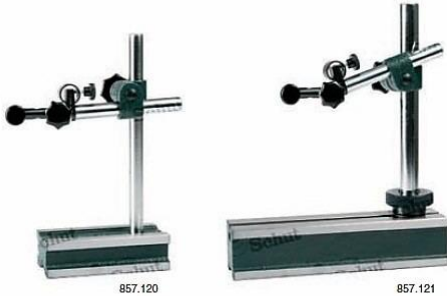




**Measuring stands**

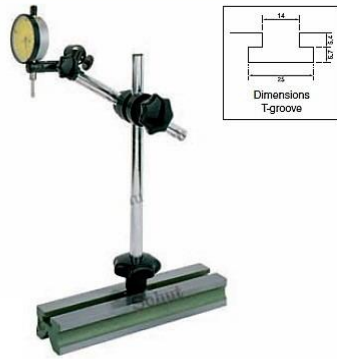
- Clamping shaft:  $\phi$  8 mm.
- Transverse arm with fine adjustment.
- Arm length: 150 mm.
- Ground base.
- Base with V-groove (only 857.120).



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

**Measuring stand**

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



Item No.	Description
856.720	Measuring stand

**Measuring stands**

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



Item No.	Column mm	Arm mm	Dimensions base/mm
906.219	$\phi$ 14 x 185	$\phi$ 12 x 245	220 x 60 x 35
909.376	$\phi$ 16 x 290	$\phi$ 16 x 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:  $\phi$  8 mm.
- Spindle thread pitch: 2 mm.
- Column:  $\phi$  35 mm.
- Transverse arm:  $\phi$  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.

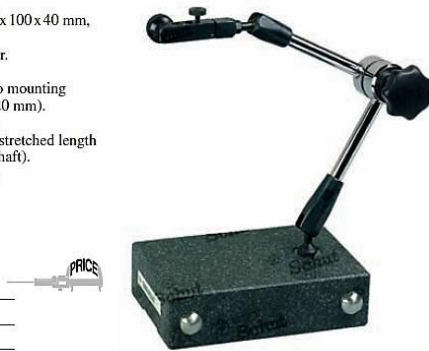


Item No.	Description
907.789	Measuring stand

**Measuring stand**

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

- Clamping shaft  $\phi$  8 mm and dovetail joint.
- Fine adjustment.
- Granite measuring table: 150 x 100 x 40 mm, flatness:  $\leq$  10  $\mu$ m.
- Base with groove in the center.
- Screw thread base: M8.
- Long, right side face with two mounting holes (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
402.195	Measuring stand

**Measuring stand**

- Clamping shaft:  $\phi$  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:  $\phi$  18 x 120 mm.
- Column:  $\phi$  22 mm.
- Other dial gauge holders are available on request.



Item No.	Description
857.130	Measuring stand

**Measuring stands**

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

- Clamping shaft:  $\phi$  8 mm (optional available clamp with clamping shaft  $\phi$  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  $\mu$ m.
- Dimensions transverse arm:  $\phi$  20 x 150 mm (906.507/517/519).
- Column:  $\phi$  30 x 200 mm (906.508: helical threaded 300 mm with anti drop facility).



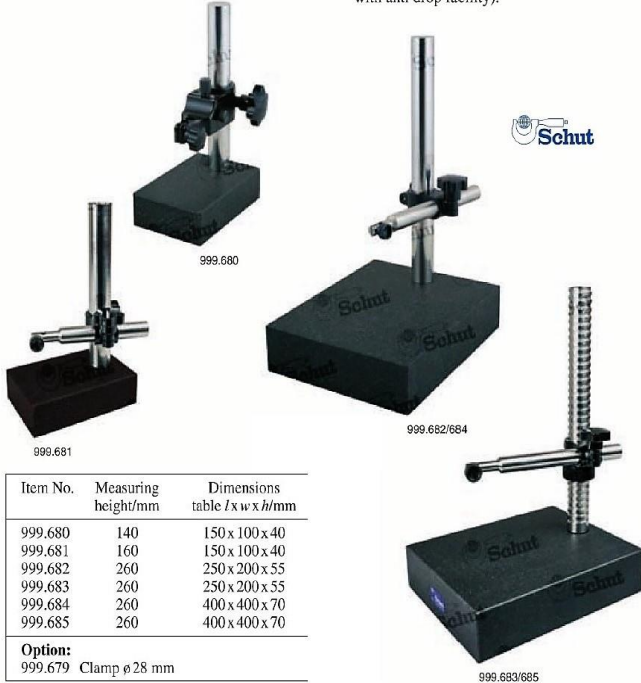
Item No.	Measuring height/mm	Dimensions table l x w x h/mm
906.506	140	140 x 105 x 50
906.507	160	140 x 105 x 50
906.508	260	140 x 105 x 50
906.516	130	$\phi$ 60 x 65
906.517	145	$\phi$ 60 x 65
906.518	130	$\phi$ 60 x 65
906.519	145	$\phi$ 60 x 65

**Option:**  
999.679 Clamp  $\phi$  28 mm

## 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:  $\varnothing 20 \times 150$  mm (999.681),  $\varnothing 20 \times 210$  mm (999.682/683/684/685).
- Column:  $\varnothing 30 \times 200$  mm (999.680/681),  $\varnothing 30 \times 300$  mm (999.682/684),  $\varnothing 30 \times 300$  mm (999.683/685: helical threaded with anti drop facility).



Item No.	Measuring height/mm	Dimensions table l x w x h/mm
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

**Option:**  
999.679 Clamp  $\varnothing 28$  mm

## Measuring stands

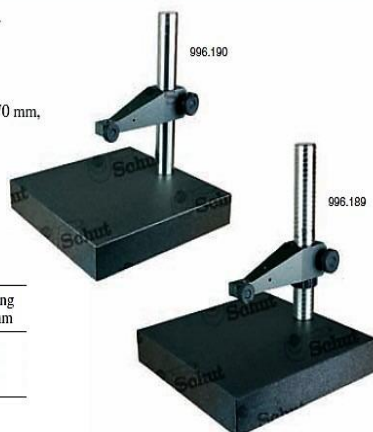
- Clamping shaft:  $\varnothing 8$  mm.
- Total height: 310 mm.
- Max. measuring height: 180 mm.
- Hard-chrome plated and ground column:  $\varnothing 35$  mm.
- 857.126 and 857.128 with adjustable transverse arm ( $\varnothing 22$  mm), length 220 mm.
- Granite measuring table: 260 x 150 x 48 mm (l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



Item No.	Column	Effective arm length/mm
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.



Item No.	Column	Clamping shaft/mm
996.190	plain	$\varnothing 20$
996.189	helical threaded	$\varnothing 20$
996.315	plain	$\varnothing 32$

**Option:**  
344.470 Reducing bush  $\varnothing 20/8$  mm

## 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.



Item No.	Measuring height/mm	Flatness table/ $\mu\text{m}$	Dimensions table l x w x h/mm	Column $\varnothing$ /mm	Effective arm length/mm
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.

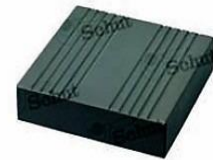


Item No.	Description
334.690	Precision stand

## 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.



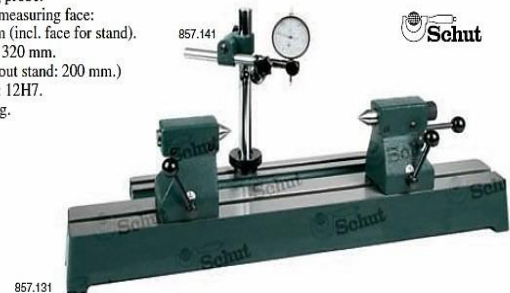
Item No.	Description
841.078	Measuring table

## Bench center

Cast iron base with the measuring face's accuracy according DIN 876/1. Supplied with two tail-stocks, 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
857.131	RP 100-450



Item No.	Description
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.



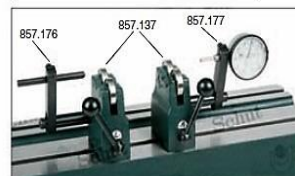
### Prism inserts 90°

- 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.

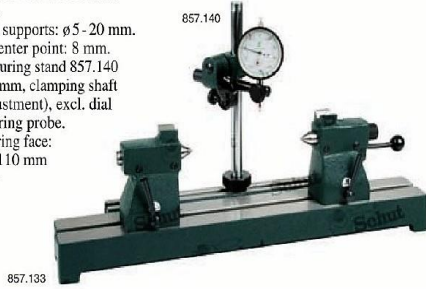




## Bench centers

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.



857.133

Item No.	Type	Center height mm	Max. center distance/mm	Measuring face/mm	Weight kg
857.132	RP 50-200	50	200	350 x 110	8
857.133	RP 75-200P	75	200	350 x 110	9
857.134	RP 50-350	50	350	500 x 110	11
857.135	RP 75-350P	75	350	500 x 110	12

### Item No. Description

- 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



857.138



### 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.

## 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:  $\phi$ 0.5 - 9.5 mm.
- Concentricity of the tailstock quill:  $\pm$ 5  $\mu$ m.
- Delivery incl. measuring stand 857.140 (column  $\phi$ 16 x 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.



### Collet chucks

Item No.	Clamping range
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

Item No.	Center height/mm
857.184	75

**Option:**  
857.182 Separate tailstock



857.274

## Bench center

Bench center with rotatable collet chuck.

- Measuring range: 0 - 50 mm (up to center).
- Capacity:  $\phi$ 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.



### Collet chucks

Item No.	Clamping range
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

Item No.	Description
857.185	Bench center



857.190

## Fisso run out testers and balancing units

Run out tester with roller wheels or V-blocks for efficient testing of external, internal and surfaces of round products. Balancing unit with roller wheels for efficient testing of grinding wheels and other round products. The supports are adjustable and can be fixed on the base plate by means of a lever. Ideal for control in the production environment.

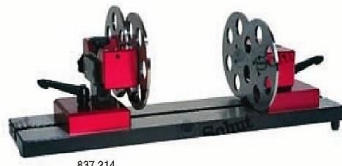
- Diameter compensation run out tester: max. 60 mm.
- Workpiece run out tester: max.  $\phi$ 240 mm, workpiece balancing unit: max.  $\phi$ 500 mm.
- Weight workpiece: max. 25 kg.
- Length base plate: run out tester: 500 or 1000 mm, balancing unit: 330 or 500 mm.
- Width T-slot: 14 mm.

### Model with roller wheels

- Accuracy roller wheel:  $\pm$ 0.005 mm.
- Roller wheel:  $\phi$ 120 mm.

### Model with V-blocks

- Tungsten carbide supports.



837.214



837.216



837.222

Item No.	Length base plate/mm	Weight kg
<b>Run out tester with roller wheels:</b>		
837.214	500	approx. 14
837.215	1000	approx. 23
<b>Run out tester with V-blocks:</b>		
837.216	500	approx. 14
837.217	1000	approx. 23
<b>Balancing unit:</b>		
837.222	330	approx. 13
837.223	500	approx. 16



## Stands / Bench centers / Surface plates

**Flatness tolerances according DIN 876**

Class	Flatness $f_f$ ( $\mu$ m)	$L$ = length in mm
00	$2 + L/500$	
0	$4 + L/250$	
1	$10 + L/100$	
2	$20 + L/50$	
3	$40 + L/25$	