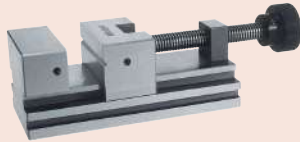
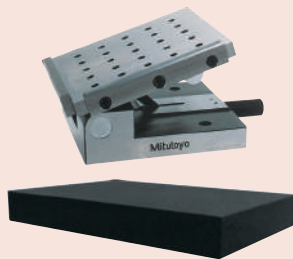


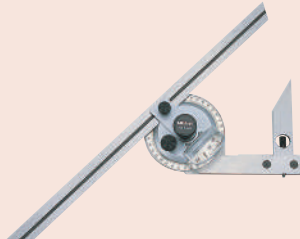
**Indicator Stands
Page 298**



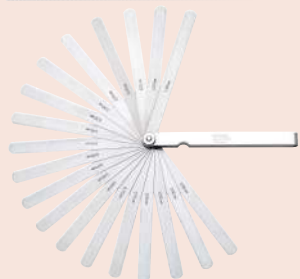
**Precision Vices
Page 308**



**Plates and Granite Squares
Page 310**



**Angle Measurement and Squares
Page 313**



**Feeler Gauges, Rules, Knife Edges
Page 316**

Gauge Stands with Hardened Steel Anvils

Series 519, Series 7

This gauge stand with hardened steel anvil offers you the following benefits:

- Standard version with round anvil



7001-10

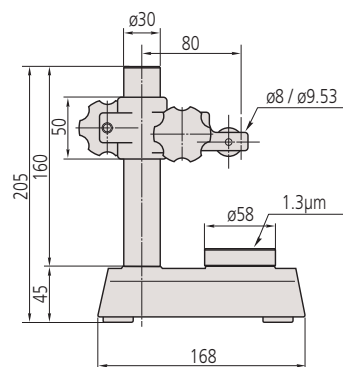


7002-10

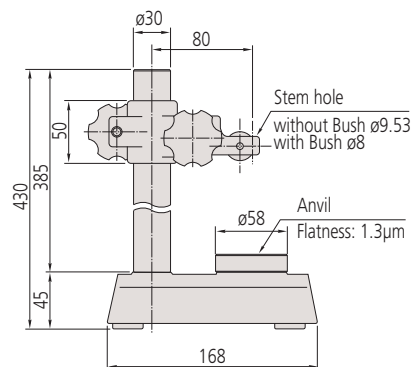
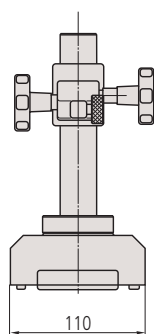


519-109-10

| No. | Effective table dimensions [mm] | Column Ø [mm] | Max. measurement height [mm] | Measuring table | Fine adjustment | Stem hole ø | Perpendicularity table-stem hole [mm/mm] | Table flatness | Mass [kg] |
|------------|---------------------------------|---------------|------------------------------|-------------------|-----------------|---|--|----------------|-----------|
| 7001-10 | Ø 58 | 30 | 95 | Serrated (101462) | 1 mm | ø 3/8" / 9,53 mm , 8 mm with bush (standard accessory) | 0,4/100 | 1,3 µm | 4 |
| 7002-10 | Ø 58 | 30 | 95 | Flat (101461) | 1 mm | ø 3/8" / 9,53 mm , 8 mm with bush (standard accessory) | 0,4/100 | 1,3 µm | 4 |
| 519-109-10 | Ø 58 | 30 | 318 | Serrated (101462) | 1 mm | ø 3/8" / 9,53 mm , 8 mm with bush (standard accessory) | 0,4/100 | 1,3 µm | 6 |



7001-10, 7002-10



519-109-10

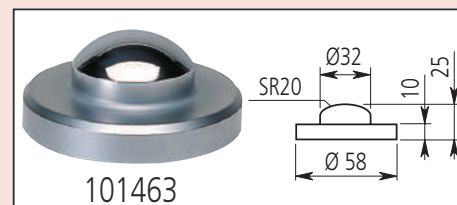
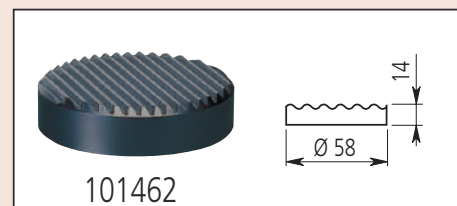
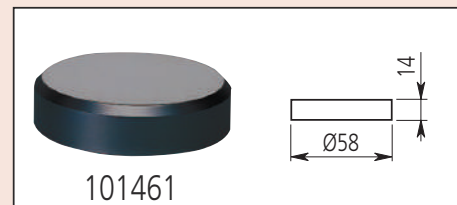
Standard accessories

| No. | Description |
|----------|--|
| 101461 | Flat Anvil for Gauge Stand, Ø58mm |
| 101462 | Serrated Anvil for Gauge Stand, Ø58mm |
| 21JAA316 | Stem Bush for Gauge Stand, 9,53mm to 8mm |

Optional accessories

| No. | Description |
|--------|-------------------------------------|
| 101463 | Convex Anvil for Gauge Stand, Ø58mm |

101461 for 7002-10
101462 for 7001-10, 519-109-10



Gauge Stands with Hardened Steel Anvils

Series 215, Series 7

This gauge stand with hardened steel anvil offers you the following benefits:

- Standard version with square anvil

Standard accessories

| No. | Description |
|----------|---|
| 21JAA316 | Stem Bush for Gauge Stand, 9,53mm to 8mm |
| 21JAA329 | Stem Bush for Gauge Stand, 20mm to 8mm |
| 21JAA330 | Stem Bush for Gauge Stand, 20mm to 9,53mm |

21JAA316 only for 7007-10 + 215-405-10
21JAA329 and 21JAA330 only for 215-505-10

Optional accessories

| No. | Description |
|----------|---|
| 21JAA331 | Stem Bush for Gauge Stand, 20mm to 15mm |

21JAA331 : only for 215-505-10



7007-10

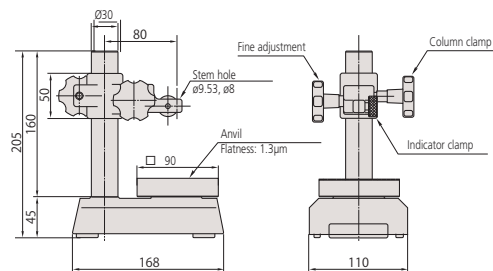


215-405-10

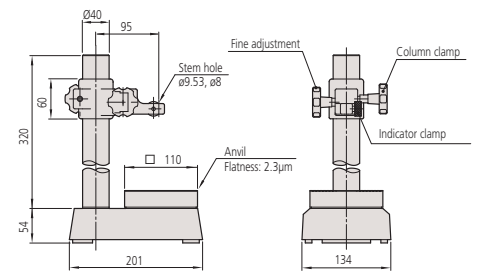


215-505-10

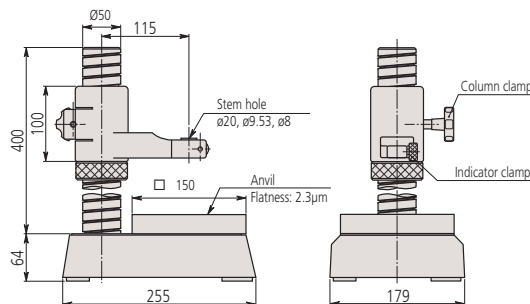
| No. | Effective table dimensions [mm] | Column Ø [mm] | Max. measurement height [mm] | Fine adjustment | Stem hole ø | Perpendicularity table-stem hole [mm/mm] | Table flatness | Mass [kg] |
|------------|---------------------------------|---------------|------------------------------|-----------------|--|--|----------------|-----------|
| 7007-10 | 90 x 90 | 30 | 90 | 1 mm | ø 3/8" / 9,53 mm, 8 mm with bush (standard accessory) | 0,4/100 | 1,3 µm | 5 |
| 215-405-10 | 110 x 110 | 40 | 235 | 1 mm | ø 3/8" / 9,53 mm, 8 mm with bush (standard accessory) | 0,4/100 | 2,3 µm | 10,9 |
| 215-505-10 | 150 x 150 | 50 | 275 | Screw on column | ø 20 mm, ø 3/8" / 9,53 mm, 8 mm with bush (standard accessory) | 0,4/100 | 2,3 µm | 19,7 |



7007-10



215-405-10



215-505-10

Gauge Stands with Hardened Steel Anvils

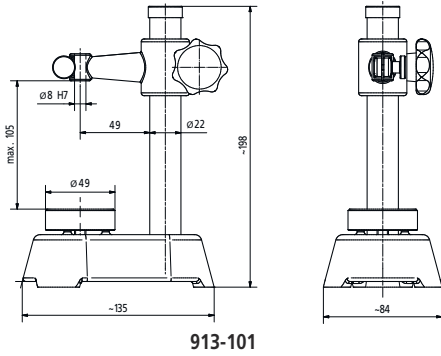
Series 913

Standard version

- Simple standard version.



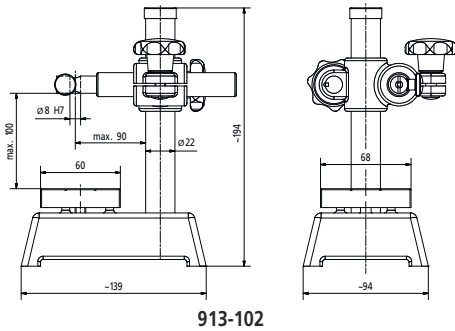
913-101



913-101



913-102



913-102

| No. | Effective table dimensions [mm] | Column Ø [mm] | Max. measurement height [mm] | Stem hole ø | Mass [kg] |
|---------|---------------------------------|---------------|------------------------------|-------------|-----------|
| 913-101 | ø 50 | 22 | 100 | 8 mm | 2,3 |
| 913-102 | 60 x 70 | 22 | 100 | 8 mm | 3,6 |

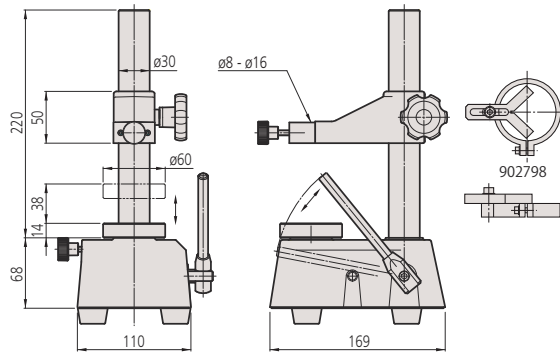
Stands for Precision Bore Gauges

Series 215

- For efficient measurement of multiple small holes with a bore gauge Series 526



215-120-10



| No. | Maximum measuring height [mm] | Measuring stroke [mm] | Effective table dimensions [mm] | Mass [kg] |
|------------|-------------------------------|-----------------------|---------------------------------|-----------|
| 215-120-10 | 110 | max.38 | Ø 60 | 6,5 |

Optional accessories

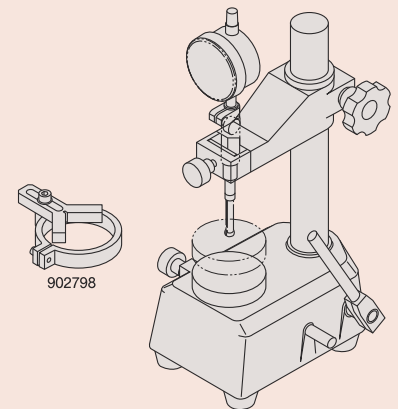
| No. | Description |
|---------|---|
| 913-201 | Horizontal Holder, for 913-101, 913-102 |



913-201

Optional accessories

| No. | Description |
|--------|---|
| 902798 | V-Attachment for 215-120-10, Stand for Bore Gauge |



Gauge Stands with Granite Bases

Series 912

This gauge stand with granite base offers you the following benefits:

- The base stays free of burrs due to its fine grain composition and the base will stay free of corrosion



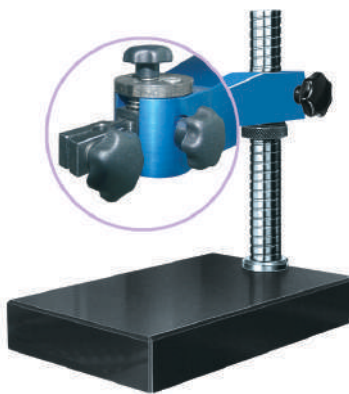
912-101

| No. | Base size [mm] | Effective table dimensions [mm] | Column Ø [mm] | Max. measurement height [mm] | Throat [mm] | Arm ø [mm] | Stem hole ø | Table flatness | Mass [kg] |
|---------|----------------|---------------------------------|---------------|------------------------------|-------------|------------|-------------|----------------|-----------|
| 912-101 | 150 x 100 x 40 | 100 x 100 | 16 | 180 | 150 | 16 | 8 mm | 2 µm | 3 |

Series 912

This gauge stand with granite base offers you the following benefits:

- The base is made of granite that stays free of burrs due to its fine grain composition and the base will stay free of corrosion



912-105

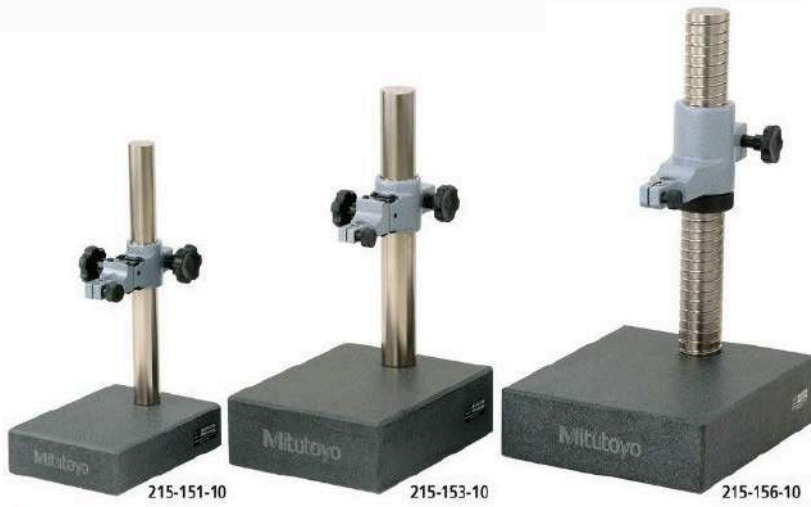
| No. | Base size [mm] | Effective table dimensions [mm] | Column Ø [mm] | Max. measurement height [mm] | Throat [mm] | Fine adjustment [mm] | Stem hole ø | Table flatness | Mass [kg] |
|---------|----------------|---------------------------------|---------------|------------------------------|-------------|----------------------|-------------|----------------|-----------|
| 912-105 | 260 x 140 x 50 | 200 x 140 | 35 | 180 | 120 | 8 | 8 mm | 2 µm | 9,5 |

Gauge Stands with Granite Bases

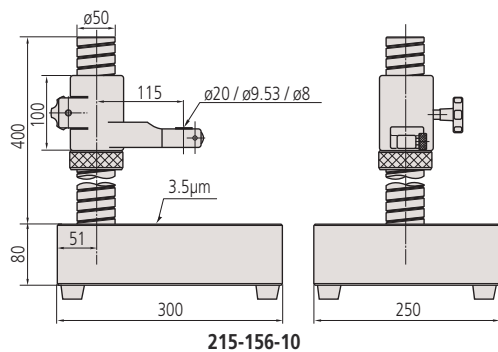
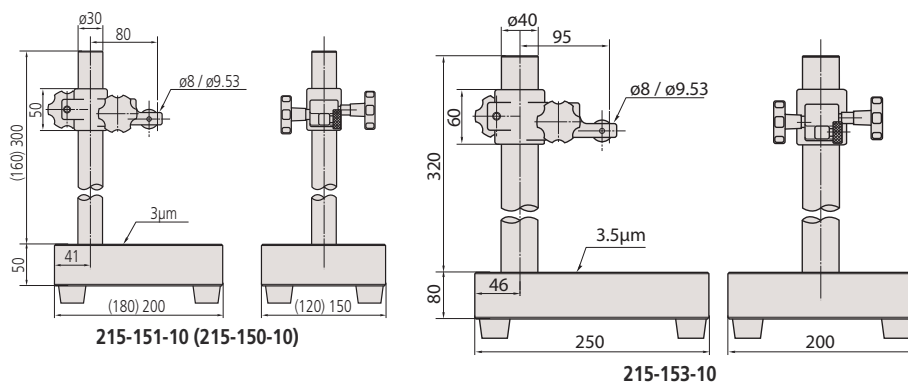
Series 215

This gauge stand with granite base offers you the following benefits:

- The base is made of granite that stays free of burrs due to its fine grain composition and the base will stay free of corrosion



| No. | Column Ø [mm] | Max. measurement height [mm] | Fine adjustment [mm] | Stem hole ø | Table flatness | Perpendicularity table-stem hole [mm/mm] | Mass [kg] |
|------------|---------------|------------------------------|----------------------|---|----------------|--|-----------|
| 215-150-10 | 30 | 120 | 1 | ø 3/8" / 9,53 mm, 8 mm with bush (standard accessory) | 3 µm | 0,2/100 | 5,4 |
| 215-151-10 | 30 | 260 | 1 | ø 3/8" / 9,53 mm, 8 mm with bush (standard accessory) | 3 µm | 0,2/100 | 7,5 |
| 215-153-10 | 40 | 250 | 1 | ø 3/8" / 9,53 mm, 8 mm with bush (standard accessory) | 3,5 µm | 0,2/100 | 16 |
| 215-156-10 | 50 | 300 | 1 | ø 20 mm, ø 3/8" / 9,53 mm 8 mm with bush (standard accessory) | 3,5 µm | 0,2/100 | 27,5 |



Standard accessories

| No. | Description |
|----------|---|
| 21JAA316 | Stem Bush for Gauge Stand, 9,53mm to 8mm |
| 21JAA329 | Stem Bush for Gauge Stand, 20mm to 8mm |
| 21JAA330 | Stem Bush for Gauge Stand, 20mm to 9,53mm |

21JAA316 for 215-150-10, 215-151-10, 215-153-10
21JAA329 and 21JAA330 for 215-156-10

Optional accessories

| No. | Description |
|----------|---|
| 21JAA331 | Stem Bush for Gauge Stand, 20mm to 15mm |

only for 215-156-10



215-150-10

Jointed Magnetic Stands

Series 011

- With mechanical locking system and fine adjustment
- Allows a dial indicator to be fixed in any position.



011533



011358



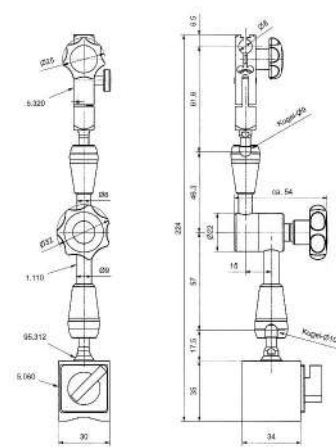
011359



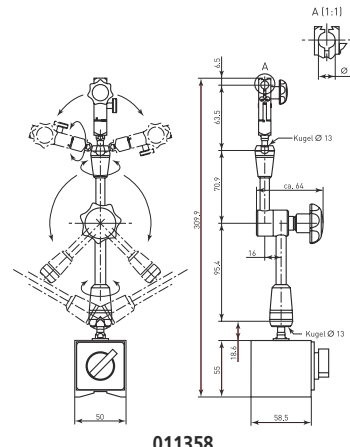
011360

| No. | Clamping device | Clamping force (vertical) [N] | Base size (LxWxH) | Total height [mm] | Fine adjustment |
|--------|-----------------|-------------------------------|-------------------|-------------------|--------------------------------------|
| 011533 | magnetic | 300 | 36 x 30 x 35 mm | 220 | with fine feed wheel 1,3 mm/rotation |
| 011358 | magnetic | 750 | 58,5 x 50 x 55 mm | 310 | with fine feed wheel 1,3 mm/rotation |
| 011359 | magnetic | 750 | 58,5 x 50 x 55 mm | 397 | with fine feed wheel 1,3 mm/rotation |
| 011360 | magnetic | 900 | 73 x 50 x 55 mm | 517 | with fine feed wheel 1,3 mm/rotation |

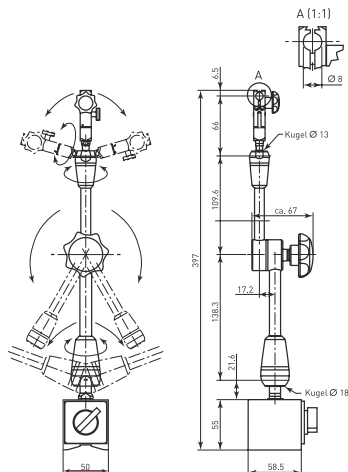
| No. | Stem hole ϕ | Working radius [mm] | Thread Arm/Base | Mass [kg] |
|--------|------------------|---------------------|-----------------|-----------|
| 011533 | 8 mm, dovetail | 130 | M6 x 1 | 0,45 |
| 011358 | 8 mm, dovetail | 200 | M8 x 1,25 | 1,55 |
| 011359 | 8 mm, dovetail | 280 | M8 x 1,25 | 1,85 |
| 011360 | 8 mm, dovetail | 400 | M8 x 1,25 | 2,1 |



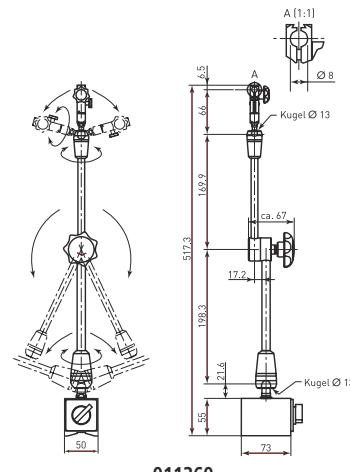
011533



011358



011359



011360

Jointed Magnetic Stands

Series 7

This jointed magnetic stand offers you the following benefits:

- It comes with a mechanical locking system and allows fine adjustment.
- You can also fix a dial indicator in any position by mechanically clamping the articulated arm.



7031-10



7032-10



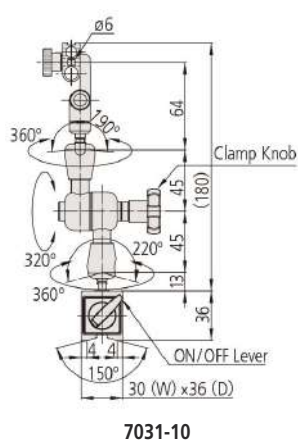
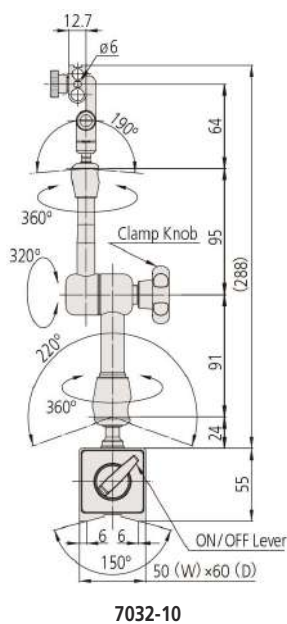
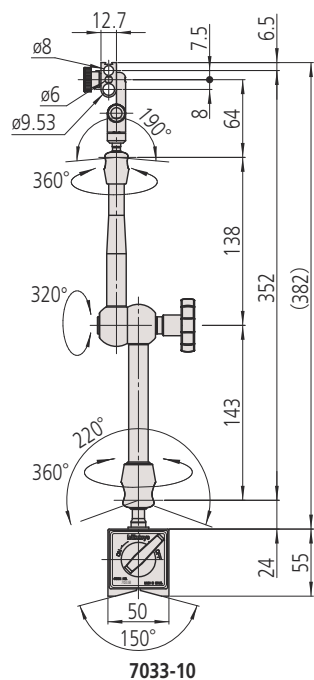
7033-10



With fine feed wheel.

| No. | Clamping device | Clamping force (vertical) [N] | Base size (LxWxH) | Total height [mm] | Fine adjustment |
|---------|-----------------|-------------------------------|-------------------|-------------------|------------------------------------|
| 7031-10 | magnetic | 300 | 36 x 30 x 36 mm | 214 | with fine feed wheel $\pm 4^\circ$ |
| 7032-10 | magnetic | 600 | 59 x 50 x 55 mm | 345 | with fine feed wheel $\pm 4^\circ$ |
| 7033-10 | magnetic | 600 | 59 x 50 x 55 mm | 425 | with fine feed wheel $\pm 4^\circ$ |

| No. | Stem hole \varnothing | Working radius [mm] | Thread Arm/Base | Mass [kg] |
|---------|-------------------------------|---------------------|-----------------|-----------|
| 7031-10 | 6 mm, 8 mm, 9,53 mm, dovetail | 154 | M5 x 0,8 | 0,59 |
| 7032-10 | 6 mm, 8 mm, 9,53 mm, dovetail | 250 | M8 x 1,25 | 1,6 |
| 7033-10 | 6 mm, 8 mm, 9,53 mm, dovetail | 346 | M8 x 1,25 | 1,75 |



Flexible Jointed Arms

Arms without magnetic base



011361 011362 011363
 Dimensions : see 011358 Dimensions : see 011359 Dimensions: see 011360

| No. | Stem hole ϕ | Working radius [mm] | Mass [g] |
|----------|-----------------------------------|---------------------|----------|
| 63AAA130 | 8 mm, dovetail | Approx. 130 | 270 |
| 21JZA331 | 6, 8 mm, 3/8" (9,53 mm), dovetail | Approx. 154 | |
| 011361 | 8 mm, dovetail | Approx. 200 | 400 |
| 21JZA332 | 6, 8 mm, 3/8" (9,53 mm), dovetail | Approx. 250 | |
| 011362 | 8 mm, dovetail | Approx. 280 | 800 |
| 21JZA333 | 6, 8 mm, 3/8" (9,53 mm), dovetail | Approx. 346 | |
| 011363 | 8 mm, dovetail | Approx. 400 | 900 |

Bases

Magnetic and pneumatic bases without arm



63AAA671



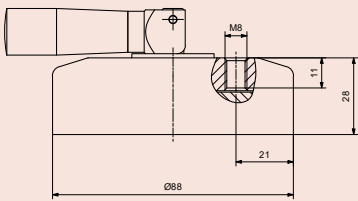
63AAA470



7013-10



011364



63AAA671

| No. | Clamping device | Clamping force (vertical) [N] | Base size (LxWxH) | Thread Arm/Base | Mass [g] |
|----------|-----------------|-------------------------------|-------------------|-----------------|----------|
| 63AAA470 | magnetic | 300 | 36 x 30 x 35 mm | M6 x 1 | 200 |
| 63AAA131 | magnetic | 750 | 58,5 x 50 x 55 mm | M8 x 1,25 | 980 |
| 7013-10 | magnetic | 600 | 58,5 x 50 x 55 mm | M8 x 1,25 | 990 |
| 011364 | magnetic | 900 | 73 x 50 x 55 mm | M8 x 1,25 | 1260 |
| 63AAA671 | pneumatic | 300 | D= 88 mm | M8 x 1,25 | 360 |

Application of the pneumatic base 63AAA671 on a granite plate with indicator and flexible jointed arm (optional)



Magnetic Stands

Series 7

- V-block base type.



63AAA670



7010S-10



7011S-10



7015-10

| No. | Clamping device | Clamping force (vertical) [N] | Base size (LxWxH) | Total height [mm] | Fine adjustment | Stem hole ϕ | Working radius [mm] | Thread Arm/Base | Mass [kg] |
|----------|-----------------|-------------------------------|-------------------|-------------------|---|---|---------------------|-----------------|-----------|
| 63AAA670 | magnetic | 300 | 36 x 30 x 35 mm | 234 | with fine feed wheel 1,3 mm/rotation | 8 mm, dovetail | 120 | M6 x 1 | 0,47 |
| 7010S-10 | magnetic | 600 | 59 x 50 x 55 mm | 232 | None | 3/8" / 9,53 mm, 4 mm, 8 mm (with stem bush) | 165 | M8 x 1,25 | 1,38 |
| 7011S-10 | magnetic | 600 | 59 x 50 x 55 mm | 232 | with fine adjustment knob | 3/8" / 9,53 mm, 4 mm, 8 mm (with stem bush) | 150 | M8 x 1,25 | 1,49 |
| 7015-10 | magnetic | 600 | 59 x 50 x 55 mm | 232 | with fine feed wheel +4° | 3/8" / 9,53 mm, 6 mm, 8 mm (with stem bush) | 170,5 | M8 x 1,25 | 1,37 |



With fine feed wheel (63AAA670, 7010-S, 7015-10).



With fine adjustment knob (7011S-10).

Standard accessories

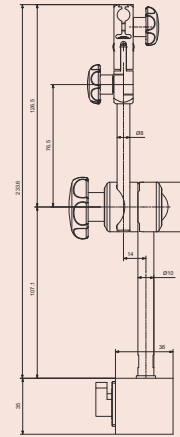
| No. | Description |
|----------|---|
| 02AZC291 | Stem Bush for Magnet Stand, 9,53mm to 8mm |

for 7010S-10, 7011S-10, 7015-10

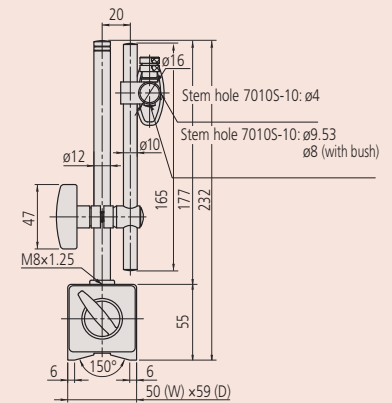
Optional accessories

| No. | Description |
|----------|-----------------------------------|
| 02AZC282 | Cross arm for Magnet Stand, 300mm |

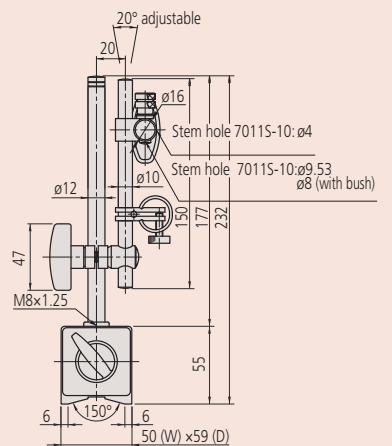
for 7010S-10, 7011S-10, 7015-10



63AAA670



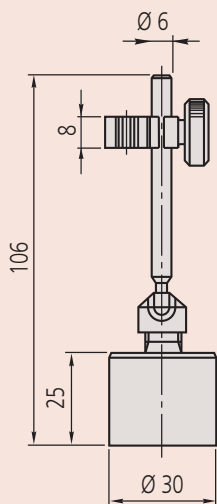
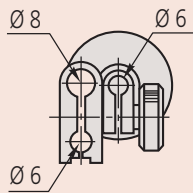
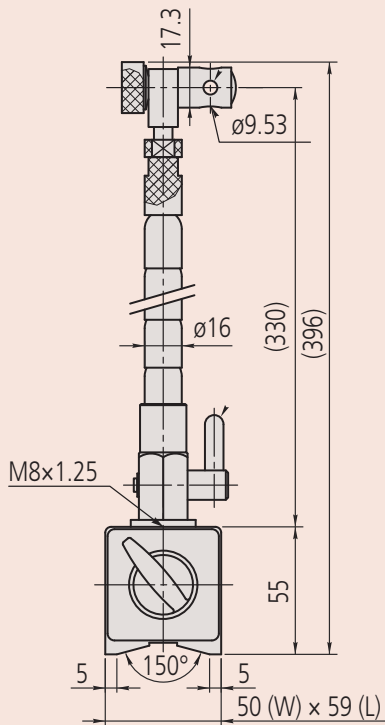
7010S-10



7011S-10

Standard accessories

| No. | Description |
|----------|---|
| 02AZC291 | Stem Bush for Magnet Stand, 9,53mm to 8mm |



Magnetic Stands

Series 7

With V-block base and flexible arm.



7012-10

| No. | Clamping device | Clamping force (vertical) [N] | Base size (LxWxH) | Total height [mm] | Stem hole ϕ | Thread Arm/Base | Mass [kg] |
|---------|-----------------|-------------------------------|-------------------|-------------------|---|-----------------|-----------|
| 7012-10 | magnetic | 600 | 59 x 50 x 55 mm | 396 | 6 mm, 3/8" / 9,53 mm, 8 mm (with stem bush) | M8 x 1,25 | 1,5 |

Series 7

This is a mini type of magnetic stand that offers you the following benefits:

- Mini measuring stand without magnet ON/OFF.
- It is designed to accept dial test indicators with 6 mm or 8 mm diameter stems, or dovetail.



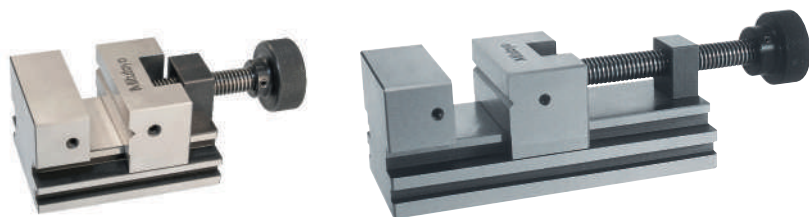
7014-10

| No. | Clamping device | Clamping force (vertical) [N] | Base size [mm] | Total height [mm] | Stem hole ϕ | Working radius [mm] | Mass [g] |
|---------|-----------------|-------------------------------|----------------|-------------------|----------------------|---------------------|----------|
| 7014-10 | magnetic | 150 | ϕ 30 | 106 | 6 mm, 8 mm, dovetail | 68 | 170 |

Precision Vices

Series 930

- It is made of tool steel, hardened and precision ground.
- It has a horizontally ground V-groove in the moveable jaw.



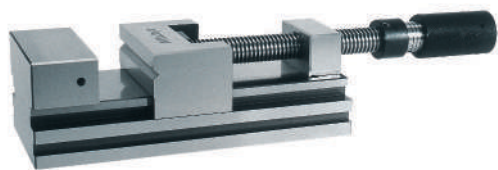
930-611

930-602

| No. | A [mm] | B [mm] | C [mm] | D [mm] | E [mm] | F [mm] | G [mm] | H [mm] | I [mm] | J H x D [mm] | Mass [kg] |
|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------------|-----------|
| 930-611 | 90 | 60 | 50 | 25 | 25 | 25 | 30 | 30 | M5 | 6 x 6 | 1,6 |
| 930-601 | 160 | 70 | 62 | 30 | 32 | 33 | 80 | 45 | M6 | 7 x 7 | 4 |
| 930-602 | 210 | 90 | 80 | 40 | 40 | 40 | 120 | 50 | M6 | 8 x 7 | 7,6 |
| 930-612 | 285 | 120 | 90 | 40 | 50 | 55 | 150 | 70 | M6 | 10 x 7 | 17,4 |

Series 930

- It is made of tool steel, hardened and precision ground.
- With hydraulic system for max.clamping force of 14,7 kN.
- It has a horizontally ground V-groove in the movable jaw.

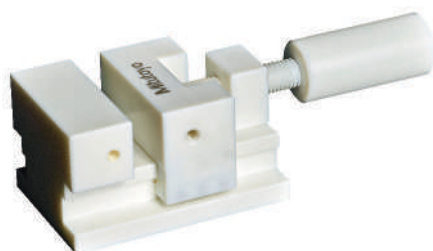


930-616

| No. | A [mm] | B [mm] | C [mm] | D [mm] | E [mm] | F [mm] | G [mm] | H [mm] | I [mm] | J H x D [mm] | Mass [kg] |
|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------------|-----------|
| 930-616 | 285 | 120 | 90 | 40 | 50 | 55 | 150 | 70 | M6 | 10 x 7 | 17,7 |

Series 930

- It is made of PET plastics, light weight, and protecting workpieces from scratches.

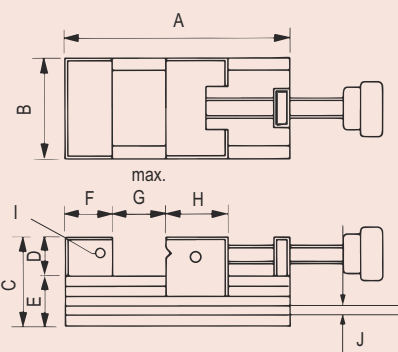


930-641

| No. | A [mm] | B [mm] | C [mm] | D [mm] | E [mm] | F [mm] | G [mm] | H [mm] | I [mm] | Mass [g] |
|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------|
| 930-641 | 90 | 60 | 50 | 25 | 25 | 25 | 30 | 30 | M5 | 350 |
| 930-642 | 160 | 70 | 62 | 30 | 32 | 33 | 80 | 45 | M6 | 700 |

Specifications

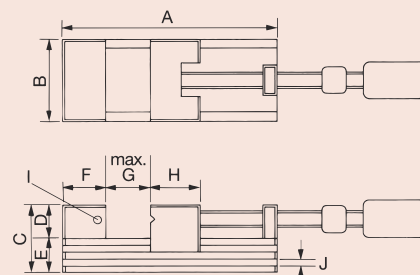
| | |
|-------------|-------------------|
| Parallelism | 0,002 mm / 100 mm |
| Squareness | 0,005 mm / 100 mm |



930-602

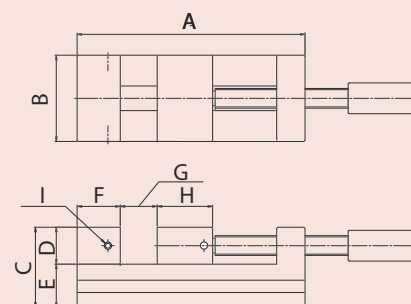
Specifications

| | |
|-------------|-------------------|
| Parallelism | 0,002 mm / 100 mm |
| Squareness | 0,03 mm / 100 mm |



Specifications

| | |
|-------------|--------------------------------------|
| Parallelism | 0,02 mm |
| Squareness | 0,03 mm (930-641), 0,05 mm (930-642) |



Precision Vices

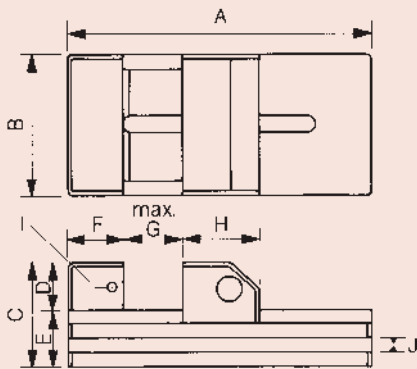
Series 930

This precision vice has a pull-down clamping action and offers you the following benefits:

- It gives you high accuracy for precision grinding, milling, measuring and eroding.
- It is made of tool steel, hardened and precision ground.

Specifications

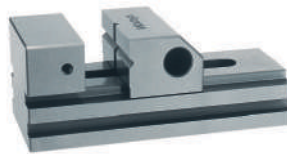
| | |
|-------------|-------------------|
| Parallelism | 0,002 mm / 100 mm |
| Squareness | 0,005 mm / 100 mm |



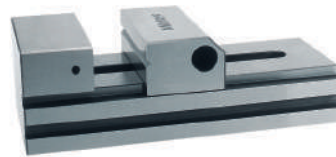
930-630



930-631



930-607



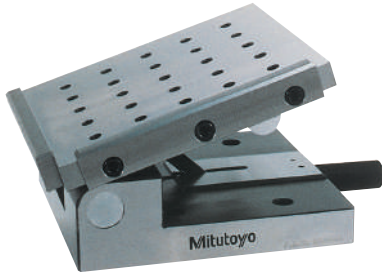
930-632

| No. | Remarks | A [mm] | B [mm] | C [mm] | D [mm] | E [mm] | F [mm] | G [mm] | H [mm] | I [mm] | J H x D [mm] | Mass [kg] |
|---------|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------------|-----------|
| 930-606 | V-groove (moveable jaw) vertical and horizontal | 160 | 70 | 62 | 30 | 32 | 33 | 80 | 45 | M6 | 8 x 7 | 3 |
| 930-607 | V-groove (moveable jaw) vertical and horizontal | 210 | 90 | 80 | 40 | 40 | 40 | 120 | 50 | M6 | 10 x 7 | 5,8 |
| 930-630 | V-groove (moveable jaw) vertical | 75 | 34 | 35 | 15 | 20 | 20 | 25 | 30 | M4 | Ø 8 x 4 | 0,38 |
| 930-631 | V-groove (moveable jaw) horizontal | 110 | 45 | 45 | 20 | 25 | 25 | 50 | 35 | M5 | 6 x 6 | 1 |
| 930-632 | V-groove (moveable jaw) horizontal | 285 | 120 | 90 | 40 | 50 | 60 | 150 | 70 | M6 | 12 x 7 | 13,5 |
| 930-633 | V-groove (moveable jaw) none | 370 | 175 | 95 | 45 | 50 | 60 | 200 | 110 | M8 | 12 x 10 | 28,7 |

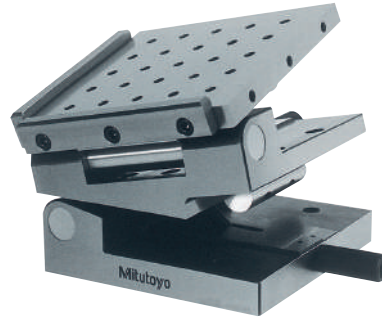
Precision Sine Plates

Series 930

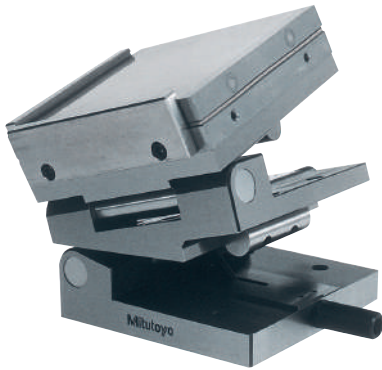
- Sine bar style of auxiliary plate.
- It is made of tool steel, hardened and precision ground.
- Accurate angle setting is made by gauge blocks, max. 45°.
- 930-626 Work piece can be fixed on plate surface by tap holes and stoppers on side.
- 930-628 and 930-629 can set the angle at two directions which go straight angularly.
- 930-629 Permanently magnet chuck is adapted.



930-626

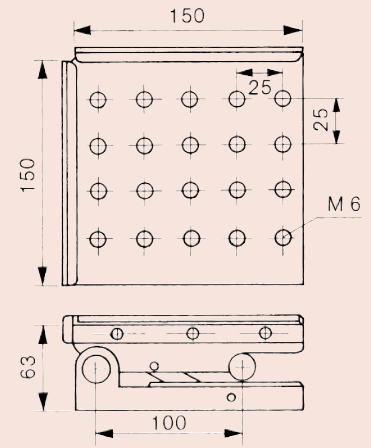


930-628

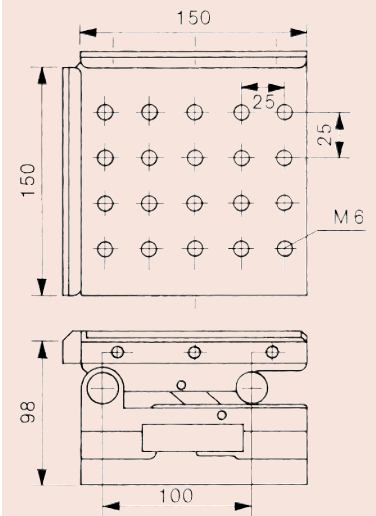


930-629

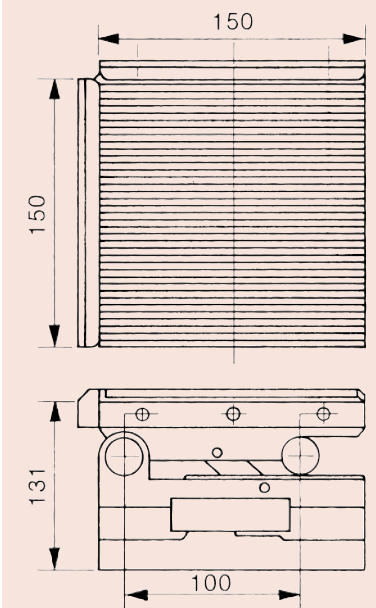
| No. | Parallelism | Squareness | Remarks | Setting accuracy at 45° | Mass [kg] |
|---------|-------------------|-------------------|---|-------------------------|-----------|
| 930-626 | 0,002 mm / 100 mm | 0,005 mm / 100 mm | With M6 clamping holes | ±15" | 7,6 |
| 930-628 | 0,002 mm / 100 mm | 0,005 mm / 100 mm | Compound-axis type with angle in two directions With M6 clamping holes | ±15" | 11,3 |
| 930-629 | 0,002 mm / 100 mm | 0,005 mm / 100 mm | Compound-axis type With lever-operated magnetic chuck | ±15" | 16,5 |



930-626



930-628



930-629

Cast Iron Surface Plates

Series 902

- A ribbed design gives you rigidity with minimum weight, and a special cast iron confers a high degree of wear resistance.



902-304

| No. | Dimensions L x W x H [mm] | Accuracy | Mass [kg] |
|---------|---------------------------|--|-----------|
| 902-301 | 300 x 300 x 85 | According to DIN 876; Grade 1 : fine scraped | 15 |
| 902-302 | 400 x 400 x 90 | According to DIN 876; Grade 1 : fine scraped | 35 |
| 902-303 | 500 x 400 x 100 | According to DIN 87; Grade 1 : fine scraped | 40 |
| 902-304 | 600 x 500 x 120 | According to DIN 876; Grade 1 : fine scraped | 65 |
| 902-305 | 800 x 500 x 140 | According to DIN 876; Grade 1 : fine scraped | 95 |
| 902-306 | 1000 x 750 x 170 | According to DIN 876; Grade 1 : fine scraped | 210 |
| 902-101 | 300 x 300 x 85 | According to DIN 876; Grade 3 : fine planed | 15 |
| 902-102 | 400 x 400 x 90 | According to DIN 876; Grade 3 : fine planed | 35 |
| 902-103 | 500 x 400 x 100 | According to DIN 876; Grade 3 : fine planed | 40 |
| 902-104 | 600 x 500 x 120 | According to DIN 876; Grade 3 : fine planed | 65 |
| 902-105 | 800 x 500 x 140 | According to DIN 876; Grade 3 : fine planed | 95 |
| 902-106 | 1000 x 750 x 170 | According to DIN 876; Grade 3 : fine planed | 210 |

Optional accessories

| No. | Description |
|---------|---|
| 902-930 | Stand (Angle Steel), for Cast Iron Plate 800x500x140mm |
| 902-931 | Stand (Angle Steel), for Cast Iron Plate 1000x750x170mm |



Stand for Series 902

Granite Squares 90°

Series 972

- It is made of natural hard stone, with two sides precision ground.



972-106

| No. | Length [mm] | Width [mm] | Accuracy | Delivered | Mass [kg] |
|---------|-------------|------------|---|--------------------------------|-----------|
| 972-106 | 300 x 200 | 50 | Perpendicularity: DIN 875 Flatness: DIN 876 Grade 00 | With certificate of inspection | 6,5 |
| 972-107 | 400 x 250 | 50 | Perpendicularity: DIN 875 Flatness: DIN 876 Grade 00 | With certificate of inspection | 10 |
| 972-108 | 500 x 300 | 60 | Perpendicularity: DIN 875 Flatness: DIN 876 Grade 00 | With certificate of inspection | 17 |
| 972-109 | 600 x 400 | 70 | Perpendicularity: DIN 875 Flatness: DIN 876 Grade 00 | With certificate of inspection | 30 |



Granite Surface Plates DIN 876

Series 901

- Surface diamond lapped, side face fine ground, backside fine sawn.
- The optional stand is a welded construction including 3 or 5-point bearings and two adjusting screws.
- Delivered with a certificate of inspection

1. Accuracy Grade 00

| No. | Dimensions L x W x H [mm] | Accuracy | Max. workpiece load [kg] | Mass [kg] |
|---------|---------------------------|------------------|--------------------------|-----------|
| 901-131 | 400 x 250 x 50 | DIN 876 grade 00 | 50 | 15 |
| 901-132 | 400 x 400 x 50 | DIN 876 grade 00 | 60 | 25 |
| 901-133 | 630 x 400 x 70 | DIN 876 grade 00 | 65 | 53 |
| 901-134 | 630 x 630 x 70 | DIN 876 grade 00 | 75 | 83 |
| 901-135 | 1000 x 630 x 100 | DIN 876 grade 00 | 150 | 189 |
| 901-136 | 1000 x 1000 x 100 | DIN 876 grade 00 | 250 | 300 |
| 901-137 | 1200 x 800 x 160 | DIN 876 grade 00 | 600 | 460 |
| 901-138 | 1600 x 1000 x 160 | DIN 876 grade 00 | 650 | 768 |
| 901-139 | 2000 x 1000 x 220 | DIN 876 grade 00 | 750 | 1.320 |

2. Accuracy Grade 0

| No. | Dimensions L x W x H [mm] | Accuracy | Max. workpiece load [kg] | Mass [kg] |
|---------|---------------------------|-----------------|--------------------------|-----------|
| 901-121 | 400 x 250 x 50 | DIN 876 grade 0 | 100 | 15 |
| 901-122 | 400 x 400 x 50 | DIN 876 grade 0 | 120 | 25 |
| 901-123 | 630 x 400 x 70 | DIN 876 grade 0 | 130 | 53 |
| 901-124 | 630 x 630 x 70 | DIN 876 grade 0 | 150 | 83 |
| 901-125 | 1000 x 630 x 100 | DIN 876 grade 0 | 300 | 189 |
| 901-126 | 1000 x 1000 x 100 | DIN 876 grade 0 | 500 | 300 |
| 901-127 | 1200 x 800 x 160 | DIN 876 grade 0 | 1.200 | 460 |
| 901-128 | 1600 x 1000 x 160 | DIN 876 grade 0 | 1.300 | 768 |
| 901-129 | 2000 x 1000 x 220 | DIN 876 grade 0 | 1.500 | 1.320 |

3. Accuracy Grade 1

| No. | Dimensions L x W x H [mm] | Accuracy | Max. workpiece load [kg] | Mass [kg] |
|---------|---------------------------|-----------------|--------------------------|-----------|
| 901-111 | 400 x 250 x 50 | DIN 876 grade 1 | 100 | 15 |
| 901-112 | 400 x 400 x 50 | DIN 876 grade 1 | 120 | 25 |
| 901-113 | 630 x 400 x 70 | DIN 876 grade 1 | 130 | 53 |
| 901-114 | 630 x 630 x 70 | DIN 876 grade 1 | 150 | 83 |
| 901-115 | 1000 x 630 x 100 | DIN 876 grade 1 | 300 | 189 |
| 901-116 | 1000 x 1000 x 100 | DIN 876 grade 1 | 500 | 300 |
| 901-117 | 1200 x 800 x 160 | DIN 876 grade 1 | 1.200 | 460 |
| 901-118 | 1600 x 1000 x 160 | DIN 876 grade 1 | 1.300 | 768 |
| 901-119 | 2000 x 1000 x 220 | DIN 876 grade 1 | 1.500 | 1.320 |

4. Accuracy Grade 2

| No. | Dimensions L x W x H [mm] | Accuracy | Max. workpiece load [kg] | Mass [kg] |
|---------|---------------------------|-----------------|--------------------------|-----------|
| 901-101 | 400 x 250 x 50 | DIN 876 grade 2 | 100 | 15 |
| 901-102 | 400 x 400 x 50 | DIN 876 grade 2 | 120 | 25 |
| 901-103 | 630 x 400 x 70 | DIN 876 grade 2 | 130 | 53 |
| 901-104 | 630 x 630 x 70 | DIN 876 grade 2 | 150 | 83 |
| 901-105 | 1000 x 630 x 100 | DIN 876 grade 2 | 300 | 189 |
| 901-106 | 1000 x 1000 x 100 | DIN 876 grade 2 | 500 | 300 |
| 901-107 | 1200 x 800 x 160 | DIN 876 grade 2 | 1.200 | 460 |
| 901-108 | 1600 x 1000 x 160 | DIN 876 grade 2 | 1.300 | 768 |
| 901-109 | 2000 x 1000 x 220 | DIN 876 grade 2 | 1.500 | 1.320 |

Stand

| No. | Dimensions L x W x H [mm] | A [mm] | B [mm] | C [mm] | Mass [kg] |
|---------|---------------------------|--------|--------|--------|-----------|
| 901-931 | 630 x 400 x 70 | 550 | 350 | 770 | 22 |
| 901-932 | 630 x 630 x 70 | 550 | 550 | 770 | 25 |
| 901-933 | 1000 x 630 x 100 | 750 | 550 | 740 | 28 |
| 901-934 | 1000 x 1000 x 100 | 750 | 750 | 740 | 30 |
| 901-935 | 1200 x 800 x 160 | 900 | 600 | 680 | 30 |
| 901-936 | 1600 x 1000 x 160 | 1050 | 750 | 680 | 35 |
| 901-937 | 2000 x 1000 x 220 | 1450 | 750 | 620 | 40 |

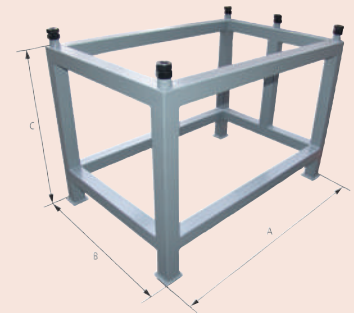


Specifications

| | |
|----------------------------------|---|
| Hardness | HV 850-900 |
| Flexural strength | 13-22 N/mm ² |
| Compressive strength | Approx. 280 N/mm ² |
| Coefficient of thermal expansion | (5 to 7,5) x 10 ⁻⁶ x K ⁻¹ |



Granite plate and stand (optional)



Dimensions for stand

Universal Bevel Protractors

Standard accessories

| No. | Description |
|---------|--|
| 187-106 | Steel Rule, 150mm/6", Metric/Inch |
| 187-107 | Steel Rule, 300mm/12", Metric/Inch |
| 950750 | Holder for Mounting on Height Gauges, Metric, Series 187 |
| 187-105 | Acute angle attachment, for Series 187 |

187-106 for 187-901-10, 187-907-10
 187-107 for 187-901-10, 187-908-10
 950750 for Height Gauge with 9x 9 mm scribe shaft
 for 187-901-10, 187-907-10, 187-908-10
 950750 for 187-201 and 187-901-10



187-106



187-107



950750



187-105

Series 187

This universal bevel protector offers you the following benefits:

- Its high-precision angle gauge enables you to take accurate angle measurements of machines, moulds and jigs.
- You can attach it to height gauges.



187-201



187-901-10



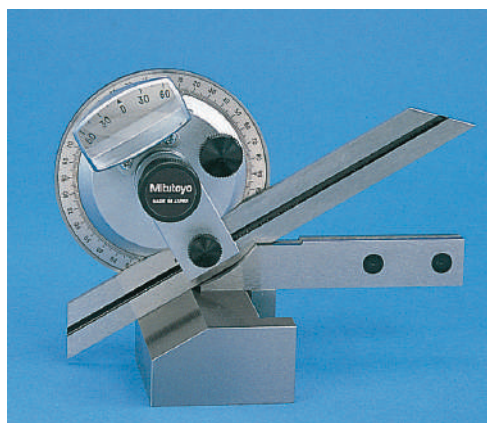
187-907-10



187-908-10
with height gauge holder

Metric

| No. | Graduation | Blade edge angle | Blade length | Delivered | Mass [g] |
|------------|--------------------|---------------------|--------------|--|----------|
| 187-201 | 5' (0° - 90° - 0°) | 30°, 60° edges | 137 mm | In a box with acute angle attachment | 212 |
| 187-901-10 | 5' (0° - 90° - 0°) | 60°, 45°, 30° edges | 150, 300 mm | In a box with acute angle attachment, holder for height gauge, magnifier | 390 |
| 187-907-10 | 5' (0° - 90° - 0°) | 60°, 45° edges | 150 mm | In a box with holder for height gauge, magnifier | 284 |
| 187-908-10 | 5' (0° - 90° - 0°) | 60°, 45° edges | 300 mm | In a box with holder for height gauge, magnifier | 318 |



Digimatic Universal Protractors

Series 187

This is a Digimatic Universal Protractor with data output that offers you the following features:

- It has an easy-to-read digital display.
- It automatically turns off after 10 minutes, and gives you fixed reference points for easy adjustment.
- You can slide and clamp the measuring blade over the entire length.
- You can make fine adjustments to precisely adjust arbitrary angle dimensions.
- It comes with a mounting facility on height gauges and tracers of series 192 via holder.



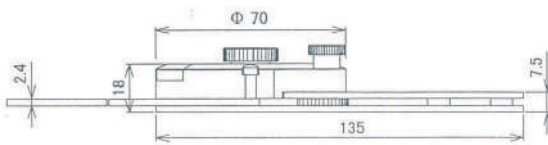
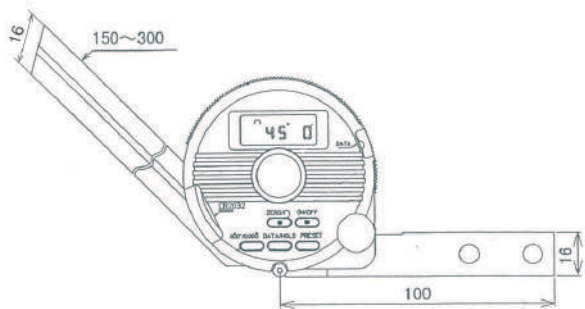
187-501



187-502

Metric

| No. | Digital step | Blade length | Delivered | Mass [g] |
|---------|--------------|--------------|--|----------|
| 187-501 | 1' (0,01°) | 150 mm | In a box including CR-2032 battery, 150 mm steel rule, holder for height gauge | 624 |
| 187-502 | 1' (0,01°) | 300 mm | In a box including CR-2032 battery, 300 mm steel rule, holder for height gauge | 662 |



| Functions | Series 187 |
|---|------------|
| ON/OFF | ● |
| DATA (output with cable) / HOLD (display value) | ● |
| Data output | ● |
| ZERO SET | ● |
| PRESET | ● |
| Angle sexagesimal/decimal | ● |

Specifications

| | |
|------------------------|----------------------------------|
| Max. permissible error | 2' (0,03°) |
| Repeatability | 1' (0,01°) |
| Battery life | Approx. 2000 hours |
| Power supply | 1 battery CR-2032 |
| Display | LCD with character height 6,5 mm |

Standard accessories

| No. | Description |
|---------|--|
| 187-106 | Steel Rule, 150mm/6", Metric/Inch |
| 187-107 | Steel Rule, 300mm/12", Metric/Inch |
| 950750 | Holder for Mounting on Height Gauges, Metric, Series 187 |

187-106 for 187-501
187-107 for 187-502
950750 for 187-501, 187-502

Optional accessories

| No. | Description |
|-----------|---|
| 905338 | Digimatic Cable, Flat Straight Type, 1m |
| 905409 | Digimatic Cable, Flat Straight Type, 2m |
| 06AFM380F | USB Input Tool Direct (Digimatic USB), Digi/Digi2, Flat Straight Type |
| 02AZD880G | U-WAVE-T, Buzzer Type, Wireless Transmitter |
| 02AZD730G | U-WAVE-T, IP67 Type, Wireless Transmitter |
| 02AZD790F | U-WAVE-T Connection Cable F, Flat Straight Type |
| 187-105 | Acute angle attachment, for Series 187 |

Consumable spares

| No. | Description |
|-----------|---------------------------------|
| 055AA217D | Lithium battery CR-2032, 1 pcs. |



950750

Digital Precision Levels

Series 950

This Digital Precision Level offers you the following benefits:

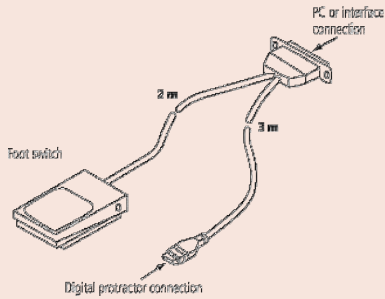
- You can measure flatness, squareness and angularity.
- Precision support surfaces in aluminium frame provide you with high rigidity and low weight.

Specifications

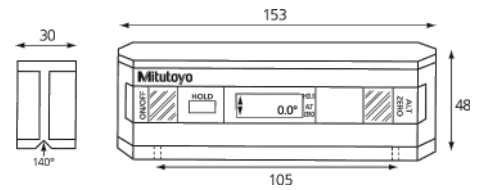
| | |
|--------------|---------------------------------|
| Range | 360° (4 x 90°) |
| Power supply | Standard battery (9 V) 6LR61 |
| Battery life | Approx. 500 hours |

Optional accessories

| No. | Description |
|-----------|--------------------------------------|
| 50AAA983A | RS-232C Output Cable, for series 950 |



950-318



Distance between two M 3 x 0,5 mm Mounting holes

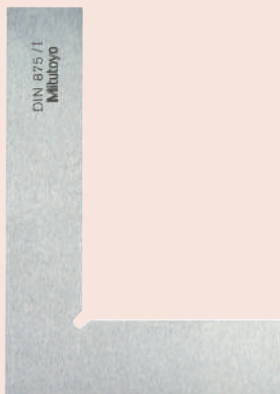
| No. | Max. permissible error (degrees) | Repeatability (degrees) | Data output | Sensitivity (degrees) | Delivered | Mass [kg] |
|---------|--|-------------------------|-------------|------------------------------------|---------------|-----------|
| 950-318 | 0,05 (0 to 10) 0,1 (80 to 90) 0,2 (10 to 80) | 0,05 | | 0,01 (0 to 9,99) 0,1 (10 to 90) | Including box | 0,3 |

90° Steel Squares

Series 916

This 90° Steel Square offers you the following benefits:

- Three types of square are available.
- It is hardened, and has precision ground edges.



Try square



Try square with shoulders

Try square

| No. | Length [mm] | Cross section | Accuracy | Grade | Remarks | Mass [g] |
|---------|-------------|---------------|----------------------|-------|---------|----------|
| 916-222 | 75x50 | 15x5 | According to DIN 875 | 1 | steel | 85 |
| 916-223 | 100x70 | 20x5 | According to DIN 875 | 1 | steel | 130 |
| 916-224 | 150x100 | 25x5 | According to DIN 875 | 1 | steel | 270 |
| 916-225 | 200x130 | 30x6 | According to DIN 875 | 1 | steel | 585 |
| 916-226 | 250x165 | 35x7 | According to DIN 875 | 1 | steel | 840 |
| 916-227 | 300x200 | 40x8 | According to DIN 875 | 1 | steel | 1300 |
| 916-232 | 75x50 | 15x5 | According to DIN 875 | 2 | steel | 85 |
| 916-233 | 100x70 | 20x5 | According to DIN 875 | 2 | steel | 130 |
| 916-234 | 150x100 | 25x5 | According to DIN 875 | 2 | steel | 270 |
| 916-235 | 200x130 | 30x6 | According to DIN 875 | 2 | steel | 530 |

Try square with shoulders

| No. | Length [mm] | Cross section | Accuracy | Grade | Remarks | Mass [g] |
|---------|-------------|---------------|----------------------|-------|---------|----------|
| 916-321 | 75x50 | 15x5 | According to DIN 875 | 1 | steel | 60 |
| 916-322 | 100x70 | 20x5 | According to DIN 875 | 1 | steel | 180 |
| 916-323 | 150x100 | 25x5 | According to DIN 875 | 1 | steel | 400 |
| 916-324 | 200x130 | 30x6 | According to DIN 875 | 1 | steel | 675 |
| 916-325 | 250x165 | 35x7 | According to DIN 875 | 1 | steel | 1185 |
| 916-326 | 300x200 | 40x8 | According to DIN 875 | 1 | steel | 1730 |
| 916-332 | 100x70 | 20x5 | According to DIN 875 | 2 | steel | 180 |
| 916-333 | 150x100 | 25x5 | According to DIN 875 | 2 | steel | 365 |
| 916-334 | 200x130 | 30x6 | According to DIN 875 | 2 | steel | 790 |
| 916-335 | 250x165 | 35x7 | According to DIN 875 | 2 | steel | 1320 |

Feeler Gauges

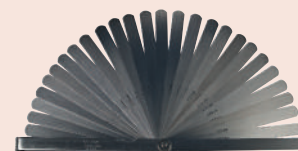
Series 184 - Feeler Gauge

This feeler gauge is ideal for a variety of measuring tasks and offers you the following benefits:

- Size clearly stamped on each leaf
- Leaves are easy to remove and can be individually locked open.

Metric

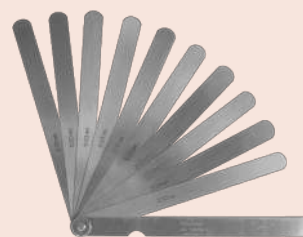
| No. | Range | Accuracy | Number of leaves | Leaf length [mm] | Mass [g] |
|----------|--|---|------------------|------------------|----------|
| 184-301S | 0,05-0,3 mm by 0,05 mm, 0,4-1 mm by 0,1 mm | 0,03-0,15 mm: $\pm 0,005$ mm, 0,2- 0,5 mm: $\pm 0,012$ mm, 0,55-1 mm: $\pm 0,02$ mm | 13 | 150 | 121 |
| 184-302S | 0,03-0,1 mm by 0,01 mm, 0,2-0,5 mm by 0,1 mm, 0,15 mm | 0,03-0,15 mm: $\pm 0,005$ mm, 0,2- 0,5 mm: $\pm 0,012$ mm, 0,55-1 mm: $\pm 0,02$ mm | 13 | 150 | 67 |
| 184-303S | 0,05-0,15 mm by 0,01 mm, 0,2-1 mm by 0,05 mm | 0,03-0,15 mm: $\pm 0,005$ mm, 0,2- 0,5 mm: $\pm 0,012$ mm, 0,55-1 mm: $\pm 0,02$ mm | 28 | 150 | 195 |
| 184-304S | 0,05-1 mm by 0,05 mm | 0,03-0,15 mm: $\pm 0,005$ mm, 0,2- 0,5 mm: $\pm 0,012$ mm, 0,55-1 mm: $\pm 0,02$ mm | 20 | 150 | 184 |
| 184-305S | 0,05-0,3 mm by 0,05 mm, 0,4-1 mm by 0,1 mm | 0,03-0,15 mm: $\pm 0,005$ mm, 0,2- 0,5 mm: $\pm 0,012$ mm, 0,55-1 mm: $\pm 0,02$ mm | 13 | 100 | 82 |
| 184-306S | 0,05-0,2 mm by 0,05 mm, 0,3-0,8 mm by 0,1 mm | 0,03-0,15 mm: $\pm 0,005$ mm, 0,2- 0,5 mm: $\pm 0,012$ mm, 0,55-1 mm: $\pm 0,02$ mm | 10 | 100 | 62 |
| 184-307S | 0,03-0,1 mm by 0,01 mm, 0,2-0,5 mm by 0,1 mm, 0,15 mm | 0,03-0,15 mm: $\pm 0,005$ mm, 0,2- 0,5 mm: $\pm 0,012$ mm, 0,55-1 mm: $\pm 0,02$ mm | 13 | 100 | 47 |
| 184-308S | 0,05-0,2 mm by 0,05 mm, 0,3-0,8 mm by 0,1 mm | 0,03-0,15 mm: $\pm 0,005$ mm, 0,2- 0,5 mm: $\pm 0,012$ mm, 0,55-1 mm: $\pm 0,02$ mm | 10 | 150 | 91 |
| 184-313S | 0,05-0,15 mm by 0,01 mm, 0,2-1 mm by 0,05 mm | 0,03-0,15 mm: $\pm 0,005$ mm, 0,2- 0,5 mm: $\pm 0,012$ mm, 0,55-1 mm: $\pm 0,02$ mm | 28 | 100 | 129 |



184-303S



184-304S



184-308S

Knife Edge Straight Edge

Series 528

This Knife Edge Straight Edge offers you the following benefits:

- Its straight edges are especially suited to testing the flatness of surfaces.
- It has a hardened, ground and micro lapped measuring edge.



Series 528

| No. | Cross section | Section | Accuracy | Length [mm] | Mass [g] |
|---------|---------------|---------|-----------|-------------|----------|
| 528-100 | 25 x 6 mm | 60° | DIN 874-2 | 50 | 40 |
| 528-101 | 25 x 6 mm | 60° | DIN 874-2 | 75 | 50 |
| 528-102 | 25 x 6 mm | 60° | DIN 874-2 | 100 | 60 |
| 528-110 | 25 x 6 mm | 60° | DIN 874-2 | 125 | 80 |
| 528-103 | 25 x 6 mm | 60° | DIN 874-2 | 150 | 100 |
| 528-104 | 25 x 6 mm | 60° | DIN 874-2 | 200 | 190 |
| 528-105 | 32 x 7 mm | 60° | DIN 874-2 | 300 | 370 |
| 528-106 | 40 x 8 mm | 60° | DIN 874-2 | 400 | 1080 |
| 528-107 | 50 x 10 mm | 60° | DIN 874-2 | 500 | 1400 |

Steel Rules

Series 182

These are rigid and fully-flexible rules that offer you the following benefits:

- They have clear graduations on satin-chrome finish.
- The rules are stainless tempered.



182-211



182-131

Metric Fully-flexible rule

| No. | Range [mm] | Graduation | Accuracy | Width | Thickness | Mass [g] |
|---------|------------|-------------------------------|----------|-------|-----------|----------|
| 182-211 | 0 - 150 | 1 mm / 0,5 mm (on both faces) | ±0,15 mm | 12 mm | 0,4 mm | 5 |
| 182-231 | 0 - 300 | 1 mm / 0,5 mm (on both faces) | ±0,15 mm | 12 mm | 0,4 mm | 10 |
| 182-251 | 0 - 450 | 1 mm / 0,5 mm (on both faces) | ±0,15 mm | 19 mm | 0,4 mm | 130 |
| 182-271 | 0 - 600 | 1 mm / 0,5 mm (on both faces) | ±0,2 mm | 19 mm | 0,4 mm | 90 |

Metric Wide rigid rule

| No. | Range [mm] | Graduation | Accuracy | Width | Thickness | Mass [g] |
|---------|------------|-------------------------------|----------|-------|-----------|----------|
| 182-111 | 0 - 150 | 1 mm / 0,5 mm (on both faces) | ±0,15 mm | 19 mm | 1,2 mm | 27 |
| 182-131 | 0 - 300 | 1 mm / 0,5 mm (on both faces) | ±0,15 mm | 25 mm | 1,2 mm | 72 |
| 182-151 | 0 - 450 | 1 mm / 0,5 mm (on both faces) | ±0,15 mm | 30 mm | 1,2 mm | 130 |
| 182-171 | 0 - 600 | 1 mm / 0,5 mm (on both faces) | ±0,2 mm | 30 mm | 1,2 mm | 175 |