

# 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.
- The swivel holder supplied with each stand accepts two or three of the standard stem sizes (see specifications on next page for details).
- In addition, models 7014-10, 7014E-10, 7031B, 7032B and 7033B have a dovetail groove in the swivel holder for attaching dial test indicators that are equipped with a dovetail.



7010-10



7011-10



7012-10



7014-10  
(magnetic clamping is non-switchable)



7033B



7031B

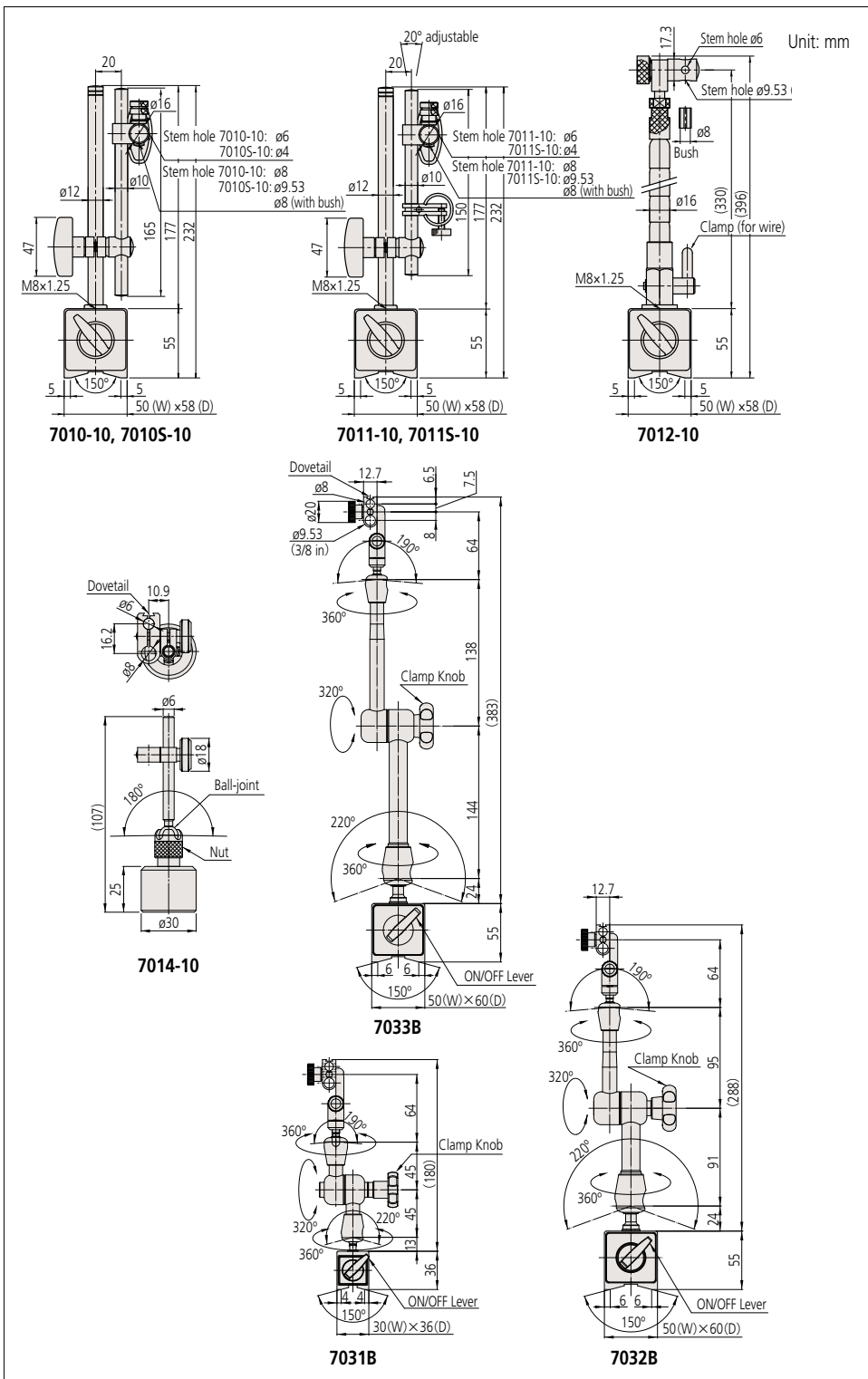


7032B

# Stands

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## DIMENSIONS



## SPECIFICATIONS

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

## Dial Gage Stands SERIES 7

- Dial Gage Stands are designed for comparison measurements of size using a dial indicator or Digimatic Indicator.
- The standard hardened and lapped steel anvil that provides the highly accurate flat reference surface is serrated or non-serrated, according to model.
- Vertical fine adjustment is available with one-touch control thanks to the parallel spring suspension.



**7001-10**  
(with ø58 mm serrated anvil)



**7002-10**  
(with ø58 mm non-serrated anvil)

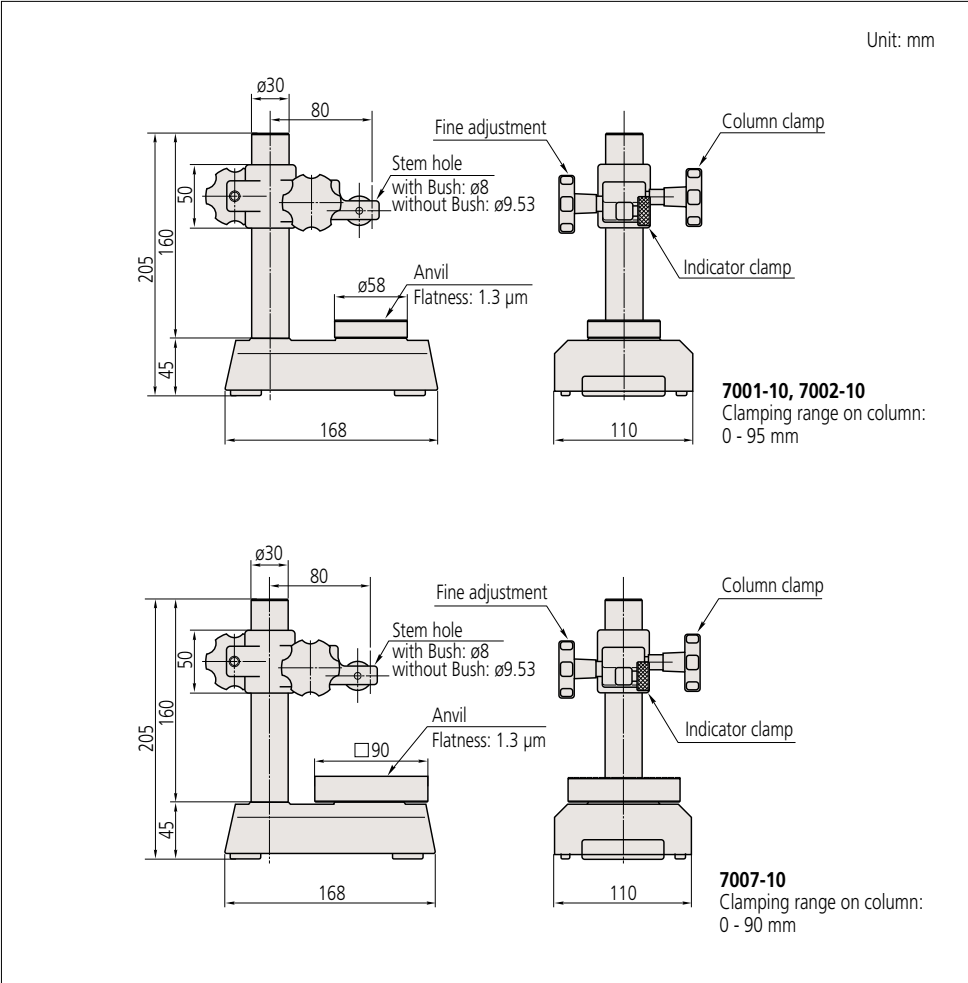


**7007-10**  
(with 90 mm square semi-serrated anvil)

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## DIMENSIONS



## SPECIFICATIONS

Metric		
Order No.	Stem hole	Remarks
7001-10	ø8 mm, ø9.53 mm	With serrated anvil
7002-10	ø8 mm, ø9.53 mm	With flat anvil
7007-10	ø8 mm, ø9.53 mm	With square anvil

Note: Perpendicularity of the stem hole to the anvil is better than 0.4 mm / 100 mm  
\* Take note that when mounting the high-accuracy Linear Gages (with resolution of 0.1 µm or less) to these stands, it may affects the indication value depends on the perpendicularity of the mounting hole to the top surface of the anvils.

## Optional Accessories

**101462:** Hardened steel serrated anvil

**No.101462**

Hardened steel

**101461:** Hardened steel non-serrated anvil

**No.101461**

Hardened steel

**101463:** Hardened steel domed anvil\*

\*Not available for 7007-10.

**No.101463**

Hardened steel

### Optional Accessories

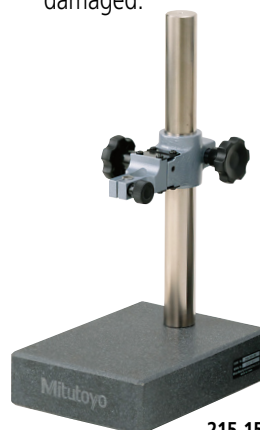
**21JAA329:** ø8 mm bush  
**21JAA330:** ø9.53 mm bush  
**21JAA331:** ø15 mm bush  
 only available for **215-156-10**

## 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.
- Since the fine-grained stone surface plate is less viscid than the cast iron, burrs or warp will not be generated. Therefore, flatness is assured and the workpiece will not be damaged.



215-150-10



215-151-10



215-153-10



215-156-10

### SPECIFICATIONS

Order No.	Granite base size (W x D x H)	Clamping range	Stem hole	Remarks
215-150-10	120 x 180 x 50 mm	110 mm	ø8 mm, ø9.53 mm	With fine adjustment of 1 mm range
215-151-10	150 x 200 x 50 mm	250 mm	ø8 mm, ø9.53 mm	With fine adjustment of 1 mm range
215-153-10	200 x 250 x 80 mm	260 mm	ø8 mm, ø9.53 mm	With fine adjustment of 1 mm range
215-156-10	300 x 250 x 80 mm	275 mm	ø8 mm, ø9.53 mm, ø20 mm	With fine adjustment over entire travel

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

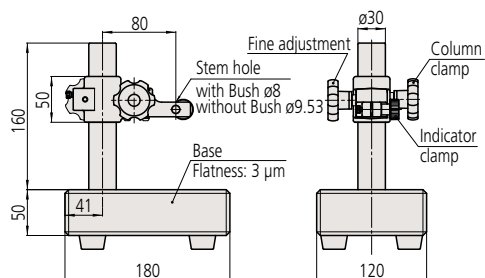
\* Take note that when mounting the high-accuracy Linear Gages (with resolution of 0.1 µm or less) to these stands, it may affect the indication value depends on the perpendicularity of the mounting hole to the top surface of the anvils.

# Stands

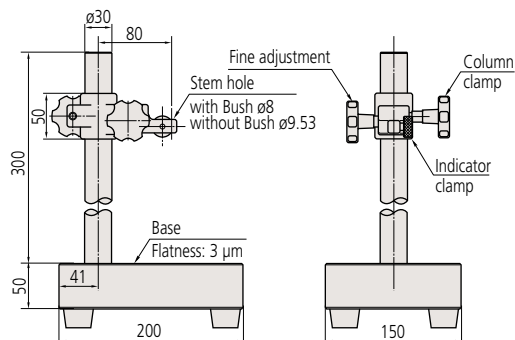
Comparison measuring instruments which ensure high quality, high accuracy and reliability.

## DIMENSIONS

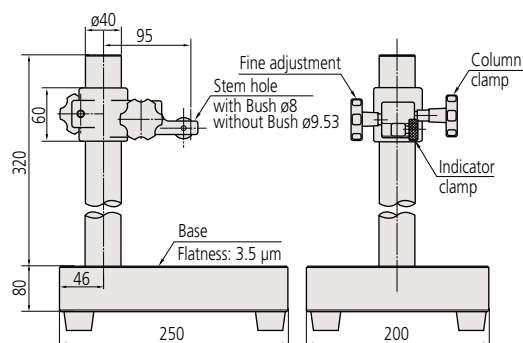
Unit: mm



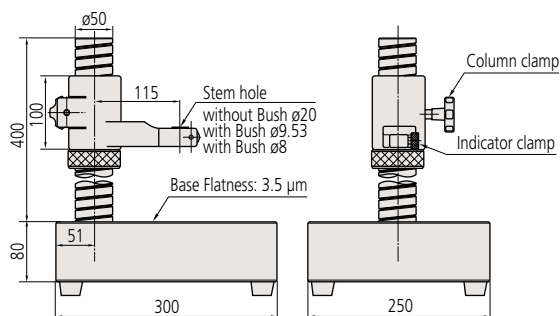
**215-150-10**  
Clamping range on column: 0 - 110 mm



**215-151-10**  
Clamping range on column: 0 - 250 mm



**215-153-10**  
Clamping range on column: 0 - 260 mm



**215-156-10**  
Clamping range on column: 0 - 275 mm

## SERIES 215 — Cast Iron Base Comparator Stands



Application example 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  $\mu\text{m}$  flatness (or better) promotes accurate measurement.
- The **215-505-10** model has a threaded column which enables easy and precise coarse adjustment.
- The hardened and lapped steel anvil is 110 mm or 150 mm square, according to model.



215-405-10

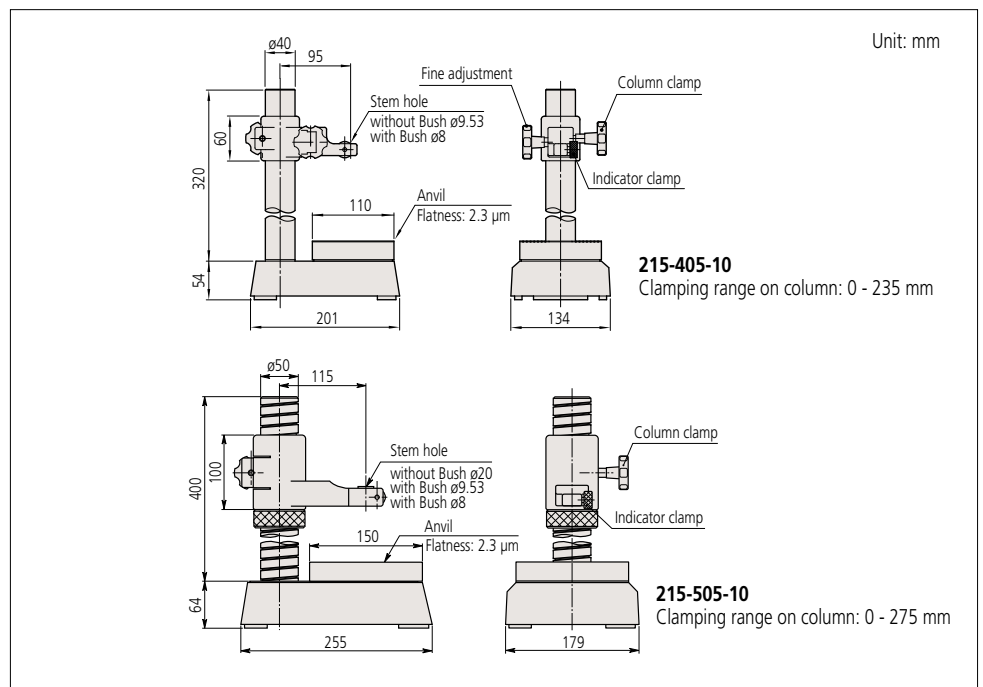
### SPECIFICATIONS

Order No.	Square anvil size (W x D)	Clamping range	Stem hole	Remarks
<b>215-405-10</b>	110 x 110 mm	235 mm	$\varnothing 8$ mm, $\varnothing 9.53$ mm	With fine adjustment of 1 mm range
<b>215-505-10</b>	150 x 150 mm	275 mm	$\varnothing 8$ mm, $\varnothing 9.53$ mm, $\varnothing 20$ mm	With fine adjustment over entire range

\* Perpendicularity of the stem hole to the anvil is better than 0.4 mm/100 mm.

\* Take note that when mounting the high-accuracy Linear Gages (with resolution of 0.1  $\mu\text{m}$  or less) to these stands, it may affect the indication value depends on the perpendicularity of the mounting hole to the top surface of the anvils.

### DIMENSIONS



### Optional Accessories

**21JAA329:**  $\varnothing 8$  mm bush\*

**21JAA330:**  $\varnothing 9.53$  mm (3/8 in) bush\*

**21JAA331:**  $\varnothing 15$  mm bush\*

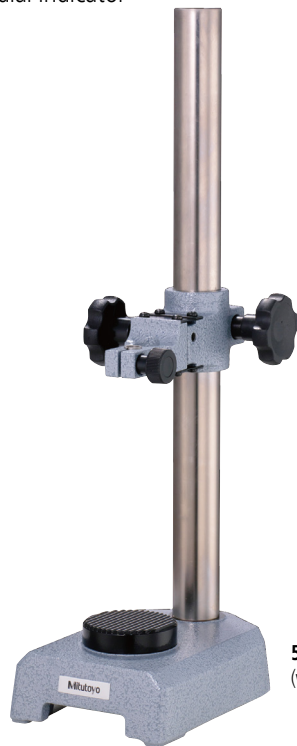
\* Only available for **215-505-10**.

# Stands

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

## SERIES 519 — Transfer Stands

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



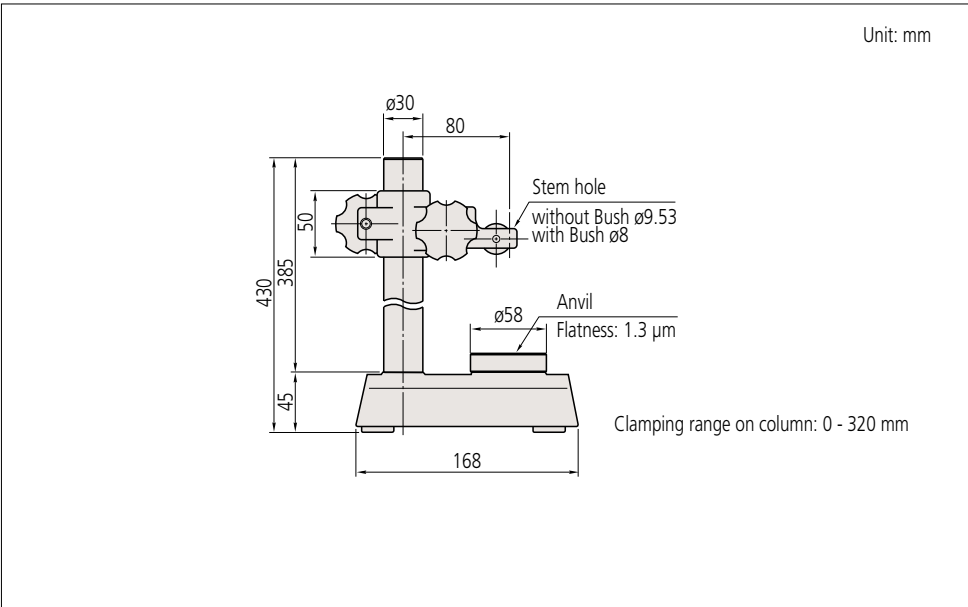
**519-109-10**  
(with a serrated anvil)

### SPECIFICATIONS

Metric		
Order No.	Stem hole	Remarks
519-109-10	ø8 mm, ø9.53 mm	With serrated anvil

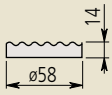
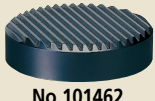
- \* Perpendicularity of the stem hole to the anvil is better than 0.4 mm /100 mm.
- \* Take note that when mounting the high-accuracy Linear Gages (with resolution of 0.1 µm or less) to these stands, it may affects the indication value depends on the perpendicularity of the mounting hole to the top surface of the anvils.

### DIMENSIONS



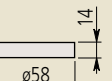
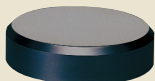
### Optional Accessories

- 101462:** Hardened steel serrated anvil
- 101461:** Hardened steel non-serrated anvil
- 101463:** Hardened steel domed anvil



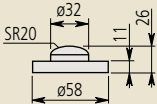
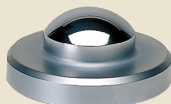
**No.101462**

Hardened steel



**No.101461**

Hardened steel



**No.101463**

Hardened steel



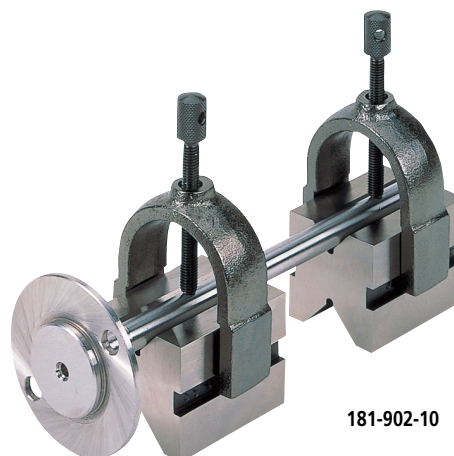
## Accuracy

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

## Optional Accessories

**No.101462** Serrated anvil (standard accessory)

## V-Block Set SERIES 181



181-902-10

## SPECIFICATIONS

Metric		
Order No.	Max. workpiece dia.	Remarks
181-902-10	25 mm	With clamp

Inch		
Order No.	Max. workpiece dia.	Remarks
181-901-10	1 in	With clamp

## DIMENSIONS

