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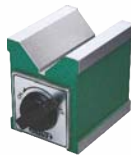
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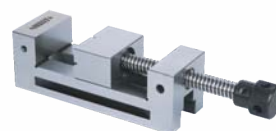
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## GRANITE SURFACE PLATES



CUSTOM-MADE  
SUPPLY SPECIAL SIZES ACCORDING  
TO CUSTOMER'S REQUEST

- Made of Indian granite, high hardness, free from deterioration or dimensional change over time, minimal changes in dimension due to temperature changes
- Meet DIN876, grade 00 is for inspection room or lab, grade 0 is for workshop
- Optional accessory:  
stand for granite surface plate (code **6902**),  
jack for granite surface plate (code **6903**)



6900-132

### Grade 00

Code	Size (L×W×H)	Flatness	Weight	Max. load
6900-132*	300×200×60mm	2.7μm	11kg	30kg
6900-142*	400×250×60mm	2.9μm	18kg	50kg
6900-144*	400×400×60mm	3.1μm	29kg	60kg
6900-153*	500×315×70mm	3.2μm	33kg	60kg
6900-164*	630×400×80mm	3.5μm	60kg	65kg
6900-166*	630×630×100mm	3.8μm	119kg	75kg
6900-185*	800×500×100mm	3.9μm	120kg	100kg
6900-1106*	1000×630×140mm	4.4μm	265kg	200kg
6900-1107*	1000×750×150mm	4.5μm	337kg	300kg
6900-1101*	1000×1000×150mm	4.8μm	450kg	400kg
6900-1128*	1200×800×160mm	4.9μm	461kg	500kg
6900-1161*	1600×1000×180mm	5.8μm	864kg	600kg
6900-1201*	2000×1000×220mm	6.5μm	1320kg	650kg
6900-1202*	2000×1500×250mm	7.0μm	2250kg	750kg



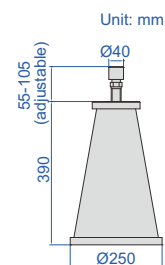
### Grade 0

Code	Size (L×W×H)	Flatness	Weight	Max. load
6900-032*	300×200×60mm	5.4μm	11kg	60kg
6900-042*	400×250×60mm	5.9μm	18kg	100kg
6900-044*	400×400×60mm	6.3μm	29kg	120kg
6900-053*	500×315×70mm	6.4μm	33kg	120kg
6900-064*	630×400×80mm	7.0μm	60kg	130kg
6900-066*	630×630×100mm	7.6μm	119kg	150kg
6900-085*	800×500×100mm	7.8μm	120kg	200kg
6900-0106*	1000×630×140mm	8.7μm	265kg	400kg
6900-0107*	1000×750×150mm	9.0μm	337kg	600kg
6900-0101*	1000×1000×150mm	9.7μm	450kg	800kg
6900-0128*	1200×800×160mm	9.8μm	461kg	1000kg
6900-0161*	1600×1000×180mm	11.5μm	864kg	1200kg
6900-0201*	2000×1000×220mm	12.9μm	1320kg	1300kg
6900-0202*	2000×1500×250mm	14.0μm	2250kg	1500kg

\* Supplied with manufacturer inspection certificate

## JACK SET FOR GRANITE SURFACE PLATES

- 5 jacks per set
- Adjustable height
- For large granite surface plates:  
2000×1000×220mm  
(code **6900-0201** and **6900-1201**)  
2000×1500×250mm  
(code **6900-0202** and **6900-1202**)

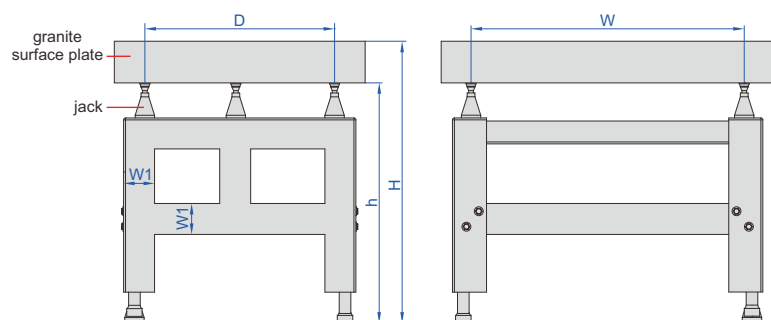


**6903-B**

**Code**

**6903-B**

## STANDS FOR GRANITE SURFACE PLATES



**6902-64A**

- For medium size granite surface plates
- 5 jacks are included
- Adjusting range of jacks: 25mm
- One foot on the bottom is adjustable

### Low stands

Code	For granite surface plate	W	D	H (with granite surface plate)	h (without granite surface plate)	W1
<b>6902-64A</b>	630×400×80mm (code <b>6900-064</b> and <b>6900-164</b> )	352	224	775-800	695-720	80
<b>6902-66A</b>	630×630×100mm (code <b>6900-066</b> and <b>6900-166</b> )	352	352	775-800	675-700	80
<b>6902-85A</b>	800×500×100mm (code <b>6900-085</b> and <b>6900-185</b> )	448	280	775-800	675-700	80
<b>6902-106A</b>	1000×630×140mm (code <b>6900-0106</b> and <b>6900-1106</b> )	560	352	755-780	615-640	80
<b>6902-107A</b>	1000×750×150mm (code <b>6900-0107</b> and <b>6900-1107</b> )	560	420	755-780	605-630	80
<b>6902-101A</b>	1000×1000×150mm (code <b>6900-0101</b> and <b>6900-1101</b> )	560	560	755-780	605-630	80
<b>6902-128A</b>	1200×800×160mm (code <b>6900-0128</b> and <b>6900-1128</b> )	672	448	755-780	595-620	80
<b>6902-161A</b>	1600×1000×180mm (code <b>6900-0161</b> and <b>6900-1161</b> )	896	560	755-780	575-600	100
<b>6902-201A</b>	2000×1000×220mm (code <b>6900-0201</b> and <b>6900-1201</b> )	1120	560	755-780	535-560	100
<b>6902-202A</b>	2000×1500×250mm (code <b>6900-0202</b> and <b>6900-1202</b> )	1120	840	755-780	505-530	100

### High stands

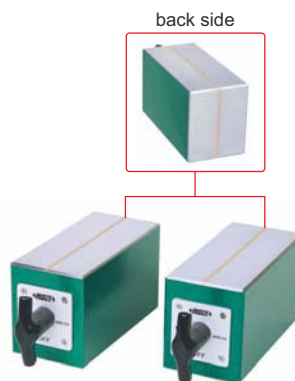
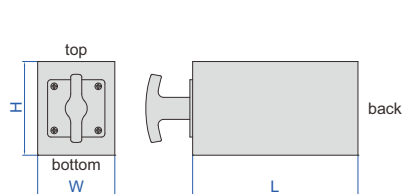
Code	For granite surface plate	W	D	H (with granite surface plate)	h (without granite surface plate)	W1
<b>6902-64H</b>	630×400×80mm (code <b>6900-064</b> and <b>6900-164</b> )	352	224	1000-1025	920-945	80
<b>6902-66H</b>	630×630×100mm (code <b>6900-066</b> and <b>6900-166</b> )	352	352	1000-1025	900-925	80
<b>6902-85H</b>	800×500×100mm (code <b>6900-085</b> and <b>6900-185</b> )	448	280	1000-1025	900-925	80
<b>6902-106H</b>	1000×630×140mm (code <b>6900-0106</b> and <b>6900-1106</b> )	560	352	1000-1025	860-885	80
<b>6902-107H</b>	1000×750×150mm (code <b>6900-0107</b> and <b>6900-1107</b> )	560	420	1000-1025	850-875	80
<b>6902-101H</b>	1000×1000×150mm (code <b>6900-0101</b> and <b>6900-1101</b> )	560	560	1000-1025	850-875	80
<b>6902-128H</b>	1200×800×160mm (code <b>6900-0128</b> and <b>6900-1128</b> )	672	448	1000-1025	840-865	80
<b>6902-161H</b>	1600×1000×180mm (code <b>6900-0161</b> and <b>6900-1161</b> )	896	560	1000-1025	820-845	100
<b>6902-201H</b>	2000×1000×220mm (code <b>6900-0201</b> and <b>6900-1201</b> )	1120	560	1000-1025	780-805	100
<b>6902-202H</b>	2000×1500×250mm (code <b>6900-0202</b> and <b>6900-1202</b> )	1120	840	1000-1025	750-775	100

## MAGNETIC RECTANGULAR BLOCKS

HARDENED  
SURFACES

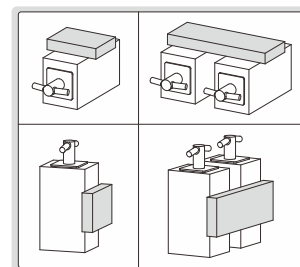
HIGH  
PRECISION

STRONG  
MAGNETIC FORCE



6898-150

- For grinding, light milling, drilling and inspection of round and square jobs
- Hardened, high accuracy, strong magnetic force
- Working surfaces are hardened to HRC58-62
- Magnetic force on top, bottom and back sides
- Supplied in matched pair



Code	Size (L×W×H)	Magnetic force	Parallelism of top to bottom side	Squareness of top and bottom to back side	Height difference of a matched pair
6898-100	100×70×70mm	100kgf	5μm	5μm	5μm
6898-150	150×70×85mm	125kgf	5μm	5μm	5μm

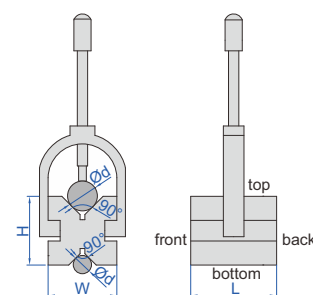
## V-BLOCK SETS



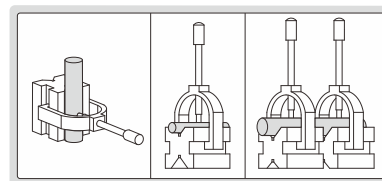
6896-10



6896-11



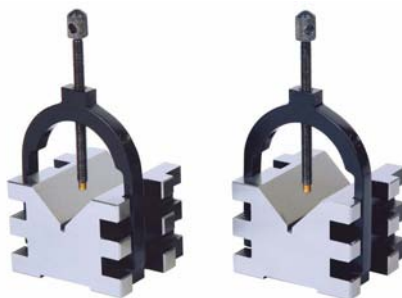
- Hold cylindrical workpieces for inspection and machining
- Two V-blocks per set
- Made of alloy steel
- Hardened to HRC60±2
- V groove on the top for large shafts
- V groove on the bottom for small shafts (except 6896-10)



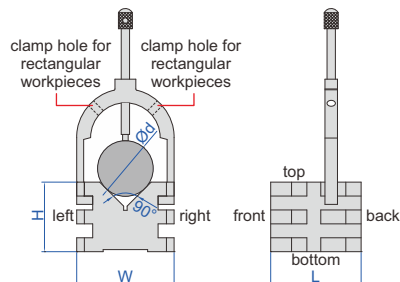
Code	Size (L×W×H)	Range of shafts (Ød)	Parallelism of both V grooves to top and bottom sides	Squareness of both V grooves to front and back sides	Height difference of a matched pair
6896-10	25×20×20mm	3-20mm	3μm	3μm	3μm
6896-11	50×40×40mm	5-30mm	5μm	5μm	5μm
6896-12	80×63×63mm	7-63mm	5μm	5μm	5μm
6896-13	100×80×80mm	7-80mm	5μm	5μm	5μm
6896-14	70×140×140mm	9-140mm	5μm	5μm	5μm

SIDE LIE-DOWN  
USE IS POSSIBLE

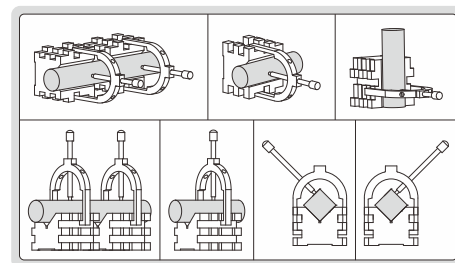
## V-BLOCK SET



6802-1



- Hold cylindrical or rectangular workpieces for inspection and machining
- Two V-blocks per set
- Made of alloy steel
- Hardened to HRC60±2
- Applicable for cylinder with diameter (Ød): 5-50mm
- Applicable for rectangular workpieces with thickness: ≤35mm



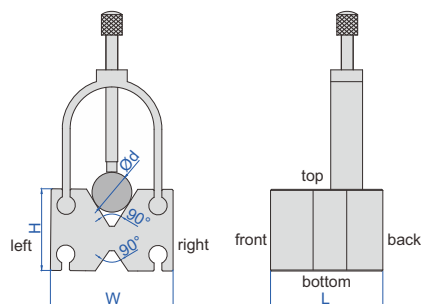
Code	Size (L×W×H)	Parallelism of V groove to top, bottom, left, right sides	Squareness of V groove to front and back sides	Height difference of a matched pair
6802-1	65×70×50mm	5µm	5µm	5µm

SIDE LIE-DOWN  
USE IS POSSIBLE

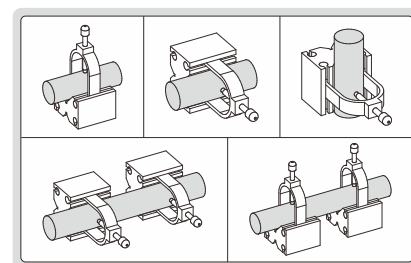
## V-BLOCK SETS



6803-1



- Hold cylindrical workpieces for inspection and machining
- Two V-blocks per set
- Made of alloy steel
- Hardened to HRC60±2
- V groove on the top for large shafts
- V groove on the bottom for small shafts

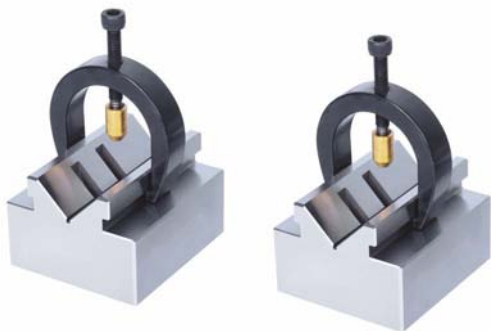


Code	Size (L×W×H)	Range of shafts (Ød)	Parallelism of both V grooves to top, bottom, left, right sides	Squareness of both V grooves to front and back sides	Height difference of a matched pair
6803-1	55×60×40mm	4-35mm	5µm	5µm	5µm
6803-2	65×70×45mm	4-47mm	5µm	5µm	5µm



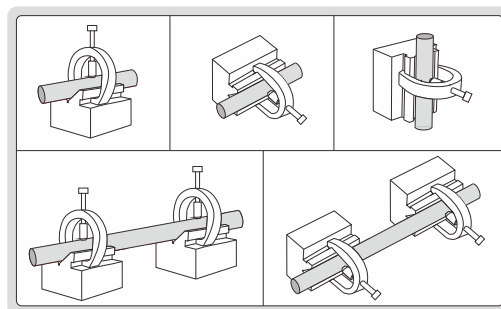
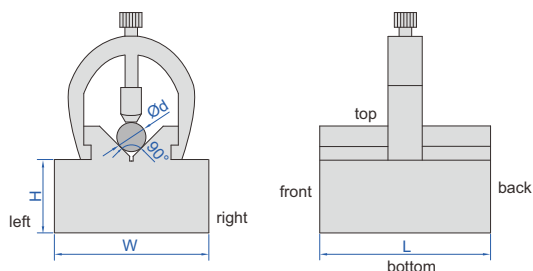
## V-BLOCK SET

SIDE LIE-DOWN  
USE IS POSSIBLE



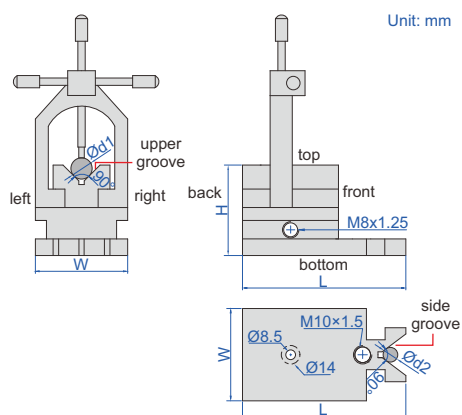
6806-20

- Hold cylindrical workpieces for inspection and machining
- Two V-blocks per set
- Made of alloy steel
- Hardened to HRC60±2
- Applicable for cylinder with diameter (Ød): 2-20mm



Code	Size (L×W×H)	Parallelism of V groove to bottom, left, right sides	Squareness of V groove to front and back sides	Height difference of a matched pair
6806-20	70×63×46mm	5µm	5µm	5µm

## V-BLOCK



Unit: mm



6804-M2

- Hold cylindrical workpieces for inspection and machining
- Made of alloy steel
- Hardened to HRC60±2



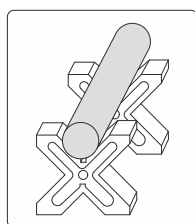
side groove is for  
shouldered  
studs and pins

the adjustable screw can support  
the block and prevent tilting

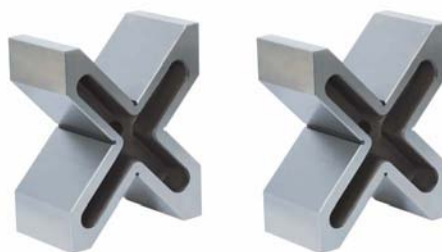


Code	Size (L×W×H)	Range of shafts (Ød1 and Ød2)	Parallelism of upper groove to bottom, left and right sides	Squareness of upper groove to back side	Parallelism of side groove to back side
6804-M2	90×48×48mm	5-33mm	5µm	5µm	5µm

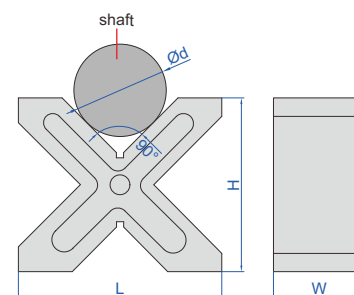
## V-BLOCK SETS



- For positioning cylindrical workpieces
- Two V-blocks per set
- Each V-block has four 90° V-grooves
- Cast iron, hardness HB170-240

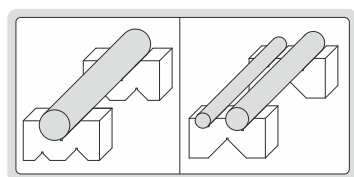


6805-2



Code	Size (L×H×W)	Range of shafts (Ød)	Parallelism of four V grooves to all sides	Height difference of a matched pair
6805-1	150×130×75mm	8-120mm	15µm	20µm
6805-2	200×170×90mm	12-180mm	15µm	20µm

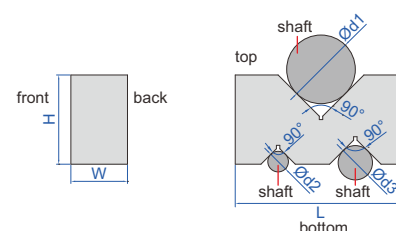
## V-BLOCK SETS



- Two V-blocks per set
- Made of hardened tool steel



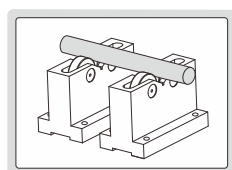
6887-3



Code	Size (L×W×H)	Range of shafts (Ød1)	Range of shafts (Ød2)	Range of shafts (Ød3)
6887-1	50×19×24mm	3-32mm	3-16mm	3-22mm
6887-2	75×24×35mm	3-50mm	3-20mm	3-32mm
6887-3	100×33×52mm	3-68mm	3-26mm	3-40mm
6887-4	125×44×69mm	3-87mm	3-34mm	3-50mm

Code	Parallelism of three V grooves to top and bottom sides	Height difference of a matched pair
6887-1	5µm	5µm
6887-2	5µm	5µm
6887-3	5µm	5µm
6887-4	5µm	5µm

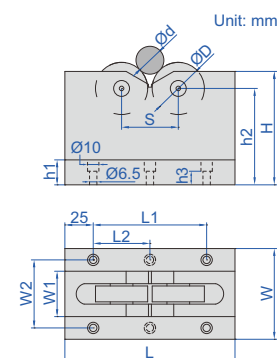
## ROLLER BEARING V-BLOCK SETS



- Runout accuracy: 5µm
- Parallelism of bearings to bottom: 12µm
- Two V-blocks per set
- Workpieces don't get damaged due to bearings
- Suitable for heavy workpieces



6888-1

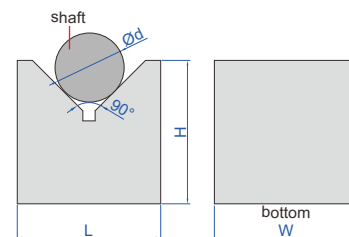
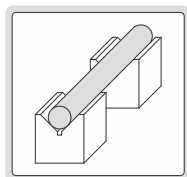


Code	Size (L×W×H)	Code of bearings	Diameter of bearings (ØD)	Range of shafts (Ød)	Load capacity
6888-1	150×60×100mm	16004 ZZ	42mm	25-70mm	500kg
6888-2	150×80×100mm	6303 ZZ	47mm	5-55mm	1000kg
6888-3	230×100×150mm	6306 ZZ	72mm	70-200mm	1000kg

Code	W1	W2	h1	h2	h3	L1	L2	S
6888-1	22	44	20	85	12	100	-	60
6888-2	40	60	22	85	12	100	-	50
6888-3	60	80	30	124	20	180	90	120



## GRANITE V-BLOCK SETS



- Two V-blocks per set

6897-1

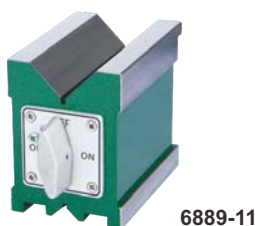
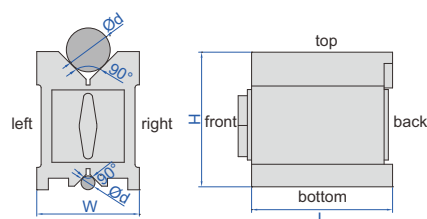
Code	Size (L×W×H)	Range of shafts (Ød)	Parallelism of V groove to bottom	Height difference of a matchet pair
6897-1	70×50×70mm	6-70mm	4µm	5µm
6897-2	100×50×70mm	6-84mm	4µm	5µm

## MAGNETIC V-BLOCKS (PROFESSIONAL TYPE)

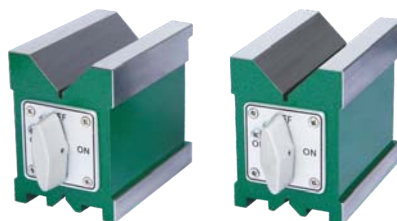
HARDENED  
SURFACES

HIGH  
PRECISION

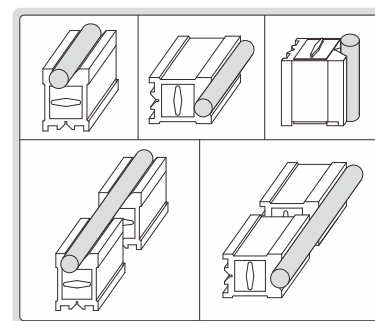
STRONG  
MAGNETIC FORCE



6889-11



6889-1



- Hardened, high accuracy, strong magnetic force, for grinding, light milling, drilling and inspection of round and square workpieces
- All working surfaces are hardened to HRC60±2
- Magnetic force on top, bottom and two V grooves
- V groove on the top for large shafts
- V groove on the bottom for small shafts
- Suitable for cast iron surface plates and granite surface plates

### Individual

Code	Size (L×W×H)	Range of shafts (Ød)	Magnetic force	Parallelism of V grooves to top, bottom, left, right sides	Squareness of V grooves to back side
6889-11	75×56×75mm	5-40mm	85kgf	5µm	5µm
6889-22	100×70×95mm	5-65mm	150kgf	5µm	5µm
6889-33	150×75×100mm	5-70mm	190kgf	6µm	6µm
6889-55	160×125×130mm	5-140mm	220kgf	12µm	12µm
6889-44	200×125×150mm	10-140mm	400kgf	12µm	12µm

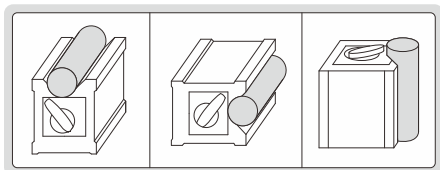
### Matched pair

Code	Size (L×W×H)	Range of shafts (Ød)	Magnetic force	Parallelism of V grooves to top, bottom, left, right sides	Squareness of V grooves to back side	Height difference of a matched pair
6889-1	75×56×75mm	5-40mm	85kgf	5µm	5µm	5µm
6889-2	100×70×95mm	5-65mm	150kgf	5µm	5µm	5µm
6889-3	150×75×100mm	5-70mm	190kgf	6µm	6µm	6µm
6889-5	160×125×130mm	5-140mm	220kgf	12µm	12µm	12µm
6889-4	200×125×150mm	10-140mm	400kgf	12µm	12µm	12µm

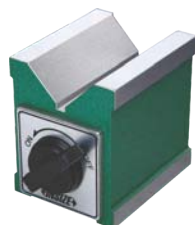
ATTENTION: NOT SUITABLE FOR STEEL OR IRON SURFACES,  
OTHERWISE THE MAGNETIC FORCE WILL BE REDUCED

ATTENTION:  
NOT HARDENED

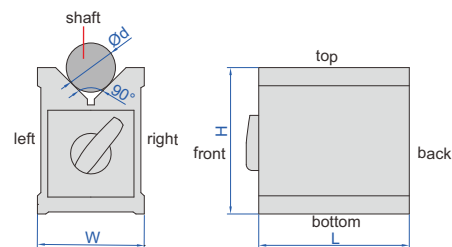
## MAGNETIC V-BLOCK (ECONOMIC TYPE)



- Hold cylindrical workpieces for inspection and machining
- Supplied in single piece
- Not hardened
- Not suitable for steel or iron surfaces, otherwise the magnetic force will be reduced



6890-702

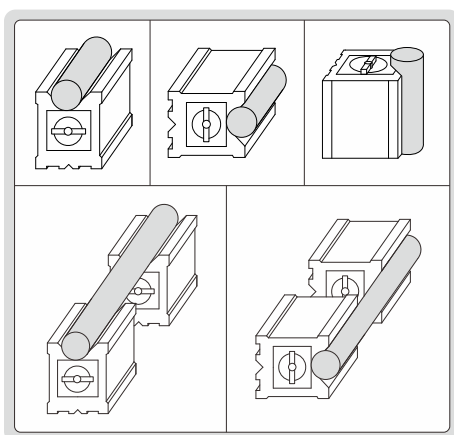


Code	Size (L×W×H)	Range of shafts (Ød)	Magnetic force	Parallelism of V groove to top, bottom, left and right sides	Squareness of V groove to back side
6890-702	70×60×73mm	6-44mm	56kgf	10µm	10µm

ATTENTION: NOT SUITABLE FOR STEEL OR IRON SURFACES,  
OTHERWISE THE MAGNETIC FORCE WILL BE REDUCED

ATTENTION:  
NOT HARDENED

## MAGNETIC V-BLOCKS (ECONOMIC TYPE)



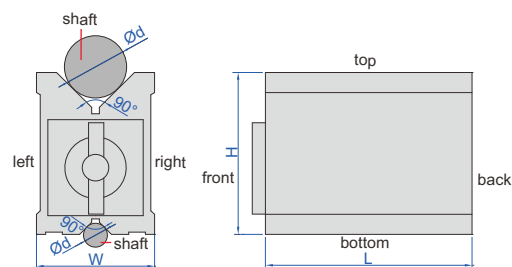
- Hold cylindrical workpieces for inspection and machining
- Not hardened
- V groove on the top for large shafts
- V groove on the bottom for small shafts
- Not suitable for steel or iron surfaces, otherwise the magnetic force will be reduced



6801-1201



6801-1



### Individual

Code	Size (L×W×H)	Range of shafts (Ød)	Magnetic force	Parallelism of V grooves to top, bottom, left, right side	Squareness of V grooves to back side
6801-1201	80×70×95mm	6-67mm	64kgf	10µm	10µm
6801-1202	100×70×95mm	6-67mm	80kgf	10µm	10µm
6801-1203	120×70×95mm	6-67mm	96kgf	10µm	10µm

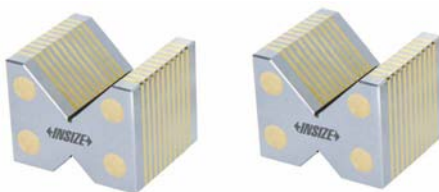
### Matched pair

Code	Size (L×W×H)	Range of shafts (Ød)	Magnetic force	Parallelism of V grooves to top, bottom, left, right side	Squareness of V grooves to back side	Height difference of a matched pair
6801-1	80×70×95mm	6-67mm	64kgf	10µm	10µm	10µm
6801-2	100×70×95mm	6-67mm	80kgf	10µm	10µm	10µm
6801-3	120×70×95mm	6-67mm	96kgf	10µm	10µm	10µm

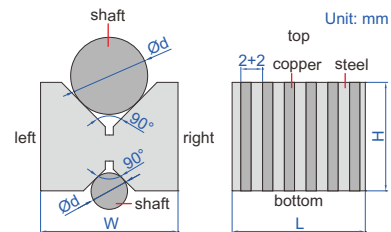
## MAGNETIC INDUCTION V-BLOCK SET

ATTENTION: NOT HARDENED, DO NOT ROTATE WORKPIECES ON V-BLOCKS

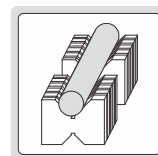
- Hold cylindrical workpieces for inspection and machining
- To be used on magnetic chucks
- Two V-blocks per set
- V groove on the top for large shafts
- V groove on the bottom for small shafts
- Hardness HRB70
- Copper magnetic strips



6878-1

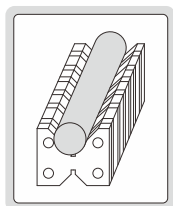


Code	Size (L×W×H)	Range of shafts (Ød)	Pole pitch	Parallelism of both V grooves to top and bottom sides	Height difference of a matched pair
6878-1	49×58×46mm	5-56mm	2+2mm	10µm	10µm



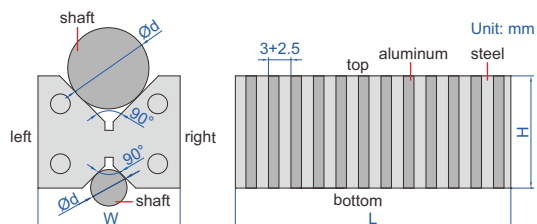
## MAGNETIC INDUCTION V-BLOCK

ATTENTION: NOT HARDENED, DO NOT ROTATE WORKPIECES ON V-BLOCKS



6892-1

- Hold cylindrical workpieces for inspection and machining
- To be used on magnetic chucks
- Supplied in single piece
- V groove on the top for large shafts
- V groove on the bottom for small shafts
- Hardness HRB70



Code	Size (L×W×H)	Range of shafts (Ød)	Pole pitch	Parallelism of both V grooves to top and bottom sides
6892-1	110×60×48mm	6-50mm	3+2.5mm	10µm

## MAGNETIC V-BLOCK SETS

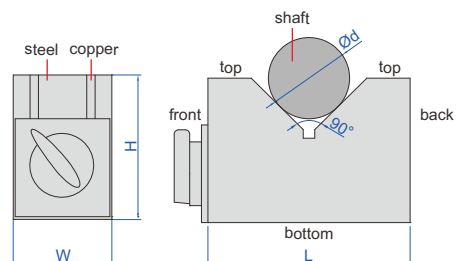
ATTENTION: NOT HARDENED, DO NOT ROTATE WORKPIECES ON V-BLOCKS

ATTENTION: LOW MAGNETIC FORCE

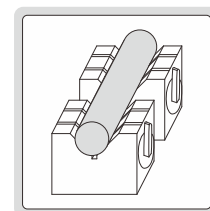
- Hold cylindrical workpieces for inspection, not suitable for machining due to low magnetic force
- Two V-blocks per set
- Hardness HRB70



6891-1



Code	Size (L×W×H)	Range of shafts (Ød)	Magnetic force	Parallelism of V groove to bottom and back sides	Height difference of a matched pair
6891-1	70×40×50mm	6-46mm	15kgf	10µm	10µm
6891-3	150×50×100mm	6-125mm	21kgf	10µm	10µm

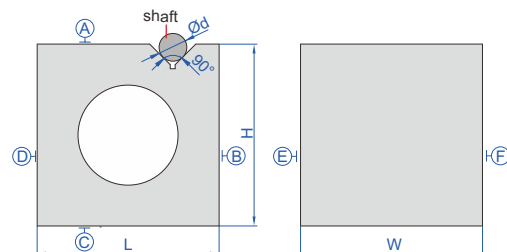


## GRANITE SQUARE WITH V GROOVE



4142-200

- Parallelism and squareness of A, B, C, D, E and F: 6μm
- Parallelism and squareness of V groove to A, B, C, D, E and F: 6μm



Code	Size (L×W×H)	Range of shaft (Ød)
4142-200	200×200×200mm	9~70mm

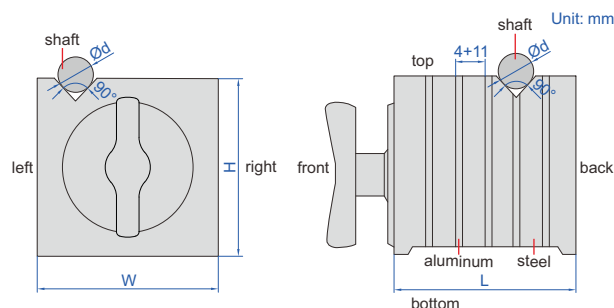
ATTENTION: NOT HARDENED, DO NOT ROTATE WORKPIECES ON V-BLOCKS

## MAGNETIC SQUARE WITH V GROOVE



6539-100

- Hold flat and cylindrical workpieces for inspection and machining
- Magnetic force on top, left, right and V grooves
- Parallelism and squareness of top, bottom, left, right and back: 20μm
- Parallelism and squareness of V grooves to top, bottom, left, right and back: 20μm



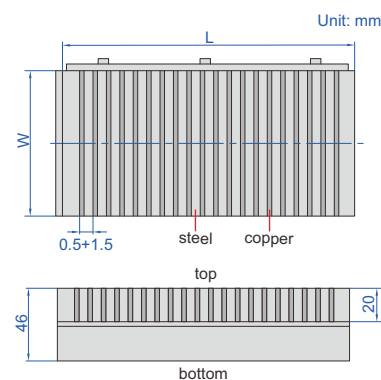
Code	Size (L×W×H)	Magnetic force of V grooves		Magnetic force of top, left and right sides		Range of shafts (Ød)
		on granite surface plate	on cast iron plate	on granite surface plate	on cast iron plate	
6539-100	100×100×100mm	30kgf	25kgf	50kgf	30kgf	5-30mm

ATTENTION: NOT HARDENED

## PERMANENT MAGNETIC CHUCK



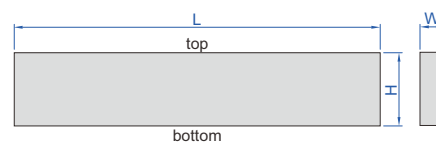
6537-400



Code	Table size (L×W)	Magnetic force	Pole pitch	Parallelism of top to bottom
6537-400	400×200mm	8kgf/cm <sup>2</sup>	0.5+1.5mm	0.02mm/300mm

## PARALLELS

- Made of alloy tool steel
- Hardened to HRC55-60
- Supplied in pair



### 6512-2210A

L=125mm	L=150mm	L=200mm			
Code	Code	Code	H×W	Parallelism between top and bottom	Height difference of a matched pair
6512-118	6512-1181	6512-1182	11×8mm	5μm	5μm
6512-168	6512-1681	6512-1682	16×8mm	5μm	5μm
6512-218	6512-2181	6512-2182	21×8mm	5μm	5μm
6512-268	6512-2681	6512-2682	26×8mm	5μm	5μm
6512-318	6512-3181	6512-3182	31×8mm	5μm	5μm
6512-368	6512-3681	6512-3682	36×8mm	5μm	5μm
6512-1310	6512-13101	6512-13102	13×10mm	5μm	5μm
6512-1810	6512-18101	6512-18102	18×10mm	5μm	5μm
6512-2310	6512-23101	6512-23102	23×10mm	5μm	5μm
6512-2810	6512-28101	6512-28102	28×10mm	5μm	5μm
6512-3310	6512-33101	6512-33102	33×10mm	5μm	5μm
6512-3810	6512-38101	6512-38102	38×10mm	5μm	5μm
6512-1512	6512-15121	6512-15122	15×12mm	5μm	5μm
6512-2012	6512-20121	6512-20122	20×12mm	5μm	5μm
6512-2512	6512-25121	6512-25122	25×12mm	5μm	5μm
6512-3012	6512-30121	6512-30122	30×12mm	5μm	5μm
6512-3512	6512-35121	6512-35122	35×12mm	5μm	5μm
6512-4012	6512-40121	6512-40122	40×12mm	5μm	5μm
6512-1714	6512-17141	6512-17142	17×14mm	5μm	5μm
6512-2214	6512-22141	6512-22142	22×14mm	5μm	5μm
6512-2714	6512-27141	6512-27142	27×14mm	5μm	5μm
6512-3214	6512-32141	6512-32142	32×14mm	5μm	5μm
6512-3714	6512-37141	6512-37142	37×14mm	5μm	5μm
6512-4214	6512-42141	6512-42142	42×14mm	5μm	5μm

### L=100mm

Code	H×W	Parallelism between top and bottom	Height difference of a matched pair
6512-52	5×2mm	7μm	7μm
6512-102	10×2mm	5μm	5μm
6512-152	15×2mm	5μm	5μm
6512-202	20×2mm	5μm	5μm
6512-63	6×3mm	7μm	7μm
6512-113	11×3mm	5μm	5μm
6512-163	16×3mm	5μm	5μm
6512-213	21×3mm	5μm	5μm
6512-74	7×4mm	7μm	7μm
6512-124	12×4mm	5μm	5μm
6512-174	17×4mm	5μm	5μm
6512-224	22×4mm	5μm	5μm
6512-85	8×5mm	7μm	7μm
6512-135	13×5mm	5μm	5μm
6512-185	18×5mm	5μm	5μm
6512-235	23×5mm	5μm	5μm
6512-96	9×6mm	7μm	7μm
6512-146	14×6mm	5μm	5μm
6512-196	19×6mm	5μm	5μm
6512-246	24×6mm	5μm	5μm

### L=150mm

Code	H×W	Parallelism between top and bottom	Height difference of a matched pair
6512-1410A	14×10mm	5μm	5μm
6512-1610A	16×10mm	5μm	5μm
6512-1810A	18×10mm	5μm	5μm
6512-2010A	20×10mm	5μm	5μm
6512-2210A	22×10mm	5μm	5μm
6512-2410A	24×10mm	5μm	5μm
6512-2610A	26×10mm	5μm	5μm
6512-2810A	28×10mm	5μm	5μm
6512-3010A	30×10mm	5μm	5μm
6512-3210A	32×10mm	5μm	5μm
6512-3510A	35×10mm	5μm	5μm
6512-4010A	40×10mm	5μm	5μm
6512-4510A	45×10mm	5μm	5μm
6512-5010A	50×10mm	5μm	5μm

To be continued



Continued from previous page

#### L=160mm

Code	H×W	Parallelism between top and bottom	Height difference of a matched pair
6512-104A	10×4mm	5μm	5μm
6512-144A	14×4mm	5μm	5μm
6512-184A	18×4mm	5μm	5μm
6512-224A	22×4mm	5μm	5μm
6512-264A	26×4mm	5μm	5μm
6512-304A	30×4mm	5μm	5μm
6512-344A	34×4mm	5μm	5μm
6512-384A	38×4mm	5μm	5μm
6512-424A	42×4mm	5μm	5μm
6512-128A	12×8mm	5μm	5μm
6512-178A	17×8mm	5μm	5μm
6512-228A	22×8mm	5μm	5μm
6512-258A	25×8mm	5μm	5μm
6512-288A	28×8mm	5μm	5μm
6512-328A	32×8mm	5μm	5μm
6512-368A	36×8mm	5μm	5μm
6512-388A	38×8mm	5μm	5μm

#### L=200mm

Code	H×W	Parallelism between top and bottom	Height difference of a matched pair
6512-178B	17×8mm	5μm	5μm
6512-228B	22×8mm	5μm	5μm
6512-268B	26×8mm	5μm	5μm
6512-288B	28×8mm	5μm	5μm
6512-328B	32×8mm	5μm	5μm
6512-368B	36×8mm	5μm	5μm
6512-388B	38×8mm	5μm	5μm
6512-428B	42×8mm	5μm	5μm

## PARALLEL SETS

- Parallelism between top and bottom: 5μm
- Height difference of a matched pair: 5μm
- Made of alloy tool steel
- Hardened to HRC55-60



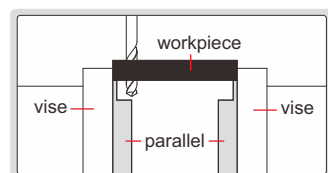
6533-144



Code	Parallels per set	Length (L)	Thickness (W)	Height (H)
6533-6	6 pairs	200mm	9.5mm	35, 40, 45, 50, 55, 58mm
6533-8	8 pairs	160mm	8mm	12*, 17, 22, 25, 28, 32, 36, 38mm
6533-81	8 pairs	200mm	8mm	17, 22, 26, 28, 32, 36, 38, 42mm
6533-9	9 pairs	160mm	4mm	10*, 14*, 18, 22, 26, 30, 34, 38, 42mm
6533-10	10 pairs	150mm	3mm	13, 16, 19, 22, 25, 28, 31, 35, 38, 41mm
6533-144	14 pairs	150mm	10mm	14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 35, 40, 45, 50mm

\* Parallelism between top and bottom and height difference of a matched pair of 12mm in **6533-8**, 10mm, 14mm in **6533-9** is 7μm

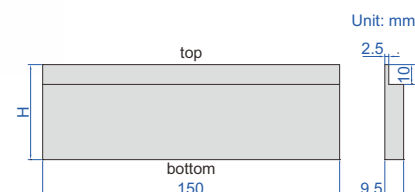
## PARALLEL SET



- Parallelism between top and bottom: 5μm
- Height difference of a matched pair: 5μm
- Made of alloy tool steel
- Hardened to HRC55-60



6534-6



Code	Parallels per set	Height (H)
6534-6	6 pairs	25, 30, 35, 40, 45, 48mm

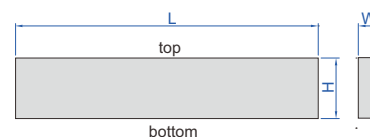


## PARALLEL SETS

- Parallelism between top and bottom: 5µm
- Height difference of a matched pair: 5µm
- Made of alloy tool steel
- Hardened to HRC55-60



6511-20



Code	Parallels per set	Length (L)	Height (H)×Thickness (W)
6511-20	20 pairs	100mm	5×2*, 10×2, 15×2, 20×2, 6×3*, 11×3, 16×3, 21×3, 7×4*, 12×4, 17×4, 22×4, 8×5*, 13×5, 18×5, 23×5, 9×6*, 14×6, 19×6, 24×6mm
6511-24	24 pairs	125mm	11×8, 16×8, 21×8, 26×8, 31×8, 36×8, 13×10, 18×10, 23×10, 28×10, 33×10, 38×10, 15×12, 20×12, 25×12, 30×12, 35×12, 40×12, 17×14, 22×14, 27×14, 32×14, 37×14, 42×14mm
6511-241	24 pairs	150mm	11×8, 16×8, 21×8, 26×8, 31×8, 36×8, 13×10, 18×10, 23×10, 28×10, 33×10, 38×10, 15×12, 20×12, 25×12, 30×12, 35×12, 40×12, 17×14, 22×14, 27×14, 32×14, 37×14, 42×14mm

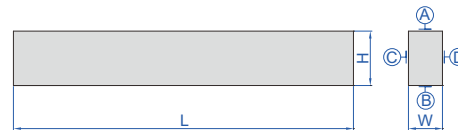
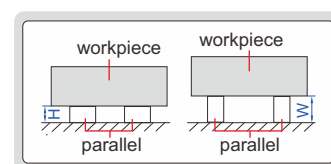
\* Parallelism between top and bottom and height difference of a matched pair of 5×2mm, 6×3mm, 7×4mm, 8×5mm and 9×6mm in 6511-20 is 7µm

## GRANITE PARALLEL SET

- Made of granite, hard and no rusty, no dimensional change over time or temperature change
- Two parallels per set



4143-250



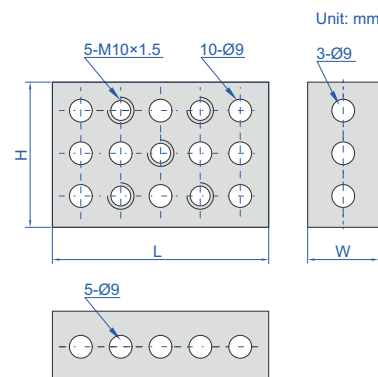
Code	Size (L×W×H)	Parallelism between A and B	Parallelism between C and D	Height difference of a matched pair
4143-250	250×25×40mm	3µm	3µm	3µm

## PARALLEL/SQUARE SET

screws and wrench are included



6531-25

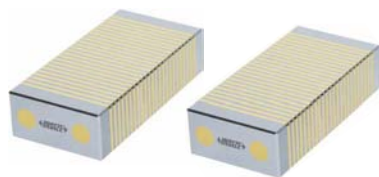


- Pairs of matched blocks for positioning and set-up
- Screws and wrench are included
- Hardness HRC 55-62

Code	Size (L×H×W)	Size accuracy	Squareness	Parallelism	Height difference of a matched pair
6531-25	75×50×25mm	10µm	7µm/25mm	10µm	10µm

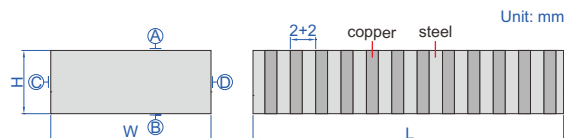
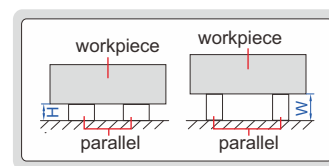
ATTENTION:  
NOT HARDENED

## MAGNETIC INDUCTION PARALLEL SET



6879-1

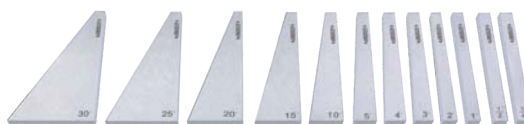
- To be used on magnetic chucks
- Two parallels per set
- Hardness HRB70
- Copper magnetic strips



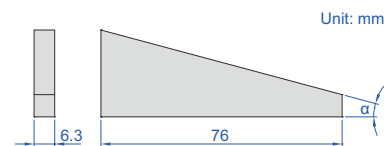
Code	Size (L×W×H)	Pole pitch	Parallelism between A and B	Parallelism between C and D	Height difference of a matched pair
6879-1	100×50×25mm	2+2mm	10μm	10μm	10μm

## ANGLE PLATE SETS

- For angle set-up in tooling, production and inspection
- Hardness HRC52



4006-12



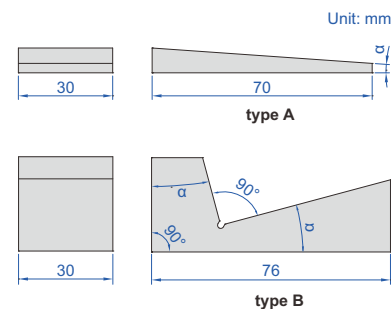
Code	Angle plates included	Angle α	Accuracy
4006-10	10 pcs	1°, 2°, 3°, 4°, 5°, 10°, 15°, 20°, 25°, 30°	±20 seconds
4006-12	12 pcs	1/4°, 1/2°, 1°, 2°, 3°, 4°, 5°, 10°, 15°, 20°, 25°, 30°	±20 seconds

## ANGLE PLATE SET

- For angle set-up in tooling, production and inspection
- Made of tool steel
- Hardness HRC55



4004-9



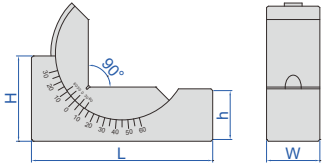
Code	Angle plates included	Angle α	Type	Accuracy
4004-9	9 pcs	1/2°, 1°, 2°, 3°, 4°, 5°	type A	±30 seconds
		10°, 15°, 30°	type B	±50 seconds

## ADJUSTABLE ANGLE BLOCKS



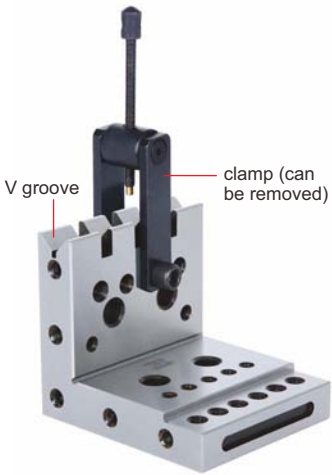
6535-30

- Made of hardened tool steel
- With locking screw
- Accuracy of angle: 10 minutes



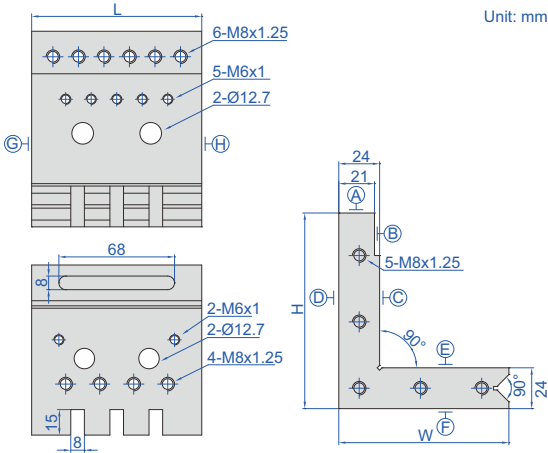
Code	Size (L×W×H)	h	Adjustable angle	Graduation of angle
6535-25	75×25×36mm	25mm	30°~0°~60°	10 minutes
6535-30	102×30×49mm	30mm	30°~0°~60°	10 minutes

## RIGHT ANGLE PLATE



6547-1

- Made of alloy steel
- Hardened to HRC60±2
- V groove for cylinders
- Parallelism and squareness between A, B, C, D, E, F, G and H: 10μm
- Parallelism and squareness of V groove to A, B, C, D, E, F, G and H: 10μm



Unit: mm

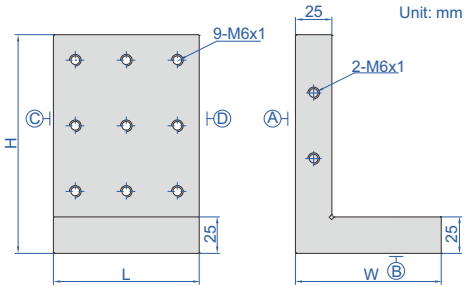
Code	Size (L×W×H)
6547-1	100×100×115mm

## RIGHT ANGLE PLATE



6548-1

- Made of tool steel
- Hardened to HRC60±2
- Squareness or parallelism between A, B, C and D: 5μm



Unit: mm

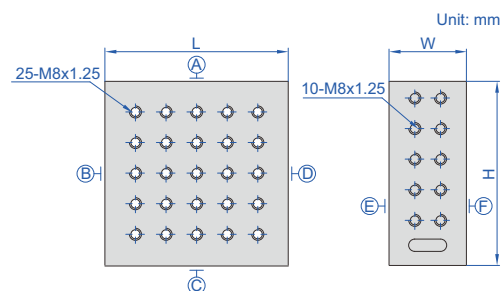
Code	Size (L×W×H)
6548-1	100×100×150mm

## RIGHT ANGLE PLATE

- Made of tool steel
- Hardened to HRC56-58
- Parallelism between A, B, C, D, E and F: 3μm
- Squareness between A, B, C, D, E and F: 5μm



6549-1



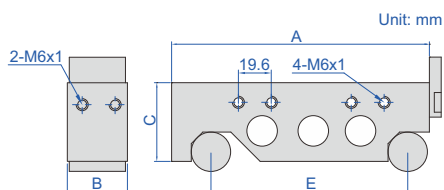
Code	Size (L×W×H)
6549-1	150×63×150mm

CAN BE  
CUSTOMIZED

## SINE BARS

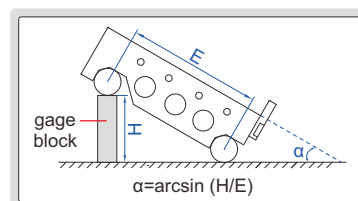


4155-100

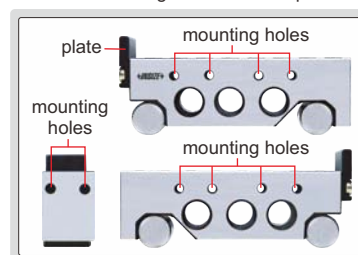


- Made of alloy tool steel

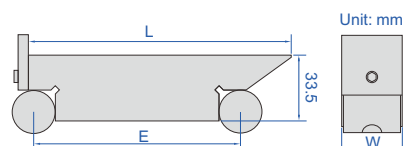
Code	Roller distance (E)	Table size (A×B)	C	Accuracy of α at 30°
4155-100	100mm	130×30mm	40mm	±5 seconds
4155-200	200mm	230×30mm	40mm	±5 seconds
4155-300	300mm	345×40mm	50mm	±8 seconds



the front and back ends and two sides have mounting holes to install plate



## SINE BAR

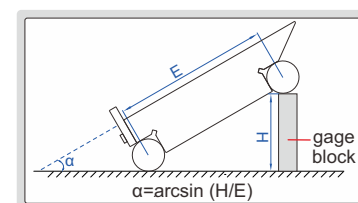


- Made of alloy tool steel



4158-100

Code	Roller distance (E)	Table size (L×W)	Accuracy of α at 30°
4158-100	100mm	130×30mm	±5 seconds

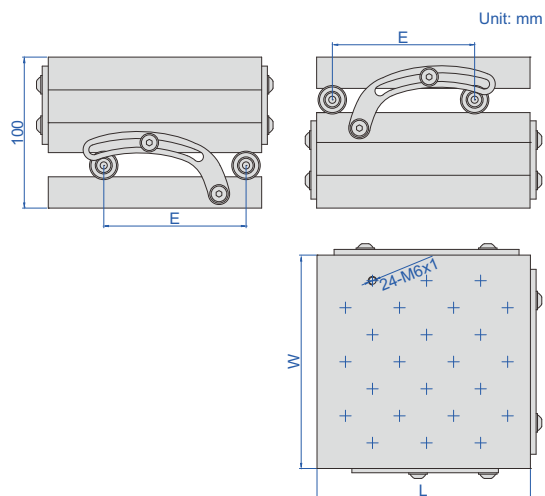


## COMPOUND SINE TABLE



6536-100

- Accuracy of angle:  $\pm 15$  seconds
- Made of alloy tool steel
- Hardness HRC58-60



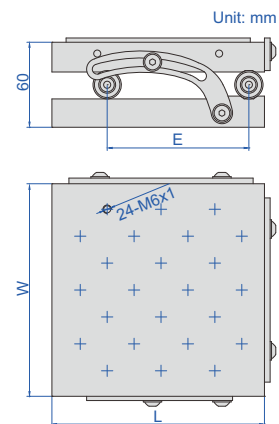
Code	Roller distance (E)	Table size (L×W)	Adjustable angle
6536-100	100mm	150×150mm	0-60°

## SINE TABLE



6527-100

- Accuracy of angle:  $\pm 15$  seconds
- Made of alloy tool steel
- Hardness HRC58-60



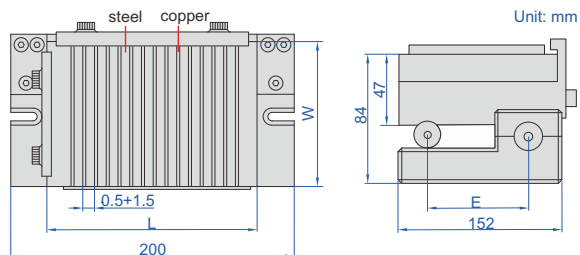
Code	Roller distance (E)	Table size (L×W)	Adjustable angle
6527-100	100mm	150×150mm	0-60°

## MAGNETIC SINE TABLE



6538-100

ATTENTION:  
NOT HARDENED



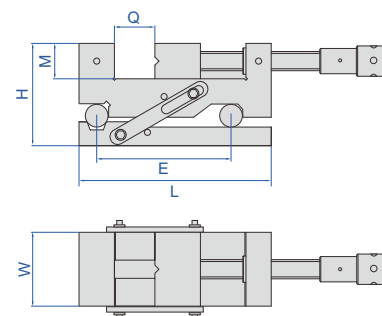
Code	Table size (L×W)	Roller distance (E)	Adjustable angle	Accuracy of angle
6538-100	150×150mm	100mm	0-60°	$\pm 15$ seconds

## PRECISION SINE VISES



6513-85

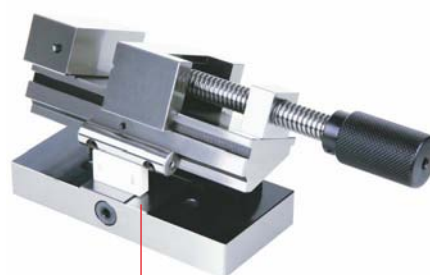
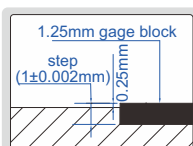
- Parallelism: 5µm/100mm
- Squareness: 5µm/100mm
- Accuracy of angle: ±20 seconds
- Made of alloy steel
- Hardness HRC58-60



(mm)						
Code	Jaw opening (Q)	Jaw width (W)	Roller distance (E)	L	H	M
6513-65	0-65	50	100	150	85	25
6513-85	0-85	63	100	185	91.5	32
6513-100	0-100	73	150	205	105	35
6513-1001	0-100	80	150	215	108	40
6513-125	0-125	88	150	245	108	40
6513-1251	0-125	100	200	255	116	45
6513-160	0-160	125	200	295	125	50
6513-175	0-175	150	200	315	125	50

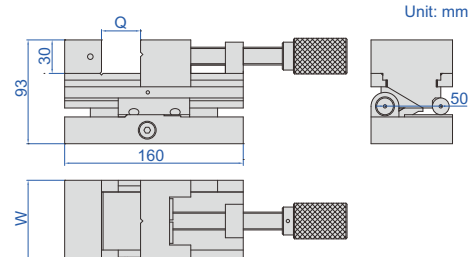
## PRECISION SINE VISE

there is a 1mm step (accuracy +/-0.002mm). gage blocks smaller than 0.5mm are not available. if small gage blocks are needed (for example, 0.25mm), a gage block 1.25mm can be used in order to make 1.25mm-1mm=0.25mm



6523-80

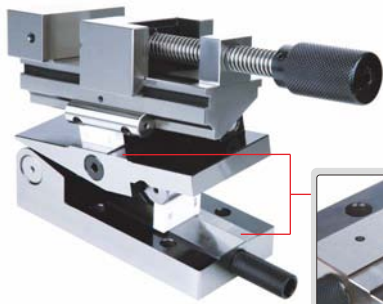
- Parallelism: 3µm/100mm
- Squareness: 5µm/100mm
- Accuracy of angle: ±15 seconds
- Made of SKS tool steel, subzero treatment
- Hardness HRC58-60



Code	Jaw opening (Q)	Jaw width (W)	Adjustable angle
6523-80	0-80mm	73mm	0-46°

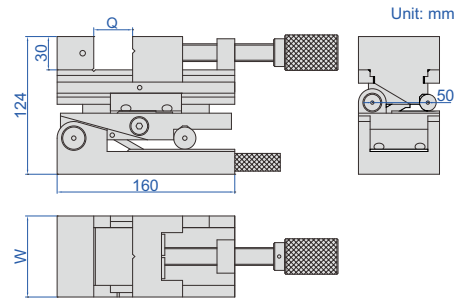
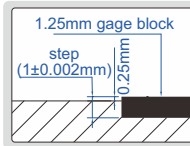


## PRECISION COMPOUND SINE VISE



6524-80

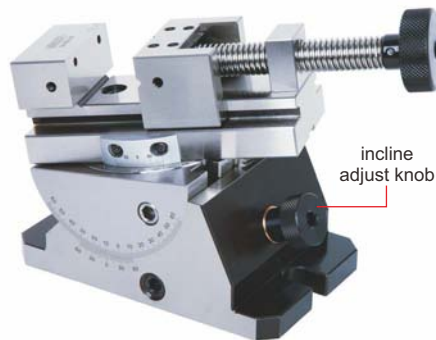
there is a 1mm step (accuracy  $\pm 0.002\text{mm}$ ). gage blocks smaller than 0.5mm are not available. if small gage blocks are needed (for example, 0.25mm), a gage block 1.25mm can be used in order to make  $1.25\text{mm} - 1\text{mm} = 0.25\text{mm}$



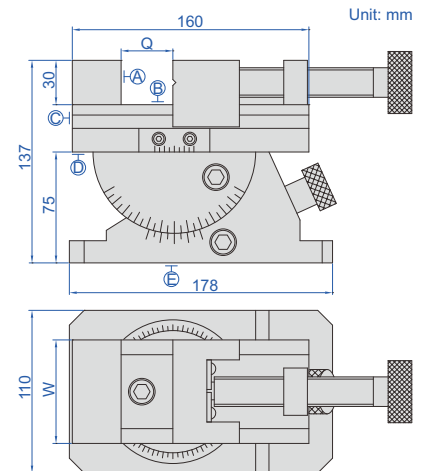
- Parallelism:  $3\mu\text{m}/100\text{mm}$
- Squareness:  $5\mu\text{m}/100\text{mm}$
- Accuracy of angle:  $\pm 15$  seconds
- Made of SKS tool steel, subzero treatment
- Hardness HRC58-60

## PRECISION UNIVERSAL VISE

- Horizontal rotary: range  $360^\circ$ , graduation  $0.05^\circ$
- Vertical incline: range  $45^\circ$ , graduation  $0.05^\circ$
- With incline adjust knob
- Parallelism and squareness between A, B, C and D:  $5\mu\text{m}/100\text{mm}$ , parallelism between D and E at  $0^\circ$ :  $10\mu\text{m}/100\text{mm}$
- Made of tool steel
- Hardness HRC56-58



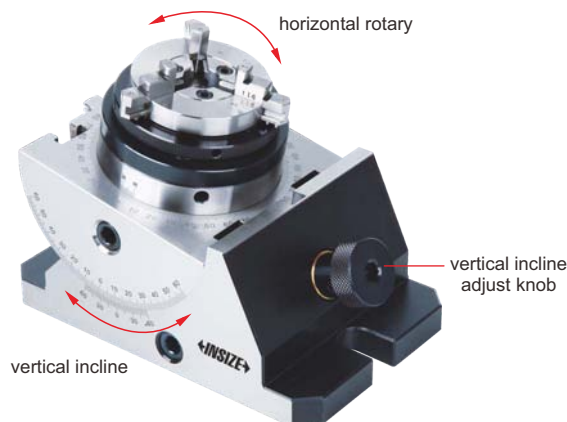
6521-80



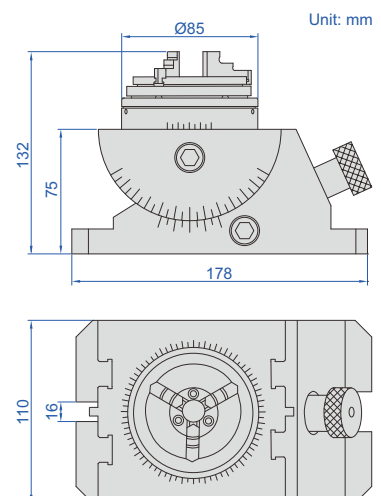
Code	Jaw opening (Q)	Jaw width (W)
6521-80	0-80mm	70mm

## PRECISION UNIVERSAL VISE WITH CHUCK

- Horizontal rotary: range  $360^\circ$ , graduation  $0.05^\circ$
- Vertical incline: range  $45^\circ$ , graduation  $0.05^\circ$
- With vertical incline adjust knob
- Runout of chuck is less than 0.05mm (test position is at less than 50mm from clamping jaws)
- The clamping jaws of chuck are reversible
- Made of tool steel
- Hardness HRC56-58



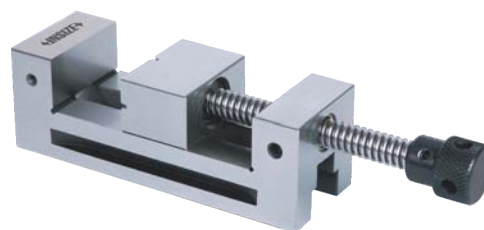
6528-85



Code	Range of external clamping	Range of internal clamping
6528-85	$\varnothing 0.8 \sim \varnothing 63\text{mm}$	$\varnothing 23 \sim \varnothing 58\text{mm}$

## PRECISION VISES

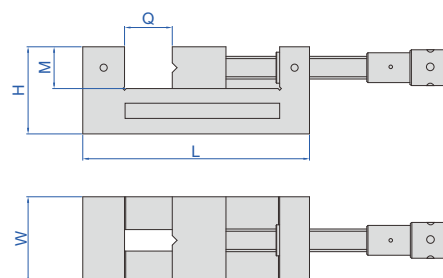
- Parallelism: 5µm/100mm
- Squareness: 5µm/100mm
- Made of alloy steel
- Hardness HRC58-60



(mm)

Code	Jaw opening (Q)	Jaw width (W)	L	H	M
6520-36	0-36	38	115	48	25
6520-67	0-67	50	150	50	25
6520-87	0-87	63	185	63	32
6520-102	0-102	73	205	70	35
6520-1021	0-102	80	215	80	40
6520-127	0-127	88	245	80	40
6520-1271	0-127	100	255	90	45
6520-162	0-162	125	295	100	50
6520-175	0-175	150	315	100	50
6520-200	0-200	200	350	110	55

6520-87



## QUICK MOVING PRECISION VISES

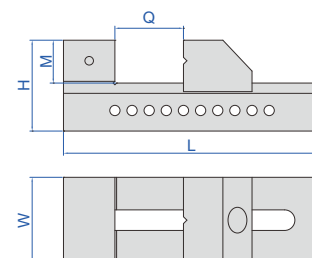
(mm)

Code	Jaw opening (Q)	Jaw width (W)	L	H	M
6526-20	0-20	25	65	29	9.3
6526-40	0-40	38	100	48	23
6526-65	0-65	50	135	50	25
6526-85	0-85	63	170	63	32
6526-100	0-100	73	185	70	35
6526-1001	0-100	80	195	80	40
6526-125	0-125	88	230	80	40
6526-1251	0-125	100	240	90	45
6526-160	0-160	125	280	100	50
6526-175	0-175	150	300	100	50
6526-208	0-208	200	350	110	55

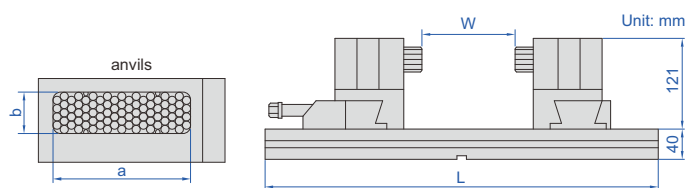


6526-85

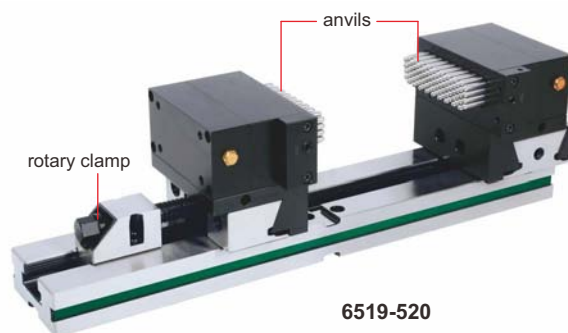
- Parallelism: 5µm/100mm
- Squareness: 5µm/100mm
- Made of alloy steel
- Hardness HRC58-60



## ANVIL VISES



- The vise is used to fix workpieces during machining. The anvils are formed according the shape of workpieces to be fixed, so the vise can fix workpieces quickly.
- The anvils are made of stainless steel (HRC20), can be customized to carbon steel (HRC40-45)
- Diameter of anvil: 6mm, stroke of anvil: 24mm
- Movement range of rotary clamp: 0-50mm



6519-520

application



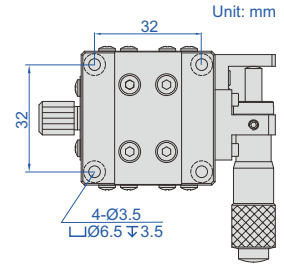
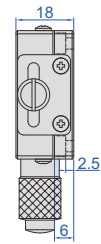
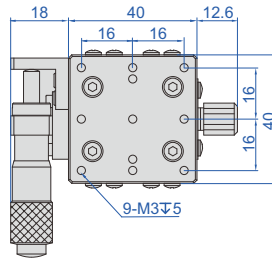
Code	Guide length (L)	Clamp range (W)	Clamp force*	Weight	a	b
6519-520	520mm	0-190mm	6500N	22.5kg	100mm	30mm
6519-680	680mm	0-320mm	8000N	39.5kg	120mm	36mm

\* When all anvils contact the workpieces

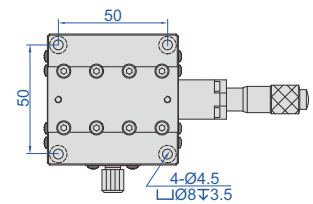
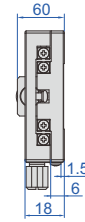
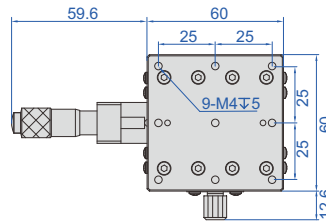
## X-AXIS STAGES



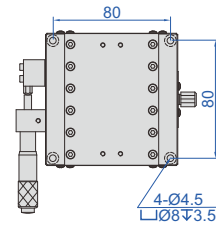
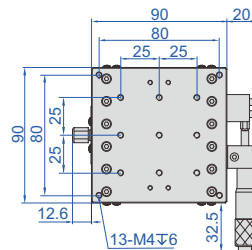
6582-401



6582-602



6582-903



- Cross roller guides, achieve high precision and smooth movement
- Stages made of aluminum alloy

### SPECIFICATION (micrometer on the left)

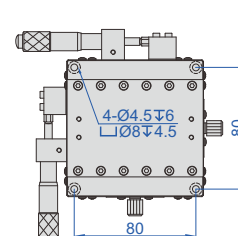
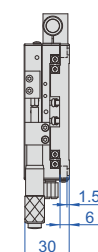
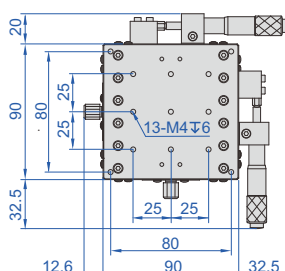
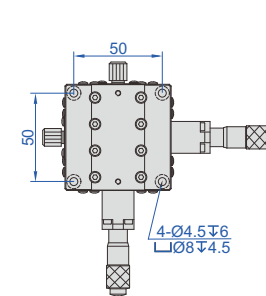
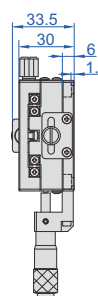
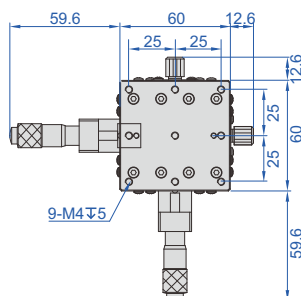
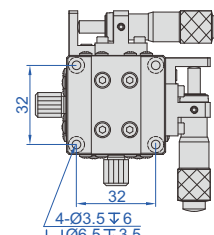
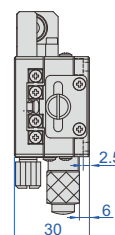
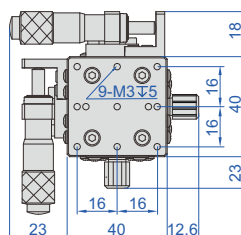
Code	X-axis displacement	Parallelism of top to bottom surface	Micrometer graduation	Micrometer accuracy	Maximum load	Micrometer location	Stage size	Weight
6582-401	±6.5mm	0.02mm	0.01mm	0.01mm	29.4N (3kgf)	left	40x40mm	0.14kg
6582-601	±6.5mm	0.03mm	0.01mm	0.01mm	49N (5kgf)	left	60x60mm	0.24kg
6582-901	±12.5mm	0.03mm	0.01mm	0.02mm	93.1N (9.5kgf)	left	90x90mm	0.47kg
6582-1251	±12.5mm	0.04mm	0.01mm	0.02mm	180N (18.4kgf)	left	125x125mm	1.40kg

### SPECIFICATION (micrometer in the middle)

Code	X-axis displacement	Parallelism of top to bottom surface	Micrometer graduation	Micrometer accuracy	Maximum load	Micrometer location	Stage size	Weight
6582-402	±6.5mm	0.02mm	0.01mm	0.01mm	29.4N (3kgf)	middle	40x40mm	0.14kg
6582-602	±6.5mm	0.03mm	0.01mm	0.01mm	49N (5kgf)	middle	60x60mm	0.24kg
6582-902	±12.5mm	0.03mm	0.01mm	0.02mm	93.1N (9.5kgf)	middle	90x90mm	0.47kg
6582-1252	±12.5mm	0.04mm	0.01mm	0.02mm	180N (18.4kgf)	middle	125x125mm	1.40kg

### SPECIFICATION (micrometer on the right)

Code	X-axis displacement	Parallelism of top to bottom surface	Micrometer graduation	Micrometer accuracy	Maximum load	Micrometer location	Stage size	Weight
6582-403	±6.5mm	0.02mm	0.01mm	0.01mm	29.4N (3kgf)	right	40x40mm	0.14kg
6582-603	±6.5mm	0.03mm	0.01mm	0.01mm	49N (5kgf)	right	60x60mm	0.24kg
6582-903	±12.5mm	0.03mm	0.01mm	0.02mm	93.1N (9.5kgf)	right	90x90mm	0.47kg
6582-1253	±12.5mm	0.04mm	0.01mm	0.02mm	180N (18.4kgf)	right	125x125mm	1.40kg

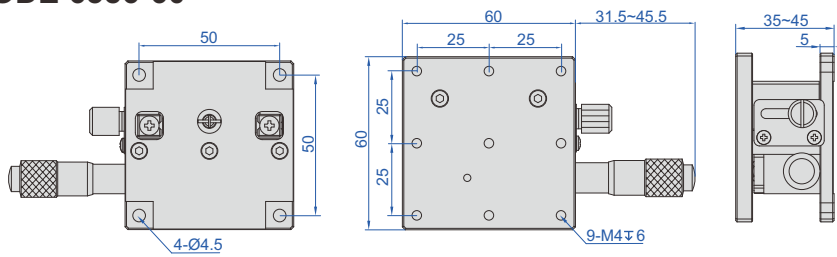


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## Z-AXIS STAGE CODE 6586-60

Unit: mm



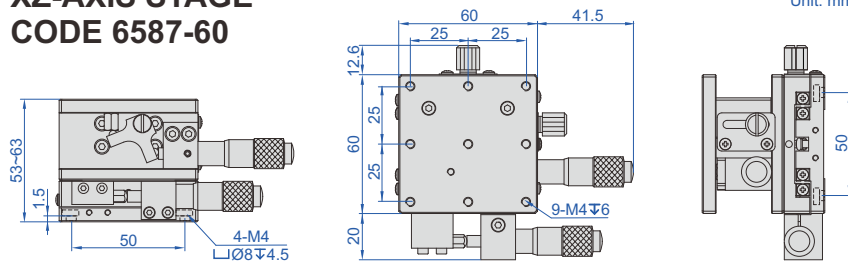
- Cross roller guides, achieve high precision and smooth movement
- Stage made of aluminum alloy

### SPECIFICATION

Code	Z-axis displacement	Parallelism of top to bottom surface	Micrometer graduation	Micrometer accuracy	Maximum load	Stage size	Weight
6586-60	10mm	0.05mm	0.01mm	0.02mm	20.4N (3kgf)	60x60mm	0.27kg

## XZ-AXIS STAGE CODE 6587-60

Unit: mm



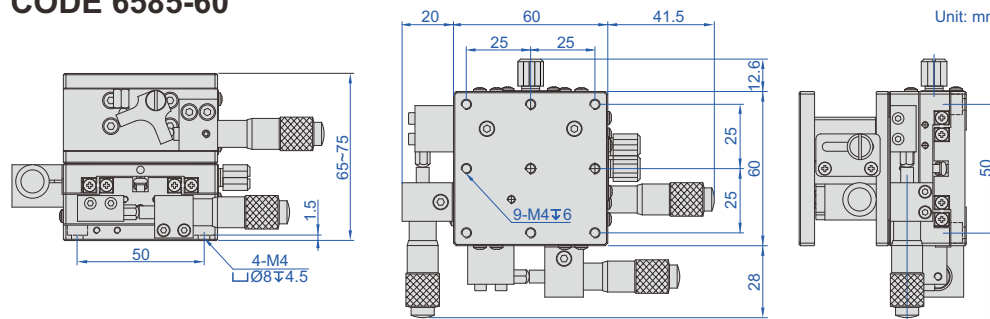
- Cross roller guides, achieve high precision and smooth movement
- Stage made of aluminum alloy

### SPECIFICATION

Code	X-axis displacement	Z-axis displacement	Micrometer graduation	Maximum load	Stage size	Weight
6587-60	±6.5mm	10mm	0.01mm	29.4N (3kgf)	60x60mm	0.51kg

## XYZ-AXIS STAGE CODE 6585-60

Unit: mm



- Cross roller guides, achieve high precision and smooth movement
- Stage made of aluminum alloy

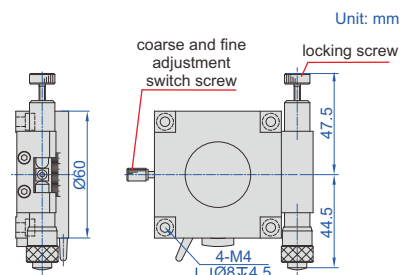
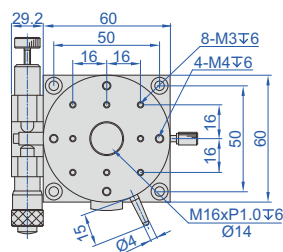
### SPECIFICATION

Code	XY-axis displacement	Z-axis displacement	Micrometer graduation	Maximum load	Stage size	Weight
6585-60	±6.5mm	10mm	0.01mm	29.4N (3kgf)	60x60mm	0.75kg

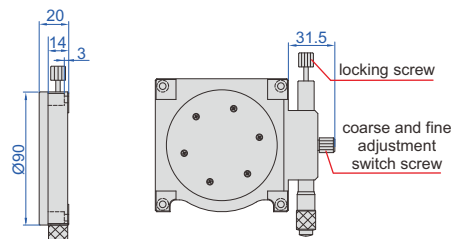
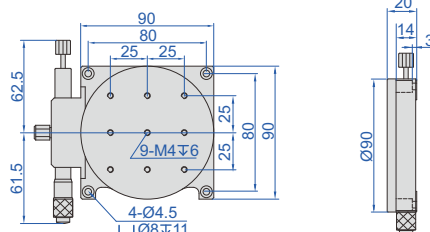
## ROTARY STAGES



6583-60H



6583-90

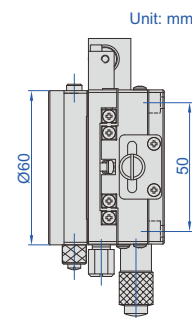
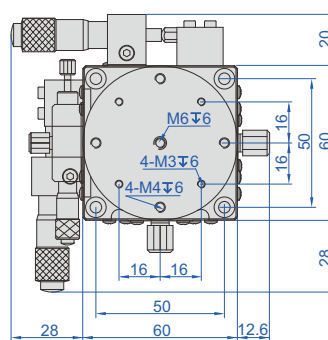


- Precise angle adjustment
- Coarse and fine adjustments
- Stages made of aluminum alloy

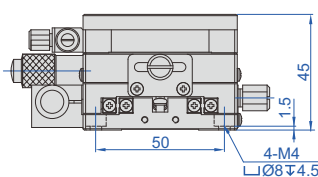
### SPECIFICATION

Code	Range	Parallelism of top to bottom surface	Concentricity	Rotation accuracy	Maximum load	Stage size	Weight
6583-60H	360° coarse, ±5° fine	0.03mm	0.03mm	12 seconds	29.4N (3kgf)	Ø60mm	0.30kg
6583-90	360° coarse, ±5° fine	0.04mm	0.03mm	5 seconds	29.4N (3kgf)	Ø90mm	0.50kg

## XY-AXIS ROTARY STAGE CODE 6588-60



- Cross roller guides, achieve high precision and smooth movement
- Coarse and fine adjustments
- Precise angle adjustment
- Stage made of aluminum alloy



### SPECIFICATION

Code	XY-axis displacement	Rotation range	Micrometer graduation	Rotation accuracy	Maximum load	Stage size	Weight
6588-60	±6.5mm	360° coarse, ±5° fine	0.01mm	10 seconds	29.4N (3kgf)	60x60mm	0.64kg