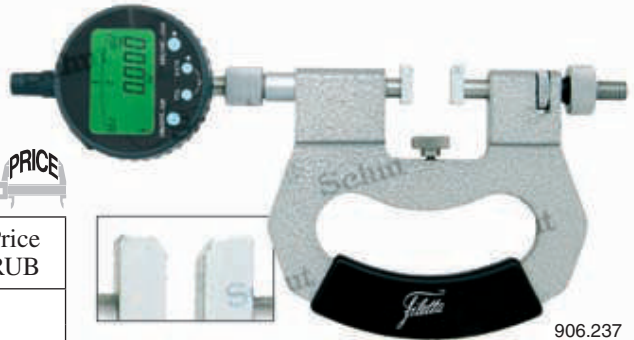
Item No.	Measuring range/mm	Accuracy mm	Price RUB
906.288	0- 25	$\pm 0.003$	
906.289	25- 50	$\pm 0.003$	

## Snap gauges with dial indicator

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

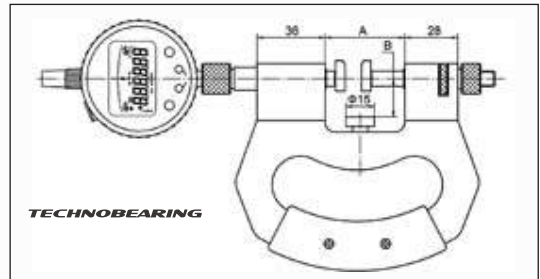
- Measuring range: 0- 300 mm.
- Measuring force: 6-9 N.
- Clamping shaft:  $\varnothing 8$  mm (dial gauge not included).
- Travel of moving anvil: 3 mm.
- Anvil size: 14 x 11 mm.

- Chamfered anvils for easy insertion.
- For suitable dial indicators refer to the dial indicators elsewhere in this catalog.



906.237

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



## Digital vertical micrometers

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

- Measuring range: 0- 50 mm.
- Resolution: 0.001 mm.
- Accuracy:  $\pm 0.002$  mm.
- mm/inch conversion.

- ABS/INC switchable.
- On/off switch.
- Automatic switch-off.
- Tungsten carbide measuring faces:  $\varnothing 6.5$  mm.
- Protection: IP65.
- Power supply: 1 battery type V357.



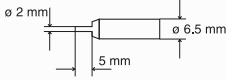
909.458

Item No.	Measuring range/mm	Price RUB
909.458	0- 25	
909.459	25- 50	
<b>Option:</b>		
836.535	Spare battery	

## Micrometers with small measuring faces

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

- Measuring range: 0-175 mm.
- Analog: graduation 0.01 mm, digital: resolution 0.001 mm.
- Tungsten carbide measuring pins:  $\varnothing 2 \times 5$  mm.



### Digital

- mm/inch conversion.
- ABS/INC switchable.
- Reset/preset.
- Hold function.
- Preservation of the min/max value.
- Protection: IP65.
- Power supply: 1 battery type V357.



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### Analog

Item No.	Measuring range/mm	Accuracy mm	Price RUB
906.135	0- 25	$\pm 0.004$	
906.136	25- 50	$\pm 0.004$	
906.137	50- 75	$\pm 0.005$	
906.119	75- 100	$\pm 0.005$	
909.320	100- 125	$\pm 0.006$	
909.321	125- 150	$\pm 0.006$	
909.322	150- 175	$\pm 0.007$	

### Digital

Item No.	Measuring range/mm	Accuracy mm	Price RUB
909.591	0- 25	$\pm 0.002$	
909.592	25- 50	$\pm 0.002$	
909.593	50- 75	$\pm 0.003$	
909.594	75- 100	$\pm 0.003$	
909.595	100- 125	$\pm 0.003$	
909.596	125- 150	$\pm 0.003$	
909.597	150- 175	$\pm 0.004$	

### Option:

836.535 Spare battery



## Micrometers with spherical anvil

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

- Measuring range: 0- 100 mm.
- Analog: graduation 0.01 mm, digital: resolution 0.001 mm.
- Tungsten carbide measuring faces:  $\varnothing 6.5$  mm.

### Digital

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



906.155

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909.598

### Analog

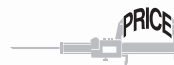
Item No.	Measuring range/mm	Accuracy mm	Price RUB
906.155	0- 25	$\pm 0.004$	
907.044	25- 50	$\pm 0.004$	
907.045	50- 75	$\pm 0.005$	
907.046	75- 100	$\pm 0.005$	

### Digital

Item No.	Measuring range/mm	Accuracy mm	Price RUB
909.598	0- 25	$\pm 0.002$	
909.599	25- 50	$\pm 0.002$	
909.600	50- 75	$\pm 0.003$	
909.601	75- 100	$\pm 0.003$	

### Option:

836.535 Spare battery





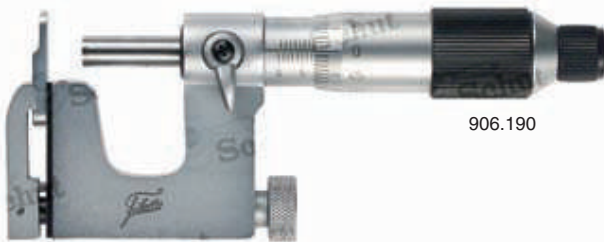
## Universal micrometers with interchangeable anvils

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

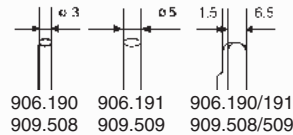
- Measuring range: 0-50 mm.
- Analog: graduation 0.01 mm, digital: resolution 0.001 mm.
- Accuracy:  $\pm 0.004$  mm.
- Tungsten carbide measuring face:  $\varnothing 6.5$  mm.
- Delivery incl. 2 tungsten carbide anvils.

### Digital

- mm/inch conversion.
- ABS/INC switchable.
- On/off switch.
- Reset/preset.
- Adjustable tolerance limits (only 909.508).
- Protection: IP65.
- Power supply: 1 battery type V357.



906.190



TECHNOBEARING



909.508

### Analog

Item No.	Measuring range/mm	Price RUB
906.190	0-25	
906.191	25-50	

### Digital

Item No.	Measuring range/mm	Price RUB
909.508	0-25	
909.509	25-50	
<b>Option:</b>		
836.535	Spare battery	



## Digital micrometers IP65 with pin-shaped anvil

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

- Measuring range: 0-50 mm.
- Resolution: 0.001 mm.
- mm/inch conversion.
- ABS/INC switchable.
- Automatic switch-off.
- Reset/preset.
- Pin-shaped anvil:  $\varnothing$  1.8 mm.
- Tungsten carbide measuring face:  $\varnothing$  6.5 mm.
- Protection: IP65.
- Power supply: 1 battery type V357.



909.684



Item No.	Measuring range/mm	Accuracy mm	Price RUB
909.684	0-25	$\pm$ 0.005	
909.685	25-50	$\pm$ 0.005	
<b>Option:</b>			
836.535	Spare battery		

## Digital micrometers with special measuring jaws

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

- Measuring range: 0-200 mm.
- Resolution: 0.001 mm.
- mm/inch conversion.
- ABS/INC switchable.
- Automatic switch-off.
- Reset/preset.
- Non-rotating spindle.
- Power supply: 1 battery type V357.



909.676



Item No.	Measuring range/mm	Accuracy mm	Price RUB
909.676	0- 25	$\pm$ 0.006	
909.677	25- 50	$\pm$ 0.006	
909.678	50- 75	$\pm$ 0.007	
909.679	75-100	$\pm$ 0.007	
909.680	100-125	$\pm$ 0.009	
909.681	125-150	$\pm$ 0.009	
909.682	150-175	$\pm$ 0.010	
909.683	175-200	$\pm$ 0.010	
<b>Option:</b>			
836.535	Spare battery		

TECHNOBEARING

## Gear pitch micrometers

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

- Measuring range: 0-200 mm.
- Analog: graduation 0.01 mm, digital: resolution 0.001 mm.
- Non-rotating spindle:  $\varnothing 8$  mm.
- Measuring faces: stainless steel (HRC 52 - 54).

### Digital

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



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Item No.	Measuring range/mm	Accuracy mm	Measuring faces $\varnothing$ /mm	Price RUB
<b>Analog:</b>				
906.580	0- 25	$\pm 0.006$	20	
906.581	25- 50	$\pm 0.006$	20	
906.582	50- 75	$\pm 0.007$	20	
906.583	75-100	$\pm 0.007$	20	
906.584	100-125	$\pm 0.009$	30	
906.585	125-150	$\pm 0.009$	30	
906.586	150-175	$\pm 0.010$	30	
906.587	175-200	$\pm 0.010$	30	
<b>Digital:</b>				
909.777	0- 25	$\pm 0.006$	20	
909.778	25- 50	$\pm 0.006$	20	
909.779	50- 75	$\pm 0.007$	20	
909.780	75-100	$\pm 0.007$	20	
909.781	100-125	$\pm 0.009$	30	
909.782	125-150	$\pm 0.009$	30	
909.783	150-175	$\pm 0.010$	30	
909.784	175-200	$\pm 0.010$	30	
<b>Option:</b>				
836.535	Spare battery			



## Universal micrometers

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

- Measuring range: 0-200 mm.
- Analog: graduation 0.01 mm, digital: resolution 0.001 mm.
- Non-rotating spindle.
- Insert shaft:  $\varnothing 5$  mm.

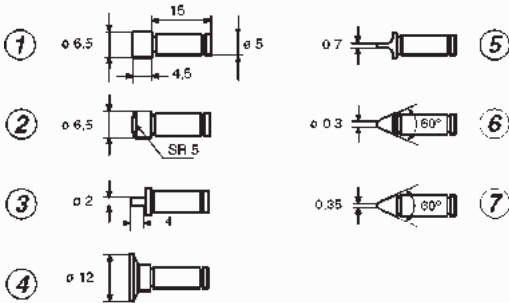
### Digital

- mm/inch conversion.
- ABS/INC switchable.
- On/off switch.
- Preset (except 909.785).
- Power supply: 1 battery type V357.



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PRICE



No.	Item No.	Description measuring faces	Price RUB
<b>Measuring inserts, per pair:</b>			
①	906.788	flat	
②	906.789	spherical	
③	906.790	small	
④	906.791	disc	
⑤	906.792	knife/flat	
⑥	906.793	point	
⑦	906.794	knife	
	906.795	Set of 7 pairs	

Item No.	Measuring range/mm	Accuracy mm	Price RUB
<b>Analog, without measuring inserts:</b>			
906.780	0- 25	$\pm 0.004$	
906.781	25- 50	$\pm 0.004$	
906.782	50- 75	$\pm 0.005$	
906.783	75-100	$\pm 0.005$	
906.784	100-125	$\pm 0.008$	
906.785	125-150	$\pm 0.008$	
906.786	150-175	$\pm 0.009$	
906.787	175-200	$\pm 0.009$	
<b>Digital, without measuring inserts:</b>			
909.785	0- 25	$\pm 0.004$	
909.786	25- 50	$\pm 0.004$	
909.787	50- 75	$\pm 0.005$	
909.788	75-100	$\pm 0.005$	
909.789	100-125	$\pm 0.008$	
909.790	125-150	$\pm 0.008$	
909.791	150-175	$\pm 0.009$	
909.792	175-200	$\pm 0.009$	
<b>Option:</b>			
836.535	Spare battery		

## Deep throat micrometers

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

- Measuring range: 0-50 mm.
- Analog: graduation 0.01 mm, digital: resolution 0.001 mm.
- Tungsten carbide measuring faces:  $\varnothing 6.5$  mm.

### Digital

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



907.068



909.694



TECHNOBEARING

Item No.	Measuring range/mm	Accuracy mm	Throat depth/mm	Price RUB
<b>Analog:</b>				
907.068	0-25	$\pm 0.004$	50	
907.069	25-50	$\pm 0.004$	50	
907.070	0-25	$\pm 0.005$	100	
907.071	25-50	$\pm 0.005$	100	
907.072	0-25	$\pm 0.006$	150	
907.073	25-50	$\pm 0.006$	150	
<b>Digital:</b>				
909.694	0-25	$\pm 0.004$	50	
909.695	25-50	$\pm 0.004$	50	
909.696	0-25	$\pm 0.005$	100	
909.697	25-50	$\pm 0.005$	100	
909.698	0-25	$\pm 0.006$	150	
909.699	25-50	$\pm 0.006$	150	
<b>Option:</b>				
836.535	Spare battery			

## Brake disc micrometers

Micrometers especially for measuring the groove depth of brake discs.

- Measuring range: 7.6 - 50 mm.
- Analog: graduation 0.01 mm, digital: resolution 0.001 mm.
- Anvil with 60° point.
- Tungsten carbide measuring face:  $\varnothing 6.5$  mm.
- Throat depth: 88 mm.

### Digital

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

TECHNOBEARING



907.056



909.793

### Analog

Item No.	Measuring range/mm	Accuracy mm	Price RUB
907.056	7.6-33	$\pm 0.004$	
907.057	25 -50	$\pm 0.004$	

### Digital

Item No.	Measuring range/mm	Accuracy mm	Price RUB
909.793	7.6-33	$\pm 0.004$	
909.794	25 -50	$\pm 0.004$	

### Option:

836.535 Spare battery

## Digital micrometers IP65 with large anvils

- Measuring range: 0 - 50 mm.
- Resolution: 0.001 mm.
- mm/inch conversion.
- ABS/INC switchable.
- On/off switch.
- On/reset switch.
- Tungsten carbide measuring face:  $\varnothing 6.5$  mm.

**NEW**

- Anvil size:  
909.488: 50 x 14 mm,  
909.489: 60 x 14 mm.
- Protection: IP65.
- Power supply: 1 battery type V357.



909.488

Item No.	Measuring range/mm	Accuracy mm	Price RUB
909.488	0-25	$\pm 0.004$	
909.489	25-50	$\pm 0.004$	

### Option:

836.535 Spare battery



## Sheet metal micrometers

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

- Measuring range: 0-25 mm.
- Graduation: 0.01 mm.
- Tungsten carbide measuring faces:  $\varnothing 6.5$  mm.



TECHNOBEARING

Item No.	Measuring range/mm	Accuracy mm	Measuring faces	Price RUB
907.058	0-15	$\pm 0.004$	flat/flat	
907.059	0-25	$\pm 0.004$	flat/flat	
907.099	0-15	$\pm 0.004$	spherical/flat	
907.100	0-25	$\pm 0.004$	spherical/flat	

## Micrometers with extra large measuring faces

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

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



Item No.	Measuring range/mm	Accuracy mm	Price RUB
906.588	0-25	$\pm 0.008$	
906.589	25-50	$\pm 0.008$	
906.590	50-75	$\pm 0.010$	
906.591	75-100	$\pm 0.010$	

## Gear micrometers

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

- Measuring range: 0-175 mm.
- Analog: graduation 0.01 mm, digital: resolution 0.001 mm.
- Dimensions of anvil-tail:  $\varnothing 5 \times 15$  mm.
- Tungsten carbide, ball-tipped measuring faces.

### Digital

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



907.081



909.859

TECHNOBEARING

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

Item No.	Measuring range/mm	Accuracy mm	Price RUB
<b>Analog, without measuring inserts:</b>			
907.081	0- 25	$\pm 0.004$	
907.082	25- 50	$\pm 0.004$	
907.083	50- 75	$\pm 0.005$	
907.084	75-100	$\pm 0.005$	
907.085	100-125	$\pm 0.006$	
907.086	125-150	$\pm 0.006$	
907.087	150-175	$\pm 0.007$	
<b>Digital, without measuring inserts:</b>			
909.859	0- 25	$\pm 0.004$	
909.860	25- 50	$\pm 0.004$	
909.861	50- 75	$\pm 0.005$	
909.862	75-100	$\pm 0.005$	
909.863	100-125	$\pm 0.006$	
909.864	125-150	$\pm 0.006$	
909.865	150-175	$\pm 0.007$	
<b>Option:</b>			
836.535	Spare battery		



## Micrometers with prism-shaped anvil

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

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

### Digital

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



906.161



909.866



Item No.	Measuring range/mm	Accuracy mm	Price RUB	Item No.	Price RUB
<b>For 3-fluted objects (<math>60^\circ</math>), analog:</b>				<b>Digital:</b>	
906.160	1 - 15	$\pm 0.004$		909.866	
906.161	5 - 20	$\pm 0.004$		909.867	
906.162	20 - 35	$\pm 0.005$		909.868	
906.163	35 - 50	$\pm 0.005$		909.869	
906.164	50 - 65	$\pm 0.006$		909.870	
906.165	65 - 80	$\pm 0.006$		909.871	
907.060	80 - 95	$\pm 0.007$		909.872	
<b>For 5-fluted objects (<math>108^\circ</math>), analog:</b>				<b>Digital:</b>	
906.166	5 - 25	$\pm 0.004$		909.873	
906.167	25 - 45	$\pm 0.005$		909.874	
906.168	45 - 65	$\pm 0.006$		909.875	
906.169	65 - 85	$\pm 0.007$		909.876	
907.061	85 - 105	$\pm 0.008$		909.877	
<b>For 7-fluted objects (<math>128^\circ</math>), analog:</b>				<b>Digital:</b>	
906.170	5 - 25	$\pm 0.004$		909.878	
906.171	25 - 45	$\pm 0.005$		909.879	
906.172	45 - 65	$\pm 0.006$		909.880	
906.173	65 - 85	$\pm 0.007$		909.881	
<b>Option:</b>					
836.535	Spare battery				

TECHNOBEARING

### Setting standards

Item No.	$\varnothing$ mm	Price RUB
909.323	5	
909.324	20	
909.325	25	
909.326	35	
909.327	45	
909.328	50	
909.329	65	
909.330	80	
909.331	85	



909.326

## Micrometers with pointed measuring faces

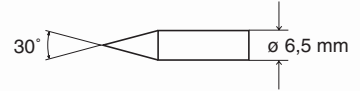
- Measuring range: 0 - 100 mm.
- Analog: graduation 0.01 mm, digital: resolution 0.001 mm.

### Digital

- mm/inch conversion.
- ABS/INC switchable.
- Preset.
- Protection: IP65.
- Power supply: 1 battery type V357.



906.145



909.643

TECHNOBEARING

### Analog

Item No.	Measuring range/mm	Accuracy mm	Price RUB
906.145	0 - 25	±0.004	
906.146	25 - 50	±0.004	
906.147	50 - 75	±0.005	
906.199	75 - 100	±0.005	

### Digital

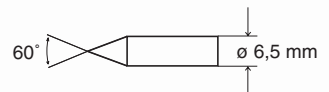
Item No.	Measuring range/mm	Accuracy mm	Price RUB
909.643	0 - 25	±0.004	
909.644	25 - 50	±0.004	
909.645	50 - 75	±0.005	
909.646	75 - 100	±0.005	

**Option:**  
836.535 Spare battery



## Micrometers with one pointed measuring face

- Measuring range: 0 - 50 mm.
- Graduation: 0.01 mm.



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



## Micrometers with lamellar measuring faces

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

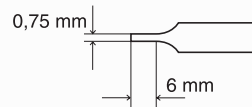
- Measuring range: 0- 175 mm.
- Analog: graduation 0.01 mm, digital: resolution 0.001 mm.
- Non-rotating spindle.
- Blade width: 0.75 mm, blade length: 6 mm.

### Digital

- mm/inch conversion.
- ABS/INC switchable.
- Reset/preset.
- Hold function.
- Power supply: 1 battery type V357.



906.141



909.882

TECHNOBEARING

### Analog

Item No.	Measuring range/mm	Accuracy mm	Price RUB
906.141	0- 25	±0.004	
906.142	25- 50	±0.004	
906.143	50- 75	±0.005	
906.144	75- 100	±0.005	
906.222	100- 125	±0.006	
906.223	125- 150	±0.006	
906.224	150- 175	±0.007	

### Digital

Item No.	Measuring range/mm	Accuracy mm	Price RUB
909.882	0- 25	±0.004	
909.883	25- 50	±0.004	
909.884	50- 75	±0.005	
909.885	75- 100	±0.005	
909.886	100- 125	±0.006	
909.887	125- 150	±0.006	
909.888	150- 175	±0.007	

### Option:

836.535 Spare battery



## Screw thread micrometers

- Measuring range: 0 - 200 mm.
- Analog: graduation 0.01 mm, digital: resolution 0.001 mm.
- Insert shaft:  $\varnothing 5$  mm.
- DIN 863 T3.
- Delivery incl. adjustment tools.
- From measuring range 25 - 50 mm including setting gauge  $60^\circ$ .
- No-glare chrome finished thimble.

### Digital

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



TECHNOBEARING



### Analog, without measuring inserts

Item No.	Measuring range/mm	Accuracy mm	Price RUB
906.750	0 - 25	$\pm 0.004$	
906.751	25 - 50	$\pm 0.004$	
906.752	50 - 75	$\pm 0.005$	
906.753	75 - 100	$\pm 0.005$	
906.754	100 - 125	$\pm 0.006$	
906.755	125 - 150	$\pm 0.006$	
906.756	150 - 175	$\pm 0.007$	
906.757	175 - 200	$\pm 0.007$	

### Digital, without measuring inserts

Item No.	Measuring range/mm	Accuracy mm	Price RUB
909.889	0 - 25	$\pm 0.004$	
909.890	25 - 50	$\pm 0.004$	
909.891	50 - 75	$\pm 0.005$	
909.892	75 - 100	$\pm 0.005$	
909.893	100 - 125	$\pm 0.006$	
909.894	125 - 150	$\pm 0.006$	
909.895	150 - 175	$\pm 0.007$	
909.896	175 - 200	$\pm 0.007$	

### Option:

836.535 Spare battery



**Screw thread micrometers (continued)**



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

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

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



TECHNOBEARING

909.305

Item No.	Length/mm	Price RUB
<b>Hardened steel setting standards for threads with 60° flank angle:</b>		
909.304	25	
909.305	50	
909.306	75	
909.307	100	
909.308	125	
909.309	150	
909.310	175	
909.311	200	

Item No.	Length/mm	Price RUB
<b>Hardened steel setting standards for threads with 55° flank angle:</b>		
909.312	25	
909.313	50	
909.314	75	
909.315	100	
909.316	125	
909.317	150	
909.318	175	
909.319	200	

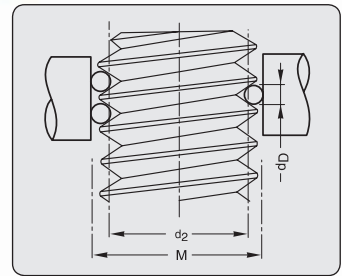
## Thread measuring wires

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

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



TECHNOBEARING



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

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

## Hub micrometers

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

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



907.133

TECHNOBEARING



Item No.	Measuring range/mm	Accuracy mm	Price RUB
907.133	0- 25	$\pm 0.004$	
907.134	25- 50	$\pm 0.004$	
907.135	50- 75	$\pm 0.004$	
907.136	75- 100	$\pm 0.005$	

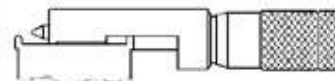
## Can seam micrometer

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

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



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



## Wire and ball micrometer

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



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



### Setting gauges

Cylindrical gauges for micrometers with flat parallel measuring faces.

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



907.464



Item No.	Length mm	Accuracy $\mu\text{m}$	Price RUB
907.464	25	$\pm 2$	
907.465	50	$\pm 2$	
907.466	75	$\pm 2.5$	
907.467	100	$\pm 2.5$	
907.468	125	$\pm 3$	
907.469	150	$\pm 3$	
907.470	175	$\pm 3.5$	
907.471	200	$\pm 4$	
907.472	225	$\pm 4$	
907.473	250	$\pm 4$	
907.474	275	$\pm 4.5$	
907.475	300	$\pm 4.5$	
907.476	325	$\pm 5$	
907.477	350	$\pm 5$	
907.478	375	$\pm 5.5$	
907.479	400	$\pm 5.5$	
907.480	425	$\pm 6$	
907.481	450	$\pm 6$	
907.482	475	$\pm 6.5$	
907.483	500	$\pm 6.5$	
907.484	525	$\pm 7$	
907.485	575	$\pm 7.5$	
907.486	625	$\pm 7.5$	
907.487	675	$\pm 8$	
907.488	725	$\pm 8.5$	
907.489	775	$\pm 9.5$	
907.490	825	$\pm 10$	
907.491	875	$\pm 10.5$	
907.492	925	$\pm 11$	
907.493	975	$\pm 11.5$	
907.494	1050	$\pm 12$	
907.495	1150	$\pm 13$	
907.496	1250	$\pm 14$	
907.497	1350	$\pm 15$	
907.498	1450	$\pm 16$	
909.529	1550	$\pm 17$	
909.530	1650	$\pm 18$	
909.531	1750	$\pm 19$	
909.532	1850	$\pm 20$	
909.533	1950	$\pm 21$	

### Setting standards

Cylindrical setting standards for micrometers with prism-shaped anvil.



909.326

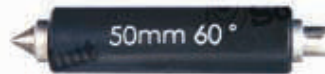
TECHNOBEARING



Item No.	Diameter/mm	Price RUB
909.323	5	
909.324	20	
909.325	25	
909.326	35	
909.327	45	
909.328	50	
909.329	65	
909.330	80	
909.331	85	

### Setting standards

Hardened steel setting standards for threads with  $55^\circ$  or  $60^\circ$  flank angle.



909.305



Item No.	Length/mm	Price RUB
<b>For threads with <math>60^\circ</math> flank angle:</b>		
909.304	25	
909.305	50	
909.306	75	
909.307	100	
909.308	125	
909.309	150	
909.310	175	
909.311	200	
<b>For threads with <math>55^\circ</math> flank angle:</b>		
909.312	25	
909.313	50	
909.314	75	
909.315	100	
909.316	125	
909.317	150	
909.318	175	
909.319	200	

### Micrometer stand

Rigid table stand for micrometers.

- Inclination adjustable.
- Weight: 1.1 kg.



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

### Micrometer stand

Cast steel stand for micrometers.

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



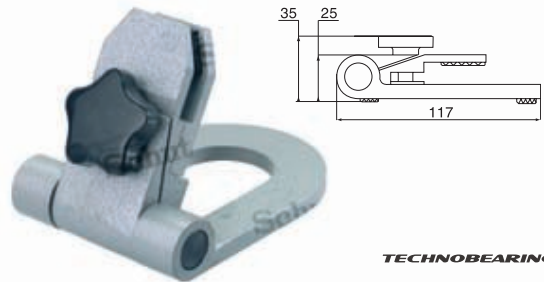
Item No.	Clamping range/mm	Price RUB
908.983	4 - 12	

### Foldable micrometer stand

Portable stand with a folded structure for micrometers.



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



### Ball attachments

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

- Ball:  $\varnothing 5$  mm.



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

### Measuring force indicators

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



Item No.	For micrometers	Price RUB
907.151	0 - 25 mm	
908.947	25 - 50 mm	
908.948	50 - 75 mm	
908.949	75 - 100 mm	

## Probe set for micrometers

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

- Delivery in a case.



Item No.	Description	Price RUB
909.118	Probe set for micrometers	

## Micrometer inspection sets

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

- Nominal sizes (mm):  
2.5 - 5.1 - 7.7 - 10.3 - 12.9 - 15.0 - 17.6 - 20.2 - 22.8 - 25.0.
- Including plan parallel optical flat  $\varnothing 30 \times 12$  mm.



909.340

Item No.	Material	Grade	Price RUB
909.346	steel	1	
909.345	steel	0	
909.162	ceramic	1	
909.340	ceramic	0	

## Thread and tolerance tables

### Thread table

Table with all standard international thread indications: metric, Ww, Gas, BSF, Pg, BA, UNC, UNF and UNEF.

### Tolerance table

Table comprising all tolerances and fits according ISO R286, up to 500 mm (table with over 6400 pairs of tolerance values for internal and external measurements).

### Conversion table mm/inch

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



835.162

835.163

835.164

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



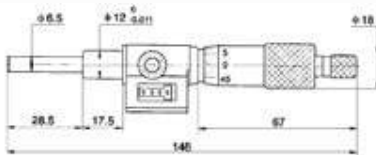
### Micrometer head with counter

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

- Measuring range: 0-25 mm.
- Resolution: 0.01 mm.
- Accuracy: ±0.003 mm.
- Numerical counter adjustable.
- Rotating spindle: ø6.5 mm.
- Tungsten carbide measuring face.
- Delivery with adjustment tool.



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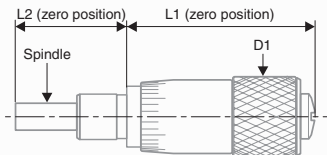
Item No.	Measuring range/mm	Spindle ø/mm	Price RUB
906.543	0-25	6.5	

### Micrometer heads

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



906.072



906.074



906.070



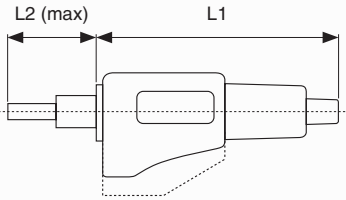
Item No.	Measuring range/mm	Graduation mm	Accuracy mm	Spindle ø/mm	Dimensions/mm clamping	D1	L1	L2	Price RUB
<b>Without friction thimble, steel measuring face:</b>									
906.070	0- 6.5	0.01	±0.005	3.5 (flat)	ø 6 x 6	ø10	23	14	
906.074	0- 6.5	0.01	±0.005	3.5 (spherical)	ø 6 x 6	ø10	23	14	
906.071	0- 13	0.01	±0.004	5.0 (flat)	ø 9.5x 9.5	ø14	33	26	
<b>Friction thimble with spring click in measuring thimble, tungsten carbide measuring face:</b>									
906.072	0-25	0.01	±0.003	6.5 (flat)	ø12 x17	ø19	65	46	
906.073	0-25	0.002	±0.003	6.5 (flat)	ø12 x17	ø19	65	46	

## Digital micrometer heads

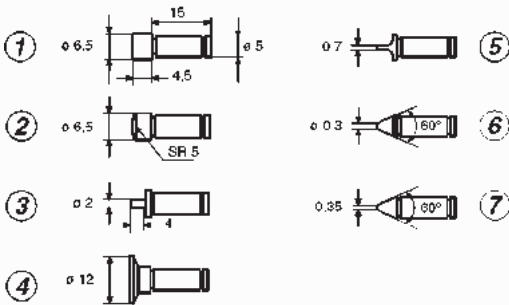
Several digital micrometer heads with different possibilities.

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

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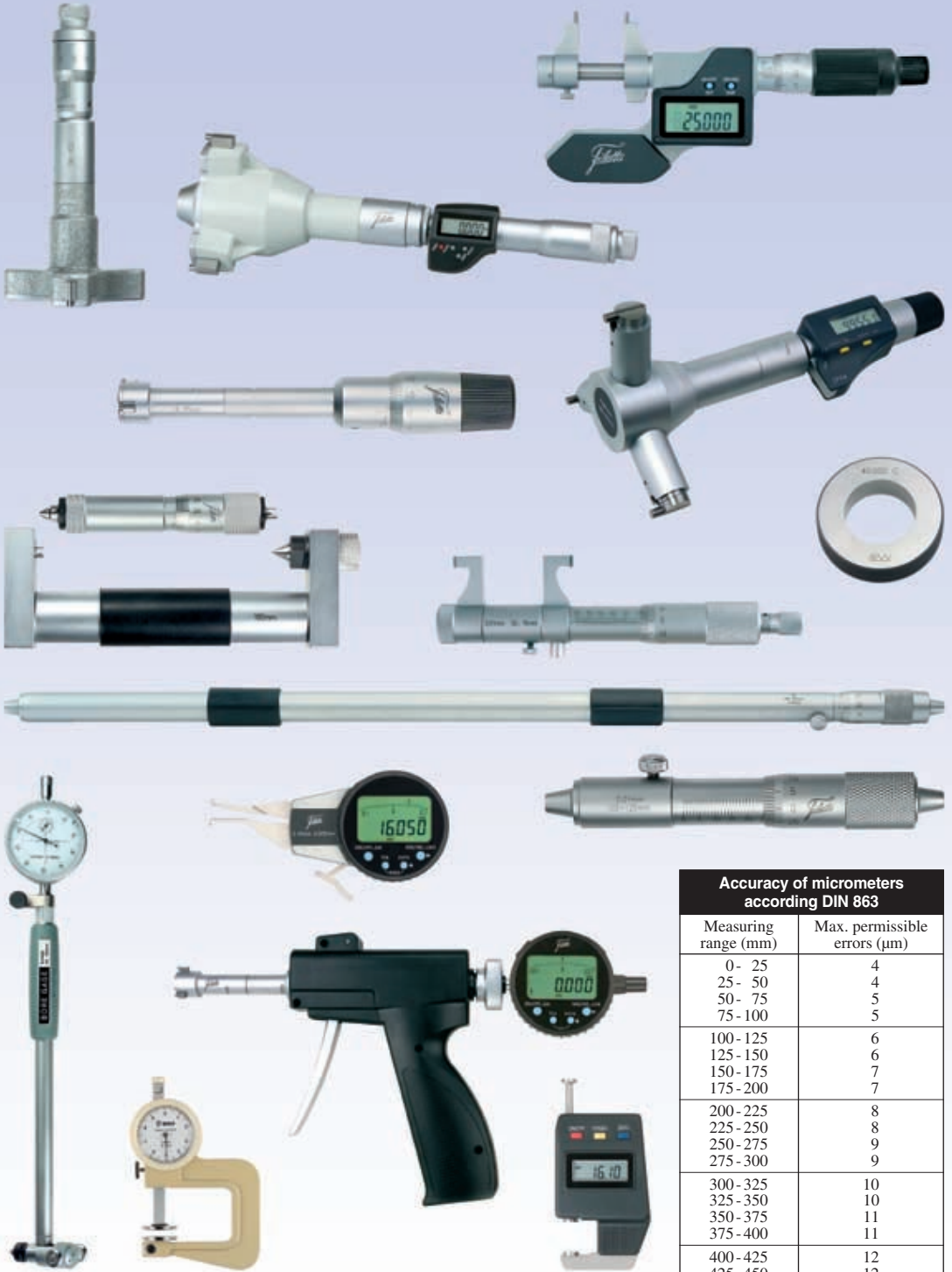


Item No.	Measuring range/mm	Dimensions/mm				Description measuring faces	Price RUB
		spindle	clamping	L1	L2		
<b>With IP65 protection:</b>							
909.897	0-25	$\phi 6.5$	$\phi 12 \times 17.5$	115	46	flat, tungsten carbide measuring face	
909.898	0-25	$\phi 6.5$	$\phi 12 \times 17.5$	115	46	spherical	
909.899	0-25	$\phi 6.5$	$\phi 12 \times 17.5$	116	56	flat, non-rotating tip	
909.900	0-50	$\phi 7.5$	$\phi 12 \times 35.5$	140	89	flat, tungsten carbide measuring face	
909.901	0-50	$\phi 7.5$	$\phi 12 \times 35.5$	140	89	spherical	
<b>With non-rotating spindle:</b>							
909.902	0-25	$\phi 7.5$	$\phi 12 \times 10$	124	39	flat, tungsten carbide measuring face	
909.903	0-25	$\phi 7.5$	$\phi 12 \times 10$	123	39	interchangeable measuring inserts	
906.297	0-25	$\phi 6.5$	$\phi 12 \times 17.5$	98	48	tungsten carbide measuring face	
906.298	0-25	$\phi 8$	$\phi 12 \times 20$	98	50	tungsten carbide measuring face	
<b>Option:</b>							
836.535	Spare battery						



No.	Item No.	Description measuring faces	Price RUB
<b>Measuring inserts, per pair:</b>			
①	906.788	flat	
②	906.789	spherical	
③	906.790	small	
④	906.791	disc	
⑤	906.792	knife/flat	
⑥	906.793	point	
⑦	906.794	knife	
	906.795	Set of 7 pairs	

# Internal micrometers / Internal & external measuring instruments



Accuracy of micrometers according DIN 863	
Measuring range (mm)	Max. permissible errors (µm)
0 - 25	4
25 - 50	4
50 - 75	5
75 - 100	5
100 - 125	6
125 - 150	6
150 - 175	7
175 - 200	7
200 - 225	8
225 - 250	8
250 - 275	9
275 - 300	9
300 - 325	10
325 - 350	10
350 - 375	11
375 - 400	11
400 - 425	12
425 - 450	12
450 - 475	13
475 - 500	13

### Three-point internal micrometers

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

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



Item No.	Measuring range/mm	Accuracy mm	Price RUB
836.700	$\phi$ 3.5 - 4	$\pm 0.005$	
836.701	$\phi$ 4.0 - 4.5	$\pm 0.005$	
836.702	$\phi$ 4.5 - 5.5	$\pm 0.005$	
836.703	$\phi$ 5.5 - 6.5	$\pm 0.005$	
836.704	$\phi$ 6 - 8	$\pm 0.005$	
836.705	$\phi$ 8 - 10	$\pm 0.005$	
836.706	$\phi$ 10 - 12	$\pm 0.005$	
836.707	$\phi$ 12 - 16	$\pm 0.005$	
836.708	$\phi$ 16 - 20	$\pm 0.005$	
836.709	$\phi$ 20 - 25	$\pm 0.005$	
836.710	$\phi$ 25 - 30	$\pm 0.005$	
836.711	$\phi$ 30 - 35	$\pm 0.005$	
836.712	$\phi$ 35 - 40	$\pm 0.005$	
836.713	$\phi$ 40 - 50	$\pm 0.006$	
836.714	$\phi$ 50 - 60	$\pm 0.006$	
836.715	$\phi$ 60 - 70	$\pm 0.006$	
836.716	$\phi$ 70 - 80	$\pm 0.006$	
836.717	$\phi$ 80 - 90	$\pm 0.006$	
836.718	$\phi$ 90 - 100	$\pm 0.006$	
836.719	$\phi$ 100 - 125	$\pm 0.008$	
836.720	$\phi$ 125 - 150	$\pm 0.008$	
836.721	$\phi$ 150 - 175	$\pm 0.008$	
836.722	$\phi$ 175 - 200	$\pm 0.008$	
836.723	$\phi$ 200 - 225	$\pm 0.012$	
836.724	$\phi$ 225 - 250	$\pm 0.012$	
836.725	$\phi$ 250 - 275	$\pm 0.012$	
836.726	$\phi$ 275 - 300	$\pm 0.012$	
<b>Sets:</b>			
836.730*	$\phi$ 3.5 - 6.5	$\pm 0.005$	
836.735	$\phi$ 6 - 12	$\pm 0.005$	
836.740	$\phi$ 12 - 20	$\pm 0.005$	
836.745	$\phi$ 20 - 40	$\pm 0.005$	
836.750	$\phi$ 40 - 100	$\pm 0.006$	

\* Without extension.



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836.718

#### Extensions

Item No.	Extension mm	For measuring range/mm	Price RUB
836.780	100	$\phi$ 6 - 12	
836.782	150	$\phi$ 12 - 20	
836.784	150	$\phi$ 20 - 40	
836.786	150	$\phi$ 40 - 100	



836.745

#### Setting rings

Measuring range/mm	Setting rings $\phi$ /mm
$\phi$ 3.5 - 6.5	4, 5.5
$\phi$ 6 - 12	8, 10
$\phi$ 12 - 20	16
$\phi$ 20 - 40	25, 35
$\phi$ 40 - 100	50, 70, 90

## Three-point internal micrometers

Three-point internal micrometers, with factory measuring report, for accurately measuring bores.

- Measuring range: 0 - 300 mm.
- Self-centering.
- Tungsten carbide measuring faces (measuring range  $\phi$  6- 12 mm: hardened steel).
- Separate instruments within measuring range  $\phi$  6- 100 mm and the sets are delivered incl. setting ring(s) and extension.
- Setting rings are conform to factory standard.
- Delivery in a case, with an inspection report.

### Analog

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

### Digital

- Resolution: 0.001 mm.
- mm/inch conversion.
- ABS/INC switchable.
- On/off switch.
- Reset/preset.
- Power supply: 1 battery type V357.

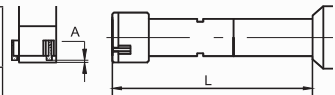


909.811



909.841

Item No.	Price RUB	Item No.	Price RUB	Measuring range/mm	Accuracy mm	Length L/mm	A/mm
<b>Analog:</b>		<b>Digital:</b>					
909.807		909.828		$\phi$ 6 - 8	$\pm 0.004$	30	1
909.808		909.829		$\phi$ 8 - 10	$\pm 0.004$	30	1
909.809		909.830		$\phi$ 10 - 12	$\pm 0.004$	30	1
909.810		909.831		$\phi$ 12 - 16	$\pm 0.004$	48	0.4
909.811		909.832		$\phi$ 16 - 20	$\pm 0.004$	48	0.4
909.812		909.833		$\phi$ 20 - 25	$\pm 0.004$	50	0.4
909.813		909.834		$\phi$ 25 - 30	$\pm 0.004$	50	0.4
909.814		909.835		$\phi$ 30 - 40	$\pm 0.004$	50	0.4
909.815		909.836		$\phi$ 40 - 50	$\pm 0.005$	55	0.5
909.816		909.837		$\phi$ 50 - 63	$\pm 0.005$	55	0.5
909.817		909.838		$\phi$ 62 - 75	$\pm 0.005$	55	0.5
909.818		909.839		$\phi$ 75 - 88	$\pm 0.005$	55	0.5
909.819		909.840		$\phi$ 87 - 100	$\pm 0.005$	55	0.5
909.820		909.841		$\phi$ 100 - 125	$\pm 0.008$	130	20
909.821		909.842		$\phi$ 125 - 150	$\pm 0.008$	130	20
909.822		909.843		$\phi$ 150 - 175	$\pm 0.008$	130	20
909.823		909.844		$\phi$ 175 - 200	$\pm 0.008$	130	20
909.824		909.845		$\phi$ 200 - 225	$\pm 0.008$	130	20
909.825		909.846		$\phi$ 225 - 250	$\pm 0.008$	130	20
909.826		909.847		$\phi$ 250 - 275	$\pm 0.008$	130	20
909.827		909.848		$\phi$ 275 - 300	$\pm 0.008$	130	20



909.850

### Options

Item No.	Description	Price RUB
836.535	Spare battery	
<b>For meas. range <math>\phi</math> 100 - 300 mm:</b>		
909.857	Extension with length 150 mm	

### Sets

Item No.	Price RUB	Item No.	Price RUB	Measuring range/mm	Setting rings $\phi$ /mm	Extension mm	Number of instruments
<b>Analog:</b>		<b>Digital:</b>					
909.849		909.853		$\phi$ 6 - 12	8, 10	50	3
909.850		909.854		$\phi$ 12 - 20	16	100	2
909.851		909.855		$\phi$ 20 - 50	25, 40	150	4
909.852		909.856		$\phi$ 50 - 100	62, 87	150	4

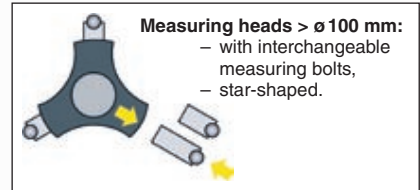
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## Three-point internal micrometers

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

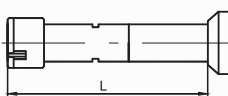
- Measuring range:  $\phi$ 6-300 mm.
- Graduation: 0.001 mm ( $\phi$  6- 12 mm), 0.005 mm ( $\phi$  12-300 mm).
- Self-centering.
- Tungsten carbide measuring faces.
- Interchangeable measuring bolts from measuring range  $\phi$ 100-125 mm.
- Delivery in a case, incl. extension 150 mm (measuring range  $\phi$ 6- 12 mm: 100 mm).
- Separate instruments within measuring range  $\phi$ 6- 100 mm and the sets are delivered incl. setting ring(s).
- Setting rings are conform to factory standard.

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908.654

Item No.	Measuring range/mm	Setting ring $\phi$ /mm	Accuracy mm	Length L/mm	Length A/mm	Price RUB
908.650	$\phi$ 6- 8	6	$\pm 0.004$	55	0.7	
908.651	$\phi$ 8- 10	8	$\pm 0.004$	55	0.7	
908.652	$\phi$ 10- 12	10	$\pm 0.004$	55	0.7	
908.653	$\phi$ 12- 16	16	$\pm 0.004$	80	0.7	
908.654	$\phi$ 16- 20	16	$\pm 0.004$	80	0.7	
908.655	$\phi$ 20- 25	25	$\pm 0.004$	90	0.7	
908.656	$\phi$ 25- 30	25	$\pm 0.004$	90	0.7	
908.657	$\phi$ 30- 40	40	$\pm 0.004$	97	0.7	
908.658	$\phi$ 40- 50	40	$\pm 0.005$	97	0.7	
908.659	$\phi$ 50- 63	62	$\pm 0.005$	114	0.7	
908.660	$\phi$ 62- 75	62	$\pm 0.005$	114	0.7	
908.661	$\phi$ 75- 88	87	$\pm 0.005$	114	0.7	
908.662	$\phi$ 87-100	87	$\pm 0.005$	114	0.7	
908.663	$\phi$ 100-125	-	$\pm 0.005$	150	0.7	
908.664	$\phi$ 125-150	-	$\pm 0.005$	150	0.7	
908.665	$\phi$ 150-175	-	$\pm 0.005$	150	0.7	
908.666	$\phi$ 175-200	-	$\pm 0.005$	150	0.7	
908.667	$\phi$ 200-225	-	$\pm 0.007$	150	0.7	
908.668	$\phi$ 225-250	-	$\pm 0.007$	150	0.7	
908.669	$\phi$ 250-275	-	$\pm 0.007$	150	0.7	
908.670	$\phi$ 275-300	-	$\pm 0.007$	150	0.7	

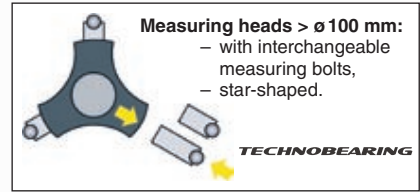


Item No.	Measuring range/mm	Setting rings $\phi$ /mm	Extension mm	Number of instruments	Price RUB
908.671	$\phi$ 6- 12	6, 8, 10	100	3	
908.672	$\phi$ 12- 20	16	150	2	
908.673	$\phi$ 20- 50	25, 40	150	4	
908.674	$\phi$ 50-100	62, 87	150	4	



## Digital three-point internal micrometers

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



- Measuring range:  $\phi$  6-300 mm.
- Resolution: 0.001 mm.
- mm/inch conversion.
- ABS/INC switchable.
- On/off switch.
- Automatic switch-off.
- Reset/preset.
- Self-centering.
- Tungsten carbide measuring faces.

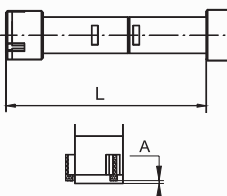
- Interchangeable measuring bolts from measuring range  $\phi$  100-125 mm.
- Protection: IP54.
- Delivery in a case, incl. extension 150 mm (measuring range  $\phi$  6-12 mm: 100 mm).
- Separate instruments within measuring range  $\phi$  6-100 mm and the sets are delivered incl. setting ring(s) (conforms to factory standard).
- Power supply: 1 battery type V357.



Item No.	Measuring range/mm	Setting ring $\phi$ /mm	Accuracy mm	Length L/mm	Length A/mm	Price RUB
906.886	$\phi$ 6- 8	6	$\pm 0.004$	62	0.7	
906.887	$\phi$ 8- 10	8	$\pm 0.004$	62	0.7	
906.888	$\phi$ 10- 12	10	$\pm 0.004$	62	0.7	
906.889	$\phi$ 12- 16	16	$\pm 0.004$	80	0.7	
906.890	$\phi$ 16- 20	16	$\pm 0.004$	80	0.7	
906.891	$\phi$ 20- 25	25	$\pm 0.004$	105	0.7	
906.892	$\phi$ 25- 30	25	$\pm 0.004$	105	0.7	
906.893	$\phi$ 30- 40	40	$\pm 0.004$	97	0.7	
906.894	$\phi$ 40- 50	40	$\pm 0.005$	110	0.7	
906.895	$\phi$ 50- 63	62	$\pm 0.005$	114	0.7	
906.896	$\phi$ 62- 75	62	$\pm 0.005$	127	0.7	
906.897	$\phi$ 75- 88	87	$\pm 0.005$	114	0.7	
906.898	$\phi$ 87-100	87	$\pm 0.005$	114	0.7	
906.899	$\phi$ 100-125	-	$\pm 0.005$	150	0.7	
908.675	$\phi$ 125-150	-	$\pm 0.005$	150	0.7	
908.676	$\phi$ 150-175	-	$\pm 0.005$	150	0.7	
908.677	$\phi$ 175-200	-	$\pm 0.005$	150	0.7	
908.678	$\phi$ 200-225	-	$\pm 0.007$	150	0.7	
908.679	$\phi$ 225-250	-	$\pm 0.007$	150	0.7	
908.680	$\phi$ 250-275	-	$\pm 0.007$	150	0.7	
908.681	$\phi$ 275-300	-	$\pm 0.007$	150	0.7	

**Option:**

836.535 Spare battery



Item No.	Measuring range/mm	Setting rings $\phi$ /mm	Extension mm	Number of instruments	Price RUB
906.900	$\phi$ 6- 12	6, 8, 10	100	3	
906.901	$\phi$ 12- 20	16	150	2	
906.902	$\phi$ 20- 50	25, 40	150	4	
906.903	$\phi$ 50-100	62, 87	150	4	

## Digital three-point internal micrometers

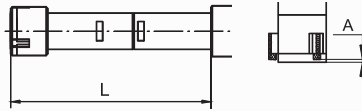
Digital three-point internal micrometers with a large measuring range. With optional extensions also for measuring in deep (blind) bores.

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

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**NEW**



### Extensions

Item No.	Extension mm	Price RUB
906.227	150	
906.228	500	
906.229	1000	



Item No.	Measuring range/mm	Setting ring $\phi$ /mm	Accuracy mm	Length L/mm	Length A/mm	Price RUB
906.904	$\phi$ 50 - 70	50	$\pm 0.004$	107	0.5	
906.905	$\phi$ 70 - 100	70	$\pm 0.004$	107	0.5	
906.906	$\phi$ 100 - 150	-	$\pm 0.005$	107	0.5	
906.907	$\phi$ 150 - 250	-	$\pm 0.007$	107	0.5	
906.908	$\phi$ 200 - 300	-	$\pm 0.007$	107	0.5	

Item No.	Measuring range/mm	Setting ring $\phi$ /mm	Number of instruments	Price RUB
906.909	$\phi$ 50 - 100	70	2	
906.910	$\phi$ 100 - 250	150	2	

### Option

Item No.	Description	Price RUB
836.535	Spare battery	

## Digital three-point internal micrometers up to 1000 mm

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

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



907.787

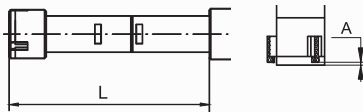
### With interchangeable measuring bolts

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

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

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



### Option

Item No.	Description	Price RUB
836.535	Spare battery	

**NEW**

### Extensions

Item No.	Extension mm	Price RUB
906.227	150	
906.228	500	
906.229	1000	

## Three-point internal micrometers

Three-point internal micrometers with a clever pistol-shaped base instrument for quick, easy and accurate measurements of internal measures such as (blind) bores. Easy single handed operation for both right and left handed use. Available as single instruments and as sets, with setting ring(s) and extension.

- Measuring range:  $\varnothing$  6- 100 mm.
- Measuring depth: 0- 270 mm.
- Read-out depends on the type of dial indicator or measuring probe.
- Clamping shaft:  $\varnothing$  8 mm.
- Self-centering.
- Excl. dial indicator or measuring probe.
- Tungsten carbide measuring faces.
- Setting rings are conform to factory standard.
- Delivery in a case.



### Separate instruments

Item No.	Measuring range/mm	Accuracy mm	Setting ring $\varnothing$ /mm	Extension mm	Length/mm		Price RUB
					L	A	
907.770	$\varnothing$ 6- 8	$\pm 0.004$	8	100	50	2	
907.771	$\varnothing$ 8- 10	$\pm 0.004$	8	100	50	2	
907.772	$\varnothing$ 10- 12	$\pm 0.004$	10	100	50	2	
907.773	$\varnothing$ 12- 16	$\pm 0.004$	16	150	65	0.5	
907.774	$\varnothing$ 16- 20	$\pm 0.004$	16	150	65	0.5	
907.775	$\varnothing$ 20- 25	$\pm 0.004$	25	150	91	0.5	
907.776	$\varnothing$ 25- 30	$\pm 0.004$	25	150	91	0.5	
907.777	$\varnothing$ 30- 40	$\pm 0.004$	40	150	97	0.5	
907.778	$\varnothing$ 40- 50	$\pm 0.005$	40	150	97	0.5	
907.779	$\varnothing$ 50- 63	$\pm 0.005$	62	150	112	0.5	
907.780	$\varnothing$ 62- 75	$\pm 0.005$	62	150	112	0.5	
907.781	$\varnothing$ 75- 88	$\pm 0.005$	87	150	112	0.5	
907.782	$\varnothing$ 87- 100	$\pm 0.005$	87	150	112	0.5	

### Sets

Item No.	Measuring range/mm	Setting ring(s) $\varnothing$ /mm	Number of pistol grips	Extension mm	Price RUB
907.783	$\varnothing$ 6- 12	8, 10	1	100	
907.784	$\varnothing$ 12- 20	16	1	150	
907.785	$\varnothing$ 20- 50	25, 40	2	150	
907.786	$\varnothing$ 50- 100	62, 87	1	150	

## Internal measuring instruments

- Measuring range: 6-450 mm.
- Read-out depends on the type of dial indicator.
- Incl. standard dial indicator 0-3 mm/0.01 mm.
- Clamping shaft:  $\varnothing 8$  mm.
- Self-centering (except 907.230).
- Interchangeable measuring inserts with tungsten carbide stylus tip (907.230 with spherical measuring face).
- Also suitable for various dial indicators from e.g. Mitutoyo, TESA, Käfer and Peacock with clamping stem  $\varnothing 8$  mm.



Item No.	Measuring range/mm	Measuring depth/mm	Price RUB
907.230	6- 10	40	
907.231	10- 18	100	
907.232	18- 35	125	
907.233	35- 50	150	
907.235	50-160	150	
907.236	160-250	400	
907.237	250-450	400	



907.235+907.933



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### Optional dial indicators

Item No.	Measuring range/mm	Read-out mm	Accuracy mm	Price RUB
<b>Analog:</b>				
907.933	0-10	0.01	-	
<b>Digital (with determination of the reversal point):</b>				
909.250	0-12.5	0.002	$\pm 0.015$	
909.251	0-12.5	0.001	$\pm 0.006$	
910.004	0-12.7	0.001	$\pm 0.004$	



909.250/251



910.004

## Peacock internal measuring instruments

- Measuring range: 6 - 400 mm.
- Read-out depends on the type of dial indicator.
- Clamping shaft:  $\varnothing 8$  mm.
- Self-centering.
- Interchangeable measuring inserts with tungsten carbide stylus tip.
- Also suitable for various dial indicators from e.g. Mitutoyo, TESA and Käfer with clamping stem  $\varnothing 8$  mm.



855.160

TECHNOBEARING



855.507

Item No.	Measuring range/mm	Measuring depth/mm	Price RUB
855.010	6 - 10	50	
855.018	10 - 18	100	
855.035	18 - 35	150	
855.060	35 - 60	150	
855.150	50 - 150	150	
855.160	100 - 160	250	
855.250	160 - 250	250	
855.260	250 - 400	400	
<b>Option:</b>			
855.507	Peacock dial indicator 0 - 10 mm, graduation 0.01 mm		



## Setting instrument for internal measuring instruments

This instrument offers you the best way to accurately zero-set your internal measuring instruments with dial indicator. Gauge blocks are used to set the exact reference value. The special receiver assures that the centering device of the micrometer also functions when in use on this instrument, making the checking just as easy as measuring.

- Adjustment range: 18-400 mm.
- The setting instrument consists of a stand with double guidance and a flat measuring jaw.
- Excl. gauge blocks.
- Delivery in a case.



Item No.	Adjustment range/mm	Price RUB
907.877	18-400	

## Setting gauges for inside micrometers

Used for setting of inside micrometers.

- Measuring range: 0-275 mm.



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Item No.	Length mm	Accuracy mm	Parallelism mm	Price RUB
910.005	50	±0.003	0.003	
910.006	75	±0.004	0.004	
910.007	100	±0.005	0.005	
910.008	150	±0.005	0.005	
910.009	200	±0.005	0.005	
910.010	250	±0.005	0.005	
910.011	275	±0.005	0.005	

## Stick micrometers

- Measuring range: 50 - 600 mm.
- Graduation: 0.01 mm.
- Locking screw (except 906.078).
- Spherical tungsten carbide measuring faces:  $\varnothing 8 \times 8$  mm (906.078/079:  $\varnothing 9 \times 2.5$  mm).
- With insulating grips (only 906.083 - 906.099).
- Excl. setting gauge.



906.080



906.096

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Item No.	Measuring range/mm	Accuracy mm	Price RUB
906.078	50 - 75	±0.006	
906.079	75 - 100	±0.006	
906.080	100 - 125	±0.006	
906.081	125 - 150	±0.008	
906.082	150 - 175	±0.008	
906.083	175 - 200	±0.008	
906.084	200 - 225	±0.009	
906.085	225 - 250	±0.009	
906.086	250 - 275	±0.009	
906.087	275 - 300	±0.009	
906.088	300 - 325	±0.009	

Item No.	Measuring range/mm	Accuracy mm	Price RUB
906.089	325 - 350	±0.009	
906.090	350 - 375	±0.010	
906.091	375 - 400	±0.010	
906.092	400 - 425	±0.010	
906.093	425 - 450	±0.010	
906.094	450 - 475	±0.011	
906.095	475 - 500	±0.011	
906.096	500 - 525	±0.011	
906.097	525 - 550	±0.011	
906.098	550 - 575	±0.011	
906.099	575 - 600	±0.011	

### Stick micrometer sets

- Measuring range: 50 - 5000 mm.
- Measuring range micrometer:  
 906.911 - 906.917: 50- 63 mm,  
 906.918: 150- 175 mm,  
 906.919 - 906.923: 1000- 1050 mm.
- Graduation: 0.01 mm.
- Accuracy:  
 906.911 - 906.918:  $\pm(3+n+L/50) \mu\text{m}$ ,  
 906.919 - 906.923:  $\pm(7+n+L/50) \mu\text{m}$   
 ( $n$  = number of extensions,  
 $L$  = max. measuring length in mm).
- Locking screw.
- Spherical tungsten carbide measuring faces.
- With insulating grips  
 (only 906.918 - 906.923).
- External diameter micrometer/extensions:  
 906.911 - 906.917: 15.5 mm,  
 906.918: 22 mm,  
 906.919 - 906.923: 28 mm.
- Incl. setting gauge  
 (only 906.911 - 917: 50 mm,  
 906.918: 150 mm).
- Delivery in a case.

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906.918

Item No.	Measuring range/mm	Number of extensions	Price RUB
906.911*	50- 63	—	
906.912	50- 100	2	
906.913	50- 150	3	
906.914	50- 300	5	
906.915	50- 500	6	
906.916	50-1000	8	
906.917	50-1500	10	
906.918	150-2000	9	
906.919*	1000- 1050	—	
906.920	1000-2000	5	
906.921	1000-3000	6	
906.922	1000-4000	7	
906.923	1000-5000	8	



\* Single instrument (without extensions).

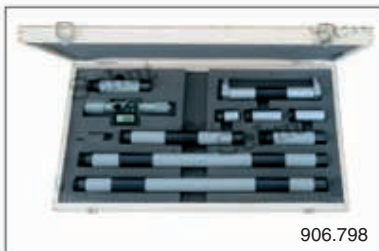
### Digital stick micrometer sets

- Measuring range: 150 - 2000 mm.
- Measuring range micrometer: 150 - 175 mm.
- Resolution: 0.001 mm.
- Locking screw.
- Spherical tungsten carbide measuring faces.
- With insulating grips  
 (only 906.797 - 906.799).
- External diameter micrometer/extensions:  
 22 mm.
- Incl. setting gauge: 150 mm.
- Delivery in a case.

**NEW**



906.796



906.798



Item No.	Measuring range/mm	Number of extensions	Accuracy $\mu\text{m}$	Price RUB
906.796*	150- 175	—	6.5	
906.797	150-1000	6	29	
906.798	150-1500	8	41	
906.799	150-2000	9	52	

\* Single instrument (without extensions).

### Inside micrometers with interchangeable anvils

Screw thread micrometers for internal measurements of pitch diameters. The interchangeable anvils allow measurements of several kinds of screw thread.

- Measuring range: 75 - 300 mm.
- Graduation: 0.01 mm.
- Insert shaft:  $\varnothing 5$  mm.
- Delivery incl. setting gauge for metric thread, 60° flank angle.



Item No.	Measuring range/mm	Accuracy mm	Price RUB
<b>Inside micrometers without inserts:</b>			
906.924	75 - 100	$\pm 0.025$	
906.925	100 - 125	$\pm 0.028$	
906.926	125 - 150	$\pm 0.030$	
906.927	150 - 175	$\pm 0.033$	
906.928	175 - 200	$\pm 0.035$	
906.929	200 - 225	$\pm 0.038$	
906.930	225 - 250	$\pm 0.040$	
906.931	250 - 275	$\pm 0.043$	
906.932	275 - 300	$\pm 0.045$	

Item No.	Threads per inch	Price RUB
<b>Inserts for Whitworth threads, 55° flank angle, per pair:</b>		
906.940	60 - 48	
906.941	48 - 40	
906.942	40 - 32	
906.944	32 - 24	
906.945	24 - 18	
906.946	18 - 14	
906.947	14 - 10	
906.948	10 - 7	
906.949	7 - 4.5	
906.950	4.5 - 3.5	
906.951	Set 60 - 3.5	

Item No.	Pitch/mm	Price RUB
<b>Inserts for metric threads, 60° flank angle, per pair:</b>		
906.933	0.4 - 0.5	
906.934	0.6 - 0.9	
906.935	1 - 1.75	
906.936	2 - 3	
906.937	3.5 - 5	
906.938	5.5 - 7	
906.939	Set 0.4 - 7	

Item No.	Threads per inch	Price RUB
<b>Inserts for UN, UNC and UNF threads, 60° flank angle, per pair:</b>		
906.952	64 - 48	
906.953	44 - 28	
906.954	24 - 14	
906.955	13 - 9	
906.956	8 - 5	
906.957	4.5 - 3.5	
906.958	Set 64 - 3.5	

## Internal micrometers

Internal micrometers with special measuring jaws for measurements in hard-to-reach places.

- Measuring range: 5 - 200 mm.
- Analog: graduation 0.01 mm, digital: resolution 0.001 mm.
- Tungsten carbide cylindrical measuring faces.
- Internal micrometers within measuring range 5 - 50 mm are delivered incl. setting ring.
- Delivery in a case.

### Analog

- No-glare chrome finished design.

### Digital

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

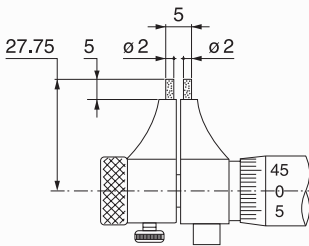


906.509

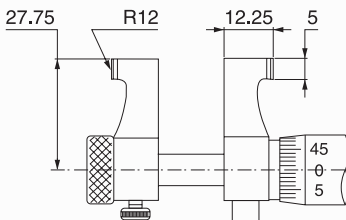


909.974

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906.509 / 909.974



906.510-533 / 909.975-981



906.510-533 / 909.975-981

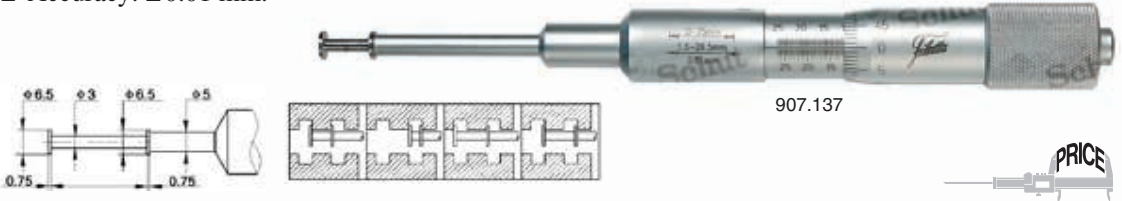


Item No.	Measuring range/mm	Accuracy mm	Price RUB
<b>Analog:</b>			
906.509	5- 30	±0.005	
906.510	25- 50	±0.006	
906.511	50- 75	±0.007	
906.512	75-100	±0.008	
906.530	100-125	±0.009	
906.531	125-150	±0.009	
906.532	150-175	±0.010	
906.533	175-200	±0.010	
<b>Digital:</b>			
909.974	5- 30	±0.005	
909.975	25- 50	±0.006	
909.976	50- 75	±0.007	
909.977	75-100	±0.008	
909.978	100-125	±0.009	
909.979	125-150	±0.009	
909.980	150-175	±0.010	
909.981	175-200	±0.010	
<b>Option:</b>			
836.535	Spare battery		

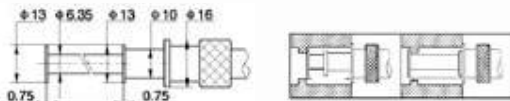
## Groove micrometers

Micrometers for measuring e.g. steps in bores and internal cross grooves. With double graduation for internal and external measurements. By means of the disk-shaped measuring faces the wide, depth and location of grooves in bores can be determined.

- Measuring range:
  - external measuring: 0 - 100 mm,
  - internal measuring: 1.6- 101.5 mm.
- Graduation: 0.01 mm.
- Accuracy:  $\pm 0.01$  mm.
- Diameter measuring faces:
  - 907.137: 6.5 mm,
  - 907.138-907.141: 13 mm.
- Double graduation.



907.137



907.138-141

Item No.	Ext. measuring range/mm	Int. measuring range/mm	Price RUB
907.137	0- 25	1.6- 26.5	
907.138	0- 25	1.6- 26.5	
907.139	25- 50	26.5- 51.5	
907.140	50- 75	51.5- 76.5	
907.141	75- 100	76.5- 101.5	

## Two-point internal measuring instruments

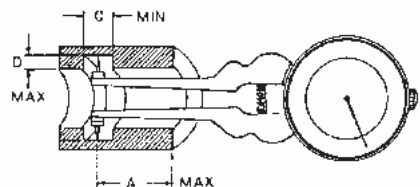
- Measuring range: 20- 150 mm.
- Graduation: 0.01 mm.
- Interchangeable measuring inserts.
- Delivery in a case with an measuring inserts.

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855.502

Item No.	Measuring range/mm	A <sub>max</sub> mm	C <sub>min</sub> mm	D <sub>max</sub> mm	Price RUB
855.501	20- 34	60	2	3	
855.502	30- 60	75	2.5	5	
855.503	55- 150	90	4	9	





### Diatest crankshaft meters

- Measuring range: 45 - 500 mm.
- Graduation: 0.01 mm.
- Rotatable dial.
- Delivery with dial indicator, counter-weight and extensions in a case.



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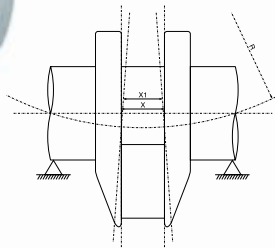
Item No.	Measuring range/mm	Price RUB
831.469	45 - 150	
831.470	60 - 300	
831.471	60 - 500	
<b>Options:</b>		
831.472	Separate dial indicator for 831.469	
831.473	Counterweight for 831.469	
831.474	Separate dial indicator for 831.470 and 831.471	
831.475	Counterweight for 831.470 and 831.471	

### Crankshaft meters

- Measuring range: 60 - 500 mm.
- Graduation: 0.01 mm.
- Rotatable dial.
- Delivery with dial indicator, counter-weight and extensions in a case.



907.917



907.919



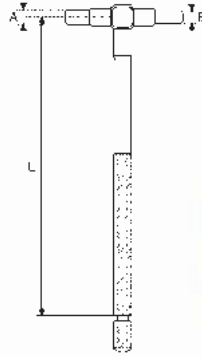
Item No.	Measuring range/mm	Price RUB
907.918	60 - 300	
907.919	60 - 500	
<b>Option:</b>		
907.917	Separate dial indicator	

## Telescopic gauges

In places that are hard to reach with standard measuring instruments, you can use these telescopic gauges. The spring gauge is put into the bore, centers itself, after that you can turn on the locking screw. Then the gauge is pulled out and you can measure the result, for instance with a micrometer.

- Measuring range: 8 - 150 mm.
- Chrome finished.

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### Individual gauges

Item No.	Measuring range/mm	Dimensions/mm			Price RUB
		L	A	B	
906.604	8 - 12.7	102	4	3	
906.605	12.7 - 19	102	5	4	
906.606	19 - 32	102	5	4	
906.607	32 - 54	127	7.5	6	
906.608	54 - 90	127	7.5	6	
906.609	90 - 150	127	7.5	6	

### Set of gauges

Item No.	Measuring range/mm	Price RUB
906.610	8 - 150	



## Plug gauges for small bores (blind/through)

Ideal for measuring of small bores (blind and through) and grooves. The spring gauge is put into the bore, centers itself, after that you can turn on the locking screw. Then the gauge is pulled out and you can measure the result, for instance with a micrometer. Separate set for blind bores and through bores.

- Measuring range: 3 - 13 mm (4 gauges: 3 - 5 mm, 5 - 7.5 mm, 7.5 - 10 mm and 10 - 13 mm).
- Chrome finished.



907.747



907.748

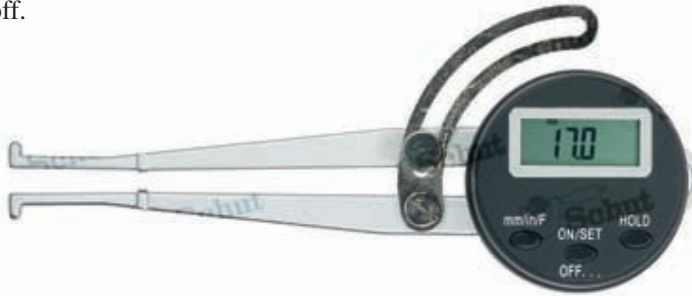
### Set of gauges

Item No.	Description	Price RUB
907.747	For blind bores	
907.748	For through bores	

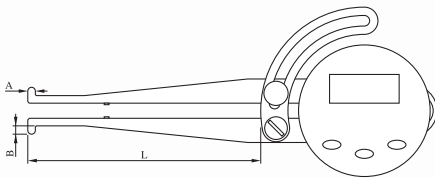


### Digital internal measuring instrument

- Measuring range: 12.7 - 170 mm.
- Resolution: 0.1 mm.
- Accuracy:  $\pm 0.2$  mm.
- mm/inch conversion.
- On/off switch.
- Automatic switch-off.
- Reset.
- Hold function.
- Locking screw.
- Power supply: 1 battery type CR2032.



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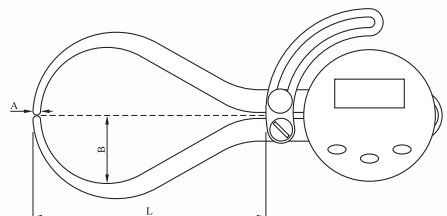
Item No.	Measuring range/mm	Length/mm			Price RUB
		L	A	B	
909.409	12.7 - 170	85	3	3	
<b>Option:</b> 495.157 Spare battery					

### Digital external measuring instrument

- Measuring range: 0 - 160 mm.
- Resolution: 0.1 mm.
- Accuracy:  $\pm 0.2$  mm.
- mm/inch conversion.
- On/off switch.
- Automatic switch-off.
- Reset.
- Hold function.
- Locking screw.
- Power supply: 1 battery type CR2032.



Item No.	Measuring range/mm	Length/mm			Price RUB
		L	A	B	
909.408	0 - 160	85	3	25	
<b>Option:</b> 495.157 Spare battery					



## Digital internal measuring instruments

Digital internal measuring instruments for measurements of bores, internal grooves and other hard-to-reach places.

- Measuring range: 5 - 60 mm.
- Resolution: 0.005 mm. Digital-analog display changes automatically between 0.01, 0.02 and 0.05 mm ( $\pm 20$  scale divisions).
- mm/inch conversion.
- ABS/INC switchable.
- Large LCD display, 340° rotatable.
- On/off switch.
- Automatic switch-off.
- Reset/preset.
- Hold and min/max functions.
- Adjustable tolerance limits.
- Measuring faces with different contact forms.
- Power supply: 1 battery type CR2032.

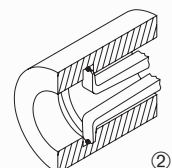
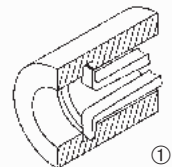
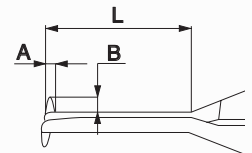


908.810



Item No.	Measuring range/mm	Accuracy mm	Length/mm			Contact form/mm	Price RUB
			L	A	B		
<b>Travel 10 mm:</b>							
908.810	5-15	$\pm 0.02$	20	1	1.5	① R 0.3	
908.811	10-20	$\pm 0.02$	25	1.5	3.0	① R 0.3	
908.812	20-30	$\pm 0.02$	30	2	6.5	① R 0.5	
908.813	30-40	$\pm 0.02$	30	2.5	9.0	① R 0.5	
908.814	40-50	$\pm 0.02$	30	2.5	9.0	① R 0.5	
908.816	10-20	$\pm 0.02$	25	1.5	3.0	② $\phi 1.5$	
908.817	20-30	$\pm 0.02$	30	2	6.5	② $\phi 1.5$	
908.818	30-40	$\pm 0.02$	30	2.5	9.0	② $\phi 1.5$	
908.819	40-50	$\pm 0.02$	30	2.5	9.0	② $\phi 1.5$	
<b>Travel 20 mm:</b>							
908.820	5-25	$\pm 0.03$	35	1	1.5	① R 0.3	
908.821	10-30	$\pm 0.03$	55	2	3.5	① R 0.5	
908.822	20-40	$\pm 0.03$	80	3	6.5	① R 0.5	
908.823	30-50	$\pm 0.03$	80	3	8.5	① R 0.5	
908.824	40-60	$\pm 0.03$	80	3	8.5	① R 0.5	
908.826	10-30	$\pm 0.03$	55	2	3.5	② $\phi 1.5$	
908.827	20-40	$\pm 0.03$	80	3	6.5	② $\phi 1.5$	
908.828	30-50	$\pm 0.03$	80	3	8.5	② $\phi 1.5$	
908.829	40-60	$\pm 0.03$	80	3	8.5	② $\phi 1.5$	
<b>Option:</b>							
495.157	Spare battery						

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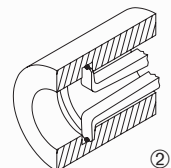
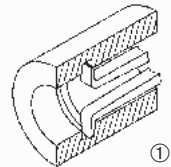
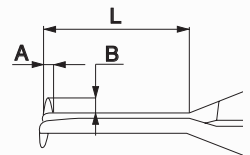
## Internal measuring instruments

Internal measuring instruments for measurements of bores, internal grooves and other hard-to-reach places.

- Measuring range: 5 - 60 mm.
- Graduation: 0.01 mm.
- Rotatable dial.
- Adjustable tolerance markers.
- Measuring faces with different contact forms.



Item No.	Measuring range/mm	Accuracy mm	Length/mm			Contact form/mm	Price RUB
			L	A	B		
<b>Travel 10 mm:</b>							
908.830	5 - 15	±0.02	20	1	1.5	① R 0.3	
908.831	10 - 20	±0.02	25	1.5	3.0	① R 0.3	
908.832	20 - 30	±0.02	30	2	6.5	① R 0.5	
908.833	30 - 40	±0.02	30	2.5	9.0	① R 0.5	
908.834	40 - 50	±0.02	30	2.5	9.0	① R 0.5	
908.836	10 - 20	±0.02	25	1.5	3.0	② ø1.5	
908.837	20 - 30	±0.02	30	2	6.5	② ø1.5	
908.838	30 - 40	±0.02	30	2.5	9.0	② ø1.5	
908.839	40 - 50	±0.02	30	2.5	9.0	② ø1.5	
<b>Travel 20 mm:</b>							
908.840	5 - 25	±0.03	35	1	1.5	① R 0.3	
908.841	10 - 30	±0.03	55	2	3.5	① R 0.5	
908.842	20 - 40	±0.03	80	3	6.5	① R 0.5	
908.843	30 - 50	±0.03	80	3	8.5	① R 0.5	
908.844	40 - 60	±0.03	80	3	8.5	① R 0.5	
908.846	10 - 30	±0.03	55	2	3.5	② ø1.5	
908.847	20 - 40	±0.03	80	3	6.5	② ø1.5	
908.848	30 - 50	±0.03	80	3	8.5	② ø1.5	
908.849	40 - 60	±0.03	80	3	8.5	② ø1.5	



## Digital external measuring instruments

Digital external measuring instruments for measurements of external grooves, axis diameters, wall thicknesses and other hard-to-reach places.

- Measuring range: 0-60 mm.
- Resolution: 0.005 mm. Digital-analog display changes automatically between 0.01, 0.02 and 0.05 mm ( $\pm 20$  scale divisions).
- mm/inch conversion.
- ABS/INC switchable.
- Large LCD display, 340° rotatable.
- On/off switch.
- Automatic switch-off.
- Reset/preset.
- Hold and min/max functions.
- Adjustable tolerance limits.
- Measuring faces with different contact forms.
- Power supply: 1 battery type CR2032.

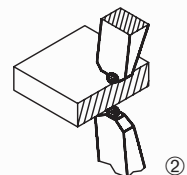
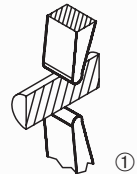
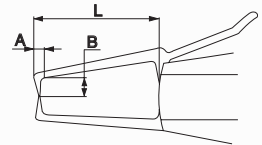


908.850



Item No.	Measuring range/mm	Accuracy mm	Length/mm			Contact form/mm	Price RUB
			L	A	B		
<b>Travel 10 mm:</b>							
908.850	0-10	$\pm 0.02$	40	3	8	① R 0.5	
908.851	10-20	$\pm 0.02$	40	3	8	① R 0.5	
908.852	20-30	$\pm 0.02$	40	3	8	① R 0.5	
908.853	30-40	$\pm 0.02$	40	3	8	① R 0.5	
908.854	40-50	$\pm 0.02$	40	3	8	① R 0.5	
908.855	0-10	$\pm 0.02$	40	3	8	② $\phi 1.5$	
908.856	10-20	$\pm 0.02$	40	3	8	② $\phi 1.5$	
908.857	20-30	$\pm 0.02$	40	3	8	② $\phi 1.5$	
908.858	30-40	$\pm 0.02$	40	3	8	② $\phi 1.5$	
908.859	40-50	$\pm 0.02$	40	3	8	② $\phi 1.5$	
<b>Travel 20 mm:</b>							
908.860	0-20	$\pm 0.03$	80	6.5	25	① R 0.75	
908.861	10-30	$\pm 0.03$	80	6.5	25	① R 0.75	
908.862	20-40	$\pm 0.03$	80	6.5	25	① R 0.75	
908.863	30-50	$\pm 0.03$	80	6.5	25	① R 0.75	
908.864	40-60	$\pm 0.03$	80	6.5	25	① R 0.75	
908.865	0-20	$\pm 0.03$	80	6.5	25	② $\phi 1.5$	
908.866	10-30	$\pm 0.03$	80	6.5	25	② $\phi 1.5$	
908.867	20-40	$\pm 0.03$	80	6.5	25	② $\phi 1.5$	
908.868	30-50	$\pm 0.03$	80	6.5	25	② $\phi 1.5$	
908.869	40-60	$\pm 0.03$	80	6.5	25	② $\phi 1.5$	
<b>Option:</b>							
495.157	Spare battery						

TECHNOBEARING





## External measuring instruments

External measuring instruments for measurements of external grooves, axis diameters, wall thicknesses and other hard-to-reach places.

- Measuring range: 0-60 mm.
- Graduation: 0.01 mm.
- Rotatable dial.
- Adjustable tolerance markers.
- Measuring faces with different contact forms.

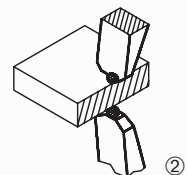
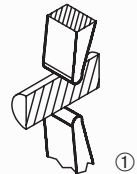
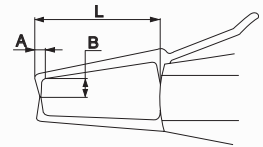


908.870

TECHNOBEARING



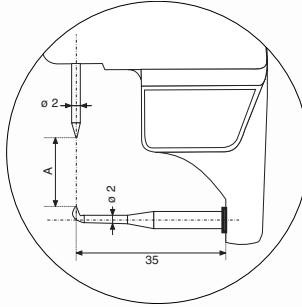
Item No.	Measuring range/mm	Accuracy mm	Length/mm			Contact form/mm	Price RUB
			L	A	B		
<b>Travel 10 mm:</b>							
908.870	0-10	±0.02	40	3	8	① R 0.5	
908.871	10-20	±0.02	40	3	8	① R 0.5	
908.872	20-30	±0.02	40	3	8	① R 0.5	
908.873	30-40	±0.02	40	3	8	① R 0.5	
908.874	40-50	±0.02	40	3	8	① R 0.5	
908.875	0-10	±0.02	40	3	8	② ø1.5	
908.876	10-20	±0.02	40	3	8	② ø1.5	
908.877	20-30	±0.02	40	3	8	② ø1.5	
908.878	30-40	±0.02	40	3	8	② ø1.5	
908.879	40-50	±0.02	40	3	8	② ø1.5	
<b>Travel 20 mm:</b>							
908.880	0-20	±0.03	80	6.5	25	① R 0.75	
908.881	10-30	±0.03	80	6.5	25	① R 0.75	
908.882	20-40	±0.03	80	6.5	25	① R 0.75	
908.883	30-50	±0.03	80	6.5	25	① R 0.75	
908.884	40-60	±0.03	80	6.5	25	① R 0.75	
908.885	0-20	±0.03	80	6.5	25	② ø1.5	
908.886	10-30	±0.03	80	6.5	25	② ø1.5	
908.887	20-40	±0.03	80	6.5	25	② ø1.5	
908.888	30-50	±0.03	80	6.5	25	② ø1.5	
908.889	40-60	±0.03	80	6.5	25	② ø1.5	



### Digital thickness gauge

This digital thickness gauge has special, pointed measuring faces for measuring in hard-to-reach places of metal parts.

- Measuring range: 0- 15 mm.
- Resolution: 0.01 mm.
- Accuracy:  $\pm 0.03$  mm.
- mm/inch conversion.
- On/off switch.
- Reset.
- Weight: 100 g.
- Power supply:  
1 battery type V357.



TECHNOBEARING

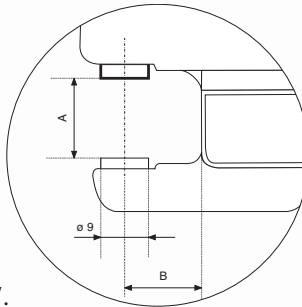


Item No.	Measuring face	Throat depth/mm	Price RUB
906.450	Pointed	35	
<b>Option:</b>			
836.535	Spare battery		

### Digital thickness gauges

The shape of the measuring faces makes this digital thickness gauge especially suitable for measuring metal or plastic film, leather, paper, etc.

- Measuring range: 0- 25 mm.
- Resolution: 0.01 mm.
- Accuracy:  
0- 15 mm:  $\pm 0.03$  mm,  
0- 25 mm:  $\pm 0.04$  mm.
- mm/inch conversion.
- On/off switch.
- Reset.
- Weight: 100 g.
- Power supply: 1 battery type V357.



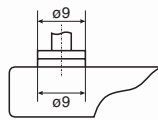
906.451



Item No.	Measuring range/mm	Measuring face $\phi$ /mm	Throat depth/mm	Price RUB
906.451	0- 15	9	15.0	
906.452	0- 25	9	14.5	
<b>Option:</b>				
836.535	Spare battery			

## Digital external measuring instruments

- Measuring range: 0-10 mm.
- Resolution: 0.01 mm.
- Repeatability: 0.01 mm.
- mm/inch conversion.
- Automatic switch-off.
- Reset.
- Max. measuring speed: 1.5 m/s.
- Non-interchangeable inserts.
- Power supply: 1 battery type V357.



906.453



906.454



Item No.	Measuring range/mm	Measuring faces $\phi$ /mm	Throat depth/mm	Price RUB
906.453	0-10	9	30	
906.454	0-10	9	120	
<b>Option:</b>				
836.535	Spare battery			

TECHNOBEARING

### Thickness gauges

- Measuring range: 0-20 mm.
- Graduation: 0.01 mm.
- Rotatable dial.

- Non-interchangeable inserts.
- Measuring face:  $\varnothing$  10 mm (906.446:  $\varnothing$  6 mm).



906.446



906.447



906.448

TECHNOBEARING

Item No.	Measuring range/mm	Throat depth/mm	Price RUB
906.446	0-10	10	
906.447	0-10	30	
906.448	0-20	110	

### Thickness gauges with roller measuring inserts

- Measuring range: 0-10 mm.
- Measuring face: 7 mm/ $\varnothing$ 22 mm.
- Throat depth: 100 mm.
- Anvil: 28 x 22 mm (3 mm wheel height in anvil).

#### Analog

- Graduation: 0.01 mm.
- Rotatable dial with locking screw.
- Adjustable tolerance markers.

#### Digital

- Resolution: 0.01 mm.
- mm/inch conversion.
- On/off switch.
- Reset.
- Power supply: 1 battery type CR2032.



906.388

**NEW**



906.389

Item No.	Description	Price RUB
906.388	Thickness gauge	
906.389	Digital thickness gauge	
<b>Option:</b>		
495.157	Spare battery	

### Peacock external measuring instruments

- Measuring range: 0 - 10 mm.
- Graduation: 0.01 mm.
- Measuring force: approx. 1.8 N.
- Non-interchangeable measuring inserts.
- Ceramic measuring faces.



855.750

TECHNOBEARING



855.751

Item No.	Measuring range/mm	Measuring faces $\phi$ /mm	Throat depth/mm	Price RUB
855.750	0 - 10	10	20	
855.751	0 - 10	10	120	

### External measuring instruments

- Measuring range: 0 - 10 mm.
- Graduation: 0.01 mm.
- Different types of inserts available, with hardened steel measuring faces.
- Throat depth: 50 mm.

Item No.	Type of insert	Price RUB
853.002	B	
853.003	C	
853.004	D	
853.005	E	
853.007	G	


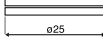





853.007



853.002

#### Types of inserts

-  **B** Wood, rubber, soft leather
-  **C** Soft rubber
-  **D** Rubber rings, round material
-  **E** Paper, cardboard, fibrous plates
-  **G** Metal

### Thickness gauge for film measurement

- Measuring range: 0 - 1 mm.
- Graduation: 0.001 mm.
- Measuring force: approx. 3 N.
- Non-interchangeable measuring inserts.
- Throat depth: 25 mm.
- Frame with insulating grip.
- Delivery with an inspection report.

Item No.	Measuring range/mm	Meas. faces $\phi$ /mm	Price RUB
907.859	0 - 1	10	



### Interapid thickness gauge for film measurement



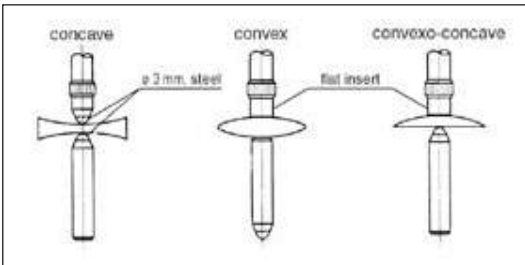
- Measuring range: 0 - 1 mm.
- Graduation: 0.001 mm.
- Measuring force: approx. 2 N.
- Non-interchangeable measuring inserts.
- Throat depth: 30 mm.
- Frame with insulating grip.
- Delivery with a declaration of conformity.

Item No.	Measuring range/mm	Meas. faces $\phi$ /mm	Price RUB
781.547	0 - 1	6.35	

### Peacock universal thickness gauge

Measuring instrument with dial indicator and adjustable anvil, multi-purpose.

- Span frame: 0 - 20 mm.
- Measuring range dial indicator: 10 mm.
- Graduation: 0.01 mm.
- Throat depth: 25 mm.
- With additional flat insert.



Item No.	Measuring range dial indicator/mm	Price RUB
855.752	0 - 10	

### Tube wall thickness gauge



- Measuring range: 0 - 10 mm.
- Graduation: 0.01 mm.
- Measuring force: approx. 1 N.
- Throat depth: 25 mm.
- From inner diameter 8 mm.

Item No.	Measuring range/mm	Price RUB
853.137	0 - 10	



## Thickness gauges

- Measuring range: 0 - 50 mm.
- Graduation: 0.1 mm.
- Different types of inserts.
- Hardened steel measuring faces.
- Other models available on request.



TECHNOBEARING

### Types of inserts

- General applications
- Wood, rubber, soft leather
- Soft rubber
- Paper, cardboard, fibrous plates
- Rubber rings, round materials
- Metal

Item No.	Measuring range/mm	Type of insert	Throat depth/mm	Price RUB
853.022	0 - 10	②	15	
853.031	0 - 30	⑤	50	
853.032	0 - 30	②	50	
853.033	0 - 30	③	50	
853.034	0 - 30	④	50	
853.035	0 - 30	⑥	50	
853.037	0 - 30	①	50	
853.041	0 - 50	⑤	50	
853.042	0 - 50	②	50	
853.043	0 - 50	③	50	
853.044	0 - 50	④	50	
853.045	0 - 50	⑥	50	
853.047	0 - 50	①	50	
853.052	0 - 25	②	150	
853.053	0 - 25	③	150	
853.054	0 - 25	①	150	
853.055	0 - 25	④	150	
853.056	0 - 25	⑥	150	
853.062	0 - 25	②	300	
853.063	0 - 25	③	300	
853.064	0 - 25	①	300	
853.065	0 - 25	④	300	
853.066	0 - 25	⑥	300	
853.082	0 - 25	②	500	
853.083	0 - 25	③	500	
853.084	0 - 25	①	500	
853.085	0 - 25	④	500	
853.087	0 - 25	⑥	500	

## Digital external measuring instruments

- Measuring range: 0-25 mm.
- Resolution: 0.01 mm.
- mm/inch conversion.
- On/off switch.
- Reset.
- Different types of inserts.
- Hardened steel measuring faces.
- Other models available on request.

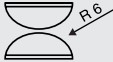

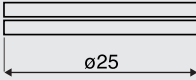
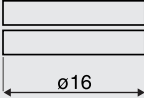

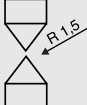


853.074



853.060

### Types of inserts

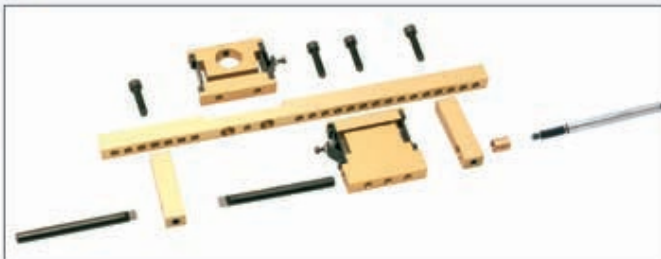
- ① General applications 
- ② Wood, rubber, soft leather 
- ③ Soft rubber 
- ④ Paper, cardboard, fibrous plates 
- ⑤ Rubber rings, round materials 
- ⑥ Metal 

**NEW**

TECHNOBEARING

Item No.	Measuring range/mm	Type of insert	Throat depth/mm	Price RUB
853.072	0-25	①	50	
853.073	0-25	②	50	
853.074	0-25	③	50	
853.075	0-25	④	50	
853.076	0-25	⑤	50	
853.077	0-25	⑥	50	
853.057	0-25	①	200	
853.078	0-25	②	200	
853.079	0-25	③	200	
853.080	0-25	④	200	
853.081	0-25	⑥	200	
853.060	0-25	①	300	
853.091	0-25	②	300	
853.092	0-25	③	300	
853.093	0-25	④	300	
853.094	0-25	⑥	300	

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



Accuracy of dial indicators according DIN 878	
Measuring range (mm)	Max. permissible errors (µm)
0- 0.4	9
0- 0.8	9
0- 3	12
0- 5	14
0-10	17

Accuracy of precision dial indicators according DIN 879	
Graduation (mm)	Max. permissible errors (µm)
0.001	1.2
0.01	12

Accuracy of dial test indicators according DIN 2270	
Graduation (mm)	Max. permissible errors (µm)
0.002	4
0.01	13

## Digital dial indicators 0.01 and 0.001 mm

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:  $\varnothing$  8 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.



TECHNOBEARING

907.646

907.649



Item No.	Measuring range/mm	Accuracy mm	Price RUB
<b>With resolution 0.01 mm:</b>			
907.634	0-12.5	$\pm 0.02$	
907.649	0-25	$\pm 0.03$	
907.652	0-50	$\pm 0.04$	
<b>With resolution 0.001 mm:</b>			
907.646	0-12.5	$\pm 0.015$	
<b>Options:</b>			
495.214	Spare battery		
909.446	USB interface		
909.687	Foot switch		



909.446

### USB interface:

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

## Absolute digital dial indicators

- Measuring range: 0-50.8 mm.
- Resolution: 0.01 mm or 0.001 mm.
- mm/inch conversion.
- ABS/INC switchable.
- LCD display 330° rotatable.
- Digimatic data output.
- On/off switch.
- Reset/preset.
- Ceramic stylus tip.
- Max. measuring speed: any.
- Measuring force: ≤ 2 N.
- Clamping stem: ø 8 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.

- With additional back with lug (only 909.998, 910.001/004).
- Protection: IP54.
- Delivery in a case with an inspection report.
- Power supply: 1 battery type CR2032.

TECHNOBEARING



**NEW**

PRICE



909.686

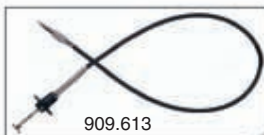


909.687

909.611



910.039/038



909.613

909.614

Item No.	Measuring range/mm	Resolution mm	Accuracy mm	Price RUB
909.998	0-12.7	0.001	±0.004	
909.999	0-25.4	0.001	±0.005	
910.000	0-50.8	0.001	±0.006	
910.001	0-12.7	0.01	±0.01	
910.002	0-25.4	0.01	±0.01	
910.003	0-50.8	0.01	±0.015	
<b>For internal measurements:</b>				
910.004	0-12.7	0.001	±0.004	
<b>With Bluetooth:</b>				
910.079	0-12.7	0.001	±0.004	
910.082	0-12.7	0.01	±0.01	
<b>Options:</b>				
495.157	Spare battery			
909.686	USB interface			
909.687	Footswitch for USB interface			
910.038	Wireless USB receiver			
910.039	Wireless sender			
909.611	Retraction lever			
909.613	Cable retraction device (1 m) (maximum travel 10 mm)			
909.614	Retraction lever (maximum travel 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:  $\varnothing$  8 mm.
- Dial diameter: 62 mm.
- Dial 360° rotatable.
- Reversible measuring direction.
- With determination of the reversal point.
- Adjustable tolerance limits.
- Power supply: 1 battery type CR2032.



Item No.	Measuring range/mm	Resolution mm	Accuracy mm	Measuring force/N	Price RUB
909.250	0-12.5	0.002	$\pm 0.015$	1.8-3.0	
909.251	0-12.5	0.001	$\pm 0.006$	2.2-3.5	
<b>Option:</b>					
495.157 Spare battery					

## Digital dial indicators

Universal digital indicators with both digital and digital-analog display of the measuring value, and can also be rotated over 340° to ensure easy read-out in all positions.

- Measuring range: 0- 12.7 mm.
- Resolution: 0.001 mm.
- Analog resolution: 0.001/0.002/0.01/0.02/0.05 mm.
- mm/inch conversion.
- ABS/INC switchable.
- On/off switch.
- Automatic switch-off.
- Reset/preset.
- Clamping stem:  $\varnothing$  8 mm.
- Dial diameter: 61 mm.
- Dial 340° rotatable.
- Reversible measuring direction.
- Adjustable tolerance limits.
- Protection: IP54.
- Power supply: 1 battery type CR2032.



Item No.	Measuring range/mm	Accuracy mm	Price RUB
907.879	0-12.7	$\pm 0.01$	
907.878	0-12.7	$\pm 0.005$	
<b>Option:</b>			
495.157 Spare battery			

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## Absolute horizontal digital dial indicators

- Measuring range: 0-30 mm.
- Resolution: 0.001 mm.
- mm/inch conversion.
- Digimatic data output.
- On/off switch.
- Reset/preset.
- Ceramic stylus tip.
- With dovetail joint (incl. lug) and clamping stem  $\varnothing$ 8 mm.

- Measuring force:  $\leq$ 2 N.
- Reversible measuring direction.
- Protection: IP54.
- Delivery in a case with an inspection report.
- Power supply: 1 battery type CR1632.

*USB interface and wireless USB receiver and sender available on request.*



**NEW**

TECHNOBEARING

**PRICE**

Item No.	Measuring range/mm	Resolution mm	Accuracy mm	Price RUB
910.085	0-12.7	0.001	$\pm$ 0.005	
910.086	0-30	0.001	$\pm$ 0.006	
<b>Option:</b>				
497.955	Spare battery			

## Digital dial indicator with calculation function

Robust digital dial indicator with built-in calculation function for easy determination of diameters by means of measuring a curved surface. Suitable for measuring both inside and outside diameters and multifunctional dial indicator applications. Delivery with measuring bases of 10, 20, 30, 60 and 100 mm.

- Measuring range: 0-13 mm.
- Resolution: 0.005 mm.
- mm/inch conversion.
- On/off switch.
- Reset.

- Hold function.
- Clamping stem:  $\varnothing$ 8 mm.
- Aluminum construction.
- Delivery in a case.
- Power supply: 1 battery type CR2032.

**PRICE**

Item No.	Measuring range/mm	Accuracy mm	Price RUB
907.884	0-13	$\pm$ 0.005*	
<b>Option:</b>			
495.157	Spare battery		

\* Accuracy of the indicator without the use of measuring bases. The accuracy with measuring bases depends on the radius and form deviation of the workpiece.



## Dial indicators 0.01 mm

Indicators with an excellent price-performance ratio.

- Measuring range: 0- 10 mm.
- Graduation: 0.01 mm.
- Clamping stem:  $\varnothing$  8 mm.
- Dial diameter: 55 mm.
- Rotatable dial.
- Shockproof.
- Adjustable tolerance markers.
- Flat back.
- Delivery with an inspection report.
- Retraction lever available on request (only 907.929/930).



Item No.	Measuring range/mm	Price RUB
907.928	0- 3	
907.929	0- 5	
907.930	0- 10	
<b>Option:</b>		
908.799	Back with lug	



## Dial indicators 0.01 mm

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

- Measuring range: 0- 10 mm.
- Graduation: 0.01 mm.
- Clamping stem:  $\varnothing$  8 mm.
- Dial diameter: 60 mm.
- Rotatable dial.
- Shockproof.
- Adjustable tolerance markers.
- Locking screw.
- Flat back.
- Delivery with an inspection report.

TECHNOBEARING



Item No.	Measuring range/mm	Price RUB
907.931	0- 3	
907.932	0- 5	
907.933	0- 10	
<b>Option:</b>		
908.987	Back with lug	



### Dial indicators 0.01 mm

Indicators with a large measuring range. Shockproof design.

- Measuring range: 0- 100 mm.
- Graduation: 0.01 mm.
- Clamping stem:  $\varnothing$  8 mm.
- Rotatable dial.
- Shockproof.
- Adjustable tolerance markers (except 907.916).
- Locking screw.
- Flat back.
- Delivery with an inspection report.



907.934



907.935

907.936



907.916

Item No.	Measuring range/mm	Dial $\varnothing$ /mm	Price RUB
907.934	0- 25	60	
907.935	0- 30	60	
907.936	0- 50	76	
907.916	0-100	80	

**Options:**

- 908.987<sup>1</sup> Back with lug
- 908.988<sup>2</sup> Back with lug

<sup>1</sup> For 907.934/935.

<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:  $\varnothing$  8 mm.
- Dial diameter: 55 mm.
- Rotatable dial.
- Shockproof.
- Adjustable tolerance markers.
- Locking screw.
- Back with lug.
- Protection: IP54.
- Conforms to factory standard.



908.779



Item No.	Measuring range/mm	Price RUB
908.777	0- 3	
908.778	0- 5	
908.779	0- 10	

TECHNOBEARING

## Miniature dial indicators 0.01 and 0.001 mm

Indicators with very small dimensions and an excellent price-performance ratio. Shockproof design.

- Measuring range: 0- 10 mm.
- Graduation: 0.01 or 0.001 mm.
- Clamping stem:  $\varnothing$  8 mm.
- Dial diameter: 40 mm.
- Rotatable dial.
- Shockproof.
- Adjustable tolerance markers.
- Locking screw.
- Flat back.
- Delivery with an inspection report.



Item No.	Measuring range/mm	Price RUB
<b>Graduation 0.01 mm:</b>		
907.925	0- 3	
907.926	0- 5	
907.927	0- 8	
907.914	0- 10	
<b>Graduation 0.001 mm:</b>		
907.920	0- 1	
<b>Option:</b>		
908.986	Back with lug	



## Dial indicators 0.001 mm

Indicators with micrometer reading. Shockproof design.

- Measuring range: 0- 5 mm.
- Graduation: 0.001 mm.
- Clamping stem:  $\varnothing$  8 mm.
- Dial diameter: 60 mm.
- Rotatable dial.
- Scale numbering: 0- 100- 0 (907.921: 0- 100).
- Shockproof.
- Adjustable tolerance markers.
- Locking screw.
- Flat back.
- Delivery with an inspection report.



Item No.	Measuring range/mm	Price RUB
907.921	0- 1	
907.922	0- 2	
907.923	0- 3	
907.924	0- 5	
<b>Option:</b>		
908.987	Back with lug	



TECHNOBEARING

## Peacock dial indicators 0.1 and 0.01 mm

- Measuring range: 0-80 mm.
- Graduation: 0.1 or 0.01 mm.
- Clamping stem:  $\varnothing 8, 10$  or  $14$  mm.
- Rotatable dial.
- Adjustable tolerance markers.
- Flat back or back with lug\*.
- DIN 878.
- Delivery in a case.



855.547



855.517



855.507/8



855.527



855.537



855.589

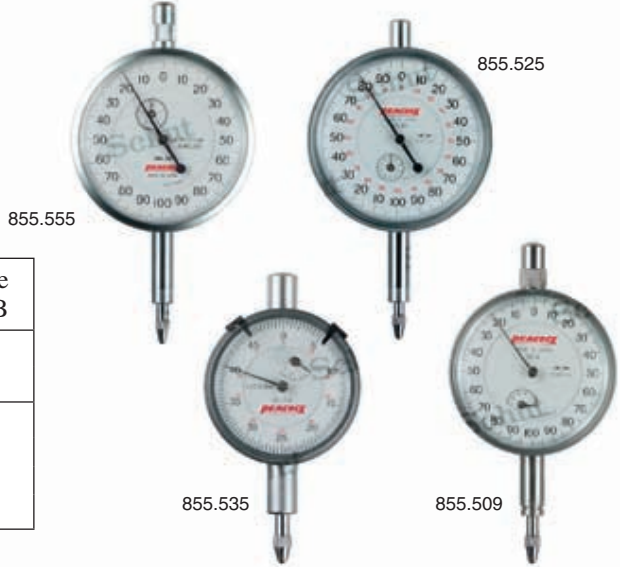
TECHNOBEARING

Item No.	Measuring range/mm	Clamping stem $\varnothing$ /mm	Dial $\varnothing$ /mm	Price RUB
<b>Graduation 0.01 mm:</b>				
855.547	0- 4	8	36	
855.536	0- 3	8	40	
855.517	0- 5	8	53	
855.507	0-10	8	53	
855.508*	0-10	8	53	
855.527*	0-20	8	66.5	
855.537*	0-30	8	76	
855.557*	0-50	10	83	
<b>Graduation 0.1 mm:</b>				
855.589*	0-80	14	112	

\* Back with lug.

### Peacock dial indicators 0.005 and 0.001 mm

- Measuring range: 0-5 mm.
- Graduation: 0.005 or 0.001 mm.
- Clamping stem:  $\varnothing 8$  mm.
- Rotatable dial.
- Flat back or back with lug\*.
- DIN 878.
- Delivery in a case.



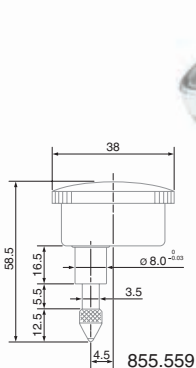
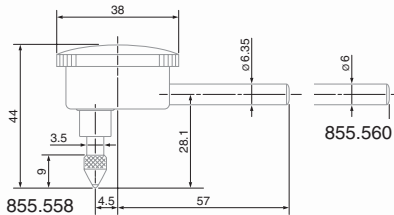
Item No.	Measuring range/mm	Dial $\varnothing$ /mm	Price RUB
<b>Graduation 0.005 mm:</b>			
855.535*	0-3	47	
<b>Graduation 0.001 mm:</b>			
855.509	0-1	53	
855.525*	0-2	66.5	
855.555*	0-5	66.5	

\* Back with lug.

### Peacock dial indicators with back plunger

The back plunger dial indicator is characterized with easy handling since the spindle with the contact point is moving in the direction perpendicular to the dial face and the gauge is more compact. The dial indicator of this type is convenient for use in achieving a parallelism 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 $\varnothing$ /mm	Accuracy mm	Price RUB
855.558	0-5	6.35	$\pm 0.02$	
855.560	0-5	6	$\pm 0.02$	
<b>Clamping stem on back side:</b>				
855.559	0-5	8	$\pm 0.02$	



### 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:  $\varnothing 8$  mm.
- Travel: 3 mm.
- Adjustable tolerance markers.
- Fine adjustment.
- Delivery with an inspection report.



TECHNOBEARING

**NEW**



Item No.	Measuring range/mm	Dial $\varnothing$ /mm	Price RUB
907.939	0.1	63.5	

### Precision dial indicators

- Measuring range: 0.06 mm.
- Graduation: 0.0005 mm or 0.001 mm.
- Measuring force: approx. 1 N.
- Clamping stem:  $\varnothing 28$  mm.
- Shockproof.
- Fine adjustment.



906.333

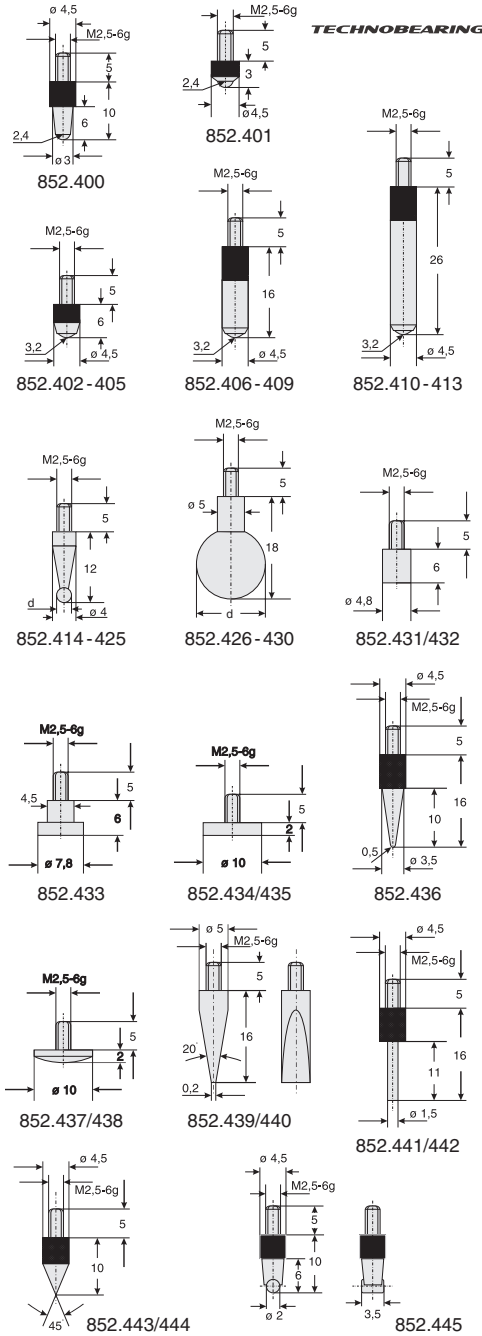
**NEW**



Item No.	Measuring range/mm	Resolution mm	Scale numbering	Price RUB
906.332	0.03	0.0005	15-0-15	
906.333	0.06	0.001	30-0-30	

Inserts

Inserts with thread M2.5. The inserts are made of steel unless otherwise indicated; tungsten carbide (TC), ruby (R) or sapphire (S).

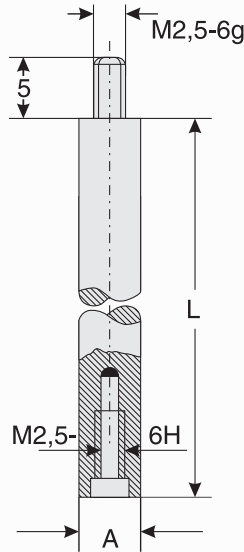


Item No.	Description	Price RUB
<b>Ball probes:</b>		
852.400	d= 2.4 mm l= 10 mm	
852.401	d= 2.4 mm l= 3.0 mm	
852.402	d= 3.2 mm l= 6.0 mm	
852.403	d= 3.2 mm l= 6.0 mm	TC
852.404	d= 3.2 mm l= 6.0 mm	R
852.405	d= 3.2 mm l= 6.0 mm	S
852.406	d= 3.2 mm l= 16 mm	
852.407	d= 3.2 mm l= 16 mm	TC
852.408	d= 3.2 mm l= 16 mm	R
852.409	d= 3.2 mm l= 16 mm	S
852.410	d= 3.2 mm l= 26 mm	
852.411	d= 3.2 mm l= 26 mm	TC
852.412	d= 3.2 mm l= 26 mm	R
852.413	d= 3.2 mm l= 26 mm	S
852.414	d= 1.0 mm l= 12 mm	
852.420	d= 1.0 mm l= 12 mm	TC
852.415	d= 2.0 mm l= 12 mm	
852.421	d= 2.0 mm l= 12 mm	TC
852.416	d= 3.0 mm l= 12 mm	
852.422	d= 3.0 mm l= 12 mm	TC
852.417	d= 4.0 mm l= 12 mm	
852.423	d= 4.0 mm l= 12 mm	TC
852.418	d= 5.0 mm l= 12 mm	
852.424	d= 5.0 mm l= 12 mm	TC
852.419	d= 6.0 mm l= 12 mm	
852.425	d= 6.0 mm l= 12 mm	TC
852.426	d= 7.0 mm l= 18 mm	
852.427	d= 8.0 mm l= 18 mm	
852.428	d= 9.0 mm l= 18 mm	
852.429	d= 10.0 mm l= 18 mm	
852.430	d= 11.0 mm l= 18 mm	
<b>Flat probes:</b>		
852.431	d= 4.8 mm l= 6 mm	
852.432	d= 4.8 mm l= 6 mm	TC
852.433	d= 7.8 mm l= 6 mm	
852.434	d= 10.0 mm l= 2 mm	
852.435	d= 10.0 mm l= 2 mm	TC
<b>Spherical probes:</b>		
852.436	conical l= 16 mm	
852.437	d= 10.0 mm l= 2.0 mm	
852.438	d= 10.0 mm l= 2.0 mm	TC
<b>Knife-edged probes:</b>		
852.439	d= 5.0 mm l= 16 mm	
852.440	d= 5.0 mm l= 16 mm	TC
<b>Needle-shaped probes:</b>		
852.441	d= 1.5 mm l= 16 mm	
852.442	d= 1.5 mm l= 16 mm	TC
<b>Tapered probes:</b>		
852.443	d= 4.5 mm l= 10 mm	
852.444	d= 4.5 mm l= 10 mm point 45°	TC
<b>Probe with cylindrical measuring face:</b>		
852.445	d= 2 x 3.5 mm l= 10 mm	

## Extensions for inserts

Steel extensions for inserts with thread M2.5.

Item No.	Length mm	Price RUB
<b>Extensions with A = <math>\varnothing 4</math> mm:</b>		
852.446	10	
852.447	15	
852.448	20	
852.449	25	
852.450	30	
852.451	35	
852.452	40	
852.453	45	
852.454	50	
852.455	55	
852.456	60	
852.457	65	
852.458	70	
852.459	75	
852.460	80	
852.461	85	
852.462	90	
852.463	95	
852.464	100	

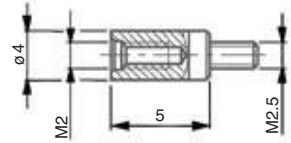


Item No.	Length mm	Price RUB
<b>Extensions with A = <math>\varnothing 5</math> mm:</b>		
852.465	10	
852.466	15	
852.467	20	
852.468	25	
852.469	30	
852.470	35	
852.471	40	
852.472	45	
852.473	50	
852.474	55	
852.475	60	
852.476	65	
852.477	70	
852.478	75	
852.479	80	
852.480	85	
852.481	90	
852.482	95	
852.483	100	

## Adapters for inserts

Adapter for attaching other inserts to dial indicators and probes with an interchangeable insert with thread M2.5.

Item No.	External/internal thread	Price RUB
960.276	M2.5/M2	

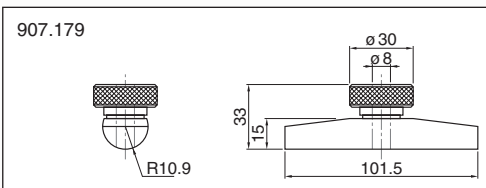
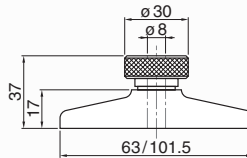


## Depth measuring bases for dial indicators

Bases which make dial indicators and probes suitable for depth measurements.

- Clamping shaft: 8H7.

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Item No.	Measuring face l x w/mm	Price RUB
907.153	63 x 17	
907.165	101.5 x 17	
<b>With cylindrical measuring face:</b>		
907.179	101.5 x R10.9	

## Retraction levers

To determine the right type of retraction lever please contact our sales department.

### Retraction lever

Universal retraction lever, bottom mounted. This lever is fully compatible with TESA dial indicators, but can also be used with a wide range of other dial indicators.



780.782

Item No.	Description	Price RUB
780.782	Retraction lever	
<b>Consisting of:</b>		
780.779	Lever	
780.780	Washer	

### Retraction levers

Universal retraction levers, top mounted. These levers are fully compatible with TESA and Käfer dial indicators of the given diameters, but can also be used with a wide range of other dial indicators.



782.321

Item No.	Description	Dial ø/mm	Price RUB
782.320	TESA lever	40	
782.321	TESA lever	58	
852.387	Käfer lever	58	

### Retraction lever

Universal retraction lever, bottom mounted and compatible with any dial indicator with an interchangeable probe with M2.5 thread.



Item No.	Description	Price RUB
781.727	Retraction lever	

TECHNOBEARING



Item No.	Description	Price RUB
137.693	Retraction lever	

## Lever-type digital test indicator

Lever-type digital test indicator with analog display. Equipped with three dovetail mountings.

- Measuring range: up to 0.5 mm.
- Resolution: 0.01 mm.
- Accuracy:  $\pm 0.02$  mm.
- mm/inch conversion.
- On/off switch.
- Reset.
- Hold function.
- Min/max/P-P function.
- Measuring force:  $\leq 0.6$  N.



- Rotatable dial: 350°.
- With dovetail joint and clamping stems  $\varnothing 6$  and  $\varnothing 8$  mm.
- Stylus tip:  $\varnothing 2$  mm.
- 230° adjustable measuring insert.
- Power supply: 1 battery type V357.

**NEW**



Item No.	Measuring range/mm	Resolution mm	Insert length/mm	Price RUB
910.087	0.5	0.01	13	
<b>Option:</b>				
836.535	Spare battery			

## 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:  $\pm 0.02$  mm.
- mm/inch conversion.
- On/off switch.
- Reset.
- Measuring force:  $\leq 0.6$  N.
- With dovetail joint and clamping stems  $\varnothing 6$  and  $\varnothing 8$  mm.
- Ruby stylus tip:  $\varnothing 2$  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 RUB
907.574	0.5	0.001	17	
<b>Options:</b>				
836.535	Spare battery			
907.769	Spare stylus tip			

## Lever-type test indicators

- Measuring range: up to 0.8 mm.
- Graduation: 0.01 or 0.002 mm.
- With dovetail joint and clamping stems  $\varnothing 6$  and  $\varnothing 8$  mm.
- Dial diameter: 40 mm.
- Rotatable dial.
- Stylus tip:  $\varnothing 2$  mm.
- Delivery with an inspection report.

Item No.	Measuring range/mm	Graduation mm	Scale numbering	Insert length/mm	Price RUB
907.941	0.8	0.01	0-40-0	19	
907.942	0.2	0.002	0-100-0	13	
<b>Options:</b>					
909.114	Spare stylus tip for 907.941				
909.115	Spare stylus tip for 907.942				

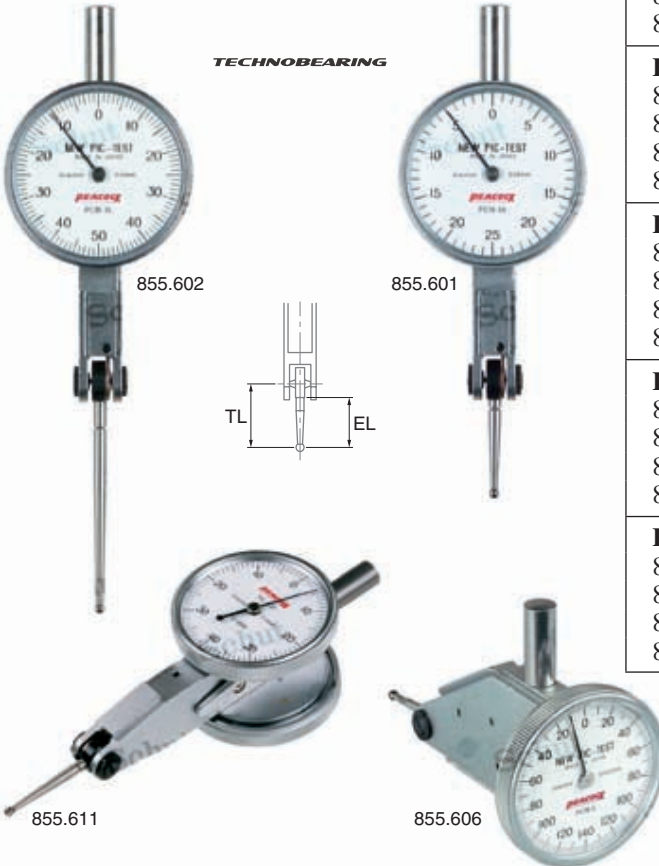


**Peacock lever-type dial test indicators**

- Measuring range: up to 1 mm.
- Graduation: 0.01, 0.002 or 0.001 mm.
- With dovetail joint and clamping stem  $\phi 6$  mm.
- Measuring force:  $<0.3$  N.
- Tungsten carbide stylus tip:  $\phi 2$  mm.
- Insert thread: M1.7.

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

Item No.	Effective length (EL)/mm	Ball $\phi$ /mm	Price RUB
<b>For 855.601:</b>			
859.016	17.74	2	
859.152	17.74	1	
859.151	17.74	0.8	
859.290	17.74	0.5	
<b>For 855.602:</b>			
859.126	39.00	2	
859.291	39.00	1	
859.292	39.00	0.8	
859.293	39.00	0.5	
<b>For 855.603, 855.605 and 855.606:</b>			
859.200	14.18	2	
859.294	14.18	1	
859.295	14.18	0.8	
859.296	14.18	0.5	
<b>For 855.604:</b>			
859.259	8.13	2	
859.297	8.13	1	
859.298	8.13	0.8	
859.299	8.13	0.5	
<b>For 855.611:</b>			
859.464	19.24	2	
859.465	19.24	1	
859.466	19.24	0.8	
859.467	19.24	0.5	



Item No.	Measuring range/mm	Graduation mm	Dial $\phi$ /mm	Scale numbering	Insert	Total insert length (TL)/mm	Price RUB
<b>Horizontal:</b>							
855.601	0.5	0.01	35	0-25-0	859.016	21.3	
855.602	1	0.01	35	0-50-0	859.126	42.8	
855.603	0.28	0.002	35	0-140-0	859.200	17.8	
855.604	0.14	0.001	30	0-70-0	859.259	11.7	
855.605	0.5	0.01	35	0-25-0	859.200	17.8	
<b>Perpendicular:</b>							
855.606	0.28	0.002	35	0-140-0	859.200	17.8	
855.611	0.8	0.01	35	0-40-0	859.464	21.8	



**Accessories dial indicators/dial test indicators**

Item No.	Description	Price RUB
909.433	Centering support $\varnothing 8 \times 25$ mm, holder $\varnothing 4$ mm	
909.434	Rectangular fixing shaft $12 \times 6 \times 76$ mm, holder $\varnothing 4/\varnothing 8$ mm and dovetail clamp	
909.435	Rectangular fixing shaft $12 \times 6 \times 76$ mm, holder $\varnothing 6/\varnothing 8$ mm and dovetail clamp	
909.436	Rectangular fixing shaft $9 \times 9 \times 76$ mm, holder $\varnothing 4/\varnothing 8$ mm and dovetail clamp	
909.437	Rectangular fixing shaft $9 \times 9 \times 76$ mm, holder $\varnothing 6/\varnothing 8$ mm and dovetail clamp	
909.438	Round, swivelling fixing shaft $\varnothing 6 \times 70$ mm, holder with dovetail clamp	
909.439	Round, swivelling fixing shaft $\varnothing 8 \times 70$ mm, holder with dovetail clamp	



**Reducer**



TECHNOBEARING

837.190

Item No.	Thread	Price RUB
781.819	$\varnothing 8 \rightarrow 4$ mm	
837.190	$\varnothing 8 \rightarrow 6$ mm	

**Center-accessory**

Small magnetic dial indicator stand which, in combination with a lever, could also be used as center-accessory to align bores in workpieces. For use in combination with a machine center.

- Permanent magnet  $\varnothing 27$  mm.
- Universal pivot with dovetail clamp.
- Delivery incl. cylindrical support  $\varnothing 9.5$  mm for insert in the collet chuck of a machine center.



Item No.	Description	Price RUB
781.997	Center-accessory	

## Centering device

Convenient tool to find and set up the position of a workpiece on vertical and horizontal machines. It can also be used to determine the position of a workpiece when the spindle is rotated by hand or automatic. Easy read-out from stationary dial indicator. Instrument with compact dimensions.

- Max. range of use: 300 mm.
- Scale read-out per rotation: 0-3 mm.
- Graduation: 0.01 mm.
- Centering inside and outside with various probes.
- 3 straight and 3 bended probes included.
- Center feeler included.
- Spindle rotating speed max. 800 rpm.
- Compact dimensions.
- For horizontal and vertical use suitable.
- Clamping stem:  $\varnothing$  10 mm.
- Delivery in a case.



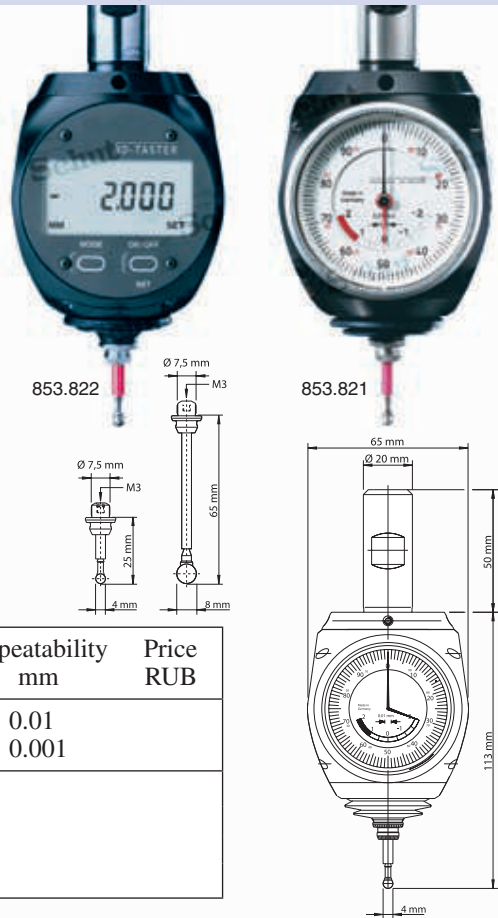
Item No.	Description	Price RUB
907.451	Centering device	
<b>Option:</b>		
907.445	Probe set (7 pieces)	

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### 3D probes for centering and measuring

For easy and with high accurate setting the reference point of workpiece in all three axes (X, Y and Z), vertically and horizontally.

- Measuring range: max. ±2 mm (rupture point in probe).
- Analog: graduation 0.01 mm, digital: resolution 0.001 mm.
- Clamping stem:  $\varnothing 20$  mm.
- Insert length 25 mm, stylus tip  $\varnothing 4$  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.



Item No.	Description	Accuracy mm	Repeatability mm	Price RUB
853.821	Analog 3D probe	±0.01	0.01	
853.822	Digital 3D probe	±0.005	0.001	

**Options:**

- 495.157 Spare battery
- 853.823 Spare insert 25 mm, tip diameter 4 mm
- 853.824 Spare insert 65 mm, tip diameter 8 mm

### Edge finders

Edge finders for both stationary and rotating use. As soon as the workpiece is touched by the ballprobe the all around visible LED will light up due to galvanic contact. The ballprobe is held in place by a spring. When the pressure on the tip becomes too large the ball 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.

907.458



907.456

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Item No.	Clamping stem $\varnothing$ /mm	Length mm	Price RUB
907.454	20	162	
907.456	20	100	
<b>With sound signal:</b>			
907.458	20	162	
907.460	20	100	
<b>Options:</b>			
836.535	Spare battery (2 needed)		
497.931	Spare battery		

PRICE

## Edge finders

Rotating edge finders for accurate edge location.

- Resolution: 0.005 mm.
- Repeatability: 0.005 mm.
- Range of use: 400 - 600 rpm.
- Hardness TiN measuring face: 2200 HV.



Item No.	Clamping stem $\phi$ /mm	Probe $\phi$ /mm	Material (measuring face)	Price RUB
909.360	8	10	steel	
909.361	10	10	steel	
909.362	8	4 and 10	steel	
909.363	10	4 and 10	steel	
909.364	6	6	steel	
909.365	10	10	steel + ceramic	
909.366	10	10	steel + TiN	
909.367	10	4 and 10	steel + TiN	

**Options:**

- 909.368 Spring for 909.360/362
- 909.369 Spring for 909.364
- 909.359 Spring for 909.365
- 909.349 Spring for 909.361/363/366/367

## 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 RUB
908.804	Z-axis setting gauge	
<b>Option:</b>		
498.823	Spare battery (2 needed)	

- Dimensions:  $\phi$  54 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.
- With magnetic base.
- Diameter dial indicator:  $\phi$  35 mm.



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- Height: 50 mm (precise height to determine with external measuring instrument).
- Weight: 654 g.
- Delivery with reference pin for insert in tool holder.



Item No.	Description	Price RUB
909.460	Z-axis setting gauge	

## MF measuring fixture system

MF is a universal construction system based on components to quickly and easy build custom measuring fixtures.

The system has been developed by Schut Geometrical Metrology. The parts of MF are made from high quality steel and colored, anodized aluminum.

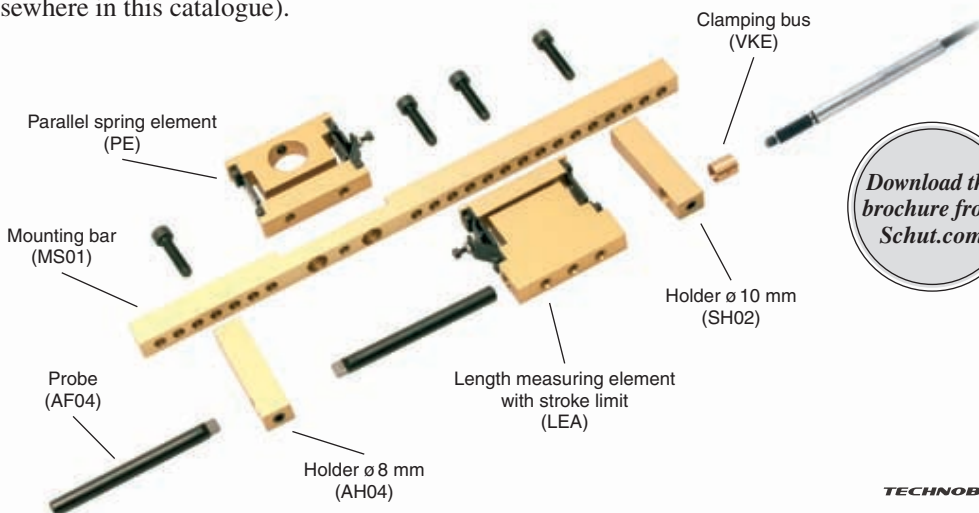
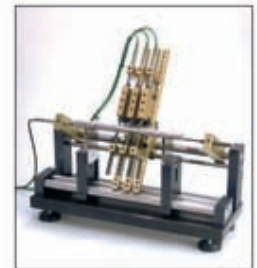
The system consists of, among other things, base plates, parallel spring elements, mounting bars, probe holders and probes. A stable product positioning is required for accurate measurements and because of the system's sophisticated composition, it is possible to generate a complete measuring system with only a few parts. Ideal for repeating measurements.

The components of MF are based on both horizontal support or vertical clamping. The wide range and shapes of probes make the system suitable for e.g. lathed parts but also for (more complicated) milling parts. For these various applications some complete sets are available, as a starter-set or for specific applications. Besides this, the variety of individual components and the ease of use enable almost endless possibilities of applying and incorporating MF in other measuring fixtures that may be custom build or composed of other construction systems.

All individual components are available separately, increasing flexibility of use. Schut Geometrical Metrology has incorporated MF many times in custom built measuring systems (see elsewhere in this catalogue).

MF's high quality and low price make an ideal addition to existing measuring systems and can be applied in production plants.

The universal properties of MF result in a highly flexible construction system. The use of internationally applied units of fit for e.g. dial indicators and electronic probes make the system's components widely applicable. With just some base elements it is very easy to create some individual measuring points on e.g. production machines.



Download the brochure from [Schut.com](http://Schut.com)

TECHNOBEARING



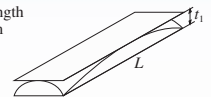
## Stands / Bench centers / Surface plates



Flatness tolerances according DIN 876

Class	Flatness $t_f$ ( $\mu\text{m}$ )
00	$2 + L/500$
0	$4 + L/250$
1	$10 + L/100$
2	$20 + L/50$
3	$40 + L/25$

$L$  = length  
in mm





## Dial indicator stands

- With dovetail joint (only 908.958/972).
- With fine adjustment (except 908.958/974).
- On/off switchable magnetic base with V-groove, except 908.973 (*flexform* base with locking mechanism and permanent magnetic force) and 908.974 (flat on/off switchable magnetic base).
- Various bases available.



908.958

908.974



908.950/951

908.946

908.973

908.952

908.972

PRICE

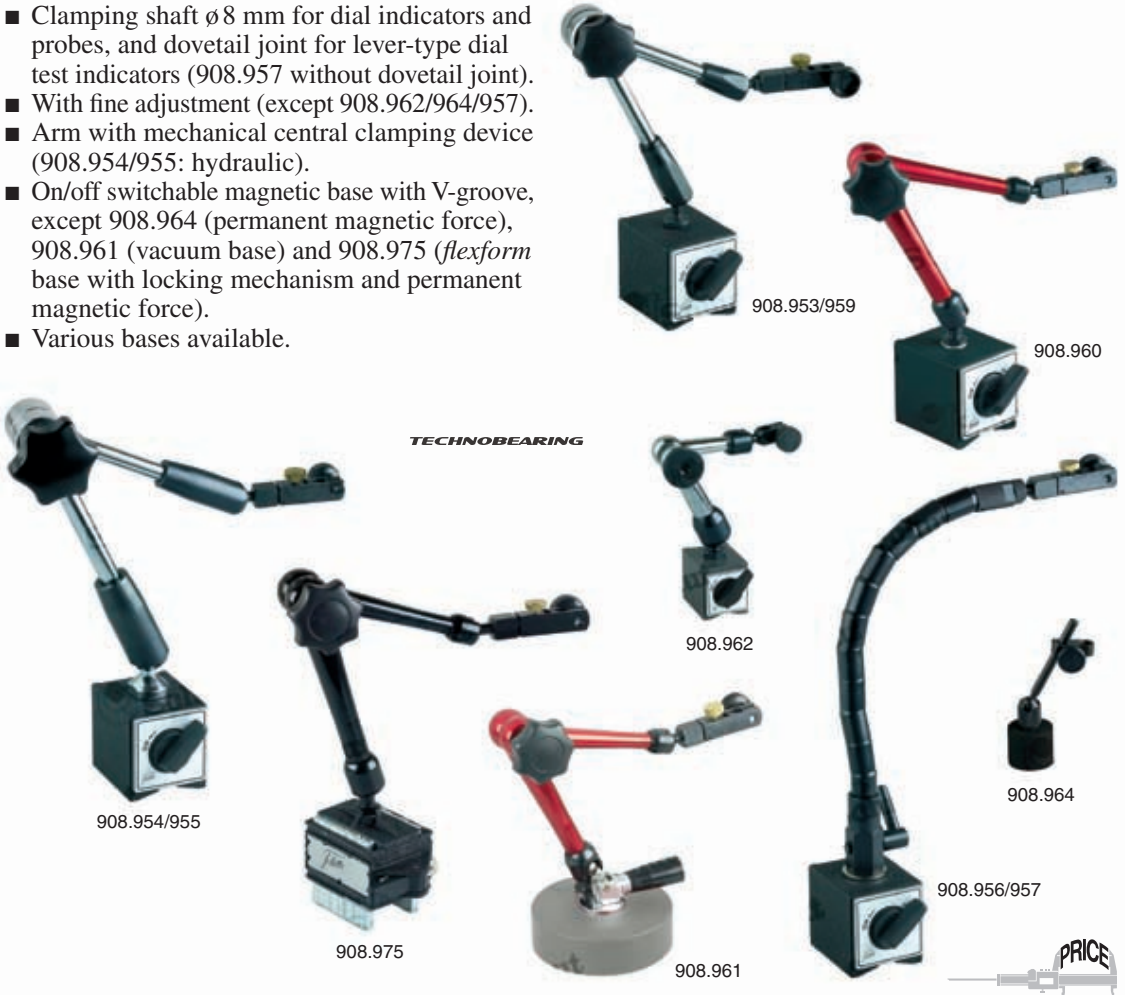
Item No.	Clamping shaft/mm	Column mm	Arm mm	Desc. of base	Dimensions l x w x h/mm	Magn. force <sup>1</sup> /N	Thread of base	Price RUB
908.950	ø4/ø8	ø12x176	ø10x150	V-groove	58x50x55	600 <sup>(S)</sup>	M8x1.25	
908.951	ø4/ø8	ø12x176	ø10x150	V-groove	58x50x55	800 <sup>(S)</sup>	M8x1.25	
908.952	ø4/ø8	ø20x350	2 arms: ø14x200 ø10x150	V-groove	73x50x55	1000 <sup>(S)</sup>	M8x1.25	
908.958	ø8	ø8x130	ø8x110	V-groove	36x30x35	400 <sup>(S)</sup>	M5x0.8	
908.972	ø8	ø12x176	ø10x110	V-groove	58x50x55	800 <sup>(S)</sup>	M8x1.25	
908.973	ø4/ø8	ø12x176	ø10x150	<i>flexform</i>	77x48x55	400 <sup>(P)</sup>	M8x1.25	
908.974	ø6	ø7x55		flat	30x30x30	170 <sup>(S)</sup>	M5x0.8	
908.946 <sup>2</sup>	ø8	ø12x190	ø10x160	V-groove	54x40x47	800 <sup>(S)</sup>	M8x1.25	

<sup>1</sup> S = switchable magnet; P = permanent magnetic force.

<sup>2</sup> V-groove on 3 sides.

## Dial indicator stands

- Clamping shaft  $\varnothing 8$  mm for dial indicators and probes, and dovetail joint for lever-type dial test indicators (908.957 without dovetail joint).
- With fine adjustment (except 908.962/964/957).
- Arm with mechanical central clamping device (908.954/955: hydraulic).
- On/off switchable magnetic base with V-groove, except 908.964 (permanent magnetic force), 908.961 (vacuum base) and 908.975 (*flexform* base with locking mechanism and permanent magnetic force).
- Various bases available.



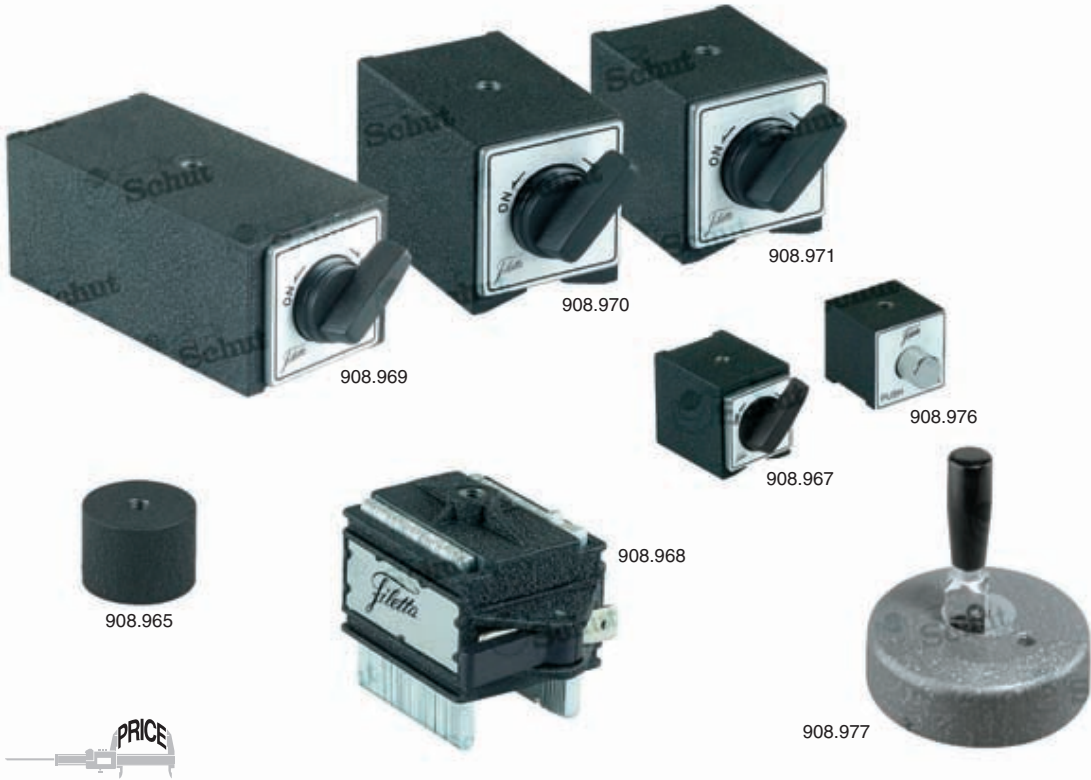
Item No.	Clamping	Arm length <sup>1</sup> /mm	Description of base	Dimensions l x w x h/mm	Magnetic force <sup>2</sup> /N	Thread of base	Price RUB
908.953	mechanical	300	V-groove	58 x 50 x 55	600 <sup>(S)</sup>	M8 x 1.25	
908.959	mechanical	330	V-groove	58 x 50 x 55	800 <sup>(S)</sup>	M8 x 1.25	
908.960	mechanical	285	V-groove	58 x 50 x 55	800 <sup>(S)</sup>	M8 x 1.25	
908.954	hydraulic	385	V-groove	58 x 50 x 55	600 <sup>(S)</sup>	M8 x 1.25	
908.955	hydraulic	370	V-groove	58 x 50 x 55	800 <sup>(S)</sup>	M8 x 1.25	
908.962	mechanical	145	V-groove	36 x 30 x 35	400 <sup>(S)</sup>	M5 x 0.8	
908.964	mechanical	65	cylinder	$\varnothing 30 \times 25$	170 <sup>(P)</sup>	M8 x 1.25	
908.975	mechanical	270	<i>flexform</i>	77 x 48 x 55	400 <sup>(P)</sup>	M8 x 1.25	
908.961	mechanical	280	vacuum base	$\varnothing 90 \times 28$		M8 x 1.25	
908.956	mechanical	350	V-groove	58 x 50 x 55	800 <sup>(S)</sup>	M8 x 1.25	
908.957	mechanical	330	V-groove	58 x 50 x 55	800 <sup>(S)</sup>	M8 x 1.25	

<sup>1</sup> The outstretched length between base and clamping shaft.

<sup>2</sup> S = switchable magnet; P = permanent magnetic force.

## Bases for dial indicator stands

A solid base is essential for accurate measurements. The dial indicator arms can be mounted on a strong magnetic or vacuum base.



Item No.	Description	Dimensions <i>l x w x h</i> /mm	Magnetic force*/N	Thread	Price RUB
908.971	V-groove	58 x 50 x 55	800 <sup>(S)</sup>	M8 x 1.25	
908.970	V-groove	73 x 50 x 55	1000 <sup>(S)</sup>	M8 x 1.25	
908.969	flat base	117 x 50 x 52	1500 <sup>(S)</sup>	M8 x 1.25	
908.967	V-groove	36 x 30 x 35	400 <sup>(S)</sup>	M5 x 0.8	
908.976	flat base	30 x 30 x 30	170 <sup>(S)</sup>	M5 x 0.8	
908.968	<i>flexform</i>	77 x 48 x 55	400 <sup>(P)</sup>	M8 x 1.25	
908.965	cylinder	∅40 x 30	300 <sup>(P)</sup>	M8 x 1.25	
908.977	vacuum base	∅90 x 28		M8 x 1.25	

\* S = switchable magnet; P = permanent magnetic force.

### Fixing clamps for dial indicator stands

Item No.	Fixing clamp ∅/mm	Price RUB
907.440	12/10	
907.442	10/8+6/6.5	
907.443	10/8+4	
907.444	14/8+6/6.5	
907.441	20/14	

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### Magnetic dial indicator stands

Solid dial indicator stands with on/off switchable magnetic base.

- Clamping shaft:  $\varnothing 6$  and  $\varnothing 8$  mm.
- Magnetic base with V-groove.
- Magnetic face at the back (except 855.707).



Item No.	Dimensions base <i>l x w x h</i> /mm	Magnetic force/N	Column mm	Arm mm	Thread of base	Price RUB
855.701	58 x 50 x 55	800	$\varnothing 12 \times 176$	$\varnothing 10 \times 150$	M8	
855.705	73 x 50 x 55	1000	$\varnothing 20 \times 178$	$\varnothing 14 \times 165$	M8	
855.707	117 x 50 x 55	1300	$\varnothing 20 \times 365$	$\varnothing 14 \times 200$	M20	

### Magnetic dial indicator stands

Solid dial indicator stands with on/off switchable magnetic base.

- Clamping shaft:  $\varnothing 6$  and  $\varnothing 8$  mm.
- Screw thread base: M8.
- Magnetic base with V-groove.
- Magnetic face at the back.

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Item No.	Clamping	Dimensions base <i>l x w x h</i> /mm	Magnetic force/N	Arm length* mm	Price RUB
855.706	hydraulic	73 x 50 x 55	1000	335	
855.710	mechanical	58 x 50 x 55	800	335	

\* The outstretched length between base and clamping shaft.

## Fisso Classic Line dial indicator stands

These dial indicator stands are manufactured according to the classic principle with chrome plated arm parts, joint together with the three hinge points by means of a central mechanic clamping device. Because this is done with one on/off switch control, the stand can be positioned easily and precisely.

- Fine adjustment: with clamping shaft  $\varnothing 8$  mm (for dial indicators and probes) and dovetail joint (for lever-type dial test indicators).
- Dial indicator not included.
- Various bases, fine adjustments and other accessories available; see “Fisso dial indicator stand accessories”.

**NEW**



839.870



837.290



837.287

### Complete stands (incl. base and fine adjustment)

Item No.	Arm length/mm	Base type*	Magnetic force/N	Price RUB
839.870	130	S2	300	
837.262	200	M	800	
837.263	200	AM	600	
837.290	200	AMO	600	
837.264	200	TM	300	
837.237	200	V	–	
837.245	288	M	800	
837.265	288	SM	1000	
837.238	288	V	–	
837.287	450	SM	1000	
837.266	450	MM	1500	
837.246	630	MM	1500	



837.238

TECHNOBEARING



837.245

\*For an extensive description of the base types see “Fisso dial indicator stand accessories”.

Item No.	Arm length/mm	Thread of head	Thread of base	Price RUB	Item No.	Price RUB
<b>Separate arm without fine adjustment:</b>					<b>With fine adjustment:</b>	
839.871	130	M6	M6		839.872	
837.283	197	M6	M8		837.267	
837.284	288	M6	M8		837.252	
837.285	453	M8	M8		837.268	
837.286	635	M8	M10 x 1.25		837.253	





## Fisso Strato Line and Strato μ-Line dial indicator stands

These dial indicator stands have a modern design with light metal arm parts in one piece, which, together with the three hinge points, are fixated by means of a mechanical clamping device. Because this is done with one on/off switch, the bases can be positioned easily and precisely.

Also available are the small dial indicator stands with an arm length of 130 mm – especially useful for places with confined space.

- Fine adjustment: with clamping shaft  $\varnothing 8$  mm (for dial indicators and probes) and dovetail joint (for lever-type dial test indicators).
- Dial indicator not included.
- Various bases, fine adjustments and other accessories available; see “Fisso dial indicator stand accessories”.
- The Strato  $\mu$ -Line models are equipped with a precision fine adjustment.



**NEW**

TECHNOBEARING

### Complete stands (incl. base and fine adjustment)

Item No.	Arm length/mm	Base type <sup>1</sup>	Magnetic force/N	Price RUB
837.297	130	S2	300	
837.270	130	TMS	150	
837.288	130	C <sup>2</sup>	–	
839.455 <sup>3</sup>	130	S3	600	
837.242	200	M	800	
837.243	200	TM	300	
837.244	200	AM	600	
837.289	200	AMO	600	
837.239	200	V	–	
839.456 <sup>3</sup>	200	M	800	
837.240	280	M	800	
837.271	280	SM	1000	
837.241	280	V	–	
837.261	280	G	–	
839.457 <sup>3</sup>	287	M	800	
839.873 <sup>3</sup>	287	V	–	
839.874 <sup>3</sup>	287	SM	1000	
837.230 <sup>3</sup>	330	SM	1000	
837.231 <sup>3</sup>	330	G	–	



837.288



<sup>1</sup> For an extensive description of the base types see “Fisso dial indicator stand accessories”.

<sup>2</sup> Long stem,  $\varnothing 10 \times 40$  mm, thread M6 (not separately available).

<sup>3</sup> With  $\mu$ -Line precision fine adjustment (837.204).

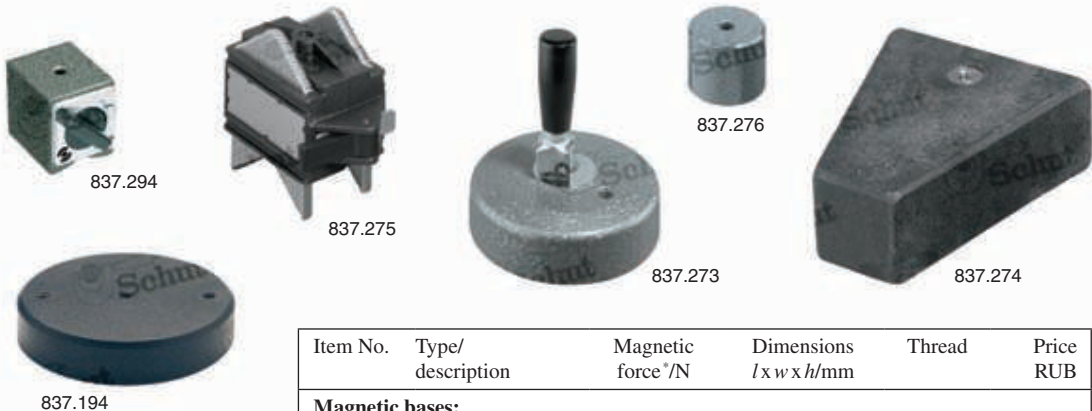


**Fisso Strato Line and Strato μ-Line dial indicator stands (continued)**

TECHNOBEARING

Item No.	Arm length/mm	Thread of head	Thread of base	Price RUB	Item No.	Price RUB
<b>Separate arm without fine adjustment (Strato Line):</b>					<b>With fine adjustment (Strato Line):</b>	
837.281	130	M6	M6		837.272	
837.282	200	M6	M8		837.251	
837.247	280	M6	M8		837.250	
<b>Separate arm without fine adjustment (Strato μ-Line):</b>					<b>With fine adjustment (μ-Line):</b>	
839.875	130	M6	M6		839.878 <sup>3</sup>	
839.876	200	M6	M8		839.879 <sup>3</sup>	
839.877	287	M8	M8		839.880 <sup>3</sup>	
837.912	330	M8	M8		837.232 <sup>3</sup>	

**Fisso dial indicator stand accessories**



Item No.	Type/description	Magnetic force <sup>1</sup> /N	Dimensions l x w x h/mm	Thread	Price RUB
<b>Magnetic bases:</b>					
837.294	S2 V-groove	300 <sup>(S)</sup>	34 x 30 x 35	M6	
837.750	S3 V-groove	600 <sup>(S)</sup>	40 x 40 x 40	M6	
837.254	M V-groove	800 <sup>(S)</sup>	60 x 50 x 55	M8	
837.255	SM V-groove	1000 <sup>(S)</sup>	75 x 50 x 55	M8	
837.256	MM flat	1500 <sup>(S)</sup>	120 x 60 x 55	M10 x 1.25	
837.275	AM <i>anyform</i>	600 <sup>(P)</sup>	77 x 48 x 55	M8	
837.291	AMO <i>anyform</i>	600 <sup>(S)</sup>	91 x 52 x 55	M8	
837.276	TMS cylinder	150 <sup>(P)</sup>	∅ 30 x 25	M6	
837.257	TM cylinder	300 <sup>(P)</sup>	∅ 40 x 30	M8	
<b>Other bases:</b>					
837.273	V vacuum base		∅ 88 x 27	M8	
837.274	G granite base		150 x 120 x 50	M8	
837.194	- steel base		∅ 100 x 20	3x M6	
837.195	- steel base		∅ 100 x 20	M8	
837.196	- steel base		∅ 150 x 20	M6	
837.292	- steel base		∅ 150 x 20	M8	
837.193	- clamping base		80 x 20 x 40	2x M6	
837.227	- clamping base		80 x 30 x 40	2x M8	
<b>Adapters for thread arm → base:</b>					
837.280	Adapter M6 → M8 (hexagonal 13 x 25 mm, CrNi steel)				
837.211	Adapter M8 → M6 (hexagonal 13 x 25 mm, CrNi steel)				
837.804	Adapter M8 → M10 (∅ 20 x 37 mm, steel)				
837.803	Adapter M8 → M12 (∅ 20 x 40 mm, steel)				

<sup>3</sup>S=switchable magnet; P=permanent magnetic force.



**Fisso dial indicator stand accessories (continued)**

Item No.	Thread	Price RUB
<b>Fine adjustments*:</b>		
837.279	M6	
837.260	M8	
<b>Precision fine adjustment (μ-Line)*:</b>		
837.204	M8	
<b>Dial indicator holders*:</b>		
837.192	M6	
837.191	M8	
<b>Reducer:</b>		
837.190	ø8 → 6 mm	

\*With clamping shaft ø8 mm and dovetail joint.



Item No.	Span	Thread	Clamping jaws	Price RUB
<b>Quick clamps:</b>				
837.220	25 mm	M6	steel	
837.228	50 mm	M8	steel	
837.221	75 mm	M8	steel	
<b>Spring quick clamps:</b>				
837.219	15 mm	M6	rubber, 50 mm	
837.218	15 mm	M6	plastic, 21 mm	

For more clamping and positioning possibilities (e.g. for medical applications) please contact our sales department.

**Fisso Base Line dial indicator stands**

Easy and handy dial indicator stands with high stability and accuracy.

- Fine adjustment: with clamping shaft ø8 mm (for dial indicators and probes) and dovetail joint (for lever-type dial test indicators).
- Mechanical clamping device.
- Dial indicator not included.



TECHNOBEARING



**Complete stands (incl. base and fine adjustment)**

Item No.	Column mm	Arm mm	Base type*	Magnetic force/N	Price RUB
837.224	ø 10 x 106	ø 8 x 75	S2	300	
837.225	ø 12 x 156	ø 10 x 106	M	750	
837.226	ø 14 x 184	ø 12 x 164	M	750	

\*For an extensive description of the base types see “Fisso dial indicator stand accessories”.

## Flexible hoses for coolant with magnetic base

- Suitable for cooling on machines in places of the workpiece that are difficult to reach.
- With 1, 2 or 3 flexible hoses.
- Special coupling for supply hose  $\varnothing 8.5$  mm.

### Support with magnetic base

- On/off switchable magnetic base with V-groove.
- Magnetic force: 588 N.
- Separate on/off switch for every flexible hose.
- Dimensions base  $l \times w \times h$ :  
 906.213: 62 x 51 x 73 mm,  
 906.214: 62 x 51 x 74 mm,  
 906.215: 69 x 51 x 75 mm.

### With round magnetic base

- Magnetic base  $\varnothing 35$  mm, with high adhesive force.
- Metal protection plate under magnetic base.



906.213



906.214



906.215



906.216



906.217



906.218



Item No.	Number of flexible hoses	Price RUB
<b>Support with magnetic base:</b>		
906.213	1	
906.214	2	
906.215	3	

Item No.	Number of flexible hoses	Price RUB
<b>With round magnetic base:</b>		
906.216	1	
906.217	2	
906.218	3	

## LED lamp on magnetic stand

- Total length: 215 mm.
- Magnetic force: 120 N.
- Power supply: 3 batteries type AAA.



Item No.	Description	Price RUB
909.607	LED lamp on magnetic stand	
<b>Option:</b>		
497.914	Spare battery (3 needed)	



TECHNOBEARING

## Measuring stands

- Clamping shaft:  $\varnothing 8$  mm.
- Transverse arm with fine adjustment.
- Arm length: 150 mm.
- Ground base.
- Base with V-groove (only 857.120).



857.120

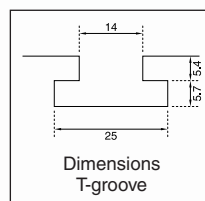


857.121

Item No.	Column $\varnothing$ /mm	Dimensions base/mm	Effective arm length/mm	Price RUB
857.120	16	65 x 40 x 140	250	
857.121	22	60 x 55 x 250	300	

## Measuring stand

- Clamping shaft:  $\varnothing 8$  mm.
- Effective arm length: 180 mm.
- Fine adjustment.
- Ground base with V- and T-groove, 250 x 60 x 35 mm.
- Column:  $\varnothing 16$  x 295 mm.
- Arm:  $\varnothing 16$  x 235 mm.
- Mechanical clamping device.
- Dial indicator not included.



TECHNOBEARING

Item No.	Description	Price RUB
856.720	Measuring stand	

## Measuring stands

- Clamping shaft:  $\varnothing 8$  mm.
- Transverse arm with fine adjustment.
- Ground base with T-groove.
- Base with V-groove (only 909.376).

TECHNOBEARING



906.219



Item No.	Column mm	Arm mm	Dimensions base/mm	Price RUB
906.219	$\varnothing 14 \times 185$	$\varnothing 12 \times 245$	220 x 60 x 35	
909.376	$\varnothing 16 \times 290$	$\varnothing 16 \times 310$	260 x 60 x 50	

## Measuring stand with spindle adjustment

Measuring stand with clear graduation 0.02 mm on the spindle and a hand wheel for easy adjustment of the height setting.

- Clamping shaft:  $\varnothing 8$  mm.
- Spindle thread pitch: 2 mm.
- Column:  $\varnothing 35$  mm.
- Transverse arm:  $\varnothing 20$  mm.
- Granite measuring table: 260 x 150 x 50 mm, measuring face: 250 x 150 mm, flatness according DIN 876/00.
- Total height: 410 mm.
- Max. measuring height: 160 mm.



Item No.	Description	Price RUB
907.789	Measuring stand	

## Measuring stand

Universal measuring stand, also suitable as a controlling measuring instrument.

- Clamping shaft  $\varnothing 8$  mm and dovetail joint.
- Fine adjustment.
- Granite measuring table: 150 x 100 x 40 mm, flatness:  $\leq 10 \mu\text{m}$ .
- Base with groove in the center.
- Screw thread base: M8.
- Long, right side face with two mounting bores (thread M5, distance 120 mm).
- Mechanical clamping device.
- Arm length: 335 mm (the outstretched length between base and clamping shaft).
- Delivery in a aluminum case.



Item No.	Description	Price RUB
402.195	Measuring stand	

## Measuring stand

- Clamping shaft:  $\varnothing 8$  mm.
- Total height: 200 mm.
- Max. measuring height: 90 mm.
- Effective arm length: 80 mm.
- Measuring table: 60 x 68 mm, ground and lapped.
- Dimensions transverse arm:  $\varnothing 18 \times 120$  mm.
- Column:  $\varnothing 22$  mm.
- Other dial gauge holders are available on request.



TECHNOBEARING



Item No.	Description	Price RUB
857.130	Measuring stand	



## Measuring stands

Universal measuring stands with a cast iron, ground measuring table.

- Clamping shaft:  $\varnothing 8$  mm (optional available clamp with clamping shaft  $\varnothing 28$  mm).
- Fine adjustment: 5 mm (906.506/508/516/518).
- Total height: 250 mm (906.508: 350 mm).
- Max. measuring height: 160 mm (906.508: 260 mm).
- Effective arm length: 68 mm (906.507: max. 105 mm, 906.517/519: max. 95 mm).
- Measuring table: ground, 906.506/507/508: flat anvil/base, 906.516/517: round flat anvil (height anvil: 13.5 mm), 906.518/519: round serrated anvil (height anvil: 13.5 mm).
- Flatness table:  $\leq 10 \mu\text{m}$ .
- Dimensions transverse arm:  $\varnothing 19.35 \times 150$  mm (906.507/517/519).
- Column:  $\varnothing 30 \times 200$  mm (906.508: helical threaded with anti drop facility).

TECHNOBEARING



Item No.	Measuring height/mm	Dimensions table l x w x h/mm	Price RUB
906.506	140	140 x 105 x 50	
906.507	160	140 x 105 x 50	
906.508	260	140 x 105 x 50	
906.516	130	$\varnothing 60 \times 65$	
906.517	145	$\varnothing 60 \times 65$	
906.518	130	$\varnothing 60 \times 65$	
906.519	145	$\varnothing 60 \times 65$	
<b>Option:</b>			
999.679	Clamp $\varnothing 28$ mm		

**NEW**

## Measuring stands

Universal measuring stands with a granite measuring table.

- Clamping shaft:  $\varnothing 8$  mm (optional available clamp with clamping shaft  $\varnothing 28$  mm).
- Fine adjustment: 5 mm (999.680).
- Total height: 240 mm (999.680/681),  
355 mm (999.682/683),  
370 mm (999.684/685).
- Max. measuring height: 260 mm (999.682/683/684/685).
- Effective arm length:  
max. 165 mm (999.682/683/684/685),  
(999.681: max. 105 mm, 999.680: 68 mm).
- Measuring table: granite.
- Flatness table:  $\leq 5 \mu\text{m}$  (999.684/685: delivery with an inspection report),  $\leq 10 \mu\text{m}$  (999.680/681/682/683).
- Dimensions transverse arm:  
 $\varnothing 19.35 \times 150$  mm (999.681),  
 $\varnothing 19.35 \times 210$  mm (999.682/683/684/685).
- Column:  
 $\varnothing 30 \times 200$  mm (999.680/681),  
 $\varnothing 30 \times 300$  mm (999.682/684),  
 $\varnothing 30 \times 300$  mm (999.683/685: helical threaded with anti drop facility).

TECHNOBEARING



999.680



999.682



Item No.	Measuring height/mm	Dimensions table l x w x h/mm	Price RUB
999.680	140	150 x 100 x 40	
999.681	160	150 x 100 x 40	
999.682	260	250 x 200 x 55	
999.683	260	250 x 200 x 55	
999.684	260	400 x 400 x 70	
999.685	260	400 x 400 x 70	
<b>Option:</b>			
999.679	Clamp $\varnothing 28$ mm		

**NEW**

## Measuring stands

Measuring stands with a granite base in two models with a competitive price-performance ratio.

- Clamping shaft:  $\varnothing 8$  mm.
- Max. measuring height: 250 mm.
- Anti drop facility.
- Granite table.
- Own product.

TECHNOBEARING



402.165

Item No.	Measuring height/mm	Flatness table/ $\mu\text{m}$	Dimensions table $l \times w \times h$ /mm	Column $\varnothing$ /mm	Effective arm length/mm	Price RUB
402.165	150	10	150 x 100 x 40	25	62	
402.168	250	10	250 x 200 x 55	35	100	

## Measuring stand

Heavy-duty precision stand with alumina ceramic grooved table and plain column.

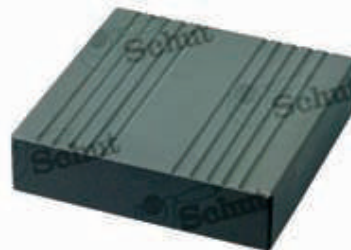
- Clamping shaft:  $\varnothing 8$  mm.
- Max. measuring height: 135 mm.
- Effective arm length: 62 mm.
- Measuring table: 80 x 80 x 22 mm.
- Flatness table:  $\pm 2$   $\mu\text{m}$ .
- Column:  $\varnothing 25$  mm.
- Base: 150 x 89 x 37 mm.
- Anti drop facility.
- Own product.



## Measuring table

Grooved measuring table made of alumina ceramics as applied to measuring stand 334.690, with the typical advantages of ceramics: high degree of hardness and wear resistance.

- Flatness:  $\pm 2$   $\mu\text{m}$ .
- Dimensions: 80 x 80 x 22 mm.
- Bottom-side: 3 tapped holes M6.



Item No.	Description	Price RUB
334.690	Precision stand	

Item No.	Description	Price RUB
841.078	Measuring table	

## Measuring stands

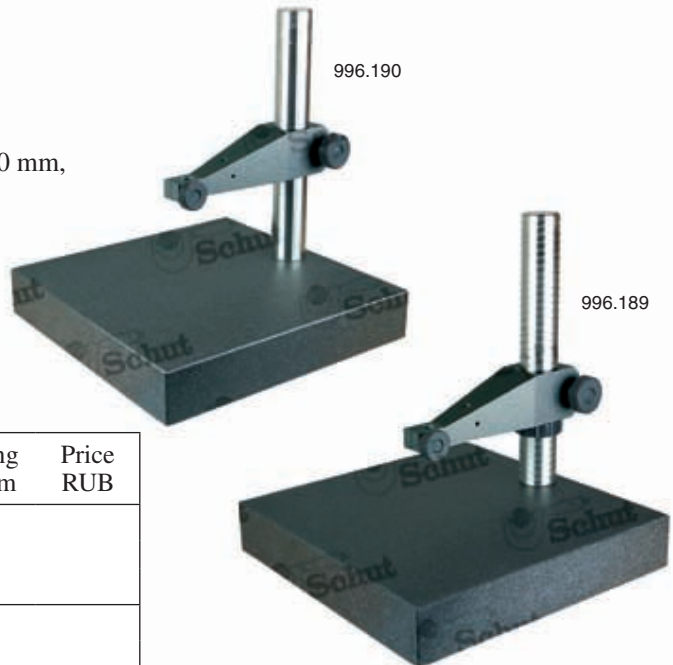
- Clamping shaft:  $\varnothing 8$  mm.
- Total height: 310 mm.
- Max. measuring height: 180 mm.
- Hard-chrome plated and ground column:  $\varnothing 35$  mm.
- 857.126 and 857.128 with adjustable transverse arm ( $\varnothing 22$  mm), length 220 mm.
- Granite measuring table: 260 x 150 x 48 mm (*l x w x h*), measuring face: 200 x 150 mm, flatness according DIN 876/00.



Item No.	Column	Effective arm length/mm	Price RUB
857.125	plain	104	
857.126	plain	175	
857.127	helical threaded	104	
857.128	helical threaded	175	

## Measuring stands

- Clamping shaft:  $\varnothing 20$  mm or  $\varnothing 32$  mm.
- Max. measuring height: 290 mm.
- Effective arm length: 167 mm.
- Column:  $\varnothing 50$  mm.
- 996.190/315 with anti drop facility.
- Granite measuring table: 400 x 400 x 70 mm, flatness:  $\leq 5 \mu\text{m}$ .
- Delivery with an inspection report.
- DIN 876/0.
- Own product.



TECHNOBEARING

Item No.	Column	Clamping shaft/mm	Price RUB
996.190	plain	$\varnothing 20$	
996.189	helical threaded	$\varnothing 20$	
996.315	plain	$\varnothing 32$	
<b>Option:</b>			
344.470	Reducing bush $\varnothing 20/8$ mm		

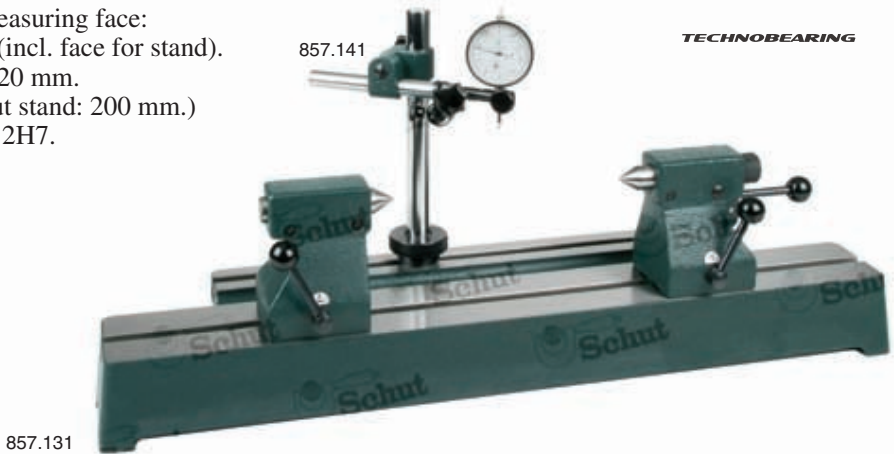
## Bench center

Cast iron base with the measuring face's accuracy according DIN 876/1. Supplied with two tailstocks, one with a fixed center point and one with an adjustable center point by means of a lever.

- Center height: 100 mm.
- Max. center distance: 450 mm.
- Center points: 60°.
- Stroke moveable center point: 8 mm.
- Delivery incl. measuring stand 857.141 (column  $\varnothing 22 \times 230$  mm, clamping shaft 8H7, with fine adjustment), excl. dial indicator or measuring probe.
- Dimensions measuring face: 700 x 180 mm (incl. face for stand).
- Total height: 320 mm. (Height without stand: 200 mm.)
- Width T-slot: 12H7.
- Weight: 35 kg.

- Larger models with granite base are available on request.

Item No.	Type	Price RUB
857.131	RP 100-450	



Item No.	Description	Price RUB
857.179	Pair of center points with tungsten carbide point 60°	
857.178	Pair of center points with bore	
857.175	Pair of prism inserts	
857.136	Pair of V-blocks	
857.137	Pair of roller blocks	
857.176	Stop	
857.177	Dial indicator holder	
857.141	Extra measuring stand	

### Center points ( $\varnothing 22$ mm)

- With tungsten carbide point 60°, or with bore according DIN 332-A 1.6 x 3.8.



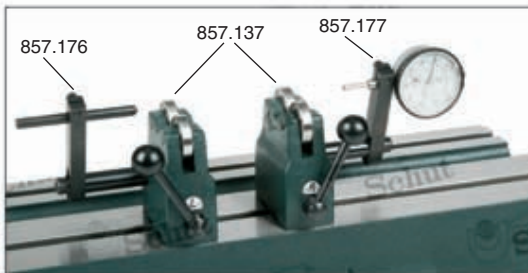
### Prism inserts 90°

- Capacity:  $\varnothing 8-45$  mm.
- Center height at  $\varnothing 10$  mm: 130 mm.



### V-blocks 90° and roller blocks

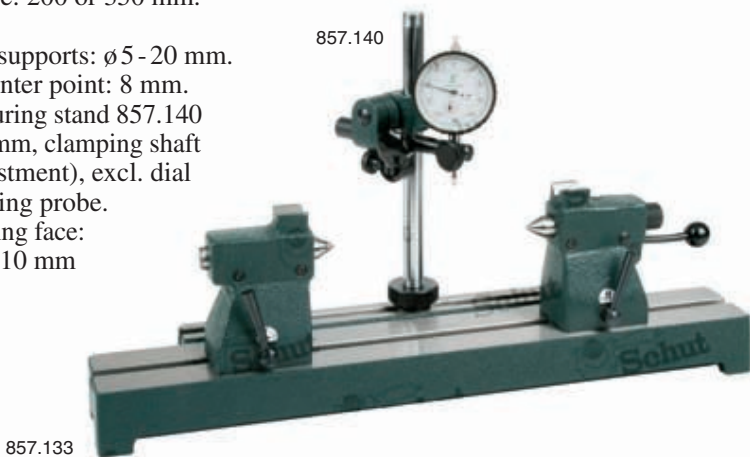
- Capacity V-blocks:  $\varnothing 8-50$  mm.
- Capacity roller blocks:  $\varnothing 2-60$  mm.
- Center height at  $\varnothing 10$  mm: 100 mm.
- Stop (857.176):  $\varnothing 8$  mm.
- Dial indicator holder (857.177): shaft 8H7.



## Bench centers

Cast iron base with the measuring face's accuracy according DIN 876/1. Supplied with two tailstocks, one with a fixed center point and one with an adjustable center point by means of a lever.

- Center height: 50 mm (without V-shaped supports) or 75 mm (P models; with V-shaped supports on the tailstocks).
- Max. center distance: 200 or 350 mm.
- Center points: 60°.
- Capacity V-shaped supports:  $\phi$  5 - 20 mm.
- Stroke moveable center point: 8 mm.
- Delivery incl. measuring stand 857.140 (column  $\phi$  16 x 220 mm, clamping shaft 8H7, with fine adjustment), excl. dial indicator or measuring probe.
- Dimensions measuring face: 350 x 110 or 500 x 110 mm (including face for measuring stand).
- Total height (incl. measuring stand): 260 mm.
- Width T-slot: 10H7.
- Vertical models are also available.



Item No.	Type	Center height mm	Max. center distance/mm	Measuring face/mm	Weight kg	Price RUB
857.132	RP 50-200	50	200	350x110	8	
857.133	RP 75-200P	75	200	350x110	9	
857.134	RP 50-350	50	350	500x110	11	
857.135	RP 75-350P	75	350	500x110	12	

Item No.	Description	Price RUB
857.174	Pair of center points with tungsten carbide point 60°	
857.155	Pair of center points with bore	
857.180	Pair of prism inserts	
857.138	Pair of V-blocks	
857.139	Pair of roller blocks	
857.172	Stop	
857.173	Dial indicator holder	
857.140	Extra measuring stand	

### Center points ( $\phi$ 16 mm)

- With tungsten carbide point 60°, or with bore according DIN 332-A 1.6 x 3.8.



### Prism inserts 90°

- Capacity:  $\phi$  3 - 15 mm.
- Center height at  $\phi$  10 mm: 70 mm (RP 50) or 95 mm (RP 75).



### V-blocks 90° and roller blocks

- Capacity V-blocks:  $\phi$  5 - 25 mm.
- Capacity roller blocks:  $\phi$  2 - 40 mm.
- Center height at  $\phi$  10 mm: 65 mm.
- Stop (857.172):  $\phi$  8 mm.
- Dial indicator holder (857.173): shaft 8H7.



857.138

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## Bench center

Bench center with rotatable collet chuck. Cast iron base with the measuring face's accuracy according DIN 876/1.

- Center height: 75 mm.
- Measuring range: 0-100 mm (up to center).
- Capacity:  $\varnothing 0.5-9.5$  mm.
- Concentricity of the tailstock quill:  $\pm 5 \mu\text{m}$ .
- Delivery incl. measuring stand 857.140 (column  $\varnothing 16 \times 220$  mm, clamping shaft 8H7, with fine adjustment), excl. dial indicator or measuring probe and collet chuck.
- Dimensions measuring face: 200 x 110 mm (DIN 876/1) (incl. face for stand).
- Weight: 5.6 kg (857.184).
- Total height (incl. measuring stand): 270 mm.
- Width T-slot: 10H7.
- Concentricity accuracy collet chucks: 0.03 mm.

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857.274

Item No.	Center height/mm	Price RUB
857.184	75	
<b>Option:</b>		
857.182	Separate tailstock	

### Collet chucks

Item No.	Clamping range	Price RUB
857.272	0.5-1	
857.273	1 -1.5	
857.274	1.5-2	
857.275	2 -2.5	
857.276	2.5-3	
857.277	3 -3.5	
857.278	3.5-4	
857.279	4 -4.5	
857.280	4.5-5	
857.281	5 -5.5	
857.282	5.5-6	
857.283	6 -6.5	
857.284	6.5-7	
857.285	7 -7.5	
857.286	7.5-8	
857.287	8 -8.5	
857.288	8.5-9	
857.289	9 -9.5	

## Bench center

Bench center with rotatable collet chuck.

- Measuring range: 0-50 mm (up to center).
- Capacity:  $\varnothing 0.5-7$  mm.
- Clamping shaft: 8H7.
- Excl. dial indicator or measuring probe and collet chuck.
- Weight: 1.8 kg.
- Concentricity accuracy collet chucks: 0.03 mm.



857.190

Item No.	Description	Price RUB
857.185	Bench center	

### Collet chucks

Item No.	Clamping range	Price RUB
857.188	0.5-1	
857.189	1 -1.5	
857.190	1.5-2	
857.191	2 -2.5	
857.192	2.5-3	
857.193	3 -3.5	
857.194	3.5-4	
857.195	4 -4.5	
857.196	4.5-5	
857.197	5 -5.5	
857.198	5.5-6	
857.199	6 -6.5	
857.200	6.5-7	

## Granite surface plates

Black granite surface plates according to DIN 876 specifications. Sizes vary from 250 x 250 mm to 2000 x 1500 mm.

- Delivery with an inspection report.
- Straight beveled edges.
- Cover (synthetic leather) optionally available.
- Surface plate stand optionally available (see “surface plate accessories” elsewhere in this catalog).



TECHNOBEARING



402.252

Delivery ex Groningen, Netherlands



Dimensions <i>l x w x h</i> mm	Weight <sup>1</sup> kg	Accuracy according DIN 876/1		Accuracy according DIN 876/0		Accuracy according DIN 876/00		Cover <sup>2</sup>	
		Item No.	Price RUB	Item No.	Price RUB	Item No.	Price RUB	Item No.	Price RUB
250 x 250 x 50	13	402.000		402.020		402.040		402.250	
400 x 250 x 50	20	402.001		402.021		402.041		402.251	
400 x 400 x 70	41	402.002		402.022		402.042		402.252	
630 x 400 x 70	65	402.003		402.023		402.043		402.253	
630 x 630 x 80	108	402.004		402.024		402.044		402.254	
800 x 500 x 100	136	402.005		402.025		402.045		402.255	
900 x 600 x 100	188	402.006		402.026		402.046		402.256	
1000 x 630 x 100	223	402.007		402.027		402.047		402.257	
1000 x 630 x 150	317	402.008		402.028		402.048		402.257	
1000 x 1000 x 100	342	402.009		402.029		402.049		402.258	
1000 x 1000 x 150	504	402.010		402.030		402.050		402.258	
1200 x 800 x 120	394	402.011		402.031		402.051		402.259	
1200 x 800 x 150	467	402.012		402.032		402.052		402.259	
1500 x 1000 x 150	750	402.013		402.033		402.053		402.260	
1500 x 1000 x 200	971	402.014		402.034		402.054		402.260	
2000 x 1000 x 200	1295	402.015		402.035		402.055		402.261	
2000 x 1000 x 250	1600	402.016		402.036		402.056		402.261	
2000 x 1500 x 300	2815	402.017		402.037		402.057		402.262	

<sup>1</sup> Weight including wooden packing.

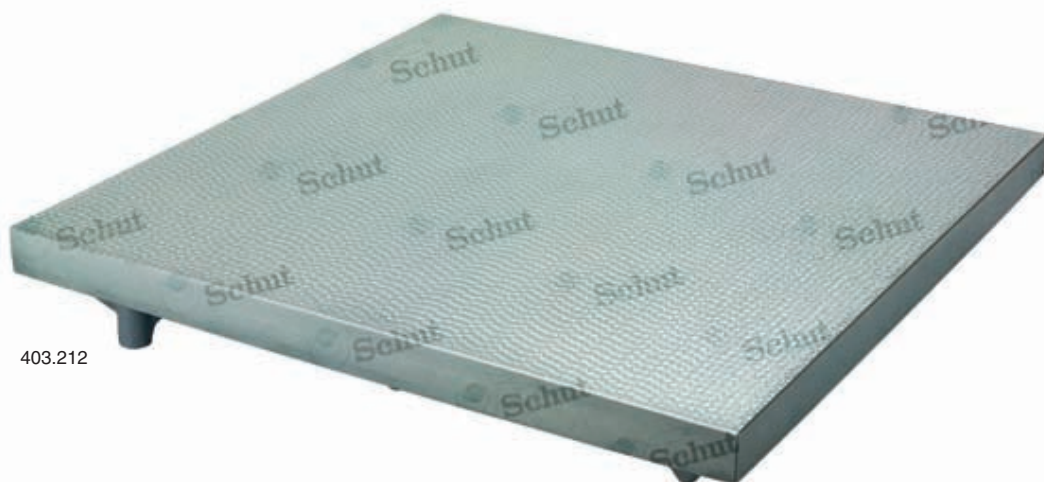
<sup>2</sup> Dimensions of the covers are equal to the length and the width of the surface plate, all covers have a depth of 50 mm.

## Cast iron surface plates

Extra heavy, cast iron surface plates.

- Three models:
  - milled (smoothened), accuracy according DIN 876/3,
  - hand scraped, accuracy according DIN 876/1,
  - fine scraped, accuracy according DIN 876/0.
- The side faces of all plates are milled and varnished.
- Surface plate stand optionally available  
(see “surface plate accessories” elsewhere in this catalog).

TECHNOBEARING



403.212

Delivery ex Groningen, Netherlands

Dimensions <i>l x w</i> mm	Weight kg (approx.)	Accuracy according DIN 876/3		Accuracy according DIN 876/1		Accuracy according DIN 876/0	
		Item No.	Price RUB	Item No.	Price RUB	Item No.	Price RUB
200 x 200	7	403.236		403.208		403.185	
250 x 250	12	403.237		403.209		403.186	
300 x 300	15	403.238		403.210		403.187	
400 x 250	25	403.239		403.211		403.188	
400 x 400	35	403.240		403.212		403.189	
500 x 500	50	403.241		403.213		403.190	
600 x 400	45	403.242		403.214		403.191	
630 x 630	90	403.243		403.215		403.192	
800 x 500	95	403.249		403.221		403.193	
1000 x 600	140	403.245		403.217		403.194	
1000 x 1000	270	403.246		403.218		403.195	
1200 x 800	300	403.250		403.222		403.196	
1500 x 1000	650	403.247		403.219		403.197	
2000 x 1000	1000	403.248		403.220		403.198	

## Surface plate supports

- For use with large granite or cast iron surface plates with a minimum size of 1000 x 630 mm.
- Support adjustable in height, with adjusting bolt and lock nut.
- For granite and cast iron surface plates it is advisable to use 5 supports, 3 for the Bessel points and 2 for tilt protection.
- Delivery incl. adjusting bolt, excl. required supporting cup.

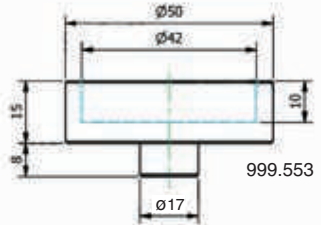
TECHNOBEARING

**NEW**



403.253 + 999.553

Item No.	Description	Height/mm		Price RUB
		min. <sup>1</sup>	max. <sup>1,2</sup>	
403.253	Surface plate support	540	580	
403.254	Surface plate support	640	680	
403.298 <sup>3</sup>	Set of 5 supports	545	580	
403.299 <sup>3</sup>	Set of 5 supports	645	680	
999.553 <sup>4</sup>	Supporting cup			
997.343 <sup>5</sup>	Support set			



999.553

<sup>1</sup> Height without supporting cup and supporting set.

<sup>2</sup> Maximum height with adjusting bolt 27 mm (thread diameter) in support.

<sup>3</sup> Set consists of 3 supports and 2 tilt protectors.

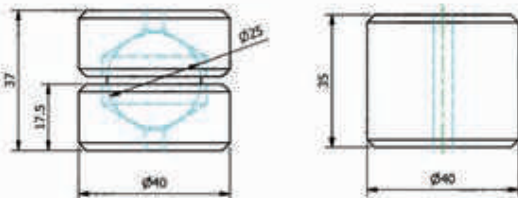
<sup>4</sup> Required for granite and cast iron (in combination with support set) surface plates.

<sup>5</sup> Required for granite surface plates (in combination with supporting cups).

## Support set for surface plates

Support set for placing a small surface plate on a working table.

- Set consists of support based on 3 Bessel points and two tilt protectors.
- Diameter: 40 mm.



## Surface plate cleaner

Surface plate cleaner for granite surface plates. Rubbing in the cleaner dissolves any flaws on the plate's surface. Dust, dirt, grease stains, finger and hand prints will disappear.



Item No.	Description	Price RUB
997.343	Support set	

Item No.	Description	Price RUB
407.303	Cleaner, 500 ml	

## Surface plate stands

Extremely solid surface plate stand. Construction is determined on the basis of the Bessel points and has a slide protection. Working height is standard 900 mm.



Delivery ex Groningen,  
Netherlands

**TECHNOBEARING**

Item No.	For granite surface plates dimensions <i>l x w x t</i> /mm	Price RUB
131.020	630 x 630 x 80	
131.019	800 x 500 x 100	
131.013	900 x 600 x 100	
131.018	1000 x 630 x 100	
131.035	1000 x 630 x 150	
131.017	1000 x 1000 x 100	
131.036	1000 x 1000 x 150	
131.016	1200 x 800 x 120	
131.037	1200 x 800 x 150	
131.015	1500 x 1000 x 150	
131.038	1500 x 1000 x 200	
131.014	2000 x 1000 x 200	
131.039	2000 x 1000 x 250	

Item No.	For cast iron surface plates dimensions <i>l x w</i> /mm	Price RUB
131.030	1000 x 600	
131.029	1000 x 1000	
131.041	1200 x 800	
131.022	1500 x 1000	
131.031	2000 x 1000	

## Surface plate stands

Extremely solid surface plate stands with excellent price-performance ratio. Support of the surface plate is determined on the basis of the bessel points and has an optional slide protection and chest of drawers. Working height is depending on the surface plate thickness. The standard models and the models with the optional chest of drawers for surface plates equal to or larger than 1000 x 1000 mm bear the load at the bessel points.

- Custom made is optionally available.
- Difference min. and max. height incl. surface plate: 25 mm.
- Delivered incl. support (bessel) and sleeping points.



TECHNOBEARING

**NEW**

131.101 +  
131.113 +  
131.108 +  
402.028



Delivery ex Groningen, Netherlands

Item No.	For granite surface plates dimensions <i>l x w x t/mm</i>	Height incl. surface plate		Price RUB
		min./mm	max./mm	
<b>Surface plate stand (standard model)<sup>1</sup>:</b>				
131.100	630 x 630 x 80	880	905	
131.100	800 x 500 x 100	900	925	
131.100	900 x 600 x 100	900	925	
131.100	1000 x 630 x 100	900	925	
131.100	1000 x 630 x 150	950	975	
131.104	2000 x 1000 x 200	850	875	
131.104	2000 x 1000 x 250	900	925	
<b>Surface plate stand<sup>1</sup> (prepared for chest of drawers):</b>				
131.101 <sup>2</sup>	630 x 630 x 80	880	905	
131.101 <sup>2</sup>	800 x 500 x 100	900	925	
131.101 <sup>2</sup>	900 x 600 x 100	900	925	
131.101 <sup>2</sup>	1000 x 630 x 100	900	925	
131.101 <sup>2</sup>	1000 x 630 x 150	950	975	
131.102	1000 x 1000 x 100	850	875	
131.102	1000 x 1000 x 150	900	925	
131.102	1200 x 800 x 120	870	895	
131.102	1200 x 800 x 150	900	925	
131.103	1500 x 1000 x 150	850	875	
131.103	1500 x 1000 x 200	900	925	

<sup>1</sup> RAL 7035.

<sup>2</sup> Do not bear the load at the bessel points.

<sup>3</sup> Incl. fasteners.

<sup>4</sup> Sleeping 2 and bessel points 3 needed.

### Options

Item No.	For granite surface plates dimensions <i>l x w x t/mm</i>	Price RUB
<b>Slide protection<sup>1,3</sup> for surface plate stands:</b>		
131.105	630 x 630 x 80	
131.106	800 x 500 x 100	
131.107	900 x 600 x 100	
131.108	1000 x 630 x 100/150	
131.109	1000 x 1000 x 100/150	
131.110	1200 x 800 x 120/150	
131.111	1500 x 1000 x 150/200	
131.112	2000 x 1000 x 200/250	
<b>Bessel and sleeping points:</b>		
131.115 <sup>4</sup>	Sleeping point (tilt protection) (height: 30 mm higher than standard)	
131.116 <sup>4</sup>	Bessel point (height: 30 mm higher than standard)	
<b>Chest of drawers:</b>		
131.113 <sup>3</sup>	Chest of drawers (RAL 5015), incl. fasteners, 610 x 480 x 470 mm ( <i>w x d x h</i> ); 3 drawers. Inside dimensions drawers ( <i>w x d x h</i> ): upper drawer: 515 x 395 x 90 mm, middle drawer: 515 x 395 x 105 mm, lower drawer: 515 x 395 x 135 mm.	



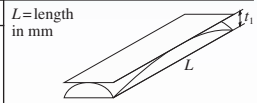
# V-blocks / Vises / Angle plates / Cylindrical squares Squares / Parallels / Straight edges



Flatness tolerances according DIN 874	
Class	Flatness $t_1$ ( $\mu\text{m}$ )
00	$1+L/150$
0	$2+L/100$
1	$4+L/60$
2	$8+L/40$

Squareness tolerances according DIN 875	
Class	Squareness ( $\mu\text{m}$ )
00	$2+L/100$
0	$5+L/50$
1	$10+L/20$
2	$20+L/10$

Flatness tolerances according DIN 876	
Class	Flatness $t_1$ ( $\mu\text{m}$ )
00	$2+L/500$
0	$4+L/250$
1	$10+L/100$
2	$20+L/50$
3	$40+L/25$



## V-blocks in pairs

V-blocks for clamping, processing, aligning and inspecting cylindrical objects, available in three classes.

- **Class 3:** Parallelism: 60 µm.  
Base and prism face smooth planed, short and long side processed.
- **Class 1:** Parallelism: 16 µm.  
Base and prism face hand scraped, short and long side processed.
- **Class 0:** Parallelism: 8 µm.  
Base and prism face and short side fine scraped, long side processed.
- Ground in matched pairs.
- V-groove: 90°.



Dimensions <i>l x w x h</i> mm	Capa- city ø/mm	Weight p. pair kg	Class 3		Class 1		Class 0	
			Item No.	Price RUB p. pair	Item No.	Price RUB p. pair	Item No.	Price RUB p. pair
<b>Steel:</b>								
100 x 40 x 30	6- 50	1.4	403.396		403.390		403.380	
150 x 50 x 40	8- 60	3.6	403.397		403.391		403.381	
<b>High-quality gray cast iron:</b>								
200 x 70 x 50	8- 75	6.1	403.398		403.392		403.382	
250 x 85 x 60	10-100	10	403.399		403.395		403.383	
300 x 100 x 70	15-120	15	403.400		403.393		403.384	

## X-blocks in pairs

The X-blocks have four V-grooves of 90°, all varying in size.

- **Class 1:** Parallelism: 16 µm.  
Flatness of the measuring faces according DIN 876/1.  
All surfaces hand scraped.
- **Class 0:** Parallelism: 8 µm.  
Flatness of the measuring faces according DIN 876/0.  
All surfaces fine scraped.
- All four V-grooves are ground in matched pairs.
- Material: high-quality gray cast iron.
- V-groove: 90°.
- Holds workpieces on all faces.

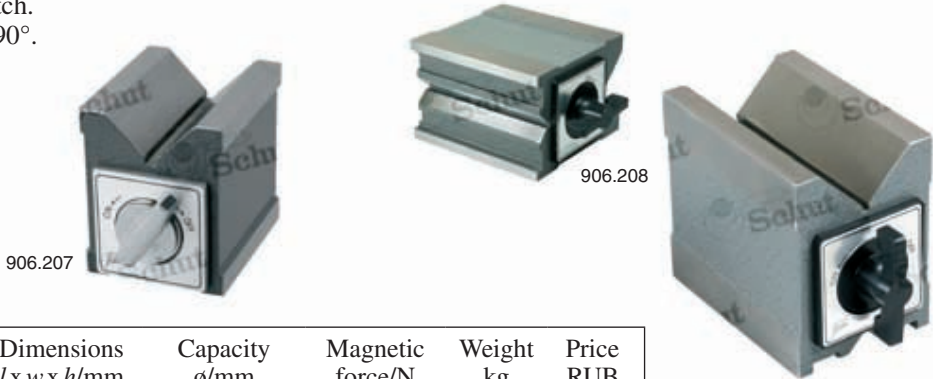


Dimensions <i>l x w x h</i> mm	Capa- city ø/mm	Weight p. pair kg	Class 1		Class 0	
			Item No.	Price RUB p. pair	Item No.	Price RUB p. pair
120 x 100 x 60	8- 90	6	403.370		403.360	
150 x 130 x 75	8-110	10.4	403.371		403.361	
200 x 170 x 90	8-150	25	403.372		403.362	

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### Magnetic V-blocks

- Accuracy:  $\pm 0.02$  mm / 100 mm.
- On/off switch.
- V-groove:  $90^\circ$ .



Item No.	Dimensions <i>l x w x h</i> /mm	Capacity $\phi$ /mm	Magnetic force/N	Weight kg	Price RUB
906.207	70 x 60 x 72	8 - 50	686	1.8	
906.208	100 x 70 x 95	6 - 55	1178	3.7	



### Magnetic V-blocks

- Magnetic force: 200 N.
- Ground in matched pairs.
- V-groove:  $90^\circ$ .
- Weight: 2.2 kg (per piece).



Item No.	Dimensions <i>l x w x h</i> /mm	Capacity $\phi$ /mm	Price RUB
906.210	100 x 50 x 80	6 - 70	

### Magnetic V-block

- V-groove:  $90^\circ$ .
- Magnetic force of round spindle axis in V-groove: 450 N, magnetic force of base plate: 450 N.

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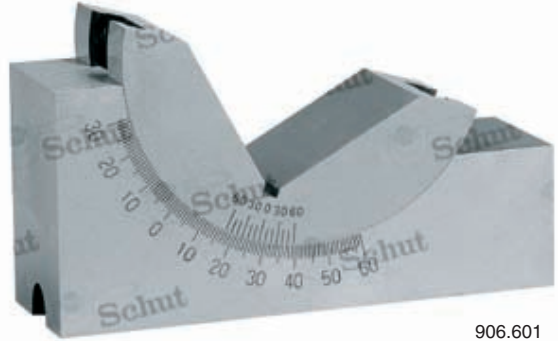
Item No.	Dimensions <i>l x w x h</i> /mm	Capacity $\phi$ /mm	Price RUB
855.200	125 x 60 x 73	6 - 50	

### Adjustable V-blocks

V-blocks adjustable from 0 to +60 degrees and 0 to -15 degrees. Suitable for metal cutting machines and for various measuring purposes.



Item No.	Dimensions l x w x h/mm	Price RUB
906.600	75 x 25 x 32.5	
906.601	102 x 30 x 48	
906.602	102 x 46 x 48	



906.601

### V-blocks in pairs

- Parallelism measuring faces:  $\pm 4 \mu\text{m}$ .
- Squareness of front face with bottom face according DIN 2274.
- Hardened ( $650 \pm 100 \text{ HV5}$ ).
- Ground in matched pairs.
- V-groove:  $90^\circ$ .
- Delivery incl. clamp.

### V-blocks in pairs

- Parallelism measuring faces:  $\pm 4 \mu\text{m}$ .
- Squareness of all side faces with each other according DIN 2274.
- Hardened ( $650 \pm 100 \text{ HV5}$ ).
- Ground in matched pairs.
- V-groove:  $90^\circ$ .
- Delivery incl. clamp.



666.550

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666.540

Item No.	Dimensions l x w x h/mm	Capacity $\phi$ /mm	Price RUB
666.550	50 x 40 x 40	5 - 30	
666.551	75 x 55 x 55	5 - 50	
666.552	100 x 75 x 75	7 - 70	

Item No.	Dimensions l x w x h/mm	Capacity $\phi$ /mm	Price RUB
666.540	60 x 58 x 40	5 - 30	
666.541	75 x 70 x 54	5 - 50	
666.542	100 x 96 x 75	7 - 70	

## Granite V-blocks in pairs

- V-groove: 90°.
- Material: granite.
- Processed in matched pairs.
- Delivery in a aluminum case (except 402.158/162).
- Delivery with an inspection report.



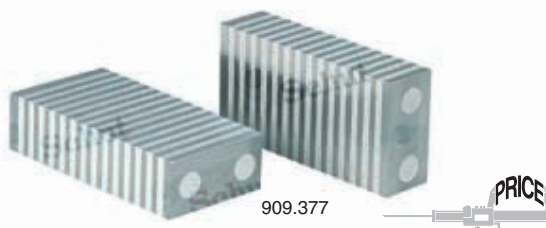
Dimensions <i>l x w x h</i> /mm	Capacity $\phi$ /mm	Weight kg <sup>1</sup>	Item No.	Accuracy $\mu\text{m}^2$	Price RUB	Item No.	Accuracy $\mu\text{m}^2$	Price RUB
			<b>Class 1:</b>			<b>Class 0:</b>		
63 x 63 x 63	10- 50	1.4	402.155	$\pm 6$		402.159	$\pm 3$	
100 x 100 x 100	15- 75	5.6	402.156	$\pm 8$		402.160	$\pm 4$	
100 x 160 x 160	25- 125	14.2	402.157	$\pm 8$		402.161	$\pm 4$	
160 x 250 x 250	60- 200	55.2	402.158	$\pm 10$		402.162	$\pm 5$	

<sup>1</sup> Weight per pair.

<sup>2</sup> Parallelism between measuring faces and base.

## Magnetic induction blocks in pairs

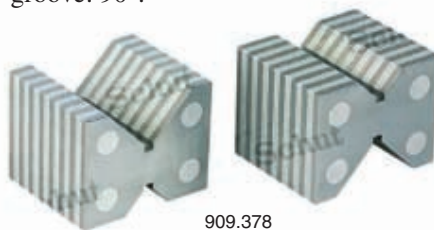
These magnetic induction blocks are not magnetized themselves. They are placed on a magnetic chuck to induce, to hold objects as for example round bars.



- Material: steel and aluminum alloy.
- Ground in matched pairs.

### V-blocks (909.378)

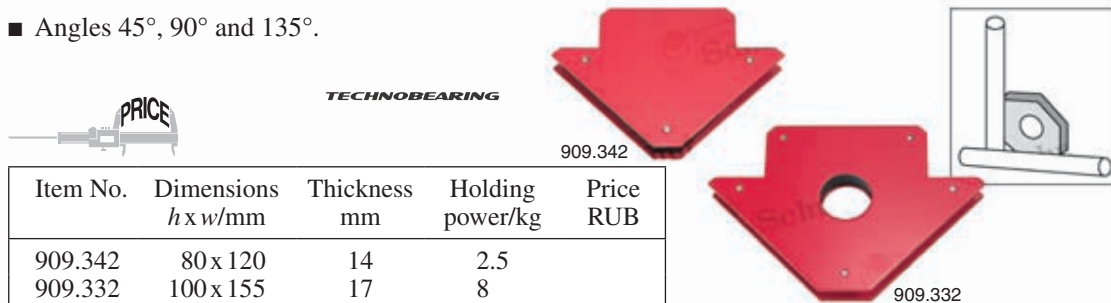
- Capacity:  $\phi 7 - 50$  mm.
- V-groove: 90°.



Item No.	Dimensions <i>l x w x h</i> /mm	Weight kg	Price RUB
909.377	100 x 50 x 25	1.18	
909.378	50 x 60 x 48	1.13	

## Magnetic holders

- Angles 45°, 90° and 135°.



Item No.	Dimensions <i>h x w</i> /mm	Thickness mm	Holding power/kg	Price RUB
909.342	80 x 120	14	2.5	
909.332	100 x 155	17	8	



## Precision vises

Hardened precision vises for accurate measurements and machine operations.

- Accuracy (parallelism, flatness and squareness):  
 ≤100 mm jaw opening = 0.005 mm,  
 >100 mm jaw opening = 0.005 mm per 100 mm.
- With horizontally and vertically ground prism in the moveable jaw.



909.734



909.739

### Precision and universal sine vises

- Stable and accurate to fix in each angle position (0 to 45°).

### Universal precision vise

- With 360° rotatable base.
- Accurate degree scale.
- Stable and accurate to fix in each angle position (0 to 45°).



909.746



Item No.	Jaw opening mm	Jaw width mm	Jaw depth mm	Length mm	Price RUB
<b>Precision vises:</b>					
909.733	60	50	25	150	
909.734	100	75	35	200	
909.735	120	100	45	250	
909.736	155	125	50	300	
<b>Precision sine vises with swivelling front axis:</b>					
909.737	25	25	10	65	
909.738	65	50	25	140	
909.739	100	75	35	190	
909.740	120	100	45	240	
909.741	155	125	50	280	
<b>Precision sine vises with swivelling rear axis:</b>					
909.742	60	50	25	140	
909.743	100	75	35	190	
909.744	120	100	45	250	
<b>Universal sine vises:</b>					
909.748	60	50	25	140	
909.749	100	75	35	200	
909.750	120	100	45	250	
909.751	155	125	50	300	
<b>Universal precision vise:</b>					
909.752	80	70	30	—	



909.749



909.752

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## Modular precision vises

Hardened precision vises for fixation for various machine operations.

- With or without 90° rotatable base.
- Accuracy (parallelism, flatness and squareness):
  - ≤ 100 mm jaw opening = 0.005 mm,
  - > 100 mm jaw opening = 0.005 mm per 100 mm.
- Also available:
  - intermediate sizes with other jaw depths and jaw openings,
  - larger models with jaw width 200 or 300 mm and jaw opening up to 600 mm.



909.702



909.706

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Jaw opening mm	Jaw width mm	Jaw depth mm	Length mm	Without rotatable base		With rotatable base	
				Item No.	Price RUB	Item No.	Price RUB
100	100	30	270	909.702		909.706	
150	125	40	345	909.703		909.707	
200	150	50	420	909.704		909.708	
400	175	60	655	909.705		909.709	



## Long modular vises

Long hardened vises for fixation for various machine operations.

- Single or two-sided model.
- Also available:
  - intermediate sizes with other jaw depths and jaw openings,
  - larger models with jaw width 200 mm and jaw opening up to 700 mm (single) or 250 mm (two-sided).



909.710



909.714



Jaw width mm	Jaw depth mm	Length mm	Single			Two-sided		
			Item No.	Jaw opening/mm	Price RUB	Item No.	Jaw opening/mm	Price RUB
100	30	460	909.710	290		909.714	90	
125	40	520	909.711	320		909.715	100	
150	50	580	909.712	360		–	–	
150	50	680	–	–		909.716	160	
175	60	866	909.713	600		909.717	220	

## Short modular vises

Short hardened vises for fixation for various machine operations.

- With fixed jaw, fixed double jaw or moveable jaw.



909.723



909.728



909.718



Jaw width mm	Jaw depth mm	Length mm	Height mm	Fixed jaw		Fixed double jaw		Moveable jaw	
				Item No.	Price RUB	Item No.	Price RUB	Item No.	Price RUB
100	30	140	65	909.723		909.728		909.718	
125	40	160	80	909.724		909.729		909.719	
150	50	230	100	909.725		909.730		909.720	
175	60	240	118	909.726		909.731		909.721	
200	65	300	135	909.727		909.732		909.722	

## Precision sine plates

- Stable and accurate to fix in each angle position (0 to 45°).

### Precision sine plates

- Accuracy (parallelism and squareness):  
 ≤ 100 mm dimension  $l$  or  $w = 0.005$  mm,  
 > 100 mm dimension  $l$  or  $w = 0.005$  mm per 100 mm.
- Mounting hole pattern 909.690: 13x M5,  
 909.691: 23x M5.

### Magnetic precision sine plates

Permanently magnetic sine plates for positioning and holding small or odd-shaped workpieces.

- Center distance of the support cylinders:  
 909.692: 76 mm,  
 909.693: 127 mm.

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909.690



909.692



Item No.	Dimensions/mm	Price RUB
<b>Precision sine plates:</b>		
909.690	100 x 100 x 50	
909.691	152 x 152 x 57	
<b>Magnetic precision sine plates:</b>		
909.692	100 x 100 x 117	
909.693	152 x 152 x 117	

## Granite square blocks with V-nut and tapped holes

Multifunctional granite blocks for e.g. flatness and squareness measurements, with V-nut and several tapped holes. Hold workpieces on several faces.

- Accuracy measuring faces:
  - flatness conforms to DIN 876/0,
  - squareness conforms to DIN 875/1.
- Equilateral cubic.
- Screw thread of tapping holes:  
402.170: M6, 402.171/172: M8.



402.170

Item No.	Dimensions mm	Flatness µm	Squareness µm	Weight kg	Price RUB
402.170 <sup>1</sup>	160 x 160 x 160	4	8	9.6	
402.171	200 x 200 x 200	5	9	17	
402.172	250 x 250 x 250	5	10	34	

<sup>1</sup> Delivery with an inspection report.

## Four-sided cast iron parallel blocks in pairs

Hollow but yet stable cast iron parallel blocks because of the internal bridge construction.

- **Class 3:** Parallelism: 64 µm. Smooth planed.
- **Class 1:** Parallelism: 16 µm. Hand scraped.
- **Class 0:** Parallelism: 8 µm. Fine scraped.
- Flatness conforms to DIN 876.
- Squareness conforms to DIN 875.
- Plan parallel and square matched in pairs.

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403.622

Dimensions <i>l x w x h</i> /mm	Weight p. pair/kg	Class 3		Class 1		Class 0	
		Item No.	Price RUB	Item No.	Price RUB	Item No.	Price RUB
150 x 150 x 100	18	403.628		403.624		403.620	
200 x 150 x 100	28	403.629		403.625		403.621	
300 x 225 x 150	60	403.630		403.626		403.622	
400 x 300 x 200	140	403.631		403.627		403.623	

## Cast iron angle blocks with several clamping possibilities

Cast iron angle block, with four clamping faces with several slots and taps, for aligning and clamping of tools and products. The four faces are planparallel and square matched.

- Slot width: 18 mm (403.607: 20 mm).

Item No.	Dimensions <i>l x w x h</i> /mm	Parallelism µm	Squareness µm	Weight kg	Price RUB
403.605	250 x 150 x 100	50	35	13	
403.606	300 x 200 x 150	52	40	23	
403.607	400 x 250 x 200	56	46	55	



403.606

## Cast iron clamping tables with several clamping possibilities

These cast iron clamping tables offer many possibilities for aligning and clamping products for mechanical processing. The six faces are parallel and square milled. Four of these faces are equipped with several clamping slots and the top face with T-slots.

- Flatness according DIN 876/3.
- T-slots according DIN 650.



403.613

Item No.	Dimensions <i>l x w x h</i> /mm	Weight kg	Nom. value T-slots/mm	Slot width mm	Price RUB
403.610	250 x 180 x 150	25	14	16	
403.611	300 x 220 x 200	37	14	18	
403.612	350 x 280 x 250	70	22	22	
403.613	400 x 350 x 300	115	22	22	
403.614	500 x 450 x 400	180	22	22	
403.615	800 x 700 x 600	670	28	30	

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## Cast iron angle plates with several clamping slots

These cast iron angle plates have several clamping slots both in the base and the clamping face, which make them suitable for all kind of fixtures.

- Flatness according DIN 876.
- Squareness according DIN 875.
- Strengthened outsides.
- Slots in base and clamping face.



403.283

Item No.	Dimensions <i>l x w x h</i> /mm	Weight kg	Flatness and square- ness/ $\mu$ m	Price RUB
<b>Class 3, DIN 876/3, DIN 875/2:</b>				
403.292	150 x 75 x 100	4	30	
403.293	200 x 100 x 150	8	30	
403.294	275 x 150 x 200	20	40	
403.295	300 x 150 x 250	24	45	
403.296	400 x 225 x 300	45	50	
403.297	500 x 300 x 400	85	60	
<b>Class 1, DIN 876/2, DIN 875/1:</b>				
403.286	150 x 75 x 100	4	15	
403.287	200 x 100 x 150	8	15	
403.288	275 x 150 x 200	20	20	
403.289	300 x 150 x 250	24	22	
403.290	400 x 225 x 300	45	25	
403.291	500 x 300 x 400	85	30	
<b>Class 0, DIN 876/1, DIN 875/0:</b>				
403.280	150 x 75 x 100	4	7	
403.281	200 x 100 x 150	8	7	
403.282	275 x 150 x 200	20	9	
403.283	300 x 150 x 250	24	11	
403.284	400 x 225 x 300	45	12	
403.285	500 x 300 x 400	85	15	

### Cast iron angle plates

- Ground faces.
- With T-slots.
- Accuracy: flatness according DIN 876, squareness according DIN 875.

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Dimensions l x w x h/mm	Weight kg	DIN 876/3 and 875/2		DIN 876/2 and 875/1		DIN 876/1 and 875/0	
		Item No.	Price RUB	Item No.	Price RUB	Item No.	Price RUB
150 x 75 x 100	6	403.264		403.261		403.267	
200 x 100 x 150	11	403.276		403.273		403.270	
275 x 150 x 200	24	403.265		403.262		403.268	
300 x 150 x 250	33	403.277		403.274		403.271	
400 x 225 x 300	54	403.266		403.263		403.269	
500 x 300 x 400	105	403.278		403.275		403.272	

### Steel cylindrical squares

Ground and lapped steel cylinder for checking squareness e.g. during the acceptance process of machines and instruments. Cylindricity error max. 1.5 µm.

Item No.	Dimensions mm	Squareness p-p/µm	Price RUB
852.190	∅90 x 200	2	
852.191	∅90 x 250	2.2	
852.192	∅90 x 300	2.5	
852.193	∅90 x 350	2.8	
852.194	∅90 x 400	3	



### Steel cylindrical squares

Ground and lapped steel cylinder for checking squareness. Out of roundness ≤ 5 µm.

Item No.	Dimensions mm	Squareness p-p/µm	Price RUB
906.436	∅ 80 x 200	3	
906.437	∅ 80 x 315	4	
906.438	∅ 100 x 500	5	
906.439	∅ 140 x 800	7	



## Granite squares

- Triangular model.
- Material: granite.
- Straight beveled edges.
- With weight-saving holes (except 402.120/126).
- Delivery with an inspection report.

PRICE



402.123

Item No.	Dimensions <i>h x w x t</i> /mm	Squareness <sup>1</sup> μm	Flatness <sup>2</sup> μm	Weight kg	Price RUB
<b>DIN 875/0:</b>					
402.120	100 x 63 x 16	±4	2	0.3	
402.121	160 x 100 x 20	±4	2	0.8	
402.122	250 x 160 x 25	±5	2	2.4	
402.123	400 x 250 x 40	±7	2.5	7.5	
402.124	630 x 400 x 63	±9	3	25.5	
402.125 <sup>3</sup>	1000 x 630 x 80	±12	5	102	
<b>DIN 875/00:</b>					
402.126	100 x 63 x 16	±2	1	0.3	
402.127	160 x 100 x 20	±2	1	0.8	
402.128	250 x 160 x 25	±2.5	1	2.4	
402.129	400 x 250 x 40	±3.5	1.2	7.5	
402.130	630 x 400 x 63	±4.5	1.5	25.5	
402.131 <sup>3</sup>	1000 x 630 x 80	±6	2.5	102	

<sup>1</sup> Squareness between measuring face and base.

<sup>2</sup> Flatness of measuring face and base.

<sup>3</sup> Weight included package.

## Granite squares

- Square model.
- Material: granite.
- Straight beveled edges.
- With weight-saving holes.
- Delivery with an inspection report.

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PRICE

Item No.	Dimensions <i>h x w x t</i> /mm	Squareness μm <sup>1</sup>	Weight kg	Price RUB
<b>Class 0:</b>				
402.145	200 x 200 x 25	±4	2.6	
402.146	250 x 250 x 30	±4.5	4.9	
402.147	315 x 315 x 30	±5.2	7.7	
402.148	400 x 400 x 40	±6	14.5	
402.149	500 x 500 x 50	±7	33	
<b>Class 00:</b>				
402.150	200 x 200 x 25	±2	2.6	
402.151	250 x 250 x 30	±2.2	4.9	
402.152	315 x 315 x 30	±2.6	7.7	
402.153	400 x 400 x 40	±3	14.5	
402.154	500 x 500 x 50	±3.5	33	

<sup>1</sup> Squareness between adjacent measuring faces.



402.146



## Ceramic squares

- Made of alumina ceramics.



Item No.	Dimensions <i>l x w x t</i> /mm	Flatness long measuring face/mm	Flatness short measuring face/mm	Squareness mm	Price RUB
<b>Triangular, class A:</b>					
908.718	100 x 63 x 16	0.001	0.001	0.004	
908.719	160 x 100 x 20	0.002	0.001	0.004	
908.720	250 x 160 x 25	0.002	0.002	0.005	
908.721	400 x 250 x 40	0.0025	0.002	0.007	
908.722	630 x 400 x 63	0.003	0.0025	0.009	
<b>Triangular, class AAA:</b>					
908.726	250 x 160 x 25	0.0005	0.0005	0.0025	
908.727	400 x 250 x 40	0.0005	0.0005	0.0035	
908.728	630 x 400 x 63	0.0008	0.0005	0.0045	

Item No.	Dimensions <i>l x w x t</i> mm	Flatness measuring faces/mm	Squareness measuring faces/mm	side faces/mm	Parallelism measuring faces/mm	side faces/mm	Price RUB
<b>Rectangular, class A:</b>							
908.742	200 x 200 x 25	0.0018	0.004	0.04	0.004	0.096	
908.745	400 x 400 x 40	0.0026	0.006	0.06	0.006	0.144	
<b>Rectangular, class AAA:</b>							
908.781	250 x 250 x 30	0.0005	0.0011	0.011	0.0011	0.027	
908.782	300 x 300 x 30	0.0006	0.0013	0.013	0.0013	0.031	

## Flat steel squares

- Lapped measuring faces.
- Accuracy according DIN 875.

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670.003

Item No.	Dimensions mm	Cross- section/mm	Price RUB
<b>Class III:</b>			
670.061	100 x 70	20 x 5	
670.062	150 x 100	25 x 5	
670.064	250 x 165	35 x 7	
670.065	300 x 175	35 x 7	
670.066	400 x 200	35 x 7	
670.067	500 x 250	40 x 8	
670.068	600 x 300	40 x 8	
670.070 <sup>2</sup>	1000 x 500	50 x 10	
<b>DIN 875/2:</b>			
670.041	75 x 50	15 x 5	
670.042	100 x 70	20 x 5	
670.043	150 x 100	25 x 5	
670.044	200 x 130	30 x 6	
670.045	250 x 165	35 x 7	
670.046	300 x 175	35 x 7	
670.047	400 x 200	35 x 7	
670.048	500 x 250	40 x 8	
670.049 <sup>1</sup>	600 x 300	40 x 8	
670.051 <sup>1,2</sup>	1000 x 500	50 x 10	

Item No.	Dimensions mm	Cross- section/mm	Price RUB
<b>DIN 875/1:</b>			
670.022	75 x 50	15 x 5	
670.023	100 x 70	20 x 5	
670.024	150 x 100	25 x 5	
670.025	200 x 130	30 x 6	
670.026	250 x 165	35 x 7	
670.027	300 x 200	40 x 8	
670.028	400 x 265	45 x 10	
670.029	500 x 330	50 x 10	
670.030 <sup>1</sup>	600 x 400	50 x 10	
<b>DIN 875/0 (with inspection report):</b>			
670.002	75 x 50	15 x 5	
670.003	100 x 70	20 x 5	
670.004	150 x 100	25 x 5	
670.005	200 x 130	30 x 6	
670.006	250 x 165	35 x 7	
670.007	300 x 200	40 x 8	
670.008	400 x 265	45 x 10	
670.009	500 x 330	50 x 10	

<sup>1</sup> Incl. transport package.

<sup>2</sup> Delivery ex Groningen, Netherlands.

## Flat stainless steel squares

Item No.	Dimensions mm	Cross- section/mm	Price RUB
<b>DIN 875/2:</b>			
670.142	75 x 50	15 x 5	
670.143	100 x 70	20 x 5	
670.144	150 x 100	25 x 5	
670.145	200 x 130	30 x 6	
670.146	250 x 165	35 x 7	
670.147	300 x 200	35 x 7	
<b>DIN 875/1:</b>			
670.122	75 x 50	15 x 5	
670.123	100 x 70	20 x 5	
670.124	150 x 100	25 x 5	
670.125	200 x 130	30 x 6	
670.126	250 x 165	35 x 7	
670.127	300 x 200	40 x 8	
670.128	400 x 265	45 x 10	
670.129	500 x 330	50 x 10	
670.130 <sup>1</sup>	600 x 400	50 x 10	
<b>DIN 875/0, hardened (with inspection report):</b>			
670.751	50 x 40	15 x 5	
670.752	75 x 50	15 x 5	
670.753	100 x 70	20 x 5	
670.754	150 x 100	25 x 5	
670.755	200 x 130	30 x 6	
670.758	250 x 165	35 x 7	
670.759	300 x 200	40 x 8	
670.760	400 x 265	45 x 10	
670.761	500 x 330	50 x 10	

- Hardened stainless steel.
- Lapped measuring faces.
- Accuracy according DIN 875.



670.753

<sup>1</sup> Incl. transport package.

## Wooden cases for squares

Wooden cases for flat squares.



670.466

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Item No.	Dimensions square/mm	Price RUB
670.463	50 x 40	
670.464	75 x 50	
670.465	100 x 70	
670.466	150 x 100	
670.467	200 x 130	
670.468	250 x 165	
670.468	300 x 200	
670.469	400 x 265	
670.470	500 x 330	

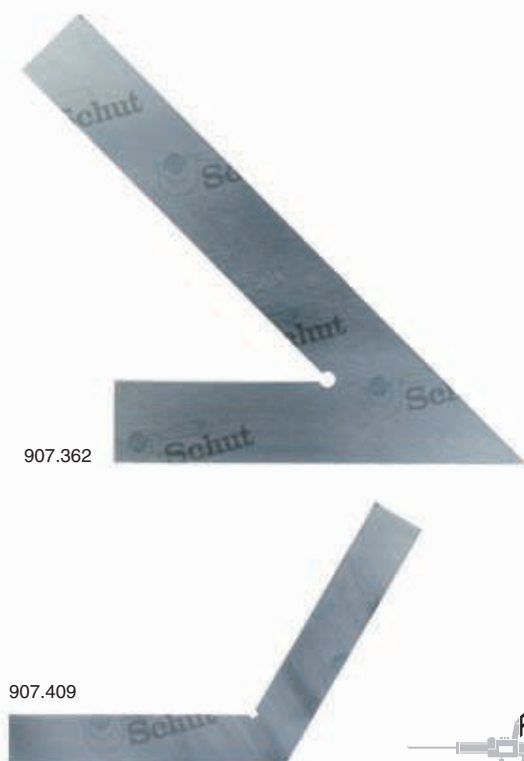
## Flat stainless steel squares

- Hardened stainless steel.
- Lapped measuring faces.
- Accuracy according DIN 875.

Item No.	Dimensions mm	Cross- section/mm	Price RUB
<b>DIN 875/1:</b>			
907.301	75 x 50	15 x 5	
907.302	100 x 70	20 x 5	
907.303	150 x 100	25 x 5	
907.304	200 x 130	30 x 6	
907.305	250 x 160	35 x 7	
907.306	300 x 200	40 x 8	
<b>DIN 875/0:</b>			
907.282	50 x 40	12 x 3.5	
907.283	75 x 50	15 x 5	
907.284	100 x 70	20 x 5	
907.285	150 x 100	25 x 7	
907.286	200 x 130	30 x 7	



## Flat steel squares



Item No.	Dimensions mm	Cross- section/mm	Price RUB
<b>Acute angle squares 45°, DIN 875/2:</b>			
907.359	100 x 70	20 x 5	
907.360	120 x 80	20 x 5	
907.361	150 x 100	20 x 5	
907.362	200 x 130	25 x 5	
<b>Acute angle squares 60°, DIN 875/2:</b>			
907.383	100 x 70	20 x 5	
907.384	120 x 80	20 x 5	
907.385	150 x 100	20 x 5	
907.386	200 x 130	25 x 5	
<b>Hexagon squares 120°, DIN 875/2:</b>			
907.407	50 x 50	15 x 5	
907.408	75 x 75	18 x 5	
907.409	100 x 100	20 x 5	
907.410	150 x 150	25 x 5	
907.411	200 x 200	30 x 6	
<b>Octagon squares 135°, DIN 875/2:</b>			
907.417	50 x 50	15 x 5	
907.418	75 x 75	18 x 5	
907.419	100 x 100	20 x 5	
907.420	150 x 150	25 x 5	
907.421	200 x 200	30 x 6	



## Steel squares with base

- Lapped measuring faces.
- Accuracy according DIN 875.

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670.203

Item No.	Dimensions mm	Cross- section/mm	Price RUB
<b>Class III:</b>			
670.261	100 x 70	20 x 5	
670.262	150 x 100	25 x 5	
670.263	200 x 130	30 x 6	
670.264	250 x 165	35 x 7	
670.265	300 x 175	35 x 7	
670.266	400 x 200	35 x 7	
670.267	500 x 250	40 x 8	
670.268	600 x 300	40 x 8	
670.270 <sup>2</sup>	1000 x 500	50 x 10	
<b>DIN 875/2:</b>			
670.241	75 x 50	15 x 5	
670.242	100 x 70	20 x 5	
670.243	150 x 100	25 x 5	
670.244	200 x 130	30 x 6	
670.245	250 x 165	35 x 7	
670.246	300 x 175	35 x 7	
670.247	400 x 200	35 x 7	
670.248	500 x 250	40 x 8	
670.249 <sup>1</sup>	600 x 300	40 x 8	
670.250 <sup>1</sup>	750 x 375	45 x 10	
670.251 <sup>1,2</sup>	1000 x 500	50 x 10	

Item No.	Dimensions mm	Cross- section/mm	Price RUB
<b>DIN 875/1:</b>			
670.222	75 x 50	15 x 5	
670.223	100 x 70	20 x 5	
670.224	150 x 100	25 x 5	
670.225	200 x 130	30 x 6	
670.226	250 x 165	35 x 7	
670.227	300 x 200	40 x 8	
670.228	400 x 265	45 x 10	
670.229	500 x 330	50 x 10	
670.230 <sup>1</sup>	600 x 400	50 x 10	
<b>DIN 875/0 (with inspection report):</b>			
670.202	75 x 50	15 x 5	
670.203	100 x 70	20 x 5	
670.204	150 x 100	25 x 5	
670.205	200 x 130	30 x 6	
670.206	250 x 165	35 x 7	
670.207	300 x 200	40 x 8	
670.208	400 x 265	45 x 10	
670.209	500 x 330	50 x 10	

<sup>1</sup> Incl. transport package.

<sup>2</sup> Delivery ex Groningen, Netherlands.

## Stainless steel squares with base

Item No.	Dimensions mm	Cross- section/mm	Price RUB
<b>DIN 875/2:</b>			
670.342	75 x 50	15 x 5	
670.343	100 x 70	20 x 5	
670.344	150 x 100	25 x 5	
670.345	200 x 130	30 x 6	
670.346	250 x 165	35 x 7	
670.347	300 x 200	35 x 7	
<b>DIN 875/1:</b>			
670.322	75 x 50	15 x 5	
670.323	100 x 70	20 x 5	
670.324	150 x 100	25 x 5	
670.325	200 x 130	30 x 6	
670.326	250 x 165	35 x 7	
670.327	300 x 200	40 x 8	
670.328	400 x 265	45 x 10	
670.329	500 x 330	50 x 10	
670.330 <sup>1</sup>	600 x 400	50 x 10	
<b>DIN 875/0, hardened (with inspection report):</b>			
670.851	50 x 40	15 x 5	
670.852	75 x 50	15 x 5	
670.853	100 x 70	20 x 5	
670.854	150 x 100	25 x 5	
670.855	200 x 130	30 x 6	
670.762	250 x 165	35 x 7	
670.763	300 x 200	40 x 8	
670.764	400 x 265	45 x 10	
670.765	500 x 330	50 x 10	

<sup>1</sup> Incl. transport package.

- Hardened stainless steel.
- Lapped measuring faces.
- Accuracy according DIN 875.



670.323

**All squares can be delivered with an inspection report or a certificate of a recognized measuring laboratory.**

For the larger squares it is important to realize that external factors affect the stability of squares, which may influence the accuracy unfavourably.

## Wooden cases for squares

Wooden cases for squares with base.



670.884

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Item No.	Dimensions square/mm	Price RUB
670.463	50 x 40	
670.464	75 x 50	
670.465	100 x 70	
670.884	150 x 100	
670.885	200 x 130	
670.887	250 x 165	
670.887	300 x 200	
670.888	400 x 265	
670.889	500 x 330	



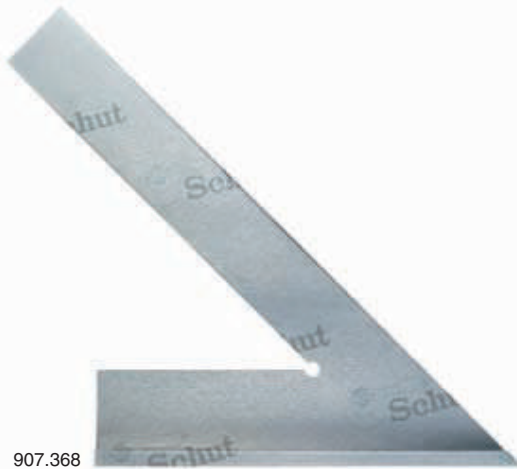
## Stainless steel squares with base

- Hardened stainless steel.
- Lapped measuring faces.
- Accuracy according DIN 875.

Item No.	Dimensions mm	Cross-section/mm	Price RUB
<b>DIN 875/1:</b>			
907.287	75 x 50	15 x 5	
907.288	100 x 70	20 x 5	
907.289	150 x 100	25 x 5	
907.290	200 x 130	30 x 6	
907.291	250 x 160	35 x 7	
907.292	300 x 200	40 x 8	
<b>DIN 875/0:</b>			
907.272	50 x 40	12 x 5	
907.273	75 x 50	15 x 5	
907.274	100 x 70	20 x 5	
907.275	150 x 100	25 x 5	
907.276	200 x 130	30 x 6	



## Steel squares with base



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Item No.	Dimensions mm	Cross-section/mm	Price RUB
<b>Acute angle squares 45°, DIN 875/2:</b>			
907.365	100 x 70	20 x 5	
907.366	120 x 80	20 x 5	
907.367	150 x 100	20 x 5	
907.368	200 x 130	25 x 5	
<b>Acute angle squares 60°, DIN 875/2:</b>			
907.389	100 x 70	20 x 5	
907.390	120 x 80	20 x 5	
907.391	150 x 100	20 x 5	
907.392	200 x 130	25 x 5	
<b>Mitre squares 135°, DIN 875/2:</b>			
907.427	100 x 70	20 x 5	
907.428	120 x 80	20 x 5	
907.429	150 x 100	20 x 5	
907.430	200 x 130	25 x 5	



**Hardened stainless steel squares with heavy beam**

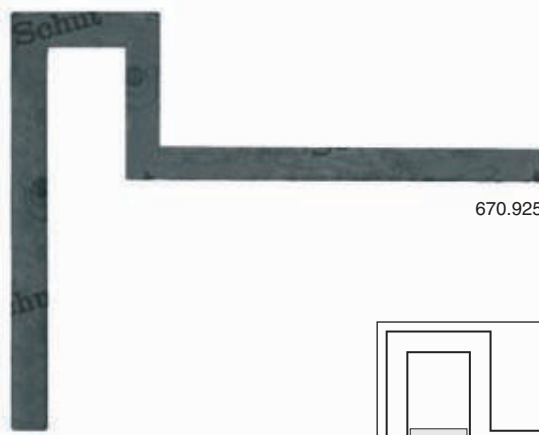
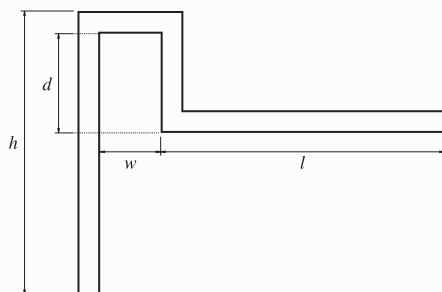
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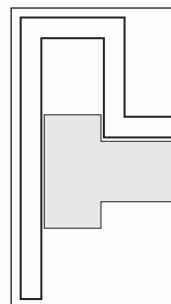
670.604

Item No.	Dimensions mm	Cross-section/mm	Price RUB
<b>With knife-edges (DIN 875/00):</b>			
670.601	50x 40	14x 10/16x 2	
670.602	75x 50	14x 10/18x 2	
670.603	100x 70	16x 10/18x 2	
670.604	150x 100	20x 12/22x 2	
670.605	200x 130	24x 14/26x 3	

**Flange squares (not standardized)**



670.925



Item No.	Dimensions/mm				Price RUB
	<i>l</i>	<i>h</i>	<i>w</i>	<i>d</i>	
670.925	300	300	64	105	
670.926	400	400	65	115	
670.927	500	500	70	126	
670.928	600	600	71	124	

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### Adjustable squares

Precise base with sliding straight edge. The straight edge can be moved continuously along the base and can be firmly clamped by the spindle. All measuring faces are ground and the complete square is hardened. The adjustable straight edge enables working with for instance short edges and grooves.



Item No.	Dimensions straight edge/mm	Dimensions base/mm	Price RUB
907.874	60 x 4 x 4	23 x 40 x 10	
909.407	125 x 8 x 8	30 x 75 x 12	



907.874

### Squares with heavy beam

- Hardened stainless steel.
- Lapped measuring faces.
- Accuracy according DIN 875/0.



Item No.	Dimensions mm	Cross- section/mm	Price RUB
907.262	50 x 40	14 x 10/16 x 2	
907.263	75 x 50	14 x 10/16 x 2	
907.264	100 x 70	18 x 12/20 x 3	
907.265	150 x 100	24 x 14/25 x 3	
907.266	200 x 130	28 x 16/30 x 4	

907.264



### Squares with heavy beam and knife-edges

- Hardened stainless steel.
- Lapped measuring faces.
- Accuracy according DIN 875/00.



Item No.	Dimensions mm	Cross- section/mm	Price RUB
907.245	50 x 40	14 x 10/16 x 2	
907.246	75 x 50	14 x 10/16 x 2	
907.247	100 x 70	18 x 12/20 x 3	
907.248	150 x 100	24 x 14/25 x 3	
907.249	200 x 130	28 x 16/30 x 4	

907.247



## Beveled edge squares

- Hardened stainless steel.
- Lapped measuring faces.
- Accuracy according DIN 875/00.

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Item No.	Dimensions mm	Cross-section/mm	Price RUB
907.250	50 x 40	12 x 4	
907.251	75 x 50	16 x 4	
907.252	100 x 70	20 x 5	
907.253	150 x 100	25 x 6	
907.254	200 x 130	30 x 7	



907.252

## Beveled edge squares

- Hardened steel.
- Ground and lapped measuring faces.
- Accuracy according DIN 875/00.

Item No.	Dimensions/mm	Price RUB
<b>Bright steel:</b>		
670.403	50 x 40	
670.404	75 x 50	
670.405	100 x 70	
670.406	150 x 100	
670.407	200 x 130	
<b>Stainless steel:</b>		
670.433	50 x 40	
670.434	75 x 50	
670.435	100 x 70	
670.436	150 x 100	
670.437	200 x 130	



670.435

## Toolmakers' squares

- Hardened stainless steel.
- Lapped measuring faces.
- Accuracy according DIN 875/00.



907.256



Item No.	Dimensions mm	Cross- section/mm	Price RUB
907.255	25 x 20	6 x 3.5/5 x 3.5	
907.256	40 x 28	8 x 3.5/5 x 3.5	

## Toolmakers' squares

LMW flat beveled edge squares, with the knife-edge on the inside.

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Item No.	Dimensions mm	Angle	Price RUB
852.220	25 x 20	90°	
852.222	40 x 28	90°	
852.223	40 x 28	89°30'	
852.224	40 x 28	90°30'	

## Toolmakers' set

Consisting of:

- 1 beveled straight edge: 100 mm,
- 1 flat beveled edge square: 75 x 50 mm,
- 1 flat beveled edge square: 40 x 28 mm,
- 1 flat beveled edge square: 25 x 20 mm,
- 1 scriber: 8 x 8 x 60 mm.

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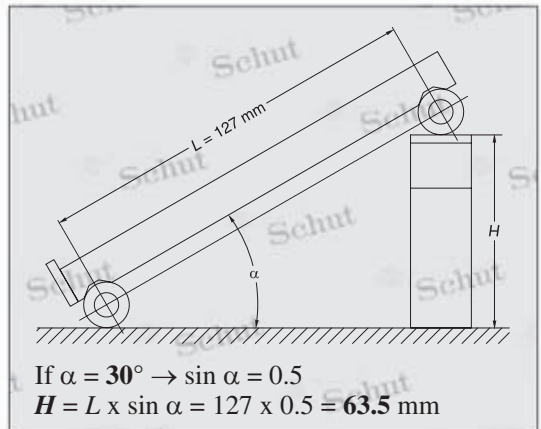


Item No.	Description	Price RUB
852.201	Toolmakers' set	

## Sine bar

By means of a sine bar and with gauge blocks, a reference plane can be created ( $l=150$  mm,  $w=25$  mm) at an angle of  $0^\circ$  to  $60^\circ$  with respect to the base. The base of the sine bar consists of two rollers with a center to center distance of  $127 \pm 0.004$  mm. In order to make a curve the gauge blocks are placed under one of the rollers.

- Straightness and parallelism:  $5 \mu\text{m}$ .



Item No.	Description	Price RUB
909.417	Sine bar	



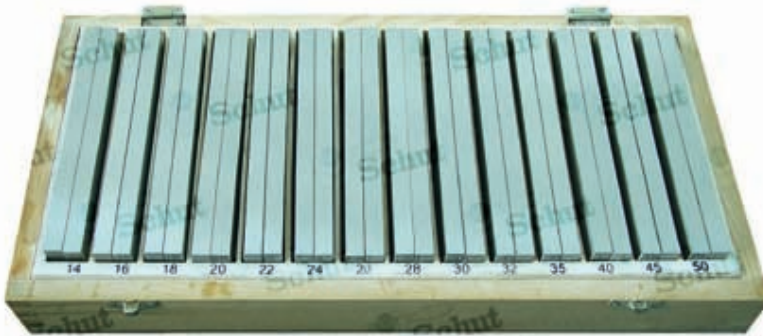
## Steel parallel blocks

Parallels to position and layout workpieces in e.g. clamping jaws for drilling, grinding, milling and measuring. The workpieces and assemblies can easily be set up to the desired working height.

- Parallelism of the two measuring faces:  $\pm 0.005$  mm.
- Size deviation (height):  $\pm 0.01$  mm.
- Hardness: 55 HRC.
- Ground in matched pairs.
- Produced of a high-grade steel alloy.
- Delivery in a case with a manufacturer's certificate.



(Only available in sets.)



906.996



Item No.	Length mm	Price RUB	Width mm	Height mm
<b>Set of 12 pairs:</b>				
909.800	100		10	14 - 16 - 18 - 20 - 22 - 24 - 26 - 28 - 30 - 32 - 35 - 40
909.804	125			
906.995	150			
<b>Set of 14 pairs:</b>				
909.802	100		10	14 - 16 - 18 - 20 - 22 - 24 - 26 - 28 - 30 - 32 - 35 - 40 - 45 - 50
909.805	125			
906.996	150			
<b>Set of 24 pairs:</b>				
909.803	100		8	11 - 16 - 21 - 26 - 31 - 36 13 - 18 - 23 - 28 - 33 - 38 15 - 20 - 25 - 30 - 35 - 40 17 - 22 - 27 - 32 - 37 - 42
909.806	125		10	
			12	
906.997	150		14	

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## Ceramic parallels in pairs

Parallels to position and layout workpieces in for example clamping jaws for drilling, grinding, milling and measuring.

- Made of alumina ceramics.

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Item No.	Dimensions <i>l x w x h</i> /mm	Flatness measur- ing faces/mm	Parallelism mea- suring faces/mm	Squareness mm	Height difference/mm	Price RUB
<b>Class A:</b>						
908.732	250 x 40 x 25	0.004	0.004	0.020	0.004	
908.733	400 x 63 x 40	0.008	0.008	0.030	0.008	
<b>Class AAA:</b>						
908.737	250 x 40 x 25	0.002	0.002	0.010	0.002	

## Ceramic straight edges

- Made of alumina ceramics.



Item No.	Dimensions <i>l x w x h</i> /mm	Flatness measuring faces/mm	Parallelism mea- suring faces/mm	Squareness mm	Price RUB
<b>Class AAA:</b>					
908.789	400 x 60 x 25	0.0016	0.0024	0.008	

## Granite parallels in pairs

Flatness, parallelism and straightness of measuring surfaces according DIN 874.

- Material: granite.
- Straight beveled edges.
- Delivery with an inspection report.



Item No.	Flatness/ Parallelism $\mu\text{m}^1$	Price RUB	Item No.	Flatness/ Parallelism $\mu\text{m}^1$	Price RUB	Dimensions mm	Weight per pair kg
<b>Class 0, 2-sided:</b>			<b>Class 00, 2-sided:</b>				
402.104	$\pm 3$		402.112	$\pm 1.5$		160x 25 x 16	0.5
402.105	$\pm 4$		402.113	$\pm 2$		250x 40 x 25	1.6
402.106	$\pm 8$		402.114	$\pm 4$		400x 63 x 40	6.5
402.107	$\pm 12$		402.115	$\pm 6$		630x 100 x 63	24.7
<b>Class 0, 4-sided:</b>			<b>Class 00, 4-sided:</b>				
402.100	$\pm 3$		402.108	$\pm 1.5$		160x 25 x 16	0.5
402.101	$\pm 4$		402.109	$\pm 2$		250x 40 x 25	1.6
402.102	$\pm 8$		402.110	$\pm 4$		400x 63 x 40	6.5
402.103	$\pm 12$		402.111	$\pm 6$		630x 100 x 63	24.7

<sup>1</sup> Flatness and parallelism between opposite surfaces.

## Granite straight edges

Flatness, parallelism and straightness of measuring surfaces according DIN 874.

- From length 1000 mm equipped with two bores.
- Material: granite.
- Straight beveled edges.
- Delivery with an inspection report.



Item No.	Dimensions mm	Weight kg	Straightness/ Flatness/ $\mu\text{m}$	Parallelism $\mu\text{m}$	Price RUB
<b>Class 0:</b>					
402.135	400 x 60 x 25	2	$\pm 2.6$	$\pm 13$	
402.136	630 x 100 x 35	7	$\pm 3.5$	$\pm 18$	
402.137	1000 x 160 x 50	27	$\pm 5$	$\pm 25$	
402.138 <sup>1</sup>	1600 x 250 x 80	138	$\pm 7.4$	$\pm 37$	
402.139 <sup>1</sup>	2000 x 300 x 100	210	$\pm 9$	$\pm 45$	
<b>Class 00:</b>					
402.140	400 x 60 x 25	2	$\pm 1.6$	$\pm 8$	
402.141	630 x 100 x 35	7	$\pm 2.1$	$\pm 10.5$	
402.142	1000 x 160 x 50	27	$\pm 3$	$\pm 15$	
402.143 <sup>1</sup>	1600 x 250 x 80	138	$\pm 4.4$	$\pm 22$	
402.144 <sup>1</sup>	2000 x 300 x 100	210	$\pm 5.4$	$\pm 27$	

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<sup>1</sup> Weight included package.

## Bright steel and stainless steel straight edges DIN 874/1 and 874/0

- Length: 500 - 6000 mm.
- Rectangular cross-section up to length 1500 mm, from length 2000 mm I-shaped with two grip slots.
- Flatness of the measuring faces according DIN 874.
- Straight edges of length 1000 mm and longer are marked on the side face at the Bessel points.



### Bright steel

Item No.	Dimensions/mm	Price RUB
<b>DIN 874/1:</b>		
776.131	500 x 40 x 8	
776.140	750 x 50 x 10	
776.132	1000 x 50 x 10	
776.133	1500 x 60 x 12	
776.134	2000 x 70 x 15	
776.135	2500 x 80 x 15	
776.136	3000 x 100 x 16	
776.137	4000 x 120 x 20	
776.138	5000 x 140 x 20	
776.139	6000 x 140 x 20	
<b>DIN 874/0:</b>		
776.121	500 x 50 x 10	
776.120	750 x 50 x 10	
776.122	1000 x 60 x 12	
776.123	1500 x 70 x 15	
776.124	2000 x 80 x 15	
776.125	2500 x 100 x 16	
776.126	3000 x 120 x 20	
776.127	4000 x 140 x 20	
776.128	5000 x 140 x 20	
776.129	6000 x 140 x 20	

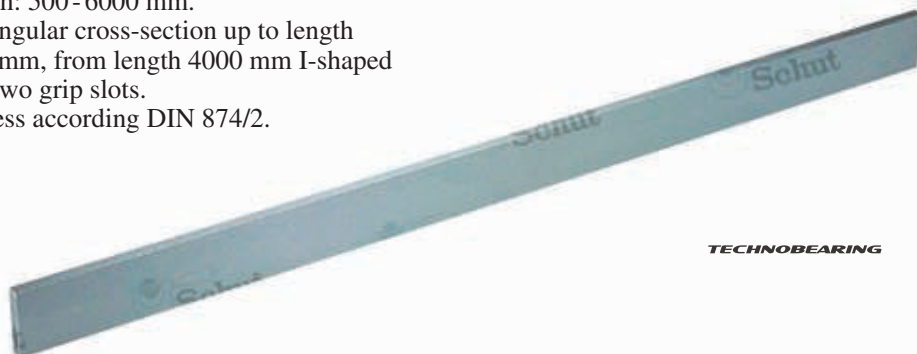
### Stainless steel

Item No.	Dimensions/mm	Price RUB
<b>DIN 874/1:</b>		
776.231	500 x 40 x 8	
776.374	750 x 50 x 10	
776.232	1000 x 50 x 10	
776.233	1500 x 60 x 12	
776.234	2000 x 70 x 15	
776.235	2500 x 80 x 15	
<b>DIN 874/0:</b>		
776.221	500 x 50 x 10	
776.130	750 x 50 x 10	
776.222	1000 x 60 x 12	
776.223	1500 x 70 x 15	
776.224	2000 x 80 x 15	

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## Bright steel and stainless steel straight edges DIN 874/2

- Length: 500 - 6000 mm.
- Rectangular cross-section up to length 3000 mm, from length 4000 mm I-shaped with two grip slots.
- Flatness according to DIN 874/2.



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### Bright steel

Item No.	Dimensions/mm	Price RUB
776.141	500 x 30 x 6	
776.142	750 x 40 x 8	
776.143	1000 x 40 x 8	
776.144	1500 x 50 x 10	
776.145	2000 x 60 x 12	
776.146	2500 x 70 x 15	
776.147	3000 x 80 x 15	
776.148	4000 x 100 x 16	
776.149	5000 x 120 x 20	
776.150	6000 x 120 x 20	

### Stainless steel

Item No.	Dimensions/mm	Price RUB
776.388	500 x 30 x 6	
776.389	750 x 40 x 8	
776.380	1000 x 40 x 8	
776.381	1500 x 50 x 10	
776.382	2000 x 60 x 12	
776.383	2500 x 70 x 15	
776.384	3000 x 80 x 15	
776.385	4000 x 100 x 16	

## Bright steel and stainless steel straight edges class 3

Class 3 straight edges are not standardized, i.e. there is no standard in which the accuracy classes are laid down. The accuracy is approximately maximum the double of the permissible error conform DIN 874/2.

### Bright steel

Item No.	Dimensions/mm	Price RUB
776.151	500 x 30 x 6	
776.152	750 x 30 x 6	
776.153	1000 x 30 x 6	
776.154	1500 x 40 x 8	
776.155	2000 x 40 x 8	
776.156	2500 x 40 x 8	
776.157	3000 x 50 x 10	
776.158	4000 x 60 x 12	
776.159	5000 x 70 x 15	
776.160	6000 x 80 x 15	

### Stainless steel

Item No.	Dimensions/mm	Price RUB
776.161	500 x 30 x 6	
776.162	750 x 30 x 6	
776.163	1000 x 30 x 6	
776.164	1500 x 40 x 8	
776.165	2000 x 40 x 8	
776.166	2500 x 40 x 8	
776.167	3000 x 50 x 10	
776.168	4000 x 60 x 12	
776.169	5000 x 70 x 15	
776.170	6000 x 80 x 15	

## Aluminum straight edges

Light and therefore easy-to-use straight edges. Especially when using longer straight edges this is undoubtedly of great significance.

- Highly wear resistant.
- Highly corrosion resistant.
- Surface hardness: 500-550 HV.
- Highly insulating.
- With protective coating, thickness: 50 µm.
- With grip slots:
  - class 2: from length 2500 mm,
  - class 1 and 0: from length 1500 mm.
- Accuracy according DIN 874.



Item No.	Dimensions mm	Weight kg	Price RUB
<b>DIN 874/2:</b>			
776.191*	500 x 60 x 12	0.7	
776.192*	1000 x 60 x 12	1.4	
776.193*	1500 x 60 x 12	2.1	
776.194*	2000 x 60 x 12	2.8	
776.195	2500 x 100 x 16	7.2	
776.196	3000 x 100 x 16	8.7	
776.197	4000 x 100 x 16	11.6	
776.198	5000 x 150 x 20	26.7	
776.199	6000 x 150 x 20	32.1	

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\* Without grip slots.

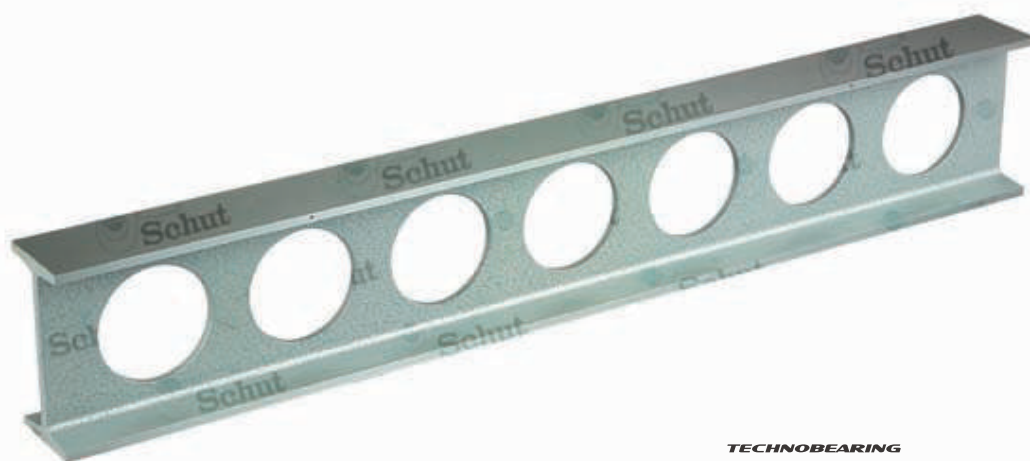
Item No.	Dimensions mm	Weight kg	Price RUB
<b>DIN 874/1:</b>			
776.181*	500 x 60 x 12	0.7	
776.182*	1000 x 60 x 12	1.4	
776.183	1500 x 100 x 12	4.3	
776.184	2000 x 100 x 12	5.8	
776.185	2500 x 100 x 12	7.2	
776.186	3000 x 150 x 20	15.9	
776.187	4000 x 150 x 20	21.3	
776.188	5000 x 150 x 20	26.7	
776.189	6000 x 150 x 20	32.1	
<b>DIN 874/0:</b>			
776.171*	500 x 60 x 12	0.7	
776.172*	1000 x 60 x 12	1.4	
776.173	1500 x 100 x 16	4.3	
776.174	2000 x 100 x 16	5.8	
776.175	2500 x 100 x 16	7.2	
776.176	3000 x 150 x 20	15.9	
776.177	4000 x 150 x 20	21.3	
776.178	5000 x 150 x 20	26.7	
776.179	6000 x 150 x 20	32.1	



## Steel straight edges for mounting

I-shaped construction with wide and extra wide measuring faces for application of spirit levels.

- Length: 500 - 6000 mm.
- Flatness of the measuring faces according DIN 874.
- Larger sizes available on request.



TECHNOBEARING

### DIN 874/1

Item No.	Dimensions/mm	Price RUB
406.610	1000 x 100 x 30	
406.615	1500 x 100 x 30	
406.620	2000 x 120 x 40	
406.625	2500 x 120 x 40	
406.630	3000 x 140 x 40	
406.640	4000 x 140 x 40	
406.622	5000 x 160 x 40	
406.641	6000 x 160 x 40	

#### With extra wide measuring faces:

406.636	500 x 80 x 40
406.637	750 x 80 x 40
406.614	1000 x 160 x 50
406.638	1500 x 160 x 50
406.643	2000 x 160 x 50
406.644	2500 x 160 x 50
406.631	3000 x 180 x 60
406.645	4000 x 180 x 60
406.646	5000 x 200 x 80
406.647	6000 x 200 x 80

### DIN 874/0

Item No.	Dimensions/mm	Price RUB
406.613	1000 x 100 x 30	
406.617	1500 x 100 x 30	
406.621	2000 x 120 x 40	
406.626	2500 x 120 x 40	
406.632	3000 x 140 x 40	
406.639	4000 x 140 x 40	
406.618	5000 x 160 x 40	
406.619	6000 x 160 x 40	

#### With extra wide measuring faces:

406.624	500 x 80 x 40
406.627	750 x 80 x 40
406.611	1000 x 160 x 50
406.616	1500 x 160 x 50
406.623	2000 x 160 x 50
406.628	2500 x 160 x 50
406.629	3000 x 180 x 60
406.633	4000 x 180 x 60
406.634	5000 x 200 x 80
406.635	6000 x 200 x 80

## Cast iron straight edges with handles

Especially suitable for measuring small surfaces.

- Tension free.
- Flatness and parallelism according DIN 876.
- DIN 876/1: hand scraped,  
DIN 876/0: fine scraped.
- Both measuring faces are flat and parallel  
matched in pairs.



Dimensions <i>l x w/mm</i>	Weight approx./kg	DIN 876/1		DIN 876/0	
		Item No.	Price RUB	Item No.	Price RUB
500 x 35	12	403.705		403.700	
750 x 50	17	403.706		403.701	
1000 x 56	25	403.707		403.702	
1500 x 70	65	403.708		403.703	
2000 x 80	90	403.709		403.704	

## Aluminum straight edges

I-shaped straight edges with wide measuring faces. Lightweight construction and material especially promote handling of longer straight edges.

- Highly wear resistant.
- Highly corrosion resistant.
- Surface hardness: 500 - 550 HV.
- High insulation:  $4 \cdot 10^{15} \Omega \text{ mm}^2/\text{m}$ .
- With protective coating, thickness: 50  $\mu\text{m}$ .
- Accuracy according DIN 874/1.
- Larger sizes and class 0 available on request.



TECHNOBEARING

Item No.	Dimensions mm	Weight kg	Tolerance $\mu\text{m}$	Price RUB
406.650	500 x 100 x 40	1.65	12	
406.651	1000 x 100 x 40	3.31	21	
406.652	1500 x 100 x 40	4.97	29	
406.653	2000 x 100 x 40	6.62	37	
406.654	2500 x 100 x 40	8.28	46	
406.655	3000 x 100 x 40	9.93	54	

## Bridge-type straight edges

Made of special close-grained cast iron.

- Tension relieved.
- Flatness according DIN 876:  
class 1: hand scraped,  
class 0: fine scraped.



Item No.	l x w mm	Weight kg	Flatness µm	Price RUB
<b>DIN 876/1:</b>				
403.658	500 x 40	6	15	
403.659	750 x 45	9	18	
403.680	1000 x 50	17	20	
403.690	1500 x 60	45	25	
403.692	2000 x 70	65	30	
403.698	3000 x 90	210	40	
<b>DIN 876/0:</b>				
403.657	500 x 40	6	6	
403.660	750 x 45	9	7	
403.679	1000 x 50	17	8	
403.691	1500 x 60	45	10	
403.696	2000 x 70	65	12	
403.697	3000 x 90	210	16	

## Triangular straight edges

On two sides scraped, triangular straight edge with screwed-in handles. The edge between the scraped sides (45° or 60°) has been accurately processed. The third side has been ground, and recessed for weight reduction at the larger types (from 500 mm).

- Tension relieved.
- Flatness of both scraped sides according DIN 876:  
class 1: hand scraped,  
class 0: fine scraped.



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Item No.	l x w/mm	Weight/kg	Price RUB
<b>Triangular straight edge 45°, DIN 876/1:</b>			
403.525	250 x 50	2	
403.550	500 x 75	7	
403.575	750 x 90	15	
403.600	1000 x 120	27	
403.602	1500 x 120	48	
<b>Triangular straight edge 45°, DIN 876/0:</b>			
403.524	250 x 50	2	
403.549	500 x 75	7	
403.574	750 x 90	15	
403.599	1000 x 120	27	
403.601	1500 x 120	48	
<b>Triangular straight edge 60°, DIN 876/1:</b>			
403.425	250 x 45	3	
403.450	500 x 60	6	
403.475	750 x 90	16	
403.500	1000 x 100	28	
403.502	1500 x 110	50	
<b>Triangular straight edge 60°, DIN 876/0:</b>			
403.424	250 x 45	3	
403.449	500 x 60	6	
403.474	750 x 80	16	
403.499	1000 x 100	28	
403.501	1500 x 110	50	

## Beveled straight edges

- Straightness tolerance according DIN 874/00.
- Hardened and ground.
- Lapped measuring faces.
- With insulated grip over the entire length.

TECHNOBEARING



Item No.	Length/mm	Price RUB
<b>Bright steel:</b>		
772.075	75	
772.100	100	
772.125	125	
772.150	150	
772.200	200	
772.300	300	
772.400	400	
772.500	500	

Item No.	Length/mm	Price RUB
<b>Stainless steel:</b>		
772.076	75	
772.101	100	
772.126	125	
772.151	150	
772.201	200	
772.301	300	
772.401	400	
772.501	500	

## Beveled straight edges

- Straightness tolerance according DIN 874/00.
- Hardened and ground.
- Lapped measuring faces.
- With insulated grip over the entire length.



Item No.	Length/mm	Price RUB
<b>Chrome finished steel:</b>		
907.750	75	
907.751	100	
907.752	125	
907.753	150	
907.754	200	
907.755	300	
907.756	400	
907.765	500	
909.237	600	

Item No.	Length/mm	Price RUB
<b>Stainless steel:</b>		
907.757	75	
907.758	100	
907.759	125	
907.760	150	
907.761	200	
907.762	300	
907.763	400	
907.764	500	
909.240	600	

# Protractors / Clinometers / Spirit levels



Accuracy of clinometers/spirit levels according DIN 877		
Graduation μm/m	"	Flatness (μm) (L=length in mm)
≤50	≤10	4+L/250
>50-200	>10-40	8+L/125
>200	>40	16+L/60

## Universal digital bevel protractor

This digital bevel protractor displays both decimal degrees and degrees-minutes-seconds at the same time.

- Measuring range (switchable): 1x 360°,  
2x 180°,  
4x 90°.
- Resolution: 0.008° and 30".
- Accuracy: ±0.08° or ±5'.
- On/off switch.
- Reset/preset.
- Reversible measuring direction.
- Fine adjustment.
- Delivery in a case with three blades (150, 200 and 300 mm), a square and an acute angle attachment.
- Power supply: 1 battery type CR2032.



TECHNOBEARING



Item No.	Description	Price RUB
907.885	Bevel protractor	
<b>Option:</b>		
495.157	Spare battery	

### Single blades

Item No.	Blade length/mm	Price RUB
909.380	150	
909.381	200	
909.382	300	
909.383	500	
909.384	600	
909.385	800	



## Universal digital bevel protractors

Digital bevel protractors made of stainless steel, with blades of 150, 200, 300 or 500 mm. The blades and all the measuring faces are hardened.

- Measuring range (switchable): 1x 360°,  
2x 180°,  
4x 90°.
- Resolution: 1', or decimal 0.01°.
- Accuracy:  $\pm 2'$ .
- Control with 2 keys for several functions.
- Clamping spring system for blade.
- Indication switchable from degrees and minutes to decimal degrees.
- Automatic switch-off after 10 minutes of idle time with storage of the displayed measuring value.
- Opto-RS232C data output.
- Reset/preset/hold functions.
- Fine adjustment.
- Delivery in a case.
- Power supply: 1 battery type CR2032.

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### Complete bevel protractors

Item No.	Blade length/mm	Price RUB
856.688	150	
856.689	200	
856.690	300	
856.691	500	

#### Options:

495.157	Spare battery
856.694	Prism base
856.695	Ledge
781.887	Opto-RS232C cable

### Single blades

Item No.	Blade length/mm	Price RUB
856.685	150	
856.693	200	
856.687	300	
856.686	500	



856.694



856.695

## Universal digital bevel protractor

This stainless steel, digital bevel protractor is available with blades from 150 to 1000 mm. The blades and all the measuring faces are hardened.

- Measuring range:  $\pm 360^\circ$ .
- Resolution: 1', or decimal 0.01°.
- Accuracy:  $\pm 2'$ .
- Repeatability: 1'.
- Indication switchable from degrees and minutes to decimal degrees.
- + and - direction reversible.
- Per 90° adjustable.
- Data output, Mitutoyo Digimatic compatible.
- On/off switch.
- Reset/preset/hold functions.
- Control with 5 keys for several functions.
- Fine adjustment.
- Delivery in a case without blade.
- Power supply: 1 battery type CR2032.



### Single blades

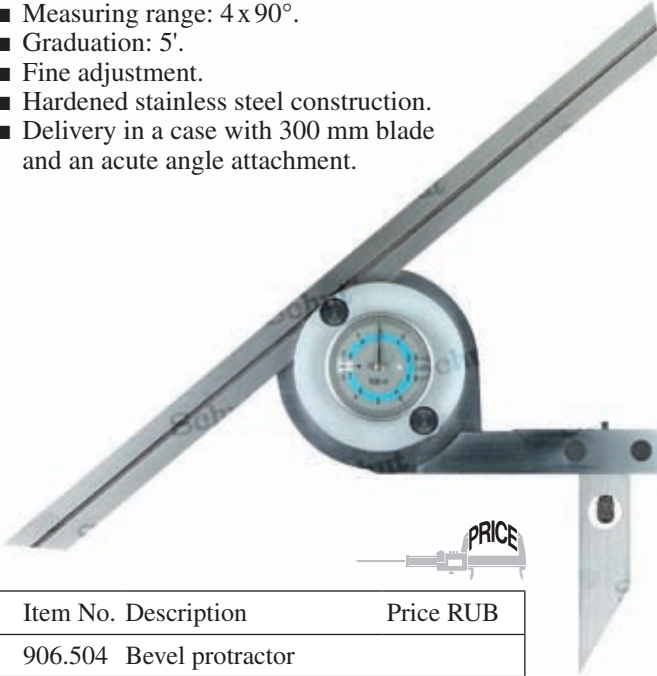
Item No.	Description	Price RUB
855.820	Bevel protractor	
<b>Options:</b>		
495.157	Spare battery	
905.409	Data cable 2 m	

Item No.	Blade length/mm	Price RUB
909.380	150	
909.381	200	
909.382	300	
909.383	500	
909.384	600	
909.385	800	
855.827	1000	

## Dial bevel protractor

- Measuring range: 4 x 90°.
- Graduation: 5'.
- Fine adjustment.
- Hardened stainless steel construction.
- Delivery in a case with 300 mm blade and an acute angle attachment.

TECHNOBEARING



Item No.	Description	Price RUB
906.504	Bevel protractor	

### Single blades

Item No.	Blade length/mm	Price RUB
909.380	150	
909.381	200	
909.382	300	
909.383	500	
909.384	600	
909.385	800	

## Bevel protractor with magnifier

- Measuring range: 4 x 90°.
- Vernier: 5', parallax-free.
- Hardened stainless steel construction.

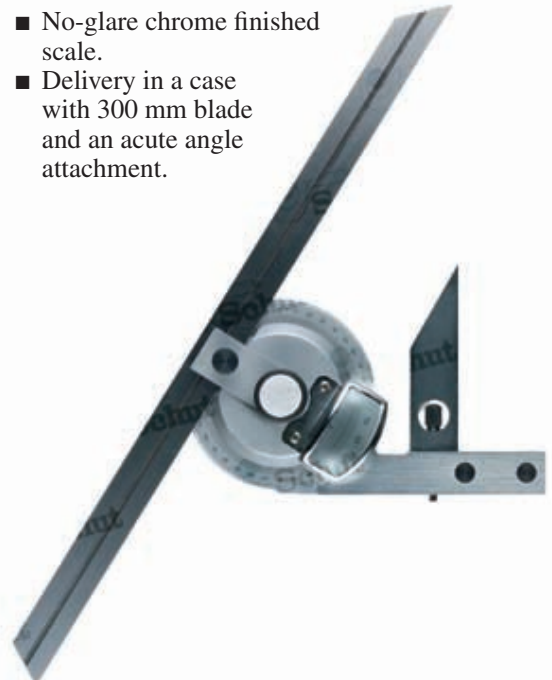
- No-glare chrome finished scale.
- Delivery in a case with 300 mm blade and an acute angle attachment.



Item No.	Description	Price RUB
906.502	Bevel protractor with magnifier	
<b>Option:</b>		
906.505	Spare magnifier	

### Single blades

Item No.	Blade length/mm	Price RUB
909.380	150	
909.381	200	
909.382	300	
909.383	500	
909.384	600	
909.385	800	



## Bevel protractor with magnifier

- Measuring range: 4 x 90°.
- Vernier: 5', parallax-free.
- Fine adjustment.
- Hardened stainless steel construction.
- No-glare chrome finished scale.

- Delivery in a case with two blades (150 and 300 mm) and an acute angle attachment.

Item No.	Description	Price RUB
855.801	Bevel protractor with magnifier	
<b>Option:</b>		
859.179	Spare magnifier	

### Single blades

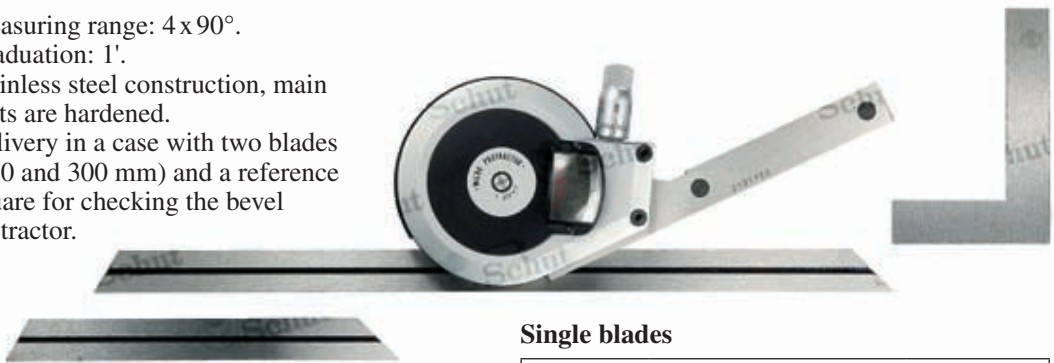
Item No.	Blade length/mm	Price RUB
909.380	150	
909.381	200	
909.382	300	
909.383	500	
909.384	600	
909.385	800	



## Universal bevel protractor

Universal bevel protractor with micrometer screw adjustment. One rotation of the screw corresponds to an angular change of 1°. Retraction of the micrometer screw enables fast adjustment of the blade and the scale.

- Measuring range: 4 x 90°.
- Graduation: 1'.
- Stainless steel construction, main parts are hardened.
- Delivery in a case with two blades (150 and 300 mm) and a reference square for checking the bevel protractor.



### Single blades

Item No.	Description	Price RUB
855.811	Universal protractor with magnifier	
<b>Option:</b>		
859.019	Spare magnifier	

Item No.	Blade length/mm	Price RUB
909.380	150	
909.381	200	
909.382	300	
909.383	500	
909.384	600	
909.385	800	

### Combination bevel protractor

Can be used as bevel protractor, ruler, depth gauge, try square, center square and spirit level.

- Measuring range: 0- 180° (90-0-90°).
- Graduation: 1°.
- Double graduation.
- Rotatable.
- Scriber (included in square head).
- Protractor head and square head provided with a spirit level.
- Ruler length: 300 mm.
- Delivery with protractor head, square head, center head, and ruler with mm/mm graduation.



Item No.	Description	Price RUB
906.503	Combination bevel protractor	

### Combination bevel protractor

Combination bevel protractor with blade and flat square.

- Measuring range exterior angle: 0- 180°.
- Measuring range interior angle: 40- 180°.
- Vernier: 2'.
- Delivery in a case.

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Item No.	Description	Price RUB
858.302	Combination bevel protractor	

### Bevel protractors

Simple and easy to use protractors with a semicircular or rectangular head and swivelling blade.

- Measuring range: 0- 180°.
- Graduation: 1°.
- Scale diameter: 85 mm.
- Locking screw.
- Blade length: 150 mm.
- Hardened steel, no-glare chrome finished.



Item No.	Shape	Price RUB
907.863	semicircular	
909.399	rectangular	



## Bevel protractors

- Measuring range: 0-180° (with swivelling blade) or 10-170° (with sliding blade).
- Graduation: 1°.
- Locking screw.
- Hardened steel, no-glare chrome finished.
- Graduation placed by laser.



907.865



907.870

Item No.	Scale ø/mm	Blade length/mm	Price RUB
<b>With swivelling blade:</b>			
907.864	80	120	
907.865	120	150	
907.866	150	200	
907.867	200	300	
907.868	300	500	
<b>With sliding blade:</b>			
907.869	100	150	
907.870	150	300	
907.871	200	400	
907.872	250	500	
907.873	300	600	

## Setting bevel

- Special steel.
- Moveable blade locked with a wing nut.

**NEW**



910.088



Item No.	Blade length/mm	Price RUB
910.088	200	
910.089	300	
910.090	500	

## Universal digital bevel protractor with spirit level

Digital bevel protractor for measuring both inside and outside angles. The measuring value is displayed upright at any time. Equipped with four holes and a locking knob for measuring a specific angle.

- Measuring range: 360°.
- Resolution: 0.05°.
- Accuracy: ±0.2°.
- ABS/INC switchable.
- With digital-analog display of the measured value.
- Reversal of display value.
- On/off switch.
- Hold function.
- Reversible measuring direction.
- Aluminum casing.
- Rotatable blade of metal.
- Dimensions: 254 x 50 x 36 mm.
- Power supply: 1 battery type CR2032.



Item No.	Description	Price RUB
909.503	Bevel protractor	
<b>Option:</b>		
495.157	Spare battery	

TECHNOBEARING





## Universal digital bevel protractors

Digital bevel protractors for measuring both inside and outside angles. Equipped with a locking knob for measuring a specific angle.

- Measuring range:  $\pm 360^\circ$ .
- Resolution:  $0.1^\circ$ .
- Accuracy:  $\pm 0.3^\circ$ .
- On/off switch.
- Automatic switch-off.
- Zero setting at any position.
- Graduation rulers: 1 mm and 1/32 inch.
- Cross-section rulers: 35 x 2.5 mm.
- With fixing holes.
- Locking screw.
- Power supply: 1 battery type CR2032.



Item No.	Ruler length/mm	Price RUB
909.505	200	
909.506	300	
909.507	500	
<b>Option:</b>		
495.157	Spare battery	



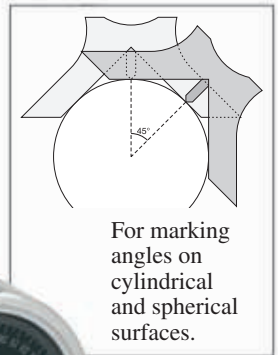
## Magnetic clinometers with center point finder

Accurate clinometers with an extremely sensitive, balanced needle. The magnetic base with  $90^\circ$  V-groove is precision milled. The center point finder can be used as a center punch.

Very suitable for angular measurements, surface alignment, and the determination of center points and highest/lowest points of cylindrical and spherical surfaces. Therefore ideal as a universal aid to the installation of larger constructions.

- Measuring range:  $360^\circ$ .
- Graduation:  $1^\circ$ .
- Scale numbering: 0-360 clockwise (CW) or counterclockwise (CCW), or 0-90-0.
- Aperture V-groove (horizontal): 82 mm (for shafts up to  $\varnothing 115$  mm).
- Dimensions  $h \times w \times d$ : 130 x 130 x 27 mm.

Item No.	Scale numbering	Price RUB
856.702	0-360 CCW	
856.703	0-360 CW	
856.704	0-90-0	
<b>Options:</b>		
856.705	Wooden case	
856.706	Suction magnifier glass	



## Digital clinometers

- Measuring range:  $\pm 180^\circ$   
(with external sensor:  $\pm 360^\circ$ ).
- Resolution:  $0.1^\circ$ .
- Accuracy 0-  $10^\circ$ :  $\pm 0.1^\circ$ ,  
10-  $170^\circ$ :  $\pm 0.2^\circ$ ,  
170-  $180^\circ$ :  $\pm 0.1^\circ$ .
- Repeatability:  $0.1^\circ$ .
- ABS/INC switchable (except 906.476).
- Automatic switch-off.
- Hold function (only 906.479).
- With magnetic base (906.476/479)  
or magnetic upper part (909.501/502).
- Dimensions: 51 x 51 x 33 mm.
- Power supply: 1 battery type CR2032.

### Models with external sensor

- Accuracy 0-  $10^\circ$ :  $\pm 0.1^\circ$ ,  
10-  $350^\circ$ :  $\pm 0.2^\circ$ ,  
350-  $360^\circ$ :  $\pm 0.1^\circ$ .
- Sensor with mounting holes.
- Cable length: 1 m.
- Max. rotation speed: 600 rpm.



906.476



906.479



909.501



909.502

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Item No.	Description	Price RUB
906.476	Standard model	
906.479	With vial	
909.501	With external sensor	
909.502	With external sensor with axis $\phi 6$ mm	
<b>Option:</b>		
495.157	Spare battery	

PRICE

## Digital clinometers

Instruments for easy measurement of angles, flatness and squareness. All four sides are measuring faces. The measuring value is displayed upright at any time.

- Measuring range: 4 x 90°.
- Resolution: 0.1°.
- Accuracy 0-10°: ±0.1°,  
10-80°: ±0.2°,  
80-90°: ±0.1°.
- Repeatability: 0.1°.
- ABS/INC switchable.
- Large, easy-to-read LCD display.
- Hold function.
- Width measuring faces: 6 mm.
- Delivery in a case.

### 908.926

- Measuring face bottom-side: 2 tapped holes M4, center distance 130 mm.
- Dimensions *l x w x h*: 150 x 33 x 52 mm.
- Power supply: 1 battery type CR2032.

### 909.504

- Blue backlight.
- Sound signal at stable value.
- °, mm/m, %, inch/ft conversion.
- Reference plane function.
- Measuring faces bottom- and upper-side with V-groove.
- With magnetic base.
- Protection: IP65.
- Dimensions *l x w x h*: 150 x 33 x 60 mm.
- Power supply: 2 batteries type AAA.



908.926



909.504



909.504

TECHNOBEARING

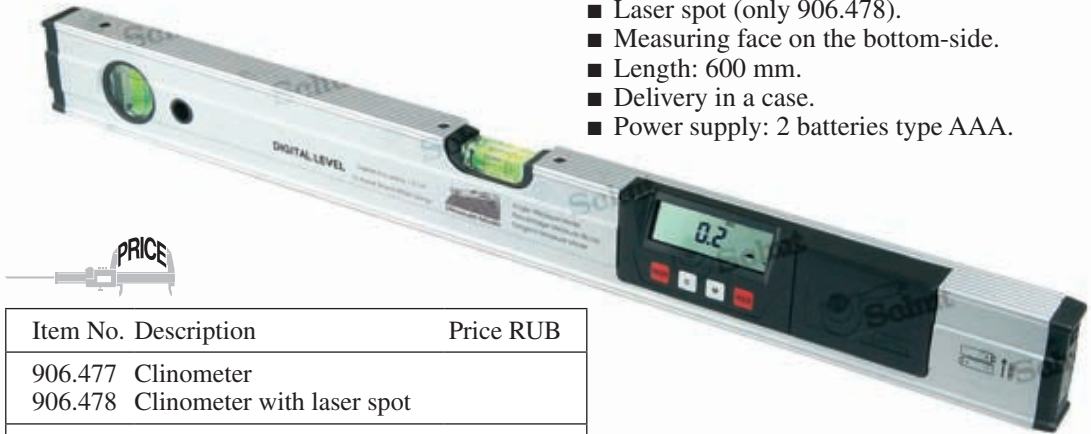


Item No.	Description	Price RUB
908.926	With tapped holes	
909.504	With V-grooves and magnetic base	
<b>Options:</b>		
495.157	Spare battery	
497.914	Spare battery (2 needed)	

## Digital clinometers

Instruments for easy measurement of inclination. Equipped with a horizontal and vertical vial. The measuring value is displayed upright at any time.

- Measuring range: 4 x 90°.
- Resolution: 0.1°.
- Accuracy 0-10°: ±0.1°,  
10-80°: ±0.2°,  
80-90°: ±0.1°.
- °/% conversion.
- Large, easy-to-read LCD display.
- On/off switch.
- Hold function.
- Sound signal at: 0°, 45°, 90°.
- Laser spot (only 906.478).
- Measuring face on the bottom-side.
- Length: 600 mm.
- Delivery in a case.
- Power supply: 2 batteries type AAA.



906.477



Item No.	Description	Price RUB
906.477	Clinometer	
906.478	Clinometer with laser spot	
<b>Option:</b>		
497.914	Spare battery (2 needed)	

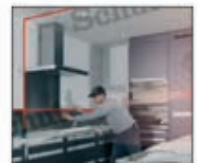
## Laser alignment tool

With this alignment tool you can exactly, quickly and easily project vertical, horizontal and crossed laserlines. Within a range of ±4° minor inclination errors are automatically compensated by means of the integrated spirit level, to level the projected horizontal line.

- Range: up to 5 m (dependent on the lighting conditions).
- Self-levelling range: 4°.
- Horizontal and vertical accuracy: ±2 mm/m.
- Laser: 650 nm, class 2 conform to IEC 60825-1.
- Lock function for projecting at an angle and transport protection.
- Mounted on rotatable base.
- On/off switch.
- Diameter: ø 120 mm.
- Height: 170 mm.
- Weight: 420 g.
- Delivery in a case incl tripod.
- Power supply: 2 batteries type AA.



TECHNOBEARING



Item No.	Description	Price RUB
909.499	Alignment tool	
<b>Option:</b>		
495.111	Spare battery (2 needed)	

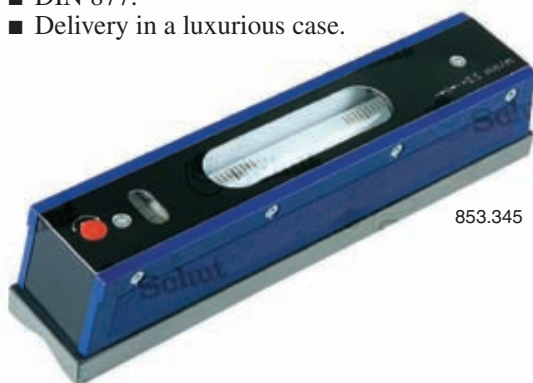
### Inspection spirit levels

- Graduation main vial: 0.01 - 0.3 mm/m.
- With cross test vial.
- Base with V-groove.
- Base width: 42 mm  
(spirit levels with length 500 mm: 44 mm).
- DIN 877.
- Delivery in a luxurious case.

Item No.	Length mm	Graduation mm/m	Price RUB
853.601	160	0.3	
853.606	160	0.1	
853.611	160	0.04	
853.616	160	0.02	
853.602	200	0.3	
853.607	200	0.1	
853.612	200	0.04	
853.617	200	0.02	
853.621	200	0.01	
853.603	250	0.3	
853.608	250	0.1	
853.613	250	0.04	
853.618	250	0.02	
853.622	250	0.01	
853.604	300	0.3	
853.609	300	0.1	
853.614	300	0.04	
853.619	300	0.02	
853.623	300	0.01	
853.605	500	0.3	
853.610	500	0.1	
853.615	500	0.04	
853.620	500	0.02	
853.624	500	0.01	

### Inspection spirit levels

- Graduation main vial: 0.02 - 0.5 mm/m.
- Adjustable main vial.
- With cross test vial.
- Base with V-groove, interrupted at the center over 1/3 of the length.
- Base width: 40 mm.
- DIN 877.
- Delivery in a luxurious case.



853.345

Item No.	Length mm	Graduation mm/m	Price RUB
853.343	150	0.5	
853.341	150	0.1	
853.315	150	0.05	
853.348	150	0.02	
853.345	200	0.5	
853.344	200	0.1	
853.323	200	0.05	
853.322	200	0.02	
853.347	300	0.5	
853.346	300	0.1	
853.324	300	0.05	
853.325	300	0.02	



853.618

TECHNOBEARING

## Inspection spirit levels

- Graduation main vial: 0.05 or 0.02 mm/m.
- Adjustable main vial.
- With cross test vial.
- Base with V-groove.
- Base width: 46 mm.
- Robust cast iron construction.
- With insulating grip.
- DIN 877.



908.685



Item No.	Length mm	Graduation mm/m	Price RUB
908.688	150	0.05	
908.684	150	0.02	
908.689	200	0.05	
908.685	200	0.02	
908.690	250	0.05	
908.686	250	0.02	
908.691	300	0.05	
908.687	300	0.02	

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## Frame spirit levels

- Graduation main vial: 0.05 or 0.02 mm/m.
- Adjustable main vial.
- With cross test vial.
- Two faces with V-groove, two flat faces.
- Robust cast iron construction.
- With insulating grip.
- DIN 877.



908.693



Item No.	Dimensions mm	Graduation mm/m	Price RUB
908.696	150 x 150 x 40	0.05	
908.692	150 x 150 x 40	0.02	
908.697	200 x 200 x 40	0.05	
908.693	200 x 200 x 40	0.02	
908.698	250 x 250 x 40	0.05	
908.694	250 x 250 x 40	0.02	
908.699	300 x 300 x 40	0.05	
908.695	300 x 300 x 40	0.02	



## Frame spirit levels

- Graduation main vial: 0.01 - 0.3 mm/m.
- With cross test vial.
- Three faces with V-groove, one flat face.
- DIN 877.
- Delivery in a luxurious case.



853.638

Item No.	Dimensions mm	Graduation mm/m	Price RUB
853.625	100 x 100 x 34	0.3	
853.629	100 x 100 x 34	0.1	
853.633	100 x 100 x 34	0.04	
853.626	150 x 150 x 42	0.3	
853.630	150 x 150 x 42	0.1	
853.634	150 x 150 x 42	0.04	
853.637	150 x 150 x 42	0.02	
853.627	200 x 200 x 42	0.3	
853.631	200 x 200 x 42	0.1	
853.635	200 x 200 x 42	0.04	
853.638	200 x 200 x 42	0.02	
853.640	200 x 200 x 42	0.01	
853.628	300 x 300 x 44	0.3	
853.632	300 x 300 x 44	0.1	
853.636	300 x 300 x 44	0.04	
853.639	300 x 300 x 44	0.02	
853.641	300 x 300 x 44	0.01	

## Frame spirit levels

- Graduation main vial: 0.02 - 0.5 mm/m.
- Adjustable main vial.
- With cross test vial.
- Three faces with V-groove, interrupted at the center over  $\frac{1}{3}$  of the length. One flat face.
- DIN 877.
- Delivery in a luxurious case.

Item No.	Dimensions mm	Graduation mm/m	Price RUB
853.372	150 x 150 x 40	0.5	
853.371	150 x 150 x 40	0.1	
853.375	150 x 150 x 40	0.05	
853.376	150 x 150 x 40	0.02	
853.374	200 x 200 x 40	0.5	
853.373	200 x 200 x 40	0.1	
853.385	200 x 200 x 40	0.05	
853.382	200 x 200 x 40	0.02	
853.395	250 x 250 x 40	0.05	
853.392	250 x 250 x 40	0.02	



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853.376

## Crankshaft spirit levels

- Graduation main vial: 0.04 - 0.6 mm/m.
- With cross test vial.
- Base with a longitudinal and a lateral V-groove.

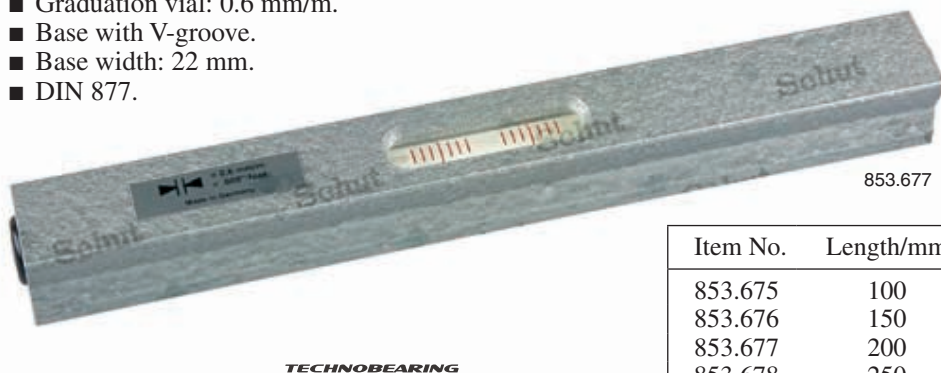
- Base width: 42 mm.
- DIN 877.



Item No.	Length mm	Graduation mm/m	Price RUB
853.684	60	0.6	
853.687	60	0.2	
853.682	90	0.3	
853.685	90	0.1	
853.688	90	0.04	
853.683	120	0.3	
853.686	120	0.1	
853.689	120	0.04	

## Aluminum spirit levels

- Graduation vial: 0.6 mm/m.
- Base with V-groove.
- Base width: 22 mm.
- DIN 877.



Item No.	Length/mm	Price RUB
853.675	100	
853.676	150	
853.677	200	
853.678	250	
853.679	300	

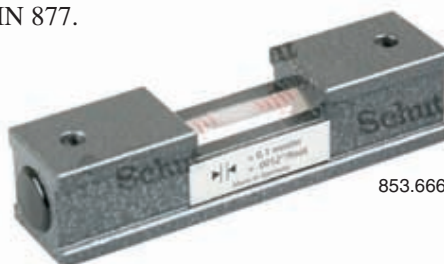
## Small spirit levels

Intended for simple tasks.

- Graduation vial: 0.1 or 0.3 mm/m.
- With longitudinal spirit level.
- Width: 24 mm.

- Equipped with mounting holes  $\varnothing 5$  mm.
- Flat base.
- DIN 877.

Item No.	Length mm	Graduation mm/m	Price RUB
853.665	100	0.3	
853.666	100	0.1	
853.667	150	0.3	
853.668	150	0.1	

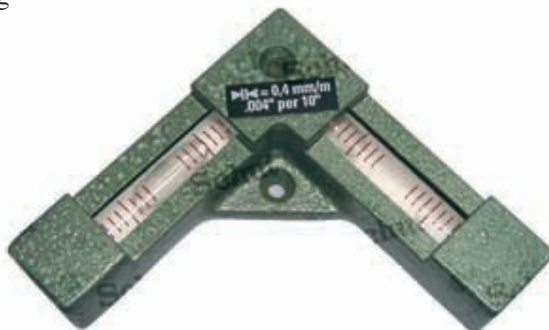


## Crankpin levels

Crankpin levels with two vials, in cast iron casing  
80 x 80 mm, cross-section 20 x 20 mm, with two  
screw holes  $\phi$ 4 mm.

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Item No.	Graduation mm/m	Price RUB
857.338	0.4	
857.339	0.1	
857.340	0.05	



857.338

Crankpin levels with two vials, in circular chrome casing  
with three screw holes  $\phi$ 2.5 or  $\phi$ 4 mm.



857.342

Item No.	Graduation mm/m	Dimensions mm	Screw holes $\phi$ /mm	Price RUB
857.341	1	$\phi$ 40 x 11	2.5	
857.342	0.4	$\phi$ 80 x 23	4	
857.343	0.1	$\phi$ 80 x 23	4	

## Spirit levels with flat base

Spirit levels with a stainless steel strip base, no  
screw mounting, with an adjustable plexiglass vial  
mounted onto it, graduation approx. 5 mm/m.

Item No.	Dimensions base <i>l</i> x <i>w</i> x <i>t</i> /mm	Price RUB
857.344	100 x 20 x 5	
857.345	150 x 20 x 5	
857.346	200 x 20 x 5	



857.344

Spirit levels with a stainless steel strip base, no screw  
mounting, with two ground contact planes. Mounted  
onto this an adjustable spirit level with cast iron housing,  
graduation 1 mm/m.

Item No.	Dimensions base <i>l</i> x <i>w</i> x <i>t</i> /mm	Price RUB
857.347	100 x 20 x 5	
857.348	150 x 20 x 5	
857.349	200 x 20 x 5	



857.347

## Circular spirit levels

Item No.	Diameter mm	Height mm	Sensitivity* mm/m	Price RUB
<b>Plexiglass model with yellow and green base:</b>				
857.315	12	7	approx. 22	
857.316	15	8	approx. 22	
857.317	18	9	approx. 22	
857.318	30	10	approx. 22	
<b>Black synthetic model with frame and screw holes <math>\varnothing 2.5</math> mm and yellow and green base:</b>				
857.320	26/17	7 +3	approx. 19	
857.321	30/20	7.5+3.5	approx. 19	
<b>Chrome casing and white base:</b>				
857.323	15	10	approx. 8	
857.324	18	10	approx. 8	
<b>Chrome casing with frame and screw holes <math>\varnothing 2.5</math> mm (857.325: <math>\varnothing 1.5</math> mm; 857.330/331: <math>\varnothing 3.5</math> mm) and white base:</b>				
857.325	20/13.5	7 +2	approx. 8	
857.326	25/17	7.5+2.5	approx. 8	
857.327	30/17	6.5+3.5	approx. 8	
857.328	35/20	7.5+3.5	approx. 6	
857.329	40/25	8 +4	approx. 6	
857.330	50/34	9.5+5.5	approx. 3	
857.331	60/39	10 +7	approx. 3	
857.332	25/17	7.5+2.5	approx. 2	
<b>White, synthetic casing with frame and screw holes <math>\varnothing 3</math> mm, additional scale circles and white base:</b>				
857.336	60/45	4+6	Reading $0^{\circ} - 2^{\circ} - 5^{\circ}$	
<b>Black, synthetic casing with frame and screw holes <math>\varnothing 5</math> mm, additional scale circles and white base:</b>				
857.337	100/75	5+10	Reading $0^{\circ} - 3^{\circ} - 6^{\circ}$	



857.318



857.320



857.323



857.331



857.336

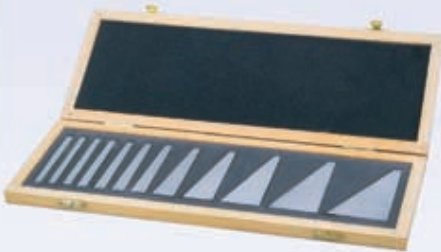
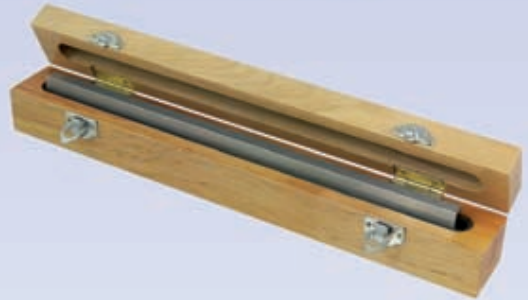
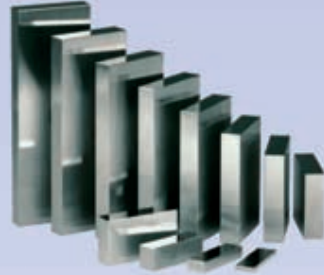


857.337

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\* Sensitivity means: the angle at which the air bubble is moved to the next scale mark or edge of the vial.

**Gauge blocks / Measuring balls / Optical flats and parallel optical flats / Feeler gauges / Roughness specimens**





## Gauge blocks general

Which gauge block is the most suitable for you?

### MATERIALS

#### Steel

Steel is the oldest material and remains the most commonly accepted for gauge blocks. If well taken care of, steel gauges guarantee many years of useful life. They must be cleaned carefully before and after use and stored in a protective case in a dry environment.

#### Tungsten carbide

When a higher degree of hardness is needed, tungsten carbide is the material to choose. It is less sensitive to wear and damage compared to hardened steel. Especially when used frequently, tungsten carbide has an increased life span compared to steel gauge blocks.

#### Ceramics

Ceramics is relatively wear resistant and has a high degree of strength and stability. It will not rust and is unaffected by chemicals.

### ACCURACY CLASSES

Gauge blocks are classified in upgrading order of accuracy according EN ISO 3650: 1998 in the classes: 2–1–0–K. The ISO 3650 is an international standard, which is adopted by national standards such as RvA, DAkkS, UKAS, BKO, SCS and COFRAC.

#### Class 2

Class 2 gauge blocks are intended for general workshop use by skilled workers to set up, for example, measuring instruments.

#### Class 1

Class 1 gauge blocks are used as working standards in inspection rooms within the production to set and calibrate measuring instruments and equipment as well as to inspect tools, fixtures and machines.

#### Class 0

Class 0 gauge blocks, with their high accuracy, are intended for use by measuring technicians in environmentally controlled inspection rooms, for example to calibrate measuring equipments.

#### Class K

Class K gauge blocks have the highest class of accuracy. They are *the* length standards in a calibration laboratory and other calibration values are derived from these gauges. Only with a UKAS certificate – or with another certificate, accepted by UKAS as equivalent (e.g. DAkkS, RvA and COFRAC) – will these gauge blocks be at their best. The most accurate gauges can meet a tolerance of  $\pm 0.05 \mu\text{m}$ .

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### Accuracy according ISO 3650

Nominal size mm	Class K		Class 0		Class 1		Class 2	
	Tolerance on nominal size $\mu\text{m}$	Deviation* $\mu\text{m}$	Tolerance on nominal size $\mu\text{m}$	Deviation* $\mu\text{m}$	Tolerance on nominal size $\mu\text{m}$	Deviation* $\mu\text{m}$	Tolerance on nominal size $\mu\text{m}$	Deviation* $\mu\text{m}$
0.5 - 10	$\pm 0.20$	0.05	$\pm 0.12$	0.10	$\pm 0.20$	0.16	$\pm 0.45$	0.30
10 - 25	$\pm 0.30$	0.05	$\pm 0.14$	0.10	$\pm 0.30$	0.16	$\pm 0.60$	0.30
25 - 50	$\pm 0.40$	0.06	$\pm 0.20$	0.10	$\pm 0.40$	0.18	$\pm 0.80$	0.30
50 - 75	$\pm 0.50$	0.06	$\pm 0.25$	0.12	$\pm 0.50$	0.18	$\pm 1.00$	0.35
75 - 100	$\pm 0.60$	0.07	$\pm 0.30$	0.12	$\pm 0.60$	0.20	$\pm 1.20$	0.35

\* Deviation of the measuring face.



## Steel gauge blocks

Steel gauge blocks delivered with an inspection report.

- Hardness measuring surfaces: 63-65 HRC.
- Expansion coefficient:  $(12 \pm 1) \cdot 10^{-6}/^{\circ}\text{C}$ .
- ISO 3650.

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### Steel gauge blocks in sets

Item No.	Class	Price RUB	Size mm	Increment mm	Pieces
<b>M32:</b>					
906.622	2		1.005	–	1
906.621	1		1.01 - 1.09	0.01	9
906.620	0		1.1 - 1.9	0.1	9
			1 - 9	1	9
			10 - 30	10	3
			50	–	1
<b>M47:</b>					
906.625	2		1.005	–	1
906.624	1		1.01 - 1.09	0.01	9
906.623	0		1.1 - 1.9	0.1	9
			1 - 24	1	24
			25 - 100	25	4
<b>M87:</b>					
906.613	2		1.001 - 1.009	0.001	9
906.612	1		1.01 - 1.49	0.01	49
906.611	0		0.5 - 9.5	0.5	19
			10 - 100	10	10
<b>M88:</b>					
906.628	2		1.0005	–	1
906.627	1		1.001 - 1.009	0.001	9
906.626	0		1.01 - 1.49	0.01	49
			0.5 - 9.5	0.5	19
			10 - 100	10	10
<b>M112:</b>					
906.631	2		1.0005	–	1
906.630	1		1.001 - 1.009	0.001	9
906.629	0		1.01 - 1.49	0.01	49
			0.5 - 24.5	0.5	49
			25 - 100	25	4

### Steel gauge blocks, per piece

Size mm	Increment mm	ISO 3650/1 Price RUB	ISO 3650/0 Price RUB
0.5	–		
1	–		
1.0005	–		
1.001 - 1.009	0.001		
1.01 - 1.50	0.01		
1.6 - 2.0	0.1		
2.5 - 7.5	0.5		
8.0 - 10.0	0.5		
10.5 - 25.0	0.5		
30	–		
40	–		
50	–		
60	–		
70	–		
75	–		
80	–		
90	–		
100	–		

## Select steel gauge blocks

The steel gauge blocks are available in all accuracy classes of ISO 3650. Only the most commonly used sizes can be found in this catalog. The gauge blocks are delivered with an inspection report or on request with a DAkkS certificate, UKAS acknowledged. Sets delivered in luxurious case. Special sizes and sets are available on request, as well as special sets for calibration of micrometers and calipers. High quality gauge blocks, can be very well wringed to make a combination size.

TECHNOBEARING

**SELECT**

### Steel gauge blocks, per piece

Size mm	Increment mm	ISO 3650/1 Price RUB	ISO 3650/0 Price RUB
0.5	–		
1	–		
1.0005	–		
1.001 - 1.009	0.001		
1.01 - 1.5	0.01		
1.6 - 1.9	0.1		
2.0 - 5.5	0.5		
6.0 - 10.0	0.5		
10.5 - 15.0	0.5		
15.5 - 20.0	0.5		
20.5 - 25.0	0.5		
30	–		
40	–		
50	–		
60	–		
70	–		
75	–		
80	–		
90	–		
100	–		

### Steel gauge blocks in sets

Item No.	Class	Price RUB	Size mm	Increment mm	Pieces
<b>M32:</b>			1.005	–	1
831.915	1		1.01 - 1.09	0.01	9
831.914	0		1.1 - 1.9	0.1	9
			1 - 9	1	9
			10 - 30	10	3
			60	–	1
<b>M47:</b>			1.005	–	1
831.911	1		1.00 - 1.09	0.01	10
831.910	0		1.1 - 1.9	0.1	9
			2 - 25	1	24
			50 - 100	25	3
<b>M87:</b>			0.5	–	1
831.909	1		1.001 - 1.009	0.001	9
831.908	0		1.00 - 1.50	0.01	51
			2.0 - 10.0	0.5	17
			20 - 100	10	9
<b>M103:</b>			0.5	–	1
831.907	1		1.005	–	1
831.906	0		1.00 - 1.50	0.01	51
			2.0 - 25.0	0.5	47
			50 - 100	25	3
<b>M112:</b>			0.5	–	1
831.905	1		1.0005	–	1
831.904	0		1.001 - 1.009	0.001	9
			1.00 - 1.50	0.01	51
			2.0 - 25.0	0.5	47
			50 - 100	25	3
<b>M122:</b>			0.5	–	1
831.903	1		1.0005	–	1
831.902	0		1.001 - 1.009	0.001	9
			1.00 - 1.50	0.01	51
			1.6 - 1.9	0.1	4
			2.0 - 25.0	0.5	47
			30 - 70	10	5
			75	–	1
			80 - 100	10	3

## Tungsten carbide gauge blocks

Tungsten carbide gauge blocks with a low expansion coefficient. High resistance against corrosion. Delivered with an inspection report.

- Hardness measuring surfaces: 70-72 HRC.
- Expansion coefficient:  $(8.5 \pm 1) \cdot 10^{-6}/^{\circ}\text{C}$ .
- ISO 3650.

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### Tungsten carbide gauge blocks, per piece

Size mm	Increment mm	ISO 3650/1 Price RUB	ISO 3650/0 Price RUB
0.5	–		
1	–		
1.0005	–		
1.001 - 1.009	0.001		
1.01 - 1.50	0.01		
1.6 - 1.9	0.1		
2.0 - 10.0	0.5		
10.5 - 15.0	0.5		
15.5 - 25.0	0.5		
30	–		
40	–		
50	–		
60	–		
70	–		
75	–		
80	–		
90	–		
100	–		

### Tungsten carbide gauge blocks in sets

Item No.	Class	Price RUB	Size mm	Increment mm	Pieces
<b>M32:</b>			1.005	–	1
906.634	2		1.01 - 1.09	0.01	9
906.633	1		1.1 - 1.9	0.1	9
906.632	0		1 - 9	1	9
			10 - 30	10	3
			50	–	1
<b>M47:</b>			1.005	–	1
906.637	2		1.01 - 1.09	0.01	9
906.636	1		1.1 - 1.9	0.1	9
906.635	0		1 - 24	1	24
			25 - 100	25	4
<b>M87:</b>			1.001 - 1.009	0.001	9
906.662	2		1.01 - 1.49	0.01	49
906.661	1		0.5 - 9.5	0.5	19
906.660	0		10 - 100	10	10
<b>M112:</b>			1.0005	–	1
906.643	2		1.001 - 1.009	0.001	9
906.642	1		1.01 - 1.49	0.01	49
906.641	0		0.5 - 24.5	0.5	49
			25 - 100	25	4

## Select tungsten carbide gauge blocks

The tungsten carbide gauge blocks are available in all accuracy classes of ISO 3650. Only the most commonly used sizes can be found in this catalog. The gauge blocks are delivered with an inspection report or on request with a DAkkS certificate, UKAS acknowledged. Sets delivered in luxurious case. Special sizes and sets are available on request. High quality gauge blocks, can be very well wringed to make a combination size.

TECHNOBEARING

**SELECT/**

### Tungsten carbide gauge blocks, per piece

Size mm	Increment mm	ISO 3650/1 Price RUB	ISO 3650/0 Price RUB
0.5	–		
1	–		
1.0005	–		
1.001 - 1.009	0.001		
1.01 - 1.50	0.01		
1.6 - 1.9	0.1		
2.0 - 5.5	0.5		
6.0 - 10.0	0.5		
10.5 - 15.0	0.5		
15.5 - 20.0	0.5		
20.5 - 25.0	0.5		
30	–		
40	–		
50	–		
60	–		
70	–		
75	–		
80	–		
90	–		
100	–		

### Tungsten carbide gauge blocks in sets

Item No.	Class	Price RUB	Size mm	Increment mm	Pieces
<b>M32:</b>			1.005	–	1
828.592	1		1.01 - 1.09	0.01	9
828.606	0		1.1 - 1.9	0.1	9
			1 - 9	1	9
			10 - 30	10	3
			60	–	1
<b>M46:</b>			1.001 - 1.009	0.001	9
828.590	1		1.00 - 1.09	0.01	10
828.604	0		1.1 - 1.9	0.1	9
			2 - 10	1	9
			20 - 100	10	9
<b>M47:</b>			1.005	–	1
828.589	1		1.00 - 1.09	0.01	10
828.603	0		1.1 - 1.9	0.1	9
			2 - 25	1	24
			50 - 100	25	3
<b>M87:</b>			0.5	–	1
828.587	1		1.001 - 1.009	0.001	9
828.601	0		1.00 - 1.50	0.01	51
			2.0 - 10.0	0.5	17
			20 - 100	10	9
<b>M103:</b>			0.5	–	1
828.585	1		1.005	–	1
828.599	0		1.00 - 1.50	0.01	51
			2.0 - 25.0	0.5	47
			50 - 100	25	3
<b>M112:</b>			0.5	–	1
828.584	1		1.0005	–	1
828.598	0		1.001 - 1.009	0.001	9
			1.00 - 1.50	0.01	51
			2.0 - 25.0	0.5	47
			50 - 100	25	3
<b>M122:</b>			0.5	–	1
828.583	1		1.0005	–	1
828.597	0		1.001 - 1.009	0.001	9
			1.00 - 1.50	0.01	51
			1.6 - 1.9	0.1	4
			2.0 - 25.0	0.5	47
			30 - 70	10	5
			75	–	1
			80 - 100	10	3

## Ceramic gauge blocks

These ceramic gauge blocks are made of high-tech material: Zirconia ceramics. Because of this, these gauge blocks are highly durable, corrosion proof and completely stable for long-term use. Delivered with an inspection report.

- Highly wear-resistant. Can be used 5 to 10 times longer than steel gauge blocks.
- Rustproof.
- Hardness: 88-90 HRC.
- Expansion coefficient:  $(10 \pm 1) \cdot 10^{-6}/^{\circ}\text{C}$  (same as steel gauge blocks, therefore they can be used at the same time).
- ISO 3650.



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### Ceramic gauge blocks, per piece

Size mm	Increment mm	ISO 3650/1 Price RUB	ISO 3650/0 Price RUB
1.0005	–		
0.5	–		
1	–		
1.01 - 1.49	0.01		
1.5 - 1.9	0.1		
2.0 - 5.5	0.5		
6.0 - 9.5	0.5		
10.0 - 20.0	0.5		
20.5 - 25.0	0.5		
30	–		
40	–		
50	–		
60	–		
70	–		
75	–		
80	–		
90	–		
100	–		

### Ceramic gauge blocks in sets

Item No.	Class	Price RUB	Size mm	Increment mm	Pieces
<b>M32:</b>			1.005	–	1
906.646	1		1.01 - 1.09	0.01	9
906.645	0		1.1 - 1.9	0.1	9
			1 - 9	1	9
			10 - 30	10	3
			50	–	1
<b>M47:</b>			1.005	–	1
906.649	1		1.01 - 1.09	0.01	9
906.648	0		1.1 - 1.9	0.1	9
			1 - 24	1	24
			25 - 100	25	4
<b>M87:</b>			1.001 - 1.009	0.001	9
906.652	1		1.01 - 1.49	0.01	49
906.651	0		0.5 - 9.5	0.5	19
			10 - 100	10	10
<b>M103:</b>			1.005	–	1
906.655	1		1.01 - 1.49	0.01	49
906.654	0		0.5 - 24.5	0.5	49
			25 - 100	25	4
<b>M112:</b>			1.0005	–	1
906.658	1		1.001 - 1.009	0.001	9
906.657	0		1.01 - 1.49	0.01	49
			0.5 - 24.5	0.5	49
			25 - 100	25	4

## Select ceramic gauge blocks

The ceramic gauge blocks are available in all accuracy classes of ISO 3650. Only the most commonly used sizes can be found in this catalog. The gauge blocks are delivered with an inspection report or on request with a DAkkS certificate, UKAS acknowledged. Sets delivered in luxurious case. Special sizes and sets are available on request, as well as special sets for calibration of micrometers and calipers. High quality gauge blocks, can be very well wringed to make a combination size.



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### Ceramic gauge blocks in sets

Item No.	Class	Price RUB	Size mm	Increment mm	Pieces
<b>M32:</b>			1.005	–	1
831.085	1		1.01 - 1.09	0.01	9
831.084	0		1.1 - 1.9	0.1	9
			1 - 9	1	9
			10 - 30	10	3
			60	–	1
<b>M47:</b>			1.005	–	1
831.081	1		1.00 - 1.09	0.01	10
831.080	0		1.1 - 1.9	0.1	9
			2 - 25	1	24
			50 - 100	25	3
<b>M87:</b>			0.5	–	1
831.079	1		1.001 - 1.009	0.001	9
831.078	0		1.00 - 1.50	0.01	51
			2.0 - 10.0	0.5	17
			20 - 100	10	9
<b>M103:</b>			0.5	–	1
831.077	1		1.005	–	1
831.076	0		1.00 - 1.50	0.01	51
			2.0 - 25.0	0.5	47
			50 - 100	25	3
<b>M112:</b>			0.5	–	1
831.075	1		1.0005	–	1
831.074	0		1.001 - 1.009	0.001	9
			1.00 - 1.50	0.01	51
			2.0 - 25.0	0.5	47
			50 - 100	25	3
<b>M122:</b>			0.5	–	1
831.073	1		1.0005	–	1
831.072	0		1.001 - 1.009	0.001	9
			1.00 - 1.50	0.01	51
			1.6 - 1.9	0.1	4
			2.0 - 25.0	0.5	47
			30 - 70	10	5
			75	–	1
			80 - 100	10	3

**SELECT/**

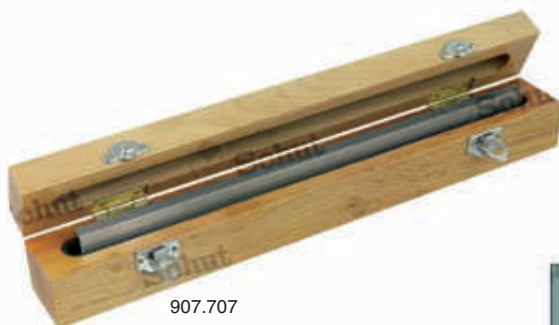
### Ceramic gauge blocks, per piece

Size mm	Increment mm	ISO 3650/1 Price RUB	ISO 3650/0 Price RUB
0.5	–		
1	–		
1.0005	–		
1.001 - 1.009	0.001		
1.01 - 1.50	0.01		
1.6 - 1.9	0.1		
2.0 - 5.5	0.5		
6.0 - 10.0	0.5		
10.5 - 15.0	0.5		
15.5 - 20.0	0.5		
20.5 - 25.0	0.5		
30	–		
40	–		
50	–		
60	–		
70	–		
75	–		
80	–		
90	–		
100	–		



## Long gauge blocks from 125 mm

These steel gauge blocks are available in the accuracy classes 0, 1 and 2 of ISO 3650. All gauge blocks have two coupling holes on both ends so that they can be coupled by means of a toggle clamp. Delivered with an inspection report.



907.707

TECHNOBEARING



907.741

PRICE

Size/mm	Item No.	Price RUB	Item No.	Price RUB	Item No.	Price RUB
	<b>ISO 3650/2:</b>		<b>ISO 3650/1:</b>		<b>ISO 3650/0:</b>	
125	907.728		907.715		907.702	
150	907.729		907.716		907.703	
175	907.730		907.717		907.704	
200	907.731		907.718		907.705	
250	907.732		907.719		907.706	
300	907.733		907.720		907.707	
400	907.734		907.721		907.708	
500	907.735		907.722		907.709	
600	907.736		907.723		907.710	
700	907.737		907.724		907.711	
800	907.738		907.725		907.712	
900	907.739		907.726		907.713	
1000	907.740		907.727		907.714	
<b>Gauge block set consisting of 125, 150, 175, 200, 250, 300, 400 and 500 mm:</b>						
	907.743		907.742		907.741	
<b>Gauge block set consisting of 600, 700, 800, 900 and 1000 mm:</b>						
	907.746		907.745		907.744	

## Select long gauge blocks from 125 mm

These steel gauge blocks are available in the accuracy classes 0, 1 and 2 of ISO 3650, equal to DIN 861. The gauge blocks are delivered with an inspection report or on request with a DAkkS certificate, UKAS acknowledged. All gauge blocks have two coupling holes on both ends so that they can be coupled by means of a toggle clamp.



831.937

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**SELECT!**

Size/mm	Item No.	Price RUB	Item No.	Price RUB	Item No.	Price RUB
	<b>ISO 3650/2:</b>		<b>ISO 3650/1:</b>		<b>ISO 3650/0:</b>	
125	831.019		831.008		831.000	
150	831.020		831.009		831.001	
175	831.021		831.010		831.002	
200	831.022		831.011		831.003	
250	831.023		831.012		831.936	
300	831.024		831.013		831.937	
400	831.025		831.981		831.946	
500	831.026		831.738		831.004	
600	831.027		831.014		831.947	
700	831.028		831.015		831.005	
800	831.029		831.016		831.948	
900	831.030		831.017		831.006	
1000	831.031		831.018		831.007	
<b>Gauge block set consisting of 125, 150, 175, 200, 250, 300, 400 and 500 mm:</b>						
	831.088		831.087		831.086	
<b>Gauge block set consisting of 600, 700, 800, 900 and 1000 mm:</b>						
	831.091		831.090		831.089	

## Mitutoyo toggle clamp for long series gauge blocks

Toggle clamp for the coupling of gauge blocks over 100 mm which have coupling holes on both ends. Very quick assembly by means of spring clamping device (with locking screw).

Item No.	Description	Price RUB
619.031	Toggle clamp for long series gauge blocks	



## Gauge block accessories

Various accessories to extract the resulting size of one or more gauge blocks outside or to convert it into an inside gauge. This also enables the creation of setting gauges and marking tools. These accessories considerably increase the applicability of standard gauge blocks.

TECHNOBEARING



907.202



907.204



907.210



907.209



907.207

Item No. Description	Price RUB	Set		
		M8	M10	M12
<b>Holder for gauge blocks:</b>				
907.203 Up to 50 mm		•	•	•
907.204 Up to 100 mm		•	•	•
907.205 Up to 200 mm		•	•	•
<b>Pair of measuring jaws, with measuring faces:</b>				
907.206 Cylindrical $\varnothing$ 2 mm and flat ( $l=40$ mm)		•	•	•
907.207 Cylindrical $\varnothing$ 5 mm and flat ( $l=45$ mm)		•	•	•
907.208 Cylindrical $\varnothing$ 10 mm and flat ( $l=70$ mm)			•	•
907.209 Flat ( $l=100$ mm, $h=19$ mm)			•	•
907.213 V-shaped ( $l=60$ mm, max. $\varnothing$ 60 mm)			•	•
907.210 Straight edge ( $l=100$ mm)				•
907.211 Scriber ( $l=45$ mm)		•	•	•
907.212 Center point ( $l=45$ mm)		•	•	•
907.214 Base for holder ( $h=25$ mm)		•	•	•
<b>Accessory sets, delivered in a case:</b>				
907.200 M8		↑	↑	↑
907.201 M10			↑	↑
907.202 M12				↑



907.213



907.211

907.212

## Caliper inspection set

For checking the accuracy of DIN 862 calipers. The set consists of three special steel gauge blocks (30 mm, 41.3 mm and 131.4 mm, ISO 3650 class 1), two steel setting rings (ø4 mm and ø25 mm) and a pair of gloves.



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PRICE

Item No.	Description	Price RUB
909.347	Caliper inspection set	

## Gloves

Comfortable, smooth, lint-free gloves with universal, perfect fit. Ideal for handling gauge blocks and other measuring instruments.

- Perfect thermal isolation.
- Washing machine safe.



Item No.	Description	Price RUB
191.069	Pair of gloves	

## Micrometer inspection sets

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

- Nominal sizes (mm): 2.5-5.1-7.7-10.3-12.9-15.0-17.6-20.2-22.8-25.0.
- Including plan parallel optical flat ø30 x 12 mm.



909.340

PRICE

Item No.	Material	Grade	Price RUB
909.346	steel	1	
909.345	steel	0	
909.162	ceramic	1	
909.340	ceramic	0	

## Select microfibre cleaning cloth

Microfibre cleaning cloth for gauge blocks. Ideal for measuring rooms.

- Dimensions: 22.5 x 22.5 cm.



Item No.	Description	Price RUB
831.739	Microfibre cleaning cloth	

## Angle gauge block set

Set of twelve hardened steel angle gauge blocks, comprising the angles  $\frac{1}{4}^\circ$  (15'),  $\frac{1}{2}^\circ$  (30'),  $1^\circ$ ,  $2^\circ$ ,  $3^\circ$ ,  $4^\circ$ ,  $5^\circ$ ,  $10^\circ$ ,  $15^\circ$ ,  $20^\circ$ ,  $25^\circ$  and  $30^\circ$ . A combination of angle gauge blocks is possible.

- Accuracy:  $\pm 30''$ .
- Thickness gauge blocks: 6 mm.
- Delivery in a case with a manufacturer's certificate.

TECHNOBEARING



**NEW**



Item No.	Description	Price RUB
909.799	Angle gauge block set	

## Steel measuring balls

Set of steel measuring balls for measuring e.g. internal tapers. This set contains of a series of balls of different sizes, with two balls of each size.

- Accuracy:  $\pm 3 \mu\text{m}$ .
- Two balls of each size.
- Delivery in a plastic case with a manufacturer's certificate.



**NEW**



Item No.	Size mm	Incr. mm	Per size	Total number	Price RUB
909.647	1 - 25	1	2	50	

## Optical flats

Optical flats can be used for inspection of the flatness of reflecting surfaces of for example gauge blocks, settings gauges and other lapped surfaces by optical interference.

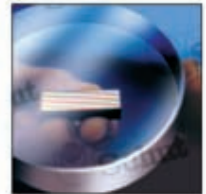
- Flatness measuring faces:  $\leq 0.15 \mu\text{m}$ .
- Parallelism measuring faces:  $\leq 0.3 \mu\text{m}$  (only 826.630/631/632/633/634).
- On request with a DAkKS certificate, UKAS acknowledged.
- Delivery in a case.

TECHNOBEARING

Item No.	Diameter mm	Thickness mm	Price RUB
<b>Single optical flats, single face:</b>			
826.625	30	15	
826.626	45	15	
826.627	50	20	
826.628	60	20	
826.629	75	20	
<b>Single optical flats, double face:</b>			
826.630	30	12	
826.631	45	15	
826.632	50	20	
826.633	60	20	
826.634	75	20	



826.626



## Plan parallel optical flats

Plan parallel optical flats can be used for inspection of the parallelism of measuring surfaces of micrometers and other measuring instruments. Each set consists of 4 sizes plan parallel optical flats for inspection of micrometers on every fourth rotation of the spindle.

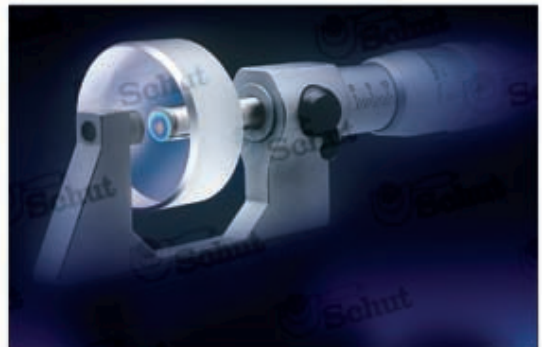
- For micrometers with a spindle pitch of 0.5 mm.
- Sets for micrometers with a measuring range of 0-25 mm, 25-50 mm, 50-75 mm and 75-100 mm.
- Flatness measuring faces:  $\leq 0.15 \mu\text{m}$ .
- Parallelism measuring faces:  $\leq 0.3 \mu\text{m}$ .
- Diameter: 30 mm.
- On request with a DAkKS certificate, UKAS acknowledged.
- Delivery in a case.



826.635



Item No.	Thicknesses/mm	Price RUB
826.635	12.00/12.12/12.25/12.37	
826.636	25.00/25.12/25.25/25.37	
907.909	50.00/50.12/50.25/50.37	
907.910	75.00/75.12/75.25/75.37	





## Feeler gauges

Feeler gauge sets in a holder, for individual use or in combination to measure slits and gaps and also for checking the amount of clearance in sliding guides, bearings, pistons etc.

- Measuring range: 0.03 - 2.00 mm.
- Blade length: 100 mm.
- Nickel plated handle with locking screw.
- Blade width: 10 mm (except stainless steel models: 12 mm), tapered.
- Also available in brass model (anti-magnetic).



Item No.	Number of blades	Increment(s)				Material	Price RUB
		0.01 mm	0.02 mm	0.05 mm	0.10 mm		
909.904	8			0.05 → 0.30	0.40 → 0.50	hardened steel	
909.905	8			0.05 → 0.30	0.40 → 0.50	stainless steel	
909.906	8			0.05 → 0.30	0.40 → 0.50	brass	
909.907	13			0.05 → 0.30	0.40 → 1.00	hardened steel	
909.908	13			0.05 → 0.30	0.40 → 1.00	stainless steel	
909.909	13			0.05 → 0.30	0.40 → 1.00	brass	
910.019	20			0.05 → 1.00		hardened steel	
910.020	20			0.05 → 1.00		stainless steel	
910.021	20			0.05 → 1.00		brass	
910.022	8	0.03 → 0.10				hardened steel	
910.023	10	0.03 → 0.05		0.10 → 0.30	0.40 → 0.50	hardened steel	
910.024	10				0.10 → 1.00	hardened steel	
910.026	14	0.03 → 0.10		0.15 → 0.30	0.40 → 0.50	hardened steel	
910.027	18	0.05 → 0.10		0.15 → 0.40	0.50 → 1.00	hardened steel	
910.028	19	0.03 → 0.10		0.15 → 0.30	0.40 → 1.00	hardened steel	
910.029	20	0.04 → 0.10		0.15 → 0.50	0.60 → 1.00	hardened steel	
908.978	22	0.03 → 0.05		0.10 → 1.00		hardened steel	
908.979	28	0.03 → 0.10	0.12 → 0.50			hardened steel	
910.034	21			0.05 → 0.10	0.20 → 2.00	hardened steel	

## Feeler gauges

- Measuring range: 0.05 - 1.00 mm;  
20 blades: 0.05 / 0.10 → 1.00.
- Material: hardened steel.
- Blade width: 12.8 mm.



**NEW**



910.031

Item No.	Blade length/mm	Price RUB
910.030	200	
910.031	300	
910.032	400	
910.033	500	

## Feeler stock coils

Feeler stock coils made of steel.

- Measuring range: 0.005 - 1.00 mm. **TECHNOBEARING**
- Length: 5 m.
- Width: 13 mm.
- Other widths or material (stainless steel or brass) available on request.



856.045



856.030



856.032

Item No.	Thickness/mm	Price RUB
856.036	0.005	
856.037	0.01	
856.038	0.02	
856.039	0.03	
856.040	0.04	
856.041	0.05	
856.042	0.06	
856.043	0.07	
856.044	0.08	
856.045	0.09	
856.046	0.10	
856.047	0.12	
856.048	0.15	
856.049	0.18	
856.050	0.20	
856.051	0.25	
856.052	0.30	
856.053	0.35	
856.054	0.40	
856.055	0.45	
856.056	0.50	
856.057	0.55	
856.058	0.60	
856.059	0.65	
856.060	0.70	
856.061	0.75	
856.062	0.80	
856.063	0.85	
856.064	0.90	
856.065	0.95	
856.066	1.00	

### Options

Item No.	Description	Price RUB
856.030	Set 0.01 - 0.25 mm	
856.031	Set 0.3 - 1.00 mm	
856.032	Holder for feeler stock coils	

## Roughness specimens

Series of roughness specimens, type Microsurf, covering the nine most frequently occurring manufacturing operations; per set eight specimens will be delivered. In addition to the roughness value  $R_a$  in  $\mu\text{m}$ , the roughness value  $CLA$  in  $\mu\text{in}$  and the  $N$  values are specified.



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Item No.	Machining-method	Number of specimens per set	Roughness $R_a$ $\mu\text{m}$	Roughness $CLA$ $\mu\text{in}$	Roughness class $N$	Price RUB
850.315	Surface grinding	8	0.025 - 3.2	1 - 125	1 - 8	
850.316	Cylindr. grinding	8	0.025 - 3.2	1 - 125	1 - 8	
850.319	Face turning	8	0.4 - 50	16 - 2000	5 - 12	
850.320	Turning	8	0.4 - 50	16 - 2000	5 - 12	
850.321	End milling	8	0.4 - 50	16 - 2000	5 - 12	
850.322	Reaming & drilling	8	0.4 - 12.5	16 - 500	5 - 10	
850.323	Horizontal milling	8	0.4 - 50	16 - 2000	5 - 12	
850.325	Planing	8	0.8 - 100	32 - 4000	6 - 13	
850.331	Spark erosion	8	0.4 - 50	16 - 2000	5 - 12	

Available with declaration of conformity on request.

## Wall chart

Eight Microsurf roughness specimens, mounted on a general reference chart, can be obtained for the following manufacturing operations:

- Surface grinding, cylindrical grinding, face turning, turning, end milling, reaming & drilling, horizontal milling and planing.
- Dimensions  $w \times h$ : 740 x 310 mm.

Item No.	Description	Price RUB
850.314	Microsurf	



## Roughness specimens in a set



850.130

This set consists of 30 specimens, mounted in an attractive wallet with instruction card. In addition to the  $R_a$  values, the standardized  $N$  values and the  $R_z$  values are specified.

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### Set composition

Item No.	Language	Price RUB
850.130	English	
850.131	French	
850.132	German	

On request available with a declaration of conformity.

Number of specimens	Machining method	Roughness $R_a/\mu\text{m}$	Roughness class $N$
3	Flat lapping	0.05 - 0.2	2, 3, 4
3	Reaming	0.4 - 1.6	5, 6, 7
6	Grinding	0.05 - 1.6	2, 3, 4, 5, 6, 7
6	Horizontal milling	0.4 - 12.5	5, 6, 7, 8, 9, 10
6	Vertical milling	0.4 - 12.5	5, 6, 7, 8, 9, 10
6	Turning	0.4 - 12.5	5, 6, 7, 8, 9, 10

## Roughness specimens for blasted surfaces

- Each plate consists of four roughness specimens for grit and shot blasting, in 4 segments.
- Delivery in a solid, leather wallet.
- Standardized to ISO specifications.



Item No.	Description	Price RUB
850.017	Shot blasting	
850.018	Grit blasting	

# Gauges / Pin gauges / Thread and tolerance tables





## Limit gauges for internal and external dimensions

The manufacturing tolerance and the permissible reduction in wear for plain gauges are laid down in DIN 7162.

New gauges are supplemented with a wear allowance on the Go end:  $z$  (plus) for plug gauges and  $z_1$  (minus) for ring gauges. Accordingly, the size indicated on the handle is not similar to the measured value of the new Go end.

### Example: plug gauge 30 H9

New Go end:

size	30.000 mm
wear allowance (+z)	<u>0.009 mm</u>
	30.009 mm
manufacturing tolerance	$\pm 0.002$ mm
largest value measured	30.011 mm
smallest value measured	30.007 mm

The gauges are also available without wear allowance (additional cost). This should be indicated when ordering.

## Plug gauges

Manufactured according DIN 2245, 2246 and 2247. Available from 0.5 to 250 mm; up to 70 mm with Go and NoGo on one handle, over 70 mm in two parts. Prices are for H7 plug gauges with Go and NoGo ends in hardened steel.

### Also available:

- other fit sizes, like H6 and H8,
- hard-chrome plated plug gauges,
- tungsten carbide plug gauges,
- extended plug gauges,
- plug gauges with vent hole,
- plug gauges with easy-entry pilot,
- flat plug gauges,
- square and hexagonal plug gauges.

TECHNOBEARING



## Measuring reports

For all gauges also measuring reports can be ordered.

- ① Inspection report (German) per gauge. Stating of product specifications, measured values after production, used traceable measuring devices, measuring inaccuracy and measuring date. A favourable choice when your quality system does not require traceable certificates.
- ② Traceable certificate (Dutch) with measuring reports of the ordered gauges. Besides stating of the measured values the extra assurance of an external inspection.

Size H7/mm	Price RUB	Size H7/mm	Price RUB	Size H7/mm	Price RUB	Size H7/mm	Price RUB
1		14		34		65	
1.5		15		35		68	
2		16		36		70	
2.5		17		37		72	
3		18		38		75	
3.5		19		40		78	
4		20		42		80	
4.5		21		44		82	
5		22		45		85	
5.5		23		46		88	
6		24		47		90	
7		25		48		92	
8		26		50		95	
9		27		52		98	
10		28		55		100	
11		30		58			
12		32		60			
13		33		62			
						<i>Larger sizes available on request</i>	



## Pin gauges

Swiss made, hardened and ground steel pin gauges; available loose and in sets.

- Hardened, ground, and seasoned steel.
- Diameter range:
  - without handle: 0.06 - 20.00 mm,
  - with handle: 0.06 - 10.00 mm.
- Increment: 0.01 mm.
- Accuracy:  $\pm 0.0015$  mm.
- Pin gauges  $\phi 5.00 - 20.00$  mm
  - without handle: indication on head.



### Also available:

With an accuracy of  $\pm 0.0003$  or  $\pm 0.001$  mm;  
 – hardened steel  $\phi 0.06 - 20.00$  mm,  
 – tungsten carbide or ceramics  $\phi 0.50 - 9.99$  mm,  
 with 0.01 mm increments. The length may deviate. More information available on request.

Diameter/mm	Length/mm	Price RUB
<b>Pin gauge without handle:</b>		
0.06 - 0.09 <sup>1</sup>	30	
0.10 - 0.19 <sup>1</sup>	40	
0.20 - 0.29 <sup>1</sup>	40	
0.30 - 0.49 <sup>1</sup>	40	
0.50 - 0.99 <sup>1</sup>	40	
1.00 - 2.99	70	
3.00 - 4.00	70	
4.01 - 5.00	70	
5.01 - 5.99	70	
6.00 - 9.99	70	
10.00 - 11.99	70	
12.00 - 13.99	70	
14.00 - 15.99	70	
16.00 - 18.99	70	
19.00 - 20.00	70	
<b>Pin gauge with handle<sup>2</sup>:</b>		
0.06 - 0.09 <sup>1</sup>	23	
0.10 - 0.19 <sup>1</sup>	33	
0.20 - 0.29 <sup>1</sup>	33	
0.30 - 0.49 <sup>1</sup>	33	
0.50 - 0.99 <sup>1</sup>	33	
1.00 - 2.99	62	
3.00 - 4.00	62	
4.01 - 5.00	62	
5.01 - 5.99	62	
6.00 - 10.00	62	

<sup>1</sup> Delivery in plastic transport case.

<sup>2</sup> The length here indicates the measuring length and not the total length of the pin gauges.

Item No.	Description	Price RUB
<b>Wooden case (tubes not included):</b>		
833.211	For 50 pin gauges $\phi 0.10 - 10.00$ mm without handle	
833.704	For 100 pin gauges $\phi 0.10 - 10.00$ mm without handle	
833.264	For 50 pin gauges $\phi 0.10 - 10.00$ mm with handle	
833.118	For 40 pin gauges $\phi 10.01 - 15.00$ mm	
833.705	For 80 pin gauges $\phi 10.01 - 15.00$ mm	
833.706	For 30 pin gauges $\phi 15.01 - 20.00$ mm	
<b>Pin gauge tube for pin gauges<sup>1</sup>:</b>		
833.066	Without handle up to $\phi 0.99$ mm	
838.224	Without handle $\phi 1.00 - 7.00$ mm	
838.089	With handle up to $\phi 0.99$ mm	
834.386 <sup>2</sup>	Base inscription per size	

<sup>1</sup> For insert in wooden case.

<sup>2</sup> For size indication in wooden case.

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## Pin gauges in sets

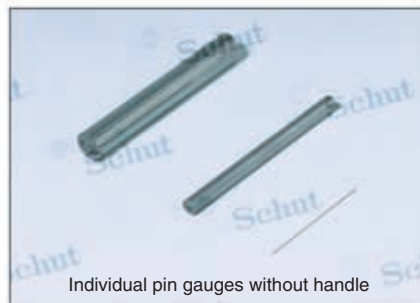
- Hardened, ground, and seasoned steel.
- Diameter range: 0.10- 10.00 mm.
- Increment: 0.01 mm.
- Accuracy:  $\pm 0.0015$  mm.
- Without handle.
- Pin gauges  $\phi 5.00$ - 10.00 mm: indication on head.
- Length:  $\phi 0.10$ - 0.99 mm: 40 mm,  
 $\phi 1.00$ - 10.00 mm: 70 mm.
- Sets with larger diameters and/or with handle are available on request.



Set pin gauges without handle

Item No.	Diameter mm	Increment mm	Number per set	Price* RUB
833.901	0.10- 1.00	0.01	91	
833.902	1.00- 2.00	0.01	101	
833.903	2.00- 3.00	0.01	101	
833.904	3.00- 4.00	0.01	101	
833.905	4.00- 5.00	0.01	101	
833.906	5.00- 6.00	0.01	101	
833.907	6.00- 7.00	0.01	101	
833.908	7.00- 8.00	0.01	101	
833.909	8.00- 9.00	0.01	101	
833.910	9.00- 10.00	0.01	101	
834.190	1.00- 10.00	0.10	91	

\* Prices per set, in wooden case.



Individual pin gauges without handle

## Pin gauges accessories

### Interchangeable handles

- For pin gauges without handle.



Item No.	For diameter/mm	Price RUB
836.043	0.40-0.80	
834.172	0.80-1.30	
836.044	1.30-1.80	
836.045	1.80-2.30	
837.615	2.30-2.80	
837.956	2.80-3.30	
837.957	3.30-3.80	
837.958	3.80-4.30	
837.959	4.30-4.80	
837.960	4.80-5.30	

### Holders for Go/NoGo determination

- For two pin gauges without handle.
- With NoGo indication.



Item No.	For diameter/mm	Price RUB
833.310	1.00- 2.00	
833.311	2.00- 4.00	
833.312	4.00- 6.00	
833.313	6.00- 8.00	
833.314	8.00- 10.00	

TECHNOBEARING



## Plug gauges

Ground and lapped, hardened tool steel plug gauges with a high accuracy. Available per piece and in sets. Swiss made.

- Diameter range:  $\varnothing$ 0.06 - 10.00 mm.
- Increment: 0.01 mm.
- Accuracy:  $\pm$ 0.0005 mm.
- Hardened tool steel.  
Ground and lapped.
- Measuring length (and total length):
  - $\varnothing$ 0.06 - 0.30 mm: 2 mm (34 mm),
  - $\varnothing$ 0.31 - 0.50 mm: 3.5 mm (35.5 mm),
  - $\varnothing$ 0.51 - 1.50 mm: 5 mm (37 mm),
  - $\varnothing$ 1.51 - 2.00 mm: 6 mm (38 mm),
  - $\varnothing$ 2.01 - 3.50 mm: 8 mm (43 mm),
  - $\varnothing$ 3.51 - 6.00 mm: 10 mm (55 mm),
  - $\varnothing$ 6.01 - 8.00 mm: 14 mm (59 mm),
  - $\varnothing$ 8.01 - 10.00 mm: 18 mm (63 mm).
- Size indication on the insulated handle.
- Also available in tungsten carbide and ceramic with an accuracy of  $\pm$ 0.001 mm.



### Per piece

Diameter/mm	Price RUB
0.06 - 0.09	
0.10 - 0.19	
0.20 - 0.29	
0.30 - 0.49	
0.50 - 0.99	
1.00 - 2.99	
3.00 - 5.99	
6.00 - 10.00	

### Sets

Item No.	Diameter mm	Pieces	Price RUB
833.761	0.06 - 0.50	45	
833.762	0.51 - 1.00	50	
833.763	1.01 - 1.50	50	
833.764	1.51 - 2.00	50	
833.765	2.01 - 2.50	50	
833.766	2.51 - 3.00	50	
833.767	3.01 - 3.50	50	
833.768	3.51 - 4.00	50	
837.311	4.01 - 4.50	50	
837.312	4.51 - 5.00	50	
837.313	5.01 - 5.50	50	
837.314	5.51 - 6.00	50	
837.315	6.01 - 6.50	50	
837.316	6.51 - 7.00	50	
837.317	7.01 - 7.50	50	
837.318	7.51 - 8.00	50	
837.319	8.01 - 8.50	50	
837.320	8.51 - 9.00	50	
837.321	9.01 - 9.50	50	
837.322	9.51 - 10.00	50	



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## Select setting rings

Setting rings, manufactured according DIN 2250 form C, 1 to 4 mm.

The size is indicated on the ring to three decimal places.

For all gauges also measuring reports can be ordered.

**SELECT**

**NEW**



830.001

Item No.	Size/mm	Price RUB
830.001	1	
830.002	1.2	
830.003	1.5	
830.004	1.8	
830.005	2	
830.006	2.2	
830.007	2.5	
830.008	2.8	
830.009	3	
830.010	4	

## Setting rings

Setting rings, manufactured according to DIN 2250 form C, 1 to 315 mm.

The size is indicated on the ring to three decimal places, 3 to 38 mm setting rings are also available in tungsten carbide as are form B rings for pneumatic measuring tools.

Prices for intermediate and larger sizes are available on request.



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Also sets with most common sizes available.

Size mm	Price RUB	Size mm	Price RUB	Size mm	Price RUB	Size mm	Price RUB	Size mm	Price RUB
1		18		43		80		165	
1.2		19		44		82		170	
1.5		20		45		84		175	
1.8		21		46		85		180	
2		22		47		86		185	
2.2		23		48		88		190	
2.5		24		49		90		195	
2.8		25		50		92		200	
3		26		52		94		210	
3.5		27		54		95		220	
4		28		55		96		230	
4.5		29		56		98		240	
5		30		58		100		250	
6		31		60		105		260	
7		32		62		110		270	
8		33		64		115		280	
9		34		65		120		290	
10		35		66		125		300	
11		36		68		130		310	
12		37		70		135		315	
13		38		72		140			
14		39		74		145			
15		40		75		150			
16		41		76		155			
17		42		78		160			

*Intermediate sizes over 3 mm are also available*

## Measuring reports

For all gauges also measuring reports can be ordered.

- ① Inspection report (German) per gauge. Stating of product specifications, measured values after production, used traceable measuring devices, measuring inaccuracy and measuring date. A favourable choice when your quality system does not require traceable certificates.
- ② Traceable certificate (Dutch) with measuring reports of the ordered gauges. Besides stating of the measured values the extra assurance of an external inspection.

## Thread gauges

The prices of the thread gauges apply to the following tolerances:

Kind of thread	Tolerances	
	Thread plug gauge	Thread ring gauge
Metric thread according ISO 1502 up to and incl. M1.4 larger than M1.4	5H 6H	6h 6g (standard) 4h and 6e
Fixing pipe thread DIN ISO 228	center	A
Trapezoidal thread DIN 103	7H	7e

Other tolerances, sizes and kinds of threads are available on request; also available are special screw threads as per your design. Left-hand screw thread: price on request.



## Measuring reports

For all gauges also measuring reports can be ordered.

- ① Inspection report (German) per gauge. Stating of product specifications, measured values after production, used traceable measuring devices, measuring inaccuracy and measuring date. A favourable choice when your quality system does not require traceable certificates.
- ② Traceable certificate (Dutch) with measuring reports of the ordered gauges. Besides stating of the measured values the extra assurance of an external inspection.

## Thread plug and ring gauges

Hardened steel thread plug gauges (up to M39: Go + NoGo, from M42: Go and NoGo separate) and thread ring gauges (Go or NoGo) for metric screw thread (ISO) with coarse pitch (ISO 1502).

Indication M...	Price RUB Thread plug	Price RUB Thread ring
1 x 0.25		
1.2 x 0.25		
1.4 x 0.3		
1.6 x 0.35		
1.8 x 0.35		
2 x 0.4		
2.2 x 0.45		
2.5 x 0.45		
3 x 0.5		
3.5 x 0.6		
4 x 0.7		
4.5 x 0.75		
5 x 0.8		
6 x 1		
8 x 1.25		
10 x 1.5		
12 x 1.75		
14 x 2		
16 x 2		
18 x 2.5		
20 x 2.5		
22 x 2.5		
24 x 3		
27 x 3		
30 x 3.5		
33 x 3.5		
36 x 4		
39 x 4		
Indication M...	Thread plug Go NoGo	Thread ring
42 x 4.5		
45 x 4.5		
48 x 5		
52 x 5		
56 x 5.5		
60 x 5.5		

Also most common sets available.

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### Thread plug and ring gauges (continued)

Hardened steel thread plug gauges (Go + NoGo) and thread ring gauges (Go or NoGo) for metric screw thread (ISO) with pitch 0.5 (ISO 1502).

Indication M... x 0.5	Price RUB Thread plug	Price RUB Thread ring
5		
6		
8		
10		
12		
14		
16		
18		
20		



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Hardened steel thread plug gauges (Go + NoGo) and thread ring gauges (Go or NoGo) for metric screw thread (ISO) with pitch 0.75 (ISO 1502).

Indication M... x 0.75	Price RUB Thread plug	Price RUB Thread ring
6		
8		
10		
12		
14		
16		
18		
20		
22		
24		
26		
28		
30		

Hardened steel thread plug gauges (Go + NoGo) and thread ring gauges (Go or NoGo) for metric screw thread (ISO) with pitch 1 (ISO 1502).

Indication M... x 1	Price RUB Thread plug	Price RUB Thread ring
8		
10		
11		
12		
14		
16		
18		
20		
22		
24		
25		
26		
27		
28		
30		



Hardened steel thread plug gauges (up to M40: Go + NoGo, from M42: Go and NoGo separate) and thread ring gauges (Go or NoGo) for metric screw thread (ISO) with pitch 1.5 (ISO 1502).

Indication M... x 1.5	Price RUB Thread plug	Price RUB Thread ring
12		
14		
16		
18		
20		
22		
24		
25		
26		
27		
28		
30		

(continued on the next page)



### Thread plug and ring gauges (continued)

Indication M... x 1.5	Price RUB Thread plug	Price RUB Thread ring
<i>(continued)</i>		
32		
33		
34		
35		
36		
38		
39		
40		
Indication M... x 1.5	Thread plug Go NoGo	Thread ring
42		
45		
48		
50		

Hardened steel thread plug gauges (up to M40: Go + NoGo, from M42: Go and NoGo separate) and thread ring gauges (Go or NoGo) for metric screw thread (ISO) with pitch 2 (ISO 1502).

Indication M... x 2	Price RUB Thread plug	Price RUB Thread ring
20		
22		
24		
26		
28		
30		
32		
34		
36		
38		
40		
Indication M... x 2	Thread plug Go NoGo	Thread ring
42		
45		
48		
50		

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Hardened steel thread plug gauges (up to G1": Go + NoGo, from G1 1/8": Go and NoGo separate) and thread ring gauges (Go or NoGo) for non-sealing fixing pipe thread (DIN ISO 228).

Indication G..."	Price RUB Thread plug	Price RUB Thread ring
1/8		
1/4		
3/8		
1/2		
5/8		
3/4		
7/8		
1		
Indication G..."	Thread plug Go NoGo	Thread ring
1 1/8		
1 1/4		
1 1/2		
1 3/4		
2		
2 1/4		
2 1/2		
2 3/4		
3		



Hardened steel thread plug and thread ring gauges for sealing pipe thread (DIN 2999).

Indication R..."	Price RUB Thread plug	Price RUB Thread ring
1/8		
1/4		
3/8		
1/2		
3/4		
1		
1 1/4		
1 1/2		
2		

*Larger sizes available on request*

## Thread plug and ring gauges (continued)

Hardened steel thread plug gauges (up to 1 1/4": Go + NoGo, from 1 3/8": Go and NoGo separate) and thread ring gauges (Go or NoGo) for American screw thread UNC and UNF according ANSI B 1.1 class 2B (thread plug) and 2A (thread ring).

Indication UNC	Price RUB Thread plug	Price RUB Thread ring
No 1-64		
No 2-56		
No 3-48		
No 4-40		
No 5-40		
No 6-32		
No 8-32		
No 10-24		
No 12-24		
1/4 -20		
5/16 -18		
3/8 -16		
7/16 -14		
1/2 -13		
9/16 -12		
5/8 -11		
3/4 -10		
7/8 - 9		
1 - 8		
1 1/8 - 7		
1 1/4 - 7		

Indication UNC	Thread plug		Thread ring
	Go	NoGo	
1 3/8-6			
1 1/2-6			
1 3/4-5			
2 -4 1/2			
2 1/4-4 1/2			
2 1/2-4			
2 3/4-4			
3 -4			
3 1/4-4			
3 1/2-4			
3 3/4-4			
4 -4			



Indication UNF	Price RUB Thread plug	Price RUB Thread ring
No 0-80		
No 1-72		
No 2-64		
No 3-56		
No 4-48		
No 5-44		
No 6-40		
No 8-36		
No 10-32		
No 12-28		
1/4 -28		
5/16 -24		
3/8 -24		
7/16 -20		
1/2 -20		
9/16 -18		
5/8 -18		
3/4 -16		
7/8 -14		
1 -12		
1 1/8 -12		
1 1/4 -12		

Indication UNF	Thread plug		Thread ring
	Go	NoGo	
1 3/8 -12			
1 1/2 -12			

Hardened steel tapered thread plug and thread ring gauges for sealing pipe thread according ANSI/ASME B 1.20.1.



Indication NPT..."	Price RUB Thread plug	Price RUB Thread ring
1/16		
1/8		
1/4		
3/8		
1/2		
3/4		
1		
1 1/4		
1 1/2		
2		
2 1/2		
3		

## Thread plug and ring gauges in sets

Sets of thread plug gauges or thread ring gauges for inspection of metric ISO threads.



836.561



836.562



- For threads M3, M4, M5, M6, M8, M10 and M12.
- Tolerance class:  
thread plug gauges: 6H,  
thread ring gauges: 6g.
- Hardened steel, thread plug gauges with aluminum grip.
- ISO 1502.
- Delivery in a wooden case with a traceable measuring report.



Item No.	Thread gauges set	Price RUB
836.561	Plug gauges (Go+NoGo)	
836.562	Ring gauges (Go)	
836.563	Ring gauges (NoGo)	

## Plug gauges and setting rings in sets

- Hardened steel, plug gauges with aluminum grip.
- Set setting rings DIN 2250 form C.
- Set plug gauges DIN 2248/2249.
- Delivery in a wooden case with a traceable measuring report.



Item No.	Description	Price RUB
836.564	Setting rings: $\phi 4$ , $\phi 5$ , $\phi 6$ , $\phi 8$ mm	
836.565	Setting rings: $\phi 10$ , $\phi 12$ , $\phi 16$ , $\phi 20$ , $\phi 25$ mm	
836.566	Plug gauges (Go+NoGo) H7: 3, 4, 5, 6, 8, 10, 12 mm	



## Thread jaw gauges

Jaw-shaped gauge for inspection of external screw thread. Delivery excl. setting thread plug gauge.



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Available on request.

### Drill gauges

Gauge in the form of a steel plate with bores of increasing diameters for determining drill diameters.

- Increment: 0.1 mm.



836.640

TECHNOBEARING

Item No.	Measuring range/mm	Number of bores	Price RUB
836.640	0.1 - 10	100	
836.641	3 - 10	71	
856.545	15.1 - 17.5	25	
856.546	17.6 - 20	25	

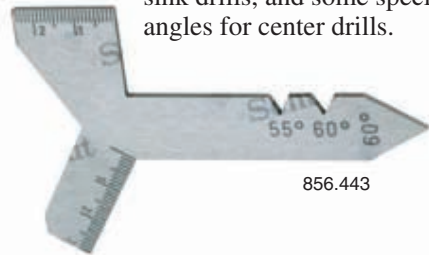
### Twist drill grinding gauges

For checking twist drills for the place and the 118° angle of the twist drill point. The maximum drill diameter is 50 mm.



856.441

Universal twist drill grinding gauge, also called *Y-gauge*. Besides the standard angle of 118°, this gauge also has a 90° angle for counter-sink drills, and some special angles for center drills.



856.443

Item No.	Description	Price RUB
856.441	Twist drill grinding gauge	
856.443	<i>Y-gauge</i>	

### Measuring wedges

Measuring wedges for quick measurements and checks of slits, key-ways, distances, etc.

- Measuring range: 0.4 - 26 mm.
- Graduation: 0.05, 0.1 or 0.2 mm.



909.537



909.535



909.536

Item No.	Measuring range/mm	Graduation mm	Price RUB
909.535	0.4- 6	0.05	
909.536	1 - 15	0.1	
909.537	2 - 26	0.2	

## Flat plug gauges

- Measuring range: 1 - 60 mm.
- Graduation: 0.1 mm.
- Stainless steel, no-glare chrome finished.
- Graduation on both sides.
- Ground measuring faces.



907.876

Item No.	Measuring range/mm	Price RUB
907.876	1 - 15	
909.516	15 - 30	
909.517	30 - 45	
909.534	45 - 60	



## Conical plug gauges

- Measuring range:  $\varnothing$  1 - 45 mm.
- Graduation: 0.1 mm.
- Hardened, ground and chrome finished.
- With anodized handle.



909.490

Item No.	Measuring range/mm	Price RUB
909.490	$\varnothing$ 1 - 6	
909.491	$\varnothing$ 4 - 15	
909.492	$\varnothing$ 15 - 30	
909.493	$\varnothing$ 30 - 45	

TECHNOBEARING



## Nozzle gauges

Set of pins in holder serving as a gauge to determine jet nozzle sizes.



856.107

Item No.	Number of pins	Sizes mm	Price RUB
856.107	20	$\varnothing$ 0.45 - 1.50	
856.108	16	$\varnothing$ 1.50 - 3.00	
856.124	16	$\varnothing$ 3.00 - 4.50	
856.125	16	$\varnothing$ 4.50 - 6.00	

## Nozzle gauges with vernier

Nozzle gauges with a hardened and ground tapered needle.

- Measuring range:  $\varnothing$  0 - 5 mm.
- Vernier: 0.01 mm.



856.110

Item No.	Measuring range/mm	Price RUB
856.109	$\varnothing$ 0 - 3	
856.110	$\varnothing$ 0 - 5	

## Center gauges

For checking thread cutting tools for Whitworth thread 55° or metric thread 60°.

TECHNOBEARING



856.444

Item No.	Description	Price RUB
856.444	Whitworth 55°	
856.445	Metric 60°	

## Thread cutting tool gauges



856.446



856.447



856.449



856.450



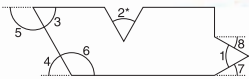
856.451

Item No.	Description	Price RUB
856.446	Universal thread cutting tool gauge for angular thread and flat thread	
856.447	Trapezoidal thread cutting tool gauge for trapezoidal thread DIN 103 (30°, 2-12 mm)	
856.449	Combined lathe and thread cutting tool gauge for – cutting tool wedge angle, – trapezoidal thread DIN 103 (30°, 2-12 mm), and – angular thread (40° - 80°)	
856.450	Combined lathe and thread cutting tool gauge like 856.449, with additional angle stop (0-30°) on the back	
856.451	Thread cutting tool gauge for – rectangular thread, – trapezoidal thread DIN 103 (30°, 2-12 mm), and – angular thread (55° and 60°)	



### Angle gauge set

- Measuring range: 5 - 90° (supplementary angles: 90 - 175°).
- Increment: 5° (18 pieces).
- Multiple angles per angle gauge:
  - primary angles (1, 2\*, 3, 4),
  - supplementary angles (5, 6), and
  - ½ primary angles (7, 8).
- Delivery in a case.



\* Angle 2: only with the angle gauges from 20°.



Item No.	Description	Price RUB
909.410	Angle gauge set	

### Angle gauges

- Measuring range: 1 - 45°.
- Number of blades: 20.
- Angles: 1° - 2° - 3° - 4° - 5° - 6° - 7° - 8° - 9° - 10° - 12° - 14° - 16° - 18° - 20° - 25° - 30° - 35° - 40° - 45°.



Item No.	Description	Price RUB
908.798	Angle gauges	

### Radius gauges

- Measuring range radius: 1 - 25 mm.
- Increment:
  - 1 - 3 mm: 0.25 mm,
  - 3.5 - 20 mm: 0.5 mm,
  - > 20 mm: 1.0 mm.

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Item No.	Radius range/mm	Price RUB
907.766	1 - 7	
907.767	7.5 - 15	
907.768	15.5 - 25	

### Shape and radius gauge

This stainless steel gauge can be used to adopt various complex shapes of tools and workpieces. When the gauge is pressed against the part which has to be checked, it takes on the shape of this part. Because of the graduation (mm) on the case, the shape can be checked easily.

Because the tracers were supported under pressure, they don't move on their own.



Item No.	Measuring range/mm	Price RUB
836.319	150 x 40	

### Set of welding seam gauges

- For weld thickness: 3 - 12 mm.
- Up to 7 mm increasing with 0.5 mm, plus 8, 10 and 12 mm. Total: 12 pieces.
- Bright steel.



Item No.	Description	Price RUB
856.452	Welding seam gauges	

### Welding seam gauge

For measurement of welding seams.

- Graduation: 0.2 mm.
- Stainless steel.
- Delivery in a case.



Item No.	Description	Price RUB
856.438	Welding seam gauge	

### Welding seam calipers

For measurement of welding seams.

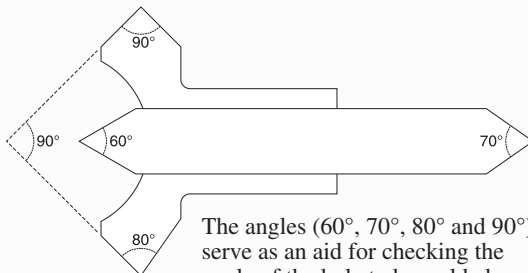
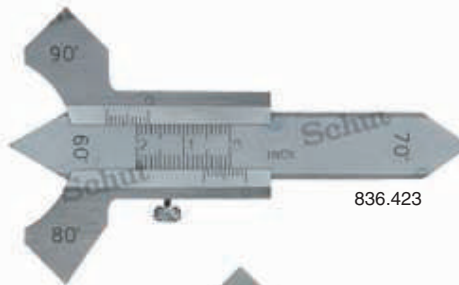
- Measuring range: 0 - 20 mm.
- Analog: vernier 0.1 mm, digital: resolution 0.01 mm.
- Delivery in a case.

#### Analog

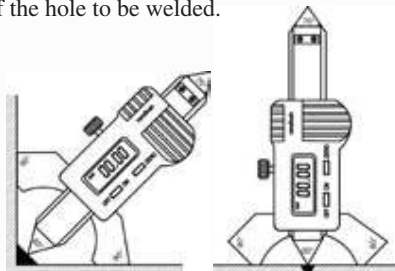
- Stainless construction.

#### Digital

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



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Item No.	Measuring range/mm	Price RUB
<b>Analog:</b> 836.423	0 - 20	
<b>Digital:</b> 906.429	0 - 20	
<b>Option:</b> 836.535	Spare battery	

## Thread and tolerance tables

### Thread table

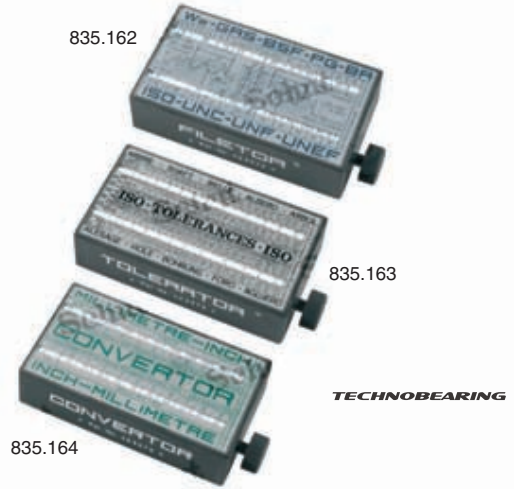
Table with all standard international thread indications: metric, Ww, Gas, BSF, Pg, BA, UNC, UNF and UNEF.

### Tolerance table

Table comprising all tolerances and fits according ISO R286, up to 500 mm (table with over 6400 pairs of tolerance values for internal and external measurements).

### Conversion table mm/inch

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



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

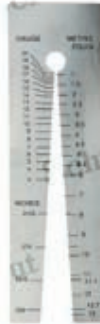
## Screw pitch gauges



## Flat thickness gauge

Gauge to e.g. measure the thickness of steel plating.

- Measuring range: 1 - 13 mm.
- Graduation: 0.5 mm.
- Stainless steel.



Item No.	Type of thread	Price RUB
856.456	Metric	
856.457	Whitworth	
856.458	BSP	
856.459	Metric/Whitworth	
856.460	Metric/Whitworth BSP	
856.461	UNC/UNF	

Item No.	Measuring range/mm	Price RUB
907.899	1 - 13	

## Universal meter for bevels

Universal instrument for measurement of bevels from 0.5 to 10 mm. Direct reading of the measured bevel (30°, 45°, 60°).

- Measuring range: 30°: 15 mm,  
45°: 10 mm,  
60°: 5 mm.
- Delivery in a case.
- Hardened stainless steel construction.



Item No.	Description	Price RUB
838.727	Universal meter for bevels	

# Magnifiers / Microscopes / Glass rulers / Stereo microscopes Endoscopes



### Stand magnifier 5x

Standard, all-purpose magnifier.

- Dimensions:  
ø 35 x 55 mm.



Item No.	Price RUB
905.110	

### Stand magnifier 10x

Standard, all-purpose magnifier. Very suitable for inspection of tissues, structures and photographic negatives.

- Dimensions:  
ø 34 x 41 mm.



Item No.	Price RUB
905.112	

### Stand magnifier 10x

A simple, all-purpose magnifier.

- Dimensions:  
ø 41 / ø 45 x 40 mm.



TECHNOBEARING

Item No.	Price RUB
905.316	

### Stand magnifier 15x

Bright images with high contrast due to a coated achromatic lens. With wide acrylic tube.

- Dimensions:  
ø 27 / ø 36 x 33 mm.



Item No.	Price RUB
905.114	

### Stand magnifier 22x

Bright images with high contrast due to a coated achromatic lens. Suitable for inspection of high precision work.

- Dimensions:  
ø 28 x 30 mm.



Item No.	Price RUB
905.116	



## Magnetic magnifier 5x

This magnifier has two small magnets which make sure that the magnifier can be put on a fixed position without moving. By placing this magnifier on hard to read scale divisions of, for example, graduated rulers, height gauges or micrometers, the possibility of reading errors substantially reduces.

- Field of view:  $\varnothing 30$  mm.
- Dimensions:  $\varnothing 44 \times 20 \times 30$  mm.
- Weight: 15 g.



Item No.	Description	Price RUB
905.210	Magnetic magnifier 5x	

## Eye magnifiers 3.3x ... 20x

Eye magnifiers can be placed in front of the eye easily, which makes them ideal tools for working on small products like watches, clocks and jewelry.

- Made of aluminum.
- Weight: 10 - 16 g.
- A small hole in the tube prevents the lens from becoming blurred.



905.390



905.394



905.301

Item No.	Type	Magnification	Lenses	Price RUB
905.390	A13D	3.3x	1	
905.391	A16D	4.0x	1	
905.392	A20D	5.0x	1	
905.393	A26D	6.7x	1	
905.394	A40D	10.0x	2	
905.299	A48D	12.0x	1	
905.300	A60D	15.0x	1	
905.301	A80D	20.0x	1	

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## Zoom magnifiers 8-16x and 10-20x

Unique stepless zoom lens with sufficient brightness in each stage of magnification and a minimum of optical aberration. With click-stop on magnifications 8/10/12/14/16x and 10/15/20x, respectively. Equipped with scale.

- Field of view:  $\varnothing 20 - 10$  mm or  $\varnothing 13 - 7$  mm.
- Graduation: 0.1 mm.

TECHNOBEARING



905.198

905.197

Item No.	Magnification	Field of view $\varnothing$ /mm	Adjustment range eye correction	Measuring range/mm	Dimensions mm	Price RUB
905.197	8 - 16x	20 - 10	+2.5D to -5D	16	$\varnothing 45 \times 65$	
905.198	10 - 20x	13 - 7	+5D to -3.5D	12	$\varnothing 42 \times 52$	

## Telecentric magnifier 7x

A telecentric magnifier shows objects, which are at different distances, with the same magnification. In this way 3D objects, or e.g. a needle above a scale, can be shown and measured accurately without parallax error.

- Field of view:  
 $\varnothing 24$  mm.
- Measuring range  
scale: 20 mm.
- Graduation: 0.1 mm.
- Adjustable diaphragm  
with apertures  $\varnothing 0.5$ ,  
1 and 3 mm.
- Dimensions:  
 $\varnothing 38 \times 74$  mm.



Item No.	Description	Price RUB
905.136	Telecentric magnifier 7x including case and standard scale (for scales of $\varnothing 26$ mm)	

## Stand magnifier 4x

This practical and convenient magnifier can be used for many purposes, like inspecting films. The magnifier is delivered with a clear and a black base, which allows you, depending on the amount of light, to choose the base which is most suitable for your application.

- Field of view:  $\varnothing 45$  mm.
- Dimensions: 51 x 51 x 65 mm.
- Weight: 80 g.



Item No.	Description	Price RUB
905.399	Stand magnifier 4x	

## Stand magnifier 8x

Convenient and smartly designed magnifier with achromatic lens. A scale is engraved at the bottom of the transparent acrylic base. Photographic negatives can be inspected using the base with opal glass.

- Field of view: 24 x 36 mm.
- Dimensions without base: 46 x 49 x 39 mm.
- Weight: 52 g.



Item No.	Description	Price RUB
905.290	Magnifier w/o base	
905.291	Base	

## Light magnifier 3.5x

Large square lens (52 x 52 mm) of plastic with illumination, e.g. for reading maps and indicators, and for inspection of production processes.

- Dimensions: 60 x 75 x 190 mm.
- Weight (without batteries): 120 g.
- Power supply: 2 batteries type C.



Item No.	Description	Price RUB
905.212	Magnifier (w/o batteries)	
495.153	Battery (2 needed)	

## Monocular telescopes

Lightweight pocket-size telescopes with erect image.

- Dimensions 905.207:  $\varnothing$  22.5 x 50 mm,  
905.208:  $\varnothing$  22.5 x 53 mm.
- Weight: 32 g.
- Delivery in a case.

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905.207

Item No.	Magnification	Lens aperture $\varnothing$ /mm	Close focus distance/mm	Field of view (angle)	Field of view* $\varnothing$ /mm	Field of view* $\varnothing$ /m	Price RUB
905.207	2x	8	100	11°	12	192	
905.208	4x	10	220	10°	29	175	

\* Field of view respectively at close focus distance and at 1000 m.

## Head magnifiers 2.2x ... 5.2x

Because of the velcro strip, the head magnifier can be used easily. The great advantage of a head magnifier is that the user has both hands free for e.g. production and assembly of precision instruments. The head magnifier is designed in such a way that people who wear glasses can use it as well. With the extra pair of lenses inside the head magnifier, the magnification can be enhanced from 2.2x to 3.3x.

- Clear, broad and 3-dimensional view.
- Weight 905.318: 100 g,  
905.317: 118 g.

905.318

905.317



Item No.	Magnification	Price RUB
905.318	2.2x / 3.3x	
905.317	2.2x / 3.3x / 4.1x / 5.2x	

## Pen microscopes with EIM 25x ... 100x

These pen microscopes have a fixed scale and EIM system. With standard microscopes, the magnification is upside down, but because of the EIM system, this is not the case with these pen microscopes.

- Dimensions:  $\varnothing 20.7 \times 111$  mm.
- Weight: 25-28 g.



905.404

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Item No.	Magnification	Field of view $\varnothing$ /mm	Measuring range/mm	Graduation mm	Price RUB
905.404	25x	3.50	3.0	0.05	
905.405	50x	1.70	1.6	0.02	
905.406	75x	1.10	1.0	0.01	
905.407	100x	0.86	0.8	0.005	

## Pen microscopes 25x ... 100x

- Dimensions:  $\varnothing 12.4 \times 127$  mm.
- Weight: 13-16 g.
- With a fixed scale (only 905.263/264).



905.267



Item No.	Magnification	Field of view $\varnothing$ /mm	Measuring range/mm	Graduation mm	Price RUB
905.267	25x	3.30	—	—	
905.268	50x	2.00	—	—	
905.269	75x	1.09	—	—	
905.266	100x	0.84	—	—	
<b>With fixed scale:</b>					
905.263	25x	3.30	3.00	0.05	
905.264	50x	2.00	1.60	0.02	

### Light magnifiers 10x and 15x

Magnifier with illumination.

- Field of view:  $\varnothing 25$  mm.
- Dimensions and weight (without batteries):  
905.118: 175 x 35 x 41 mm, 81 g,  
905.119: 180 x 36 x 42 mm, 90 g.
- Power supply: 2 batteries type C, not included.



905.118

### Folding magnifiers 7x ... 20x

Steinheil magnifiers with an excellent chromatic correction and a large field of view.

- Dimensions: 39 x 24 x 22 mm.
- Weight: 18 - 22 g.



905.202

Item No.	Magnification	Price RUB
905.118	10x	
905.119	15x	
495.153	Battery (2 needed)	

Item No.	Magnification	Field of view $\varnothing$ /mm	Price RUB
905.200	7x	16	
905.202	10x	15.5	
905.204	14x	12	
905.206	20x	7	

### Folding magnifiers 3x ... 9x

Because of their small size, these folding magnifiers are easy to use. Available in several magnifications, with one or two lenses. The advantage of two lenses is that it gives a very sharp image, because the image error of the first lens is being corrected by the second one.

A mm scale is engraved at each of the four sides of the base. The scale length is equal to the width of the field of view (see table).



905.230



905.379

Item No.	Magnification	Field of view/mm	Number of lenses	Material/color	Price RUB
905.230	9x	10 x 10	1	Al/clear	
905.375	7x	15 x 15	1	Al/clear	
905.376	6x	25 x 25	1	Al/clear	
905.377	9x	10 x 10	1	Al/black	
905.378	7x	15 x 15	1	Al/black	
905.379	6x	25 x 25	1	Al/black	
905.383	4x	30 x 30	2	Al/black	
905.384	3x	50 x 50	2	Al/black	
905.380	9x	10 x 10	2	Zn/black	
905.381	8x	15 x 15	2	Zn/black	
905.382	6x	25 x 25	2	Zn/black	

## Scale magnifier 7x

All-purpose scale magnifier. Aberrations are avoided by the excellent achromatic lenses.

- Field of view:  $\varnothing 26$  mm.
- Measuring range standard scale: 20 mm.
- Graduation: 0.1 mm.
- Dimensions:  $\varnothing 36 \times 62$  mm.
- Weight: 56 g.



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## Scale magnifier with illumination 905.138

- Field of view:  $\varnothing 22$  mm.
- Dimensions:  $\varnothing 36 \times 58 \times 175$  mm.
- Weight (without batteries): 118 g.
- Power supply: 2 batteries type C.

Item No.	Description	Price RUB
905.140	Magnifier with standard scale in a case	
905.155	Set of magnifier 905.140 and five scales in a case	
905.138	Magnifier 905.140 with illumination (without batteries)	
495.153	Battery (2 needed)	



## Set 905.155

Scale magnifier 905.140 in a set with the five most frequently used scales (2, 3, 7, 8 and 10).

## Scales $\varnothing 26$ mm

Aside from the standard scale, various other scales are available, each one with its own specific application. These scales are interchangeable in scale magnifiers like the one above.

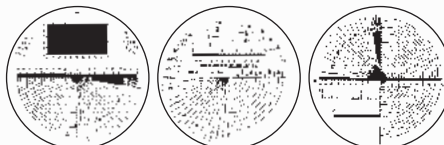
Item No.	Scale	Price RUB
905.141	no. 1	
905.142	no. 2	
905.143	no. 3	
905.144	no. 4	
905.145	no. 5	
905.146	no. 6	
905.147	no. 7	
905.148	no. 8	
905.149	no. 9	
905.150	no. 10	
905.151	no. 11	
905.152	no. 12	
905.153	standard	



905.141

905.142

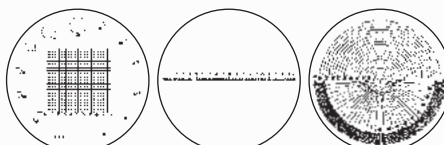
905.143



905.144

905.145

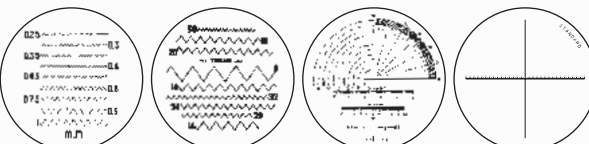
905.146



905.147

905.148

905.149



905.150

905.151

905.152

905.153



## Scale magnifier 10x

All-purpose scale magnifier. Aberrations are avoided by the excellent achromatic lenses. High resolution and large field of view.

- Field of view:  $\varnothing 35$  mm.
- Measuring range standard scale: 30 mm.
- Graduation: 0.1 mm.
- Dimensions:  $\varnothing 46 \times 44$  mm.
- Weight: 74 g.



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### Scale magnifier with illumination 905.178

- Field of view:  $\varnothing 32$  mm.
- Dimensions:  $\varnothing 47 \times 45 \times 185$  mm.
- Weight (without batteries): 134 g.
- Power supply: 2 batteries type C.

### Set 905.195

Scale magnifier 905.180 in a set with the five most frequently used scales (2, 3, 7, 8 and 10).

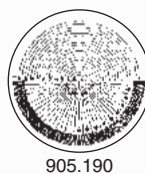
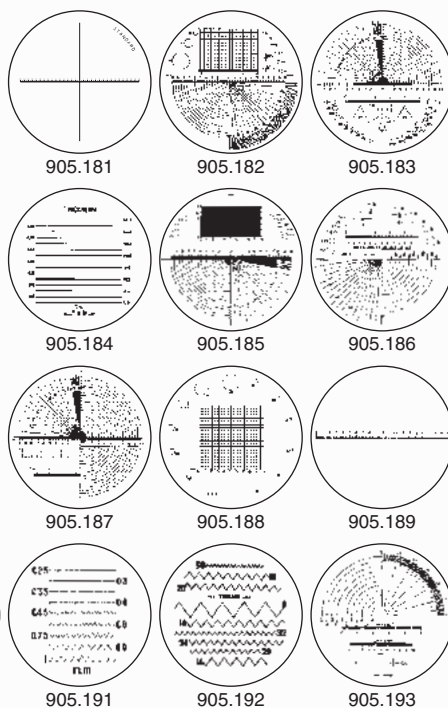


Item No.	Description	Price RUB
905.180	Magnifier with standard scale in a case	
905.195	Set of magnifier 905.180 and five scales in a case	
905.178	Magnifier 905.180 with illumination (without batteries)	
495.153	Battery (2 needed)	

## Scales $\varnothing 35$ mm

Aside from the standard scale, various other scales are available, each one with its own specific application. These scales are interchangeable in scale magnifiers like the one above.

Item No.	Scale	Price RUB
905.181	standard	
905.182	no. 1	
905.183	no. 2	
905.184	no. 3	
905.185	no. 4	
905.186	no. 5	
905.187	no. 6	
905.188	no. 7	
905.189	no. 8	
905.190	no. 9	
905.191	no. 10	
905.192	no. 11	
905.193	no. 12	



905.190

905.191

905.192

905.193



## Long-distance microscope

The long-distance microscope consists of a stand microscope 40x (905.330) and an objective unit. The objects being inspected can be enlarged sharply at a short distance of 200 mm as well as at long distances. The microscope has a large field of view, and comes with a Huygens eyepiece (magnification 10x) and a detachable soft rubber eye adapter.

- Focusing with helicoid ring.
- Dimensions at working distance  
200 mm:  $\varnothing 46 \times 316$  mm,  
infinite:  $\varnothing 46 \times 262$  mm.
- Weight: 414 g.
- Delivery in a case incl. standard scale.



Working distance/mm	Magnification	Field of view $\varnothing$ /mm
200	27x	5.5
300	15x	10
400	10x	15
500	8x	19

Item No.	Description	Price RUB
905.435	Long-distance microscope	

## Scale magnifier 3x

Scale magnifier with a lens system separated from the scale by a stand, hereby creating a larger working distance, field of view and luminous intensity. The scale is placed in a rotatable ring in the base of the stand.

- Field of view:  $\varnothing 58$  mm.
- Measuring range scale: 54 mm.
- Graduation: 0.1 mm.
- Dimensions: 76 x 105 x 96 mm.
- Weight: 378 g.

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Item No.	Description	Price RUB
905.328	Magnifier with scale and stand	

## Scale magnifier 30x

- Field of view:  $\varnothing 7$  mm.
- Measuring range standard scale: 5 mm.
- Graduation: 0.05 mm.
- Dimensions:  $\varnothing 30 \times 19$  mm.
- Weight: 16 g.



## Scale magnifier with LED illumination 905.287

- Dimensions:  $\varnothing 43 \times 65 \times 184$  mm.
- Weight (without batteries): 48 g.
- Power supply: 2 batteries type AAA.



Item No.	Description	Price RUB
905.285	Scale magnifier in case	
905.287	Magnifier 905.285 with illumination (without batteries)	
497.914	Battery (2 needed)	
905.286	Separate standard scale	

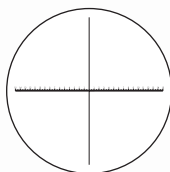
## Anastigmatic scale magnifiers 4x and 7x

Magnifier with anastigmatic lens. This is a combined objective which reflects a large, undistorted image with sharp features, very suitable for inspection of (photographic) films.

- Large field of view, 905.216:  $\varnothing 58$  mm, 905.400:  $\varnothing 41$  mm.
- Removable scale with mm graduation.
- Measuring range scale 905.217: 54 mm, 905.401: 36 mm.
- Graduation scale: 0.1 mm.
- Dimensions and weight: 905.216:  $\varnothing 73 \times 77$  mm, 272 g, 905.400:  $\varnothing 55 \times 53$  mm, 103 g.



905.216



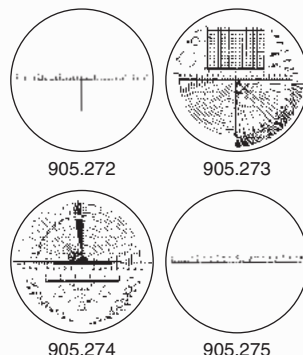
905.400

Item No.	Description	Price RUB
905.216	Scale magnifier 4x	
905.400	Scale magnifier 7x	
905.217	Standard scale for magnifier 905.216	
905.401	Standard scale for magnifier 905.400	

## Scale magnifier 15x

- Field of view:  $\varnothing 20$  mm.
- Measuring range standard scale: 14 mm.
- Graduation: 0.1 mm.
- Dimensions:  $\varnothing 35 \times 33$  mm.
- Weight: 40 g.

**NEW**



Item No.	Description	Price RUB
905.270	Magnifier with standard scale in a case	
905.278	Magnifier 905.270 with illumination (without batteries)	
497.914	Battery (2 needed)	
905.272	Separate standard scale	
905.273	Scale no. 1	
905.274	Scale no. 2	
905.275	Scale no. 8	

### Scale magnifier with LED illumination 905.278

- Dimensions:  $\varnothing 43 \times 65 \times 184$  mm.
- Weight (without batteries): 72 g.
- Power supply: 2 batteries type AAA.



## Stand magnifier 30x

This *microscopic* magnifier has a very high magnification despite its small size. In this way, the magnifier can be held with one hand, while you can hold the product to be inspected in the other. Because of the sophisticated optic design, this magnifier is almost comparable to a microscope of the same size, while the field of view is larger. This magnifier is often used in photo technique, for the production of precision instruments and for inspection of precision work.

- Lens aperture:  $\varnothing 7$  mm.
- Dimensions:  $\varnothing 37 \times 20$  mm.
- Weight: 10 g.

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### Stand magnifier with illumination 905.402

- Dimensions:  $\varnothing 43 \times 65 \times 184$  mm.
- Weight (without batteries): 40 g.
- Power supply: 2 batteries type AA.

Item No.	Description	Price RUB
905.222	Stand magnifier $M=30x$	
905.402	Stand magnifier 905.222 with illumination (without batteries)	
495.111	Battery (2 needed)	

### ABC magnifier 3-18x

The ABC magnifier consists of three lenses. Combining the three lenses, seven different magnifications are possible.

- Magnification: 3x, 6x, 9x, 12x, 14x, 16x and 18x.
- Magnification and diameter of the lenses:
  - lens A: 12x,  $\varnothing$  14 mm,
  - lens B: 3x,  $\varnothing$  28 mm,
  - lens C: 6x,  $\varnothing$  20 mm.
- Dimensions: 60 x 39 x 24 mm.
- Weight: 76 g.



Item No.	Description	Price RUB
905.196	ABC magnifier 3-18x	

### Magnifying glass 2.5-5x

This model of the classical magnifying glass has a lens-in-lens construction. In the big  $\varnothing$  75 mm lens a smaller  $\varnothing$  20 mm lens has been integrated which offers extra strong magnification. The big lens has a 2.5x magnification, the small lens 5x.

- Dimensions:  $\varnothing$  80 x 170 mm.
- Weight: 111 g.



Item No.	Description	Price RUB
905.214	Magnifying glass 2.5 - 5x	

### Magnifier on magnetic stand

- Magnification: 2x ( $\varnothing$  90 mm).
- Total length: 280 mm.
- Magnetic force: 600 N.



Item No.	Description	Price RUB
909.609	Magnifier on magnetic stand	

### Flexible stand magnifier

This magnifier has a flexible arm which can be adjusted freely from a solid and stabilized stand. The lens can be put in many positions for the most ergonomic use thus leaving both hands of the user free.

- Dimensions: 145 x 120 x 485 mm (maximum height).
- Weight: 1.5 kg.



905.279

Item No.	Magnification	Lens $\varnothing$ /mm	Price RUB
905.279	1.7x	115	
905.427	2.0x	100	
905.428	2.2x	90	

## Stand microscopes 20x ... 300x

These stand microscopes are available in five versions. All five are compact and lightweight, but are especially characterized by their large field of view. Delivery in a case, including illumination, matching standard scale and objective. The microscopes come with a Huygens eyepiece (magnification 10x) and with a detachable soft rubber eye adapter. All-purpose use with high precision.

### Type 2034

A scale graduation (with a 10 mm scale range) has been engraved on the focusing ring which allows height measurements at a resolution of 0.1 mm.

- Focusing with helicoid ring.
- Dimensions:  $\varnothing 63 \times 172$  mm.
- Weight (without batteries): 237 - 241 g.
- Power supply: 2 batteries type AA.



Type 2034

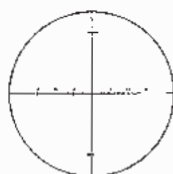
Item No.	Magnification	Field of view $\varnothing$ /mm	Working distance/mm	Measuring range/mm	Graduation mm	Price RUB
905.320	20x	7.2	36	6	0.1	
905.330	40x	3.6	18.7	3	0.05	
905.340	60x	2.4	10.8	2	0.02	
905.350	100x	1.45	5.7	1.2	0.01	
905.355	150x	0.96	9.2	0.9	0.005	
905.370	200x	0.72	6.7	0.6	0.002	
905.374	300x	0.48	4	0.4	0.001	

### Option:

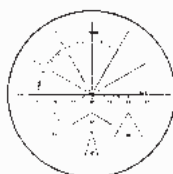
495.111 Spare battery (2 needed)

## Individual scales

The in the eyepiece integrated scale can be changed, for example when the magnification of the microscope changes (see "Individual objectives"). Additionally, an extra eyepiece (without scale and soft rubber eye adapter) is available, so the eyepiece doesn't need to be disassembled each time the scale is being changed.



905.321



905.325

Item No.	Magnification microscope	Scale	Price RUB
<b>Standard scales:</b>			
905.321	20x	no. 54	
905.331	40x	no. 64	
905.341	60x	no. 74	
905.351	100x	no. 84	
905.356	150x	no. 94	
905.337	200x	no. 104	
905.388	300x	no. 114	
<b>For inspection of printed matter and tools:</b>			
905.325	20x	no. 55	
905.335	40x	no. 65	
904.042	Individual eyepiece 10x		

## Stand microscopes 20x ... 300x (continued)

### Types 2054/2054-EIM/2054-CIL/2064

These types primarily differ from the type 2034 in the focusing mechanism and the sturdy die-cast aluminum base.

- Focusing with rack-and-pinion.
- Dimensions:  $\varnothing 63 \times 172$  mm.
- Weight (without batteries):  
2054/2054-EIM: 263 - 267 g,  
2054-CIL/2064: 393 - 394 g.
- Power supply:  
2054/2054-EIM: 2 batteries type AA,  
2054-CIL: 4 batteries type AA,  
2064: 5 batteries type AA.



Type 2054-EIM

### Erected Image with Measure (EIM)

With standard microscopes, the magnification is upside down, but this is not the case with the microscopes of type 2054-EIM.

## Individual objectives

The objectives are also separately available. This gives you the great advantage that you can get all magnifications with one scale microscope. The magnification of the eyepiece is 10x.

Item No.	Magnification objective	Magnification microscope	Price RUB
905.322	2x	20x	
905.332	4x	40x	
905.342	6x	60x	
905.352	10x	100x	
905.357	15x	150x	
905.372	20x	200x	
905.387	30x	300x	

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Type 2054-CIL

### Coaxial Incident Light (CIL)

The microscopes of the types 2054-CIL and 2064 are besides the standard illumination also provided with a coaxial light source, which is especially suitable for the inspection of objects with deep structures as well as chromed, high reflective surfaces. For the type 2064 this is a LED illumination.

Item No.	Magnification	Price RUB
<b>Type 2054:</b>		
905.410	20x	
905.411	40x	
905.412	60x	
905.413	100x	
905.414	150x	
905.415	200x	
905.416	300x	
<b>Type 2054-EIM:</b>		
905.417	20x	
905.418	40x	
905.419	60x	
905.420	100x	
<b>Type 2054-CIL:</b>		<b>Type 2064:</b>
905.429	40x	905.293
905.430	60x	905.294
905.431	100x	905.295
905.432	150x	905.296
905.433	200x	905.297
905.434	300x	905.298
<b>Option:</b>		
495.111	Spare battery type AA	

For other specifications: see table of type 2034.

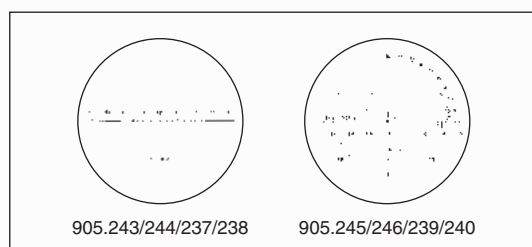


## Stand microscopes 25x ... 100x

Compact and light-weight stand microscope with scale. The high resolution and bright images as well as its easy focusing make this instrument a practical measuring aid. A scale graduation (scale range 8 mm) has been engraved on the focusing ring which allows height measurements at a resolution of 0.1 mm. With detachable soft rubber eye adapter. Delivery in a case, with matching standard scale.

- Dimensions:  $\varnothing 41.5 \times 122$  mm.
- Weight: 83 g.

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905.250

Item No.	Type	Magnification	Price RUB
<b>Standard scales:</b>			
905.243	24	25x	
905.244	13	50x	
905.237	34	75x	
905.238	44	100x	
<b>Scales for inspection of printed matter and tools:</b>			
905.245	25	25x	
905.246	14	50x	
905.239	35	75x	
905.240	45	100x	

Item No.	Magnification	Field of view $\varnothing$ /mm	Working distance/mm	Measuring range/mm	Graduation mm	Price RUB
905.249	25x	3.3	17.0	3.0	0.05	
905.250	50x	2.0	11.7	1.6	0.02	
905.251	75x	1.1	11.7	1.0	0.01	
905.258	100x	0.84	11.6	0.8	0.005	

### Glass rulers

- Graduation: 0.1 mm.
- Accuracy:  $\pm 0.02$  mm.
- Thickness: 10 mm.
- Width: 50 mm.
- Delivery incl. 2 magnifiers  $M=10x$ .
- Delivery in a case.



Item No.	Measuring range/mm	Length mm	Price RUB
905.422	0- 300	360	
905.423	0- 500	560	
905.424	0- 700	760	
905.425	0-1000	1060	

### Special cleaner

Special cleaner (120 ml) for objectives, glass plates and other optical components.

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Item No.	Description	Price RUB
111.534	Special cleaner	

### Field of view qualifier

- Accuracy:  $\pm 0.002$  mm.



Item No.	Description	Price RUB
635.222	Field of view qualifier	

### Optical cleaning kit

This cleaning kit is ideal to clean optics, microscopes and magnifying glasses, and can also be used on other products.

**The set consists of:**

- a bottle of cleaning solution (15 ml),
- a micro fiber cleaning cloth,
- a soft brush,
- an air blower.



Item No.	Description	Price RUB
909.432	Optical cleaning kit	

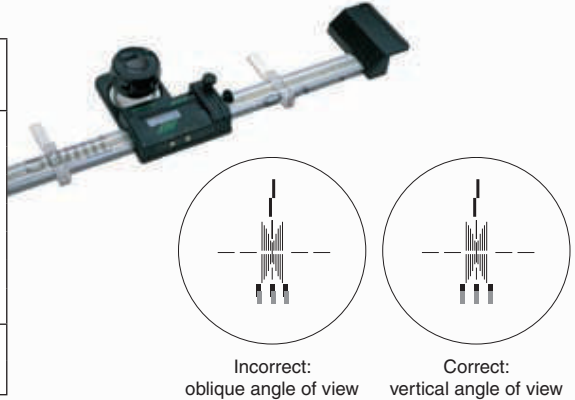
## Electronic scales with magnifier

This electronic scale with magnifier makes accurate and reliable measuring of flat products easier (e.g. printed material and metal sheets).

- Measuring range: 0- 1500 mm.
- Resolution: 0.01 mm.
- Repeatability: 0.01 mm.
- mm/inch conversion.
- RS232C data output.
- Reset.
- Fine adjustment.
- Hardened stainless steel construction.
- Magnifier: 10x magnification, crosshair scale with parallax control system (25x or 50x magnification available on request).
- Delivery in a case with an inspection report.
- Power supply: 1 battery type CR2032.

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Item No.	Measuring range/mm	Accuracy mm	Price RUB
903.500	0- 180	±0.03	
903.501	0- 300	±0.03	
903.502	0- 500	±0.03	
903.503	0- 800	±0.05	
903.504	0-1000	±0.05	
903.505	0-1300	±0.1	
903.506	0-1500	±0.15	
<b>Option:</b>			
495.157	Spare battery		



## Electronic carbon scales with magnifier

- Measuring range: 0- 1450 mm.
- Resolution: 0.01 mm.
- Intake magnifier: ø41 mm.
- mm/inch conversion.
- Opto-RS232C data output.
- Reset/preset.
- Excl. magnifier (905.180); see “magnifiers” elsewhere in this catalog.
- Delivery in a case with an inspection report.
- Power supply: 1 battery type CR2032.



Item No.	Measuring range/mm	Accuracy mm	Length mm/A	Weight kg	Price RUB
838.715	0- 450	±0.03	720	1	
838.716	0- 750	±0.03	1020	1.9	
838.717	0-1150	±0.05	1420	3	
838.718	0-1450	±0.06	1720	3.7	
<b>Options:</b>					
495.157	Spare battery				
905.180	Magnifier with standard scale 905.181 Crosshair scale: horizontal 0.1 mm graduation (15 mm-0-15 mm)				
996.664	Holder for USB measuring microscopes				



## Light magnifiers with fluorescent or LED illumination

Large lens with a large field of view. Very suitable for production and assembly of precision instruments.

- Magnification: 1.75x.
- Lens:  $\varnothing$  120 mm (909.649:  $\varnothing$  100 mm).
- Span table clamp: 50 mm.
- Power supply: 230 V.



### With circular fluorescent tube

Item No.	Description	Price RUB
909.650	With table clamp	
909.651	With base	
909.654	Spare bulb 22 W	

### With LED ring light

Item No.	Description	Price RUB
909.648	90 LEDs, with table clamp	
909.649	60 LEDs, with base	

## Stereo microscope SSM

- Magnification: 20x.
- Field of view:  $\varnothing$  9.5 mm.
- Viewing angle: 90°.
- Interpupillary distance: adjustable (55 - 75 mm).
- Working distance: 70 mm.
- Max. object height: 30 mm.
- Incident light (LED).



- Stage plate: white plastic,  $\varnothing$  50 mm.
- Dimensions *l x w x h*: 135 x 120 x 230 mm.
- Power supply: 2 batteries type AA.

Item No.	Type	Magnification	Price RUB
909.012	SSM	20x	
<b>Option:</b>			
495.111	Spare battery (2 needed)		

## Microscope SSM-1

- Magnification: 20x.
- Field of view:  $\varnothing$  9.0 mm.
- Microscope head: 360° rotatable.
- Viewing angle: 45°.
- Working distance: 80 mm.
- Max. object height: 35 mm.
- Travel of the rack: 30 mm.

- Stage plate: black/white (two-sided),  $\varnothing$  60 mm.
- Dimensions *l x w x h*: 195 x 110 x 245 mm.



Item No.	Type	Magnification	Price RUB
909.013	SSM-1	20x	

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## Stereo microscopes SSM-2

Stereo microscopes on a column stand, with a sharp erect image and a large field of view. The magnification is 20x (eyepiece: 10x, objective: 2x); eyepieces 5x, 15x and 20x are optionally available. See for all accessories the pages “SSM stereo microscope accessories”.

- Viewing angle: 45°.
- Interpupillary distance: adjustable (55-75 mm).
- Left eyepiece with diopter adjustment: ±5 dpt.
- Objective: with dovetail mounting.
- Stage plate: black/white (two-sided).
- Delivery incl. dust cover and soft rubber eye adapters.

Item No.	Type	Magnification	Price RUB
909.000	SSM-2A	20x	
909.001	SSM-2C	20x	

See for accessories the pages “SSM stereo microscope accessories”.



909.000



909.001

Type		SSM-2A	SSM-2C
Eyepiece	<i>M</i>	10x	10x
Objective	<i>M</i>	2x	2x
Total range*	<i>M</i>	10-40x	10-40x
Illumination		<i>no</i>	<i>yes</i>
Working distance	mm	70	70
Max. object height	mm	60	70
Travel of rack	mm	40	40
Stage plate	ø/mm	60	95
Dimensions	<i>l x w x h</i> /mm	220x115x250	220x115x290
Weight	kg	1.6	2.6

\*The magnification range of the microscope in combination with the optional eyepieces 5-20x.

### Illumination: incident light and backlight

Model SSM-2C is equipped with incident light and backlight (switchable incident light or backlight).

- Stage plate: opal glass. Delivery incl. black/white stage plate. Dark field condenser optional.
- Power supply: 230 Vac (50 Hz).

TECHNOBEARING

## Stereo zoom microscopes SSM-3/5

Stereo zoom microscopes with a sharp erect image and a large field of view. Equipped with a double objective (2x/4x is used most; also available 1x/2x and 1x/3x), so that the magnification can be changed with a simple rotary motion. The magnification of the eyepieces is 10x (optionally 5x, 15x and 20x). See for all accessories the pages “SSM stereo microscope accessories”.

- SSM-3: stand with round column.  
SSM-5: fixed stand.
- Microscope head: 360° rotatable (only SSM-5).
- Viewing angle: 45°.
- Interpupillary distance: adjustable (55 - 75 mm).
- Left eyepiece with diopter adjustment: ±5 dpt.
- Stage plate: black/white (two-sided).
- Delivery incl. dust cover and soft rubber eye adapters.

Item No.	Type	Magnification	Price RUB
909.002	SSM-3A	20x/40x	
909.042	SSM-3A	10x/20x	
909.032	SSM-3A	10x/30x	
909.003	SSM-3C	20x/40x	
909.043	SSM-3C	10x/20x	
909.033	SSM-3C	10x/30x	
909.034	SSM-5AW	20x/40x	
909.044	SSM-5AW	10x/20x	
909.004	SSM-5AW	10x/30x	
909.005	SSM-5CW	20x/40x	
909.045	SSM-5CW	10x/20x	
909.035	SSM-5CW	10x/30x	



See for accessories the pages “SSM stereo microscope accessories”.



### Illumination: incident light and backlight

Models SSM-3C/5CW are equipped with incident light and backlight (switchable incident light or backlight).

- Stage plate: opal glass. Delivery incl. black/white stage plate. Dark field condenser optional.
- Power supply: 230 Vac (50 Hz).

Type		SSM-3A	SSM-3C	SSM-5AW	SSM-5CW
Eyepiece	M	10x	10x	10x	10x
Objective	M	2x/4x, 1x/2x or 1x/3x			
Total range*	M	10-80x, 5-40x or 5-60x			
Illumination		no	yes	no	yes
Working distance	mm	57	57	70	70
Max. object height	mm	60	70	20	20
Travel of rack	mm	40	40	30	20
Stage plate	ø/mm	60	95	60	95
Dimensions	lwxh/mm	220x115x250	220x115x290	220x115x280	220x115x320
Weight	kg	1.7	2.6	1.7	2.5

TECHNOBEARING

\*The magnification range of the microscope in combination with the optional eyepieces 5-20x.



## Stereo zoom microscopes with auxiliary lenses SSM-10/20

Stereo zoom microscopes with a sharp erect image and a large field of view. Equipped with a double objective (2x/4x is used most; also available 1x/2x and 1x/3x), so that the magnification can be changed with a simple rotary motion. The magnification of the eyepieces is 10x (optionally 5x, 15x and 20x). The magnification can be adjusted to your application even more with an optional auxiliary lens (0.5x, 0.75x, 1.5x or 2x). See for all accessories the pages “SSM stereo microscope accessories”.

- SSM-10/20C2: stand with round (flattened) column and anti drop facility.  
SSM-20W: fixed stand.
- Microscope head: 360° rotatable.
- Viewing angle: 45°.
- Interpupillary distance: adjustable (55 - 75 mm).
- Left eyepiece with diopter adjustment: ±5 dpt.
- Working distance (without aux. lens): 72 mm.
- Stage plate: black/white (two-sided).
- Delivery incl. dust cover and soft rubber eye adapters.



909.006

Item No.	Type	Magnification	Price RUB
909.006	SSM-10	20x/40x	
909.046	SSM-10	10x/20x	
909.036	SSM-10	10x/30x	
909.007 <sup>1</sup>	SSM-20C2	20x/40x	
909.047 <sup>1</sup>	SSM-20C2	10x/20x	
909.037 <sup>1</sup>	SSM-20C2	10x/30x	
909.008	SSM-20W	20x/40x	
909.048	SSM-20W	10x/20x	
909.038	SSM-20W	10x/30x	

<sup>1</sup> With LED illumination.

See for accessories the pages “SSM stereo microscope accessories”.



TECHNOBEARING

### Illumination: incident light and backlight

Models SSM-20C2/20W are equipped with incident light and backlight, and the luminous intensity is adjustable.

- Models SSM-20C2 are equipped with LED illumination.
- Stage plate: opal glass. Delivery incl. black/white stage plate. Dark field condenser optional.
- Power supply: 230 Vac (50 Hz).



909.007

NEW

Type		SSM-10	SSM-20C2	SSM-20W
Eyepiece	M	10x	10x	10x
Objective	M	2x/4x, 1x/2x or 1x/3x		
Total range*	M	5-160x, 2½-80x or 2½-120x		
Illumination		no	yes	yes
Max. object height	mm	100	100	50
Travel of rack	mm	60	60	60
Stage plate	ø/mm	75	95	95
Dimensions	lwxh/mm	260x170x290	270x235x330	255x145x330
Weight	kg	3.0	4.3	4.0

\*The magnification range of the microscope in combination with the optional eyepieces 5-20x and auxiliary lenses 0.5-2x.



909.008

## Stereo microscopes with stepless zoom SSM-E

Stereo zoom microscopes with a sharp erect image and a large field of view. The special microscope head is equipped with stepless zoom; in combination with the standard 10x eyepieces (optionally 20x) you can smoothly zoom in from 10x to 40x magnification. The magnification can be adjusted to your application even more with an optional auxiliary lens (0.5x, 0.75x, 1.5x or 2x). See for all accessories the pages “SSM stereo microscope accessories”.

- SSM-EW: fixed stand. SSM-EC2/3E/3EC2: stand with round (flattened) column and anti drop facility.
- Microscope head: 360° rotatable.
- Viewing angle: 45°.
- Interpupillary distance: adjustable (55 - 75 mm).
- Both eyepieces with diopter adjustment: ±5 dpt.
- Working distance (without aux. lens): 85 mm.
- Equipped with incident light and backlight, and the luminous intensity is adjustable.
- Stage plate: opal glass.
- Delivery incl. dust cover, soft rubber eye adapters and black/white stage plate. Dark field condenser optional.

- Models SSM-EC2/3EC2 are equipped with **LED** illumination.
- Power supply: 230 Vac (50 Hz).

Item No.	Type	Magnification	Price RUB
909.009	SSM-EW	10 - 40x	
909.010 <sup>1</sup>	SSM-EC2	10 - 40x	
909.011	SSM-3E	10 - 40x	
908.998 <sup>1</sup>	SSM-3EC2	10 - 40x	

<sup>1</sup> With LED illumination.  
See for accessories the pages “SSM stereo microscope accessories”.



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Type		SSM-EW	SSM-EC2	SSM-3E	SSM-3EC2
Eyepiece	M	10x	10x	10x	10x
Objective	M	1-4x	1-4x	1-4x	1-4x
Total range*	M	5-160x	5-160x	5-160x	5-160x
Illumination		yes	yes	yes	yes
Max. object height	mm	50	110	110	110
Travel of rack	mm	60	60	60	60
Stage plate	ø/mm	95	95	95	95
Dimensions	l x w x h / mm	310x150x360	330x235x360	330x150x395	330x235x395
Weight	kg	4.5	4.8	5.1	5.4

\*The magnification range of the microscope in combination with the 10x eyepieces, the optional 20x eyepieces and the optional auxiliary lenses 0.5-2x.

**NEW**

### Camera connection

Models SSM-3E and 3EC2 are equipped with camera connection. See the accessories page for the total magnification range with camera.

## SSM stereo microscope accessories

### USB microscope cameras

For viewing and saving images. They fit in the ocular (ø30 mm) of an SSM microscope and/or the adapter bushing (ø23 mm) of the models SSM-3E/3EC2.

- Field of view: see table.
- Resolution: 1.3 Mpx or 5 Mpx.
- Suitable for Windows and Mac OS X.
- Measuring of distances, radii and angles.



### Auxiliary lenses

The magnification can be adjusted to your application even more with an optional auxiliary lens. Note concerning stereo microscopes with a fixed stand: auxiliary lens 0.5x is not suitable, and with auxiliary lenses 1.5x and 2x focusing on the stage plate is not possible (the product needs to be positioned higher).



Item No.	Description	Price RUB
<b>Pairs of eyepieces for SSM-2/3/5/10/20:</b>		
909.050	M=5x	
909.051	M=10x	
909.052	M=15x	
909.053	M=20x	
<b>Pairs of eyepieces for SSM-E:</b>		
909.055	M=10x	
909.057	M=20x	
<b>Eyepieces with crosshair for SSM-E:</b>		
909.095	M=10x (per piece)	
909.096	M=20x (per piece)	
<b>Auxiliary lenses (for SSM-10/20/E):</b>		
909.018	M=0.5x	
909.019	M=0.75x	
909.020	M=1.5x	
909.021	M=2x	
<b>USB microscope cameras:</b>		
774.145	1.3 Mpx, ø23 mm	
774.146	1.3 Mpx, ø23/30/30.5 mm	
774.147*	5 Mpx, ø23 mm	
774.148*	5 Mpx, ø30/30.5 mm	

\*For displaying the 5 Mpx resolution a Motion JPEG codec is required.



Magnification objective	Microscope magnification / Field of view/mm			
	Eyepiece 5x	Eyepiece 10x	Eyepiece 15x	Eyepiece 20x
<b>Stereo microscope SSM-2:</b>				
2x	10x / ø10.0	20x / ø10.0	30x / ø7.5	40x / ø6.5
<b>Stereo zoom microscope SSM-3/5:</b>				
1x	5x / ø20.0	10x / ø20.0	15x / ø15.0	20x / ø9.5
2x	10x / ø10.0	20x / ø10.0	30x / ø7.5	40x / ø4.6
3x	15x / ø7.0	30x / ø6.7	45x / ø5.0	60x / ø3.1
4x	20x / ø5.0	40x / ø5.0	60x / ø3.7	80x / ø2.3
<b>Stereo zoom microscope SSM-10/20 (without auxiliary lens):</b>				
1x	5x / ø20.0	10x / ø20.0	15x / ø15.0	20x / ø10.0
2x	10x / ø10.0	20x / ø10.0	30x / ø7.5	40x / ø4.9
3x	15x / ø7.0	30x / ø7.0	45x / ø5.0	60x / ø3.2
4x	20x / ø5.0	40x / ø5.0	60x / ø3.8	80x / ø2.5

### Pairs of eyepieces



### Soft rubber eye adapters

Item No.	Description	Price RUB
909.089	Per pair	



TECHNOBEARING

Magnification objective	Magnification / Field of view/mm		Field of view camera/mm			
	Eyepiece 10x	Eyepiece 20x	774.145	774.146	774.147	774.148
<b>Stereo microscope with stepless zoom SSM-E (without auxiliary lens):</b>						
from 1x to 4x	10x / ø23.0 40x / ø5.5	20x / ø10.5 80x / ø3.0	4.5 x 3.3 <sup>1</sup> 1.2 x 0.8 <sup>1</sup>	6.8 x 5.0 <sup>1</sup> 1.4 x 1.0 <sup>1</sup>	4.5 x 3.3 <sup>1</sup> 1.2 x 0.9 <sup>1</sup>	
from 1x to 4x				5.6 x 4.1 <sup>2</sup> 1.34 x 1.0 <sup>2</sup>		4.9 x 3.5 <sup>2</sup> 1.25 x 0.9 <sup>2</sup>

<sup>1</sup>Camera intake in adapter bushing. <sup>2</sup> Camera intake in ocular.

**SSM stereo microscope accessories (continued)**

**Halogen optical fiber illumination**



Item No.	Description	Price RUB
<b>Halogen optical fiber illumination:</b>		
909.027	Light source 24 V, 150 W	
909.030	Single flexible arm	
909.028	Dual flexible arm	
909.029	Optical fiber ring light <sup>1,2</sup>	
909.113	Spare bulb for 909.027	

**Halogen optical fiber ring light<sup>1,2</sup>**

Suitable for stereo microscopes SSM-10/20/E.  
Note: not for use in combination with auxiliary lenses.



<b>Ring lights<sup>1,2</sup>:</b>		
909.024	Circular fluoresc. tube 10 W	
909.059	Spare bulb for 909.024	
909.085	Ring light 60 LEDs	

<b>Spare bulbs (standard illumination):</b>		
499.377	For SSM-2/3/5	
498.157	For SSM-20W/EW, and for transmitted light SSM-20C2/EC2/3E	
499.379	For incident light SSM-20C2/EC2/3E	
438.211	Fuse F 0.5 A, 250 V	

<b>Other options:</b>		
909.022	Dark field condenser	
908.999	XY measuring table	
960.255	Dial indicator holder	
635.222	Field of view qualifier	



**Ring lights<sup>1,2</sup>**

Suitable for SSM-10/20/E (909.085) or SSM-3/5/10/20/E (909.024).

<sup>1</sup> Delivery incl. adapter ring.  
<sup>2</sup> Note: microscopes with standard provided incident light, this incident light must be removed before installing the ring light.

**Dark field condenser**

The contrast of transparent objects is enhanced. Suitable for all SSM stereo microscopes with backlight.

- Diameter: 94 mm.
- Stage: ø 27 mm.



**XY measuring table**

- Range: X, Y: 25 mm.
- Intake microscope: ø 94 mm.
- Turnable object plate with degree indication.
- Excl. two analog micrometer heads (intake ø 12 mm; 906.072 measuring range 25 mm).



**Dial indicator holder**

Suitable for stereo microscopes with round column from the series SSM-10/20/E, for height measurements. The accuracy increases with higher magnification.

- Excl. dial indicator.
- The travel of the microscopes is 60 mm; see the dial indicators category for a suitable dial indicator with measuring range 50 or 60 mm.



**Field of view qualifier**

- Accuracy: ± 0.002 mm.



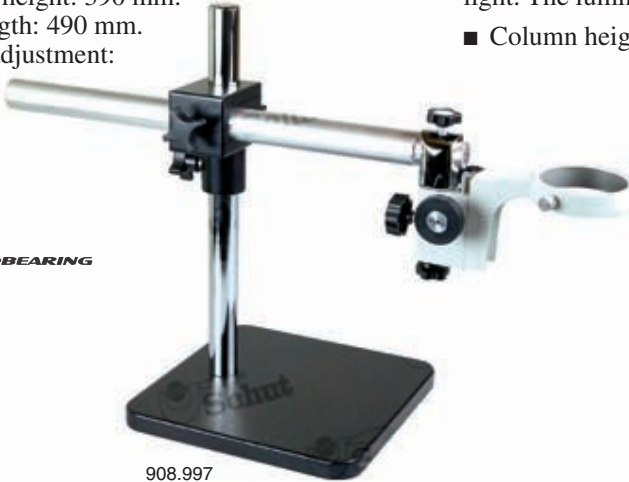


**SSM stereo microscope accessories (continued)**

**Large stand**

- Base: 255 x 255 mm.
- Column height: 390 mm.
- Arm length: 490 mm.
- Height adjustment: 60 mm.

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908.997

**Stand with illumination**

Equipped with LED incident light and back-light. The luminous intensity is adjustable.

- Column height: 185 mm.



909.405

**LCD microscope head**

- Screen: 8" color.
- CCD: 1/3" color.
- Zoom lens: 0.65 - 5.5.
- Magnification: 10 - 85x.
- Working distance: 10.5 cm.
- Crosshair can be toggled on/off.
- Field of view: from 1.3 x 1.8 mm ( $M=85x$ ) to 12 x 16 mm ( $M=10x$ ).



909.405  
+909.406  
+870.006  
+334.695

**Microscope heads**

- With or without camera connection.



909.093



909.406



Item No.	Description	Price RUB
<b>Microscope stands:</b>		
908.997	Large stand	
909.405	Stand with illumination	
870.006 <sup>1</sup>	Column 400 mm	
<b>Microscope heads:</b>		
909.092	Microscope head	
909.093	Microscope head with camera connection	
909.406 <sup>2</sup>	LCD microscope head	
334.695	Mini AC adapter 12 Vdc, 1 A	

<sup>1</sup> To be used with stand 909.405 for a larger Z axis range.

<sup>2</sup> Adapter 334.695 required.

## Endoscopes

Endoscopes for inspecting hard-to-reach places by means of a flexible cable. Equipped with built-in illumination. Delivery in a case.

### Endoscopes GSI

- Resolution: 7400 px.
- Soft flexible cable ø4 mm, or rigid bendable cable ø8 mm.
- Field of view: 40°.
- Viewing distance: 3 mm to infinite (depends on ambient light).
- Xenon halogen illumination.
- Power supply: 2 batteries type AA.

### USB endoscope GSIV

- Camera resolution: 1.3 Mpx.
- Rigid bendable cable ø9 mm.
- Field of view: 67°.
- Viewing distance: 2- 10 cm.
- Illumination: 6 LEDs (intensity adjustable).
- Delivery with software (English) for Windows 2000/XP and USB cable.
- Power supply: via USB.

### Portable monitoring endoscopes GSIM

With control panel (English) for taking and saving pictures and video.

- Camera resolution: 320x 240 px.
- Resolution: 640x 480 px (JPEG pictures), 320x 240 px (ASF video).
- 3.5" TFT LCD monitor 320x 240 px.
- Soft flexible cable ø5.5 mm.
- Field of view: 67°.
- Viewing distance: 1.5- 10 cm.
- Illumination: 4 LEDs (intensity adjustable).
- Memory card: SD 4 GB.
- USB connection for data transfer to PC.
- Delivery with USB cable, video cable, memory card SD 1 GB and adapter 5.5 V.
- Power supply: 1 rechargeable battery 3.7 V.

### Portable monitoring endoscope ZE

- Camera resolution: 640x 480 px.
- 2.5" TFT LCD monitor 320x 240 px.
- Rigid bendable cable ø7 mm. Camera: ø10 mm.
- Field of view: 53°.
- Viewing distance: 8- 2000 cm
- Illumination: 6 LEDs (intensity adjustable).
- Power supply: 4 batteries type AA.



Item No.	Type	Cable ø/mm	Cable length/cm	Price RUB
909.270	GSI-4	4	40	
909.271	GSI-8	8	40	
909.272	GSIV	9	40	
909.273	GSIM	5.5	100	
909.296	GSIM	5.5	200	
909.299	GSIM	5.5	300	
909.334	ZE	7	100	

Options:		Options for GSIV:	
495.111	Spare battery for GSI/ZE (2 or 4 needed)	909.289	Mirror 35°
909.277	Xenon bulb for GSI	909.282	Mirror 45°
		909.288	Mirror 55°
		909.283	Magnet
Options for GSI-4:		Options for GSIM:	
909.278	Mirror 35°	909.291	Mirror 35°
909.274	Mirror 45°	909.284	Mirror 45°
909.275	Mirror 55°	909.290	Mirror 55°
Options for GSI-8:		Options for ZE:	
909.287	Mirror 35°	909.335	Mirror 35°
909.280	Mirror 45°	909.336	Mirror 45°
909.286	Mirror 55°	909.337	Mirror 55°
909.281	Magnet	909.338	Magnet
		909.339	Hook



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## Graduated rulers / Scale units / Circumference tapes Precision tapes / Distance meters



Accuracy of graduated rulers according DIN 2004/22		
Measuring range (mm)	Max. permissible errors ( $\pm$ mm)	
	EG I	EG II
0- 500	0.15	0.40
0- 1000	0.20	0.50
0- 1500	0.25	0.60
0- 2000	0.30	0.70
0- 3000	0.40	0.90
0- 4000	0.50	1.10

Accuracy of graduated rulers according DIN 866 form A/B		
Measuring range (mm)	Max. permissible errors ( $\pm$ mm)	
	form A	form B
0- 500	0.04	0.10
0- 1000	0.04	0.10
0- 1500	0.06	0.15
0- 2000	0.06	0.15
0- 3000	0.08	0.20
0- 4000	0.10	0.25
0- 5000	0.12	0.30

## Rulers

- Material: bright steel or stainless steel.
- No graduation on first 5 mm at both ends.
- Graduation: 1 mm.
- Accuracy according DIN 866 form A.
- Scale numbering from right to left is available at extra cost.



Dimensions <i>l x w x t</i> /mm	Bright steel		Stainless steel	
	Item No.	Price RUB	Item No.	Price RUB
500 x 30 x 6	776.280		776.371	
1000 x 40 x 8	776.281		776.366	
1500 x 40 x 8	776.282		776.289	
2000 x 50 x 10	776.283		776.399	
3000 x 50 x 10	776.284		776.369	
4000 x 60 x 12	776.285		776.407	
5000 x 70 x 14	776.400		776.408	
6000 x 70 x 14	776.401		776.409	

## Rulers

- Material: bright steel or stainless steel.
- Zero coincides with left end.
- Graduation: 1 mm.
- Accuracy according DIN 866 form B.
- Scale numbering from right to left is available at extra cost.



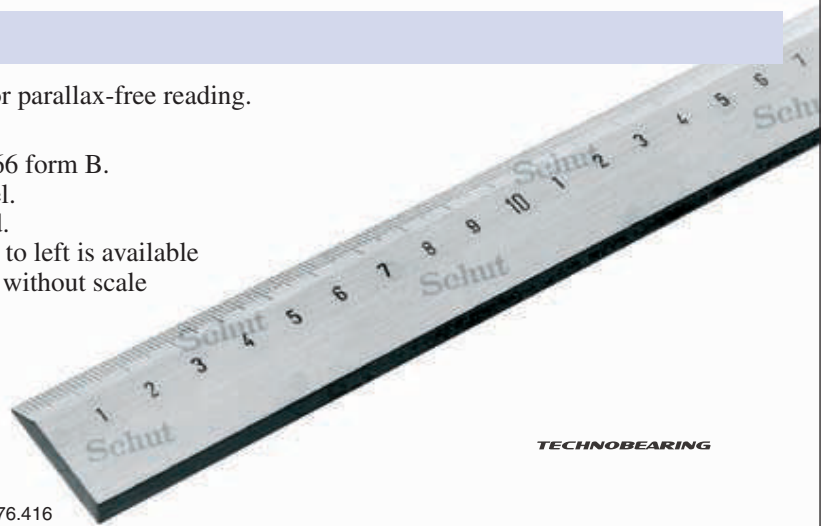
Dimensions <i>l x w x t</i> /mm	Bright steel		Stainless steel	
	Item No.	Price RUB	Item No.	Price RUB
500 x 25 x 5	776.270		776.276	
1000 x 30 x 6	776.271		776.277	
1500 x 30 x 6	776.272		776.360	
2000 x 40 x 8	776.273		776.373	
3000 x 40 x 8	776.274		776.357	
4000 x 50 x 10	776.275		776.410	
5000 x 60 x 12	776.396		776.395	
6000 x 60 x 12	776.415		776.411	

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## Rulers

Rulers with beveled edge for parallax-free reading.

- Graduation: 1 mm.
- Accuracy according DIN 866 form B.
- Bright steel or stainless steel.
- Zero coincides with left end.
- Scale numbering from right to left is available at extra cost. Also available without scale numbering.



776.416

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Dimensions <i>l x w x t</i> /mm	Bright steel		Stainless steel	
	Item No.	Price RUB	Item No.	Price RUB
500 x 30 x 6	776.416		776.250	
1000 x 40 x 8	776.417		776.251	
1500 x 40 x 8	776.398		776.252	
2000 x 50 x 10	776.418		776.253	
3000 x 50 x 10	776.419		776.254	
4000 x 60 x 12	776.420		776.255	

## Hardened and ground rulers

No-glare chrome finished stainless steel.

### With mm/0.5 mm graduation

Upper edge: mm graduation, lower edge: 0.5 mm graduation.

Item No.	Dimensions <i>l x w x t</i> /mm	Price RUB
775.300	150 x 15 x 0.5	
775.301	300 x 25 x 1	

### With mm/mm graduation

The first 100 mm on the lower edge have a 0.5 mm graduation.

Item No.	Dimensions <i>l x w x t</i> /mm	Price RUB
775.302	600 x 30 x 1.2	
775.303	1000 x 35 x 1.5	
775.304	2000 x 41 x 2	
775.305	3000 x 39 x 3	



775.302

### Hardened and polished rulers

- Stainless steel construction.
- With mm graduation on the upper edge.
- With 0.5 mm graduation on the lower edge.



Item No.	Dimensions l x w x t/mm	Price RUB
775.580	150 x 15 x 0.6	
775.582	450 x 29 x 1	
775.583	600 x 29 x 1.2	
775.584	1000 x 35 x 1.2	
775.585	1500 x 40 x 2	
775.586	2000 x 40 x 2	

### Aluminum rulers

- Anodized.
- With mm graduation.



775.590



775.600

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Item No.	Dimensions l x w x t/mm	Price RUB
<b>With slip-stopper:</b>		
775.590	300 x 35 x 1.5	
775.592	600 x 35 x 1.5	
775.593	1000 x 35 x 1.5	
<b>With handle and magnet:</b>		
775.600	450 x 50 x 3	
775.602	1000 x 50 x 3	

### Self-adhesive rulers

- Measuring range: 0 - 400 mm.
- Graduation: 1 mm, vernier: 0.1 mm.
- Blue anodized aluminum.
- With self-adhesive back.
- Suitable for positioning on measuring devices and machine elements.



#### Vernier 0.1 mm

- 10 scale divisions on 9 mm.
- Non-adhesive, furnished with two fixing holes  $\varnothing 2.5$  mm.

Item No.	Measuring range/mm	Dimensions l x w x t/mm	Price RUB
775.901	0 - 200	208 x 16 x 0.5	
775.902	0 - 300	308 x 16 x 0.5	
775.903	0 - 400	408 x 16 x 0.5	
775.900	Vernier 0.1 mm	40 x 10 x 0.5	

## Stainless steel rulers with L → R or R → L numbering

- Measuring range: 0 - 12000 mm.
- Graduation: 1 mm (type B: 0.5 mm).
- No-glare finished stainless steel surface.
- EC class II.
- Etched graduation.
- The rulers up to 4000 mm are conform EC class II.

**Available on request:**

- with graduation from top to bottom or from bottom to top,
- with different combinations (mm/mm, mm/inch, mm/blanc, etc.),
- with 0-point in the middle.

NEW



Item No.	Price RUB	Item No.	Price RUB	Item No.	Price RUB	Item No.	Price RUB	Dimensions l x w x t/mm
<b>L → R type A:</b>		<b>R → L type A:</b>		<b>L → R type B:</b>		<b>R → L type B:</b>		
835.120		835.121		835.421		835.422		150 x 13 x 0.5
835.122		835.123		835.298		835.440		200 x 13 x 0.5
835.124		835.125		835.427		835.441		250 x 13 x 0.5
835.126		835.127		835.129		835.442		300 x 13 x 0.5
835.130		835.131		835.354		835.443		500 x 18 x 0.5
835.132		835.133		835.252		835.444		1000 x 18 x 0.5
835.134		835.135		835.428		835.445		1500 x 18 x 0.5
835.136		835.137		835.429		835.446		2000 x 18 x 0.5
835.138		835.139		835.430		835.447		2500 x 18 x 0.5
835.140		835.141		835.431		835.448		3000 x 18 x 0.5
835.142		835.143		835.432		835.449		3500 x 18 x 0.5
835.144		835.145		835.433		835.450		4000 x 18 x 0.5
835.146		835.147		835.413		835.451		5000 x 18 x 0.5
835.148		835.149		835.434		835.452		6000 x 18 x 0.5
835.150		835.151		835.035		835.453		7000 x 30 x 1
835.152		835.153		835.435		835.454		8000 x 30 x 1
835.154		835.155		835.436		835.455		9000 x 30 x 1
835.156		835.157		835.437		835.456		10000 x 30 x 1
835.158		835.159		835.438		835.457		11000 x 30 x 1
835.160		835.161		835.439		835.458		12000 x 30 x 1



Type A: mm/mm (bottom and top side 1 mm graduation).

Type B: 0.5 mm/1 mm (top side 0.5 mm, bottom side 1 mm graduation).

**Rulers with a self-adhesive back**

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Item No.	Additional costs	Price RUB
835.165	For rulers up to 1000 mm (price per piece) For rulers from 1000 mm (price per meter)	

The self-adhesive back is *not* separately available.

**With 0-point in the middle**

Item No.	Dimensions l x w x t/mm	Price RUB
835.266	200 x 13 x 0.5	

Other sizes are also available.

## Rulers

### Stainless steel rulers with laser engraving

- With mm/mm graduation from left to right.
- Graduation: 1 mm.
- With identification number.
- EC class I.



835.462



### Stainless steel rulers with magnet inserts

- Graduation from left to right.
- Laser engraving.
- With 2 flat edges without hanger hole.
- Graduation on front and back side.
- Graduation: front side: 1 mm, 0.5 mm, back side: 1/32", 1/64".
- With removeable magnet inserts.
- EC class II.

835.473

### Rulers (black) with laser engraving

- Graduation on front and back side.
- Graduation: front side: 1 mm, 0.5 mm, back side: 1/10", 1/16", 1/20", 1/32", 1/64", 1/50", 1/100".
- EC class II.



835.466

### Stainless steel rulers with 90° anvil hook

- Graduation from left to right.
- Etched graduation.
- Graduation: front side: 1 mm, back side: 0.5 mm.
- EC class II.



835.476

**NEW**

TECHNOBEARING

Item No.	Dimensions l x w x t/mm	Material	Class	Price RUB
<b>Stainless steel rulers with laser engraving:</b>				
835.096	150 x 13 x 0.5	No-glare finished stainless steel surface	EC class I	
835.459	300 x 13 x 0.5	No-glare finished stainless steel surface	EC class I	
835.460	500 x 20 x 0.5	No-glare finished stainless steel surface	EC class I	
835.461	1000 x 20 x 0.5	No-glare finished stainless steel surface	EC class I	
835.462	300 x 30 x 1.0	No-glare finished stainless steel surface	EC class I	
835.463	500 x 30 x 1.0	No-glare finished stainless steel surface	EC class I	
835.464	1000 x 30 x 1.0	No-glare finished stainless steel surface	EC class I	
835.465	2000 x 30 x 1.0	No-glare finished stainless steel surface	EC class I	
<b>Rulers (black) with laser engraving:</b>				
835.466	150 x 18 x 0.5	Steel, black surface	EC class II	
835.467	300 x 30 x 1.0	Steel, black surface	EC class II	
835.468	450 x 30 x 1.0	Steel, black surface	EC class II	
835.469	600 x 30 x 1.0	Steel, black surface	EC class II	
835.470	1000 x 30 x 1.0	Steel, black surface	EC class II	
<b>Stainless steel rulers with magnet inserts:</b>				
835.471	150 x 20 x 1.0	No-glare finished stainless steel surface	EC class II	
835.472	300 x 30 x 1.0	No-glare finished stainless steel surface	EC class II	
835.473	600 x 30 x 1.0	No-glare finished stainless steel surface	EC class II	
835.474	900 x 30 x 1.0	No-glare finished stainless steel surface	EC class II	
835.475	1200 x 30 x 1.0	No-glare finished stainless steel surface	EC class II	
<b>Stainless steel rulers with 90° anvil hook:</b>				
835.476	200 x 13 x 0.5	No-glare finished stainless steel surface	EC class II	
835.477	300 x 13 x 0.5	No-glare finished stainless steel surface	EC class II	
835.478	500 x 18 x 0.5	No-glare finished stainless steel surface	EC class II	



## Digital horizontal scale units

These scale units are available in two different models. Up to 300 mm the model matches the photo of the 906.403, from 450 mm the photo of the 906.406.

- Measuring range: 0- 1000 mm.
- Resolution: 0.01 mm.
- Repeatability: 0.01 mm.
- mm/inch conversion.
- ABS/INC switchable (from 450 mm).
- On/off switch.
- Preset (from 450 mm).
- Reset.
- Max. measuring speed:  
 <500 mm: 1.5 m/s,  
 ≥500 mm: 1 m/s.
- Delivery with mounting material.
- Power supply: 1 battery type V357.
- Power supply:  
 906.400-403: 1 battery type V357,  
 906.404-409: 1 battery type CR2032.

Item No.	Measuring range/mm	Accuracy mm	Price RUB
906.400	0- 100	±0.03	
906.401	0- 150	±0.03	
906.402	0- 200	±0.03	
906.403	0- 300	±0.04	
906.404	0- 450	±0.05	
906.405	0- 500	±0.05	
906.406	0- 600	±0.05	
906.408	0- 800	±0.06	
906.409	0-1000	±0.07	
<b>Options:</b>			
836.535	Spare battery type V357		
495.157	Spare battery type CR2032		



## Digital vertical scale units

- Measuring range: 0- 1000 mm.
- Resolution: 0.01 mm.
- Repeatability: 0.01 mm.
- mm/inch conversion.
- ABS/INC switchable.
- On/off switch.
- Reset/preset.
- Max. measuring speed: 1 m/s.
- Delivery with mounting material.
- Power supply: 1 battery type V357.

Item No.	Measuring range/mm	Accuracy mm	Price RUB
906.415	0- 100	±0.03	
906.416	0- 150	±0.03	
906.417	0- 200	±0.03	
906.418	0- 300	±0.04	
906.419	0- 450	±0.05	
906.420	0- 500	±0.05	
906.421	0- 600	±0.05	
906.423	0- 800	±0.06	
906.424	0-1000	±0.07	
<b>Option:</b>			
836.535	Spare battery		



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906.417

### Internal circumference tapes

Circumference tapes to measure the internal circumferences and the average cross-section of round and not-round bores. The surface may be smooth or rough.

- Separate graduations for circumference and diameter in mm.
- Vernier: 0.1 mm.
- Tape width: 20 mm.
- Universal clamp for all types.
- Delivery without clamping jaw.
- Stainless steel construction.
- Accuracy according DIN 866.
- Available up to: diameter 2700 mm.



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Item No.	Diameter mm	Circumference mm	Price RUB
852.645	230- 490	720- 1550	
852.646	300- 700	940- 2200	
852.647	700- 1100	2190- 3460	
852.648	1100- 1500	3450- 4720	
852.649	Clamping jaw		

### Circumference tapes

- Separate graduations for circumference and diameter in mm.
- Vernier: 0.1 mm.
- Bright steel or stainless steel.
- Accuracy according DIN 2768 T1-m.
- With measuring report on request.



835.101

#### Bright steel

Item No.	Diameter mm	Circumference mm	Price RUB
835.111	20- 300	60- 950	
835.112	300- 700	940- 2200	
835.113	700- 1100	2190- 3460	
835.114	1100- 1500	3450- 4720	
835.115	1500- 1900	4710- 5980	
835.116	1900- 2300	5960- 7230	
835.117	2300- 2700	7220- 8500	
835.118	2700- 3100	8480- 9760	
835.119	3100- 3500	9730- 11010	

#### Stainless steel

Item No.	Diameter mm	Circumference mm	Price RUB
835.101	20- 300	60- 950	
835.102	300- 700	940- 2200	
835.103	700- 1100	2190- 3460	
835.104	1100- 1500	3450- 4720	
835.105	1500- 1900	4710- 5980	
835.106	1900- 2300	5960- 7230	
835.107	2300- 2700	7220- 8500	
835.108	2700- 3100	8480- 9760	
835.109	3100- 3500	9730- 11010	

## Circumference tapes

Highly precise circumference tapes, on which the scales have been placed by means of a laser.

- Separate graduations for circumference and diameter in mm.
- Vernier: 0.1 mm.
- Tape width: 16 mm.
- Accuracy according DIN 866.
- The black model (stainless steel) is for a better contrast.
- Available on request:
  - circumference scale in inches,
  - for larger diameters up to 7500 mm,
  - with measuring reports for one or both scales,
  - vernier 0.05 mm on diameter reading.

TECHNOBEARING



852.832

Item No.	Diameter mm	Circumference mm	Price RUB
<b>Bright steel:</b>			
852.823	20- 300	60- 950	
852.824	300- 700	940- 2200	
852.825	700-1100	2190- 3460	
852.826	1100-1500	3450- 4720	
852.827	1500-1900	4710- 5980	
852.828	1900-2300	5960- 7230	
852.829	2300-2700	7220- 8500	
852.830	2700-3100	8480- 9760	
852.831	3100-3500	9730-11010	
<b>Stainless steel:</b>			
852.832	20- 300	60- 950	
852.833	300- 700	940- 2200	
852.834	700-1100	2190- 3460	
852.835	1100-1500	3450- 4720	
852.836	1500-1900	4710- 5980	
852.837	1900-2300	5960- 7230	
852.838	2300-2700	7220- 8500	
852.839	2700-3100	8480- 9760	
852.840	3100-3500	9730-11010	
<b>Black model:</b>			
852.699	20- 300	60- 950	
852.915	300- 700	940- 2200	
852.280	700-1100	2190- 3460	
852.281	1100-1500	3450- 4720	
852.282	1500-1900	4710- 5980	
852.283	1900-2300	5960- 7230	
852.284	2300-2700	7220- 8500	
852.285	2700-3100	8480- 9760	
852.286	3100-3500	9730-11010	

## Circumference tapes for diameters

Circumference tapes for highly accurate measuring of diameters. The graduation has been placed by means of a laser.

- Graduation in mm.
- Vernier: 0.05 mm.
- Tape width: 12 mm.
- Stainless steel construction.
- Accuracy according DIN 866.
- The black model (stainless steel) is for a better contrast.
- Available on request:
  - measuring report.

Item No.	Diameter/mm	Price RUB
852.820	15- 115	
852.821	100- 230	
852.822	200- 330	
852.984	300- 620	
<b>Black model:</b>		
852.706	15- 115	
852.788	100- 230	
852.287	200- 330	
852.288	300- 620	



852.820

## Precision tapes

Cost effective rubberized precision tapes.

- Yellow varnished steel strip with mm graduation.

- One-sided printed blade.
- Matt finished steel blade.
- EC class II.
- Standard EC-type hook.



910.060



910.057

TECHNOBEARING

PRICE

**NEW**

Item No.	Length m	Tape width mm	Price RUB
910.056	2	16	
910.057	3	16	
910.058	5	19	
910.059	8	25	
910.060	10	25	

## Precision tapes

Precision tapes for professional use with double-sided printed blade and double hook with magnet.

- EC class II (except 910.064).
- EC class I (only 910.064).

- Shockproof til 2 m.
- Matt finished steel blade.
- Double-sided printed blade (except 910.064).
- Blade horizontal stand-out:  
19 mm: 1.7 m, 27 mm: 2.8 m.
- EC-type magnet dual hook (except 910.064).
- Double lock (except 910.064).
- Delivery with an inspection report (only 910.064).



910.062

**NEW**



910.062

PRICE

Item No.	Length m	Tape width mm	Price RUB
910.061	3	19	
910.062	5	27	
910.063	10	27	
<b>EC class I:</b>			
910.064	3	19	

## Long stroke precision tape

Long stroke precision tape with blade from fiberglass and with high speed retracting gear.

- Double-sided printed blade.
- EC class II.



**NEW**



Item No.	Length m	Tape width mm	Price RUB
910.065	30	15	

## Precision tapes Top-Stop / Double-Stop

- Yellow varnished steel strip with mm graduation.
- EC class II.
- Chrome colored, plastic housing.
- Stop button on top (775.500/503).
- Double stop button (775.506).

TECHNOBEARING



775.503



775.506

Item No.	Type	Length m	Tape width mm	Price RUB
775.500	Top-Stop	2	13	
775.503	Top-Stop	3	16	
775.506	Double-Stop	5	19	

## Long stroke precision tapes



775.543

- Black plastic housing with wristlet.
- White varnished steel strip with mm graduation.
- Winding-on handle.
- EC class II.

Item No.	Length m	Tape width mm	Price RUB
775.540	10	9.5	
775.541	15	9.5	
775.542	20	9.5	
775.543	30	9.5	

### Digital measuring tape

Digital measuring tape equipped with a 19 mm wide tape, which is provided with a clear graduation. The digital indication is convertible from external to internal measurements and can be reset to zero at any point on the tape.

- Measuring range: 0-5 m.
- Resolution: 1 mm.
- Accuracy:  $\pm(0.3+0.2L)$  mm ( $L$  in m).
- mm/inch conversion.
- Hold function.
- Reversal of display value.
- Automatic stop.
- Convertible for internal/external measurements.
- Storage for 8 measuring values.
- Dimensions: 75 x 70 mm.
- Power supply: 1 battery type CR2032.



Item No.	Length m	Tape width mm	Price RUB
909.341	5	19	
<b>Option:</b>			
495.157	Spare battery		

### Digital measuring wheel

With this measuring wheel long distance measurements can be done quickly and easily.

- Measuring range: 0- 10000 m.
- Resolution: 0.1 m.
- Accuracy: <0.5%.
- m/ft conversion.
- Wheel size:  $\varnothing$  160 mm.
- Display located near handle.
- Adjustable in height.
- Reset.
- Storage for 5 values.
- Weight: 0.8 kg.
- Delivery incl. pouch.
- Power supply: 2 batteries type AAA.
- Measuring range: 103.5- 500 cm.
- With mm graduation.
- Aluminum model with steel measuring faces.
- With circular spirit level (for vertical use) and horizontal spirit level.
- Delivery in a case.



Item No.	Description	Price RUB
909.518	Digital measuring wheel	
<b>Option:</b>		
497.914	Spare battery (2 needed)	

### Telescopic scale



Item No.	Description	Price RUB
909.519	Telescopic scale	



## Leica DISTO laser distance meter

With this compact hand laser distance meter you aim a visual laser spot at the object for quick and accurate measurements of the distance without contact. Beside the model shown below there are various other types available with extended functions.

- Measuring range: 0.05 - 100 m.
- Resolution: 0.001 m.
- Accuracy:  $\pm 1.5$  mm.
- Distance, surface and volume measurements, continuous measurements, addition and subtraction, min/max function, multifunctional end-piece and Pythagoras function.
- mm/inch conversion.
- Illuminated LCD display.
- On/off switch, automatic switch-off.
- Storage of the last measuring values.
- Bluetooth Smart.

- Measurement reference: front or rear.
- Dimensions and weight (incl. batteries): D2: 116 x 44 x 26 mm, 100 g.
- Protection: IP54.
- Laser: 635 nm, class II according IEC 60825-1.
- Power supply: 2 batteries type AAA.
- Available with a declaration of conformity.
- Various other types available.

**NEW**



774.244

Item No.	Type	Measuring range/m	Price RUB
774.244	DISTO D2	0.05 - 100	
<b>Options:</b>			
497.914	Spare battery (2 needed)		
774.059	Laser glasses for visible laser beam		

## Laser distance meters

With these compact hand laser distance meters you aim a visual laser spot at the object for quick and accurate measurements of the distance without contact.

- Measuring range: 0 - 80 m.
- Resolution: 0.001 m/0.01 m.
- Accuracy:  $\pm 2$  mm.
- Distance, surface and volume measurements, continuous measurements, addition and subtraction, min/max function and Pythagoras function.
- mm/inch/ft conversion.
- Illuminated LCD display.
- On/off switch, automatic switch-off.
- Measurement reference: front or rear.
- Storage for 99 measuring values.
- With thread for tripod.

- Laser: 635 nm, class II according IEC 60825-1.
- Dimensions: 120 x 55 x 30 mm.
- Weight: 909.453: 180 g, 909.454: 128 g.
- Power supply: 2 batteries type AAA.



Item No.	Measuring range/m	Price RUB
909.453	0 - 40	
909.454	0 - 80	
<b>Option:</b>		
497.914	Spare battery	

TECHNOBEARING



909.454

## Scribing tools / Compasses / Center squares



## Marking gauges

- Measuring range: 0 - 400 mm.
- Vernier: 0.1 mm.
- No-glare chrome finished beam.
- Roll stop.



TECHNOBEARING



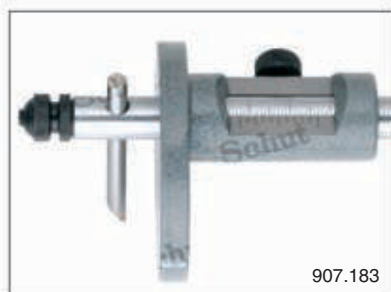
Item No.	Measuring range/mm	Price RUB
836.602	0 - 200	
836.604	0 - 400	
836.603	Spare scriber point	

## Marking gauges

- Measuring range: 0 - 500 mm.
- Vernier: 0.1 mm.
- With round rod and mm graduation.
- No-glare chrome finished.



907.187



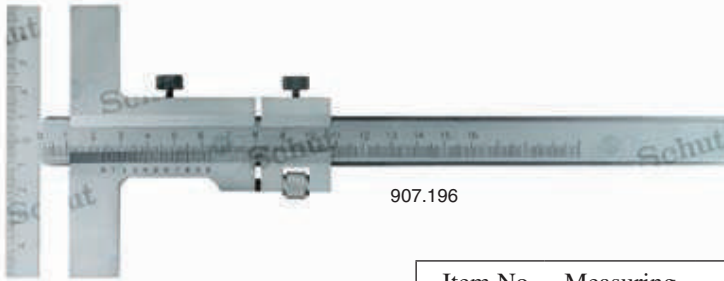
907.183

Item No.	Measuring range/mm	Price RUB
<b>Without fine adjustment:</b>		
907.183	0 - 200	
907.184	0 - 300	
907.185	0 - 400	
907.186	0 - 500	
<b>With fine adjustment:</b>		
907.187	0 - 200	
907.188	0 - 300	
907.189	0 - 400	
907.190	0 - 500	
907.191	Spare scriber point (TC)	

## Marking calipers

T-shaped stainless steel marking caliper with a large marking face/cross scale. The marking face is sunk into the U-shaped base face.

- Measuring range: 0- 500 mm.
- Locking screw.
- Vernier: 0.05 mm.
- With or without fine adjustment.
- No-glare chrome finished beam.
- Marking face/cross scale with mm graduation (50-0-50 mm).



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Item No.	Measuring range/mm	Base length/mm	Price RUB
<b>Without fine adjustment:</b>			
907.575	0-160	140	
907.576	0-250	140	
907.577	0-300	160	
<b>With fine adjustment:</b>			
907.196	0-160	140	
907.197	0-250	140	
907.198	0-300	160	
907.199	0-500	160	

## Marking gauges

- Measuring range: 0- 300 mm.
- Vernier: 0.1 mm.
- No-glare chrome finished beam.



907.180



Item No.	Measuring range/mm	Price RUB
907.180	0-200	
907.181	0-250	
907.182	0-300	

## Scriber



TECHNOBEARING



Item No.	Description	Price RUB
909.388	Scriber with clip, with tungsten carbide exchangeable point and magnetic upper part	
<b>Replacement point:</b>		
909.389	1 tungsten carbide scriber point for 909.388	

## Trammels

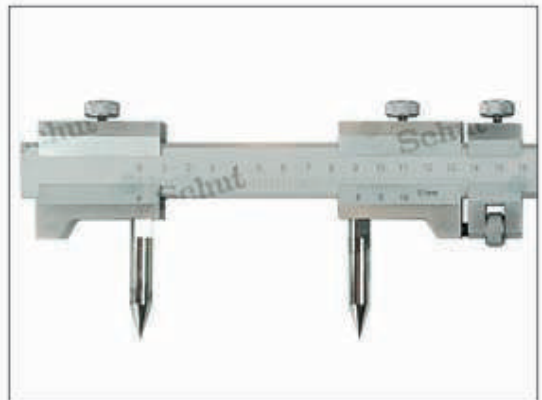
- Round rod with graduation.
  - Milled key groove.
  - Vernier: 0.1 mm.
  - Fine adjustment.
- (Also available without fine adjustment.)



Item No.	Length/mm	Price RUB
671.275	500	
671.276	1000	
671.277	1500	
671.278	2000	
<b>Needles per pair:</b>		
671.234	Hardened steel	
671.239	Tungsten carbide	

## Trammels

- Flat beam with graduation.
- Vernier: 0.1 mm.
- Fine adjustment.



Item No.	Length/mm	Price RUB
671.261	500	
671.262	1000	
671.263	1500	
671.264	2000	
<b>Needles per pair:</b>		
671.230	Hardened steel	
671.235	Tungsten carbide	

## Spring joint dividers

- Stainless steel construction.
- With adjustment screw.
- With interchangeable points (910.012-018, 907.447-448).
- With pencil holder (907.447-448).



Item No.	Description	Price RUB
907.446	Spare divider point $\varnothing 2 \times 30$ mm	

Length/mm	Item No.	Price RUB	Item No.	Price RUB	Item No.	Price RUB
100	–		910.012		–	
125	–		910.013		–	
150	907.827		910.014		907.447	
175	–		910.015		–	
200	907.828		910.016		907.448	
250	907.829		910.017		–	
300	907.830		910.018		–	
400	907.831		–		–	
500	907.832		–		–	
600	907.833		–		–	

## Firm joint compasses

- Stainless steel construction.
- With adjustment arch and locking screw (907.818-826, 909.461-469).
- With pencil holder (909.461-469).



TECHNOBEARING



Length/mm	Item No.	Price RUB	Item No.	Price RUB	Item No.	Price RUB
150	907.809		907.818		909.461	
200	907.810		907.819		909.462	
250	907.811		907.820		909.463	
300	907.812		907.821		909.464	
400	907.813		907.822		909.465	
500	907.814		907.823		909.466	
600	907.815		907.824		909.467	
800	907.816		907.825		909.468	
1000	907.817		907.826		909.469	



### Internal spring joint compasses

- Stainless steel construction.
- With adjustment screw.



TECHNOBEARING



Item No.	Length/mm	Price RUB
907.793	100	
907.794	125	
907.795	150	
907.796	200	
907.797	250	
907.798	300	
907.799	400	
907.800	500	

### External spring joint compasses

- Stainless steel construction.
- With adjustment screw.



Item No.	Length/mm	Price RUB
907.801	100	
907.802	125	
907.803	150	
907.804	200	
907.805	250	
907.806	300	
907.807	400	
907.808	500	

### Firm joint compasses

- Stainless steel construction.



Item No.	Length/mm	Price RUB
907.836	100	
907.837	125	
907.838	150	
907.839	200	
907.840	250	
907.841	300	
907.842	400	
907.843	500	
907.844	600	
907.845	800	
907.846	1000	

### Firm joint compasses

- Stainless steel construction.

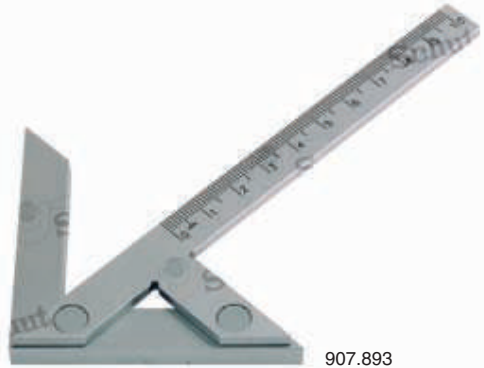


Item No.	Length/mm	Price RUB
907.847	100	
907.848	125	
907.849	150	
907.850	200	
907.851	250	
907.852	300	
907.853	400	
907.854	500	
907.855	600	
907.856	800	
907.857	1000	

## Center squares

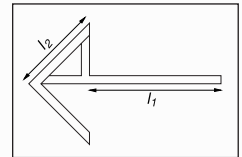
Center squares with mm graduation on the blade, to mark the center on round discs or axes.

- Stainless steel construction, no-glare chrome finished.
- Graduation placed by laser.



907.893

Item No.	Length/mm		Max. $\phi$ mm	Price RUB
	$l_1$	$l_2$		
907.893	100	70	90	
907.894	150	130	190	
907.895	200	150	220	
907.896	250	160	230	
907.897	300	180	280	
909.972	400	250	380	
909.973	500	330	530	



## Caliper compasses

- For scribing of diameters of 0-600 mm.
- Vernier: 0.1 mm.
- Stainless steel construction, no-glare chrome finished.
- Fixed jaw and beam made out of one piece.
- Hardened, ground and lapped measuring faces.



909.425

Item No.	For scribing up to $\phi$ /mm	Meas. range mm	Jaw length mm	Price RUB
909.424	300	150	40	
909.425	400	200	40	
909.426	500	250	40	
909.427	600	300	40	

TECHNOBEARING

### Universal setting instrument

This multilateral instrument is specially designed for manufacturers of very accurate products, such as gauges and toolmakers. The guide is installed under an angle of 20° and the components can be moved very accurately. The movable component has several threaded bores M4, by which the setting instrument also can be used as a scriber or height gauge.

- Max. height range incl. extensions: 270 mm.
- Dimensions: 133 x 64 x 18.5 mm.
- Delivery with extensions 25 mm and 75 mm (equipped with thread M4/thread hole M4).
- Base with vial.



906.455

Item No.	Description	Price RUB
906.455	Universal setting instrument	

### Surface gauge

Stable foot with V-slot at the ground surface, grips at the side and is also equipped with two bores (ø5.5 mm).

- Foot ground all around (except for the V-slot).
- Fine adjustment.
- Dimensions:  
 scriber: ø 4 x 200 mm,  
 arm: ø 10 x 300 mm, ø 10 x 450 mm,  
 foot: 85 x 65 x 25 mm.

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Item No.	Description	Price RUB
906.220	Surface gauge	

## Height and scribing gauges / Height gauges



## Digital height and scribing gauges

- Measuring range: 0- 1000 mm.
  - Resolution: 0.01 mm.
  - mm/inch conversion.
  - ABS/INC switchable.
  - On/off switch.
  - Reset.
  - Hold function.
  - Fine adjustment.
  - Delivery incl. scriber.
  - Power supply:  
909.244/245/246: 1 battery type V357,  
906.267/268: 1 battery type CR2032.
- From measuring range 500 mm:**
- Tolerance function.
  - Preset.



TECHNOBEARING



Item No.	Measuring range/mm	Accuracy mm	Price RUB
906.267	0- 200	±0.03	
906.268	0- 300	±0.04	
909.244	0- 500	±0.05	
909.245	0- 600	±0.07	
909.246	0- 1000	±0.07	
<b>Options:</b>			
836.535	Spare battery type V357		
495.157	Spare battery type CR2032		
906.029	Scriber for 906.267		
906.049	Scriber for 906.268		
906.054	Scriber for 909.244		
906.075	Scriber for 909.245		
906.077	Scriber for 909.246		

## Absolute digital height and scribing gauges

Digital height and scribing gauges with an absolute measuring system.

- Measuring range: 0 - 600 mm.
- Resolution: 0.01 mm.
- Handwheel drive for easy head displacement.
- Interchangeable scriber, intake 9 x 9 mm.
- ABS/INC switchable.
- Digimatic data output.
- On/off switch.
- Reset.
- Hold function.
- Locking screw.
- Delivery incl. scriber, dial indicator holder, Digimatic data cable and AC adapter.
- Power supply: 1 battery type CR2032 or AC adapter.

**NEW**

TECHNOBEARING



910.096



910.096



909.686



909.687



910.039/038

**PRICE**

Item No.	Measuring range/mm	Accuracy mm	Price RUB
910.096	0 - 300	0.03	
910.097	0 - 600	0.05	
<b>With Bluetooth:</b>			
910.098	0 - 300	0.03	
<b>Options:</b>			
495.157	Spare battery		
909.686	USB interface		
909.687	Footswitch for USB interface		
910.038	Wireless USB receiver		
910.039	Wireless sender		
906.256	Scriber		



### Special digital height and scribing gauges

The dual display model shows the measuring value on the displays on both sides of the instrument, ideal for left handed use. The magnetic base model is made primarily of plastic, which makes it very light and easy to handle. Due to the magnets in the flat plastic base the instrument can also be placed on magnetic surfaces at an angle.

- Measuring range: 0- 150 mm.
  - Resolution: 0.01 mm.
  - mm/inch conversion.
  - On/off switch.
  - Delivery incl. scriber.
  - Double display (906.225).
  - Magnetic base (906.226).
- Power supply:  
 906.225: 1 battery type V357,  
 906.226: 1 battery type CR2032.



Item No.	Accuracy/mm	Price RUB
906.225	±0.03	
906.226	±0.4	
<b>Options:</b>		
836.535	Spare battery type V357	
495.157	Spare battery type CR2032	
906.344	Scriber for 906.225	
906.354	Scriber for 906.226	



### Digital height and scribing gauge with dial indicator holder

Solid and stable instrument with integrated dial indicator holder and stainless measuring table.

- Measuring range: 0- 500 mm.
  - Resolution: 0.01 mm.
  - mm/inch conversion.
  - ABS/INC switchable.
  - On/off switch.
  - Preset.
  - Reset.
  - Hold function.
  - Tolerance function.
  - Fine adjustment.
  - Intake scriber: 8 x 6 mm.
  - Delivery incl. scriber.
- Dial gauge clamping shaft 8 mm.
  - Measuring table: 906.115/116: 80 x 80 mm,  
 906.117: 110 x 100 mm.
  - Power supply: 1 battery type V357.

TECHNOBEARING



Item No.	Measuring range/mm	Accuracy mm	Price RUB
906.115	0- 200	±0.04	
906.116	0- 300	±0.04	
906.117	0- 500	±0.06	
<b>Option:</b>			
836.535	Spare battery		
906.343	Scriber		



## Digital double columns height and scribing gauges

This is a very stable digital height gauge because of its twin guide system. The measuring unit moves over two independent columns with high precision toothed racks, which generates an accurate measurement.

- Measuring range: 0 - 600 mm.
- Resolution: 0.01 mm.
- Repeatability: 0.01 mm.
- Handwheel drive for easy head displacement.
- mm/inch conversion.
- ABS/INC switchable.
- On/off switch.
- Reset/preset.
- Intake scriber: 9 x 9 mm.
- Delivery incl. scriber.
- Power supply: 1 battery type V357.

TECHNOBEARING



906.263



Item No.	Measuring range/mm	Accuracy mm	Price RUB
906.263	0 - 300	±0.04	
906.264	0 - 450	±0.05	
906.265	0 - 600	±0.05	
<b>Option:</b>			
836.535	Spare battery		
906.118	Scriber 9 x 9 mm		

### Height and scribing gauges with dial and counter

- Measuring range: 0 - 1000 mm.
- Graduation dial indicator: 0.01 mm.
- Resolution counter: 1 mm.
- 1 pointer revolution = 1 mm.
- Rotatable dial.
- Double counter, one indicator in plus direction and one in minus direction.
- Zero setting possible at any height.
- Intake scriber: 9 x 9 mm.
- Delivery incl. scriber.



Item No.	Measuring range/mm	Accuracy mm	Price RUB
906.250	0 - 300	±0.04	
906.251	0 - 450	±0.05	
906.252	0 - 600	±0.05	
906.253	0 - 800	±0.06	
906.254	0 - 1000	±0.07	
<b>Option:</b>			
906.174	Scriber 9 x 9 mm		



### Height and scribing gauges with dial

These height gauges are equipped with a rack, as used for dial calipers.

- Measuring range: 0 - 300 mm.
- Graduation: 0.02 mm.
- 1 pointer revolution = 2 mm.
- Rotatable dial.
- Fine adjustment.
- Delivery in a case with a scriber.

TECHNOBEARING



Item No.	Measuring range/mm	Accuracy mm	Price RUB
906.260	0 - 150	±0.03	
906.261	0 - 200	±0.03	
906.262	0 - 300	±0.04	



## Height and scribing gauges

- Measuring range: 0 - 1000 mm.
- Vernier: 0.02 mm.
- Fine adjustment.
- Delivery incl. scriber.  
From 500 mm with fixed scriber.
- No-glare chrome finished scale and vernier.



Item No.	Measuring range/mm	Accuracy mm	Price RUB
906.325	0 - 200	±0.03	
906.326	0 - 300	±0.04	
906.327	0 - 500	±0.05	
906.328	0 - 1000	±0.07	

**Options:**

- 906.324 Scriber for 906.325/326
- 906.329 Scriber for 906.327/328



## Height and scribing gauges with magnifier

To minimize the possibility of reading errors these height gauges are equipped with a magnifier. The magnifier can be adjusted in height, so that it can always be positioned correctly with regard to the vernier.

- Measuring range: 0 - 500 mm.
- Vernier: 0.02 mm.
- Ruler adjustable in height.
- Fine adjustment.
- Intake scriber: 9 x 9 mm.
- Delivery incl. scriber.



Item No.	Measuring range/mm	Accuracy mm	Price RUB
906.255	0 - 300	±0.04	
906.257	0 - 500	±0.05	

**Options:**

- 906.269 Scriber for 906.255
- 906.323 Scriber for 906.257



Hardness testers / Thickness gauges / Thermometers  
Tachometers / Dynamometers / Inspection instruments



## Portable Shore hardness testers

Portable hardness testers to measure Shore hardness A or D, according to DIN ISO 7619-1, ISO 868 and ASTM D 2240.

- Measuring range: 0-100 Shore.
- Analog: graduation 1 Shore, digital: resolution 0.1 Shore.
- Measuring length: 2.5 mm.
- Material thickness: ≥6 mm.
- Delivery in a case.

TECHNOBEARING



### Analog

- Dial diameter: 57 mm.
- Dimensions: 110x58x30 mm.
- Weight: 230 g.

### Digital

Integrated sensor and equipped with comfortable buttons. Possibility for display of current, average and maximum measuring value.

- Accuracy: ±1 Shore.
- RS232C data output.
- On/off switch.
- Automatic switch-off.
- Max function.
- Calculation of the average of at most 9 measurements in “max mode”.
- Dimensions: 161 x 65 x 28 mm.
- Power supply: 4 batteries type AAA.



Item No.	Type	Meas. range/Shore	Price RUB
<b>Analog:</b>			
907.882	Shore A	20 - 90	
907.889	Shore D	20 - 90	
<b>Digital:</b>			
909.066	Shore A	0 - 100	
909.068	Shore D	0 - 100	
<b>Options:</b>			
497.914	Spare battery (4 needed)		
909.078	RS232C cable and software		
909.430	Shore A (30x90) test block set 50x50x7 mm		
909.431	Shore D (30x90) test block set 50x50x7.5 mm		



Type	Shore A	Shore D
Max. spring force	8.065 N	44.50 N
Impact module		
Applications	Soft rubber, elastomers, nature rubber, etc.	Hard rubber, thermoplastics, etc.

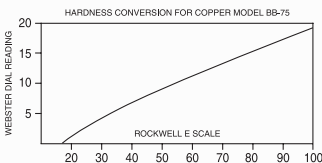
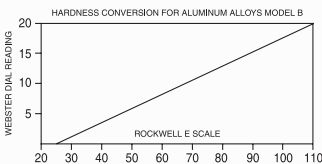
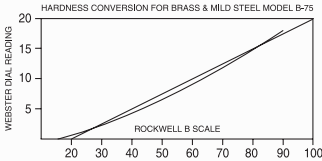


## Portable hardness testers

For measuring the hardness of various materials like aluminum, copper, brass and soft steel. Fit for various forms like extrusion profiles, tubes and flat materials.

- Measuring range: 0-20 Webster.

Values to convert by means of graph (Rockwell B or E Scale).



- Material thickness: 0.4-6 mm.

- Round anvil:  $\phi \frac{3}{8}$ ".

- Delivery in a case incl. spare penetrator, screwdriver, adjusting wrench, standard test strip and manual.



909.455

Item No.	Rockwell	Material	Price RUB
909.455	E25 - E110	aluminum	
909.456	B25 - B100	brass, hard aluminum, soft steel	
909.457	E20 - E100	copper	

## Portable digital hardness tester

This Swiss made quality product allows one to determine HRC hardness in the most simple way. Modern technology resulted in an extremely compact and easy to use tool. No switches, buttons or cables, simply pull up the ring, measure and immediately read out the value. The measurement causes hardly any damage to the product. Especially suitable for larger objects, installed machines and use in hard-to-reach places.

- Measuring range: 20-70 HRC.
- Resolution: 0.1 HRC.
- Accuracy:  $\pm 1.0$  HRC.
- Automatic switch-off.
- Operating temperature: 5 to 50°C.
- Dimensions:  $\phi 12 \times 140$  mm.
- Weight: 36 g.
- Power supply: 2 batteries type V394.

### Requirements

- Solid base (at least 5 kg) for objects < 5 kg.
- Minimum thickness of objects: 3 mm.
- Minimum thickness of a hardened top layer, if any: 0.7 mm.
- Minimum diameter of workpiece: 10 mm.
- Minimum radius of spherical measuring surface: 30 mm.



TECHNOBEARING



Item No.	Description	Price RUB
774.075	Digital hardness tester	
<b>Option:</b>		
420.248	Spare battery (2 needed)	

## Portable digital hardness testers

- Measuring range:  
HLD 200 - 890, HB 30 - 655,  
HRC 13.5 - 95.3, HV 80 - 976,  
HRB 46.5 - 101.7, HSD 26.4 - 99.5.
- Accuracy:  $\pm 0.5\%$  (at HLD 800).
- On/off switch, automatic switch-off.
- Storage for 1250 measuring values.
- Min. radius: 30 mm.
- Tungsten carbide stylus tip.
- ASTM A956.
- Delivery with an inspection report.

### Digital hardness tester (909.470)

- RS232C data output.
- Operating temperature: -20 to 50°C.
- Dimensions basic instrument: 108 x 62 x 25 mm.
- Weight basic instrument: 230 g.



909.470

**NEW**



Item No.	Description	Price RUB
909.470	Digital hardness tester	
909.485	Digital hardness tester	
<b>Options:</b>		
909.477	Set special support rings	
909.478 <sup>1</sup>	Testblock D, 2.5 kg	
909.479 <sup>1</sup>	Testblock G, 5.5 kg	
<b>Options (only for 909.470):</b>		
497.914	Spare battery (2 needed)	
909.480	Printer	
270.732	Printing paper (5 rolls)	
909.471	Ext. impact module D	
909.472	Ext. impact module G	
909.473	Ext. impact module C	
909.474	Ext. impact module DL	
909.481	Cable for ext. impact module	

<sup>1</sup> Delivery with an inspection report.

### Selection table materials for impact module D

Material	HLD	HRC	HRB	HB (30D <sup>2</sup> )	HSD	HV
bright steel	300-890	19.8-68.5	59.6- 99.6	80-651	26.4-99.5	83-976
tool steel	300-840					80-898
stainless steel	300-800	20.4-67.1		85-655		85-802
gray cast iron	444-650		46.5-101.7	140-334 (30D <sup>2</sup> )		
cast iron	416-658	19.6-62.4		140-384 (30D <sup>2</sup> )		
cast aluminum	200-560			30-159 (10D <sup>2</sup> )		
brass	200-550	13.5-95.3		40-173 (10D <sup>2</sup> )		
bronze	300-700			60-290 (10D <sup>2</sup> )		
copper	200-690			45-315 (10D <sup>2</sup> )		

- Delivery in a case with RS232C-USB adapter, software and cable, small supporting ring, test block, impact module D (909.471) and leather wrist strap.
- Power supply: 2 batteries type AAA.

### Digital hardness tester (909.485)

- With integrated impact module D.
- USB data output.
- Operating temperature: -20 to 40°C.
- Dimensions basic instrument: 158 x 41 x 26 mm.
- Weight basic instrument: 120 g.
- Delivery in a case with AC adapter/charger, software and cable, small supporting ring, test block and integrated impact module D.
- Power supply:  
1 rechargeable battery 3.7 V.
- AC adapter/charger.



909.485

TECHNOBEARING



909.480

## Portable digital hardness testers (continued)

### Optional impact devices

#### External impact module D

External module, instead of standard module.

#### External impact module DL

With thin, long probe on the impact module for measuring in grooves, blind bores etc.

#### External impact module C

4x reduced impact energy for hardened components, thin-walled materials and coatings.

#### External impact module G

9x higher impact energy for rough casting pieces etc.

**NEW**

Impact devices	D	DL	C	G
Max. roughness (Ra)	2	2	0.4	7
Impacting energy (Nmm)	11	11	3	90
Mass of impact body (g)	5.5	7.8	3.0	20
Impact body length (mm)	147	250	141	254
Max. hardness of workpiece (HV)	940	940	1000	–
Max. hardness of workpiece (HB)	–	–	–	650
Min. weight of sample:				
of compact shape (kg)	5	5	1.5	15
on solid support (kg)	2	2	0.5	5
coupled on plate (kg)	0.1	0.1	0.02	0.5
Min. thickness of sample:				
coupled (mm)	3	3	1	10
min. thickness of hardened layers (mm)	0.8	0.8	0.2	–



909.471



909.472



909.473



909.474

### Impact bodies

Item No.	Description	Price RUB
909.482	Impact body D	
909.483	Impact body G	
909.564	Impact body C	
909.484	Impact body DL	

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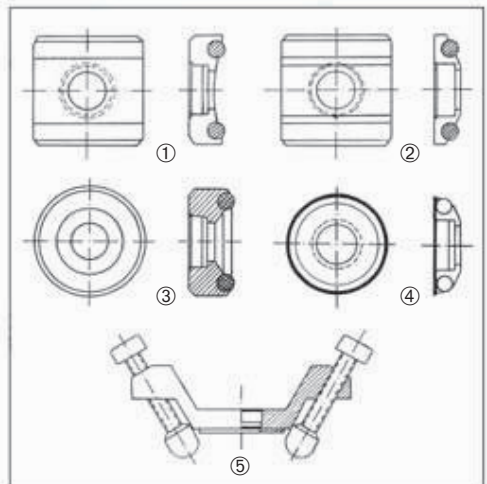
909.477



### Set special support rings

#### The set consists of

Type	Description
①	Cylindrical outside surface R10 - R15
①	Cylindrical outside surface R14.5 - R30
①	Cylindrical outside surface R25 - R50
②	Cylindrical inside surface R11 - R13
②	Cylindrical inside surface R12.5 - R17
②	Cylindrical inside surface R16.5 - R30
③	Spherical outside surface SR10 - SR15
③	Spherical outside surface SR14.5 - SR30
③	Spherical outside surface SR11 - SR13
④	Spherical inside surface SR12.5 - SR17
④	Spherical inside surface SR16.5 - SR30
⑤	Cylindrical outside surface, radius adjustable $\geq R10$



## Portable digital hardness tester

With this portable hardness tester one can easily measure the hardness of installed machines or steel constructions, in hard-to-reach places, of heavy and large objects and for example for inspection of large series in the production process. The most common hardness scales can be measured and read out directly on the screen.

- Measuring range with impact module D:  
HLD 200-900, HB 30 -650,  
HRC 20- 68, HV 80 -940,  
HRB 20-100, HSD 32.5- 99.5.
- Accuracy: ±0.8% (at HLD 800).
- On/off switch, automatic switch-off.
- Storage for 500 measuring values.
- Calculates automatically the average of at most 7 measuring values.
- Min. radius: 30 mm.
- Operating temperature: 0 to 45°C.
- Admissible relative humidity: <90%.
- Dimensions basic instrument: 170 x 68 x 30 mm.
- Weight basic instrument: 250 g.
- Delivery including:
  - integrated impact module D,
  - test block HLD 2.5 kg,
  - 2 batteries.
- ASTM A956.
- Delivery with an inspection report.
- Power supply: 2 batteries type AAA.

### External impact module G

9x higher impact energy for rough casting pieces etc.

### External impact module C

4x reduced impact energy for hardened components, thin-walled materials and layers on a surface.

### External impact module DL

With thin, long probe on the impact module for measuring in grooves, blind bores etc.

### External impact module D

External module, instead of standard module.



Item No.	Description	Price RUB
906.804	Digital hardness tester	
<b>Options:</b>		
497.914	Spare battery (2 needed)	
906.816	Ext. impact module G	
906.813	Ext. impact module C	
906.817	Ext. impact module DL	
906.812	Ext. impact module D	
906.834 <sup>4</sup>	Test block HLD 2.5 kg	

<sup>4</sup> Delivery with an inspection report.

### Requirements

Impact module	Min. weight workpiece/kg <sup>1</sup>	Min. weight workpiece/kg <sup>2</sup>	Min. thickness/mm object	Max. hardened top layer <sup>3</sup>	Max. roughness Ra/μm
C	0.5	1.5	1	0.2	0.4
D/DL	2	5	5	0.8	1.6
G	5	15	10	–	6.3

<sup>1</sup> On a solid base of at least 5 kg.

<sup>2</sup> Without solid base.

<sup>3</sup> Minimum thickness of a hardened top layer, if any.

### Selection table materials for impact module D/DL

Material	HLD	HRC	HRB	HB (30D <sup>2</sup> )	HSD	HV
bright steel	300-900	20.0-68.0	38.4- 99.5	80-647	32.5-99.5	80-940
tool steel	300-840	20.4-67.1				80-898
stainless steel	300-800	19.6-62.4	46.5-101.7	85-655		85-802
gray cast iron	400-660			131-387		
cast iron	360-650			90-334		
cast aluminum	200-560			30-160 (10D <sup>2</sup> )		
brass	200-550		20.0- 95.3	40-173		
bronze	300-700			60-290		
copper	200-690			45-315		

TECHNOBEARING

## Digital thickness gauge

This thickness gauge measures non-destructively the thickness and speed of sound from several materials according to the ultrasonic measuring principle (as illustrated).

- Measuring principle: ultrasonic.
- Measuring range for steel: 1.2 - 200 mm.
- Resolution: 0.1 mm.
- Accuracy:  $\pm(0.5\%H+0.1 \text{ mm})$   
(H = measured value).
- Measuring frequency: 5 MHz.
- Speed of sound: 1000 - 9000 m/s.
- mm/inch conversion.
- RS232C data output.
- On/off switch.
- Automatic switch-off.
- 11 presets for the speed of sound of various materials (cd01 - cd11) and one configurable speed of sound (cd12).

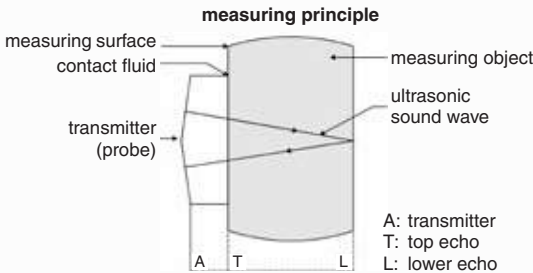
- Calibration standard on side of basic instrument.
- Operating temperature: 0 to 50°C.
- Admissible relative humidity: <80%.
- Dimensions: 120 x 60 x 30 mm.
- Weight basic instrument: 260 g.
- Power supply: 4 batteries type AAA.

### Test block for calibration (909.398)

For the inspection and calibration of digital thickness gauges.

- Heights: 2.5 - 25 mm, incr. 2.5 mm.
- Tolerance: 0.1 mm (flatness:  $\pm 0.05 \text{ mm}$ ).
- Material: steel.

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### Delivery including:

- small, rectangular probe (measuring face  $\varnothing 10 \text{ mm}$ ),
- contact fluid,
- manual,
- 4 batteries.



Preset code	Material
cd01	steel
cd02	cast iron
cd03	aluminum
cd04	copper (red copper)
cd05	brass
cd06	zinc
cd07	quartz glass
cd08	polyethylene
cd09	PVC
cd10	gray cast iron
cd11	nodular/ductile cast iron

Item No.	Description	Price RUB
909.139	Thickness gauge	
<b>Options:</b>		
497.914	Spare battery (4 needed)	
909.075	RS232C cable and software	
909.576	Contact fluid (approx. 75 ml)	
909.398	Test block for calibration	

909.398





## Digital thickness gauges

This thickness gauge measures non-destructively the thickness and speed of sound from several materials according to the ultrasonic measuring principle. The Echo-Echo model is capable of measuring the material thickness even through coatings.

- Resolution: 0.1 mm or 0.01 mm.
- Accuracy (H = measured value):
  - 0.65 - 9.99 mm:  $\pm 0.04$  mm,
  - 10.00 - 99.99 mm:  $\pm (0.1\%H + 0.04$  mm),
  - 100.0 - 400.0 mm:  $\pm 0.3\%H$ .
- Measuring frequency: 5 MHz (standard probe).
- 9 preset materials (aluminum, titanium, steel, stainless steel, glass, copper, cast iron, brass and polystyrene) and one configurable speed of sound.
- mm/inch conversion.
- LCD display with backlight.
- On/off/reset switch.
- Automatic switch-off.
- Calibration standard on side of basic instrument.
- Operating temperature: -20 to 50°C.
- Dimensions: 116 x 64 x 27 mm.
- Weight basic instrument: 220 g.
- Delivery including inspection report (standard probe).
- Delivery including contact fluid.
- Power supply: 2 batteries type AAA.

### Standard model

- Measuring range: 0.8 - 300 mm (standard probe).
- Delivery including standard probe (909.570).

### Echo-Echo model

Echo-Echo mode is only available with the standard probe, 909.575.

- Measuring range:
  - normal mode: 1.44 - 200 mm (standard probe),
  - Echo-Echo mode: 3 - 25 mm (standard probe).
- Maximum coating thickness: 2 mm.
- Delivery including standard probe (909.575).

### Models with USB output only

- Tolerance settings with alarm function.
- Memory for 5000 measurements.
- Delivery including software and cable.



Item No.	Description	Price RUB
<b>Thickness gauges:</b>		
909.566	Without USB data output	
909.567	With USB data output	
<b>Echo-Echo model:</b>		
909.568	Without USB data output	
909.569	With USB data output	
<b>Options:</b>		
497.914	Spare battery (2 needed)	
909.576	Contact fluid (approx. 75 ml)	
909.398	Test block for calibration	

### Test block for calibration (909.398)

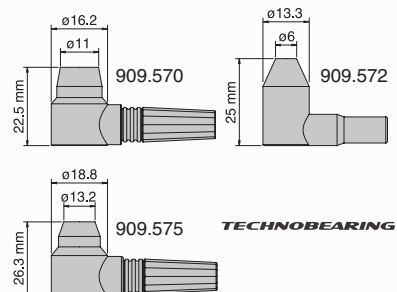
For the inspection and calibration of digital thickness gauges.

- Heights: 2.5 - 25 mm, incr. 2.5 mm.
- Tolerance: 0.1 mm (flatness:  $\pm 0.05$  mm).
- Material: steel.



### Optional probes

Item No.	Mode	Measuring range/mm	Measuring frequency MHz	Minimum tube diameter/mm	Price RUB
909.570		0.8 - 300	5	$\varnothing 20 \times 1.2$	
909.572		0.65 - 20	10	$\varnothing 10 \times 4.0$	
<b>For Echo-Echo model only:</b>					
909.575	Normal	3.0 - 25	5	$\varnothing 25 \times 3$	
	Echo-Echo	1.44 - 200			





## Digital coating thickness gauges

Measurements of coating thickness of paint, coating, foil etc. (non-magnetic layers) on a magnetic (ferro) and/or non-magnetic (non-ferro) metal substrate. Available with integrated or external sensor, in single or combined (automatically selecting magnetic/non-magnetic) model. Furthermore there is a one-button model, specifically designed for the automobile industry.

- Measuring principles: magnetic induction (ferro) and eddy current (non-ferro).
- Measuring range: 0 - 1250  $\mu\text{m}$ .
- Resolution: 0.1  $\mu\text{m}$  (< 100  $\mu\text{m}$ ),  
1  $\mu\text{m}$  ( $\geq 100 \mu\text{m}$ ).
- Accuracy:  $\pm 3\%H$  or 3  $\mu\text{m}$  (H = measured value).
- $\mu\text{m}/\text{mil}$  conversion.
- RS232C data output.
- Automatic switch-off.
- Minimum measuring area: 6 x 6 mm.
- Minimum substrate thickness: 0.3 mm.
- Minimum object radius:  
ferro: 1.5 mm (convex), 25 mm (concave),  
non-ferro: 3 mm (convex), 50 mm (concave).
- Dimensions: 131 x 65 x 28 mm.
- Delivery in a case with ferro and non-ferro base plate and reference standards.
- Power supply: 4 batteries type AAA.



909.070



909.072

TECHNOBEARING



909.062

Item No.	Type/description	Price RUB
<b>With integrated sensor:</b>		
909.060	Ferro	
909.069	Non-ferro	
909.070	Non-ferro and ferro	
<b>With external sensor:</b>		
909.061	Ferro	
909.071	Non-ferro	
909.072	Non-ferro and ferro	
<b>One-button model:</b>		
909.062	Non-ferro and ferro	
<b>Options:</b>		
497.914	Spare battery (4 needed)	
909.073	RS232C cable and software	

## Digital coating thickness gauge

Measurements of coating thickness of paint, coating, foil etc. (non-magnetic layers) on a magnetic (ferro) and non-magnetic (non-ferro) metal substrate.

- Measuring principles: magnetic induction (ferro) and eddy current (non-ferro).
- Measuring range: 0- 1300  $\mu\text{m}$ .
- Resolution: 1  $\mu\text{m}$  ( 0- 999  $\mu\text{m}$ ),  
10  $\mu\text{m}$  (1000- 1300  $\mu\text{m}$ ).
- Accuracy:  $\pm(3\% + 2 \mu\text{m})$ .
- Statistics: number of measurements, mean, minimum, maximum and standard deviation.
- $\mu\text{m}/\text{mil}/\text{mm}$  conversion.
- USB data output.
- Illuminated LED display.
- On/off switch.
- Automatic switch-off.
- Minimum measuring area:  $\varnothing 6 \text{ mm}$ .
- Minimum substrate thickness:  
ferro: 0.5 mm, non-ferro: 0.3 mm.
- Minimum object radius:  
1.5 mm (convex), 25 mm (concave).
- Maximum measuring frequency: 2 times per second.
- Adjustable tolerance limits (alarm signal on display and acoustic).
- Operating temperature: 0 to 40°C.
- Admissible relative humidity: 20-90%.
- Dimensions: 110 x 53 x 24 mm.
- Weight: 92 g.
- Delivery in a case with USB cable, software, ferro and non-ferro base plate, reference standards and an inspection report.
- Power supply: 2 batteries type AAA.

**NEW**

TECHNOBEARING



Item No.	Description	Price RUB
909.116	Coating thickness gauge	
<b>Option:</b>		
497.914	Spare battery (2 needed)	

## Digital thermometer

- Measuring range: -50 to 750°C.
- Resolution: 1°C.
- Accuracy (H = measured value):
  - 50 to -20°C: ±4°C,
  - 20 to 0°C: ±3°C,
  - 0 to 750°C: ±(0.75%H+1°C).
- On/off switch.
- Hold function.
- Delivery incl. TP01 probe (909.076).
- Weight (incl. battery): approx. 150 g.
- Power supply: 1 battery type PP3 (9 V).



Item No.	Measuring range/°C	Price RUB
909.145	-50 to 750	
<b>Option:</b>		
495.161	Spare battery	



Item No.	Type	Measuring range/°C	Applications	Material probe	Price RUB
909.076	TP01	-50 to 204	air	steel	
909.077	TP02	-50 to 700	air, steam, liquids	stainless steel	

## Contact thermometers

Temperature fluctuations can have a major influence on the precision of products and measuring instruments that have to be manufactured. This thermometer has a very good heat transmission, allowing you to measure the exact temperature of a product within a few minutes.

- Measuring range: 16-26°C.
- Accuracy:
  - 633.250: between 18 and 22°C: ±0.1°C,
  - 633.251: between 17 and 23°C: ±0.1°C.

TECHNOBEARING



Item No.	Measuring range/°C	Graduation °C	Total length (incl. base)/mm	Dimensions base l x w x h/mm	Weight kg	Price RUB
633.250	16-26	0.2°C	113	12 x 12 x 28	0.03	
633.251	17-23	0.1°C	100	10 x 10 x 25	0.025	

## Infrared thermometers

These hand-held infrared thermometers are extremely suitable for fast non-contact temperature measurements. Equipped with laser for easy aiming at the object. With adjustable emissivity for different surfaces. Applications: for example in the food, automotive and chemical industries, in the process technology and for research purposes.

- Measuring range: -60 to 760°C.
- Resolution: 0.1 or 0.2°C.
- Accuracy: ±2°C or ±2%.
- °C/°F conversion.
- Emissivity preset (standard 0.95).

- Automatic switch-off.
- Hold function.
- Min/max function.
- Operating temperature: 0 to 50°C.
- Measuring time: 1000 ms.
- Laser: 635 - 660 nm, class 2.

### Models

The infrared thermometers have different optics ratios, which makes them applicable for different working distances:

- 908.800: for measurements at small distances,
- 909.413: with a fixed small working distance and a dual laser pointer for targeting,
- 909.412: for measurements at large distances or with a large temperature range.



908.800



909.413

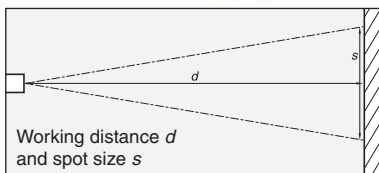


909.412

TECHNOBEARING



Material	T/°C	Emissivity
Cement	0 - 200	0.96
Cloth	93	0.90
Paper	38 - 371	0.93
Granite	21	0.45
Steel	25	0.65
Cast iron	100	0.21
Cold milled steel	93	0.75 - 0.85
Stainless steel	24	0.28
White alumina ceramics	93	0.90
Hard rubber	23	0.94
Soft rubber	24	0.86



### Spare batteries

Item No.	Type	Price RUB
495.157	CR2032	
497.914	AAA	

Item No.	908.800	909.413	909.412	
Price	RUB			
Measuring range	°C	-55 to 250	-55 to 220	-60 to 760
Working distance $d$ Optics ratio $d : s$		small 6 : 1	18 mm ( $s=2.5$ mm)	large 30 : 1
Resolution	°C	0.1	0.2	0.1
Wave length	µm	5 - 14	5 - 14	8 - 14
Laser pointer		✓	✓ (dual)	✓
Emissivity		0.05 - 1 (incr. 0.01)	0.05 - 1 (incr. 0.01)	0.10 - 1 (incr. 0.01)
Emissivity preset		0.95	0.95	0.95
Illuminated LCD display		-	-	✓
Dimensions	mm	103 x 50 x 23	171 x 41 x 27	146 x 133 x 49
Weight (incl. batteries)	g	65	125	222
Power supply (batteries)		2x CR2032	2x AAA	2x AAA

### Digital thermometer

- Measuring range: -40 to 200°C.
- Resolution: 0.1°C.
- Accuracy:
  - 0 to 100°C: ±1°C,
  - 100 to 200°C: ±2°C.
- Stainless steel measuring pin.
- °C/°F conversion.
- On/off switch.
- Power supply: 1 battery type V357.



TECHNOBEARING



Item No.	Measuring range/°C	Price RUB
909.421	-40 to 200	
<b>Option:</b>		
836.535	Spare battery	

### Digital thermal imager

With this thermal imager one can easily measure and display (2.8" LCD color display) the thermal image and temperature.

- Measuring range: -20 to 250°C.
- Field of view: 40 x 40°.
- Accuracy: ±2°C or ±2%.
- Thermal sensitivity: 0.1°C.
- Thermal image resolution: 32 x 31 px.
- Emissivity preset: 0.95, selectable 0.10-1.00 per 0.01.
- USB data output.
- On/off switch.
- Automatic switch-off.
- Adjustable tolerance limits.
- Backlight with 3 selectable levels of brightness.
- °C/°F/°K conversion.
- 4 selectable color palettes.
- Alarm for adjustable upper and lower limit of the temperature.
- Frame rate: 9 Hz.
- Spectral range: 8 - 14 μm.
- Time stamp for images.
- Storage for 25000 images.
- Memory card: micro SDHC 8 GB, including adapter for SD card reader.
- Dimensions: 95 x 75 x 233 mm.
- Weight (incl. batteries): 390 g.
- Protection: IP54.  
(When using data output: IP40.)
- Delivery in a case with USB cable and software.
- Power supply: 4 batteries type AA.



Item No.	Description	Price RUB
909.429	Thermal imager	
<b>Option:</b>		
495.111	Spare battery (4 needed)	



## Digital thermohygrometer

- Measuring range: -10 to 50°C, 5-98%RH (with no condensation).
- Resolution: 0.1°C, 0.1%RH.
- Accuracy temperature: ±1°C.
- Accuracy relative humidity at 25°C: ≤30%RH: ±5%RH, >30%RH: ±3%RH.
- °C/°F conversion.
- Measuring frequency: 2.5 times per second.
- Illuminated LCD display.

- On/off switch.
- Automatic switch-off.
- Hold and min/max functions.
- Dimensions: 151 x 83 x 26.5 mm.
- Weight: 251 g.
- Delivery in a case.
- Power supply: 1 battery type PP3 (9 V).



TECHNOBEARING



Item No.	Measuring range/°C	Measuring range/%RH	Price RUB
909.130	-10 to 50	5-98	
<b>Option:</b>			
495.161	Spare battery		

## Digital thermohygraph for permanent monitoring

The new technology for permanent 24 hours registering and checking the temperature and humidity in the area and measuring rooms. Typical metrology room temperature is 20±0.05°C, with a resolution of 0.1°C for registering the temperature.

- Measuring range: -10 to 60°C, 0-100%RH (with no condensation).
- Resolution: 0.01°C, 0.1%RH.
- Accuracy temperature: ±(0.1 + |T-20|/250)°C (T in °C).
- Accuracy relative humidity: 4%RH.
- °C/°F conversion.
- Min/max/P-P function.
- Stand-alone: memory for 500 000 measurements (interval: adjustable).
- Data-logger with Bluetooth, SD card and USB connection for data analysis (initial settings via PC).
- Including software for Windows (7 or later) and app for Android and IOS.

- Audiovisual alarms: temperature: 2 upper and 2 lower limits, humidity: 4 limits, temperature change: 2 limits.
- Graphs: on e-paper display or PC.
- Including wall support and desk stand.
- Dimensions: 75 x 110 x 30 mm.
- Delivery in a case.
- Power supply: 2 batteries type AA or USB (adapter not supplied).



Item No.	Description	Price RUB
837.800	Thermohygraph	
<b>Option:</b>		
495.111	Spare battery (2 needed)	



## Digital tachometers – contact, laser, laser/contact

With these digital laser tachometers very accurate non-contact and/or contact measurements can be done easily.

- Measuring range contact: 0.5 - 19999 rpm,  
0.05 - 1999.9 m/min.
- Measuring range laser: 2.5 - 99999 rpm.
- Resolution:  
  - < 1000 rpm: 0.1 rpm,
  - ≥ 1000 rpm: 1 rpm,
  - < 100 m/min: 0.01 m/min,
  - ≥ 100 m/min: 0.1 m/min.
- Range: 5 - 50 cm (laser).
- Accuracy: ±(0.05% + 1 digit).
- Laser/contact switchable (909.146).
- Automatic switch-off.
- Functions: max., min. and last measured value.
- Dimensions and weight:  
  - 909.148: 174 x 72 x 38 mm, 240 g,
  - 909.152: 182 x 70 x 34 mm, 170 g,
  - 909.146: 198 x 70 x 34 mm, 225 g.
- Laser class 2 according IEC825-1 and EN60825-1.
- Power supply:  
  - 909.148: 4 batteries type AA,
  - 909.152: 3 batteries type AAA,
  - 909.146: 4 batteries type AAA.



909.148



909.152



909.146

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909.348

Item No.	Description	Price RUB
909.148	Digital contact tachometer	
909.152	Digital laser tachometer	
909.146	Digital laser/contact tachometer	
<b>Options:</b>		
497.914	Spare battery type AAA	
495.111	Spare battery type AA	
906.811	Reflective tape per meter (width 25 mm, for laser tachometers)	
909.348	Set contact points for tachometers 909.146/148	

## Digital torquemeters

Instrument for the testing and measuring of torque.

- Measuring range: 0- 500 N·m.
- N·m/kgf·cm/lbf·inch conversion.
- RS232C data output.
- Automatic switch-off.
- Peak hold function.
- Go/NoGo tolerance evaluation.
- Memory for 10 values.
- Average value calculation.
- Weight: 2.4 kg (model I) or 22 kg (model II).
- With built-in printer (only model II).
- Delivery with an RS232C cable.
- Power supply: AC adapter 220 V, 300 mA (model I) or 220<sup>±10%</sup> V, 100 W (model II).



model I



model II

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Item No.	Measuring range/N·m	Resolution N·m	Accuracy	Price RUB
<b>With integrated sensor (model I):</b>				
909.370	0- 1	0.0005	±0.5%	
909.371	0- 5	0.002	±0.5%	
909.372	0- 10	0.005	±0.5%	
<b>With external sensor (model II):</b>				
909.373	0- 50	0.02	±1%	
909.374	0- 100	0.05	±1%	
909.375	0- 500	0.2	±1%	
<b>Option:</b>				
900.825	Printing paper (5 rolls)			

## Strain gauges

Handy strain gauges suitable for measurements in two directions.

- Measuring range: 0.005 - 100 N.
- Indication accuracy:  
± 2% of the entire scale.
- With peak pointer.



857.701

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857.724

### Small model

Item No.	Measuring range/cN	Graduation cN	Price RUB
857.701	0.5 - 5	0.1	
857.702	1.5 - 15	0.5	
857.703	3 - 30	1	
857.704	5 - 50	1	
857.705	10 - 100	2	
857.706	15 - 150	5	
857.707	25 - 250	5	

### Large model

Item No.	Measuring range/N	Graduation N	Length mm	Price RUB
857.721	0.25 - 2.5	0.05	153.5	
857.722	1 - 5	0.1	153.5	
857.723	1 - 10	0.5	153.5	
857.724	2 - 20	1	153.5	
857.725	3 - 30	0.5	153.5	
857.726	4 - 40	1	153.5	
857.727	5 - 50	1	127.5	
857.728	10 - 100	2	127.5	

## Strain gauges

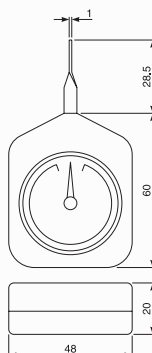
Handy measuring instruments suitable for measurements in two directions. Used to check the measuring force of dial indicators, lever type indicators, CMM probes etc. The flat touch surface has a  $\varnothing 1$  mm bore.

- Measuring range: 0.006 - 5 N.
- Indication accuracy:  
± 4% of the entire scale.

- With peak pointer.



Item No.	Measuring range/N	Graduation N	Price RUB
909.390	0.006 - 0.05	0.002	
909.391	0.01 - 0.1	0.005	
909.392	0.03 - 0.3	0.01	
909.393	0.04 - 0.5	0.02	
909.394	0.1 - 1	0.05	
909.395	0.15 - 1.5	0.05	
909.396	0.3 - 3	0.1	
909.397	0.4 - 5	0.2	



909.395

### Digital spring scales

- Measuring range: 0- 25 kg.
- Resolution: 0.005, 0.01 or 0.02 kg.
- Kg/lbs conversion.
- Automatic switch-off.
- Reset at weight empty box possible.
- Automatic hold function.
- Memory for maximum weight.

- Dimensions and weight:  
909.126: 100x 58x22 mm, approx. 100 g,  
909.123/124: 149x 100x 35 mm, approx. 200 g.
- Power supply:  
909.126: 3 batteries type AAA,  
909.123/124: 1 battery type PP3 (9 V).



Item No.	Measuring range/kg	Resolution kg	Accuracy kg	Price RUB
909.126	0- 5	0.005	±0.02	
909.123	0- 10	0.01	±0.01	
909.124	0- 25	0.02	±0.02	
<b>Options:</b>				
497.914	Spare battery type AAA			
495.161	Spare battery type PP3			



909.126

909.123

### Dynamometers

Robust dynamometers in analog and digital model with several set-up pieces.

- Measuring range: 0- 500 N.
- Push and pull.
- Max/peak function.

**Analog**

- Accuracy: ± 1%.
- Graduation: N and kg.
- With 4 tapped holes M3 (for mounting).
- Dimensions: 225 x 60 x 51 mm.
- Weight: approx. 600 g.

**Digital**

- Accuracy: ±0.2%.
- Kg/lb/N conversion.
- On/off switch.
- Automatic switch-off.
- Reversible display value.
- With 4 tapped holes M4 (for mounting).
- Dimensions: 147 x 75 x 38 mm.
- Weight: approx. 400 g.
- Power supply: AC adapter (12 Vdc, 1 A) and rechargeable battery.

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909.174

909.182

Item No.	Measuring range/N	Reading N	Price RUB
<b>Analog:</b>			
909.175	0- 10	0.05	
909.178	0- 50	0.2	
909.180	0- 200	1	
909.182	0- 500	2	
<b>Digital:</b>			
909.168	0- 5	0.001	
909.169	0- 10	0.01	
909.171	0- 50	0.01	
909.173	0- 200	0.1	
909.174	0- 500	0.1	



## Digital vibration tester

Instrument with external sensor for quick checking of unbalance, misalignment, bearings and gears. For measuring velocity, acceleration, displacement and frequency.

### Measuring range

- Velocity: 0.01 - 40 cm/s (RMS, at frequency 10 Hz - 1 kHz).
- Acceleration: 0.1 - 400 m/s<sup>2</sup> (peak value, at frequency 10 Hz - 1 kHz or 10 Hz - 10 kHz).
- Displacement: 0.001 - 4.0 mm (P-P, at frequency 10 - 500 Hz).
- Frequency: 0.1 - 20 kHz.

### Further specifications

- Accuracy: ±5% + 2 digits.
- mm/inch conversion.
- RS232C data output.
- Operating temperature: 0 to 50°C.
- Dimensions: 125 x 62 x 31 mm.
- Weight: 255 g.
- Delivery in a case, incl. magnet and 2 attachments.
- Power supply: 4 batteries type AAA.



Item No.	Description	Price RUB
909.065	Vibration tester	
<b>Options:</b>		
497.914	Spare battery (4 needed)	
909.074	RS232C cable and software	

## Digital sound level meter

Instrument for measuring the sound level.

- Measuring range: 30 - 130 dB.
- Resolution: 0.1 dB.
- Accuracy: ± 1.5 dB.
- Frequency weighting: A and C.
- Frequency range: 31.5 Hz - 8.5 kHz.
- Measuring frequency: 2 times per second.
- Time weighting: fast/slow.
- The current measured value within the range of 50 dB is graphically displayed (adjustable).
- Over range indication.
- Automatic switch-off.
- Max function.
- Dimensions: 207 x 70 x 29 mm.
- Weight: 178 g.
- Delivery in a case.
- Power supply: 1 battery type PP3 (9 V).

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Item No.	Measuring range/dB	Price RUB
909.131	30 - 130	
<b>Option:</b>		
495.161	Spare battery	

## Refractometers

Refractometers for regular checking the correct mixing ratio of coolants. A correct proportion is very important.

- Measuring range: 0- 32% Brix.
- Graduation: 0.1 or 0.2% Brix.
- Accuracy:  $\pm 0.2\%$ .
- Adjustable eyepiece.
- Adjustment screw for zero setting (protected by rubber cap).
- Rubber eye adapter.
- Ergonomic design.
- Weight: 200 g.
- Delivery in a case incl. cleaning cloth, screwdriver, bottle with distilled water (for calibration), pipette.



909.079



Item No.	Meas. range % Brix	Graduation % Brix	Price RUB
909.090	0- 10	0.1	
909.079	0- 32	0.2	

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## Telescopic mirror/magnet

- Adhesive force magnet: 5 N.
- Max. length (extended length): 480 mm.



909.343

909.344



Item No.	Description	Price RUB
909.343	Telescopic mirror	
909.344	Telescopic magnet lifter	

## Sonarscope

For tracing mechanical problems by means of sound.



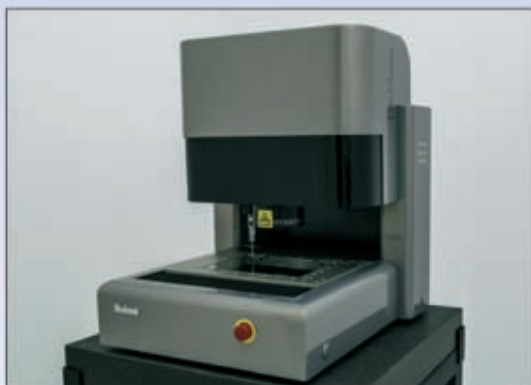
Item No.	Description	Price RUB
909.418	Sonarscope	



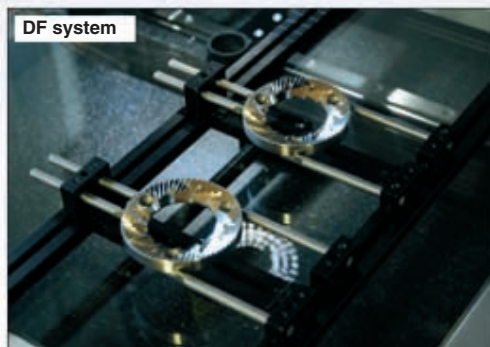
## DeMeet 3D CNC coordinate measuring machines DF fixture system



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## DeMeet video and multi-sensor measuring machines



### DeMeet coordinate measuring machines

The DeMeet 3D CNC coordinate measuring machines provide automatic, user-independent quality control with measuring results traceable to the international length standard. The DeMeet measuring machines are available in Video (optical) and Combo model (multi-sensor for combined video and touch probe measurements). The DeMeet multi-sensor measuring machines are an excellent all-in-one alternative to other measuring devices for example a measuring microscope, profile projector and height gauge.

With an excellent price-performance ratio the DeMeet measuring machines enable high precision quality control in measuring laboratories as well as on the production floor. Applications of optical and multi-sensor measuring are among others in the precision engineering, medical, plastics and electronics industry.

### Design and quality

The application of quality components made by Schut and by well-known, specialized manufacturers ensures excellent performance and high accurate measurements.

With the new design of the DeMeet measuring machine series no concessions have been made to accuracy and reliability. The new visually screwless cover design provides a better protection in the production environment and is highlighted with nickel-plated aluminum details which can be personalized. The open design of the DeMeet allows for easy operation and loading of the machine from all sides.

The accuracy of the DeMeet measuring machines is guaranteed by a CAA 3D correction model (Computer-Aided Accuracy, error compensation).

### Machine construction

The construction is a granite base plate with accuracy grade according to DIN 876/00, placed on well positioned shock absorbing points and resting on a welded base frame (for the DeMeet-220 the base plate is flat grinded cast iron).

The XYZ base structure for the THK precision preloaded caged ball linear guides is made from extremely tension relieved, flat grinded cast iron, as the basis for a mechanical accurate construction. The axis drive system consists of Faulhaber high torque DC servo motors, TFE coated Kerk lead screws and Renishaw TONIC optical linear encoders with low sub-divisional error.

The measuring table is made of tension relieved, wear-resistant, hard anodized aluminum, or optionally nickel-plated steel, with a mounting hole pattern for product fixtures and a flat aligned glass plate. The video model consists of a DeMeet camera with a Sony sensor and a telecentric optical system. In addition to the optical system the Combo model is equipped with a Renishaw touch probe system.

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## DeMeet video measuring machines

### Optical measurements

Optical measurements are performed using the camera system, optics and adjustable illumination. Due to the non-contact nature of the measurements there is no risk of product deformation. Optical measuring is very suitable for products with fine structures and contact sensitive products.

Another advantage of optical measurements is that edge information can be defined directly with high density of measuring points. Within the field of view of the DeMeet a very high accuracy can be achieved.

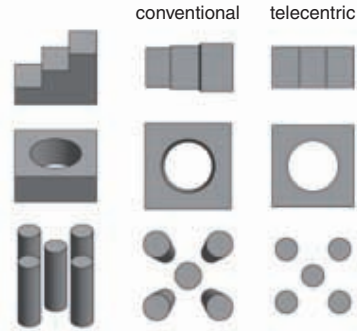


### Optical system

A combination of high quality telecentric optics and DeMeet Sony sensor camera is integrated for a clear image with an excellent contrast and a high resolution. In combination with the image processing functionality of the DeMeet, this results in highly accurate measurements.

Telecentric optics are supplied as a standard to avoid perspective image distortion around the center of the field of view. The DeMeet is either equipped with Nikon or Leica-Design optics with a large working distance for a brilliant image with high contrast providing optimal edge detection.

Lenses with various magnifications from 1x to 10x are available and can be exchanged during a measuring run, generating a range in display magnification from 40x to 400x.



### Illumination

Illumination is essential for accurate measurements. The DeMeet is standard equipped with LED based illumination (backlight, coaxial light and segmented ring light). A ring light consisting of a 3 rings, 16 segments and 48 cells LED pattern, that can be controlled per individual ring, segment and cell, is standard supplied for optimal light configuration.

The ring light can be set in intensity and angle to achieve the best contrast with clearly defined edges. The backlight is transmitted from below and is used to highlight the profile of the edges. Coaxial lighting can be used for illumination inside deep located structures. The LED based backlight and coaxial light can be adjusted in intensity.

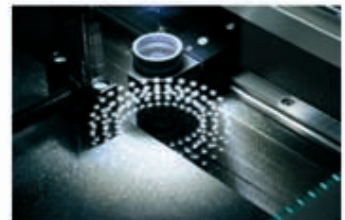
The configuration of the illumination is automatically controlled during a CNC measuring run. A coaxial laser pointer assists navigation during creation of a measuring program.

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## DeMeet multi-sensor measuring machines



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### Multi-sensor measurements

The increasing miniaturization and complexity of product features results in more difficult measuring and inspection procedures. Measuring systems equipped for only optical or contact measurements are often no longer sufficient, in which case multi-sensor measuring machines are required for optimal geometrical quality control.

When measuring certain features encounters the physical limits of non-contact measurement, the DeMeet video machines can be additionally equipped with a touch probe system (contact measuring system).

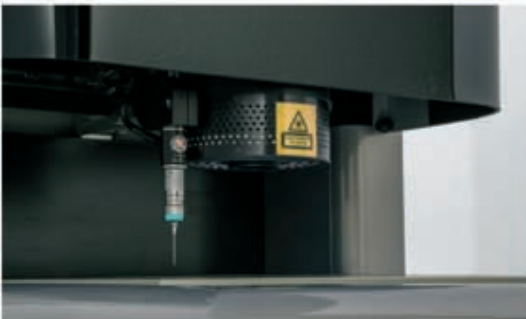
With the DeMeet Combo model both optical and contact measuring principles are seamlessly integrated and measurements can be performed by the optical and the probing system within one measuring run and even within one feature. Touch probe measurements can also be useful to create a complex 3D product alignment.

### Probe modules and styli

Standard a Renishaw TP20 system with a 5-way stylus configuration is supplied. On request various probe modules, systems and stylus configurations are available. Multiple probe modules can be used to leave the stylus configuration on the module to achieve a shorter set-up time for measurements requiring other stylus configurations.

In addition to the standard touch probe system, an optional stylus change rack (automatic probe configuration change) can be utilized. With the stylus change rack probe modules can automatically be exchanged within one measuring run.

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## DeMeet video and multi-sensor measuring machines (continued)

### Approve for DeMeet multi-sensor measuring software

*Approve for DeMeet* is a true multi-sensor software package, where the difference in sensor origin of the measuring input is limited to only the necessary. All the measuring results of video and touch probe can be displayed, reported, exported and used in constructs together, and are dynamically updated. The measuring results can also be displayed together in a 3D view. *Approve for DeMeet* is designed to be a user-friendly software package, but is flexible and very elaborate to measure many products.



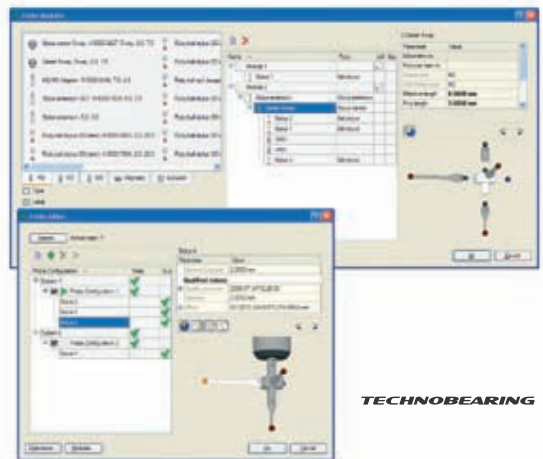
### 3D Movements

The 3D motor controller in *Approve for DeMeet* makes blended, smooth moves which makes the DeMeet run more fluent and faster. The DeMeet also moves during video image processing and other calculations, shortening the measuring time considerably. To eliminate hysteresis, and therefore improving accuracy, an approach direction and distance can be set for video measurements. Pretouch and average touch can be set for touch measurements.

### Measurements

For video measurements our proprietary image processing algorithms were developed, which are completely different from algorithms used by competing products. The edge find algorithm finds complete curves instead of separate points, the interpolation of the pixels is virtually infinite and very accurate. Video targets larger than one field of view can be measured in one program step, and are automatically split into more images and combined for the fitted result. The illumination for video measurements can be set and changed using a graphical control for backlight, coaxial light and ring light.

For touch measurements it is normal that the targets are defined in 3D, but now this is also the case for video measurements. Features (like a circle) can be measured properly even if they are not parallel to the camera (optical) plane. The graphical touch probe configuration editor allows for building a custom configuration for a specific measurement by using an extensive touch probe library. Settings can be defined and shared between measuring steps which greatly reduces the complexity of a measuring program.



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for DeMeet

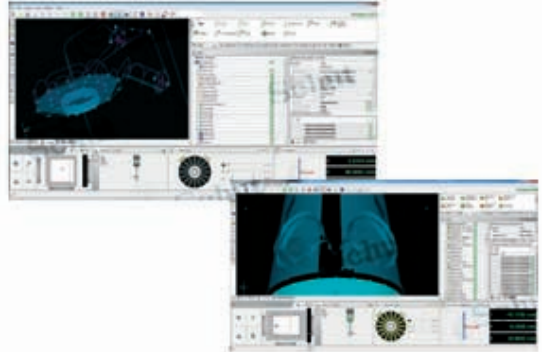
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## DeMeet video and multi-sensor measuring machines (continued)

### Measuring Program

A measuring program in *Approve for DeMeet* is a graphical program consisting of simple program steps. Program steps can be changed, added, copied, moved and removed very easily, inputs of a program step can be easily changed or linked to other results by using drag-and-drop. A program can be verified by running it step by step, even a single program step can be run for verification. After running a program step an icon appears behind it to indicate its status.



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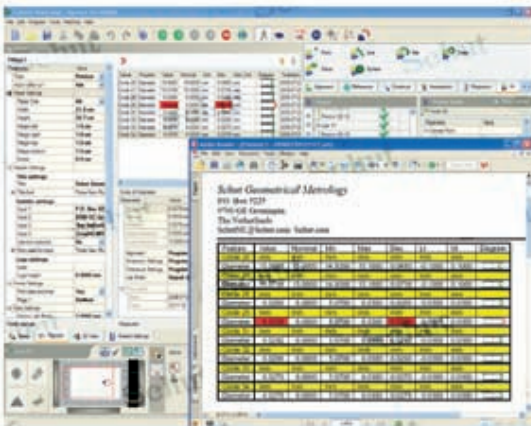
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### Results, Report and Export

Results from measurements and calculations (constructs, fits, etc.) as well as from other program steps can be added to an export or report and saved or printed as PDF or CSV file for further analysis. If tolerances are used for a result a graphical tolerance bar is shown. Results and reports can be automatically printed or exported at the end of a measuring program run.

### PTB software evaluation

Evaluation software for coordinate measuring machines. The accuracy of the *Approve for DeMeet* software was verified by comparing the results obtained from the software with reference results supplied by the PTB (Physikalisch-Technische Bundesanstalt, Braunschweig, Germany). The *Approve for DeMeet* software has been placed in the class of the smallest deviations.



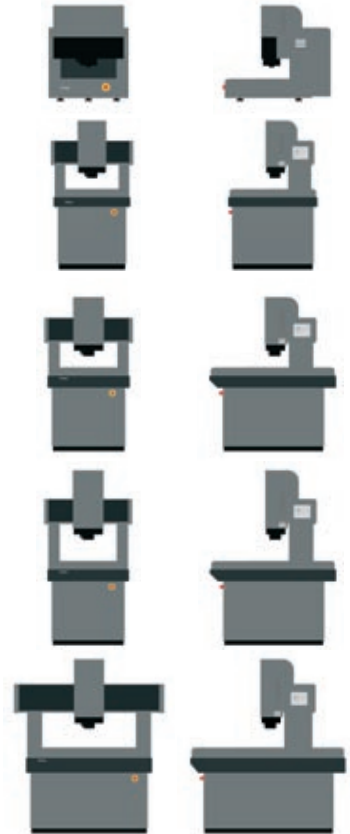
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## Specifications DeMeet video and multi-sensor measuring machines

	Video model	Combo model
<b>General</b>		
Video system	DeMeet Sony sensor camera	
Leica-Design telecentric lenses	2.0x (1.0x, 5.0x and 10.0x optional)	
Nikon telecentric lenses	3.0x (1.0x, 5.0x and 10.0x optional)	
Ring light <sup>1</sup>	3 rings, 16 segments and 48 cells (adjustable)	
Backlight and coaxial light	adjustable	
Probe system <sup>2</sup>	-	Renishaw TP20
Construction <sup>3</sup>	fixed bridge with granite base plate DIN 876/00	
Structure	extremely tension relieved, flat grinded cast iron	
Measuring table <sup>4</sup>	tension relieved, hard anodized aluminum	
Linear guides	THK linear guides	
Linear encoders	Renishaw TONIC linear encoders	
Drive system	Faulhaber DC servo motors	
Operating mode	motorized joystick / CNC	
<b>Measuring specifications</b>		
Resolution (µm)	0.5 (0.1 optional)	
Accuracy standard <sup>5</sup> (µm)	X/Y/Z 4 + L/150	
(0.5 µm resolution) (L in mm)	XY 5 + L/150	XYZ 5 + L/150
Accuracy optional <sup>5</sup> (µm)	X/Y/Z 3 + L/200	
(0.1 µm resolution) (L in mm)	XY 4 + L/200	XYZ 4 + L/200
Travel speed max. (mm/s)	X/Y 250, Z 55	
Acceleration max. (mm/s <sup>2</sup> )	X/Y/Z 500	
<b>Power requirements</b>		
Voltage (V)	90 - 120, 210 - 240 (50 - 60 Hz)	
Power (VA)	400	
<b>Environmental conditions</b>		
Operating temperature (°C)	15 - 35	
Measuring temperature (°C)	20 ± 0.5	
Humidity (%)	40 - 70 (no condensation)	



<sup>1</sup>For video models (except DeMeet-220) a ring light with 4 rings, 16 segments and 64 cells can be supplied as an option.  
<sup>2</sup>Other probe systems can be supplied as an option.  
<sup>3</sup>The base plate of the DeMeet-220 is made of flat grinded cast iron.  
<sup>4</sup>Optional available in tension relieved nickel-plated steel.  
<sup>5</sup>The accuracy of the multi-sensor measuring system should be taken into account.

**CE** The DeMeet measuring machines are in compliance with EC Machine Directive 2006/42/EC, Electromagnetic Compatibility (EMC) directive 2014/30/EU and Low Voltage Directive (LVD) 2014/35/EU.

Specifications apply to all DeMeet models, unless otherwise specified. Machines with higher specifications and/or modifications are available on request. Specifications are subject to change without prior notice. For more specifications refer to our website Schut.com.

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<b>DeMeet-220</b>		
Measuring range (mm)	X 220, Y 150, Z 100	
Dimensions (mm)	W 520, L 700, H 615	
Weight (kg)	110	
Measuring table (mm)	X 357, Y 260	
Max. load (kg)	20	
<b>DeMeet-400</b>		
Measuring range (mm)	X 400, Y 250, Z 200	
Dimensions (mm)	W 865, L 930, H 1570	
Weight (kg)	530	
Measuring table (mm)	X 560, Y 422	
Max. load (kg)	50	

<b>DeMeet-404</b>		
Measuring range (mm)	X 400, Y 400, Z 200	
Dimensions (mm)	W 865, L 1245, H 1580	
Weight (kg)	700	
Measuring table (mm)	X 560, Y 580	
Max. load (kg)	50	

<b>DeMeet-443</b>		
Measuring range (mm)	X 400, Y 400, Z 300	
Dimensions (mm)	W 865, L 1245, H 1785	
Weight (kg)	720	
Measuring table (mm)	X 560, Y 580	
Max. load (kg)	50	

<b>DeMeet-705</b>		
Measuring range (mm)	X 700, Y 500, Z 300	
Dimensions (mm)	W 1520, L 1550, H 1820	
Weight (kg)	1400	
Measuring table (mm)	X 930, Y 700	
Max. load (kg)	60	

### Field of view qualifier

- Accuracy:  $\pm 0.002$  mm.



Item No.	Description	Price RUB
635.222	Field of view qualifier	

### Worktable DeMeet-220

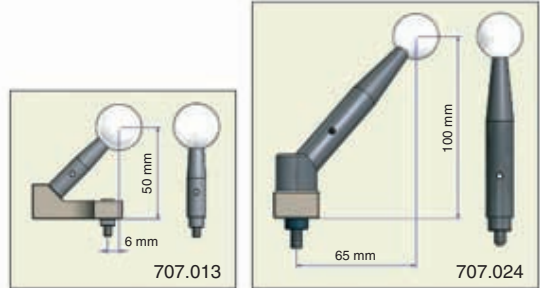
The DeMeet-220 must be placed on a stable worktable for accurate measurements. Placing can be done on a strong work table or on a granite worktable like below.



Item No.	Description	Price RUB
402.004	Granite surface plate 630 x 630 x 80 mm, DIN 876/1	
131.032	Support DeMeet-220 (working height 750 - 800 mm)	

### Qualification spheres

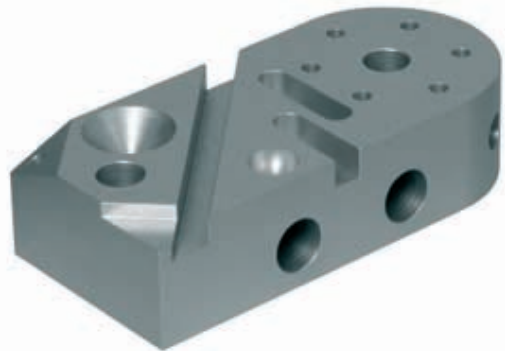
- Ball:  $\varnothing 8$  or  $\varnothing 25$  mm, made of ceramics.
- Delivery with a measuring report.



Item No.	Description	Price RUB
<b>Qualification sphere <math>\varnothing 8</math> mm:</b>		
707.025	For DeMeet-220	
707.026	For DeMeet-4xx/705	
<b>Qualification sphere <math>\varnothing 25</math> mm:</b>		
707.013	For DeMeet-220	
707.024	For DeMeet-4xx/705	

### Training object

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Item No.	Description	Price RUB
635.200	Touch probe training object	

## Fixture systems

Solid positioning of a measuring object with a fixture system is essential for accurate measurements and the fixing pattern can also be used for batch measurements. The measuring table of the DeMeet is prepared for DF and Alufix fixture systems.

### DF product fixture system

DF-System is a fixture system developed and produced by Schut and designed for constructing 3D product fixtures, particularly for optical measurements, and is fully compatible with the measuring table of the DeMeet measuring machines. The DF-system is an easy to mount measurement fixture system and especially developed to use the most of the illumination possibilities for optical measurements. Easy to mount with single-screw couplings to build fixtures with a high repeatability and to realize a short set-up time for measuring tasks.

DF-System consists of a full range of fixture components: bars, connection components and fixing components. Produced from extruded or machined aluminum with either a black or silver anodized finishing. Technically the difference is only applicable for optical measurements in relation to (un)desirable light reflection.

DF is a universal fixture system and can be mounted on any type of measuring machine. With special couplings the system is fully compatible with the measuring tables of the DeMeet video and multi-sensor coordinate measuring machines.

Item No.	Description	Price RUB
717.057	Basic set I DeMeet-220 Black	
717.088	Basic set I DeMeet-220 Silver	
717.095	Basic set II DeMeet-400Y Black	
717.096	Basic set II DeMeet-400Y Silver	
717.058	Basic set III DeMeet-400X/4xxXY Black	
717.089	Basic set III DeMeet-400X/4xxXY Silver	



### Alufix fixture system

Alufix is a flexible fixture system made of high-tensile aluminum. Alufix is a uniquely designed modular fixture system to prepare a product-fixture in a short time and is easy to mount and specially suitable for fixtures for heavier measuring objects. A wide range of components is available that can be combined to complete your measuring fixture such as base plates, bars, chucks, rotary plates, centers, magnetic holders, v-blocks, vises and optical targets.

Besides all the separate components two basic sets are composed for the DeMeet: an Alufix 16 set for light weight products and an Alufix 25 set for larger and heavier products.

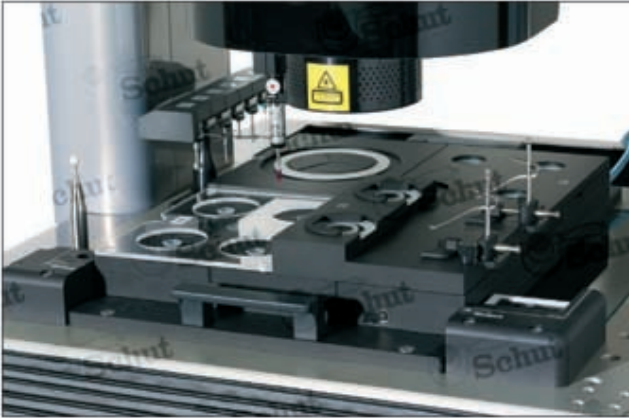
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Item No.	Description	Price RUB
381.100	Basic set Alufix 16 DeMeet for DeMeet-220 and DeMeet-400 (Y-axis)	
381.101	Basic set Alufix 25 DeMeet for DeMeet-400 (X-axis), DeMeet-404 and DeMeet-443	
381.099	Basic set Alufix 25 DeMeet-705 for DeMeet-705	



## Custom fixture systems for the DeMeet measuring machines

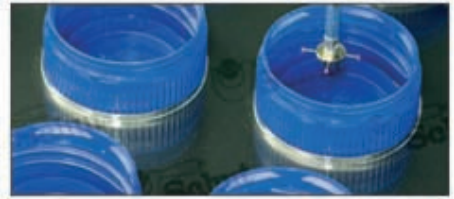
When products need to be measured in a batch and a standard fixture system does not provide the right solution for example caused by the extraordinary shape or small dimensions of the product, a custom made fixture can provide the solution. This is especially the case for products that need to be measured optically.



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A certain repeatability of product positioning in the fixture is important for a quick set-up time in for example the production environment. We can assist in the development and manufacturing of a custom fixture. There is a range of possibilities, from machined fixturing positions in acryl glass to magnet and vacuum fixture systems.



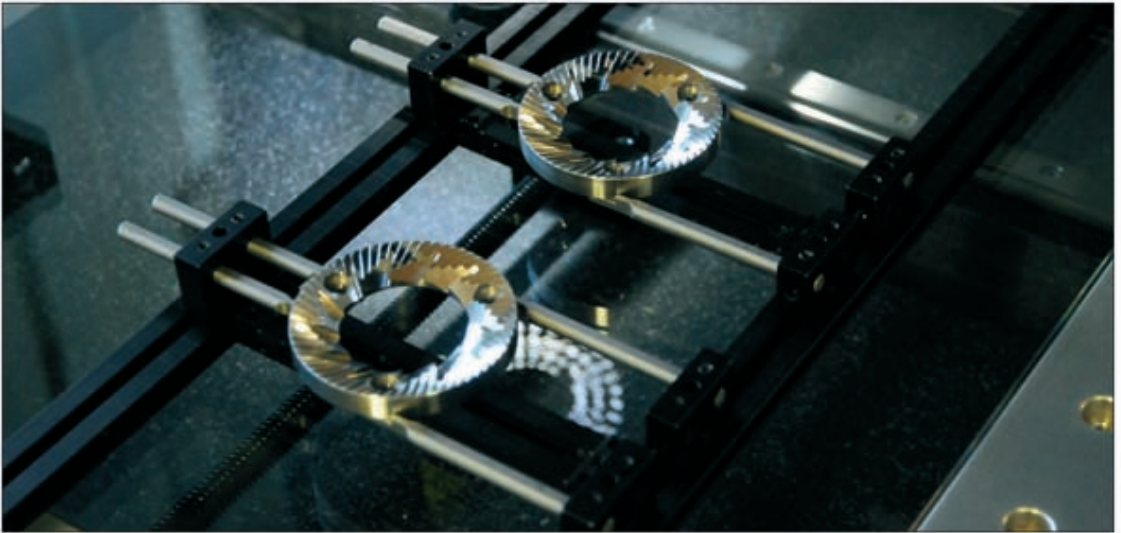


## DF product fixture system

DF is a new fixture system developed and produced by Schut and designed for building 3D product fixtures, particularly for optical measurements.

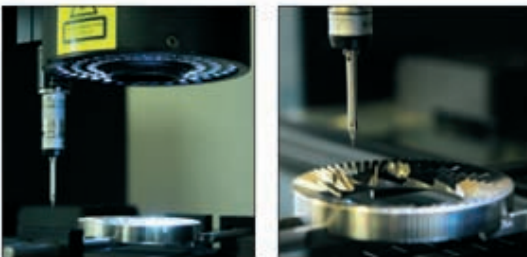
Solid product positioning is essential for accurate measurements. DF is very easy to mount with single-screw couplings to build fixtures with a high repeatability and to realize a short lead-time for measuring jobs.

DF consists of a full range of fixture components: bars, connection components and fixing components. Produced from extruded or machined AlMgSi1 aluminum with either a black or silver anodized finishing. The black anodized version avoids light reflections. The silver components can be applied when light reflections from the fixture are required.



DF is a universal fixture system and can be mounted on any type of measuring machine. With special couplings the system is fully compatible with the measuring tables of the DeMeet video and multi-sensor coordinate measuring machines.

## DeMeet



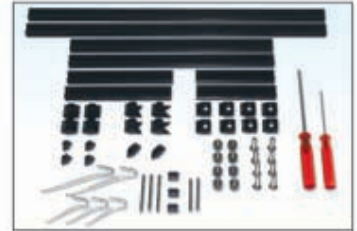
Download the  
brochure from  
[Schut.com](http://Schut.com)

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## DF product fixture system (continued)

DF is available in separate components and in three basic sets, in black or silver finishing. Basic set I is composed for the DeMeet-220, basic set II for the DeMeet-400 (Y-axis) and basic set III for the DeMeet-400 (X-axis) and the DeMeet-404/443 (X- and Y-axis).

Item No.	Description	Price RUB
717.057	Basic set I DeMeet-220 Black	
717.088	Basic set I DeMeet-220 Silver	
717.095	Basic set II DeMeet-400Y Black	
717.096	Basic set II DeMeet-400Y Silver	
717.058	Basic set III DeMeet-400X/4xxXY Black	
717.089	Basic set III DeMeet-400X/4xxXY Silver	



Item No.		Description	Number	Basic set		
black	silver			I	II	III
717.029	717.073	Mounting block perpendicular	8	•	•	•
717.030	717.074	One point anvil	4	•	•	•
717.031	717.075	One point anvil long	2	•	•	•
717.036	717.077	Mounting block for spring shaft	3	•	•	•
717.040	717.081	V-block 120°	2	•	•	•
717.042	717.083	V-block 90°	2	•	•	•
717.033	717.043	Mounting block side pattern 16	4	•	•	
717.028	717.072	Mounting block end pattern 16	4	•	•	
717.034	717.050	Mounting block side pattern 25	4			•
717.035	717.056	Mounting block end pattern 25	4			•
717.015	717.059	Bar 56 mm	2	•		
717.016	717.060	Bar 88 mm	2		•	
717.097	717.098	Bar 110 mm	2			•
717.017	717.061	Bar 120 mm	2	•		
717.018	717.062	Bar 160 mm	2			•
717.022	717.066	Bar 246 mm	2	•		
717.024	717.068	Bar 310 mm	2			•
717.026	717.070	Bar 344 mm	2			•
717.025	717.069	Bar 460 mm	2			•
	717.044	Screw and adapter pattern 16	4	•	•	
	380.301	Distance tube with stop pattern 16	8	•	•	
	380.304	Distance tube with stop pattern 25	8			•
	993.539	Screw M4 x 20 stainless steel	8	•	•	
	995.087	Screw M6 x 25 stainless steel	8			•
	717.000	Shaft 60 mm for clamping spring	3	•	•	•
	717.004	Shaft 50 mm for clamping spring	2	•	•	•
	717.010	Clamping spring short	3	•	•	•
	717.011	Clamping spring long	2	•	•	•
	991.158	Hex screwdriver 2 mm	1	•	•	•
	991.160	Hex screwdriver 3 mm	1	•	•	
	991.161	Hex screwdriver 4 mm	1			•
	717.008	Screw mounting tool	1	•	•	
	851.888	Case for DF basic sets I and II	1	•	•	
	851.899	Case for DF basic set III	1			•

Item No.	Description	Price RUB
991.158	Hex screwdriver 2 mm	
991.160	Hex screwdriver 3 mm	
991.161	Hex screwdriver 4 mm	
991.276	Adjustable torque hex screwdriver 2 mm with range 0.1 - 0.6 Nm	



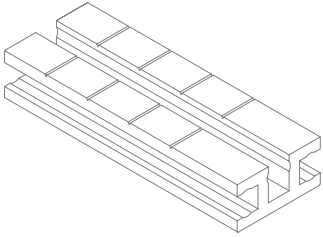
991.276



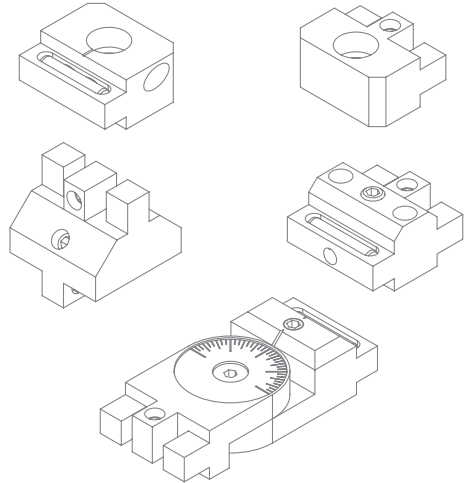
## DF components

Besides the components shown below, there are various other types available.

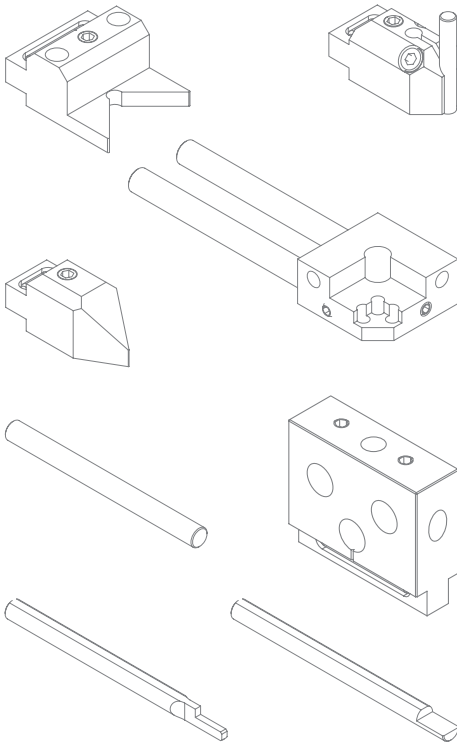
### Bars



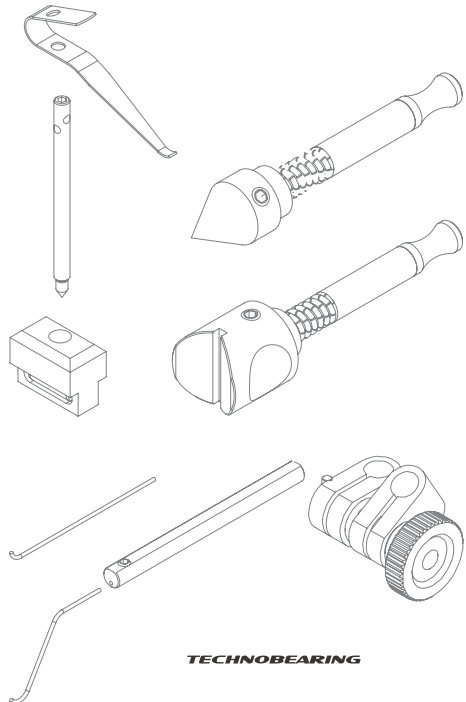
### Connection components



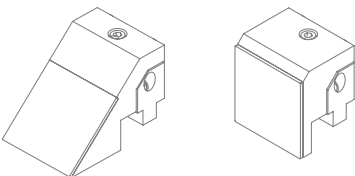
### Positioning components



### Fixing components

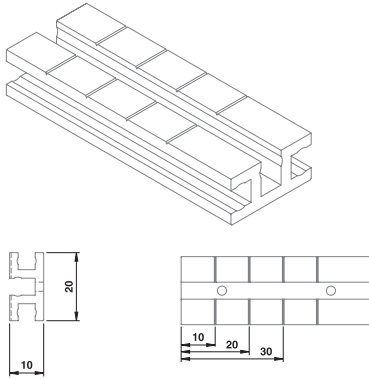


### Mirrors



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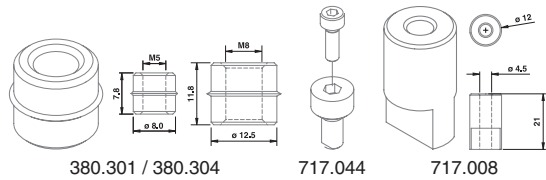
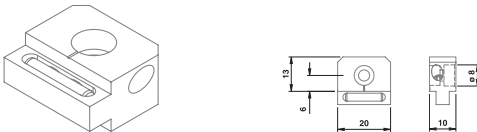
**DF components – bars**



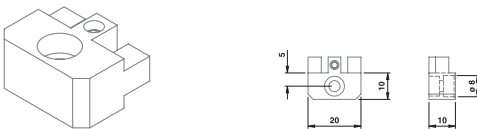
Length mm	Item No.	Price RUB	Item No.	Price RUB
	<b>Black:</b>		<b>Silver:</b>	
56	717.015		717.059	
88	717.016		717.060	
110	717.097		717.098	
120	717.017		717.061	
152	717.027		717.071	
160	717.018		717.062	
184	717.019		717.063	
210	717.020		717.064	
216	717.021		717.065	
246	717.022		717.066	
260	717.023		717.067	
310	717.024		717.068	
344	717.026		717.070	
460	717.025		717.069	

**DF components – connection components**

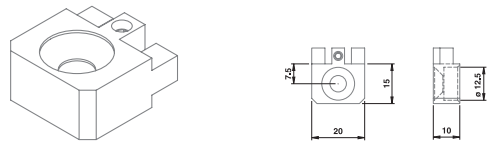
Item No.	Description	Price RUB
380.301	Distance tube with stop pattern 16	
380.304	Distance tube with stop pattern 25	
717.044	Screw and adapter pattern 16	
717.008	Screw mounting tool	



Item No.	Description	Price RUB
717.033	Mounting block side pattern 16 Black	
717.043	Mounting block side pattern 16 Silver	



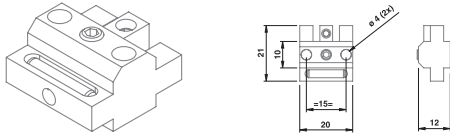
Item No.	Description	Price RUB
717.034	Mounting block side pattern 25 Black	
717.050	Mounting block side pattern 25 Silver	



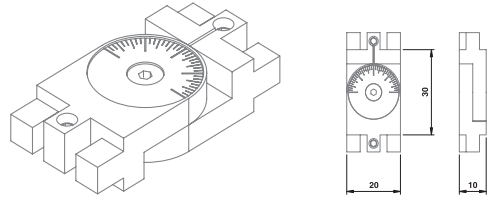
Item No.	Description	Price RUB
717.028	Mounting block end pattern 16 Black	
717.072	Mounting block end pattern 16 Silver	

Item No.	Description	Price RUB
717.035	Mounting block end pattern 25 Black	
717.056	Mounting block end pattern 25 Silver	

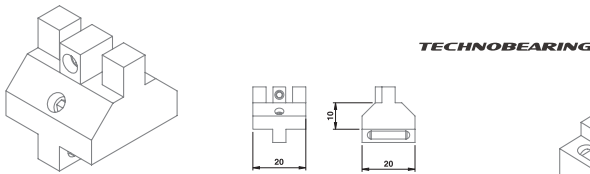
**DF components – connection components (continued)**



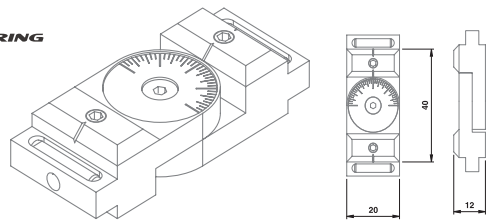
Item No.	Description	Price RUB
717.029	Mounting block perpendicular Black	
717.073	Mounting block perpendicular Silver	



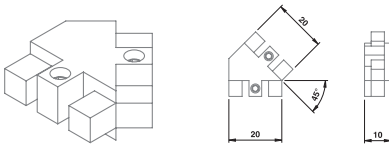
Item No.	Description	Price RUB
717.047	Hinge end Black	
717.085	Hinge end Silver	



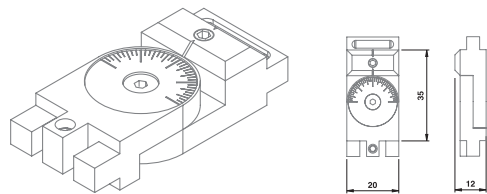
Item No.	Description	Price RUB
717.039	Mounting block V perpendicular Black	
717.080	Mounting block V perpendicular Silver	



Item No.	Description	Price RUB
717.048	Hinge side Black	
717.086	Hinge side Silver	

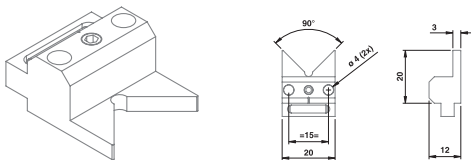


Item No.	Description	Price RUB
717.032	Mounting block 45° Black	
717.076	Mounting block 45° Silver	

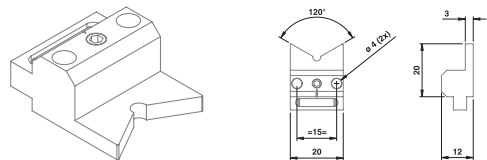


Item No.	Description	Price RUB
717.049	Hinge combi Black	
717.087	Hinge combi Silver	

**DF components – positioning components**

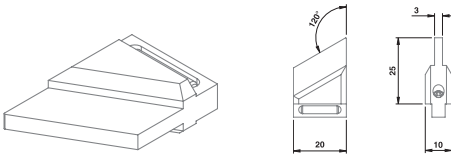


Item No.	Description	Price RUB
717.042	V-block 90° Black	
717.083	V-block 90° Silver	

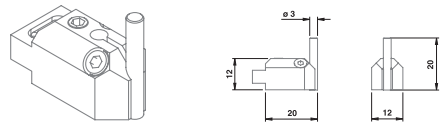


Item No.	Description	Price RUB
717.040	V-block 120° Black	
717.081	V-block 120° Silver	

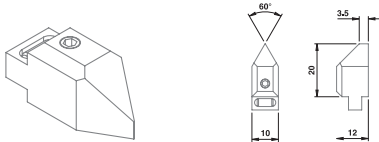
**DF components – positioning components (continued)**



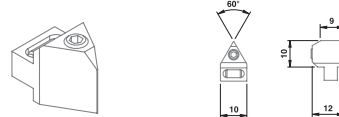
Item No.	Description	Price RUB
717.041	V-block half 120° Black	
717.082	V-block half 120° Silver	



Item No.	Description	Price RUB
717.099	Anvil with shaft $\varnothing$ 3 mm Black	
717.100	Anvil with shaft $\varnothing$ 3 mm Silver	

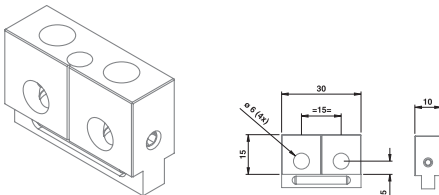


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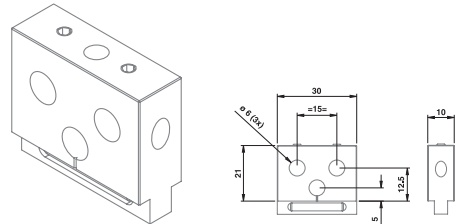


Item No.	Description	Price RUB
717.031	One point anvil long Black	
717.075	One point anvil long Silver	

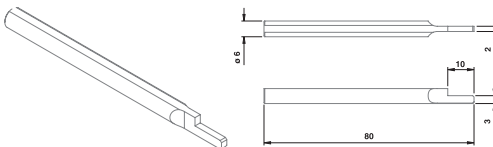
Item No.	Description	Price RUB
717.030	One point anvil Black	
717.074	One point anvil Silver	



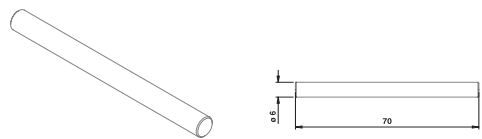
Item No.	Description	Price RUB
717.037	Mounting block for 2 shafts Black	
717.078	Mounting block for 2 shafts Silver	



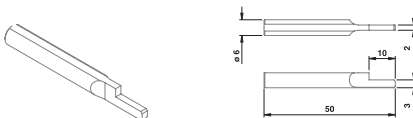
Item No.	Description	Price RUB
717.038	Mounting block for 3 shafts Black	
717.079	Mounting block for 3 shafts Silver	



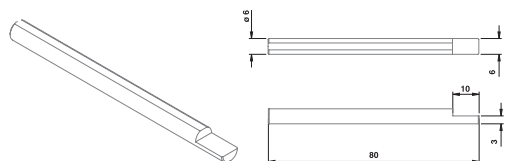
Item No.	Description	Price RUB
717.005	Support shaft 2 x 10 mm	



Item No.	Description	Price RUB
717.003	Shaft $\varnothing$ 6 x 70 mm	

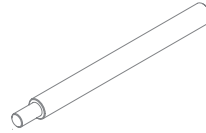
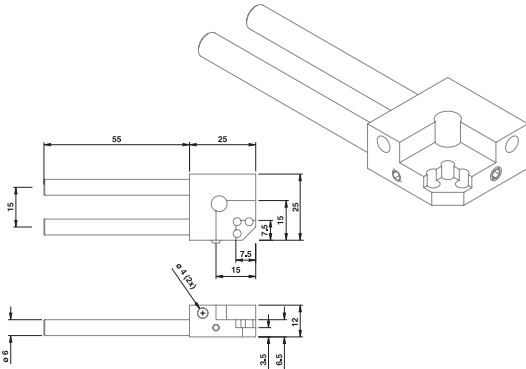


Item No.	Description	Price RUB
717.007	Support shaft 2 x 10 mm	



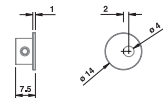
Item No.	Description	Price RUB
717.006	Support shaft 6 x 10 mm	

**DF components – positioning components (continued)**



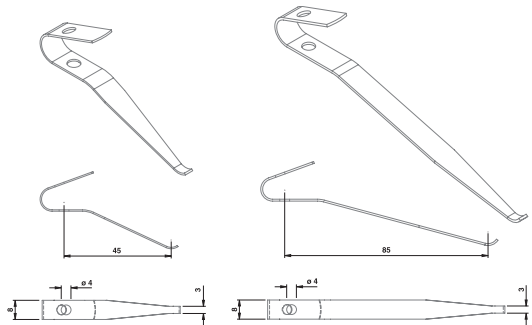
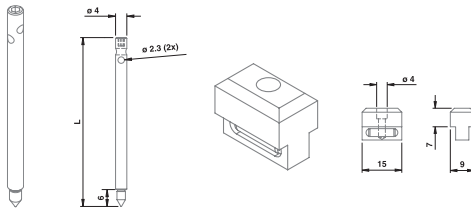
Item No.	Description	Price RUB
717.002	Shaft $\phi 6/4 \times 70$ mm	

Item No.	Description	Price RUB
717.045	Support edge Black	
717.084	Support edge Silver	



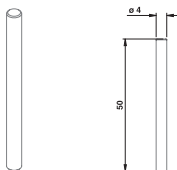
Item No.	Description	Price RUB
717.046	Eccentric support disc $\phi 14$ mm	

**DF components – fixing components**

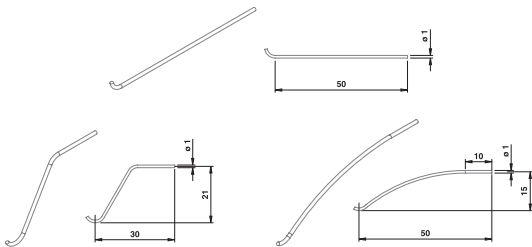


Item No.	Description	Price RUB
717.000	Shaft 60 mm for clamping spring	
717.001	Shaft 90 mm for clamping spring	
717.036	Mounting block for spring shaft Black	
717.077	Mounting block for spring shaft Silver	

Item No.	Description	Price RUB
717.010	Clamping spring short	
717.011	Clamping spring long	



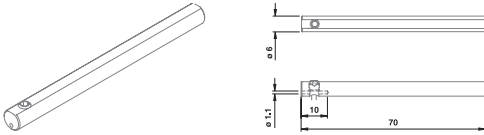
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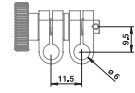
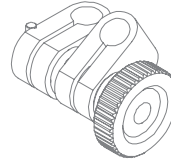
Item No.	Description	Price RUB
717.004	Shaft 50 mm for clamping spring	

Item No.	Description	Price RUB
717.012	Clamping spring straight 50 mm	
717.013	Clamping spring bended 30 mm	
717.014	Clamping spring bended 50 mm	

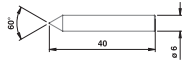
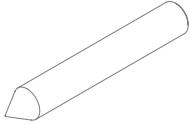
**DF components – fixing components (continued)**



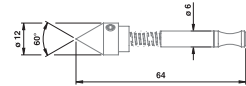
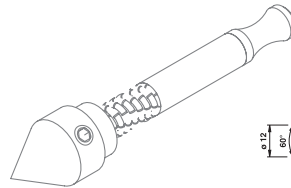
Item No.	Description	Price RUB
717.051	Holder for clamping spring	



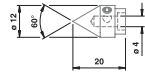
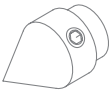
Item No.	Description	Price RUB
717.101	Clamp $\phi 6$ mm	



Item No.	Description	Price RUB
717.009	Center shaft $\phi 6$ mm, 60°	

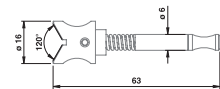
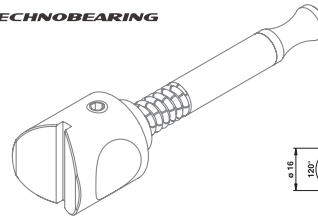


Item No.	Description	Price RUB
717.054	Center unit $\phi 12$ mm, 60°	



Item No.	Description	Price RUB
717.052	Center point $\phi 12$ mm, 60°	

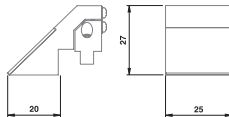
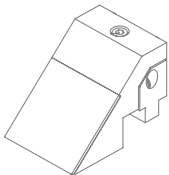
TECHNOBEARING



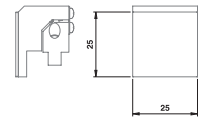
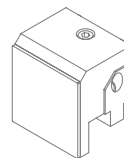
Item No.	Description	Price RUB
717.053	V-shaft $\phi 16$ mm, 120°	

Item No.	Description	Price RUB
717.055	V-unit $\phi 16$ mm, 120°	

**DF components – mirrors**



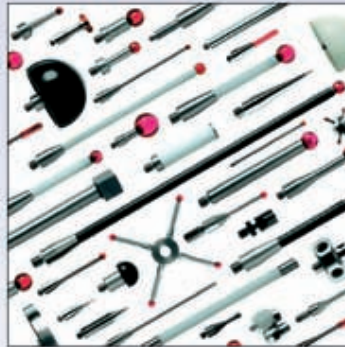
Item No.	Description	Price RUB
717.091	Mirror 45° 25 x 25 mm Black	
717.092	Mirror 45° 25 x 25 mm Silver	



Item No.	Description	Price RUB
717.093	Mirror 90° 25 x 25 mm Black	
717.094	Mirror 90° 25 x 25 mm Silver	



## Probes and probe systems



*Ask for  
the detailed  
catalog*

## TP20 probe system

The TP20 probe consists of two parts; a probe body, and a detachable probe module that contains the kinematic touch sensor and carries the stylus assembly.

The probe body has a standard M8 x 1.25 screw connector, which enables simple fitment to all CMMs with a Renishaw standard probe head (including PH6). The body contains a

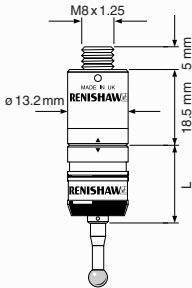


magnetic proximity switch to inhibit triggering of the probe during automatic module changing with the MCR20. (The TP20 NI, *Non-Inhibit*,

is not affected by magnetic fields and must be inhibited through software. The TP20 NI is available on request.)

The probe module is connected to the probe body by a highly repeatable magnetic kinematic coupling, which allows the automatic (CNC) or manual exchange of modules without the need to requalify the stylus tips.

Seven probe module options are available, each with a preset trigger force designed to ensure maximum probe performance when using different stylus configurations.



Module type <sup>1</sup>	Unidirectional repeatability (2σ)/μm	2D (XY) form meas. deviation PTV at 10 mm/μm	Trigger force/N (nominal at stylus tip)		Overall displacement (max at stylus tip)			Length L mm
			XY	Z	XY <sup>2</sup>	+Z/mm	-Z/mm	
LF	0.35	±0.6	0.055	0.65	±14°	3.1	-	19.5
SF	0.35	±0.8	0.08	0.75	±14°	4.0	-	19.5
MF	0.5	±1.0	0.1	1.9	±14°	3.7	-	19.5
EF	0.65	±2.0	0.1	3.2	±14°	2.4	-	19.5
6-way	0.80	±1.5	0.14	1.6	±14°	4.5	-	24.5
EM1	0.35	±0.8	0.08	0.75	±14°	4.0	1.5	69.5
EM2	0.35	±0.8	0.08	0.75	±14°	4.0	-	94.5

<sup>1</sup> Probe length: 10 mm, except MF: 25 mm and EF: 50 mm.  
<sup>2</sup> The probe module can get detached if this value is exceeded.

Item No.	Description	Price RUB
<b>TP20 probe sets (incl. stylus tools/cleaning kit and manual):</b>		
876.198	Probe body, probe module SF	
876.244	Probe body, two probe modules SF	
876.200	Probe body, probe modules SF and MF	
	<i>Other set compositions are available on request.</i>	
876.180	Probe module LF: with low force (green)	
876.170	Probe module SF: with standard force (black)	
876.171	Probe module MF: with medium force (gray)	
876.172	Probe module EF: with extended force (brown)	
876.194	Probe module 6W: 6-way (blue)	
876.190	Extension module EM1 (standard force)	
876.195	Extension module EM2 (standard force)	
876.168	CK200 cleaning kit	

### PH6 Fixed Probe Head

The PH6 is a compact, vertical probe head for a single probe, with a fixed cable. The correct shank with cable combination must be chosen to suit the mounting features of your CMM. Many combinations are possible and available on request.

- Weight: 48 g (without shank and cable).
- Probe status identification: 1 LED.
- Cable connection: fixed cable (specify on order).
- Probe mounting: M8 thread.



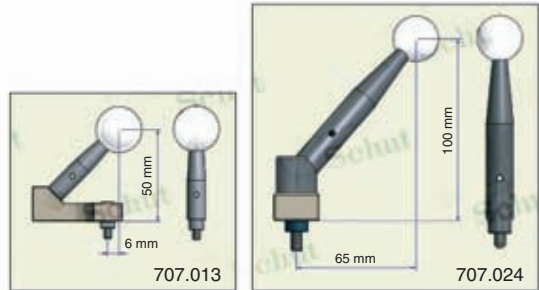
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Item No.	Description	Price RUB
876.061 <sup>1</sup>	PH6 Fixed Probe Head	

<sup>1</sup> Equipped with PL1 cable (0.71 m) and MS1/T shank (ø9.500-9.512 mm).

### Qualification spheres

- Ball: ø8 or ø25 mm, made of ceramics.
- Delivery with a measuring report.

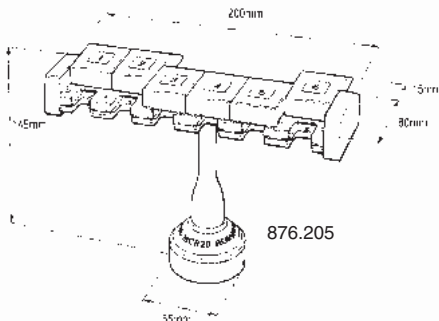


Item No.	Description	Price RUB
<b>Qualification sphere ø8 mm:</b>		
707.025	For DeMeet-220	
707.026	For DeMeet-4xx/705	
<b>Qualification sphere ø25 mm:</b>		
707.013	For DeMeet-220	
707.024	For DeMeet-4xx/705	
707.008	Ball only; M6 external thread	

### MCR20 Probe Module Changing Rack

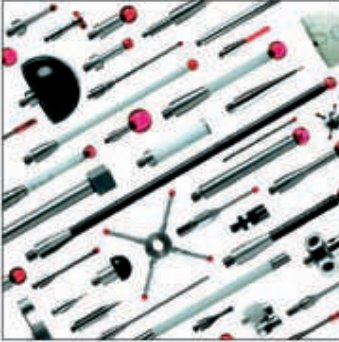
The MCR20 is designed to securely hold up to six probe modules for automatic (CNC) changing and to protect them from airborne contaminants which may be present in the working environment.

- Height:  
876.205: 145 mm,  
635.141: 108.5 mm,  
635.140: 110.5 mm.
- Capacity for 6 TP20 modules.
- Inhibit range: 50 mm.
- Delivery with base, without probe modules.



Item No.	Description	Price RUB
876.205	MCR20	
635.141	MCR20 DeMeet-220	
635.140	MCR20 DeMeet-4xx/705	

## Probes and accessories



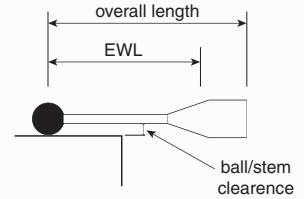
The element of the product to be measured determines the type and length of the probe. Maximum rigidity of the stem and perfect roundness of the ball are very important.

Only the M2 styli of the Renishaw probe program have been included in this catalog. M3, M4 and M5 are also available on request. The M2 probes are primarily suitable for the TP2, TP20 and TP200 probe systems.

### Choosing probes for inspections

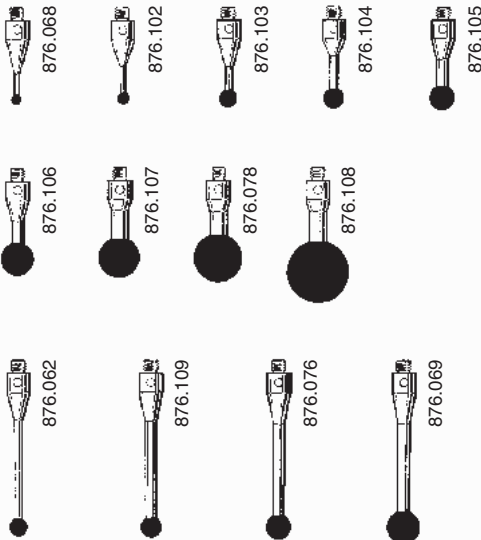
In order to maximize the accuracy of the main part of the probe applications, we advise you to use:

- the shortest and stiffest probes possible; the more the probe bends or deviates, the lower the measuring accuracy.
- the largest possible probe ball; the bigger the probe ball, the greater the free space between the ball and the stem and the smaller the effect of the surface condition of the product that has to be measured.
- as little extensions as possible; every connection introduces a potential diffraction or deviation.



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### Ruby ball styli with stainless steel stem and thread M2

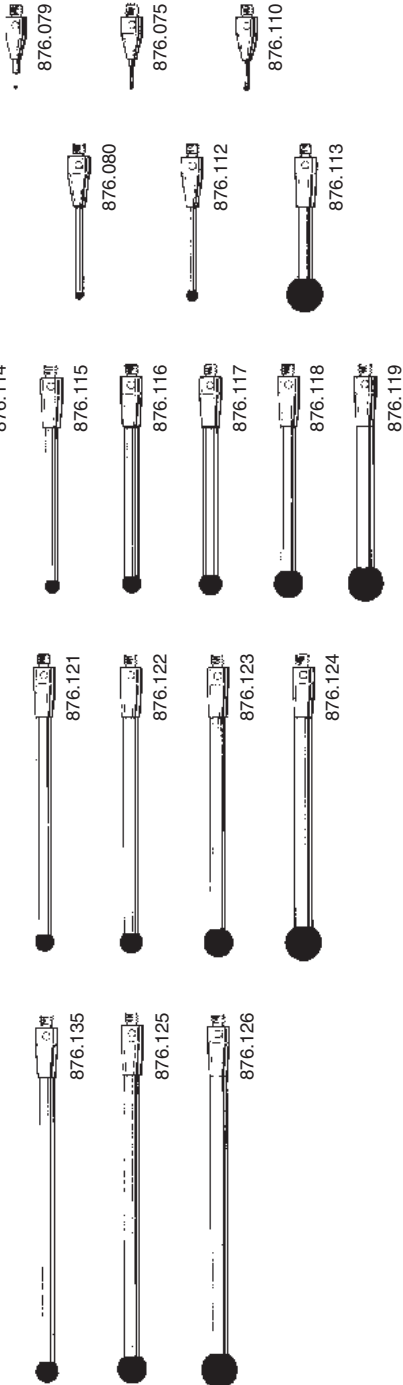


Item No.	Ball $\phi$ /mm	EWL* mm	Weight g	Price RUB
<b>Total length* 10 mm:</b>				
876.068	1	4.5	0.3	
876.102	1.5	4.5	0.3	
876.103	2	6	0.3	
876.104	2.5	6	0.3	
876.105	3	7.5	0.4	
876.106	4	10	0.4	
876.107	5	10	0.7	
876.078	6	10	0.9	
<b>Total length* 11 mm:</b>				
876.108	8	11	1.5	
<b>Total length* 20 mm:</b>				
876.062	2	14	0.4	
876.109	2.5	14	0.4	
876.076	3	17.5	0.5	
876.069	4	20.2	0.6	

\* Total length: from the base of the stem up to the center of the ball. EWL: effective working length.

**Probes and accessories (continued)**

**Ruby ball styli with tungsten carbide stem and thread M2**



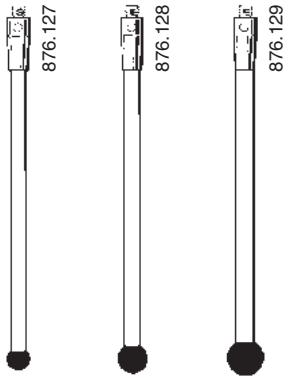
Item No.	Ball φ/mm	EWL* mm	Weight g	Price RUB
<b>Total length* 10 mm:</b>				
876.079	0.3	2	0.3	
876.075	0.5	3	0.3	
876.110	0.7	4	0.3	
<b>Total length* 20 mm:</b>				
876.111	1	7	0.5	
876.080	1	12.5	0.41	
876.112	1.5	15	1.98	
876.113	5	20	1.98	
<b>Total length* 30 mm:</b>				
876.101	1	20.5	0.4	
876.114	1.5	25	0.58	
876.115	2	25	0.99	
876.116	2.5	25	1.48	
876.117	3	25	1.49	
876.118	4	30	1.57	
876.119	5	30	2.57	
<b>Total length* 40 mm:</b>				
876.120	2	35	1.29	
876.121	2.5	35	1.95	
876.122	3	35	1.97	
876.123	4	40	2.04	
876.124	5	40	3.17	
<b>Total length* 50 mm:</b>				
876.135	3	42.5	2.44	
876.125	4	50	2.52	
876.126	5	50	3.75	

\* Total length: from the base of the stem up to the center of the ball. EWL: effective working length.

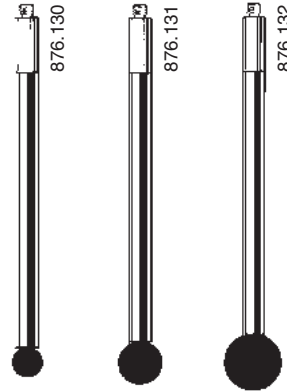
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**Probes and accessories (continued)**

**Ruby ball styli with ceramic stem and thread M2, total length<sup>1</sup> 50 mm**



**Ruby ball styli with carbon fiber stem and thread M2, total length<sup>1</sup> 50 mm**

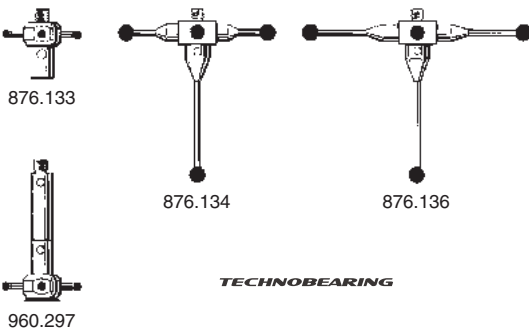


Item No.	Ball ø/mm	EWL <sup>1</sup> mm	Weight g	Price RUB
876.127	3	42.5	0.83	
876.128	4	50	0.91	
876.129	5	50	1.31	

Item No.	Ball ø/mm	EWL <sup>1</sup> mm	Weight g	Price RUB
876.130	4	50.5	1	
876.131	5	50.5	1.1	
876.132	6	50.5	1.2	

<sup>1</sup> Total length: from the base of the stem up to the center of the ball. EWL: effective working length.

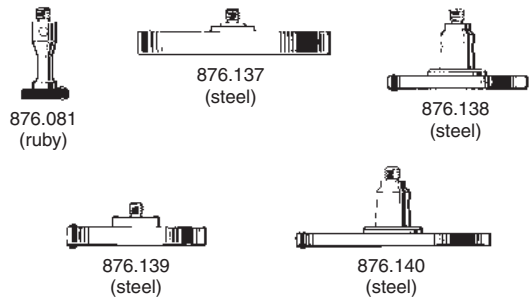
**Star styli (fixed) with thread M2**



Item No.	Ball ø/mm	Work <sup>2</sup> ø/mm	Weight g	Price RUB
876.133	1	10	0.5	
876.134	2	20	1.3	
876.136	2	30	1.8	
960.297	1	11	1.2	

<sup>2</sup> Span (center distance).

**Disc styli with thread M2**



Item No.	Disc ø/mm	Disc thick- ness/mm	Weight g	Price RUB
876.081	6	2 <sup>3</sup>	0.6	
876.137	25	3	3.8	
876.138	18	2.5 <sup>3</sup>	3	
876.139	18	3 <sup>3</sup>	2.7	
876.140	25	2.5 <sup>3</sup>	4	

<sup>3</sup> Size is incl. ball probe on the disc.



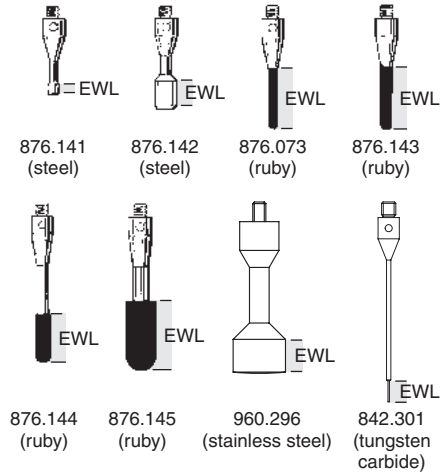
**Probes and accessories (continued)**

**Cylinder styli with thread M2**

Item No.	Cylinder ø/mm	Total length <sup>1</sup> /mm	EWL <sup>1</sup> mm	Weight g	Price RUB
876.141	1.5	11	1.5	0.3	
876.142	3	13	3.8	0.6	
876.073	1	15	8	0.3	
876.143	1.5	15	8.5	0.3	
876.144	2	20	7.2	0.5	
876.145	4	20	10	0.9	
960.296 <sup>2</sup>	8	23	5	4.5	
842.301	0.2	26	3	0.35	

<sup>1</sup> Total length: from the base of the stem up to the center of the ball.  
EWL: effective working length.

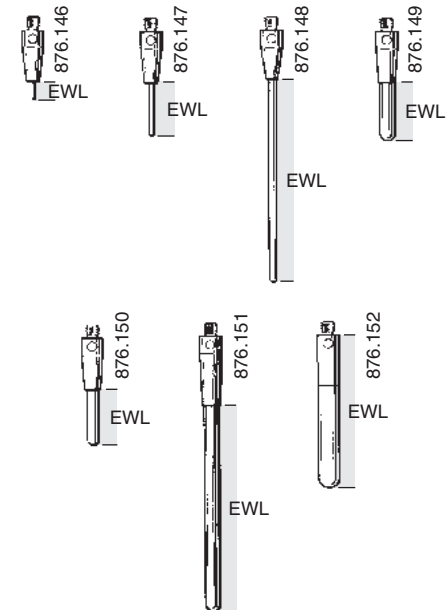
<sup>2</sup> Radius bottom side 40 mm.



**Parallel hemispherical ended styli (tungsten carbide) with thread M2**

Item No.	Cylinder ø/mm	Total length*/mm	EWL* mm	Weight g	Price RUB
876.146	0.3	10.2	2.7	0.3	
876.147	0.5	15.3	7.8	0.3	
876.148	1	35.5	29.8	0.7	
876.149	1.5	15.8	8.3	0.6	
876.150	2	16	8.5	0.8	
876.151	2	40	32	2	
876.152	3	22.5	22.5	2	

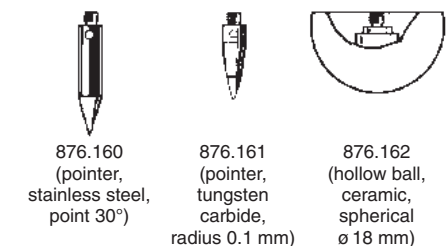
\* Total length: from the base of the stem up to the center of the ball.  
EWL: effective working length.



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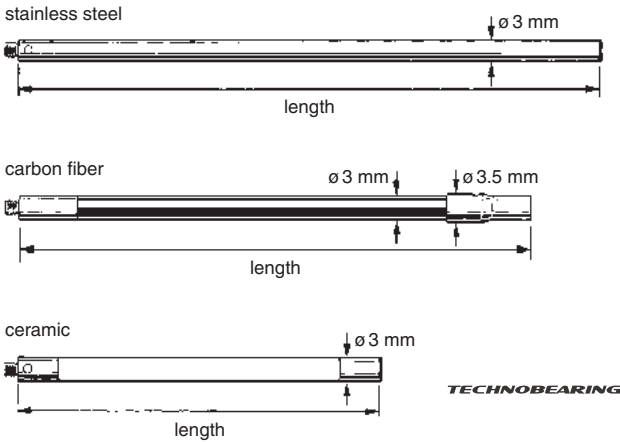
**Special purpose styli with thread M2**

Item No.	Length mm	Weight g	Material	Price RUB
876.160	15	0.7	stainless steel	
876.161	10	0.7	tungsten carbide	
876.162	11	3.3	ceramic	



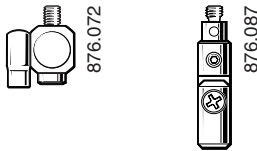
## Probes and accessories (continued)

### Stylus extensions with thread M2



Item No.	Length mm	Weight g	Price RUB
<b>Stainless steel:</b>			
876.067	5	0.2	
876.077	10	0.4	
876.070	20	0.9	
876.164	30	1.4	
876.165	40	1.8	
<b>Carbon fiber:</b>			
876.153	40	0.9	
876.154	50	1	
876.155	70	1.3	
876.156	90	1.5	
<b>Ceramic:</b>			
876.157	30	0.97	
876.158	40	1.22	
876.159	50	1.51	

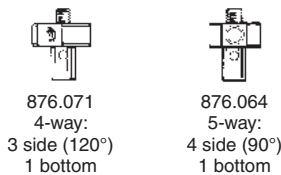
### Stylus knuckles to put the probe in any desired position



Item No.	Thread	EWL* mm	Center offset/mm	Weight g	Price RUB
876.072	M2	8	4.5	1.6	
876.087	M2	16.5	–	1.3	

\* EWL: effective working length.

### Stylus centers for a maximum of 5 styli



Item No.	Thread	EWL* mm	Center size/mm	Weight g	Price RUB
876.071	M2	7.5	7.5	1.1	
876.064	M2	8	7.5	0.8	

\* EWL: effective working length.

### Adapters (stainless steel)



Item No.	Thread external/internal	Length mm	Weight g	Price RUB
876.074	M2/M3	7	0.4	
876.065	M3/M2	5	0.6	

### Styli tool for fitting styli to probe modules, couplings and extentions



Item No.	Description	Price RUB
876.166	Styli tool for M2 and M3 threaded styli	