

Stands

Comparison measuring instruments which ensure high quality, high accuracy and reliability.

SERIES 7 — Magnetic Stands

- Mitutoyo's Magnetic Stands clamp to iron or steel surfaces with a strong magnetic force that is switchable ON or OFF to allow easy mounting and dismounting.
 - Vertical/horizontal mounting holes and bushes are available for attaching dial test indicators and dial indicators*.
 - In addition, models **7014-10**, **7014E-10**, **7031-10**, **7032-10** and **7033-10** have a dovetail groove in the swivel holder for attaching dial test indicators that are equipped with a dovetail.
- * Recommended dial indicators: compact and lightweight indicators*.



7010-10



7011-10



7012-10



7014-10
(magnetic clamping is non-switchable)



7033-10



7031-10

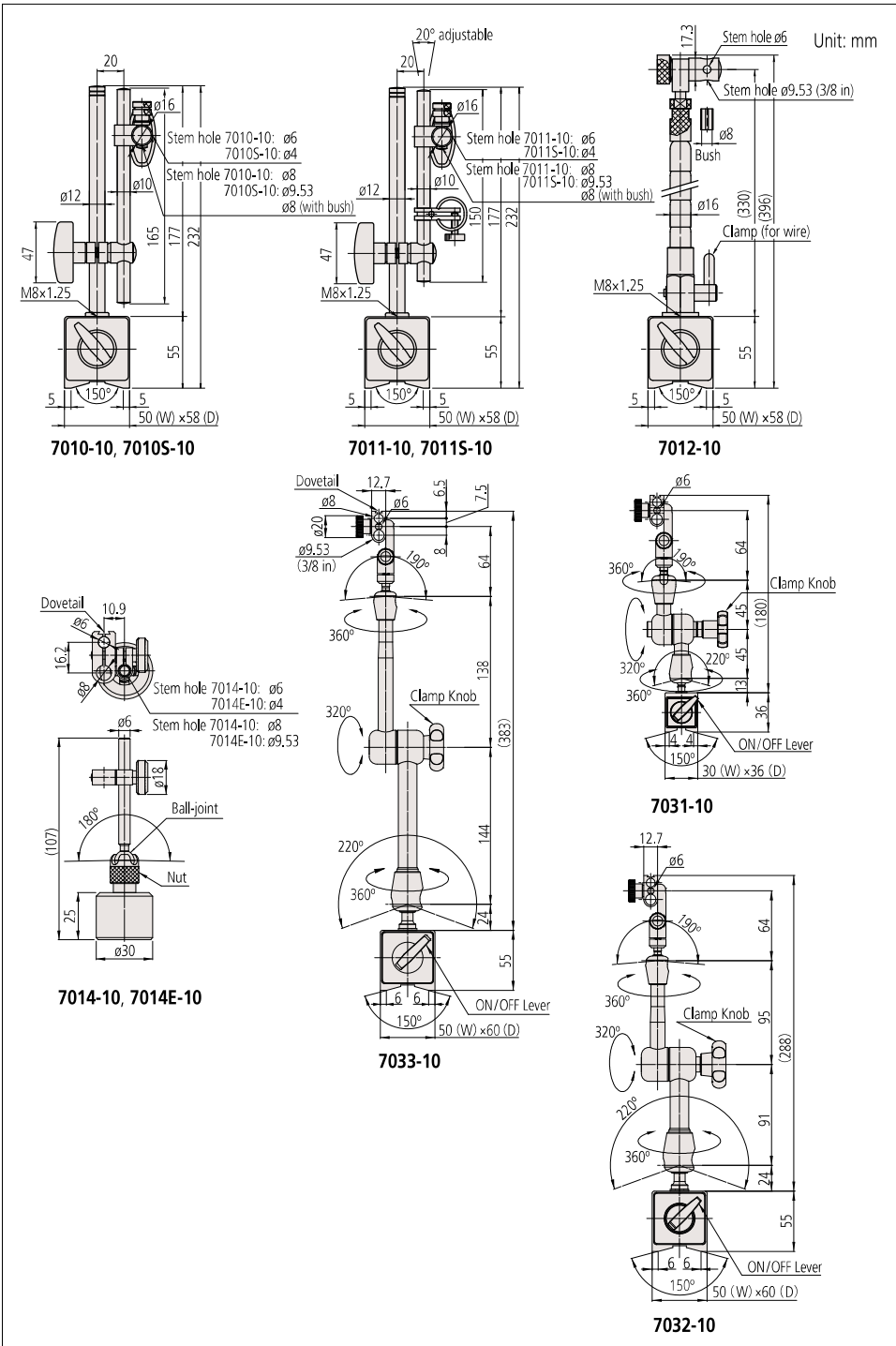


7032-10

Stands

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DIMENSIONS



SPECIFICATIONS

Order No.	Description	Applicable holding stem sizes	Magnetic force*1	Remarks
7010-10*2*3	Magnetic stand	$\varnothing 6$ mm, $\varnothing 8$ mm	Approx. 600 N	—
7010S-10*2*3	Magnetic stand	$\varnothing 4$ mm, $\varnothing 8$ mm, $\varnothing 9.53$ mm (3/8 in)	Approx. 600 N	—
7011-10*2*3	Magnetic stand	$\varnothing 6$ mm, $\varnothing 8$ mm	Approx. 600 N	With fine adjustment
7011S-10*2*3	Magnetic stand	$\varnothing 4$ mm, $\varnothing 8$ mm, $\varnothing 9.53$ mm (3/8 in)	Approx. 600 N	With fine adjustment
7012-10*4	Magnetic stand	$\varnothing 6$ mm, $\varnothing 8$ mm, $\varnothing 9.53$ mm (3/8 in)	Approx. 600 N	—
7014-10*4	Mini magnetic stand	$\varnothing 6$ mm, $\varnothing 8$ mm, with dovetail	Approx. 150 N	Without magnet ON/OFF
7014E-10*2*3	Mini magnetic stand	$\varnothing 4$ mm, $\varnothing 9.53$ mm (3/8 in)	Approx. 150 N	Without magnet ON/OFF
7031-10	Universal magnetic stand	$\varnothing 6$ mm, $\varnothing 8$ mm, $\varnothing 9.53$ mm (3/8 in), with dovetail	Approx. 300 N	With mechanical locking system
7032-10	Universal magnetic stand	$\varnothing 6$ mm, $\varnothing 8$ mm, $\varnothing 9.53$ mm (3/8 in), with dovetail	Approx. 600 N	With mechanical locking system
7033-10	Universal magnetic stand	$\varnothing 6$ mm, $\varnothing 8$ mm, $\varnothing 9.53$ mm (3/8 in), with dovetail	Approx. 600 N	With mechanical locking system

*1 The magnetic holding force applies to that needed for vertical separation from a thick and flat steel object.

*2 Back plunger type (1160T, etc.) cannot be attached.

*3 When attaching a compact dial indicator (outer frame diameter 31, 36 or 40 mm), select a back cover type with a lug.

*4 Use with a dial test indicator or SERIES 1 dial indicator (compact or lightweight type) is recommended.

Dial Gage Stands SERIES 7

- A convenient supporting stand for enabling a dial indicator to be used for comparative height or thickness measurements.
- Anvil: $\varnothing 58$ mm for **7001-10**, **7002-10**
90x90 mm for **7007-10**.
- Vertical fine adjustment is available with one-touch control thanks to the parallel spring suspension.



7001-10
(with $\varnothing 58$ mm serrated anvil)



7002-10
(with $\varnothing 58$ mm non-serrated anvil)

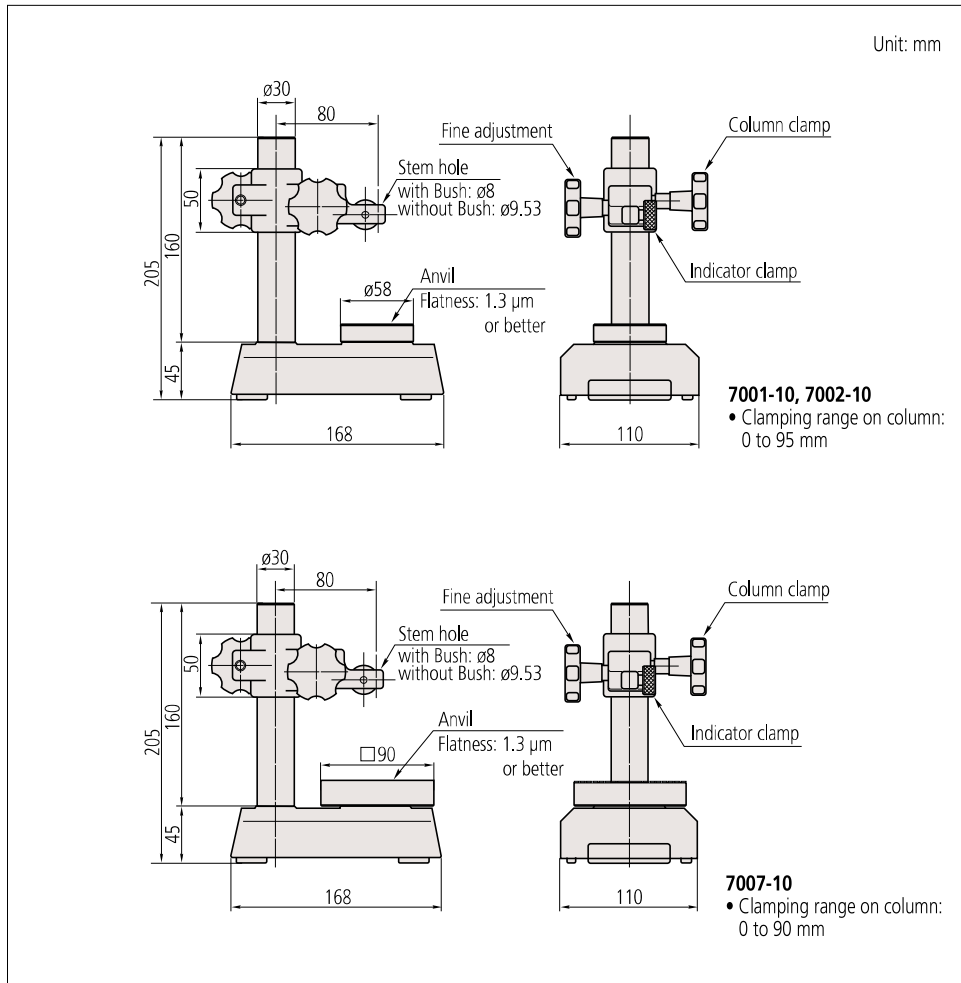


7007-10
(with 90 mm square semi-serrated anvil)

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SPECIFICATIONS

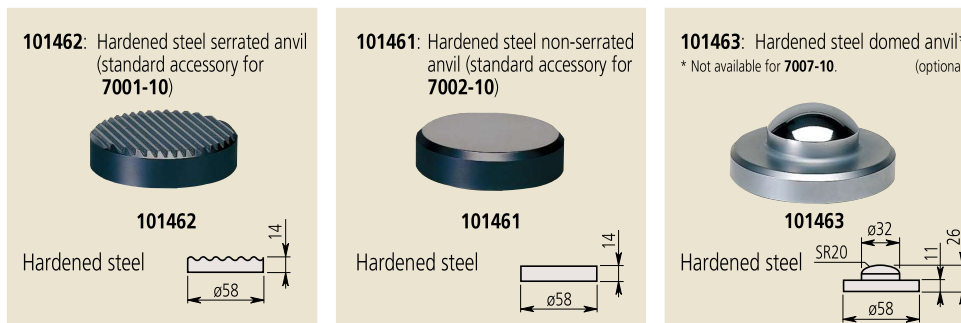
Metric		
Order No.	Stem hole (mm)	Remarks
7001-10	Ø8, Ø9.53	With serrated anvil
7002-10	Ø8, Ø9.53	With flat anvil
7007-10	Ø8, Ø9.53	With square anvil

Note 1: Perpendicularity of the stem hole to the anvil is better than 0.4 mm/100 mm

Note 2: Take note that when mounting high-accuracy Linear Gages (with resolution of 0.1 µm or better) to these stands, accuracy may be affected depending on the perpendicularity of the mounting hole to the top surface of the anvil (cosine effect).

Note 3: Compact dial indicators (bezel Ø31, Ø36) are not suitable for use with these stands.

Accessories (for 7001-10, 7002-10)



Accessories for 215-156-10

- **21JAA329:** ø8 mm bush (standard accessory)
- **21JAA330:** ø9.53 mm (3/8 in) bush (standard accessory)
- **21JAA331:** ø15 mm bush (optional accessory)

SERIES 215 — Granite Base Comparator Stands

- The base is made of black granite that stays free of burrs and build-ups due to its fine-grain composition.
- Easy maintenance due to the non-rusting base.
- The stability of the granite base assures long-lasting flatness accuracy.



215-150-10



215-151-10



215-153-10



215-156-10

SPECIFICATIONS

Order No.	Granite base size (WxDxH) (mm)	Clamping range (mm)	Stem hole (mm)	Remarks
215-150-10	120x180x50	110	ø8, ø9.53	With fine adjustment of 1 mm range
215-151-10	150x200x50	250	ø8, ø9.53	With fine adjustment of 1 mm range
215-153-10	200x250x80	260	ø8, ø9.53	With fine adjustment of 1 mm range
215-156-10	300x250x80	275	ø8, ø9.53, ø20	With fine adjustment over entire travel

Note 1: Perpendicularity of the stem hole to the anvil is better than 0.2 mm/100 mm.

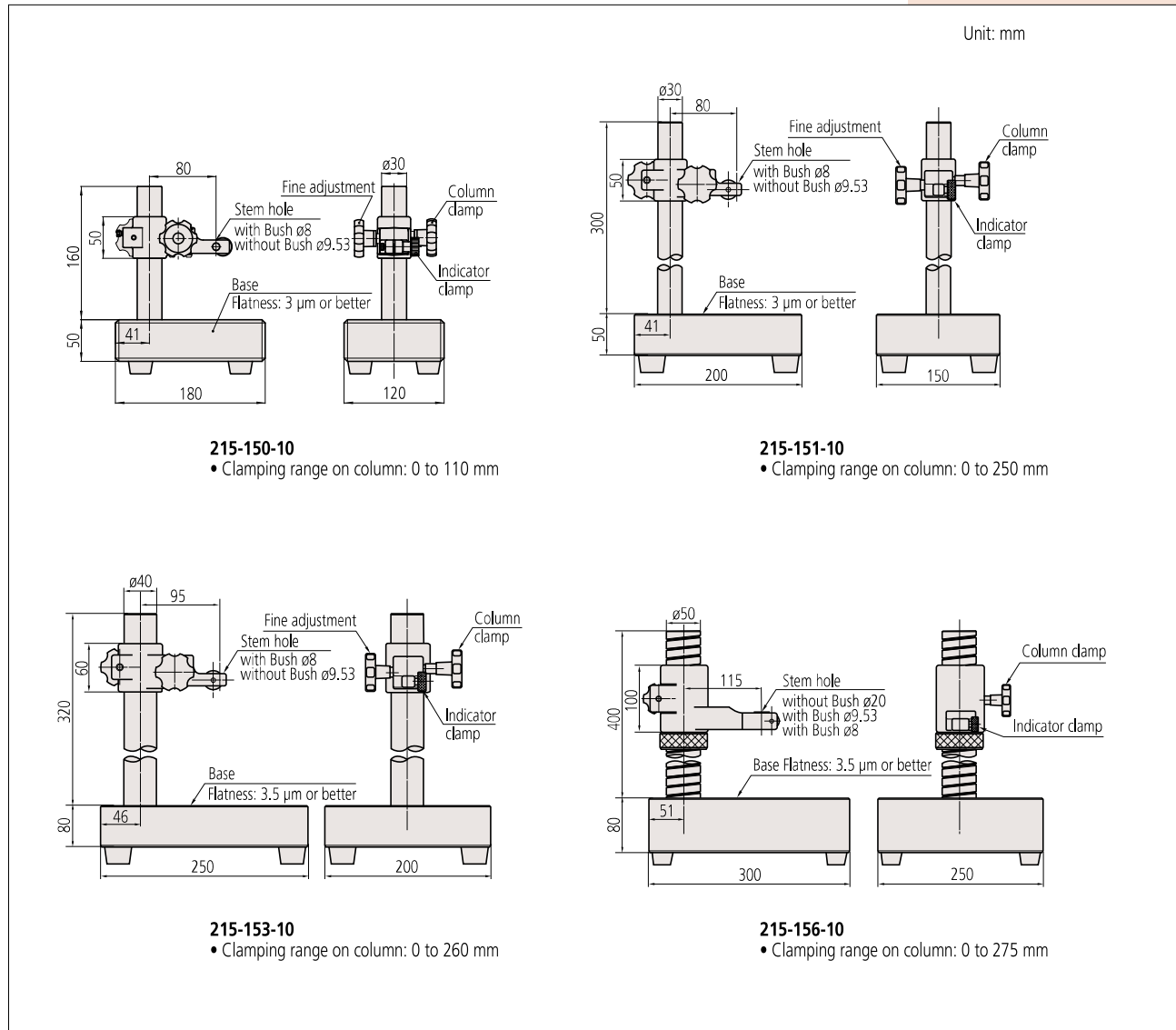
Note 2: Take note that when mounting high-accuracy Linear Gages (with resolution of 0.1 µm or better) to these stands, accuracy may be affected depending on the perpendicularity of the mounting hole to the top surface of the anvil (cosine effect).

Note 3: Compact dial indicators (bezel ø31, ø36) are not suitable for use with these stands.

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SERIES 215 — Cast Iron Base Comparator Stands



Typical application using Digimatic Indicator ID-H.

- These stands have a very stable cast-iron base that enables precise measurement.
- The semi-serrated anvil prevents very flat workpieces from wringing to it and the 2.3 μm flatness (or better) promotes accurate measurement.
- With an integrated indicator mounting section and arm, the bracket for **BSC-30HX** provides further improved rigidity, making it easy to adjust parallelism.
- **BSB-20X** uses a square 110 mm×110 mm serrated anvil while **BSC-30HX** uses a square 150 mm×150 mm serrated anvil.



215-405-10

SPECIFICATIONS

Order No.	Anvil	Micromotion mechanism (Adjustment range)	Stem hole (mm)
215-405-10	Square semi-serrated anvil (110×110 mm)	Vertical fine adjustment (1 mm)	$\varnothing 9.53$, $\varnothing 8$ with Bush
215-505-10	Square semi-serrated anvil (150×150 mm)	Micromotion screw	$\varnothing 20$, $\varnothing 9.53$ with Bush, $\varnothing 8$ with Bush

Note 1: Perpendicularity of the stem hole to the anvil is better than 0.4 mm/100 mm.

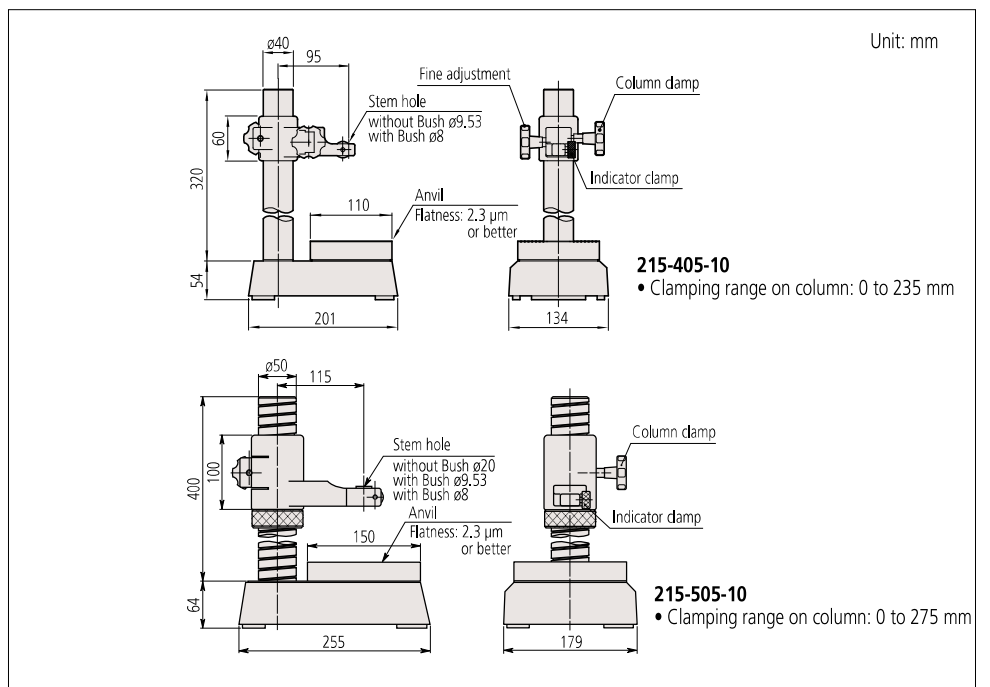
Note 2: Take note that when mounting high-accuracy Linear Gages (with resolution of 0.1 μm or better) to these stands, accuracy may be affected depending on the perpendicularity of the mounting hole to the top surface of the anvil (cosine effect).

Note 3: Compact dial indicators (bezel $\varnothing 31$, $\varnothing 36$) are not suitable for use with these stands.

Accessories for 215-505-10

- 21JAA329: $\varnothing 8$ mm bush (standard accessory)
- 21JAA330: $\varnothing 9.53$ mm (3/8 in) bush (standard accessory)
- 21JAA331: $\varnothing 15$ mm bush (optional accessory)

DIMENSIONS



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SERIES 519 — Transfer Stands

- Transfer Stands are designed for comparison measurements of size using a dial indicator or Digimatic Indicator.



519-109-10
(with a serrated anvil)

SPECIFICATIONS

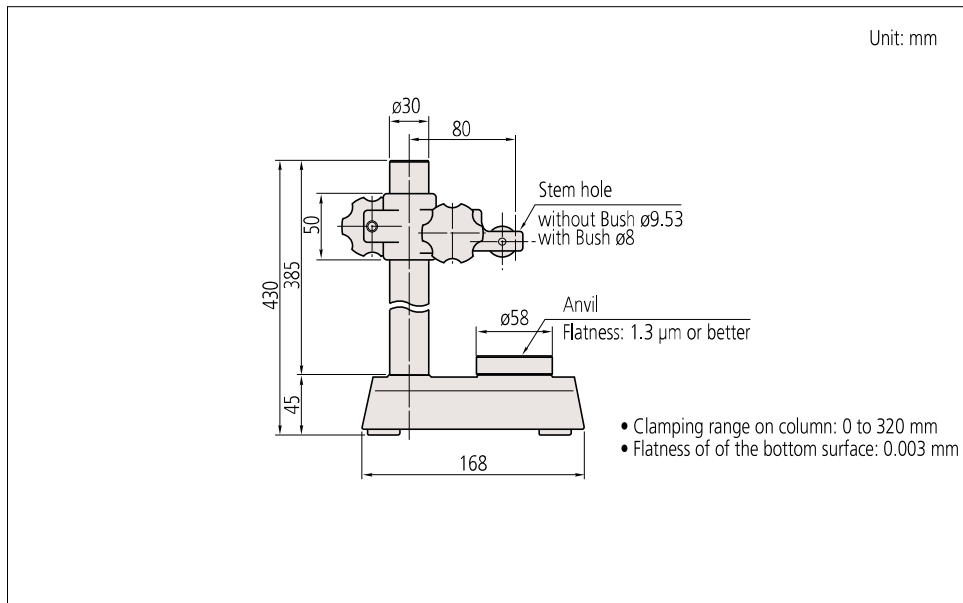
Metric			
Order No.	Clamping range on column (mm)	Micromotion adjustment range (mm)	Stem hole (mm)
519-109-10	0 to 320	1	ø9.53, ø8 with Bush

Note 1: Perpendicularity of the stem hole to the anvil is better than 0.4 mm/100 mm.

Note 2: Take note that when mounting high-accuracy Linear Gages (with resolution of 0.1 µm or better) to these stands, accuracy may be affected depending on the perpendicularity of the mounting hole to the top surface of the anvil (cosine effect).

Note 3: Compact dial indicators (bezel ø31, ø36) are not suitable for use with these stands.

DIMENSIONS

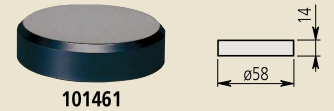


Accessories

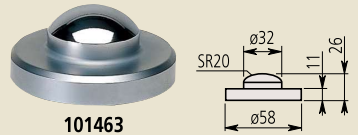
101462: Hardened steel serrated anvil (standard accessory)



101461: Hardened steel non-serrated anvil (optional)



101463: Hardened steel domed anvil (optional)



Accuracy

	Mitutoyo	Reference JIS B 7540 Grade 1, 100 mm or shorter
Bottom-surface flatness	2 μm or better	10 μm or better
V-surface flatness	2 μm or better	10 μm or better
Parallelism between the bottom-surface and a cylinder on the V-surface	7.5 μm or better	10 μm or better
Inclination of the V-anvil against the bottom-surface	10 μm or better	10 μm or better
Parallelism between the side surface and a cylinder on the V-surface	7.5 μm or better	20 μm or better
Difference in the height of a pair of V-Blocks	9 μm or better	10 μm or better

Optional Accessory

101462 Serrated anvil (standard accessory)

V-Block Set SERIES 181



181-902-10

SPECIFICATIONS

Metric		
Order No.	Max. workpiece dia. (mm)	Remarks
181-902-10	25	A set of two blocks and clamps

DIMENSIONS

