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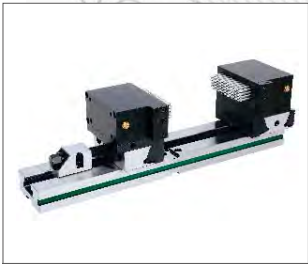
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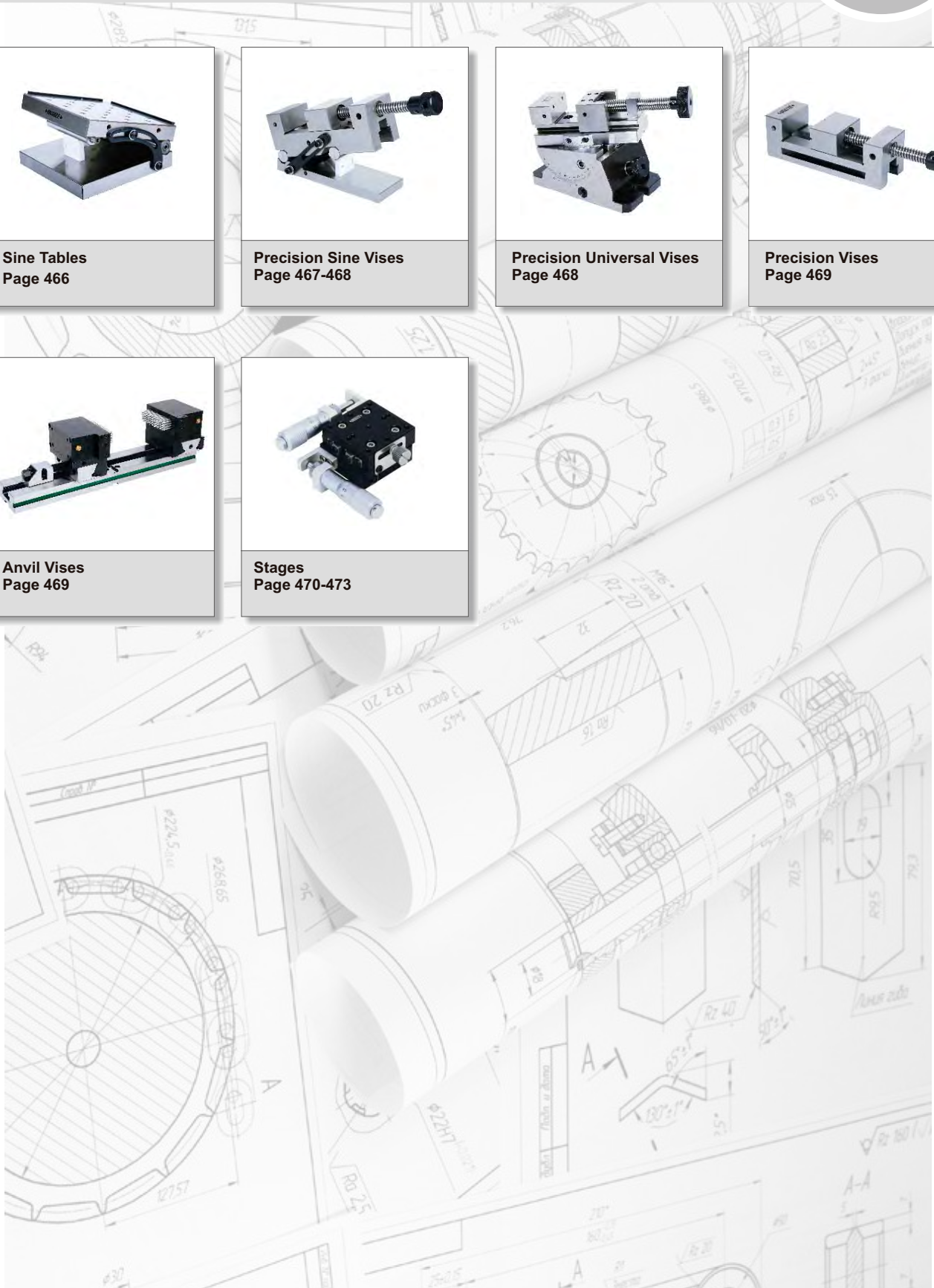
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## GRANITE SURFACE PLATES

**INSPECTION  
CERTIFICATE**

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

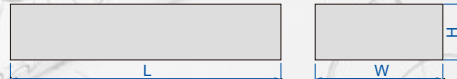
- Made of Indian granite, high hardness, free from deterioration or dimensional change over time, minimal changes in dimension due to temperature changes
- Meet DIN876, grade 00 is for inspection room or lab, grade 0 is for workshop
- Optional accessory:  
stand for granite surface plate (code **6902**),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

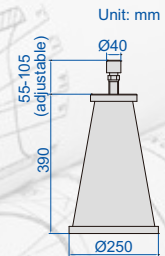
Code	Size (L×W×H)	Flatness	Weight	Max. load
6900-032*	300×200×60mm	5.4µm	11kg	60kg
6900-042*	400×250×60mm	5.9µm	18kg	100kg
6900-044*	400×400×60mm	6.3µm	29kg	120kg
6900-053*	500×315×70mm	6.4µm	33kg	120kg
6900-064*	630×400×80mm	7.0µm	60kg	130kg
6900-066*	630×630×100mm	7.6µm	119kg	150kg
6900-085*	800×500×100mm	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**)

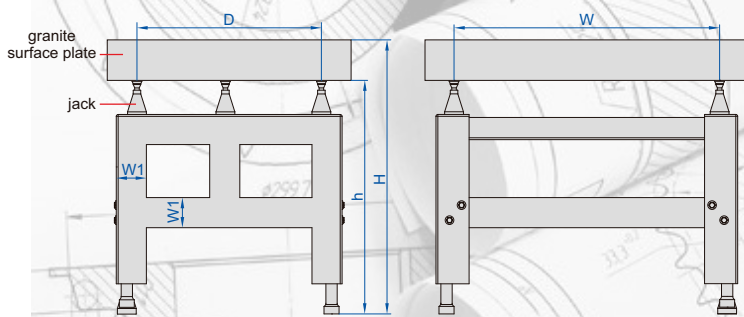


6903-B

Code

6903-B

## STANDS FOR GRANITE SURFACE PLATES



adjustable foot

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

(mm)

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

### High stands

(mm)

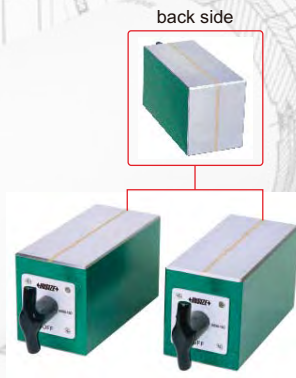
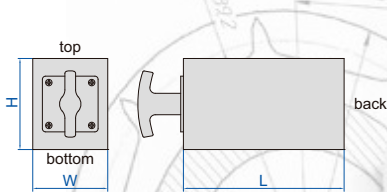
Code	For granite surface plate	W	D	H (with granite surface plate)	h (without granite surface plate)	W1
6902-64H	630×400×80mm (code <b>6900-064</b> and <b>6900-164</b> )	352	224	1000-1025	920-945	80
6902-66H	630×630×100mm (code <b>6900-066</b> and <b>6900-166</b> )	352	352	1000-1025	900-925	80
6902-85H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

## MAGNETIC RECTANGULAR BLOCKS

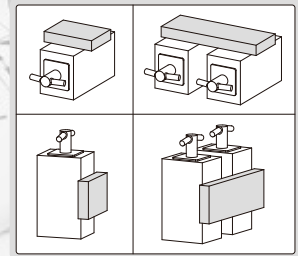
HARDENED SURFACES

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

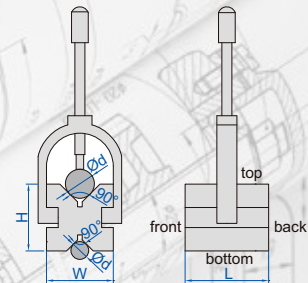
## V-BLOCK SETS



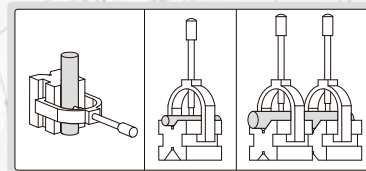
6896-10



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

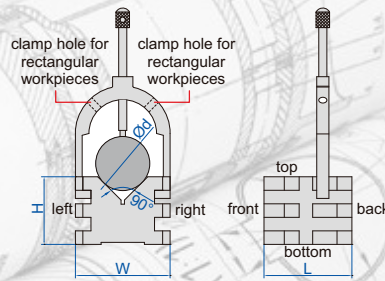


SIDE LIE-DOWN USE IS POSSIBLE

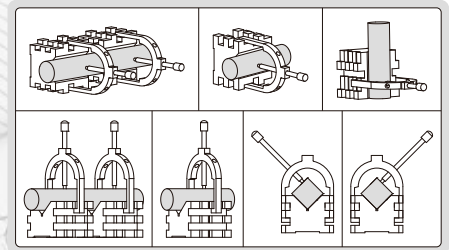
## V-BLOCK SET



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



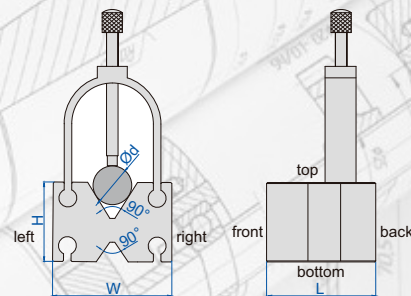
Code	Size (L×W×H)	Parallelism of V groove to top, bottom, left, right sides	Squareness of V groove to front and back sides	Height difference of a matched pair
6802-1	65×70×50mm	5µm	5µm	5µm

SIDE LIE-DOWN USE IS POSSIBLE

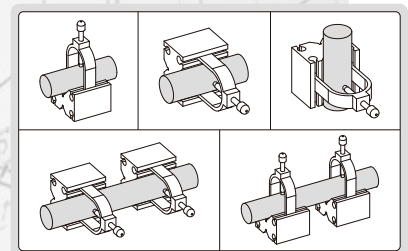
## V-BLOCK SETS



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

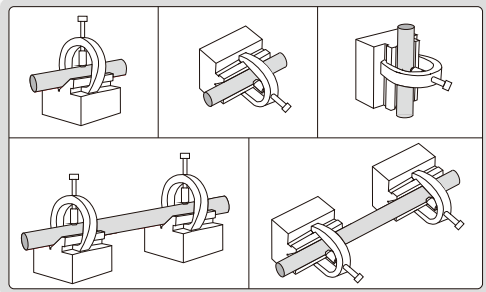
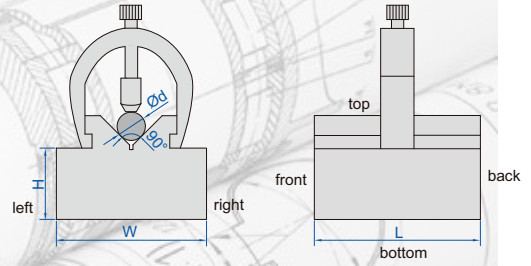
V-BLOCK SET

SIDE LIE-DOWN USE IS POSSIBLE



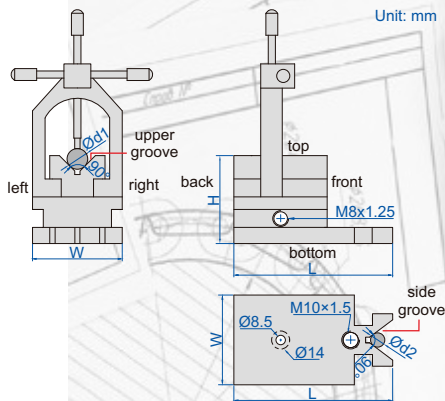
6806-20

- 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



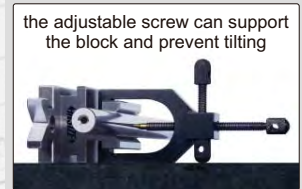
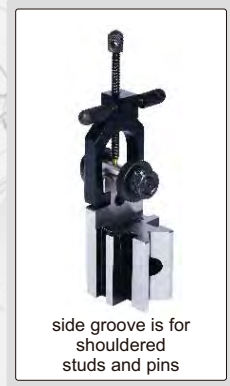
Code	Size (L×W×H)	Parallelism of V groove to bottom, left, right sides	Squareness of V groove to front and back sides	Height difference of a matched pair
6806-20	70×63×46mm	5µm	5µm	5µm

V-BLOCK



6804-M2

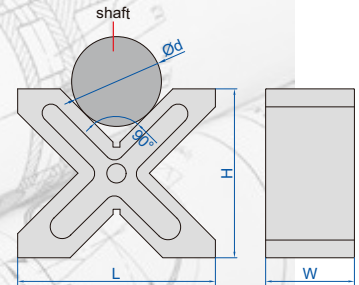
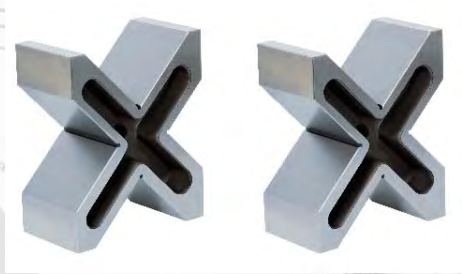
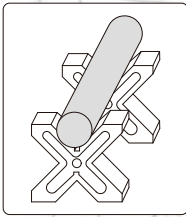
- Hold cylindrical workpieces for inspection and machining
- Made of alloy steel
- Hardened to HRC60±2



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

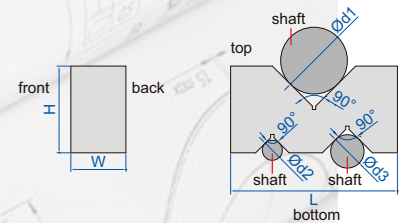
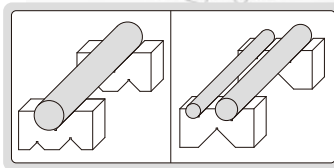


- For positioning cylindrical workpieces
- Two V-blocks per set
- Each V-block has four 90° V-grooves
- Cast iron, hardness HB170-240

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

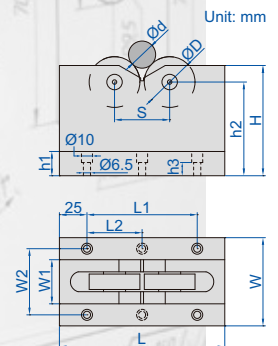
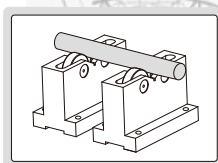


- Two V-blocks per set
- Made of hardened tool steel

6887-3

Code	Size (L×W×H)	Range of shafts (Ød1)	Range of shafts (Ød2)	Range of shafts (Ød3)	Code	Parallelism of three V grooves to top and bottom sides	Height difference of a matched pair
6887-1	50×19×24mm	3-32mm	3-16mm	3-22mm	6887-1	5µm	5µm
6887-2	75×24×35mm	3-50mm	3-20mm	3-32mm	6887-2	5µm	5µm
6887-3	100×33×52mm	3-68mm	3-26mm	3-40mm	6887-3	5µm	5µm
6887-4	125×44×69mm	3-87mm	3-34mm	3-50mm	6887-4	5µm	5µm

## ROLLER BEARING V-BLOCK SETS



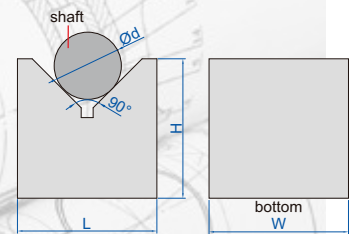
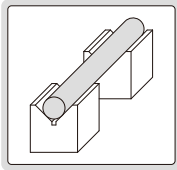
- Runout accuracy: 5µm
- Parallelism of bearings to bottom: 12µm
- Two V-blocks per set
- Workpieces don't get damaged due to bearings
- Suitable for heavy workpieces

6888-1

Code	Size (L×W×H)	Code of bearings	Diameter of bearings (ØD)	Range of shafts (Ød)	Load capacity	(mm)							
Code	W1	W2	h1	h2	h3	L1	L2	S					
6888-1	150×60×100mm	16004 ZZ	42mm	25-70mm	500kg	22	44	20	85	12	100	-	60
6888-2	150×80×100mm	6303 ZZ	47mm	5-55mm	1000kg	40	60	22	85	12	100	-	50
6888-3	230×100×150mm	6306 ZZ	72mm	70-200mm	1000kg	60	80	30	124	20	180	90	120



## GRANITE V-BLOCK SETS



■ Two V-blocks per set

6897-1

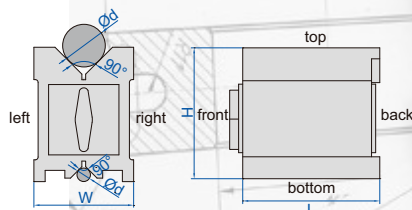
Code	Size (L×W×H)	Range of shafts (Ød)	Parallelism of V groove to bottom	Height difference of a match pair
6897-1	70×50×70mm	6-70mm	4µm	5µm
6897-2	100×50×70mm	6-84mm	4µm	5µm

## MAGNETIC V-BLOCKS (PROFESSIONAL TYPE)

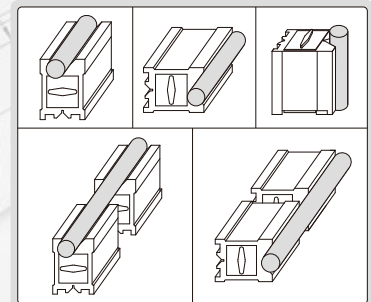
HARDENED SURFACES

HIGH PRECISION

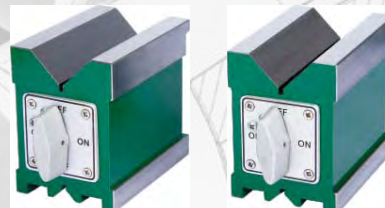
STRONG MAGNETIC FORCE



6889-11



- 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



6889-1

### 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

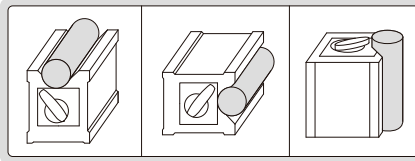
### Matched pair

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

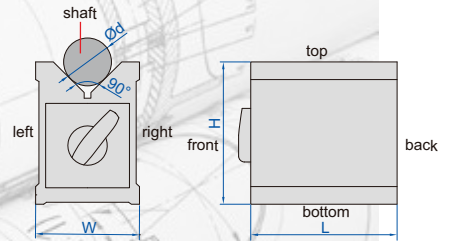
ATTENTION: NOT SUITABLE FOR STEEL OR IRON SURFACES, OTHERWISE THE MAGNETIC FORCE WILL BE REDUCED

ATTENTION: NOT HARDENED

## MAGNETIC V-BLOCK (ECONOMIC TYPE)



6890-702



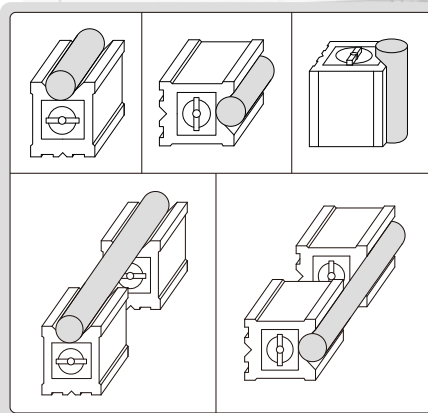
- Hold cylindrical workpieces for inspection and machining
- Supplied in single piece
- Not hardened
- Not suitable for steel or iron surfaces, otherwise the magnetic force will be reduced

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

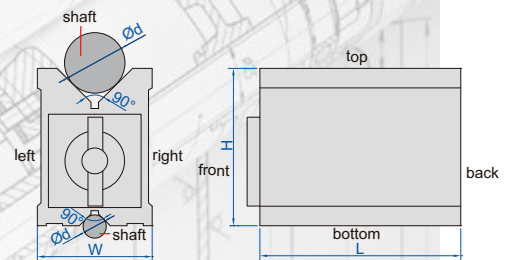
## MAGNETIC V-BLOCKS (ECONOMIC TYPE)



6801-1201



6801-1



- 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

### 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

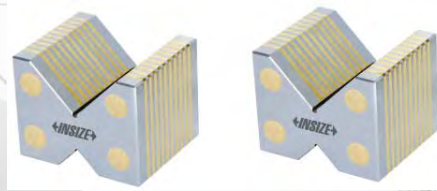
Code	Size (L×W×H)	Range of shafts (Ød)	Magnetic force	Parallelism of V grooves to top, bottom, left, right side	Squareness of V grooves to back side	Height difference of a matched pair
6801-1	80×70×95mm	6-67mm	64kgf	10µm	10µm	10µm
6801-2	100×70×95mm	6-67mm	80kgf	10µm	10µm	10µm
6801-3	120×70×95mm	6-67mm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



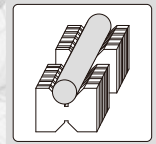
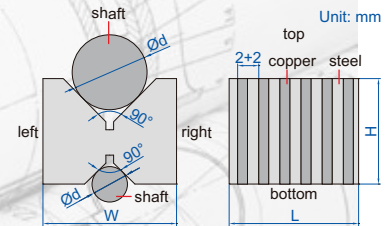
## MAGNETIC INDUCTION V-BLOCK SET

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



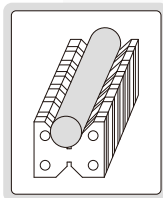
6878-1



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

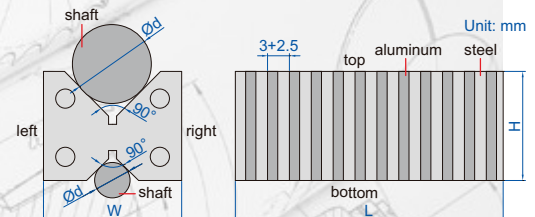
## MAGNETIC INDUCTION V-BLOCK

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

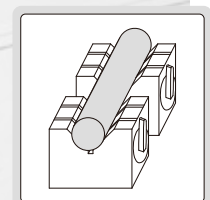
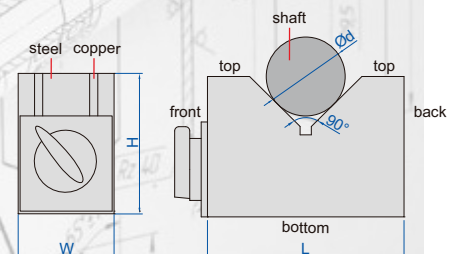
ATTENTION: NOT HARDENED, DO NOT ROTATE WORKPIECES ON V-BLOCKS

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

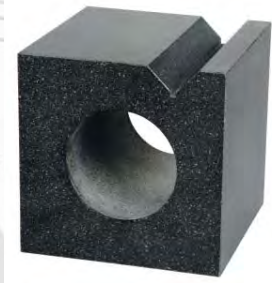


6891-1



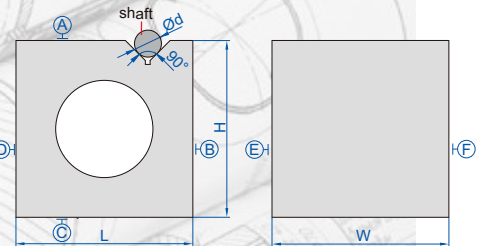
Code	Size (L×W×H)	Range of shafts (Ød)	Magnetic force	Parallelism of V groove to bottom and back sides	Height difference of a matched pair
6891-1	70×40×50mm	6-46mm	15kgf	10µm	10µm
6891-3	150×50×100mm	6-125mm	21kgf	10µm	10µm

## 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

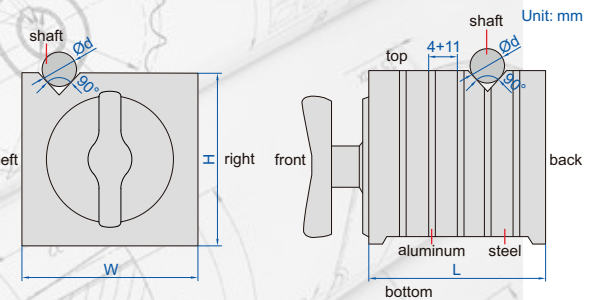
**ATTENTION: NOT HARDENED, DO NOT ROTATE WORKPIECES ON V-BLOCKS**

## 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



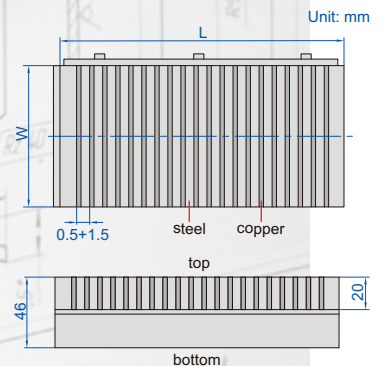
Code	Size (L×W×H)	Magnetic force of V grooves		Magnetic force of top, left and right sides		Range of shafts (Ød)
		on granite surface plate	on cast iron plate	on granite surface plate	on cast iron plate	
6539-100	100×100×100mm	30kgf	25kgf	50kgf	30kgf	5-30mm

**ATTENTION: NOT HARDENED**

## PERMANENT MAGNETIC CHUCK



6537-400

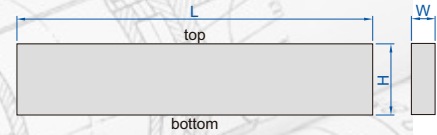


Code	Table size (L×W)	Magnetic force	Pole pitch	Parallelism of top to bottom
6537-400	400×200mm	8kgf/cm <sup>2</sup>	0.5+1.5mm	0.02mm/300mm



## 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

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

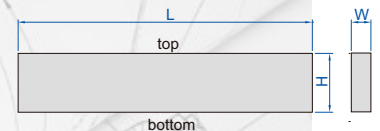
Code	H×W	Parallelism between top and bottom	Height difference of a matched pair
6512-178B	17×8mm	5µm	5µm
6512-228B	22×8mm	5µm	5µm
6512-268B	26×8mm	5µm	5µm
6512-288B	28×8mm	5µm	5µm
6512-328B	32×8mm	5µm	5µm
6512-368B	36×8mm	5µm	5µm
6512-388B	38×8mm	5µm	5µm
6512-428B	42×8mm	5µm	5µm

## PARALLEL SETS

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



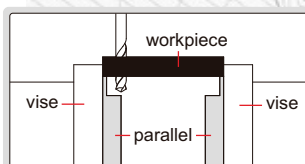
6533-144



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

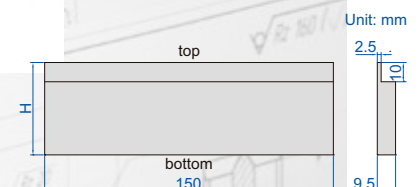
## PARALLEL SET



- 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

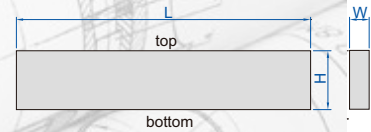


## PARALLEL SETS

- 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

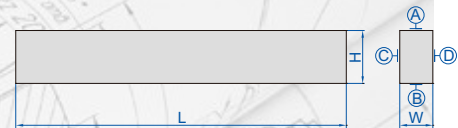
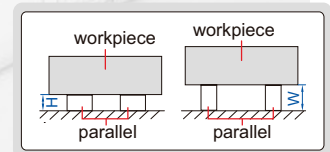
\* Parallelism between top and bottom and height difference of a matched pair of 5×2mm, 6×3mm, 7×4mm, 8×5mm and 9×6mm in 6511-20 is 7µm

## GRANITE PARALLEL SET

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



4143-250



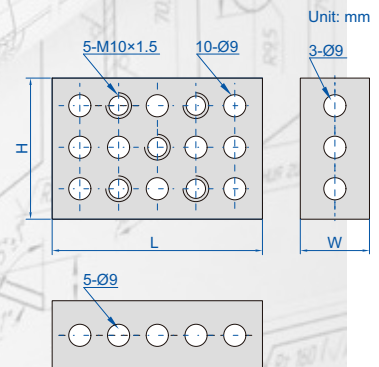
Code	Size (L×W×H)	Parallelism between A and B	Parallelism between C and D	Height difference of a matched pair
4143-250	250×25×40mm	3µm	3µm	3µm

## PARALLEL/SQUARE SET

screws and wrench are included



6531-25

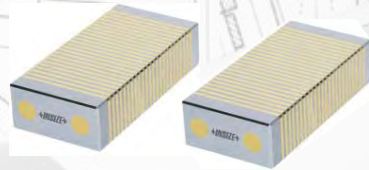


- Pairs of matched blocks for positioning and set-up
- Screws and wrench are included
- Hardness HRC 55-62

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

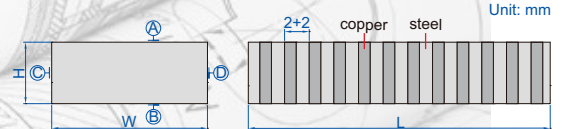
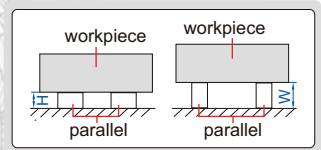
**ATTENTION:  
NOT HARDENED**

## MAGNETIC INDUCTION PARALLEL SET



**6879-1**

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



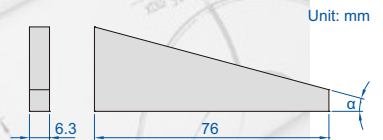
Code	Size (L×W×H)	Pole pitch	Parallelism between A and B	Parallelism between C and D	Height difference of a matched pair
6879-1	100×50×25mm	2+2mm	10µm	10µm	10µm

## ANGLE PLATE SETS

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



**4006-12**



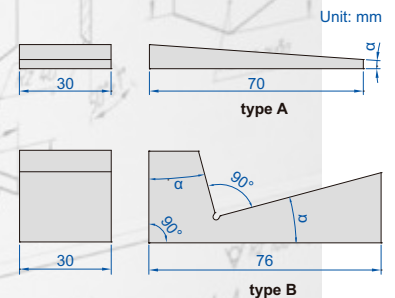
Code	Angle plates included	Angle $\alpha$	Accuracy
4006-10	10 pcs	1°, 2°, 3°, 4°, 5°, 10°, 15°, 20°, 25°, 30°	±20 seconds
4006-12	12 pcs	1/4°, 1/2°, 1°, 2°, 3°, 4°, 5°, 10°, 15°, 20°, 25°, 30°	±20 seconds

## ANGLE PLATE SET

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



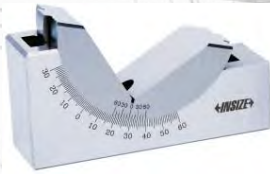
**4004-9**



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



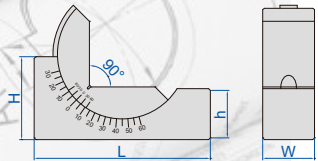
## ADJUSTABLE ANGLE BLOCKS



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



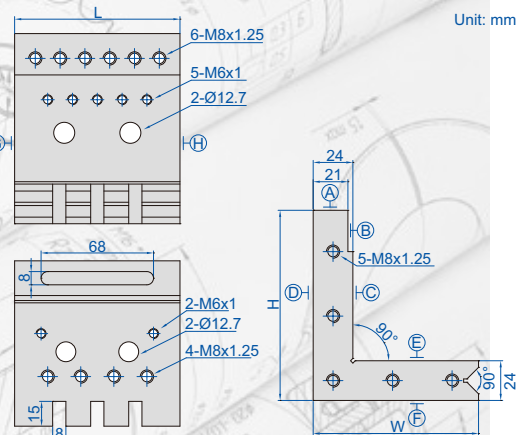
## RIGHT ANGLE PLATE



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

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



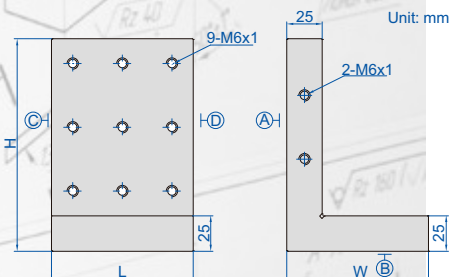
Unit: mm

## RIGHT ANGLE PLATE

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



6548-1



Unit: mm

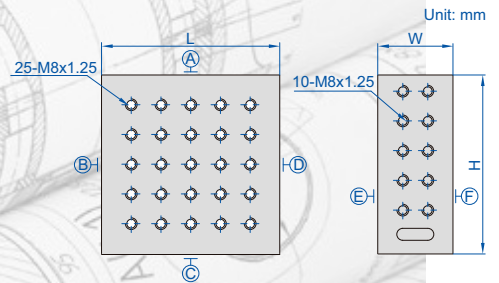
Code	Size (L×W×H)
6548-1	100×100×150mm

## 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



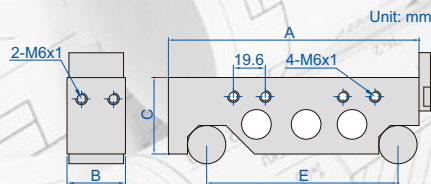
Code	Size (L×W×H)
6549-1	150×63×150mm

CAN BE CUSTOMIZED

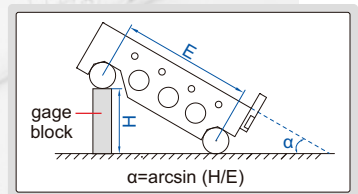
## SINE BARS



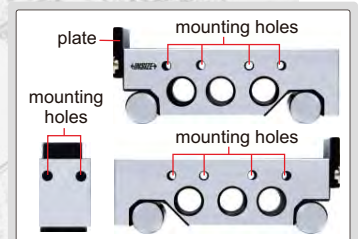
4155-100



- Made of alloy tool steel

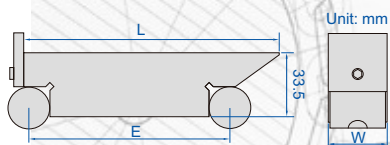


the front and back ends and two sides have mounting holes to install plate



Code	Roller distance (E)	Table size (A×B)	C	Accuracy of $\alpha$ 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

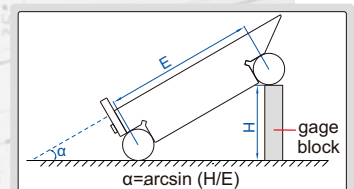
## SINE BAR



- Made of alloy tool steel



4158-100



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

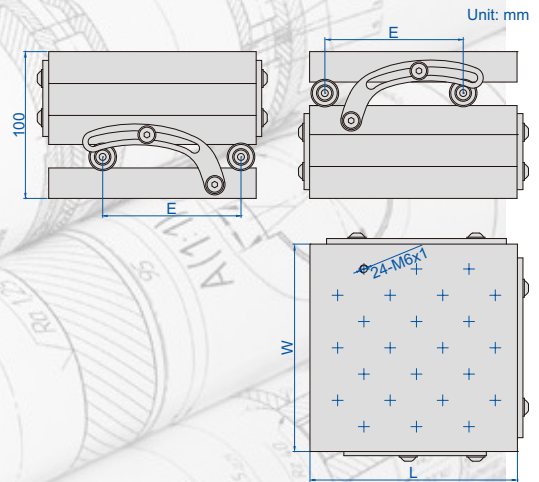


## COMPOUND SINE TABLE



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

6536-100



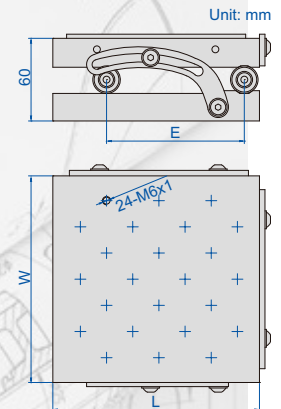
Code	Roller distance (E)	Table size (LxW)	Adjustable angle
6536-100	100mm	150x150mm	0-60°

## SINE TABLE



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

6527-100

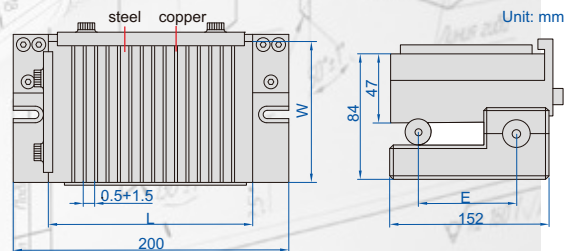


Code	Roller distance (E)	Table size (LxW)	Adjustable angle
6527-100	100mm	150x150mm	0-60°

## MAGNETIC SINE TABLE



6538-100



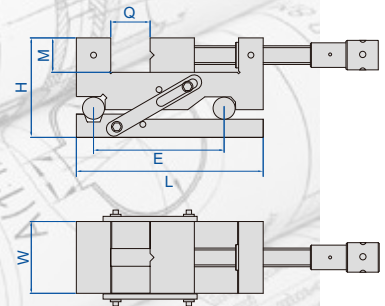
Code	Table size (LxW)	Roller distance (E)	Adjustable angle	Accuracy of angle
6538-100	150x150mm	100mm	0-60°	$\pm 15$ seconds

## PRECISION SINE VISES



6513-85

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



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

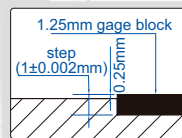
(mm)

## PRECISION SINE VISE

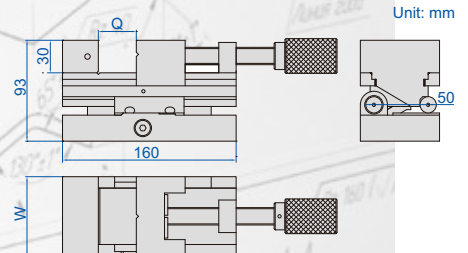


6523-80

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



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

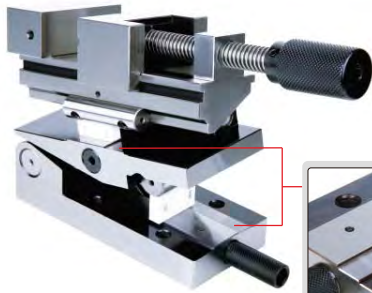


Unit: mm

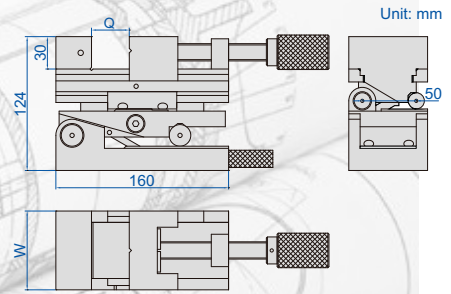
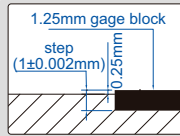
Code	Jaw opening (Q)	Jaw width (W)	Adjustable angle
6523-80	0-80mm	73mm	0-46°



## PRECISION COMPOUND SINE VISE



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  $1.25\text{mm} - 1\text{mm} = 0.25\text{mm}$



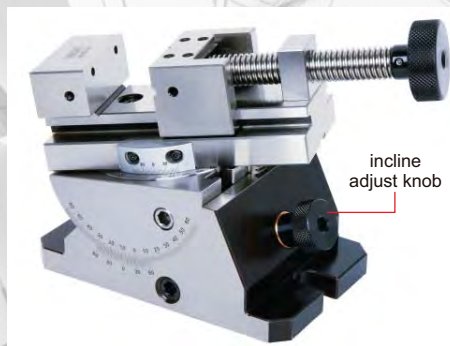
6524-80

- 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

Code	Jaw opening (Q)	Jaw width (W)	Adjustable angle
6524-80	0-80mm	73mm	0-46°

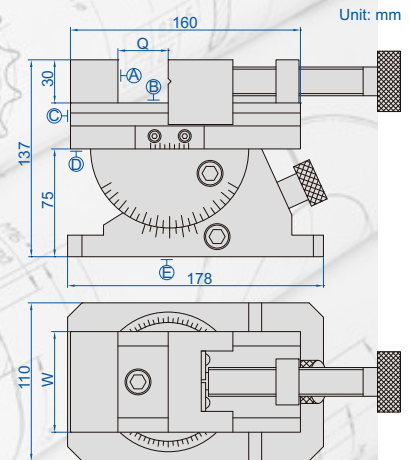
## PRECISION UNIVERSAL VISE

- 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



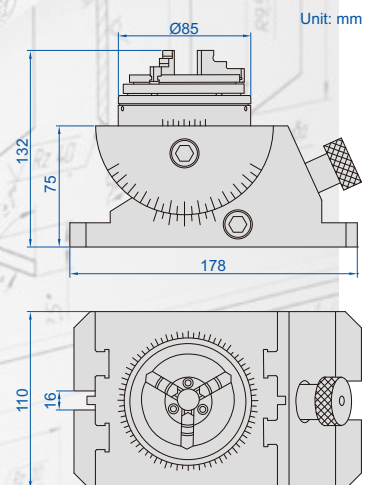
## PRECISION UNIVERSAL VISE WITH CHUCK

- 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

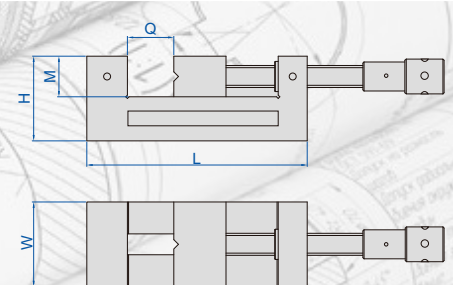
- Parallelism: 5µm/100mm
- Squareness: 5µm/100mm
- Made of alloy steel
- Hardness HRC58-60



(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



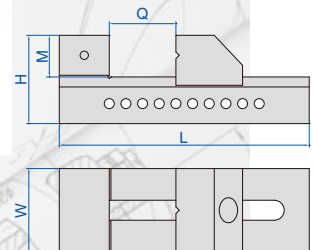
## QUICK MOVING PRECISION VISES

(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

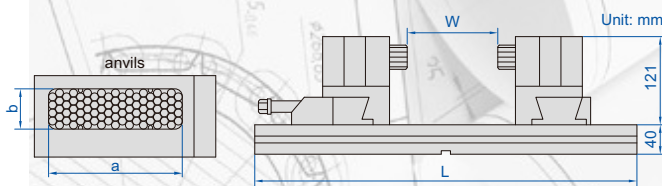


6526-85

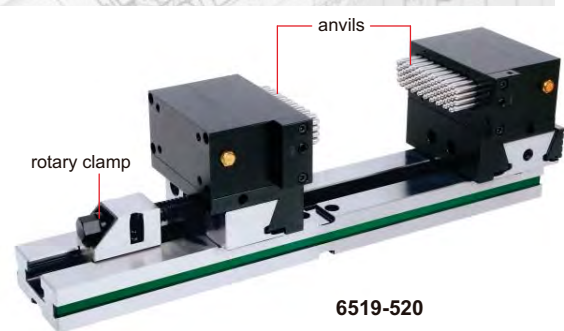


- Parallelism: 5µm/100mm
- Squareness: 5µm/100mm
- Made of alloy steel
- Hardness HRC58-60

## ANVIL VISES



- The vise is used to fix workpieces during machining. The anvils are formed according to 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

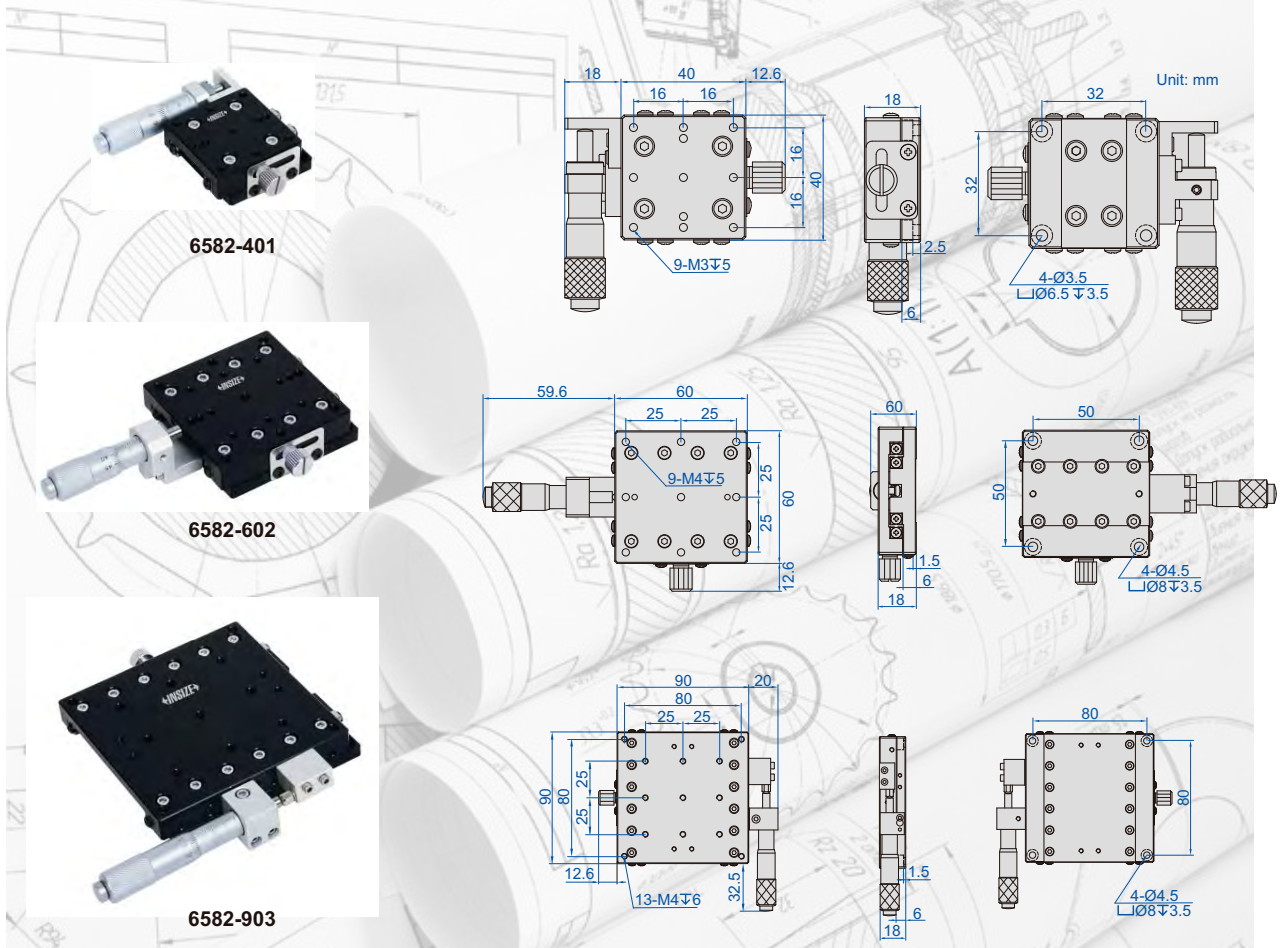


Code	Guide length (L)	Clamp range (W)	Clamp force*	Weight	a	b
6519-520	520mm	0-190mm	6500N	22.5kg	100mm	30mm
6519-680	680mm	0-320mm	8000N	39.5kg	120mm	36mm

\* When all anvils contact the workpieces



## X-AXIS STAGES



- 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)

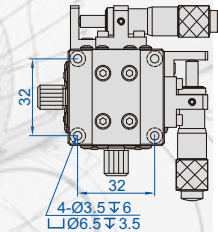
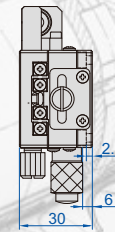
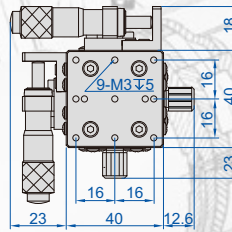
Code	X-axis displacement	Parallelism of top to bottom surface	Micrometer graduation	Micrometer accuracy	Maximum load	Micrometer location	Stage size	Weight
6582-403	±6.5mm	0.02mm	0.01mm	0.01mm	29.4N (3kgf)	right	40x40mm	0.14kg
6582-603	±6.5mm	0.03mm	0.01mm	0.01mm	49N (5kgf)	right	60x60mm	0.24kg
6582-903	±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

## XY-AXIS STAGES

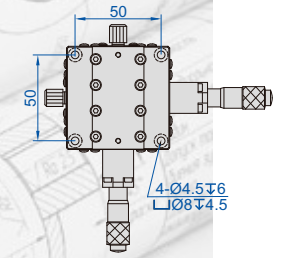
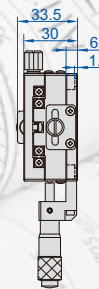
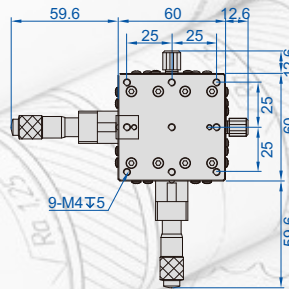
Unit: mm



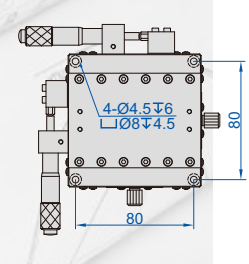
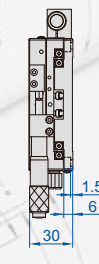
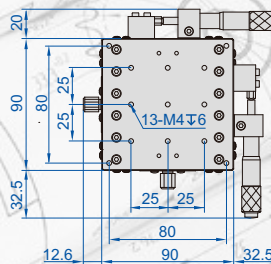
6584-401



6584-602



6584-903



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

### SPECIFICATION (micrometer on the left)

Code	XY-axis displacement	Parallelism of top to bottom surface	Micrometer graduation	Micrometer accuracy	Maximum load	Micrometer location	Stage size	Weight
6584-401	±6.5mm	0.04mm	0.01mm	0.01mm	29.4N (3kgf)	left	40x40mm	0.27kg
6584-601	±6.5mm	0.06mm	0.01mm	0.01mm	49N (5kgf)	left	60x60mm	0.48kg
6584-901	±12.5mm	0.06mm	0.01mm	0.02mm	93.1N (9.5kgf)	left	90x90mm	1kg
6584-1251	±12.5mm	0.08mm	0.01mm	0.02mm	180N (18.4kgf)	left	125x125mm	2.8kg

### SPECIFICATION (micrometer in the middle)

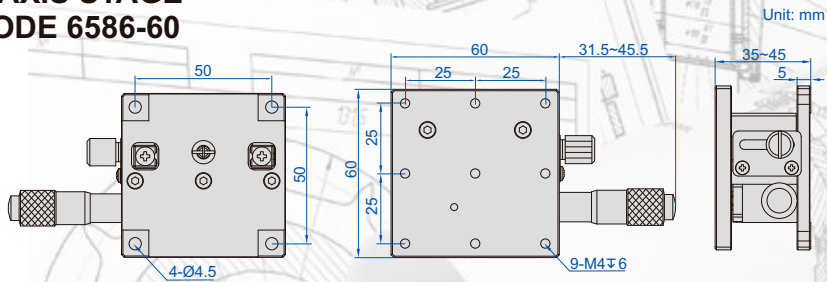
Code	XY-axis displacement	Parallelism of top to bottom surface	Micrometer graduation	Micrometer accuracy	Maximum load	Micrometer location	Stage size	Weight
6584-402	±6.5mm	0.04mm	0.01mm	0.01mm	29.4N (3kgf)	middle	40x40mm	0.27kg
6584-602	±6.5mm	0.06mm	0.01mm	0.01mm	49N (5kgf)	middle	60x60mm	0.48kg
6584-902	±12.5mm	0.06mm	0.01mm	0.02mm	93.1N (9.5kgf)	middle	90x90mm	1kg
6584-1252	±12.5mm	0.08mm	0.01mm	0.02mm	180N (18.4kgf)	middle	125x125mm	2.8kg

### SPECIFICATION (micrometer on the right)

Code	XY-axis displacement	Parallelism of top to bottom surface	Micrometer graduation	Micrometer accuracy	Maximum load	Micrometer location	Stage size	Weight
6584-403	±6.5mm	0.04mm	0.01mm	0.01mm	29.4N (3kgf)	right	40x40mm	0.27kg
6584-603	±6.5mm	0.06mm	0.01mm	0.01mm	49N (5kgf)	right	60x60mm	0.48kg
6584-903	±12.5mm	0.06mm	0.01mm	0.02mm	93.1N (9.5kgf)	right	90x90mm	1kg
6584-1253	±12.5mm	0.08mm	0.01mm	0.02mm	180N (18.4kgf)	right	125x125mm	2.8kg



## Z-AXIS STAGE CODE 6586-60

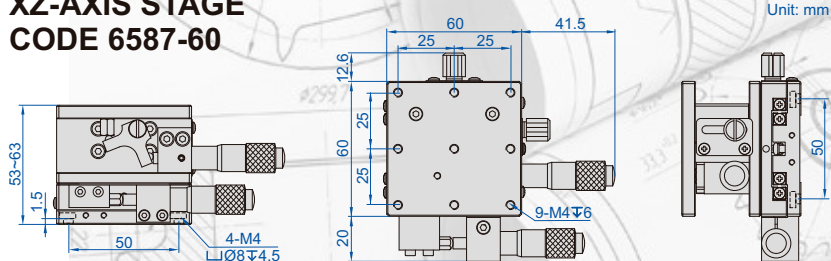


- Cross roller guides, achieve high precision and smooth movement
- Stage made of aluminum alloy

### 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

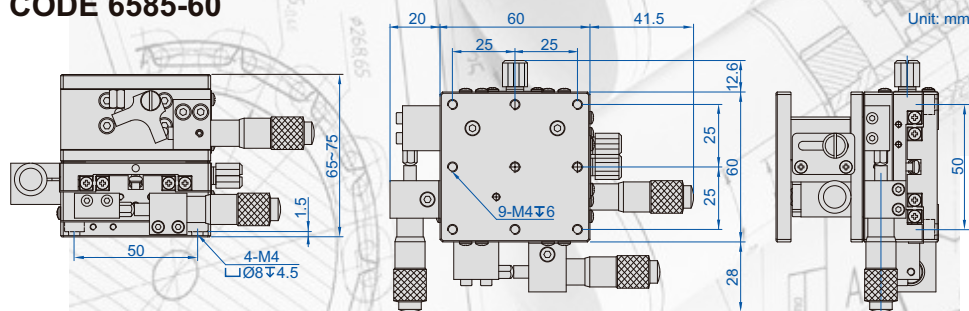


- Cross roller guides, achieve high precision and smooth movement
- Stage made of aluminum alloy

### 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



- 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

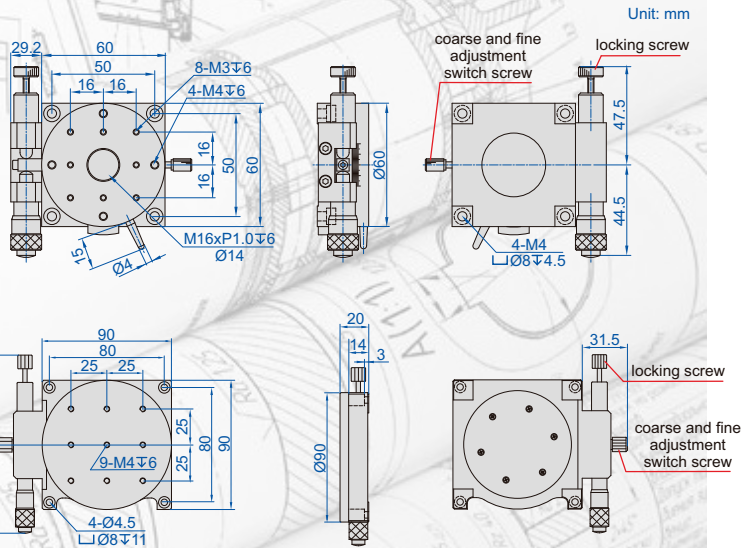
## ROTARY STAGES



6583-60H



6583-90

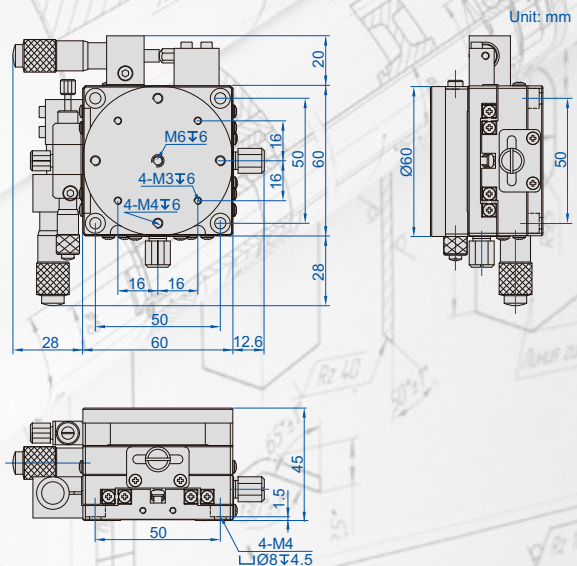


- Precise angle adjustment
- Coarse and fine adjustments
- Stages made of aluminum alloy

### 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





**Video Measuring Instrument For  
Machine Tools**  
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**Centering Indicators**  
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**Edge Finders For EDM**  
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**3D Testers**  
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**Trigger-Type 3D Probes**  
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**Infrared Transmission Probes For  
CNC Machine Tools**  
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**Zero Setters With Cable**  
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**Zero Setters**  
Page 492



**Zero Setters**  
Page 493-494

# VIDEO MEASURING INSTRUMENT FOR MACHINE TOOLS



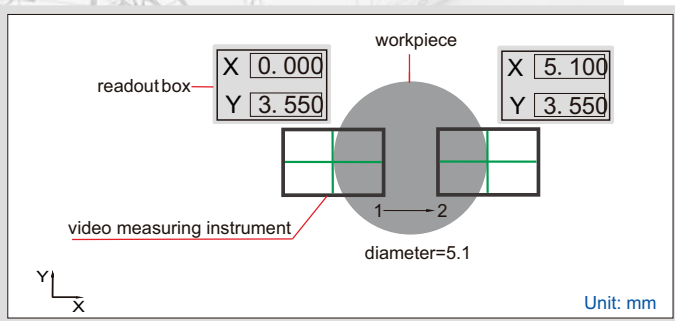
5314-R31



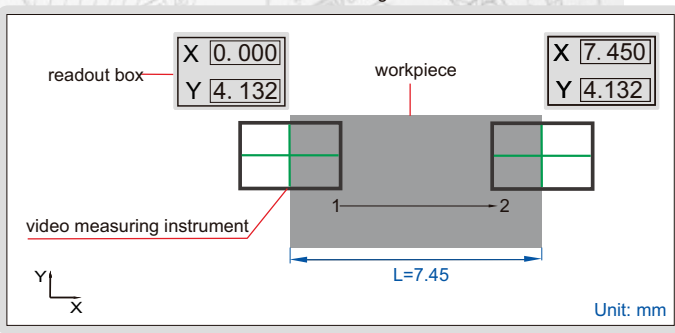
application



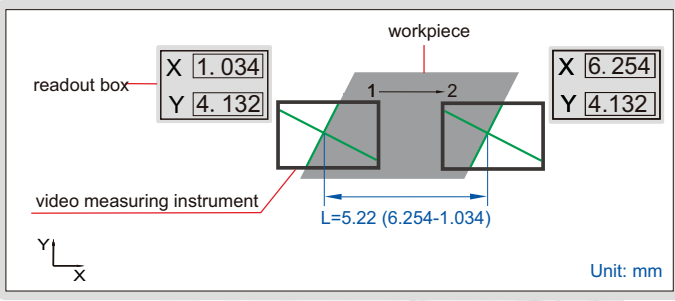
measure diameter



measure length



measure distance



- Used in machine tools such as EDM and CNC
- Working together with linear scale and readout box of machine tools to make 2D measurement, especially suitable for small or thin parts
- Can rotate crosshair and change its color
- With laser indicator to locate position

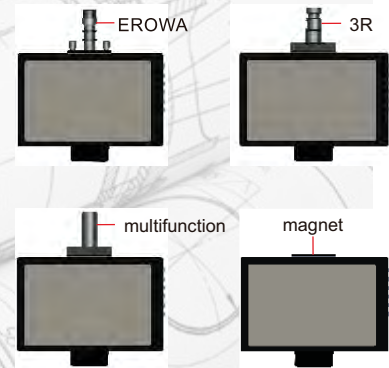
To be continued



Continued from previous page

**SPECIFICATION**

<b>Code</b>	<b>5314-R31</b>	<b>5314-R32</b>	<b>5314-R33</b>	<b>5314-R34</b>
<b>Adapter</b>	EROWA	3R	multifunction	magnet
<b>Screen size/pixel</b>	7"/1080P			
<b>Visual accuracy</b>	±0.003mm			
<b>Magnification</b>	50X			
<b>Angle resolution</b>	15'			
<b>Automatic edge-find</b>	after finding the edge, the crosshair changes to green color and prompts			
<b>Color of crosshair</b>	red, blue			
<b>Rotation of crosshair</b>	manual			
<b>Focus distance</b>	50mm			
<b>Light source</b>	LED (adjustable brightness)			
<b>Lithium battery</b>	4800mA (for 4 hours working)			
<b>Power supply</b>	power adapter			
<b>Dimension (LxWxH)</b>	178x90x215mm			
<b>Weight</b>	2kg			

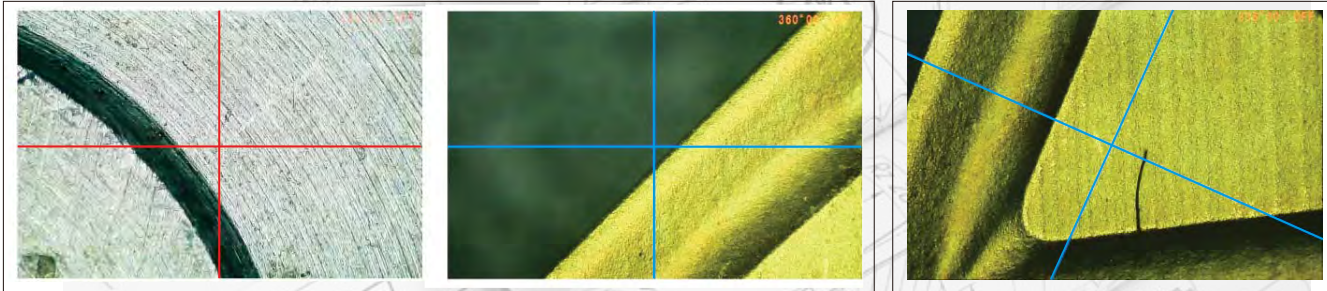


**STANDARD DELIVERY**

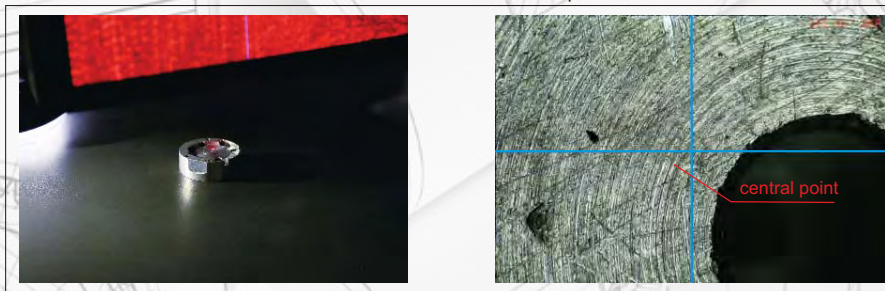
<b>Main unit</b>	1 pc
<b>Power adapter</b>	1 pc

select crosshair color

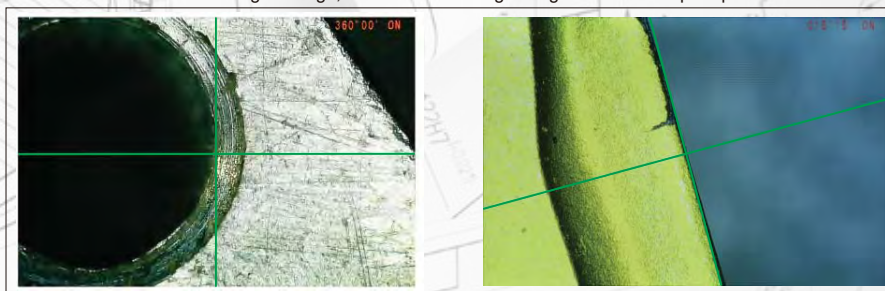
rotate crosshair



laser indicator locates the central point



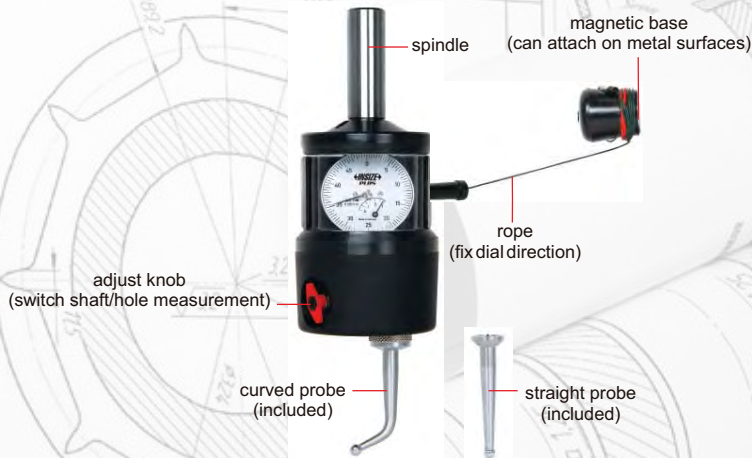
after finding the edge, the crosshair changes to green color and prompts



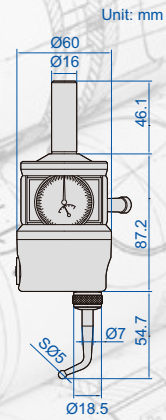
READING SHOWS MOVEMENT VALUE OF PROBE

## CENTERING INDICATOR

**INSIZE PLUS**  
MADE IN EUROPE

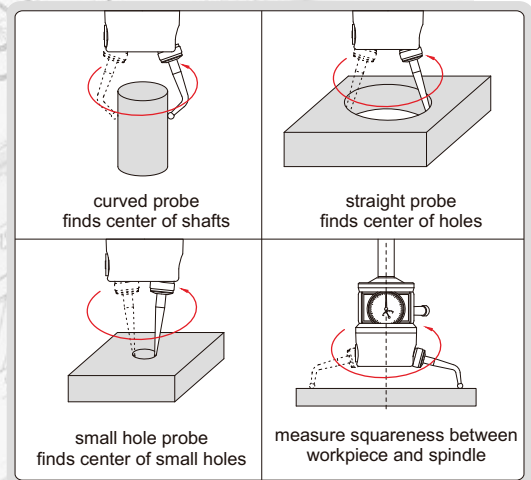


2847-3



application

- Provides quick and accurate shaft/hole centering in boring and milling set-up, can also measure squareness between workpiece and spindle
- Dial indicator can rotate 360°
- Reading show movement value of probe, for example, if probe moves 0.01mm, reading changes 0.01mm (2 graduations)
- Optional accessory: probes



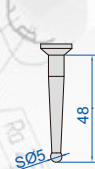
Code	Graduation	Travel
2847-3	0.005mm	2.5mm

### SPECIFICATION OF PROBE

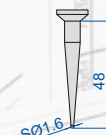
Description	Measurement type	Diameter measurement	Depth measurement	Accuracy
straight probe (included)	hole center	Ø6-125mm	55mm	0.005mm
	squareness	Ø120-160mm	40mm	
small hole probe (optional)	small hole center	Ø2-125mm	55mm	0.005mm
	squareness	Ø120-160mm	40mm	
curved probe (included)	shaft center	Ø0-125mm	55mm	0.005mm
	squareness	Ø120-160mm	40mm	

### PROBE (optional)

Code	Description
2847-P1	straight probe
2847-P2	small hole probe
2847-P3	curved probe



2847-P1  
straight probe



2847-P2  
small hole probe



2847-P3  
curved probe



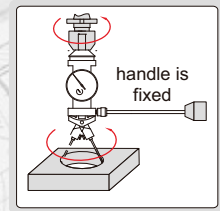
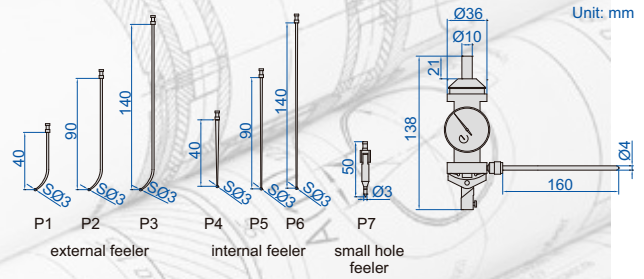
**CENTERING INDICATOR**



**POPULAR MODEL**



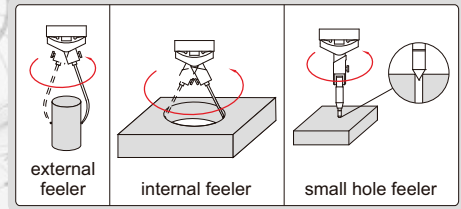
2385-3



- Provides quick and accurate centering in boring and milling set-up
- Maximum speed is recommended not to exceed 800rpm

Feeler	Measuring diameter	Accuracy
P1	Ø0-60mm	0.015mm
P2	Ø0-160mm	0.02mm
P3	Ø0-250mm	0.03mm
P4	Ø3.2-80mm	0.015mm
P5	Ø3.2-180mm	0.02mm
P6	Ø3.2-280mm	0.03mm
P7	Ø0-2.8mm	0.015mm

**Code**  
2385-3

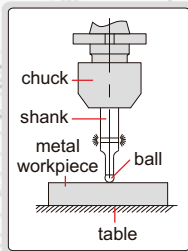
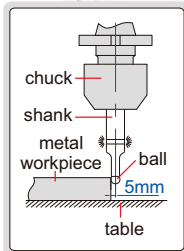


**3D ELECTRONIC EDGE FINDERS**

**INSIZE PLUS**  
MADE IN EUROPE

X-Y edge finder

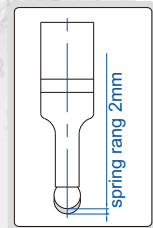
Z axial setting



6571-1

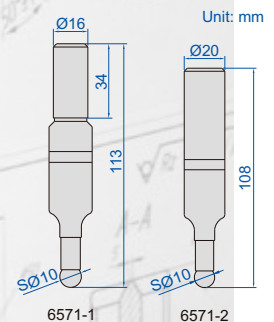


6571-2



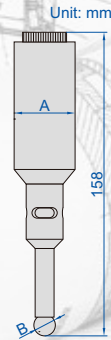
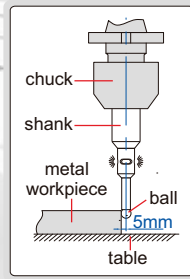
- The shank is electrically conducted to the metal workpiece through the chuck and table. The LED lights up, when the ball touches the workpiece
- Not suitable for rotary use
- Hardened contact ball

Code	Shank	Contact ball	Accuracy	Battery
6571-1	Ø16mm	SØ10mm	10µm	23A, 12Vx1 pc
6571-2	Ø20mm	SØ10mm	10µm	23A, 12Vx1 pc



## LARGE SHANK ELECTRONIC EDGE FINDERS

- The shank is electrically conducted to the metal workpiece through the chuck and table. The LED lights up and the beeper sounds (only for **6572-2**), when the ball touches the workpiece
- Not suitable for rotary use
- Hardened shank and contact ball



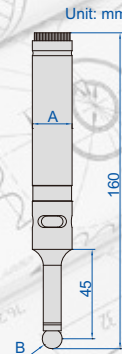
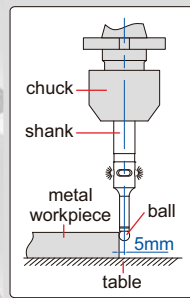
6572-1

6572-2

Code	Shank (A)	Contact ball (B)	Accuracy	Beeper	Battery
6572-1	Ø32mm	SØ10mm	5µm	without	23A, 12V×1 pc
6572-2	Ø32mm	SØ10mm	5µm	with	23A, 12V×1 pc

## ELECTRONIC EDGE FINDERS

- The shank is electrically conducted to the metal workpiece through the chuck and table. The LED lights up and the beeper sounds (only for **6566-3**), when the ball touches the workpiece
- Not suitable for rotary use
- Hardened shank and contact ball



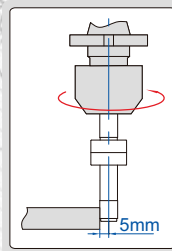
6566-2

6566-3

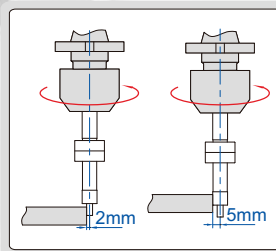
Code	Shank (A)	Contact ball (B)	Accuracy	Beeper	Battery
6566-2	Ø20mm	SØ10mm	5µm	without	23A, 12Vx1 pc
6566-3	Ø20mm	SØ10mm	5µm	with	23A, 12Vx1 pc

## NON-MAGNETIC EDGE FINDERS

- TiAlN coating, non-magnetic, hardness HV2500, extremely wear resistance
- Suitable for machine speed 400~600rpm



6573-1

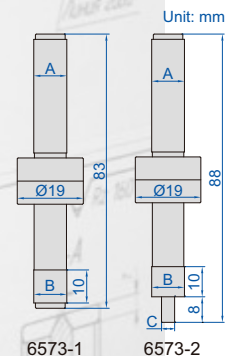


6573-2



6573-1

6573-2



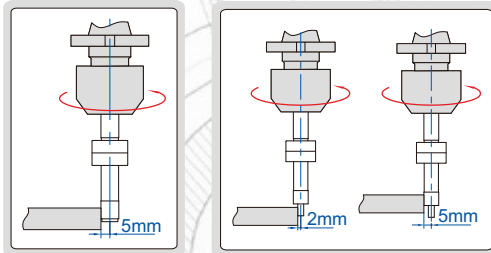
6573-1

6573-2

Code	Shank (A)	Contact point (B)	Contact point (C)	Accuracy
6573-1	Ø10mm	Ø10mm	—	5µm
6573-2	Ø10mm	Ø10mm	Ø4mm	5µm



## EDGE FINDERS



6562-3

6562-4

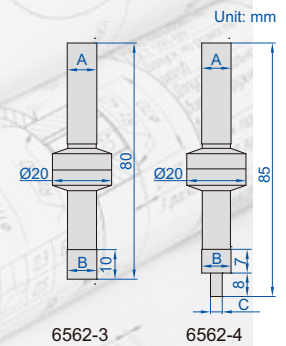


6562-3

6562-4

- Hardened shank and contact point
- Suitable for machine speed 400~600rpm

Code	Shank (A)	Contact point (B)	Contact point (C)	Accuracy
6562-3	Ø10mm	Ø10mm	—	5µm
6562-4	Ø10mm	Ø10mm	Ø4mm	5µm



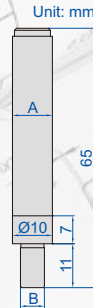
6562-3

6562-4

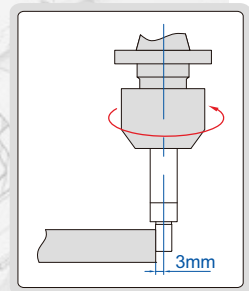
## EDGE FINDER

- Hardened shank and contact point
- Suitable for machine speed 400~600rpm

Code	Shank (A)	Contact point (B)	Accuracy
6567-1	Ø10mm	Ø6mm	8µm



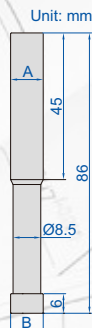
6567-1



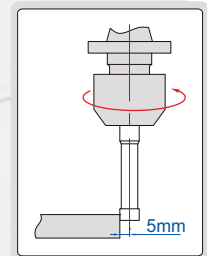
## CERAMIC EDGE FINDER

- Ceramic contact point, non magnetic
- Suitable for machine speed 400~600rpm

Code	Shank (A)	Contact point (B)	Accuracy
6568-1	Ø10mm	Ø10mm	8µm



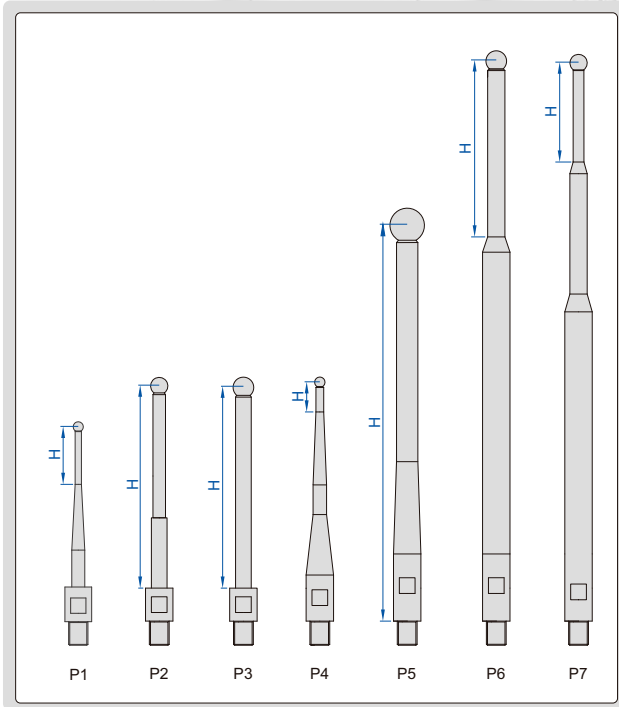
6568-1



## EDGE FINDERS FOR EDM

CAN BE  
CUSTOM-MADE

spindle type

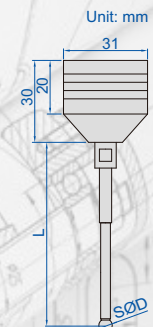


6558-52

- To locate workpieces
- Buzzer in EDM sounds when the ball touches the workpiece
- Tungsten steel ball, diameter accuracy:  $\pm 0.003\text{mm}$
- Non magnetic stainless steel spindle
- Magnetic base

(mm)

Code	Ball dia. (SØD)	Spindle length (L)	Measuring depth (H)	Spindle type
6558-11	SØ1	69	5	P4
6558-21	SØ2	49	6	P1
6558-22	SØ2	69	6	P4
6558-23	SØ2	119	8	P4
6558-31	SØ3	48	6	P1
6558-32	SØ3	68	7	P4
6558-33	SØ3	118	10	P4
6558-41	SØ4	48	37	P3
6558-42	SØ4	68	57	P2
6558-43	SØ4	118	16	P4
6558-44	SØ4	168	28	P7
6558-51	SØ5	47	36	P3
6558-52	SØ5	67	56	P2
6558-53	SØ5	117	106	P2
6558-54	SØ5	167	46	P6
6558-61	SØ6	47	35	P3
6558-62	SØ6	67	56	P3
6558-63	SØ6	87	76	P3
6558-64	SØ6	117	107	P2
6558-65	SØ6	167	51	P6
6558-81	SØ8	46	46	P5
6558-82	SØ8	66	54	P3
6558-83	SØ8	116	105	P3
6558-84	SØ8	166	51	P6
6558-101	SØ10	45	34	P3
6558-102	SØ10	65	53	P3
6558-103	SØ10	115	114	P5
6558-104	SØ10	165	53	P6





# DIGITAL 3D TESTER

**INSIZE PLUS**  
MADE IN EUROPE

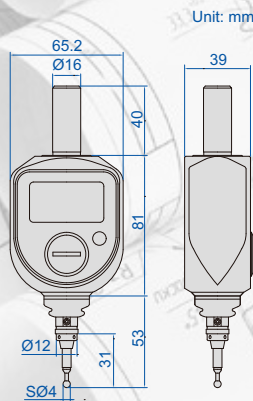
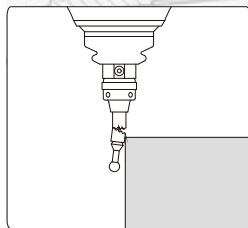
**IP65**  
WATERPROOF

**SHOCK**  
PROOF



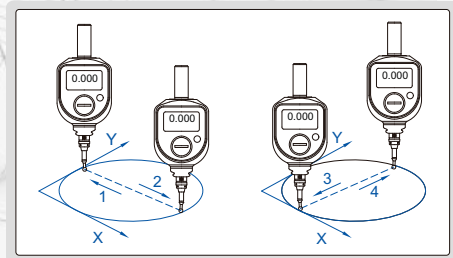
**2846-3D**

if the probe is pressed too much, the probe breaks at the breaking point, in order to prevent damage of the main body

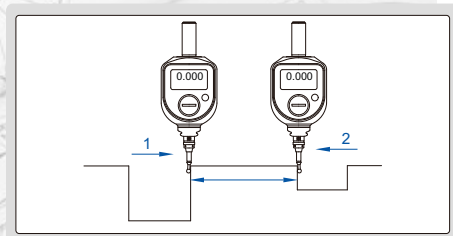


- Shockproof, IP65 dust/waterproof
- Mainly used for milling machines and CNC machine tools
  1. determine coordinate point on workpieces
  2. find center of holes
  3. adjust and position workpieces
- Can be used to measure length and depth
- Reading shows movement value of probe.  
for example, if probe moves 0.01mm, reading changes 0.01mm
- Large working range on three axes (X, Y, Z), which avoids damage of probes due to collision by mistake
- Optional accessory: probe (code **2840-N1**)

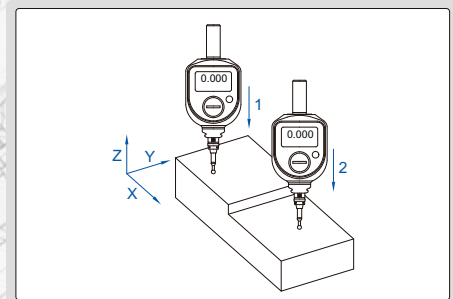
find center of holes



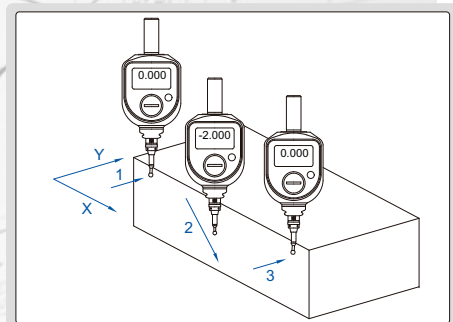
length measurement



depth measurement



position workpieces



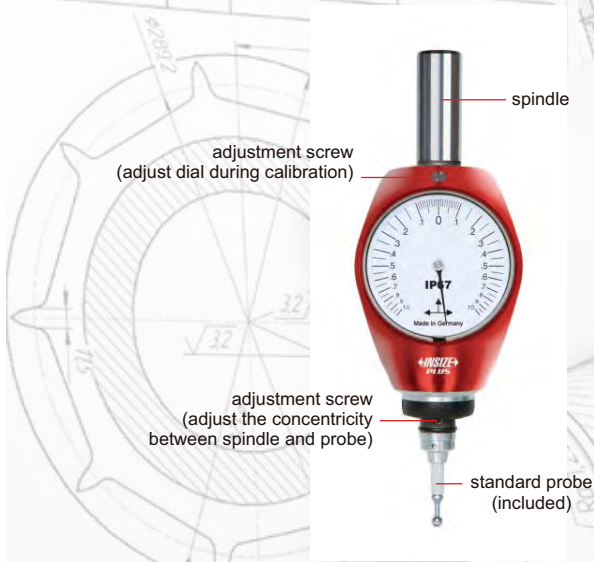
Code	Range	Resolution	Repeatability at zero (one direction)	X, Y, Z range
2846-3D	±2mm	0.005mm	±0.005mm	6mm

**ATTENTION: WHEN USING STANDARD PROBE, READING SHOWS MOVEMENT VALUE OF PROBE. WHEN USING EXTENDED PROBE, READING DOES NOT SHOW MOVEMENT VALUE OF PROBE**

**IP67 WATERPROOF**

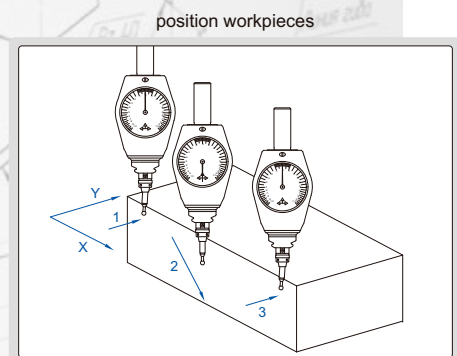
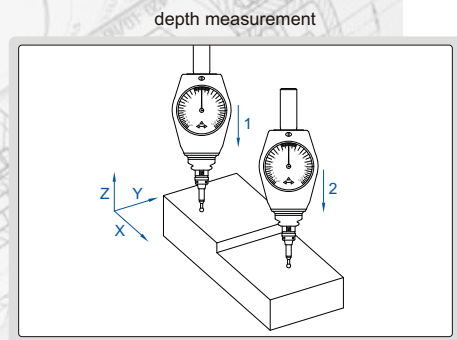
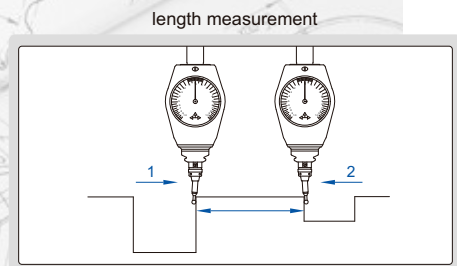
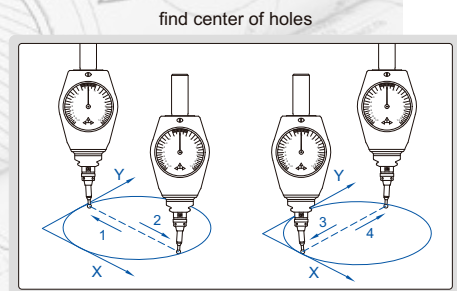
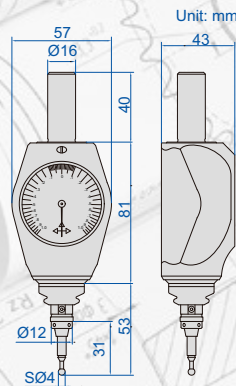
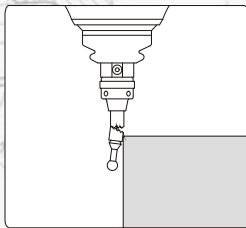
**SHOCK PROOF**

**3D TESTER**  
**INSIZE PLUS**  
 MADE IN EUROPE



**2840-3D**

if the probe is pressed too much, the probe breaks at the breaking point, in order to prevent damage of the main body

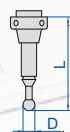


- Shockproof, IP67 dust/waterproof
- Mainly used for milling machines and CNC machine tools
  1. determine coordinate point on workpieces
  2. find center of holes
  3. adjust and position workpieces
- Can be used to measure length and depth
- When using standard probe, reading shows movement value of probe, for example, if probe moves 0.05mm, reading changes 0.05mm (5 graduations). When using extended probe, reading does not show movement value of probe
- Large working range on three axes (X, Y, Z), which avoids damage of probes due to collision by mistake

Code	Range	Graduation	Repeatability at zero (one direction)	X, Y, Z range
2840-3D	±1.0mm	0.01mm	±0.01mm	6mm

**PROBE (optional)**

Code	Description	L	D
2840-N1	standard probe	31mm	SØ4mm
2840-N2	extended probe	56.6mm	SØ6mm



standard probe



extended probe



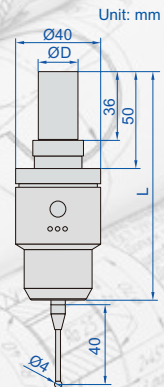
# TRIGGER-TYPE 3D PROBE (AUDIBLE AND VISUAL ALARM) CODE 9410

**IP67**  
WATERPROOF

type-C charging cable (included)

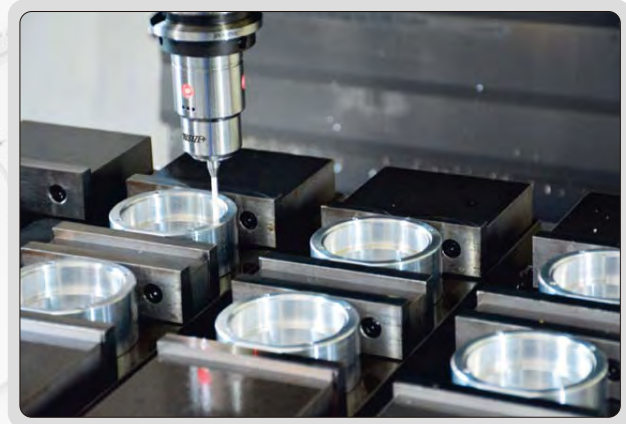


signal extension cord (included)



- Suitable for all kinds of machining centers, CNC boring machines, milling machines, drilling and tapping centers
- Suitable for workpiece detection of various solid materials
- Manually set the workpiece coordinates and machining reference points before CNC machining process
- In the process of CNC machining, manually detect and control key dimensions and position coordinates and their accuracy
- Detect the accuracy of the key size, shape and position of the workpiece after completion of CNC machining
- Standard Ø20mm shank diameter, held by CNC
- LED indicator and buzzer indicate the trigger state of the probe
- Using lithium battery charging technology, no need to replace the battery
- The battery (5% utilization rate per shift) can be used continuously for 90 days
- Type-C interface
- Optional accessory: styli and extension bar

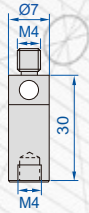
application



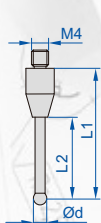
## SPECIFICATION

Probe length (L)	115.5mm
Shank diameter (ØD)	20mm
Trigger direction	±X, ±Y, +Z
Directional trigger protection stroke	X-Y: ±12°, Z: +5mm
Arbitrary one-way repeated trigger accuracy	≤1µm
Trigger force in X-Y direction (with standard styli)	0.3-0.6N
Trigger force in Z direction	4N
Dust/waterproof	IP67
Type-C charging cable	1.5m
Signal extension cord (provide signals to CNC)	1m

Unit: mm



Unit: mm



## EXTENSION ROD (OPTIONAL)

Code	Material
9410-R1	ceramic

## STYLI (OPTIONAL)

(mm)

Code	L1	L2	Ød	Material of rod *	Material of ball
9410-P1	18	13	4	stainless steel	ruby
9410-P2	18	13.5	5	stainless steel	ruby
9410-P3	18.5	13	3	stainless steel	ruby
9410-P4	19	8	2	carbide	ruby
9410-P5	19.5	4	1	carbide	ruby
9410-P6	50	40	2	carbide	ruby
9410-P7	50	34	5	ceramic	ruby
9410-P8	100	86	6	ceramic	ruby
9410-P9	40	30	4	ceramic	ruby
9410-P10	50	36	6	ceramic	ruby

\* For stainless steel or carbide rods, it is recommended to use extension rods to protect spindles in case of break

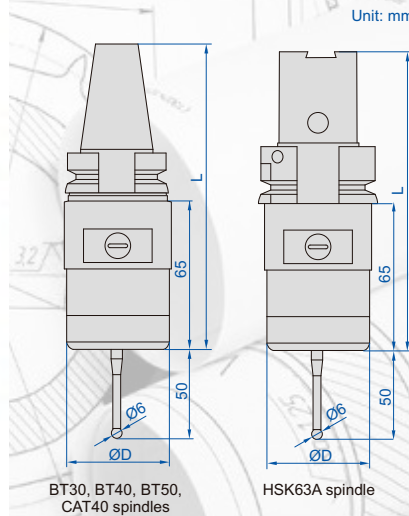
# INFRARED TRANSMISSION PROBES FOR CNC MACHINE TOOLS



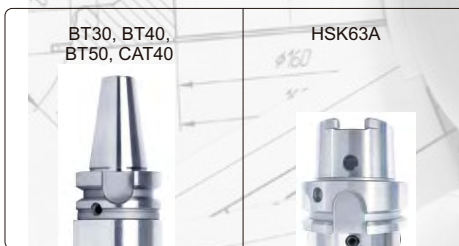
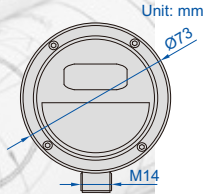
**IP68**  
WATERPROOF



9413-1



9413-A



- On-machine measurement of all kinds of small and medium-sized machining centers, CNC boring, milling machines and five-axis CNC machine tools
- Automatically set the workpiece coordinate and machining reference point before CNC machining process
- Automatically measure dimension and position coordinate during CNC machining
- Measure dimension, shape and position after CNC machining is completed
- Four kinds of SSR signals such as probe status, error, low voltage and pulse are transmitted to CNC machine tools
- M code is used to control on or off of probes
- Infrared transmission, strong anti-interference
- Infrared transmission/reception range: 5m
- Supplied with automatic measurement software
- Optional accessory: styli

## PROBE SPECIFICATION

Code	9413-1	9413-2	9413-3	9413-4	9413-5
Probe length (L)	140mm	166mm	216mm	168mm	136mm
Probe diameter (ØD)	48mm	48mm	48mm	48mm	48mm
Applicable spindle *	BT30	BT40	BT50	CAT40	HSK63A
Trigger accuracy of styli in any direction	1µm				
Protection stroke triggered by styli in all directions	X and Y axis stroke: ±12.5°, Z axis stroke: 5mm				
Trigger force of styli in all directions	X and Y axis: 1-1.6N, Z axis: 5-10N				
Dust/waterproof	IP68				
Power supply	2×LS14250 lithium battery				

\* SK and ISO spindle probes also can be customized

## RECEIVER SPECIFICATION

Code	9413-A
Protection function	low battery voltage or probe transmitting signal all the time**
Applicable probe	code 9413-1, 9413-2, 9413-3, 9413-4, 9413-5
Cable length	8m
Dust/waterproof	IP68
Power supply	input voltage: 24V±10% (DC), load current: 50mA

\*\* When battery voltage is low or probe is in wrong state, receiver sends a signal to CNC machine to stop working

To be continued



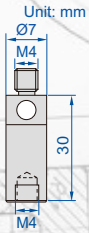
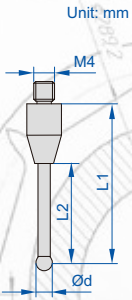
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### STYLI (OPTIONAL)

(mm)

Code	L1	L2	Ød	Material of rod ***	Material of ball
9410-P1	18	13	4	stainless steel	ruby
9410-P2	18	13.5	5	stainless steel	ruby
9410-P3	18.5	13	3	stainless steel	ruby
9410-P4	19	8	2	carbide	ruby
9410-P5	19.5	4	1	carbide	ruby
9410-P6	50	40	2	carbide	ruby
9410-P7	50	34	5	ceramic	ruby
9410-P8	100	86	6	ceramic	ruby
9410-P9	40	30	4	ceramic	ruby
9410-P10	50	36	6	ceramic	ruby

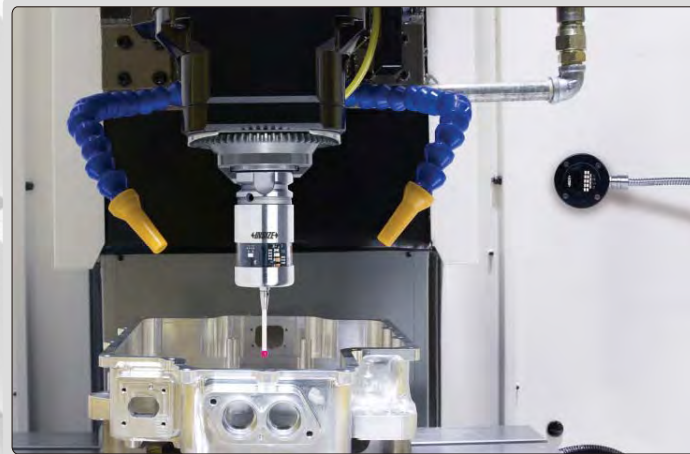
\*\*\* For stainless steel or carbide rods, it is recommended to use extension rods to protect spindles in case of break



### EXTENSION ROD (OPTIONAL)

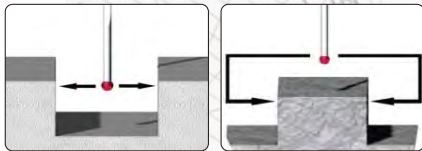
Code	Material
9410-R1	ceramic

application



### AUTOMATIC MEASUREMENT SOFTWARE (INCLUDED)

1. Stylus automatic calibration
2. Protection of stylus during probe movement (avoid collision)
3. Groove and boss measurement



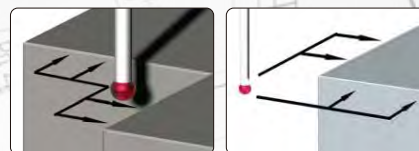
4. Bore and axis measurement



5. X or Y single-surface measurement



6. Internal and external corner measurement



7. 4th axis measurement
8. Angle on X and Y plane measurement
9. Three points measurement of arc

10. Measure the distance between two holes

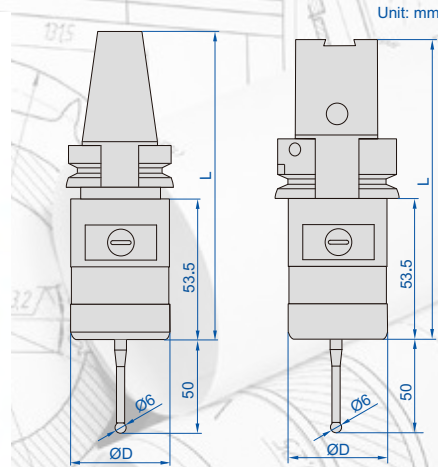


## INFRARED TRANSMISSION PROBES FOR CNC MACHINE TOOLS (CAN BE USED IN COMBINATION WITH ZERO SETTER WITH INFRARED TRANSMISSION)

**IP68**  
WATERPROOF



9414-1

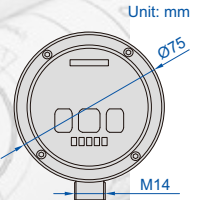


BT30, BT40, BT50,  
CAT40 spindles

HSK63A spindle



9414-A



- On-machine measurement of all kinds of small and medium-sized machining centers, CNC boring, milling machines and five-axis CNC machine tools
- Automatically set the workpiece coordinate and machining reference point before CNC machining process
- Automatically measure dimension and position coordinate during CNC machining
- Measure dimension, shape and position after CNC machining is completed
- Four kinds of SSR signals such as probe status, error, low voltage and pulse are transmitted to CNC machine tools
- Working status can be displayed on receiver LED indicator
- Signal transmitting range of probe can be set
- Infrared transmission, fast response, high reliability
- The battery (5% utilization rate per shift) can be used continuously for 90 days
- Supplied with measurement software package
- Can be used in combination with zero setter with infrared transmission (code 9415-1, 9415-2)
- Optional accessory: styli



### PROBE SPECIFICATION

Code	9414-1	9414-2	9414-3	9414-4	9414-5
Probe length (L)	130mm	151.5mm	208.3mm	156mm	126.5mm
Probe diameter (ØD)	40mm	40mm	40mm	40mm	40mm
Applicable spindle *	BT30	BT40	BT50	CAT40	HSK63A
Trigger accuracy of styli in any direction	1µm				
Protection stroke triggered by styli in all directions	X and Y axis stroke: ±12°, Z axis stroke: 5mm				
Trigger force of styli in all directions	X and Y axis: 0.5-1N, Z axis: 7.5N				
Dust/waterproof	IP68				
Power supply	2xLS14250 lithium battery				

\* SK and ISO spindle probes also can be customized

### RECEIVER SPECIFICATION

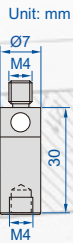
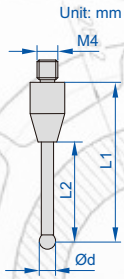
Code	9414-A
Protection function	low battery voltage, overstroke and signal interrupt protection**
Applicable	probe code 9414-1, 9414-2, 9414-3, 9414-4, 9414-5; zero setter code 9415-1, 9415-2
Infrared transmission/reception range	3m
Cable length	8m
Dust/waterproof	IP68
Power supply	input voltage: 24V±10% (DC), load current (max): 50mA

\*\* When battery voltage is low or zero setter is in wrong state, receiver sends a signal to CNC machine to stop working

To be continued



Continued from previous page



### STYLI (OPTIONAL)

(mm)

Code	L1	L2	Ød	Material of rod ***	Material of ball
9410-P1	18	13	4	stainless steel	ruby
9410-P2	18	13.5	5	stainless steel	ruby
9410-P3	18.5	13	3	stainless steel	ruby
9410-P4	19	8	2	carbide	ruby
9410-P5	19.5	4	1	carbide	ruby
9410-P6	50	40	2	carbide	ruby
9410-P7	50	34	5	ceramic	ruby
9410-P8	100	86	6	ceramic	ruby
9410-P9	40	30	4	ceramic	ruby
9410-P10	50	36	6	ceramic	ruby

\*\*\* For stainless steel or carbide rods, it is recommended to use extension rods to protect spindles in case of break

application

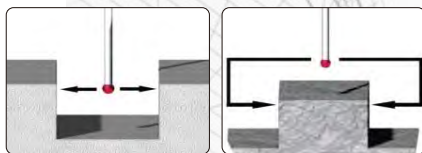


### EXTENSION ROD (OPTIONAL)

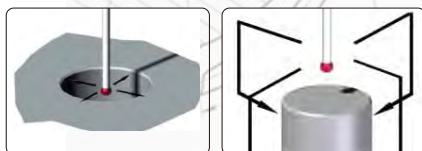
Code	Material
9410-R1	ceramic

### AUTOMATIC MEASUREMENT SOFTWARE (INCLUDED)

1. Stylus automatic calibration
2. Protection of stylus during probe movement (avoid collision)
3. Groove and boss measurement



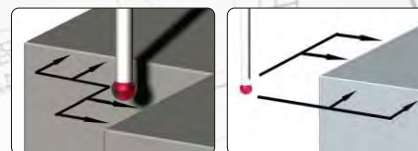
4. Bore and axis measurement



5. X or Y single-surface measurement



6. Internal and external corner measurement



7. 4th axis measurement
8. Angle on X and Y plane measurement
9. Three points measurement of arc

10. Measure the distance between two holes



**IP68**  
WATERPROOF

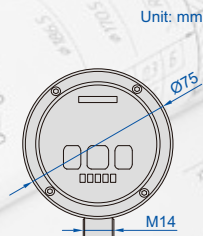
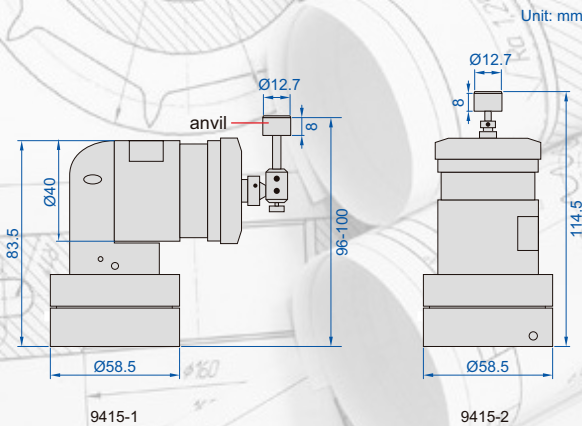
## ZERO SETTER WITH INFRARED TRANSMISSION (FIVE-SIDE)



9415-1



9414-A



- Suitable for all kinds of small and medium-sized machining centers, CNC boring, milling machines and five-axis CNC machine tools, etc.
- Automatically set the tool length parameters before CNC machining process
- Automatic detection of tool wear or damage during CNC machining
- Automatic detection of tool wear or damage after CNC machining is completed
- The working surface of anvil is ceramic and has chamfer, which can greatly improve the service life
- Infrared transmission, fast response, high reliability
- The battery (5% utilization rate per shift) can be used continuously for 90 days
- Supplied with automatic zero setter software package
- Can be used in combination with infrared transmission probes for CNC machine tools (code **9414-1**, **9414-2**, **9414-3**, **9414-4**, **9414-5**)
- Optional accessory: square anvil (code **9412-B1**)

### ZERO SETTER SPECIFICATION

Code	9415-1	9415-2
Height (factory setting)	96-100mm	114.5mm
Diameter of zero setter	Ø12.7mm	
Trigger direction	±X, ±Y, +Z	
Trigger protection stroke	X-Y: ±5mm, Z: 8mm	
Trigger force of zero setter all directions	X and Y axis: 0.5-1N, Z axis: 1.5N	X and Y axis: 0.5-1N, Z axis: 5N
Repeated trigger accuracy	≤1µm	
Start/stop mode	M code control *	
Hardness of the zero setter	HM8.5	
Dust/waterproof	IP68	
Power supply	2xLS14250 lithium battery	

\*Before purchasing, please confirm whether CNC still has enough M code to be used

To be continued



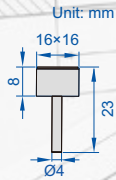
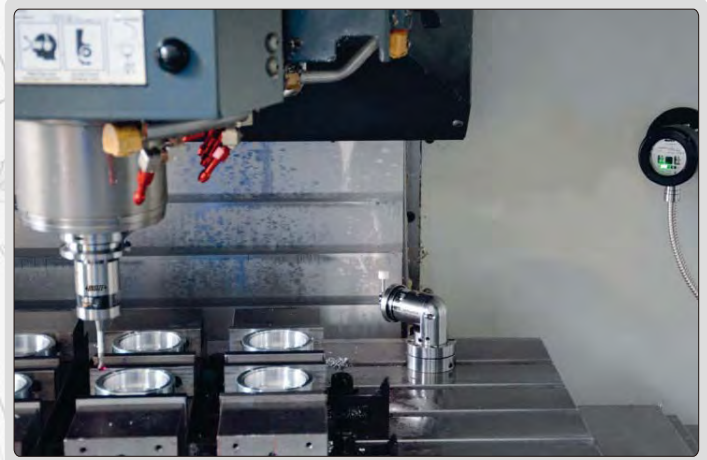
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**RECEIVER SPECIFICATION**

Code	9414-A
Protection function	low battery voltage, overstroke and signal interrupt protection**
Applicable	probe code 9414-1, 9414-2, 9414-3, 9414-4, 9414-5; zero setter code 9415-1, 9415-2
Infrared transmission/reception range	3m
Cable length	8m
Dust/waterproof	IP68
Power supply	input voltage: 24V±10% (DC), load current (max): 50mA

\*\* When battery voltage is low or zero setter is in wrong state, receiver sends a signal to CNC machine to stop working

application



**SQUARE ANVIL (OPTIONAL)**

Code	Shape	Dimension	Material
9412-B1	square	16×16mm	ceramic

**Automatic zero setter software (included)**

1. Automatic calibration of the center position of the anvil
2. Standard knife length setting
3. Semi-automatic and fully automatic tool setting for tool length

4. Semi-automatic and fully automatic tool diameter settings

5. Automatic detection of tool wear and breakage



**IP68**  
WATERPROOF

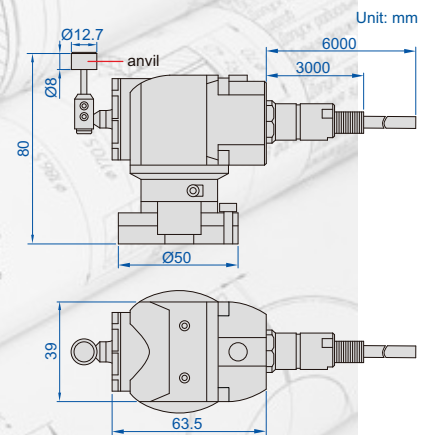
## ZERO SETTER WITH CABLE (FIVE-SIDE) CODE 9412

- Suitable for various machining centers, CNC boring and milling machines, etc.
- Automatically set the tool length parameters before CNC machining process
- Automatic detection of tool wear or damage during CNC machining
- Automatic detection of tool wear or damage after CNC machining is completed
- The working surface adopts ceramic material and chamfering process, which can greatly improve the service life
- The plug, cable part and output signal of the host are protected, so that the zero setter can work in the splash environment for a long time
- Signal transmission through the cable, the reverse connection of the power line can change the state of the signal output
- The working status is displayed by the indicator light
- Supplied with automatic zero setter software package
- Optional accessory: square feeler block (code 9412-B1)



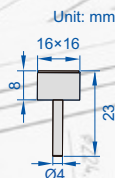
### SPECIFICATION

Height (factory setting)	80±0.5mm
Diameter of zero setter	Ø12.7mm
Trigger direction	±X, ±Y, +Z
Trigger protection stroke	X-Y: ±5mm, Z: 8mm
Axial reset force	3.4N-3.6N
Repeated trigger accuracy	≤1µm
Hardness of the zero setter	HM8.5
Class of protection	IP68
Cable length *	6m (stainless steel sheath 3m)
Input voltage	24V±10% (DC)
Load current	max: 50mA
Signal type and logic **	SSR (NC/NO)



\*The length of the cable can be customized

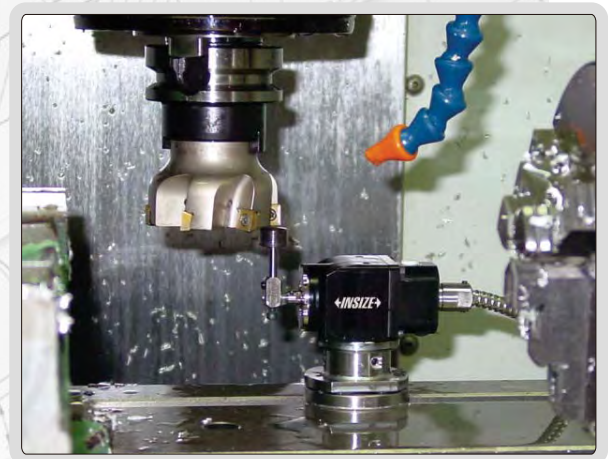
\*\* Before purchasing, it is necessary to confirm whether the working logic of the tool setter output signal matches CNC control system



### SQUARE ANVIL (OPTIONAL)

Code	Shape	Dimension	Material
9412-B1	square	16×16mm	ceramic

application



### Automatic zero setter software (included)

1. Automatic calibration of the center position of the anvil
2. Standard knife length setting
3. Semi-automatic and fully automatic tool setting for tool length



4. Semi-automatic and fully automatic tool diameter settings



5. Automatic detection of tool wear and breakage settings





## ZERO SETTER (WITH CABLE) CODE 9411

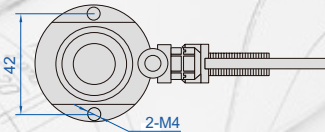
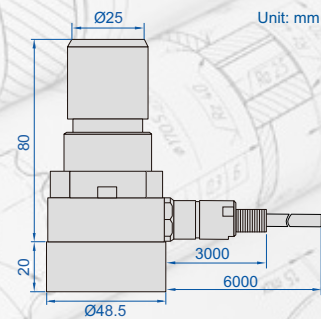
**IP68**  
WATERPROOF

- Suitable for various machining centers, CNC boring and milling machines, etc.
- Automatically set the tool length parameters before CNC machining process
- Automatic detection of tool wear or damage during CNC machining
- Automatic detection of tool wear or damage after CNC machining is completed
- The working surface is made of hard alloy material, which can greatly improve the scratch resistance
- Signal transmission through the cable, the reverse connection of the power line can change the state of the signal output
- The working status is displayed by the indicator light
- Supplied with 20mm mounting base
- Supplied with automatic zero setter software package
- Optional accessory: blow-cleaning device (code **9411-C1**)



### SPECIFICATION

Height	80mm (the height is 100mm after adding the mounting base)
Diameter of zero setter	Ø25mm
Downward travel	5mm
Axial reset force	6N±0.3N
Repeated trigger accuracy	≤1µm
Hardness of the zero setter	HRA90-93
Class of protection	IP68
Cable length *	6m (stainless steel sheath 3m)
Input voltage	24V±10% (DC)
Load current	max: 50mA
Signal type and logic **	SSR (NC/NO)



\* The length of the cable can be customized

\*\* Before purchasing, it is necessary to confirm whether the working logic of the tool setter output signal matches CNC control system

### BLOW-CLEANING DEVICE (OPTIONAL)

Code	Material
<b>9411-C1</b>	stainless steel

Before purchasing a blow-cleaning device, it is necessary to confirm whether CNC machine has the M-code to control the cleaning

application



### blow-cleaning device (optional)



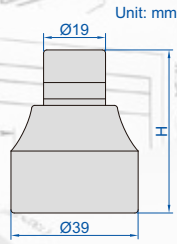
### Automatic zero setter software package (included)

1. Automatic calibration of the center position of the cutter block
2. Standard knife length setting
3. Semi-automatic and fully automatic tool setting for tool length
4. Automatic detection of tool wear and breakage



**LOW TEST FORCE**

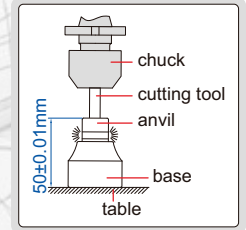
- The base is electrically conducted to the cutting tools through the table and chuck. The LED lights up when the cutting tool touches the anvil
- Magnetic base
- Two batteries LR44



6553-50

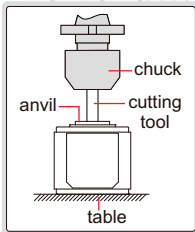
**ELECTRONIC ZERO SETTER**

**INSIZE PLUS**  
MADE IN EUROPE



Code	Height (H)	Accuracy	Test force
6553-50	50mm	±10µm	7N (at 49mm)

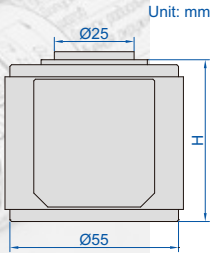
**IP65 WATERPROOF**



6557-50



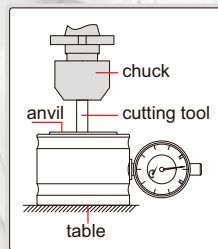
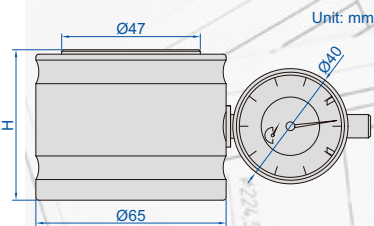
**DIGITAL ZERO SETTER**



Code	Height (H)	Anvil stroke	Accuracy*	Test force	Repeatability
6557-50	50mm	2.5mm	±10µm/0.0004"	10N (at 50mm)	2µm

\* The accuracy is ensured within Ø10mm of the center

- Resolution: 0.001mm/0.00005"
- IP65 dust/waterproof
- Buttons: on/off, mm/inch, zero
- CR2032 battery
- Automatic power off
- Magnetic base
- Automatic backlight at zero

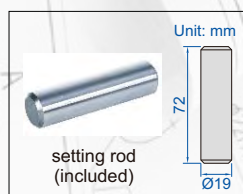
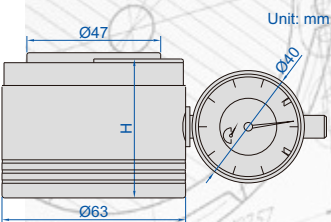


6554-50

**ZERO SETTER**

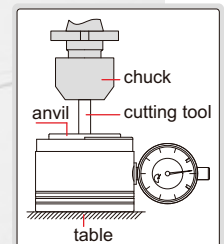
**INSIZE PLUS**  
MADE IN EUROPE

Code	Height (H)	Graduation	Accuracy	Test force
6554-50	50mm	0.01mm	±0.02mm	9N (at 50mm)



6556-50

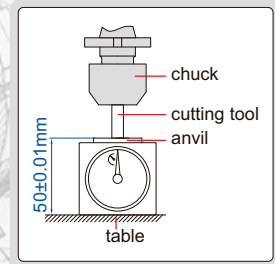
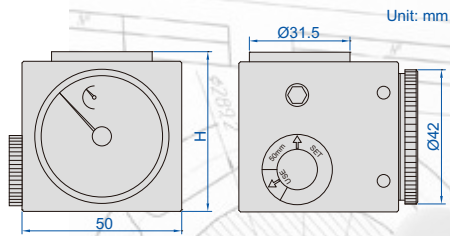
**ZERO SETTER**



Code	Height (H)	Graduation	Accuracy	Test force
6556-50	50mm	0.01mm	±0.01mm	10N (at 50mm)



## ZERO SETTER

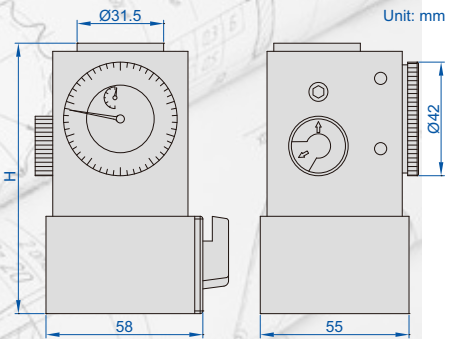
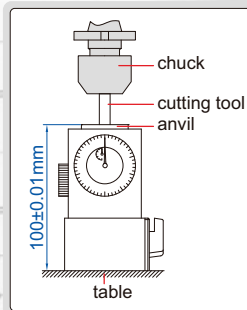


- Magnetic base

2397-502A

Code	Height (H)	Graduation	Accuracy	Test force
2397-502A	50mm	0.01mm	±0.01mm	9N (at 50mm)

## ZERO SETTER



- Magnetic base with on-off switch

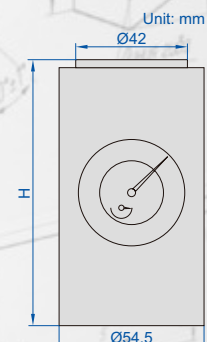
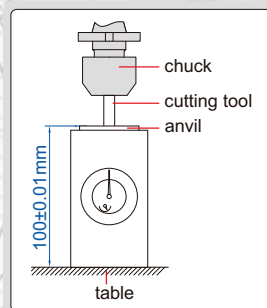
2394-100A

Code	Height (H)	Graduation	Accuracy	Test force
2394-100A	100mm	0.01mm	±0.01mm	9N (at 100mm)

## LOW TEST FORCE ZERO SETTER

**INSIZE PLUS**  
MADE IN EUROPE

LOW TEST FORCE



- Magnetic base
- Low test force, suitable for micro tools with minimum diameter Ø0.1mm

6555-100B

Code	Height (H)	Graduation	Accuracy	Test force
6555-100B	100mm	0.01mm	±0.01mm	1N (at 100mm)