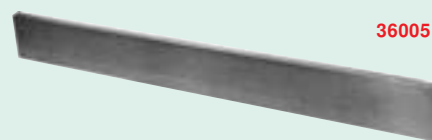


36005 - 36006

Steel straight edges DIN 874/2

Type
Accuracy in compliance with DIN 874/2, edges finely ground. **With works testing certificate.**
Application
For general work.

Note:
Further dimensions available on request.



36005

Length mm	□ approx. mm	Standard steel		Stainless steel	
		36005	...	36006	...
500	30 x 6	101		101	
1000	40 x 8	102		102	
1500	50 x 10	103		103	

Length mm	□ approx. mm	Standard steel		Stainless steel	
		36005	...	36006	...
2000	60 x 12	104		104	
2500	70 x 14	105		105	
3000	80 x 15	106		106	

36010 - 36011

Steel straight edges DIN 874/1

Type
Accuracy in compliance with DIN 874/1, testing surfaces carefully adjusted, faces finely ground. Sizes over 2000 mm length in double T-section with handling slots. **With works testing certificate.**

Application
For precision machine construction.

Note:
Further dimensions available on request.



36010 - 36011

Length mm	□ approx. mm	Standard steel		Stainless steel	
		36010	...	36011	...
500	40 x 8	101		101	
1000	50 x 10	102		102	
1500	60 x 12	103		103	

Length mm	□ approx. mm	Standard steel		Stainless steel	
		36010	...	36011	...
2000	70 x 14	104		104	
2500	80 x 15	105		105	
3000	100 x 16	106		106	

36015 - 36016

Reference straight edges DIN 874/0

Type
Accuracy in compliance with DIN 874/0, testing surfaces carefully adjusted, faces ground. **With works testing certificate.**

Note:
Further dimensions available on request.



36015 - 36016

Length mm	□ approx. mm	Standard steel		Stainless steel	
		36015	...	36016	...
500	50 x 10	101		101	
1000	60 x 12	102		102	
1500	70 x 14	103		103	

Length mm	□ approx. mm	Standard steel		Stainless steel	
		36015	...	36015	...
2000	80 x 15	104		104	
2500	100 x 16	105		105	
3000	120 x 18	106		106	

36060 - 36062

Knife-edged straight edges DIN 874

Type
Accuracy in compliance with DIN 874, Contact surfaces hardened, ground and lapped. Wedge-shaped cross-section, tapered end, with insulating grip, in case.

Application
For testing flatness using the light gap method.



36060 - 36062

Length mm	Standard steel		Stainless steel	
	36060	...	36062	...
75	101		101	
100	102		102	
125	103		103	
150	104		104	
200	105		105	

Length mm	Standard steel		Stainless steel	
	36060	...	36062	...
300	106		106	
400	107		107	
500	108		108	
800	109		109	
1000	110		110	



Light box with monochromatic light

Application

Used in conjunction with flatness testers or plane-parallel testing planes for light-interferential measuring of flatness and parallelism of contact surfaces. The light source is monochromatic. Therefore, the lines of the light interference are displayed with high contrast and their light-dark aspects can be interpreted unambiguously. The light box can be used as background illumination for light gap measurements, e.g. with knife-edged straight edges.

Available on request. Please contact us!



i

• Squares • Measuring tool set

36103 - 36105

Flat steel squares

Application

For general millwright work.

Quality

Steel, up to 1000 x 500 mm bright-galvanised stainless steel.

Leg length mm	Leg □ mm	Without stop		With stop	
		36103	...	36105	...
100 x 70	20 x 5	101		101	
150 x 100	20 x 5	102		102	
200 x 130	20 x 5	103		103	
250 x 160	25 x 5	104		104	
300 x 180	25 x 5	105		105	
400 x 230	30 x 5	106		106	
500 x 280	30 x 5	107		107	
750 x 375	30 x 5	108		108	
1000 x 500	30 x 5	109		109	
1500 x 750	30 x 5	110		110	
2000 x 1000	40 x 5	111			



36111 - 36113

Flat steel squares DIN 875/2

ATORN®

Quality

Standard steel.

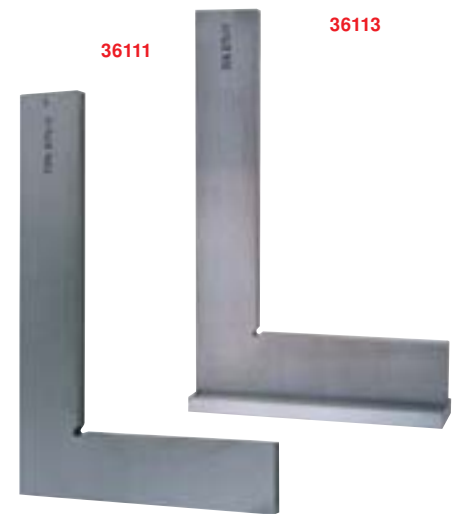
Type

Accuracy in compliance with DIN 875/2, edges and faces ground.

Application

For general workshop use.

Leg length mm	Leg □ mm	Without stop		With stop	
		36111	...	36113	...
100 x 70	20 x 5	101		101	
150 x 100	25 x 5	102		102	
200 x 130	30 x 6	103		103	
250 x 165	35 x 7	104		104	
300 x 175	35 x 7	105		105	
500 x 250	40 x 8	107		107	
600 x 300	40 x 8	108		108	
750 x 375	45 x 10	109		109	
1000 x 500	50 x 10	110		110	



36115 - 36119

Flat steel squares DIN 875/1

ATORN®

Type

Accuracy in compliance with DIN 875/1, edges and faces finely ground.

Application

For precision machine construction.

36115

Type

Without stop.

Quality

Standard steel.

36117

Type

With stop.

Quality

Standard steel.

36118

Type

Without stop.

Quality

Stainless steel.

36119

Type

With stop.

Quality

Stainless steel.

Leg length mm	Leg □ mm	Without stop/steel		With stop/steel		Without stop/Nirosta		With stop/Nirosta	
		36115	...	36117	...	36118	...	36119	...
75 x 50	15 x 5	101		101		101		101	
100 x 70	20 x 5	102		102		102		102	
150 x 100	25 x 5	103		103		103		103	
200 x 130	30 x 6	104		104		104		104	
250 x 165	35 x 7	105		105		105		105	
300 x 200	40 x 8	106		106		106		106	
500 x 330	50 x 10	108		108		108		108	
750 x 500	60 x 12	110		110					
1000 x 660	70 x 15	111		111					



36120 - 36122

Reference flat steel squares DIN 875/0

ATORN®

Type

Accuracy in compliance with DIN 875/0, with calibration certificate. Edges and faces precision-trued.

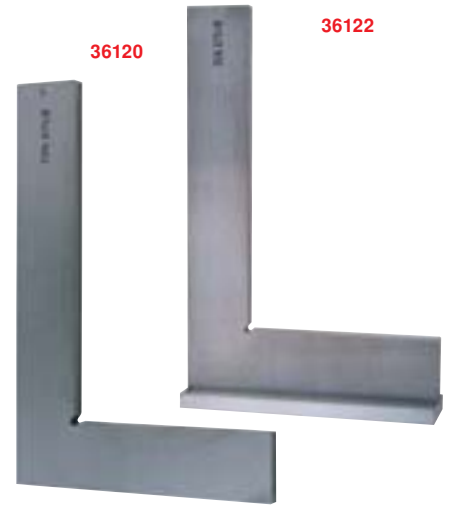
Application

Suitable for checking and machine construction.

Quality

Steel.

Leg length mm	Leg □ mm	Without stop		With stop	
		36120	...	36122	...
75 x 50	15 x 5	101		101	
100 x 70	20 x 5	102		102	
150 x 100	25 x 5	103		103	
200 x 130	30 x 6	104		104	
250 x 165	35 x 7	105		105	
300 x 200	40 x 8	106		106	



36135 - 36136

Hardened precision flat steel squares DIN 875/0

ATORN®

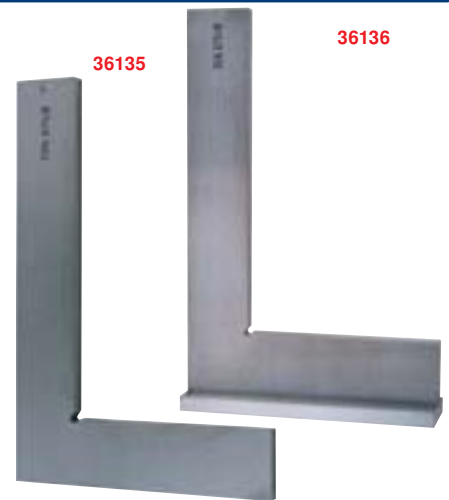
Type

Accuracy in compliance with DIN 875/0, with calibration certificate. Most precisely adjusted, edges ground and lapped.

Quality

Stainless steel.

Leg length mm	Leg □ mm	Without stop		With stop	
		36135	...	36136	...
50 x 40	12 x 5	101		101	
75 x 50	15 x 5	102		102	
100 x 70	20 x 5	103		103	
150 x 100	25 x 5	104		104	
200 x 130	30 x 6	105		105	



36139

Measuring tool set

Type

5-part, consists of:

1 knife-edged straight edge plain steel, DIN 874, length 100 mm,

1 bevelled-edged steel square stainless, DIN 875/00, 75 x 50 mm,

2 diemaker's try square stainless, 25 x 20 and 40 x 28 mm,

1 gauge block laying-out points, 60 x 8 x 8 mm.

Set contents	36139	...
5-part	101	



36142

Precision steel squares DIN 875/00

Type

Accuracy in compliance with DIN 875/00, most precisely adjusted, testing surfaces lapped, fully hardened, with thin and thick leg, stop and 2 knife edges.

Quality

Stainless steel.

Leg length mm	Leg □ mm	36142	...
50 x 40	16 x 2/14 x 10	101	
75 x 50	15 x 2/14 x 10	102	
100 x 70	19 x 3/18 x 12	103	
150 x 100	25 x 3/24 x 12	104	
200 x 130	29 x 4/28 x 16	105	



• Squares

36151 - 36152

Bevelled-edge steel squares DIN 875/00

36151

Type

Accuracy in compliance with DIN 875/00, fully hardened, with 2 knife edges. Edges and faces ground and lapped.

Application

For tests using the light gap method.

Quality

Stainless steel.

36152

Wooden case

36152



Leg length mm	Leg □ mm	Bevelled-edge steel square		Wooden case	
		36151	...	36152	...
50 x 40	13 x 4	101		106	
75 x 50	15 x 5	102		107	
100 x 70	20 x 6	103		108	
150 x 100	25 x 7	104		109	
200 x 130	33 x 7	105		110	

36153

Diemaker's Try Squares DIN 875/00

Type

Accuracy in compliance with DIN 875/00, edges and faces accurate and finest ground. With 1 knife edge on the inside of the long leg, without stop.

Application

For testing the surfaces on cutting-, pressing- and stamping tools. Can be used as a flat steel square with 90°. For die and jig as well as tool making.

Quality

Stainless steel.

36153



Leg length mm	Leg □ short/long leg mm	36153	...
25 x 20	6,0 x 3,5 / 5,0 x 3,5	201	
40 x 28	6,0 x 3,5 / 5,5 x 3,5	202	

36154

Adjustable bevelled-edge steel square

Type

Error tolerance in compliance with DIN 875 GG 0, hardened and ground. With double clamping claw so that the thin leg does not bend when under pressure, for constant accuracy. Supplied in case.

Application

Many applications in tool, mould, die and jig making.

36154



Leg length mm	Leg □ mm	36154	...
75 x 75	18 x 5	102	
100 x 100	20 x 5	103	

36171

120° miter squares DIN 875/1

Type

Accuracy in compliance with DIN 875/1, edges and faces finely ground.

Application

For accurate scribing and testing of 60° and/or 120°.

36171



Leg length mm	Leg □ mm	36171	...
75 x 75	18 x 5	102	
100 x 100	20 x 5	103	

36175

135° miter squares DIN 875/1

Type

Accuracy in compliance with DIN 875/1, edges and faces finely ground.

Application

For accurate scribing and testing of 45° and/or 135°.

36175



Leg length mm	Leg □ mm	36175	...
75 x 75	18 x 5	102	
100 x 100	20 x 5	103	

36181

135° miter squares DIN 875/2

Type

With stop, accuracy in compliance with DIN 875/2, edges and faces fine ground, with legs of equal section.

Application

For accurate scribing and testing of 45° and/or 135°, for corner work 90°.

36181



Leg length mm	Leg \square mm	36181	...
150 x 100	20 x 5		102
200 x 130	25 x 5		103

36182

Plumber's squares

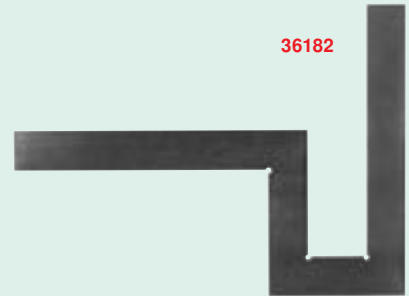
Application

For plumbers. Special tool for aligning flanges in plumbing. Calibration not possible.

Quality

Standard steel, galvanised.

36182



Leg length mm	Leg \square mm	36182	...
300	30 x 5		100
400	30 x 5		101

36185

Centre squares

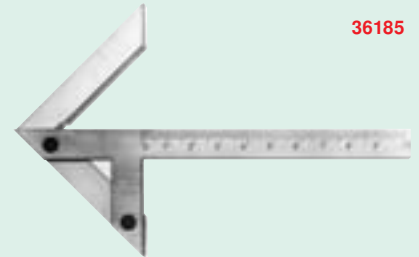
Type

With crosspiece on half of the head, for centring round discs and shafts. Rod with millimeter graduation, chrome-plated.

Application

For marking the centres of discs and shafts.

36185



Leg length mm	Leg \square mm	36185	...
100 x 70	12 x 3		101
150 x 130	16 x 4		102
200 x 150	18 x 4		103
250 x 160	18 x 4		104
300 x 180	18 x 4		105

36188

Bevels

Type

3-part, with locking screw.

Application

Can be set to any angle, adjustable by wing nut.

36188



Length mm	Shank \square mm	36188	...
200	22 x 9		103
300	30 x 9		104
500	30 x 9		106

36191 - 36194

Angle plates DIN 876

Type

Fixed, 90°, with clamping slots. Flatness in compliance with DIN 876, squareness in compliance with DIN 875, exact on two sides.

Application

For scribing and inspection work. Also suitable as clamping fixtures for milling, planing and drilling machines.

Quality

Made of close-grained hard special cast iron with high wear-resistance.

Note:

Angle plates with other accuracy, larger dimensions as well as with T-clamping slots in compliance with DIN 650 in the driving face available on request.

36191

Accuracy grade 1, base and clamping faces ground.

36194

Accuracy grade 3, base and clamping faces precision-milled.

36191 - 36194



L x W x H approx. mm	Weight approx. kg	Accuracy grade 1		Accuracy grade 3	
		36191	...	36194	...
200 x 100 x 150	8			102	102
275 x 150 x 200	20			103	103
400 x 225 x 300	45			105	105
500 x 300 x 400	85			106	106

• Clamping tables • Clamps • Sine bar • Prism • Angle Ssetting instrument

36201

Tilting clamping table

Type

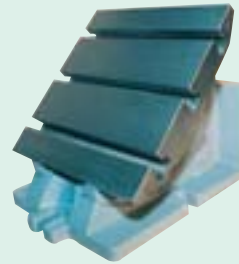
Particularly low height. Upper part located in dovetail guide. Locks in position by clamping method, swivels up to 90°. Angle setting can be read of on scale. T-slots (clamping slots), **clamping face with accuracy grade 3**, planed.

Application

Also suitable for heavy loads.

Quality

Special cast iron.



36201

Clamping surface mm	Height mm	Clamping slots number of	Nominal size	Base dimensions mm	Weight approx. kg	36201 ...
390 x 400	210	4	14	300 x 370	70	203

27260

Sets of assorted plastic clamping elements



Type

55 parts. Clamping claws, step blocks, and nuts: high-strength plastics PBT, red.

Stud bolts: anodised aluminium.

Advantages:

- Weight only 1/4 compared to parts made of aluminium and 1/10 compared to parts made of steel.
- Corrosion-resistant against hand perspiration.
- Very easy handling.
- No damage of machine tables and workpieces.
- Multi-purpose use.

Application

Suitable for use on 3-dimensional coordinate measuring machines, pulse circuit machines as well as for all clampings which need low clamping force only. Possible clamping force (approx. 500 N) is achieved by tightening the nut and depends on selected leverage ratio of clamp support.

27260



Set contents	Stud bolt size	Weight kg	27260 ...
55-part	M 6 x M 8	1,70	101
55-part	M 8 x M 8	1,74	102
55-part	M 10 x M 8	1,77	103
55-part	M 12 x M 8	1,80	104



Tilting clamping and inspection tables

Tilting Clamping and Inspection Tables

Made of close-grained special cast iron, finely ground. Height adjustment by means of self-retarding adjusting mechanism. Setting by dial and vernier, and additional sine bar setting by using gauge blocks.

Types

Adjustable in one plane from 0 - 60°, in two planes from 0 - 60°, in one plane from 0 - 90°.

Precision Sine Plates

Made of close-grained special cast iron, finely ground. The angle setting is held by 2 Allen set

screws. Setting by gauge blocks. Gauge block setting area is hardened, ground and lapped.

Accuracy grade 0

Angle accuracy 0,005mm/100 mm, parallelism deviation at zero-position 0,006 mm.

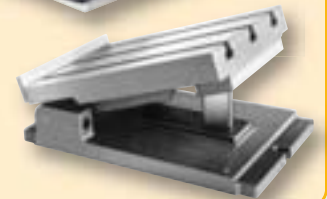
Accuracy grade 1

Angle accuracy 0,01mm/100 mm, parallelism deviation at zero-position 0,016 mm.

Types

Adjustable in one plane from 0 - 60°, in two planes from 0 - 60°.

Further information available on request.



Master precision vices

Machine vices



Master precision vices



(Multi-purpose) grinding and testing vices



Sine vices



are shown in our catalogue group 27 from cat.-no. 27540 cont.



36300

Sine bar

Type

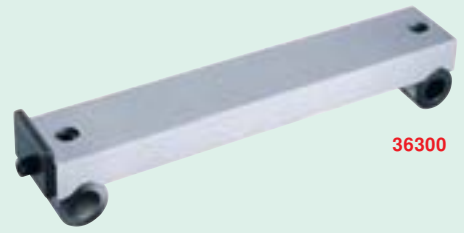
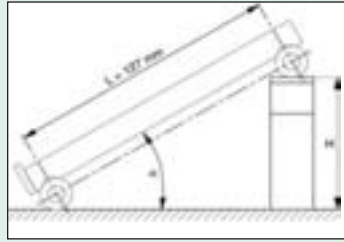
Contact surfaces with one side stop, which can be removed.

Application

For setting and measuring of exact angles between 0° and 60°. Angle setting by use of gauge block combinations.

Quality

Hardened gauge-grade steel.



36300

Note:

Gauge blocks see cat.-no. 32027 - 32030.

Calculation example for a setting angle of 45°:

Gauge block combination H:

$$H = l \times \sin \alpha$$

$$H = 127 \times 0,70711$$

$$H = 89,803 \text{ mm}$$



Distance between rollers mm	Measuring surface mm	36300 ...
127 +/- 0,004	123 x 25	201

27610

Adjustable prisms

Type

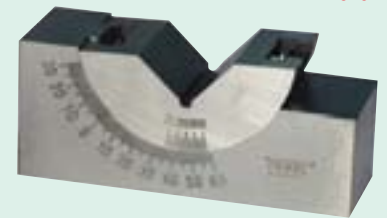
Accuracy +/- 0,1 mm, angle accuracy +/- 10 min.

Application

Universal use for grinding, boring, measuring and scribing. Prisms are clamped in a vice. Angle setting of the prisms by locking screw.

Quality

Alloyed tool steel, hardened to HRC 55.



27610

Length mm	W mm	H mm	h mm	Weight ca. g	27610 ...
75	25	32	23	380	101
102	30	48	29	850	102



27612

Sine angle setting instrument

Type

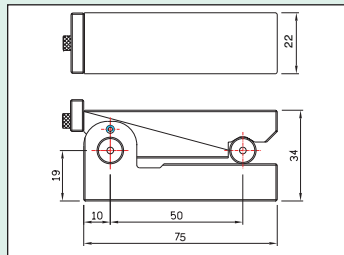
With adhesion magnet. Top working face precision ground. Measuring arms reversible, therefore it may be used in any position. Distance between axes: 50 mm. Angle accuracy: 3 sec. Plane parallelism: +/- 0,004/100 mm.

Application

For precise setting of any angles between 0° and 45° on machining centres and for checking parts. Angle setting by the sine bar method with gauge blocks.

Quality

Alloyed tool steel, hardened to HRC 58.



27612

Length mm	Width mm	Height mm	Weight kg	27612 ...
75	22	34	1,0	101

36330

Hardened prisms (Single prisms)

Type

In pairs, notch 90°. Precision type, made of steel, finely ground in pairs and adjusted, accuracy 0,004 mm.

Application

For testing, marking and aligning of cylindrical parts.



36330

Length mm	W x H mm	for workpiece Ø mm	36330 ...
75	35 x 30	5 - 40	201
100	47 x 40	5 - 55	202
150	55 x 45	5 - 60	203
200	65 x 55	5 - 75	204
250	85 x 70	5 - 100	205

• Prism • Clamping prisms • Parallels

36332 - 36335

Prisms (Single prisms)

Type

In pairs, notch approx. 90°.

Application

For testing, marking and aligning of cylindrical parts.

Quality

Made of close-grained special cast iron with high wear-resistance.

Note:

Large prism pairs up to 450 mm workpiece Ø available on request.

36332

Type

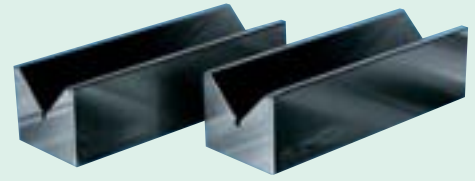
Accuracy grade 1, notch and base area ground, parallelism deviation max. 0,016 mm.

36335

Type

Accuracy grade 3, notch and base area precision-milled, parallelism deviation max. 0,06 mm.

36332 - 36335



Length mm	Width mm	For workpiece Ø mm	Accuracy grade 1		Accuracy grade 3	
			36332	...	36335	...
100	40	6 - 40			102	102
150	50	8 - 50			103	103
200	70	8 - 70			104	104
300	100	12 - 100			106	106

36338

Permanent magnet measuring and clamping prisms

Type

Unhardened, **single**, 3 clamping faces with 2 prisms, 1 each on top and on bottom, including on/off rotary switch.

Application

For measuring, testing and other purposes.

Parallelism mm/100 mm	Squareness mm/100 mm	Adhesion N	L x W x H mm	Weight kg	36338	...
0,01	0,025	2.200	100 x 70 x 95	4		101

36338



36341

Magnet measuring and clamping prisms (pair)

Type

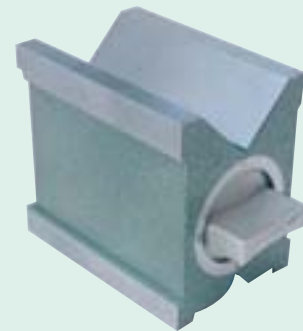
Contact surfaces and prism hardened, ground, in pairs. High-precision prism, **all faces precision-ground, parallel, precisely angled.** Switches on and off with rotary switch. Magnetic adhesion surface at the opposite site of the rotary switch. Adhesion force of cylindrical parts of the prism approx. 400 N. Supplied in wooden case.

Application

For material Ø 6 - 70 mm. For measuring, scribing and machining of workpieces on machine tools.

Accuracy mm	Adhesion on approx. N	L x W x H mm	Weight kg/unit.	36341	...
0,004	1800	100 x 70 x 96	3,8		102

36341



36343 - 36344

Hardened prisms

Type

Finest precision type, with clamp, **in pairs, finely ground** and adjusted, with 2 differently sized notches, notch 90°.

36343

Type

Accuracy 0,01 mm.

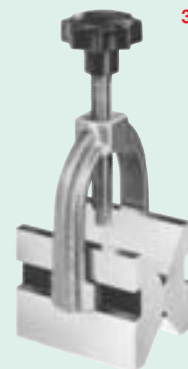
36344

Type

Accuracy 0,004 mm.

36343 - 36344

Length mm	Width mm	Height mm	For workpiece Ø mm	0,01 mm		0,004 mm	
				36343	...	36344	...
50	40	50	5 - 30			101	101
75	55	55	5 - 50			102	102
100	75	75	7 - 70			103	103



36365

Set of prisms

Type

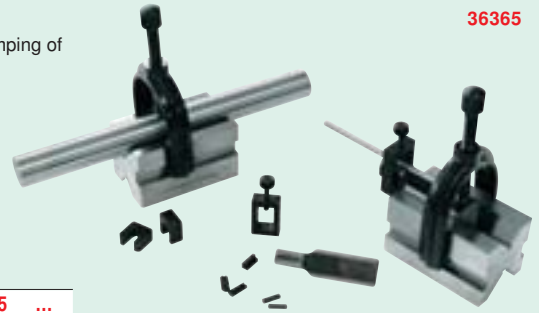
Set consists of 9 prisms (Ø 0,7 up to 40 mm). Set of 1 pair each of prism pairs and 7 small prisms with 2 clamps, 2 bridges and 2 mini clamps. Supplied in case.

Application

Special clamping system allows secure clamping of small cylindrical parts.

Quality

Steel, hardened and ground.



36365

36365 ...

201

36383

Quadruple prisms (drill blocks) DIN 876/1

Type

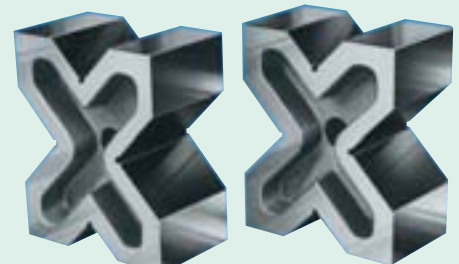
In pairs, 4 notches approx. 90°. **Parallelism deviation** prism notches in comparison to base area max. 0,016 mm, **accuracy grade 1**.

Quality

Made of close-grained special cast iron with high wear-resistance.

Note:

Other accuracies available on request.



36383

Length mm	Width mm	Height mm	for workpiece Ø mm	36383 ...
60	100	120	8 - 90	101
75	130	150	10 - 120	102
90	170	200	12 - 180	103

36600

Precision parallels sets



Type

In pairs, plane-parallel finely ground. Dimensions on face. The sets result in a large range with 1 mm increments. Case-hardened. Paired tolerance IT 5, nominal size tolerance +/- 0,01 mm. Other dimensions in compliance with **DIN ISO 2768 m**. In wooden stand.

Application

For clamping and positioning of different sized workpieces, e.g. for grinding, milling, eroding, measuring and scribing. Can be used in conjunction with clamping tools and for parallel positioning workpieces in toolmaker's vices and on test plates.

Note:

Sets made of acid- and corrosion-resistant steel available on request. Types with special dimensions (e.g. in compliance with DIN) with higher accuracy or as single pairs available on request.

36600 101

Type

Length 100 mm.

Contents of box one pair each of:

2 x 5 / 2 x 10 / 2 x 15 / 2 x 20 / 3 x 6 / 3 x 11 / 3 x 16 / 3 x 21 / 4 x 7 / 4 x 12 / 4 x 17 / 4 x 22 / 5 x 8 / 5 x 13 / 5 x 18 / 5 x 23 / 6 x 9 / 6 x 14 / 6 x 19 / 6 x 24 mm.

36600 103

Type

Length 125 mm.

Contents of box one pair each of:

8 x 11 / 8 x 16 / 8 x 21 / 8 x 26 / 8 x 31 / 8 x 36 / 10 x 13 / 10 x 18 / 10 x 23 / 10 x 28 / 10 x 33 / 10 x 38 / 12 x 15 / 12 x 20 / 12 x 25 / 12 x 30 / 12 x 35 / 12 x 40 / 14 x 17 / 14 x 22 / 14 x 27 / 14 x 32 / 14 x 37 / 14 x 42 mm.

36600 102

Type

Length 150 mm.

Contents of box one pair each of:

8 x 11 / 8 x 16 / 8 x 21 / 8 x 26 / 8 x 31 / 8 x 36 / 10 x 13 / 10 x 18 / 10 x 23 / 10 x 28 / 10 x 33 / 10 x 38 / 12 x 15 / 12 x 20 / 12 x 25 / 12 x 30 / 12 x 35 / 12 x 40 / 14 x 17 / 14 x 22 / 14 x 27 / 14 x 32 / 14 x 37 / 14 x 42 mm.



36600

Length mm	36600 ...
100	101
125	103 NEW
150	102

• Parallels • Test plates • Test plates

36602

Set of parallels

Type

Hardened and finely ground. Resting faces finely ground. **Paired tolerance in height 0,010 mm.** Nominal sizes in compliance with **ISO 2768 m.** Nominal size tolerance up to a height of 30 mm = +/- 0,2 mm, starting at a height of 35 mm = +/- 0,3 mm.

Contents:

1 pair each (=14 pairs). Parallels 150 mm long, 10 mm wide. Height of contact surfaces mm: 14 / 16 / 18 / 20 / 22 / 24 / 26 / 28 / 30 / 32 / 35 / 40 / 45 / 50. In wooden case with removable swing cover.



36602

Contents

36602 ...

14 pairs

101

36604

Sets of parallels DIN 6346



Type

Case-hardened and ground, accuracy grade 1 in compliance with **DIN 876**, Section 2.2.1, Tab. 3, paired tolerance IT 5. Nominal sizes in compliance with ISO 2768 m. In wooden box with removable swing cover.

Application

Can be used as supports, stops or spacers on machine tools. A must for parallel positioning workpieces in toolmaker's vices. Thanks to ideal stepping and high accuracy grade suitable as well for scribing. High accuracy allows stacking of parallels with two different sizes.

36604 101

Set contents 9 pairs:

8 x 2,5 x 63 / 10 x 3,2 x 63 / 12 x 4 x 63 / 16 x 5 x 63 / 20 x 6,3 x 63 / 12 x 4 x 100 / 16 x 5 x 100 / 20 x 6,3 x 100 / 25 x 8 x 100 mm.

36604 102

Set contents 7 pairs:

12 x 4 x 100 / 16 x 5 x 100 / 20 x 6,3 x 100 / 25 x 8 x 100 / 25 x 8 x 160 / 32 x 10 x 160 / 40 x 12 x 160 mm.

36604 103

Set contents 5 pairs:

25 x 8 x 100 / 32 x 10 x 100 / 40 x 12 x 100 / 50 x 16 x 160 / 63 x 20 x 160 mm.



36604

Set size Set contents pairs

36604 ...

2,5 - 25 9

101

4,0 - 40 7

102

8,0 - 63 5

103

36605

Parallels DIN 6346



Type

Case-hardened and ground, **accuracy grade 1 in compliance with DIN 876**, Section 2.2.1, Tab. 3, **in pairs, tolerance IT 5 in height and width.** Nominal sizes in compliance with **ISO 2768 m.**

Application

Can be used as supports, stops or spacers on machine tools. A must for parallel positioning workpieces in toolmaker's vices. Thanks to ideal stepping and high accuracy grade suitable as well for scribing. High accuracy allows stacking of parallels with two different sizes.



36605

H x W mm	Length mm	Width tolerance mm	Height tolerance mm	36605 ...
8 x 2,5	63	0,004	0,006	102
10 x 3,2	63	0,005	0,006	104
12 x 4,0	100	0,005	0,008	106
16 x 5,0	100	0,005	0,008	108
20 x 6,3	100	0,006	0,009	110
25 x 8,0	100	0,006	0,009	111

H x W mm	Length mm	Width tolerance mm	Height tolerance mm	36605 ...
25 x 8,0	160	0,006	0,009	112
32 x 10,0	100	0,006	0,011	113
32 x 10,0	160	0,006	0,011	114
40 x 12,0	100	0,008	0,011	115
40 x 12,0	160	0,008	0,011	116
50 x 16,0	160	0,008	0,011	117

36615

Set of parallels



Type

Hardened and ground, resting surfaces precision-ground. Paired tolerance in height 0,004 mm. Nominal size tolerance in height= +/- 0,004 mm. Nominal sizes length and width in compliance with **ISO 2768 m.** 150 mm long, 10 mm wide, in wooden box with removable swing cover.

Set contents 14 pairs: height of measuring surface 14 / 16 / 18 / 20 / 22 / 24 / 26 / 28 / 30 / 32 / 35 / 40 / 45 / 50 mm.

Application

Can be used as supports for workpieces in different machining procedures. Thanks to constant width, the parallels can be stacked in height. The swing cover is removable so that the box can be open stored in a tool cabinet.



36615

Contents

36615 ...

14 pairs

101

36758 - 36759

Test plates DIN 876/1 and 876/3

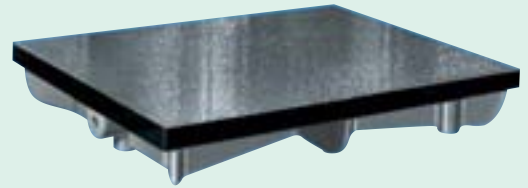
Type
Contact surfaces machined in compliance with DIN 876, outer edges finely milled.

Quality
Made of close-grained special cast iron with high wear-resistance and standard reinforcing ribs.

36758
Accuracy DIN 876/1, finely scraped.

36759
Accuracy DIN 876/3, finely planed.

36758 - 36759



Note:

We recommend steel frame stands. Further sizes and accuracies available on request.

Dimensions approx. mm	Weight approx. kg	DIN 876/1		DIN 876/3	
		36758	...	36759	...
300 x 300	14	201		201	
400 x 400	31	202		202	
500 x 400	40	203		203	
600 x 500	57	204		204	
800 x 500	83	205		205	

36762

Natural stone test plates DIN 876/0

ATORN®

Type
Accuracy DIN 876/0, finely diamond-lapped.
Diamond-lapped measuring surfaces guarantees long service life, test plates made of **natural stone** are manufactured in air and humidity-controlled rooms. Vickers hardness HV: 850-900. 13-22 N/mm² absolutely warp-free, temperature-proof, hard and wear-resistant, electrically non-conductive, absolutely acid-resistant, color blue-black. **Incl. of calibration certificate.**

Quality
Made of natural stone - diamond-lapped, made of special selected material of highest quality, fully free of any errors.

Note:
Setting up on support pedestals, cabinet type stands and steel frame stands is done by using steel ball inserts. Included starting at size 1000 x 630 x 100 mm. The steel ball inserts are positioned at the lower side of the plate so that they fit steel frame stands (cat.-no. 36768) and single pedestal supports (available on request).

Dimensions approx. mm	Flatness mm	Weight approx. kg	36762	...
400 x 400 x 50	0,006	25	103	
630 x 400 x 70	0,007	53	106	
1000 x 630 x 100	0,008	189	108	
1200 x 800 x 160	0,009	460	109	

36762



36765 - 36766

Natural stone test plates DIN 876/1 and 876/0

PLANOLITH

Type
Diamond-lapped measuring surfaces guarantees long service life, test plates made of **natural stone** are manufactured in air and humidity-controlled rooms. Vickers hardness HV: 850-900. 13-22 N/mm² absolutely warp-free, temperature-proof, hard and wear-resistant, electrically non-conductive, absolutely acid-resistant, color blue-black. **Incl. of calibration certificate.**

Quality
Made of natural stone - diamond-lapped, made of special selected material of highest quality, fully free of any errors.

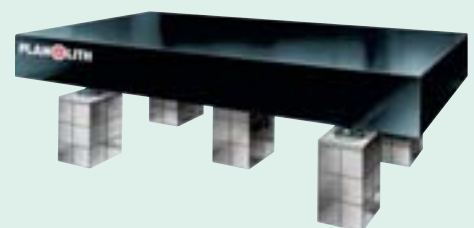
Note:
Setting up on support pedestals, cabinet type stands and steel frame stands is done by using steel ball inserts. The inserts are included (not for no. 101 + 102). The steel ball inserts are positioned at the lower side of the plate so that they fit steel frame stands (cat.-no. 36768) and single pedestal supports (available on request. Test plates also available with T-slot bars. Service: Please use our service for refurbishing of your test plate. We will submit you our offer for re-finishing the plates at your location. No packing, no transport, no loss of production time.

36765
Accuracy DIN 876/1, diamond-lapped.

36766
accuracy DIN 876/0, finely diamond-lapped.

Dimensions approx. mm	DIN 876/1		Weight approx. kg	DIN 876/0			
	Flatness mm	Flatness mm		36765	...	36766	...
250 x 250 x 50	0,012	0,005	10	101		101	
400 x 250 x 50	0,014	0,006	15	102		102	
400 x 400 x 50	0,014	0,006	25	103		103	
500 x 400 x 90	0,015	0,006	55	104		104	
600 x 500 x 100	0,016	0,007	90	105		105	
800 x 600 x 120	0,018	0,007	173	106		106	
1000 x 630 x 100	0,02	0,008	189	107		107	
1200 x 800 x 160	0,022	0,009	460	108		108	
1600 x 1000 x 160	0,025	0,01	768	109		109	
2000 x 1000 x 220	0,03	0,012	1320	110		110	

36765 - 36766





▶ T-Slot Bars for clamping and guidance DIN 650

Type

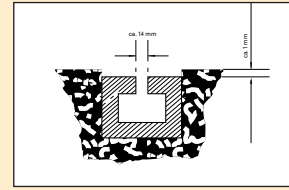
Steel, dazzle-free matt chrome finish, guidance- and clamping T-slot ground, nominal slot size 14 mm only approx.-size. Accessories such as tailstocks will be fitted precisely to this actual dimension, **accuracy 0,01 mm/m.**

Application

For natural stone test plates, to mount tailstocks etc.

For plate length mm:

600 / 630 / 800 / 1000 / 1200 / 1500 / 1600 / 2000.



36768

Stands for natural stone test plates

Type

Sturdy welded design, inclusive of plate rest (cat.-no. 101 and 102 with 4-point rest, 103-116 with plate rest (3-point rest and 2 screws to prevent tilting).

Height approx. 900 mm. Finish silver grey.

Application

For test plates (cat.-no. 36762 - 36766).

Quality

Sectional steel.

Note:

Special lacquers available on request.

36768



For plate sizes approx. mm	Weight approx. kg	36768	...
400 x 400 x 50	20		101
500 x 400 x 90	20		102
600 x 500 x 100 / 630 x 400 x 70	22		103
800 x 600 x 120	25		106
1000 x 630 x 100	28		107
1200 x 800 x 160	30		112
1600 x 1000 x 160	35		115
2000 x 1000 x 220	40		116

36772

Cabinet type stands

Type

Stand made of sturdy sheet metal welded construction. Internal drawers on rollers and removable storage shelf. Doors with cylinder locks, inclusive of plate rest (3-point rest and 2 screws to prevent tilting). Setting screws on the feet to compensate for floor unevenness. **Height approx. 900 mm.** Finish silver grey.

Application

For test plates (cat.-no. 36762 - 36766).

Note:

Special lacquers available on request.

36772 104-112

36772 113



For plates approx. mm	No. of doors	No. of drawers	No. of shelves	Weight approx. kg	36772	...
800 x 600 x 120	1	1	-	55		103
1000 x 630 x 100	2	2	1	75		104
1200 x 800 x 160	2	2	1	80		109
1600 x 1000 x 160	2	2	1	100		112
2000 x 1000 x 220	3	2	1	130		113

36779 - 36780

Natural stone straight edges accuracy grade 0 and accuracy grade 00

PLANOLITH

Type

2-side precision. Hard and wear-resistant, no deformation. The two narrow contact surfaces are plane parallel and aligned to one another. Starting at 750 mm with handle on both sides.

36779

Accuracy grade 0, finely diamond-lapped.

36780

Accuracy grade 00, especially suitable finely diamond-lapped.

Note:

4-side precision machined types available on request.

36779 - 36780



Dimensions mm	Accuracy grade 0		Weight approx. kg	Accuracy grade 00	
	mm	mm		36779	36780
500 x 45 x 90	0,003	0,0015	6	101	101
750 x 50 x 140	0,004	0,002	16	102	102
1000 x 56 x 160	0,005	0,002	26	103	103
1500 x 70 x 220	0,006	0,003	69	105	105
2000 x 80 x 250	0,007	0,0035	120	107	107

36781

Natural stone reference squares 90° DIN 875

ATORN®

Type

2-side precision. Hard and wear-resistant. **Surface accuracy in compliance with DIN 876/00**, very finely diamond-lapped. Angularity in compliance with DIN 875. Starting at a leg length of 600 x 400 mm with holes to reduce the weight. These holes double as recessed grips to facilitate handling.

Application

For inspecting 90° angles and straightness. For example during the assembly and acceptance tests of machine tools and for inspecting workpieces, machine parts etc. on test plates. Can be mounted horizontally or vertically.

Note:

Further dimensions available on request.

NEW

36781



Leg length mm	Width mm	Admissible deviation of rectangularity mm	Holes to reduce weight mm	Weight approx. kg	36781 ...
400 x 250	50	0,003	-	10	101
500 x 300	60	0,004	-	17	102
600 x 400	70	0,005	2 x Ø 110	30	103
800 x 500	80	0,006	2 x Ø 130	55	104

36786 - 36787

Natural stone reference squares 90° DIN accuracy grade 0 and accuracy grade 00

PLANOLITH

Type

4-side precision. Hard and wear-resistant. **Surface accuracy in compliance with DIN 876/00**. Angularity in compliance with DIN 875. The four narrow contact surfaces are plane parallel and aligned perpendicularly to one another. For lighter weight and better handling, the stone square is supplied with holes.

36786

Accuracy grade 0, finely diamond-lapped.

36787

Accuracy grade 00, especially suitable finely diamond-lapped.

36786 - 36787



Dimensions mm	Max. perm. deviation of rectangularity mm	Weight approx. kg	Accuracy grade 0		Accuracy grade 00	
			36786 ...	36787 ...		
350 x 250 x 50	0,004	11	101			
600 x 400 x 60	0,004	35	102			
350 x 250 x 50	0,002	11		101		
600 x 400 x 60	0,002	35		102		

36788

Natural stone analysis measuring and testing instruments Axis-Inspect-Master 90°

PLANOLITH

Type

Rectangular, **accurate on 5 sides.** For lighter weight and better handling, the device is supplied with holes. The four narrow contact surfaces are plane parallel and aligned perpendicularly to one another. With 12 holes (Ø 20 mm) for an easy and quick test of positions. **Incl. of test certificate** in wooden case.

Advantages:

- reduction of maintenance costs
- reduction of downtimes caused by machine stoppage
- cost reduction during manufacturing

Application

The Axis-Inspect-Master is a measuring and testing instrument for CNC machine tools, measuring machines, measuring arms etc. It allows for quick and precise establishment of the actual state of the machine. The received values need to be compared with predefined target values, in order to determine the actual state of the machine that is tested. Dependent on outfit and suitability of the respective set-up, this can be done automatically. It is especially important, to inspect geometry and positioning of a machine right after a crash and to

readjust it, if necessary. **This may save time and costs**, if the test result shows that the damage is not as bad as suspected and the costs for a service technician can be avoided, as well as the costs for the downtime.

NEW

36788



Measuring arms



Height Measuring Gauges



Machining centres



Coordinate measuring machines

Dimensions approx. mm	Admissible deviation of rectangularity mm	Flatness of sides mm	Flatness of one face mm	Weight approx. kg	36788 ...
350 x 250 x 50	0,002	0,002	0,01	15	101
600 x 400 x 50	0,002	0,002	0,01	32	102
800 x 600 x 70	0,002	0,002	0,01	90	103

• Test frames • Cleaning and care agents • Laying-out dyes • finishing paste
 • Spray cleaning fluids • Concentricity testing instruments

36789 - 36790 Natural stone test frames 90° DIN accuracy grade 0 and accuracy grade 00



Type
One-part, 4-side precision. Hard and wear-resistant. **Surface accuracy in compliance with DIN 876/00.** Angularity in compliance with DIN 875. The four narrow contact surfaces are plane parallel and aligned perpendicularly to one another. Considerable weight reduction and better handling thanks to recesses in centre of frame.

36789
Accuracy grade 0, finely diamond-lapped.

36790
Accuracy grade 00, especially suitable finely diamond-lapped.

36789 - 36790



Dimensions mm	Max. perm. deviation of rectangularity mm	Weight approx. kg	Accuracy grade 0		Accuracy grade 00	
			36789	...	36790	...
350 x 250 x 50	0,004	8			101	
600 x 400 x 60	0,004	20			102	
350 x 250 x 50	0,002	8				101
600 x 400 x 60	0,002	20				102

36793 Cleaning and care agents for stone test plates

36793 101
Cleaning fluid
 DURALIN

Type
 In plastic canister approx. 5 l.

Application
 The cleaning fluid removes dirt, oil, finishing paste, etc. and ensures that gauging and scribing tools moves smoothly over the plate.

36793 202
Care Agent
Type
 In tin approx. 400 g.

Application
 The paste reduces wear on the plate and ensures that the workpieces and specimens move smoothly over the plate.

36793 101



36793 202



	36793	...
Container 5 l		101
Can 400 g		202

36795 Laying-out dyes / Marking sticks

Application
 For marking working points on metal surfaces. Ensures easy scribing of clear lines.

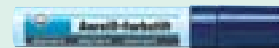
36795 101
Laying-out dye
Type
 In bottle, fluid, quick drying. Apply with brush.

36795 102
Marking stick

36795 101



	Contents ml	Colour	36795	...
Laying-out dye	500	blue		101
Marking stick	-	blue		102



36795 102

36796 Spray laying-out dyes

Type
 In spray can, quick-drying, best contrasting characteristics, economical in use. With environmentally friendly propellant, flammable.

Application
 For all metals.

36796
Marking stick

36796



	Contents ml	Colour	36796	...
	400	blue		101

36798 Finishing pastes

Application
 For surface testing. The regularity of the finishing paste helps in determining the quality of the working surface.

36798 101
Marking stick

36798 101



	Contents	Colour	36798	...
	80 ml tube	blue		101
	225 g can	blue		102



36798 102

36799

Spray cleaning fluids

Type

Highly flammable.

Application

For general cleaning, particularly for removing laying-out dye.



36799

Contents	36799	...
ml		
300		101

36855

Concentricity testing instruments



Type

Contact surface finely ground, **flatness in compliance with DIN 876/2**. With 2 sliding tailstocks. Left-hand tailstock with fixed quill. Right-hand tailstock with spring quill, stroke approx. 15 mm. Tailstocks are fastened by means of an excenter. T-slot on the side with indicator stands, dial indicator mounting hole 8 mm H7 and fine adjustment.

36855 100

Type

Additionally with prism.

Note:

Accessories such as tailstocks with collet chuck devices, prism inserts, and prism blocks with ball bearings available on request.

36855 099



Height of centres	Distance of centres	Width of T-slot	Base plate	Weight	36855	...
mm	mm	mm	mm	kg		
50	180	10	350 x 110	8		099
75	330	10	500 x 110	12		100
100	450	12	700 x 180	35		102
150	450	12	700 x 180	38		103



Accessories for concentricity testing instruments such as tailstocks, prism inserts, or prism blocks available on request.

Please contact us!



36860

Concentricity testing instrument



Type

Clamping table made of dark natural stone. **Flatness tolerance in compliance with DIN 876/1**. Tailstock with moving sleeve, adjustment by means of hand lever. Left-hand tailstock with fixed quill. Exchangeable centre points with standard release device. Lacquer, silver-grey.

With:

1 test bed, 1 dial indicator stand, 1 pair of tailstocks with centre points 60° MT 2.

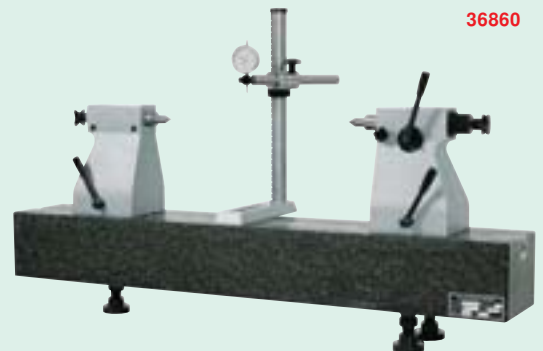
Quality

Tailstocks made of high-quality, well-aged special cast iron.

Technical specifications

- ▶ Height of points: 200 mm
- ▶ Distance between points: 650 mm
- ▶ Test bed: 1100 x 180 x 140 mm
- ▶ T-slot bar with matt chrome finish: 14 mm
- ▶ Straightness T-slot bar: 10 µm/m
- ▶ Base area tailstock: 130 x 150 mm
- ▶ Weight: 135 kg
- ▶ Overall height and indicator stand: 650 mm
- ▶ Dial indicator mounting hole: 8 H7
- ▶ Stroke moving point: 20 mm
- ▶ Sleeve mount: MT 2
- ▶ Accuracy of tailstocks: accuracy grade 1 +/- 8 µm

36860



36860	...
	201



3



Performance requires quality.

Digital slide callipers by ATORN:

- high-quality materials
- maximum precision
- quick and reliable measuring results
- waterproof and with best resilience

This is but one example of **ATORN's** high-quality measuring tools.

ATORN[®]