

2
часть

2023
2024



MEASURING INSTRUMENTS

CATALOGUE NO. 106



**Официальный дистрибьютор
в России – ООО «СиЭнСиЭм Групп»**

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INSIZE is our standard quality

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The products with this mark are supplied with manufacturer inspection certificate.

INSIZE		Inspection Certificate						
Product name	Digital Caliper	Traceable to	USA NIST No.821/279484-10					
Code No.	1108-150		Germany DKD No.D-K-15190-01-00					
Measuring range	0-150mm / 0-6"	Inspector	<i>Jose</i>					
Resolution	0.01mm / 0.0005"	Judgement	Passed					
Serial No.	0910120004							
Standard temperature	20°C / 68°F							
			Unit: inch			Unit: mm		
Measuring Length	Permissible Error	Error		Measuring Length	Permissible Error	Error		
		External	Internal			External	Internal	
0.4 DIA	+0.0005 -0.0010	/	0.0005	Φ10	+0.01 -0.02	/	0.01	
2	±0.0010	-0.0005	/	50	±0.02	-0.01	/	
4		-0.0005	/	100		-0.01	/	
6		-0.0010	/	150		-0.02	/	
8		/	/	200		/	/	
10	±0.0015	/	/	250	±0.03	/	/	
12		/	/	300		/	/	



Please scan QR code to watch the videos of products.



How to search:

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3. Search for products in APPLICATION INDEX OF MEASURING TOOLS (page 790-796)

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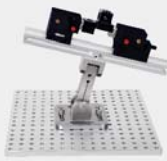
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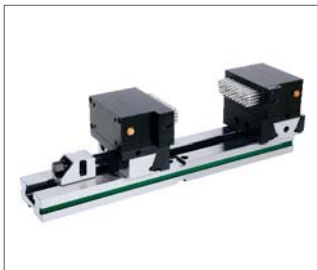
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GRANITE SURFACE PLATES



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

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



6900-132

Grade 00

Code	Size (LxWxH)	Flatness	Weight	Max. load
6900-132*	300x200x60mm	2.7µm	11kg	30kg
6900-142*	400x250x60mm	2.9µm	18kg	50kg
6900-144*	400x400x60mm	3.1µm	29kg	60kg
6900-153*	500x315x70mm	3.2µm	33kg	60kg
6900-164*	630x400x80mm	3.5µm	60kg	65kg
6900-166*	630x630x100mm	3.8µm	119kg	75kg
6900-185*	800x500x100mm	3.9µm	120kg	100kg
6900-1106*	1000x630x140mm	4.4µm	265kg	200kg
6900-1107*	1000x750x150mm	4.5µm	337kg	300kg
6900-1101*	1000x1000x150mm	4.8µm	450kg	400kg
6900-1128*	1200x800x160mm	4.9µm	461kg	500kg
6900-1161*	1600x1000x180mm	5.8µm	864kg	600kg
6900-1201*	2000x1000x220mm	6.5µm	1320kg	650kg
6900-1202*	2000x1500x250mm	7.0µm	2250kg	750kg



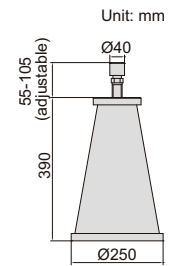
Grade 0

Code	Size (LxWxH)	Flatness	Weight	Max. load
6900-032*	300x200x60mm	5.4µm	11kg	60kg
6900-042*	400x250x60mm	5.9µm	18kg	100kg
6900-044*	400x400x60mm	6.3µm	29kg	120kg
6900-053*	500x315x70mm	6.4µm	33kg	120kg
6900-064*	630x400x80mm	7.0µm	60kg	130kg
6900-066*	630x630x100mm	7.6µm	119kg	150kg
6900-085*	800x500x100mm	7.8µm	120kg	200kg
6900-0106*	1000x630x140mm	8.7µm	265kg	400kg
6900-0107*	1000x750x150mm	9.0µm	337kg	600kg
6900-0101*	1000x1000x150mm	9.7µm	450kg	800kg
6900-0128*	1200x800x160mm	9.8µm	461kg	1000kg
6900-0161*	1600x1000x180mm	11.5µm	864kg	1200kg
6900-0201*	2000x1000x220mm	12.9µm	1320kg	1300kg
6900-0202*	2000x1500x250mm	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:
2000x1000x220mm
(code **6900-0201** and **6900-1201**)
2000x1500x250mm
(code **6900-0202** and **6900-1202**)

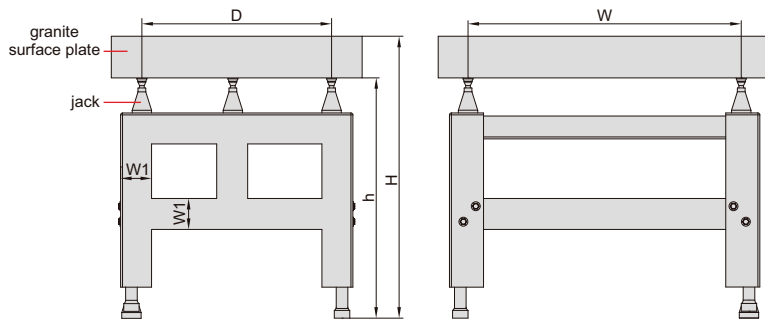


6903-B

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	630x400x80mm (code 6900-064 and 6900-164)	352	224	775-800	695-720	80
6902-66A	630x630x100mm (code 6900-066 and 6900-166)	352	352	775-800	675-700	80
6902-85A	800x500x100mm (code 6900-085 and 6900-185)	448	280	775-800	675-700	80
6902-106A	1000x630x140mm (code 6900-0106 and 6900-1106)	560	352	755-780	615-640	80
6902-107A	1000x750x150mm (code 6900-0107 and 6900-1107)	560	420	755-780	605-630	80
6902-101A	1000x1000x150mm (code 6900-0101 and 6900-1101)	560	560	755-780	605-630	80
6902-128A	1200x800x160mm (code 6900-0128 and 6900-1128)	672	448	755-780	595-620	80
6902-161A	1600x1000x180mm (code 6900-0161 and 6900-1161)	896	560	755-780	575-600	80
6902-201A	2000x1000x220mm (code 6900-0201 and 6900-1201)	1120	560	755-780	535-560	100
6902-202A	2000x1500x250mm (code 6900-0202 and 6900-1202)	1120	840	755-780	505-530	100

High stands

(mm)

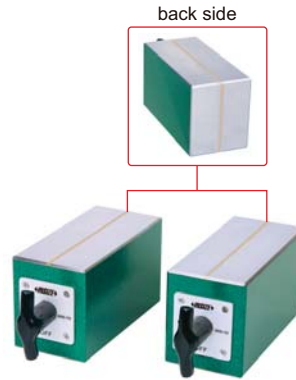
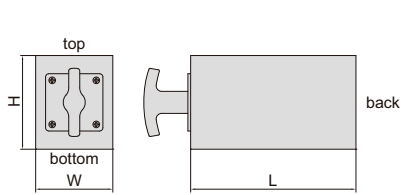
Code	For granite surface plate	W	D	H (with granite surface plate)	h (without granite surface plate)	W1
6902-64H	630x400x80mm (code 6900-064 and 6900-164)	352	224	1000-1025	920-945	80
6902-66H	630x630x100mm (code 6900-066 and 6900-166)	352	352	1000-1025	900-925	80
6902-85H	800x500x100mm (code 6900-085 and 6900-185)	448	280	1000-1025	900-925	80
6902-106H	1000x630x140mm (code 6900-0106 and 6900-1106)	560	352	1000-1025	860-885	80
6902-107H	1000x750x150mm (code 6900-0107 and 6900-1107)	560	420	1000-1025	850-875	80
6902-101H	1000x1000x150mm (code 6900-0101 and 6900-1101)	560	560	1000-1025	850-875	80
6902-128H	1200x800x160mm (code 6900-0128 and 6900-1128)	672	448	1000-1025	840-865	80
6902-161H	1600x1000x180mm (code 6900-0161 and 6900-1161)	896	560	1000-1025	820-845	80
6902-201H	2000x1000x220mm (code 6900-0201 and 6900-1201)	1120	560	1000-1025	780-805	100
6902-202H	2000x1500x250mm (code 6900-0202 and 6900-1202)	1120	840	1000-1025	750-775	100

MAGNETIC RECTANGULAR BLOCKS

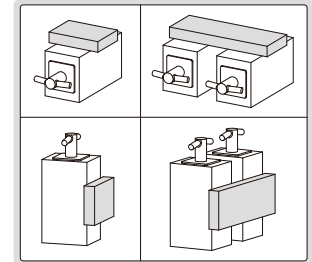
HARDENED SURFACES

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 (LxWxH)	Magnetic force	Parallelism of top to bottom side	Squareness of top and bottom to back side	Height difference of a matched pair
6898-100	100x70x70mm	100kgf	5µm	5µm	5µm
6898-150	150x70x85mm	125kgf	5µm	5µm	5µm

V-BLOCK SETS

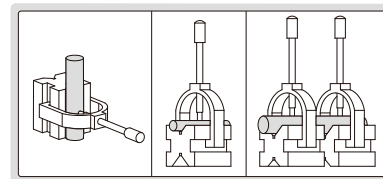
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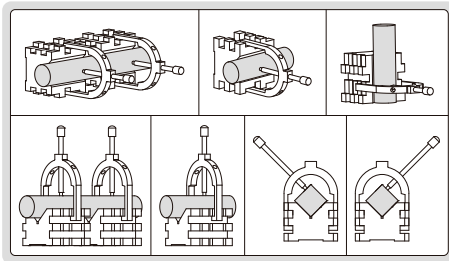
6896-10

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)

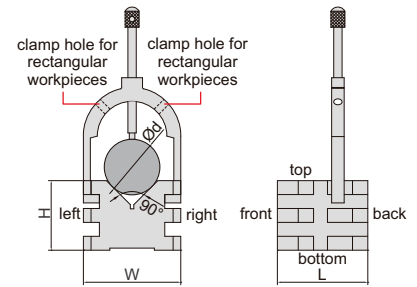


Code	Size (LxWxH)	Range of shafts (Ød)	Parallelism of both V grooves to top and bottom sides	Squareness of both V grooves to front and back sides	Height difference of a matched pair
6896-10	25x20x20mm	3-20mm	3µm	3µm	3µm
6896-11	50x40x40mm	5-30mm	5µm	5µm	5µm
6896-12	80x63x63mm	7-63mm	5µm	5µm	5µm
6896-13	100x80x80mm	7-80mm	5µm	5µm	5µm
6896-14	70x140x140mm	9-140mm	5µm	5µm	5µm



SIDE LIE-DOWN
USE IS POSSIBLE

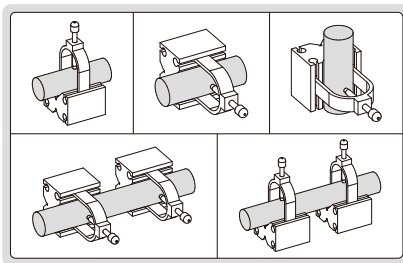
V-BLOCK SET



6802-1

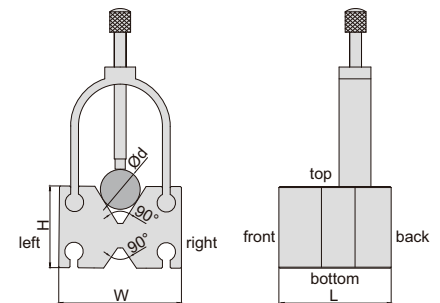
- Hold cylindrical or rectangular workpieces for inspection and machining
- Two V-blocks per set
- Made of alloy steel
- Hardened to HRC60±2
- Applicable for cylinder with diameter (Ød): 5-50mm
- Applicable for rectangular workpieces with thickness: ≤35mm

Code	Size (LxWxH)	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	65x70x50mm	5µm	5µm	5µm



SIDE LIE-DOWN
USE IS POSSIBLE

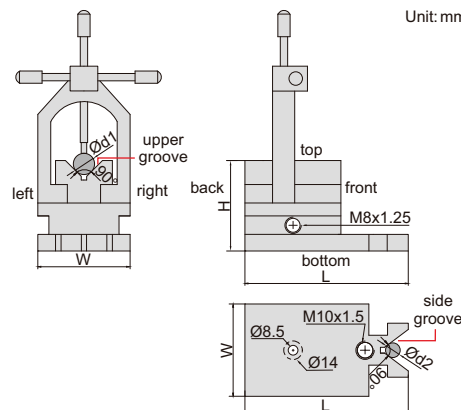
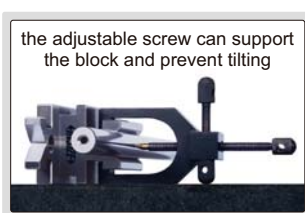
V-BLOCK SETS



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 (LxWxH)	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	55x60x40mm	4-35mm	5µm	5µm	5µm
6803-2	65x70x45mm	4-47mm	5µm	5µm	5µm



Unit: mm

V-BLOCK

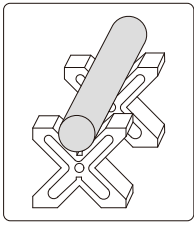


6804-M2

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

Code	Size (LxWxH)	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	90x48x48mm	5-33mm	5µm	5µm	5µm

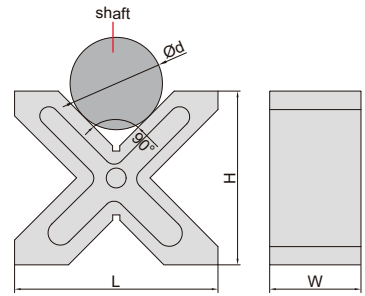
V-BLOCK SETS



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

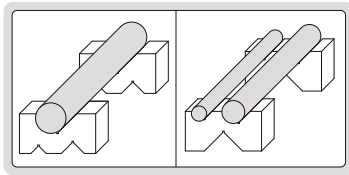


6805-2



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

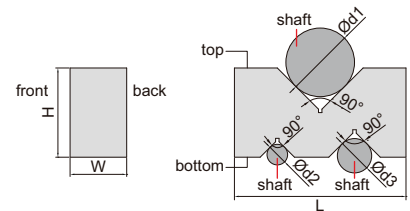
V-BLOCK SETS



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



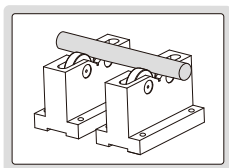
6887-3



Code	Size (LxWxH)	Range of shafts (Ød1)	Range of shafts (Ød2)	Range of shafts (Ød3)
6887-1	50x19x24mm	3-32mm	3-16mm	3-22mm
6887-2	75x24x35mm	3-50mm	3-20mm	3-32mm
6887-3	100x33x52mm	3-68mm	3-26mm	3-40mm
6887-4	125x44x69mm	3-87mm	3-34mm	3-50mm

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

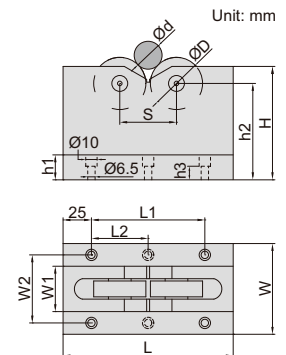
ROLLER BEARING V-BLOCK SETS



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



6888-1

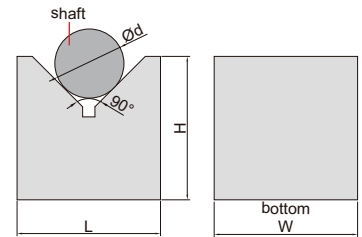
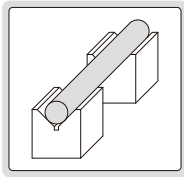


Code	Size (LxWxH)	Code of bearings	Diameter of bearings (ØD)	Range of shafts (Ød)	Load capacity
6888-1	150x60x100mm	16004 ZZ	42mm	25-70mm	500kg
6888-2	150x80x100mm	6303 ZZ	47mm	5-55mm	1000kg
6888-3	230x100x150mm	6306 ZZ	72mm	70-200mm	1000kg

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

(mm)

GRANITE V-BLOCK SETS



- Two V-blocks per set

6897-1

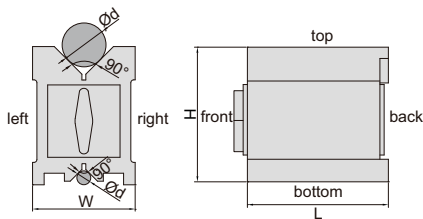
Code	Size (LxWxH)	Range of shafts (Ød)	Parallelism of V groove to bottom	Height difference of a matchet pair
6897-1	70x50x70mm	6-75mm	4µm	5µm
6897-2	100x50x70mm	6-84mm	4µm	5µm

MAGNETIC V-BLOCKS (PROFESSIONAL TYPE)

HARDENED SURFACES

HIGH PRECISION

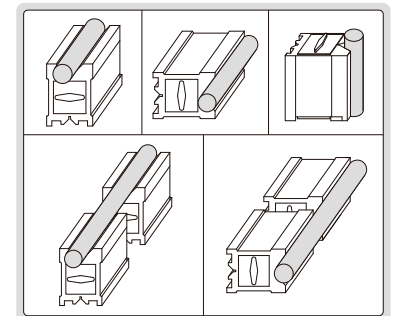
STRONG MAGNETIC FORCE



6889-11



6889-1



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

Individual

Code	Size (LxWxH)	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	75x56x75mm	5-40mm	85kgf	5µm	5µm
6889-22	100x70x95mm	5-65mm	150kgf	5µm	5µm
6889-33	150x75x100mm	5-70mm	190kgf	6µm	6µm
6889-55	160x125x130mm	5-140mm	220kgf	12µm	12µm
6889-44	200x125x150mm	10-140mm	400kgf	12µm	12µm

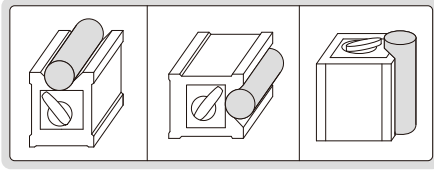
Matched pair

Code	Size (LxWxH)	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	75x56x75mm	5-40mm	85kgf	5µm	5µm	5µm
6889-2	100x70x95mm	5-65mm	150kgf	5µm	5µm	5µm
6889-3	150x75x100mm	5-70mm	190kgf	6µm	6µm	6µm
6889-5	160x125x130mm	5-140mm	220kgf	12µm	12µm	12µm
6889-4	200x125x150mm	10-140mm	400kgf	12µm	12µm	12µm

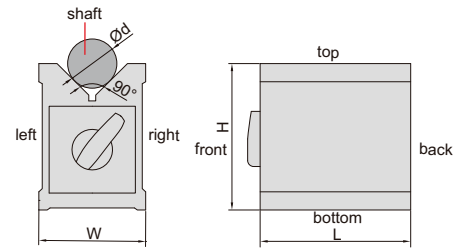
MAGNETIC V-BLOCK (ECONOMIC TYPE)

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

ATTENTION: NOT HARDENED



6890-702



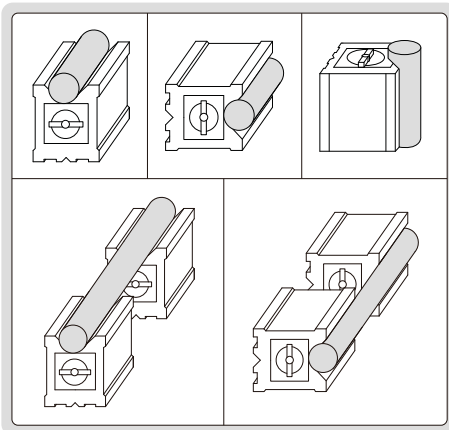
- Hold cylindrical workpieces for inspection and machining
- Supplied in single piece
- Not hardened
- Not suitable for steel or iron surfaces, otherwise the magnetic force will be reduced

Code	Size (LxWxH)	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	70x60x73mm	6-44mm	56kgf	10µm	10µm

MAGNETIC V-BLOCKS (ECONOMIC TYPE)

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

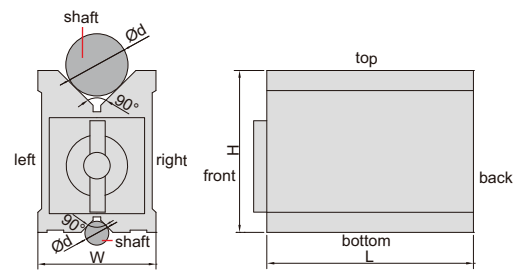
ATTENTION: NOT HARDENED



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 (LxWxH)	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	80x70x95mm	6-67mm	64kgf	10µm	10µm
6801-1202	100x70x95mm	6-67mm	80kgf	10µm	10µm
6801-1203	120x70x95mm	6-67mm	96kgf	10µm	10µm

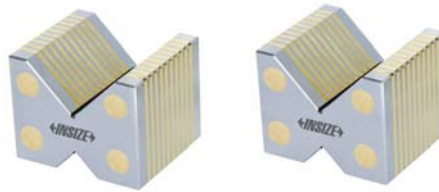
Matched pair

Code	Size (LxWxH)	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	80x70x95mm	6-67mm	64kgf	10µm	10µm	10µm
6801-2	100x70x95mm	6-67mm	80kgf	10µm	10µm	10µm
6801-3	120x70x95mm	6-67mm	96kgf	10µm	10µm	10µm

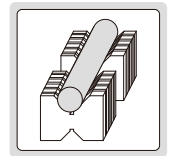
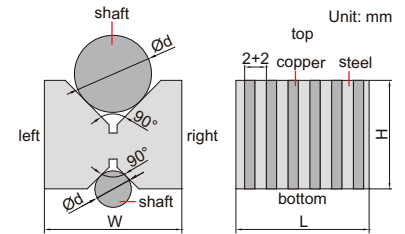
ATTENTION: NOT HARDENED, DO NOT ROTATE WORKPIECES ON V-BLOCKS

MAGNETIC INDUCTION V-BLOCK SET

- 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



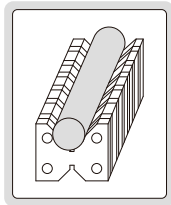
6878-1



Code	Size (LxWxH)	Range of shafts (Ød)	Pole pitch	Parallelism of both V grooves to top and bottom sides	Height difference of a matched pair
6878-1	49x58x46mm	5-56mm	2+2mm	10µm	10µm

MAGNETIC INDUCTION V-BLOCK

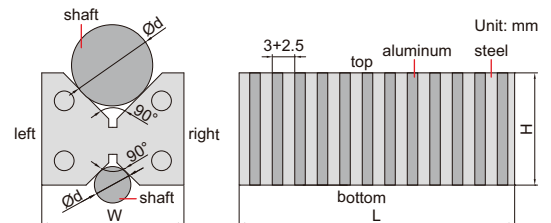
ATTENTION: NOT HARDENED, DO NOT ROTATE WORKPIECES ON V-BLOCKS



- 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



6892-1

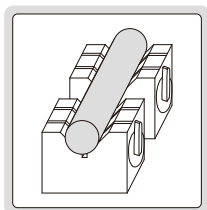


Code	Size (LxWxH)	Range of shafts (Ød)	Pole pitch	Parallelism of both V grooves to top and bottom sides
6892-1	110x60x48mm	6-50mm	3+2.5mm	10µm

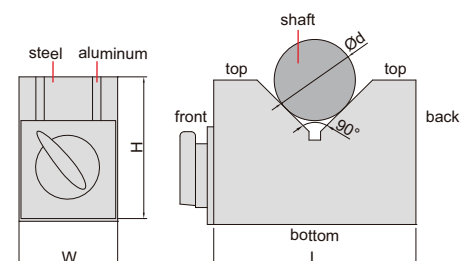
ATTENTION: LOW MAGNETIC FORCE

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

MAGNETIC V-BLOCK SETS



6891-1



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

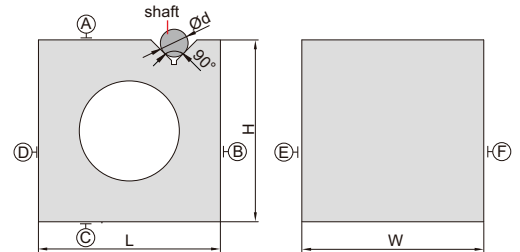
Code	Size (LxWxH)	Range of shafts (Ød)	Magnetic force	Parallelism of V groove to bottom and back sides	Height difference of a matched pair
6891-1	70x40x50mm	6-46mm	8kgf	10µm	10µm
6891-3	150x50x100mm	6-125mm	14kgf	10µm	10µm

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

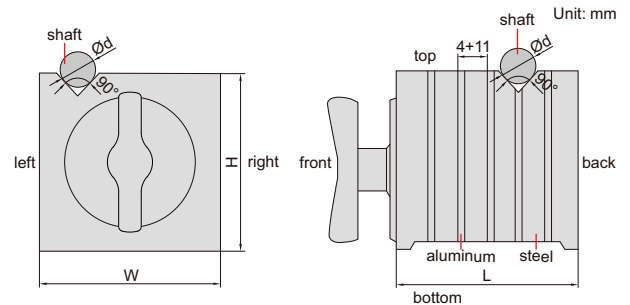
MAGNETIC SQUARE WITH V GROOVE

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



6539-100

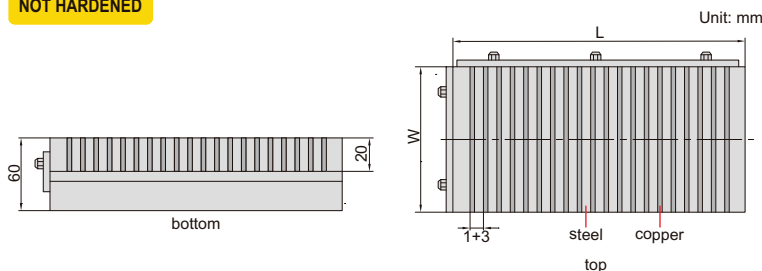
- Hold flat and cylindrical workpieces for inspection and machining
- Magnetic force on top, left, right and V grooves
- Parallelism and squareness of top, bottom, left, right and back: 20μm
- Parallelism and squareness of V grooves to top, bottom, left, right and back: 20μm



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	5-35mm

PERMANENT MAGNETIC CHUCK

ATTENTION: NOT HARDENED

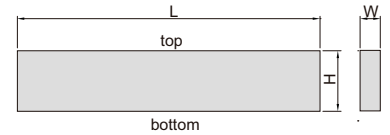


6537-400

Code	Table size (L×W)	Magnetic force	Pole pitch	Parallelism of top to bottom
6537-400	400×200mm	12kgf/cm ²	1+3mm	0.005mm/100mm

PARALLEL SETS

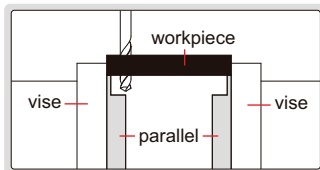
- Parallelism between top and bottom: 5µm
- Height difference of a matched pair: 5µm
- Made of alloy tool steel
- Hardened to HRC55-60



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

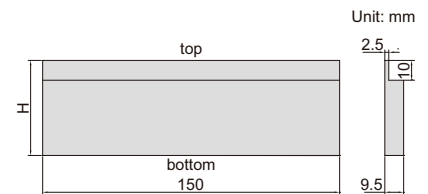
PARALLEL SET



- 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

Unit: mm

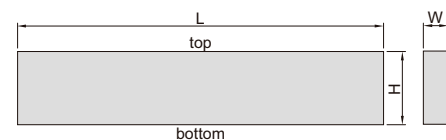
PARALLELS

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



6512-2210A



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

To be continued

Continued from previous page

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=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

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

L=160mm

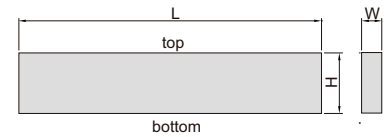
Code	H×W	Parallelism between top and bottom	Height difference of a matched pair
6512-104A	10×4mm	5μm	5μm
6512-144A	14×4mm	5μm	5μm
6512-184A	18×4mm	5μm	5μm
6512-224A	22×4mm	5μm	5μm
6512-264A	26×4mm	5μm	5μm
6512-304A	30×4mm	5μm	5μm
6512-344A	34×4mm	5μm	5μm
6512-384A	38×4mm	5μm	5μm
6512-424A	42×4mm	5μm	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

PARALLEL SETS



6511-20

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



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

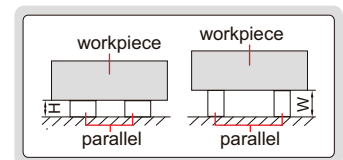
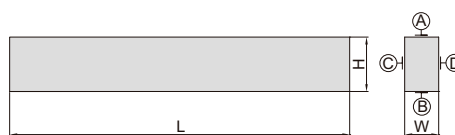
* Parallelism between top and bottom and height difference of a matched pair of 5×2mm, 6×3mm, 7×4mm, 8×5mm and 9×6mm in 6511-20 is 7µm

GRANITE PARALLEL SET



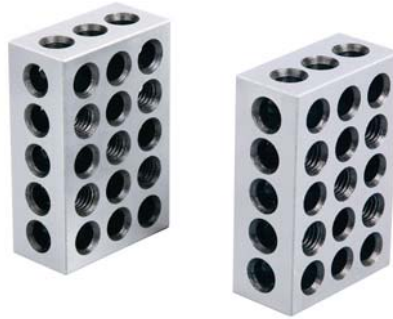
4143-250

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



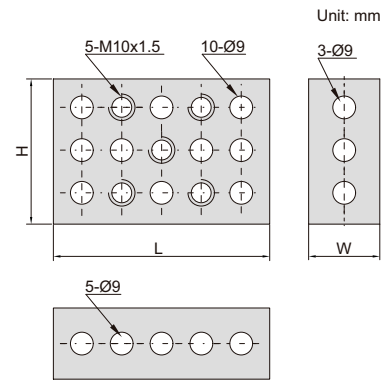
Code	Size (LxWxH)	Parallelism between A and B	Parallelism between C and D	Height difference of a matched pair
4143-250	250x25x40mm	3µm	3µm	3µm

PARALLEL/SQUARE SET



6531-25

screws and wrench are included

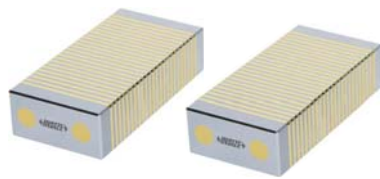


- Pairs of matched blocks for positioning and set-up
- Screws and wrench are included
- Hardness HRC 55-62

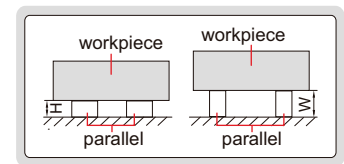
Code	Size (L×H×W)	Size accuracy	Squareness	Parallelism	Height difference of a matched pair
6531-25	75×50×25mm	10µm	7µm/25mm	10µm	10µm

MAGNETIC INDUCTION PARALLEL SET

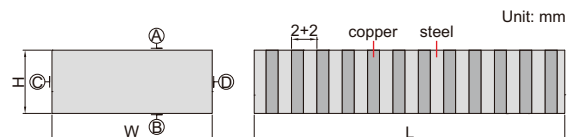
ATTENTION:
NOT HARDENED



6879-1



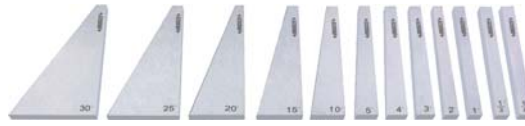
- To be used on magnetic chucks
- Two parallels per set
- Hardness HRB70
- Copper magnetic strips



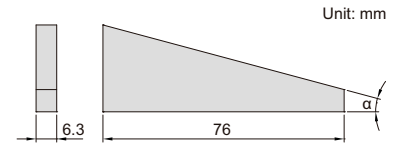
Code	Size (L×W×H)	Pole pitch	Parallelism between A and B	Parallelism between C and D	Height difference of a matched pair
6879-1	100x50x25mm	2+2mm	10µm	10µm	10µm

ANGLE PLATE SETS

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



4006-12



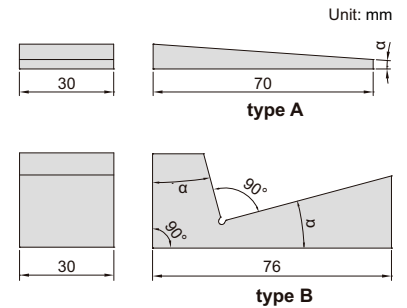
Code	Angle plates included	Angle α	Accuracy
4006-10	10 pcs	1°, 2°, 3°, 4°, 5°, 10°, 15°, 20°, 25°, 30°	±20 seconds
4006-12	12 pcs	1/4°, 1/2°, 1°, 2°, 3°, 4°, 5°, 10°, 15°, 20°, 25°, 30°	±20 seconds

ANGLE PLATE SET

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



4004-9



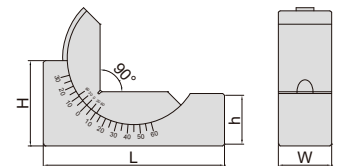
Code	Angle plates included	Angle α	Type	Accuracy
4004-9	9 pcs	1/2°, 1°, 2°, 3°, 4°, 5°	type A	±30 seconds
		10°, 15°, 30°	type B	±50 seconds

ADJUSTABLE ANGLE BLOCKS

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

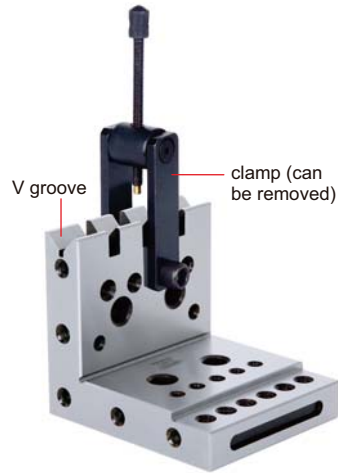


6535-30



Code	Size (LxWxH)	h	Adjustable angle	Graduation of angle
6535-25	75x25x36mm	25mm	30°~0°~60°	10 minutes
6535-30	102x30x49mm	30mm	30°~0°~60°	10 minutes

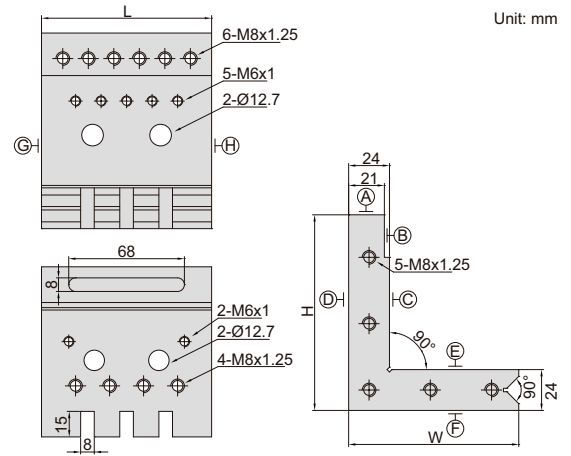
RIGHT ANGLE PLATE



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 (LxWxH)
6547-1	100x100x115mm



RIGHT ANGLE PLATE

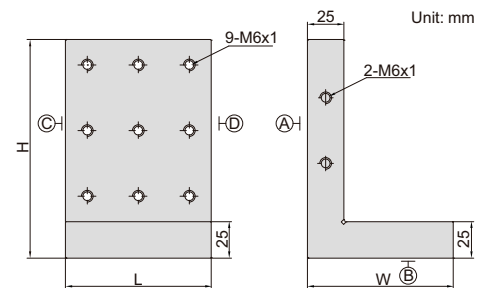
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6548-1

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

Code	Size (LxWxH)
6548-1	100x100x150mm



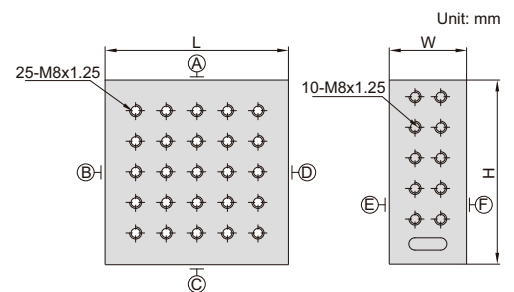
RIGHT ANGLE PLATE



6549-1

- 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

Code	Size (LxWxH)
6549-1	150x63x150mm

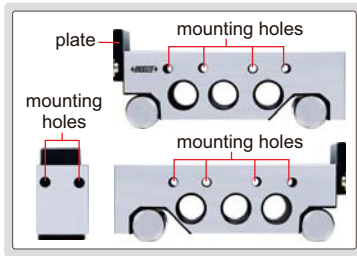


CAN BE CUSTOMIZED

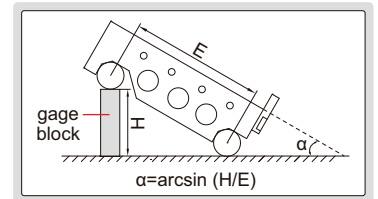
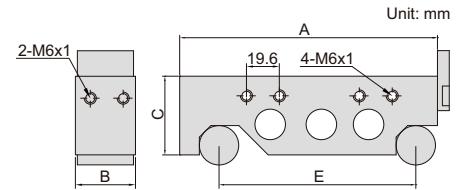
HIGH PRECISION

SINE BARS

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



4155-100



- Made of alloy tool steel

Code	Roller distance (E)	Table size (AxB)	C	Accuracy of α at 30°
4155-100	100mm	130x30mm	40mm	±5 seconds
4155-200	200mm	230x30mm	40mm	±5 seconds
4155-300	300mm	345x40mm	50mm	±8 seconds

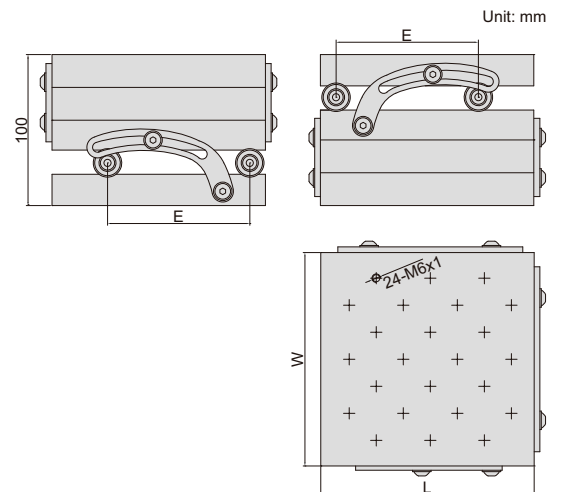
COMPOUND SINE TABLE



6536-100

- Accuracy of angle: ±15 seconds
- Made of alloy tool steel
- Hardness HRC58-60

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



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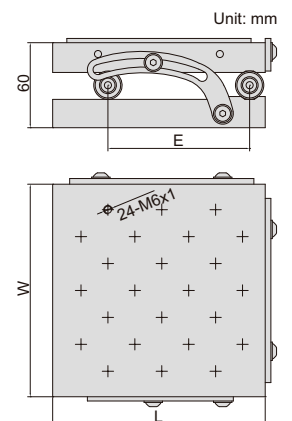
SINE TABLE



6527-100

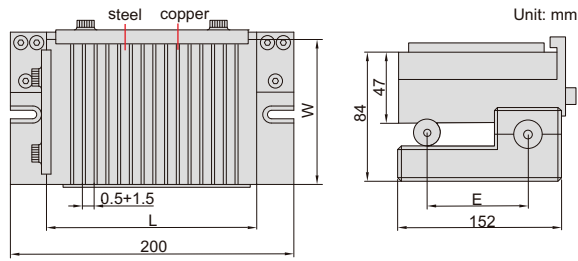
- Accuracy of angle: ±15 seconds
- Made of alloy tool steel
- Hardness HRC58-60

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



MAGNETIC SINE TABLE

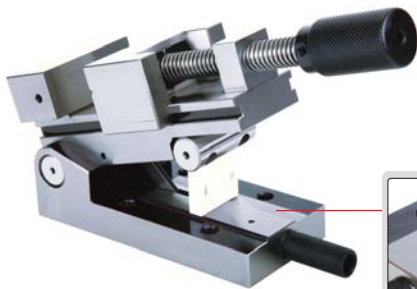
**ATTENTION:
NOT HARDENED**



6538-100

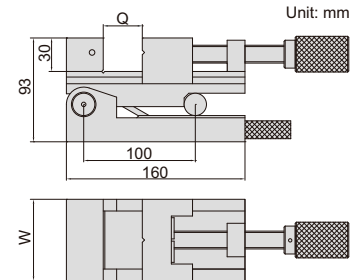
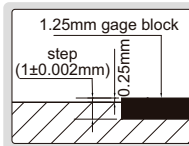
Code	Table size (L×W)	Roller distance (E)	Adjustable angle	Accuracy of angle
6538-100	150×150mm	100mm	0-60°	±15 seconds

PRECISION SINE VISE



6522-80

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



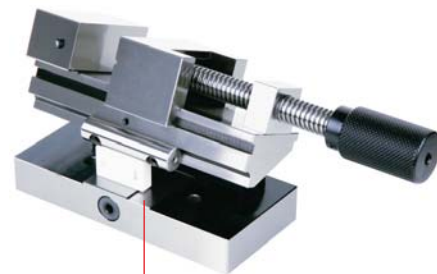
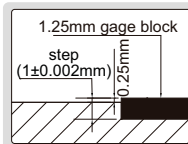
- Parallelism: $3\mu\text{m}/100\text{mm}$
- Squareness: $5\mu\text{m}/100\text{mm}$
- Accuracy of angle: ± 15 seconds
- Made of SKS tool steel, subzero treatment
- Hardness HRC58-60

Code	Jaw opening (Q)	Jaw width (W)	Adjustable angle
6522-80	0-80mm	73mm	0-46°

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PRECISION SINE VISE

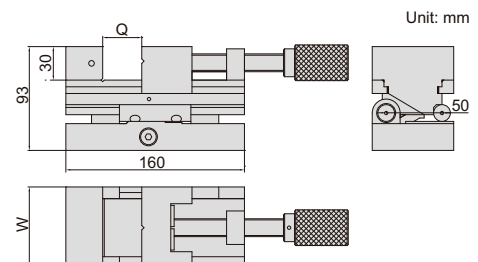
there is a 1mm step (accuracy $\pm 0.002\text{mm}$). gage blocks smaller than 0.5mm are not available. if small gage blocks are needed (for example, 0.25mm), a gage block 1.25mm can be used in order to make $1.25\text{mm} - 1\text{mm} = 0.25\text{mm}$



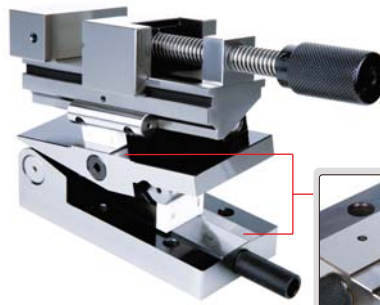
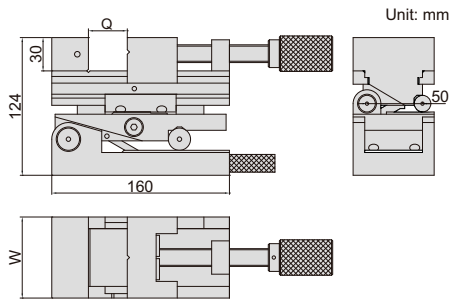
6523-80

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

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



PRECISION COMPOUND SINE VISE



6524-80

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

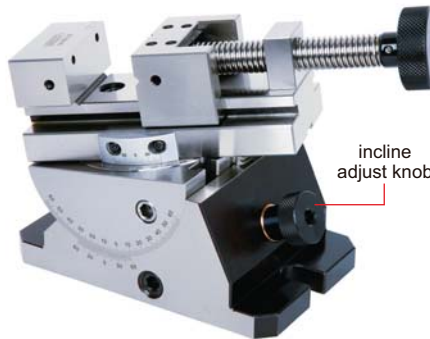


- Parallelism: $3\mu\text{m}/100\text{mm}$
- Squareness: $5\mu\text{m}/100\text{mm}$
- Accuracy of angle: ± 15 seconds
- Made of SKS tool steel, subzero treatment
- Hardness HRC58-60

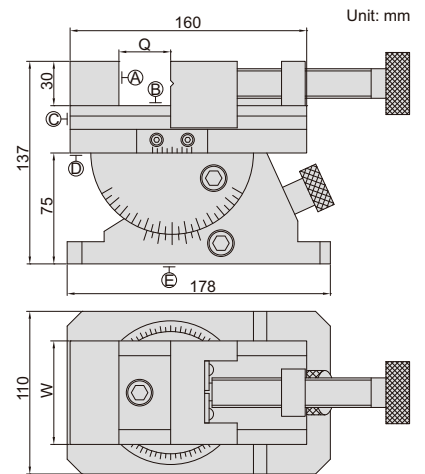
Code	Jaw opening (Q)	Jaw width (W)	Adjustable angle
6524-80	0-80mm	73mm	0-46°

PRECISION UNIVERSAL VISE

- Horizontal rotary: range 360° , graduation 0.05°
- Vertical incline: range 45° , graduation 0.05°
- 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° : $10\mu\text{m}/100\text{mm}$
- Made of tool steel
- Hardness HRC56-58



6521-80



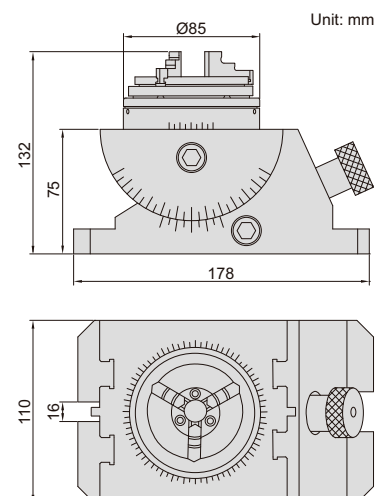
Code	Jaw opening (Q)	Jaw width (W)
6521-80	0-80mm	70mm

PRECISION UNIVERSAL VISE WITH CHUCK

- Horizontal rotary: range 360° , graduation 0.05°
- Vertical incline: range 45° , graduation 0.05°
- 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	$\varnothing 0.8\text{--}\varnothing 63\text{mm}$	$\varnothing 23\text{--}\varnothing 58\text{mm}$

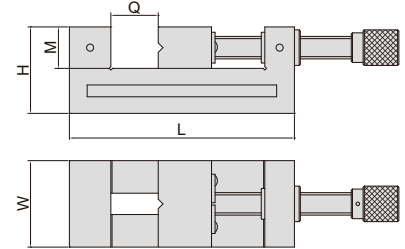
PRECISION VISES

- Parallelism: 8µm/100mm
- Squareness: 10µm/100mm
- Made of alloy steel
- Hardness HRC56-58



6520-73A

Code	Jaw opening (Q)	Jaw width (W)	L	H	M
6520-63A	0-63mm	48mm	156mm	52mm	25mm
6520-73A	0-73mm	63mm	176mm	63mm	30mm
6520-76A	0-76mm	73mm	190mm	73mm	35mm
6520-115A	0-115mm	88mm	250mm	80mm	42mm
6520-120A	0-120mm	98mm	255mm	82mm	40mm
6520-152A	0-152mm	125mm	310mm	100mm	50mm
6520-165A	0-165mm	150mm	325mm	199mm	50mm



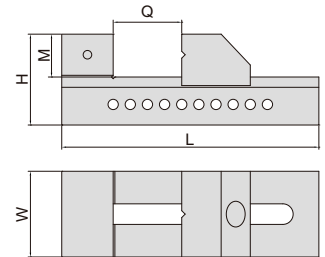
PRECISION VISES

- Parallelism: 3µm/100mm
- Squareness: 5µm/100mm
- Made of alloy steel
- Hardness HRC56-58



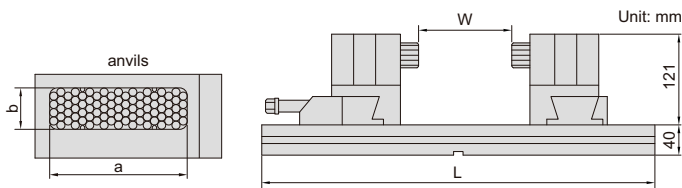
6526-80

Code	Jaw opening (Q)	Jaw width (W)	Overall length (L)	H	M
6526-80	0-80mm	50mm	150mm	53mm	25mm
6526-100	0-100mm	73mm	190mm	70mm	35mm

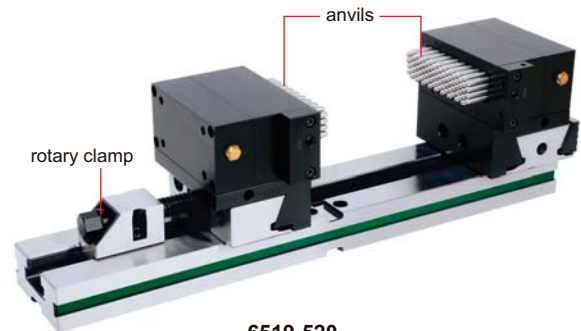


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ANVIL VISES



- 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



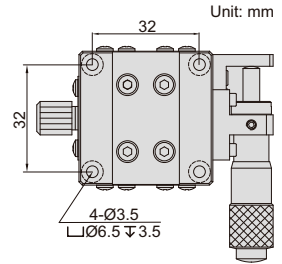
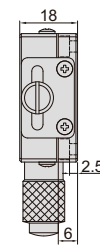
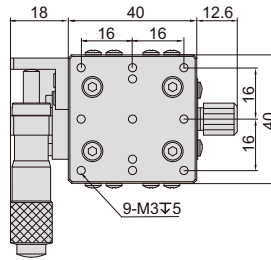
Code	Guide length (L)	Clamp range (W)	Clamp force *	Weight	a	b
6519-520	520mm	0-190mm	6500N	22.5kg	100mm	30mm
6519-680	680mm	0-320mm	8000N	39.5kg	120mm	36mm

* When all anvils contact the workpieces

X-AXIS STAGES



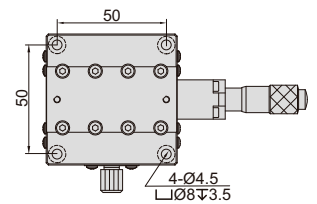
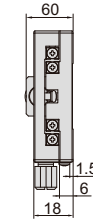
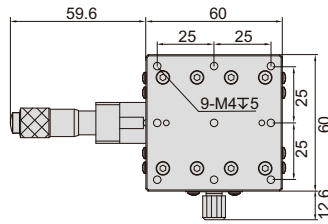
6582-401



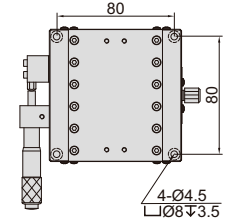
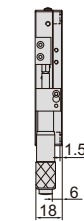
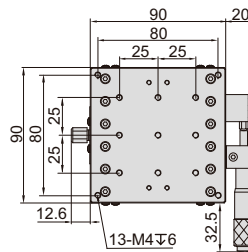
Unit: mm



6582-602



6582-903



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

SPECIFICATION (micrometer on the left)

Code	X-axis displacement	Parallelism of top to bottom surface	Micrometer graduation	Micrometer accuracy	Maximum load	Micrometer location	Stage size	Weight
6582-401	\pm 6.5mm	0.02mm	0.01mm	0.01mm	29.4N (3kgf)	left	40x40mm	0.14kg
6582-601	\pm 6.5mm	0.03mm	0.01mm	0.01mm	49N (5kgf)	left	60x60mm	0.24kg
6582-901	\pm 12.5mm	0.03mm	0.01mm	0.02mm	93.1N (9.5kgf)	left	90x90mm	0.47kg
6582-1251	\pm 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	\pm 6.5mm	0.02mm	0.01mm	0.01mm	29.4N (3kgf)	middle	40x40mm	0.14kg
6582-602	\pm 6.5mm	0.03mm	0.01mm	0.01mm	49N (5kgf)	middle	60x60mm	0.24kg
6582-902	\pm 12.5mm	0.03mm	0.01mm	0.02mm	93.1N (9.5kgf)	middle	90x90mm	0.47kg
6582-1252	\pm 12.5mm	0.04mm	0.01mm	0.02mm	180N (18.4kgf)	middle	125x125mm	1.40kg

SPECIFICATION (micrometer on the right)

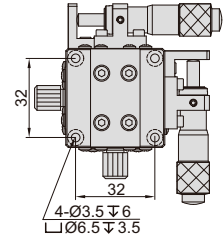
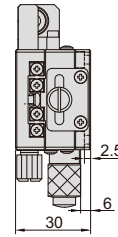
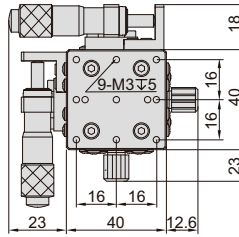
Code	X-axis displacement	Parallelism of top to bottom surface	Micrometer graduation	Micrometer accuracy	Maximum load	Micrometer location	Stage size	Weight
6582-403	\pm 6.5mm	0.02mm	0.01mm	0.01mm	29.4N (3kgf)	right	40x40mm	0.14kg
6582-603	\pm 6.5mm	0.03mm	0.01mm	0.01mm	49N (5kgf)	right	60x60mm	0.24kg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

XY-AXIS STAGES

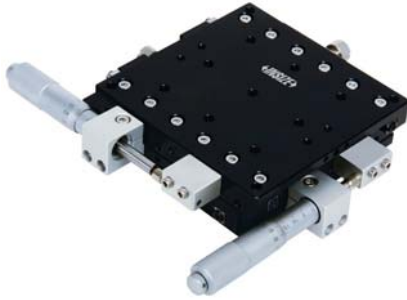
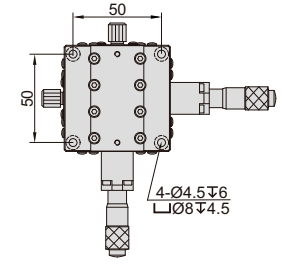
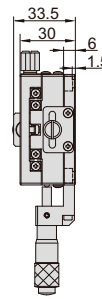
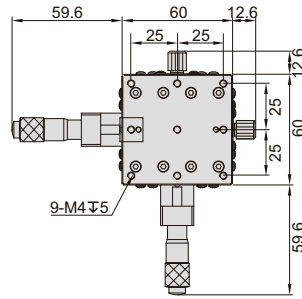
Unit: mm



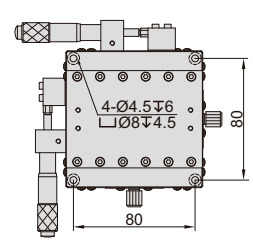
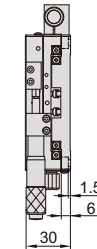
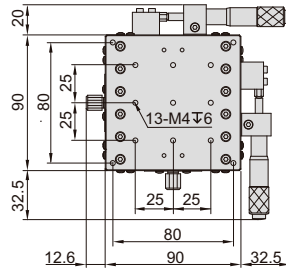
6584-401



6584-602



6584-903



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

SPECIFICATION (micrometer on the left)

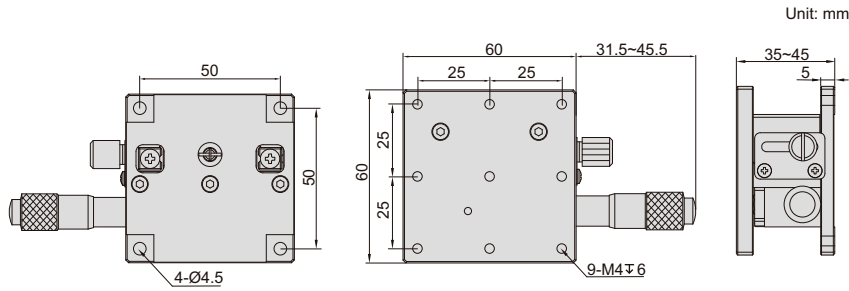
Code	XY-axis displacement	Parallelism of top to bottom surface	Micrometer graduation	Micrometer accuracy	Maximum load	Micrometer location	Stage size	Weight
6584-401	±6.5mm	0.04mm	0.01mm	0.01mm	29.4N (3kgf)	left	40x40mm	0.27kg
6584-601	±6.5mm	0.06mm	0.01mm	0.01mm	49N (5kgf)	left	60x60mm	0.48kg
6584-901	±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



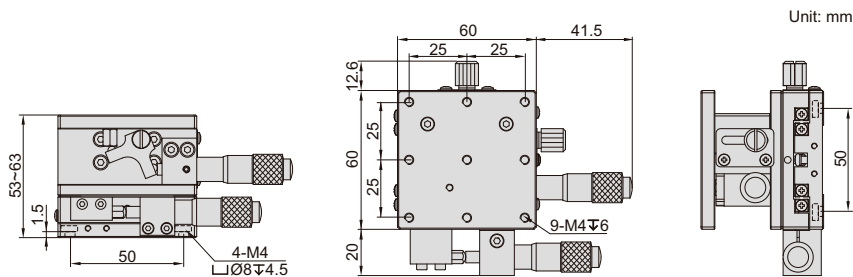
Z-AXIS STAGE CODE 6586-60



- 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



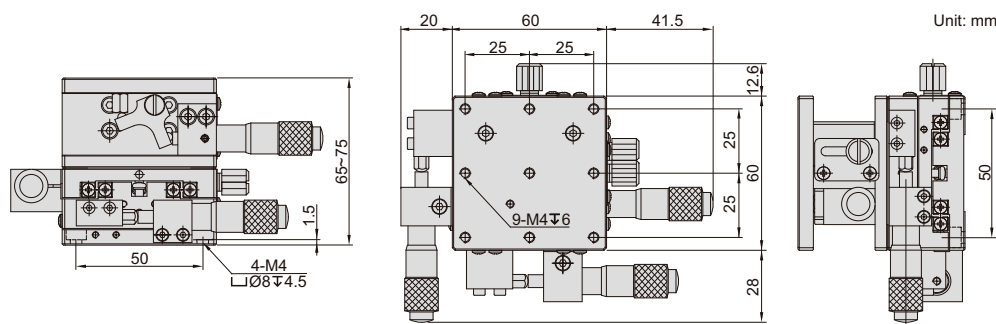
XZ-AXIS STAGE CODE 6587-60



- 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

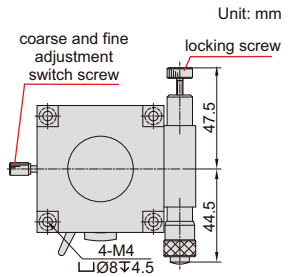
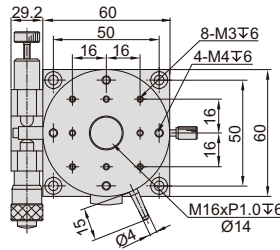
SPECIFICATION

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

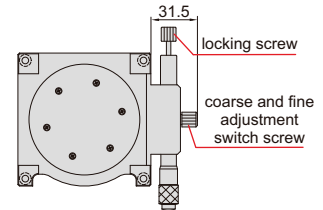
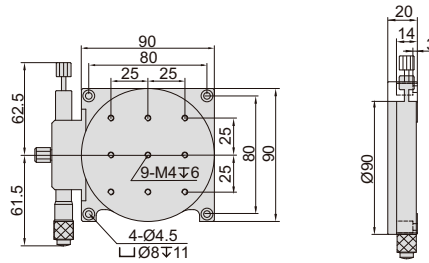
ROTARY STAGES



6583-60H



6583-90



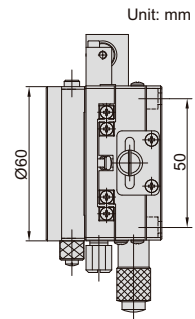
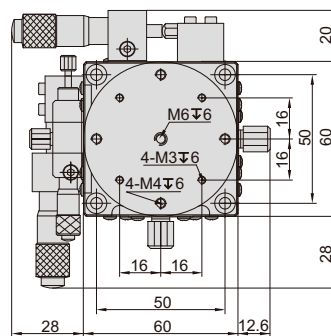
- Precise angle adjustment
- Coarse and fine adjustments
- Stages made of aluminum alloy

SPECIFICATION

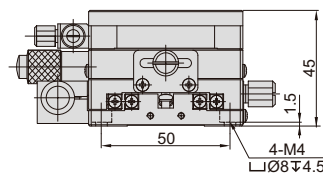
Code	Range	Parallelism of top to bottom surface	Concentricity	Rotation accuracy	Maximum load	Stage size	Weight
6583-60H	360° coarse, ±5° fine	0.03mm	0.03mm	12'	29.4N (3kgf)	Ø60mm	0.30kg
6583-90	360° coarse, ±5° fine	0.04mm	0.03mm	5'	29.4N (3kgf)	Ø90mm	0.50kg

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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



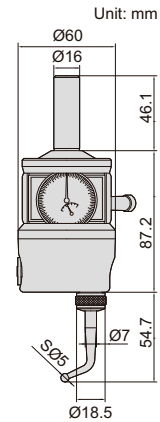
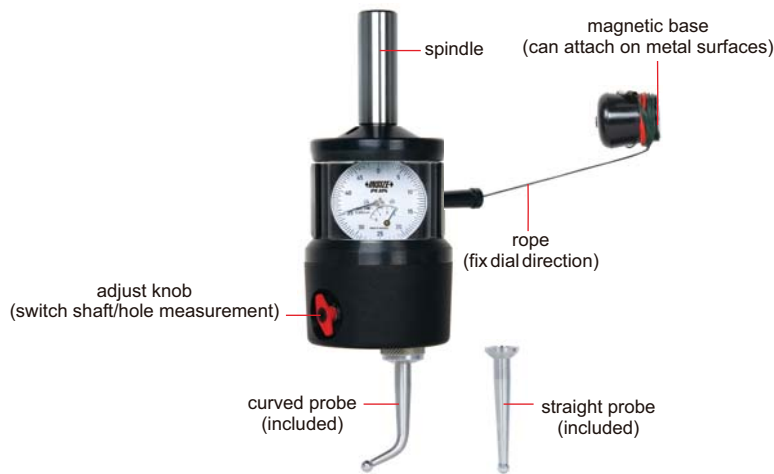
SPECIFICATION

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'	29.4N (3kgf)	60x60mm	0.64kg

READING SHOWS MOVEMENT VALUE OF PROBE

CENTERING INDICATOR

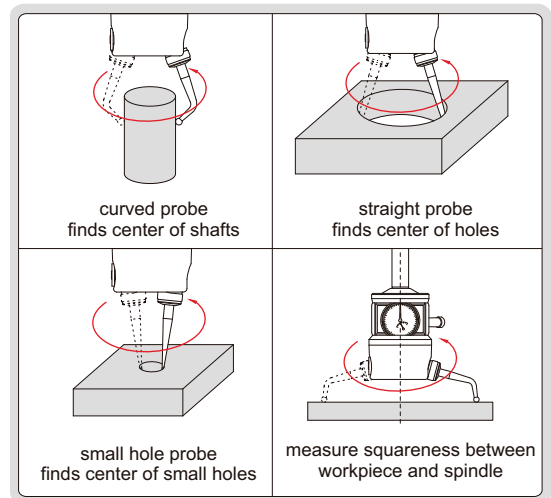
INSIZE PLUS
MADE IN EUROPE



2847-3

- 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

application



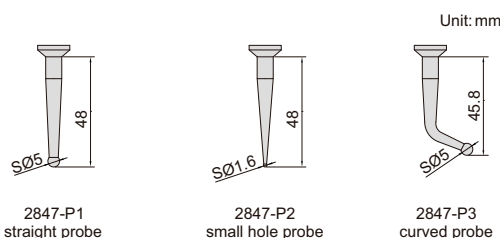
Code	Graduation	Travel
2847-3	0.005mm	2.5mm

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	
	squareness	Ø120-160mm	40mm	
curved probe (included)	shaft center	Ø0-125mm	55mm	0.005mm
	squareness	Ø120-160mm	40mm	

PROBE (optional)

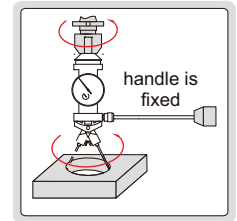
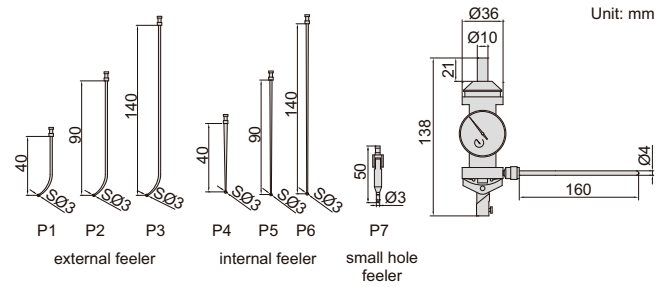
Code	Description
2847-P1	straight probe
2847-P2	small hole probe
2847-P3	curved probe



CENTERING INDICATOR

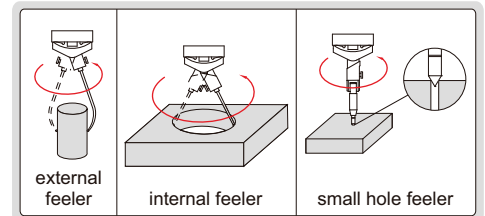


2385-3



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

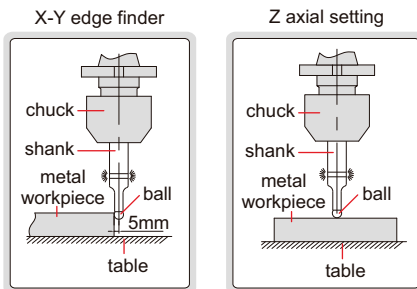
Feeler	Measuring diameter	Accuracy
P1	Ø0-60mm	0.015mm
P2	Ø0-160mm	0.02mm
P3	Ø0-250mm	0.03mm
P4	Ø3.2-80mm	0.015mm
P5	Ø3.2-180mm	0.02mm
P6	Ø3.2-280mm	0.03mm
P7	Ø0-2.8mm	0.015mm



Code
2385-3

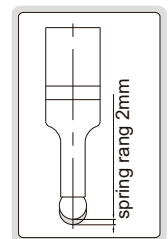
3D ELECTRONIC EDGE FINDERS

INSIZE PLUS
MADE IN EUROPE



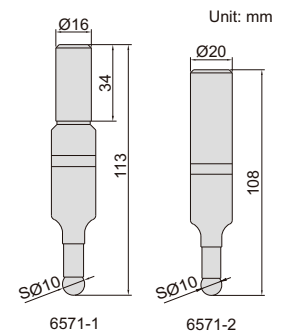
6571-1

6571-2



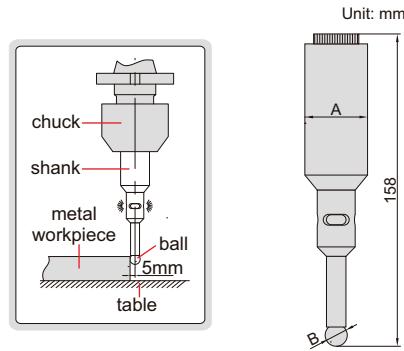
- The shank is electrically conducted to the metal workpiece through the chuck and table. The LED lights up, when the ball touches the workpiece
- Not suitable for rotary use
- Hardened contact ball

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

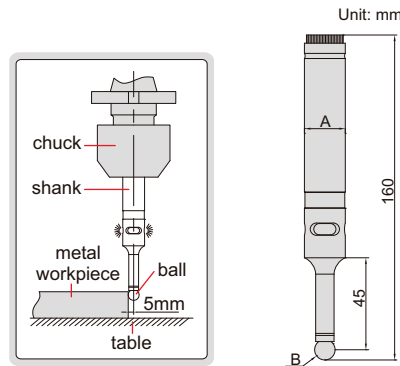
- The shank is electrically conducted to the metal workpiece through the chuck and table. The LED lights up and the beeper sounds (only for **6572-2**), when the ball touches the workpiece
- Not suitable for rotary use
- Hardened shank and contact ball



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

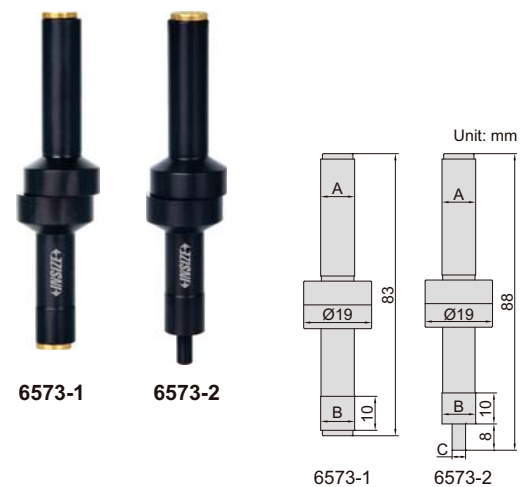
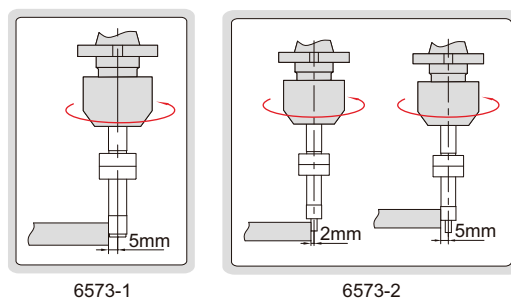
- The shank is electrically conducted to the metal workpiece through the chuck and table. The LED lights up and the beeper sounds (only for **6566-3**), when the ball touches the workpiece
- Not suitable for rotary use
- Hardened shank and contact ball



Code	Shank (A)	Contact ball (B)	Accuracy	Beeper	Battery
6566-2	Ø20mm	SØ10mm	5µm	without	23A, 12V×1 pc
6566-3	Ø20mm	SØ10mm	5µm	with	23A, 12V×1 pc

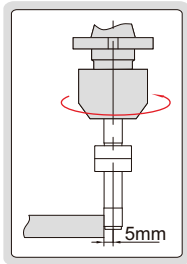
NON-MAGNETIC EDGE FINDERS

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

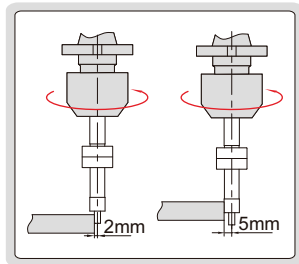


Code	Shank (A)	Contact point (B)	Contact point (C)	Accuracy
6573-1	Ø10mm	Ø10mm	—	5µm
6573-2	Ø10mm	Ø10mm	Ø4mm	5µm

EDGE FINDERS



6562-3



6562-4

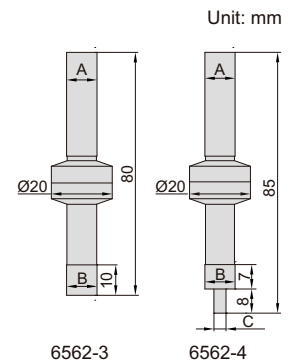


6562-3

6562-4

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

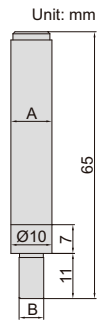
Code	Shank (A)	Contact point (B)	Contact point (C)	Accuracy
6562-3	Ø10mm	Ø10mm	—	5µm
6562-4	Ø10mm	Ø10mm	Ø4mm	5µm



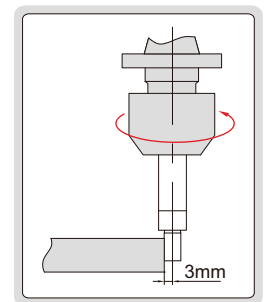
EDGE FINDER

17

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



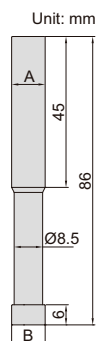
6567-1



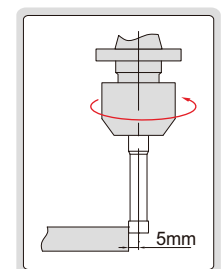
Code	Shank (A)	Contact point (B)	Accuracy
6567-1	Ø10mm	Ø6mm	8µm

CERAMIC EDGE FINDER

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



6568-1



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

IP65
WATERPROOF

SHOCK
PROOF

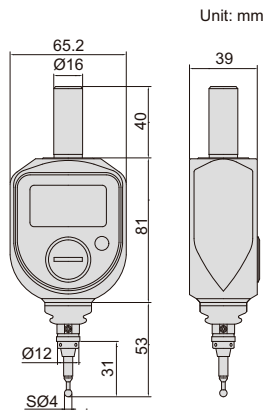
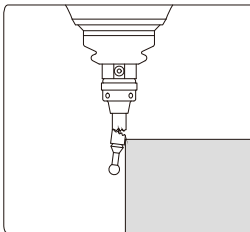
DIGITAL 3D TESTER

INSIZE PLUS
MADE IN EUROPE



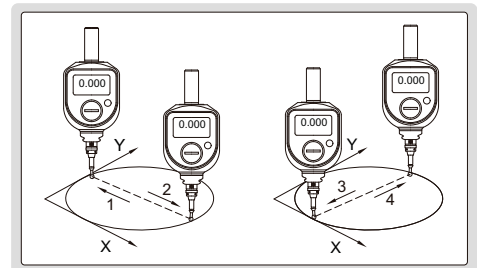
2846-3D

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

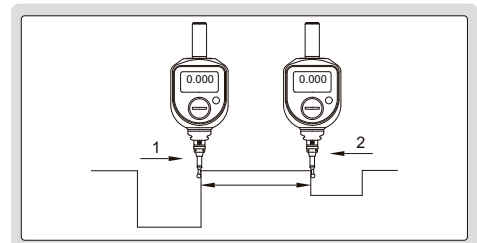


Unit: mm

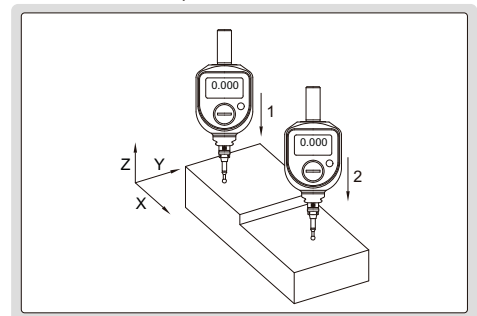
find center of holes



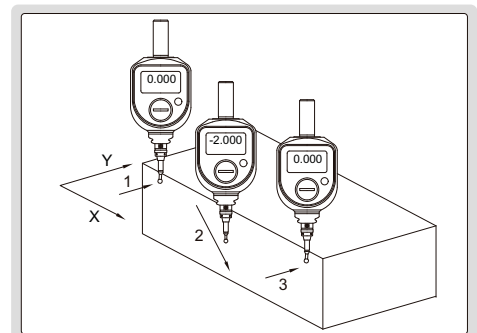
length measurement



depth measurement



position workpieces



- 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**)

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

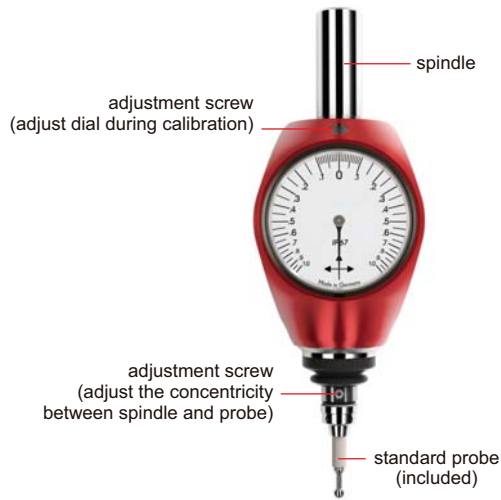
3D TESTER

INSIZE PLUS
MADE IN EUROPE

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

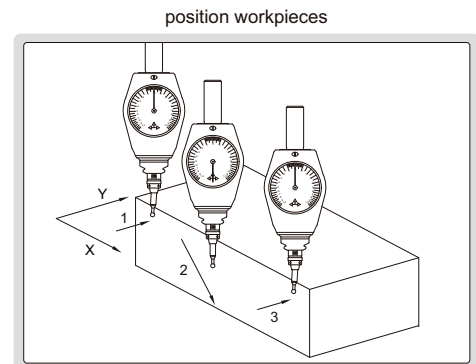
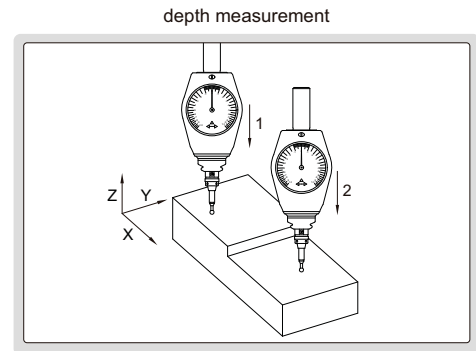
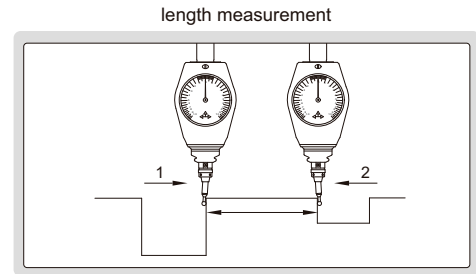
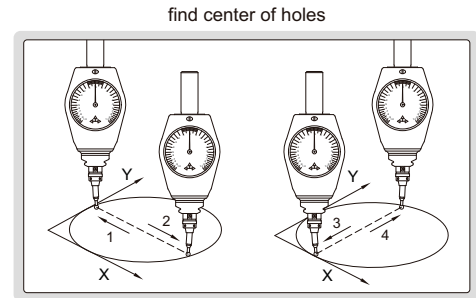
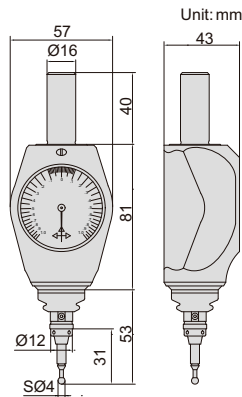
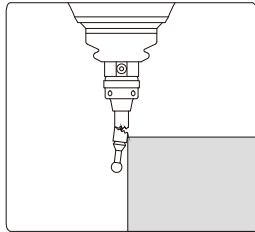
IP67
WATERPROOF

SHOCK PROOF



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

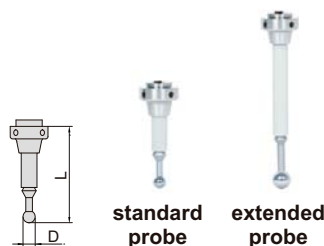


- Shockproof, IP67 dust/waterproof
- Mainly used for milling machines and CNC machine tools
 - determine coordinate point on workpieces
 - find center of holes
 - adjust and position workpieces
- Can be used to measure length and depth
- When using standard probe, reading shows movement value of probe, 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



CAN BE
CUSTOM-MADE

EDGE FINDERS FOR EDM

- 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

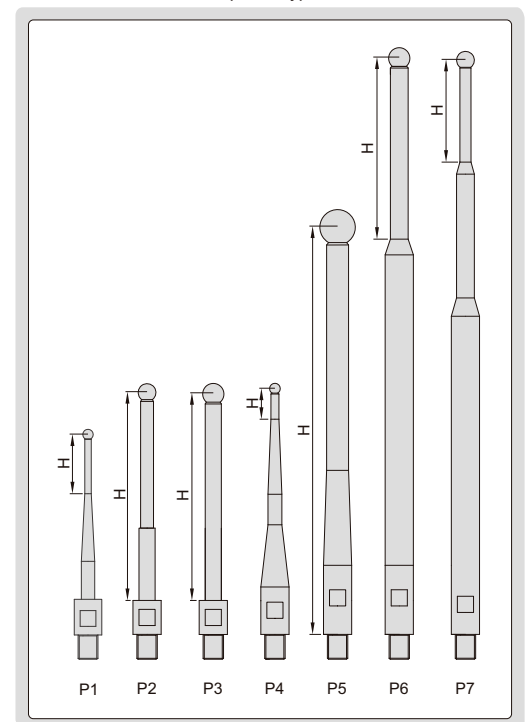
(mm)

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



6558-52

spindle type

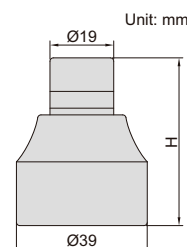


LOW TEST
FORCE

- 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

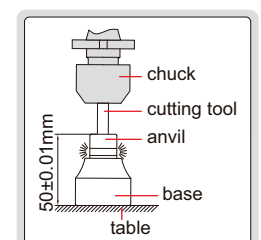
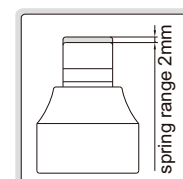


6553-50



ELECTRONIC ZERO SETTER

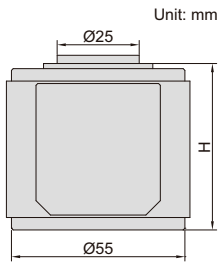
INSIZE PLUS
MADE IN EUROPE



Code	Height (H)	Accuracy	Test force
6553-50	50mm	$\pm 10\mu\text{m}$	7N (at 49mm)

DIGITAL ZERO SETTER

IP65
WATERPROOF



6557-50

set zero



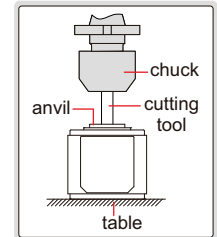
automatic backlight at zero



- 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

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

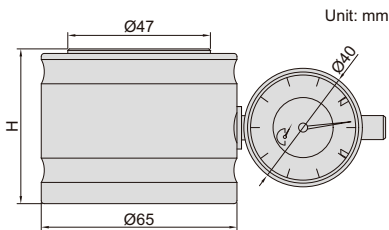
* The accuracy is ensured within Ø10mm of the center



ZERO SETTER

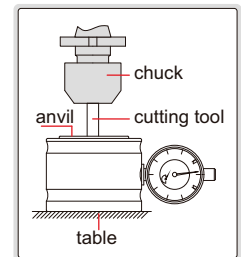
INSIZE PLUS
MADE IN EUROPE

17

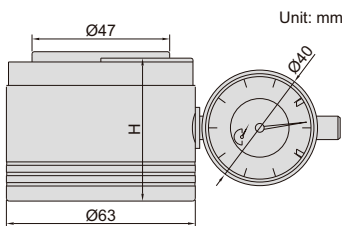


6554-50

Code	Height (H)	Accuracy	Test force
6554-50	50mm	±20µm	9N (at 50mm)

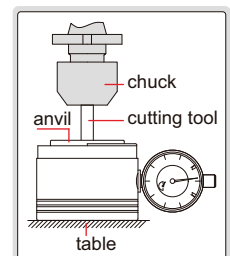
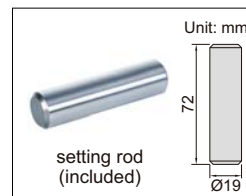


ZERO SETTER



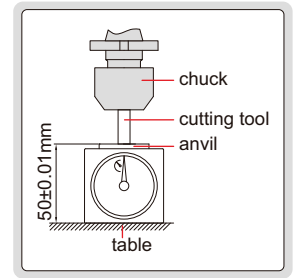
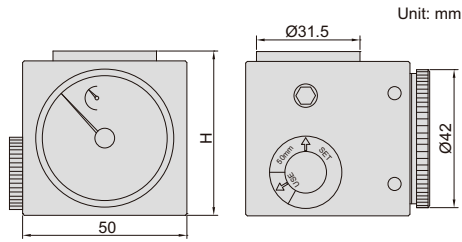
6556-50

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



ZERO SETTER

- Magnetic base

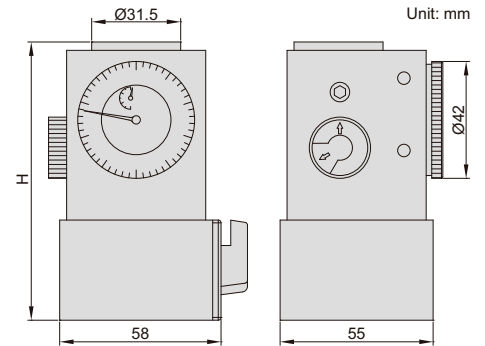
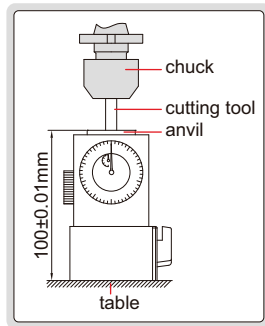


2397-502A

Code	Height (H)	Accuracy	Test force
2397-502A	50mm	±10µm	9N (at 50mm)

ZERO SETTER

- Magnetic base with on-off switch



2394-100A

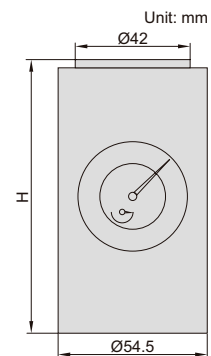
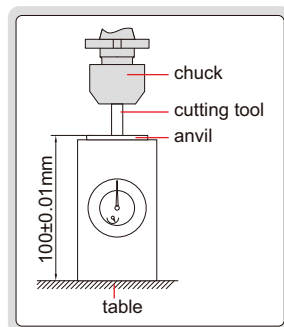
Code	Height (H)	Accuracy	Test force
2394-100A	100mm	±10µm	9N (at 100mm)

LOW TEST FORCE

LOW TEST FORCE ZERO SETTER

INSIZE PLUS
MADE IN EUROPE

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



6555-100B

Code	Height (H)	Accuracy	Test force
6555-100B	100mm	±10µm	1N (at 100mm)



Electronic Levels
Page 434-435



Digital Levels And Slope Meters
Page 436-437



Frame Levels
Page 438



Block Levels
Page 439



Digital Levels And Slope Meters
Page 440



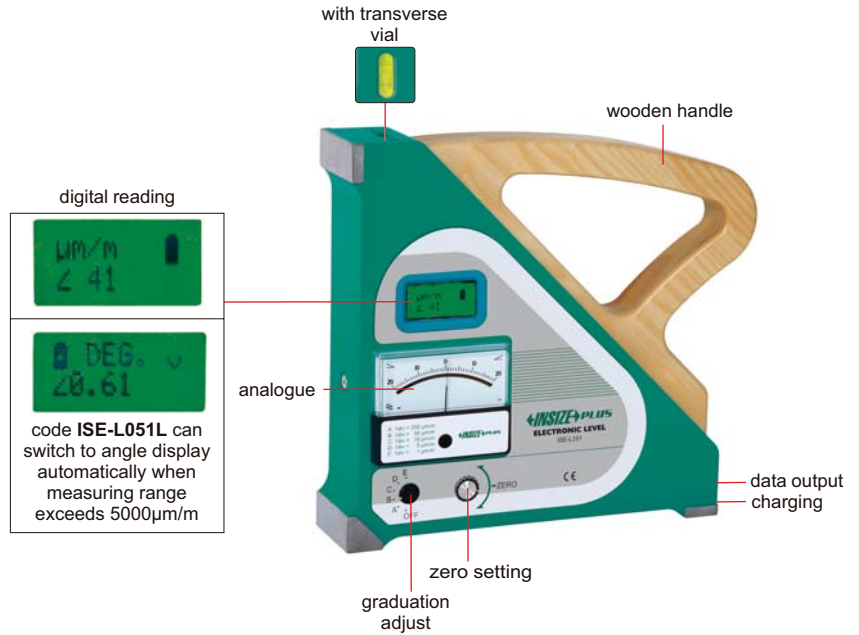
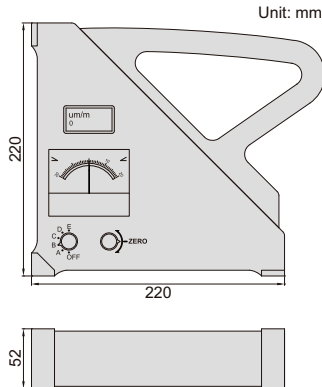
Levels
Page 440-443



Cross-line Laser Levels
Page 444



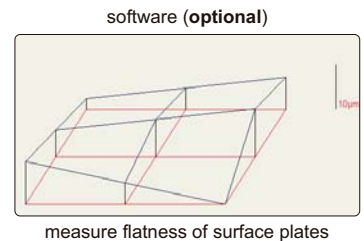
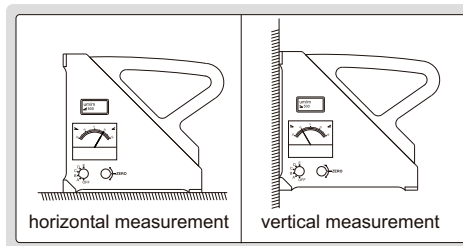
Self-leveling Rotary Lasers
Page 445



digital reading

code ISE-L051L can switch to angle display automatically when measuring range exceeds 5000µm/m

- Shockproof
- Analogue and digital reading modes


SPECIFICATION

Code	ISE-L051		ISE-L051L		
	Analogue graduation (adjustable)	250µm/m (=0.014°)	50µm/m (=10")	10µm/m (=2")	5µm/m (=1")
Analogue range	±5000µm/m	±1000µm/m	±200µm/m	±100µm/m	±20µm/m
Digital reading resolution	horizontal: 1µm/m (=0.2")		horizontal: 1µm/m (=0.2"), angle: 0.01°		
Digital reading range	horizontal: 5000µm/m		horizontal: 5000µm/m, angle: 0.3~85°		
Accuracy	horizontal: ±1%		horizontal: ±1%, angle: ±0.7%		
Zero setting range	±1500µm/m				
Response time	<3s				
Data output	RS232				
Power supply	rechargeable Li-ion battery, provides power for 10h continuous working				
Dimension	220×220×52mm				
Weight	4.4kg				

STANDARD DELIVERY

Main unit	1 pc
AC/DC adapter	1 pc

OPTIONAL ACCESSORY

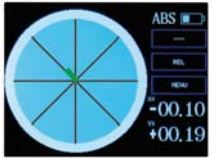
Software and data output cable	ISE-L050-SOFTWARE
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DIGITAL LEVEL CODE ISE-2DT

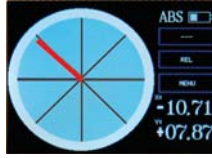
DATA OUTPUT



- Color LCD, touch panel
- X-Y axis measurement
- Set the tolerance and the display is shown in different colors



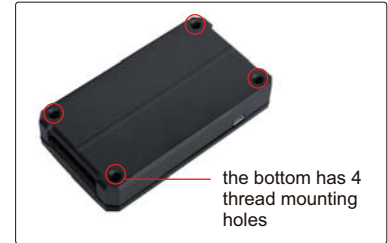
within the tolerance (green)



out of the tolerance (red)



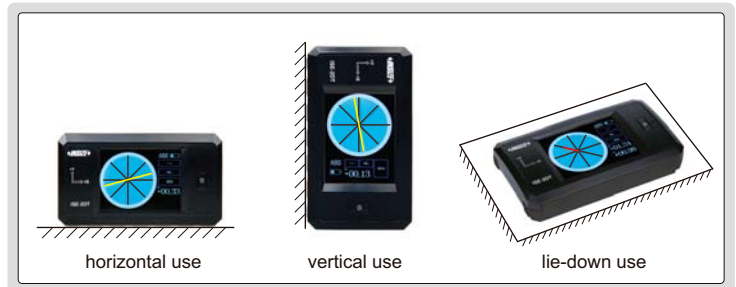
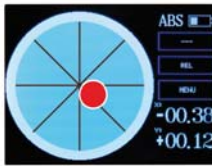
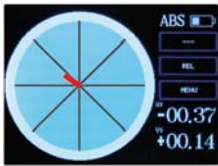
charging and data output



the bottom has 4 thread mounting holes

18

- To show the incline with line or bubble



horizontal use

vertical use

lie-down use

SPECIFICATION

Measuring range	±30°
Resolution	0.1°, 0.01°, 0.1mm/m
Accuracy	±0.03° (range 0~3°) ±0.05° (range >3°)
Power supply	rechargeable battery
Dimension	115×66×25mm
Weight	224g

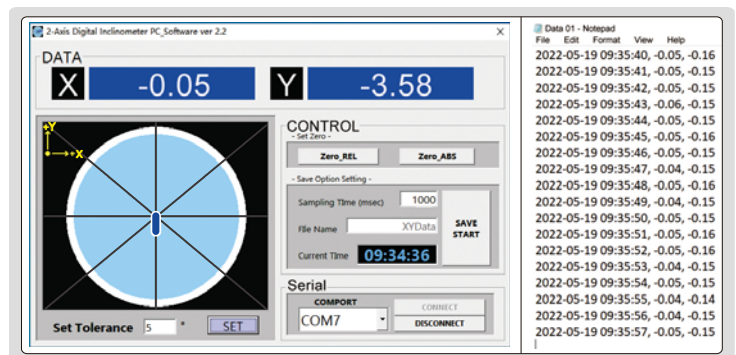
STANDARD DELIVERY

Main unit	1 pc
USB cable	1 pc

OPTIONAL ACCESSORY

Software	ISE-2DT-SOFTWARE
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PC software (optional), send data to txt



IP67
WATERPROOF

ABSOLUTE LEVEL

BACKLIGHT

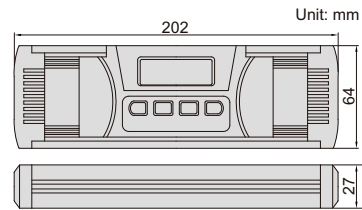
BUZZER ALARM AT 0° AND 90°

WORKING TEMPERATURE -5°C~50°C

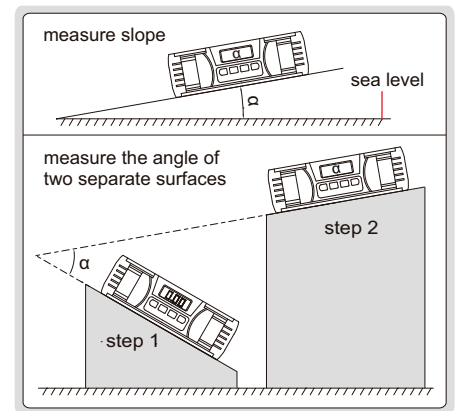
DIGITAL LEVEL AND SLOPE METER



2175-360



- IP67 dust/waterproof
- Used as level and slope meter
- Aluminum frame, shock absorbing rubber end caps
- Magnetic bottom with V-groove for shafts
- The sea level is permanently set inside the chip, zero setting is not needed when batteries are replaced
- Buttons: ON/OFF, backlight/buzzer alarm, absolute and incremental measurement, unit (mm/m, %, °), HOLD (keep the reading)
- Three AAA batteries, automatic power off



Code	Range	Resolution	Accuracy
2175-360	0-360° (90°x4)	0.05° (=0.873mm/m)	at 0°: ±0.05°; at others: ±0.1°

IP54
WATERPROOF

ABSOLUTE LEVEL

BACKLIGHT

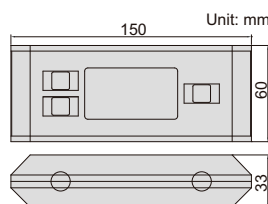
BUZZER ALARM AT 0° AND 90°

WORKING TEMPERATURE -5°C~50°C

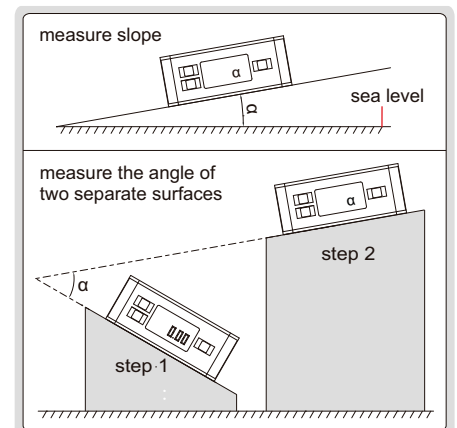
DIGITAL LEVEL AND SLOPE METER



2179-360



- IP54 dust/waterproof
- Used as level and slope meter
- Aluminum frame
- Magnetic bottom with V-groove for shafts
- The sea level is permanently set inside the chip, zero setting is not needed when battery is replaced
- Buttons: ON/OFF, absolute and incremental measurement, keep the reading, buzzer alarm, unit (mm/m, %, in/ft), conversion, backlight
- Two AAA batteries, automatic power off



Code	Range	Resolution	Accuracy
2179-360	0-360° (90°x4)	0.05° (=0.873mm/m)	at 0° and 90°: ±0.1°; at others: ±0.2°

DIGITAL LEVEL AND SLOPE METER

MAGNETIC
BOTTOM

WORKING TEMPERATURE
-5°C~50°C

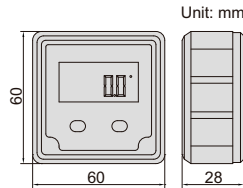
BACKLIGHT

DISPLAY FLIPS OVER WHEN
THE BOTTOM FACES UP

ABSOLUTE
LEVEL



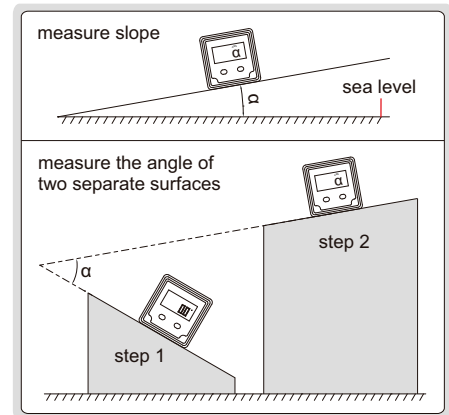
2170-1



Unit: mm

- Used as level and slope meter
- Aluminum frame
- Magnetic bottom
- The display flips over when the bottom faces up
- The backlight is on automatically when in use, and automatically off in 15 seconds after use
- The sea level is permanently set inside the chip, zero setting is not needed when battery is replaced
- Buttons: ON/OFF, ZERO, absolute and incremental measurement
- One AAA battery, automatic power off in 5 minutes

Code	Range	Resolution	Accuracy
2170-1	4x90°	0.1° (=1.745mm/m)	at 0° and 90°: ±0.1°; at others: ±0.2°



BLUETOOTH DIGITAL LEVEL AND SLOPE METER

MAGNETIC
BOTTOM

DISPLAY FLIPS OVER WHEN
THE BOTTOM FACES UP

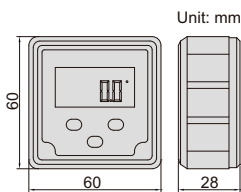
WORKING TEMPERATURE
-5°C~50°C

ABSOLUTE
LEVEL

BACKLIGHT

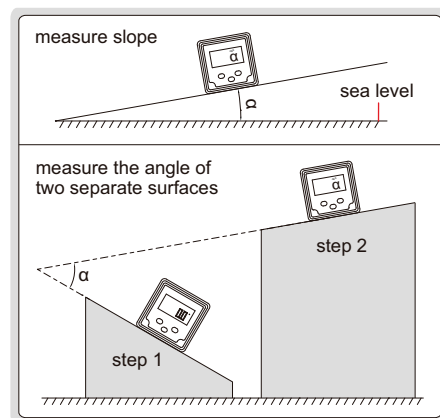


2198-2



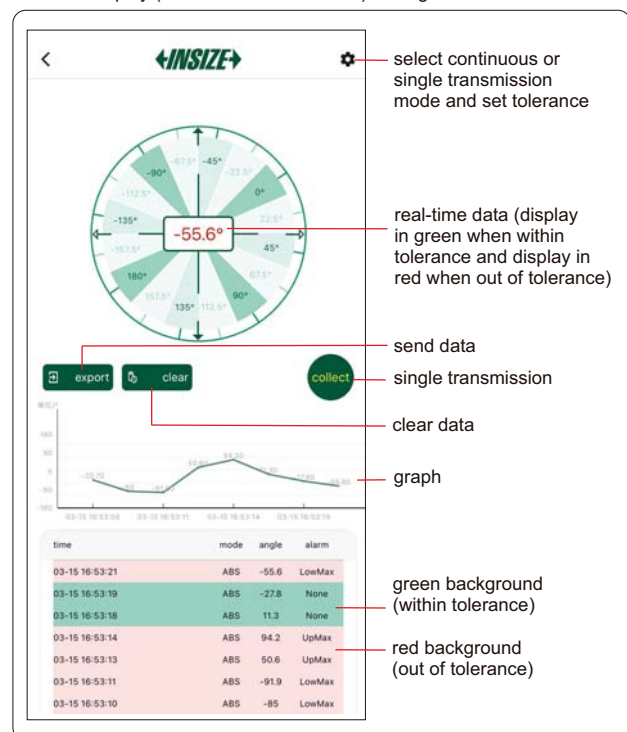
Unit: mm

- Used as level and slope meter
- Aluminum frame
- Magnetic bottom
- The display flips over when the bottom faces up
- The backlight is on automatically when in use, and automatically off in 15 seconds after use
- The sea level is permanently set inside the chip, zero setting is not needed when battery is replaced
- Buttons: ON/OFF, ZERO, HOLD, absolute and incremental measurement
- Built-in bluetooth, transmission distance is 15 meters (under the condition of no obstruction and no electromagnetic interference). Android and iPhone APP are included
- One AAA battery, automatic power off in 5 minutes



Code	Range	Resolution	Accuracy
2198-2	4x90°	0.1° (=1.745mm/m)	at 0° and 90°: ±0.1°; at others: ±0.2°

Android and iPhone APP (included), can choose real-time display (continuous transmission) or single transmission



NO NEED TO SET ZERO BEFORE USE

FRAME LEVELS
INSIZE PLUS
 MADE IN EUROPE



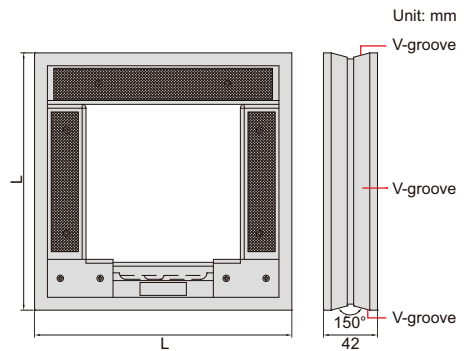
4906-150

magnet on the left side



4906-150M

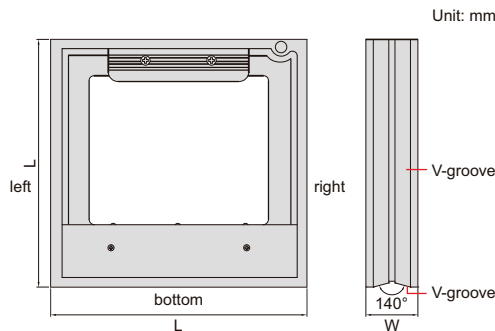
- No need to set zero before use
- Three V-grooves for shafts (shafts dia. 19.3~115.9mm)
- With longitudinal vial



Code		Size (LxL)	Remark
Sensitivity 0.02mm/m (=0.001°)	Sensitivity 0.1mm/m (=0.0057°)		
4906-150	4906-B150	150x150mm	—
4906-200	4906-B200	200x200mm	—
4906-300	4906-B300	300x300mm	—
4906-150M	4906-B150M	150x150mm	with magnet
4906-200M	4906-B200M	200x200mm	with magnet
4906-300M	4906-B300M	300x300mm	with magnet



- V-groove on bottom and left for shafts (shafts dia. 15~68mm)
- With transverse vial



FRAME LEVELS



4902-200

Code		Size (LxL)	W
Sensitivity 0.02mm/m (=0.001°)	Sensitivity 0.05mm/m (=0.0029°)		
4902-150	4902-C150	150x150mm	40mm
4902-200	4902-C200	200x200mm	40mm
4902-300	4902-C300	300x300mm	45mm

BLOCK LEVELS

INSIZE PLUS
MADE IN EUROPE

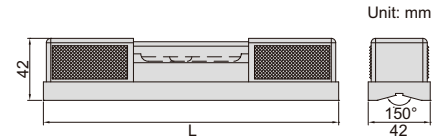
- No need to set zero before use
- V-groove on bottom for shafts (shafts dia. 19.3~115.9mm)
- With longitudinal vial



4905-200

NO NEED TO SET ZERO BEFORE USE

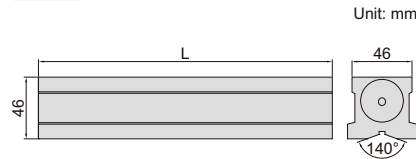
Code		Size (L)
Sensitivity 0.02mm/m (=0.001°)	Sensitivity 0.1mm/m (=0.0057°)	
4905-160	4905-B160	160mm
4905-200	4905-B200	200mm
4905-300	4905-B300	300mm
4905-500	4905-B500	500mm



BLOCK LEVELS



- V-groove on bottom for shafts (shafts dia. 15~68mm)
- With transverse vial



4903-200A

Code		Length (L)
Sensitivity 0.02mm/m (=0.001°)	Sensitivity 0.05mm/m (=0.0029°)	
4903-150A	4903-C150	150mm
4903-200A	4903-C200	200mm
4903-300A	4903-C300	300mm

SHORT LEVEL

INSIZE PLUS
MADE IN EUROPE

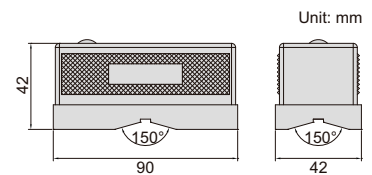
- No need to set zero before use
- Suitable for small spaces like crankshaft
- Longitudinal and transverse V-grooves on bottom for shafts (shafts dia. 19.3~115.9mm)
- With transverse vial



4907-90

NO NEED TO SET ZERO BEFORE USE

Code	Length	Sensitivity
4907-90	90mm	0.1mm/m (=0.0057°)



MINI LEVEL

INSIZE PLUS
MADE IN EUROPE

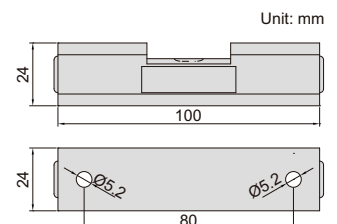
- No need to set zero before use
- With mounting holes (for M5 screws)



4908-100

NO NEED TO SET ZERO BEFORE USE

Code	Length	Sensitivity
4908-100	100mm	0.1mm/m (=0.0057°)

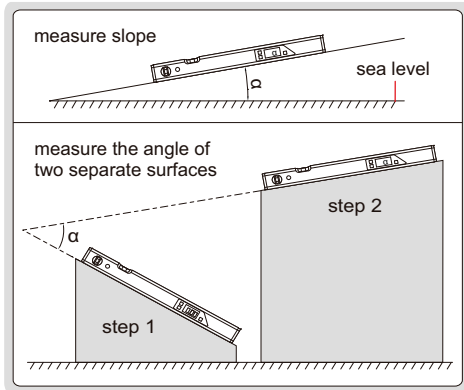


ABSOLUTE LEVEL

BACKLIGHT

WORKING TEMPERATURE
0°C ~ 50°C

DIGITAL LEVELS AND SLOPE METERS



both angle and slope are displayed

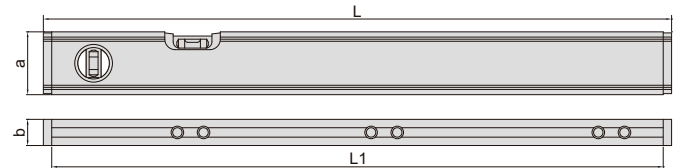


4910-400



4910-600

- With transverse and longitudinal vials
- Used as level and slope meter
- Aluminum frame, magnetic bottom
- The sea level is permanently set inside the chip, zero setting is not needed when batteries are replaced
- Buttons: ON/OFF, absolute and incremental measurement, keep the reading, buzzer alarm (not for 4910-400), unit (mm/m, %, in/ft), conversion (not for 4910-400), backlight
- The display flips over when the bottom faces up
- Two AAA batteries
- Automatic power off



(mm)

Code	Range	Resolution	Accuracy	Remark	L	L1	a	b
4910-400	0~360° (90°×4)	angle: 0.1°; slope: 1mm/m	±0.2°	both angle and slope are displayed	416	400	50	21
4910-600	0~360° (90°×4)	at 0° and 90°: 0.05° (=0.8725mm/m); at others: 0.1° (=1.745mm/m)	at 0° and 90°: ±0.1°; at others: ±0.2°	at 0° and 90° buzzer alarms	600	585	60	25

18

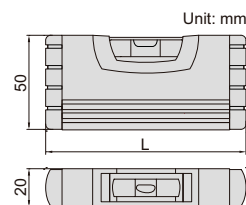
MAGNETIC BASE

LIFETIME WARRANTY VIALS

magnetic base surface



4912-100



- Shockproof vials
- Magnetic base
- Shock absorbing rubber end caps
- Working temperature: -15°C~55°C

HANDY LEVEL

packaging



Code	Size (L)	Accuracy
4912-100	100mm	0.5mm/m

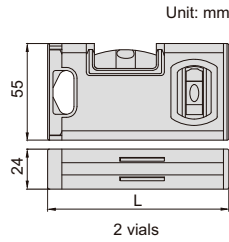
HANDY LEVELS

MAGNETIC BASE

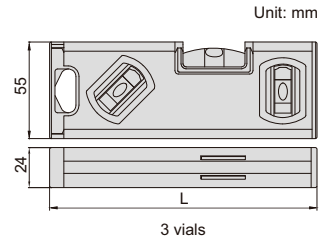
LIFETIME WARRANTY VIALS



4922-100



4922-150



Code	Size (L)	Accuracy	Number of vials
4922-100	100mm	0.5mm/m	2
4922-150	150mm	0.5mm/m	3
4922-200	200mm	0.5mm/m	3

- Shockproof horizontal and vertical vials
- Magnetic base
- Shock absorbing rubber end caps
- Working temperature: -15°C~55°C

CASTING ALUMINUM LEVEL

MAGNETIC BASE

LIFETIME WARRANTY VIALS

magnetic bottom surface (milled)



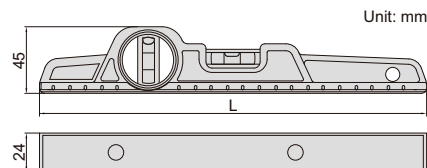
4913-250

packaging



- Shockproof horizontal and vertical vials
- Magnetic base
- Working temperature: -15°C~55°C
- Casting aluminum body

Code	Size (L)	Accuracy
4913-250	250mm	0.5mm/m



ALUMINUM LEVEL

MAGNETIC BASE

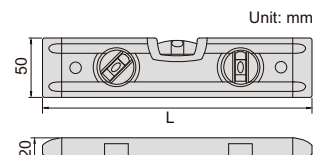
LIFETIME WARRANTY VIALS

- Shockproof horizontal and vertical vials
- Magnetic base
- Shock absorbing rubber end caps
- Working temperature: -15°C~55°C



4921-230

Code	Size (L)	Accuracy
4921-230	230mm	0.5mm/m



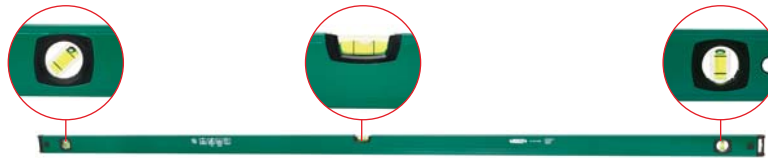
LIFETIME WARRANTY VIALS

MAGNETIC BASE

ALUMINUM LEVELS



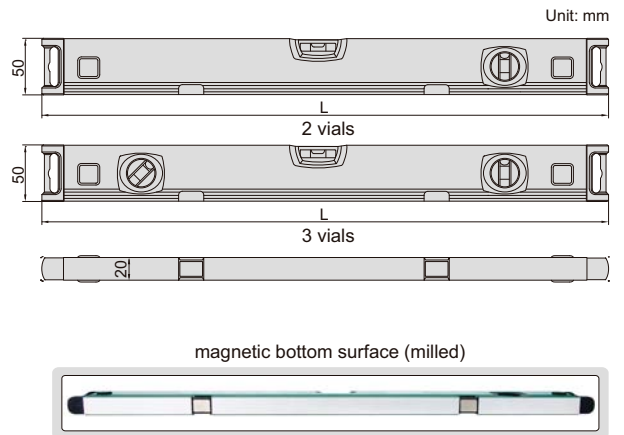
4914-600



4914-2000

- Shockproof horizontal and vertical vials
- Magnetic base
- Shock absorbing rubber end caps
- Working temperature: -15°C~55°C

Code	Size (L)	Accuracy	Number of vials
4914-300	300mm	0.5mm/m	2
4914-600	600mm	0.5mm/m	2
4914-800	800mm	0.5mm/m	2
4914-1000	1000mm	0.5mm/m	2
4914-1200	1200mm	0.5mm/m	2
4914-2000	2000mm	0.5mm/m	3



LIFETIME WARRANTY VIALS

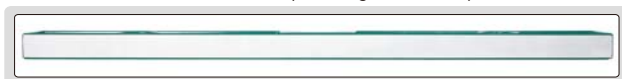
ALUMINUM LEVELS

- Top and bottom working surfaces
- Shock-proof and UV-proof vials
- Die casting aluminum alloy frame
- Zero position of horizontal vial can be set
- One graduation of horizontal vial is 2% slope
- Working temperature: -15°C~55°C

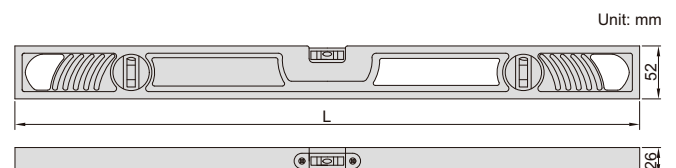


4911-600

bottom surface (non-magnetic, milled)



Code	Size (L)	Accuracy
4911-600	600mm	0.5mm/m
4911-800	800mm	0.5mm/m



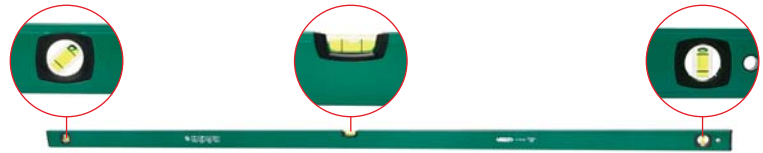
ALUMINUM LEVELS (BASIC TYPE)

MAGNETIC BASE

LIFETIME WARRANTY VIALS



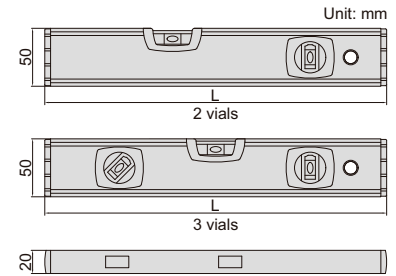
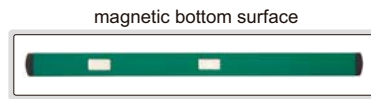
4918-300



4918-2000

Code	Size (L)	Accuracy	Number of vials
4918-300	300mm	1mm/m	2
4918-600	600mm	1mm/m	2
4918-800	800mm	1mm/m	2
4918-1000	1000mm	1mm/m	2
4918-1200	1200mm	1mm/m	2
4918-2000	2000mm	1mm/m	3

- Shock-proof and UV-proof vials
- Magnetic base
- Shock absorbing rubber end caps
- Working temperature: -15°C~55°C



ALUMINUM LEVELS (WITH ROTARY VIAL)

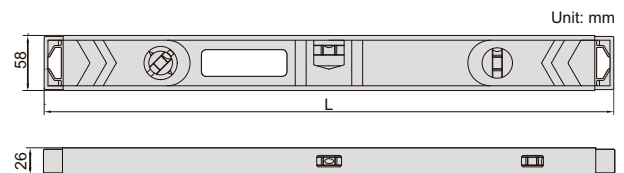
LIFETIME WARRANTY VIALS

- Shockproof and UV-proof vials
- Horizontal, vertical and rotary vials
- Rotary vial, range: 0°~360°, graduation: 5°
- Plumb window
- Shock absorbing rubber end caps
- Working temperature: -15°C~55°C



4920-600

Code	Size (L)	Accuracy
4920-400	400mm	0.5mm/m
4920-600	600mm	0.5mm/m
4920-800	800mm	0.5mm/m
4920-900	900mm	0.5mm/m
4920-1000	1000mm	0.5mm/m
4920-1200	1200mm	0.5mm/m



ALUMINUM LEVEL WITH RULER

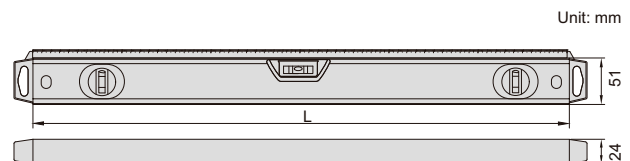
LIFETIME WARRANTY VIALS

- Shockproof horizontal and vertical vials
- Non-magnetic milled base
- Shock absorbing rubber end caps
- Range of ruler: 0-60cm, graduation: 1mm
- Working temperature: -15°C~55°C



4923-600

Code	Size (L)	Accuracy
4923-600	600mm	0.5mm/m





IP54
WATERPROOF

AUDIBLE AND VISUAL
WARNING WHEN OUT OF $\pm 3^\circ$

CROSS-LINE LASER LEVEL CODE 4917-30

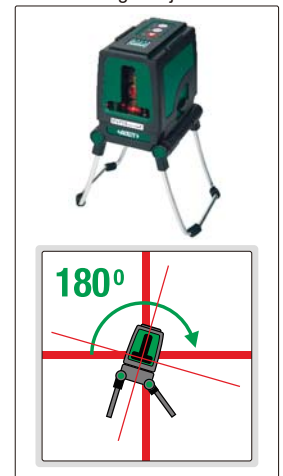
- Red horizontal and vertical cross laser lines
- Self-leveling within $\pm 3^\circ$, self-leveling time within 4s, audible and visual warning when out of $\pm 3^\circ$
- Folding legs for angle and height adjustment
- Outdoor use with the detector (code: **4917-DETECTOR**)



application examples



folding legs for angle and height adjustment



SPECIFICATION

Laser line width	2 \pm 0.5mm (within 5m)
Laser type	630~660nm, class II, <1mW
Beam angle	120 \pm 0.5 $^\circ$
Self-leveling range	$\pm 3^\circ$
Working distance	indoor: 30m, outdoor: 50m with detector (optional)
Accuracy	0.2mm/m
Operation temperature	-10~40 $^\circ$ C
Power supply	3 \times AA batteries, for 3 hours working
Dimension	100 \times 82 \times 104mm
Weight	620g

OUTDOOR DETECTOR (OPTIONAL)

Detecting distance	horizontal 1~50m, vertical 1~30m
Detecting accuracy *	high accuracy ± 1.5 mm, low accuracy ± 2.5 mm
Power supply	9V battery
Dimension	168 \times 58 \times 30mm
Weight	140g (battery included)

* Use high accuracy detection mode within 15m, use low accuracy detection mode over 15m



stand
(included with outdoor detector)



outdoor detector (**optional**)

STANDARD DELIVERY

Main unit	1 pc
1/4" to 5/8" tripod adaptor	1 pc
Battery (AA)	3 pcs

OPTIONAL ACCESSORY

Outdoor detector	4917-DETECTOR
------------------	---------------

SELF-LEVELING ROTARY LASER CODE GRL-L340

INDICATOR FLASHING
WHEN OUT OF $\pm 5^\circ$

IP65
WATERPROOF



VIDEO



detector (included)



remote controller (included)



bracket for C battery (included)

- Applicable fields: construction, decoration, pipeline and equipment installation
- Green laser beam rotates 360° horizontally or vertically
- Self-leveling range $\pm 5^\circ$ on both X and Y planes
- Alarm when inclination is out of $\pm 5^\circ$
- $\pm 5^\circ$ leveling range for manual mode on both X and Y planes
- 5 variable speeds 0-600rpm
- 6 scan modes
- Plumb up and plumb down dots
- Remote control for long distance
- Power supply: AC or DC

application examples



horizontal leveling

vertical leveling

working with detector



beam finder glasses (included)

SPECIFICATION

Working range	indoor 50m, outdoor 300m (with detector)	
Self leveling range	$\pm 5^\circ$	
Horizontal/vertical beam accuracy	$\pm 0.1\text{mm/m}$	
Main laser type	520~540nm, class 2, <1mW	
Auxiliary laser type	645~655nm, class 2, <1mW	
Rotating speed	0/60/120/300/600rpm	
Scanning range	0/10/45/90/180/360°	
Setting slope	X axis: $\pm 5^\circ$, Y axis: $\pm 5^\circ$	
Operation temperature	-20~50°C	
Maximum remote control distance	20m	
Power supply	remote controller	2x1.5V AAA batteries
	main unit	NI-MH batteries or 4x1.5V C batteries
	detector	1x9V battery
Dimension	210x210x213mm	
Weight	2.5kg	

STANDARD DELIVERY

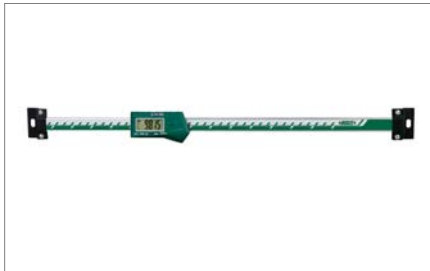
Main unit (including NI-MH batteries)	1 pc
C battery and bracket	1 set
Detector	1 pc
Remote controller	1 pc
Beam finder glasses	1 pc
Laser target	1 pc
Power adapter	1 pc
AAA battery	2 pcs
9V battery	1 pc



Linear Scales
Page 447-449/451



Digital Readouts
Page 450-451



Scales
Page 452



Air Gages And Displays
Page 453



Optical Transmission Probes For CNC Machine Tools
Page 454-455



Video Measuring Instrument For Machine Tools
Page 456-457



Laser Scan Micrometers
Page 458-459



Digital Ultrasonic Flaw Detectors
Page 460-461



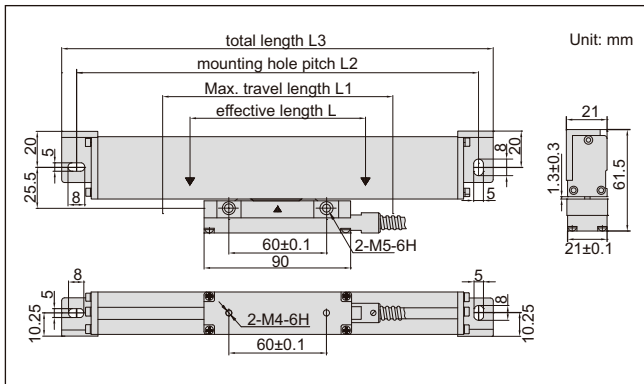
Spectrometers
Page 462-466

LINEAR SCALES (TTL SIGNAL)

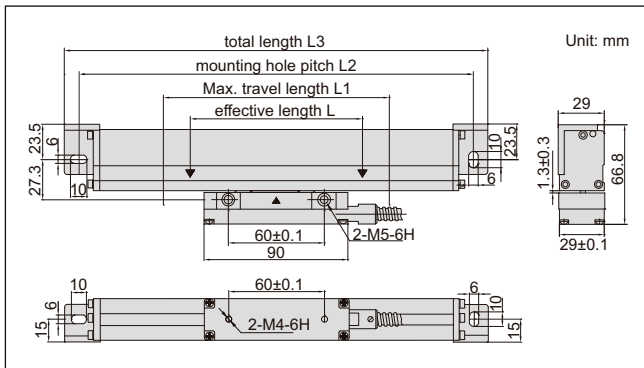


ISL-A1-300

Series ISL-A1 and ISL-A5



Series ISL-B5

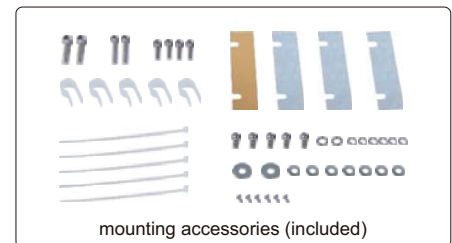
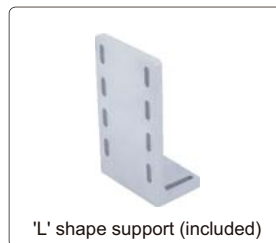


Effective length (L)	Code		
	Thin type		Thick type
	Series ISL-A1	Series ISL-A5	Series ISL-B5
50mm	ISL-A1-50	ISL-A5-50	ISL-B5-50
100mm	ISL-A1-100	ISL-A5-100	ISL-B5-100
150mm	ISL-A1-150	ISL-A5-150	ISL-B5-150
200mm	ISL-A1-200	ISL-A5-200	ISL-B5-200
250mm	ISL-A1-250	ISL-A5-250	ISL-B5-250
300mm	ISL-A1-300	ISL-A5-300	ISL-B5-300
350mm	ISL-A1-350	ISL-A5-350	ISL-B5-350
400mm	ISL-A1-400	ISL-A5-400	ISL-B5-400
450mm	ISL-A1-450	ISL-A5-450	ISL-B5-450
500mm	ISL-A1-500	ISL-A5-500	ISL-B5-500
550mm	ISL-A1-550	ISL-A5-550	ISL-B5-550
600mm	ISL-A1-600	ISL-A5-600	ISL-B5-600
650mm	ISL-A1-650	ISL-A5-650	ISL-B5-650
700mm	ISL-A1-700	ISL-A5-700	ISL-B5-700
750mm	ISL-A1-750	ISL-A5-750	ISL-B5-750
800mm	ISL-A1-800	ISL-A5-800	ISL-B5-800
850mm	ISL-A1-850	ISL-A5-850	ISL-B5-850
900mm	ISL-A1-900	ISL-A5-900	ISL-B5-900
950mm	ISL-A1-950	ISL-A5-950	ISL-B5-950
1000mm	ISL-A1-1000	ISL-A5-1000	ISL-B5-1000
1100mm			ISL-B5-1100
1200mm			ISL-B5-1200
1300mm			ISL-B5-1300
1400mm			ISL-B5-1400
1500mm			ISL-B5-1500
1600mm			ISL-B5-1600
1700mm			ISL-B5-1700
1800mm			ISL-B5-1800
1900mm			ISL-B5-1900
2000mm			ISL-B5-2000
2100mm			ISL-B5-2100
2200mm			ISL-B5-2200
2300mm			ISL-B5-2300
2400mm			ISL-B5-2400
2500mm			ISL-B5-2500
2600mm			ISL-B5-2600
2700mm			ISL-B5-2700
2800mm			ISL-B5-2800
2900mm			ISL-B5-2900
3000mm			ISL-B5-3000
3100mm			ISL-B5-3100
3200mm			ISL-B5-3200

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STANDARD DELIVERY

Main unit	1 pc
'L' shape support	1 pc
Anti-dust cover	1 pc
Plain base	1 pc (for L≥1500mm)
Mounting accessories	1 package



To be continued

Continued from previous page



anti-dust cover (included)



plain base (included, for L ≥ 1500mm)

SPECIFICATION

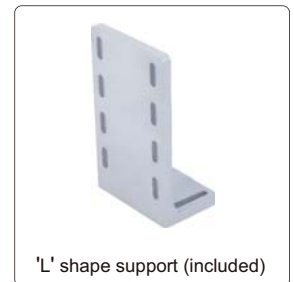
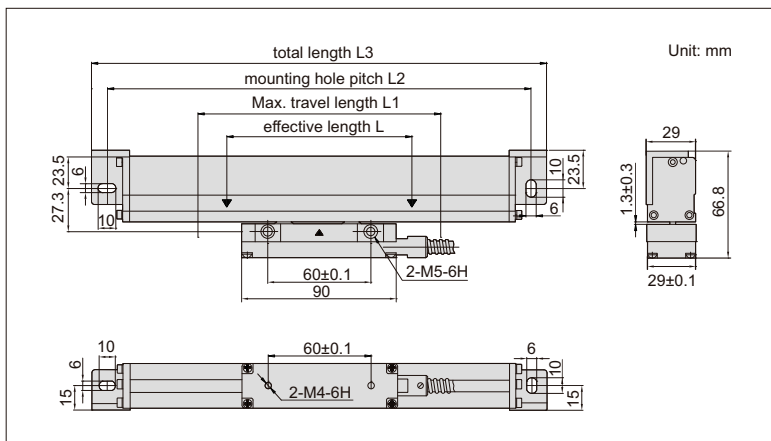
Code	Series ISL-A1		Series ISL-A5		Series ISL-B5	
L1 (mm)	L+30 (L<950)	L+50 (L≥950)	L+30 (L<950)	L+50 (L≥950)	L+30 (L<950)	L+50 (L≥950)
L2 (mm)	L+132 (L<950)	L+152 (L≥950)	L+132 (L<950)	L+152 (L≥950)	L+136 (L<950)	L+156 (L≥950)
L3 (mm)	L+149 (L<950)	L+169 (L≥950)	L+149 (L<950)	L+169 (L≥950)	L+154 (L<950)	L+174 (L≥950)
Resolution	1µm		5µm		5µm	
Max. response speed	50m/min		90m/min		60m/min	
Scale grating pitch	20µm					
Scale reference point pitch	50mm					
Accuracy	±(5+5L/1000)µm L is the effective length in mm					
Cable length	3.5m (L: 50-950mm), 5m (L: 1000-1500mm), 10m (L: 1600-3200mm)					
Output signal	TTL					
Socket	9PD					
Power supply	5±0.5V					

LINEAR SCALES (RS422 SIGNAL)

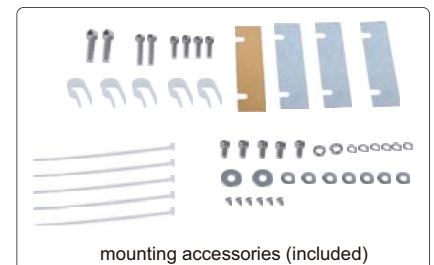


ISL-B5-450A

- Connected to digital display box or PLC



'L' shape support (included)



mounting accessories (included)

To be continued

Continued from previous page



Effective length (L)	Code	
	Series ISL-B1	Series ISL-B5
50mm	ISL-B1-50A	ISL-B5-50A
100mm	ISL-B1-100A	ISL-B5-100A
150mm	ISL-B1-150A	ISL-B5-150A
200mm	ISL-B1-200A	ISL-B5-200A
250mm	ISL-B1-250A	ISL-B5-250A
300mm	ISL-B1-300A	ISL-B5-300A
350mm	ISL-B1-350A	ISL-B5-350A
400mm	ISL-B1-400A	ISL-B5-400A
450mm	ISL-B1-450A	ISL-B5-450A
500mm	ISL-B1-500A	ISL-B5-500A
550mm	ISL-B1-550A	ISL-B5-550A
600mm	ISL-B1-600A	ISL-B5-600A
650mm	ISL-B1-650A	ISL-B5-650A
700mm	ISL-B1-700A	ISL-B5-700A
750mm	ISL-B1-750A	ISL-B5-750A
800mm	ISL-B1-800A	ISL-B5-800A
850mm	ISL-B1-850A	ISL-B5-850A
900mm	ISL-B1-900A	ISL-B5-900A
950mm	ISL-B1-950A	ISL-B5-950A
1000mm	ISL-B1-1000A	ISL-B5-1000A

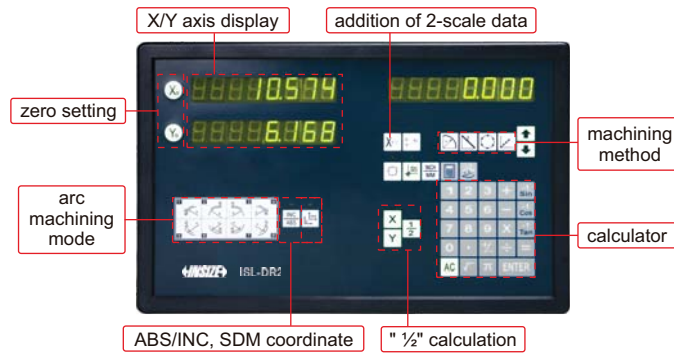
Effective length (L)	Code	
	Series ISL-B1	Series ISL-B5
1100mm	ISL-B1-1100A	ISL-B5-1100A
1200mm	ISL-B1-1200A	ISL-B5-1200A
1300mm	ISL-B1-1300A	ISL-B5-1300A
1400mm	ISL-B1-1400A	ISL-B5-1400A
1500mm	ISL-B1-1500A	ISL-B5-1500A
1600mm	ISL-B1-1600A	ISL-B5-1600A
1700mm	ISL-B1-1700A	ISL-B5-1700A
1800mm	ISL-B1-1800A	ISL-B5-1800A
1900mm	ISL-B1-1900A	ISL-B5-1900A
2000mm	ISL-B1-2000A	ISL-B5-2000A
2100mm	ISL-B1-2100A	ISL-B5-2100A
2200mm	ISL-B1-2200A	ISL-B5-2200A
2300mm	ISL-B1-2300A	ISL-B5-2300A
2400mm	ISL-B1-2400A	ISL-B5-2400A
2500mm	ISL-B1-2500A	ISL-B5-2500A
2600mm	ISL-B1-2600A	ISL-B5-2600A
2700mm	ISL-B1-2700A	ISL-B5-2700A
2800mm	ISL-B1-2800A	ISL-B5-2800A
2900mm	ISL-B1-2900A	ISL-B5-2900A
3000mm	ISL-B1-3000A	ISL-B5-3000A

SPECIFICATION

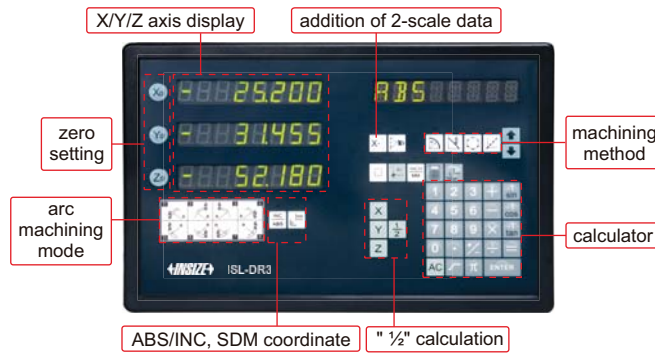
Code	Series ISL-B1	Series ISL-B5
L1 (mm)	L+30 (L<950), L+50 (L≥950)	L+30 (L<950), L+50 (L≥950)
L2 (mm)	L+136 (L<950), L+136 (L≥950)	L+136 (L<950), L+136 (L≥950)
L3 (mm)	L+154 (L<950), L+174 (L≥950)	L+154 (L<950), L+174 (L≥950)
Resolution	1μm	5μm
Thickness	29mm	
Max. response speed	60m/min	
Scale grating pitch	20μm	
Scale reference point pitch	50mm	
Accuracy	±(5+5L/1000)μm, L is the effective length in mm	
Cable length	3.5m (L: 50-950mm), 5m (L: 1000-1900mm), 10m (L: 2000-3000mm)	
Output signal	RS422	
Socket	9 PD	
Power supply	5±0.25V	

STANDARD DELIVERY

Main unit	1 pc
'L' shape support	1 pc
Anti-dust cover	1 pc
Plain base	1 pc (for L≥1500mm)
Mounting accessories	1 package



ISL-DR2



ISL-DR3



software flash disk (included)

SPECIFICATION

Code	ISL-DR2	ISL-DR3
Application	two-axis	three-axis
Scale input ports	2	3
Resolution	0.05μm, 0.1μm, 0.2μm, 0.5μm, 1μm, 2μm, 5μm, 10μm, 20μm, 50μm	
Functions	addition of 2-scale data, linearity error compensation, smoothing, RS232C interface unit, BCD code out, zero setting, preset, resolution setting, counting direction setting, inch/mm conversion, ABS/INC conversion, expansion/contraction coefficient setting, "1/2" calculation, detecting RI, bolt-hole circle machining, ramp circle machining	
Power supply	110/220V, 50/60Hz	
Dimension	295×185×45mm	
Weight	1.45kg	

STANDARD DELIVERY

Main unit	1 pc
Mounting bracket	1 pc
Ground cable	1 pc
RS232C cable	1 pc
Software flash disk for RS232C	1 pc

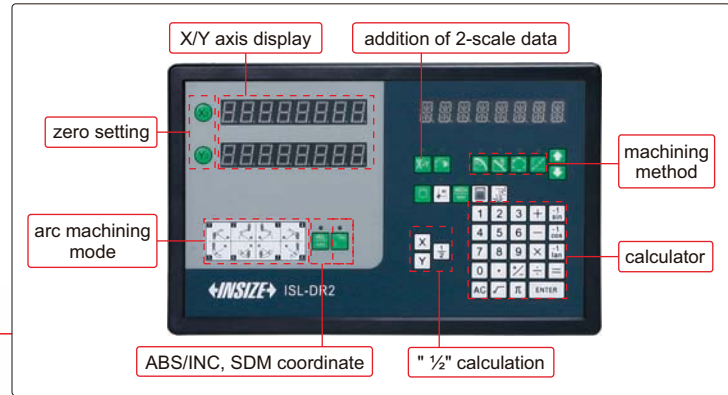


mounting bracket (included)

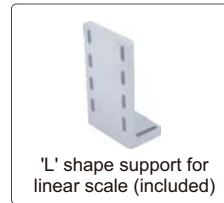
LINEAR SCALE AND READOUT SET FOR LATHE CODE ISL-SET1



software flash disk
(included)



mounting bracket for readout (included)



'L' shape support for
linear scale (included)



anti-dust cover for linear scale (included)

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READOUT SPECIFICATION

Application	two-axis
Scale input ports	2
Resolution	1 μ m
Functions	addition of 2-scale data, linearity error compensation, smoothing, RS232C interface unit, BCD code out, zero setting, preset, resolution setting, counting direction setting, inch/mm conversion, ABS/INC conversion, expansion/contraction coefficient setting, "1/2" calculation, detecting RI, bolt-hole circle machining, ramp circle machining
Power supply	110/220V, 50/60Hz
Dimension	295×185×45mm
Weight	1.45kg

LINEAR SCALE SPECIFICATION

X-axis	200mm
Y-axis	1000mm
Max. response speed	50m/min
Scale grating pitch	20 μ m
Scale reference point pitch	50mm
Accuracy	$\pm(5+5L/1000)\mu$ m L is the effective length in mm
Cable length	200mm scale: 3.5m, 1000mm scale: 5m

STANDARD DELIVERY

Readout box	1 pc
200mm linear scale	1 pc
1000mm linear scale	1 pc
Mounting bracket for readout	1 pc
Ground cable for readout	1 pc
RS232C cable for readout	1 pc
Software flash disk for RS232C of readout	1 pc
'L' shape support for linear scale	1 pc
Anti-dust cover for linear scale	1 pc
Mounting accessories for linear scale	1 package

DATA OUTPUT

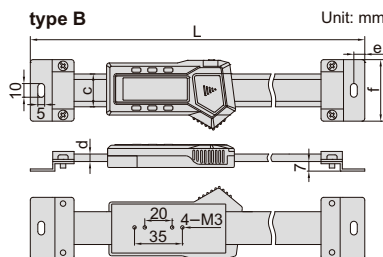
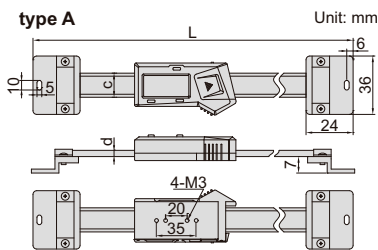
DIGITAL HORIZONTAL SCALES



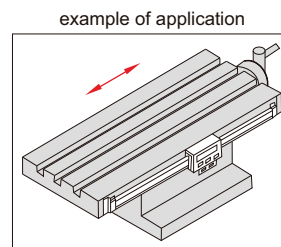
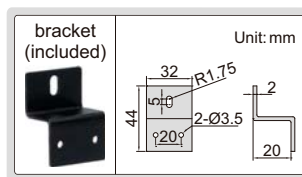
7101-300A



7101-400A



- Non waterproof
- Resolution: 0.01mm/0.0005"
- Buttons type A: on/off, zero, mm/inch, type B: on/off, zero, mm/inch, ABS, data preset
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Supplied with bracket to be mounted on the back



With data interface (data output cable code 7315-21 page 4, 7302-21 page 12, 7305-21 page 8, optional) (mm)

Code	Range	Type	Accuracy	L	c	d
7101-100A	100mm	A	±0.02mm	215	16	4
7101-150A	150mm	A	±0.03mm	265	16	4
7101-200A	200mm	A	±0.03mm	315	16	4
7101-300A	300mm	A	±0.04mm	445	16	4

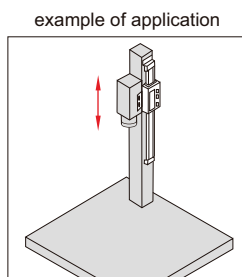
With data interface (data output cable code 7315-22 page 4, 7302-22 page 12, 7305-22 page 8, optional) (mm)

Code	Range	Type	Accuracy	L	c	d	e	f
7101-400A	400mm	B	±0.05mm	590	24	5.5	8	45
7101-500A	500mm	B	±0.05mm	690	24	5.5	8	45
7101-600A	600mm	B	±0.08mm	790	24	5.5	8	45
7101-800A	800mm	B	±0.10mm	990	24	5.5	8	45
7101-1000A	1000mm	B	±0.10mm	1240	31	10.5	10	60

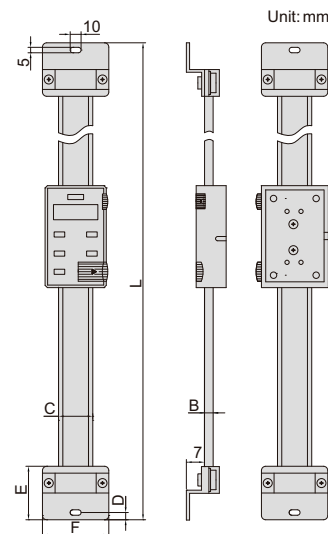
DATA OUTPUT

DIGITAL VERTICAL SCALES

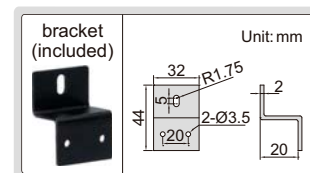
- Non waterproof
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch, ABS/INC, data hold, TOL, set
- Battery LR44, data output
- Made of stainless steel
- Supplied with bracket to be mounted on the back
- Optional accessory: wireless transmitter (code 7315-1150 page 6), data output cable (code 7302-SPC7 page 13, keyboard format), data output cable (code 7305-1150 page 9, serial port format)



7102-300




Code	Range	Accuracy	B	C	D	E	F	L
7102-100	100mm/4"	±0.02mm	4	20	6	24	40	245
7102-150	150mm/6"	±0.03mm	4	20	6	24	40	296
7102-200	200mm/8"	±0.03mm	4	20	6	24	40	345
7102-300	300mm/12"	±0.04mm	4	20	6	24	40	445
7102-400	400mm/16"	±0.05mm	4	20	6	24	40	545
7102-500	500mm/20"	±0.05mm	5.5	24	8	32	45	685
7102-600	600mm/24"	±0.08mm	5.5	24	8	32	45	785
7102-800	800mm/32"	±0.10mm	5.5	24	8	32	45	985
7102-1000	1000mm/40"	±0.10mm	10.5	31	9.5	40	60	1245







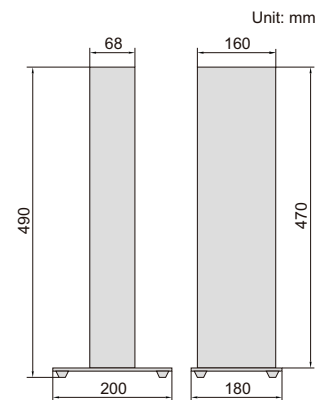
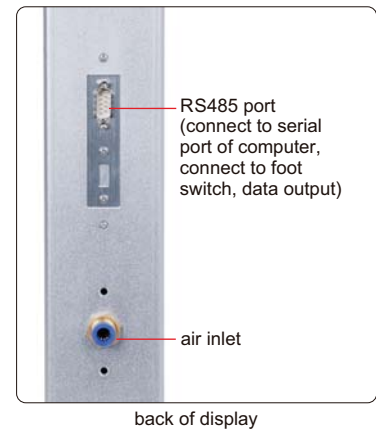
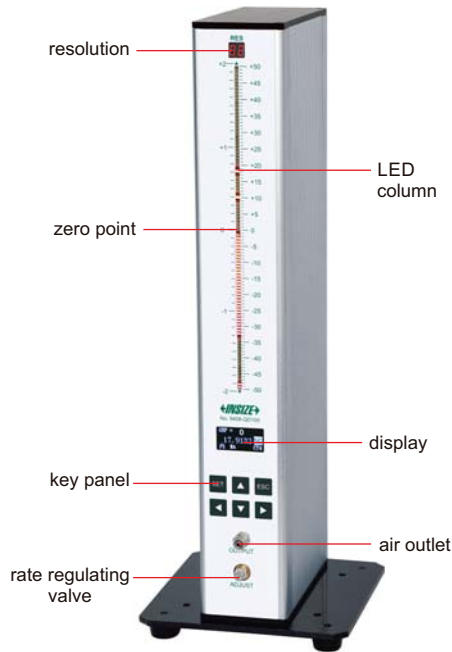
AIR GAGES CODE 9401-PB

CUSTOM-MADE

<p>air plug gage and standard rings</p>  <p>measure diameter of hole, range: $\varnothing 4\sim 230\text{mm}$</p>	<p>air ring gage and standard plain plug gages</p>  <p>measure diameter of shaft, range: $\varnothing 4\sim 160\text{mm}$</p>	<p>air snap gage and standard column gages</p>  <p>measure diameter of shaft, range: $\varnothing 15\sim 160\text{mm}$</p>	<p>air taper gage and standard gages</p> 
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AIR GAGE DISPLAY CODE 9408-QD100

 <p>air filter (optional)</p>	 <p>pressure regulating valve (optional)</p>
 <p>foot switch (optional)</p>	 <p>RS485 cable (optional)</p>



- Can store 10 measuring programs, and the program can be switched quickly
- Data storage function, support manual and automatic storing, 1500 groups data can be stored
- Automatic grouping function for workpiece sorting

SPECIFICATION

LED quantity	101 pcs			
LED color	red, orange, green			
LED height	254mm			
Range, resolution and accuracy	range	resolution		accuracy
		LED	display	
	10 μm	0.1 μm	0.1 μm	0.2 μm
	20 μm	0.2 μm	0.1 μm	0.4 μm
50 μm	0.5 μm	0.1 μm	1 μm	
100 μm	1 μm	0.1 μm	2 μm	
Unit	mm, μm			
Air supply	dry and clean, 0.4~0.8MPa			
Data interface	RS485			
Operation temperature	-20~45°C			
Power supply	110~220V, 50/60Hz			
Dimension (L×W×H)	200×180×490mm			
Weight	4.5kg			



STANDARD DELIVERY

Main unit	1 pc
-----------	------

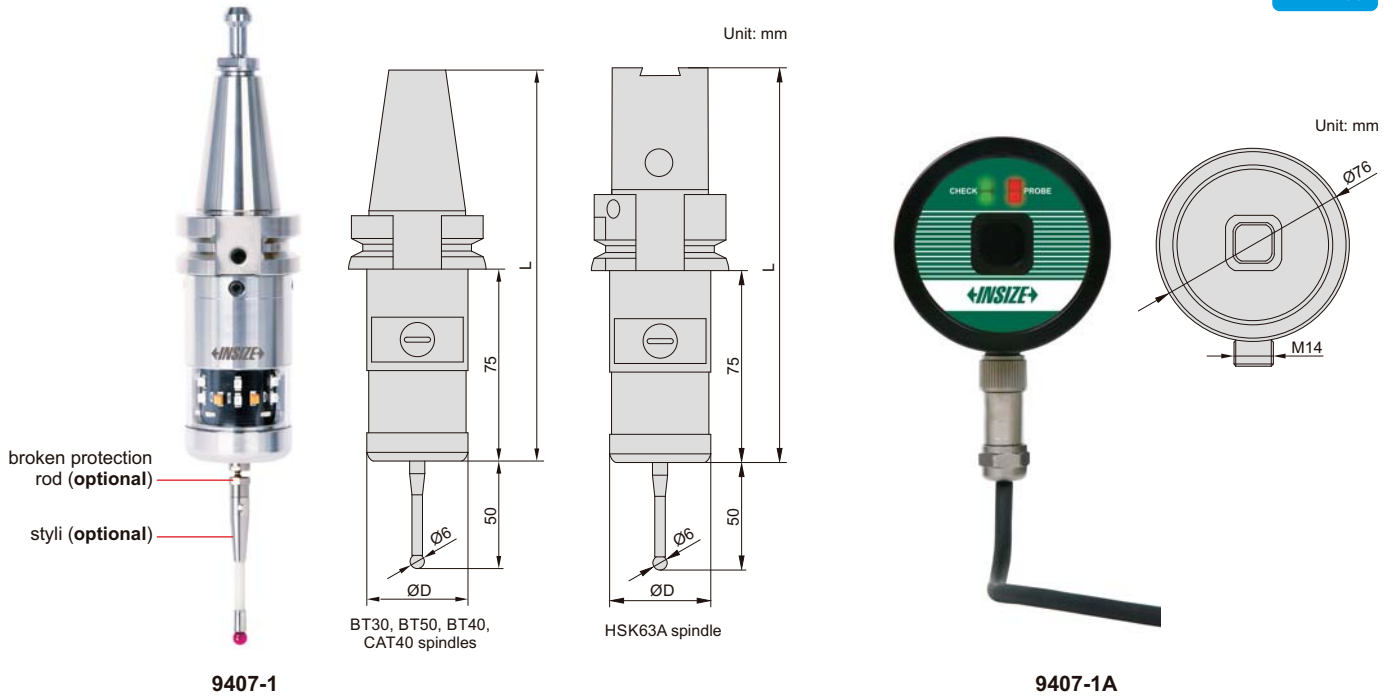
OPTIONAL ACCESSORY

Air filter	9401-FILTER-A
Pressure regulating valve	9404-PRV
RS485 cable	9408-CB
Foot switch	9408-FS
Data output cable (keyboard format)	7302-9404



OPTICAL TRANSMISSION PROBES FOR CNC MACHINE TOOLS

IP68
WATERPROOF



- On-machine measurement
- Multi-channel transmission between probes and receivers, for anti-interference
- Transmit three kinds of signals: trigger, contact and low battery voltage
- With spindle protection function
- Optical transmission range: 1m, 3m, 5m
- Automatic power off in 3 seconds, move styli to power on

OPTICAL PROBE SPECIFICATION

Code	9407-1	9407-2	9407-3	9407-4	9407-5
Probe length (L)	146mm	228mm	180mm	180mm	149mm
Probe diameter (ØD)	40mm	46.5mm	40mm	40mm	40mm
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: 0.9N, Z axis: 6N				
Applicable spindle*	BT30	BT50	BT40	CAT40	HSK63A
Dust/waterproof	IP68				
Power supply	2×LS14250 lithium battery				

* SK and ISO series spindles also can be customized

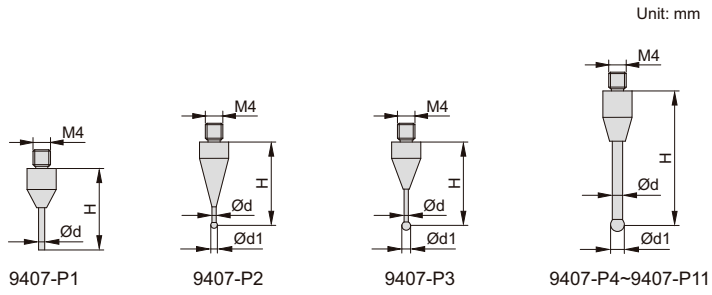
RECEIVER SPECIFICATION

Code	9407-1A
Protection function	low battery voltage or probe transmitting signal all the time**
Applicable probe	code 9407-1, 9407-2, 9407-3, 9407-4, 9407-5
Cable length	5m
Dust/waterproof	IP68

** When the battery voltage is low or the probe transmits signal all the time, the receiver will send a signal to the machine tool to stop working

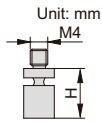
To be continued

Continued from previous page



STYLI (OPTIONAL) (mm)

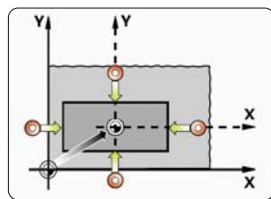
Code	H	Ød	Ød1	Material of measuring face
9407-P1	20	1	—	carbide
9407-P2	19.5	0.7	1	ruby
9407-P3	19	1.4	2	ruby
9407-P4	20	0.7	1	ruby
9407-P5	20	1.5	2	ruby
9407-P6	20	2	3	ruby
9407-P7	20	2	4	ruby
9407-P8	50	3	4	ruby
9407-P9	50	3.8	5	ruby
9407-P10	50	4.5	6	ruby
9407-P11	75	3.8	5	ruby



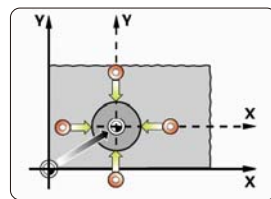
BROKEN PROTECTION ROD (OPTIONAL)

Code	H
9407-R1	12mm
9407-R2	22mm

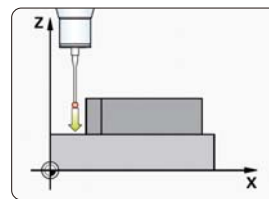
application



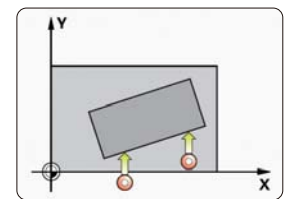
find center of rectangular boss



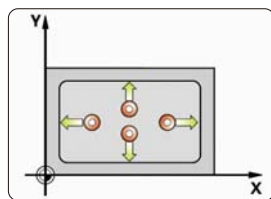
find center of the round boss



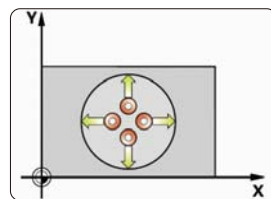
measure position of point on any axis



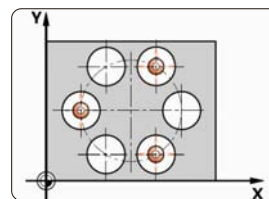
measure inclination of line



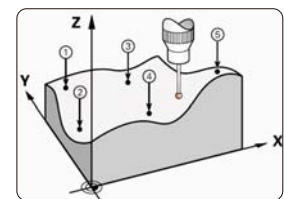
measure rectangular cavity



measure round cavity



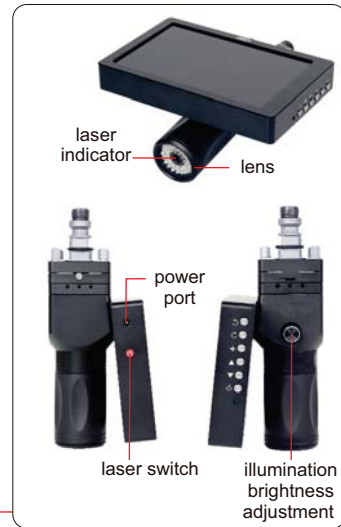
measure center of holes



measure freeform surfaces

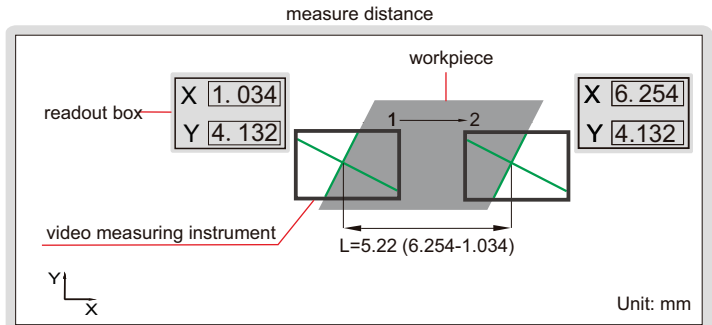
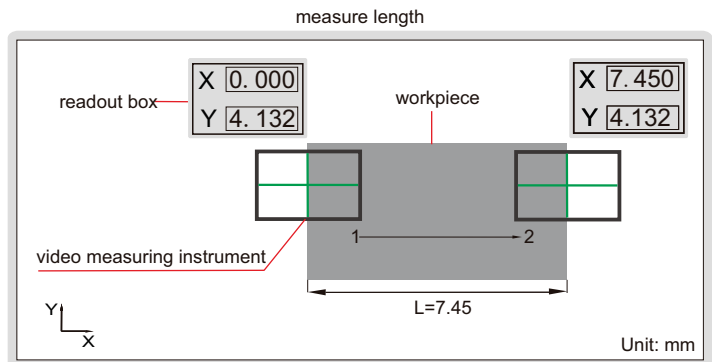
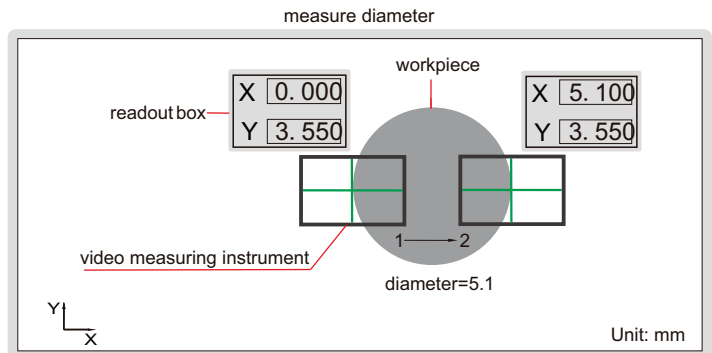


VIDEO MEASURING INSTRUMENT FOR MACHINE TOOLS



5314-R31

application



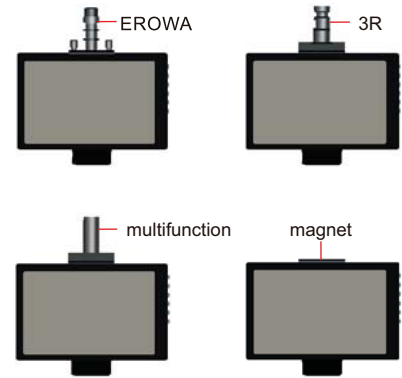
- Used in machine tools such as EDM and CNC
- Working together with linear scale and readout box of machine tools to make 2D measurement, especially suitable for small or thin parts
- Can rotate crosshair and change its color
- With laser indicator to locate position

To be continued

Continued from previous page

SPECIFICATION

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



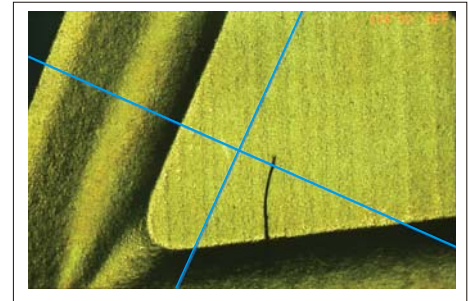
STANDARD DELIVERY

Main unit	1 pc
Power adapter	1 pc

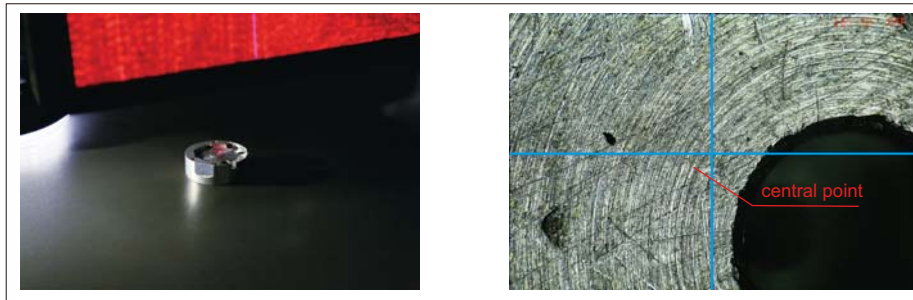
select crosshair color



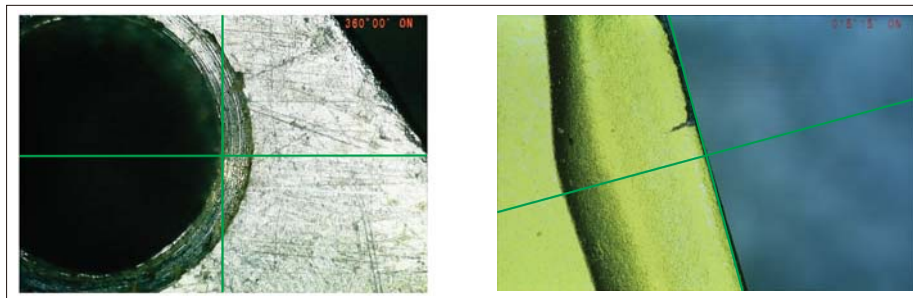
rotate crosshair



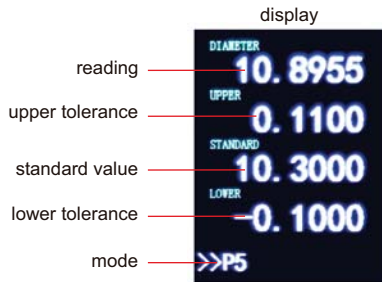
laser indicator locates the central point



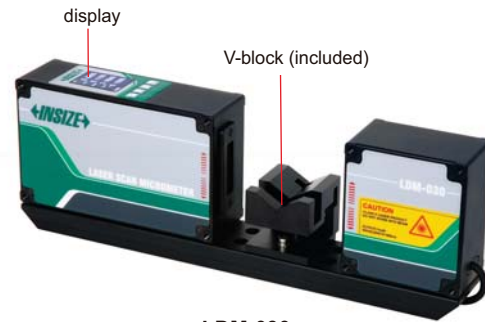
after finding the edge, the crosshair changes to green color and prompts



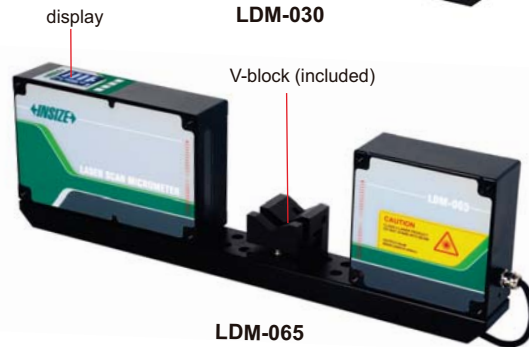
LASER SCAN MICROMETERS



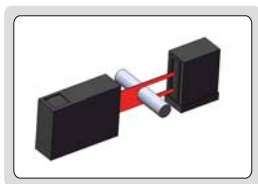
- Measure external diameter, ellipticity, run-out, maximum diameter of tools, etc.
- Can be used for transparent or non transparent workpieces
- Tolerance measurement
- Online or offline measurement
- Connected with computer and PLC



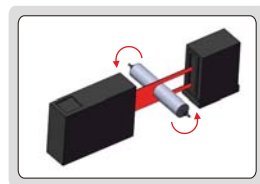
LDM-030



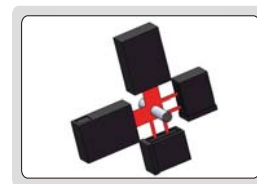
LDM-065



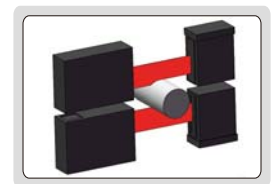
measure external diameter



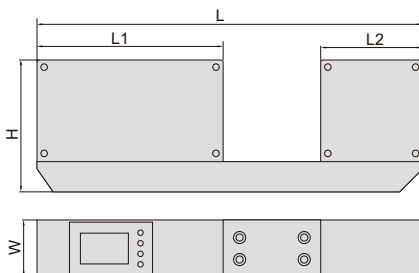
measure ellipticity and run-out



two-axis measurement



large size measurement



Dimension	(mm)	
Code	LDM-030	LDM-065
L	351	469
W	52	52
H	120	146
L1	170	203
L2	95	131



calibration gage (optional)

SPECIFICATION

Code	LDM-030	LDM-065
Measuring range	0.1~30mm	0.5~65mm
Resolution	0.01/0.1/1/10/100µm selectable	
25°C accuracy	±(0.5+10%D)µm, D is measuring diameter in mm	
Repeatability	±(0.3+5%D)µm, D is measuring diameter in mm	
Laser wave length	650nm	
Measuring speed	800~3200times/s (adjustable)	
Operation temperature	0~50°C	
Operation humidity	35~85RH without condensation	
Output	dual channel RS485	
Alarm output	24V, 1A	
Power supply	DC24V, 2A	
Dimension (L×W×H)	351×52×120mm	469×52×146mm
Weight	5kg	8kg

STANDARD DELIVERY

Main unit	1 pc
V-block	1 pc
AC/DC adapter	1 pc
RS485 cable	1 pc

OPTIONAL ACCESSORY

Calibration gage	custom made
------------------	-------------

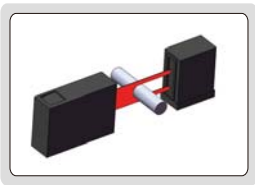
LASER SCAN MICROMETER CODE LDM-D090



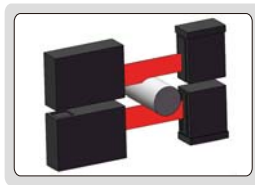
calibration gage (optional)

- Can measure the width and thickness of flat cables and tapes
- Can measure the outer diameter of cables, pipes and wires
- Laser scanning technology, large measurement range, high accuracy, high repeatability
- Connected with PLC and PC with RS485 interface
- Use high-precision F (θ) mirror, the swing of the measured object does not affect the measurement

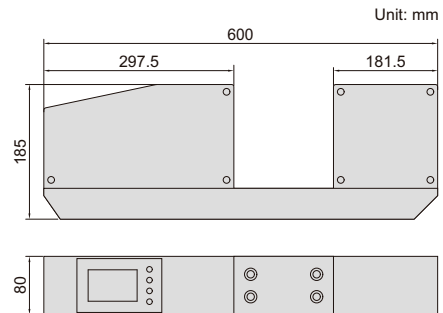
19



measure external diameter



large size measurement



SPECIFICATION

Measuring range	0.5~90mm
Resolution	1μm
25°C accuracy	±(5+20%D)μm, D is measuring diameter in mm
Repeatability	±(3+20%D)μm, D is measuring diameter in mm
Laser wave length	650nm
Measuring speed	600 times/s
Operation temperature	5~45°C
Operation humidity	≤80%RH without condensation
Output	RS485/MODBUS protocol
Alarm output	24V, 1A
Power supply	AC85V~220V (50~60Hz)
Dimension (L×W×H)	600×80×185mm
Weight	6.5kg

STANDARD DELIVERY

Main unit	1 pc
V-block	1 pc
AC/DC adapter	1 pc
RS485 cable	1 pc

OPTIONAL ACCESSORY

Calibration gage	custom made
------------------	-------------



DIGITAL ULTRASONIC FLAW DETECTOR CODE UFD-T680

- The all-aluminum metal shell is strong and durable, and the electromagnetic shielding performance is very good
- Tempered glass panel, extremely hard, wear-resistant and scratch-resistant
- Full-digital multi-color high resolution (640×480 pixels) TFT LCD display
- 4 operation interface styles can be selected according to the environment
- Real-time screenshots of all pages and flaw detection reports, and save them as BMP pictures to U disk
- Export the flaw detection report as a PDF file
- Unique Fn multifunction key design
- There is no limit of the number and duration of video recording through U disk
- Memory of 500 channel files to store calibration setups and probe parameter
- Memory of 1000 wave report files to store A-Scan wave and settings
- Two fully independent gates offer a range of measurement options for signal height or distance using peak triggering
- Can choose to set the incoming wave alarm or lost wave alarm, accompanied by LED light display
- Selectable frequency ranges (automatically set by the instrument) to match probe for optimum performance
- The unique automatic gain adjustment and gain scanning function make flaw detection fast and accurate



straight-beam probe
(included)



angle-beam probe
(included)



USB disk
(included)

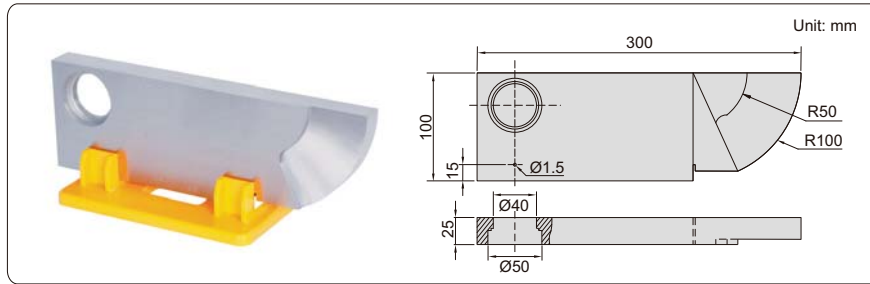


couplant (included)

FUNCTIONS

Flaw detection standard	built-in common flaw detection standards, direct call, convenient and fast
Auto calibration	automatic calibration of probe zero offset, probe angle (K value) and material velocity
Peak hold	compare frozen peak waveforms to live A-Scans to easily interpret test result
Flaw locating	live display sound-path, projection (surface distance), depth, amplitude
Flaw discrimination	automatic flaw sizing using AVG or DAC, speeds reporting of defect acceptance or rejection
Flaw sizing	the equivalent dB value of defects or equivalent size of defects are displayed in real time
Curved surface correction	used for flaw detection of curved workpiece, it can display the circumferential position of defects in real time
DAC/AVG	the curve is automatically generated, and the sampling points can be compensated and corrected. The curve automatically floats with the gain, automatically expands with the detection distance, and automatically moves with the delay time. It can display the AVG curve of any aperture
AWS D1.1	choosing this standard can reduce manual calculations and improve detection efficiency
Weld diagram	support V type, T type, L type and other weld types, acoustic path navigation real-time display, weld and defect location real-time display, scaling, easy to locate defects
Automatic rating	select different AWS standards, automatically calculate the rating of defects and display
Crack height	the crack height is measured and calculated automatically by the diffracted wave at the end
Gate magnify	spreading of the gate range over the entire screen width
Continuous record	video recording and playback
Echo coding	display 1~9 echo display area in different colors, used to analyze the defect position
Scan freeze	display freeze holds waveform and test distance data
Peak mark	vapture and mark the peak in real time
B scan	intuitively display the defect shape of the workpiece and the detection result is more intuitive

Continued from previous page



calibration block (optional)

SPECIFICATION

Measuring range	0~15000mm
Working frequency	0.2~20MHz
Material velocity	100~20000m/s
Repetition frequency	20~2000Hz
Dynamic range	≥36dB
Vertical linearity	≤1.5%
Horizontal linearity	≤0.1%
Resolving power	>42dB
Sensitivity leavings	>65dB
Suppression	0~80%
Noise	≤10%
Probe selection	single crystal probe, dual crystal probe, penetrating probe, climbing probe
Pulse energy	100V, 200V, 250V, 300V, 350V, 400V, 450V, 500V (selectable)
Pulse width	30ns-510ns
Probe damping	50Ω, 150Ω, 250Ω, 500Ω (selectable)
Rectification	positive half wave, negative half wave, full wave, RF
Gates	two independent gates controllable over entire sweep range
Interface	USB 2.0
Operation temperature	-10~50°C
Relative humidity	20~95%RH
Power	build-in rechargeable battery
Size	263×170×61mm
Weight	1.92kg

STANDARD DELIVERY

Main unit	1 pc
Single-element straight probe UFD-T60	1 pc
Single-element angle probe UFD-T61	1 pc
USB cable	1 pc
Couplant	1 bottle
Probe connecting cable	1 pc
USB disk	1 pc
Power adapter	1 pc

OPTIONAL ACCESSORY

Calibration block	UFD-CSK1
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SPECIFICATION OF PROBE

Code	Frequency	Size	Probe type	Transducer sensor angle
UFD-T60 (included)	2.5MHz	Ø20mm	single-element straight probe	90°
UFD-T61 (included)	4.0MHz	8x9mm	single-element angle probe	60°
UFD-T62 (optional)	5.0MHz	Ø10mm	dual-element straight probe	90°
UFD-T63 (optional)	5.0MHz	Ø10mm	single-element straight probe	90°
UFD-T64 (optional)	4.0MHz	8x9mm	single-element angle probe	45°
UFD-T65 (optional)	4.0MHz	8x9mm	single-element angle probe	70°

Note: Other types of the probes are available

CUSTOMIZE
CAN CUSTOMIZE OTHER METAL MATRIX DETECTION,
SUCH AS: Fe (004-009), Al, Cu, Zn, Ti, Ni, Pb, etc



SPECTROMETER CODE OES-T350



printer (included)



filter element (included)



electrode brush (included)



single-phase AC voltage
regulator (included)



pressure valve (included)



calibration sample (included)



gray iron control sample
(optional)



15# carbon steel control
sample (optional)

- The standard machine can do analysis Fe 001~003
- The full-spectrum technology covers the full range of element analysis, which can determine trace amounts of carbon (C), phosphorus (P), sulfur (S) and other elements
- The analysis speed is fast, and the element composition of all channels is measured within 20 seconds
- Paschen-Runge structure with full wavelength coverage, the most concise and stable optical system structure
- Perfect aberration correction, so that the spectrometer has excellent resolution, minimize the cross interference of different elements
- Argon-filled optical chamber, effectively reducing the attenuation of P and S rays in the far ultraviolet region
- The software has automatic spectrum correction technology, can store database, trace historical data, output and print reports
- Report format can be customized, data can be sent out

To be continued

Continued from previous page

SPECIFICATION

Optical system	optical structure	paschen-runge structure
	rowland circle of diameter	350mm
	wavelength range	160~510nm
	detector	multi high resolution CCD detectors
	pixel resolution	20pm
	full spectrum	cover the full range of element analysis
	light room temperature	34±0.5°C (be controlled automatically)
Spark source	type	digital arc and spark source/new plasma generator
	spark frequency	100~1000Hz
	plasma current	1~80A
	ignition voltage	>7000V
Spark stand		spray discharge electrode technology reduces argon consumption and improves argon use efficiency
		good heat dissipation, continuous excitation for 100 times, the temperature of the excitation table does not rise more than 5°C
Others	measurable elements	Fe base, Al base, Cu base, Zn base, etc
	operation temperature	10~30°C, 23±2°C is recommended
	operation humidity	20%~80%RH
	power	AC220V/50Hz
	power consumption	excitation: 300W, stand by: 40W
	argon quality	99.999% high purity argon, argon pressure≥4MPa
	argon consumption	5L/min during spark mode
	dimension (LxWxH)	700x660x340mm
	weight	30kg

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STANDARD DELIVERY

Main unit	1 pc
Computer	1 pc
Software	1 pc
Printer	1 pc
Calibration sample	1 pc
Electrode brush	2 pcs
Filter element	2 pcs
Single-phase AC voltage regulator	1 pc
Pressure valve	1 pc

OPTIONAL ACCESSORY

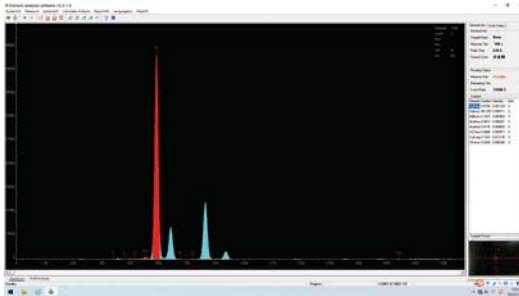
Control sample	custom specifications
Argon cylinder	OES-T350-ARGON
Grinding prototype	code: OES-T350-GRIND for ferrous metal sample preparation
Small lathe	code: OES-T350-LATHE for non-ferrous metal sample preparation
Argon purifier	OES-T350-PURIFIER



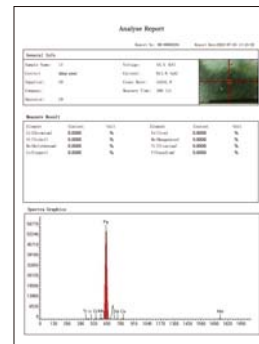
X RAY FLUORESCENCE SPECTROMETER (RoHS DETECTOR/ALLOY COMPOSITION ANALYZER/COATING THICKNESS GAGE) CODE XRF-B210



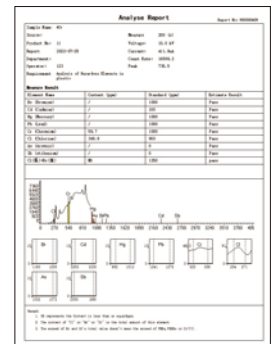
CALIBRATION CURVE CAN BE CUSTOMIZED
ACCORDING TO CUSTOMER REQUIREMENTS



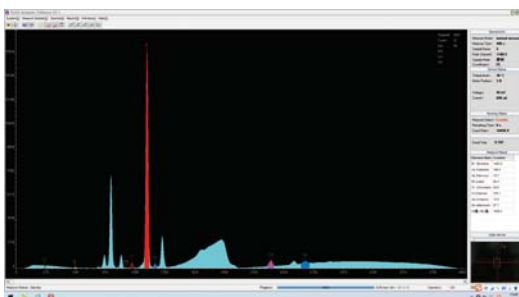
alloy composition analysis software (included)



alloy composition analysis report (included)



RoHS test report (included)



RoHS test software (included)



coating thickness test report (included)



coating thickness detection software (included)

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To be continued

Continued from previous page

- Used for RoHS detection, alloy element analysis, coating thickness measurement
- Using SI-PIN detector with electric cooling, small size, accurate data analysis and low maintenance cost
- Seven optical path correction and collimation system, automatically switch according to different samples
- Multiple radiation leakage prevention design
- The temperature monitoring technology ensures the safe and reliable operation of the X-ray source
- Dedicated software, standard window design, friendly interface, easy to operate
- Can display multiple spectrograms at the same time and print multiple report forms
- USB3.0 interface to ensure accurate, high-speed and efficient data transmission

SPECIFICATION

Detector	type	Si-PIN electrical refrigeration semiconductor detector	
	resolution	149±5 EV	
	amplifier circuit module	detect the sample characteristic X-ray, further enlarge the information collected by detection	
X ray excitation device	maximum output current	1mA	
	power	50W, air cooling	
High and low voltage power	maximum output voltage	50KV, built-in voltage overload protection	
	minimum output voltage	5KV	
Multi-channel pulse amplitude analyzer		maximum channel number: 4096	
Optical path filter module		reduce interference light path in the process of sending x-rays, guarantee the accuracy of the detector signal	
		Integrate the collimator with the filter	
Collimator automatic switching module		7 kinds, Ø0.5~Ø8mm	
Filter automatic switching module		5 kinds(free to choose and switch)	
RoHS analysis software	elemental analysis range	S~U	
	harmful element analysis	Cd, Pb, Hg, Br, Cr, Cl, As, Sb	
	test time	60~200s	
	detection limit	2PPM	
Alloy analysis software	content analysis range	2PPM~99.9%	
	elemental analysis range	Ti~U	
	detection limit	100PPM	
	content analysis range	100PPM~99.9%	
	repeatability	0.1%	
Metal coating analysis software	stability	0.1%	
	elemental analysis range	Ti~U	
	detection limit	0.01µm	
	analysis thickness	single layer thickness	0.01~30µm
		3 layer thickness	≤10µm
	repeatability	0.1µm (for outside coating less than 1µm)	
stability	0.1µm (for outside coating less than 1µm)		
light spot	within 0.2mm		
Operation temperature		10~30°C	
Relative humidity		10%~90%	
Power		AC 220V±5V	
Dimension (L×W×H)		700×460×370mm	
Weight		49kg	

STANDARD DELIVERY

Main unit	1 pc
Standard sample	1 pc
Silver calibration	1 pc
Sample cup	2 pcs
Test film	50 pcs
Computer	1 pc
Printer	1 pc
Collimator (built-in)	7 pcs
Software	RoHS test software, alloy composition analysis software, coating thickness detection software

IP54
WATERPROOF

HAND-HELD SPECTROMETER CODE HSM-A310



test



analysis

- Fast and non-destructive test to identify alloy grade and composition
- For all kinds of high and low temperature alloy steel, stainless steel, tool steel, chromium/molybdenum steel, nickel alloy, cobalt alloy, nickel/cobalt heat resistant alloy, titanium alloy
- Multiple tests, it can automatically calculate maximum value, minimum value and standard deviation
- IP54 dust/waterproof



VIDEO

SPECIFICATION

Excitation source	50KV/200μA; Ag target, integrated end window, micro X-ray tube and high voltage power supply, matching power ≥4W
Detector	Si-PIN, window area 25mm ²
Elemental analysis range	Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, Se, Zr, Nb, Mo, Rh, Pd, Ag, Cd, Sn, Sb, Hf, Ta, W, Re, Pb, Bi
Alloy analysis mode	1. automatically identify alloy grade 2. small sample test, 1mm small sample compensation 3. alloy material qualified test mode
Collimator filter	7 groups
Display	5-inch LCD touch screen
CPU	quad-core processor, 1.4GHz, 4G memory
Memory	built-in 64G, storage data, >500000 groups
Data transmission	built-in WIFI, U disk, bluetooth (support bluetooth printer)
Data export format	EXCEL, BMP, PDF, CSV
Battery	6800mAh lithium battery, for 8 hours working time
Air pressure compensation	built-in pressure measurement module for system compensation and correction
System	Win-IOT operation system
Work environment	temperature: 0~40°C, relative humidity: 10%~90%
Dimension	250x320x80mm
Weight	1.9kg

STANDARD DELIVERY

Main unit	1 pc
Charger	1 pc
Battery	2 pcs
Test film	50 pcs
Sample cup	1 pc
Standard sample	1 pc
Protection support (including calibration silver)	1 pc
USB and cable	1 pc



standard sample (included)



protection support (included)



Mini CNC CMM
Page 468



CMM Check Masters
Page 469



Styli For CMM
Page 469-471



Jigs For CMM
Page 472-478

Can be used in shop floor, with the following features:

- Temperature compensation system, suitable for wide temperature range
- Water and oil resistance
- Compact design, small size
- Three sides open, easy to load and unload workpieces
- Without compress air
- Easy installation

ATTENTION: ROTATION OF PROBE HEAD IS MANUAL

ATTENTION: MEASUREMENT ON THE LEFT SIDE OF WORKPIECES IS LIMITED

MINI CNC CMM (SHOP FLOOR TYPE) CODE CMM-MN432



CMM-MN432

FEATURES

- Integrated control system, safe, reliable and easy to operate
- High precision linear guide rail and ball screw for three axes
- 4 temperature sensors for X, Y, Z three axes and workpiece, suitable for wide temperature range

CONTROL SYSTEM

- Double computer control systems
- Driven by DC servo motor
- The control system supports communication with machine tools
- The control system has 12 buttons for customize

NET-DMIS SOFTWARE

- Can measure point, straight line, curve, circle, ellipse, plane, groove, cylinder, sphere, cone, ring, edge point, corner point, polygon, straightness, flatness, circularity, cylindricity, profile of a line, profile of a surface, perpendicularity, parallelism, angularity, coaxiality, concentricity, symmetry, position, composite position, circular runout and total runout
- Modular software structure, can support: temperature compensation, turning table, I/O interface
- Can program in offline mode and do virtual measurement based on CAD model, can extract the element features of CAD for programming
- Support dynamic point measurement and import DMO theoretical point coordinates for vector point measurement
- Can import and convert CAD model (SAT, IGES, STEP)
- Can select multi language, metric and inch, polar and straight coordinate system
- Have multiple export ways: export measured data (SAT, IGES, STEP), report windows (PDF, HTML, MHT, RTF, EXCEL, CSV, txt, images, WORD, etc.), custom EXCEL template
- Support uploading the measuring result to server

SPECIFICATION

Code	CMM-MN432
Measuring range (X*Y*Z)	400×200×300mm
Resolution	0.1μm
Repeatability	1μm
Accuracy (L is measuring range in mm)	±(4.5+L/200)μm (15°C~30°C, variation≤2°C/h) ±(5.5+L/200)μm (10°C~15°C, 30°C~40°C, variation≤2°C/h)
Probe error	±5μm
Temperature	10°C~40°C, variation≤2°C/h
Humidity	40~60%
Power	220V±10%, 50Hz
Max. load	50kg
Dimension (L*W*H)	1270×1110×1630mm
Weight	280kg

STANDARD DELIVERY

Main unit		1 pc
Probe system	probe head *	1 pc
	probe *	1 pc
	styli **	1 set
Calibration system	datum sphere (Ø25mm)	1 pc
	pivot pillar	1 pc
Computer system	computer	1 pc
	printer	1 pc
Temperature compensation system		1 pc
Software		1 pc

* The probe head and probe are Renishaw brand

** The styli system includes styli and extensions

STYLUS (included) SPECIFICATION

Code	Material	Ball diameter	Length	Stem diameter	Effective working length	Quantity
PS2R	ruby ball / stainless steel stem	SØ2mm	20mm	Ø1.4mm	14mm	1 pc
PS17R		SØ4mm		Ø1.5mm	20mm	1 pc

EXTENSION (included) SPECIFICATION

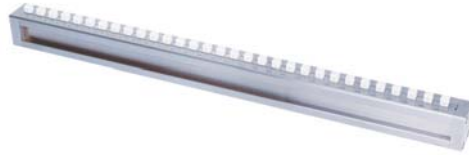
Code	Material	Stem diameter	Length	Quantity
SE4	stainless steel	Ø3mm	10mm	1 pc
SE5			20mm	1 pc

PROBE (included) SPECIFICATION

Probe head	angular movement with horizontal axis	0°~90° in 15 steps
	angular movement with vertical axis	±180° in 15 steps
	control mode	manual
	number of positions	168
Probe	probe mounting	M8
	weight	210g
	detect direction	±X, ±Y, +Z
	styli mounting	M2
	rating life	>1000,000 times
	weight	22g

CMM CHECK MASTERS

REFER TO PAGE 298 FOR DETAILS



6882-600



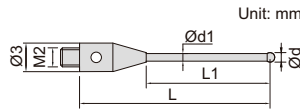
horizontal use

STYLI FOR CMM

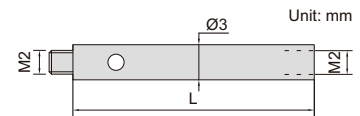
INSIZE PLUS
MADE IN EUROPE



ISQ-01-2010-020STR



ISQ-02-2030-040ST

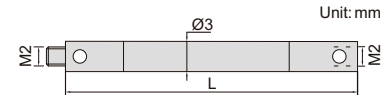


M2 styli (stainless steel base)

Code	Ød	Ød1	L	L1	Material of rod	Material of tip
ISQ-01-2010-010STR	1	0.8	10	4	carbide	ruby
ISQ-01-2010-020LTR	1	0.8	20	7		
ISQ-01-2010-020STR	1	0.8	20	13		
ISQ-01-2010-028STR	1	0.8	27.5	20.5		
ISQ-01-2015-020STR	1.5	1	20	13		
ISQ-01-2015-030STR	1.5	1	30	23		
ISQ-01-2020-020STR	2	1	20	13		
ISQ-01-2020-030STR	2	1.5	30	23		
ISQ-01-2020-040STR	2	1.5	40	33		
ISQ-01-2025-020STR	2.5	1.5	20	13		
ISQ-01-2025-030STR	2.5	2	30	23		
ISQ-01-2025-040STR	2.5	2	40	33		
ISQ-01-2030-020STR	3	1.5	20	13		
ISQ-01-2030-030STR	3	2	30	23		
ISQ-01-2030-040STR	3	2	40	33		
ISQ-01-2030-050STR	3	2	50	43		
ISQ-01-2040-022STR	4	2	22	15		
ISQ-01-2040-030STR	4	2	30	23		
ISQ-01-2040-040STR	4	2	40	33		
ISQ-01-2040-050STR	4	2	50	43		
ISQ-01-2020-020SSR	2	1.5	20	13	stainless steel	
ISQ-01-2030-020SSR	3	1.5	20	13		
ISQ-01-2040-020SSR	4	1.5	20	13	ceramic	
ISQ-01-2030-050SCE	3	2	50	43		

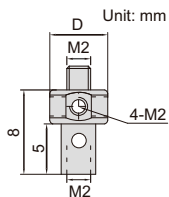
M2 extension rods of styli

Code	L	Material
ISQ-02-2030-005ST	5	stainless steel
ISQ-02-2030-010ST	10	
ISQ-02-2030-020ST	20	
ISQ-02-2030-030ST	30	
ISQ-02-2030-040ST	40	



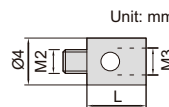
M2 extension rods of styli

Code	L	Material
ISQ-02-2035-030SCF	30	carbon fibre
ISQ-02-2035-040SCF	40	
ISQ-02-2035-050SCF	50	
ISQ-02-2035-060SCF	60	
ISQ-02-2035-070SCF	70	



M2 multi way bases of styli

Code	D	Remark	Material
ISQ-03-2075-008ST	7.5	4-way	stainless steel
ISQ-03-2070-008ST	7	5-way	steel

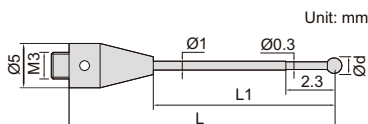


M2 thread converters

Code	L	Material
ISQ-05-2040-005M3	5	stainless steel
ISQ-05-2040-007M3	7	steel



ISQ-01-3005-020TTR2

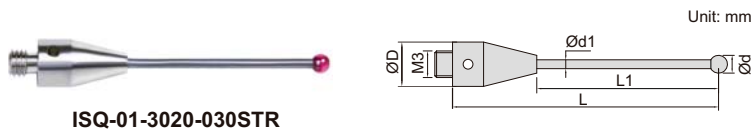


M3 styli with step (stainless steel base)

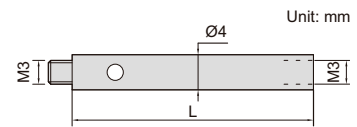
Code	Ød	L	L1	Material of rod	Material of tip
ISQ-01-3005-018TTR2	0.5	18	9	carbide	ruby
ISQ-01-3005-020TTR2	0.5	20	11		

To be continued

Continued from previous page



ISQ-01-3020-030STR



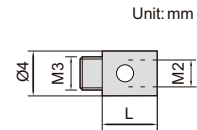
Unit: mm

M3 styli (stainless steel base) (mm)

Code	Ød	Ød1	L	L1	ØD	Material of rod	Material of tip		
ISQ-01-3010-020TTR	1	0.8	20	11	5	carbide	ruby		
ISQ-01-3010-040TTR	1	0.8	40	31	5				
ISQ-01-3015-020TTR	1.5	1	20	11	5				
ISQ-01-3015-030TTR	1.5	1	30	21	5				
ISQ-01-3015-040TTR	1.5	1	40	31	5				
ISQ-01-3020-014TTR	2	1	14	5	5				
ISQ-01-3020-040TTR	2	1.5	40	31	5				
ISQ-01-3020-050TTR	2	1.5	50	41	5				
ISQ-01-3030-050TTR	3	2	50	41	5				
ISQ-01-3040-030TTR	4	2	30	21	5				
ISQ-01-3040-040TTR	4	2	40	31	5				
ISQ-01-3040-050TTR	4	2	50	41	5				
ISQ-01-3020-030STR	2	1.5	30	22.5	4			carbon fibre	
ISQ-01-3030-030STR	3	1.5	30	22.5	4				
ISQ-01-3030-050TCR	3	2	50	41	5				
ISQ-01-3030-075TCR	3	2	75	66	5				

M3 extension rods of styli (mm)

Code	L	Material
ISQ-02-3040-010ST	10	stainless steel
ISQ-02-3040-020ST	20	
ISQ-02-3040-030ST	30	
ISQ-02-3040-040ST	40	
ISQ-02-3040-050ST	50	



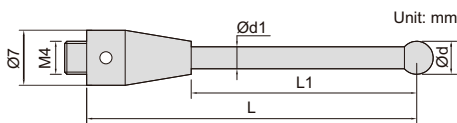
Unit: mm

M3 thread converters (mm)

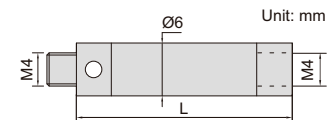
Code	L	Material
ISQ-05-3040-005M2	5	stainless steel
ISQ-05-3040-010M2	10	
ISQ-05-3040-020M2	20	



ISQ-01-4060-100SCE



Unit: mm



Unit: mm

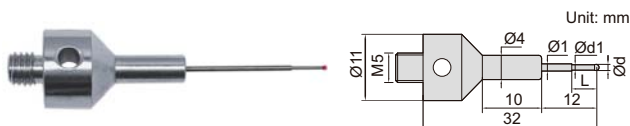
M4 styli (stainless steel base) (mm)

Code	Ød	Ød1	L	L1	Material of rod	Material of tip
ISQ-01-4010-020STR	1	0.8	20	10	carbide	ruby
ISQ-01-4020-020STR	2	1.5	20	10		
ISQ-01-4020-050STR	2	1.5	50	40		
ISQ-01-4040-050SCE	4	3	50	33.5	ceramic	
ISQ-01-4060-100SCE	6	4.5	100	83.5		

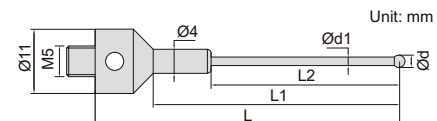
M4 extension rods of styli (mm)

Code	L	Material
ISQ-02-4070-030SCT	30	ceramic
ISQ-02-4070-050SCT	50	
ISQ-02-4070-100SCT	100	
ISQ-02-4070-200SCT	200	

20



ISQ-01-5010-032STR



Unit: mm

M5 styli with step (stainless steel base) (mm)

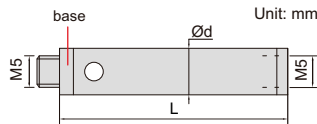
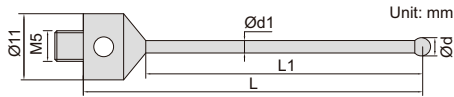
Code	Ød	Ød1	L	Material of rod	Material of tip
ISQ-01-5005-032STR	0.5	0.3	2.5	carbide	ruby
ISQ-01-5008-032STR	0.8	0.6	4.8		
ISQ-01-5010-032STR	1	0.8	5		

M5 styli with step (stainless steel base) (mm)

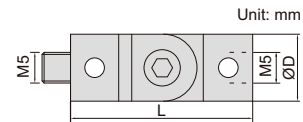
Code	Ød	Ød1	L	L1	L2	Material of rod	Material of tip
ISQ-01-5015-044STR	1.5	1	44	34	19	carbide	ruby
ISQ-01-5020-044STR	2	1.5	44	34	19		
ISQ-01-5020-058STR	2	1.5	58	48	33		

To be continued

Continued from previous page



ISQ-03-5110-030TI



M5 extension rods of styli

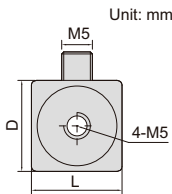
(mm)

Code	Ød	L	Material	Material of base
ISQ-02-5110-040SAL	11	40	aluminium	stainless steel
ISQ-02-5110-060SAL	11	60		
ISQ-02-5110-080SAL	11	80		
ISQ-02-5110-100SAL	11	100	stainless steel	titanium
ISQ-02-5110-020ST	11	20	carbon fibre	
ISQ-02-5110-040TCF	11	40		
ISQ-02-5110-050TCF	11	50		
ISQ-02-5110-060TCF	11	60		
ISQ-02-5110-100TCF	11	100		

M5 rotating joints

(mm)

Code	L	ØD	Material
ISQ-03-5110-030TI	30	11	titanium
ISQ-03-5180-036TI	36	18	



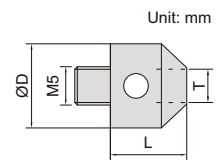
M5 4-way cubes of styli

(mm)

Code	D	L	Material
ISQ-03-5150-150TI	15	15	titanium
ISQ-03-5200-200TI	20	20	



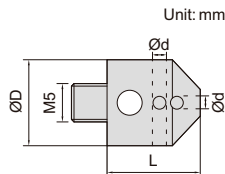
ISQ-05-5110-090M3



M5 thread converters

(mm)

Code	L	ØD	Thread (T)	Material
ISQ-05-5110-090M2	10	11	M2	stainless steel
ISQ-05-5110-090M3	10	11	M3	



Holders for pin styli

(mm)

Code	L	Ød	ØD	Material
ISQ-03-5110-012H1	12	1	11	stainless steel
ISQ-03-5110-012H1D5	12	1.5	11	
ISQ-03-5110-012H2	12	2	11	



ISQ-01-0008-016TR

Pin styli

(mm)

Code	L	Ød	L1	Ød1	Ød2	Material of rod	Material of tip
ISQ-01-0008-016TR	15.8	0.8	4.8	1	0.6	carbide	ruby
ISQ-01-0020-027TR	27	2	-	1.5	-		
ISQ-01-0030-038TR	38	3	-	2	-		

M5 styli (stainless steel base)

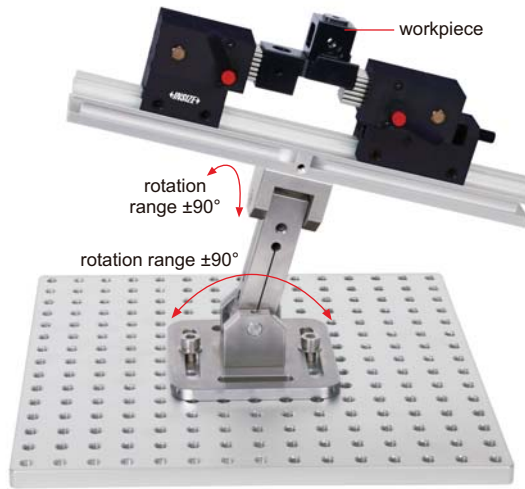
(mm)

Code	Ød	Ød1	L	L1	Material of rod	Material of tip
ISQ-01-5015-033STR	1.5	1	33	23	carbide	ruby
ISQ-01-5015-040STR	1.5	1	40	30		
ISQ-01-5020-034STR	2	1.5	33.5	23.5		
ISQ-01-5020-040STR	2	1.5	40	30		
ISQ-01-5030-034STR	3	2	33.5	23.5		
ISQ-01-5030-050STR	3	2	50	40		
ISQ-01-5030-058STR	3	2	58	48		
ISQ-01-5030-075STR	3	2	75	65		
ISQ-01-5050-050STR	5	2.5	50	40		
ISQ-01-5050-075STR	5	2.5	75	65		
ISQ-01-5060-054STR	6	3	54	44		
ISQ-01-5080-115STR	8	4	114.5	101.5	carbon fibre	ruby
ISQ-01-5030-058SCR	3	2	58	48		
ISQ-01-5050-100SCR	5	3.5	100	90		
ISQ-01-5080-100SCR	8	6	100	87		

CAN BE CUSTOMIZED



JIGS FOR CMM (ANVIL Ø2.5mm)



ISY-200



ISY-200-1



ISY-200-2



ISY-200-3



ISY-200-4



ISY-200-5



ISY-200-6

Code	Product	Remark
ISY-200	jig set	including 1 pc ISY-200-1, 1 pc ISY-200-2, 1 pc ISY-200-3, 1 pc ISY-200-4, 1 pc ISY-200-5 and 2 pcs ISY-200-6

Code	Product	Size	Anvil area	Anvil stroke
ISY-200-1	spring anvil	60×40×57	20.5×23	14
ISY-200-2	adjustable spring anvil (range 0-20mm)	70×40×57	20.5×23	14

Code	Product	Size	Hole size
ISY-200-3	base plate	300×300×12mm	M8

Code	Product	Size
ISY-200-4	guide	300×40×27
ISY-200-5	two-way adjustable stand	110×110×142
ISY-200-6	clamp handle	—

JIGS FOR CMM (ANVIL Ø6mm)



CAN BE CUSTOMIZED



ISY-500



ISY-500-1



ISY-500-2



ISY-500-3



ISY-500-4



ISY-500-5



ISY-500-6



ISY-500-7

Code	Product	Remark
ISY-500	jig set	including 1 pc ISY-500-1, 1 pc ISY-500-2, 2 pcs ISY-500-3, 10 pcs ISY-500-4, 2 pcs ISY-500-5, 1 pc ISY-500-6, 2 pcs ISY-500-7

Code	Product	Size	Anvil area	Anvil stroke
ISY-500-1	spring anvil	134×90×90	36×100	24
ISY-500-2	adjustable spring anvil (range 0-40mm)	134×120×130	36×100	24

(mm)

Code	Product	Size
ISY-500-3	base plate	300×240×20
ISY-500-4	block	120×90×20
ISY-500-5	connecting plate	170×90×15
ISY-500-6	connecting block of base plate	80×50×10
ISY-500-7	clamp handle	—

(mm)

CAN BE CUSTOMIZED

JIGS FOR CMM (ANVIL Ø2.5mm)



ISY-300-1



ISY-300



ISY-300-2



ISY-300-3



ISY-300-4



ISY-300-5



ISY-300-6



ISY-300-7



ISY-300-8



ISY-300-9



ISY-300-10



ISY-300-11



ISY-300-12



ISY-300-13

Code	Product	Remark
ISY-300	jig set	including 1 pc ISY-300-1, 2 pcs ISY-300-2, 1 pc ISY-300-3, 2 pcs ISY-300-4, 14 pcs ISY-300-5, 2 pcs ISY-300-6, 8 pcs ISY-300-7, 6 pcs ISY-300-8, 2 pcs ISY-300-9, 2 pcs ISY-300-10, 2 pcs ISY-300-11, 2 pcs ISY-300-12, 2 pcs ISY-300-13

Code	Product	Size	Hole size
ISY-300-1	base plate	300×300×12mm	M8

Code	Product	Size	Anvil area	Anvil stroke
ISY-300-2	spring anvil	60×40×75	20.5×23	14
ISY-300-3	spring anvil	Ø26×80	3.1cm ² (hexagon)	14

Code	Product	Size (mm)
ISY-300-4	block	50×50×50
ISY-300-5	block	50×50×20
ISY-300-6	connecting plate	110×50×10
ISY-300-7	block	Ø26×20
ISY-300-8	block	Ø26×30
ISY-300-9	connecting plate	150×26×10
ISY-300-10	clip	65×11
ISY-300-11	clip	100×11
ISY-300-12	connecting block of clip stand	Ø26×20
ISY-300-13	clip stand	Ø8×75

JIGS FOR CMM (ANVIL Ø6mm)

CAN BE CUSTOMIZED



ISY-400



ISY-400-1



ISY-400-2



ISY-400-3



ISY-400-4



ISY-400-5



ISY-400-6

Code	Product	Remark
ISY-400	jig set	including 3 pcs ISY-400-1, 9 pcs ISY-400-2, 9 pcs ISY-400-3, 1 pc ISY-400-4, 3 pcs ISY-400-5, 3 pcs ISY-400-6

(mm)

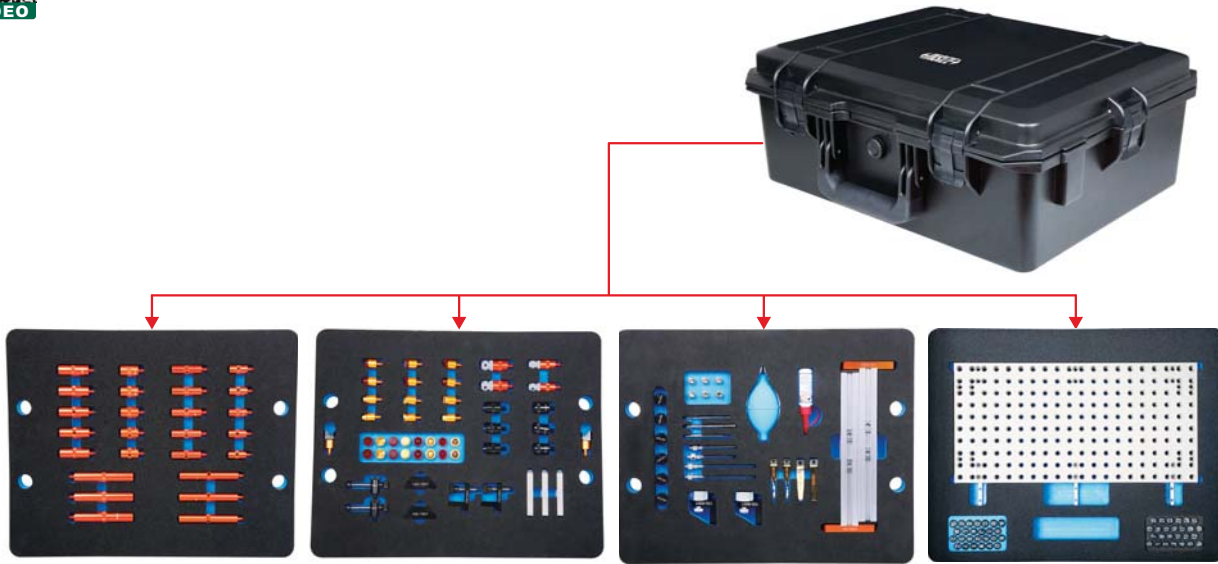
Code	Product	Size
ISY-400-2	block	120×60×20
ISY-400-3	block	120×60×30
ISY-400-4	base plate	500×500×12
ISY-400-5	connecting plate	130×120×12
ISY-400-6	clamp handle	—

(mm)

Code	Product	Size	Anvil area	Anvil stroke
ISY-400-1	spring anvil	135×60×90	36×100	24

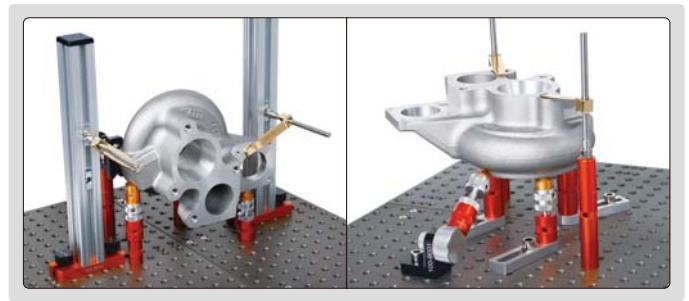


JIG SET FOR CMM CODE ISY-100



ISY-100

application examples













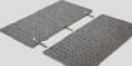





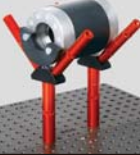


Product	Code	Size (mm)	Quantity	Application
	ISY-100-1001	Ø16×30	5	
	ISY-100-1002	Ø16×50	5	
	ISY-100-1003	Ø16×100	3	
	ISY-100-1004	Ø20×30	5	
	ISY-100-1005	Ø20×50	5	
	ISY-100-1006	Ø20×100	3	
stand with fine adjustment	ISY-100-2001	Ø16×45~60	2	height adjustment: 45~60mm
stand with fine adjustment	ISY-100-2003	Ø20×45~60	2	
horizontal spring stand	ISY-100-4001	—	2	

Product	Code	Size (mm)	Quantity	Application
horizontal screw stand	ISY-100-5001	—	2	
magnetic stand (magnetic top surface)	ISY-100-7001	Ø20×25	3	
stand for slice parts	ISY-100-8001	Ø20×25	2	ISY-100-8001 and ISY-100-8002 use cooperatively
clamping stand for slice parts	ISY-100-8002		1	









To be continued

Continued from previous page

Product	Code	Size (mm)	Quantity	Application
clip 	ISY-100-1201	—	2	
clip 	ISY-100-1301	—	2	
clip stand 	ISY-100-1401	Ø6×60	2	
	ISY-100-1402	Ø6×100	2	
vertical square column 	ISY-100-3003	30×30×250	2	
sliding support plate 	ISY-100-1801	78×20×10	3	
clamping screw 	ISY-100-2301	Ø8×20	6	
screw 	ISY-100-2302	Ø8×20	6	
base plate 	ISY-600-400200	400×400×12 hole size: M8×1.25 hole center distance: 20	2 pieces	—
wrench 	ISY-100-3701	Ø3.8×70	1	—
wrench 	ISY-100-3801	M2.5	1	—
	ISY-100-3802	M5	1	—
	ISY-100-3803	M6	1	—
45° stand 	ISY-100-9001	—	2	
V shaped support 	ISY-100-1901	—	2	

Product	Code	Quantity	Application
V shaped support 	ISY-100-1902	2	
marker 	ISY-6100-1501	52*	
dust cleaner 	ISY-100-3501	1	—
lubricating oil 	ISY-100-3601	1	—

*Letter A-Z, number 0-25

Product	Code	Quantity	Material	Application
support head 	ISY-100-27016	2	aluminum	
	ISY-100-27018	2	nylon	
support head 	ISY-100-27026	2	aluminum	
	ISY-100-27028	2	nylon	
support head 	ISY-100-27036	2	aluminum	
	ISY-100-27038	2	nylon	
support head 	ISY-100-27046	2	aluminum	
	ISY-100-27048	2	nylon	
support head 	ISY-100-27056	2	aluminum	
	ISY-100-27058	2	nylon	
support head 	ISY-100-27066	2	aluminum	
	ISY-100-27068	2	nylon	
support head 	ISY-100-27076	2	aluminum	
	ISY-100-27078	2	nylon	

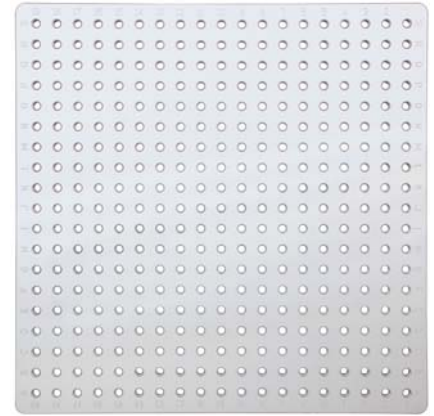


JIG SET FOR CMM CODE ISY-600





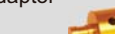
application example



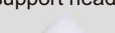


acrylic tray (included)



ISY-600

Product	Code	Size (mm)	Quantity
	ISY-600-80001	Ø12×50	6
	ISY-600-80002	Ø12×30	6
	ISY-600-80007	Ø12×20	6
	ISY-600-80003	Ø16×50	6
	ISY-600-80004	Ø16×30	6
	ISY-600-80008	Ø16×20	6
	ISY-600-80005	Ø20×50	6
	ISY-600-80006	Ø20×30	6
	ISY-600-80009	Ø20×20	6
	ISY-600-800010	—	2
	ISY-600-800012	—	2
	ISY-600-800013	Ø20×55~78	2
	ISY-600-800014	Ø20×20	4
	ISY-600-800015	Ø20×20	2
	ISY-600-800016	Ø20×15	6
	ISY-600-800017	—	2

Product	Code	Size (mm)	Quantity
	ISY-600-800018	Ø20×25	2
	ISY-600-800019	—	6
	ISY-600-800020	68×20×10	6
	ISY-600-800021	12×70	5
	ISY-600-800022	—	2
	ISY-600-800023	Ø6×80	2
	ISY-600-800024	Ø6×40	3
	ISY-600-800025	—	3
	ISY-600-800026	—	3
	ISY-600-800027	Ø8×48	2
	ISY-600-800028	400×400×15 hole size: M8X1.25	1



Tool Presetters
Page 480-482



Profile Projectors
Page 483-492



Quick Measurement Systems
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Vision Measuring Systems
Page 499-508



Vision Measuring Softwares
Page 509-510



Jig Sets For Vision Measuring Systems
Page 511



Standard Glass Scales
Page 512



TOOL PRESETTER (PROJECTOR TYPE) CODE TLP-P340

projection screen Ø120mm with scale
(protractor with 1° graduation, radius with 0.2,
0.4, 0.8, 1.2, 1.5, 2, 2.5, 3mm graduation)



▪ 99 data can be saved and printed



standard rod (included)



BT50/BT40 converter (optional)



BT50/BT30 converter (optional)

SPECIFICATION

Maximum tool diameter (X axis)		Ø300mm
Height measuring range (Z axis)		30~400mm
Accuracy	X axis	±6µm
	Z axis	±13µm
Resolution		0.5µm
Diameter of projection screen		Ø120mm
Lens	magnification	20X
	view filed	Ø6mm
Illumination		24V/20W
Spindle holder		BT50
Power supply		220V, 50/60HZ
Dimension (L×W×H)		940×520×870mm
Weight		90kg

STANDARD DELIVERY

Main unit	1 pc
BT50 spindle holder	1 pc
Standard rod	1 pc
Foot-switch	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

BT50/BT30 converter	TLP-P340-C1
BT30 rod	TLP-P340-R1
BT50/BT40 converter	TLP-P340-C2
BT40 rod	TLP-P340-R2

TOOL PRESETTER CODE TLP-400E



rotate the handwheel to rotate tools



standard rod (included)



BT50/BT40 converter (optional)



BT50/BT30 converter (optional)

- Absolute linear scales, zero setting is not needed after power on and off

SPECIFICATION

Maximum tool diameter (X axis)	Ø300mm
Height measuring range	60~400mm
Repeatability	0.005mm
Measuring accuracy	0.01mm
Linear scale resolution	0.001mm
Dial indicator graduation	0.001mm
Spindle holder	BT50
Power supply	110/220V, 50/60HZ
Dimension (L×W×H)	720x480x930mm
Weight	150kg

STANDARD DELIVERY

Main unit	1 pc
BT50 spindle holder	1 pc
Standard rod	1 pc
Dial indicator	2 pcs
Wrench	1 set
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

BT50/BT30 converter	TLP-300H-C1
BT50/BT40 converter	TLP-300H-C2



TOOL PRESETTER (BASIC TYPE) CODE TLP-300H



standard rod (included)



BT50/BT40 converter (optional)



BT50/BT30 converter (optional)

- Absolute linear scales, zero setting is not needed after power on and off

SPECIFICATION

Maximum tool diameter (X axis)	Ø300mm
Height measuring range	60~300mm
Repeatability	0.005mm
Measuring accuracy	0.02mm
Linear scale resolution	0.005mm
Dial indicator graduation	0.01mm
Spindle holder	BT50
Power supply	110/220V, 50/60HZ
Dimension (L×W×H)	600x365x690mm
Weight	68kg

STANDARD DELIVERY

Main unit	1 pc
BT50 spindle holder	1 pc
Standard rod	1 pc
Dial indicator	2 pcs
Wrench	1 set
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

BT50/BT30 converter	TLP-300H-C1
BT50/BT40 converter	TLP-300H-C2

PROFILE PROJECTORS



ISP-Z3015



ISP-A1000E

digital readout of ISP-A1000E



- touch buttons
- USB data output to Excel and CAD
- show diagram

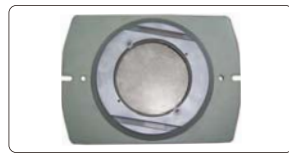


software flash disk (included, only for ISP-A1000E)

OPTIONAL ACCESSORY



lens



rotary table
(glass plate diameter 100mm)



overlay chart (protractor with 1°
graduation, radius with 1mm increment)



holder with clamp



swivel center support



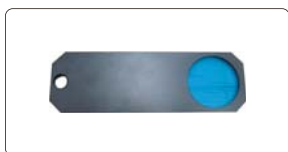
V-block with clamp



50mm reading scale
(check magnification accuracy)



300mm calibration scale (check
magnification accuracy together
with 50mm reading scale or
calibrate measuring accuracy)



blue filter



demo sample



printer (only for ISP-A1000E)

To be continued

Continued from previous page

SPECIFICATION

Code		ISP-Z3015	ISP-A1000E		
Edge detector		not included	included		
Lens	magnification	10X (included) 20X (optional)	50X (optional)	100X (optional)	
	view field	Ø30mm Ø15mm	Ø6mm	Ø3mm	
	working distance	77.7mm 44.3mm	38.4mm	25.3mm	
Max. workpiece height		90mm 90mm	90mm	90mm	
Magnification accuracy		±0.08%			
Image		erect image			
Projector screen		diameter: Ø300mm			
		rotation range: 0°~360°, resolution: 1" or 0.01°			
		reference lines: cross-hairs			
Stage	metal stage size	340×152mm			
	glass stage size	196×96mm			
	X-Y stage travel	range: 150×50mm			
		resolution: 0.5µm			
		accuracy: (4+L/25)µm L is the measuring length in mm			
Z (focus) travel range	90mm				
max. load capacity	4kg				
Illumination		contour illumination: 24V/150W halogen lamp, brightness is adjustable			
		surface illumination: 24V/150W halogen lamp			
Data processing unit	display	X-Y stage travel, screen rotation			
	output	RS232C	RS232C, USB (data output to Excel and CAD)		
	function	measure coordinate of point		measure coordinate of point	
		measure coordinate of line		measure coordinate of line	
measure center coordinate, radius of circle with three points			measure center coordinate, radius of circle with three points		
measure distance between two objects			measure distance between two objects		
measure angle with four points or two lines			measure angle with four points or two lines		
set origin of coordinate			coordinate transform		
coordinate transform			choose measurement object automatically according to the selective point and display the result		
set midpoint of coordinate					
advanced function	—	programming for batch measurements			
Power supply		110/220V, 50/60Hz			
Dimension (L×W×H)		550×770×1100mm			
Weight		135kg			

STANDARD DELIVERY

Main unit	1 pc
10X lens with half-reflection mirror and oblique illuminator mirror	1 pc
Overlay chart clip	4 pcs
Foot-switch	1 pc
Anti-dust cover	1 pc
Software (only for ISP-A1000E) and USB cable	1 pc

OPTIONAL ACCESSORY

20X lens with half-reflection mirror and oblique illuminator mirror	ISP-Z3015-LENS20X
50X lens with half-reflection mirror	ISP-Z3015-LENS50X
100X lens with half-reflection mirror	ISP-Z3015-LENS100X
Rotary table	ISP-Z3015-TABLE
Overlay chart	ISP-Z3015-CHART
Holder with clamp	ISP-Z3015-HOLDER

Swivel center support	ISP-Z3015-SUPPORT
V-block with clamp	ISP-Z3015-VBLOCK
50mm reading scale	ISP-Z3015-SCALE50
300mm calibration scale	ISP-Z3015-RULE
Blue filter	ISP-Z3015-FILTER
Demo sample	ISP-Z3015-DEMO
Printer (only for ISP-A1000E)	ISP-A1000-PRINTER

PROFILE PROJECTORS

THE STAGE DOESN'T
MOVE UP AND DOWN



ISP-AZ3020



edge detector

ISP-A5000E



digital readout of ISP-A5000E

- Adjust the focus by ascending and descending the projector head, the stage doesn't move up and down
- Maximum workpiece weight 50kg

- touch buttons
- USB data output to Excel and CAD
- show diagram

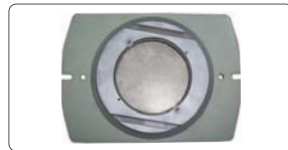


software flash disk (included, only for ISP-A5000E)

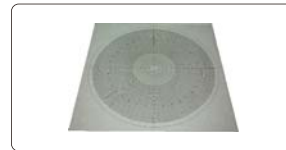
OPTIONAL ACCESSORY



lens



rotary table (glass plate diameter 100mm)



overlay chart (protractor with 1° graduation, radius with 1mm increment)



holder with clamp



swivel center support



V-block with clamp



50mm reading scale (check magnification accuracy)



300mm calibration scale (check magnification accuracy together with 50mm reading scale or calibrate measuring accuracy)



demo sample


















printer (only for ISP-A5000E)

To be continued

Continued from previous page

SPECIFICATION

Code		ISP-AZ3020	ISP-A5000E		
Edge detector		not included	included		
Lens	magnification	10X (included) 20X (optional)	50X (optional)	100X (optional)	
	view field	Ø30mm Ø15mm	Ø6mm	Ø3mm	
	working distance	77.7mm 44.3mm	38.4mm	25.3mm	
Max. workpiece height		100mm 100mm	100mm	100mm	
Magnification accuracy		±0.08%			
Image		erect image			
Projector screen		diameter: Ø300mm			
		rotation range: 0°~360°, resolution: 1" or 0.01°			
		reference lines: cross-hairs			
Stage	metal stage size	404×228mm			
	glass stage size	260×160mm			
	X-Y stage travel	range: 200×100mm			
		resolution: 0.5µm			
	Z (focus) travel range	accuracy: (3+L/75)µm L is the measuring length in mm			
max. load capacity	100mm				
Illumination		contour illumination: 24V/150W halogen lamp, brightness is adjustable			
		surface illumination: 24V/150W halogen lamp			
Data processing unit	display	X-Y stage travel, screen rotation			
	output	RS232C	RS232C, USB (data output to Excel and CAD)		
	function		measure coordinate of point		measure coordinate of point
			measure coordinate of line		measure coordinate of line
		measure center coordinate, radius of circle with three points		measure center coordinate, radius of circle with three points	
		measure distance between two objects		measure distance between two objects	
		measure angle with four points or two lines		measure angle with four points or two lines	
		set origin of coordinate		coordinate transform	
		coordinate transform		choose measurement object automatically according to the selective point and display the result	
		set midpoint of coordinate			
advanced function		—	programming for batch measurements		
Power supply		110/220V, 50/60Hz			
Dimension (L×W×H)		780×780×1100mm			
Weight		160kg			

STANDARD DELIVERY

Main unit	1 pc
10X lens with half-reflection mirror and oblique illuminator mirror	1 pc
Overlay chart clip	4 pcs
Foot-switch	1 pc
Blue filter	1 pc
Anti-dust cover	1 pc
Software (only for ISP-A5000E) and USB cable	1 pc

OPTIONAL ACCESSORY

20X lens with half-reflection mirror and oblique illuminator mirror	ISP-A5000-LENS20X
50X lens with half-reflection mirror	ISP-A5000-LENS50X
100X lens with half-reflection mirror	ISP-A5000-LENS100X
Rotary table	ISP-A5000-TABLE
Overlay chart	ISP-A5000-CHART
Holder with clamp	ISP-A5000-HOLDER
Swivel center support	ISP-A5000-SUPPORT
V-block with clamp	ISP-A5000-VBLOCK
50mm reading scale	ISP-A5000-SCALE50
300mm calibration scale	ISP-A5000-RULE
Demo sample	ISP-A5000-DEMO
Printer (only for ISP-A5000E)	ISP-A5000-PRINTER

HORIZONTAL PROFILE PROJECTORS



ISP-W3020

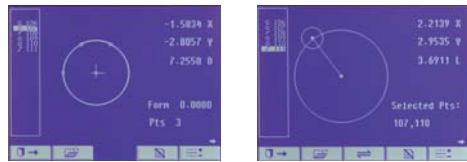


ISP-A3000E

digital readout of ISP-A3000E



- touch buttons
- USB data output to Excel and CAD
- show diagram



software flash disk (included, only for ISP-A3000E)

OPTIONAL ACCESSORY



lens



overlay chart (protractor with 1° graduation, radius with 1mm increment)



50mm reading scale (check magnification accuracy)



demo sample



vise



rotary table



300mm calibration scale (check magnification accuracy together with 50mm reading scale or calibrate measuring accuracy)



















printer (only for ISP-A3000E)

To be continued

Continued from previous page

SPECIFICATION

Code		ISP-W3020	ISP-A3000E	
Edge detector		not included	included	
Lens	magnification	10X (included) 20X (optional)	50X (optional) 100X (optional)	
	view field	Ø30mm Ø15mm	Ø6mm Ø3mm	
	working distance	77.7mm 44.3mm	38.4mm 25.3mm	
Magnification accuracy		±0.08%		
Projector screen		diameter: Ø300mm		
		rotation range: 0°~360°, resolution: 1' or 0.01°		
		reference lines: cross-hairs		
Stage	metal stage size	400×150mm		
	turning range	±15°		
	X-Z stage travel	range: 200×100mm		
		resolution: 0.5µm		
	Y (focus) travel range	accuracy: (4+L/25)µm L is the measuring length in mm		
max. load capacity	75mm			
Illumination		contour illumination: 24V/150W halogen lamp, brightness is adjustable		
		surface illumination: 12V/150W halogen lamp (with 2 fibers), position is adjustable		
Data processing unit	display	X-Z stage travel, screen rotation		
	output	RS232C	RS232C, USB (data output to Excel and CAD)	
	function		measure coordinate of point	
			measure coordinate of line	
		measure center coordinate, radius of circle with three points		
		measure distance between two objects		
		measure angle with four points or two lines		
		set origin of coordinate		
		coordinate transform		
		set midpoint of coordinate		
advanced function		—	programming for batch measurements	
Power supply		110/220V, 50/60Hz		
Dimension (L×W×H)		830×1090×1010mm		
Weight		160kg		

STANDARD DELIVERY

Main unit	1 pc
10X lens	1 pc
Overlay chart clip	4 pcs
Foot-switch	1 pc
Anti-dust cover	1 pc
Software (only for ISP-A3000E) and USB cable	1 pc

OPTIONAL ACCESSORY

20X lens	ISP-A3000-LENS20X
50X lens	ISP-A3000-LENS50X
100X lens	ISP-A3000-LENS100X
Overlay chart	ISP-A3000-CHART
50mm reading scale	ISP-A3000-SCALE50
300mm calibration scale	ISP-A3000-RULE

Demo sample	ISP-A3000-DEMO
V-block with clamp	ISP-A3000-VBLOCK
Rotary table	ISP-A3000-RTABLE
Vise	ISP-A3000-UISE
Printer (only for ISP-A3000E)	ISP-A3000-PRINTER

HORIZONTAL PROFILE PROJECTORS



ISP-W4025



ISP-A7000E

digital readout of ISP-A7000E



- touch buttons
- USB data output to Excel and CAD
- show diagram



software flash disk (included, only for ISP-A7000E)

OPTIONAL ACCESSORY



lens



vise



rotary table



demo sample (need rotary table)



printer (only for ISP-A7000E)



50mm reading scale (check magnification accuracy)



300mm calibration scale (check magnification accuracy together with 50mm reading scale or calibrate measuring accuracy)


















Ø300mm overlay chart (protractor with 1° graduation, radius with 1mm increment)

To be continued

Continued from previous page

SPECIFICATION

Code		ISP-W4025	ISP-A7000E				
Edge detector		not included	included				
Lens	magnification	5X (optional)	10X (standard)	20X (optional)	50X (optional)	100X (optional)	
	view field	Ø80mm	Ø40mm	Ø20mm	Ø8mm	Ø4mm	
	working distance	93.7mm	103.9mm	95.1mm	65.7mm	35mm	
Magnification accuracy		±0.08%					
Image		erect image					
Projector screen		diameter: Ø400mm					
		rotation range: 0°~360°, resolution: 1' or 0.01°					
		reference lines: cross-hairs					
Stage	metal stage size	450×200mm					
	turning range	±15°					
	X-Z stage travel	range: 250×150mm					
		resolution: 0.5µm					
	Y (focus) travel range	accuracy: (4+L/25)µm L is the measuring length in mm					
max. load capacity	100mm						
Illumination		contour illumination: 24V/150W halogen lamp, brightness is adjustable					
		surface illumination: 12V/150W halogen lamp (with 2 fibers), position is adjustable					
Data processing unit	display	X-Z stage travel, screen rotation					
	output	RS232C		RS232C, USB (data output to Excel and CAD)			
	function		measure coordinate of point		 measure coordinate of point		
			measure coordinate of line		 measure coordinate of line		
			measure center coordinate, radius of circle with three points		 measure center coordinate, radius of circle with three points		
		measure distance between two objects		 measure distance between two objects			
		measure angle with four points or two lines		 measure angle with four points or two lines			
		set origin of coordinate		 coordinate transform			
		coordinate transform		 choose measurement object automatically according to the selective point and display the result			
	set midpoint of coordinate						
advanced function	—		programming for batch measurements				
Power supply		110/220V, 50/60Hz					
Dimension (L×W×H)		646×1215×1210mm					
Weight		240kg					

STANDARD DELIVERY

Main unit	1 pc
10X lens	1 pc
Overlay chart clip	4 pcs
Foot-switch	1 pc
Anti-dust cover	1 pc
Software (only for ISP-A7000E) and USB cable	1 pc

OPTIONAL ACCESSORY

5X lens	ISP-W4025-LENS5X
20X lens	ISP-W4025-LENS20X
50X lens	ISP-W4025-LENS50X
100X lens	ISP-W4025-LENS100X
Ø300mm overlay chart	ISP-A3000-CHART
50mm reading scale	ISP-A3000-SCALE50

300mm calibration scale	ISP-A3000-RULE
Demo sample	ISP-A3000-DEMO
V-block with clamp	ISP-A3000-VBLOCK
Rotary table	ISP-A3000-RTABLE
Vise	ISP-A3000-VISE
Printer (only for ISP-A7000E)	ISP-A3000-PRINTER

PROFILE PROJECTORS



edge detector (for ISP-A6000E)

digital readout

- touch buttons
- USB data output to Excel and CAD
- show diagram

ISP-A6000 (without edge detector)



software flash disk (included)

OPTIONAL ACCESSORY



lens



rotary table
(glass plate diameter 100mm)



holder with clamp



printer



300mm calibration scale (check magnification accuracy together with 50mm reading scale or calibrate measuring accuracy)



50mm reading scale
(check magnification accuracy)










demo sample

To be continued



Continued from previous page

SPECIFICATION

Code		ISP-A6000			ISP-A6000E	
Edge detector		not included			included	
Projector screen		diameter: Ø600mm				
		rotation range: 0°~360°, resolution: 1' or 0.01°				
		reference lines: cross-hairs				
Lens	magnification	5X (optional)	10X (included)	20X (optional)	50X (optional)	100X (optional)
	view field	Ø120mm	Ø60mm	Ø30mm	Ø12mm	Ø6mm
	working distance	242.8mm	143.2mm	85.5mm	92mm	48.5mm
Magnification accuracy		±0.08%				
Image		erect image				
Stage	metal stage size	404×265mm				
	glass stage size	207×170mm				
	X-Y stage travel	range: 200×100mm				
		resolution: 0.5µm				
	Z (focus) travel range	50mm				
max. load capacity	5kg					
Illumination		contour illumination: 24V/150W halogen lamp, brightness is adjustable				
		surface illumination: 12V/150W halogen lamp (with 2 fibers), position is adjustable				
Data processing unit	display	X-Y stage travel, screen rotation				
	output	RS232C, USB (data output to Excel and CAD)				
	function	 measure coordinate of point				
		 measure coordinate of line				
 measure center coordinate, radius of circle with three points						
 measure distance between two objects						
 measure angle with four points or two lines						
 coordinate transform						
advanced function		 choose measurement object automatically according to the selective point and display the result programming for batch measurements				
Power supply		110/220V, 50/60Hz				
Dimension (L×W×H)		1200×1140×1940mm				
Weight		360kg				

STANDARD DELIVERY

Main unit	1 pc
10X lens	1 pc
Foot-switch	1 pc
Software and USB cable	1 pc
Overlay chart clip	4 pcs
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

5X lens	ISP-A6000-LENS5X
20X lens	ISP-A6000-LENS20X
50X lens	ISP-A6000-LENS50X
100X lens	ISP-A6000-LENS100X
Holder with clamp	ISP-A6000-HOLDER

300mm calibration scale	ISP-A6000-RULE
50mm reading scale	ISP-A6000-SCALE50
Rotary table	ISP-A6000-TABLE
Demo sample	ISP-A6000-DEMO
Printer	ISP-A6000-PRINTER

LARGE SIZE QUICK MEASUREMENT SYSTEM CODE QMS-A450



SPECIFICATION

Optical lens		dual-field dual-telecentric low-distortion lens	
Measurement range		wide view field	small view field
		500×400mm	430×350mm
Measurement Accuracy	without stitching	±3μm ^①	±1μm ^②
	with stitching	±(5+0.02L)μm ^③	±(3+0.02L)μm ^④
Repeatability	without stitching	±1μm	±0.5μm
	with stitching	±2μm	±1.5μm
Illumination system	transmission light	telecentric illuminator, green light	
	surface light	vertical illuminator, high angle ring white light	
		vertical illuminator, 4-zone low and medium angle ring white light (electric) vertical illuminator, circular (directional) green light (electric)	
	coaxial light (optional)	vertical illuminator, white light	
Max. weight of workpiece		25kg	
Measurement time		<2s	
Measurement data		2D measurement	
Environmental requirement		temperature: 20°C±2°C, relative humidity: 30%~80%, vibration: <0.002g, less than 15Hz	
Power supply		220V, 50Hz, 1200W	
Dimension (L×W×H)		1060×860×1890mm	
Weight		650kg	

* The optimum temperature is 20°C±1°C

① Within 73×49mm, on focal position and environment temperature at 20°C±1°C

② Within 16×12mm, on focal position and environment temperature at 20°C±1°C

③ Within 450×360mm, on focal position and environment temperature at 20°C±1°C

④ Within 387×315mm, on focal position and environment temperature at 20°C±1°C

To be continued

Continued from previous page

- One or more workpieces can be measured by one step operation
- Place workpieces at any position
- Focus and measure automatically

STANDARD DELIVERY

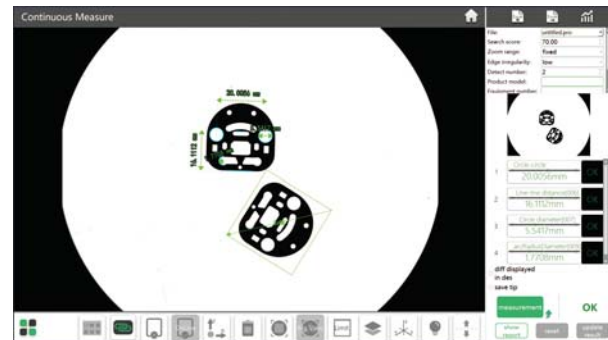
Main unit	1 pc
Computer	1 pc
Software	1 pc

OPTIONAL ACCESSORY

Coaxial light illumination	QMS-43-A1
Data transmission function of software	QMS-23-D1
CAD import function of software	QMS-23-C1
Laser sensor	QMS-43-SJ1
Foot-switch	QMS-43-FS1

Software (included)

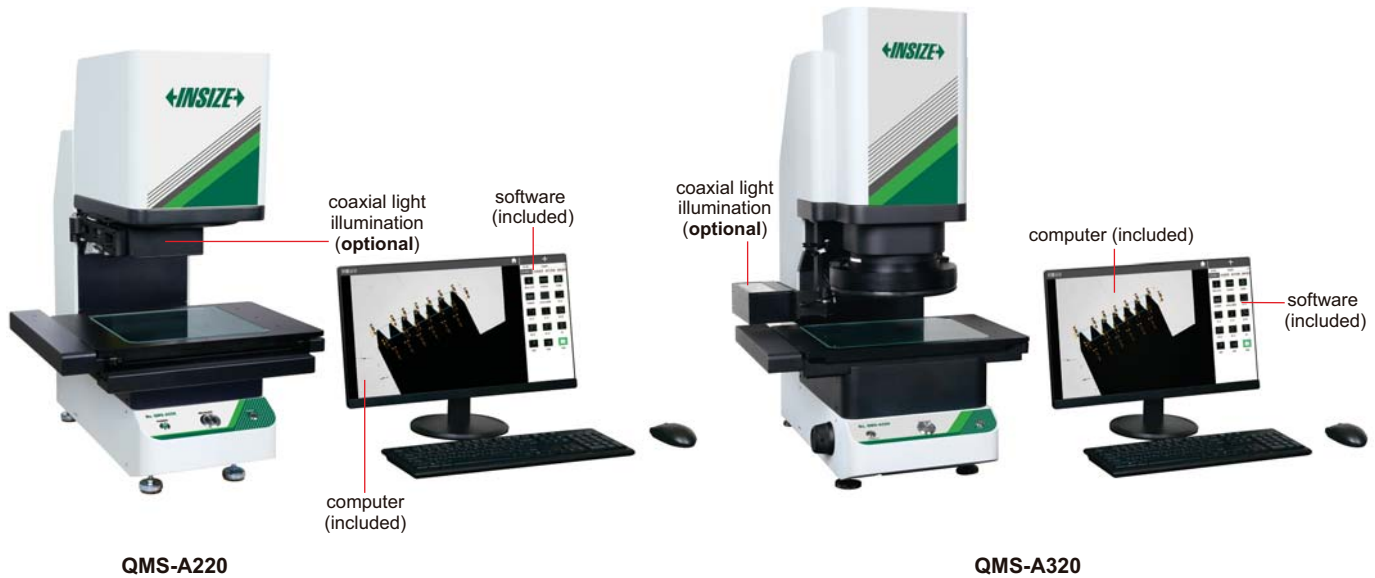
- Automatically measure widths, holes, rings, angles at the same time, simple and efficient



- Measuring result can be stored automatically. OK items and NG items can be counted automatically



QUICK MEASUREMENT SYSTEMS (WITH STITCHING)



SPECIFICATION

Code		QMS-A220		QMS-A315		QMS-A320	
Optical lens		dual-field dual-telecentric low-distortion lens					
View field range		wide view field: Ø100mm small view field: Ø25mm	wide view field: Ø100mm small view field: Ø25mm	wide view field: Ø150mm small view field: Ø50mm			
Measurement range		200×200mm	130×130mm	300×200mm	230×130mm	300×210mm	200×135mm
Measurement accuracy *	without stitching	±3µm ^①	±1µm ^②	±3µm ^①	±1µm ^②	±5µm ^③	±2µm ^④
	with stitching	±(5+0.02L)µm ^⑤	±(3+0.02L)µm ^⑥	±(5+0.02L)µm ^⑦	±(3+0.02L)µm ^⑧	±(7+0.02L)µm ^⑨	±(4+0.02L)µm ^⑩
Repeatability	without stitching	±1µm	±0.5µm	±1µm	±0.5µm	±1µm	±0.5µm
	with stitching	±2µm	±1.5µm	±2µm	±1.5µm	±2µm	±1.5µm
Max. weight of workpiece		5kg					
Measurement time		<2s					
Measurement data		2D measurement					
Power supply		220V, 50Hz, 600W					
Illumination system	back light	telecentric illuminator, green light					
	ring light	4-zone circular white high light circular (directional) low-angle green light (electric)					
	coaxial light (optional)	vertical illuminator, white light					
Environmental requirement		temperature: 20°C±2°C, relative humidity: 30%~80%, vibration: <0.002g, less than 15Hz					
Dimension (L×W×H)		532×480×766mm		532×497×766mm		669×510×883mm	
Weight		50kg		60kg		68kg	

* The optimum temperature is 20°C±1°C

- ① Within 80×64mm, on focal position and environment temperature at 20°C±1°C
- ② Within 20×16mm, on focal position and environment temperature at 20°C±1°C
- ③ Within 120×88mm, on focal position and environment temperature at 20°C±1°C
- ④ Within 40×28mm, on focal position and environment temperature at 20°C±1°C
- ⑤ Within 180×180mm, on focal position, environment temperature at 20°C±1°C, and workpiece is less than 2kg, L is the travel of stage
- ⑥ Within 117×117mm, on focal position, environment temperature at 20°C±1°C, and workpiece is less than 2kg, L is the travel of stage
- ⑦ Within 270×180mm, on focal position, environment temperature at 20°C±1°C, and workpiece is less than 2kg, L is the travel of stage
- ⑧ Within 207×117mm, on focal position, environment temperature at 20°C±1°C, and workpiece is less than 2kg, L is the travel of stage
- ⑨ Within 270×189mm, on focal position, environment temperature at 20°C±1°C, and workpiece is less than 2kg, L is the travel of stage
- ⑩ Within 180×121mm, on focal position, environment temperature at 20°C±1°C, and workpiece is less than 2kg, L is the travel of stage

To be continued

Continued from previous page

- One or more workpieces can be measured by one step operation
- Place workpieces at any position
- Focus and measure automatically

STANDARD DELIVERY

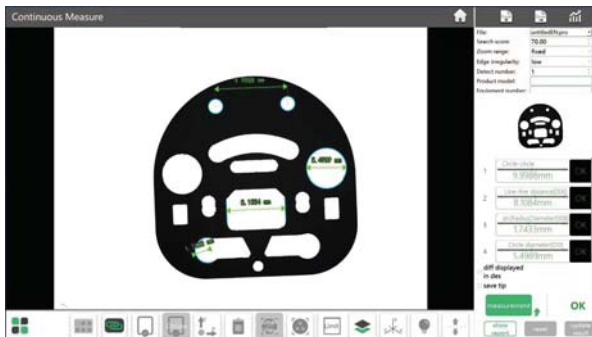
Main unit	1 pc
Computer	1 pc
Software	1 pc

OPTIONAL ACCESSORY

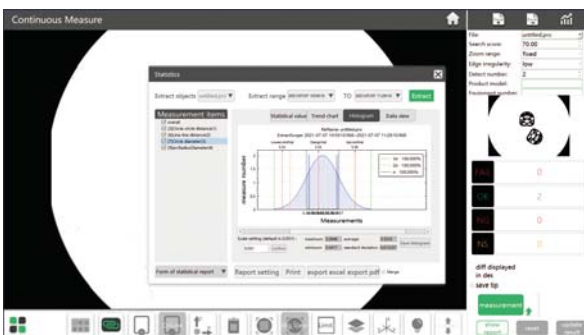
Coaxial light illumination	QMS-23-A3 (for QMS-A220, QMS-A315)
	QMS-23-A4 (for QMS-A320)
Data transmission function of software	QMS-23-D1
CAD import function of software	QMS-23-C1
Laser sensor	QMS-43-SJ1 (for QMS-A315)
Foot-switch	QMS-43-FS1

Software (included)

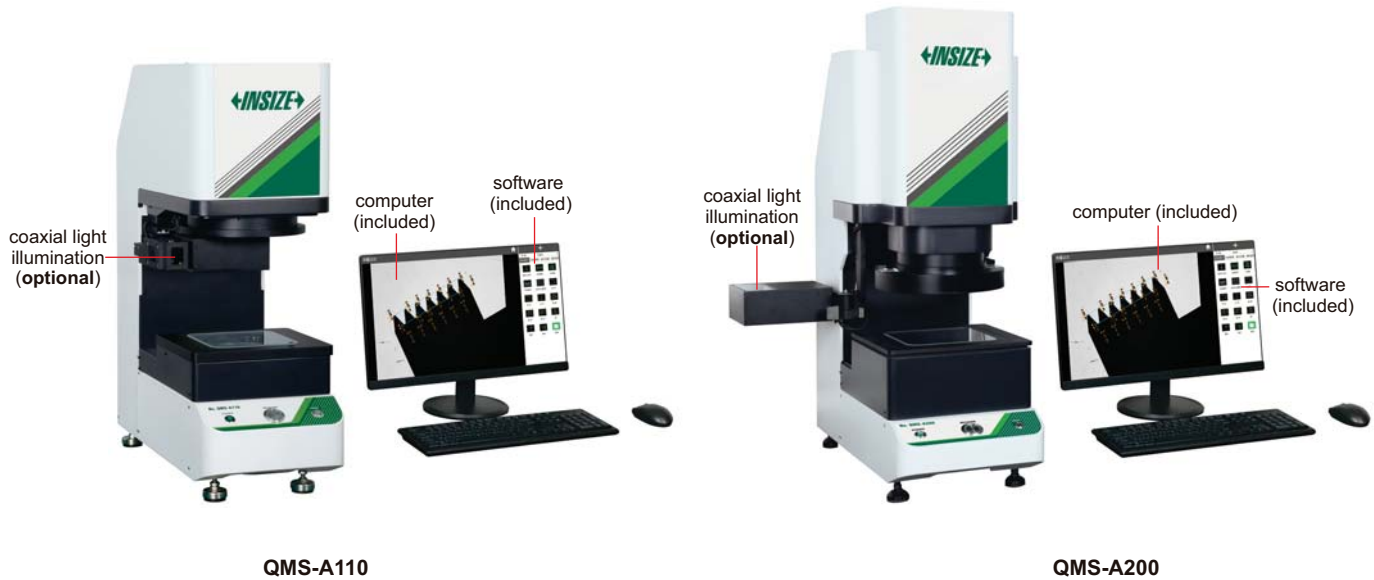
- Automatically measure widths, holes, rings, angles at the same time, simple and efficient



- Measuring result can be stored automatically. OK items and NG items can be counted automatically



QUICK MEASUREMENT SYSTEMS (WITHOUT STITCHING)



QMS-A110

QMS-A200

SPECIFICATION

Code	QMS-A110	QMS-A200	
Optical lens	low-distortion lens, single-field telecentric Ø100mm	dual-field dual-telecentric low-distortion lens wide view field: Ø150mm small view field: Ø50mm	
View field range	100×80mm	wide view field 150×110mm	small view field 50×35mm
Measurement range (X×Y)	98×78mm	148×108mm	48×33mm
Measurement accuracy *	±3µm ①	±5µm ②	±2µm ③
Repeatability	±1µm	±1µm	±0.5µm
Max. weight of workpiece	5kg		
Measurement time	<2s		
Measurement data	2D measurement		
Power supply	220V, 50Hz, 600W		
Illumination system	back light	telecentric illuminator, green light	
	ring light	4-zone circular white high light circular (directional) low-angle green light (electric)	
	coaxial light (optional)	vertical illuminator, white light	
Environmental requirement	temperature: 20°C±2°C, relative humidity: 30%~80%, vibration: <0.002g, less than 15Hz		
Dimension (L×W×H)	580×235×790mm	638×336×885mm	
Weight	40kg	60kg	

* The optimum temperature is 20°C±1°C

- ① Within 80×64mm, on focal position and environment temperature at 20°C±1°C
- ② Within 120×88mm, on focal position and environment temperature at 20°C±1°C
- ③ Within 40×28mm, on focal position and environment temperature at 20°C±1°C

To be continued

Continued from previous page

- One or more workpieces can be measured by one step operation
- Place workpieces at any position
- Focus and measure automatically

STANDARD DELIVERY

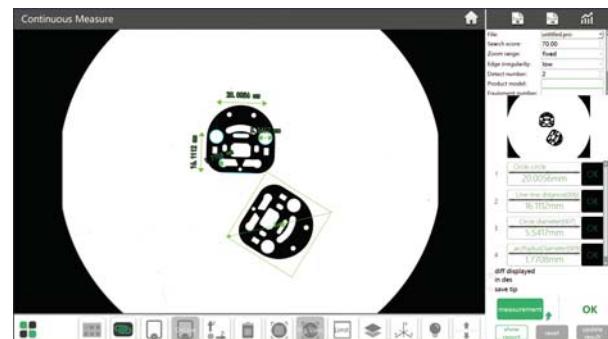
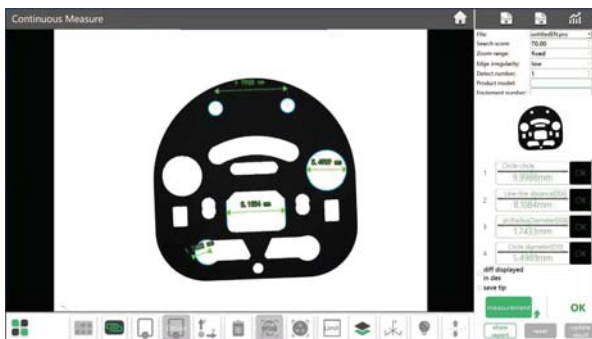
Main unit	1 pc
Computer	1 pc
Software	1 pc

OPTIONAL ACCESSORY

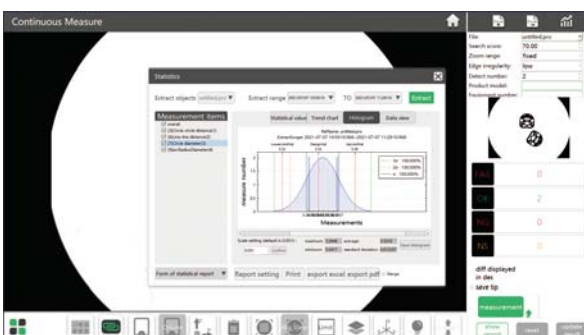
Coaxial light illumination	QMS-23-A3 (for QMS-A110) QMS-23-A4 (for QMS-A200)
Data transmission function of software	QMS-23-D1
CAD import function of software	QMS-23-C1
Foot-switch	QMS-43-FS1

Software (included)

- Automatically measure widths, holes, rings, angles at the same time, simple and efficient



- Measuring result can be stored automatically. OK items and NG items can be counted automatically



HIGH-DEFINITION VISION MEASURING SYSTEMS



- High-definition image
- Large view field
- Electronic magnification feedback lens: when the objective lens magnification is changed manually, the software automatically selects the corresponding pre-calibration data and calibration is not needed

STANDARD DELIVERY

Main unit	1 pc
Computer	1 pc
Calibration glass chart	1 pc
Clay	1 pc
Foot switch	1 pc
Anti-dust cover	1 pc



ISD-H210

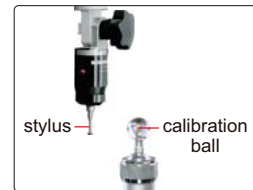
computer is included

SPECIFICATION

Code	ISD-H210	ISD-H320	ISD-H430
Measuring range (X*Y*Z)	200×100×150mm	300×200×150mm	400×300×150mm
Stage size	404×228mm	500×330mm	606×466mm
Glass stage size	260×160mm	350×250mm	450×350mm
Resolution of X/Y/Z axis	0.5µm		
Accuracy of X/Y axis	≤(3.5+L/100)µm (L is the measuring length in mm)		
Repeatability of X/Y axis	2µm		
Objective	0.58X~7.5X (zoom)		
View field (diagonal length)	1.4mm~14mm		
Working distance	82mm		
Magnification	27.4X~351X (on 24" monitor)		
Camera	giga-bit network camera		
Illumination	surface and contour with adjustable LED		
Max. height of workpiece	150mm		
Max. weight of workpiece	20kg		
Operation system	Windows 7/8/10		
Drive method	manual		
Power supply	110~240V, 50/60Hz		
Dimension (L*W*H)	540×560×850mm	760×600×900mm	970×670×940mm
Weight	110kg	140kg	240kg



lens with coaxial light (optional, must be installed in factory)



probe (optional), includes Ø2mm and Ø3mm styli, Ø25mm calibration ball, measuring accuracy is 10µm

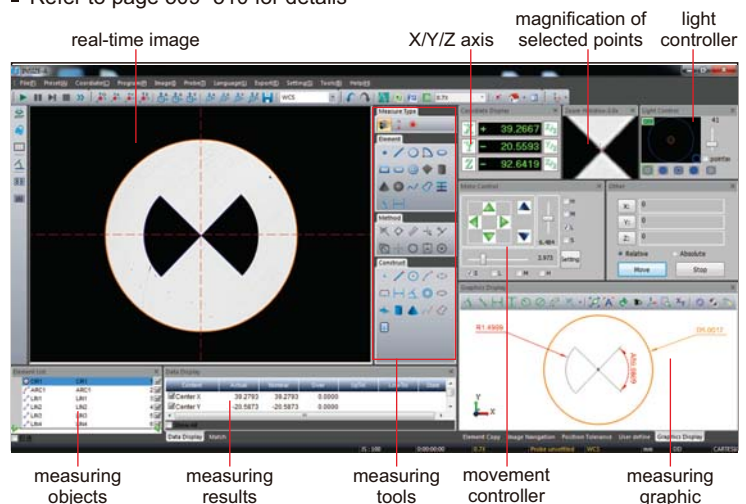
21

OPTIONAL ACCESSORY

0.5X auxiliary objective	code: ISD-H-OB05X working distance: 155mm magnification: 13.7~175.5X (on 24" monitor)
2X auxiliary objective	code: ISD-H-OB2X working distance: 34.5mm magnification: 54.8~702X (on 24" monitor)
Probe	code: ISD-V-PROBE includes Ø2mm and Ø3mm styli, Ø25mm calibration ball
Vision measuring system with coaxial light lens	code: ISD-H210CL, ISD-H320CL, ISD-H430CL
Office software	code: 7313-OFFICE

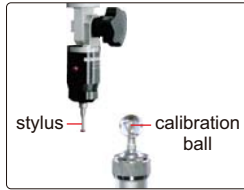
SOFTWARE (INCLUDED)

- Refer to page 509~510 for details





lens with coaxial light (**optional**, must be installed in factory)



probe (**optional**), includes Ø2mm and Ø3mm styli, Ø25mm calibration ball, measuring accuracy is 10µm



ISD-V250A

computer is included

SPECIFICATION

Code	ISD-V150A	ISD-V250A	ISD-V300A	ISD-V400A
Measuring range (X×Y×Z)	150×100×150mm	250×150×150mm	300×200×150mm	400×300×150mm
Stage size	354×228mm	450×280mm	500×330mm	606×466mm
Glass stage size	210×160mm	306×196mm	350×250mm	450×350mm
Resolution of X/Y/Z axis	0.5µm			
Accuracy of X/Y axis	≤(3.5+L/100)µm (L is the measuring length in mm)			
Repeatability of X/Y axis	2µm			
Objective	0.7X~4.5X (zoom)			
Working distance	92mm			
Magnification	33X~195X (on 19" monitor)			
Camera	1/3" color CCD, 0.3M pixel			
Illumination	surface and contour with adjustable LED			
Max. height of workpiece	150mm			
Max. weight of workpiece	20kg			
Operation system	Windows 7/8/10			
Drive method	manual			
Power supply	110/220V, 50/60Hz			
Dimension (L×W×H)	560×540×850mm	760×600×900mm	760×600×900mm	970×670×940mm
Weight	100kg	120kg	140kg	240kg

STANDARD DELIVERY

Main unit	1 pc
Computer	1 pc
Calibration glass chart	1 pc
Clay	1 pc
Foot switch	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

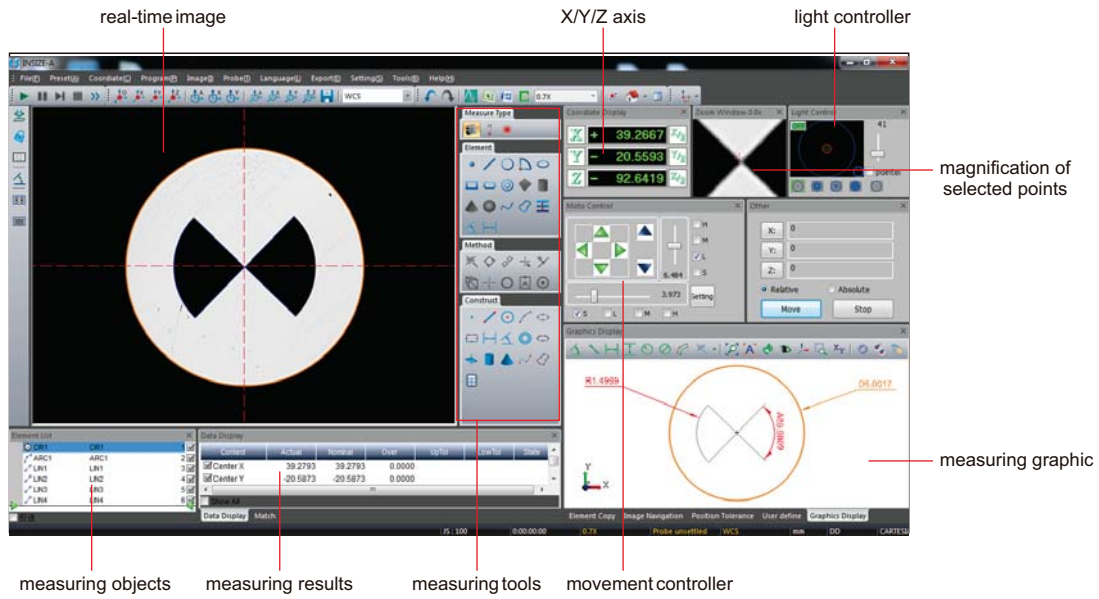
0.5X auxiliary objective	code: ISD-V-OB05X working distance: 175mm magnification: 16.5~97.5X (on 19" monitor)
2X auxiliary objective	code: ISD-V-OB2X working distance: 36mm magnification: 66~390X (on 19" monitor)
Probe	code: ISD-V-PROBE includes Ø2mm and Ø3mm styli, Ø25mm calibration ball
Vision measuring system with coaxial light lens (with computer)	code: ISD-V150ACL, ISD-V250ACL, ISD-V300ACL, ISD-V400ACL
Office software	code: 7313-OFFICE

To be continued

Continued from previous page

SOFTWARE (INCLUDED)

- Refer to page 509~510 for details



CNC VISION MEASURING SYSTEMS (WITH STAND)

MOTORIZED ZOOM OBJECTIVE IS OPTIONAL



lens with coaxial light (included)



programmable segmented ring light (included)



software flash disk (included)



21

- Automatic edge-detection, focus, measuring, contour scanning, calibration, etc.
- Servo motors for X, Y, Z axis
- Granite body, more stable
- SPC function for large quantity measurement
- Measuring software is included (page 509~510)

STANDARD DELIVERY

Main unit	1 pc
Dongle	1 pc
Software	1 pc
Computer	1 pc
Display	1 pc
Lens with coaxial light	1 pc
Controller	1 pc
Calibration glass chart	1 pc
Laser positioner	1 pc
Clay	1 pc
Anti-dust cover	1 pc



ISD-E320

controller

To be continued

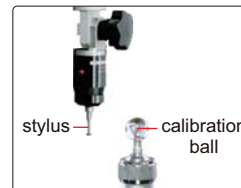
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SPECIFICATION

Code	ISD-E320	ISD-E430
Measuring range (X×Y×Z)	300×200×200mm	400×300×200mm
Stage size	556×406mm	561×556mm
Glass stage size	350×250mm	450×350mm
Resolution of X/Y/Z axis	0.5μm	
Accuracy of X/Y axis	≤(2.5+L/200)μm (L is measuring length in mm)	≤(3.5+L/200)μm (L is measuring length in mm)
Repeatability of X/Y axis	2μm	
Objective (manual zoom)	0.7X~4.5X (zoom)	
Working distance	92mm	
View field (diagonal length)	1.7~11.1mm	
Magnification	33X~208.6X (on 24" monitor)	
Camera	giga-bit network camera	
Illumination	surface	coaxial light, programmable segmented ring light
	contour	adjustable LED light
Max. height of workpieces	200mm	
Max. weight of workpieces	30kg	
Operation system	Windows 7/8/10	
Drive method	automatic	
Power supply	220V, 50/60Hz	
Dimension (L×W×H)	1420×915×1830mm	1650×1170×1900mm
Weight	500kg	700kg

OPTIONAL ACCESSORY

0.5X auxiliary objective	code: ISD-V-OB05X working distance: 175mm magnification: 16.5~104.3X (on 24" monitor)
2X auxiliary objective	code: ISD-V-OB2X working distance: 36mm magnification: 66~417.2X (on 24" monitor)
Probe	code: ISD-V-PROBE includes Ø2mm and Ø3mm styli, Ø25mm calibration ball
Office software	code: 7313-OFFICE
Laser probe	code: ISD-V-LASER



probe (optional), includes Ø2mm and Ø3mm styli, Ø25mm calibration ball, measuring accuracy is 10μm



laser probe (optional) measuring accuracy is 5μm

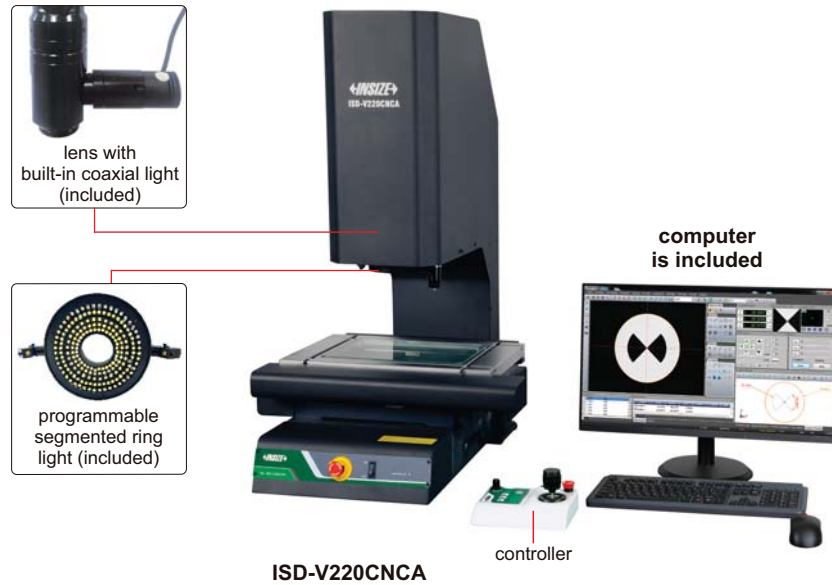
SOFTWARE (INCLUDED)

- Refer to page 509~510 for details

The screenshot shows the INSIZE software interface with the following labeled components:

- real-time image**: The main image area showing a circular object with a crosshair.
- measuring objects**: The list of objects being measured, including AR01, LR01, LR02, LR03, and LR04.
- measuring results**: The data display table showing coordinates and dimensions.
- measuring tools**: The toolbar with various measurement and navigation tools.
- movement controller**: The XY/Z axis control panel with directional buttons.
- light controller**: The light control panel with a circular indicator.
- magnification of selected points**: A zoomed-in view of a specific point on the object.
- measuring graphic**: A diagram showing the measurement path and dimensions (R1.4995 and D6.0017).

CNC VISION MEASURING SYSTEMS



- Automatic edge-detection, focus, measuring, contour scanning, calibration, etc.
- Servo motors for X, Y, Z axis
- SPC function for large quantity measurement
- Measuring software is included (page 509~510)

SPECIFICATION

Code	motorized zoom lens	ISD-V220ZA	ISD-V220ZHN	ISD-V270ZA	ISD-V270ZHN	ISD-V370ZA	ISD-V370ZHN
	manual zoom lens	ISD-V220CNCA	ISD-V220HN	ISD-V270CNCA	ISD-V270HN	ISD-V370CNCA	ISD-V370HN
Measuring range (X×Y×Z)		220×120×150mm	220×120×300mm	270×170×150mm	270×170×300mm	370×270×150mm	370×270×300mm
Stage size		450×280mm	450×280mm	500×330mm	500×330mm	606×466mm	606×466mm
Glass stage size		306×196mm	306×196mm	350×250mm	350×250mm	450×350mm	450×350mm
Resolution of X/Y/Z axis		0.5μm					
Accuracy of X/Y axis		≤(2.5+L/100)μm (L is the measuring length in mm)				≤(3.5+L/100)μm (L is the measuring length in mm)	
Repeatability of X/Y axis		2μm					
Objective		0.7X~4.5X (zoom)					
Working distance		92mm					
Magnification		33.0X~208.6X (with manual zoom lens, on 24" monitor) 31.9X~188.7X (with motorized zoom lens, on 24" monitor)					
Camera		giga-bit network camera					
Illumination	surface	coaxial light, programmable segmented ring light					
	contour	adjustable LED light					
View field (diagonal length)		1.5~10.8mm					
Max. height of workpiece		150mm	300mm	150mm	300mm	150mm	300mm
Max. weight of workpiece		30kg					
Operation system		Windows 7/8/10					
Drive method		automatic					
Power supply		220V, 50/60Hz					
Dimension (L×W×H)		760×600×900mm	760×600×1050mm	760×600×900mm	760×600×1050mm	970×670×940mm	970×670×1090mm
Weight		146kg	156kg	168kg	178kg	266kg	276kg

To be continued

Continued from previous page



software flash disk
(included)

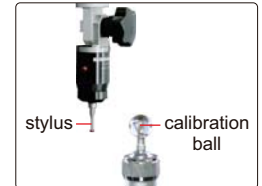


laser probe (optional)
measuring accuracy is 5µm

STANDARD DELIVERY

Main unit	1 pc
Software	1 pc
Computer	1 pc
24" display	1 pc
Len with coaxial light	1 pc
Controller	1 pc
Calibration glass chart	1 pc
Laser positioner	1 pc
Clay	1 pc
Anti-dust cover	1 pc

desk (optional)



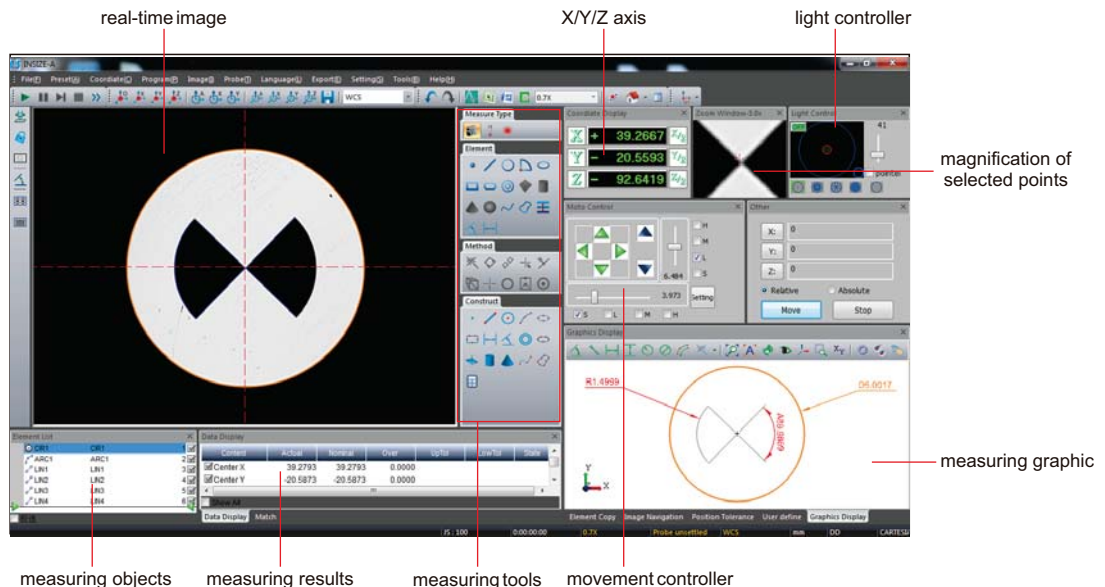
probe (optional), includes
Ø2mm and Ø3mm styli,
Ø25mm calibration ball,
measuring accuracy is 10µm

OPTIONAL ACCESSORY

0.5X auxiliary objective	code: ISD-V-OB05X , working distance: 175mm magnification: 16.5~104.3X (with manual zoom lens, on 24" monitor), 16.0~94.4X (with motorized zoom lens, on 24" monitor)
2X auxiliary objective	code: ISD-V-OB2X , working distance: 36mm magnification: 66~417.2X (with manual zoom lens, on 24" monitor), 63.8~377.4X (with motorized zoom lens, on 24" monitor)
Probe	code: ISD-V-PROBE , includes Ø2mm and Ø3mm styli, Ø25mm calibration ball
Laser probe	code: ISD-V-LASER
Office software	code: 7313-OFFICE
Desk	code: ISD-V-DESK

SOFTWARE (INCLUDED)

- Refer to page 509~510 for details



CNC VISION MEASURING SYSTEMS



ISD-V500N



computer is included

- Automatic edge-detection, focus, measuring, contour scanning, calibration, etc.
- Servo motors for X, Y, Z axis
- SPC function for large quantity measurement

SPECIFICATION

Code		ISD-V500N	ISD-V500HN
Measuring range (X*Y*Z)		470×370×200mm	470×370×400mm
Stage size		786×636mm	
Glass stage size		570×470mm	
Resolution of X/Y/Z axis		0.5μm	
Accuracy of X/Y axis		≤(2.5+L/200)μm (L is measuring length in mm)	
Repeatability of X/Y axis		2μm	
Objective		0.7X~4.5X (zoom)	
Working distance		92mm	
View field (diagonal length)		1.5~10.8mm	
Magnification		33.0X~208.6X (on 24" monitor)	
Camera		giga-bit network camera	
Illumination	surface	coaxial light, programmable segmented ring light	
	contour	adjustable LED light	
Max. height of workpieces		200mm	400mm
Max. weight of workpieces		30kg	
Operation system		Windows 7/10	
Drive method		automatic	
Power supply		220V, 50/60Hz	
Dimension (L*W*H)		1270×1200×1870mm	1270×1200×2070mm
Weight		870kg	900kg

To be continued

Continued from previous page

STANDARD DELIVERY

Main unit	1 pc
Video card with dongle	1 pc
Software disc	1 pc
Lens with coaxial light	1 pc
Controller	1 pc
Computer	1 pc
Calibration glass chart	1 pc
Laser positioner	1 pc
Clay	1 pc
Anti-dust cover	1 pc



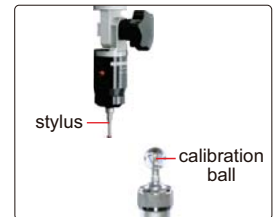
lens with coaxial light (included)



programmable segmented ring light (included)

OPTIONAL ACCESSORY

0.5X auxiliary objective	code: ISD-V-OB05X working distance: 175mm magnification: 16.5~104.3X (on 24" monitor)
2X auxiliary objective	code: ISD-V-OB2X working distance: 36mm magnification: 66~417.2X (on 24" monitor)
Probe	code: ISD-V-PROBE includes Ø2mm and Ø3mm styli, Ø25mm calibration ball
Office software	code: 7313-OFFICE



probe (optional), includes Ø2mm and Ø3mm styli, Ø25mm calibration ball, measuring accuracy is 10µm

SOFTWARE (INCLUDED)

- Refer to page 509~510 for details

The screenshot shows the INSIZE software interface. Key components are labeled as follows:

- real-time image:** The main central window showing a live camera feed of a circular object with a crosshair.
- X/Y/Z axis:** A small 3D coordinate system icon in the bottom right corner.
- light controller:** A panel on the right side with a light icon and a 'Stop' button.
- magnification of selected points:** A zoomed-in view of a specific point on the object, showing numerical coordinates like X1.4909 and Ø6.0017.
- measuring objects:** A table at the bottom left listing measurement data for various points (ARC1, LNK1, LNK2, LNK3, etc.).
- measuring results:** A table at the bottom center showing 'Center X', 'Center Y', and other parameters.
- measuring tools:** A toolbar on the left side with various icons for measurement and navigation.
- movement controller:** A panel on the right side with directional arrows and a 'Move' button.
- measuring graphic:** A 2D diagram of the object with measurement lines and labels.

CNC VISION MEASURING SYSTEMS

MOTORIZED ZOOM
OBJECTIVE IS OPTIONAL



VMM-L1001CN

- Automatic edge-detection, focus, measuring, contour scanning, calibration, etc.
- Servo motors for X, Y, Z axis, X, Y axis adopt linear guide rail structure, without air supply
- Fixed glass table and granite platform base, good stability
- SPC function for large quantity measurement
- Measuring software is included (page 509~510)

SPECIFICATION

Code	VMM-L600CN	VMM-L601CN	VMM-L800CN
Measuring range (X×Y×Z)	600×600×200mm	600×900×200mm	800×1000×200mm
Glass stage size	765×1238mm	702×1543mm	902×1643mm
Resolution of X/Y/Z axis	0.5μm		
Accuracy of X/Y axis	≤(3.5+L/200)μm (L is measuring length in mm)		
Repeatability of X/Y axis	2μm		
Objective (manual zoom)	0.7X~4.5X (zoom)		
Working distance	92mm		
View field (diagonal length)	1.7~11.1mm		
Magnification	33.0X~208.6X (on 24" monitor)		
Camera	giga-bit network camera		
Illumination	surface	coaxial light, programmable segmented ring light	
	contour	adjustable LED light	
Max. height of workpiece	200mm		
Max. weight of workpiece	35kg		
Operation system	Windows 7/8/10		
Drive method	automatic		
Power supply	AC 220V, 50/60Hz		
Dimension (L×W×H)	1445×1185×1560mm	1745×1220×1720mm	1850×1420×1720mm
Weight	1000kg	1400kg	2200kg

To be continued

Continued from previous page

SPECIFICATION

Code	VMM-L1000CN	VMM-L1001CN	VMM-L1200CN
Measuring range (X×Y×Z)	1000×1200×200mm	1000×1500×200mm	1200×1500×200mm
Glass stage size	1100×1831mm	1100×2113mm	1300×2113mm
Resolution of X/Y/Z axis	0.5μm		
Accuracy of X/Y axis	≤(3.5+L/200)μm (L is measuring length in mm)		
Repeatability of X/Y axis	2μm		
Objective(manual zoom)	0.7X~4.5X (zoom)		
Working distance	92mm		
View field (diagonal length)	1.7~11.1mm		
Magnification	33.0X~208.6X (on 24" monitor)		
Camera	giga-bit network camera		
Illumination	surface	coaxial light, programmable segmented ring light	
	contour	adjustable LED light	
Max. height of workpiece	200mm		
Max. weight of workpiece	30kg		
Operation system	Windows 7/8/10		
Drive method	automatic		
Power supply	AC 220V, 50/60Hz		
Dimension (L×W×H)	2035×1590×1720mm	2315×1590×1720mm	2315×1790×1720mm
Weight	2900kg	3200kg	4000kg



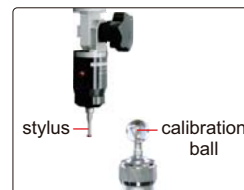
programmable segmented ring light (included)



lens with coaxial light (included)

STANDARD DELIVERY

Main unit	1 pc
Dongle	1 pc
Computer	1 pc
Software	1 pc
Display	1 pc
Lens with coaxial light	1 pc
Controller	1 pc
Calibration glass chart	1 pc
Laser positioner	1 pc
Clay	1 pc
Anti-dust cover	1 pc



probe (optional), includes Ø2mm and Ø3mm styli, Ø25mm calibration ball, measuring accuracy is 10μm



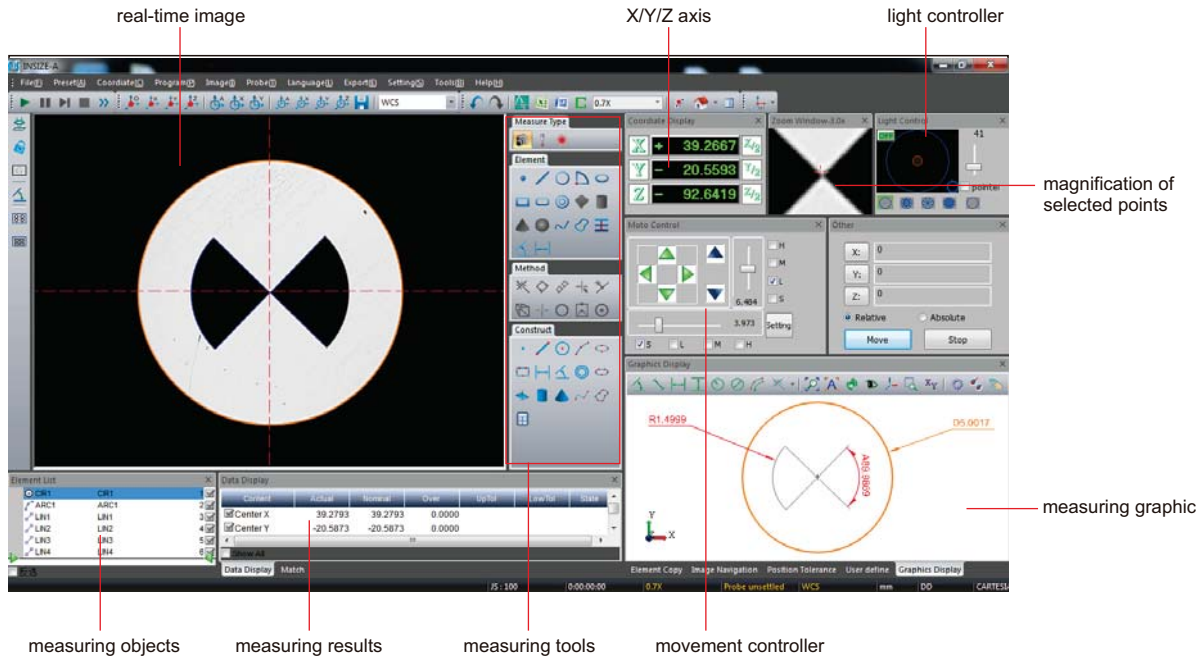
laser probe (optional) measuring accuracy is 5μm

OPTIONAL ACCESSORY

0.5X auxiliary objective	code: ISD-V-OB05X working distance: 175mm magnification: 16.5~104.3X (on 24" monitor)
2X auxiliary objective	code: ISD-V-OB2X working distance: 36mm magnification: 66~417.2X (on 24" monitor)
Probe	code: ISD-V-PROBE includes Ø2mm and Ø3mm styli, Ø25mm calibration ball
Laser probe	code: ISD-V-LASER
Office software	code: 7313-OFFICE

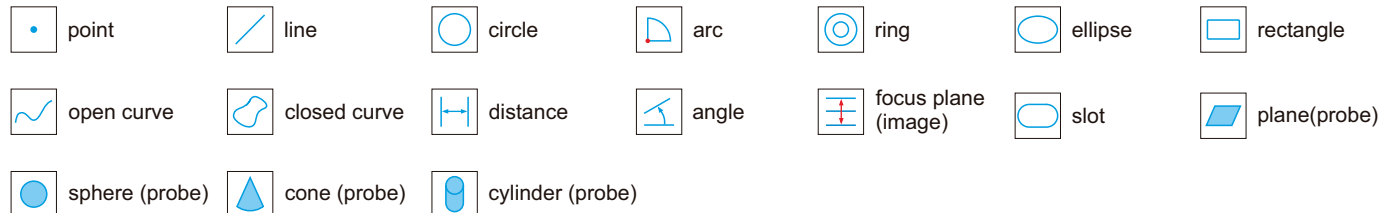
VISION MEASURING SOFTWARE

SOFTWARE FOR VISION MEASURING SYSTEMS
 ISD-V SERIES, ISD-H SERIES, ISD-VMM SERIES,
 ISD-E SERIES AND VMM-L SERIES



- Operation system: Windows 7/10
- Language: English
- Control features: assistant focus (manual machines), auto focus (CNC machines), auxiliary light control, motion controlled by mouse (CNC machines), auto zoom lens (CNC machines)
- Image measuring methods: intelligent automatic edge detect, select points of an area, select points from multiple parts, select points via mouse, select adjacent points, select points via cross line, magnify to select points, comparatively select points, select points via probe, edge point, contour point
- Constructable elements: point, line, circle, arc, ellipse, rectangle, distance, angle, ring, slot, plane, cone, open curve, closed curve
- Support fixture (CNC machines), scanning, image navigation, user define, pixel calibration
- Measuring by image and probe, image and probe can be synchronized
- Measuring data can be sent to Excel, Word, SPC, measuring elements can be sent to dxf

Dimension measuring tools:



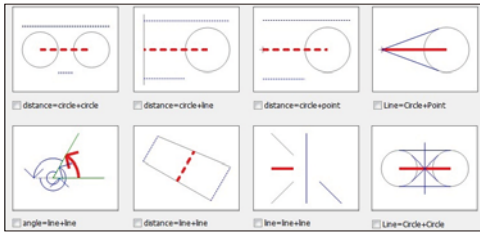
Geometric measuring tools:



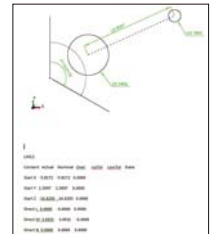
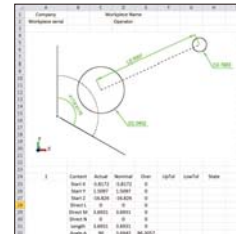
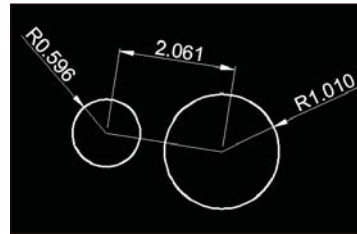
To be continued

Continued from previous page

Measuring and element construct methods:



Sent to CAD, EXCEL, WORD



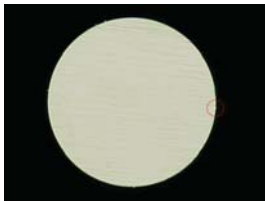
CAD

EXCEL

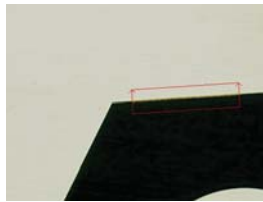
WORD

Edge-detection:

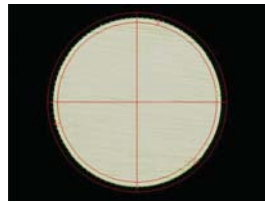
point tool



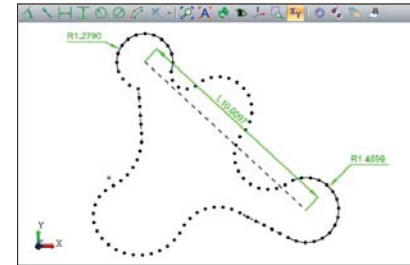
box tool



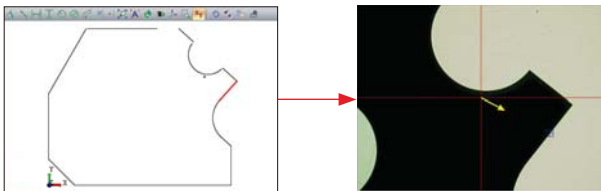
circle tool



Contour scanning:

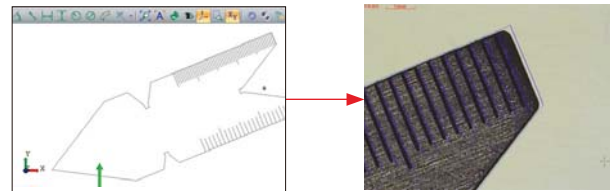


CAD measuring:



import CAD drawing, set the datum, establish coordinate system, then the software will automatically measure

CAD comparison:

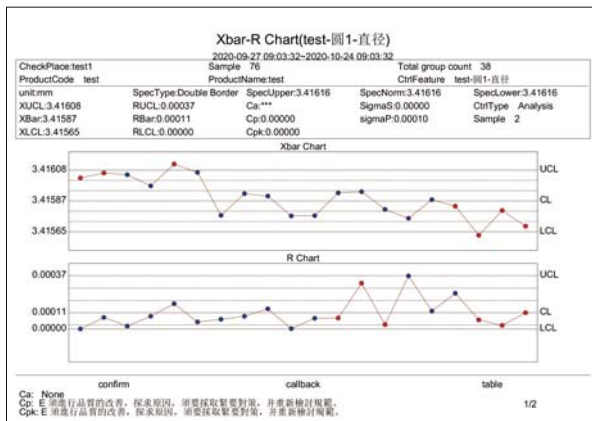


import CAD drawing, then compare with real-time image

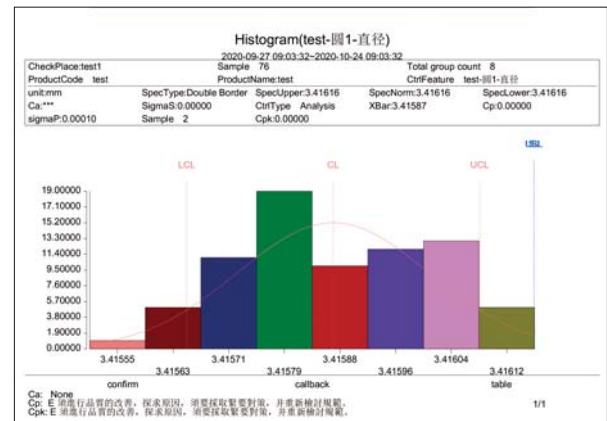
Profile scanning:



SPC analysis, import the measuring data to SPC module, generate Xbar-R chart, Xbar-S chart, Mid-R chart, X-Rs chart, Histogram, Sigma A and Sigma S chart, Cpk process chart, Process state analyse chart, Single process advice analyse chart

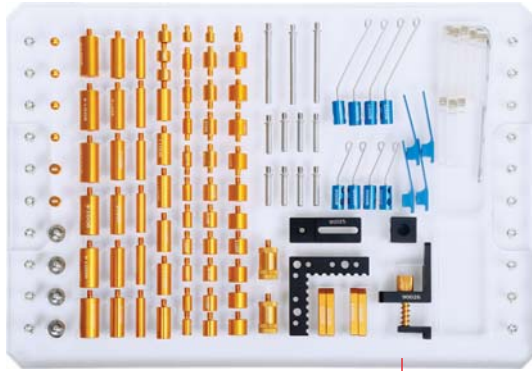


Xbar-R chart

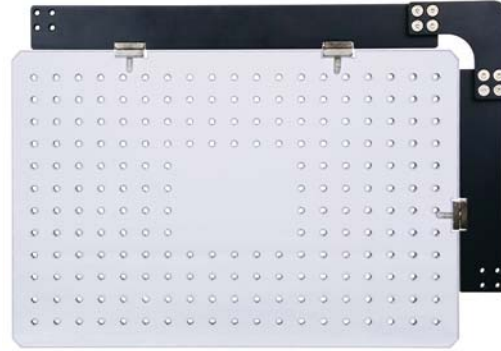


Histogram

JIG SET FOR VISION MEASURING SYSTEMS CODE ISY-700

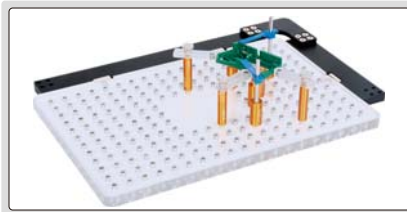




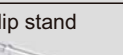
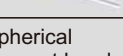



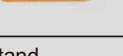
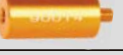
acrylic tray (included)



ISY-700

application example



Product	Code	Size (mm)	Quantity
clip 	ISY-700-90001	7×34	4
clip 	ISY-700-90002	∅1.5×24	4
	ISY-700-90003	∅1.5×50	4
clip stand 	ISY-700-90004	∅4×20	8
	ISY-700-90005	∅4×46	3
spherical support head 	ISY-700-90006	—	4
stand 	ISY-700-90007	∅6×10	6
	ISY-700-90008	∅6×25	6
	ISY-700-90019	∅6×6	3
stand 	ISY-700-90009	∅9×7	3
	ISY-700-90010	∅9×10	6
	ISY-700-90011	∅9×20	6
	ISY-700-90012	∅9×25	6
stand 	ISY-700-90013	∅12×10	6
	ISY-700-90014	∅12×25	6
stand for slice parts 	ISY-700-90015	∅6×10	4
	ISY-700-90016	∅9×10	4
	ISY-700-90017	∅12×10	4
stand with fine adjustment 	ISY-700-90018	∅12×20~25	2

Product	Code	Size (mm)	Quantity
adapter for square support 	ISY-700-90020	—	2
clamping screw 	ISY-700-90021	—	4
L-shaped positioning plate 	ISY-700-90022	50×50×6	1
sliding support plate 	ISY-700-90023	30×12×5	4
square support 	ISY-700-90024	20×16×16	1
base for square support 	ISY-700-90025	45×16×6	1
spring stand 	ISY-700-90026	—	1
acrylic sliding support plate 	ISY-700-90028	45×12×5	8
wrench 	ISY-700-90029	M3	1
acrylic base plate 	ISY-700-90030	300×200×12 Hole size: M4X0.7	1

STANDARD GLASS SCALES



ISD-CL300A

- To calibrate optical measuring instruments, also can be used as optical positioning elements in precision machine tools

STANDARD TYPE

Code	Measuring range	Graduation	Length	Width	Thickness	Accuracy
ISD-CL100A	100mm	1mm	130mm	30mm	5mm	1µm
ISD-CL200A	200mm	1mm	230mm	30mm	5mm	1µm
ISD-CL300A	300mm	1mm	330mm	30mm	5mm	1µm
ISD-CL400A	400mm	1mm	430mm	30mm	5mm	1µm
ISD-CL500A	500mm	1mm	530mm	30mm	5mm	2µm

ECONOMIC TYPE

Code	Measuring range	Graduation	Length	Width	Thickness	Accuracy
ISD-CL100B	100mm	1mm	130mm	30mm	5mm	3µm
ISD-CL200B	200mm	1mm	230mm	30mm	5mm	3µm
ISD-CL300B	300mm	1mm	330mm	30mm	5mm	3µm
ISD-CL400B	400mm	1mm	430mm	30mm	5mm	3µm
ISD-CL500B	500mm	1mm	530mm	30mm	5mm	3µm

PROFESSIONAL TYPE (The scale is between two layers of glass and will not be worn off)

Code	Measuring range	Graduation	Length	Width	Thickness	Accuracy
ISD-CL100S	100mm	1mm	130mm	30mm	10mm	1µm
ISD-CL200S	200mm	1mm	230mm	30mm	10mm	1.5µm
ISD-CL300S	300mm	1mm	330mm	30mm	15mm	2.5µm
ISD-CL400S	400mm	1mm	430mm	30mm	15mm	3µm
ISD-CL500S	500mm	1mm	530mm	30mm	15-25mm	3.5µm



Toolmaker Microscopes
Page 514-515



Digital Microscopes
Page 516-549



Cutting Tools Microscopes
Page 536



Industrial Microscopes
Page 550-551



Metallurgical Microscopes
Page 552-554



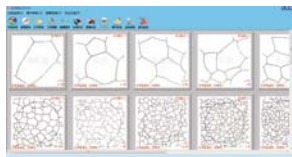
Zoom Stereo Microscopes
Page 555-560



Polarizing Microscopes
Page 561



Digital Cameras For Microscopes
Page 562-570



Metallurgical Analysis Softwares
Page 569-570



Portable Measuring Microscopes
Page 571



Table Magnifiers With Illumination
Page 572



Digital Magnifiers
Page 573-574



Magnifiers
Page 575-578



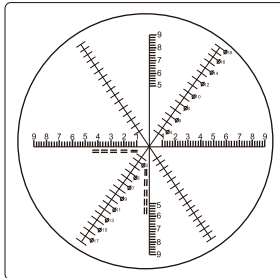
Telescoping Inspection Mirrors
Page 578



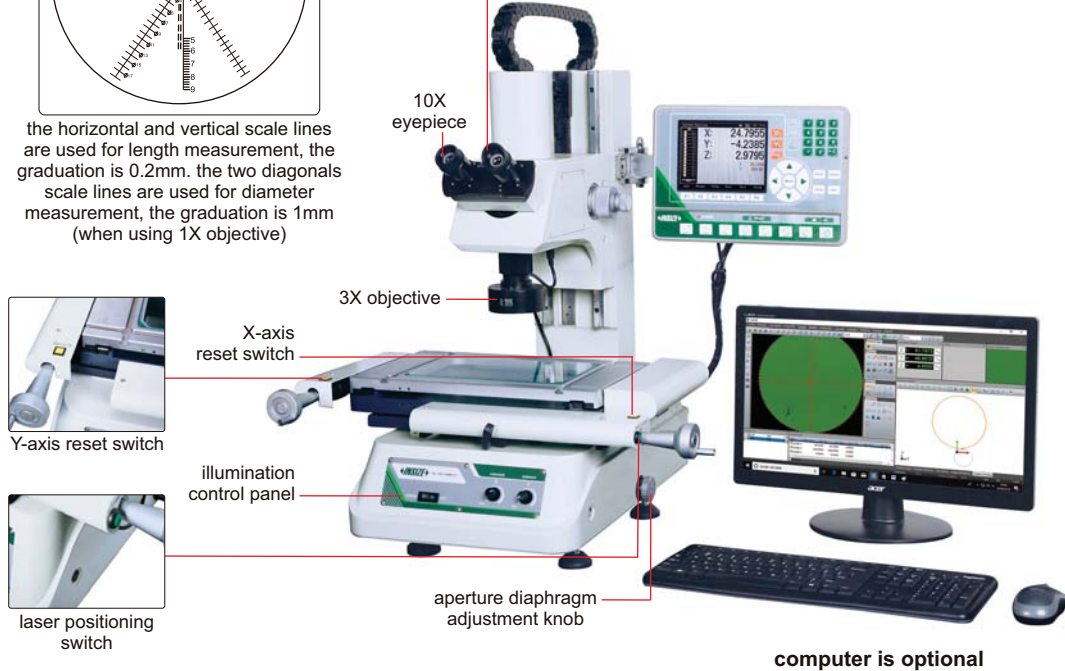
Telescoping Pick-up
Page 579



10X dividing eyepiece



the horizontal and vertical scale lines are used for length measurement, the graduation is 0.2mm. the two diagonals scale lines are used for diameter measurement, the graduation is 1mm (when using 1X objective)



computer is optional

ISD-VMM215
SPECIFICATION

Code	binocular	ISD-VMM205	ISD-VMM215	ISD-VMM225	ISD-VMM235
	monocular	ISD-VMM205D	ISD-VMM215D	ISD-VMM225D	ISD-VMM235D
X/Y axis travel		150×100mm	200×100mm	250×150mm	300×200mm
Z axis travel		150mm	150mm	200mm	200mm
Metal stage size		354×228mm	404×228mm	450×280mm	500×330mm
Glass stage size		210×160mm	260×160mm	306×196mm	350×250mm
Resolution of X/Y/Z axis		0.5μm			
Accuracy of X/Y axis		≤(3.5+L/100)μm (L is the measuring length in mm)			
Repeatability		2μm			
Camera		1/3" color CCD, 0.3M pixel			
Optical magnification		30X (with 3X objective)			
Image magnification		114X (on 19" monitor)			
Illumination		surface and contour with adjustable LED			
Max. weight of workpiece		25kg			
Power supply		100V~240V, 50/60Hz			
Operation system		Windows 7/8/10			
Drive method		manual			
Dimension (L×W×H)		540×667×850mm	540×667×850mm	800×675×920mm	800×675×920mm
Weight		100kg	110kg	135kg	140kg

Continued from previous page

DATA PROCESSING UNIT

Output	RS232
Function	simple measuring tools
	measure coordinate of points
	measure lines
	measure center coordinate, radius of circle with three points
	measure distances between two objects
	measure angles
	set origin of coordinate
	skew and calibrate the workpiece
	measure rectangle (including length, width, perimeter and center coordinate)
	measure thread (including thread diameter, screw pitch, screw angle)
measure slot (including center coordinate, length, width)	

STANDARD DELIVERY

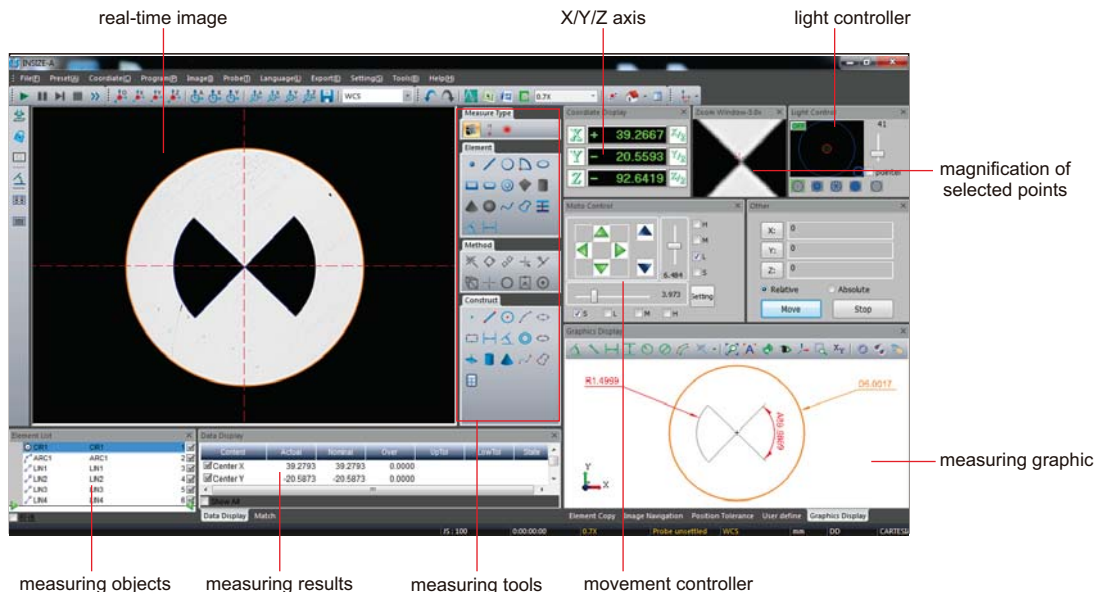
Main unit	1 pc
Video card with dongle	1 pc
Software disc	1 pc
Calibration glass chart	1 pc
Demo sample	1 pc
Foot switch	1 pc
3X objective	1 pc

OPTIONAL ACCESSORY

1X objective	ISD-VMM-LENS1X
5X objective	ISD-VMM-LENS5X
10X objective	ISD-VMM-LENS10X
Toolmaker microscopes (with computer)	code: ISD-VMM205A (binocular) ISD-VMM215A (binocular) ISD-VMM225A (binocular) ISD-VMM235A (binocular)
	code: ISD-VMM205DA (monocular) ISD-VMM215DA (monocular) ISD-VMM225DA (monocular) ISD-VMM235DA (monocular)

SOFTWARE (INCLUDED)

- Refer to page 509~510 for details



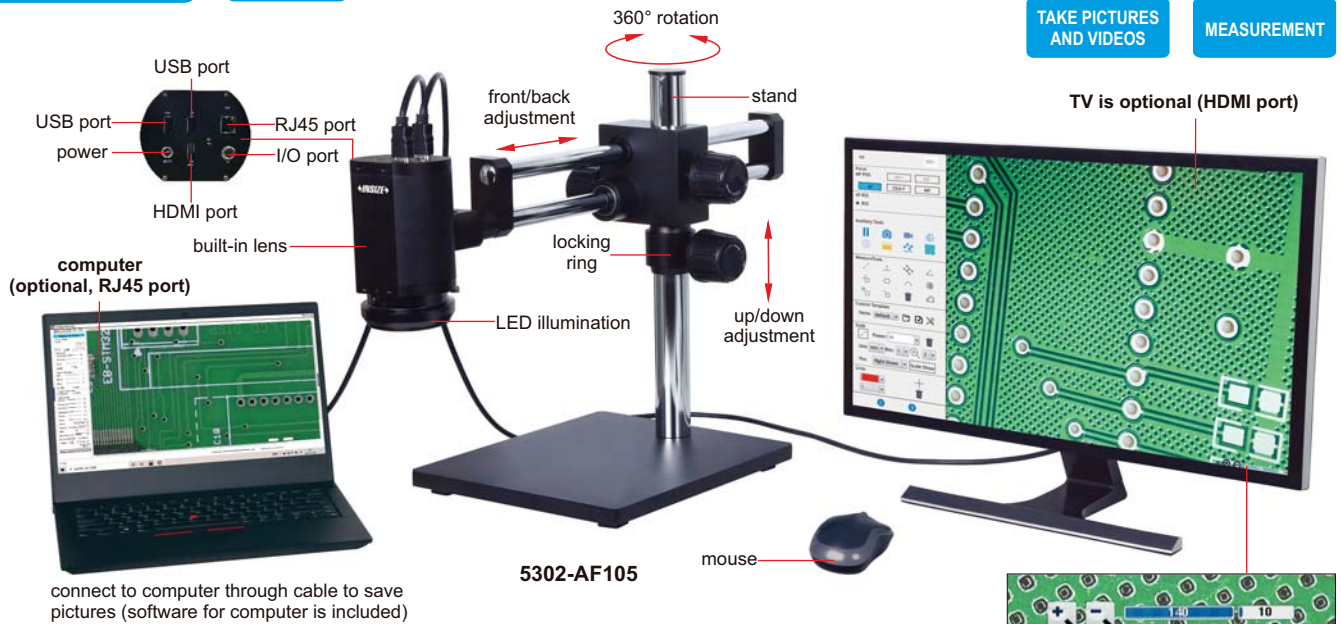
CAN BE CONNECTED TO PC AND TV AT THE SAME TIME

AUTO FOCUS

AUTO FOCUS DIGITAL MICROSCOPES (LARGE VIEW FIELD)

TAKE PICTURES AND VIDEOS

MEASUREMENT

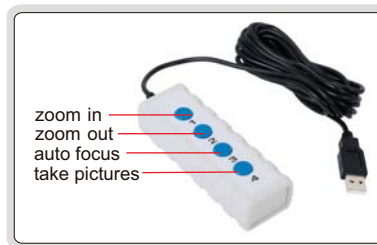


connect to computer through cable to save pictures (software for computer is included)

5302-AF105



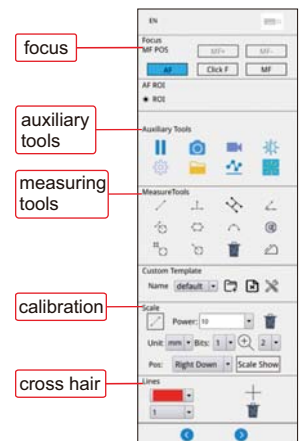
optical zoom adjustment



controller (optional, for TV)

- Auto focus camera
- Take pictures and videos
- Can be connected to TV (HDMI port) and computer (RJ45 port) at the same time
- Built-in measuring software for TV
- Measuring software for computers is included
- Automatic exposure and white balance
- Brightness, contrast ratio, gain are adjustable
- Display cross hair (blue/green/red/yellow/black/brown colors)

TV SOFTWARE (INCLUDED)



SPECIFICATION

Code	5302-AF105 (standard type)	5302-AF108 (high-definition type)
Pixel	2M	8M
Resolution	1920×1080	3840×2160
Magnification	1.4X~25.8X (on 28" TV)	1.4X~51.6X (on 28" TV)
Sensor	1/2.8" CMOS	
Auto focus distance	100mm~∞	
Output	HDMI, RJ45	
Frame rate	HDMI: 60fps, RJ45: 50fps	
Power supply	power adapter	
Dimension (L×W×H)	500×280×410mm	
Weight	17kg	

VIEW FIELD

Focus distance	Adjustable magnification (on 28" TV)	View field
100mm	3.9~25.8X	24×14~168×91mm
150mm	2.6~20X	30×17~240×128mm
200mm	2.1~17X	37×20~315×170mm
250mm	1.7~14.7X	42×24~385×210mm
270mm	1.4~14X	43×25~415×225mm

MEASURING ACCURACY

Optical magnification (5302-AF105)	Optical magnification (5302-AF108)	Measuring accuracy
2X	2X	±0.1mm
4X	4X	±0.1mm
6X	6X	±0.04mm
8X	8X	±0.02mm
14X	14X	±0.02mm
/	28X	±0.02mm



VIDEO

STANDARD DELIVERY

Main unit (with stand)	1 pc
LED illumination	1 pc
16G USB flash disk	1 pc
Mouse	1 pc
HDMI cable (for TV)	1 pc
Network cable (for computer)	1 pc
Switch	1 pc
Software for computer	1 pc
Power adapter	2 pcs

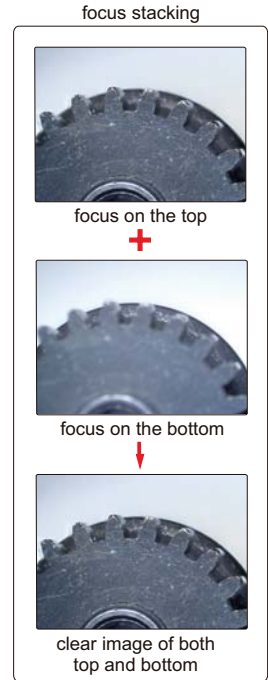
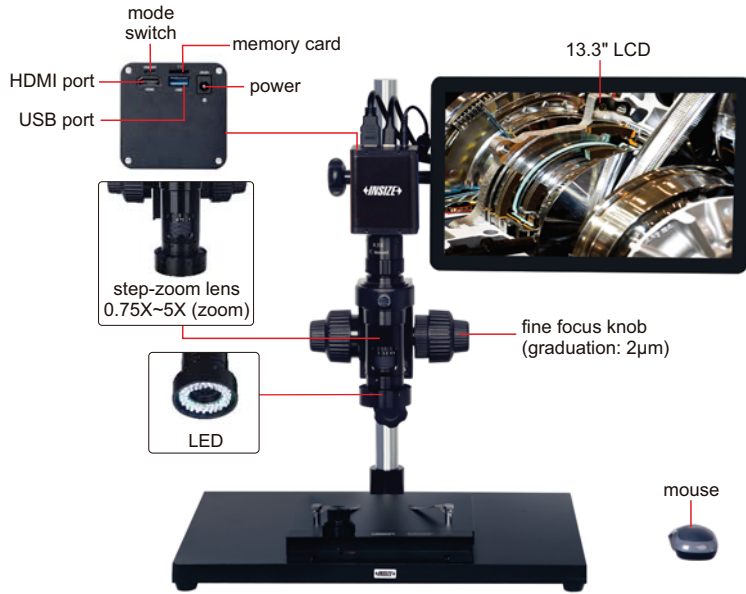
OPTIONAL ACCESSORY

28" 4K TV	5302-AF-TV28
32" 4K TV	5302-AF-TV32
Computer	5302-AF-COMPUTER
Controller	5302-AF-CONTROLLER

HIGH-DEFINITION AUTO FOCUS MEASURING MICROSCOPE (WITH DISPLAY)

CODE 5315-S710

IMAGE STITCHING DUAL SCREEN OPERATION FOCUS STACKING



- 12M high-definition image
- Switchable LCD mode and computer mode
- Take pictures or videos, save to memory card
- Measurement results can be sent to Excel
- Auto focus
- Automatic white balance and exposure



calibration plate (included)



1X camera adapter (optional)



2X auxiliary objective (optional)

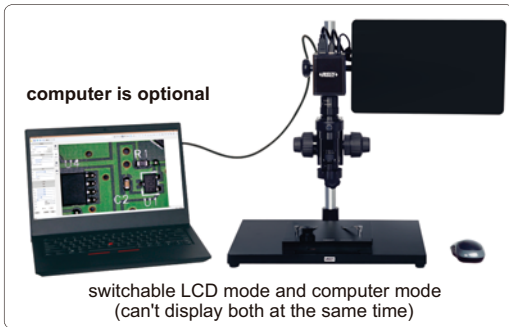
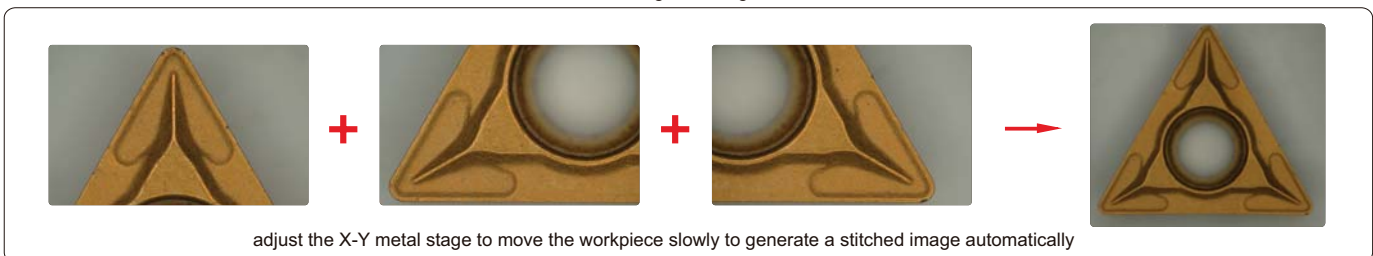


image stitching



To be continued

Continued from previous page

SPECIFICATION

Magnification	15X~100X (on 13.3" LCD)
Sensor	1/1.7" CMOS
Pixel	12M
Resolution	1920×1080
Frame rate	30fps
Output	HDMI/USB
Power supply	power adapter
Dimension (L×W×H)	570×300×430mm

STANDARD DELIVERY

Main unit	1 pc
0.5X camera adapter	1 pc
1X auxiliary objective	1 pc
Calibration plate	1 pc
32G memory card	1 pc
Mouse	1 pc
X-Y metal stage	1 pc

MAGNIFICATION, FOCUS DISTANCE AND VIEW FIELD (on 13.3" LCD)

Specification	Camera adapter	
	0.5X (included)	1X (optional)
Magnification	15~100X	30~200X
Focus distance	80±2mm	80±2mm
View filed	20.0×11.2~5.5×3.1mm	10.0×5.6~2.7×1.5mm

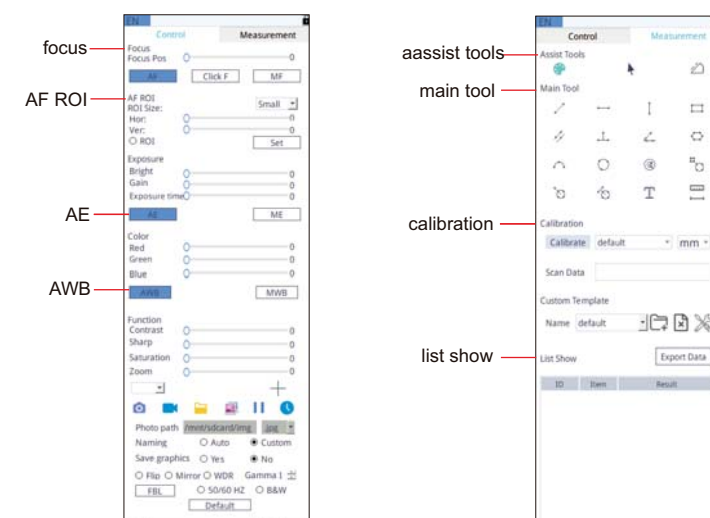
OPTIONAL ACCESSORY

1X camera adapter	ISM-DL-CA1X
2X auxiliary objective	ISM-DL-OB2X
Computer	ISM-DL-COMPUTER
LED light	page 540~541
Auxiliary objective	page 542

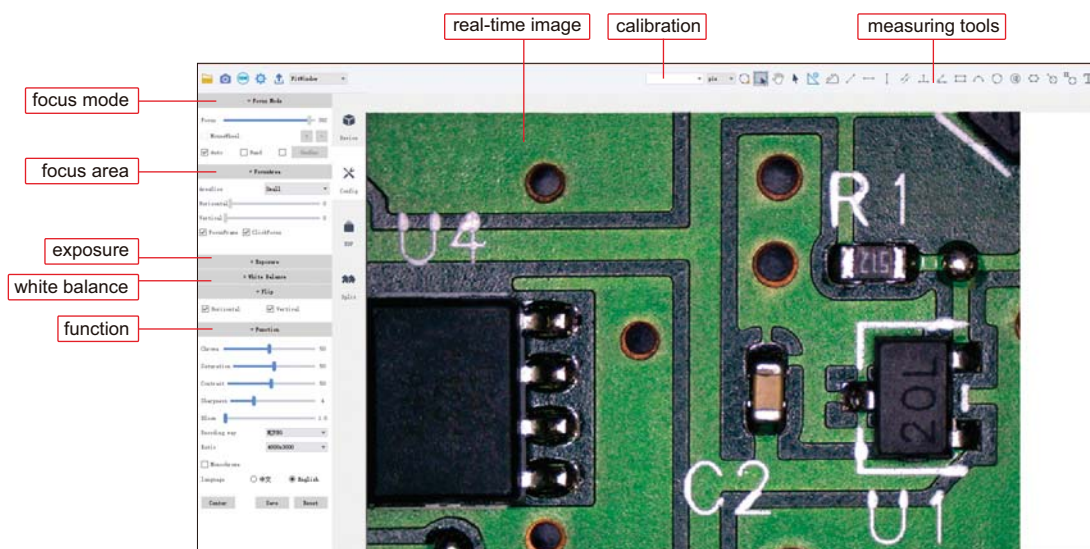
MAGNIFICATION AND MEASURING ACCURACY (on 13.3" LCD)

Objective magnification	Image magnification	Measuring accuracy
0.75X	15X	±20μm
1X	20X	±20μm
1.5X	30X	±20μm
2X	40X	±20μm
2.5X	50X	±20μm
3X	60X	±20μm
3.5X	70X	±20μm
4X	80X	±10μm
4.5X	90X	±10μm
5X	100X	±10μm

SOFTWARE FOR LCD (INCLUDED)



SOFTWARE FOR COMPUTER (INCLUDED)

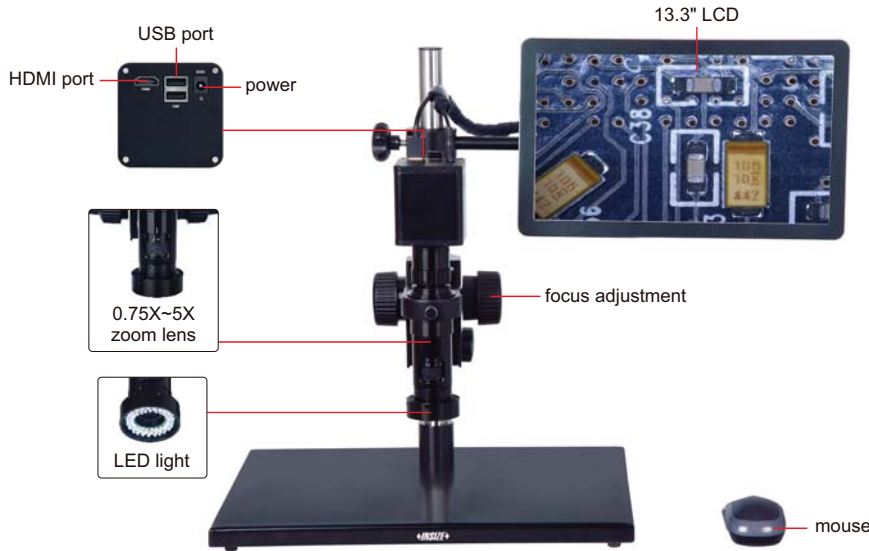


AUTO FOCUS DIGITAL MICROSCOPE (WITH DISPLAY) CODE 5303-AF103

AUTO FOCUS

TAKE PICTURES
AND VIDEOS

MEASUREMENT



16G USB flash disk (included)

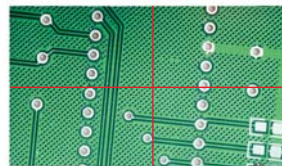


0.5X camera adapter (included)



1X auxiliary objective (included)

- 1080P high-definition image
- Auto focus camera
- Take pictures and videos, saved to USB flash disk
- Picture review, picture compare
- Automatic exposure and white balance
- Brightness, contrast ratio, gain are adjustable
- Display cross hair (blue/green/red/yellow/black/brown colors)
- Built-in software without computer, operation by mouse



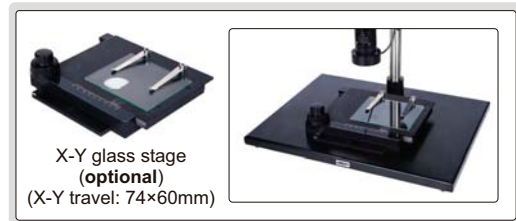
display cross hair (blue/green/red/yellow/black/brown colors)



1X camera adapter (optional)



2X auxiliary objective (optional)



X-Y glass stage (optional)
(X-Y travel: 74×60mm)

SPECIFICATION

Magnification	20X~123X
Sensor	1/2.8" CMOS
Pixel	2M
Resolution	1920×1080
Frame rate	60fps
Output	HDMI
Power supply	power adapter
Dimension (L×W×H)	570×300×430mm
Weight	6.5kg

MAGNIFICATION, FOCUS DISTANCE AND VIEW FIELD

Auxiliary objective	Specification	Camera adapter	
		0.5X (included)	1X (optional)
1X (included)	magnification	20~123X	40~246X
	focus distance	48~84mm	48~84mm
	view field	13×7~2.2×1mm	6.3×3.5~1.1×0.5mm
2X (optional)	measuring accuracy	±0.02mm	±0.02mm
	magnification	40~246X	80~492X
	focus distance	24~42mm	24~42mm
	view field	6.5×3.5~1.1×0.5mm	3.3×1.8~0.6×0.3mm
	measuring accuracy	±0.02mm	±0.02mm

AUTO FOCUS DISTANCE

Zoom objective scale	0.75X	1X	1.5X	2X	2.5X
Auto focus distance	48~84mm	50~78mm	55~73mm	62~71mm	65~70mm

Zoom objective scale	3X	3.5X	4X	4.5X	5X
Auto focus distance	66~70mm	67~70mm	68~70mm	68~70mm	68~70mm

STANDARD DELIVERY

Main unit	1 pc
0.5X camera adapter	1 pc
1X auxiliary objective	1 pc
Calibration plate	1 pc
16G USB flash disk	1 pc
White/black plate	1 pc
Mouse	1 pc
HDMI cable	1 pc
Power adppter	2 pcs

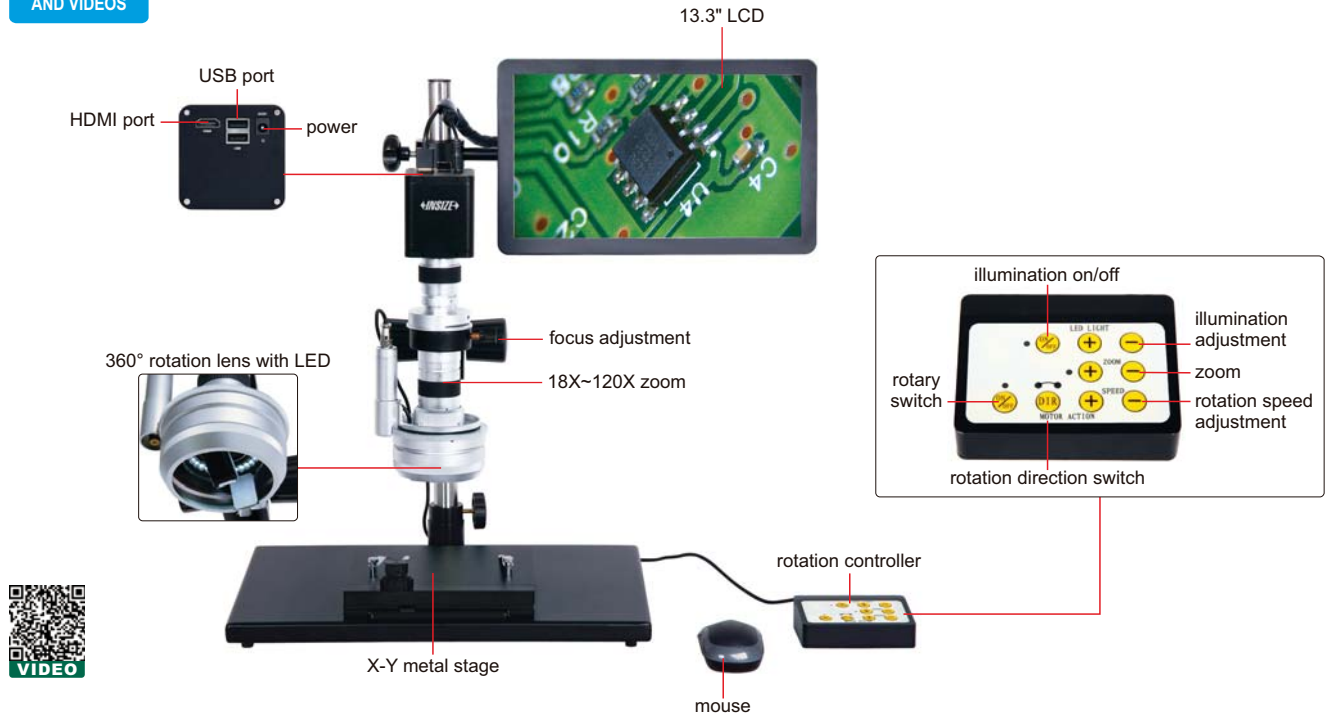
OPTIONAL ACCESSORY

1X camera adapter	ISM-DL-CA1X
2X auxiliary objective	ISM-DL-OB2X
X-Y glass stage (travel: 74×60mm)	ISM-DL-STAGE
X-Y metal stage	ISM-DL-STAGE1
LED light	page 540~541
Auxiliary objective	page 542

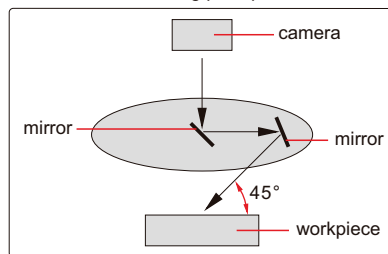
SUITABLE TO CHECK CONVEX OBJECTS AND WALL OF HOLE

TAKE PICTURES AND VIDEOS

3D MOTORIZED ROTATION MICROSCOPE (WITH DISPLAY) CODE 5301-D400



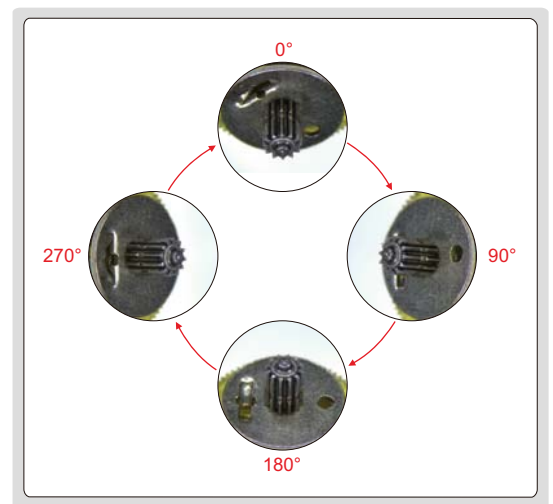
working principle



- 1080P high-definition 3D image
- Take pictures and videos, save to USB flash disk
- Automatic white balance and exposure
- Brightness, contrast ratio and gain are adjustable

SPECIFICATION

Magnification	18X~120X
View field	2.4×1.5mm~16×9mm
Focus distance	20mm
View angle	45°
Sensor	1/2.8" CMOS
Pixel	2M
Resolution	1920×1080
Frame rate	60fps
Output	HDMI
Rotation speed	2~5RPM
Power supply	110/220V, 50/60Hz
Dimension (L×W×H)	570×300×430mm
Weight	10kg



360° rotation observation

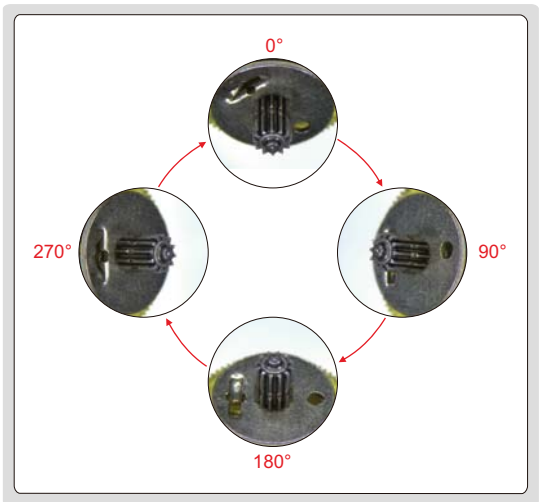
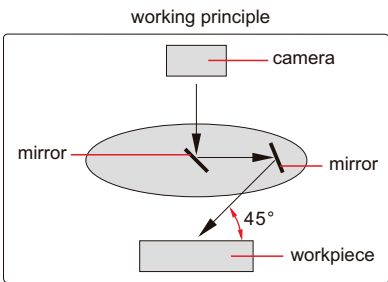
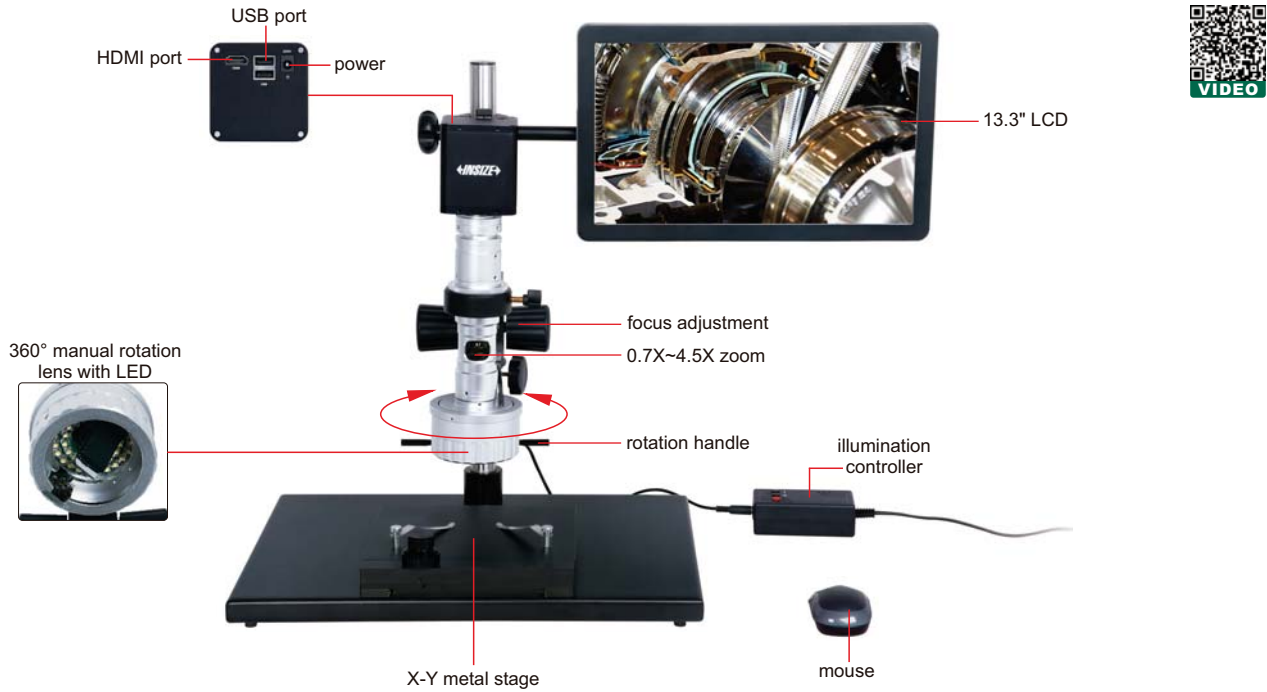
STANDARD DELIVERY

Main unit	1 pc
Rotation controller	1 pc
X-Y metal stage	1 pc
16G USB flash disk	1 pc
White/black plate	1 pc
Mouse	1 pc
Power adapter	2 pcs

3D MANUAL ROTATION MICROSCOPE (WITH DISPLAY) CODE 5313-S407

SUITABLE TO CHECK CONVEX OBJECTS
AND WALL OF HOLES

TAKE PICTURES AND VIDEOS



360° rotation observation

SPECIFICATION

Magnification	18X~120X
View field	2.4×1.5mm~16×9mm
Focus distance	20mm
View angle	45°
Sensor	1/2.8" CMOS
Pixel	2M
Resolution	1920×1080
Frame rate	60fps
Output	HDMI
Power supply	220V, 50/60Hz
Dimension (L×W×H)	570×300×430mm
Weight	10kg

STANDARD DELIVERY

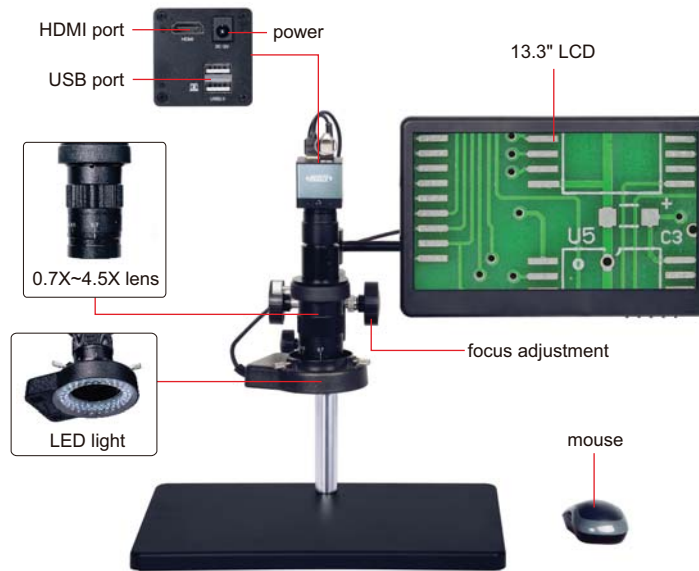
Main unit	1 pc
X-Y metal stage	1 pc
16G USB flash disk	1 pc
White/black plate	1 pc
Mouse	1 pc
Power adapter	2 pcs

MEASUREMENT

TAKE PICTURES

BUILT-IN SOFTWARE WITHOUT COMPUTER

DIGITAL MEASURING MICROSCOPE (WITH DISPLAY, BASIC TYPE) CODE 5318-MD60



- 1080P high-definition image
- Built-in software without computer, operated by mouse
- Take pictures, save to USB flash disk
- Measurement results can be sent to Excel
- Brightness, contrast ratio, gain are adjustable

SPECIFICATION

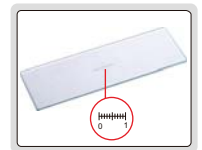
Magnification	12.5X~80X
Sensor	1/2.8" CMOS
Pixel	2M
Resolution	1920×1080
Frame rate	60fps
Measuring accuracy	±0.02mm
Lines	cross lines, scale lines (number, color and position of lines are adjustable)
Output	HDMI
Power supply	power adapter
Dimension (L×W×H)	380×260×350mm
Weight	4.5kg



16G USB flash disk (included)



white/black plate (included)



glass calibration rule (graduation 0.1mm, included)

MAGNIFICATION AND VIEW FIELD

Auxiliary objective	Specification	Camera adapter
		0.5X (included)
0.5X (optional)	magnification	6.2~40X
	view field	47×26~7.4×4mm
1X (included)	magnification	12.5~80X
	view field	23.5×13~3.7×2mm
2X (optional)	magnification	25~160X
	view field	11.8×6.5~1.8×1mm

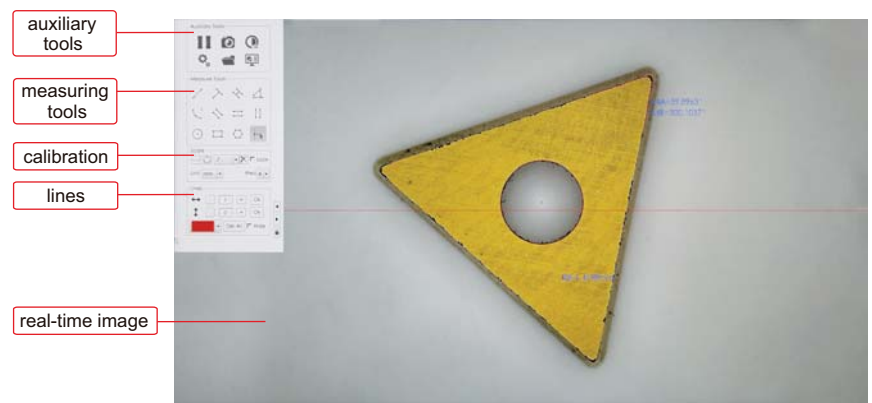
STANDARD DELIVERY

Main unit	1 pc
0.5X camera adapter	1 pc
1X auxiliary objective	1 pc
White/black plate	1 pc
Glass calibration rule	1 pc
16G USB flash disk	1 pc
Mouse	1 pc
HDMI cable	1 pc
Power adapter	3 pcs

OPTIONAL ACCESSORY

0.5X auxiliary objective	5318-OB05X
2X auxiliary objective	5318-OB2X

MEASURING SOFTWARE (INCLUDED)



DIGITAL MEASURING MICROSCOPES (WITH DISPLAY)

BUILT-IN SOFTWARE
WITHOUT COMPUTER

MEASUREMENT

TAKE
PICTURES



0.5X camera adapter
(included)



1X auxiliary objective
(included)



calibration plate
(included)



16G USB flash disk
(included)

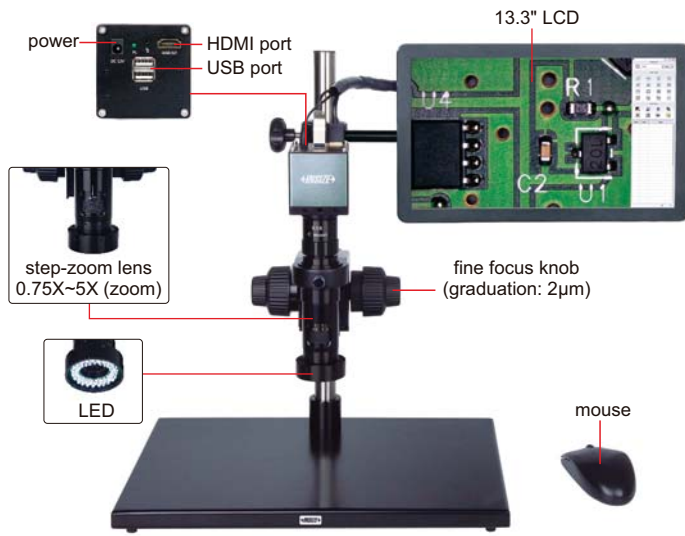


1X camera adapter
(optional)

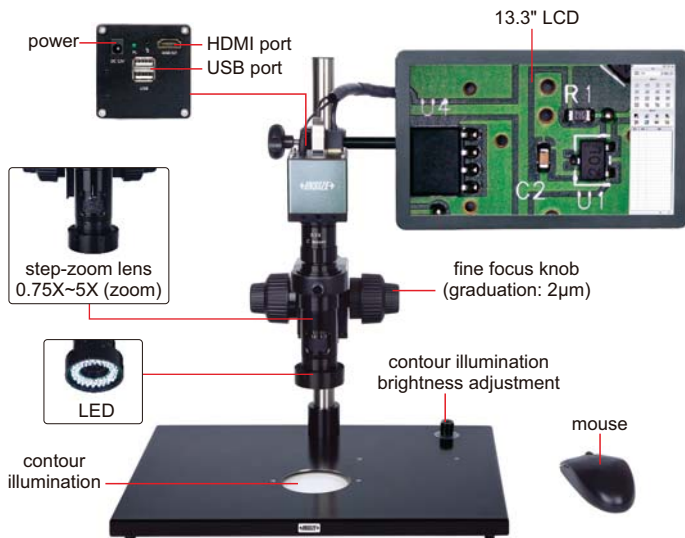


2X auxiliary objective
(optional)

- 1080P high-definition image
- Built-in software without computer, operated by mouse
- Take pictures, save to USB flash disk
- Measurement results can be sent to Excel
- Automatic white balance and exposure
- Brightness, contrast ratio, gain are adjustable



ISM-DL300 (without contour illumination)



ISM-DL301 (with contour illumination)

SPECIFICATION

Code	ISM-DL300 (without contour illumination)	ISM-DL301 (with contour illumination)
Magnification	15X~100X	
Sensor	1/2" CMOS	
Pixel	2M	
Resolution	1920×1080	
Frame rate	60fps	
Output	HDMI	
Power supply	power adapter	
Dimension (L×W×H)	570×300×430mm	
Weight	6.5kg	

To be continued

Continued from previous page

STANDARD DELIVERY

Code	ISM-DL300	ISM-DL301
Main unit	1 pc	1 pc
0.5X camera adapter	1 pc	1 pc
1X auxiliary objective	1 pc	1 pc
Calibration plate	1 pc	1 pc
16G USB flash disk	1 pc	1 pc
White/black plate	1 pc	1 pc
Mouse	1 pc	1 pc
HDMI cable	1 pc	1 pc
Power adapter	2 pcs	3 pcs

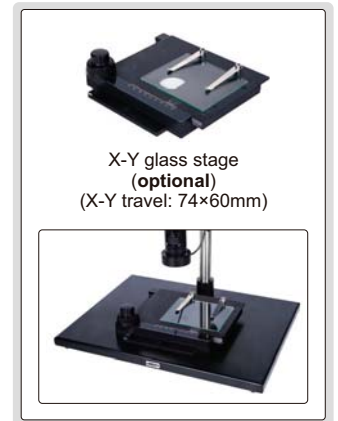
OPTIONAL ACCESSORY

1X camera adapter	ISM-DL-CA1X
2X auxiliary objective	ISM-DL-OB2X
X-Y glass stage (travel: 74×60mm)	ISM-DL-STAGE
X-Y metal stage	ISM-DL-STAGE1
LED light	page 540~541
Auxiliary objective	page 542

MAGNIFICATION AND MEASURING ACCURACY

Objective magnification	Image magnification	Measuring accuracy *
0.75X	15X	±8μm
1X	20X	±7μm
1.5X	30X	±6μm
2X	40X	±6μm
2.5X	50X	±6μm
3X	60X	±5μm
3.5X	70X	±5μm
4X	80X	±4μm
4.5X	90X	±4μm
5X	100X	±4μm

* When measuring the contour of workpieces, please use **ISM-DL301** to ensure accuracy.

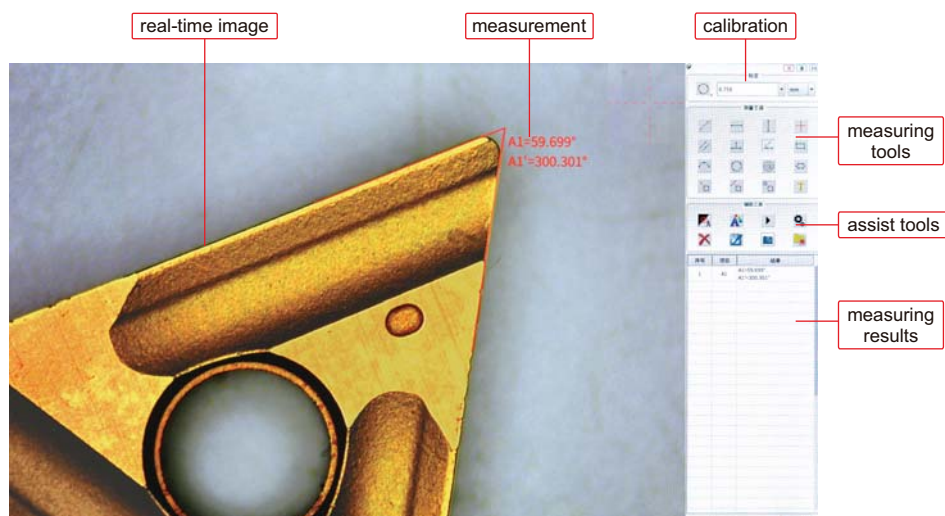


MAGNIFICATION, FOCUS DISTANCE AND VIEW FIELD

Auxiliary objective	Specification	Camera adapter	
		0.5X (included)	1X (optional)
1X (included)	magnification	15~100X	30~200X
	focus distance	70±2mm	70±2mm
	view filed	16×11~2.5×1.6mm	7.8×5.3~1.2×0.8mm
2X (optional)	magnification	30~200X	60~400X
	focus distance	29±2mm	29±2mm
	view filed	7.8×5.3~1.2×0.8mm	3.8×2.7~0.6×0.4mm

SOFTWARE (INCLUDED)

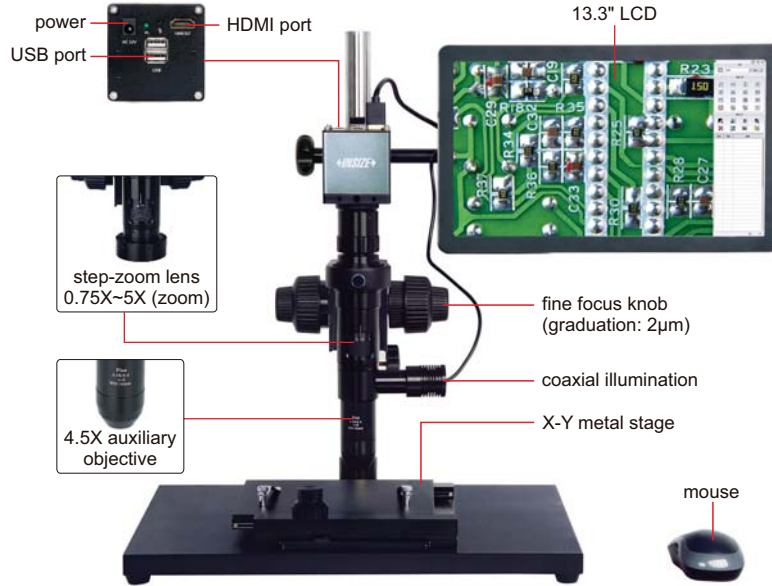
- Refer to page 537 for details



HIGH MAGNIFICATION MEASURING MICROSCOPE (WITH DISPLAY) CODE ISM-DL302

OBSERVATION AND MEASUREMENT
AT HIGH MAGNIFICATION

SOFTWARE IS INCLUDED,
REFER TO page 537 FOR DETAILS



calibration plate
(included)



16G USB flash disk
(included)



step-zoom lens
0.75X~5X (zoom)



4.5X auxiliary
objective



0.5X camera adapter
(included)



1X camera adapter
(optional)

- 1080P high-definition image
- Maximum 1000X optical magnification (using camera adapter 1X, optional)
- Built-in software without computer, operated by mouse
- Solid base and column to avoid lens shaking during focusing
- Software is included, refer to page 537 for details

SPECIFICATION

Magnification	78X~504X
Sensor	1/2" CMOS
Pixel	2M
Resolution	1920×1080
Frame rate	60fps
Output	HDMI
Power supply	power adapter
Dimension (L×W×H)	570×300×430mm
Weight	15kg

SATNDARD DELIVERY

Main unit	1 pc
0.5X camera adapter	1 pc
4.5X auxiliary objective	1 pc
Calibration plate	1 pc
16G USB flash disk	1 pc
Mouse	1 pc
HDMI cable	1 pc
X-Y metal stage	1 pc

OPTIONAL ACCESSORY

1X camera adapter	ISM-DL-CA1X
LED light	page 540~541

MAGNIFICATION AND MEASURING ACCURACY

Objective magnification	Image magnification	Measuring accuracy
0.75X	78X	±5μm
1X	102X	±4μm
1.5X	153X	±4μm
2X	204X	±4μm
2.5X	255X	±4μm
3X	305X	±4μm
3.5X	356X	±4μm
4X	408X	±4μm
4.5X	458X	±4μm
5X	504X	±4μm

MAGNIFICATION, FOCUS DISTANCE AND VIEW FIELD

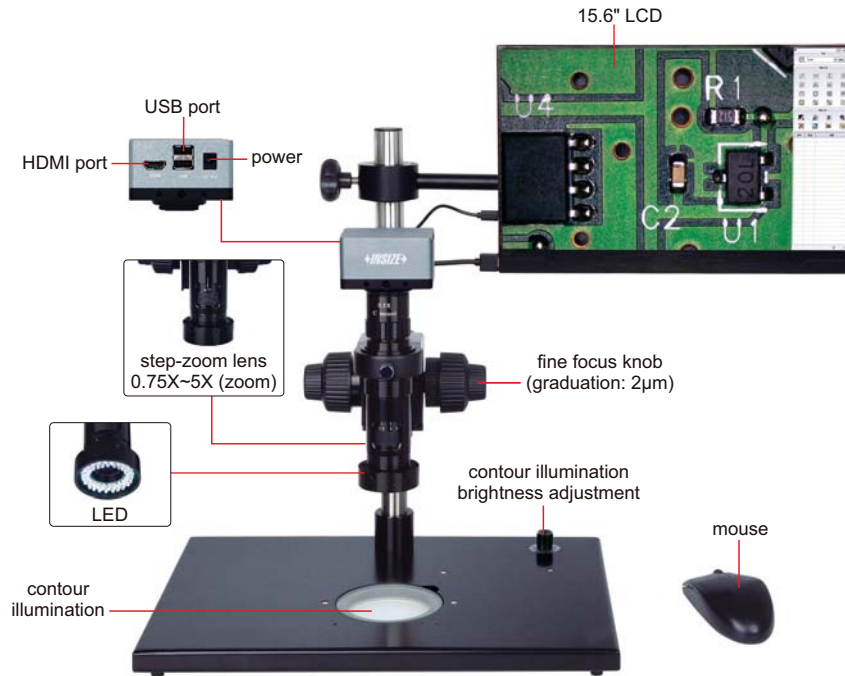
Camera adapter	0.5X (included)	1X (optional)
Magnification	78~504X	156~1008X
Focus distance	14±2mm	14±2mm
View field	2.8×1.7~0.5×0.3mm	1.4×0.9~0.3×0.2mm

BUILT-IN SOFTWARE
WITHOUT COMPUTER

TAKE
PICTURES

MEASUREMENT

4K DIGITAL MEASURING MICROSCOPE (WITH DISPLAY) CODE 5310-DL401



- 4K high-definition image
- Built-in software without computer, operated by mouse
- Take pictures, save to USB flash disk
- Measurement results can be sent to Excel
- Automatic white balance and exposure
- Brightness, contrast ratio, gain are adjustable

SPECIFICATION

Magnification	17.6X~120X
Sensor	1/2.3" CMOS
Pixel	8M
Resolution	3840×2160
Frame rate	4K: 30fps, 1080P: 60fps
Output	HDMI
Power supply	power adapter
Dimension (L×W×H)	570×300×430mm
Weight	6.5kg



To be continued

Continued from previous page

MAGNIFICATION, VIEW FIELD AND MEASURING ACCURACY

Objective magnification	Image magnification	View field	Measuring accuracy
0.75X	17.6X	19.5×11.5mm	±5μm
1X	23.7X	14.0×8.0mm	±5μm
1.5X	36.6X	9.0×5.0mm	±5μm
2X	49X	7.0×4.0mm	±5μm
2.5X	62X	5.5×3.0mm	±4μm
3X	73X	4.5×2.5mm	±4μm
3.5X	85X	4.0×2.2mm	±4μm
4X	97X	3.5×2.0mm	±3μm
4.5X	109X	3.0×1.8mm	±3μm
5X	120X	2.7×1.5mm	±3μm

STANDARD DELIVERY

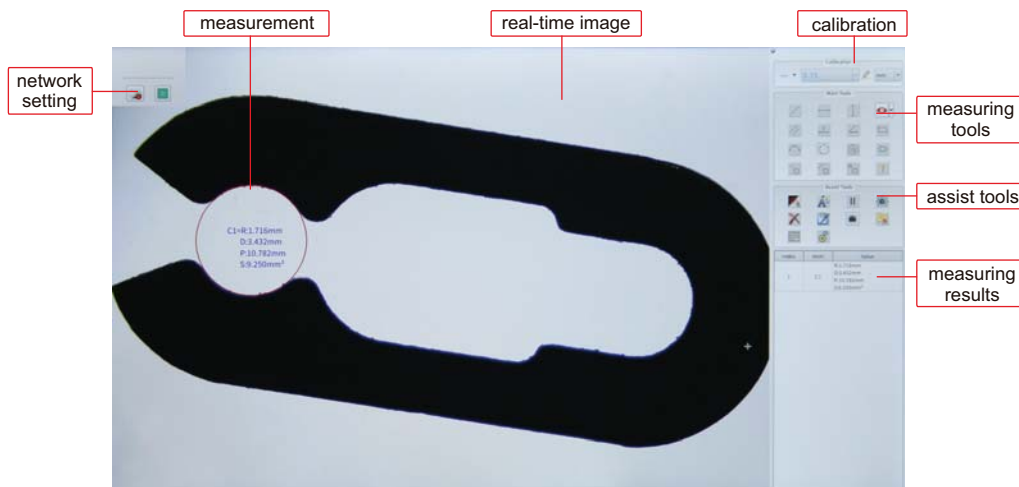
Main unit	1 pc
0.5X camera adapter	1 pc
1X auxiliary objective	1 pc
Calibration plate	1 pc
16G USB flash disk	1 pc
White/black plate	1 pc
Mouse	1 pc
HDMI cable	1 pc
Power adapter	3 pcs

OPTIONAL ACCESSORY

1X camera adapter	ISM-DL-CA1X
2X auxiliary objective	ISM-DL-OB2X
X-Y glass stage (travel: 74×60mm)	ISM-DL-STAGE
X-Y metal stage (travel: 100×86mm)	ISM-DL-STAGE1
LED light	page 540~541
Auxiliary objective	page 542

SOFTWARE (INCLUDED)

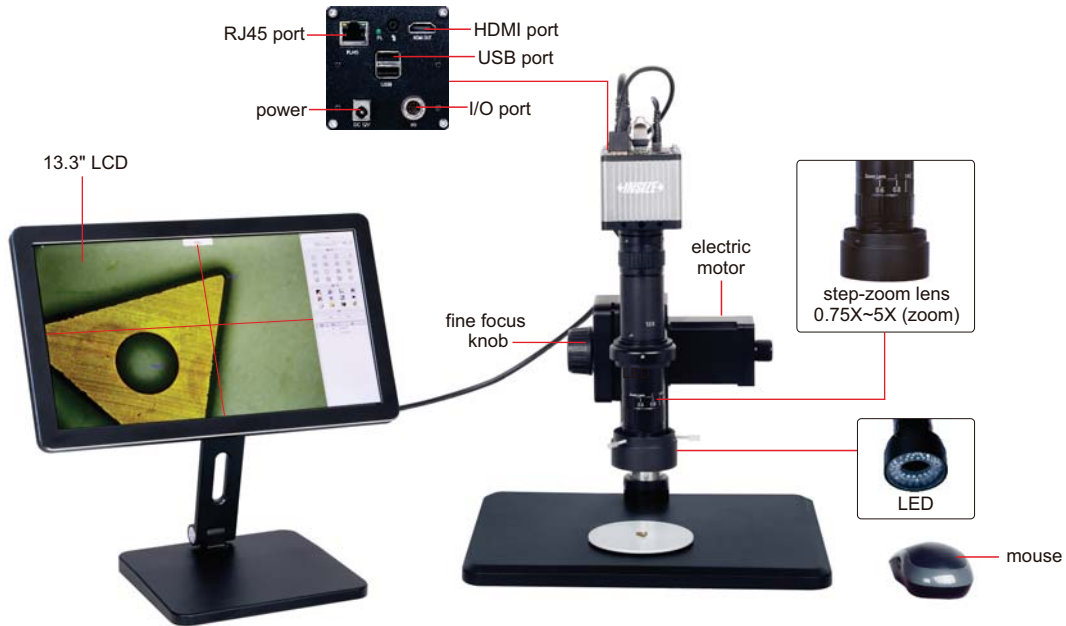
- Refer to page 537 for details



MOTORIZED FOCUS STACKING

BUILT-IN SOFTWARE WITHOUT COMPUTER

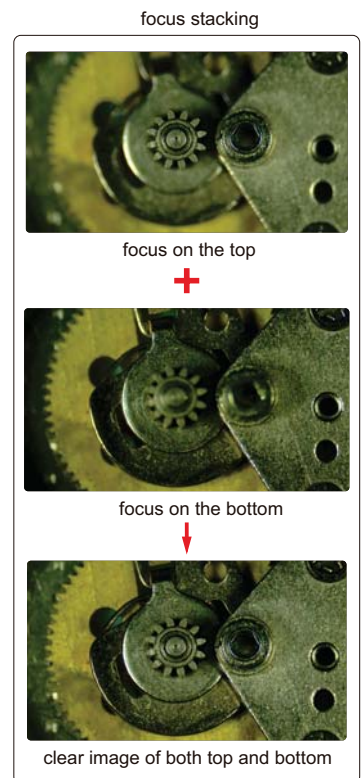
MOTORIZED FOCUS STACKING MICROSCOPE (WITH DISPLAY) CODE ISM-DL520



- 1080P high-definition image
- Built-in software without computer, operated by mouse
- Take pictures, save to USB flash disk
- Measurement results can be sent to Excel
- Automatic white balance and exposure
- Motorized focus stacking
- Send photos and measurement data via ethernet (TCP/IP)
- Name photos and measurement data files with serial number of workpieces read by scanner

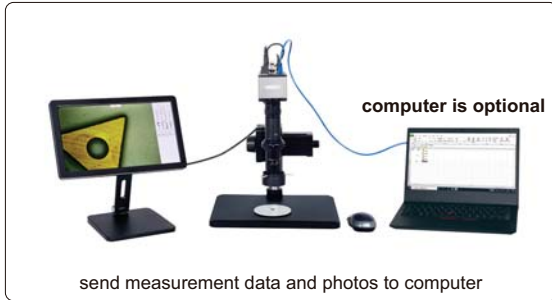
SPECIFICATION

Magnification	24.5X~204.5X
View field	2.8×1.6~18×10mm
Focus distance	65mm
Sensor	1/1.2" CMOS
Pixel	2M
Resolution	1920×1080
Frame rate	30fps
Output	RJ45
Power supply	power adapter
Dimension (L×W×H)	320×260×500mm
Weight	7kg



To be continued

Continued from previous page



calibration plate
(included)



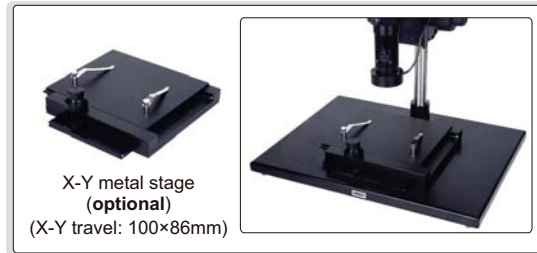
16G USB flash disk
(included)

STANDARD DELIVERY

Main unit	1 pc
1X camera adapter	1 pc
1X auxiliary objective	1 pc
Calibration plate	1 pc
16G USB flash disk	1 pc
Mouse	1 pc
LED ring light	1 pc
White/black plate	1 pc
Power adapter	3 pcs

MAGNIFICATION AND MEASURING ACCURACY

Objective magnification	Image magnification	Measuring accuracy
0.6X	24.5X	±8μm
0.8X	32.7X	±7μm
1X	40.9X	±6μm
1.5X	61.3X	±6μm
2X	81.8X	±6μm
2.5X	102.2X	±5μm
3X	122.7X	±5μm
3.5X	143.1X	±4μm
4X	163.6X	±4μm
4.5X	184.0X	±4μm
5X	204.5X	±4μm

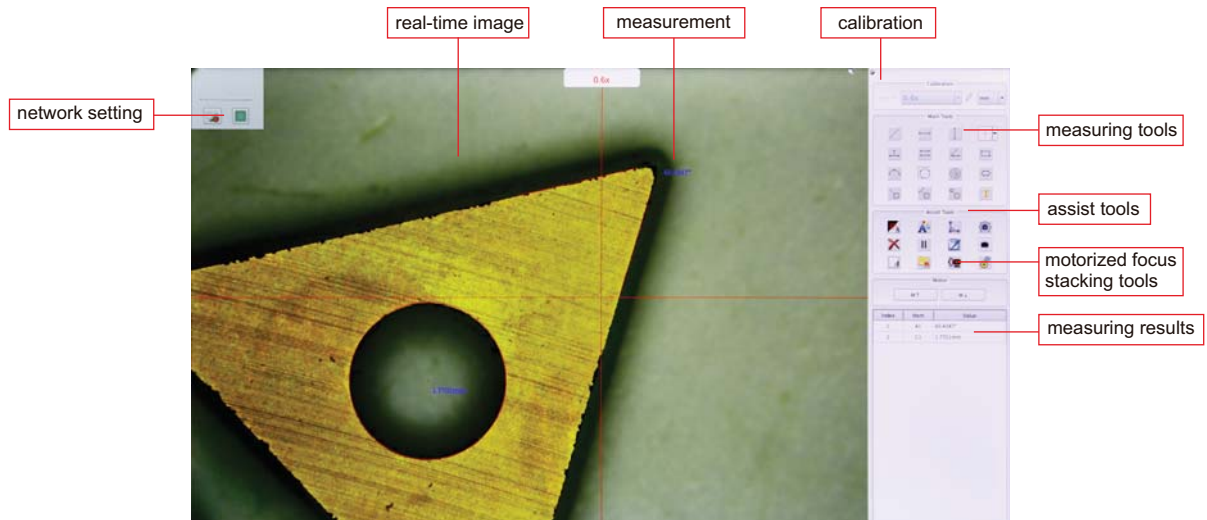


OPTIONAL ACCESSORY

X-Y metal stage (travel: 100×86mm)	ISM-DL-STAGE1
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SOFTWARE (INCLUDED)

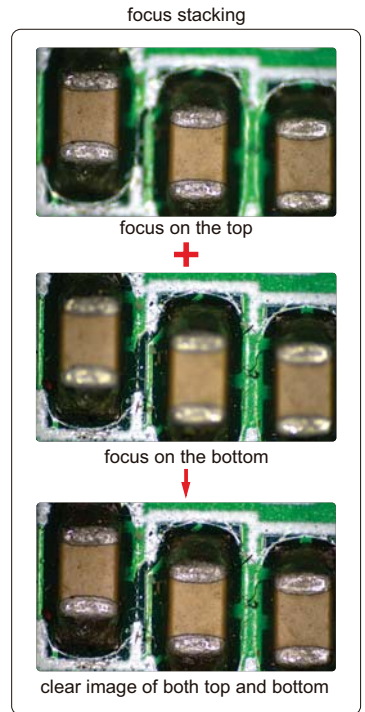
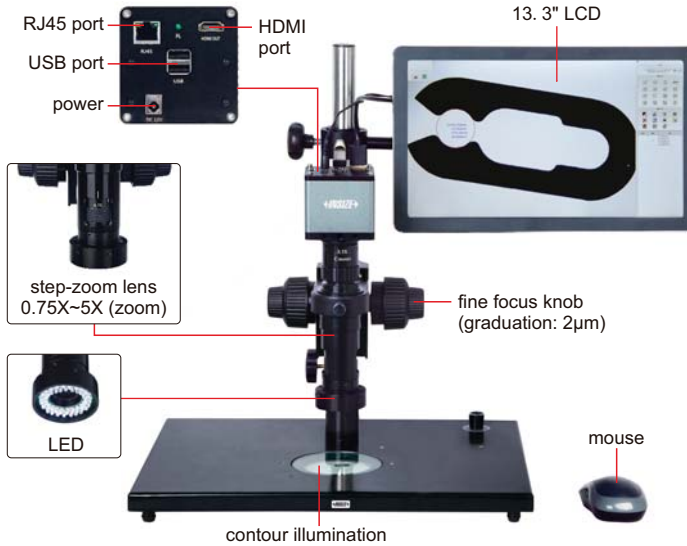
- Refer to page 537 for details



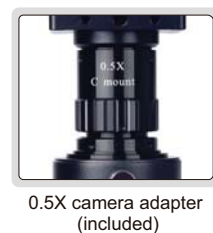
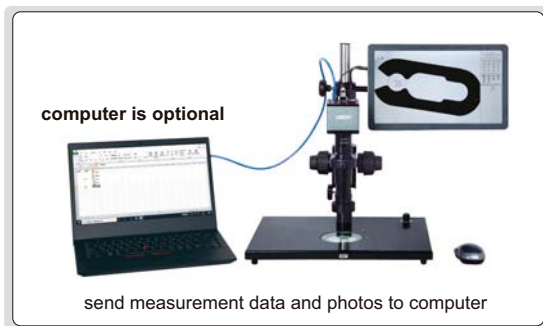
BUILT-IN SOFTWARE
WITHOUT COMPUTER

FOCUS
STACKING

MANUAL FOCUS STACKING MICROSCOPE (WITH DISPLAY) CODE ISM-DL510



- 1080P high-definition image
- Built-in software without computer, operated by mouse
- Take pictures, save to USB flash disk
- Measurement results can be sent to Excel
- Automatic white balance and exposure
- Focus stacking
- Send photos and measurement data via ethernet (TCP/IP)
- Name photos and measurement data files with serial number of workpieces read by scanner



SPECIFICATION

Magnification	15X~100X
Sensor	1/2" CMOS
Pixel	2M
Resolution	1920×1080
Frame rate	60fps
Output	HDMI
Power supply	power adapter
Dimension (L×W×H)	570×300×430mm

To be continued

Continued from previous page

STANDARD DELIVERY

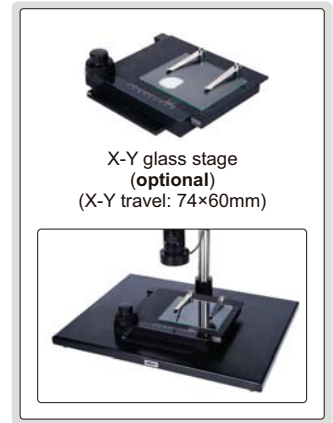
Main unit	1 pc
0.5X camera adapter	1 pc
1X auxiliary objective	1 pc
Calibration plate	1 pc
16G USB flash disk	1 pc
White/black plate	1 pc
Mouse	1 pc
Power adapter	3 pcs

OPTIONAL ACCESSORY

1X camera adapter	ISM-DL-CA1X
2X auxiliary objective	ISM-DL-OB2X
X-Y glass stage (travel: 74×60mm)	ISM-DL-STAGE
Scanner and hub	7328-SCAN
LED light	page 540~541
Auxiliary objective	page 542

MAGNIFICATION AND MEASURING ACCURACY

Objective magnification	Image magnification	Measuring accuracy
0.75X	15X	±8μm
1X	20X	±7μm
1.5X	30X	±6μm
2X	40X	±6μm
2.5X	50X	±6μm
3X	60X	±5μm
3.5X	70X	±5μm
4X	80X	±4μm
4.5X	90X	±4μm
5X	100X	±4μm

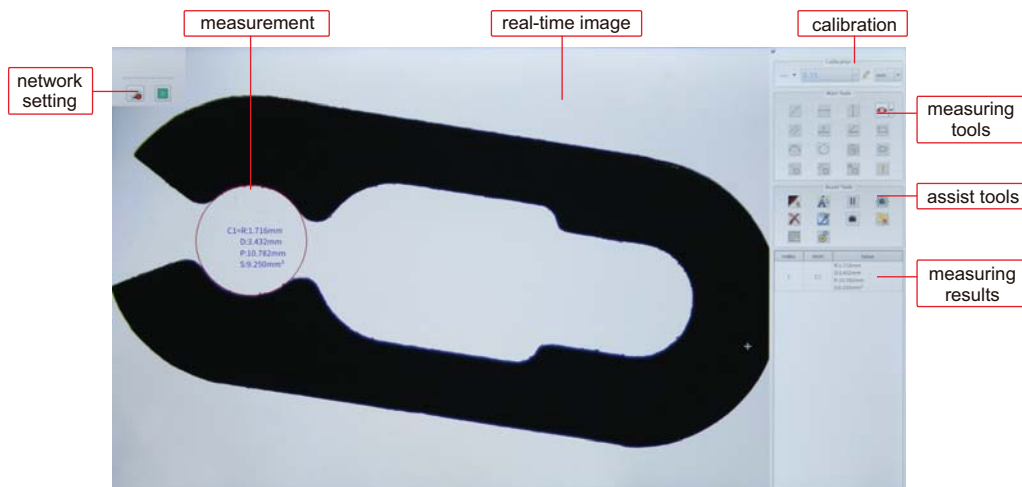


MAGNIFICATION, FOCUS DISTANCE AND VIEW FIELD

Auxiliary objective	Specification	Camera adapter	
		0.5X (included)	1X (optional)
1X (included)	magnification	15~100X	30~200X
	focus distance	70±2mm	70±2mm
	view filed	16×11~2.5×1.6mm	7.8×5.3~1.2×0.8mm
2X (optional)	magnification	30~200X	60~400X
	focus distance	29±2mm	29±2mm
	view filed	7.8×5.3~1.2×0.8mm	3.8×2.7~0.6×0.4mm

SOFTWARE (INCLUDED)

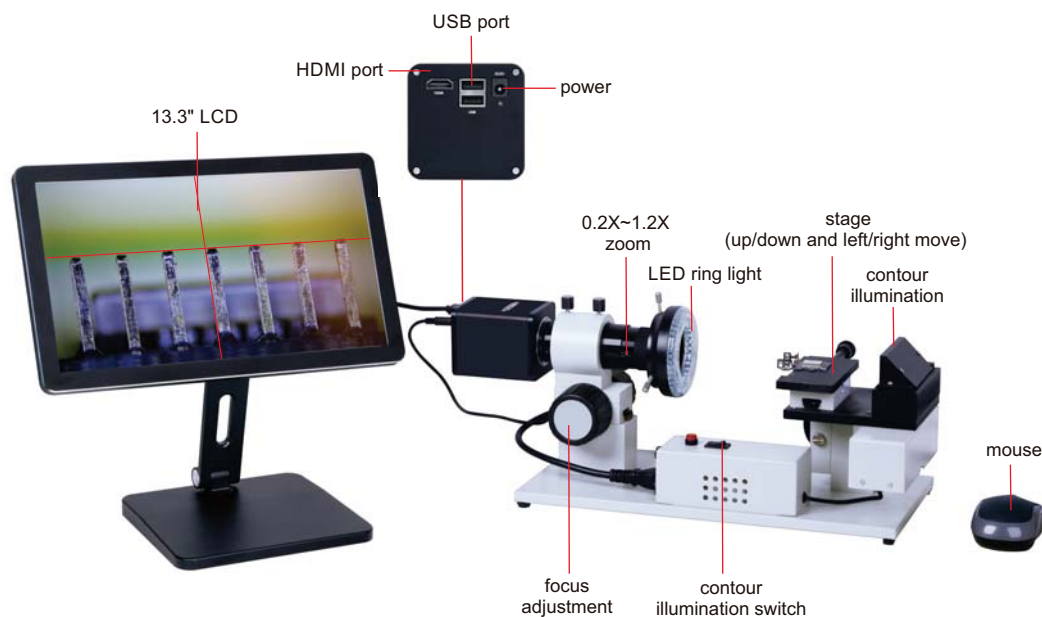
Refer to page 537 for details



BUILT-IN SOFTWARE WITHOUT COMPUTER

TAKE PICTURES

HORIZONTAL MICROSCOPE (WITH DISPLAY) CODE 5316-HM810



- 1080P high-definition image
- Built-in software without computer, operated by mouse
- Take pictures, save to USB flash disk
- Automatic white balance and exposure
- Brightness, contrast ratio, gain are adjustable
- Display cross hair (blue/green/red/yellow/black/brown colors)



plastic calibration rule (included, graduation 1mm)



16G USB flash disk (included)

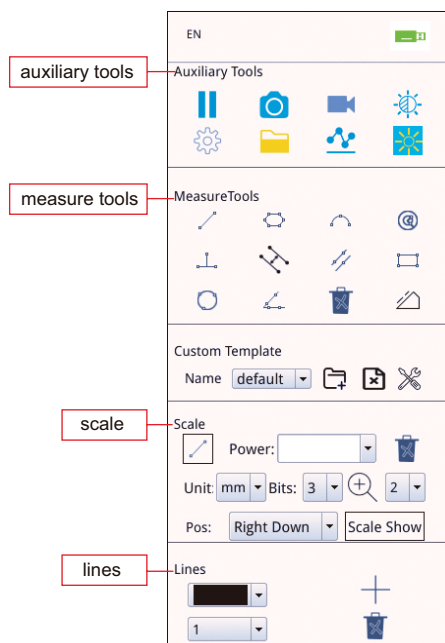
SPECIFICATION

Magnification	10.5X~62.5X
View field	4.5×2.5~28×12.3mm
Focus distance	115mm
Measuring accuracy	±0.02mm
Sensor	1/2.8" CMOS
Pixel	2M
Resolution	1920×1080
Frame rate	1080P: 60fps/50fps
Output	HDMI
Power supply	110/220V, 50/60Hz
Dimension (L×W×H)	500×200×200mm
Weight	7kg

STANDARD DELIVERY

Main unit	1 pc
1X camera adapter	1 pc
1X auxiliary adapter	1 pc
Plastic calibration rule	1 pc
16G USB flash disk	1 pc
Mouse	1 pc
LED ring light	1 pc

SOFTWARE (INCLUDED)

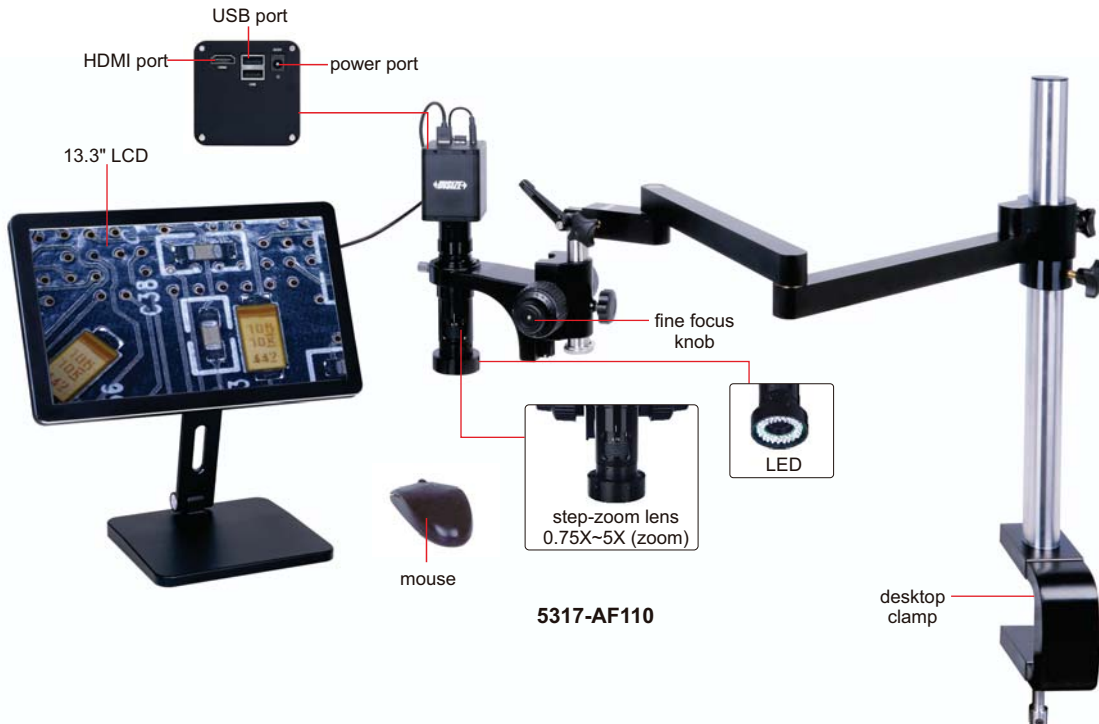


**FLEXIBLE ARM AUTO FOCUS DIGITAL MICROSCOPES
(WITH DISPLAY)**

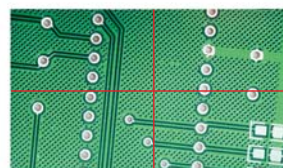
AUTO FOCUS

TAKE PICTURES
AND VIDEOS

MEASUREMENT



- 1080P high-definition image
- Auto focus camera
- Take pictures and videos, saved to USB flash disk
- Picture review, picture compare
- Automatic exposure and white balance
- Brightness, contrast ratio, gain are adjustable
- Display cross hair (blue/green/red/yellow/black/brown colors)
- Built-in software without computer, operation by mouse
- Flexible arm



display cross hair
(blue/green/red/yellow/
black/brown colors)

To be continued

Continued from previous page

SPECIFICATION

Code	5317-AF109 (with magnetic stand)	5317-AF110 (with desktop clamp)
Magnification	20X~123X	
Sensor	1/2.8" CMOS	
Pixel	2M	
Resolution	1920×1080	
Frame rate	60fps	
Power supply	power adapter	
Dimension (height)	480mm	600mm
Weight	5.6kg	8.5kg



calibration plate
(included)



16G USB flash disk
(included)



0.5X camera adapter
(included)



1X auxiliary objective
(included)

MAGNIFICATION, FOCUS DISTANCE AND VIEW FIELD

Auxiliary objective	Specification	Camera adapter	
		0.5X (included)	1X (optional)
1X (included)	magnification	20~123X	40~246X
	focus distance	48~84mm	48~84mm
	view field	13×7~2.2×1mm	6.3×3.5~1.1×0.5mm
	measuring accuracy	±0.02mm	±0.02mm
2X (optional)	magnification	40~246X	80~492X
	focus distance	24~42mm	24~42mm
	view field	6.5×3.5~1.1×0.5mm	3.3×1.8~0.6×0.3mm
	measuring accuracy	±0.02mm	±0.02mm

STANDARD DELIVERY

Main unit	1 pc
0.5X camera adapter	1 pc
1X auxiliary objective	1 pc
Calibration plate	1 pc
16G USB flash disk	1 pc
White/black plate	1 pc
Mouse	1 pc
HDMI cable	1 pc
Power adpter	2 pcs

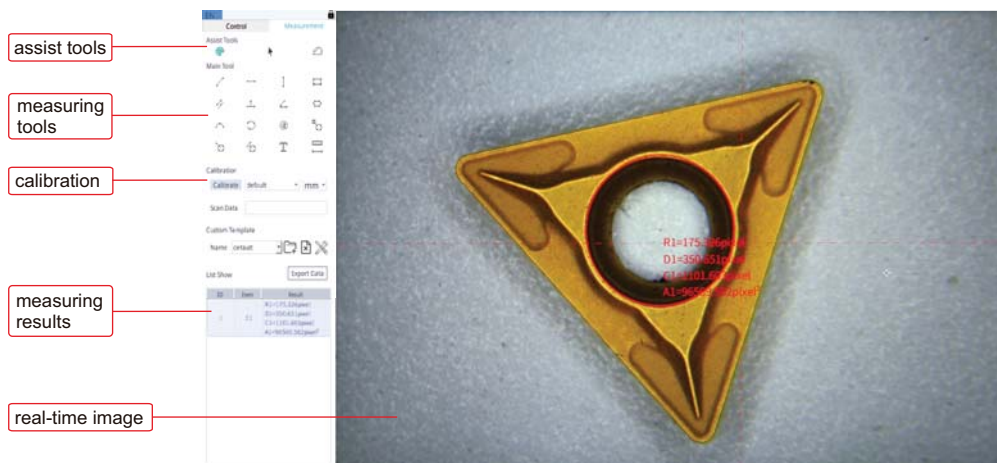
AUTO FOCUS DISTANCE

Zoom objective scale	0.75X	1X	1.5X	2X	2.5X
Auto focus distance	48~84mm	50~78mm	55~73mm	62~71mm	65~70mm
Zoom objective scale	3X	3.5X	4X	4.5X	5X
Auto focus distance	66~70mm	67~70mm	68~70mm	68~70mm	68~70mm

OPTIONAL ACCESSORY

1X camera adapter	ISM-DL-CA1X
2X auxiliary objective	ISM-DL-OB2X
Auxiliary objective	page 542

MEASURING SOFTWARE (INCLUDED)



DIGITAL MEASURING MICROSCOPE (WITH DISPLAY) CODE 5307-ID100A

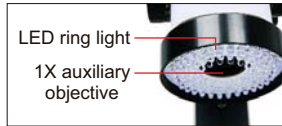
ELECTRONIC MAGNIFICATION
FEEDBACK LENS

BUILT-IN SOFTWARE
WITHOUT COMPUTER



- Electronic magnification feedback lens: when the objective lens magnification is changed manually, the software automatically selects the corresponding pre-calibration data and calibration is not needed
- Two methods of LED brightness adjustment, knob adjustment and software adjustment
- Built-in software without computer, operated by mouse
- Take pictures, save to USB flash disk
- Measuring results can be sent to Excel

adjustable display angle



SPECIFICATION

Sensor	1/2" CMOS
Pixel	2M
Resolution	1920×1080
Magnification	12~77X
Focus distance	100mm
View field	2.7×1.9~17.5×11.9mm
Max workpiece height	60mm
Frame rate	60fps
Output	USB/HDMI
Power supply	power adapter
Dimension (L×W×H)	610×610×660mm
Weight	4.5kg

MAGNIFICATION AND MEASURING ACCURACY

Objective magnification	Magnification	Measuring accuracy
0.7X	12X	±9μm
1X	17X	±9μm
1.5X	26X	±8μm
2X	35X	±7μm
2.5X	43X	±7μm
3X	51X	±7μm
3.5X	60X	±6μm
4X	68X	±6μm
4.5X	77X	±5μm

STANDARD DELIVERY

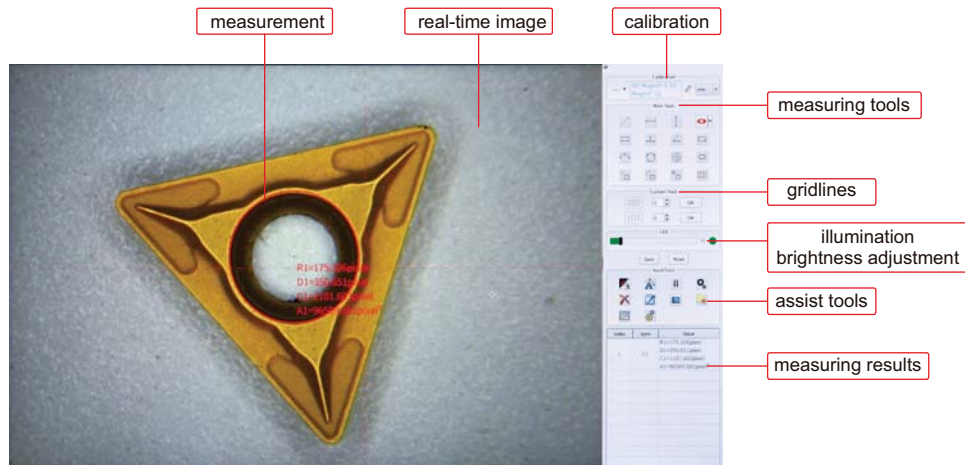
Main unit	1 pc
Calibration plate	1 pc
Power adapter	1 pc
Mouse	1 pc
16G USB flash disk	1 pc

OPTIONAL ACCESSORY

0.5X auxiliary objective	5307-ID100A-OB05X
0.75X auxiliary objective	5307-ID100A-OB075X
2X auxiliary objective	5307-ID100A-OB2X

SOFTWARE (INCLUDED)

- Refer to page 537 for details

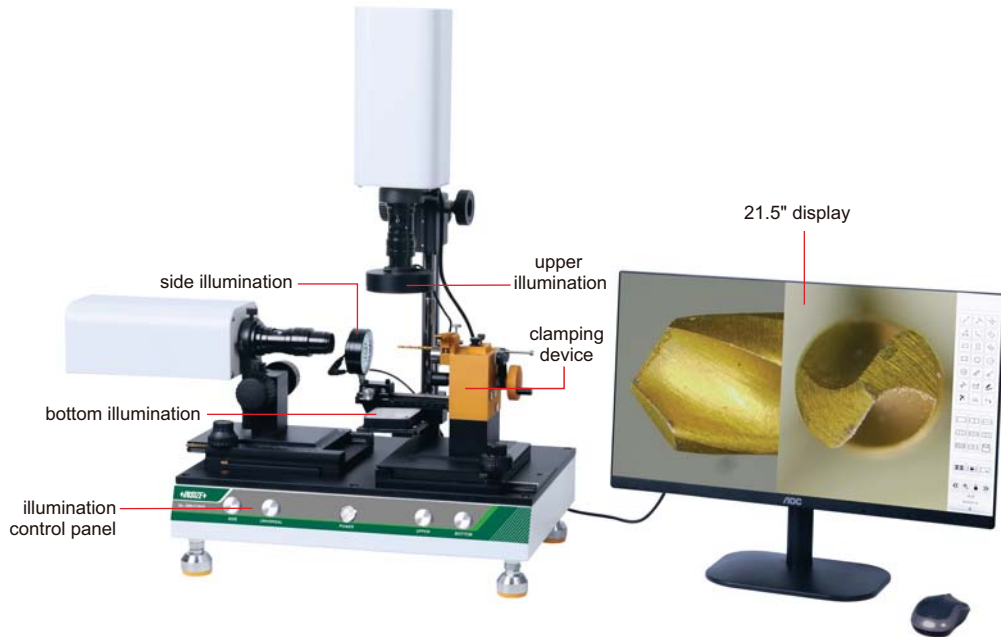


BUILT-IN SOFTWARE
WITHOUT COMPUTER

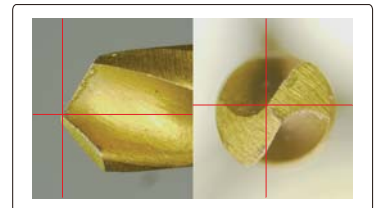
SPLIT SCREEN
DESIGN

TAKE PICTURES
AND VIDEOS

CUTTING TOOLS MICROSCOPE (WITH DISPLAY) CODE ISM-CT820



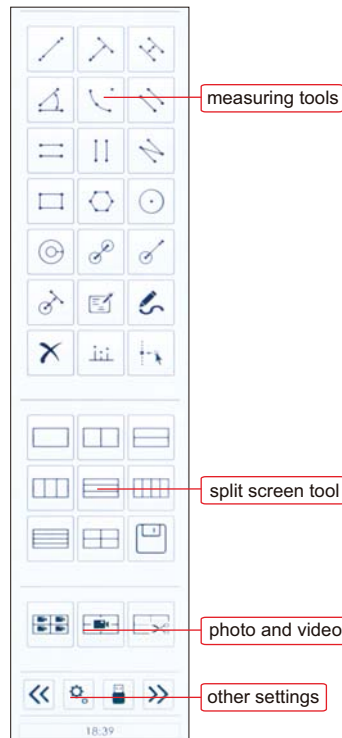
glass calibration plate (included)



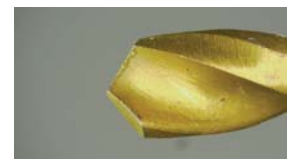
display cross hairs separately (movable)

- Split screen design, zoom in and out independently
- One mouse can operate two cameras
- Display cross hairs
- Brightness, contrast ratio, white balance are adjustable
- Basic measuring tools including point to point, point to line, line to line, angle, three-point circle, etc.

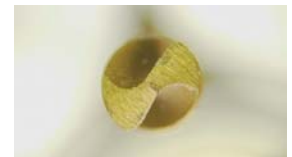
SOFTWARE (INCLUDED)



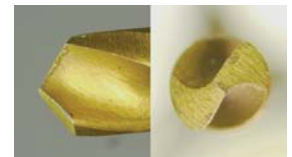
screen display



single screen display



single screen display



split screen display

SPECIFICATION

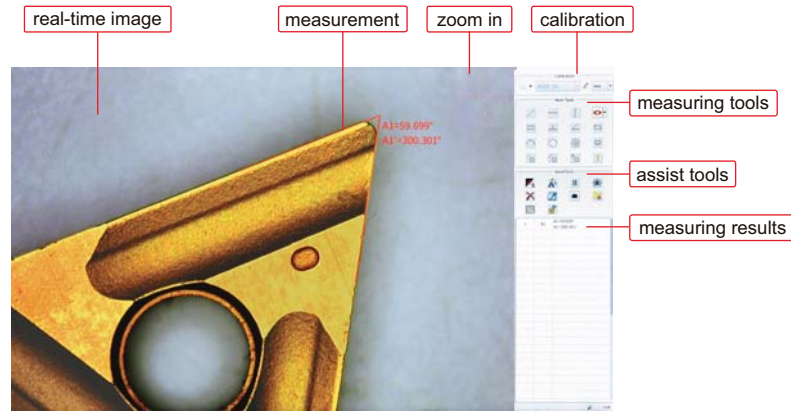
Cutting tools range	Ø3~10mm, length 30-75mm
Lens	step-zoom lens
Output	HDMI
Resolution	1920×1080
Frame rate	60fps
Focus distance	85mm
View field	0.9×1.5~5.5×10mm
Magnification	45-290X
Power supply	AC 100-240V
Dimension (L×W×H)	450×300×700mm
Weight	20kg

STANDARD DELIVERY

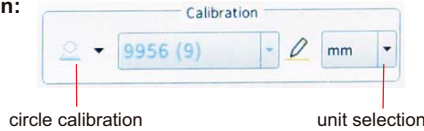
Main unit	1 pc
Display	1 pc
32G USB flash disk	1 pc
Mouse	1 pc
HDMI cable	1 pc
Glass calibration plate	1 pc
Anti-dust cover	1 pc

MEASURING SOFTWARE OF DIGITAL MICROSCOPES

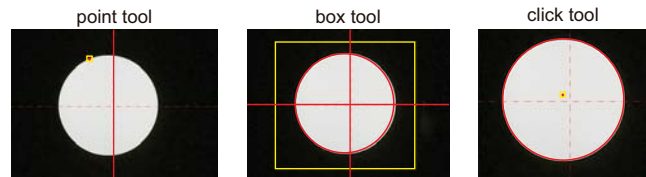
SOFTWARE CAN BE CUSTOMIZED



- **Included in digital microscopes (ISM-DL300, ISM-DL301, 5310-DL401, ISM-DL302, ISM-DL510, ISM-DL520, 5307-ID100A)**
- **Language:** Simplified Chinese, Traditional Chinese, English, Korean
- **Calibration:**



Edge-detection:



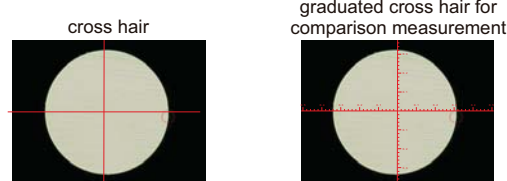
Measurement tools:

- | | | | | | |
|--|--|--|---|--|---|
| | measure length of line or distance between two points | | measure length of line or distance between two points in horizontal direction | | measure length of line or distance between two points in vertical direction |
| | measure angle from horizontal line | | measure angle from vertical line | | measure angle of two lines |
| | measure distance between two parallel lines | | measure distance between two parallel lines | | measure distance between multiple parallel lines |
| | measure distance between point and line | | measure radius, length and angle of arc | | measure girth and area of polygon |
| | measure radius, diameter, girth and area of circle with three points | | measure radius, diameter, girth and area concentric of circles | | measure length, width, girth and area of rectangle |
| | measure minimum distance between point and circle | | measure distance between point and center of circle | | measure maximum distance between point and circle |
| | measure minimum distance between line and circle | | measure distance between line and center of circle | | measure maximum distance between line and circle |
| | measure minimum distance between two circles | | measure center distance between two circles | | measure maximum distance between two circles |
| | add text | | measure radius, diameter, girth and area of circle with two points | | cross hair and graduated cross hair |

Assist tools:

- | | | | |
|--|--------------------------------------|--|-----------------------------------|
| | manual/automatic point selection | | delete images |
| | line width and color settings | | export measurement data to U disk |
| | freeze screen | | take pictures and save |
| | camera parameter settings | | review pictures |
| | layout settings of measurement items | | system settings |

Cross hair:



Grid comparison measurement:



full-screen grid for comparison measurement, adjustable grid number

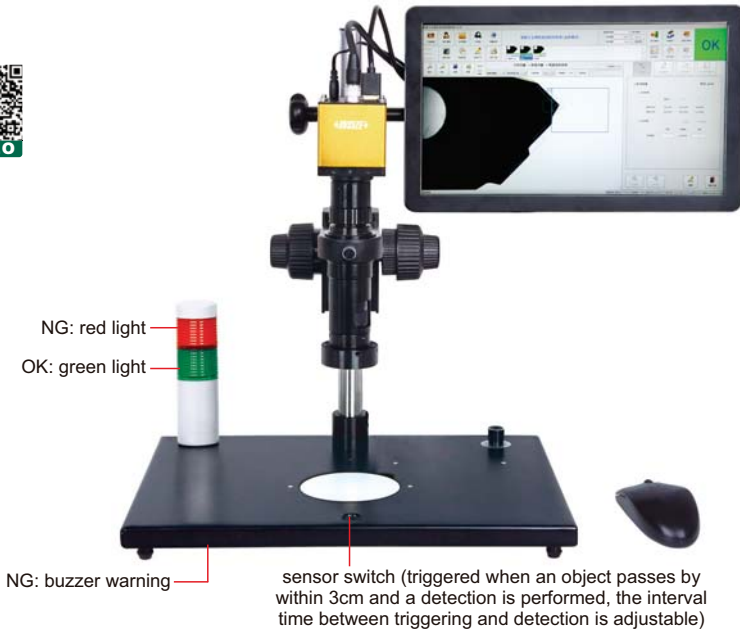
Output to Excel:

1	A1	A1=59.699° A1=300.301°

AUTOMATICALLY LOCATE WORKPIECES REGARDLESS OF POSITION AND DIRECTION

BUILT-IN SOFTWARE WITHOUT COMPUTER

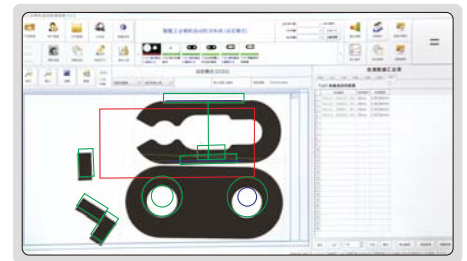
SMART MICROSCOPE (WITH DISPLAY) CODE ISM-DL400



camera function

- surface defect detection
- dimension measurement
- read barcode
- burr detection
- contour matching
- character recognition
- color detection
- read QR code
- object counting
- thread measurement

detect different workpieces at one time



- Automatically identify different workpieces
- Automatically locate workpieces regardless of position and direction
- Built-in software, PLC control input and output interface
- Including multiple detection tools
- Automatically calculate, store the test results and sent to Excel

report showing the perform times of each tool, quantity of OK and NG, the report can be saved

report of each detection is automatically created and saved

SPECIFICATION

Magnification	15X~100X
Resolution	1920×1080
Pixel	2M
Single pixel size	3.75×3.75μm
Frame rate	60fps
Sensor	1/2" CMOS
Chip structure	FPGA+ARM
Operation system	Linux 3.10
Power supply	power adapter
Dimension (L×W×H)	570×300×430mm
Weight	6.5kg

STANDARD DELIVERY

Main unit	1 pc
0.5X camera adapter	1 pc
1X auxiliary objective	1 pc
Calibration plate	1 pc
16G USB flash disk	1 pc
White/black plate	1 pc
HDMI cable	1 pc
Power adapter	3 pcs

MAGNIFICATION, FOCUS DISTANCE AND VIEW FIELD

Auxiliary objective	Specification	Camera adapter	
		0.5X (included)	1X (optional)
1X (included)	magnification	15~100X	30~200X
	focus distance	70±2mm	70±2mm
	view filed	16×11~2.5×1.6mm	7.8×5.3~1.2×0.8mm
2X (optional)	magnification	30~200X	60~400X
	focus distance	29±2mm	29±2mm
	view filed	7.8×5.3~1.2×0.8mm	3.8×2.7~0.6×0.4mm

OPTIONAL ACCESSORY

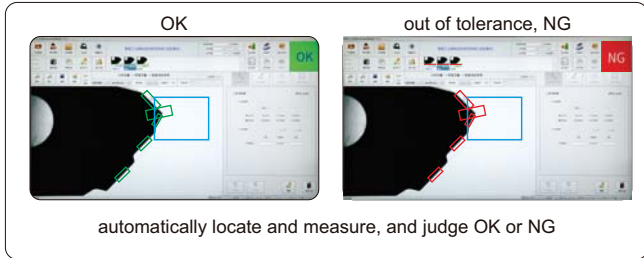
1X camera adapter	ISM-DL-CA1X
2X auxiliary objective	ISM-DL-OB2X
LED light	page 540~541
Auxiliary objective	page 542

To be continued

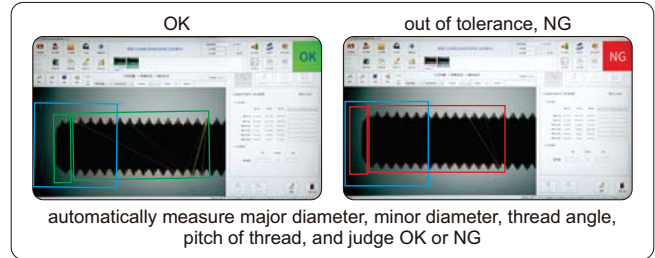
Continued from previous page

■ APPLICATION EXAMPLES:

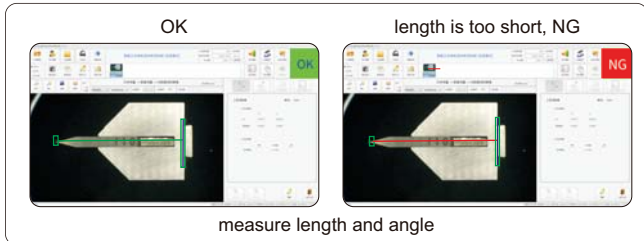
dimension measurement



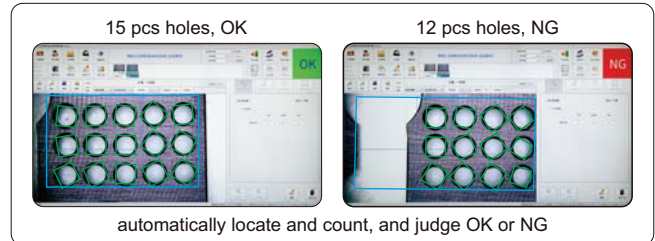
thread measurement



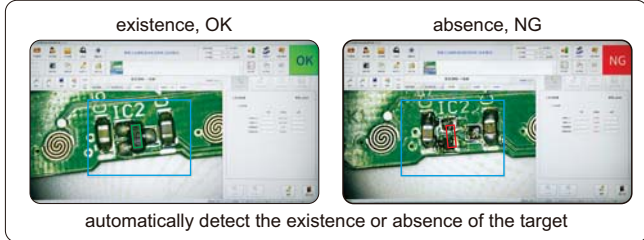
cutting tools measurement



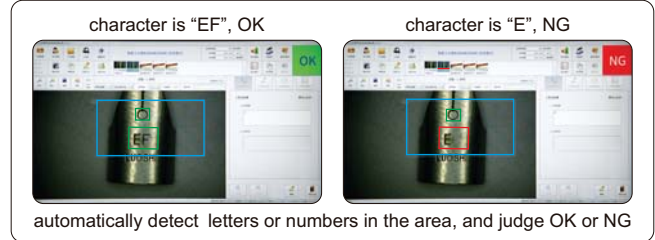
counting



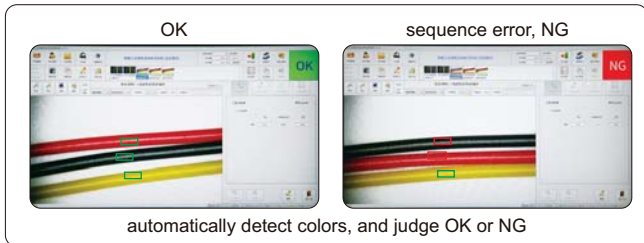
existence or absence



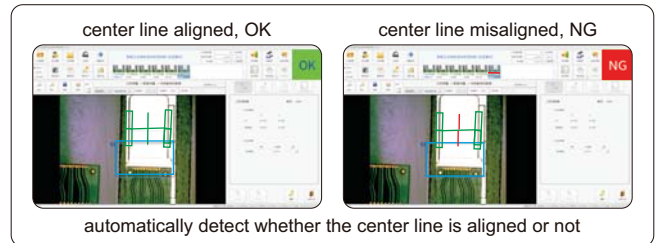
character recognition



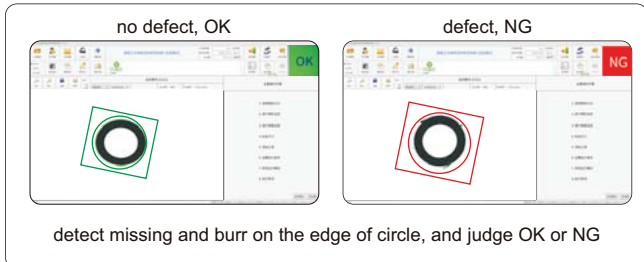
color detection



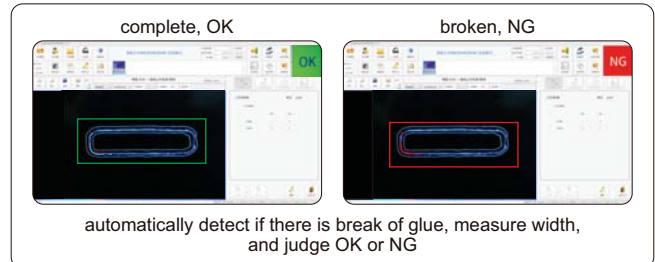
location detection



surface defect detection



glue detection

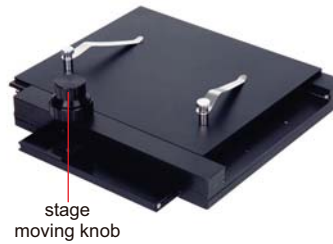


X-Y METAL STAGE CODE ISM-DL-STAGE1

- Suitable for digital microscopes 5315-S710, 5301-D400, 5313-S407, 5310-DL401, 5303-AF103, ISM-DL300, ISM-DL301, ISM-DL302, ISM-DL520

SPECIFICATION

X-Y travel range	100×86mm
Dimension (L×W×H)	180×180×50mm
Weight	2.3kg



RED, GREEN, BLUE, INFRARED AND UV LIGHT CAN BE CUSTOMIZED

ATTENTION: MUST BE USED WITH LIGHT BRACKET AND LIGHT CONTROLLER

LED RING LIGHT CODE ISM-LED-9245R

- Diffuser plate is included to reduce the reflective effect on workpieces
- Suitable for digital microscopes 5303-AF103, 5310-DL401, ISM-DL300, ISM-DL301, ISM-DL302, ISM-DL400, ISM-DL510, 5315-S710

SPECIFICATION

Light color	white
Power supply	24V
Power	5.5W
Angle	45°
Outside/inside diameter	92/52mm



RED, GREEN, BLUE, INFRARED AND UV LIGHT CAN BE CUSTOMIZED

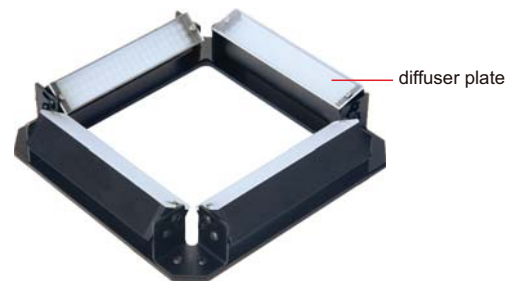
ATTENTION: MUST BE USED WITH LIGHT BRACKET AND LIGHT CONTROLLER

LED SQUARE LIGHT CODE ISM-LED-100L4

- Diffuser plate is included to reduce the reflective effect on workpieces
- Angle and brightness can be adjusted independently
- Suitable for digital microscopes 5303-AF103, 5310-DL401, ISM-DL300, ISM-DL301, ISM-DL302, ISM-DL400, ISM-DL510, 5315-S710

SPECIFICATION

Light color	white
Power supply	24V
Power	10.36W
Angle	0~90°
Dimension (L×W×H)	154×154×30mm



DIGITAL LIGHT CONTROLLER CODE ISM-LED-CTRL

- 256 (0-255) steps of brightness adjustment
- With power off memory function and short circuit protection function
- Suitable for ISM-LED-100L4, ISM-LED-9245R

SPECIFICATION

Power supply	100~240V, 50/60HZ
Output power (rated)	60W
Output voltage (rated)	24V
Dimension (L×W×H)	145×118×83mm



BRACKET FOR LIGHTS CODE ISM-LED-BRACKET



L-shape metal

- 4 pcs L-shape bars are included, multiple combinations can be realized
- Suitable for ISM-LED-100L4, ISM-LED-9245R

application



SPECIFICATION

Size (L×W×H)	260×300×20mm
Weight	0.7kg

DUAL HEAD LED LIGHT CODE ISM-ZS-LED

- Adjustable illumination
- For digital and stereo microscopes

SPECIFICATION

Power	3W
Power supply	100~240V
Working	10000h
Illumination	10000lux



application



LED AUXILIARY LIGHT CODE ISM-DL-LED

- Suitable for digital microscopes
5303-AF103, 5310-DL401, ISM-DL300,
ISM-DL301, ISM-DL302, ISM-DL400,
ISM-DL510, 5315-S710



illumination direction and brightness are adjustable

SPECIFICATION

Power	8W
Diameter of mounting hole	Ø25mm
Power supply	10~12V, 0~300mA

COAXIAL LIGHT CODE ISM-DL-COAXIAL

- Suitable for digital microscopes
5303-AF103, 5310-DL401, ISM-DL300,
ISM-DL301, ISM-DL302, ISM-DL400,
ISM-DL510, 5315-S710



for smooth surfaces and small holes, brightness is adjustable

SPECIFICATION

Power	1W
Power supply	0~3.4V, 0~400mA

AUXILIARY OBJECTIVES



0.3X auxiliary objective*
ISM-DL-OB03X



0.5X auxiliary objective*
ISM-DL-OB05X



0.75X auxiliary objective*
ISM-DL-OB075X



1X auxiliary objective
ISM-DL-OB1X



1.5X auxiliary objective
ISM-DL-OB1D5X



2X auxiliary objective
ISM-DL-OB2X

- Suitable for digital microscopes 5303-AF103, 5310-DL401, ISM-DL300, ISM-DL301, ISM-DL302, ISM-DL400, ISM-DL510, 5315-S710, 5317-AF109, 5317-AF110

MAGNIFICATION, FOCUS DISTANCE AND VIEW FIELD (5303-AF103)

Auxiliary objective	Specification	Camera adapter	
		0.5X (included)	1X (optional)
0.3X (optional)	magnification	6~37X	12~74X
	focus distance	120~310mm	120~310mm
	view field	52×30~8×5mm	26×15~4×2.5mm
0.5X (optional)	magnification	10~61X	20~123X
	focus distance	78~230mm	78~230mm
	view field	37×20~5×3mm	18×10~2.5×1.5mm
0.75X (optional)	magnification	15~92X	30~184X
	focus distance	60~125mm	60~125mm
	view field	21×13~3.4×2mm	10×6.5~1.7×1mm
1X (included)	magnification	20~123X	40~246X
	focus distance	48~84mm	48~84mm
	view field	15×8~2.5×1.5mm	7.5×4~1.3×0.7mm
1.5X (optional)	magnification	30~184X	60~368X
	focus distance	36~63mm	36~63mm
	view field	10×6~1.7×1mm	5×3~0.9×0.5mm
2X (optional)	magnification	40~246X	80~492X
	focus distance	24~42mm	24~42mm
	view field	7.5×4~1.3×0.7mm	3.8×2~0.7×0.4mm

MAGNIFICATION, FOCUS DISTANCE AND VIEW FIELD (ISM-DL300, ISM-DL301, ISM-DL510)

Auxiliary objective	Specification	Camera adapter	
		0.5X (included)	1X (optional)
0.3X (optional)	magnification	5~34X	10~68X
	focus distance	287±2mm	287±2mm
	view field	42×26~6.5×4.5mm	21×13~3.3×2.3mm
0.5X (optional)	magnification	9~56X	18~112X
	focus distance	166±2mm	166±2mm
	view field	25.6×16.8~5×3.5mm	12.8×8.4~2×1.3mm
0.75X (optional)	magnification	13~84X	26~168X
	focus distance	105±2mm	105±2mm
	view field	17×10.5~2.6×1.7mm	8.5×5.3~1.3×0.9mm
1X (included)	magnification	15~100X	30~200X
	focus distance	70±2mm	70±2mm
	view field	16×11~2.5×1.6mm	7.8×5.3~1.2×0.8mm
1.5X (optional)	magnification	26~168X	52~336X
	focus distance	42±2mm	42±2mm
	view field	8.5×5.2~1.3×0.9mm	4.3×2.6~0.7×0.5mm
2X (optional)	magnification	30~200X	60~400X
	focus distance	29±2mm	29±2mm
	view field	7.8×5.3~1.2×0.8mm	3.8×2.7~0.6×0.4mm

*For auxiliary objectives 0.3X, 0.5X, 0.75X, use contour illumination of ISM-DL301, ISM-DL400, ISM-DL510, 5310-DL401 or LED light

DIGITAL MICROSCOPES

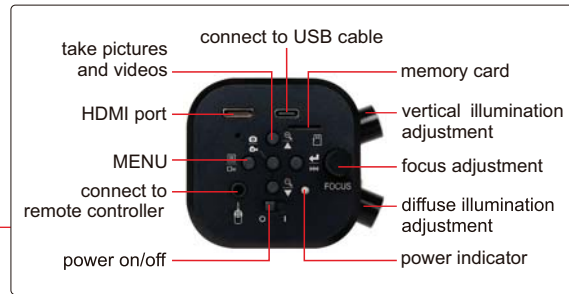


MEASUREMENT

TAKE PICTURES AND VIDEOS



5309-DM50



5309-DM51

- Independent control of vertical illumination and diffuse illumination
- Back focus adjustment extends working distance
- Take pictures and videos, save to memory card

SPECIFICATION

Code	5309-DM50	5309-DM51
Arm type	straight	universal
Sensor	1/2.8" CMOS	
Pixel	2M	
Resolution	1920×1080	
Exposure	real-time auto, single auto, manual adjustment	
White balance	real-time auto, single auto, manual RGB adjustment	
Record format	pictures: JPG videos: MOV	
Record media	memory card	
Working distance	45~169mm	42~195mm
Magnification	9~41X	7.6~49.4X
View field	7.6×4~38.5×21.7mm	7×4~45×25mm
Power supply	DC12V 3A	



USE COMPUTERS, OPTIONAL

Image magnification	View field	Measuring accuracy
9.0X	38.5×21.7mm	±0.02mm
13.0X	26.6×15.0mm	±0.02mm
17.0X	20.5×11.7mm	±0.02mm
22.0X	16.0×9.0mm	±0.02mm
28.5X	11.9×6.3mm	±0.02mm
34.0X	9.8×5.5mm	±0.01mm
41.0X	7.6×4.1mm	±0.01mm

STANDARD DELIVERY

Main unit	1 pc
Memory card and holder	1 pc
Plastic calibration rule (graduation 1mm)	1 pc
White/black plate	1 pc
Remote controller	1 pc
USB cable	1 pc
Measuring software	1 pc
Power adapter	1 pc

To be continued

Continued from previous page



remote controller
(included)



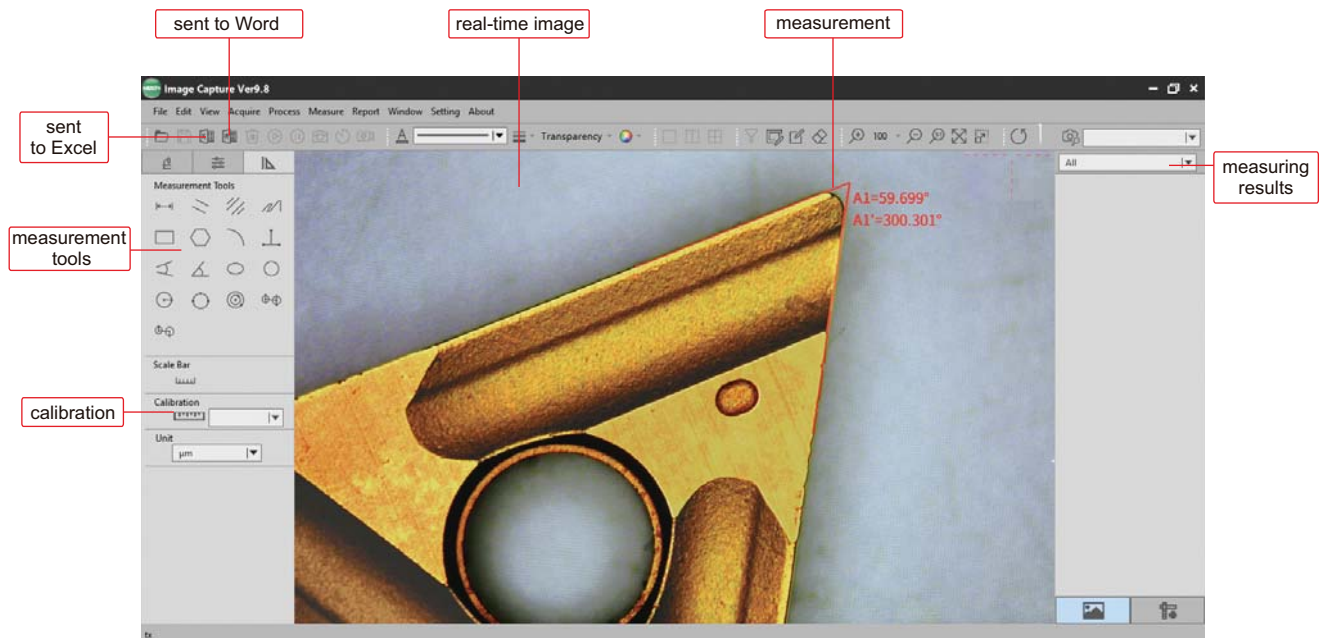
white/black plate
(included)



plastic calibration ruler
(graduation 1mm, included)

SOFTWARE FOR COMPUTER

- **Language:** Chinese (Simplified), English, French, Chinese (Traditional), Portuguese, Korean, Japanese
- **Operation system:** Windows 7/8/8.1/10 (64bit)

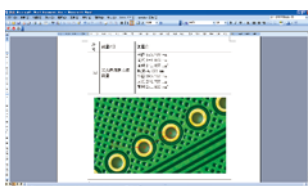


Measurement tools:

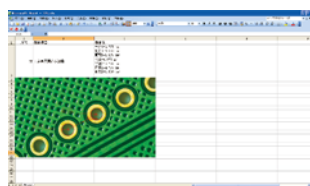
- | | | | |
|--|-------------------------------------|--|---------------------------------------|
| straight line distance measurement | parallel lines distance measurement | centre distance between parallel lines measurement | polyline line measurement |
| rectangular measurement | polygon measurement | arc measurement | three-vertical-line measurement |
| four-point perspective measurement | angle measurement | ellipse measurement | round measurement |
| circle measurement by radius | circle measurement by 3-point | torus measurement | center distance measurement by radius |
| center distance measurement by 3-point | | | |

Data is sent to Word or Excel:

sent to word



sent to excel

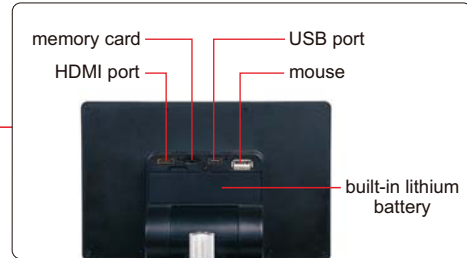
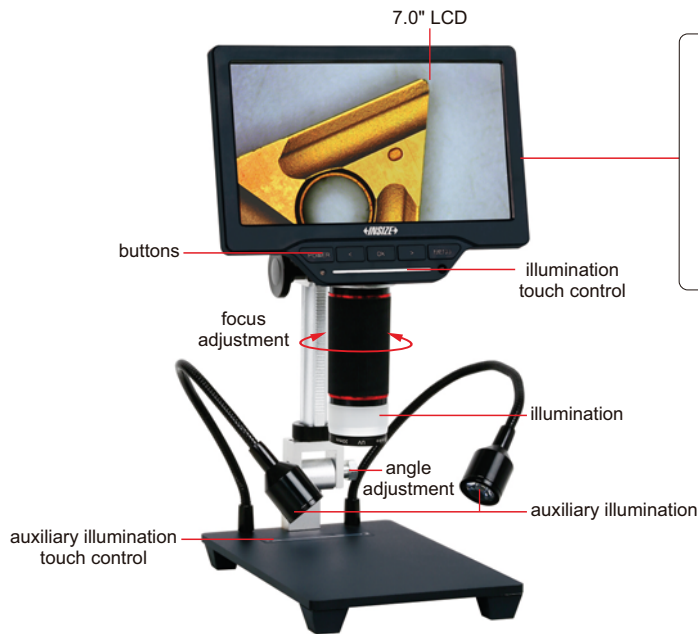


MINI DIGITAL MICROSCOPE (ECONOMIC TYPE) CODE 5311-M710



TAKE PICTURES
AND VIDEOS

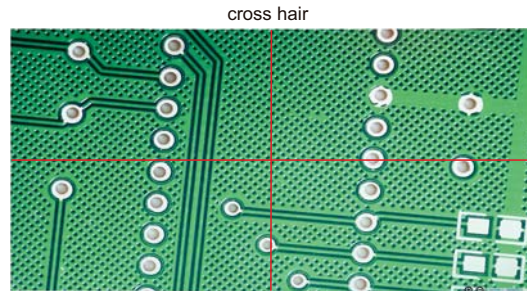
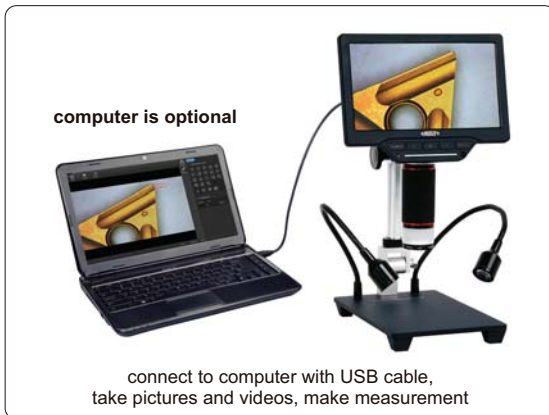
BUILT-IN
LITHIUM BATTERY



8G memory card and holder (included)



infrared ray remote controller (included)



cross hair



grid (color, line width and positions are adjustable)

SPECIFICATION

Display resolution	1024×600
Sensor	1/3" CMOS
Sensor resolution	1280×960
Single pixel size	2μm×2μm
Frame rate	60fps/30fps
Magnification	1X~16X
White balance	auto/manual (10 levels RGB)/calibration
Exposure control	AE lock/exposure compensation (10 levels)
Image control	contrast/saturation/sharpness
Record media	memory card
Output	HDMI
Power supply	built-in lithium battery/power adapter
Dimension (L×W×H)	174×200×350mm
Weight	1.5kg

STANDARD DELIVERY

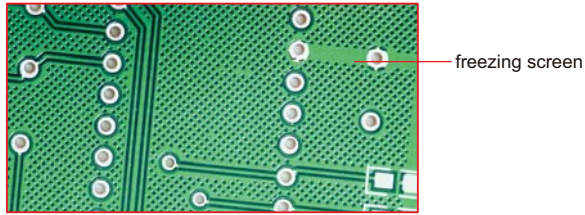
Main unit	1 pc
USB cable	1 pc
HDMI cable	1 pc
IR remote controller	1 pc
8G memory card and holder	1 pc
Plastic calibration rule	1 pc
Power adapter	1 pc

To be continued

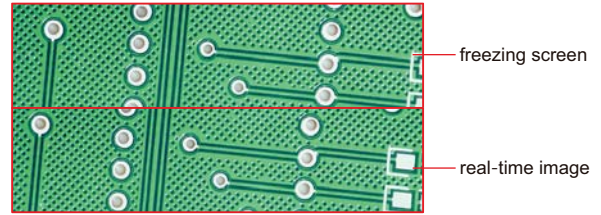
Continued from previous page

▪ **Screen freezing:**

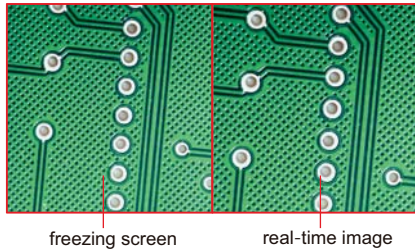
full screen



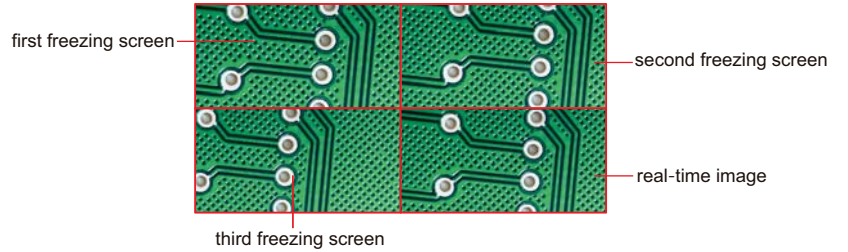
up-down split screen



left-right split screen



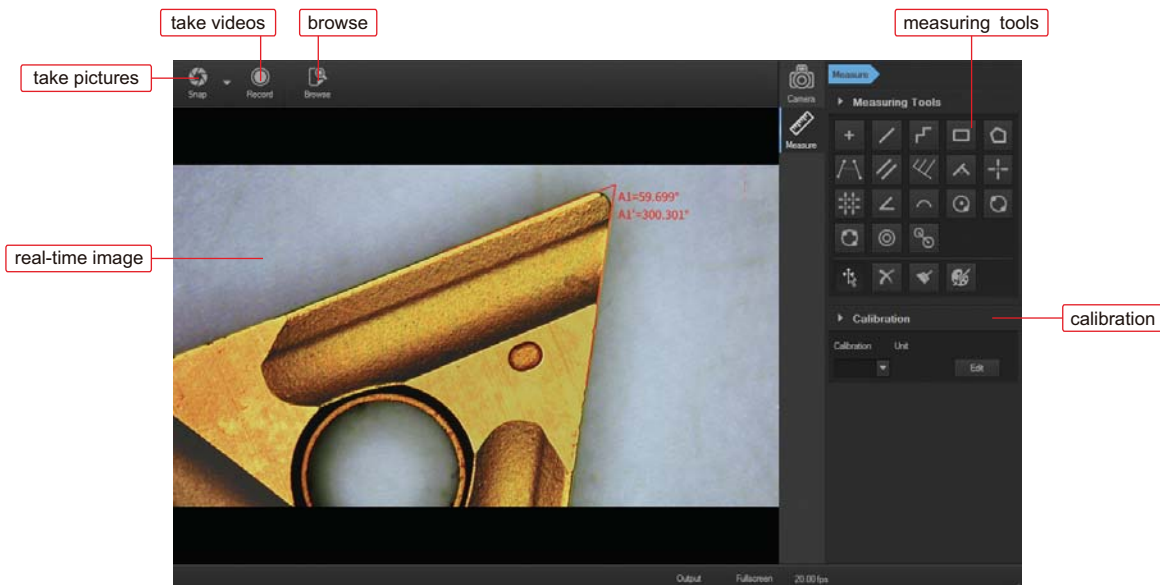
1/4 split screen



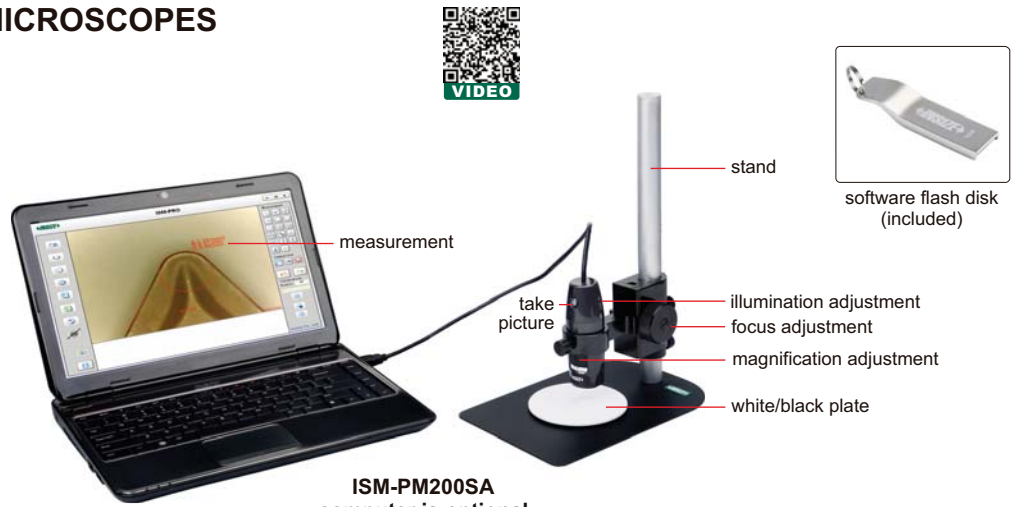
SOFTWARE FOR COMPUTER (included)

- **Language:** Chinese (Simplified), English
- **Operation system:** Windows 7/8/8.1/10 (64bit)
- **Port:** USB2.0 or above
- **Measuring accuracy:** 0.02mm

- | | | | |
|------------------------------|--------------------------------------|---------------------------------|---|
| point counting | straight line length | continuous line length | area of a rectangle |
| area of a polygon | distance between 2 lines | distance between parallel lines | distance between line and first parallel line |
| point-line distance | cross line | double cross line | angle |
| arc | radius of a circle | radius of a 2-point circle | radius of a 3-point circle |
| center distance of 2 circles | center distance of concentric circle | | |



DIGITAL MEASURING MICROSCOPES



- Can take pictures and videos
- Supplied with software
- Calibration rules (graduation 0.1 and 1mm) are included
- With focus support

SPECIFICATION

Code	ISM-PM200SA	ISM-PM200SB
Magnification	10X~200X	10X~200X
Stand	standard	universal
Pixel	2M (resolution: 1600×1200)	
Illumination	built-in adjustable LED	
Power supply	USB 2.0 cable (voltage required: 5±0.1V)	

OPTIONAL ACCESSORY

Green filter	ISM-PM-GREEN
Yellow filter	ISM-PM-YELLOW
Blue filter	ISM-PM-BLUE

universal stand (included in ISM-PM200SB)



filter (optional)



MAGNIFICATION, FOCUS DISTANCE, VIEW FIELD AND ACCURACY

Magnification	Focus distance	View field	Accuracy
50X	21mm	8.1×6.4mm	30μm
100X	13mm	3.9×3.1mm	15μm
150X	16mm	2.6×2.1mm	10μm
200X	19mm	1.8×1.5mm	8μm

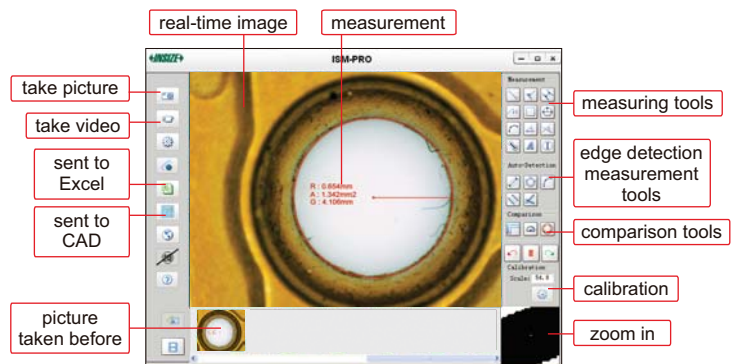
SOFTWARE

- Language:** English, Japanese, Korean, German, Turkey, Portuguese, Chinese
- Operation system:** Windows 7/8/XP/Vista
- Measuring tools:**

- | | | | |
|--|---|--|--|
| | measure length of line or distance between two points | | measure radius, length and angle of arc |
| | measure area of rectangle | | add number with circle |
| | measure distance between two circles | | measure length of continuous line |
| | measure distance between two parallel lines | | measure angle with three points |
| | measure angle with two lines | | measure radius, girth and area of circle |
| | measure distance between point and line | | add text |

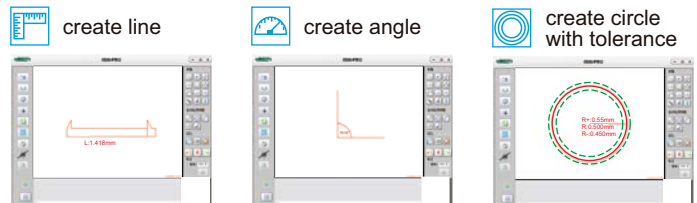
Edge detection measurement tools:

- detect two parallel lines automatically and calculate distance
- detect circle automatically, and calculate radius, girth and area
- detect arc automatically, and calculate radius, angle and arc length
- detect two lines automatically, and calculate angle
- detect line automatically, and calculate length

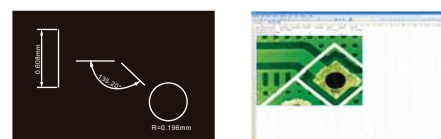


Comparison tools:

- Create line, angle or circle with desired size, to compare with workpieces



Data is sent to CAD or Excel:





WiFi DIGITAL MEASURING MICROSCOPE CODE ISM-WF200

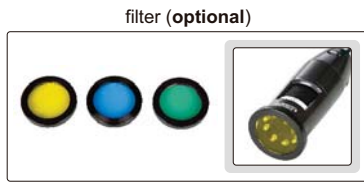
- Maximum working distance is 5m under WiFi mode
- Can be connected to multiple iPads, Android devices or computers together under WiFi mode
- Take pictures and videos
- Supplied with software



stand (code ISM-PM-STAND, optional)



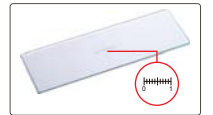
software flash disk (included)



filter (optional)



plastic calibration rule (graduation 1mm, included)



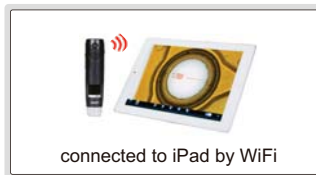
glass calibration rule (graduation 0.1mm, included)

SPECIFICATION

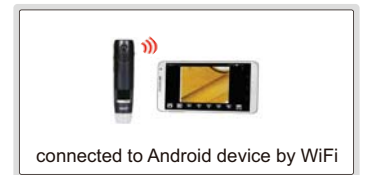
Magnification	10X~200X
Pixel	1.3M (resolution: 1280×1024)
Illumination	built-in adjustable LED
Power supply	built-in rechargeable battery

STANDARD DELIVERY

Microscope	1 pc
Focus support ring for 80X/150X	1 pc
Focus support ring for 60X/200X	1 pc
Glass calibration rule (graduation 0.1mm)	1 pc
Plastic calibration rule (graduation 1mm)	1 pc
Software and USB cable	1 pc
AC/DC adapter	1 pc



connected to iPad by WiFi



connected to Android device by WiFi



connected to computer by WiFi



connected to computer by USB cable

OPTIONAL ACCESSORY

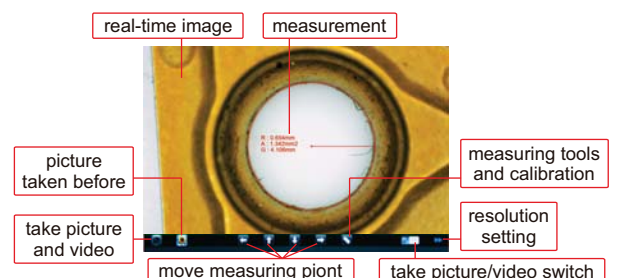
Stand	ISM-PM-STAND
Green filter	ISM-PM-GREEN
Yellow filter	ISM-PM-YELLOW
Blue filter	ISM-PM-BLUE

MAGNIFICATION, FOCUS DISTANCE, VIEW FIELD AND ACCURACY

Magnification	Focus distance	View field	Accuracy
50X	21mm	8.1×6.4mm	30μm
100X	13mm	3.9×3.1mm	15μm
150X	16mm	2.6×2.1mm	10μm
200X	19mm	1.8×1.5mm	8μm

1 Software ISM-PAD (for iPad by WiFi)




- measure length of line or distance between two points
- measure radius, girth and area of circle with three points
- measure angle

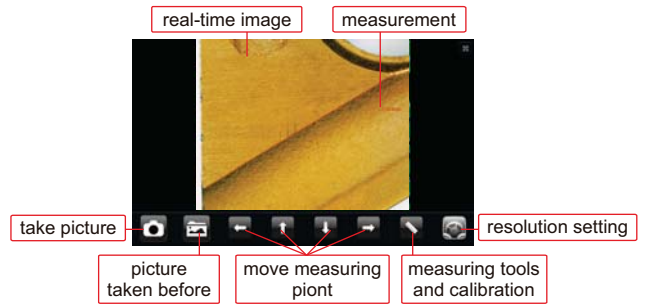


To be continued












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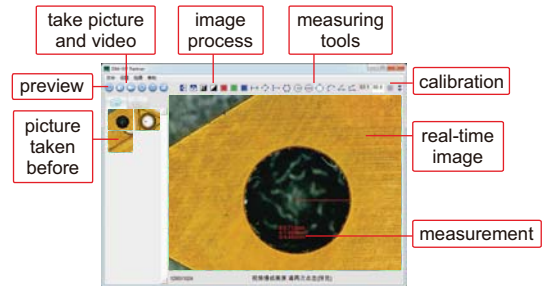
2 Software ISM-APK (for Android devices by WiFi)

-  measure length of line or distance between two points
-  measure radius, girth and area of circle with three points
-  measure angle















3 Software ISM-WF Partner (for computer by WiFi)

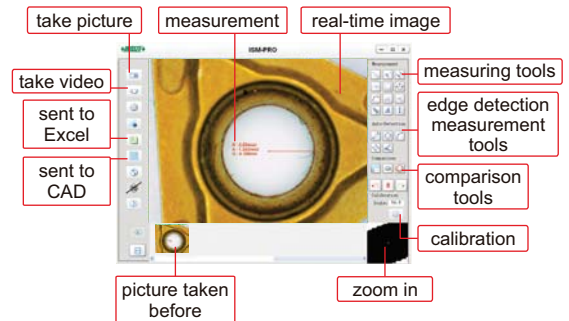
- | | |
|---|--|
|  measure length of line or distance between two points |  measure angle with two lines |
|  measure area of polygon |  measure radius, girth and area of circle with two points |
|  measure angle with three points |  measure distance between point and line |
|  measure radius, girth and area of circle with center point |  measure radius, length and angle of arc |
|  measure length of continuous line |  measure area of rectangle |
|  measure radius, girth and area of circle with three points | |



4 Software ISM-PRO (for computer by USB cable)

Measuring tools:

- | | |
|---|---|
|  measure length of line or distance between two points |  measure distance between point and line |
|  measure length of continuous line |  measure area of rectangle |
|  measure radius, length and angle of arc |  measure angle with two lines |
|  measure distance between two circles |  add number with circle |
|  measure distance between two parallel lines |  measure angle with three points |
|  measure radius, girth and area of circle |  add text |



Edge detection measurement tools:

- | | |
|--|--|
|  detect line automatically, and calculate length |  detect two lines automatically, and calculate angle |
|  detect arc automatically, and calculate radius, angle and arc length |  detect two parallel lines automatically and calculate distance |
|  detect circle automatically, and calculate radius, girth and area | |

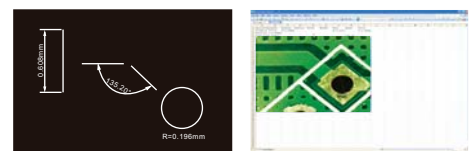
Comparison tools:

Create line, angle or circle with desired size, to compare with workpieces

-  create line
-  create angle
-  create circle with tolerance



Data is sent to CAD or Excel:



INDUSTRIAL MICROSCOPES



5101-M500

- Infinite optical system, polarization observation, dark field observation
- Kohler illumination system provides uniform illumination field
- Objective 50X is spring type

SPECIFICATION

Code	5101-M500 (bright field objectives)				5101-M500BD (bright & dark field objectives)			
Illumination	6V/30W halogen lamp, brightness is adjustable				12V/50W halogen lamp, brightness is adjustable			
Objective (infinite plan achromatic)	bright field objectives				bright & dark field objectives			
	5X	10X	20X	50X	5X	10X	20X	50X
Working distance	26.1mm	20.2mm	8.80mm	3.68mm	9.70mm	9.30mm	7.23mm	2.50mm
Numerical aperture	0.12	0.25	0.40	0.70	0.12	0.25	0.40	0.70
Magnification	50X~500X							
Eyepiece (wide field)	10X (view field: Ø22mm)							
Stage	double layer							
	size: 160×140mm							
	travel: 35x30mm							
Pupil distance	53~75mm							
Diopter adjustment	±5 diopter (one eyepiece)							
Power supply	220V, 50/60Hz							
Dimension (L×W×H)	415×345×380mm							
Weight	14kg							

STANDARD DELIVERY

Main unit	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

Bright & dark field objective (for 5101-M500BD)	PL40X	5101-M-BD40X
	PL60X	5101-M-BD60X
	PL80X	5101-M-BD80X
	PL100X	5101-M-BD100X
10X dividing eyepiece (0.1mm/div.)		5101-M-EPD10X
Bright field objective (for 5101-M500)	PL40X	5101-M-OB40X
	PL60X	5101-M-OB60X
	PL80X	5101-M-OB80X
	PL100X	5101-M-OB100X
Digital camera		ISM-CM20, ISM-CM63, ISM-ZS70-S
Camera adapter *		5101-M-ADAPTER

*Digital camera must be used with camera adapter

INDUSTRIAL INSPECTION MICROSCOPE (LARGE STAGE) CODE 5104-M700



- For observation and inspection of large IC and chip in IT industry

SPECIFICATION

Magnification	40X~400X			
Eyepiece (wide field)	10X (view field: Ø22mm)			
Objective (plan achromatic)	4X	10X	20X	40X
Numerical aperture	0.10	0.25	0.40	0.60
Working distance	17.8mm	10mm	5.8mm	2.9mm
Stage	double layer, size: 300×268mm, travel: 250×200mm			
Kohler illumination	6V/20W halogen lamp, brightness is adjustable built-in green, blue, yellow and frosted glasses			
Pupil distance	48~75mm			
Diopter adjustment	±5 diopter (two eyepieces)			
Power supply	220V, 50/60Hz			
Dimension (L×W×H)	647×268×376mm			
Weight	12kg			

STANDARD DELIVERY

Main unit	1 pc
Camera connector	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

Bright field objective	5X plan achromatic objective (focus distance: 15.5mm)	5104-M700-OB5X
	50X plan achromatic objective (focus distance: 0.32mm)	5104-M700-OB50X
	100X plan achromatic objective (focus distance: 2mm)	5104-M700-OB100X
Polarizer and analyzer		5104-M700-AP
Digital camera		ISM-CM20, ISM-CM63, ISM-ZS70-S
Camera adapter 0.5X *		ISM-MAS-ADAPTER

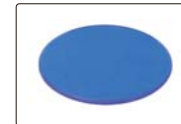
*Digital camera must be used with camera adapter

METALLURGICAL MICROSCOPES



5102-M600

- Infinite optical system, observation in reflected or transmitted illumination, polarizing observation
- Kohler illumination system provides uniform illumination field
- Objectives 40X, 60X are spring type



blue filter (included)



frosted glass filter (included)

SPECIFICATION

Code	5102-M600 (bright field objectives)				5102-M600BD (bright & dark field objectives)			
illumination	6V/30W (transmitted)		6V/30W (reflected)		12V/30W (transmitted)		12V/50W (reflected)	
Objective (infinite plan achromatic)	bright field objectives				bright & dark field objectives			
	5X	10X	40X	60X	5X	10X	20X	40X
Working distance	26.1mm	20.2mm	3.98mm	3.18mm	9.70mm	9.30mm	7.20mm	3.00mm
Numerical aperture	0.12	0.25	0.60	0.70	0.12	0.25	0.40	0.70
Magnification	50X~600X				50X~400X			
Eyepiece (wide field)	10X (view field: Ø22mm)							
Stage	double layer							
	size: 210×140mm							
	travel: 75×50mm							
Pupil distance	53~75mm							
Diopter adjustment	±5 diopter (one eyepiece)							
Power supply	220V, 50/60Hz							
Dimension (L×W×H)	456×260×498mm							
Weight	11kg							

STANDARD DELIVERY

Main unit	1 pc
Anti-dust cover	1 pc
Filter (blue/frosted glass)	1 pc of each

OPTIONAL ACCESSORY

Bright & dark field objective (for 5102-M600BD)	PL50X	5101-M-BD50X
	PL60X	5101-M-BD60X
	PL80X	5101-M-BD80X
	PL100X	5101-M-BD100X
10X dividing eyepiece (0.1mm/div.)		5101-M-EPD10X
Bright field objective (for 5102-M600)	PL20X	5101-M-OB20X
	PL50X	5101-M-OB50X
	PL80X	5101-M-OB80X
	PL100X	5101-M-OB100X
Digital camera		ISM-CM20, ISM-CM63, ISM-ZS70-S
Camera adapter *		5101-M-ADAPTER

*Digital camera must be used with camera adapter

METALLURGICAL MICROSCOPES (PROFESSIONAL TYPE)



- Infinite chromatic aberration correction optical system
- Three way observation tube with infinite hinge
- Translucent and reflective frame, front low-hand position coarse and fine coaxial focus adjustment mechanism, with adjustment elastic device to prevent sliding and random upper limit device
- Bright and dark field five-hole converter with DIC slot
- Adopt digital dimming, with light intensity reset and setting function
- With polarizer insert plate and 360° rotating analyzer insert slot



5108-M3000

SPECIFICATION

Code	5108-M3000 (standard type)				5108-M3000H (high-definition type)			
Eyepiece	high eye point large field SWH10X-H (view field: Ø25mm, adjustable visibility)							
Objective (infinite long working distance bright and dark field semi achromatic)	5X	10X	20X	50X	5X	10X	20X	50X
Working distance	15mm	8.4mm	10.3mm	3.0mm	20mm	11mm	3.0mm	1.0mm
Numerical aperture	0.15	0.30	0.40	0.75	0.15	0.30	0.45	0.80
Optical magnification	50X~500X (up to 1000X with optional 100X objective)							
Digital magnification	170X~1700X (on 21.5" monitor), up to 3400X with optional 100X objective							
Stage	double layer size: 310×140mm travel: 150×100mm							
Condenser	roll-out achromatic condenser (numerical aperture 0.9)							
Illumination	5W LED, transmitted and reflected							
Observation tube	inverse image, distance adjustment: 50~76mm, two grade spectral ratio binocular: trinocular=100:0							
Diopter adjustment	±5 diopter (two eyepieces)							
Power supply	AC 100-240V							
Dimension (L×W×H)	310×600×500mm							
Weight	27kg							

OPTIONAL ACCESSORY

Camera and software	ISM-CM63
Glass calibration rule	ISM-MAS-SCALE
Computer	5108-M-COMPUTER
2.5X infinite long working distance bright field semi achromatic objective	5108-M-OB2D5X
100X infinite long working distance bright and dark field semi achromatic objective	5108-M-BD100X
50X infinite long working distance bright and dark field achromatic objective	5108-M-APO50X
100X infinite long working distance bright and dark field achromatic objective	5108-M-APO100X
Differential interference module (DIC)	5108-M-DIC

STANDARD DELIVERY

Main unit	1 pc
Anti-dust cover	1 pc
0.65X camera adapter (adjustable focus)	1 pc
Polarizer and analyzer	1 pc of each

METALLURGICAL MICROSCOPES



5103-M1000

- Infinite optical system, polarization observation
- Kohler illumination system provides uniform illumination field
- Objectives 50X, 100X are spring type

SPECIFICATION

Code	5103-M1000 (bright field objectives)				5103-M1000BD (bright & dark field objectives)			
Illumination	6V/30W halogen lamp, brightness is adjustable				12V/50W halogen lamp, brightness is adjustable			
Objective (infinite plan achromatic)	bright field objectives				bright & dark field objectives			
	10X	20X	50X	100X	5X	10X	20X	50X
Working distance	20.2mm	8.80mm	3.68mm	0.40mm	9.70mm	9.30mm	7.23mm	2.50mm
Numerical aperture	0.25	0.40	0.70	0.85	0.12	0.25	0.40	0.70
Magnification	100X~1000X				50X~500X			
Eyepiece (wide field)	10X (view field: Ø22mm)							
Stage	double layer							
	size: 242×200mm							
	travel: 30x30mm							
Pupil distance	53~75mm							
Diopter adjustment	±5 diopter (one eyepiece)							
Power supply	220V, 50/60Hz							
Dimension (L×W×H)	614×250×394mm							
Weight	13kg							

STANDARD DELIVERY

Main unit	1 pc
Polarizer and analyzer	1 pc of each
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

Bright & dark field objective (for 5103-M1000BD)	PL40X	5101-M-BD40X
	PL60X	5101-M-BD60X
	PL80X	5101-M-BD80X
	PL100X	5101-M-BD100X
10X dividing eyepiece (0.1mm/div.)		5103-M-EPD10X
Bright field objective (for 5103-M1000)	PL5X	5101-M-OB5X
	PL40X	5101-M-OB40X
	PL60X	5101-M-OB60X
	PL80X	5101-M-OB80X
Digital camera		ISM-CM63
Camera adapter *		5101-M-ADAPTER

*Digital camera must be used with camera adapter

ZOOM STEREO MICROSCOPE (PROFESSIONAL TYPE) CODE 5107-S70T



LED ring light (optional)



- Greenough optical system, clear observation, real color
- High working distance is convenient for operation
- Excellent flat image and large depth of field, make observation comfortable
- 6.7:1 large zoom ratio, allow quick observation adjustment

SPECIFICATION

Optical tube	trinocular
Eyepiece (wide field)	10X (view field: Ø22mm)
Objective	0.67X~4.5X (zoom)
Observation tube	45° trinocular tube inclination angle, built-in 0.5X adapter
Zoom ratio	6.7:1
Pupil distance	50~75mm
Diopter adjustment	-8~+5 diopter (both eyepieces)
Working distance of objective	110mm
Max. workpiece height	106mm
Illumination	adjustable LED light
Power supply	110/220V
Dimension (L×W×H)	330×300×368mm
Weight	3.5kg



frosted glass filter (included)



white/black plate (included)

STANDARD DELIVERY

Main unit	1 pc
10X eyepiece	2 pcs
Ø100mm glass plate	1 pc
Ø100mm white/black plate	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

Auxiliary objective	0.5X	5107-S70T-OB05X
	1.5X	5107-S70T-OB15X
	2X	5107-S70T-OB20X
Eyepiece	15X (view field: Ø16mm)	5107-S70T-EP15X
	20X (view field: Ø12.5mm)	5107-S70T-EP20X
LED ring light		ISM-ZS-RL
Digital camera		ISM-CM20, ISM-CM63, ISM-ZS70-S

PARALLEL LIGHT PATH: REDUCE FATIGUE,
ACCESSORIES CAN BE ADDED INTO LIGHT PATH

PARALLEL LIGHT STEREO MICROSCOPE CODE ISM-ZS200



VIDEO

coaxial illumination (optional)



optical path splitter (optional)



iris diaphragm (optional)



- Infinity parallel optical system and 20° inclined optical tube reduce fatigue
- Coaxial illumination is optional for deep holes which cannot be observed by ring light
- Aperture diaphragm is optional for large depth of field and high quality image

SPECIFICATION

Optical tube	binocular (20° inclined)
Eyepiece (wide field)	10X (view field: Ø22mm)
Objective	0.8X~8X (zoom)
Zoom ratio	1:10
Pupil distance	55~75mm
Diopter adjustment	±5 diopter (both eyepieces)
Working distance of objective	78mm
Max. workpiece height	72mm
Illumination	adjustable reflected and transmitted LED light
Power supply	110/220V, 50/60HZ
Dimension (L×W×H)	240×280×440mm
Weight	4.3kg

STANDARD DELIVERY

Main unit	1 pc
WF10X eyepiece	2 pcs
Ø100mm glass plate	1 pc
Ø100mm white/black plate	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

Objective	0.5X achromatic objective (focus distance: 186mm)	ISM-ZS200-OB05X *
	2X plan achromatic objective (focus distance: 32.5mm)	ISM-ZS200-OB2X
	0.5X plan apochromatic objective (focus distance: 126mm)	ISM-ZS200-APO05X *
Eyepiece	WF15X (view field: Ø16mm)	ISM-ZS200-EP15X
	WF20X (view field: Ø12mm)	ISM-ZS200-EP20X
	WF30X (view field: Ø20mm)	ISM-ZS200-EP30X
Sleeve for objective		ISM-ZS200-ADAPTER
Iris diaphragm		ISM-ZS200-IRD
Optical path splitter		ISM-ZS200-OBS
Coaxial illumination		ISM-ZS200-COAXIAL
Digital camera **		ISM-CM20, ISM-CM63

* 0.5X auxiliary objective must be used with ISM-ZS200-ADAPTER

** Digital camera must be used with optical path splitter

ZOOM STEREO MICROSCOPES (ADVANCED TYPE)

LARGE ZOOM RATIO



ISM-ZS100T

connect to digital camera (for ISM-ZS100T)



LED ring light (optional)

SPECIFICATION

Code	ISM-ZS100	ISM-ZS100T
Optical tube	binocular	trinocular
Eyepiece (wide field)	10X (view field: Ø23mm)	
Objective	0.6X~5X (zoom)	
Zoom ratio	1: 8.3	
Pupil distance	55~75mm	
Diopter adjustment	±5 diopter (two eyepieces)	
Working distance of objective	115mm	
Max. workpiece height	75mm	
Illumination	adjustable reflected and transmitted LED light	
Power supply	110/220V, 50/60HZ	
Dimension (L×W×H)	260×310×490mm	
Weight	4.9kg	

STANDARD DELIVERY

Main unit	1 pc
Digital camera adapter 1X for ISM-ZS100T	1 pc
WF10X eyepiece	2 pcs
Ø100mm glass plate	1 pc
Ø100mm white/black plate	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

Auxiliary objective	0.5X (focus distance: 220mm)	ISM-ZS100-OB05X *
	0.7X (focus distance: 125mm)	ISM-ZS100-OB07X
	2X (focus distance: 45mm)	ISM-ZS100-OB2X
Eyepiece	WF15X (view field: Ø16mm)	ISM-ZS100-EP15X
	WF20X (view field: Ø12mm)	ISM-ZS100-EP20X
	WF30X (view field: Ø8mm)	ISM-ZS100-EP30X
Sleeve for auxiliary objective		ISM-ZS200-ADAPTER
LED ring light		ISM-ZS-RL
Digital camera adapter 1X for ISM-ZS100T		ISM-ZS100-DA
Digital camera for ISM-ZS100T		ISM-CM20, ISM-CM63, ISM-ZS70-S

*0.5X auxiliary objective must be used with ISM-ZS200-ADAPTER

ZOOM STEREO MICROSCOPES (STANDARD TYPE)



LED ring light (optional)

ISM-ZS50

SPECIFICATION

Code	ISM-ZS50	ISM-ZS50T
Optical tube	binocular	trinocular
Eyepiece (wide field)	10X (view field: Ø22mm)	
Objective	0.8X~5X (zoom)	
Zoom ratio	1: 6.3	
Pupil distance	55~75mm (adjustable)	
Diopter adjustment	±5 diopter (two eyepieces)	
Working distance of objective	115mm	
Max. workpiece height	75mm	
Illumination	adjustable reflected and transmitted LED light	
Power supply	110/220V, 50/60HZ	
Dimension (L×W×H)	290×260×480mm	
Weight	4.9kg	

STANDARD DELIVERY

Main unit	1 pc
WF 10X eyepiece	2 pcs
Ø100mm glass plate	1 pc
Ø100mm white/black plate	1 pc
Anti-dust cover	1 pc

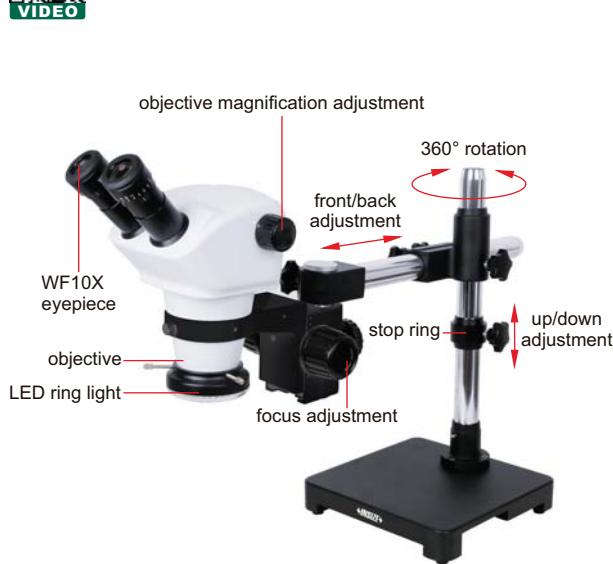
OPTIONAL ACCESSORY

Auxiliary objective	0.5X	ISM-ZS50-OB05X*
	2X	ISM-ZS50-OB2X
Eyepiece	10X dividing eyepiece (graduation 0.1mm/div.)	ISM-ZS50-EPD10X
	WF15X (view field: Ø16mm)	ISM-ZS50-EP15X
	WF20X (view field: Ø12mm)	ISM-ZS50-EP20X
LED ring light		ISM-ZS-RL
Sleeve for auxiliary objective		ISM-ZS200-ADAPTER
Digital camera for ISM-ZS50T		ISM-CM20, ISM-CM63, ISM-ZS70-S
Camera adapter 0.5X for ISM-ZS50T**		ISM-MAS-ADAPTER

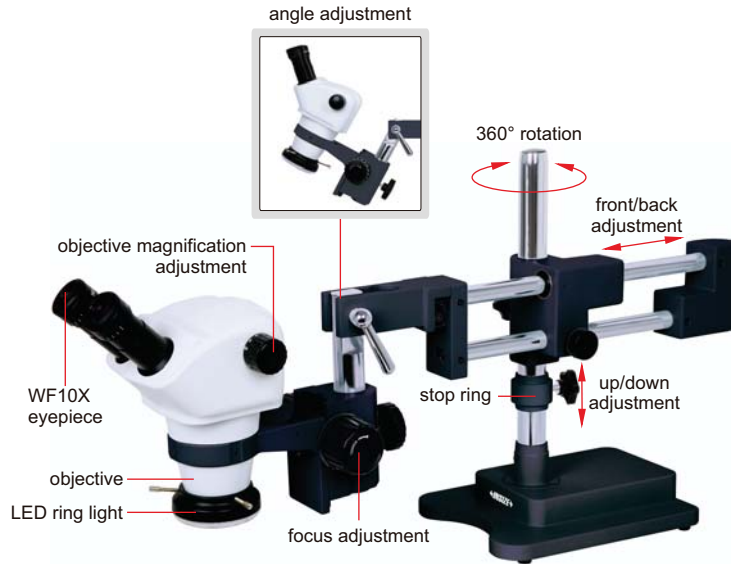
* 0.5X auxiliary objective must be used with ISM-ZS200-ADAPTER

** Digital camera must be used with camera adapter 0.5X

ZOOM STEREO MICROSCOPES (WITH UNIVERSAL STAND)



5106-M40 (with stand type A)



5106-M50 (with stand type B)

SPECIFICATION

Code	5106-M40	5106-M40T	5106-M50	5106-M50T
Stand	type A		type B	
Optical tube	binocular	trinocular	binocular	trinocular
Eyepiece (wide field)	10X (view field: Ø22mm)			
Objective	0.8X~5X (zoom)			
Zoom ratio	1:6.3			
Pupil distance	55~75mm			
Diopter adjustment	±5 diopter (two eyepieces)			
Working distance of objective	115mm			
Max. workpiece height	300mm			
Illumination	adjustable reflected LED ring light			
Power supply	power adapter			
Dimension (L×W×H)	610×220×430mm		790×230×430mm	
Weight	13.7kg		20kg	

STANDARD DELIVERY

Main unit (with stand)	1 pc
WF10X eyepiece	2 pcs
LED ring light	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

Auxiliary objective	0.5X	ISM-ZS50-OB05X*
	2X	ISM-ZS50-OB2X
Eyepiece	10X dividing eyepiece (0.1mm/div.)	ISM-ZS50-EPD10X
	WF15X (view field: Ø16mm)	ISM-ZS50-EP15X
	WF20X (view field: Ø12mm)	ISM-ZS50-EP20X
Adapter sleeve		ISM-ZS30-ADAPTER
0.5X adapter (for 5106-M40T/M50T)		ISM-MAS-ADAPTER
Digital camera (for 5106-M40T/M50T)**		ISM-CM20, ISM-CM63

* 0.5X auxiliary objective must be used with ISM-ZS30-ADAPTER

** Digital camera must be used with 0.5X adapter ISM-MAS-ADAPTER

ZOOM STEREO MICROSCOPE (BASIC TYPE) CODE ISM-ZS30



SPECIFICATION

Optical tube	binocular
Eyepiece (wide field)	10X (view field: Ø20mm)
Objective	1X~4.5X (zoom)
Zoom ratio	1:4.5
Pupil distance	55~75mm (adjustable)
Diopter adjustment	±5 diopter (two eyepieces)
Working distance of objective	97mm
Max. workpiece height	60mm
Illumination	adjustable reflected and transmitted LED light
Power supply	110/220V, 50/60HZ
Dimension (L×W×H)	260×190×400mm
Weight	4.3kg



LED ring light (optional)

STANDARD DELIVERY

Main unit	1 pc
WF 10X eyepiece	2 pcs
Ø95mm glass plate	1 pc
Ø95mm white/black plate	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

Auxiliary objective	0.5X	ISM-ZS30-OB05X *
	0.63X	ISM-ZS30-OB06X *
	0.75X	ISM-ZS30-OB07X *
	2X	ISM-ZS30-OB2X
Eyepiece	10X dividing eyepiece (graduation 0.1mm/div.)	ISM-ZS30-EPD10X
	WF15X (view field: Ø16mm)	ISM-ZS50-EP15X
	WF20X (view field: Ø12mm)	ISM-ZS50-EP20X
LED ring light		ISM-ZS-RL
Sleeve for auxiliary objective		ISM-ZS30-ADAPTER
Digital camera		ISM-CM63
Camera adapter 0.75X **		ISM-AD-0D75

*0.5X, 0.63X and 0.75X auxiliary objectives must be used with ISM-ZS30-ADAPTER

**Digital camera must be used with camera adapter 0.75X

LONG WORKING DISTANCE STEREO MICROSCOPE (LOW MAGNIFICATION) CODE 5305-ZS80

SPECIFICATION

Magnification	8X
Eyepiece (wide field)	10X (view field: Ø20mm)
Objective	0.8X
Pupil distance	55~75mm
Diopter adjustment	±5 diopter (one eyepiece)
Working distance of objective	115mm
Max. workpiece height	100mm
Dimension (L×W×H)	280x160x370mm
Weight	3.7kg

STANDARD DELIVERY

Main unit	1 pc
10X eyepieces	1 pair
0.8X objective	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

Eyepiece	WF5X (view field: Ø20mm)	5305-ZS80-EP5X
	WF15X (view field: Ø15mm)	5305-ZS80-EP15X
	WF20X (view field: Ø10mm)	5305-ZS80-EP20X
LED ring light		ISM-ZS-RL



LED ring light (optional)

POLARIZING MICROSCOPE CODE ISM-POL1000



- Widely used in geology, mineralogy, fossil fuel exploration
- Single polarization, orthogonal polarization or conoscopic observation are available



SPECIFICATION

Magnification	40X~600X				
Eyepiece	10X (view field: \varnothing 20mm)				
Infinite strain free plan achromatic objective	4X (transmitted/reflected)	10X (transmitted/reflected)	20X (transmitted)	40X (transmitted)	60X (transmitted)
Working distance	22.2mm	6.1mm	6.4mm	0.6mm	0.3mm
Numerical aperture	0.1	0.25	0.4	0.65	0.8
Stage	revolving round stage				
	diameter: \varnothing 160mm				
	graduation: 1°, resolution: 6'				
Pupil distance	53~75mm				
Diopter adjustment	\pm 5 diopter (one eyepiece)				
Illumination	12V/50W halogen lamp, brightness is adjustable (reflected illumination)				
	12V/20W halogen lamp, brightness is adjustable (transmitted illumination)				
Power supply	110/220V, 50/60HZ				
Dimension (L×W×H)	614×250×394mm				
Weight	13kg				

STANDARD DELIVERY

Main unit	1 pc
Micrometer	1 pc
Grid plate	1 pc
10X crossing eyepiece (view field: \varnothing 20mm)	1 pc
10X dividing eyepiece (view field: \varnothing 20mm, graduation 0.1mm)	1 pc
λ slip (first class red) and 1/4 λ slip	1 pc
Quartz wedge	1 pc

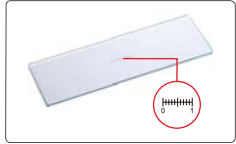
OPTIONAL ACCESSORY

Objective for reflected system	PL20X	ISM-POL1000-OBR20X
	PL40X	ISM-POL1000-OBR40X
	PL60X	ISM-POL1000-OBR60X
	PL100X	ISM-POL1000-OBR100X
Objective for transmitted system	PL100X	ISM-POL1000-OBT100X
Specimen presser		ISM-POL1000-SP

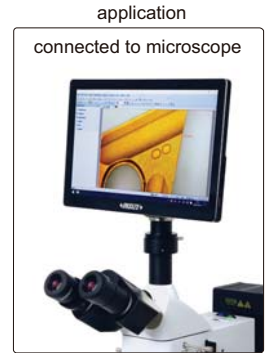
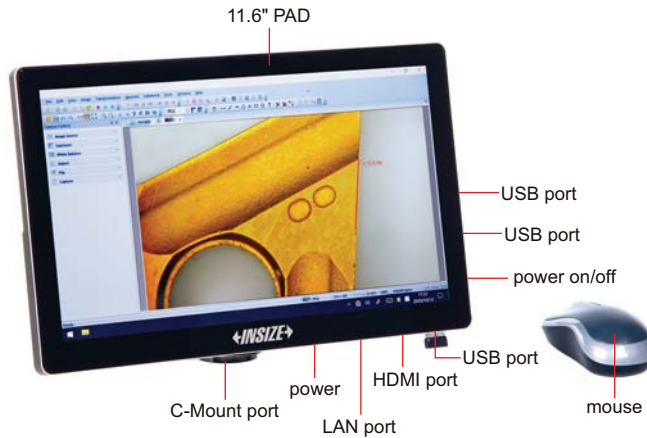
ATTENTION: CAMERA CONNECTOR AND ADAPTER ARE NEEDED ACCORDING TO MICROSCOPES

DIGITAL CAMERA FOR MICROSCOPES (WITH PAD) CODE ISM-ZS70-S

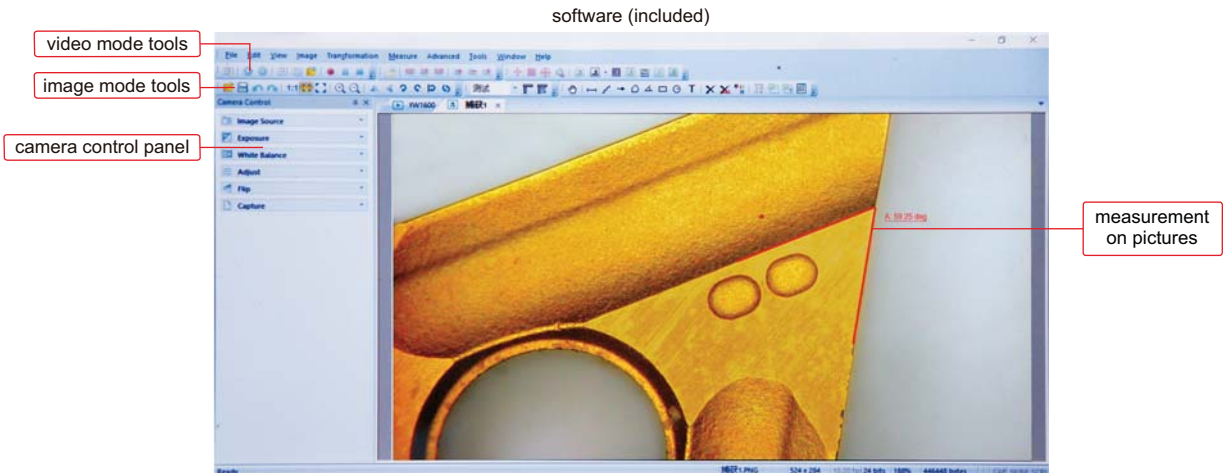
MEASUREMENT, TAKE PICTURES AND VIDEOS



glass calibration rule (included, graduation 0.1mm)



- Windows 10 operation system
- Built-in software, can take pictures and videos, can measure
- Language: Chinese, English, French, Japanese, German, Polish, Arabic
- Automatic exposure, white balance, brightness, contrast ratio, saturation are adjustable
- Image process feature: zoom in/out, flip, mirror, stitching and so on
- Output to Excel or CSV file



Measuring tools

- measure line
- measure meander line
- arrow mark
- measure polygon
- calibration
- measure angle
- measure rectangle
- measure circle
- text mark
- show/hide scale

SPECIFICATION

Sensor	1/2.3" CMOS
Pixel	16M
Resolution	800×600, 1600×1200, 1920×1080, 2048×1536, 2304×1728, 2592×1944, 4608×3456
Frame rate	30fps (1920×1080)
Output	HDMI, USB 3.0
Power supply	power adapter
Dimension (L×W×H)	280.3×177.4×12.5mm
Weight	0.9kg

STANDARD DELIVERY

Main unit	1 pc
Mouse	1 pc
Glass calibration rule (graduation 0.1mm)	1 pc
AC/DC adapter	1 pc

DIGITAL CAMERA FOR MICROSCOPES CODE ISM-CM63



ATTENTION: ADAPTERS ARE NEEDED
ACCORDING TO MICROSCOPES

- To be used with computers
- Sony Exmor back-illuminated CMOS sensor
- USB3.0 transmission
- Automatic exposure, gain adjustment, white balance, chrominance adjustment, saturation adjustment, gamma correction, luminance adjustment, contrast adjustment



C-mount port

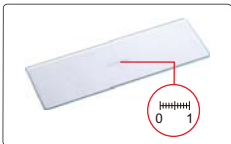
adapter 0.75X
(optional)



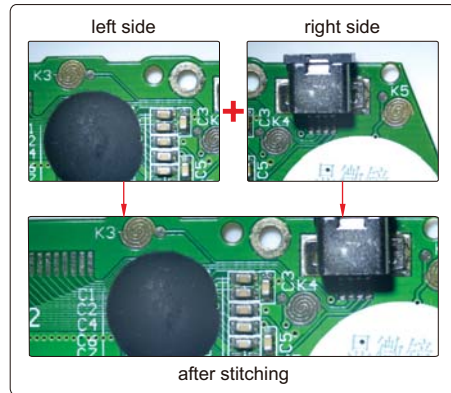
application



glass calibration rule
(included, graduation 0.1mm)

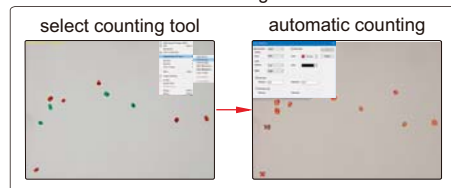


automatic image stitching (expand field of view)



after stitching

counting



software (included)

selectable resolution

measurement items

real time gray calibration

histogram (quantify the distribution of color and brightness)

black balance (reduce color difference)

flat field correction (reduce brightness difference)

dark field correction (reduce thermal noise)

The software can control image completely, including measurement, image stitching, extend focus depth, image gray processing, RGB histogram observation, image color sampling, 3D plot (3D representation of image intensity), image exposure, white balance, black balance, image bit depth, flat field correction and dark field correction, etc.

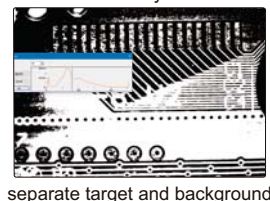
Measuring tools:

- | | | | |
|--|---|--|--|
| | measure length of line or distance between two points | | measure rectangle |
| | measure distance between two parallel lines | | measure width and diameter of ring |
| | measure angle | | measure diameter, length, perimeter angle of arc |
| | measure radius, girth and area of circle | | measure area of polygon |
| | measure axis lengths, girth and area of ellipse | | measure center distance between two circles |
| | calibration | | measure length of open curve |

focus stacking



binary



separate target and background

3D plot



visualize the distribution of image brightness and color

To be continued

Continued from previous page

SPECIFICATION

Sensor (back-up)	1/1.8" CMOS
Resolution	3072×2048
Pixel	6.3M
Single pixel size	2.4×2.4μm
Spectral range	380-650nm (with infrared cut filter)
Frame rate	30fps
Sampling average	1×1
Exposure time	0.1ms~15s
Power supply	USB port
Weight	400g

COMPUTER REQUIREMENT

Operation system	Windows/7/8/10
CPU	Intel Core 2 2.8Hz or above
Memory	2GB or above
USB port	USB3.0 (recommand) or USB2.0
Display	17" or above

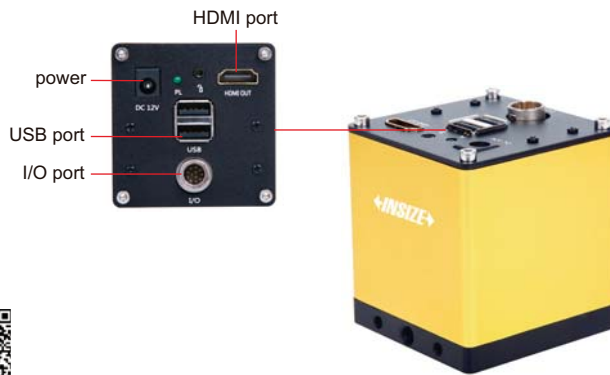
STANDAER DELIVERY

Camera (USB cable included)	1 pc
Software	1 pc
Glass calibration rule (graduation 0.1mm)	1 pc

OPTIONAL ACCESSORY

Adapter 0.75X	ISM-AD-0D75
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**SMART CAMERA
CODE ISM-MV10**



- Built-in software, operated by mouse.
- Automatically calculate, store the test results and sent to Excel
- Camera with PLC control input and output interface, can be integrated with automation equipment
- Functions: presence or absence of objects, position tilt correction, object counting, color detection, stain detection, dimension measurement, position guide, etc.

SPECIFICATION

Chip structure	FPGA+ARM
Opreation system	Linux 3.10
Kernel structure	dual-core Cortex-A9
Frequency	1GHZ
I/O port	3 sets of input and output (can be connected to photoelectric switch, wire switch, PLC, etc.)
Working temperature	-10~70°C
Sensor	1/2" CMOS
Single pixel size	3.75×3.75μm
Resolution	1920×1080
Frame rate	60fps
Video output	HDMI port
Lens connection	standard C port

SOFTWARE

presence or absence of objects



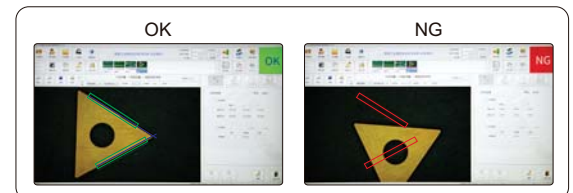
select the area and specify the target, the camera will automatically detect the presence or absence of the target.

automatic counting



select the area and specify the target, the camera will automatically calculate the number of targets.

dimension measurement



measuring angle, distance, radius, center distance, etc.

STANDAER DELIVERY

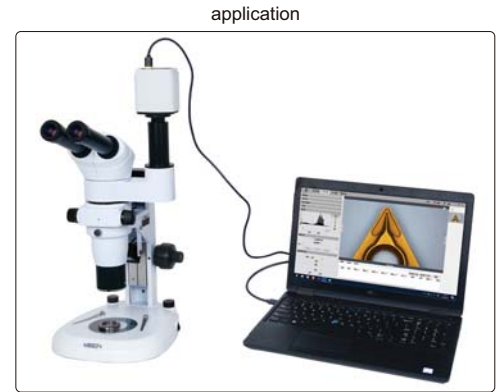
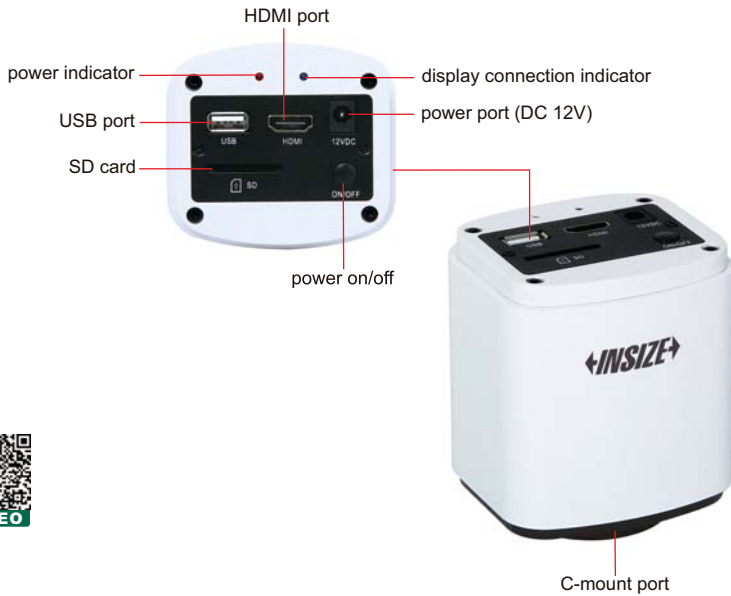
Camera (with HDMI cable)	1 pc
Software	1 pc

DIGITAL CAMERA FOR MICROSCOPES CODE ISM-CM20

ATTENTION: ADAPTERS ARE NEEDED ACCORDING TO MICROSCOPES

FOCUS STACKING

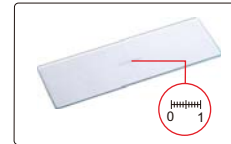
AUTOMATIC IMAGE STITCHING



- 1080P high-definition image
- Can be connected with displays or computers
- Built-in simple measuring software for displays, without computer
- Professional measuring software for computers is included
- For bright field, dark field or fluorescent field
- Automatic exposure, white balance, gain adjustment, gamma correction, brightness contrast adjustment, saturation adjustment, chroma sharpness adjustment
- Focus stacking, automatic image stitching

adapter 0.5X (optional)

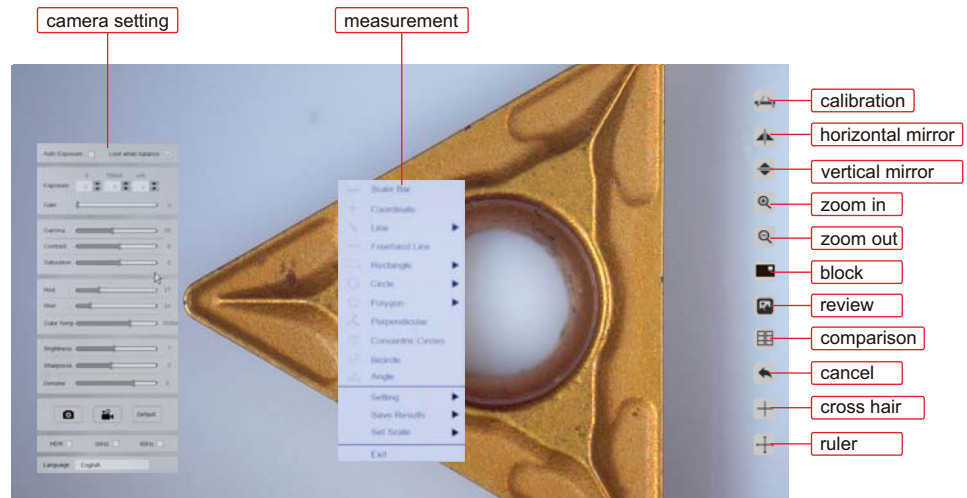
glass calibration rule (included, graduation 0.1mm)



SIMPLE MEASURING SOFTWARE (BUILT-IN, FOR DISPLAYS)

Measuring tools:

- measure length of line or distance between two points
- measure distance between point and line
- measure rectangle
- measure concentric circles
- measure circle
- measure curve
- measure polygon
- measure center distance of two circles
- measure angle of two lines



auto exposure, white balance, gain adjustment, gamma, chroma contrast adjustment, brightness sharpness adjustment, size measurement

To be continued

Continued from previous page

PROFESSIONAL MEASURING SOFTWARE (INCLUDED, FOR COMPUTERS)

selectable resolution

flat field correction

white balance
(balance color based on actual light source)

metrics flow
(create templates, set tolerances and build metrics flow)

histogram
(quantify the distribution of color and brightness)

manual counting
(class counting)

image coloring, fluorescence synthesis, binary, image smoothing, color filter/color extraction/color inversion, delay capture, focus stacking, automatic image stitching, metrics flow, manual counting, dynamic and static measurement, layered measurement, report generation and printing, delay record, flat field correction, image adjustment, histogram.

focus stacking

+
→

focus on the top

focus on the bottom

clear image of both top and bottom

automatic image stitching

+
→

+
→

slowly move the workpiece to generate a stitched image automatically (this image can not be used for size measurement)

SPECIFICATION

Sensor	1/2.8" CMOS
Pixel	2M
Resolution	1920×1080
Frame rate	30fps
Power supply	power adapter
Output	HDMI/USB
Lens connection	C-mount

COMPUTER (optional) REQUIREMENT

Operation system	Windows 7/8/10 (64 bit)
CPU	Intel Core i5 or above
Memory	8GB or above
USB port	USB 3.0

DISPLAY (optional) REQUIREMENT

Size	13" or above
Resolution	1080P or above
HDMI port	type A

STANDARD DELIVERY

Main unit	1 pc
16G memory card and holder	1 pc
Glass calibration rule (graduation 0.1mm)	1 pc
Mouse	1 pc
HDMI cable	1 pc
USB cable	1 pc
Power supply	1 pc

OPTIONAL ACCESSORY

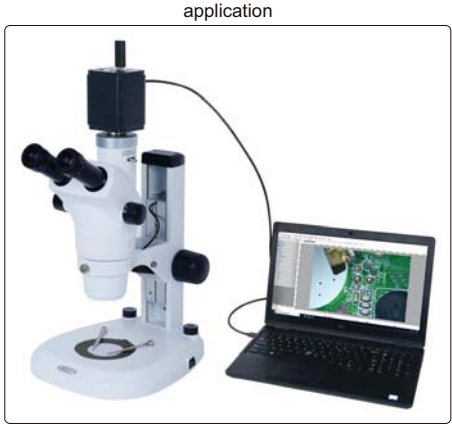
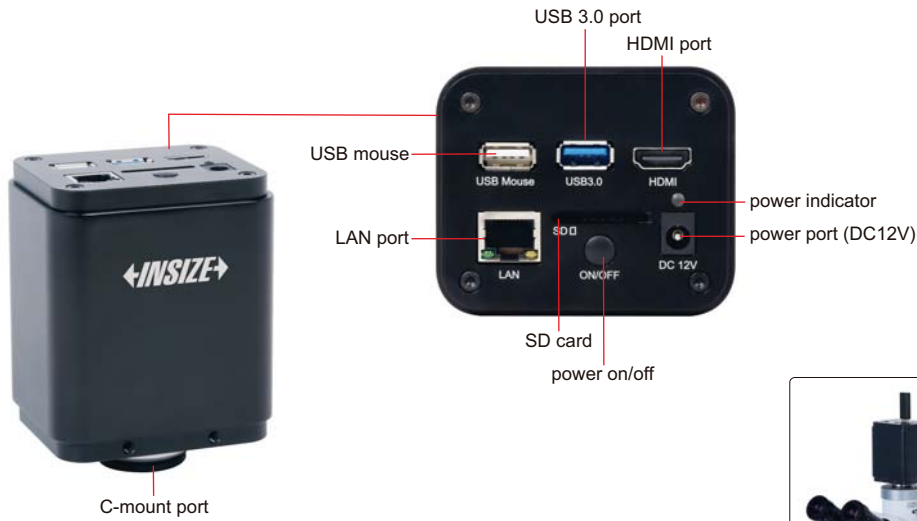
Adapter 0.5X	ISM-MAS-ADAPTER
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WIFI 4K CAMERA FOR MICROSCOPES CODE ISM-MP8B

WIRELESS AD-HOC NETWORK

AUTOMATIC IMAGE STITCHING

FOCUS STACKING



- 4K high-definition image
- Can be connected with displays or computers
- Built-in simple measuring software for display, without computer
- Professional measuring software for computers is included
- 4K HDMI/LAN/USB multiple video outputs
- 4K/1080P automatically switched by display resolution
- Focus stacking, automatic image stitching
- Wireless network or wired network



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SPECIFICATION

Sensor	1/1.2" CMOS
Pixel	8M
Resolution	3840×2160, 1920×1080
Single pixel	2.9×2.9μm
Frame rate	60fps@3840×2160 (HDMI) 30fps@3840×2160 (LAN) 30fps@3840×2160 (USB)
Binning	1×1
Exposure	0.04~2000ms
Output	HDMI/USB/LAN
Lens connection	C-mount
Power supply	DC 12V 1A
Dimension (L×W×H)	255×170×90mm
Weight	2kg

CONNECTION

HDMI	comply with HDMI 2.0 standard 4K/1080P automatically switched by display resolution
LAN	H264 encoded video bandwidth adjustment in real time DHCP configuration or manual configuration unicast/multicast configuration
WLAN	connecting 5G WLAN adapter (USB 3.0 interface) in AP/STA mode
USB3.0	connecting USB 3.0 port of PC for video transfer MJPEG format video

To be continued

Continued from previous page

STANDARD DELIVERY

Main unit	1 pc
16G SD card	1 pc
USB mouse	1 pc
HDMI2.0 cable	1 pc
USB3.0 cable	1 pc
USB wlan adapter	1 pc
Wlan cable	1 pc
Glass calibration ruler	1 pc
Calibration plate	1 pc
Software	1 pc
Power adapter	1 pc

OPTIONAL ACCESSORY

16G USB flash disk		IS-USBDISK-16G
Adjustable lens adapter	Ø23.2mm eyepiece tube	ISM-MP-2A075
	Ø31.75mm eyepiece tube	ISM-MP-3A075
Fixed lens adapter	Ø23.2mm eyepiece tube	ISM-MP-2F075
	Ø31.75mm eyepiece tube	ISM-MP-3F075
Adapter ring for Ø30.0mm eyepiece tube		ISM-MP-300R
Adapter ring for Ø30.5mm eyepiece tube		ISM-MP-305R

COMPUTER

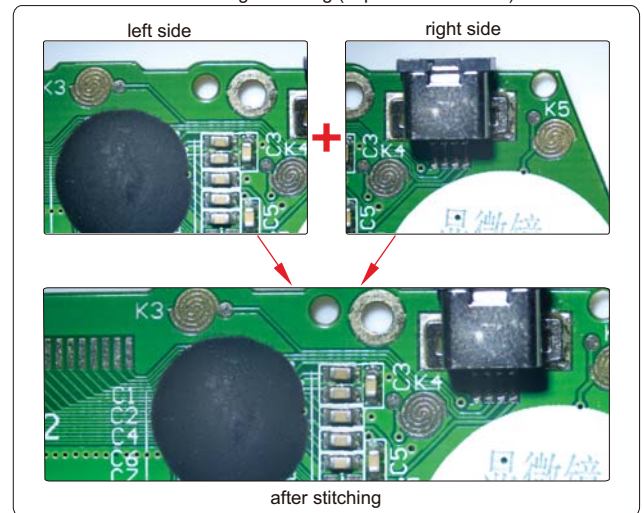
Operation system	Windows/7/8/10
CPU	Intel Core 2 2.8Hz
Memory	2GB
USB port	USB 3.0 or USB 2.0 port
Display	17"

PROFESSIONAL MEASURING SOFTWARE (INCLUDED, FOR COMPUTERS)

Measuring tools:

- measure length of line or distance between two points
- measure rectangle
- measure distance between two parallel lines
- measure width and diameter of ring
- measure angle
- measure diameter, length, perimeter angle of arc
- measure radius, girth and area of circle
- measure area of polygon
- measure axis lengths, girth and area of ellipse
- measure center distance between two circles
- calibration
- measure length of open curve

automatic image stitching (expand field of view)



focus stacking

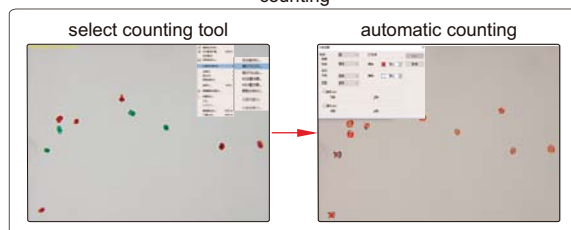


3D plot

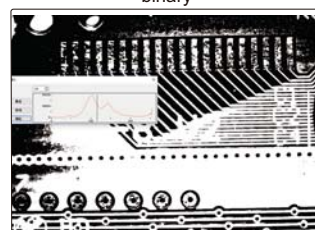


visualize the distribution of image brightness and color

counting



binary



separate target and background

METALLURGICAL ANALYSIS SOFTWARE AND CAMERA CODE ISM-MAS100

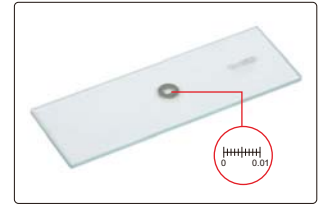
- More than 100 standards (ISO, ASTM, JIS, etc.)
- For metallurgical microscopes
- The camera can be inserted into the eyepiece tube or camera connector of microscopes
- Metallurgical analysis software is included, which can make comparative analysis, measurement and evaluation of various materials



application



software flash disk
(included)



glass calibration rule
(included, graduation 0.01mm)

metallurgical analysis software (included)

tool bar

gallery

this software can be used with variety of metallographic microscopes for acquisition, processing, analysis, report generation of metallurgical images

metallurgical module list

Select autoAnalysis Item

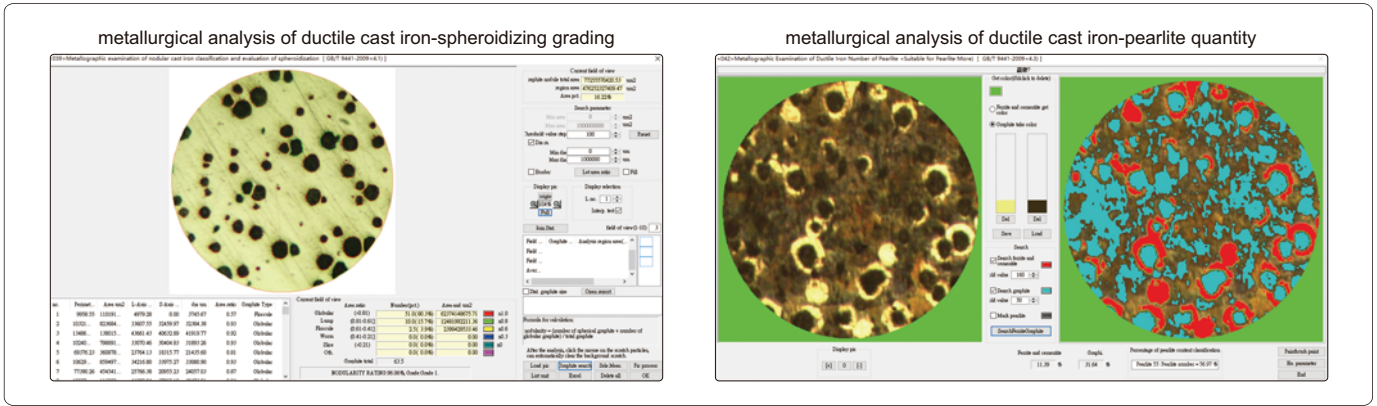
- [001] METHOD OF AVERAGE GRAIN SIZE, AREA OF METAL
- [002] METHOD OF AVERAGE GRAIN SIZE, AREA OF METAL
- [003] METAL AVERAGE GRAIN SIZE CUTTING POINT METHOD
- [004] METAL AVERAGE GRAIN SIZE COMPARISON METHOD
- [005] Details of Average Grain Size Testing for Other Metals and Alloys
- [006] Standard for Dual Grain Size Characterization Test Method Area Fraction Evaluation Comparison Chart
- [007] Standard for Dual Grain Size Characterization Test Method _01_ Micrographs of Dual Grain Size Types
- [008] Standard for Dual Grain Size Characterization Test Method _21_ Micrographs of Dual Grain Size Types
- [009] Standard for Dual Grain Size Characterization Test Method _X2_ Application of Statistical Program for Determining Grain Size Distribution
- [010] Steel apparent grain size of micrographic estimating(planimetry) method
- [011] Steel apparent grain size of micrographic estimating(transparent) method
- [012] Evaluation Method of Inclusion Content in Steel method (burst field of view method)
- [013] Evaluation Method of Inclusion Content in Steel method (Low Inclusion Content Method)
- [014] Evaluation Method of Inclusion Content in Steel method
- [015] Metallurgical examination method, Microscopic examination of non-metallic inclusions in high quality steel by metallographic diagram
- [016] Metallurgical examination of precious metal cuprous oxide
- [017] Determination of decarburization depth of steel
- [018] DETERMINATION OF FERRITIC GRAIN SIZE OF LOW CARBON STEEL COLD ROLLED SHEET GRAIN ELONGATION
- [019] Determination of Phase Area Content of Stainless Steel
- [020] Metallurgical Examination of Gray Cast Iron Graphite Distribution Shape
- [021] Metallurgical Examination of Gray Cast Iron Graphite Length (Manual Analysis)
- [022] Metallurgical Inspection of Gray Cast Iron Graphite Length (Automatic Analysis)
- [023] Metallurgical Examination of Gray Cast Iron Number of Pearlite
- [024] Metallurgical Examination of Gray Cast Iron Number of Carbide
- [025] Metallurgical Examination of Gray Cast Iron Number of Phosphorus Eutectic
- [026] Metallurgical Examination of Gray Cast Iron Determination of the Number of Eutectic Groups of Cast Iron
- [027] Metallurgical examination of gray cast iron Phosphorus eutectic type etc.
- [028] Quantitative metallographic determination
- [029] Iron cementite
- [030] Pearlite in Low Carbon Deformed Steel
- [031] Dual tissue
- [032] Microstructure Assessment of Steel Calculation of Ironite Content
- [033] Metallurgical Martensite Needle Length Rating of Carburized Gear for Automobile
- [034] Metallurgical Carbide Rating of Carburized Gears for Automobile
- [035] Metallurgical Retained Austenite Rating of Carburized Gears for Automobile
- [036] Metallurgical Retained Austenite Rating of Carburized Gears for Automobile

Multi-module grad Clear all OK Cancel

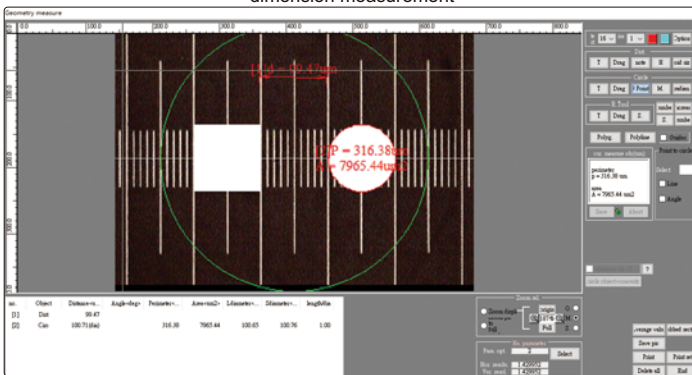
To be continued

Continued from previous page

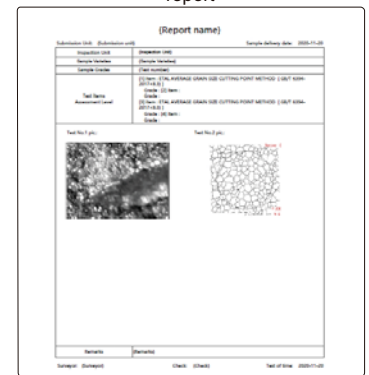
examples of metallurgical analysis



dimension measurement



report



focus stacking

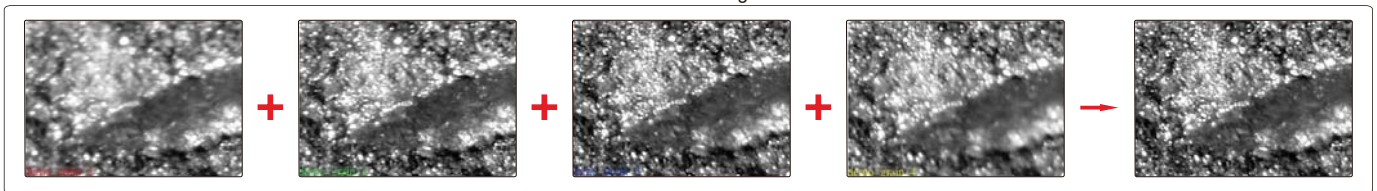
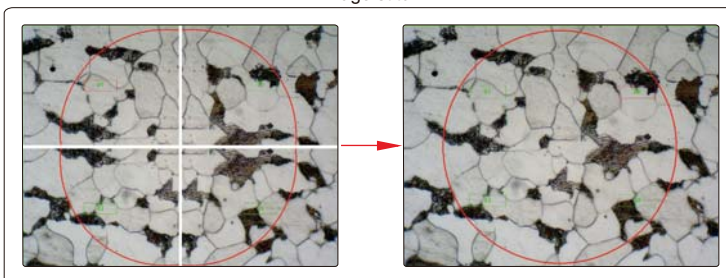
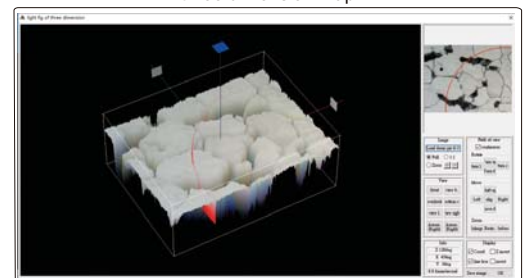


image stitch



three dimension map



SPECIFICATION

Sensor	1/2.8" CMOS
Pixel	3.1M
Resolution	2048×1536
Frame rate	10fps
Exposure	manual or automatic, adjustable exposure time
Power supply	USB port
Weight	400g

STANDARD DELIVERY

Camera (USB cable included)	1 pc
Software	1 pc
Glass calibration rule (graduation 0.01mm)	1 pc

CAMERA ADAPTERS

- Ø23.2/30mm eyepiece adapter is included
- Suitable for digital cameras ISM-CM20, ISM-CM63, ISM-ZS70-S



Ø23.2/30mm eyepiece adapter (included)



0.5X camera adapter (fixed focus distance) ISM-AD-0D5



0.75X camera adapter (fixed focus distance) ISM-AD-0D75



0.5X camera adapter (adjustable focus distance) ISM-AD-A0D5



0.75X camera adapter (adjustable focus distance) ISM-AD-A0D75

application

inserted into eyepiece tube



inserted into camera connector



SPECIFICATION

Code	ISM-AD-0D5	ISM-AD-A0D5 *	ISM-AD-0D75	ISM-AD-A0D75
Type	fixed focus distance	adjustable focus distance	fixed focus distance	adjustable focus distance
Magnification	0.5X	0.41X~0.58X	0.75X	0.64X~0.86X

* There may be shadows on the edge of image when ISM-AD-A0D5 is used

PORTABLE MEASURING MICROSCOPES

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ISM-PM100

SPECIFICATION

Code	ISM-PM20	ISM-PM40	ISM-PM50	ISM-PM100
Total magnification	20X	40X	50X	100X
Eyepiece	10X with graduation	10X with graduation	10X with graduation	10X with graduation
Objective (achromatic)	2X (numerical aperture: 0.05)	4X (numerical aperture: 0.1)	5X (numerical aperture: 0.12)	10X (numerical aperture: 0.25)
Working distance	17.2mm	18mm	17.6mm	7mm
Graduation	0.05mm	0.025mm	0.02mm	0.01mm
Viewing field	Ø9mm	Ø4.5mm	Ø3.6mm	Ø1.8mm
Focus range	30mm			
Illumination	LED light			
Diameter of base	Ø63mm			
Height	210mm			
Weight	650g			

STANDARD DELIVERY

Main unit	1 pc
Pen light	1 pc
Battery (AAA)	2 pcs

TABLE MAGNIFIER WITH ILLUMINATION CODE 7517-3D

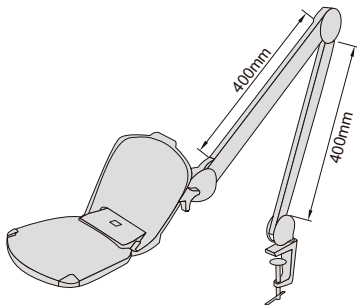
- Four steps brightness adjustment
- LED illumination, working life 20000h
- Resin lens

SPECIFICATION

Magnification	1.75X
Diopter	3D
Lens diameter	Ø125mm
Illumination	power: 3W, illumination: 260lm
Power supply	power adapter 12V, 1A



TABLE MAGNIFIERS WITH ILLUMINATION



- LED illumination, working life 20000h
- Resin lens

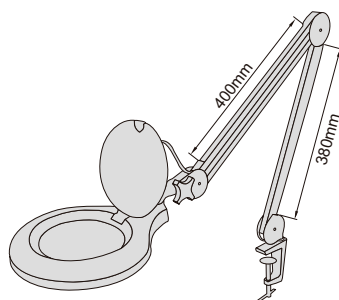
SPECIFICATION

Code	7520-320D	7521-3D
Magnification	two magnifications 1.75X/6X	1.75X
Diopter	3D/20D	3D
Lens dimension	160×127mm	Ø126mm
Illumination	power: 6W, illumination: 550lm	
Power supply	power adapter 12V, 1A	



7520-320D

7521-3D



- LED illumination, working life 20000h

SPECIFICATION

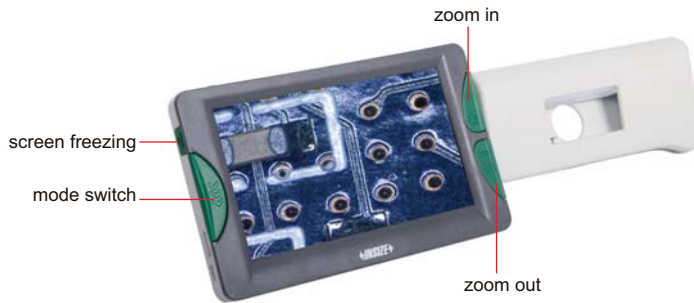
Magnification	2.25X
Diopter	5D
Lens diameter	Ø122mm
Illumination	power: 7W, illumination: 420lm
Power supply	100~240V, 50~60Hz

TABLE MAGNIFIER WITH ILLUMINATION CODE 7516-5D



7516-5D

DIGITAL MAGNIFIER CODE 7525-D4



- 720P60 camera
- Auto focus
- With screen freezing function
- 26 color modes can be switched to meet the needs of different people
- Port to TV
- Automatic shutdown after 3 minutes

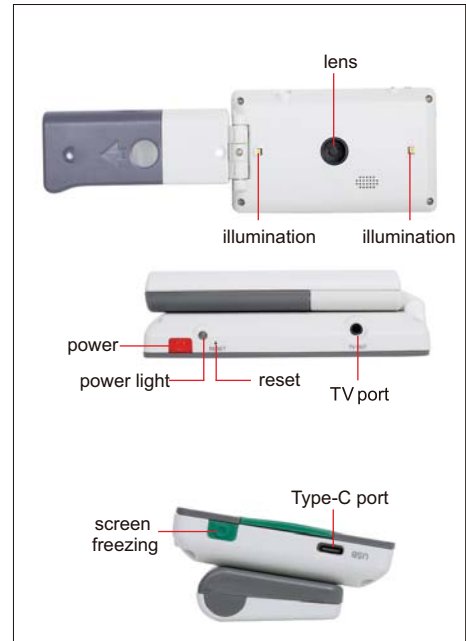
after the handle is folded, the magnifier can be directly placed on the object for observation



SPECIFICATION

Screen size	4.3 inch
Screen resolution	480x272
Magnification	2X-32X
Pixel	8M
Focus	manual/automatic
Color mode (26 modes)	color mode, color enhancement mode, negative mode, monochrome mode, black on white, white on black, blue on white, white on blue, yellow on black, black on yellow, yellow on blue, blue on yellow, green on white, white on green, orange on white, white on orange, red on black, black on red, orange on black, black on orange, yellow on green, green on yellow, red on white, white on red, yellow on white, white on yellow
Output	TV
Charging port	Type-C
Lithium battery	1600mAH (for 4 hours working)
Dimension (LxWxH)	123x39x76mm (when the handle is folded)
Weight	210g

side and back



STANDARD DELIVERY

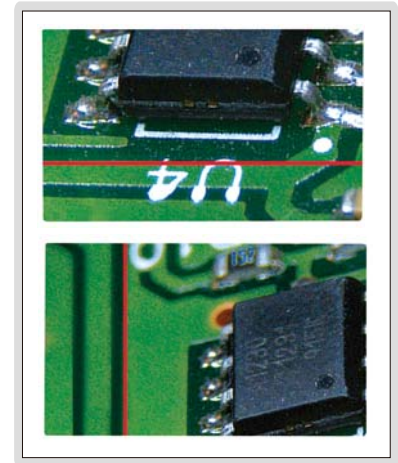
Main unit	1 pc
Video output cable	1 pc
USB charging cable	1 pc
Power adapter	1 pc



DIGITAL MAGNIFIER CODE 7526-D5



horizontal and vertical red lines



- 720P60 (close view) and 1080P30 (far view) cameras
- Double autofocus
- 26 color modes can be switched to meet the needs of different people
- Adopt folding bracket
- Detachable handle design, suitable for left-handed or right-handed use
- TV and HDMI ports to TV and display
- Automatic shutdown after 3 minutes

SPECIFICATION

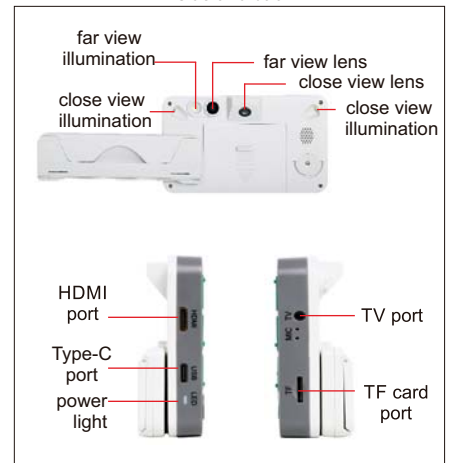
Screen size	5 inch
Screen resolution	800x480
Magnification	2X-32X
Close view pixel	8M
Far view pixel	8M
Focus	manual/automatic
Color mode (26 modes)	color mode, color enhancement mode, negative mode, monochrome mode, black on white, white on black, blue on white, white on blue, yellow on black, black on yellow, yellow on blue, blue on yellow, green on white, white on green, orange on white, white on orange, red on black, black on red, orange on black, black on orange, yellow on green, green on yellow, red on white, white on red, yellow on white, white on yellow
Line	horizontal and vertical red lines
Function	screen freezing, image moving, photo playback, and high definition storage
Output	TV and HDMI
Storage	supports up to 32G TF card
Charging port	Type-C
Lithium battery	2500mAH (for 4 hours working)
Dimension (LxWxH)	145x30x85mm (when the handle is folded)
Weight	275g

after the handle is folded, the magnifier can be directly placed on the object for observation



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side and back



STANDARD DELIVERY

Main unit	1 pc
HDMI cable	1 pc
Video output cable	1 pc
USB charging cable	1 pc
Power adapter	1 pc

FOLDING MAGNIFIER

- Glass lens

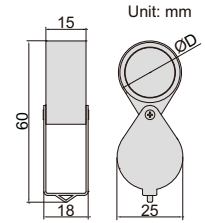
Code	Magnification	Lens diameter (ØD)
7511-8	10X	Ø21mm



7511-8



closed



FOLDING MAGNIFIER WITH ILLUMINATION

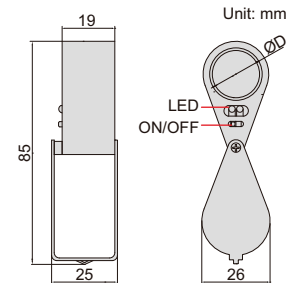
- Resin lens
- Powered by 3xLR927 batteries (included)



7515-10



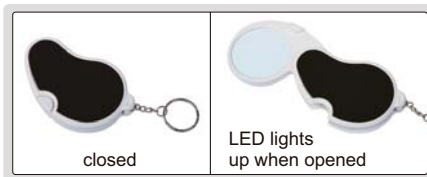
closed



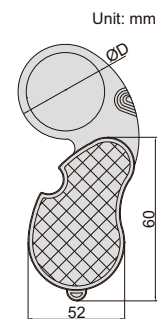
Code	Magnification	Lens diameter (ØD)
7515-10	10X	Ø21mm

FOLDING MAGNIFIER WITH ILLUMINATION

- Resin lens
- Powered by 2xCR1620 batteries (included)
- LED lights up automatically when opened



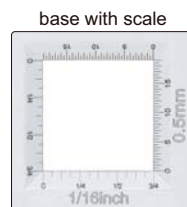
7514-1



Code	Magnification	Lens diameter (ØD)
7514-1	2.5X	Ø45mm

MAGNIFIER WITH ILLUMINATION

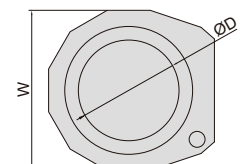
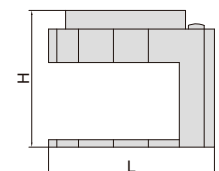
- Glass lens
- Powered by 3xAG7 batteries
- 3 pcs LED and 3 pcs UV
- Base with scale, graduation: 0.5mm, 1/16"



rotate lens to adjust focus



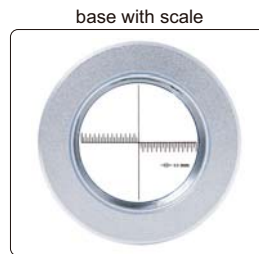
7524-10



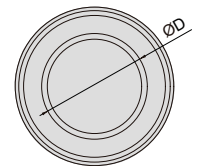
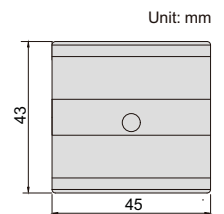
Code	Magnification	Lens diameter (ØD)	L	H	W
7524-10	10X	Ø30mm	60mm	50mm	56mm

MEASURING MAGNIFIER (WITH ILLUMINATION)

- Base with scale
- With two white LED and two UV LED
- Charging mode: Micro USB
- Work for 1.5h after fully charged



7527-D1



Code	Magnification	Graduation	Lens diameter (ØD)
7527-D1	10X	0.5mm	Ø30mm

MAGNIFIERS WITH ILLUMINATION

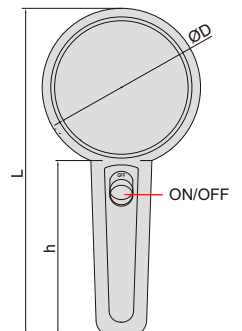
- Glass lens
- Powered by 3xAAA batteries (included)



7513-2



7513-4



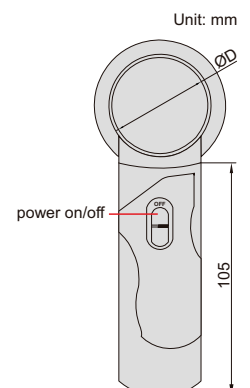
Code	Magnification	Lens diameter (ØD)	L	h
7513-2	2X	Ø75mm	170mm	90mm
7513-4	4X	Ø50mm	145mm	90mm

MAGNIFIER WITH TWO LENSES

- Resin lens
- Interchangeable lenses
- Powered by 3 pcs AAA batteries (included)

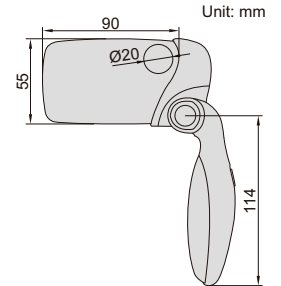


7522-610



Code	Lens number	Magnification	Lens diameter (ØD)
7522-610	2 pcs	6X	50mm
		10X	37mm

MAGNIFIER WITH ILLUMINATION

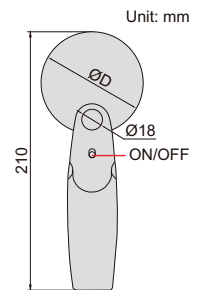


- Two magnifications
- LED illumination
- Powered by 2 pcs AAA batteries (included)
- Resin lens

Code	Magnification	Lens size
7518-26	2X/6X	90x55mm

7518-26

MAGNIFIER WITH ILLUMINATION



- Handheld and desk-type use
- Two magnifications
- LED illumination
- Powered by 2×AA batteries (included)
- Resin lens

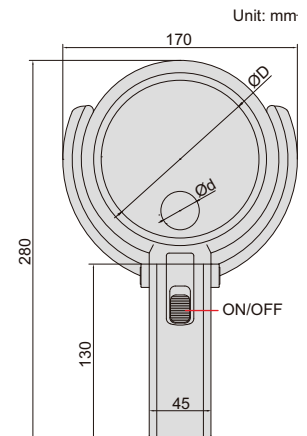
Code	Magnification	Lens diameter (ØD)
7519-26	2X/6X	90mm

7519-26

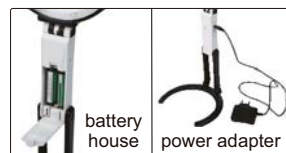
THREE WAYS MAGNIFIER WITH ILLUMINATION



three ways use



- Resin lens
- Powered by 2xAA batteries (included) or power adapter (110~240V, 50~60Hz)



7512-1

Code	Magnification	Lens diameter (ØD/Ød)
7512-1	2X/4X	Ø120mm/Ø28mm

MAGNIFICATION GLASSES

interchangeable lenses



head band (included)

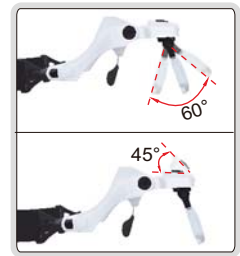


- Resin lens
- Interchangeable lenses
- Powered by 3 pcs AAA batteries (included)



7523-3D5

adjustable lens and LED angle



adjustable holder angle



moveable lens for focus

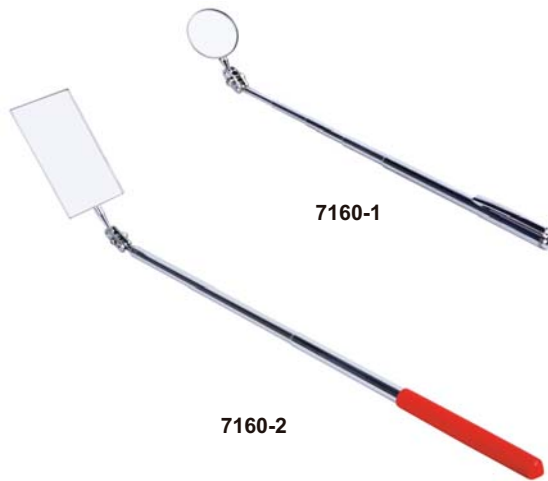
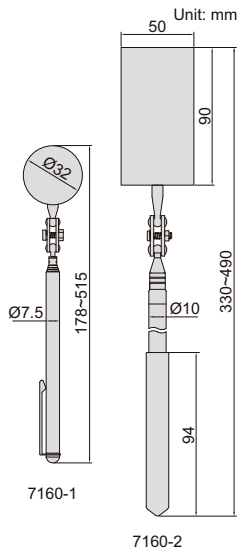


2 pcs LED



Code	Lens number	Magnification
7523-3D5	5 pcs	1X
		1.5X
		2X
		2.5X
		3.5X

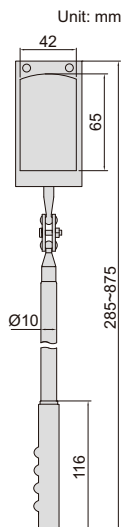
TELESCOPING INSPECTION MIRRORS



- Inspect hidden areas
- Rotation of the mirror: 360°
- Length of handle is adjustable, handle is made of stainless steel

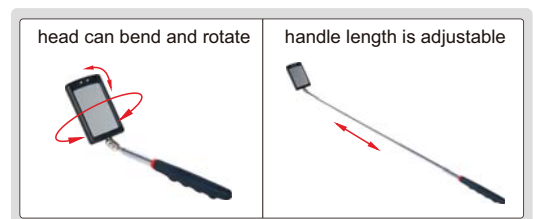
Code	Size of mirror	Length
7160-1	Ø32mm	178~515mm
7160-2	50x90mm	330~490mm

TELESCOPING INSPECTION MIRROR (WITH ILLUMINATION)



7162-1

- Inspect hidden areas
- Head can bend and rotate
- Telescoping handle, made of stainless steel
- With two CR2032 batteries



Code	Size of mirror	Length
7162-1	65x42mm	285~875mm

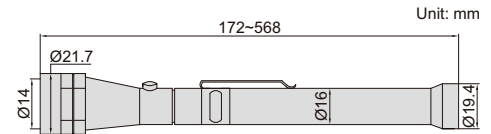
TELESCOPING MAGNETIC PICK-UP AND FLASHLIGHT



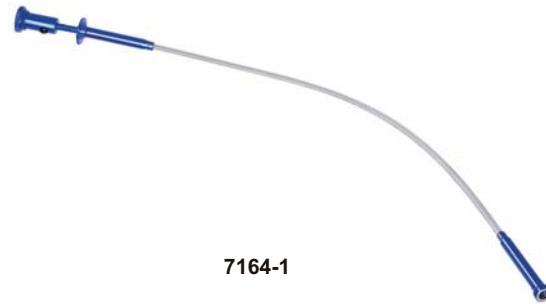
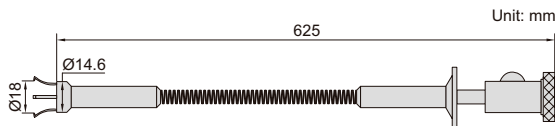
- For illumination and pick up steel parts in hidden areas
- Head can bend
- Telescoping handle, made of stainless steel
- Magnetic head and end
- With four LR44 batteries

7163-1

Code	Magnetic force of the end	Magnetic force of the head	Flashlight range	Battery life	Length
7163-1	4kgf	2kgf	3m	8h	172~568mm



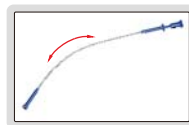
FLEXIBLE PICK-UP AND FLASHLIGHT



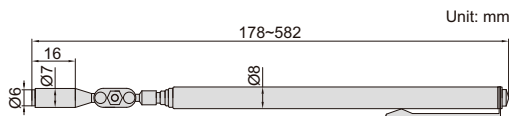
7164-1

- For illumination and pick up steel parts in hidden areas
- Flexible spring rod, made of stainless steel
- Three LR44 batteries

Code	Magnetic force	Flashlight range	Battery life
7164-1	0.9kgf	1m	24h



TELESCOPING MAGNETIC PICK-UP



- Pick up steel parts from hidden areas
- Rotation of magnetic head: 360°
- Length of handle is adjustable, handle is made of stainless steel



7161-1

Code	Size of magnetic tip	Magnetic force	Length
7161-1	Ø6mm	0.45kgf	178~582mm



Videoscopes
Page 581-592



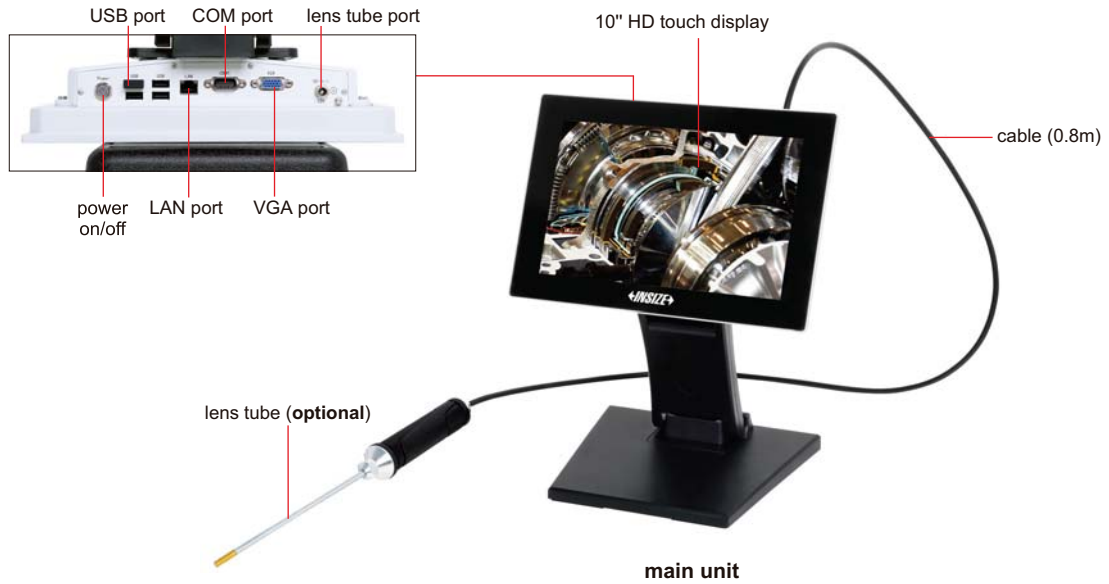
Pipe Videoscopes
Page 593



Rigid Borescopes
Page 594

VIDEOSCOPE (DESK TYPE)

REAR FIBER ILLUMINATION



MAIN UNIT (WITHOUT LENS TUBE)

Code	ISV-Y
Display	10" HD touch display
Function	take picture, take video
File format	picture: JPG, video: MP4
Memory	built-in hard disk or USB flash disk
Image process	image zoom (1X, 2X, 3X)
Image control	noise reduction, negative film, flip over, freeze, on-line edit
Illumination	stepless adjustment
Additional function	real-time dynamic annotation, real-time watermark, rapid defect mark
Output	USB, HDMI
Power supply	AC/DC adapter (for continuous working)
Weight	1000g

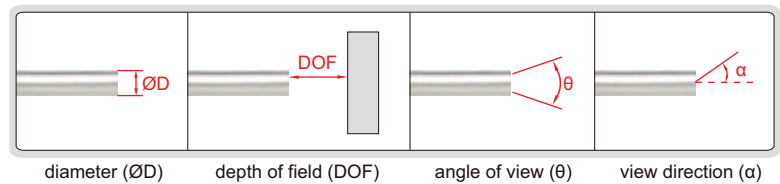
STANDARD DELIVERY

Main unit	1 pc
USB disk	1 pc
Mouse	1 pc
AC/DC adapter	1 pc

OPTIONAL ACCESSORY

Lens tube	refer to below details
Software for automatic defect identification	can be customized

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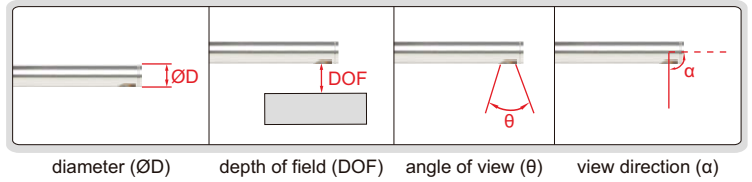


RIGID STRAIGHT LENS TUBE, FRONT VIEW

Code	Lens tube			illumination	angle of view (θ)	Lens		dust/ waterproof
	diameter (ØD)	length (L)	pixel			depth of field (DOF)	view direction (α)	
ISV-Y1210	1.2mm	90mm	0.04M	rear optical fiber	120°	3~70mm	0°	IP67
ISV-Y1810	1.8mm	120mm (optional 90-150mm)	0.16M			3~70mm	0°	
ISV-Y2010	2.0mm	120mm (optional 90-150mm)	0.16M			3~70mm	0°	
ISV-Y2410	2.4mm	150mm (optional 90-300mm)	0.16M			3~70mm	0°	
ISV-Y2810	2.8mm	150mm (optional 90-300mm)	0.16M			3~70mm	0°	
ISV-Y3910	3.9mm	200mm (optional 90-500mm)	1M			8~150mm	0° (optional 30°, 70°)	
ISV-Y6010	6.0mm	300mm (optional 90-1000mm)	1M			12~200mm	0° (optional 30°, 70°)	

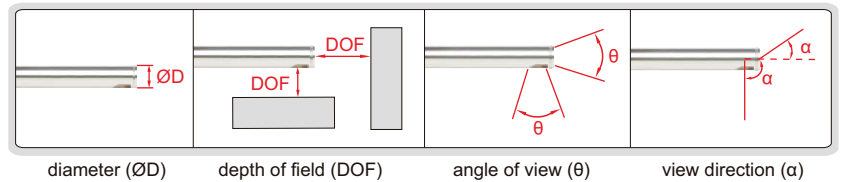
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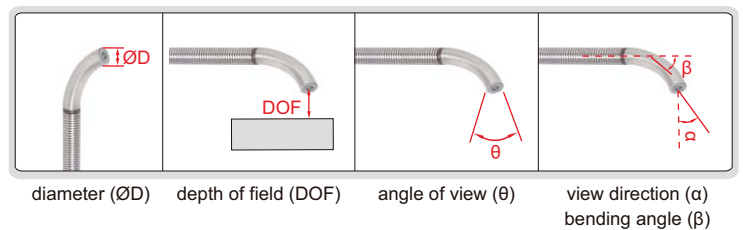
RIGID STRAIGHT LENS TUBE, SIDE VIEW

Code	Lens tube		Lens					
	diameter (ØD)	length (L)	pixel	illumination	angle of view (θ)	depth of field (DOF)	view direction (α)	dust/ waterproof
ISV-Y2810C	2.8mm	150mm (optional 90-300mm)	0.16M	rear optical fiber	120°	3~70mm	90°	IP67
ISV-Y3910C	3.9mm	200mm (optional 90-500mm)	1M			8~150mm		
ISV-Y4510C	4.5mm	250mm (optional 90-800mm)	1M			8~150mm		
ISV-Y6010C	6.0mm	300mm (optional 90-1000mm)	1M			12~200mm		



RIGID STRAIGHT LENS TUBE, FRONT VIEW & SIDE VIEW

Code	Lens tube		Lens					
	diameter (ØD)	length (L)	pixel	illumination	angle of view (θ)	depth of field (DOF)	view direction (α)	dust/ waterproof
ISV-Y6010S	6.0mm	300mm (optional 90-1000mm)	1M	rear optical fiber	120°	front view: 12~200mm side view: 8~150mm	front view: 0° side view: 90°	IP67

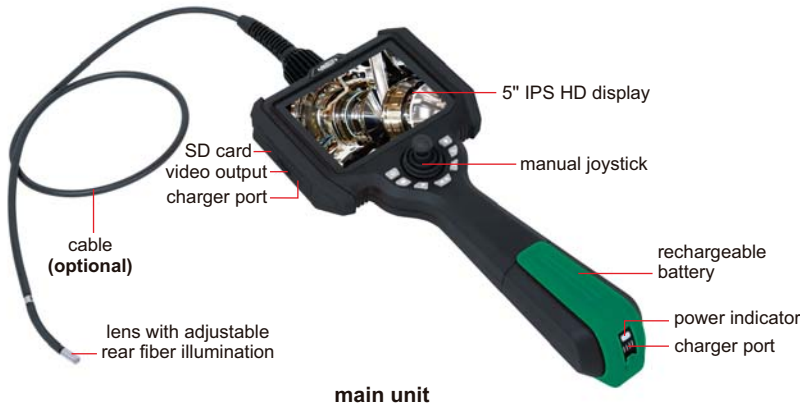


BENDING SPRING LENS TUBE

Code	Lens tube		Lens						
	diameter (ØD)	length (L)	pixel	illumination	angle of view (θ)	depth of field (DOF)	view direction (α)	bending angle (β)	dust/ waterproof
ISV-Y3010W	3.0mm	1000mm	0.16M	rear optical fiber	120°	8~150mm	0°	75° (can be customized)	IP65
ISV-Y5010W	5.0mm		1M			8~150mm			
ISV-Y7010W	7.0mm		1M			12~200mm			

VIDEOSCOPE

REAR FIBER ILLUMINATION



main unit



changeable lens cable



tripod (included)



ISV-L-HOOK (optional)



ISV-L-MAGNET (optional)



ISV-L-CLAMP (optional)



MAIN UNIT (WITHOUT CABLE)

Code	ISV-L
Display	5" high definition LCD
Resolution	1024×720
Function	take pictures, take videos
File format	picture: JPG, video: MP4
Image process	image zoom (1X, 2X, 3X, 4X)
Image control	freeze, flip over, playback and analog ruler
Memory	memory card
Output	USB, HDMI
Power supply	rechargeable lithium battery (working time ≥ 4hours) AC/DC adapter (for continuous working)
Weight	1000g

OPERATION ENVIRONMENT

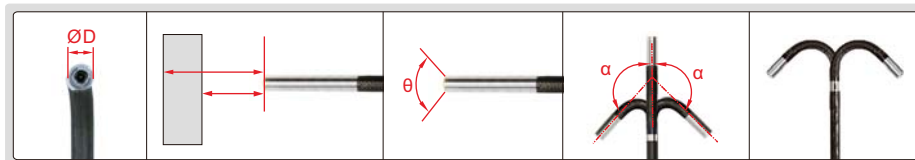
Main unit	-10~50°C, no preheat
Operation temperature	-20~70°C
Storage temperature	-20~60°C
Relative humidity	maximum 90%, no condensation

STANDARD DELIEVERY

Main unit	1 pc
32G SD card	1 pc
Card reader	1 pc
USB cable	1 pc
Tripod	1 pc
AC/DC adapter	1 pc

OPTIONAL ACCESSORY

Cable	please refer to details
WIFI output	ISV-L-WIFI (must be installed in factory, only for Android OS)
Temperature alarm	ISV-L-HTALARM (must be installed in factory, for Ø3.9mm, Ø4.5mm and Ø6.0mm)
Hook	ISV-L-HOOK (must be installed in factory, for Ø3.9mm, Ø4.5mm and Ø6.0mm)
Magnet	ISV-L-MAGNET (must be installed in factory, for Ø3.9mm, Ø4.5mm and Ø6.0mm)
Clamp	ISV-L-CLAMP



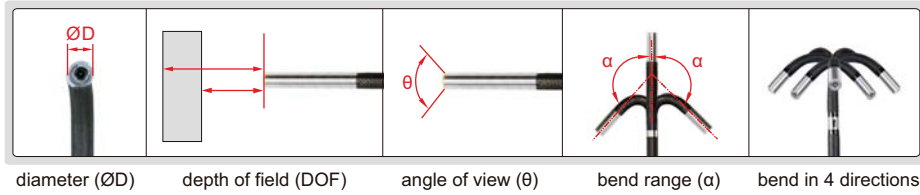
diameter (ØD) depth of field (DOF) angle of view (θ) bend range (α) bend in 2 directions

TWO-DIRECTION CABLE, FRONT VIEW

Code	Cable		Lens									
	length	type	view direction	bend direction	diameter (ØD)	depth of field (DOF)	bend range (α)	angle of view (θ)	illumination	pixel	resolution	dust/ waterproof
ISV-L1810	1m	tungsten wire weaved cable	front view	two directions	1.8mm	3~30mm	±160°	>120°	rear fiber	0.16M	400×400	IP65
ISV-L2010	1m				2.0mm	3~30mm						
ISV-L2410	1m				2.4mm	3~70mm (optional 5~100mm)						
ISV-L2415	1.5m											
ISV-L2420	2m											

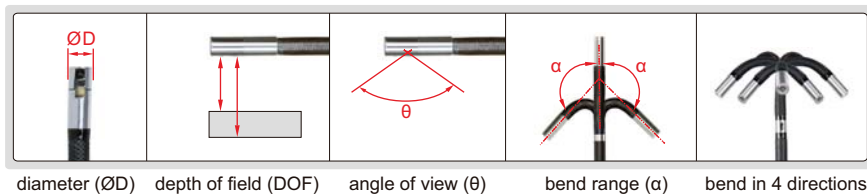
To be continued

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FOUR-DIRECTION CABLE, FRONT VIEW

Code	Cable		Lens									
	length	type	view direction	bend direction	diameter ($\varnothing D$)	depth of field (DOF)	bend range (α)	angle of view (θ)	illumination	pixel	resolution	dust/ waterproof
ISV-L2810	1m	tungsten wire weaved cable	front view	four directions	2.8mm	3~70mm (optional 5~100mm)	$\pm 160^\circ$	$> 120^\circ$	rear fiber	0.16M	400×400	IP65
ISV-L2815	1.5m											
ISV-L2820	2m											
ISV-L2830	3m											
ISV-L3910	1m				3.9mm	8~150mm (optional 3~70mm)				0.92M	1280×720	IP67
ISV-L3915	1.5m											
ISV-L3920	2m											
ISV-L3930	3m				6.0mm	12~200mm (optional 3~70mm, 8~150mm)				0.92M	1280×720	IP67
ISV-L3940	4m											
ISV-L3950	5m											
ISV-L6010	1m											
ISV-L6015	1.5m											
ISV-L6020	2m											
ISV-L6030	3m											
ISV-L6040	4m											
ISV-L6050	5m											
ISV-L6060	6m											
ISV-L6070	7m											

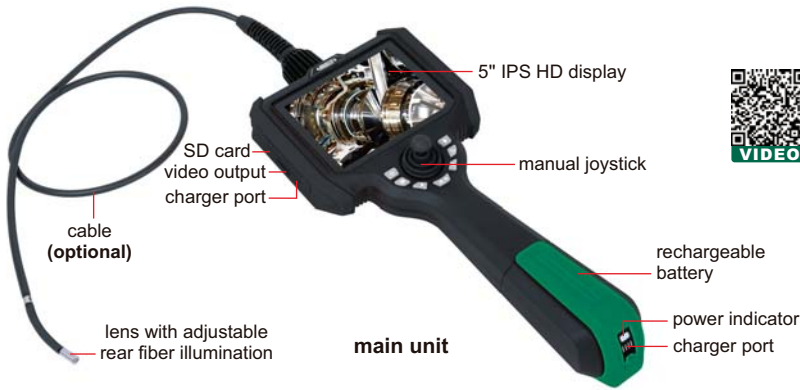


FOUR-DIRECTION CABLE, SIDE VIEW

Code	Cable		Lens									
	length	type	view direction	bend direction	diameter ($\varnothing D$)	depth of field (DOF)	bend range (α)	angle of view (θ)	illumination	pixel	resolution	dust/ waterproof
ISV-L4510C	1m	tungsten wire weaved cable	side view	four directions	4.5mm	5~100mm (optional 8~150mm)	$\pm 160^\circ$	$> 120^\circ$	rear fiber	0.92M	960×720	IP67
ISV-L4515C	1.5m											
ISV-L4520C	2m											
ISV-L4530C	3m											
ISV-L6010C	1m				6.0mm	8~150mm (optional 5~100mm)				0.92M	960×720	IP67
ISV-L6015C	1.5m											
ISV-L6020C	2m											
ISV-L6030C	3m											
ISV-L6040C	4m											
ISV-L6050C	5m											

FRONT AND SIDE VIEW VIDEOSCOPE

REAR FIBER ILLUMINATION



MAIN UNIT (WITHOUT CABLE)

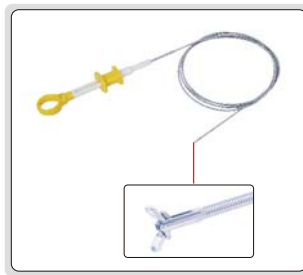
Code	ISV-S
Display	5" high definition LCD
Resolution	1024×720
Function	take pictures, take videos
File format	picture: JPG, video: Mp4
Image process	image zoom (1X, 2X, 3X, 4X)
Image control	freeze, flip over, playback and analog ruler
Memory	memory card
Output	USB, HDMI
Power supply	rechargeable lithium battery (working time ≥ 4hours) AC/DC adapter (for continuous working)
Weight	1000g



changeable lens cable



tripod (included)



ISV-S-CLAMP (optional)



ISV-S-HOOK (optional)



ISV-S-MAGNET (optional)

STANDARD DELIEVERY

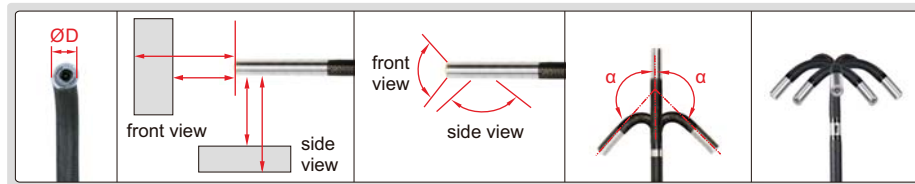
Main unit	1 pc
32G SD card	1 pc
Card reader	1 pc
USB cable	1 pc
Tripod	1 pc
AC/DC adapter	1 pc

OPTIONAL ACCESSORY

Cable	please refer to details
WIFI output	ISV-S-WIFI (must be installed in factory, only for Android OS)
Temperature alarm	ISV-S-HTALARM (must be installed in factory)
Hook	ISV-S-HOOK (must be installed in factory)
Magnet	ISV-S-MAGNET (must be installed in factory)
Clamp	ISV-S-CLAMP

OPERATION ENVIRONMENT

Main unit	-10~50°C, no preheat
Operation temperature	-20~70°C
Storage temperature	-20~60°C
Relative humidity	maximum 90%, no condensation

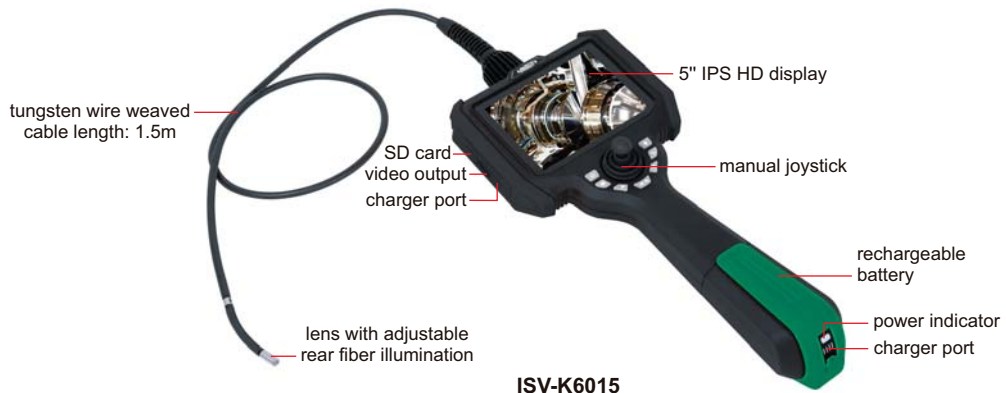


diameter (ØD) depth of field (DOF) angle of view (θ) bend range (α) bend in 4 directions

FOUR-DIRECTION CABLE, FRONT VIEW&SIDE VIEW

Code	Cable		Lens									
	length	type	view direction	bend direction	diameter (ØD)	depth of field (DOF)	bend range (α)	angle of view (θ)	illumination	pixel	resolution	dust/ waterproof
ISV-S6010	1m	tungsten wire weaved cable	front view and side view	four directions	6.0mm	front view: 12~200mm (optional 3~70mm) side view: 8~150mm (optional 3~70mm)	±160°	>120°	rear fiber	0.92M	1280×720	IP67
ISV-S6015	1.5m											
ISV-S6020	2m											
ISV-S6030	3m											
ISV-S6040	4m											
ISV-S6050	5m											

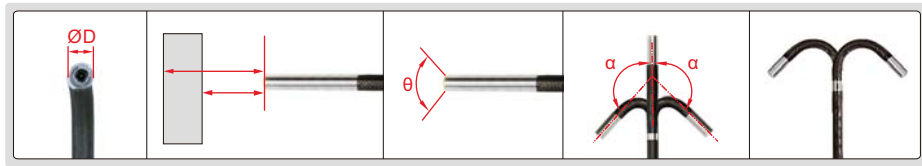
REAR FIBER ILLUMINATION



ISV-K6015



changeable lens cable



diameter (ØD) depth of field (DOF) angle of view (θ) bend range (α) bend

SPECIFICATION

Code		ISV-K1810	ISV-K2410	ISV-K2810	ISV-K3915	ISV-K6015
Lens	diameter (ØD)	1.8mm	2.4mm	2.8mm	3.9mm	6.0mm
	pixel	0.16M			0.92M	
	resolution	400×400			1280×720	
	depth of field	3-30mm	3-70mm	3-70mm	8-150mm	12-200mm
	bending direction	two directions	two directions	four directions	four directions	four directions
	bending range (α)	±160°				
	angle of view (θ)	120°				
	illumination	rear fiber				
	lens	sapphire glass lens				
	dust/waterproof	IP65			IP67	
Cable	bend control	manual joystick				
	length	1m	1m	1m	1.5m	1.5m
Main unit	type	tungsten wire weaved cable				
	display	5" high definition LCD				
	function	take pictures, take videos				
	file format	picture: JPG, video: MP4				
	image process	image zoom (1X, 2X, 3X, 4X)				
	image control	freeze, flip over, playback and analog ruler				
	memory	memory card				
	output	USB, HDMI				
power supply	rechargeable lithium battery (working time ≥ 4 hours), AC/DC adapter (for continuous working)					
Weight	1000g					

STANDARD DELIEVERY

Main unit	1 pc
32G SD card	1 pc
Card reader	1 pc
USB cable	1 pc
Tripod	1 pc
AC/DC adapter	1 pc

OPERATION ENVIRONMENT

Main unit	-10~50°C, no preheat
Operation temperature	-20~70°C
Storage temperature	-20~60°C
Relative humidity	maximum 90%, no condensation

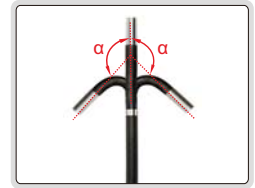
OPTIONAL ACCESSORY

WIFI output	ISV-K-WIFI (must be installed in factory, only for Android OS)
Temperature alarm	ISV-K-HTALARM (must be installed in factory, for ISV-K3915 and ISV-K6015)
Clamp	ISV-K-CLAMP1, ISV-K-CLAMP2, ISV-K-CLAMP3, ISV-K-CLAMP4 (must be installed in factory, for ISV-K3915 and ISV-K6015)

**MOBILE PHONE VIDEOSCOPE
CODE ISV-P6**



the clamping range of mobile phone bracket L=56-95mm



bending of lens up to 180°



angle of view



lens with LED



bend in any direction

■ For Android and IOS mobile phones

SPECIFICATION

Diameter of lens (ØD)	6±0.2mm
Length of cable	1m
Resolution	960×720, 1280×720 (switchable)
Depth of field	20mm~∞
Angle of view (θ)	100°
Bending range (α)	0~180°
Illumination	LED with 3 levels control
Cable type	wear resistant
Interface	USB, Type-C
Mobile phone system	Android, IOS
Power supply	rechargeable battery (for 2 hours working)
Dimension (L×W×H)	195×57×105mm
Weight	450g

STANDARD DELIVERY

Main unit (with cable)	1 pc
Type-C cable	1 pc
Micro USB cable	1 pc
Iphone cable	1 pc
Charging cable	1 pc

TUNGSTEN WIRE WEAVED CABLE
BREAK AND WEAR RESISTANCE

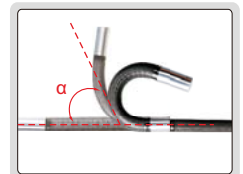
VIDEOSCOPIES (BASIC TYPE)



ISV-S106

SPECIFICATION

Code		ISV-T105	ISV-S106
Lens	diameter (ØD)	6mm	
	pixel	1M	
	resolution	1280×720	
	depth of field	20~150mm	
	bending direction	360°	
	bending range (α)	0°~220°	
	angle of view (θ)	120°	
	illumination	7 pcs LED, with 6 levels control	
	illuminance	25000 Lux	
	lens	sapphire glass lens	
	dust/waterproof	IP67	
Cable	bend control	manual joystick	
	temperature alarm	temperature sensor (optional)	
Cable	length	1m	1.5m
	type	tungsten wire weaved cable	
Main unit	display	3.5" IPS full-view display	
	display resolution	640×480	
	function	take pictures, take videos	
	file format	picture: JPG, video: MP4	
	image process	image zoom (1X, 2X, 3X, 4X, 5X)	
	memory	memory card (Maximum: 64G)	
	output	USB, HDMI, WIFI (optional)	
	dust/waterproof	IP65	
power supply	power supply	rechargeable lithium battery (working time \geq 3 hours; optional: additional battery, working time \geq 9 hours) AC/DC adapter (for continuous working)	
	Weight	1000g	



220° bending angle



120° view angle



LED 6 levels control



360° bending direction

STANDARD DELIVERY

Main unit (with cable & lens)	1 pc
16G SD card	1 pc
Card reader	1 pc
USB cable	1 pc
Battery	1 pc
AC/DC adapter	1 pc

OPTIONAL ACCESSORY

Additional battery	ISV-S106-BATTERY (must be installed in factory)
WIFI output	ISV-S106-WIFI
Temperature alarm	ISV-S106-HT-ALARM

VIDEOSCOPE (BASIC TYPE) CODE ISV-E40

MEMORY CABLE CAN
BE FIXED AT ANY SHAPE

IP67
WATERPROOF



magnet pick up (included)



hook (included)



45° mirror (included)

SPECIFICATION

Lens	diameter (ØD)	8mm
	pixel	0.92M
	resolution	1280x720
	depth of field	30~80mm
	angle of view	77°
	illumination	3 levels
	dust/waterproof	IP67
Cable	length	1180mm
	type	memory (can be set at any shape)
Main unit	display	5" IPS LCD
	function	take picture, take video
	file format	picture: JPG, video: MOV
	image process	image zoom (1.5X, 2X, 3X, 4X)
	memory	memory card (optional)
	output	Type-C
	power supply	rechargeable lithium battery (for 5 hours working)
dimension	217×155×131mm	
Weight	506g	

STANDARD DELIVERY

Main unit	1 pc
45° mirror	1 pc
Hook	1 pc
Magnet pick up	1 pc

OPTIONAL ACCESSORY

32G memory card	ISV-E40-CARD
Card reader	ISV-E40-READER

OPERATION ENVIRONMENT

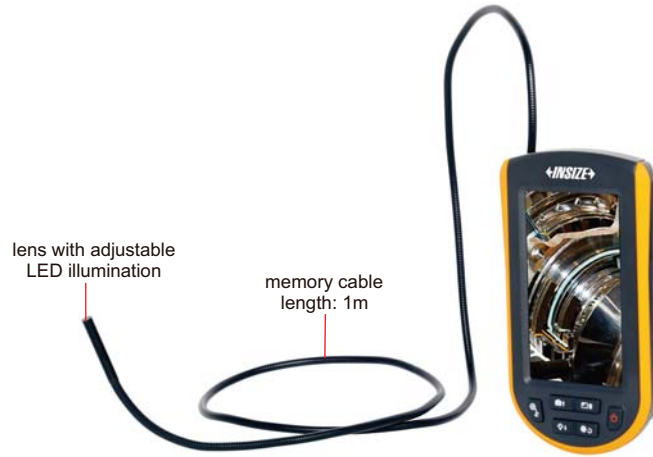
Operation temperature	-10~50°C
Storage temperature	-20~60°C
Operation humidity	15%~85%

MEMORY CABLE CAN BE FIXED AT ANY SHAPE

IP67
WATERPROOF



VIDEOSCOPE (ECONOMIC TYPE)
CODE ISV-E30



magnet pick up (included)



hook (included)



cable can be wrapped around the main unit

SPECIFICATION

Lens	diameter	5.2mm
	pixel	0.4M
	depth of field	30~80mm
	angle of view	72°
	illumination	8 levels
	dust/waterproof	IP67
Cable	length	1m
	type	memory (can be set at any shape)
Main unit	display	4.3" LCD
	function	take picture, take video
	file format	picture: JPG, video: AVI
	image zoom	2X
	memory card	memory card (optional)
	output	micro USB
	power supply	AA battery
dimension	154×32.5×87.5mm	
Weight		280g

STANDARD DELIVERY

Main unit	1 pc
Hook	1 pc
Magnet pick up	1 pc
AA battery	4 pcs

OPTIONAL ACCESSORY

32G memory card	ISV-E40-CARD
Card reader	ISV-E40-READER

OPERATION ENVIRONMENT

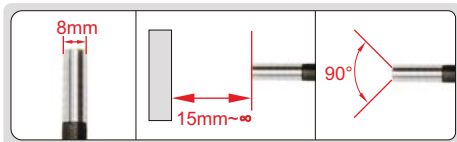
Operation temperature	-10~50°C
Storage temperature	-20~60°C
Operation humidity	15%~85%

MULTIPURPOSE VIDEOSCOPE



MAIN UNIT (without cable)

Code	VSP-201
Function	take picture, take video
File format	picture: JPG, video: AVI
Image process	brightness, contrast
Memory	64GB
Output	HDMI, USB
Power supply	rechargeable battery (for 4 hours working)
Dimension	260×170×65mm
Weight	1.2kg



diameter (ØD) focus distance (F) angle of view (θ)



bend in any direction 360° swivel in clockwise and counter-clockwise bend within 120°



FOUR-DIRECTION CABLE (FRONT VIEW)

Code	VSP-201D	
Cable	length	3m
	type	tungsten wire weaved cable
Lens	diameter (ØD)	8mm
	focus distance (F)	15mm~∞
	angle of view (θ)	90°
	illumination	6 pcs LED
	pixel	1M
	resolution	1280×720
dust/waterproof		IP67



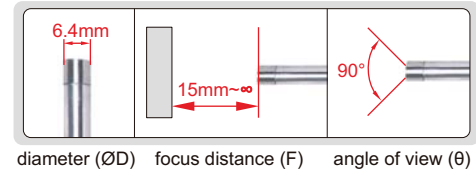
To be continued

Continued from previous page



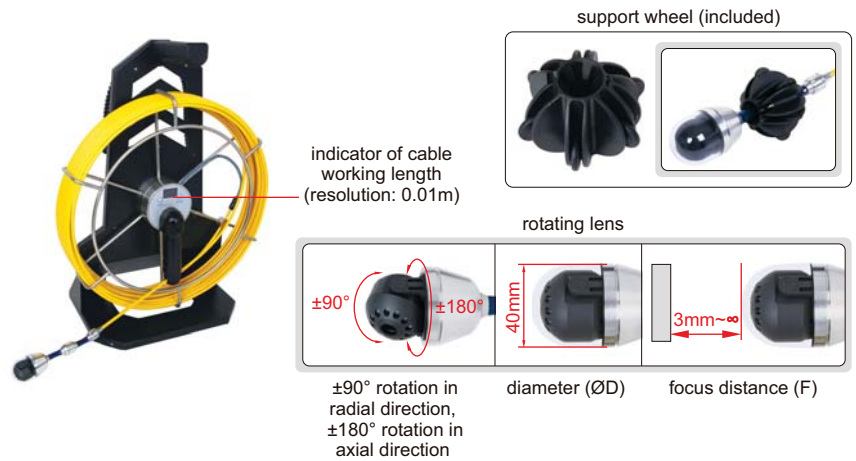
RIGID CABLE

Code	VSP-201H	
Cable	length (L)	250mm
	type	stainless steel
Lens	diameter (ØD)	6.4mm
	focus distance (F)	15mm~∞
	angle of view (θ)	90°
	illumination	6 pcs LED
	pixel	1M
	resolution	1280×720
	dust/waterproof	IP64



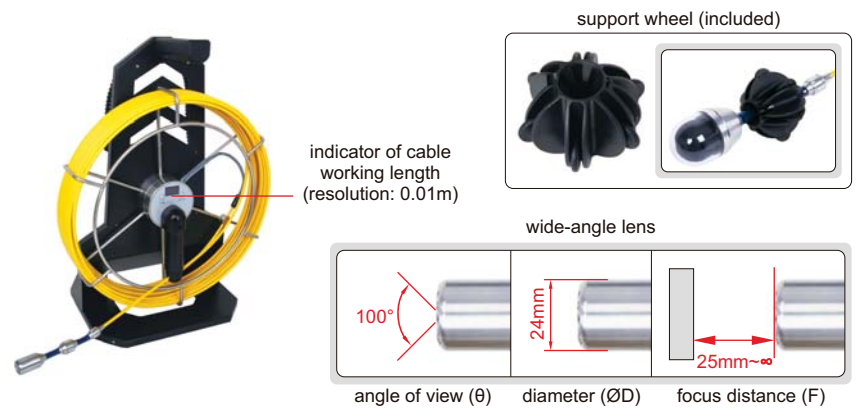
ROTATING LENS CABLE

Code	VSP-201R	
Cable	length	30m
	type	high strength glass fibre
Lens	diameter (ØD)	40mm
	focus distance (F)	3mm~∞
	angle of view (θ)	100°
	illumination	12 pcs LED
	pixel	1M
	resolution	1280×720
	dust/waterproof	IP67
lens control	motorized	



WIDE-ANGLE LENS CABLE

Code	VSP-201W	
Cable	length	30m
	type	high strength glass fibre
Lens	diameter (ØD)	24mm
	focus distance (F)	25mm~∞
	angle of view (θ)	100°
	illumination	12 pcs LED
	pixel	1M
	dust/waterproof	IP67



ADJUSTABLE SUPPORT

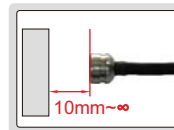
Code	Working diameter (ØD)	Remark
VSP-201-R200	60~200mm	for VSP-201R or VSP-201W



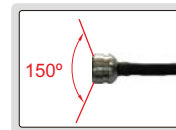
**PIPE VIDEOSCOPE
CODE ISV-VP280**

**IP68
WATERPROOF**

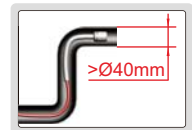
**ATTENTION: RESISTANCE TO ACID AND
ALKALI LIQUID (CONSULT IS NEEDED)**



focus distance



angle of view



can turn at least two times in the pipe (>∅40mm)

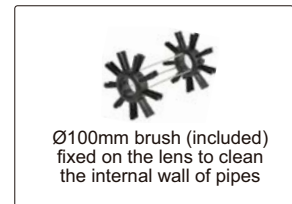


vertical use

horizontal use



∅50mm centering ring (optional) fixed on the lens to center lens in the pipe



∅100mm brush (included) fixed on the lens to clean the internal wall of pipes

SPECIFICATION

Lens	diameter	28mm
	dust/waterproof	IP68
	pixel	0.3M
	resolution	640×480
Cable	frame	30fps
	length	30m
	dust/waterproof	IP68
Main unit	type	semi-rigid
	function	take picture and video
	file format	picture: JPG, video: ASF
	image process	mirror, rotate, zoom (1.5X, 2X)
	memory	4G SD card
	output	TV, USB
Weight	power supply	4×AA batteries
		5kg

STANDARD DELIVERY

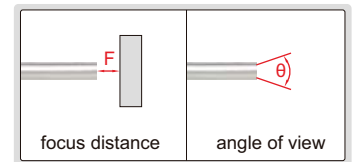
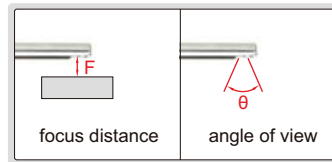
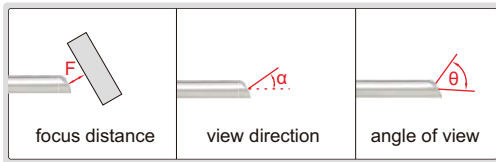
Main unit	1 pc
Cable with lens	1 pc
Stand	1 pc
Indicator of cable working length	1 pc
4G SD card	1 pc
∅100mm brush	1 pc
AA battery	4 pcs
AAA battery	2 pcs
Video output cable	1 pc
USB cable	1 pc

OPTIONAL ACCESSORY

∅50mm centering ring	ISV-VP280-R50
∅150mm brush	ISV-VP280-B150

IP67
WATERPROOF

RIGID BORESCOPIES



- Focus distance: 2mm, depth of view: 5~100mm
- Dust/waterproof level: IP67
- Can be used in liquid with temperature $-10^\circ\text{C}\sim 85^\circ\text{C}$



LED light handle
(optional)



adjustable LED light source
(optional)



camera and display
(optional)

SPECIFICATION

Code	Length (L)	View direction (α)	Diameter ($\varnothing D$)	Angle of view (θ)
ISV-1H4170	174mm	0°	4mm	$\geq 60^\circ$
ISV-1H4173	174mm	30°		
ISV-1H4177	174mm	70°		
ISV-1H4179	166mm	90°		
ISV-1H4300	302mm	0°		
ISV-1H4303	302mm	30°		
ISV-1H4307	302mm	70°		

OPTIONAL ACCESSORY

LED light handle	ISV-1HLED
Adjustable LED light source	ISV-1LED1
Camera and display	ISV-2CAM

LED LIGHT HANDLE CODE ISV-1HLED

- For rigid borescopes



battery (included)



charger (included)



SPECIFICATION

Power	3W
Battery	3.7V rechargeable battery (for 2 hours working)
Dimension	120×27×27mm
Weight	300g

STANDARD DELIVERY

Main unit	1 pc
Battery	1 pc
Charger	1 pc

ADJUSTABLE LED LIGHT SOURCE CODE ISV-1LED1

- For rigid borescopes
- High LED illumination and brightness is adjustable
- For long time work with low noise

SPECIFICATION

Color temperature	5600K
Cooling	fan cooling
Power	AC110~220V, 50/60Hz
Dimension	400×300×112mm
Weight	7kg

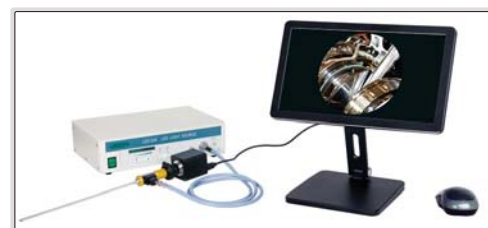


STANDARD DELIVERY

Main unit	1 pc
1.8m optical fiber cable	1 pc

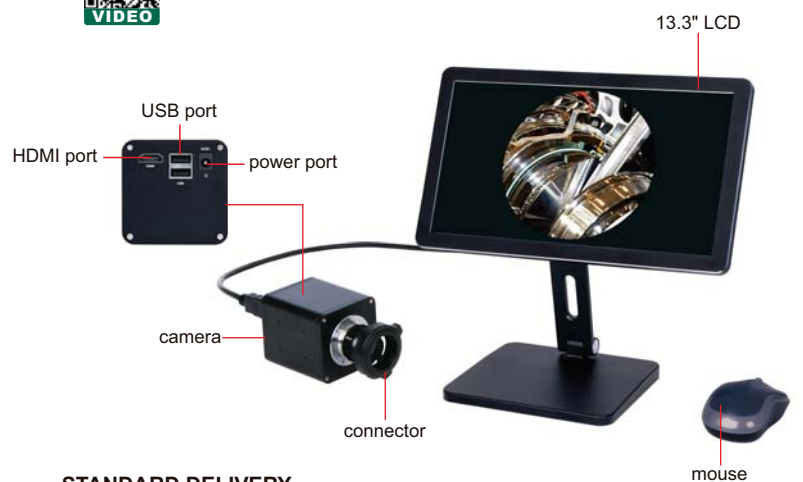


CAMERA (WITH DISPLAY) CODE ISV-2CAM



TAKE PICTURES
AND VIDEOS

AUTO FOCUS



- For rigid borescopes
- 1080P high-definition image
- Auto-focus camera
- Take pictures and videos, saved to USB flash disk
- Automatic white balance and exposure
- Brightness, contrast ratio, gain are adjustable

SPECIFICATION

Sensor	1/2.8" CMOS
Pixel	2M
Resolution	1920×1080
Frame rate	60fps
Output	HDMI
Power supply	power adapter
Dimension (L×W×H)	350×100×430mm
Weight	2kg

STANDARD DELIVERY

Camera	1 pc
Connector	1 pc
13.3" LCD (with stand)	1 pc
16G USB flash disk	1 pc
Mouse	1 pc
HDMI cable	1 pc
Power adapter	2 pcs



16G USB flash disk
(included)



Coating Thickness Gages
Page 597-600



Coating Thickness Gages
Page 600



Surface Profile Gages
Page 601-602



Wet Film Gages
Page 602



Gloss Meters
Page 603-604



Colorimeters
Page 605-607



Pencil Hardness Testers
Page 608



Cross Cut Adhesion Testers
Page 608



Digital Adhesion Testers
Page 609



Rotational Abrasion Testers
Page 610



Paint Film Flexibility Testers
Page 610



Impact Testers
Page 611

COATING THICKNESS GAGE (HIGH PRECISION) CODE ISO-8000FN

SUITABLE FOR THIN COATING
BELOW 10µm

FOR MAGNETIC AND
NON-MAGNETIC SUBSTRATES



calibration foils (included)



zero calibration plate
(included)



stand
(optional)



VIDEO



eddy current probe
(optional)



magnetic induction
probe
(included)

- Can measure thickness of thin coating below 10µm
- High repeatability
- Magnetic induction probe measures the thickness of non-magnetic coating and non-metallic coating on magnetic metal substrate
Substrate: iron, steel, magnetic stainless steel (not for non-magnetic stainless steel)
Coating: zinc, aluminum, copper, chrome, tin, plastic, powder, paint (not for nickel)
- Eddy current probe measures the thickness of non-conductive coating on non-magnetic metal substrate
Substrate: copper, aluminum, zinc, non-magnetic stainless steel
Coating: plastic, powder, paint, anodizing (not for chrome and zinc plating)
- Maximum, minimum, average and variance values can be calculated automatically

SPECIFICATION

Probe	Magnetic induction probe (included)	Eddy current probe (optional)*
Measuring range	0~500µm	0~1500µm
Resolution	0.1µm (range<100µm) 1µm (100µm≤range≤500µm)	0.1µm (range<100µm) 1µm (100µm≤range<1000µm) 0.01mm (1.00mm≤range≤1.50mm)
Accuracy	±(0.5+2%L)µm L is measuring thickness in µm	
Repeatability	≤(0.2+0.8%L)µm L is measuring thickness in µm	
Measuring mode	single and continuous	
Measuring interval	single mode	1.5s
	continuous mode	0.4s
Calibration mode	zero calibration and multi-points calibration (1~5 points)	
Minimum substrate thickness	0.1mm	0.05mm
Minimum measuring area	Ø7mm	
Minimum radius of curvature workpieces	convex surface	1.5mm
	concave surface	10mm
Unit	µm/mil	
Power supply	4×1.5V AAA batteries	
Dimension	148×76×26mm	
Weight	148g	

STANDARD DELIVERY

Main unit	1 pc
Magnetic induction probe	1 pc
Zero calibration plate	1 pc
Calibration foils (5.6µm, 11.6µm, 24.6µm, 50.0µm, 100µm, 252µm, 390µm)	1 set
1.5V AAA battery	4 pcs

OPTIONAL ACCESSORY

Eddy current probe (with zero calibration plate)	ISO-8000FN-N1500*
Stand	ISO-8000FN-STAND

* For precision measurement of thin coating below 10µm, please use the stand for eddy current probe



BLUETOOTH

FOR MAGNETIC AND NON-MAGNETIC SUBSTRATES

DATA OUTPUT

COATING THICKNESS GAGE CODE 9501-1200



eddy current probe NFE (optional) with zero calibration block



magnetic induction probe FE90 for bores and grooves (optional)



calibration foils (included)



magnetic induction probe FE10 for large range (optional)



zero calibration block for FE (included)



receiver (optional)



- Magnetic induction probe (FE) measures the thickness of non-magnetic coating and non-metallic coating on magnetic metal substrate.
Substrate: iron, steel, magnetic stainless steel (not for non-magnetic stainless steel)
Coating: zinc, copper, chrome, tin, plastic, powder, paint (not for nickel)
- Eddy current probe (NFE) measures the thickness of non-conductive coating on non-magnetic metal substrate.
Substrate: copper, aluminum, zinc, non-magnetic stainless steel
Coating: plastic, powder, paint, anodizing (not for chrome and zinc plating)
- Tolerance measurement
- Data statistic, including average, variance, maximum and minimum values
- Data can be sent to Excel by connecting to computers via bluetooth or cable of receiver
- Support bluetooth printer
- Automatic power off

SPECIFICATION

Probe type	FE (included) magnetic induction probe	NFE (optional) eddy current probe	FE90 (optional) magnetic induction probe for bores and grooves	FE10 (optional) magnetic induction probe for large range
Measuring range	0~1250µm	0~1250µm	0~1250µm	500~10000µm
Accuracy	$\pm(3\%L+1)\mu\text{m}$ (range $\leq 1250\mu\text{m}$) $\pm(3\%L+10)\mu\text{m}$ (range $> 1250\mu\text{m}$) L is measuring thickness in µm			
Resolution	0.1µm (range $< 100\mu\text{m}$) 1µm (range $\geq 100\mu\text{m}$)			
Measuring mode	continuous and single			
Minimum substrate thickness	0.5mm	0.3mm	0.5mm	2mm
Minimum measuring area	Ø7mm	Ø5mm	Ø7mm	Ø40mm
Minimum curvature radius of convex workpiece	1.5mm	3mm	—	10mm
Memory	600			
Output	USB			
Power supply	2×1.5V AA batteries			
Dimension	135×77×32mm			
Weight	172g			

STANDARD DELIVERY

Main unit	1 pc
Magnetic induction probe (FE)	1 pc
Zero calibration block for FE probe	1 pc
Calibration foils (50/100/250/500/1000µm)	1 set
1.5V AA battery	2 pcs
Software and USB cable	1 pc

OPTIONAL ACCESSORY

Receiver	ISR-C300-RECEIVER
Cable of receiver	9501-1200-CABLE
Bluetooth printer	ISR-C002-PRINTER
Eddy current probe (NFE) with zero calibration block	9501-1200-NFE
Magnetic induction probe (FE90) for bores and grooves	9501-1200-FE90
Magnetic induction probe (FE10) for large range	9501-1200-FE10

COATING THICKNESS GAGE (BASIC TYPE) CODE ISO-1200FN

FOR MAGNETIC AND
NON-MAGNETIC SUBSTRATES

- Probe is suitable for both magnetic and non-magnetic metal substrates
- Can measure the thickness of non-magnetic coating and non-metallic coating on magnetic metal substrate
Substrate: iron, steel, magnetic stainless steel (not for non-magnetic stainless steel)
Coating: zinc, aluminum, copper, chrome, tin, plastic, powder, paint (not for nickel)
- Can measure the thickness of non-conductive coating on non-magnetic metal substrate
Substrate: copper, aluminum, zinc, non-magnetic stainless steel
Coating: plastic, powder, paint, anodizing (not for chrome and zinc plating)
- 3 measuring modes: Fe, NFe, Fe/NFe
- Store 9 measuring records
- Small and portable, easy for operation



ruby contact point

SPECIFICATION

Measuring range	0~2000μm	
Resolution	0.1μm (range<100μm) 1μm (100μm≤range<1000μm) 0.01mm (1mm≤range≤2mm)	
Accuracy	±(2μm+3%L) L is measuring thickness in μm	
Measure interval	0.5s	
Calibration mode	zero calibration	
Measuring mode	Fe, NFe, Fe/NFe	
Minimum substrate thickness	Fe	0.2mm
	NFe	0.05mm
Minimum measuring area	Ø25mm	
Minimum radius of curvature workpieces	convex surface	5mm
	concave surface	25mm
Unit	μm/mil	
Power supply	2×1.5V AA batteries	
Main unit dimension	101×62×28mm	
Probe dimension	71×26×22mm	
Weight	114g	



Fe zero calibration plate
(included)



NFe zero calibration plate
(included)



standard foil (included)

STANDARD DELIVERY

Main unit	1 pc
Fe zero calibration plate	1 pc
NFe zero calibration plate	1 pc
Standard foil (100μm)	1 pc
1.5V AA battery	2 pcs

FOR MAGNETIC AND
NON-MAGNETIC SUBSTRATES

COATING THICKNESS GAGE (BASIC TYPE) CODE ISO-1000FN

- Probe is suitable for both magnetic and non-magnetic metal substrates
- Can measure the thickness of non-magnetic coating and non-metallic coating on magnetic metal substrate
Substrate: iron, steel, magnetic stainless steel (not for non-magnetic stainless steel)
Coating: zinc, aluminum, copper, chrome, tin, plastic, powder, paint (not for nickel)
- Can measure the thickness of non-conductive coating on non-magnetic metal substrate
Substrate: copper, aluminum, zinc, non-magnetic stainless steel
Coating: plastic, powder, paint, anodizing (not for chrome and zinc plating)
- 3 measuring modes: Fe, NFe, Fe/NFe
- Store 9 measuring records
- Small and portable, easy for operation



ruby contact point

SPECIFICATION

Measuring range	0~2000 μ m	
Resolution	0.1 μ m (range<100 μ m)	
	1 μ m (100 μ m \le range<1000 μ m)	
	0.01mm (1mm \le range \le 2mm)	
Accuracy	$\pm(2\mu\text{m}+3\%L)$ L is measuring thickness in μ m	
Measure interval	0.5s	
Calibration mode	zero calibration	
Measuring mode	Fe, NFe, Fe/NFe	
Minimum substrate thickness	Fe	0.2mm
	NFe	0.05mm
Minimum measuring area	\varnothing 25mm	
Minimum radius of curvature workpieces	convex surface	5mm
	concave surface	25mm
Unit	μ m/mil	
Power supply	2 \times 1.5V AA batteries	
Dimension	101 \times 62 \times 28mm	
Weight	79g	



Fe zero calibration plate (included)



NFe zero calibration plate (included)



standard foil (included)

STANDARD DELIVERY

Main unit	1 pc
Fe zero calibration plate	1 pc
NFe zero calibration plate	1 pc
Standard foil (100 μ m)	1 pc
1.5V AA battery	2 pcs

X RAY FLUORESCENCE SPECTROMETER (RoHS DETECTOR/ALLOY COMPOSITION ANALYZER/COATING THICKNESS GAGE) CODE XRF-B210

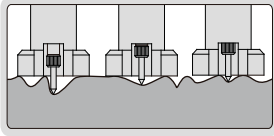


REFER TO PAGE
464~465 FOR DETAILS

SURFACE PROFILE GAGE



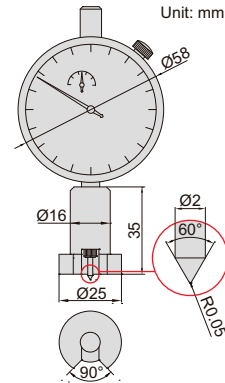
measure peak-to-valley height of blast cleaned surfaces



- Measure peak-to-valley height of blast cleaned surface.
If the profile is too low, the adhesion of the coating to the surface will be reduced.
If the profile is too high, there is the danger that the profile peaks will remain uncoated, allowing rust spots to occur.
- Meet ASTM D 4417-B
- Zero set block is included, set zero before measurement
- Stainless steel base



2344-1



set zero



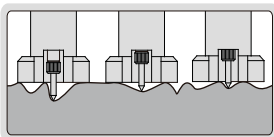
Code	Range	Dial indicator stroke	Dial indicator graduation	Accuracy
2344-1	0-1mm	1mm	0.001mm	±0.005mm

DIGITAL SURFACE PROFILE GAGE

DATA OUTPUT



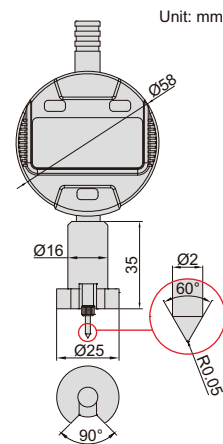
measure peak-to-valley height of blast cleaned surfaces



- Measure peak-to-valley height of blast cleaned surface.
If the profile is too low, the adhesion of the coating to the surface will be reduced.
If the profile is too high, there is the danger that the profile peaks will remain uncoated, allowing rust spots to occur.
- Meet ASTM D 4417-B
- Zero set block is included, set zero before measurement
- Button function: on/off, zero, mm/inch, absolute/incremental measurement
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- Stainless steel base
- Optional accessory: data output cable (code 7315-50M page 5, 7302-40M page 13)



2843-10



set zero



Code	Range	Digital indicator stroke	Digital indicator resolution	Accuracy
2843-10	0-12.7mm/0-0.5"	12.7mm/0.5"	0.001mm/0.00005"	±0.005mm

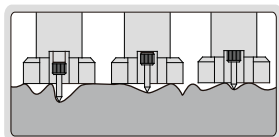
DATA OUTPUT

DISPLAY MAXIMUM, MINIMUM, DIFFERENCE VALUE BETWEEN MAXIMUM AND MINIMUM

DIGITAL SURFACE PROFILE GAGE



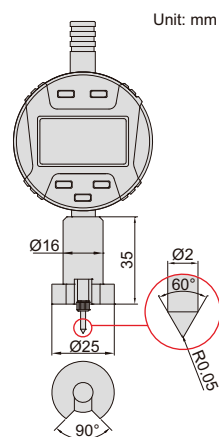
measure peak-to-valley height of blast cleaned surfaces



- Measure peak-to-valley height of blast cleaned surface. If the profile is too low, the adhesion of the coating to the surface will be reduced. If the profile is too high, there is the danger that the profile peaks will remain uncoated, allowing rust spots to occur.
- Meet ASTM D 4417-B
- Zero set block is included, set zero before measurement
- Button function: tolerance Go and No-Go display, data preset, measuring direction change, max./min./TIR measurement, inch/metric conversion, absolute/incremental measurement
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- Stainless steel base
- Optional accessory: data output cable (code 7315-50M page 5, 7302-40M page 13)



2844-10

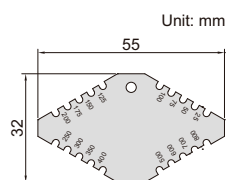


Code	Range	Digital indicator stroke	Digital indicator resolution	Accuracy
2844-10	0-12.7mm/0-0.5"	12.7mm/0.5"	0.001mm/0.00005"	±0.005mm

WET FILM GAGES



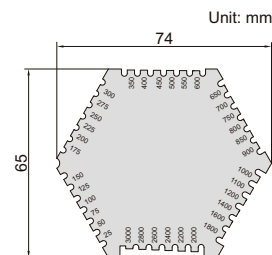
4845-1



4845-1



4845-2



4845-2

- Made of stainless steel

Code	Range	Accuracy	Thickness
4845-1	25-800µm	±5µm	1.8mm
4845-2	25-3000µm	25-100µm: ±5µm 100µm-3000µm: ±5%	1mm

60° GLOSS METER (BASIC TYPE) CODE 5702-DG6

- To test the gloss of coating, such as painting, varnish, printing ink, etc.
- To test the material surfaces, such as metal, granite, ceramic, plastic, paper, etc.
- According to ISO 2813, ISO 7668, ASTM D523, ASTM D2457, DIN 67530
- Automatic judgement after setting high and low limits
- Automatic power off

SPECIFICATION

Incidence angle	60°
Measuring range	0~200GU
Resolution	0.1GU
Accuracy	±1.5GU (range<120GU) ±1.5% (range≥120GU)
Repeatability	0.2GU (range<120GU) 0.2% (range≥120GU)
Zero error	0.1GU
Measuring area	20×10mm
Power supply	rechargeable battery
Data port	USB
Dimension	135×45×75mm
Weight	237g

STANDARD DELIVERY

Main unit	1 pc
Base with calibration block	1 pc
U disk	1 pc
AC/DC adapter	1 pc
USB data cable	1 pc
Cleaning cloth	1 pc



base with calibration block
(included)



software (included), test can be controlled from the software,
display test data and report

report

software

measurement data is sent to Excel

60° GLOSS METER CODE ISQ-DG6

- To test the gloss of coating, such as painting, varnish, printing ink, etc.
- To test the material surfaces, such as metal, granite, ceramic, plastic, paper, etc.
- According to ISO 2813, ASTM D2457, ASTM D523
- Automatic power off

SPECIFICATION

Incidence angle	60°
Measuring range	0~150GU
Resolution	0.1GU
Accuracy	±1.2GU
Repeatability	0.4GU
Zero set error	0.2GU
Measuring area	20×10mm
Output	bluetooth
Power supply	1×1.5V AA battery
Dimension	123×38×65mm
Weight	300g

STANDARD DELIVERY

Main unit	1 pc
Base with calibration block	1 pc
Spare calibration block	1 pc



base with calibration block
(included)



connect mobile phone via bluetooth
(only Android system)

operate and output data by mobile phone



DATA OUTPUT

BLUETOOTH

CAN BE OPERATED BY COMPUTERS OR MOBILE PHONES

20°/60°/85° GLOSS METER CODE ISQ-DG8



base with calibration block (included)



software flash disk (included)

- To test the gloss of coating, such as painting, varnish, printing ink, etc.
- To test the material surfaces, such as metal, granite, ceramic, plastic, paper, etc.
- According to ISO 2813, ASTM D2457, ASTM D523
- Memory of 10000 measurement results for browsing and output
- Automatic power off

connect to mobile phone via bluetooth (only Android system)



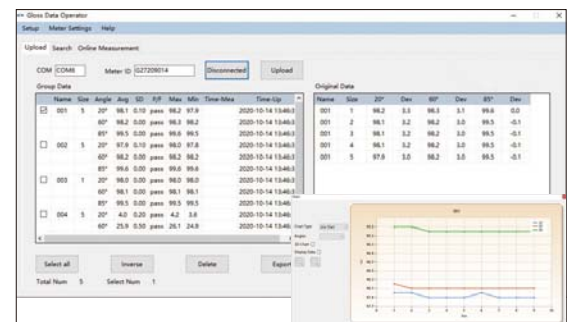
operate and output data by mobile phone

connect to computer via bluetooth or USB cable



SPECIFICATION

Incidence angle	20°	60°	85°
Measuring range	0~2000GU	0~1000GU	0~160GU
Resolution	0.1GU (range≤119.9GU) 1GU (range>119.9GU)		
Accuracy	±1.5GU (range≤119.9GU) ±1.5% (range>119.9GU)		
Repeatability	0.2GU (range≤119.9GU) 0.2% (range>119.9GU)		
Zero set error	0.2GU		
Measuring area	10×9mm	16×9mm	39×5mm
Output	USB and bluetooth		
Power supply	1×1.5V AA battery		
Dimension	155×48×75mm		
Weight	400g		



software (included), test can be controlled from the software, display test data, output to Excel

STANDARD DELIVERY

Main unit	1 pc
Base with calibration block	1 pc
Software and USB cable	1 pc
Bluetooth receiver	1 pc

SPECTROPHOTOMETER CODE 9710-30

DATA
OUTPUT

CONCAVE GRATING
SPECTROPHOTOMETRIC

Ø8/4mm DUAL APERTURE

BLUETOOTH

- Concave grating spectrophotometric
- 3.5 inch TFT color LCD, capacitive touch screen, 256 image element double arrays CMOS image sensor
- D/8 geometrical optics, conforms with CIE No.15, ISO7724/1, ASTM E1164, DIN5033 Teil 7
- Use long life and low power consumption combined LED light source
- Camera locating function, switchable 8mm/4mm aperture, support both SCI and SCE at the same time
- Large capacity storage space, over 20,000 measurement data
- USB port and Bluetooth 4.0
- Two standard observer angles, a variety of illuminant, a variety of color indexes, conforms with a variety of standard colorimetric data
- Measure sample spectra, accurate Lab data, can be used in color matching and accurate color transmission



SPECIFICATION

Optical geometry	reflect: di: 8°, de: 8° (diffused illumination, 8-degree viewing angle)
Integrating sphere size	Ø48mm
Light source	combined LED light, UV light
Spectrophotometric mode	concave grating
Sensor	256 image element double array CMOS image sensor
Wavelength range	400~700nm
Wavelength interval	10nm
Semiband width	10nm
Measured reflectance range	0~200%
Measuring aperture	dual aperture: MAV: Ø8mm; SAV: Ø4mm
Specular component	SCI&SCE
Color space	CIE LAB, XYZ, Yxy, LCh, CIE LUV, hunter LAB
Color difference formula	ΔE^*ab , ΔE^*uv , ΔE^*94 , ΔE^*cmc (2:1), ΔE^*cmc (1:1), ΔE^*00v , ΔE (Hunter)
Other colorimetric index	WI (ASTM E313, CIE/ISO, AATCC, hunter), YI (ASTM D1925, ASTM 313), metamerism index MI, staining fastness, color fastness, color strength, opacity
Observer angle	2°/10°
Illuminant	A, C, D50, D55, D65, D75, F1, F2, F3, F4, F5, F6, F7, F8, F9, F10, F11, F12, CWF, U30, T183, T184, U35
Displayed data	spectrogram/values, samples chromaticity values, color difference values/graph, PASS/FAIL result, color offset
Measuring time	2.6s
Repeatability	spectral reflectance
	colorimetric values
Inter-instrument error	MAV/SCI: $\Delta E^* \leq 0.08\%$ of standard deviation (400~700nm: 0.18%)
Measurement mode	MAV/SCI: $\Delta E^* \leq 0.03$
Measurement mode	MAV/SCI: $\Delta E^* \leq 0.15$
Measurement mode	single measurement, average measurement
Data port	USB, bluetooth 4.0
Data storage	standard 1000 pcs, sample 28000 pcs
Illuminant life span	5 years, more than 3 million times measurements
Battery	Li-ion battery, 5000 measurements within 8 hours
Dimension	184×77×105mm
Weight	600g



software flash disk (included)



white and black calibration cavity (included)



printer (optional)



measurement



reflectivity

software

report

measurement data is sent to Excel

software (included), test can be controlled from the software, display test data, report

STANDARD DELIVERY

Main unit	1 pc
White and black calibration cavity	1 pc
Software and USB cable	1 pc
AC/DC adapter	1 pc

OPTIONAL ACCESSORY

Printer	9710-PRINTER
Powder test box	9710-POWDERBOX
Universal test kit	9710-TESTKIT

GRATING
SPECTROPHOTOMETRIC

FOUR KINDS OF APERTURE

DATA
OUTPUT

MATCHING COLOR
CARD QUICKLY

SPECTROPHOTOMETER CODE 5701-D40



- Conforms with CIE No.15, ISO7724-1, ASTM E1164 and DIN5033 Teil7 standards
- Grating spectrophotometric, 3.5" IPS full color screen, dual optical path high precise CMOS array sensor
- Use long life and low power consumption combined LED light source, include UV and exclude UV measurement
- Camera locating function, switchable 11mm/6mm/1×3mm aperture
- Large capacity storage space, over 20000 measurement data
- Two standard observer angles, a variety of illuminant, a variety of color indexes, conforms with a variety of standard colorimetric data
- Measure sample spectra, accurate Lab data, can be used in color matching and accurate color transmission



SPECIFICATION

Optical geometry	D/8 (diffused illumination/8° direction reception) SCI+SCE (specular component included+specular component excluded)	
Integrating sphere size	Ø40mm	
Light source	LED (full band balanced LED)+UV	
Spectrophotometric mode	grating	
Sensor	dual optical path high precise CMOS array sensor	
Wavelength range	400~700nm	
Wavelength interval	10nm	
Reflectance measurement range	0~200%	
Reflectance resolution	0.01%	
Display resolution	0.01	
Illumination area/Aperture	MAV: Ø11mm; SAV: Ø6mm, Ø3mm; MINI: 1×3mm	
Color space	CIE-Lab, CIE-LCh, HunterLab, CIE Luv, XYZ, Yxy, RGB	
Color difference formula	ΔE^*ab , ΔE^*cmc , ΔE^*94 , ΔE^*00	
Other colorimetric index	whiteness (ASTM E313-00, ASTM E313-73, CIE/ISO, AATCC, hunter, taube berger stensby), yellowness (ASTM D1925, ASTM 313-00, ASTM E313-73), blackness (My, dM), color fastness, tint (ASTM E313-73) color density CMYK (A, T, E, M), milm, munsell, opacity, color strength	
Observer angle	2°/10°	
Illuminant	A, B, C, D50, D55, D65, D75, F1, F2, F3, F4, F5, F6, F7, F8, F9, F10, F11, F12, CWF, U30, U35, DLF, NBF, T183, T184, Id50, Id65, LED-B1, LED-B2, LED-B3, LED-B4, LED-B5, LED-BH1, LED-RGB1, LED-V1, LED-V2	
Measuring time	about 1.5s	
Repeatability	spectral reflectance	within 0.08% of standard deviation
	colorimetric values	$\Delta E^*ab \leq 0.025$ (after whiteboard correction, measuring the whiteboard 30 times at 5s interval)
Inter-instrument error	$\Delta E^*ab \leq 0.25$ (BCRA series II, average value of 12 color plates)	
Data port	USB, bluetooth	
Light source lifetime	10 years, more than 1 million times measurements	
Battery	3.7V/3000mAh, rechargeable 8000 times continuous tests	
Dimension	95×129×231mm	
Weight	750g	

To be continued

Continued from previous page

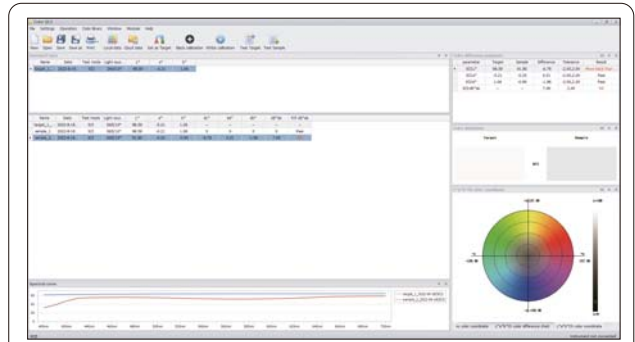
STANDARD DELIVERY

Main unit	1 pc
White calibration cavity	1 pc
Measuring aperture	3 pcs
USB cable	1 pc
USB disk	1 pc
AC/DC adapter	1 pc

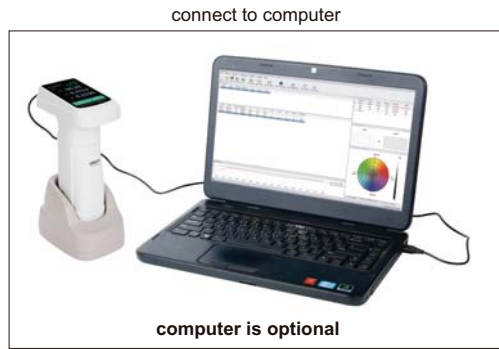


white calibration cavity (included)

software (included), test can be controlled from the software, display test data, report

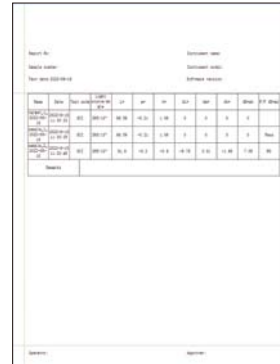


software

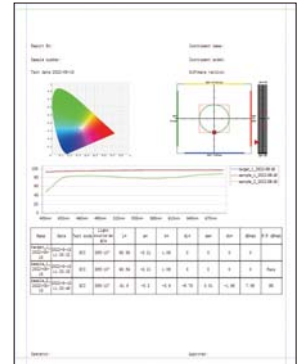


connect to computer

computer is optional



pure data report



graphic report

**COLORIMETER (BASIC TYPE)
CODE 5700-LS35**



- Conforms with CIE 15, CIE S 005, ISO 7724-1 and ISO 13655 standards
- 3.5-inch IPS display and capacity touch panel
- Contains multiple color cards and can match the closest color code quickly
- QC testing function, can set color difference threshold
- Able to store 1000 colors and 1000 color comparison
- 3.7V/4000mAh battery, 10000 continuous measurements



white calibration cavity (included)



SPECIFICATION

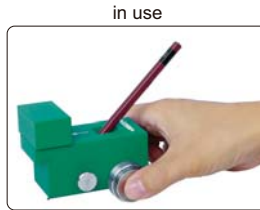
Illumination geometry	D/8, specular component include (SCI)
Illumination light source	full spectrum LED light source
Measurement conditions	light source D65, field of view 10°
Measuring time	about 1s
Color space	CIE Lab, Luv, LCh, Yxy, CMYK, RGB, Hex
Color difference formula	ΔE^*ab , ΔE^*uv , ΔE^*94 , $\Delta E^*cmc(2:1)$, $\Delta E^*cmc(1:1)$, ΔE^*00
Repeatability	standard deviation ΔE^*ab is within 0.03 (Measurement condition: the average value of 30 measurements on the whiteboard at an interval of 3s after calibration)
Charging interface	USB (Type-C)
Dimension	86×63×158mm
Weight	245g

STANDARD DELIVERY

Main unit	1 pc
White calibration cavity	1 pc
USB cable	1 pc
AC/DC adapter	1 pc
Cleaning cloth	1 pc
Locating plate	1 pc



- For flat coating surfaces
- Conform to ASTM D3363, ISO 15184, BS3900-E19 and ECCA-T4/1



PENCIL HARDNESS TESTER CODE PHT-C751



SPECIFICATION

Pressure of pencil on coating	500g, 750g, 1000g (main unit is 500g, one weight is 750g, two weights are 1000g)
Angle between pencil and measured surface	45°
Dimension (L×W×H)	95×80×110mm
Weight	2kg

STANDARD DELIVERY

Main unit	1 pc
Weights	2 pcs
Leveling rod	1 pc
Level	1 pc
Pencil	12 pcs (4B, 3B, 2B, B, HB, F, H, 2H, 3H, 4H, 5H, 6H)
Pencil sharpener	1 pc

OPTIONAL DELIVERY

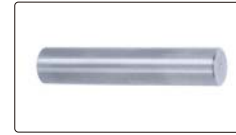
Pencil (17 pcs: 6B-9H)	PHT-C751-P
400 grade abrasive paper	PHT-C751-S



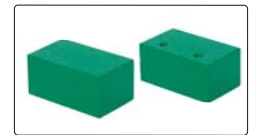
level (included)



pencils (included)



leveling rod (included)



weights (included)



- To test the adhesion of paint coating on metal, wood, plastic, etc.
- According to ISO 2409, ASTM D3359, DIN53151



CROSS CUT ADHESION TESTER CODE ISQ-PK100



3mm pitch blade (included)



2X magnifier (included)



2mm pitch blade (included)



1mm pitch blade (included)



brush (included)



test tape (included)
ISQ-PK100-1

SPECIFICATION

Blade		1mm pitch	2mm pitch	3mm pitch
Applied paint thickness	on hard substrate (like metal)	0~60µm	61~120µm	121~250µm
	on soft substrate (like wood, plaster)	—	0~120µm	121~250µm
Minimum substrate thickness	hard substrate (like metal)	0.25mm	0.25mm	0.25mm
	soft substrate (like wood, plaster)	—	10mm	10mm
Minimum size of test sample		150×100mm	150×100mm	150×100mm
Dimension		170×28×40mm		
Weight		430g		

STANDARD DELIVERY

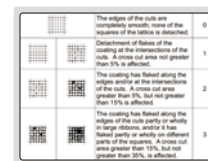
Handle	1 pc
1mm pitch blade	1 pc
2mm pitch blade	1 pc
3mm pitch blade	1 pc
Test tape (ISQ-PK100-1)	1 pc
2X magnifier	1 pc
Brush	1 pc



step 1: make grid cutting on surface

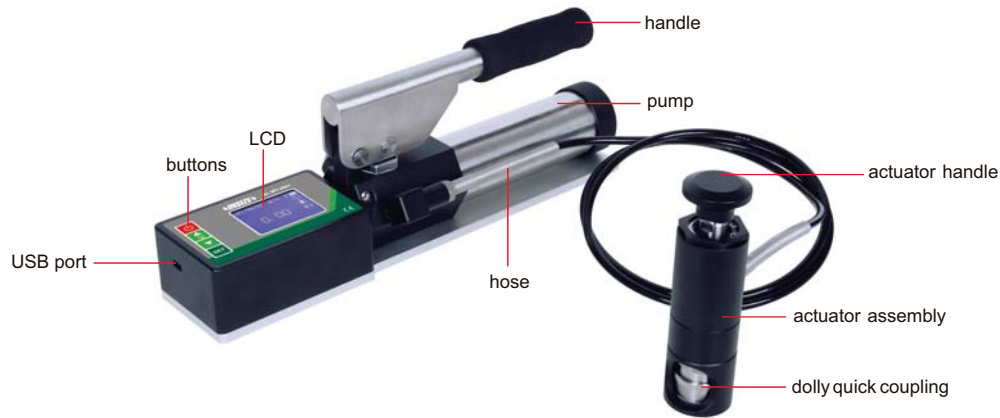


step 2: paste and remove the tape



step 3: according to the shedding status, judge the adhesion grade

DIGITAL ADHESION TESTER CODE SPT-AD21



- Pull-off test
- Built-in rechargeable lithium battery, no need external power source
- Portable design, can be used anywhere
- Standard USB interface, can directly transmit the stored data to computer, no need to install software
- Conforms to GB/T 5210, ASTM D4541/D7234, ISO 4624/16276-1
- Store all test results, includes maximum pull-off force, pull-off rate, dolly size and time
- Built in real-time clock, all saved data have corresponding date and time
- Selectable four different sizes dolly for different resolution and testing range
- No need conversion, the instrument can calculate pull-off force according to the dolly size
- Get the testing results from LCD directly
- Two units MPa and psi for selection and can be converted automatically



cutting tool (included)

SPECIFICATION

Range	0~20MPa
Dolly diameter	Ø20mm
Resolution	0.01MPa (1psi)
Accuracy	±1% full scale
Pull-off Force	0.7~20MPa
Power	built-in rechargeable lithium battery
Dimension (LxWxH)	360x75x115mm
Weight	3kg



Ø20mm dolly (included)



glue gun and glue (included)

STANDARD DELIVERY

Main unit	1 pc
Ø20mm dolly	20 pcs
Cutting tool for Ø20mm dolly	1 pc
Charger	1 pc
USB cable	1 pc
Glue gun	1 pc
3M glue	1 pc

OPTIONAL ACCESSORY

Ø10mm dolly	SPT-AD21-10	10 pcs/package pull-off force: 2.8~80MPa
Ø14mm dolly	SPT-AD21-14	10 pcs/package pull-off force: 1.4~40MPa
Ø20mm dolly	SPT-AD21-20	10 pcs/package pull-off force: 0.7~20MPa
Ø50mm dolly	SPT-AD21-50	10 pcs/package pull-off force: 0.4~3.5MPa
Cutting tool	SPT-AD21-CUTTER1	for Ø10mm, Ø14mm, Ø20mm dolly
Cutting tool	SPT-AD21-CUTTER2	for Ø50mm dolly
Glue	SPT-AD21-GLUE	3M DP420 epoxy glue/50ml

ROTATIONAL ABRASION TESTER CODE QMY-AP32

- To test flat paint film
- Comply with ISO 7784-2, ISO 9352, GB/T1768, ASTM D3884, ASTM D1175 standards

SPECIFICATION

Platform rotary speed	60±2 r/min, 72±2 r/min (selectable)
Load weight	500g, 750g, 1000g (selectable)
Sample size	Ø100mm
Grinding wheel	external diameter (51.6±0.1)mm, thickness (12.7±0.1)mm
Counting range of platform rotation	0~9999 times
Motor power	25W
Power supply	220V, 50Hz
Dimension	260×410×280mm
Weight	14kg



STANDARD DELIVERY

Main unit	1 pc
Vacuum cleaner	1 pc
1000g weight	2 pcs
750g weight	2 pcs
500g weight	2 pcs
TABER CS-10 grinding wheel	1 pair
Sandpaper	10 pcs
Glass plate	5 pcs

OPTIONAL ACCESSORY

TABER CS17 grinding wheel (1 pair)	QMY-AP32-CS17
Glass plate (Ø100mm with a 9mm center hole, 100 pcs/box)	QMY-AP32-GP
Aluminum plate (Ø100mm with a 9mm center hole, 100 pcs/box)	QMY-AP32-AP
180# emery cloth strip (100 pcs/box)	QMY-AP32-EC

PAINT FILM FLEXIBILITY TESTER CODE PPF-BF62

- To test the flexibility of paint and varnishes
- Bend the coated test plates on the shaft rods with different diameter, the minimum shaft rod diameter that does not cause damage to the film is the film flexibility



SPECIFICATION

Shaft rod length	35mm
Shaft rod 1	Ø15mm
Shaft rod 2	Ø10mm
Shaft rod 3	Ø5mm
Shaft rod 4	Ø4mm
Shaft rod 5	cross section 3×10mm, radius of curved surface 1.5mm
Shaft rod 6	cross section 2×10mm, radius of curved surface 1.0mm
Shaft rod 7	cross section 1×10mm, radius of curved surface 0.5mm
Dimension	450×75×100mm
Weight	3.1kg

STANDARD DELIVERY

Main unit	1 pc
Test plate	1 box (500 pcs)
4X magnifier	1 pc

OPTIONAL ACCESSORY

Test plate (dimension: 120×25×0.28mm, 500 pcs/box)	PPF-BF62-TP
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**IMPACT TESTER
CODE THD-PF34**



300g main weight (included)



1000g main weight (included)



2lb main weight (included)



2lb additional weight (included)



1000g additional weight (included)



Ø16.3mm die base (included)



Ø12.7mm indenter (included)



Ø15.9mm indenter (included)



- For paint and varnish dry coating. To test the ability to resist cracking or peeling from the substrate when deformation is caused by weights impact under standard conditions
- Indenter, base and weight can be replaced quickly
- Conform to ISO 6272-2:2002, ASTM D 2794

SPECIFICATION

Impact height range	0-100cm (0-40inch)
Graduation	1cm
Impact depth	2.5cm
Weight	1000g (2 pcs), 300g (1 pc), 2lb (2 pcs)
Indenter diameter	Ø12.7mm (1/2 inch DIA), Ø15.9mm (5/8 inch DIA)
Die base diameter	Ø16.3mm

OPTIONAL ACCESSORY

Base plate (120×70×0.5mm, 180 pcs/box) *	TD-PF34-T
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*Can be customized according to the needs of different thickness, size and processing

STANDARD DELIVERY

Main unit	1 pc
1000g main weight	1 pc
300g main weight	1 pc
2lb main weight	1 pc
1000g additional weight	1 pc
2lb additional weight	1 pc
Ø12.7mm indenter	1 pc
Ø15.9mm indenter	1 pc
Ø16.3mm die base	1 pc



Ultrasonic Thickness Gages
Page 614-621



Infrared Thermal Imaging Cameras
Page 622-623



Infrared Thermometers
Page 624



Thermohygrometers
Page 625-628



Tachometers
Page 628-629



Stroboscopes
Page 630



Vibration Pens
Page 630-631



Digital Multimeters
Page 631-634



Digital AC/DC Clamp Meters
Page 635



Voltage Testers
Page 636



Laser Distance Meters
Page 637



Portable Conductivity/TDS Meters
Page 637



Portable pH Meters
Page 638



Refractometers
Page 638-639



Digital Stopwatches
Page 639



Stroke Counters
Page 639



Bourdon Tube Pressure Gages
Page 640



Digital Moisture Meters
Page 640



Anemometers
Page 641



Digital Sound Level Meters
Page 641-642



Light Meters
Page 643



Teslameters
Page 644



Laser Belt Tension Meters
Page 644

PENETRATE COATING AND MEASURE THE THICKNESS OF SUBSTRATE

BLUETOOTH

REAL-TIME TEMPERATURE COMPENSATION

DATA OUTPUT

ULTRASONIC THICKNESS GAGE (ADVANCED TYPE) CODE ISU-800D

- Real-time temperature compensation eliminates the error caused by temperature variation
- Support both single element transducers and dual element transducers
- Measure the thickness of substrate through coating
- Measuring mode: standard mode (dual element transducer: P-E mode, single element transducer: I-E mode), penetrate coating mode (dual element transducer: I-E mode, single element transducer: E-E mode or auto mode)
- Measure method: single point, scanning, deviation
- Set upper and lower limits for alarm when out-of-tolerance
- Single point and 2 points calibration
- Keyboard lock function avoids parameter setting change caused by unintended press during measurement
- Memory 1000 measurement values
- Data can be transferred to PC by Bluetooth connection or Mini-USB cable



transducer
ISU-S15-P06
(included)



transducer
ISU-S2M-P14
(optional)



transducer
ISU-G5M-P10
(optional)



transducer
ISU-G5M-P08
(optional)



transducer
ISU-G7M-P06
(optional)



transducer
ISU-G2M-P12
(optional)



transducer
ISU-H3M-P12
(optional)



delay block
ISU-S15-P06-CB
(optional)



delay block
ISU-S15-P06-CB1
(optional)



SPECIFICATION

Measuring range	refer to the specification of transducers
Resolution	0.01mm/0.001mm
Accuracy	refer to the specification of transducers
Data output	bluetooth and USB
Velocity	1~19999m/s
Power supply	3.7V rechargeable lithium battery
Dimension	157×78×37mm
Weight	260g

STANDARD DELIVERY

Main unit	1 pc
Transducer ISU-S15-P06	1 pc
Power adaptor	1 pc
USB cable	1 pc
Couplant	1 bottle

OPTIONAL ACCESSORY

Transducer	refer to the specification of transducers
Couplant (for ISU-H3M-P12)	ISU-HT5-COUPPLANT
Thermal printer (with cable)	ISU-800D-PRINTER

SPECIFICATION OF TRANSDUCERS (ON STEEL)

Code	Type	Freq	Diameter (Ød)	Measuring range	Min. size of pipes (diameter x wall thickness)	Accuracy	Working temperature	Application
ISU-S15-P06 (Included)	single element	15MHz	8mm	I-E: 0.9~28mm E-E: 0.15~14mm	Ø10x1.5mm Ø15x0.35mm	±0.02mm/0.3%H* (take the larger one)	-10~60°C	high precision or thin workpieces
ISU-S15-P06-CB (optional)**	-	-	5mm	I-E: 0.9~10mm E-E: 0.15~5mm	Ø10x1.2mm Ø15x0.35mm			high precision or irregular surface
ISU-S15-P06-CB1 (optional)**	-	-	8mm	I-E: 0.9~38mm E-E: 0.3~19mm	-			high precision or thick workpieces
ISU-S2M-P14 (optional)	single element	2MHz	19mm	I-E: 30~2000mm E-E: 30~1000mm	-	±0.5%H*	-10~310°C	ultra-thick workpieces
ISU-G5M-P10 (optional)	dual element	5MHz	13mm	0.8~300mm	Ø25x3mm	±0.04mm (range: <10mm) ±H/333mm* (range: ≥10mm)	-10~60°C	normal workpieces
ISU-G5M-P08 (optional)	dual element	5MHz	11mm	0.8~225mm	Ø20x1.2mm			curved surface and normal workpieces
ISU-G7M-P06 (optional)	dual element	7.5MHz	9mm	0.8~50mm	Ø15x1.2mm			curved surface and small workpieces
ISU-G2M-P12 (optional)	dual element	2MHz	17mm	3~700mm	Ø30x4mm			castings and thick workpieces
ISU-H3M-P12 (optional)	dual element	3MHz	15mm	2~200mm	Ø25x3mm	±0.05mm/0.5%H* (take the larger one)	-10~310°C	workpieces with high temperature

* H is the measured thickness in mm

** Delay blockers, suitable for transducer **ISU-S15-P06**

ULTRASONIC THICKNESS GAGE CODE ISU-720D

DATA
OUTPUT

WITH A AND B SCAN

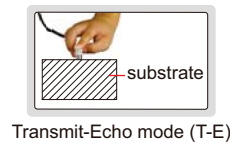
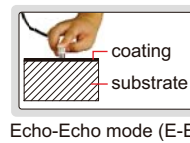
PENETRATE NON-METALLIC COATING AND
MEASURE THE THICKNESS OF METAL SUBSTRATES

- Two measuring modes, Echo-Echo (E-E) and Transmit-Echo (T-E):
 - E-E is applicable for non-metallic coating (such as paint, plastic resin, etc.) on metal substrates, can penetrate coating and measure the thickness of substrates
 - T-E is to measure the thickness of material without coating, such as metal, plastic, glass, nylon, resin, ceramics, ice, etc.
- A scan, through the waveform, judges whether there are impurities, pores, cracks and so on inside, in order to avoid wrong measurement
- B scan, measures continuously, displays the thickness change on the screen
- Transducers can be automatically identified and zeroed
- Memory 10000 measurement values
- Data can be input to Excel and Word as keyboard signal
- Automatic or manual measurement
- When transducers are removed from workpieces, the measurement data are held on screen for easy viewing
- Set upper and lower limits for alarm when out-of-tolerance
- Automatic power off



SPECIFICATION (ON STEEL)

Measuring range	refer to specification of transducers
Resolution	0.1/0.01mm
Accuracy	±0.04mm (H<10mm) ±(0.04+H/1000)mm (10≤H<100mm) ±H/333mm (H≥100mm) H is the thickness to be measured in mm
Frequency	refer to specification of transducers
Display	320×240, color screen display
Velocity	1000~9999m/s
Measuring frequency	2 times/second and 10 times/second
Operation temperature of main unit	-20~50°C
Output	USB
Measuring unit	mm/inch
Power supply	2×1.5V AA batteries
Dimension	133×75×29mm
Weight	260g (including batteries)



transducer ISU-T04 (optional)



transducer ISU-T06 (optional)



transducer ISU-T08 (optional)



transducer ISU-T12 (optional)



transducer ISU-T13 (optional)



transducer ISU-T25 (optional)



STANDARD DELIVERY

Main unit	1 pc
Bicrystal transducer ISU-T07	1 pc
Battery (AA)	2 pcs
Couplant	1 bottle
USB cable	1 pc

OPTIONAL ACCESSORY

Transducer	ISU-T04, ISU-T06, ISU-T08, ISU-T12, ISU-T13, ISU-T25
Couplant (for ISU-T13)	ISU-HT5-COUPPLANT

SPECIFICATION OF TRANSDUCERS (ON STEEL)

Code	Mode	Frequency	Diameter (Ød)	Measuring range	Minimum size of pipes for measurement (diameter × wall thickness)	Applicable temperature	Application
ISU-T07 (included)	T-E E-E	5.0MHz	13.2mm	T-E mode: 1.5~200mm E-E mode: 3~25mm	T-E mode: Ø25×3mm	-20~60°C	general use
ISU-T04 (optional)	T-E	10.0MHz	6mm	0.7~20mm	Ø15×1mm	-20~60°C	for small tubes
ISU-T06 (optional)	T-E	7.5MHz	9mm	0.7~50mm	Ø15×1.2mm	-20~60°C	for thin workpieces
ISU-T08 (optional)	T-E	5.0MHz	11mm	0.8~300mm	Ø25×1.2mm	-20~60°C	general use
ISU-T12 (optional)	T-E	2.0MHz	17mm	2~400mm	Ø40×3mm	-20~60°C	for casting iron
ISU-T13 (optional)	T-E	5.0MHz	15mm	3~100mm	Ø25×2mm	0~350°C	for high temperature
ISU-T25 (optional)	T-E	1.0MHz	26mm	3~200mm	—	-20~60°C	for fiberglass and organic material

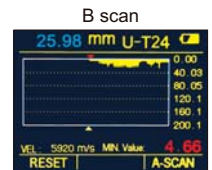
DATA
OUTPUT

WITH A AND B SCAN

ULTRASONIC THICKNESS GAGE (FOR THICK WORKPIECES MADE OF ORGANIC MATERIALS) CODE ISU-710D



- For thick workpieces made of organic materials
- A scan, through the waveform, judges whether there are impurities, pores, cracks and so on inside, in order to avoid wrong measurement
- B scan, measures continuously, displays the thickness change on the screen
- Transducers can be automatically identified and zeroed
- Memory 10000 measurement values
- Data can be input to Excel and Word as keyboard signal
- Automatic or manual measurement
- When transducers are removed from workpieces, the measurement data are held on screen for easy viewing
- Set upper and lower limits for alarm when out-of-tolerance
- Automatic power off



SPECIFICATION (ON STEEL)

Measuring range		20~590mm
Resolution		0.1/0.01mm
Accuracy		$\pm(0.04+H/1000)$ mm (H<100mm) $\pm H/333$ mm (H \geq 100mm) H is the thickness to be measured in mm
Transducer	type	single element transducer
	frequency	1.0MHz
	diameter ($\varnothing d$)	26mm
Display		320×240, color screen display
Velocity		1000~9999m/s
Measuring frequency		2 times/second and 10 times/second
Operation temperature		main unit: -20~50°C transducer: -20~60°C
Output		USB
Measuring unit		mm/inch
Power supply		2×1.5V AA batteries
Dimension		133×75×29mm
Weight		260g (including batteries)

STANDARD DELIVERY

Main unit	1 pc
Transducer	1 pc
Battery (AA)	2 pcs
Couplant	1 bottle
USB cable	1 pc

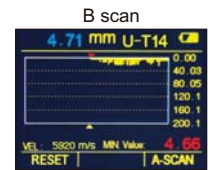
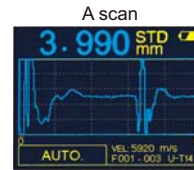
ULTRASONIC THICKNESS GAGE (FOR THIN WORKPIECES) CODE ISU-700D

DATA
OUTPUT

WITH A AND B SCAN



- For thin workpieces
- A scan, through the waveform, judges whether there are impurities, pores, cracks and so on inside, in order to avoid wrong measurement
- B scan, measures continuously, displays the thickness change on the screen
- Transducers can be automatically identified and zeroed
- Memory 10000 measurement values
- Data can be input to Excel and Word as keyboard signal
- Automatic or manual measurement
- When transducers are removed from workpieces, the measurement data are held on screen for easy viewing
- Set upper and lower limits for alarm when out-of-tolerance
- Automatic power off



SPECIFICATION (ON STEEL)

Measuring range		Transmit-echo (T-E) mode: 1.5~20mm Echo-echo (E-E) mode: 0.2~10mm
Resolution		0.1/0.01/0.001mm
Accuracy		±0.04mm (H<10mm) ±(0.04+H/1000)mm (H≥10mm) H is the thickness to be measured in mm
Transducer	type	single element transducer
	frequency	15.0MHz
	diameter (Ød)	7.5mm
Display		320×240, color screen display
Velocity		1000~9999m/s
Measuring frequency		2 times/second and 10 times/second
Operation temperature		main unit: -20~50°C transducer: -20~60°C
Output		USB
Measuring unit		mm/inch
Power supply		2×1.5V AA batteries
Dimension		133×75×29mm
Weight		260g (including batteries)

transducer protective sleeve (included)



STANDARD DELIVERY

Main unit	1 pc
Transducer	1 pc
Transducer protective sleeve	1 pc
Battery (AA)	2 pcs
Couplant	1 bottle
USB cable	1 pc

PENETRATE NON-METALLIC COATING AND MEASURE THE THICKNESS OF METAL SUBSTRATE



DATA OUTPUT



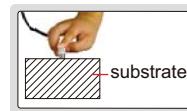
ULTRASONIC THICKNESS GAGE (THROUGH COATING) CODE ISU-300D

- Two measuring modes, Echo-Echo (E-E) and Transmit-Echo (T-E):
 - E-E is applicable for non-metallic coating (such as paint, plastic resin, etc.) on metal substrates, can penetrate coating and measure the thickness of substrates
 - T-E is to measure the thickness of material without coating, such as metal, plastic, glass, nylon, resin, ceramics, ice, etc.
- Tolerance measurement
- Average calculation of maximum 9 readings
- Data can be input to Excel and Word as keyboard signal



SPECIFICATION (ON STEEL)

Measuring range	refer to specification of transducers
Resolution	0.1/0.01mm
Accuracy	±0.04mm (H<10mm) ±(0.04+H/1000)mm (10≤H<100mm) ±H/333mm (H≥100mm) H is the thickness to be measured in mm
Velocity	1000~9999m/s
Operation temperature of main unit	-20~50°C
Output	USB
Measuring unit	mm/inch
Power supply	2×1.5V AAA batteries
Dimension	116×64×27mm
Weight	220g



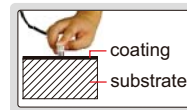
Transmit-Echo mode (T-E)



transducer ISU-T04 (optional)



transducer ISU-T06 (optional)



Echo-Echo mode (E-E)



transducer ISU-T12 (optional)



transducer ISU-T13 (optional)

STANDARD DELIVERY

Main unit	1 pc
Transducer ISU-T07	1 pc
Battery (AAA)	2 pcs
Couplant (for ISU-T04, ISU-T06, ISU-T07, ISU-T12)	1 bottle
USB cable	1 pc

OPTIONAL ACCESSORY

Transducer	ISU-T04, ISU-T06, ISU-T12, ISU-T13
Couplant (for ISU-T13)	ISU-HT5-COULPLANT

SPECIFICATION OF TRANSDUCERS (ON STEEL)

Code	Mode	Frequency	Diameter (Ød)	Measuring range	Minimum size of pipes for measurement (diameter × wall thickness)	Applicable temperature	Application
ISU-T07 (included)	T-E E-E	5.0MHz	13.2mm	T-E mode: 1.5~200mm E-E mode: 3~25mm	T-E mode: Ø25×3mm	-20~60°C	general use
ISU-T04 (optional)	T-E	10.0MHz	6mm	0.7~20mm	Ø15×1mm	-20~60°C	for small tubes
ISU-T06 (optional)	T-E	7.5MHz	9mm	0.7~50mm	Ø15×1.2mm	-20~60°C	for thin workpieces
ISU-T12 (optional)	T-E	2.0MHz	17mm	2~400mm	Ø40×3mm	-20~60°C	for casting iron
ISU-T13 (optional)	T-E	5.0MHz	15mm	3~100mm	Ø25×2mm	0~350°C	for high temperature

ULTRASONIC THICKNESS GAGE CODE ISU-250C



DATA
OUTPUT



- Measure the thickness from one side of objects, suitable for pipes, tanks, etc.
- Applicable material: metal, plastic, glass, nylon, resin, ceramic, ice
- Tolerance measurement
- Average calculation of 9 readings
- Data can be input to Excel and Word as keyboard signal



SPECIFICATION (ON STEEL)

Measuring range	refer to specification of transducers
Resolution	0.1/0.01mm
Accuracy	±0.04mm (H<10mm) ±(0.04+H/1000)mm (10≤H<100mm) ±H/333mm (H≥100mm) H is the thickness to be measured in mm
Velocity	1000-9999m/s
Operation temperature of main unit	-20~50°C
Output	USB
Measuring unit	mm/inch
Power supply	2×1.5V AAA batteries
Dimension	64×116×27mm
Weight	220g



transducer ISU-T06
(optional)



transducer ISU-T13
(optional)



transducer ISU-T04
(optional)



transducer ISU-T12
(optional)

STANDARD DELIVERY

Main unit	1 pc
Transducer ISU-T08	1 pc
Battery (AAA)	2 pcs
Couplant (for ISU-T04, ISU-T06, ISU-T08, ISU-T12)	1 bottle
USB cable	1 pc

OPTIONAL ACCESSORY

Transducer	ISU-T04, ISU-T06, ISU-T12, ISU-T13
Couplant (for ISU-T13)	ISU-HT5-COULPLANT

SPECIFICATION OF TRANSDUCERS (ON STEEL)

Code	Frequency	Diameter (Ød)	Measuring range	Minimum size of pipes for measurement (diameter × wall thickness)	Applicable temperature	Application
ISU-T08 (included)	5.0MHz	11mm	0.8~300mm	Ø25×1.2mm	-20~60°C	general use
ISU-T04 (optional)	10.0MHz	6mm	0.7~20mm	Ø15×1mm	-20~60°C	for small tubes
ISU-T06 (optional)	7.5MHz	9mm	0.7~50mm	Ø15×1.2mm	-20~60°C	for thin workpieces
ISU-T12 (optional)	2.0MHz	17mm	2~400mm	Ø40×3mm	-20~60°C	for casting iron
ISU-T13 (optional)	5.0MHz	15mm	3~100mm	Ø25×2mm	0~350°C	for high temperature

ATTENTION: NOT SUITABLE FOR CASTINGS AND ALUMINUM WORKPIECES

ULTRASONIC THICKNESS GAGE (BASIC TYPE) CODE ISU-100D

**INSPECTION
CERTIFICATE**



- Measure the thickness from one side of objects, suitable for pipes, tanks, etc.
- Applicable material: steel, stainless steel, glass, copper, brass, polystyrene, titanium, etc.



SPECIFICATION (ON STEEL)

Measuring range		0.8~300mm
Resolution		0.1/0.01mm
Accuracy		±0.05mm (H<10mm) ±(0.05+H/1000)mm (10≤H<100mm) ±H/333mm (H≥100mm) H is the thickness to be measured in mm
Transducer	frequency	5MHz
	diameter (∅d)	10.8mm
Minimum size of pipes		20×1.2mm (diameter×wall thickness)
Velocity		1000-9999m/s
Operation temperature		main unit: -20~50°C transducer: -20~60°C
Measuring unit		mm/inch
Power supply		2×AAA batteries
Dimension		114×64×28mm
Weight		200g

STANDARD DELIVERY

Main unit	1 pc
Transducer	1 pc
Couplant	1 bottle
Battery (AAA)	2 pcs

STANDARD TEST BLOCKS FOR ULTRASONIC THICKNESS GAGES

STEP WEDGE BLOCKS
CAN BE CUSTOMIZED



cylinder block

- Supplied with manufacturer inspection certificate
- Material of step wedge blocks can be customized



round tube block

Cylinder block set (17 blocks are included) (mm)

Code	Material	Diameter	Thickness	Accuracy	QTY
ISU-ST	45#	20	0.5	±0.01	1 pc
	45#	20	1		1 pc
	45#	20	1.2		1 pc
	45#	20	1.5		1 pc
	45#	20	2		1 pc
	45#	20	3.3		1 pc
	45#	20	5.5		1 pc
	45#	20	7.7	1 pc	
	45#	20	10	1 pc	
	45#	20	15	1 pc	
	45#	20	20	±0.02	1 pc
	45#	20	25		1 pc
	45#	20	50		1 pc
	45#	20	75		1 pc
	45#	20	100		1 pc
	45#	20	150	±0.05	1 pc
	45#	20	200		1 pc

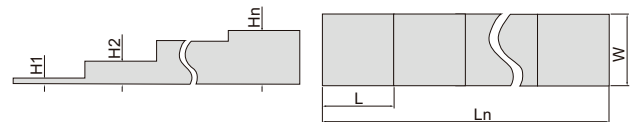
Round tube block set (2 blocks are included) (mm)

Code	Material	Outer diameter	Wall thickness	Accuracy	Length	QTY
ISU-SWT	45#	30	2	±0.02	40	1 pc
	45#	40	3	±0.02	40	1 pc

25



step wedge block



Step wedge blocks (mm)

Code	Material	QTY of steps (n)	Thickness							Accuracy	Width (W)	Length of each step (L)	Total length (Ln)
			H1	H2	H3	H4	H5	H6	H7				
ISU-S4A	45#	4	6.25	12.5	18.75	25	-	-	-	±0.02	20	20	80
ISU-S4B	45#	4	5	10	15	20	-	-	-	±0.02	20	20	80
ISU-S5A	45#	5	2.5	5	7.5	10	12.5	-	-	±0.02	20	20	100
ISU-S5B	45#	5	2	4	6	8	10	-	-	±0.02	20	20	100
ISU-S7A	45#	7	3	12.5	24	30	36	42	48	±0.02	40	40	280
ISU-S7B	45#	7	1	1.5	2	4	6	8	10	±0.02	40	40	280

NON-CONTACT
TEMPERATURE MEASUREMENT

DATA
OUTPUT

IP54
WATERPROOF

INFRARED THERMAL IMAGING CAMERA (BASIC TYPE) CODE 9132-T400

- IR/visible/laser indicator
- Trigger button for photo taking
- 2-meter drop test, IP54 protection

STANDARD DELIVERY

Main unit	1 pc
Power supply adapter	1 pc
TYPE-C cable	1 pc
16G TF card	1 pc



SPECIFICATION

IR image	IR resolution	120×90@17μm
	detector type	VOx/7.5~14μm
	frame rate	25Hz/9Hz
	thermal sensitivity/NETD	60mk
	focal length	2.28mm/F1.13
	field of view (FOV)	50°×38°
	spatial resolution (IFOV)	7.6mrad
	focus	focus-free
Visible camera	visible camera resolution	320×240, focus-free
	flashlight	yes
Image display	display	2.4 inch IPS technology TFT display
	display resolution	320×240
	image model	IR/visible/picture-in-picture
	color palettes	6: white hot, iron red, hot iron, arctic, rainbow 1, rainbow 2
Temperature measurement	temperature range	-20~150°C, 100~400°C (auto switching)
	accuracy	±2°C or ±3%, whichever is greater (target temp ≥0°C, ambient temp is 15~30°C)
	measurement spot	center spot
	measurement area	3 (incl. max & min temp)
	auto max & min spot tracking	yes
Image storage	alarm	full screen max & min spot alarm
	storage media	TF card (16G)
	IR image format	full radiometric (JPG) (120 x 90)
	visible image	yes, 320x240
Connections & communications	USB	TYPE-C, TF card slot
	tripod interface	yes
	mobile APP	yes
	PC IR analysis software	yes
Power system	battery type	rechargeable li ion battery
	battery operation time	>5 hours
	charging time	internal charge, ≤2.5 hours
Environmental parameters	operation temperature	-10~50°C
	storage temperature	-40~70°C
	protection	IP54, 2-meter drop test
	certification	CE/ROHS/FCC
	dimension (LxWxH)	194×61.5×76mm
weight	350g	

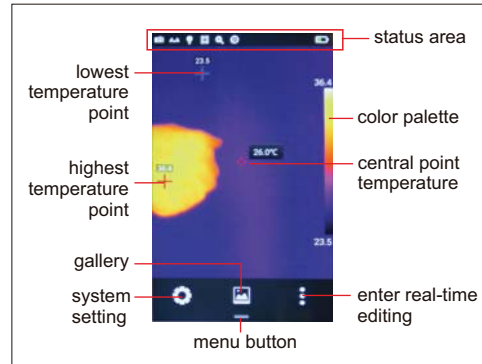
front view



INFRARED THERMAL IMAGING CAMERA CODE 9130-H360

IP54
WATERPROOF

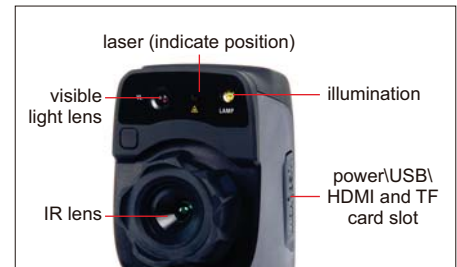
DATA
OUTPUT



- 4 inch high-brightness touchscreen
- Four image presentations: IR, visible, PIP and MIF
- WIFI real-time sharing, one-click connection to mobile devices
- USB interface for data transmission and charging
- Built-in illumination
- Video can be recorded and stored

SPECIFICATION

IR resolution	192×144
NETD	≤50mk
Focus length	7mm/F1.1
Angle of view	37.8°×28.8°
Spatial resolution	3.45mrad
Focus adjustment	focus-free
Detector type	unrefrigerated vanadium oxide/8~14μm
Pixel size	25μm
Visible camera	resolution 500W, focus-free
Display	4" highlight LCD touch screen, 480×800
Image mode	IR image, visible image, MIF, PIP
Digital zoom	1.1~4
Color palette	8 modes
Temperature range	-20°C~350°C
Accuracy	±2°C or ±2% (of maximize range)
Emissivity	0.01-1.00 (adjustable)
Storage	in camera and TF card (up to 32GB)
Image format	JPG with temp info
Output	USB, HDMI
Power	rechargeable Li-ion battery (7.4V), working time≥4h
Operation temperature	-10°C~50°C
Vibration	10HZ~150HZ~10HZ 0.15mm (IEC 60068-2-6)
Impact	30g 11ms (IEC 60068-2-27)
Weight	735g
Dimension	274x97x78mm



STANDARD DELIVERY

Main unit	1 pc
Power supply adapter	1 pc
USB cable	1 pc
HDMI cable	1 pc
Capacitive screen gloves	1 pc
TF card (16GB)	1 pc

INFRARED THERMOMETER (BASIC TYPE) CODE 0210-G260

- MAX/MIN temperature display
- °C/°F conversion function
- Auto data hold and auto power off

SPECIFICATION

Measuring range	-30°C~260°C/-22°F~500°F
Accuracy	±4°C/±7°F (≤0°C) ±2% or ±2°C/±4°F (>0°C)
Resolution	0.1°C/0.1°F
Distance to spot size (D:S)	8:1
Emissivity	0.95 (fixed)
Diode laser	output<1mW, wavelength 630~670nm class 2 (II) laser product
Spectral response	6~14μm
Response time	less than 1s
Power supply	9V battery
Dimension	82×42×160mm
Weight	180g



STANDARD DELIVERY

Main unit	1 pc
Battery	1 pc

INFRARED THERMOMETER CODE 0213-A500

- Unit: °C, °F
- Dual laser sighting
- Negativity display
- Automatic power off
- Automatic data hold
- Over range indicator
- Max/Min display

SPECIFICATION

Temperature range	-50°C~380°C/-58°F~716°F
Temperature accuracy	±2.5°C (at -50°C~20°C), ±2% or ±2.0°C (at 20°C~380°C) ±4.5°F (at -58°F~68°F), ±2% or ±3.6°F (at 68°F~716°F)
Temperature resolution	0.1°C/0.1°F
Distance to spot size (D:S)	12:1
Emissivity	0.95 (fixed)
Repeatability	±1°C/1.8°F
Response time	150ms
Spectral response	8~14μm
Diode laser	output<1mW, wavelength 630~670nm class 2 laser product
Operation temperature	0°C~50°C/32°F~122°F
Operation humidity	10%RH~90%RH
Storage temperature	-10°C~60°C/14°F~140°F
Storage humidity	<80%RH
Power supply	1×9V battery
Dimension	137×73×38mm
Weight	135g



STANDARD DELIVERY

Main unit	1 pc
Battery	1 pc

DATA LOGGER FOR TEMPERATURE AND HUMIDITY (BUILT-IN SENSOR) CODE 0311-3070

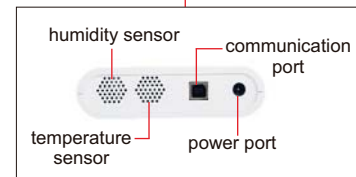
IP54
WATERPROOF

DATA
OUTPUT



stand (included)

- Signal acquisition, display, storage, analysis function
- Low power consumption
- Built-in high-precision temperature and humidity sensor
- Software is included



SPECIFICATION

Temperature range	-30°C~70°C/-22°F~158°F
Temperature accuracy	±0.3°C (at 23°C±2°C), other range ±0.5°C ±0.6°F (at 73.4°F±3.6°F), other range ±0.9°F
Temperature resolution	0.1°C/0.2°F
Humidity range	0%RH~100%RH
Humidity accuracy	±3%RH (at 10%RH~85%RH), other range ±5%RH
Humidity resolution	0.1%RH
Memory capacity	10918
Alarm	function: alarm when over high or low limit method: display+buzz+backlight
Sampling interval	2s, 5s, 10s, 30s, 60s, 255s (adjustable)
Logging interval	2 seconds~24 hours (adjustable)
Start with delay	1~120 seconds (adjustable)
Start mode	start immediately/delay start/timing start
End mode	Full/FIFO/preset/timing end
Timing start/end	random start/end with format YYMMDD HHMMSS
Interface	USB
Time battery	CR2032
Power supply	3.6V lithium battery (ER14505) or 5~24V DC
Dimensions	123×117×33mm
Weight	260g

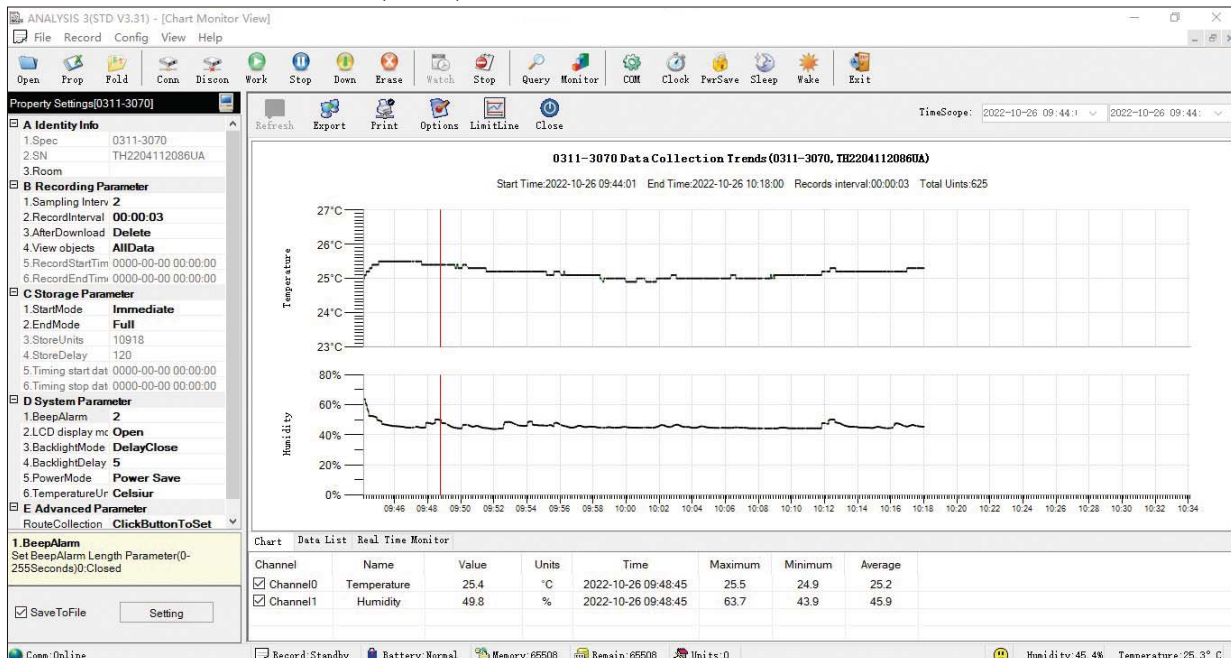
STANDARD DELIVERY

Main unit	1 pc
Software and USB cable	1 pc
Time battery	1 pc
Lithium battery	1 pc

OPTIONAL ACCESSORY

Power adapter	0311-3070-ADAPTER
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software (included), record and download data to PC software via USB cable



IP50
DUSTPROOF

DIGITAL THERMOHYGROMETER (PROFESSIONAL TYPE) CODE 9362-TH27

- Measure humidity, ambient temperature and dew-point temperature
- Max/Min/Average mode
- Alarm function
- IP50 protection grade



SPECIFICATION

Sensor model	NTC thermistor/humidity capacitance/digital sensor
Temperature range	-20°C~70°C/-4°F~158°F
Temperature accuracy	± 0.5°C/± 0.9°F
Temperature resolution	0.1°C/0.2°F (minimum adjustable unit is 0.2°F in setting mode)
Humidity range	0~100%RH
Humidity accuracy	±5%RH
Humidity resolution	0.1%RH
Sampling interval	5s
Battery	1.5V AAA
Dimensions	95×107×18mm
Weight	105g

STANDARD DELIVERY

Main unit	1 pc
Battery (AAA)	1 pc

THERMOHYGROMETER (EXTERNAL SENSOR) CODE 0313-TH48

- External sensor, 3m cable
- Time/temperature/humidity display
- Temperature and humidity upper and lower limit alarm function
- Unit: °C/°F
- Low battery warning



SPECIFICATION

Temperature range	-40°C~80°C/-40°F~176°F
Temperature accuracy	±0.5°C (at -20°C~60°C), ±1.0°C (at 60°C~80°C), ±2°C (at -40°C~-20°C), ±2°F (at -20°F~176°F), ±3°F (at -40°F~-20°F)
Temperature resolution	0.1°C (at -20°C~80°C), other range 1°C 0.1°F (at -20°F~100°F), other range 1°F
Humidity range	0%RH~99.9%RH
Humidity accuracy	±5%RH (at 10°C~60°C), other range ±7% ±5%RH (at 50°F~140°F), other range ±7%
Humidity resolution	0.1%RH
Sensitivity attenuation value	temperature: <0.1°C/year (<0.2°F/year) humidity: <1%RH/year
Sampling interval	5 seconds
Power supply	built-in rechargeable lithium battery (USB 5V charging) working time at least one month
Dimension	88×88×21mm
Weight	174g

STANDARD DELIVERY

Main unit	1 pc
USB charging cable	1 pc

K-TYPE THERMOCOUPLE THERMOMETER (ECONOMIC TYPE) CODE 0320-K230

- Contact K-type thermocouple
- Unit: °C/°F
- Data hold function
- Low battery display
- Display backlight

SPECIFICATION

Temperature range	-50°C~200°C/-58°F~392°F
Temperature accuracy	±2.0°C/±3.6°F
Temperature resolution	0.1°C (at -50°C~199.9°C), 1°C (at -50°C~200°C) 0.1°F (at -58°F~199.9°F), 1°F (at -58°F~392°F)
Sampling rate	2.5 times/sec
Power supply	3×3V CR2450 batteries (for 300 hours working)
Operation voltage	6.8V~10V
Dimension	149×76×34mm
Weight	220g

STANDARD DELIVERY

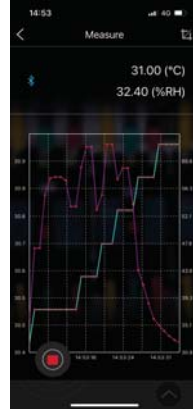
Main unit	1 pc
Thermocouple (K-type)	1 pc
CR2450 battery	3 pcs



THERMOHYGROMETER CODE 0310-H26

- Measure humidity, ambient temperature, dew point temperature and wet bulb temperature
- Min/Max, data hold function
- Bluetooth 4.0
- Auto power off
- Supplied with APP for Apple and Android

App measurement



App record

No.	Data Value (°C)	Data Value (%RH)
1	30.90	41.40
2	30.90	38.50
3	30.90	36.10
4	31.00	35.10
5	31.00	34.20
6	31.00	33.40
7	31.00	32.80
8	31.00	32.40
9	31.00	32.10
10	31.00	32.00
11	31.00	31.70



SPECIFICATION

Function	Measuring range	Resolution	Accuracy
Ambient temperature	0°C~50°C 32°F~122°F	0.1°C/0.1°F	±1.0°C/±1.8°F
Wet bulb temperature	0°C~50°C 32°F~122°F		
Dew point temperature	0°C~50°C 32°F~122°F		
Humidity	0%RH~80%RH	0.1%RH	±5.0%RH
Auto power off	30 minutes		
Data port	Bluetooth 4.0		
Power supply	9V battery		
Dimension	204×54×36mm		
Weight	172g		

STANDARD DELIVERY

Main unit	1 pc
Battery	1 pc

THERMOHYGROMETER (ECONOMIC TYPE) CODE 0312-TH50

- Environment comfort display: COMFORT, WET, DRY
- Time/temperature/humidity display
- Highest/lowest temperature and humidity memory function
- Alarm clock function
- Unit: °C, °F



SPECIFICATION

Temperature range	0°C~50°C/32°F~122°F
Temperature accuracy	±1.0°C (at 5°C~40°C), other range ±1.5°C ±1.8°F (at 41°F~104°F), other range ±2.7°F
Temperature resolution	0.1°C/0.1°F
Humidity range	10%RH~90%RH
Humidity accuracy	±5%RH (at 40%RH~80%RH), other range ±8%RH
Humidity resolution	1%RH
Power supply	1×AAA 1.5V battery
Dimension	108×60×15mm
Weight	74g

STANDARD DELIVERY

Main unit	1 pc
Battery	1 pc

CONTACT/NON-CONTACT TACHOMETER CODE 9225-405



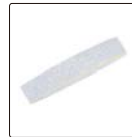
cone head
(included)



small cone head
(included)



cone cavity
head (included)



reflection sticker
(included)



wheel with 0.1m
perimeter
(included)



clamping sleeve
(included)

- 2 measuring method, contact and non-contact
- Can measure rotary speed and line speed
- Automatically save the maximum value, minimum value and the last value, 500 data can be stored during continuous measurement
- Automatic power off



SPECIFICATION

Measuring method		Non-contact	Contact
Measuring range	rotary speed	2.5~99999RPM	0.5~19999RPM
	line speed	—	0.05~500m/min
Resolution	rotary speed	0.1RPM (range 2.5~999.9RPM) 1RPM (range 1000~99999RPM)	0.1RPM (range 0.5~999.9RPM) 1RPM (range 1000~19999RPM)
	line speed	—	0.01m/min (range 0.05~99.99m/min) 0.1m/min (range 100~500m/min)
Accuracy	rotary speed	±(0.05% <i>n</i> +1 <i>d</i>)RPM <i>n</i> is rotary speed, <i>d</i> is resolution	±(0.4% <i>n</i> +1 <i>d</i>)RPM (<i>n</i> <300RPM) ±(0.05% <i>n</i> +1 <i>d</i>)RPM (<i>n</i> ≥300RPM) <i>n</i> is rotary speed, <i>d</i> is resolution
	line speed	—	±(1%+1 <i>d</i>)m/min <i>d</i> is resolution
Laser power		CLASS 3R, 3mW~4mW	—
Sampling time		0.6s (above 100RPM)	
Measuring distance		50~500mm	—
Operation temperature		0~40°C	
Power supply		3×AA batteries	
Dimension		206×71×36mm	
Weight		170g	

STANDARD DELIVERY

Main unit	1 pc
Reflection sticker	3 pcs
Wheel with 0.1m perimeter	1 pc
Clamping sleeve	1 pc
Cone head	1 pc
Small cone head	1 pc
Cone cavity head	1 pc
Battery (AA)	3 pcs

NON-CONTACT TACHOMETER CODE 9223-120

- Accurately measure the rotary speed without contact
- Automatically save the maximum value, minimum value and the last value, 500 data can be stored during continuous measurement

SPECIFICATION

Measuring range	2.5~99999RPM
Resolution	0.1RPM (range 2.5~999.9RPM) 1RPM (range 1000~99999RPM)
Accuracy	$\pm(0.05\%n+1d)$ RPM n is rotary speed, d is resolution
Laser power	CLASS 3R, 3mW~4mW
Sampling time	0.6 second (above 100RPM)
Measuring distance	50~500mm
Operation temperature	0~40°C
Power supply	3×AA batteries
Dimension	180×71×29.9mm
Weight	145g



reflection sticker
(included)



STANDARD DELIVERY

Main unit	1 pc
Reflection sticker	3 pcs
Battery (AA)	3 pcs

CONTACT TACHOMETER CODE 9224-213

- Can measure rotary speed, line speed and line length
- Automatically save the maximum value, minimum value and the last value, 96 data can be stored during continuous measurement
- With backlight display

SPECIFICATION

Measuring range	rotary speed	0.5~19999RPM
	line speed	0.05~500m/min
	line length	0.05~99999m
Resolution	rotary speed	0.1RPM (range 0.5~999.9RPM) 1RPM (range 1000~19999RPM)
	line speed	0.01m/min (range 0.05~99.99m/min) 0.1m/min (range 100~500m/min)
	line length	0.02m
Accuracy	rotary speed	$\pm(0.4\%n+1d)$ RPM (n<300RPM) $\pm(0.05\%n+1d)$ RPM (n≥300RPM) n is rotary speed, d is resolution
	line speed	$\pm(1\%+1d)$ m/min d is resolution
	line length	$\pm(1\%+1d)$ m d is resolution
Sampling time	0.8s (above 60RPM)	
Operation temperature	0~40°C	
Power supply	3×AA batteries	
Dimension	171×71×35mm	
Weight	162g	



wheel with 0.1m
perimeter (included)



cone head
(included)



small cone head
(included)



cone cavity
head (included)



clamping sleeve
(included)

STANDARD DELIVERY

Main unit	1 pc
Wheel with 0.1m perimeter	1 pc
Clamping sleeve	1 pc
Cone head	1 pc
Small cone head	1 pc
Cone cavity head	1 pc
Battery (AA)	3 pcs

DIGITAL LED TACHOMETER/STROBOSCOPE CODE ISQ-TS120K

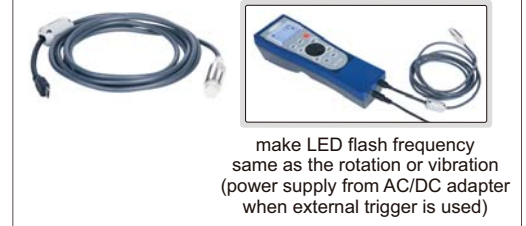
- Make cyclical motion (rotation, vibration, etc.) objects to appear slow-moving or stationary
- On-line inspection or observation for moving objects
- Measure the rotation or vibration speed and frequency
- Can be triggered from outside by moving objects, make LED flash frequency same as the rotation or vibration

SPECIFICATION

Flash frequency range		60~120000FPM (flash per minute), 1~2000Hz
Resolution	FPM	0.1FPM (<100000FPM), 1FPM (≥100000FPM)
	HZ	0.01Hz (<200Hz), 0.1Hz (≥200Hz)
Setting accuracy		±0.01%
Phase shift increment		3°
Flash pulse duration time		0.1~2.5°
LED light		3 pcs CREE 10W lamp
LED life		3~5 years
Trigger mode		internal and external
Power supply		built-in rechargeable battery or AC/DC adapter
Dimension		208×70×60mm
Weight		380g



proximity trigger (included)



STANDARD DELIVERY

Main unit	1 pc
AC/DC adapter	1 pc
Proximity trigger	1 pc

VIBRATION PEN (THREE PARAMETERS) CODE 0020-A199

- Acceleration, velocity and displacement can be tested
- Automatic power off



SPECIFICATION

Parameter	acceleration	velocity	displacement
Measuring range	0.01~199.9m/s ² (peak value)	0.01~199.9mm/s (virtual value)	0.001~1.999mm (peak~peak value)
Frequency	10Hz~1kHz	10Hz~1kHz	10Hz~500Hz
Frequency response	±5% (≥20Hz) -20%~+10% (<20Hz)		
Linearity	±(5%+2unit)		
Indeterminacy of sensitivity	≤3%		
Operation temperature	0°C~40°C/32°F~104°F		
Operation humidity	<85%		
Power supply	2×LR44 battery (for 10 hours working)		
Dimension	150x22x18mm		
Weight	55g		

STANDARD DELIVERY

Main unit	1 pc
LR44 battery	2 pcs

VIBRATION PEN CODE 9720-199

- Measure vibration of motors, fans, pumps, compressors and machine tools to prevent mechanical failure
- Small size, light weight, low energy consumption, easy operation, easy to carry
- One key control
- Automatic power off



SPECIFICATION

Code	9720-199
Measured parameter	speed
Measuring range	0.1~199.9mm/s
Frequency	10Hz~1KHz
Accuracy	±(5%±2)mm/s
Operation temperature	0°C~40°C
Operation humidity	<85%
Power supply	2×LR44 batteries (for 10 hours working)
Dimension	150x22x18mm
Weight	55g



STANDARD DELIVERY

Main unit	1 pc
LR44 battery	2 pcs

PEN-TYPE DIGITAL MULTIMETER CODE 9241-ML200

- Auto/manual ranging
- Maximum mode
- Data hold
- NCV detection
- Low battery indication
- Auto power off
- Safety rating: CAT III 600V



test lead (included)



clips (included)



SPECIFICATION

Function	Range	Resolution	Accuracy
DC Voltage	200mV/2V/20V/200V/600V	0.1mV/1mV/10mV/0.1V/1V	±(0.7%+2)
AC Voltage	200mV/2V/20V/200V	0.1mV/1mV/10mV/0.1V	±(0.8%+3)
	600V	1V	±(1.0%+3)
DC Current	20mA/200mA	10μA/0.1mA	±(1.5%+3)
AC Current	20mA/200mA	10μA/0.1mA	±(2.0%+3)
Resistance	200Ω	0.1Ω	±(1.0%+3)
	2kΩ/20kΩ/200kΩ/2MΩ	1Ω/10Ω/0.1kΩ/1kΩ	±(1.0%+1)
	20MΩ	10kΩ	±(1.0%+5)
Logic level test	<1.5V (green LED on) 1.5~3.5V (green & red LED off) >3.5V (red LED on)		
Diode	open circuit voltage 1.5V		
Continuity buzzer	<50Ω		
Power supply	2×1.5V AAA batteries		

STANDARD DELIVERY

Main unit	1 pc
Test lead	1 pc
Clip	2 pcs
Battery (AAA)	2 pcs

DIGITAL MULTIMETER CODE 9216-F520



test leads (included)



temperature probe and adapter (included)

- 2000 counts digital display
- Auto ranging (except 200mV AC)
- Data hold
- Max hold
- Display with backlight
- Low battery indication
- Auto power off
- Safety rating: CAT III 600V

SPECIFICATION

Function	Range	Resolution	Accuracy ("d" is the least reading)
DC Voltage	200mV	0.1mV	$\pm(0.5\%+2d)$
	2V/20V/200V	0.001V/0.01V/0.1V	$\pm(1.0\%+2d)$
	600V	1V	$\pm(1.2\%+2d)$
AC Voltage (50~60Hz)	200mV	0.1mV	$\pm(1.5\%+30d)$
	2V	0.001V	$\pm(1.2\%+3d)$
	20V/200V	0.01V/0.1V	$\pm(1.5\%+3d)$
	600V	1V	$\pm(2.0\%+4d)$
DC Current	200 μ A	0.1 μ A	$\pm(1.0\%+3d)$
	2000 μ A/20mA/200mA	1 μ A/0.01mA/0.1mA	$\pm(1.5\%+3d)$
	10A	0.01A	$\pm(2.5\%+5d)$
AC Current (50~60Hz)	200 μ A	0.1 μ A	$\pm(1.5\%+5d)$
	2000 μ A/20mA/200mA	1 μ A/0.01mA/0.1mA	$\pm(1.8\%+5d)$
	10A	0.01A	$\pm(3.0\%+7d)$
Resistance	200 Ω	0.1 Ω	$\pm(1.2\%+4d)$
	2k Ω	0.001k Ω	$\pm(1.0\%+2d)$
	20k Ω /200k Ω /2M Ω	0.01k Ω /0.1k Ω /0.001M Ω	$\pm(1.2\%+2d)$
	20M Ω	0.01M Ω	$\pm(2.0\%+3d)$
Temperature (type-K)	-50°C to 1000°C	1°C	$\pm(3.0\%+5^{\circ}\text{C})$
	-58°F to 1832°F	1°F	$\pm(3.0\%+8^{\circ}\text{F})$
Diode test	test current: 0.3mA typical	1mV	$\pm(1.0\%+5d)$
Continuity check	less than 100 Ω		
Power supply	9V battery		
Dimension (LxWxH)	150x70x48mm		
Weight	255g		

STANDARD DELIVERY

Main unit	1 pc
Thermocouple adapter	1 pc
Temperature probe	1 pc
9V battery	1 pc
Test lead	2 pcs

MINI DIGITAL MULTIMETER (BASIC TYPE) CODE 9242-ML100A

- Portable size with protective case
- 2000 counts digital display
- 10A fuse protection
- Low battery indication
- Safety rating: CAT III 600V



test leads (included)



VIDEO



SPECIFICATION

Function	Range	Resolution	Accuracy ("d" is the least reading)
DC Voltage	200mV/2000mV/20V	0.1mV/1mV/0.01V	±(0.5%+2d)
	200V/600V	0.1V/1V	±(1.0%+2d)
AC Voltage (50/60Hz)	200V/600V	0.1V/1V	±(1.2%+10d)
DC Current	2000µA/20mA	1µA/0.01mA	±(1.0%+2d)
	200mA	0.1mA	±(1.2%+2d)
	10A	0.01A	±(2.0%+2d)
Resistance	200Ω/2000Ω/20kΩ/200kΩ	0.1Ω/1Ω/0.01kΩ/0.1kΩ	±(0.8%+2d)
	2000kΩ	1kΩ	±(1.0%+2d)
Battery test	9V	0.01V	±(1.0%+2d)
	1.5V	0.001V	±(1.0%+2d)
Diode test	open circuit voltage 2.8V DC		
Continuity check	<30Ω		
Power supply	1×9V 6F22 battery		
Dimension (LxWxH)	122×61×40mm		
Weight	150g		

STANDARD DELIVERY

Main unit	1 pc
Test lead	2 pcs
9V battery	1 pc

SMART DIGITAL MULTIMETER CODE 9247-190

- Automatically identify test modes for AC voltage/DC voltage/resistance/continuity
- NCV detection and judge the strength by light and buzzer
- Self-calibration when power on to ensure accuracy
- LIVE firewire recognition
- Display with backlight
- True RMS measurement
- Data hold
- Low battery indication
- Auto power off
- Safety rating: CAT III 600V



VIDEO



test leads (included)

STANDARD DELIVERY

Main unit	1 pc
Test lead	2 pcs
Battery (CR2032)	2 pcs

SPECIFICATION

Function	Range	Resolution	Accuracy
DC Voltage	60mV/600mV/6V/60V/600V	0.01mV/0.1mV/0.001V/0.01V/0.1V	±(0.5%+3)
AC Voltage	60mV/600mV/6V/60V/600V	0.01mV/0.1mV/0.001V/0.01V/0.1V	±(1.0%+3)
DC Current	6000µA/60mA/600mA	1µA/0.01mA/0.1mA	±(1.2%+5)
AC Current	6000µA/60mA/600mA	1µA/0.01mA/0.1mA	±(1.5%+5)
Resistance	600Ω/6kΩ/60kΩ/600kΩ	0.1Ω/0.001kΩ/0.01kΩ/0.1kΩ	±(1.0%+5)
	6MΩ/60MΩ	0.001MΩ/0.01MΩ	±(1.5%+3)
Capacitance	6nF/60nF/600nF/6µF/60µF/600µF	0.001nF/0.01nF/0.1nF/0.001µF/0.01µF/0.1µF	±(4.0%+5)
	6mF/60mF	0.001mF/0.01mF	±(5.0%+5)
Frequency	10Hz/100Hz/1000Hz/10kHz/100kHz/1000kHz	0.001Hz/0.01Hz/0.1Hz/0.001kHz/0.01kHz/0.1kHz	±(1.0%+5)
	10MHz	0.001MHz	±(3.0%+5)
Duty cycle	1~99%	0.1%	±(3.0%+5)
Diode measurement	open circuit voltage 2.0V		
Continuity measurement	<50Ω		
Power	2×3V CR2032 batteries		
Dimension (LxWxH)	133×68×18mm		
Weight	178g		



DIGITAL MULTIMETER (WITH JACK INDICATOR LIGHT) CODE 9246-180



- Jack indicator light: jacks flash green to indicate the corresponding jacks for test leads
- NCV detection and judge the strength by light and buzzer
- Self-calibration when power on to ensure accuracy
- LIVE firewire recognition
- Double color backlight (orange backlight prompts high voltage or current: the orange backlight automatically lights up when voltage is higher than 80V or the current is higher than 1A)
- Large range capacitance meter 100mF
- True RMS measurement
- Battery test function
- Max/Min mode
- Data hold
- Low battery indication
- Auto power off
- Safety rating: CAT III 1000V, CAT IV 600V



test leads (included)

STANDARD DELIVERY

Main unit	1 pc
Test lead	2 pcs
Battery (AA)	2 pcs

SPECIFICATION

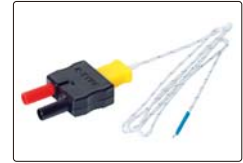
Function	Range	Resolution	Accuracy
DC Voltage	600mV/6V/60V/600V/1000V	0.1mV/0.001V/0.01V/0.1V/1V	±(0.5%+3)
AC Voltage	6V/60V/600V/750V	0.001V/0.01V/0.1V/1V	±(0.8%+5)
DC Current	60μA/60mA/600mA/10A	0.01μA/0.01mA/0.1mA/0.01A	±(1.2%+3)
AC Current	60mA/600mA/10A	0.01mA/0.1mA/0.01A	±(1.5%+3)
Resistance	600Ω/6kΩ/60kΩ/600kΩ	0.1Ω/0.001kΩ/0.01kΩ/0.1kΩ	±(1.0%+3)
	6MΩ/60MΩ	0.001MΩ/0.01MΩ	±(1.5%+3)
Capacitance	10nF/100nF/1000nF/10μF/100μF/1000μF	0.001nF/0.01nF/0.1nF/0.001μF/0.01μF/0.1μF	±(4.0%+5)
	10mF/100mF	0.001mF/0.01mF	±(5.0%+5)
Frequency	10Hz/100Hz/1000Hz/10kHz/100kHz/1000kHz	0.001Hz/0.01Hz/0.1Hz/0.001kHz/0.01kHz/0.1kHz	±(1.0%+3)
	10MHz	0.001MHz	±(3.0%+3)
Duty cycle	1~99%	0.1%	±(3.0%+3)
Diode measurement	forward DC current 2.5mA, reverse DC voltage 3.0V		
Continuity measurement	<30Ω		
Power	2x1.5V AA batteries		
Dimension (LxWxH)	188×88×50mm		
Weight	424g		

DIGITAL AC/DC CLAMP METER CODE 9315-CF210

- 4000 counts LCD display
- 30mm jaw opening
- True RMS measurement
- NCV detection
- REL (zero) function
- Data hold
- Low battery indication
- Auto power off
- Safety rating: CAT III 600V



test leads (included)



temperature probe and adapter (included)

SPECIFICATION

Function	Range	Resolution	Accuracy ("d" is the least reading)
AC Current (50/60Hz) *	40A	0.01A	$\pm(2.5\%+8d)$
	400A	0.1A	$\pm(2.8\%+5d)$
DC Current	40A	0.01A	$\pm(2.5\%+5d)$
	400A	0.1A	$\pm(2.8\%+5d)$
AC Voltage (50-400Hz) **	4V/40V/400V	0.001V/0.01V/0.1V	$\pm(1.5\%+5d)$
	600V	1V	$\pm(2.0\%+5d)$
DC Voltage	400mV	0.1mV	$\pm(0.8\%+2d)$
	4V/40V/400V	0.001V/0.01V/0.1V	$\pm(1.5\%+2d)$
	600V	1V	$\pm(2.0\%+2d)$
Resistance	400 Ω	0.1 Ω	$\pm(1.0\%+4d)$
	4k Ω /40k Ω /400k Ω	0.001k Ω /0.01k Ω /0.1k Ω	$\pm(1.5\%+2d)$
	4M Ω	0.001M Ω	$\pm(2.5\%+3d)$
	40M Ω	0.01M Ω	$\pm(3.5\%+5d)$
Capacitance	40nF	0.01nF	$\pm(4.0\%+20d)$
	400nF/4 μ F/40 μ F	0.1nF/0.001 μ F/0.01 μ F	$\pm(3.0\%+5d)$
	400 μ F	0.1 μ F	$\pm(4.0\%+10d)$
	4mF	0.001mF	$\pm(5.0\%+10d)$
Frequency	10Hz/100Hz/1kHz/10kHz	0.01Hz/0.1Hz/0.001kHz/0.01kHz	$\pm(1.2\%+2d)$
Duty cycle	0.5% to 99.0%	0.1%	$\pm(1.2\%+2d)$
Temperature (type-K)	-20°C to 760°C	1°C	$\pm(3.0\%+5^{\circ}\text{C})$
	-4°F to 1400°F	1°F	$\pm(3.0\%+9^{\circ}\text{F})$
Power supply	2x1.5V AAA batteries		
Dimension (LxWxH)	151x75x45mm		
Weight	255g		

STANDARD DELIVERY

Main unit	1 pc
Thermocouple adapter	1 pc
Temperature probe	1 pc
Battery (AAA)	2 pcs
Test lead	2 pcs

* All AC current/voltage ranges are specified from 5% to 100% of range

** AC voltage bandwidth: 50 to 400Hz (sine); 50 to 60Hz (all waves)

AC PHASE AND VOLTAGE DETECTOR CODE 9723-400

- Non-contact detection of phase sequence, high and low voltage, wire distinction
- Low battery indication
- Auto power off
- Flashlight

SPECIFICATION

Phase sequence detection	screen shows clockwise or counterclockwise
High and low voltage detection	beep: slow~fast backlight: green~red analog bar: low~high
Wire distinction	green backlight indicates neutral wire red backlight indicates live wire
Power supply	2×1.5V AAA batteries
Dimension	157×27×23mm
Weight	32g



DIGITAL VOLTAGE TESTER CODE 9721-250

- Direct AC test (contact): 12-250V
two way display: voltage displays on LCD screen and neon lamp lights up (when voltage>80V)
- Induction AC test (non-contact): 12-250V
to detect power source or recognize the phase line, ground line and break point
- Direct DC test (contact): 6-36V
instant sense and display
- Work without battery
- Tester tip: CRV material

SPECIFICATION

Range	AC: 12-250V; DC: 6-36V
Neon lamp life	30000 times
Dimension	133×21×19mm
Weight	22g



VOLTAGE TESTER CODE 9722-250

- Tester tip: CRV material

SPECIFICATION

Range	AC: 100-250V
Neon lamp life	30000 times
Dimension	145×Ø15mm
Weight	21g

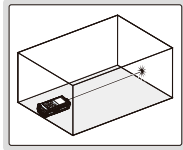


LASER DISTANCE METERS

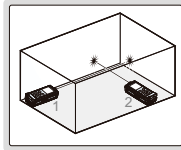
- High accuracy models: **9561-50B, 9561-70B**
- Low accuracy models: **9561-50B-F, 9561-70B-F**
- Large display with backlight
- Unit: m, ft, in, ft+in
- Distance, area, volume and height measurement
- Continuous measuring mode to track maximum and minimum value
- Memory of 30 measurement values
- Automatic power off: laser 30s, main unit 180s



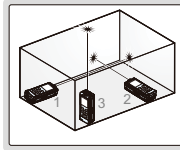
9561-50B



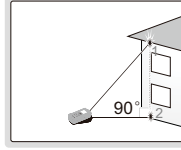
distance measurement



area measurement



volume measurement



height measurement

SPECIFICATION

Code	9561-50B	9561-70B	9561-50B-F	9561-70B-F
Measuring range	0.2~50m	0.2~70m	0.2~50m	0.2~70m
Resolution	0.001m, .001ft, 1/16"			
Accuracy	$\pm(3+D/20)$ mm D: measured distance, unit: m		$\pm(5+D/20)$ mm D: measured distance, unit: m	
Laser type	630~670nm, class II, <1mW			
Power supply	2×AAA batteries			
Dimension (L×W×H)	115×50×28mm			
Weight	95g			

STANDARD DELIVERY

Main unit	1 pc
Battery (AAA)	2 pcs

PORTABLE CONDUCTIVITY/TDS METER CODE 0411-0200

IP65
WATERPROOF



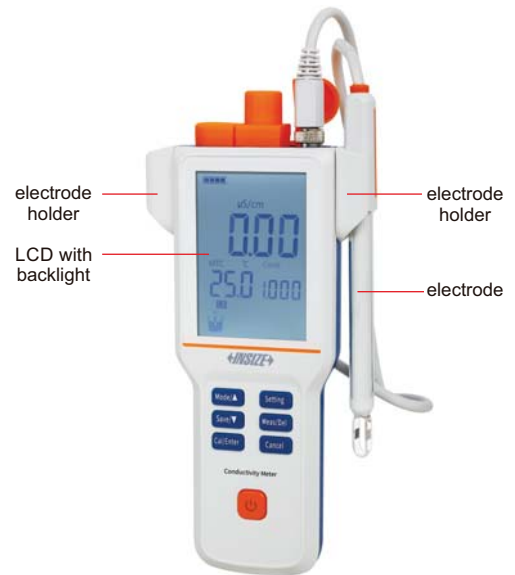
- Reading mode: auto-read and continuous-read
- Automatic/manual temperature compensation
- Auto-hold feature senses and locks the measurement endpoint
- Cell constant is settable
- 1 point calibration with standard recognition
- Data capacity up to 200 sets for each parameter
- IP65 dust/waterproof
- Auto power off



wristband (included)



standard solution (included)



electrode holder
LCD with backlight

electrode holder
electrode

SPECIFICATION

Conductivity	range	0.00μS/cm~200mS/cm
	resolution	0.01μS/cm minimum
	accuracy	±1.0%FS
	reference temperature	25°C/77°F
	calibration point	1
TDS	range	0.00mg/L~300g/L
	resolution	0.01mg/L minimum
	accuracy	±1.0%FS
Temperature	range	-5~110°C/23~230°F
	resolution	0.1°C/0.2°F
	accuracy	±0.2°C/±0.4°F
Input	electrode with 5-pin aviation connector	
Power supply	rechargeable battery	
Dimension	80×225×35mm	
Weight	400g	

STANDARD DELIVERY

Main unit	1 pc
Electrode	1 pc
Electrode holder	2 pcs
Wristband	1 pc
Silicone rubber case	1 pc
AC/DC adapter and charging cable	1 pc
Standard solution	1 bottle

IP65
WATERPROOF

PORTABLE pH METER
CODE 0431-0018



standard solution (included)



wristband (included)



KCl powder (included)

- Reading mode: auto-read and continuous-read
- Automatic/manual temperature compensation
- Auto-hold feature senses and locks the measurement endpoint
- 1 or 2 points calibration with standard recognition
- Data capacity up to 200 sets for each parameter
- IP65 dust/waterproof
- Auto power off



SPECIFICATION

pH	range	-2.00~18.00pH
	resolution	0.01pH
	accuracy	±0.01pH
	calibration point	1 or 2
	standard recognition	NIST pH buffers: 4.01, 7.00, 10.01
Voltage	range	-1999~1999mV
	resolution	1mV
	accuracy	±0.1%FS
Temperature	range	-5~110°C/23~230°F
	resolution	0.1°C/0.2°F
	accuracy	±0.2°C/±0.4°F
Inputs	pH electrode: BNC (Q9) temp. probe: 4-pin aviation connector	
Power supply	rechargeable battery	
Dimension	80×225×35mm	
Weight	400g	

STANDARD DELIVERY

Main unit	1 pc
Electrode	1 pc
Electrode holder	2 pcs
Wristband	1 pc
Silicone rubber case	1 pc
AC/DC adapter and charging cable	1 pc
Standard solution	3 bottles
KCl powder	1 bottle

SUITABLE FOR WATER
BASED COOLANT

DIGITAL REFRACTOMETER
CODE ISQ-DRM31

- Quickly measure the concentration of coolant
- Two measurement modes: single measurement and automatic average multiple measurement
- Two units: brix and refractive index
- Refer to the refraction factor of coolant, for example: the refraction factor of grinding emulsion is 2.1, the reading value is 6%, so the actual concentration is $(2.1 \times 6\%) = 12.6\%$
- Automatic power off

SPECIFICATION

Measuring range	0~50% (1.3330~1.4200RI)
Accuracy	±0.2% (±0.0003RI)
Resolution	0.1% (0.0001RI)
Power supply	1×AAA battery
Dimension	121×58×25mm
Weight	90g



25

STANDARD DELIVERY

Main unit	1 pc
Dropper	1 pc
Battery (AAA)	1 pc

dropper (included)



MINI DIGITAL REFRACTOMETER CODE 5801-A55

SUITABLE FOR WATER
BASED COOLANT

- Quickly measure the concentration of coolant
- Automatic temperature compensation
- Brix and refractive index can be displayed
- Refer to the refraction coefficient of coolant, for example: the refraction coefficient of grinding emulsion is 2.1, the reading value is 6%, so the actual concentration is $(2.1 \times 6\%) = 12.6\%$
- Automatic power off

SPECIFICATION

Measuring range	0~50% (1.3330~1.4200RI)
Accuracy	±0.2% (±0.0003RI)
Resolution	0.1% (0.0001RI)
Power supply	built-in 3.7V rechargeable lithium battery
Dimension	147×46×27mm
Weight	115g (including battery)

dropper (included)



STANDARD DELIVERY

Main unit	1 pc
Dropper	1 pc
Power adapter	1 pc

PORTABLE REFRACTOMETER CODE ISQ-RM30

SUITABLE FOR WATER
BASED COOLANT

- Quickly measure the concentration of coolant
- Refer to the refraction factor of coolant, for example: the refraction factor of grinding emulsion is 2.1, the reading value is 6%, so the actual concentration is $(2.1 \times 6\%) = 12.6\%$

SPECIFICATION

Measuring range	0~32%
Graduation	0.2%
Dimension	27×40×160mm
Weight	175g



DIGITAL STOPWATCH CODE DSW-A010

- Split time, total time and continuous time can be displayed
- 10 groups of results can be read out from memory after resetting
- Scroll back and forth to read out the memory digits
- The fastest, slowest and average time can be displayed
- Able to record the split times (00-199)

SPECIFICATION

Measuring range	0~9 hours, 59 minutes, 59.99 seconds	
Resolution	0.01s	
Accuracy	±0.5s	
Function	memory	10 groups
	timer	up to 10 hours
	time	12-hour or 24-hour time display, alarm can be set
Power supply	LR44 battery	
Screen dimension	33.6×13.6mm	
Dimension	76×63×16mm (metal case)	

STANDARD DELIVERY

Main unit	1 pc
String	1 pc

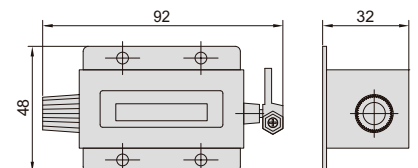


STROKE COUNTER CODE 7600-6

- Accumulate and record the number of mechanical movements
- Rotate back to zero

SPECIFICATION

Code	Number of digits	Range
7600-6	6	0-999999



Unit: mm

CAN BE CUSTOMIZED

BOURDON TUBE PRESSURE GAGES (LIQUID FILLED)

- Stainless steel case and bezel, copper alloy internals
- Shock-proof and pulse-proof
- Suitable for pneumatic systems, hydraulic systems and compressed air systems

Dial size	Ø63mm		
Process connection	1/4BSP	1/4ZG	1/4NPT
Connector location	bottom	bottom	bottom
Range (0~10bar/0~150psi)	5201-63B2Y10	5201-63Z2Y10	5201-63N2Y10

SPECIFICATION

Accuracy class	1.6
Ambient temperature	-20~60°C
Medium temperature	≤60°C



5201-63B2Y10

- Suitable for wood, smooth cement, hard gypsum, mixed mortar, brick, etc.
- Measure moisture, temperature and relative humidity
- Temperature type: ambient, dew point, wet bulb
- Maximum and minimum modes
- Automatic power off

SPECIFICATION

Measuring depth	0~50mm	
Measuring range	moisture	0~60%
	temperature	-10~50°C/14~122°F
	relative humidity	0~100%RH
Accuracy	moisture	±2%
	temperature	±2%
	relative humidity	±5%RH
Resolution	moisture	0.1%
	temperature	0.1°C/0.1°F
	relative humidity	0.1%RH
Sampling time	0.5s for moisture	
	1s for temperature and relative humidity	
Power supply	2×AAA batteries	
Dimension	130×56×29mm	
Weight	206g	

DIGITAL MOISTURE METER CODE 9341-50



STANDARD DELIVERY

Main unit	1 pc
Battery (AAA)	2 pcs

- Suitable for wood, gypsum and cement
- MAX/MIN/HOLD mode
- Alarm function
- Low battery indication
- Auto power off

SPECIFICATION

Measuring range	0~100%
Resolution	1%
Accuracy	±4%
Detection depth	20~40mm
Sampling time	0.5s
Battery	9V
Dimension	185×55×38mm
Weight	193g



INDUCTIVE MOISTURE METER CODE 0120-IM24

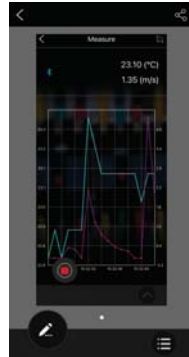
STANDARD DELIVERY

Main unit	1 pc
Battery	1 pc

ANEMOMETER CODE 0110-1125

- Measure air velocity and temperature
- Min/Max, data hold function
- Bluetooth 4.0
- Auto power off
- Supplied with APP for Apple and Android

App measurement



App record

No.	Data Value (°C)	Data Value (m/s)
1	23.10	0.22
2	23.10	0.00
3	23.00	0.00
4	23.10	4.39
5	23.10	1.85
6	23.00	1.06
7	23.00	0.72
8	23.00	0.44



SPECIFICATION

	Unit	Measuring range	Resolution	Accuracy
Air velocity	m/s	1.1~25.0	0.01	±(3%+0.3)
	km/h	4~90	0.1	±(3%+1)
	ft/min	220~4920	1	±(3%+40)
	MPH	2.5~56.0	0.1	±(3%+0.4)
	knots	2.2~48.0	0.1	
Air temperature	°C	0~50	0.1	±2
	°F	32~122	0.1	±4
Sensors	air velocity sensor, NTC-type precision thermistor			
Sampling time	0.5s			
Operation altitude	max 2000m			
Operation environment	0~50°C, 0~80%RH			
Storage environment	-10~60°C, 0~80%RH			
Auto power off	10 minutes			
Data port	bluetooth 4.0			
Power supply	9V			
Dimension	213×54×36mm			
Weight	172g			

STANDARD DELIVERY

Main unit	1 pc
Battery	1 pc

DIGITAL SOUND LEVEL METER (ADVANCED TYPE) CODE 9353-413

- Automatic range conversion
- Over range indicator
- Maximum mode
- Data hold
- AC signal output: 0.707Vrms, impedance approx. 100Ω
- DC signal output: 20mV/dB, impedance approx. 1kΩ



SPECIFICATION

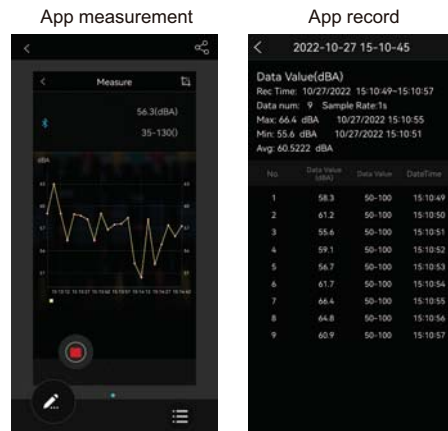
Measuring range	40dB~130dB (ref.20μPa)
Frequency	20Hz~12.5kHz
Resolution	0.1dB
Accuracy	IEC 61672-1:2013 Class 2
Frequency weighting	A weighting
Response time	fast (125ms), slow (1s)
Microphone	pre polarization condenser microphone
Refercner Direction	axial direction of condenser microphone
Power supply	4×1.5V AAA batteries
Dimension	210×68×27mm
Weight	240g

STANDARD DELIVERY

Main unit	1 pc
Battery (AAA)	4 pcs
Precision screwdriver	1 pc

SOUND LEVEL METER (BASIC TYPE) CODE 0010-A35

- Auto range selection
- Over range indication
- Display backlight
- Min/Max, data hold function
- Bluetooth 4.0
- Auto power off
- Supplied with APP for Apple and Android



SPECIFICATION

Frequency	31.5Hz~8KHz
Measuring range	35dB~130dB
Accuracy	±3.0dB (ref 94dB@1kHz)
Resolution	0.1dB
Frequency weighting	A and C
Display update	2 times/sec
Microphone	1/2 inch electret condenser microphone
Power supply	9V battery
Operation temperature and humidity	0°C~40°C/32°F~104°F, 10%RH~90%RH
Dimension	185×54×36mm
Weight	184g

STANDARD DELIVERY

Main unit	1 pc
Battery	1 pc
Windscreen	1 pc



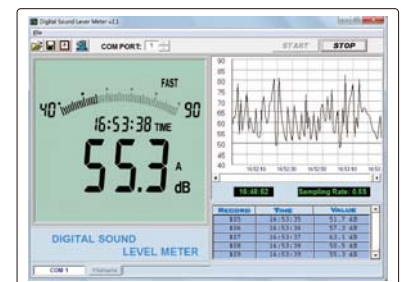
DATA
OUTPUT

- Automatically select best range: 30~80dB, 40~90dB, 50~100dB, 60~110dB, 70~120dB, 80~130dB
- Over range indicator
- Real time, average, maximum modes
- Memory 16000 measurement values
- AC signal output: 0.707 Vrms at FS, impedance approx. 600Ω
- DC signal output: 10mV/dB, impedance approx.100Ω
- Automatic power off

SPECIFICATION

Measuring range	30~130dB
Accuracy	±2dB
Resolution	0.1dB
Sampling time	0.5s for digital, 0.05s for analogue
Response time	fast: 125ms, slow: 1s
Frequency	30Hz~8KHz
Frequency weighting	A/C
Microphone	electret condenser type
Output	RS232, AC/DC
Power supply	6×AAA batteries
Dimension	265×80×69mm
Weight	317g

DIGITAL SOUND LEVEL METER CODE 9351-130



software (included), display measurement values and graph, save and output data

STANDARD DELIVERY

Main unit	1 pc
Software and RS232 cable	1 pc
Output connector	1 pc
Battery (AAA)	6 pcs



software flash disk (included)

LIGHT METER (BASIC TYPE) CODE 0130-L110

- Suitable for measuring illuminance in various occasions
- Data hold function
- Fast switching of measuring range, easy to operate

SPECIFICATION

Measuring range	1~1999Lux	10~19990Lux	100~100000Lux
Resolution	1Lux	10Lux	100Lux
Accuracy	$\pm(4\%+10d)$, range<10000Lux $\pm(5\%+10d)$, range \geq 10000Lux (d is resolution, calibrated with standard incandescent lamp at color temperature 2856K)		
Repeatability	±2%		
Sampling time	0.5s		
Operation environment	0~40°C, 0~70%RH		
Storage environment	-10~50°C, 0~80%RH		
Battery	9V		
Photodetector dimension	105×58×28mm		
Main unit dimension	130×72×30mm		
Weight	170g		



STANDARD DELIVERY

Main unit	1 pc
Battery	1 pc

LIGHT METER CODE 0131-A120

- Photosensor can rotate 90° clockwise and 180° counterclockwise
- Build-in calibration filters ensure the accuracy when working in different colors
- Data hold function
- Lux/FC unit switch
- Low battery warning

SPECIFICATION

Measuring range	0.1~199.9Lux	1~1999Lux	10~19990Lux	100~199900Lux
Resolution	0.1Lux	1Lux	10Lux	100Lux
Measuring range	0.01~19.99FC	0.1~199.9FC	1~1999FC	10~19990FC
Resolution	0.01FC	0.1FC	1FC	10FC
Accuracy	$\pm(4\%+10d)$, range<20000Lux/2000FC $\pm(5\%+10d)$, range \geq 20000Lux/2000FC (d is resolution, calibrated with standard incandescent lamp at color temperature 2856K)			
Repeatability	±2%			
Sampling time	0.5s			
Operation environment	0~40°C, 0~70%RH			
Storage environment	-10~50°C, 0~80%RH			
Battery	9V			
Dimension	185×68×38mm			
Weight	130g			



STANDARD DELIVERY

Main unit	1 pc
Battery	1 pc

DATA
OUTPUT



TESLAMETERS (GAUSSMETERS)

- Measure magnetic induction of DC magnetic field
- Directly display the N/S polarity of the measured magnetic field
- One-key zero function: eliminate the influence of zero drift before measurement
- Maximum value hold: record the maximum value of the changing magnetic field
- Unit switch between mT or G (1mT=10G)
- Auto ranging
- Built-in USB interface for data transmission
- Display with backlight
- Auto power off



axial probe (optional)



0501-MA01

radial probe
(included)

SPECIFICATION

Code	0501-MA01	0501-MA05
Range	2000mT	
Resolution	0.01mT (0~200mT) 0.1mT (200~2000mT)	
Accuracy	±1.0%	±2.0% (≤1000mT) ±5.0% (1000mT~2000mT)
Temperature coefficient	±0.1%/K	
Zero drift	±0.5mT/h	
Interface	USB	
Power supply	3×1.5V AA batteries or USB	
Dimension (L×W×H)	165×90×40mm	
Weight	350g	

STANDARD DELIVERY

Main unit	1 pc
Radial probe	1 pc
Battery (AA)	3 pcs

OPTIONAL ACCESSORY

Axial probe	0501-PA
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- Laser sensor, direct measurement, easy to use
- Two sensors: internal and external, external sensor is suitable for measurement in narrow spaces
- Automatic power off

SPECIFICATION

Measuring range	10~800Hz	
Input parameter range	maximum free belt length: 99.99m maximum belt weight: 9.999kg/m	
Accuracy	±5%	
Unit	N, lbf	
Measuring distance	3~20mm	
Operation temperature	10~50°C	
Power supply	4×1.5V AAA batteries	
Dimension	main unit	178×72×34mm
	external sensor	124×21×12mm
Weight	180g	

STANDARD DELIVERY

Main unit	1 pc
External sensor	1 pc



external sensor

internal sensor



LASER BELT TENSION METER CODE 5900-HZ18



Roundness Measuring Machines
Page 646-647



Precision Air Floating Rotary Tables
Page 648



Surface Profile Measuring Machines
Page 649-652



Roughness Testers
Page 651-665



Surface Roughness Specimens
Page 665-666

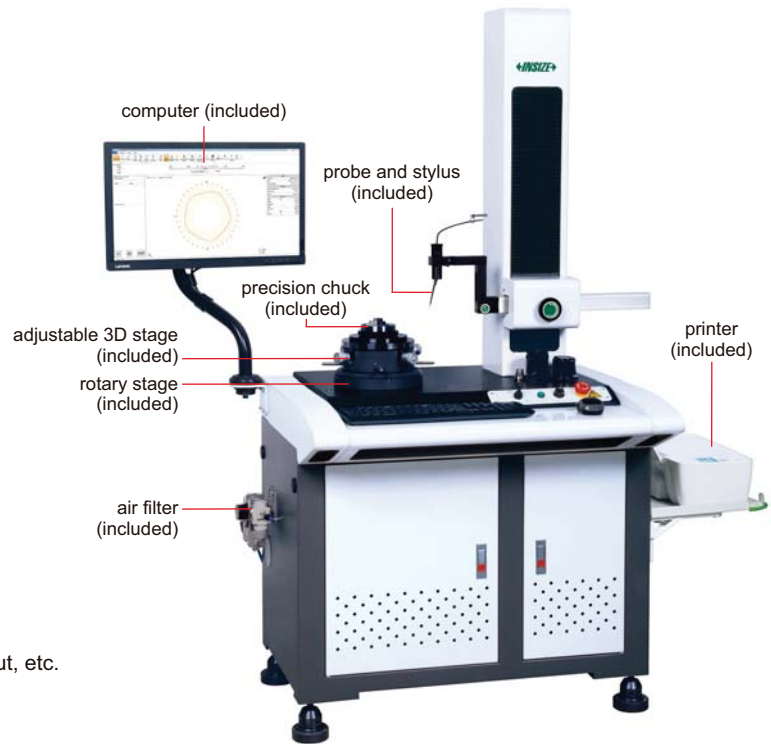


**Surface Roughness Reference
Specimens**
Page 667



ROUNDNESS MEASURING MACHINE CODE RCT-RA260

- Air-floating spindle
- Can measure roundness, coaxiality, concentricity, flatness, radial runout, axial runout, parallelism and perpendicularity.
- Spectrum analysis, automatic gap/burr removal, waveform analysis
- 4 roundness evaluation methods: smallest area method, least square method, smallest circumscribed circle method, largest inscribed circle method
- Measuring filer: 1-15 μ r, 1-50 μ r, 1-150 μ r, 1-250 μ r, 1-500 μ r, 15-100 μ r, 15-500 μ r, 2-15 μ r
- Filter form: gauss (ISO standard)
- Software is included, for measurement, analysis, data output, etc.

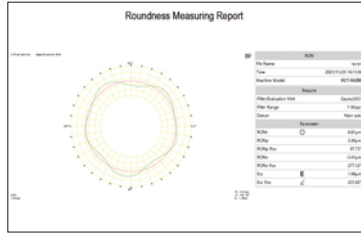


SPECIFICATION

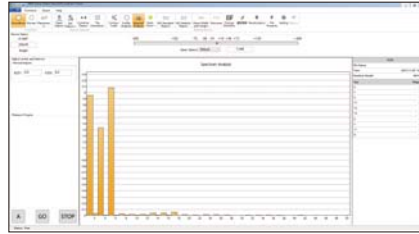
Probe	measuring range	$\pm 300\mu\text{m}$
	resolution	$0.001\mu\text{m}$
	linear accuracy	0.25%
Ruby stylus	size	$\varnothing 2 \times 10\text{mm}$
	direction	two directions
	adjustable angle	$\pm 45^\circ$
X axis	travel	165mm
	excess range	25mm
	drive mode	by hand
Z axis	drive mode	motor
	travel	320mm
	movement speed	0.5~10mm/s
Rotary stage	rotation accuracy	$(0.025+6H/10000)\mu\text{m}$ for $H \leq 20\text{mm}$, H is the measuring height in mm
	rotation speed	6rpm
	max. measuring diameter	260mm
	max. workpiece diameter (rotation diameter)	400mm
Rotary axis	radial rotation accuracy	$\pm 0.0125\mu\text{m}$
	axial runout accuracy	$\pm 0.05\mu\text{m}$
Adjustable 3D stage	diameter	180mm
	adjustment range of center	$\pm 3\text{mm}$
	adjustment range of level	$\pm 2^\circ$
	weight capacity	20kg
Granite stage		700×500mm
Precision chuck	external grip diameter	$\varnothing 1 \sim \varnothing 81\text{mm}$
	internal grip diameter	$\varnothing 31 \sim \varnothing 70\text{mm}$
Air filter	pressure range	0~0.8MPa
	oil mist removal accuracy	$0.01\mu\text{m}$
	export oil mist concentration	$0.5\text{mg}/\text{m}^3$
Dimension (L×W×H)		1300×795×1715mm
Power supply		220±10%V, 50Hz
Power		500W
Weight		320kg

To be continued

Continued from previous page



measurement



spectrum analysis

STANDARD DELIVERY

Main unit	1 pc
Probe (with ruby stylus)	1 pc each
Standard block	1 pc
Precision chuck	1 pc
Adjustable 3D stage	1 pc
Rotary stage	1 pc
Computer	1 pc
Software	1 set
Printer	1 pc
Air filter	1 set
Installation tools	1 set

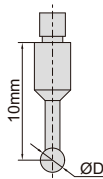


standard block (included)

OPTIONAL ACCESSORY

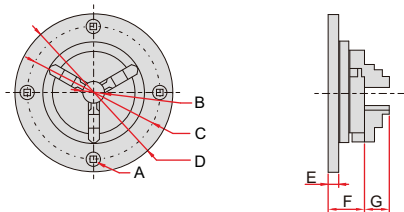
Probes	refer to details
Precision chucks	refer to details
Dryer	ISC-DRY

SPECIFICATION OF PROBES



Code	Diameter (ØD)	Remark
RCT-RA260-T1	2mm	included
RCT-RA260-T2	0.5mm	optional
RCT-RA260-T3	1mm	optional
RCT-RA260-T4	4mm	optional
RCT-RA260-T5	8mm	optional

SPECIFICATION OF PRECISION CHUCKS



(mm)

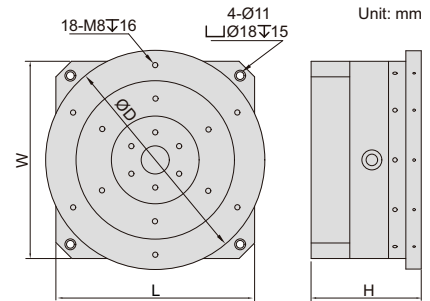
Code	A	B	C	D	E	F	G	Clamping range		Remark
								external grip dia.	internal grip dia.	
RCT-RA260-C1	M5x0.8	16	100	118	8	28	13	Ø0.8~63	Ø23~58	optional
RCT-RA260-C2	M6x1.0	20	116	143	10.5	37	15	Ø1~81	Ø31~70	included
RCT-RA260-C3	M6x1.0	26	140	168	10	39	19	Ø1~100	Ø36~90	optional



PRECISION AIR FLOATING ROTARY TABLES



6875-320



air filter (included)



- Manual rotation
- Optional accessory:
high precision digital indicators (code 2133 series),
hydraulic universal magnetic stands (code 6274 series)

Code	Stage size ØD	Max. RPM	Air supply pressure	Max. load	Radial stiffness	Axial stiffness	Radial runout	Axial runout	L×W×H
6875-320	320mm	500rpm	5-6bar	100kg	250N/μm	500N/μm	<0.3μm	<0.3μm	272x272x161mm
6875-400	400mm	500rpm	5-6bar	100kg	250N/μm	500N/μm	<0.3μm	<0.3μm	272x272x161mm
6875-500	500mm	500rpm	5-6bar	100kg	250N/μm	500N/μm	<0.3μm	<0.3μm	272x272x191mm

Standard glass hemisphere (optional)

Code	Roundness
6875-BALL*	0.05μm

*To check the accuracy of rotary table



6875-BALL



6875-CLAMP

Clamp for glass hemisphere (optional)

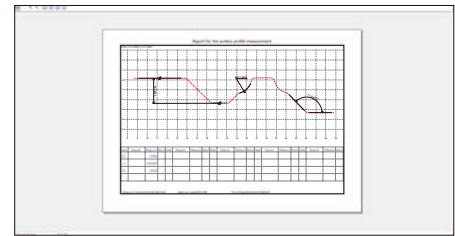
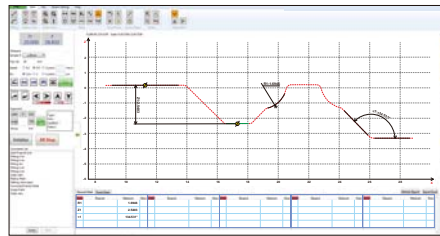
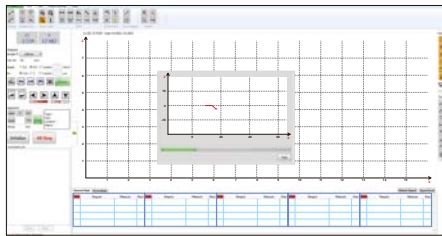
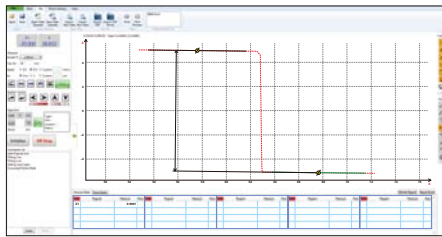
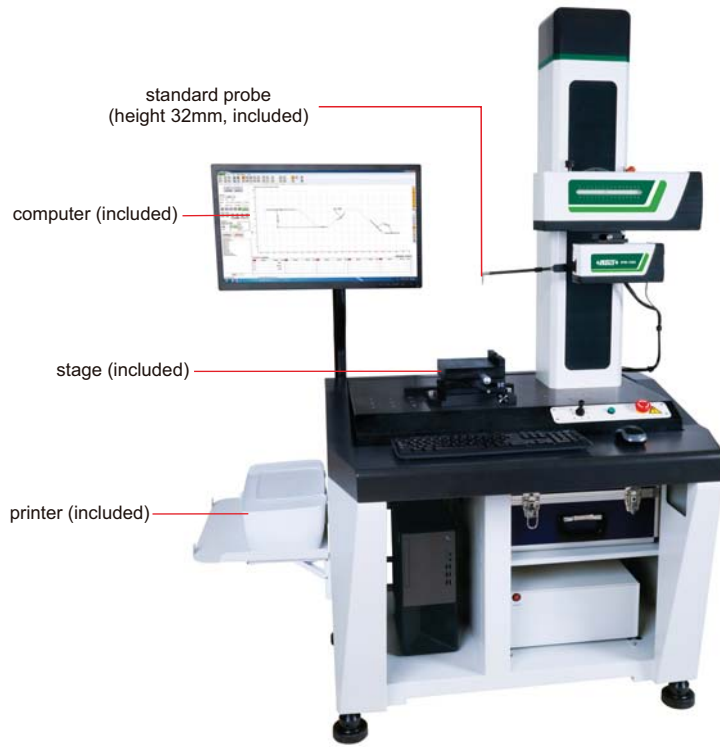
Code
6875-CLAMP

application



SURFACE PROFILE MEASURING MACHINE CODE SPM-1000

- Software is included, for surface profile measurement and data output
- Probe compensation
- Output as format txt, csv, etc.
- Large range design, the leverage ratio is 1:2.2, maintain the original accuracy of the sensor
- The overall structure of the Z-axis sensor does not have any elastic components, ensuring the measuring force is constant regardless the position of probe



SPECIFICATION

X axis measuring range	140mm
X axis resolution	0.2 μ m
X axis straightness	0.8 μ m/100mm
X axis moving speed	0.1~10mm/s
Z axis measuring range	\pm 20mm
Z axis resolution	0.05 μ m
Z axis moving speed	0.5~10mm/s
Linear accuracy	$\pm(1.5+ 0.2H)\mu$ m, H is measuring height in mm
Angular measuring accuracy	$\pm 2'$
Arc measuring accuracy	$\pm(2+R/8)\mu$ m, R is 2~10mm standard ball
Radius of probe tip	25 μ m
Moving direction	backward
Measuring force	6.86~9.8mN
Measuring unit	mm/inch
Traceable angle	72° (upward), 87° (downward)
Drive mode	motor
Travel of Z axis	430mm
Dimension (L×W×H)	1200×700×1780mm
Power supply	220 \pm 5%V, 50Hz
Weight	320kg

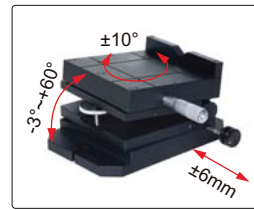


To be continued

Continued from previous page

STANDARD DELIVERY

Main unit	1 pc
Standard probe and arm	1 pc of each
Standard block	2 pcs
Standard ball	2 pcs
Standard shaft	1 pc
Stage	1 pc
Vise	1 pc
Measuring arm	1 pc
Computer	1 pc
Measurement software	1 pc
Printer	1 pc
Installation tools	1 set



stage (included)



vise (included)

OPTIONAL ACCESSORY

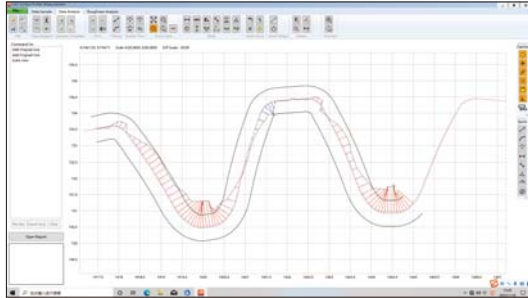
Probe and arm	refer to details
---------------	------------------

SPECIFICATION OF PROBES AND ARMS

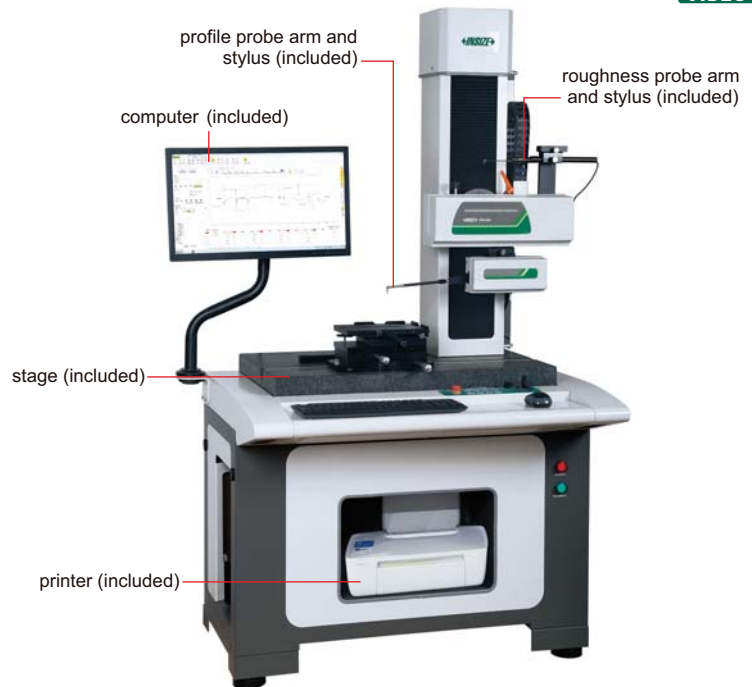
Unit: mm

<p>chisel probes</p> <p>code SPM-1000-T01 (H=32mm, included) code SPM-1000-T02 (H=48mm, optional) code SPM-1000-T03 (H=68mm, optional)</p>	<p>cone probes</p> <p>code SPM-1000-Z01 (H=32mm, optional) code SPM-1000-Z02 (H=48mm, optional) code SPM-1000-Z03 (H=68mm, optional)</p>	<p>ball probes</p> <p>code SPM-1000-R01 (H=32mm, optional) code SPM-1000-R02 (H=48mm, optional) code SPM-1000-R03 (H=68mm, optional)</p>
<p>standard arm, code SPM-1000-SP (included), probe is not included</p>		<p>arm for small holes, code SPM-1000-SBP (optional), probe is included</p> <p>measure the contour of holes with diameter > Ø8mm</p>
<p>transverse arm, code SPM-1000-LP (optional), probe is included</p> <p>measure the contour of holes in radial direction</p>		

ROUGHNESS AND PROFILE MEASURING MACHINE CODE SPM-2000



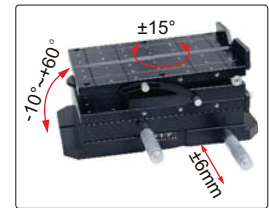
CAD profile comparison



- Software is included, for measurement and data output
- Profile sensor with low noise
- Wide range roughness sensor without skid
- Meet ISO1997, ISO1984, BS1988, DIN1990, ASME1995, JIS1982, JIS1994 standards
- 65 roughness parameters

PROFILE MEASUREMENT SPECIFICATION

X axis measuring range	140mm
X axis resolution	0.2 μ m
X axis traverse speed	0.05~15mm/s
Z axis measuring range	50mm
Z axis resolution	0.05 μ m
Z axis traverse speed	0.2~15mm/s
Straightness	0.5 μ m/100mm
Linear accuracy	$\pm(0.8+ 0.15H)\mu$ m, H is measuring height in mm
Angular measuring accuracy	$\pm 1'$
Arc measuring accuracy	$\pm(1.5+R/12)\mu$ m, R is 2~10mm standard ball
Measuring unit	μ m/ μ in
Measuring speed	0.05~1mm/s
Traceable angle	72° (upward), 88° (downward)
Travel of Z axis	430mm
Power supply	220 \pm 5%V, 50Hz
Dimension (L×W×H)	1400×850×1780mm
Weight	350kg



stage (included)



vise (included)



standard shaft (included)



standard blocks (included)



standard balls (included)

ROUGHNESS MEASUREMENT SPECIFICATION

Roughness parameters	Ra, Rp, Rv, Rz, Rz (JIS), R3z, Rz (DIN), Rzj, Rmax, Rc, Rt, Rq, Rsk, Rku, Rsm, Rs, PΔq, Rk, Rpk, Rvk, Mr1, Mr2, Rmr
Waviness parameters	Wa, Wt, Wp, Wv, Wz, Wq, Wsm, Wsk, Wku, Wmr
Primary profile parameters	Pa, Pt, Pp, Pv, Pz, Pq, Psm, Psk, Pku, Pmr
Measuring range	$\pm 420\mu$ m
Resolution	0.001 μ m
Linear accuracy	$\leq \pm(5nm+2.8\%)$
Probe radius/angle	5 μ m/90°
Cut off	0.025/0.08/0.25/0.8/2.5/8mm
Number of cut-offs	2~7
Measuring unit	μ m
Measuring speed	0.05~0.25mm/s

To be continued

Continued from previous page

STANDARD DELIVERY

Main unit	1 pc
Calibration block	1 set
Roughness probe arm	1 pc
Roughness stylus	1 pc
Profile probe arm	1 pc
Profile chisel stylus	1 pc
Stage	1 set
Vise	1 set
Computer	1 pc
Software	1 set
Printer	1 pc
Installation tools	1 set

OPTIONAL ACCESSORY

Probe and arm	refer to details
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SPECIFICATION OF ROUGHNESS PROBE

standard arm, code SPM-2000-P (included), probe is included

Unit: mm

small roughness arm, code SPM-2000-P1 (optional), probe is included

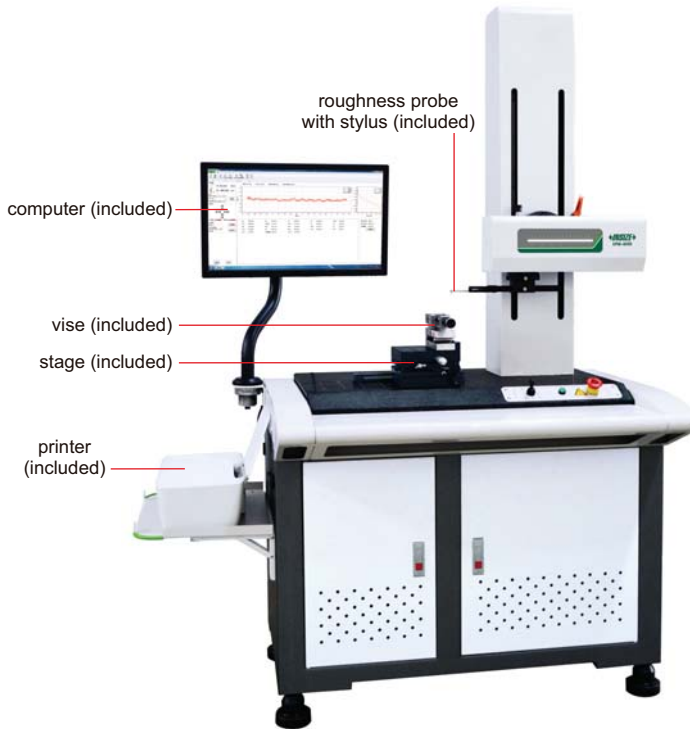
Unit: mm

SPECIFICATION OF PROBES AND ARMS

Unit: mm

<p>chisel probes</p> <p>code SPM-1000-T01 (H=32mm, included) code SPM-1000-T02 (H=48mm, optional) code SPM-1000-T03 (H=68mm, optional)</p>	<p>cone probes</p> <p>code SPM-1000-Z01 (H=32mm, optional) code SPM-1000-Z02 (H=48mm, optional) code SPM-1000-Z03 (H=68mm, optional)</p>	<p>ball probes</p> <p>code SPM-1000-R01 (H=32mm, optional) code SPM-1000-R02 (H=48mm, optional) code SPM-1000-R03 (H=68mm, optional)</p>
<p>standard arm, code SPM-1000-SP (included), probe is not included</p>	<p>arm for small holes, code SPM-1000-SBP (optional), probe is included</p> <p>measure the contour of holes with diameter > Ø8mm</p>	
<p>transverse arm, code SPM-1000-LP (optional), probe is included</p> <p>measure the contour of holes in radial direction</p>		

ROUGHNESS MEASURING MACHINE CODE SPM-4000



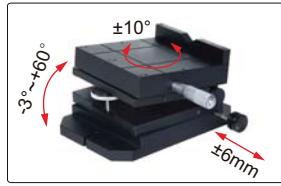
- Skidless probe
- Hundreds of parameters can be evaluated, such as roughness profile, waviness profile, primary profile, etc.
- Software is included, for measurement and data output

SPECIFICATION

Roughness parameters	Ra, Rp, Rv, Rz, Rz (JIS), R3z, Rz (DIN), Rzj, Rmax, Rc, Rt, Rq, Rsk, Rku, Rsm, Rs, RΔq, Rk, Rpk, Rvk, Mr1, Mr2, Rmr
Waviness parameters	Wa, Wt, Wp, Wv, Wz, Wq, Wsm, Wsk, Wku, Wmr
Primary profile parameters	Pa, Pt, Pp, Pv, Pz, Pq, Psm, Psk, Pku, Pmr
X axis measuring range	100mm
X axis resolution	0.2μm
X axis straightness	0.5μm/100mm
X axis moving speed	0.1~10mm/s
Z axis measuring range	±420μm
Z axis resolution	0.001μm
Z axis linear accuracy	±(7nm+3.5%)
Z axis moving speed	0.5~10mm/s
Z axis repeatability	1δ≤2nm
Radius/angle of stylus	5μm/90°
Cut off length	0.025/0.08/0.25/0.8/2.5/8mm
Number of cut-offs	2~7
Measuring unit	μm
Drive mode	motor
Travel of Z axis	320mm
Dimension (LxWxH)	1200×700×1780mm
Power supply	220±5%V, 50Hz
Weight	320kg

To be continued

Continued from previous page



stage (included)



vise (included)



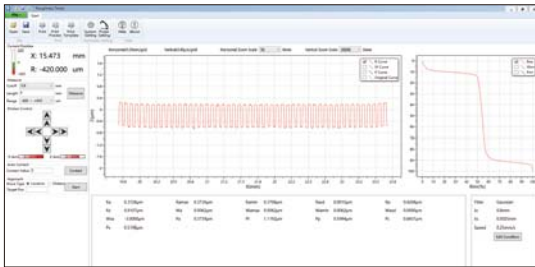
calibration block (included)



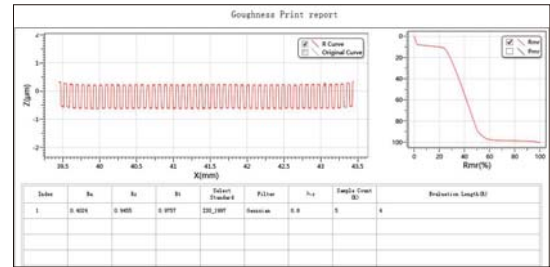
calibration



measurement



parameter measurement



data output

STANDARD DELIVERY

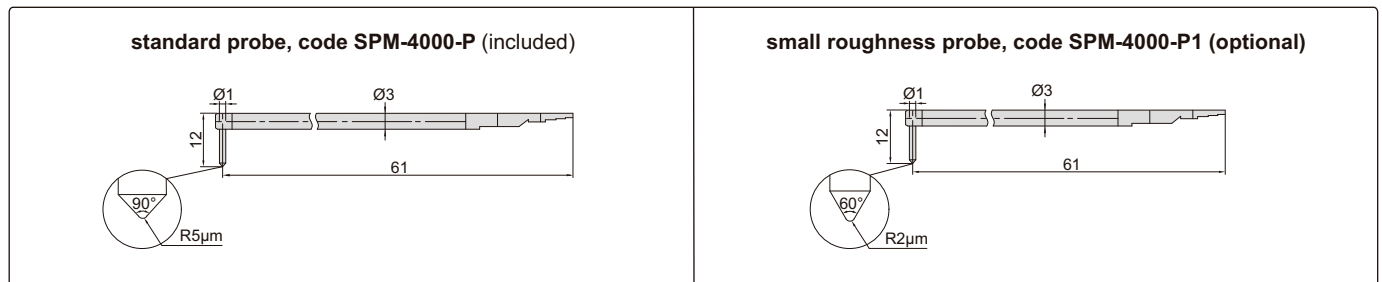
Main unit	1 pc
Roughness probe (with stylus)	1 pc
Calibration block	1 pc
Stage	1 pc
Vise	1 pc
Computer	1 pc
Software	1 set
Printer	1 pc
Installation tools	1 set

OPTIONAL ACCESSORY

Small roughness probe	refer to details
-----------------------	------------------

SPECIFICATION OF ROUGHNESS PROBE

Unit: mm



ROUGHNESS TESTER (COMPACT TYPE) CODE ISR-C200

INSIZE PLUS
MADE IN EUROPE

BLUETOOTH

DATA
OUTPUT

PROBE CAN BE CHANGED



- The product is light, reliable and durable
- 13 roughness parameters
- Can be operated by mobile phones (only Android system) or computers
- Measurement results can be exported in Excel and PDF format
- Memory of 18000 measurements with only parameters or 30 measurements with graph
- Automatic power off



probe can be set at 90°,
for transverse measurement



probe cover (included)



adjustable stand (included)

Parameter	Value	Tol.
Ra	3.423 µm	
Rq	3.932 µm	
Rt	13.277 µm	
Rz	13.090 µm	
Rc	12.463 µm	
Rmax	13.277 µm	
RSm	95.4 µm	
RPC_max	105 /cm	

measuring software (included), connect to mobile phones via bluetooth (only Android system) to control roughness tester, or connect to computers via USB cable or bluetooth to control roughness tester, display roughness values and curve, results can be exported in Excel and PDF format

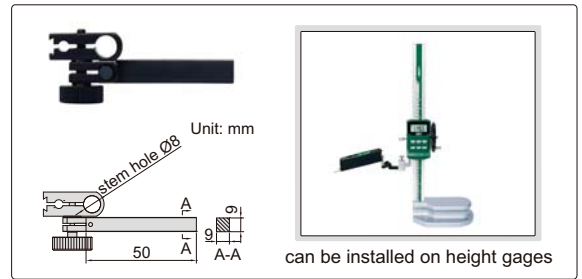
To be continued

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magnetic stand adapter (included)



dial test indicator holder (optional)



SPECIFICATION

Parameters		Ra, Rq, Rt, Rz, Rc, Rmax, RSm, Rpc, Pt, R, AR, Rx, Ppc
Range	X axis	17.5mm
	Z axis	250µm
Accuracy		±(5%+0.025)µm
Resolution (Ra)		0.001µm
Probe	type	inductive
	stylus radius/angle	2µm/90°
	stylus material	diamond
Measuring unit		µm/µin
Cut off		0.25/0.8/2.5mm
Number of cut-off		1~5
Moving speed		0.5mm/s, 1mm/s
Memory		18000 measurements with only parameters, 30 measurements with graph
Power		built-in rechargeable battery
Dimension (L×W×H)		160×34×33.5mm
Weight		200g

STANDARD DELIVERY

Main unit	1 pc
Standard probe	1 pc
Calibration block	1 pc
Adjustable stand	1 pc
Probe cover	1 pc
Magnetic stand adapter	1 pc
Software and USB cable	1 pc
AC/DC adapter	1 pc

OPTIONAL ACCESSORY

Dial test indicator holder	6293-6
Groove probe	ISR-C200-SB21
Small hole probe	ISR-C200-SB31
Deep groove probe	ISR-C200-SB121
Extension rod	ISR-C200-ER50
Extension rod	ISR-C200-ER100

SPECIFICATION OF PROBES

Unit: mm

<p>standard probe (included)</p> <p>measurement for plane surfaces, also transverse measurement for plane surfaces, cylinders and grooves</p>	<p>groove probe (optional), code ISR-C200-SB21</p> <p>measure plane surfaces and grooves</p>
<p>small hole probe (optional), code ISR-C200-SB31</p> <p>measure holes with diameter > Ø4mm and depth < 20mm</p>	<p>deep groove probe (optional), code ISR-C200-SB121</p> <p>measure grooves with depth < 20mm</p>
<p>extension rod (optional), code ISR-C200-ER50</p> <p>for long holes</p>	<p>extension rod (optional), code ISR-C200-ER100</p> <p>for long holes</p>

ROUGHNESS TESTER CODE ISR-C002

BLUETOOTH

DATA
OUTPUT

CAN BE OPERATED BY
MOBILE PHONES OR COMPUTERS

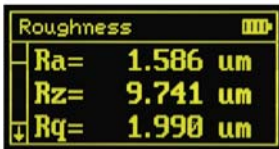


- Roughness tester can be operated by mobile phones (only Android system) or computers
- Data can be sent to Excel by connecting to computers via bluetooth or SPC cable
- Support bluetooth printer
- 21 roughness parameters
- Display roughness value, profile and curve
- Memory of maximum 100 results
- Automatic power off



software flash disk (included)

screen display



measurement result



roughness profile



Rmr analysis

probe cover (included)



put the small workpieces directly under the probe for measurement



adjustable stand (included)



operate roughness tester by mobile phones



connect to mobile phones via bluetooth (only Android system), display roughness values, profile and curve

operate roughness tester by computers



connect to computers via USB cable (software is included), display roughness values, profile and curve

data can be sent to Excel by connecting to computer via bluetooth or SPC cable

via bluetooth

receiver (optional)



via SPC cable

SPC cable (optional)



receiver (optional)



bluetooth printer (optional)



To be continued

Continued from previous page

Unit: mm

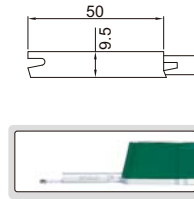
light duty test stand (optional)



heavy duty test stand (optional)



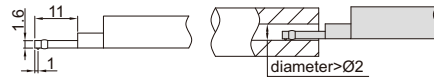
extension rod (optional), code ISR-C002-ER



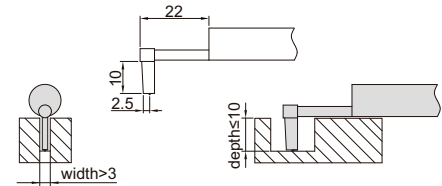
transverse rod (optional), code ISR-C002-TR



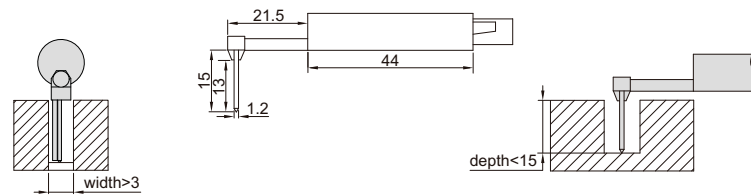
tiny hole probe (optional), code ISR-C002-SBP



deep groove probe (optional), code ISR-C002-DGP



deep groove probe (optional), code ISR-C002-DGP1



SPECIFICATION

Parameters	Ra, Rz, Rq, Rv, Rp, RS, R3z, R3y, Rt, Rz (JIS), Rk, Rku, Rsm, Rpc, Rpk, Rvk, Rsk, Mr1, Mr2, Ry (JIS), Rmax	
Range	320µm (-160µm~160µm)	
Accuracy	±10%	
Resolution (Ra)	0.001µm	
Probe	type	inductive
	stylus radius/angle	5µm/90°
	stylus material	diamond
Measuring force	4mN	
Measuring unit	µm/µin	
Cut off	0.25/0.8/2.5mm	
Number of cut-off	1 to 5	
Moving speed	0.5mm/s, 1mm/s	
Memory	100 measurement results	
Output	bluetooth and USB	
Power	built-in rechargeable battery	
Dimension (L×W×H)	141×55×40mm	
Weight	400g	

STANDARD DELIVERY

Main unit	1 pc
Standard probe	1 pc
Calibration block and support	1 pc of each
Adjustable stand	1 pc
Probe cover	1 pc
Software and USB cable	1 pc
AC/DC adapter	1 pc

OPTIONAL ACCESSORY

Extension rod	ISR-C002-ER
Transverse rod	ISR-C002-TR
Tiny hole probe	ISR-C002-SBP
Deep groove probe	ISR-C002-DGP
Deep groove probe	ISR-C002-DGP1*
Light duty test stand	ISR-C002-STAND1
Heavy duty test stand	ISR-C002-STAND
Bluetooth printer	ISR-C002-PRINTER
Receiver	ISR-C300-RECEIVER
SPC cable	ISR-C300-SPC

*Need to be delivered with roughness tester ISR-C002

ROUGHNESS TESTER (SEPARABLE TYPE) CODE ISR-C300

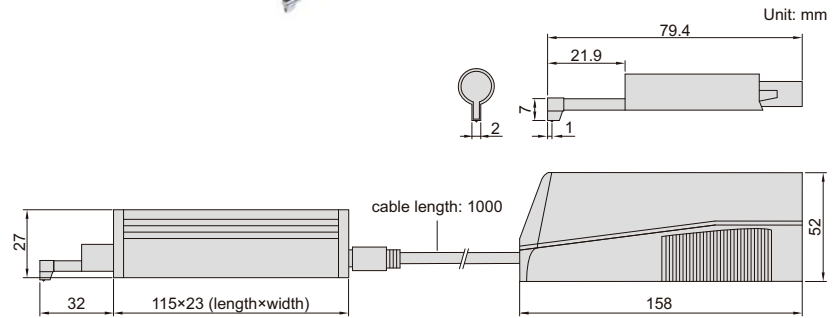
BLUETOOTH

TOUCH SCREEN

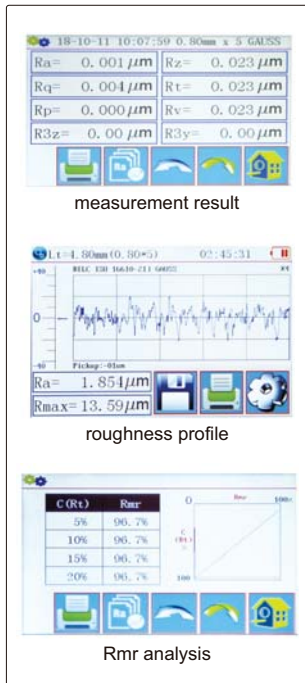
CAN BE OPERATED BY
COMPUTERS OR MOBILE PHONES

DATA
OUTPUT

- Roughness tester can be operated by mobile phones (only Android system) or computers
- Data can be sent to Excel by connecting to computers via bluetooth or SPC cable
- Support bluetooth printer
- 22 roughness parameters
- Meet ISO, DIN, ANSI, JIS standards
- Display roughness values, profile and curve
- Memory of maximum 100 data and waveform
- Built-in lithium battery, working time more than 50 hours
- Touch screen
- Automatic power off



roughness tester screen display



software flash disk (included)

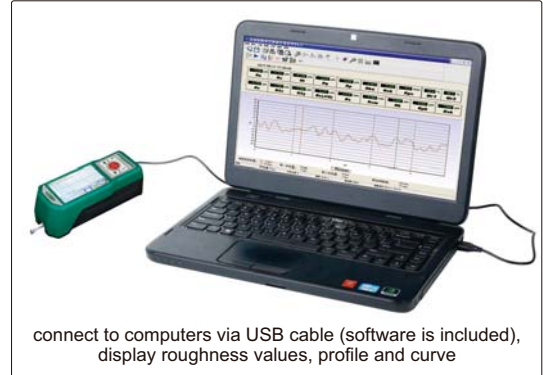
probe and main unit can be combined together



operate roughness tester by mobile phones



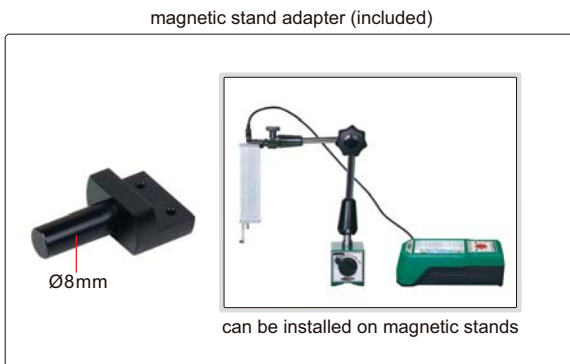
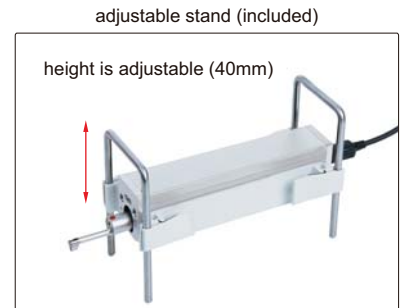
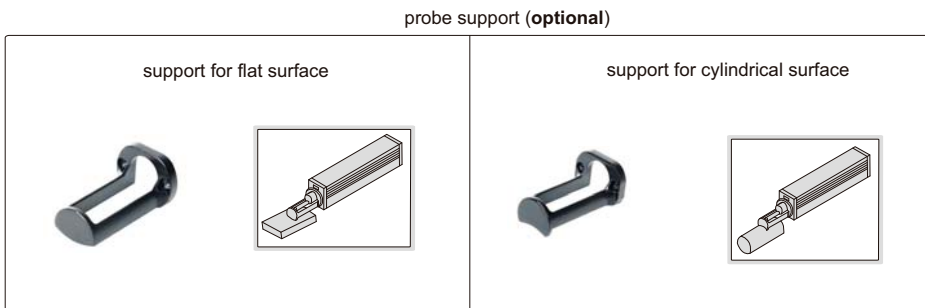
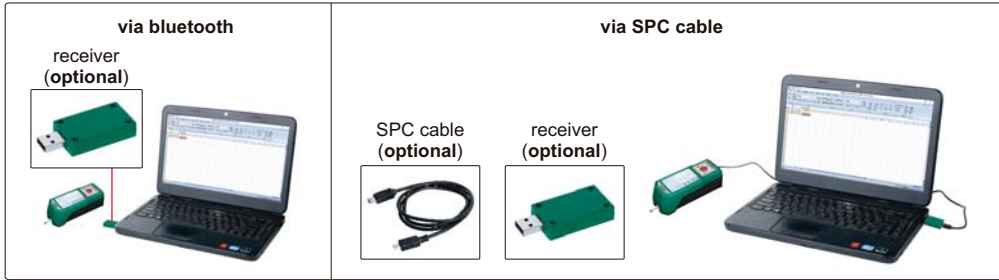
operate roughness tester by computers



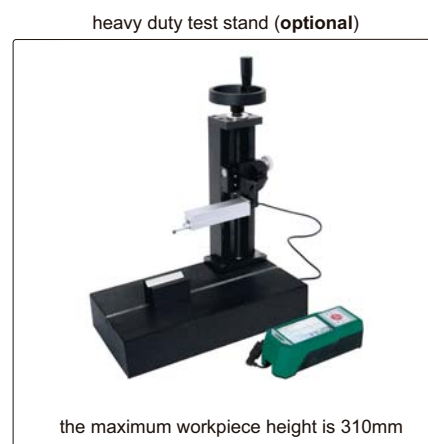
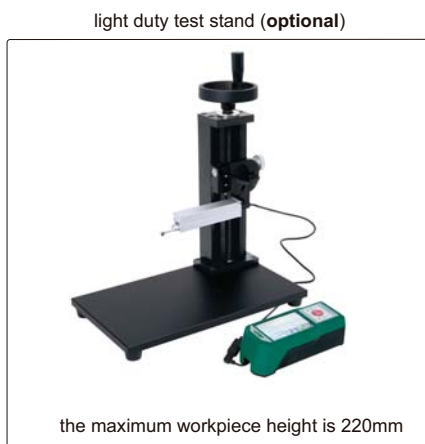
To be continued

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data can be sent to Excel by connecting to computer via bluetooth or SPC cable



NOTE: Please check whether the adapter can fit your height gages. When using **INSIZE** height gages, please use the dial test indicator holder of height gages

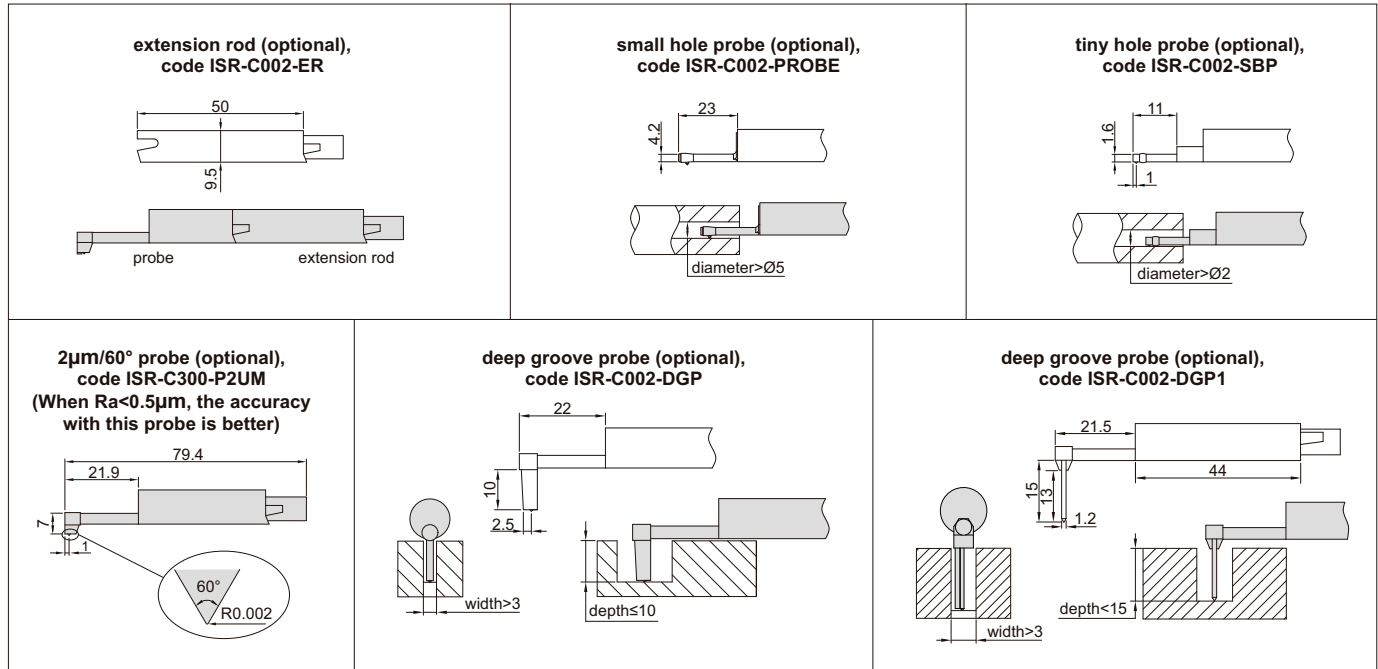


To be continued

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optional probes

Unit: mm



SPECIFICATION

Parameters		Ra, Rz, Rq, Rv, Rp, Rs, R3z, R3y, Rt, Rc, Rz (JIS), Rk, Rku, Rsm, Rpc, Rpk, Rvk, Rsk, Mr1, Mr2, Ry, Rmax
Range	X axis	17.5mm
	Z axis	320µm (-160µm~160µm)
Accuracy		±10%
Resolution (Ra)		0.001µm
Probe	type	inductive
	stylus radius/angle	5µm/90°
	stylus material	diamond
Measuring force		4mN
Measuring unit		µm/µin
Cut off		0.25/0.8/2.5mm
Number of cut-offs		1~5
Moving speed		0.135mm/s, 0.5mm/s, 1mm/s
Memory		100 measurement results
Output		USB and bluetooth
Power		built-in rechargeable battery
Dimension (L×W×H)		158×64×52mm
Weight		400g

STANDARD DELIVERY

Main unit	1 pc
Standard probe	1 pc
Calibration block and support	1 pc of each
Connecting cable (long and short)	1 pc of each
Magnetic stand adapter	1 pc
Adjustable stand	1 pc
Touch pen	1 pc
Software and USB cable	1 pc
AC/DC adapter	1 pc

OPTIONAL ACCESSORY

Extension rod	ISR-C002-ER
Small hole probe	ISR-C002-PROBE
Tiny hole probe	ISR-C002-SBP
Deep groove probe	ISR-C002-DGP
Deep groove probe	ISR-C002-DGP1*
2µm/60° probe	ISR-C300-P2UM
Bluetooth printer	ISR-C002-PRINTER
Height gage adapter	ISR-C300-LB1
Receiver	ISR-C300-RECEIVER
SPC cable	ISR-C300-SPC
Support for flat surface	ISR-C300-COVER1
Support for cylindrical surface	ISR-C300-COVER2
Light duty test stand	ISR-C002-STAND1
Heavy duty test stand	ISR-C002-STAND

*Need to be delivered with roughness tester ISR-C300

DATA OUTPUT

BLUETOOTH

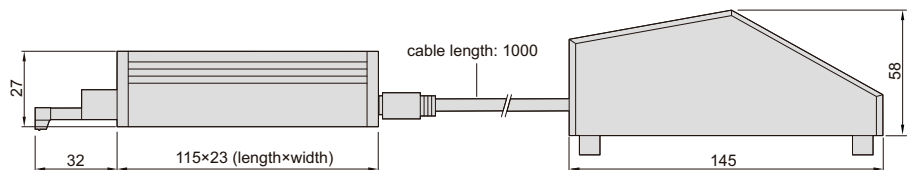
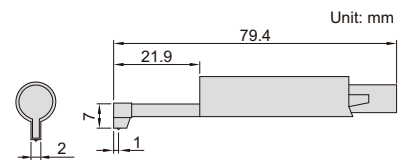
TOUCH SCREEN

CAN BE OPERATED BY MOBILE PHONES OR COMPUTERS

ROUGHNESS TESTER CODE ISR-T120



- Roughness tester can be operated by mobile phones (only Android system) or computers
- Data can be sent to Excel by connecting to computers via bluetooth or SPC cable
- Built-in printer can print measurement results and graphics
- 22 roughness parameters
- Meet ISO, DIN, ANSI, JIS standards
- Display roughness values, profile and curve
- Memory of maximum 100 data and waveform
- Built-in lithium battery, working time more than 50 hours
- Automatic power off



roughness tester screen display

measurement result

Ra = 0.001 μm	Rz = 0.023 μm
Rq = 0.004 μm	Rt = 0.023 μm
Rp = 0.000 μm	Rv = 0.023 μm
R3z = 0.00 μm	R3y = 0.00 μm

roughness profile

Rmr analysis

C(Rt)	Rmr	C
5%	96.7%	C (Rt)
10%	96.7%	
15%	96.7%	
20%	96.7%	

operate roughness tester by mobile phones




connect to mobile phones via bluetooth (only Android system), display roughness values, profile and curve

operate roughness tester by computers

connect to computers via USB cable (software is included), display roughness values, profile and curve

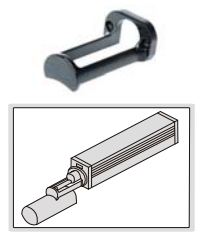
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data can be sent to Excel by connecting to computer via bluetooth or SPC cable

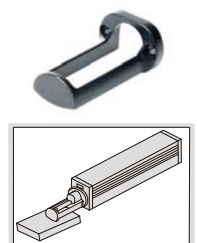
<p>via bluetooth</p> <p>receiver (optional)</p> 	<p>via SPC cable</p> <p>SPC cable (optional)</p>  <p>receiver (optional)</p> 
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probe support (optional)


support for cylindrical surface




support for flat surface



height gage adapter (optional)




9×9mm




can be installed on height gages

magnetic stand adapter (included)



Ø8mm

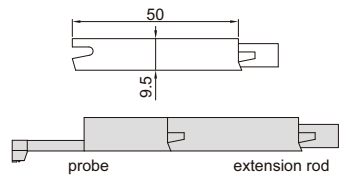
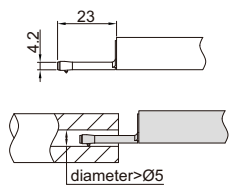
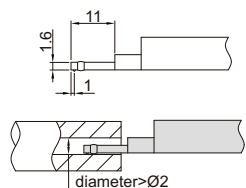
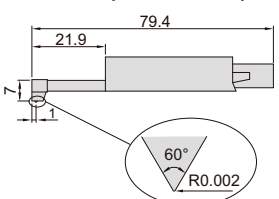
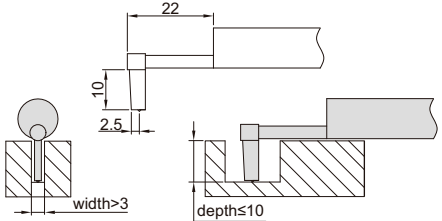
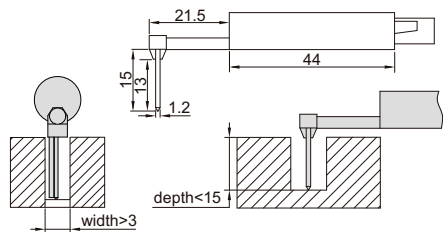


can be installed on magnetic stands

NOTE: Please check whether the adapter can fit your height gages. When using **INSIZE** height gages, please use the dial test indicator holder of height gages

optional probes

Unit: mm

<p>extension rod (optional), code ISR-C002-ER</p>  <p>probe extension rod</p>	<p>small hole probe (optional), code ISR-C002-PROBE</p>  <p>diameter > Ø5</p>	<p>tiny hole probe (optional), code ISR-C002-SBP</p>  <p>diameter > Ø2</p>
<p>2µm/60° probe (optional), code ISR-C300-P2UM (When Ra<0.5µm, the accuracy with this probe is better)</p> 	<p>deep groove probe (optional), code ISR-C002-DGP</p>  <p>width > 3 depth ≤ 10</p>	<p>deep groove probe (optional), code ISR-C002-DGP1</p>  <p>depth < 15 width > 3</p>

To be continued

Continued from previous page

light duty test stand (optional)



heavy duty test stand (optional)



SPECIFICATION

Parameters		Ra, Rz, Rq, Rv, Rp, Rs, R3z, R3y, Rt, Rc, Rz (JIS), Rk, Rku, Rsm, Rpc, Rpk, Rvk, Rsk, Mr1, Mr2, Ry, Rmax
Range	X axis	17.5mm
	Z axis	640 μ m (-320 μ m~320 μ m)
Accuracy		\pm 10%
Resolution (Ra)		0.001 μ m
Probe	type	inductive
	stylus radius/angle	5 μ m/90°
	stylus material	diamond
Measuring force		4mN
Measuring unit		μ m/ μ in
Cut off		0.25/0.8/2.5mm
Number of cut-offs		1~5
Traverse speed		0.135mm/s, 0.5mm/s, 1mm/s
Memory		100 measurement results
Output		bluetooth and USB
Power		built-in rechargeable battery
Dimension (L×W×H)		158×64×52mm
Weight		400g

STANDARD DELIVERY

Main unit	1 pc
Standard probe	1 pc
Calibration block and support	1 pc of each
Magnetic stand adapter	1 pc
Adjustable stand	1 pc
Touch pen	1 pc
Software and USB cable	1 pc
AC/DC adapter	1 pc

OPTIONAL ACCESSORY

Extension rod	ISR-C002-ER
Small hole probe	ISR-C002-PROBE
Tiny hole probe	ISR-C002-SBP
2 μ m/60° probe	ISR-C300-P2UM
Deep groove probe	ISR-C002-DGP
Deep groove probe	ISR-C002-DGP1*
Height gage adapter	ISR-C300-LB1
Receiver	ISR-C300-RECEIVER
SPC cable	ISR-C300-SPC
Support for flat surface	ISR-C300-COVER1
Support for cylindrical surface	ISR-C300-COVER2
Light duty test stand	ISR-C002-STAND1
Heavy duty test stand	ISR-C002-STAND

*Need to be delivered with roughness tester ISR-T120

ROUGHNESS TESTER (BASIC TYPE) CODE ISR-C003

ATTENTION: THIS ROUGHNESS TESTER IS NOT SUITABLE FOR ROUGH TURNING, MILLING AND PLANING WORKPIECES

- Unit: μm , μin
- Automatic power off



fixture for small shafts (optional)



application



calibration block (included)

OPTIONAL ACCESSORY

Fixture for small shafts	ISR-C003-FIXTURE
--------------------------	------------------

SPECIFICATION

Parameters	Ra, Rz, Rq, Rt	
Range	Ra, Rq: 0.05~15 μm Rz, Rt: 0.1~50 μm	
Accuracy	$\pm 10\%$	
Resolution (Ra)	0.01 μm	
Probe	type	piezoelectric
	stylus radius/angle	10 $\mu\text{m}/90^\circ$
	stylus material	diamond
Measuring force	5mN	
Measuring unit	$\mu\text{m}/\mu\text{in}$	
Cut off	0.25/0.8/2.5mm	
Evaluation length	1.25mm for cut off 0.25mm	
	4mm for cut off 0.8mm	
	5mm for cut off 2.5mm	
Moving speed	0.75mm/s	
Power	built-in rechargeable battery	
Dimension (L×W×H)	106×70×24mm	
Weight	200g	

STANDARD DELIVERY

Main unit	1 pc
Calibration block	1 pc
AC/DC adapter	1 pc

SURFACE ROUGHNESS SPECIMEN SET CODE ISR-CS130-W

INSIZE PLUS
MADE IN EUROPE



- For checking, identifying and specifying the roughness by symbol
- Rust-proof, made of pure Nickel

Machining method	Roughness (Ra) *	Roughness (Rz) *	Quantity
Flat lapping	0.05, 0.1, 0.2 μm	0.55, 1, 1.6 μm	3 pcs
	2, 4, 8 μin		
Reaming	0.4, 0.8, 1.6 μm	3, 6, 10 μm	3 pcs
	16, 32, 63 μin		
Plain grinding	0.05, 0.1, 0.2, 0.4, 0.8, 1.6 μm	0.55, 1, 1.6, 3, 6, 10 μm	6 pcs
	2, 4, 8, 16, 32, 63 μin		
Horizontal milling	0.4, 0.8, 1.6, 3.2, 6.3, 12.5 μm	2.5, 4, 8, 16, 32, 50 μm	6 pcs
	16, 32, 63, 125, 250, 500 μin		
Vertical milling	0.4, 0.8, 1.6, 3.2, 6.3, 12.5 μm	2.5, 4, 8, 16, 32, 50 μm	6 pcs
	16, 32, 63, 125, 250, 500 μin		
Turning	0.4, 0.8, 1.6, 3.2, 6.3, 12.5 μm	2.5, 4, 8, 16, 32, 50 μm	6 pcs
	16, 32, 63, 125, 250, 500 μin		

* The actual value is the value to be calibrated

SURFACE ROUGHNESS SPECIMENS

INSIZE PLUS
MADE IN EUROPE



- For checking, identifying and specifying the roughness by symbol
- Rust-proof, made of pure Nickel

ISR-CS315

Code	Machining method	Roughness (Ra) *	Roughness (Rz) *	Quantity
ISR-CS315	surface grinding	0.025, 0.05, 0.1, 0.2, 0.4, 0.8, 1.6, 3.2µm	0.29, 0.55, 0.91, 1.74, 2.6, 4.65, 7.87, 15.6µm	8 pcs
ISR-CS316	cylindrical grinding	0.025, 0.05, 0.1, 0.2, 0.4, 0.8, 1.6, 3.2µm	0.3, 0.53, 0.88, 1.56, 2.64, 4.4, 7.71, 15.3µm	8 pcs
ISR-CS317	flat lapping	criss-cross	0.025, 0.05, 0.1, 0.2µm	0.4, 0.6, 0.74, 1.26µm
		parallel	0.025, 0.05, 0.1, 0.2µm	0.34, 0.56, 1.12, 1.5µm
ISR-CS318	cylindrical lapping	0.025, 0.05, 0.1, 0.2µm	0.46, 0.54, 0.63, 1.23µm	4 pcs
	superfinishing	0.025, 0.05, 0.1, 0.2µm	0.36, 0.7, 1, 1.4µm	4 pcs
ISR-CS319	face turning	0.4, 0.8, 1.6, 3.2, 6.3, 12.5, 25, 50µm	1.92, 3.2, 6.15, 12.5, 23.7, 48.7, 102, 185µm	8 pcs
ISR-CS320	cylindrical turning	0.4, 0.8, 1.6, 3.2, 6.3, 12.5, 25, 50µm	1.7, 3.2, 6.1, 12.2, 23.7, 47.5, 95, 190µm	8 pcs
ISR-CS321	end milling	0.4, 0.8, 1.6, 3.2, 6.3, 12.5, 25, 50µm	1.92, 3.82, 6.45, 12.2, 25.2, 49.8, 92.6, 191µm	8 pcs
ISR-CS322	reaming	0.4, 0.8, 1.6, 3.2µm	1.7, 3.2, 6.4, 12.8µm	4 pcs
	drilling	1.6, 3.2, 6.3, 12.5µm	7.5, 15.5, 31, 60µm	4 pcs
ISR-CS323	horizontal milling	0.4, 0.8, 1.6, 3.2, 6.3, 12.5, 25, 50µm	1.8, 3.68, 6.63, 12.8, 25.6, 53, 97.5, 197µm	8 pcs
ISR-CS325	shaping (planing)	0.8, 1.6, 3.2, 6.3, 12.5, 25, 50, 100µm	3.84, 6.7, 12.2, 25.2, 48.7, 99.9, 190, 361µm	8 pcs
ISR-CS326	linishing (belt sanding)	0.1, 0.2, 0.4, 0.8, 1.6, 3.2µm	0.9, 1.55, 3.37, 7.42, 18.5, 31µm	6 pcs
ISR-CS328	vertical grinding	0.2, 0.4, 0.8, 1.6, 3.2, 6.3µm	1.1, 3.5, 6.15, 8.78, 22.19, 40.8µm	6 pcs
ISR-CS329	grit blasting	3.2, 10.5, 18, 25µm	19.2, 63, 108, 150µm	4 pcs
	shot blasting	3.2, 8, 13, 18µm	19.2, 48, 78, 108µm	4 pcs
ISR-CS331	spark erosion (EDM)	0.4, 0.8, 1.6, 3.2, 6.3, 12.5, 25, 50µm	2.5, 4.5, 7.2, 14.2, 24.7, 51.2, 105, 196µm	8 pcs
ISR-CS333	hand filing	0.4, 0.8, 1.6, 3.2, 6.3µm	3, 5.6, 12.4, 22.5, 61µm	5 pcs
ISR-CS334	castings	0.8, 1.6, 3.2, 6.3, 12.5, 25, 50µm	3.2, 8, 16, 32, 56, 112, 225µm	7 pcs
ISR-CS335	honing	0.05, 0.1, 0.2, 0.4, 0.8, 1.6µm	0.31, 0.56, 1, 2, 4.2, 9µm	6 pcs
ISR-CS336	polishing	0.0125, 0.025, 0.05, 0.1, 0.2µm	0.29, 0.35, 0.67, 0.72, 1.52µm	5 pcs

* The actual value is the value to be calibrated

SHOT AND GRIT BLASTING SURFACE ROUGHNESS SPECIMENS

INSIZE PLUS
MADE IN EUROPE



- To check the roughness of steel surfaces which have been blast cleaned before painting
- Meets ISO 8503/1
- Rust-proof, made of pure Nickel
- Each piece contains 4 parts

ISR-CS017

Code	Machining method	Roughness (Ra) *	Roughness (Rz) *
ISR-CS017	shot blasting	3.2, 8, 13, 18µm	19.2, 48, 78, 108µm
ISR-CS018	grit blasting	3.2, 10.5, 18, 25µm	19.2, 63, 108, 150µm

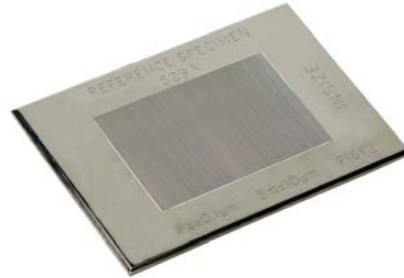
* The actual value is the value to be calibrated

SURFACE ROUGHNESS REFERENCE SPECIMENS

INSIZE PLUS
MADE IN EUROPE

MEASURING ACCURACY OF ROUGHNESS TESTERS CAN BE IMPROVED, IF THE CALIBRATION IS MADE ON A REFERENCE SPECIMEN WITH THE ROUGHNESS VALUE CLOSE TO THE WORKPIECE TO BE MEASURED

- To calibrate roughness testers
- Meets ISO 5436-1: 2000
- Rust proof, made of pure Nickel



ISR-RS529X

Code	Roughness (Ra)
ISR-RS525X	6.25µm *
ISR-RS526X	3.15µm *
ISR-RS527X	3.0µm *
ISR-RS528X	0.5µm *
ISR-RS529X	0.1µm *
ISR-RS530X	1.0µm *
ISR-RS531X	0.3µm *

*The actual value may be slightly different

SURFACE ROUGHNESS REFERENCE SPECIMENS

MEASURING ACCURACY OF ROUGHNESS TESTERS CAN BE IMPROVED, IF THE CALIBRATION IS MADE ON A REFERENCE SPECIMEN WITH THE ROUGHNESS VALUE CLOSE TO THE WORKPIECE TO BE MEASURED

- To calibrate roughness testers
- Made of glass



ISR-LS603

Code	Roughness (Ra)	Deviation *	Uniformity
ISR-LS601	0.1µm	-20% ~ +10%	3%
ISR-LS602	0.2µm	±10%	3%
ISR-LS603	0.4µm	±10%	3%
ISR-LS604	0.8µm	±10%	3%
ISR-LS605	1.6µm	±10%	3%
ISR-LS606	3.2µm	±10%	2%
ISR-LS607	6.4µm	±10%	2%

*Deviation between the actual value when supply and the nominal value



Rockwell Hardness Testers
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Micro-Vickers Hardness Testers
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Vickers Hardness Testers
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Vickers Hardness Measuring Systems
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Brinell Hardness Testers
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Brinell Indentation Measuring Systems
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Brinell/Rockwell/Vickers Hardness Testers
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Portable Leeb Hardness Testers
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Magnetic Rockwell Hardness Testers
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Magnetic Brinell/Rockwell Hardness Testers
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Portable Rockwell Hardness Testers
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Pin Brinell Hardness Testers
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HARDNESS TESTERS



Hydraulic Brinell Hardness Testers
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Chain Type Hydraulic Brinell Hardness Testers
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Aluminum Hardness Testers
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Barcol Hardness Testers
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Shore Durometers
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Fruit Hardness Testers
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Hardness Test Blocks
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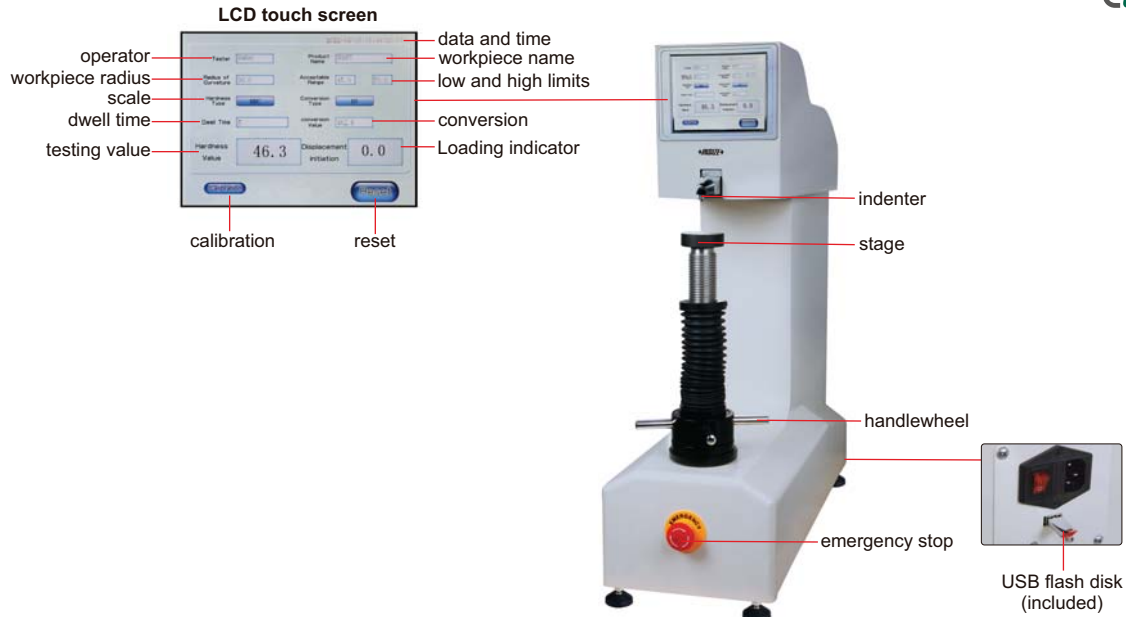
Concrete Strength Testers
Page 717

DATA
OUTPUT

FORCE LOADING BY ELECTRIC
MOTOR (WITHOUT WEIGHTS)

MOTORIZED DIGITAL ROCKWELL HARDNESS TESTERS (DOLPHIN-NOSE TYPE)

INSPECTION
CERTIFICATE



ISHR-T100



Ø63mm flat anvil
(included)



Ø150mm flat anvil
(included)



level (included)



touch pen (included)



V-type anvil
(included)
for cylinders with
diameter Ø4~60mm

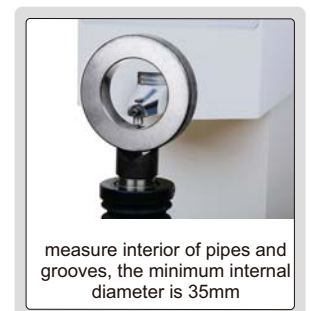


desk (optional)



small V-type anvil
(optional)
for cylinders with
diameter Ø2~4mm

- Dolphin-nose indenter to reach interior of pipe and groove
- Automatic testing after preliminary test force is loaded by hand
- LCD touch screen, easy operation
- Convert to other Rockwell scales, HV or HB automatically
- Tolerance testing
- Insert USB disk, save the testing results as Excel
- Self-compensation of the hardness value for curved workpiece
- Force loading by electric motor (without weights)
- The test force is selected automatically according to hardness scale
- According to ISO 6508



Continued from previous page

SPECIFICATION

Code		ISHR-T100	ISHR-T200	ISHR-T300
Type		Rockwell	Superficial Rockwell	Rockwell and Superficial Rockwell
Hardness scale	with standard indenter	HRA, HRB, HRC, HRD, HRF, HRG	HR15N, HR30N, HR45N, HR15T, HR30T, HR45T	HRA, HRB, HRC, HRD, HRF, HRG, HR15N, HR30N, HR45N, HR15T, HR30T, HR45T
	with optional indenter	HRE, HRH, HRK, HRL, HRM, HRP, HRR, HRS, HRV	HR15W, HR30W, HR45W, HR15X, HR30X, HR45X, HR15Y, HR30Y, HR45Y	HRE, HRH, HRK, HRL, HRM, HRP, HRR, HRS, HRV, HR15W, HR30W, HR45W, HR15X, HR30X, HR45X, HR15Y, HR30Y, HR45Y
Preliminary test force		98N/10kgf for Rockwell	29.4N/3kgf for Superficial Rockwell	98N/10kgf for Rockwell 29.4N/3kgf for Superficial Rockwell
Test force		588N (60kg), 980N (100kg), 1471N (150kg)	147.1N (15kg), 294.2N (30kg), 441.3N (45kg)	147.1N (15kg), 294.2N (30kg), 441.3N (45kg), 588N (60kg), 980N (100kg), 1471N (150kg)
Stage elevation		manual		
Load control		automatic (load/dwell/unload)		
Load dwell time		0~99 second		
Resolution		0.1HR		
Output		USB		
Max. workpiece height		300mm		
Max. testing width		250mm (from the center of indenter to the wall of main body)		
Power supply		220V, 50/60Hz		
Dimension		720×260×840mm		
Weight		80kg		

STANDARD DELIVERY

Code	ISHR-T100	ISHR-T200	ISHR-T300
Main unit	1 pc	1 pc	1 pc
Ø63mm flat anvil	1 pc	1 pc	1 pc
Ø150mm flat anvil	1 pc	1 pc	1 pc
V-type anvil	1 pc	1 pc	1 pc
Diamond indenter	1 pc	1 pc	1 pc
Ø1.5875mm carbide ball indenter	1 pc	1 pc	1 pc
Hardness test block HRB88~95	1 pc	—	1 pc
Hardness test block HRC60~65	1 pc	—	1 pc
Hardness test block HRC20~30	1 pc	—	1 pc
Hardness test block 78~88HR15N	—	1 pc	1 pc
Hardness test block 55~73HR30N	—	1 pc	1 pc
Hardness test block 57~69HR30T	—	1 pc	1 pc
USB disk	1 pc	1 pc	1 pc
Level	1 pc	1 pc	1 pc
Touch pen	1 pc	1 pc	1 pc
Anti-dust cover	1 pc	1 pc	1 pc

OPTIONAL ACCESSORY

Hardness test block HRB88~100	HDT-B-HRB
Hardness test block HRC60~70	HDT-B-HRC3
Hardness test block HRC20~30	HDT-B-HRC1
Hardness test block 78~88HR15N	HDT-B-HR15N2
Hardness test block 55~73HR30N	HDT-B-HR30N2
Hardness test block 73~82HR30T	HDT-B-HR30T
Small V-type anvil	ISH-SMALLANVIL
Desk	HDT-DESK

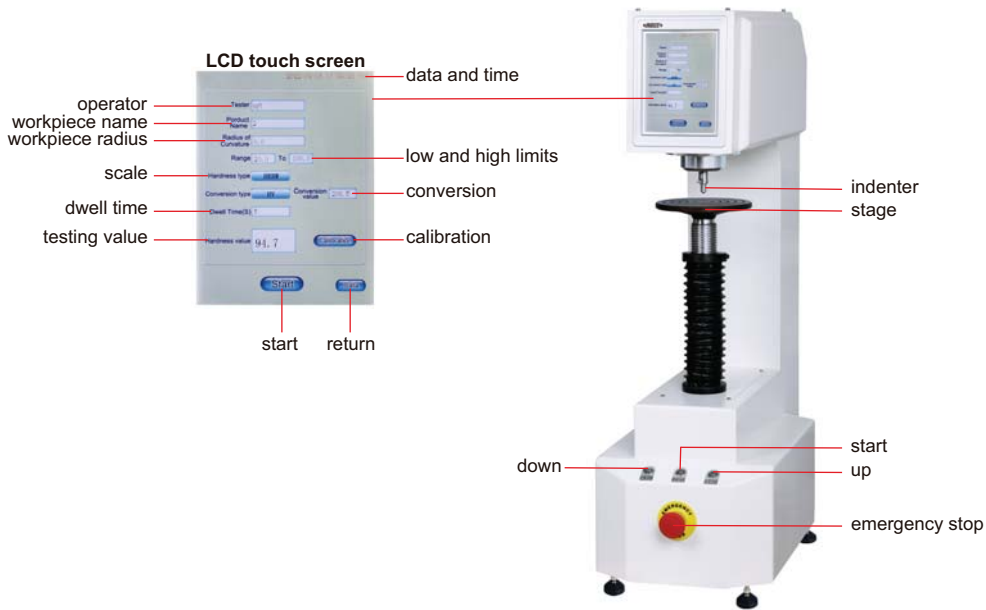
AUTOMATIC DIGITAL ROCKWELL/SUPERFICIAL ROCKWELL HARDNESS TESTERS (FOR MASS PRODUCTION)

AUTOMATIC LIFTING OF STAGE
AUTOMATIC LOADING AND UNLOADING

DATA
OUTPUT

FORCE LOADING BY ELECTRIC
MOTOR (WITHOUT WEIGHTS)

INSPECTION
CERTIFICATE



HDT-A410



Ø63mm flat anvil
(included)



Ø150mm flat anvil
(included)



level (included)



touch pen (included)



V-type anvil (included) for
cylinders with
diameter Ø4~60mm



small V-type anvil (**optional**)
for cylinders with
diameter Ø2~4mm



desk (**optional**)

- According to BSEN 6508, ISO 6508, ASTM E18
- Automatic lifting of stage without manual rotation
- Automatic testing, the preliminary and main test force are loaded automatically
- LCD touch screen, easy operation
- Convert to other Rockwell scales, HV or HB automatically
- Tolerance testing
- Insert USB flash disk, save the testing results as Excel
- Self-correcting the hardness value for curved workpieces
- The accuracy can be corrected with three standard blocks of low, medium and high values
- The loading force can be corrected with standard force gages
- Force loading by electric motor (without weights)
- The test force is selected automatically according to hardness scales

To be continued

Continued from previous page

SPECIFICATION

Code		HDT-A410	HDT-A510	HDT-A610
Type		Rockwell	Superficial Rockwell	Rockwell and Superficial Rockwell
Hardness scale	with standard indenters	HRA, HRB, HRC, HRD, HRF, HRG	HR15N, HR30N, HR45N, HR15T, HR30T, HR45T	HRA, HRB, HRC, HRD, HRF, HRG, HR15N, HR30N, HR45N, HR15T, HR30T, HR45T
	with optional indenter	HRE, HRH, HRK, HRL, HRM, HRP, HRR, HRS, HRV	HR15W, HR30W, HR45W, HR15X, HR30X, HR45X, HR15Y, HR30Y, HR45Y	HRE, HRH, HRK, HRL, HRM, HRP, HRR, HRS, HRV, HR15W, HR30W, HR45W, HR15X, HR30X, HR45X, HR15Y, HR30Y, HR45Y
Preliminary test force		98N/10kgf for Rockwell	29.4N/3kgf for Superficial Rockwell	98N/10kgf for Rockwell 29.4N/3kgf for Superficial Rockwell
Test force		588N (60kg), 980N (100kg), 1471N (150kg)	147.1N (15kg), 294.2N (30kg), 441.3N (45kg)	147.1N (15kg), 294.2N (30kg), 441.3N (45kg), 588N (60kg), 980N (100kg), 1471N (150kg)
Stage lifting		automatic		
Load control		automatic (load/dwell/unload)		
Load dwell time		0~99 second		
Resolution		0.1HR		
Output		USB		
Max. workpiece height		300mm		
Max. testing width		200mm (from the center of indenter to the wall of main body)		
Power supply		220V, 50/60Hz		
Dimension		560×280×850mm		
Weight		80kg		

STANDARD DELIVERY

Code	HDT-A410	HDT-A510	HDT-A610
Main unit	1 pc	1 pc	1 pc
Ø63mm flat anvil	1 pc	1 pc	1 pc
Ø150mm flat anvil	1 pc	1 pc	1 pc
V-type anvil	1 pc	1 pc	1 pc
Diamond indenter	1 pc	1 pc	1 pc
Ø1.5875mm carbide ball indenter	1 pc	1 pc	1 pc
Hardness test block HRB88~95	1 pc	—	1 pc
Hardness test block HRC60~65	1 pc	—	1 pc
Hardness test block HRC20~30	1 pc	—	1 pc
Hardness test block 78~88HR15N	—	1 pc	1 pc
Hardness test block 55~73HR30N	—	1 pc	1 pc
Hardness test block 57~69HR30T	—	1 pc	1 pc
USB flash disk (8G)	1 pc	1 pc	1 pc
Level	1 pc	1 pc	1 pc
Touch pen	1 pc	1 pc	1 pc
Anti-dust cover	1 pc	1 pc	1 pc

OPTIONAL ACCESSORY

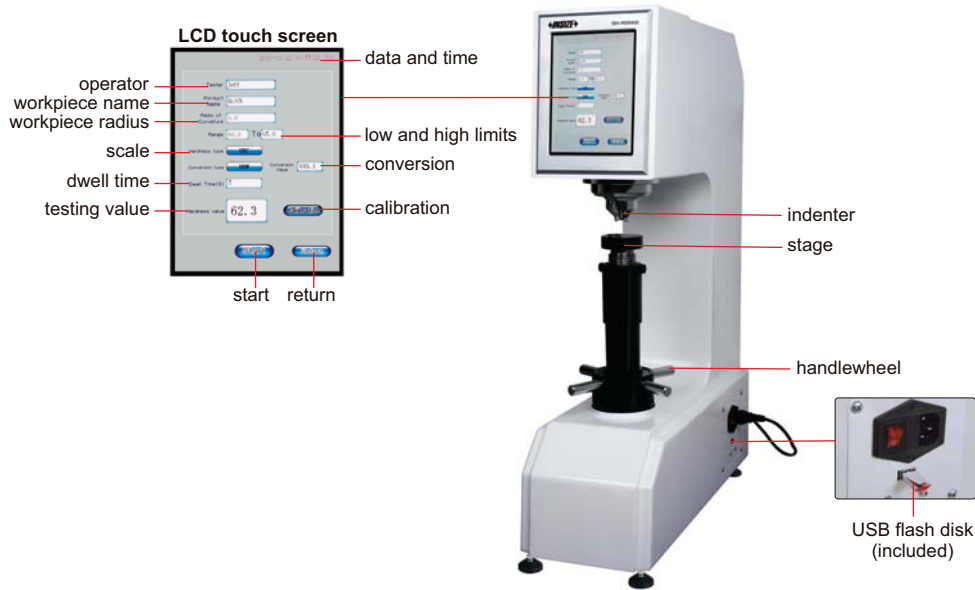
Hardness test block HRB88~100	HDT-B-HRB
Hardness test block HRC60~70	HDT-B-HRC3
Hardness test block HRC20~30	HDT-B-HRC1
Hardness test block 78~88HR15N	HDT-B-HR15N2
Hardness test block 55~73HR30N	HDT-B-HR30N2
Hardness test block 73~82HR30T	HDT-B-HR30T
Small V-type anvil	ISH-SMALLANVIL
Desk	HDT-DESK

MOTORIZED DIGITAL ROCKWELL/SUPERFICIAL ROCKWELL HARDNESS TESTERS

DATA
OUTPUT

FORCE LOADING BY ELECTRIC
MOTOR (WITHOUT WEIGHTS)

INSPECTION
CERTIFICATE



ISH-RSR40



Ø63mm flat anvil
(included)



Ø150mm flat anvil
(included)



level (included)



touch pen (included)



V-type anvil (included) for
cylinders with
diameter Ø4~60mm

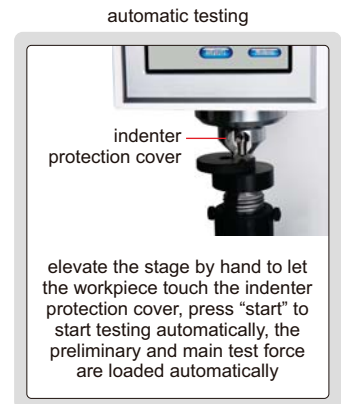


small V-type anvil (optional)
for cylinders with
diameter Ø2~4mm



desk (optional)

- Automatic testing, the preliminary and main test force are loaded automatically
- LCD touch screen, easy operation
- Convert to other Rockwell scales, HV or HB automatically
- Tolerance testing
- Insert USB flash disk, save the testing results as Excel
- Self-correcting the hardness value for curved workpieces
- Force loading by electric motor (without weights)
- The test force is selected automatically according to hardness scale
- According to ISO 6508



To be continued

Continued from previous page

SPECIFICATION

Code		ISH-RSR400	ISH-RSR500	ISH-RSR600
Type		Rockwell	Superficial Rockwell	Rockwell and Superficial Rockwell
Hardness scale	with standard indenters	HRA, HRB, HRC, HRD, HRF, HRG	HR15N, HR30N, HR45N, HR15T, HR30T, HR45T	HRA, HRB, HRC, HRD, HRF, HRG, HR15N, HR30N, HR45N, HR15T, HR30T, HR45T
	with optional indenter	HRE, HRH, HRK, HRL, HRM, HRP, HRR, HRS, HRV	HR15W, HR30W, HR45W, HR15X, HR30X, HR45X, HR15Y, HR30Y, HR45Y	HRE, HRH, HRK, HRL, HRM, HRP, HRR, HRS, HRV, HR15W, HR30W, HR45W, HR15X, HR30X, HR45X, HR15Y, HR30Y, HR45Y
Preliminary test force		98N/10kgf for Rockwell	29.4N/3kgf for Superficial Rockwell	98N/10kgf for Rockwell 29.4N/3kgf for Superficial Rockwell
Test force		588N (60kg), 980N (100kg), 1471N (150kg)	147.1N (15kg), 294.2N (30kg), 441.3N (45kg)	147.1N (15kg), 294.2N (30kg), 441.3N (45kg), 588N (60kg), 980N (100kg), 1471N (150kg)
Stage elevation		manual		
Load control		automatic (load/dwell/unload)		
Load dwell time		0~60 second		
Resolution		0.1HR		
Output		USB		
Max. workpiece height		220mm		
Max. testing width		200mm (from the center of indenter to the wall of main body)		
Power supply		220V, 50/60Hz		
Dimension		510×260×780mm		
Weight		70kg		

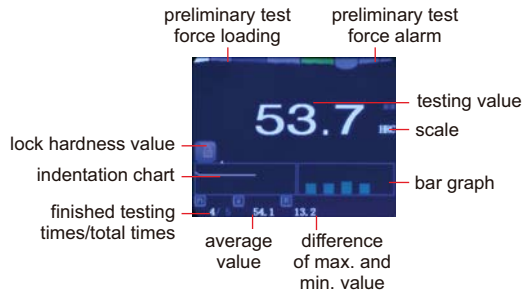
STANDARD DELIVERY

Code	ISH-RSR400	ISH-RSR500	ISH-RSR600
Main unit	1 pc	1 pc	1 pc
Ø63mm flat anvil	1 pc	1 pc	1 pc
Ø150mm flat anvil	1 pc	1 pc	1 pc
V-type anvil	1 pc	1 pc	1 pc
Diamond indenter	1 pc	1 pc	1 pc
Ø1.5875mm carbide ball indenter	1 pc	1 pc	1 pc
Hardness test block HRB88~95	1 pc	—	1 pc
Hardness test block HRC60~65	1 pc	—	1 pc
Hardness test block HRC20~30	1 pc	—	1 pc
Hardness test block 78~88HR15N	—	1 pc	1 pc
Hardness test block 55~73HR30N	—	1 pc	1 pc
Hardness test block 57~69HR30T	—	1 pc	1 pc
USB flash disk (8G)	1 pc	1 pc	1 pc
Level	1 pc	1 pc	1 pc
Touch pen	1 pc	1 pc	1 pc
Anti-dust cover	1 pc	1 pc	1 pc

OPTIONAL ACCESSORY

Hardness test block HRB88~100	HDT-B-HRB
Hardness test block HRC60~70	HDT-B-HRC3
Hardness test block HRC20~30	HDT-B-HRC1
Hardness test block 78~88HR15N	HDT-B-HR15N2
Hardness test block 55~73HR30N	HDT-B-HR30N2
Hardness test block 73~82HR30T	HDT-B-HR30T
Small V-type anvil	ISH-SMALLANVIL
Desk	HDT-DESK

MOTORIZED DIGITAL ROCKWELL HARDNESS TESTER CODE ISH-MRD200



software flash disk (included)

- Tolerance testing
- Set testing times (2~10) to have average value and the difference of max. and min. value
- Convert to other Rockwell scales, HV or HB
- Memory of 500 testing values for browsing and output
- Testing value can be sent to wireless printer automatically
- Calibration function compensates the testing value for high accuracy
- The hardness value of soft materials like plastic is not stable, the lock function can obtain the value automatically
- Display unit is automatic power off
- According to ISO 6508
- Keyboard signal, can be transmitted to Excel



Ø60mm flat anvil (included)



Ø150mm flat anvil (included)



V-type anvil (included) for cylinders with diameter Ø4~60mm



small V-type anvil (optional) for cylinders with diameter Ø2~4mm



wireless printer (optional)



desk (optional)

SPECIFICATION

Hardness scale	HRA, HRB, HRC, HRD HRE, HRG (with standard indenters) HRE, HRH, HRK (with optional indenter)
Preliminary test force	98N
Test force	588N, 980N, 1471N
Stage elevation	manual
Load control	automatic (load/dwell/unload)
Load dwell time	1~99 second
Resolution	0.1HR
Output	wireless and USB
Memory	500
Max. workpiece height	170mm
Max. testing width	165mm (from the center of indenter to the wall of main body)
Power supply of the display unit	built-in rechargeable battery
Power supply	220V, 50/60Hz
Dimension	520×160×700mm
Weight	60kg

STANDARD DELIVERY

Main unit	1 pc
Ø60mm flat anvil	1 pc
Ø150mm flat anvil	1 pc
V-type anvil	1 pc
Diamond indenter	1 pc
Ø1.5875mm carbide ball indenter	1 pc
Hardness test block HRB88~95	1 pc
Hardness test block HRC60~65	1 pc
Hardness test block HRC20~30	1 pc
Anti-dust cover	1 pc
Software and USB cable	1 pc
AC/DC adapter	1 pc

OPTIONAL ACCESSORY

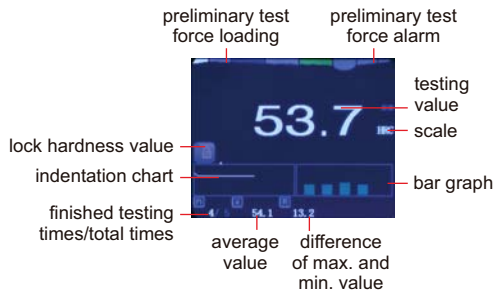
Wireless printer	ISH-DS-PRINTER
Ø3.175mm carbide ball indenter	ISH-EHK-INDENTER
Hardness test block HRB88~100	HDT-B-HRB
Hardness test block HRC60~70	HDT-B-HRC3
Hardness test block HRC20~30	HDT-B-HRC1
Small V-type anvil	ISH-SMALLANVIL
Desk	HDT-DESK

MANUAL DIGITAL ROCKWELL HARDNESS TESTER

CODE ISH-RD200

DATA
OUTPUT

INSPECTION
CERTIFICATE



- Tolerance testing
- Set testing times (2~10) to have average value and the difference of max. and min. value
- Convert to other Rockwell scales, HV or HB
- Memory of 500 testing values for browsing and output
- Testing value can be sent to wireless printer automatically
- Calibration function compensates the testing value for high accuracy
- The hardness value of soft materials like plastic is not stable, the lock function can obtain the value automatically
- Automatic power off
- According to ISO 6508
- Keyboard signal, can be transmitted to Excel



software flash disk (included)



Ø60mm flat anvil (included)



Ø150mm flat anvil (included)



V-type anvil (included) for cylinders with diameter Ø4~60mm



small V-type anvil (optional) for cylinders with diameter Ø2~4mm



wireless printer (optional)



desk (optional)

SPECIFICATION

Hardness scale	HRA, HRB, HRC, HRD HRF, HRG (with standard indenters) HRE, HRH, HRK (with optional indenter)
Preliminary test force	98N
Test force	588N, 980N, 1471N
Stage elevation	manual
Load control	manual
Resolution	0.1HR
Output	wireless and USB
Memory	500
Max. workpiece height	170mm
Max. testing width	165mm (from the center of indenter to the wall of main body)
Power supply	built-in rechargeable battery
Dimension	520×160×700mm
Weight	60kg

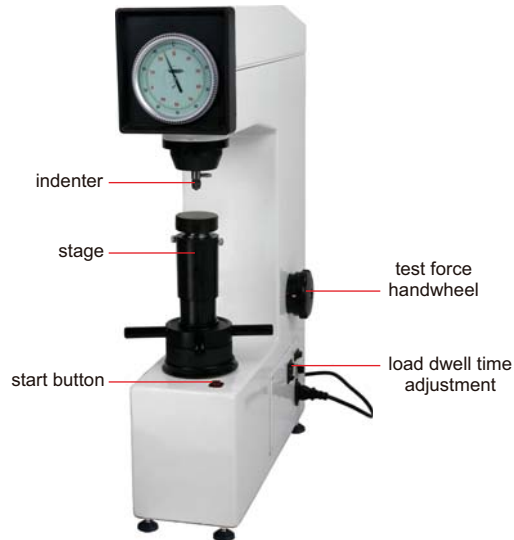
STANDARD DELIVERY

Main unit	1 pc
Ø60mm flat anvil	1 pc
Ø150mm flat anvil	1 pc
V-type anvil	1 pc
Diamond indenter	1 pc
Ø1.5875mm carbide ball indenter	1 pc
Hardness test block HRB88~95	1 pc
Hardness test block HRC60~65	1 pc
Hardness test block HRC20~30	1 pc
Anti-dust cover	1 pc
Software and USB cable	1 pc
AC/DC adapter	1 pc

OPTIONAL ACCESSORY

Wireless printer	ISH-DS-PRINTER
Ø3.175mm carbide ball indenter	ISH-EHK-INDENTER
Hardness test block HRB88~100	HDT-B-HRB
Hardness test block HRC60~70	HDT-B-HRC3
Hardness test block HRC20~30	HDT-B-HRC1
Small V-type anvil	ISH-SMALLANVIL
Desk	HDT-DESK

MOTORIZED ROCKWELL HARDNESS TESTER CODE ISH-MR150



■ According to ISO 6508



Ø60mm flat anvil
(included)



Ø150mm flat anvil
(included)



V-type anvil (included)
for cylinders with
diameter Ø4~60mm



small V-type anvil
(optional)
for cylinders with
diameter Ø2~4mm



desk (optional)

SPECIFICATION

Hardness scale	HRA, HRB, HRC, HRD, HRF, HRG
Preliminary test force	98N
Test force	588N, 980N, 1471N
Display	analogue
Stage elevation	manual
Load control	automatic (load/dwell/unload)
Load dwell time	1~99 second
Min. reading	0.5HR
Max. workpiece height	170mm
Max. testing width	165mm (from the center of indenter to the wall of main body)
Power supply	220V, 50/60Hz
Dimension	520×160×700mm
Weight	60kg

STANDARD DELIVERY

Main unit	1 pc
Ø60mm flat anvil	1 pc
Ø150mm flat anvil	1 pc
V-type anvil	1 pc
Diamond indenter	1 pc
Ø1.5875mm carbide ball indenter	1 pc
Hardness test block HRB88~95	1 pc
Hardness test block HRC60~65	1 pc
Hardness test block HRC20~30	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

Hardness test block HRB88~100	HDT-B-HRB
Hardness test block HRC60~70	HDT-B-HRC3
Hardness test block HRC20~30	HDT-B-HRC1
Small V-type anvil	ISH-SMALLANVIL
Desk	HDT-DESK

**MOTORIZED ROCKWELL HARDNESS TESTER (BASIC TYPE)
CODE HDT-RA151**



■ According to ISO 6508



Ø58mm flat anvil (included)



Ø150mm flat anvil (included)



V-type anvil (included) for cylinders with diameter Ø4~60mm



level (included)



small V-type anvil (optional) for cylinders with diameter Ø2~4mm



desk (optional)

SPECIFICATION

Hardness scale	HRA, HRB, HRC, HRD, HRF, HRG
Preliminary test force	98N
Test force	588N, 980N, 1471N
Display	analogue
Stage elevation	manual
Load control	automatic (load/dwell/unload)
Load dwell time	1~60 second
Min. reading	0.5HR
Max. workpiece height	170mm
Max. testing width	128mm (from the center of indenter to the wall of main body)
Power supply	220V, 50/60Hz
Dimension	520×225×640mm
Weight	65kg

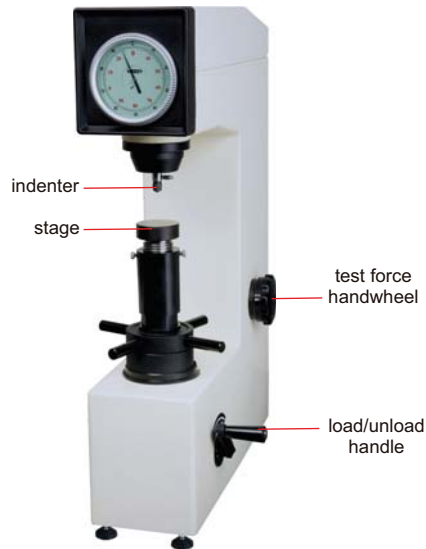
STANDARD DELIVERY

Main unit	1 pc
Ø58mm flat anvil	1 pc
Ø150mm flat anvil	1 pc
V-type anvil	1 pc
Diamond indenter	1 pc
Ø1.5875mm steel ball indenter	1 pc
Level	1 pc
Hardness test block HRA80~88	1 pc
Hardness test block HRB85~95	1 pc
Hardness test block HRC20~30	1 pc
Hardness test block HRC35~55	1 pc
Hardness test block HRC60~70	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

Hardness test block HRA80~84	HDT-B-HRA
Hardness test block HRB88~100	HDT-B-HRB
Hardness test block HRC20~30	HDT-B-HRC1
Hardness test block HRC35~55	HDT-B-HRC2
Hardness test block HRC60~70	HDT-B-HRC3
Small V-type anvil	ISH-SMALLANVIL
Desk	HDT-DESK

MANUAL ROCKWELL HARDNESS TESTER CODE ISH-R150



- According to ISO 6508



Ø60mm flat anvil
(included)



Ø150mm flat anvil
(included)



V-type anvil (included)
for cylinders with
diameter Ø4~60mm



small V-type anvil
(optional)
for cylinders with
diameter Ø2~4mm



desk (optional)

SPECIFICATION

Hardness scale	HRA, HRB, HRC, HRD, HRF, HRG
Preliminary test force	98N
Test force	588N, 980N, 1471N
Display	analogue
Stage elevation	manual
Load control	manual
Min. reading	0.5HR
Max. workpiece height	170mm
Max. testing width	165mm (from the center of indenter to the wall of main body)
Dimension	520×160×700mm
Weight	60kg

STANDARD DELIVERY

Main unit	1 pc
Ø60mm flat anvil	1 pc
Ø150mm flat anvil	1 pc
V-type anvil	1 pc
Diamond indenter	1 pc
Ø1.5875mm carbide ball indenter	1 pc
Hardness test block HRB88~95	1 pc
Hardness test block HRC60~65	1 pc
Hardness test block HRC20~30	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

Hardness test block HRB88~100	HDT-B-HRB
Hardness test block HRC60~70	HDT-B-HRC3
Hardness test block HRC20~30	HDT-B-HRC1
Small V-type anvil	ISH-SMALLANVIL
Desk	HDT-DESK

**MANUAL ROCKWELL HARDNESS TESTER (BASIC TYPE)
CODE HDT-RW160**



■ According to ISO 6508



Ø58mm flat anvil (included)



Ø150mm flat anvil (included)



V-type anvil (included) for cylinders with diameter Ø4~60mm



level (included)



small V-type anvil (optional) for cylinders with diameter Ø2~4mm



desk (optional)

SPECIFICATION

Hardness scale	HRA, HRB, HRC, HRD, HRF, HRG
Preliminary test force	98N (10kg)
Test force	588N (60kg), 980N (100kg), 1471N (150kg)
Display	analogue
Stage elevation	manual
Load control	manual
Min. reading	0.5HR
Max. workpiece height	170mm
Max. testing width	135mm (from the center of indenter to the wall of main body)
Dimension	466×238×630mm
Weight	70kg

STANDARD DELIVERY

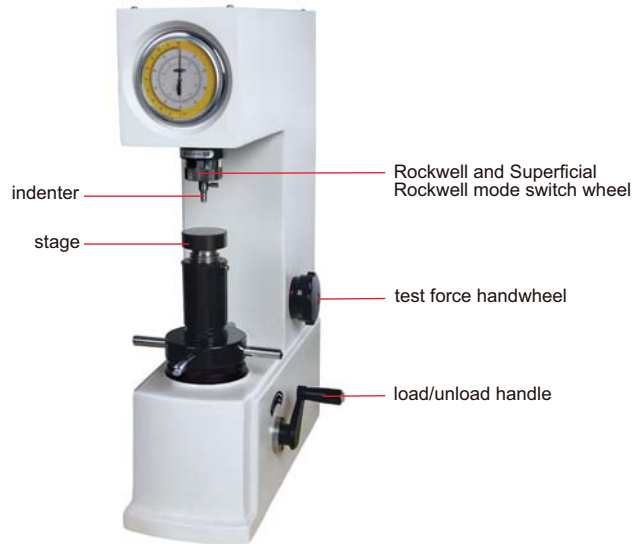
Main unit	1 pc
Ø58mm flat anvil	1 pc
Ø150mm flat anvil	1 pc
V-type anvil	1 pc
Diamond indenter	1 pc
Ø1.5875mm steel ball indenter	1 pc
Ø1.5875mm steel ball	5 pcs
Level	1 pc
Hardness test block HRA80~88	1 pc
Hardness test block HRB85~95	1 pc
Hardness test block HRC20~30	1 pc
Hardness test block HRC35~55	1 pc
Hardness test block HRC60~70	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

Hardness test block HRA80~84	HDT-B-HRA
Hardness test block HRB88~100	HDT-B-HRB
Hardness test block HRC20~30	HDT-B-HRC1
Hardness test block HRC35~55	HDT-B-HRC2
Hardness test block HRC60~70	HDT-B-HRC3
Small V-type anvil	ISH-SMALLANVIL
Desk	HDT-DESK



MANUAL ROCKWELL AND SUPERFICIAL ROCKWELL HARDNESS TESTER CODE HDT-RSR100



Ø60mm flat anvil (included)



Ø150mm flat anvil (included)



V-type anvil (included) for cylinders with diameter Ø4~60mm



small V-type anvil (optional) for cylinders with diameter Ø2~4mm



desk (optional)

■ According to ISO 6508

SPECIFICATION

Hardness scale	HRA, HRB, HRC, HRD, HRF, HRG, HR15N, HR30N, HR45N, HR15T, HR30T, HR45T
Preliminary test force	29.4N/3kgf for Superficial Rockwell 98N/10kgf for Rockwell
Test force	147N/15kgf, 294N/30kgf, 441N/45kgf, 588N/60kgf, 980N/100kgf, 1471N/150kgf
Display	analogue
Stage elevation	manual
Load control	manual
Min. reading	0.5HR
Max. workpiece height	160mm
Max. testing width	140mm (from the center of indenter to the wall of main body)
Dimension	460×240×660mm
Weight	75kg

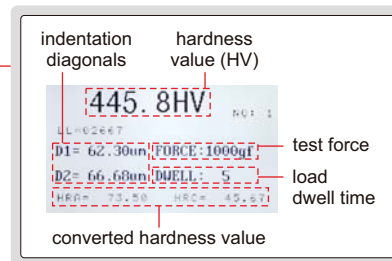
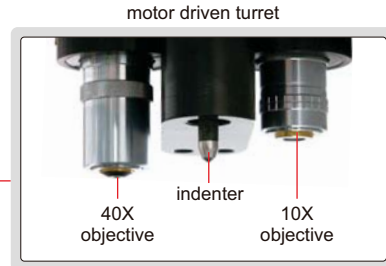
STANDARD DELIVERY

Main unit	1 pc
Ø60mm flat anvil	1 pc
Ø150mm flat anvil	1 pc
V-type anvil	1 pc
Diamond indenter	1 pc
Ø1.5875mm carbide ball indenter	1 pc
Hardness test block HRB88~95	1 pc
Hardness test block HRC60~65	1 pc
Hardness test block HRC20~30	1 pc
Hardness test block 78~88HR15N	1 pc
Hardness test block 55~73HR30N	1 pc
Hardness test block 57~69HR30T	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

Hardness test block HRB88~100	HDT-B-HRB
Hardness test block HRC60~70	HDT-B-HRC3
Hardness test block HRC20~30	HDT-B-HRC1
Hardness test block 78~88HR15N	HDT-B-HR15N2
Hardness test block 55~73HR30N	HDT-B-HR30N2
Hardness test block 57~69HR30T	HDT-B-HR30T
Small V-type anvil	ISH-SMALLANVIL
Desk	HDT-DESK

**DIGITAL MICRO-VICKERS HARDNESS TESTER (ADVANCED TYPE)
CODE ISH-TDV1000A**



- Measure hardness of thin or small workpieces
- Based on Vickers (HV), can be converted to Rockwell (HRA, HRB and HRC)
- According to ISO 6507



cylinder holder (included)



vice (included)



slice holder (included)

SPECIFICATION

Test force	0.01, 0.025, 0.05, 0.1, 0.2, 0.3, 0.5, 1kgf
Vickers scales	HV0.01, HV0.025, HV0.05, HV0.1, HV0.2, HV0.3, HV0.5, HV1
Stage elevation	manual
Load control	automatic (load/dwell/unload)
Load dwell time	5~60 second (5 second increment)
Objective	10X, 40X
Eyepiece	15X
Total magnification	150X (for observation) 600X (for measurement)
Max. workpiece height	85mm
Max. testing width	85mm (from the center of indenter to the wall of main body)
X-Y stage	dimensions: 100×100mm
	travel range: 25×25mm
	graduation: 0.01mm
Data output	RS232C
Power supply	110/220V, 50Hz
Dimension	540x500x640mm
Weight	50kg

STANDARD DELIVERY

Main unit	1 pc
10X, 40X objective	1 pc of each
Micro Vickers indenter	1 pc
Hardness test block 400~500HV0.2	1 pc
Hardness test block 700~800HV1	1 pc
Slice holder	1 pc
Vice	1 pc
Cylinder holder	1 pc
Level	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

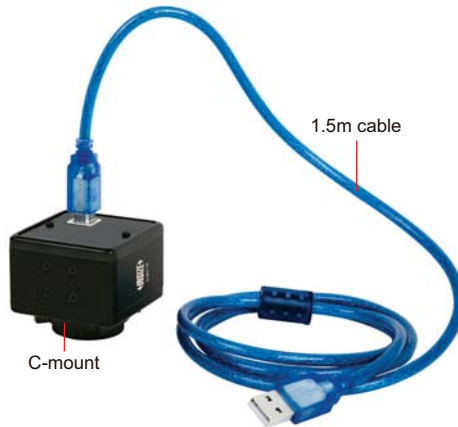
20X objective	ISH-TDV-20X
Hardness test block 400~500HV0.2	HDT-B-HV02C
Hardness test block 700~750HV1	HDT-B-HV1F
Measuring system	9631-130
Camera adapter	ISH-TDV-ADAPTER



VICKERS HARDNESS MEASURING SYSTEM CODE 9631-130



software flash disk
(included)



C-mount

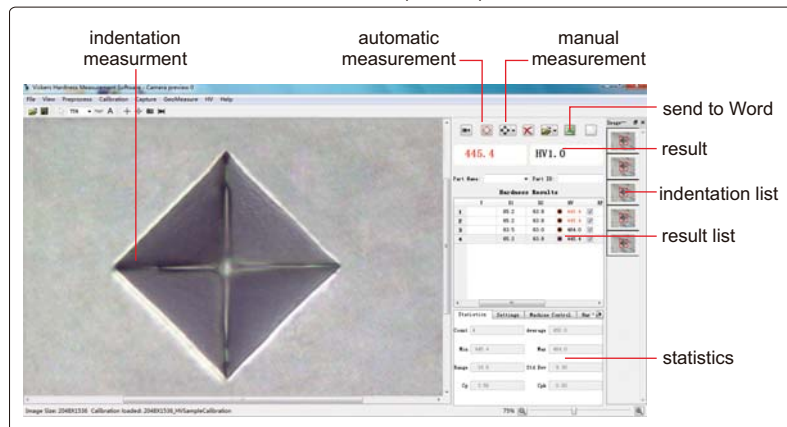
1.5m cable

application example



- Suitable for ISH-TDV1000A
- Connected to computer USB port
- Measure the indentation sizes automatically or manually
- Multiple measurements to have average value, max. value and min. value
- Tolerance testing
- Convert to HRA, HRB, HRC, HRD, HRE, HRF, HRG, HRK, HR15T/30T/45T, HR15N/30N/45N, HK, HV, HB, HS, HSD
- Calibration with standard test block
- Measurement result can be sent to Word or Excel

software (included)



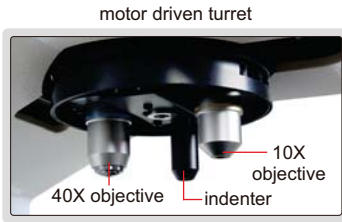
SPECIFICATION

Sensor	1/2" CMOS
Pixel	1.3M (resolution 1280×1024)
Hardness measurement resolution	0.1HV
Length measurement resolution	0.1µm
Hardness measurement accuracy	±3%
Test force	0.01, 0.025, 0.05, 0.1, 0.2, 0.3, 0.5, 1, 2, 2.5, 3, 5, 10, 20, 30, 50, 100kgf
Dimension	57×51×49mm
Weight	200g

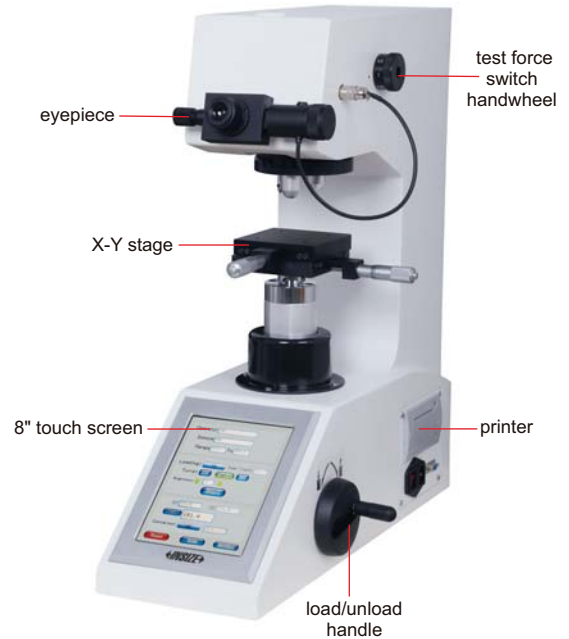
STANDARD DELIVERY

Main unit	1 pc
USB dongle	1 pc
Software and USB cable	1 pc

DIGITAL MICRO-VICKERS HARDNESS TESTERS



- Measure hardness of thin or small workpieces
- Converted to HRA, HRB, HRC, HRD, HRF, HV, HK, HBW, HR15N, HR30N, HR45N, HR15T, HR30T, HR45T
- Motor driven turret to switch between indenter and objective lens automatically
- Calibrated according to standard hardness blocks or length scales
- Test result can be sent to Word or Excel
- According to ISO 6507



HDT-MV290

SPECIFICATION

Code	HDT-MV290	HDT-MV290S
Test force	manual switch of test force	motorized switch of test force
Vickers scales	0.098N (10gf), 0.245N (25gf), 0.49N (50gf), 0.98N (100gf), 1.96N (200gf), 2.94N (300gf), 4.9N (500gf), 9.8N (1kgf)	
Range	HV0.01, HV0.025, HV0.05, HV0.1, HV0.2, HV0.3, HV0.5, HV1	
Length measurement resolution	0.01μm	
Objective/indenter switch	motor driven turret	
Stage lifting	manual	
Load control	automatic (load/dwell/unload)	
Load dwell time	1~99 second	
Objective	10X, 40X	
Eyepiece	10X	
Total magnification	100X (for measurement or observation), 400X (for measurement)	
Max. workpiece height	100mm	
Max. testing width	130mm (from the center of indenter to the wall of main body)	
X-Y stage	dimensions: 100×100mm, travel range: 25×25mm	
Data output	built-in printer, RS232	
Power supply	220V, 50/60Hz	
Dimension	540×260×650mm	
Weight	50kg	



vice (included)



slice holder (included)



cylinder holder (included)

STANDARD DELIVERY

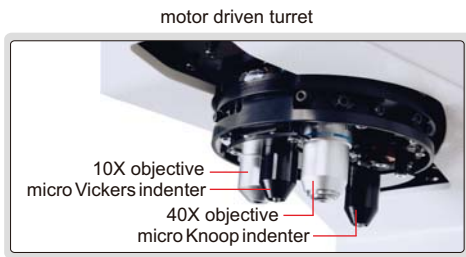
Main unit	1 pc
10X, 40X objective	1 pc of each
Micro vickers indenter	1 pc
Hardness test block 400~500HV0.2	1 pc
Hardness test block 700~750HV1	1 pc
Level	1 pc
Touch pen	1 pc
Slice holder	1 pc
Vice	1 pc
Cylinder holder	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

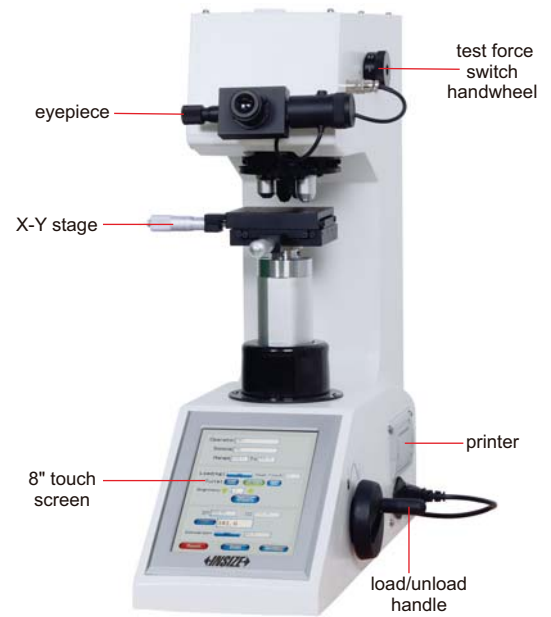
Hardness test block 400~500HV0.2	HDT-B-HV02C
Hardness test block 700~750HV1	HDT-B-HV1F
Measuring system	HDT-VS530



DIGITAL DUAL-INDENTER MICRO-VICKERS HARDNESS TESTERS



- With Vickers indenter and Knoop indenter
- Micro Vickers indenter is for thin and small workpieces, carburizing layers, hardening layers and coating
- Knoop indenter is for hard and brittle materials, such as enamel, glass, synthetic diamond, cermet and minerals
- Converted to HRA, HRB, HRC, HRD, HRF, HV, HK, HBW, HR15N, HR30N, HR45N, HR15T, HR30T, HR45T
- Motor driven turret to switch indenters and objective lens automatically
- Calibrated according to standard hardness blocks or length scales
- Test result can be sent to Word or Excel
- According to ISO 6507



HDT-MV280

SPECIFICATION

Code	HDT-MV280	HDT-MV280S
		manual switch of test force
Test force	0.098N (10gf), 0.245N (25gf), 0.49N (50gf), 0.98N (100gf), 1.96N (200gf), 2.94N (300gf), 4.9N (500gf), 9.8N (1kgf)	
Vickers scales	HV0.01, HV0.025, HV0.05, HV0.1, HV0.2, HV0.3, HV0.5, HV1	
Knoop scales	HK0.01, HK0.025, HK0.05, HK0.1, HK0.2, HK0.3, HK0.5, HK1	
Range	8~2900HV/HK	
Length measurement resolution	0.01µm	
Objective/indenter switch	motor driven turret	
Stage lifting	manual	
Load control	automatic (load/dwell/unload)	
Load dwell time	1~99 second	
Objective	10X, 40X (optional 20X, 50X, 60X)	
Eyepiece	10X	
Total magnification	100X (for measurement or observation), 400X (for measurement)	
Max. workpiece height	100mm	
Max. testing width	130mm (from the center of indenter to the wall of main body)	
X-Y stage	dimension: 100×100mm, travel range: 25×25mm	
Data output	built-in printer, RS232	
Power supply	220V, 50/60Hz	
Dimension	540×260×650mm	
Weight	50kg	



vice (included)



cylinder holder (included)



slice holder (included)

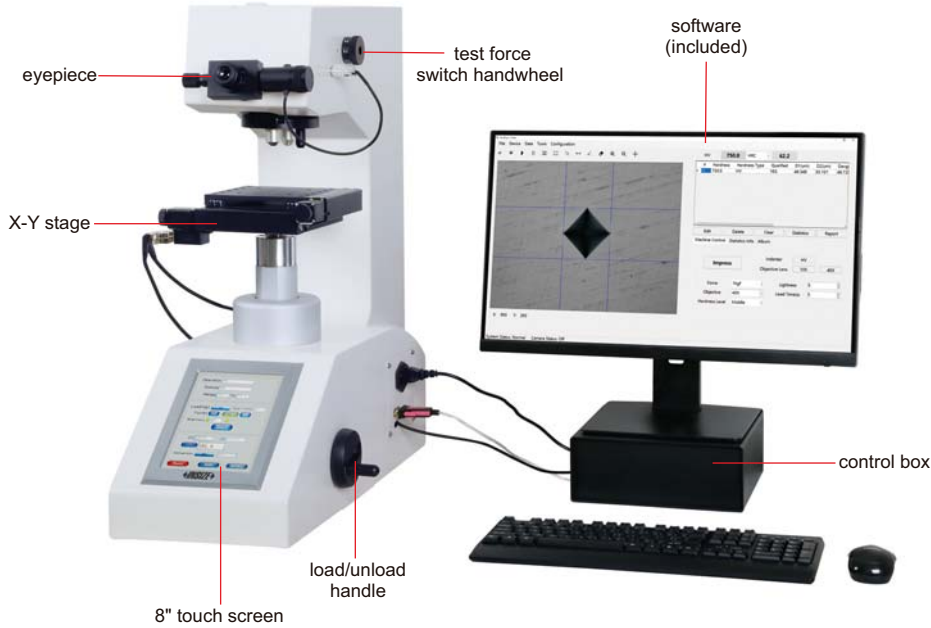
STANDARD DELIVERY

Main unit	1 pc
10X, 40X objective	1 pc of each
Micro vickers indenter	1 pc
Knoop indenter	1 pc
Hardness test block 400~500HV0.2	1 pc
Hardness test block 700~750HV1	1 pc
Hardness test block 700~800HK1	1 pc
Level	1 pc
Touch pen	1 pc
Vice	1 pc
Slice holder	1 pc
Cylinder holder	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

Hardness test block 400~500HV0.2	HDT-B-HV02C
Hardness test block 700~750HV1	HDT-B-HV1F
Hardness test block 700~800HK1	HDT-B-HK1C
Measuring system	HDT-VS530

**AUTOMATIC MICRO-VICKERS HARDNESS TESTER
CODE HDT-VS1D**



vice (included)



slice holder (included)



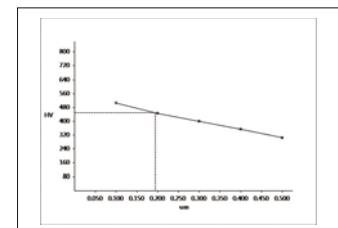
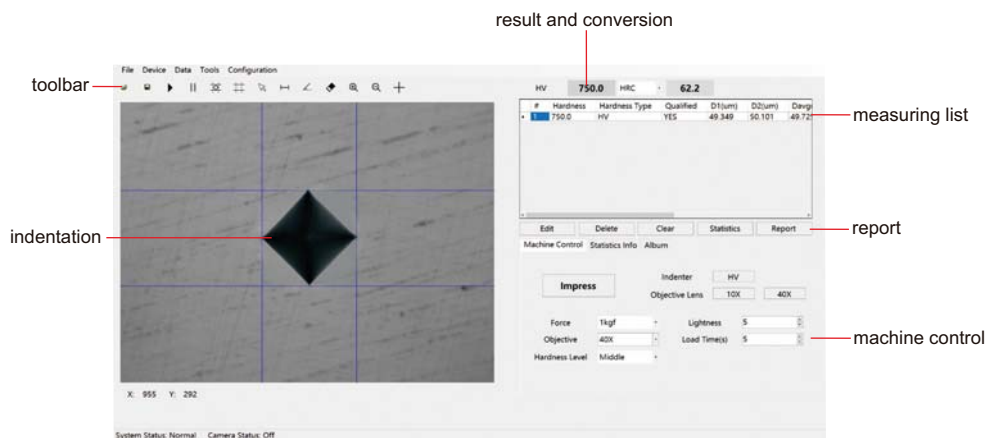
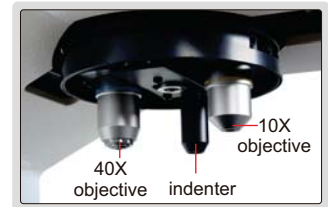
cylinder holder (included)

- Detect depth of hardened layer of head treatment and coating thickness. Can also be used for metallography observation
- Calibrate according to standard hardness blocks or length scales
- Convert to HRA, HRB, HRC, HRD, HRF, HV, HBW, HR15N, HR30N, HR45N, HR15T, HR30T, HR45T
- Built-in printer
- According to ISO 6507

X-Y stage



motor driven turret



depth of hardened layer

To be continued



Continued from previous page

SPECIFICATION

Test force	0.098N (10gf), 0.245N (25gf), 0.49N (50gf), 0.98N (100gf), 1.96N (200gf), 2.94N (300gf), 4.9N (500gf), 9.8N (1kgf)
Vickers scales	HV0.01, HV0.025, HV0.05, HV0.1, HV0.2, HV0.3, HV0.5, HV1
Range	8HV~2900HV
Length measurement resolution	0.01μm
Objective/indenter switch	motor driven turret
Stage lifting	manual
Load control	automatic (load/dwell/unload)
Load dwell time	1~99 second
Objective	10X, 40X
Eyepiece	10X
Total magnification	100X (for measurement or observation), 400X (for measurement)
Data output	built-in printer
Max. workpiece height	160mm
Max. testing width	160mm (from the center of indenter to the wall of main body)
X-Y stage	dimensions: 150×150mm, travel range: 50×50mm, graduation: 1μm, displacement repeatability: 3μm
Pixel	5M
Measurement and control software	stage movement control
	measurement
Power supply	220V, 50/60Hz
Dimension	620×250×710mm
Weight	50kg

STANDARD DELIVERY

Main unit	1 pc
10X, 40X objective	1 pc of each
Micro vickers indenter	1 pc
Hardness test block 400~500HV0.2	1 pc
Hardness test block 700~750HV1	1 pc
Level	1 pc
Touch pen	1 pc
Anti-dust cover	1 pc
Control box	1 pc
Software and USB dongle	1 pc of each
Computer	1 pc
Slice holder	1 pc
Vice	1 pc
Cylinder holder	1 pc

OPTIONAL ACCESSORY

Hardness test block 400~500HV0.2	HDT-B-HV02C
Hardness test block 700~750HV1	HDT-B-HV1F
OFFICE software	7313-OFFICE
Knoop indenter	HDT-VS1D-KNOOP

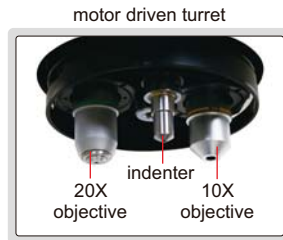
DIGITAL VICKERS HARDNESS TESTERS

FORCE LOADING BY ELECTRIC MOTOR (WITHOUT WEIGHTS)

INSPECTION CERTIFICATE



- LCD touch screen, easy operation
- Insert USB flash disk, save the test results as Excel
- Converted to HRA, HRB, HRC, HRD, HRF, HV, HK, HBW, HR15N, HR30N, HR45N, HR15T, HR30T, HR45T
- Force loading by electric motor, without weights
- According to ISO 6507



HDT-VD50A



Ø58mm flat anvil (included)



Ø150mm flat anvil (included)



V-type anvil (included)



level (included)

SPECIFICATION

Code	HDT-VD10A	HDT-VD30A	HDT-VD50A	HDT-VD100A	HDT-VD120A
Test force	0.3, 0.5, 1, 2, 2.5, 3, 5, 10kgf	0.3, 0.5, 1, 2, 2.5, 3, 5, 10, 15, 20, 30kgf	0.5, 1, 2, 2.5, 3, 5, 10, 15, 20, 30, 40, 50kgf	2, 3, 5, 10, 20, 30, 50, 60, 80, 100kgf	5, 10, 20, 30, 50, 100, 120kgf
Range	8~2900HV				
Load control	automatic (load/dwell/unload)				
Load dwell time	1~99 second				
Eyepiece	10X				
Objective	10X, 20X (optional 2.5X, 5X, 40X)				
Total magnification	100X, 200X (optional 25X, 50X, 400X)				
Length measurement resolution	0.01µm				
Data output	USB flash disk				
Max. workpiece height	180mm				
Max. testing width	160mm (from the center of indenter to the wall of main body)				
Power supply	220V, 50/60Hz				
Dimension	580x190x700mm				
Weight	55kg				

STANDARD DELIVERY

Main unit	1 pc
10X, 20X objective	1 pc of each
Vickers indenter	1 pc
Ø58mm flat anvil	1 pc
Ø150mm flat anvil	1 pc
V-type anvil	1 pc
Hardness test block	2 pcs
USB flash disk	1 pc
Level	1 pc
Touch pen	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

Hardness test block	page 715~716
2.5X objective	HDT-VD-OB2X
5X objective	HDT-VD-OB5X
40X objective	HDT-VD-OB40X
Vickers hardness measuring system	HDT-VS530

VICKERS HARDNESS MEASURING SYSTEM CODE HDT-VS530

measure the indentation sizes automatically or manually, and hardness tester can be controlled by software



C-mount



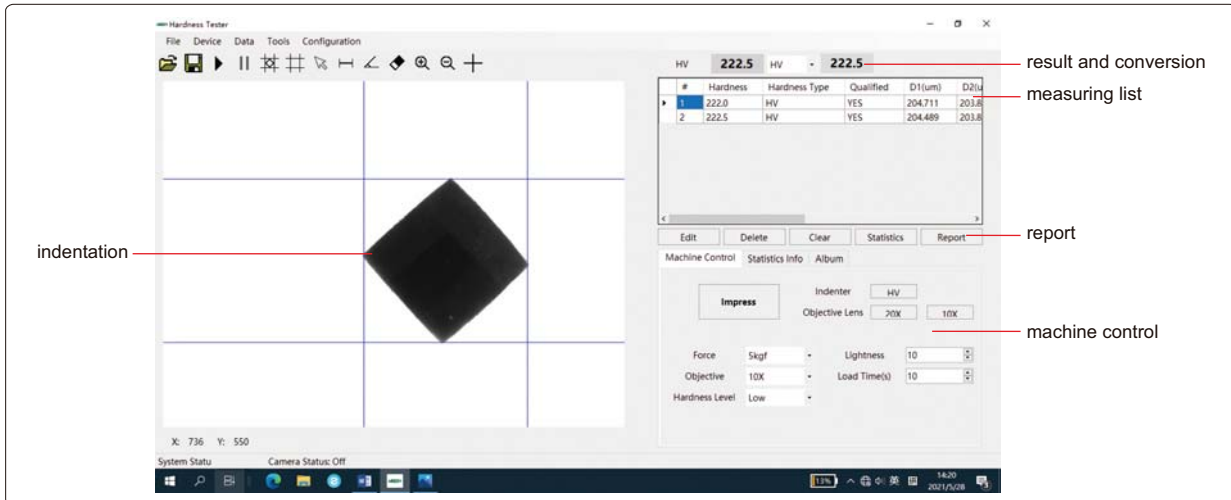
software flash disk (included)



camera adapter (included)

- Suitable for digital Vickers hardness tester **HDT-VD** series and **HDT-MV** series
- Connected to computer USB port
- Measure the indentation sizes automatically or manually
- Multiple measurements to have average value, max. value, min. value and variance
- Convert to HRA, HRB, HRC, HRD, HRF, HV, HK, HBW, HR15N, HR30N, HR45N, HR15T, HR30T, HR45T
- Hardness tester can be controlled by software
- Measurement result can be sent to Word, Excel or CSV

measuring software (included)



indentation

result and conversion

measuring list

report

machine control

SPECIFICATION

Sensor	1/2.5" CMOS
Pixel	5M (resolution 2592×1944)
Hardness measurement resolution	0.1HV
Length measurement resolution	0.001μm
Test force	0.3, 0.5, 1, 2, 2.5, 3, 5, 10, 15, 20, 30, 40, 50, 60, 80, 100, 120kgf
Dimension	30×30×40mm
Weight	50g

STANDARD DELIVERY

Main unit	1 pc
Software and USB cable	1 pc
RS232 cable	1 pc
Camera adapter	1 set

AUTOMATIC DIGITAL BRINELL HARDNESS TESTER CODE HDT-XB500

TEST FORCE LOADING BY ELECTRIC MOTOR (WITHOUT WEIGHT)



automatic test



Press the "test" button on the screen to start testing. The stage ascends automatically until the workpiece touches the indenter. Automatically load, dwell and unload. The turret rotates and the objective focuses automatically. Measure the indentation by measuring microscope or automatic measuring system.



Ø200mm flat anvil (included)



Ø80mm flat anvil (included)



V-type anvil (included)



touch pen (included)



HDT-XB500

- Automatic testing
- LCD touch screen, easy operation
- Measure indentation by measuring microscope or automatic measuring system
- Tolerance testing
- Insert USB flash disk, save the test results as Excel
- Force loading by electric motor, without weights
- According to ISO 6506

SPECIFICATION

Turret rotation		automatic
Stage elevation		automatic
Range		8~650HBW
Test force		62.5, 100, 125, 187.5, 250, 500, 750, 1000, 1500, 3000kgf
Measuring Accuracy	HBW≤125	±3%
	125≤225<HBW	±2.5%
	HBW>225	±2%
Hardness measuring resolution		0.1HBW
Measuring microscope	eyepiece	20X
	resolution	0.1µm
Load control		automatic (load/dwell/unload)
Load dwell time		0~99 second
Max. workpiece height		320mm
Max. testing width		250mm (from the center of indenter to the wall of main body)
Power supply		220V, 50/60Hz
Dimension		700×340×970mm
Weight		160kg

STANDARD DELIVERY

Main unit	1 pc
Measuring microscope	1 pc
Automatic measuring system	1 pc
Ø80mm flat anvil	1 pc
Ø200mm flat anvil	1 pc
V-type anvil	1 pc
Ø2.5mm carbide ball indenter	1 pc
Ø5mm carbide ball indenter	1 pc
Ø10mm carbide ball indenter	1 pc
Hardness test block 150~250HBW2.5/187.5	1 pc
Hardness test block 75~125HBW10/1000	1 pc
Hardness test block 175~250HBW10/3000	1 pc
USB flash disk (8G)	1 pc
Touch pen	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

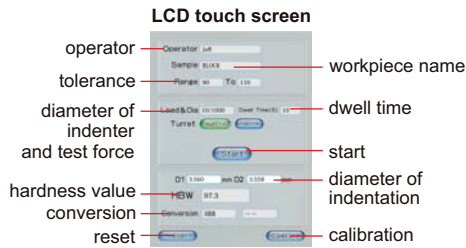
10X eyepiece	HDT-XB500-EP10X
15X eyepiece	HDT-XB500-EP15X
Hardness test block	page 715~716
Desk	HDT-DESK

**AUTOMATIC TESTING,
AUTOMATIC TEST FORCE LOADING**

**FORCE LOADING BY ELECTRIC
MOTOR (WITHOUT WEIGHT)**



MOTORIZED DIGITAL BRINELL HARDNESS TESTERS



- Automatic testing, automatic test force loading
- LCD touch screen, easy operation
- Measure indentation by measuring microscope then read the hardness value from LCD
- Tolerance testing
- Insert USB flash disk, save the test results as Excel
- Converted to HRA, HRB, HRC, HRD, HRF, HV, HB, HR15N, HR30N, HR45N, HR15T, HR30T, HR45T
- Force loading by electric motor, without weights
- According to ISO 6506



step: 1

elevate the stage by hand to let the indenter approach the workpiece, press "start" to start testing automatically, the test force is loaded automatically

step: 2

measuring microscope
measure indentation with measuring microscope

step: 3

read the hardness value from LCD



SPECIFICATION

Code	ISHB-D200	ISHB-D300
Turret rotation	manual	automatic
Range	8~650HBW	
Reading mode	directly read from LCD	
Test force	62.5, 100, 125, 187.5, 250, 500, 750, 1000, 1500, 3000kgf	
Max. workpiece height	200mm	
Max. testing width	155mm (from the center of indenter to the wall of main body)	
Stage elevation	manual	
Load control	automatic (load/dwell/unload)	
Load dwell time	5~60 second	
Measuring microscope	magnification	20X
	resolution	0.625µm
Power supply	220V, 50/60Hz	
Dimension	550x210x750mm	
Weight	110kg	

STANDARD DELIVERY

Main unit	1 pc
Ø80mm flat anvil	1 pc
Ø200mm flat anvil	1 pc
V-type anvil	1 pc
Ø2.5mm carbide ball indenter	1 pc
Ø5mm carbide ball indenter	1 pc
Ø10mm carbide ball indenter	1 pc
Hardness test block 150~250HBW2.5/187.5	1 pc
Hardness test block 75~125HBW10/1000	1 pc
Hardness test block 175~250HBW10/3000	1 pc
USB flash disk (8G)	1 pc
Touch pen	1 pc
Anti-dust cover	1 pc

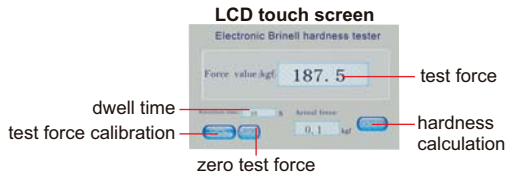
OPTIONAL ACCESSORY

Hardness test block 200~300HBW2.5/187.5	HDT-B-HB25A2
Hardness test block 90~200HBW10/1000	HDT-B-HB10C1
Hardness test block 200~300HBW10/3000	HDT-B-HB10A2
Brinell indentation measuring system	ISHB-MSA
Desk	HDT-DESK

MOTORIZED BRINELL HARDNESS TESTER CODE ISHB-M100

FORCE LOADING BY ELECTRIC MOTOR (WITHOUT WEIGHTS)

AUTOMATIC TESTING AFTER PRELIMINARY TEST FORCE IS LOADED BY HAND



step: 1

measure indentation diameter by measuring microscope

step: 2

input the diameters, the hardness value is shown on screen automatically

- LCD touch screen, easy operation
- Automatic testing after preliminary test force is loaded by hand
- Measure indentation diameter by measuring microscope, input the diameters, the hardness value is shown on screen automatically
- Force loading by electric motor, without weights
- According to ISO 6506



Ø80mm flat anvil (included)



Ø200mm flat anvil (included)



V-type anvil (included)



measuring microscope (included)



desk (optional)

SPECIFICATION

Range	8~650HBW	
Reading mode	directly read from LCD	
Test force	62.5, 100, 125, 187.5, 250, 500, 750, 1000, 1500, 3000kgf	
Max. workpiece height	230mm	
Max. testing width	160mm (from the center of indenter to the wall of main body)	
Stage elevation	manual	
Load control	automatic (load/dwell/unload)	
Load dwell time	5~60 second	
Measuring microscope	magnification	20X
	graduation	0.01mm
Power supply	220V, 50/60Hz	
Dimension	550×210×750mm	
Weight	90kg	

STANDARD DELIVERY

Main unit	1 pc
Ø80mm flat anvil	1 pc
Ø200mm flat anvil	1 pc
V-type anvil	1 pc
Ø2.5mm carbide ball indenter	1 pc
Ø5mm carbide ball indenter	1 pc
Ø10mm carbide ball indenter	1 pc
Hardness test block 150~250HBW2.5/187.5	1 pc
Hardness test block 75~125HBW10/1000	1 pc
Hardness test block 175~250HBW10/3000	1 pc
Measuring microscope	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

Hardness test block 200~300HBW2.5/187.5	HDT-B-HB25A2
Hardness test block 90~200HBW10/1000	HDT-B-HB10C1
Hardness test block 200~300HBW10/3000	HDT-B-HB10A2
Brinell indentation measuring system	ISHB-MSA
Desk	HDT-DESK

BRINELL INDENTATION MEASURING SYSTEM CODE ISHB-MSA

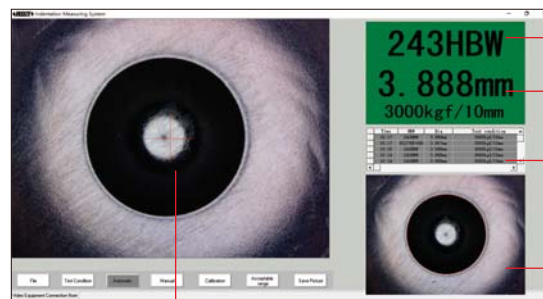
application



software flash disk
(included)

- Connected to computer USB port
- Automatically measure the indentation
- Result saved to Excel automatically
- Tolerance testing
- Calibration with standard hardness blocks or standard indentation blocks

software (included)



result and scale

diameter of indentation

result list

picture

indentation

SPECIFICATION

Applicable Brinell indenter	Ø10mm, Ø7.26mm, Ø5mm, Ø4mm, Ø2.5mm	
Hardness range	16~650HB	
Range of indentation diameter	Ø0.6~6mm	
Test force	62.5, 100, 125, 187.5, 250, 500, 750, 1000, 1500, 3000kgf	
Hardness resolution	1HB	
Diameter measuring resolution	0.001mm	
Diameter measuring accuracy	Ø10mm ball indenter	±0.4% (indentation diameter)
	Ø5mm ball indenter	±0.8% (indentation diameter)
	Ø2.5mm ball indenter	±1.2% (indentation diameter)
Camera	sensor	1/3.2" CMOS
	pixel	2M (resolution 1600×1200)
	view filed	8×6mm
Dimension	170×54×54mm	
Weight	385g	



standard blocks for Ø5mm and Ø10mm indenters (included)

STANDARD DELIVERY

Main unit	1 pc
Software	1 pc
Ø5mm standard indentation block	1 pc
Ø10mm standard indentation block	1 pc

OPTIONAL ACCESSORY

Ø2.5mm standard indentation block	ISHB-MSA-BLOCK25
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DIGITAL BRINELL/ROCKWELL/VICKERS HARDNESS TESTER

CODE HDT-BRV130

FORCE LOADING BY ELECTRIC MOTOR (WITHOUT WEIGHTS)

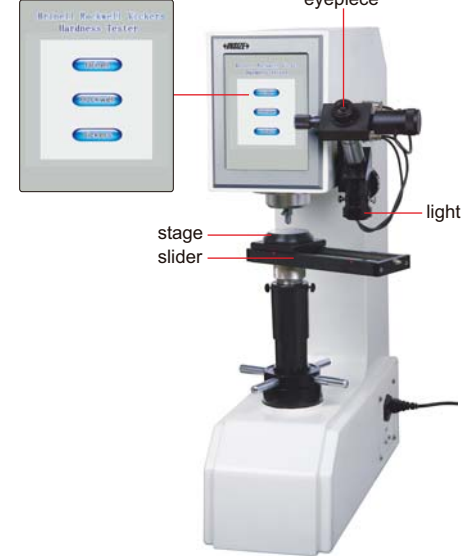
- According to ISO 6506, ISO 6507, ISO 6508
- Force loading by electric motor (without weights)



SPECIFICATION

Brinell test load	49N (5kgf), 98N (10kgf), 153N (15.625kgf), 294N (30kgf), 306N (31.25kgf), 613N (62.5kgf), 980N (100kgf), 1226N (125kgf), 1839N (187.5kgf)
Brinell scales	HBW1/5, HBW2.5/62.5, HBW1/10, HBW2.5/15.625, HBW1/30, HBW2.5/31.25, HBW2.5/62.5, HBW10/100, HBW5/125, HBW2.5/187.5
Brinell resolution	0.1HBW
Rockwell test load	98N (10kgf) preload 588 (60kgf), 980 (100kgf), 1471N (150kgf) total load
Rockwell scales	HRA, HRB, HRC, HRD, HRE, HRF, HRG, HRH, HRK, HRL, HRM, HRP, HRR, HRS, HRV
Rockwell resolution	0.1HR
Vickers test load	49N (5kgf), 98N (10kgf), 196N (20kgf), 294N (30kgf), 392N (40kgf), 490N (50kgf), 588N (60kgf), 784N (80kgf), 980N (100kgf), 1176N (120kgf)
Vickers scales	HV5, HV10, HV20, HV30, HV40, HV50, HV60, HV80, HV100, HV120
Vickers resolution	0.1HV
Objective	2.5X/5X
Magnification of microscope	Brinell: 37.5X, Vickers: 75X
Hardness test range	Brinell: 8~650HBW, Rockwell: 20~100HR, Vickers: 8~2900HV
Max. workpiece height	Rockwell: 220mm, Brinell and Vickers: 150mm
Max. testing width	200mm (from the center of indenter to the wall of main body)
Data output	USB flash disk
Power supply	220V, 50/60Hz
Dimension	560×350×800mm
Weight	70kg

LCD touch screen



Ø60mm flat anvil for Rockwell (included)



Ø60mm flat anvil for Vickers and Brinell (included)



V-type anvil for Rockwell (included), for cylinders with diameter Ø4~60mm



small V-type anvil for Rockwell (optional), for cylinders with diameter Ø2~4mm



Ø150mm flat anvil for Rockwell (included)



desk (optional)

STANDARD DELIVERY

Main unit	1 pc
Vickers diamond indenter	1 pc
Rockwell diamond indenter	1 pc
Ø1.5875mm Rockwell indenter	1 pc
Ø2.5mm Brinell indenter	1 pc
Ø5mm Brinell indenter	1 pc
Ø60mm flat anvil for Rockwell	1 pc
Ø150mm flat anvil for Rockwell	1 pc
V-type anvil for Rockwell	1 pc
Ø60mm flat anvil for Vickers and Brinell	1 pc
Hardness test block HRB88~95	1 pc
Hardness test block HRC60~65	1 pc
Hardness test block HRC20~30	1 pc
Hardness test block 400~500HV30	1 pc
Hardness test block 180~300HBW2.5/187.5	1 pc
Level	1 pc
USB flash disk	1 pc
Touch pen	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

Hardness test block HRB88~100	HDT-B-HRB
Hardness test block HRC60~70	HDT-B-HRC3
Hardness test block HRC20~30	HDT-B-HRC1
Hardness test block 400-500HV30	HDT-B-HV30D
Hardness test block 200-300HBW2.5/187.5	HDT-B-HB25A2
Small V-type anvil for Rockwell	ISH-SMALLANVIL
Desk	HDT-DESK



BRINELL/ROCKWELL/VICKERS HARDNESS TESTER CODE ISH-BRV



Ø60mm flat anvil for Rockwell (included)



Ø150mm flat anvil for Rockwell (included)



Ø60mm flat anvil for Vickers and Brinell (included)



V-type anvil for Rockwell (included), for cylinders with diameter Ø4~60mm



V-type anvil for Vickers and Brinell (included)



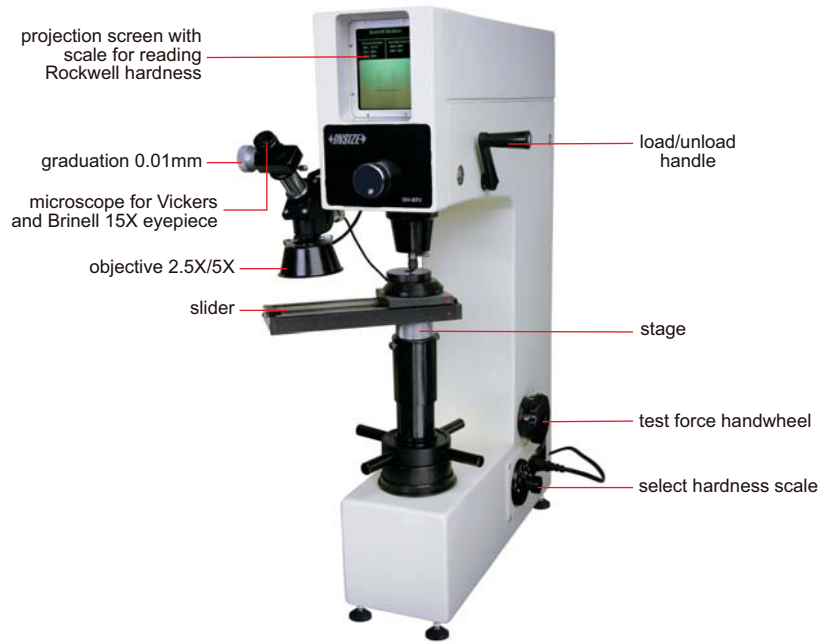
small V-type anvil for Rockwell (optional), for cylinders with diameter Ø2~4mm



desk (optional)



VIDEO



- According to ISO 6506, ISO 6507, ISO 6508

SPECIFICATION

Rockwell test load	98N preload, 588, 980, 1471N total load
Min. Rockwell reading	0.5HR
Brinell test load	306, 613, 1839N
Vickers test load	294N
Stage elevation	manual
Load control	manual
Magnification of microscope	37.5X/75X
Max. workpiece height	180mm
Max. testing width	200mm (from the center of indenter to the wall of main body)
Power supply	220V, 50/60Hz
Dimension	546×300×767mm
Weight	90kg

STANDARD DELIVERY

Main unit	1 pc
Ø1.5875mm carbide ball indenter	1 pc
Diamond Rockwell indenter	1 pc
Ø5mm Brinell indenter	1 pc
Ø2.5mm Brinell indenter	1 pc
Vickers indenter	1 pc
Ø60mm flat anvil for Rockwell	1 pc
Ø150mm flat anvil for Rockwell	1 pc
V-type anvil for Rockwell	1 pc
Ø60mm flat anvil for Vickers and Brinell	1 pc
V-type anvil for Vickers and Brinell	1 pc
Hardness test block HRB88~95	1 pc
Hardness test block HRC60~65	1 pc
Hardness test block HRC20~30	1 pc
Hardness test block 400~500HV30	1 pc
Hardness test block 180~300HBW2.5/187.5	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

Hardness test block HRB88~100	HDT-B-HRB
Hardness test block HRC60~70	HDT-B-HRC3
Hardness test block HRC20~30	HDT-B-HRC1
Hardness test block 400-500HV30	HDT-B-HV30D
Hardness test block 200-3000HBW2.5/187.5	HDT-B-HB25A2
Small V-type anvil for Rockwell	ISH-SMALLANVIL
Desk	HDT-DESK

PORTABLE LEEB HARDNESS TESTER APPLICABLE MATERIAL AND HARDNESS RANGE OF IMPACT DEVICE D

Material	HLD	HV	HB	HRC	HRB	HS	Tensile strength (MPa)
Steel & cast steel	300-900	81-955	81-654	20-68	38-100	32-100	375-2639
Tool steel	300-840	80-898		20-67			
Stainless steel	300-800	85-802	85-655		46-101		
Cast iron	360-650		93-334				
Cast aluminum alloy	170-570		19-164		23-84		
Brass	200-550		40-173		13-95		
Bronze	300-700		60-290				
Copper	200-690		45-315				

PORTABLE LEEB HARDNESS TESTERS

BLUETOOTH

DATA
OUTPUT

INSPECTION
CERTIFICATE



HDT-CB320
(wired probe is included)



HDT-WL320
(wireless probe is included)

- Can use wired probes or wireless probes
- Dual-coil probe for high accuracy
- Universal testing angle, no need to set impact direction
- Based on Leeb (HLD), converted to Vickers (HV), Brinell (HB), Rockwell (HRC, HRA and HRB), Shore (HS) and tensile strength (σ_b)
- Dual value display, shows both Leeb and converted hardness
- Large 2.4" LCD display with backlight
- With a magnet on the back, the main unit can be attached on steel surfaces
- According to ASTM A956 and DIN 50156



hardness test
block D (included)



small support ring
(included)

connect to PC, upload the data to PC, print and send to Excel (software is included)



connect to
bluetooth printer (optional)



To be continued

Continued from previous page

SPECIFICATION

Code	HDT-CB320	HDT-WL320
Probe included	wired probe D	wireless probe D
Optional probes	wired (DC/C/D/D+15/DL/E/G), wireless (DC/C/D/DL/G)	
Resolution	1HLD/1HV/1HB/0.1HRC/0.1HRB/0.1HRA/0.1HS/1MPa	
Accuracy	±6HLD (when HLD=800)	
Output	USB	
Measuring range	HL 170-960/HRC 1.3-74.7/HRB 1.2-139.7/HB 28-1027/HV 45-1221 HS 4.0-112.1/HRA 1.3-88.5/MPa 118-3315N/mm ²	
Applicable materials	1. steel/cast steel 2. alloy steel 3. stainless steel 4. gray pig iron 5. nodular cast iron 6. cast aluminum 7. brass 9. copper 10. forging steel 11. rolling steel 8. bronze	
Statistics	average/max./min./s.value	
Memory	999 data	
Working environment	-10°C~45°C	
Power supply	2xAA battery	
Dimension	145×68×28mm	
Weight	158g	

STANDARD DELIVERY

Code	HDT-CB320	HDT-WL320
Main unit	1 pc	1 pc
Wired probe D	1 pc	—
Wireless probe D	—	1 pc
Hardness test block D	1 pc	1 pc
Small support ring	1 pc	1 pc
Cleaning brush	1 pc	1 pc

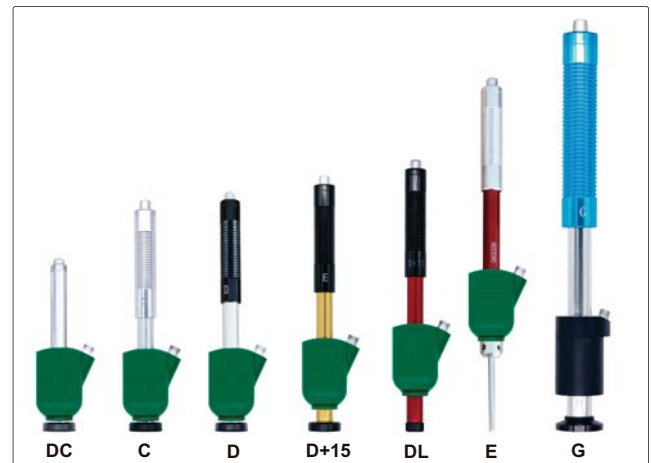
OPTIONAL ACCESSORY

Wired probe	DC	HDT-CB320-DC
	C	HDT-CB320-C
	D	HDT-CB320-D
	D+15	HDT-CB320-D15
	DL	HDT-CB320-DL
	E	HDT-CB320-E
	G	HDT-CB320-G
Wireless probe	DC	HDT-WL320-DCW
	C	HDT-WL320-CW
	D	HDT-WL320-DW
	DL	HDT-WL320-DLW
	G	HDT-WL320-GW
Hardness test block D **	HDT-B-HLD3	
Hardness test block G *	HDT-B-HLG2	
Printer	ISH-LP200-PRINTER	
Support rings	page 706	

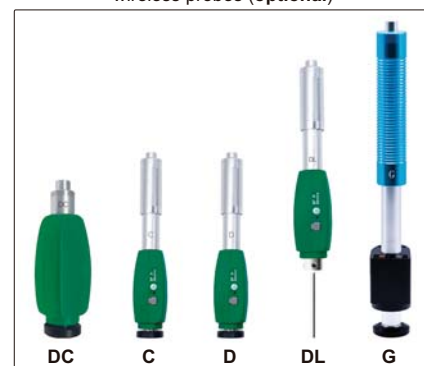
* Hardness test block G (HDT-B-HLG2) is for probe G (HDT-LP320-G or HDT-LP320-GW)

** Hardness test block D (HDT-B-HLD3) is for all other probes

wired probes (optional)



wireless probes (optional)



APPLICABLE WORKPIECE

Probes	DC	C	D	D+15	DL	E	G
Application	inner wall of small space	small or thin workpiece, coating layer	general use	deep groove	narrow slot or small hole	very hard material	casting or forging workpiece
Maximum roughness of workpiece (Ra)	2µm	0.4µm	2µm	2µm	2µm	2µm	7µm
Minimum weight of workpiece	direct measurement	5kg	1.5kg	5kg	5kg	5kg	15kg
	on solid support	2.5kg	0.5kg	2kg	2kg	2kg	5kg
	coupled on plate	0.05-2kg	0.02kg	0.05-2kg	0.1kg	0.1kg	0.1-2kg
Minimum thickness of workpiece	3mm	1mm	3mm	3mm	3mm	3mm	10mm

PORTABLE LEEB HARDNESS TESTER CODE ISH-PHB



- Based on Leeb (HLD), converted to Vickers (HV), Brinell (HB), Rockwell (HRC and HRB), Shore (HS) and tensile strength (MPa)
- Memory of 99 measurement values for browsing
- Set measurement times (1~9) to have average value
- Connected with printer via bluetooth
- Automatic power off, according to ASTM A 956



hardness test block D (included)



small support ring (included)



wireless printer (optional)

SPECIFICATION

Min. reading	1HLD, 1HV, 1HB, 0.1HRC, 0.1HRB, 1HS, 1MPa	
Accuracy	±6HLD (when HLD=800)	
Display	Leeb (HLD), converted hardness, material, impact direction, test times, average value, date	
Output	bluetooth	
Applicable workpiece	minimum weight	5kg
		2kg (on solid support)
		0.1kg (coupled on plate)
	minimum thickness: 5mm	
minimum radius of curved surface: 30mm		
maximum roughness (Ra): 1.6µm		
Power supply	3×AAA batteries	
Dimension	150×84×28mm	
Weight	200g	

STANDARD DELIVERY

Main unit	1 pc
Impact device D	1 pc
Hardness test block D	1 pc
Small support ring	1 pc
Cleaning brush	1 pc

OPTIONAL ACCESSORY

Wireless printer	ISH-DS-PRINTER
Couplant	ISH-COUPPLANT
Support rings	page 706
Hardness test block D	HDT-B-HLD3

BUILT-IN BLUETOOTH

DATA OUTPUT

PORTABLE LEEB HARDNESS TESTER (BUILT-IN BLUETOOTH) CODE ISH-PHB-B

INSPECTION
CERTIFICATE

- Based on Leeb (HLD), converted to Vickers (HV), Brinell (HB), Rockwell (HRC and HRB), Shore (HS) and tensile strength (MPa)
- Memory of 99 measurement values for browsing
- Set measurement times (1~9) to have average value
- Connected with printer via wireless module
- Automatic power off
- According to ASTM A 956
- Wired data transmission (keyboard signal):
USB cable connect to computer, press transmission button to send data
- Wireless data transmission (keyboard signal):
built-in Bluetooth module connect to computer or mobile phone, press transmission button to send data



hardness test block D (included)



small support ring (included)



wireless printer (optional)



transmission button

SPECIFICATION

Min. reading	1HLD, 1HV, 1HB, 0.1HRC, 0.1HRB, 1HS, 1MPa	
Accuracy	±6HLD (when HLD=800)	
Display	Leeb (HLD), converted hardness, material, impact direction, test times, average value, date	
Output	bluetooth, USB	
Applicable workpiece	minimum weight	5kg
		2kg (on solid support)
		0.1kg (coupled on plate)
	minimum thickness: 5mm	
minimum radius of curved surface: 30mm		
maximum roughness (Ra): 1.6µm		
Power supply	3×AAA batteries	
Dimension	150×84×28mm	
Weight	200g	

STANDARD DELIVERY

Main unit	1 pc
Impact device D	1 pc
Hardness test block D	1 pc
USB cable	1 pc
Small support ring	1 pc
Cleaning brush	1 pc

OPTIONAL ACCESSORY

Wireless printer	ISH-DS-PRINTER
Couplant	ISH-COUPPLANT
Support rings	page 706
Hardness test block D	HDT-B-HLD3

connected to computer by USB cable,
upload the data in real time



connected to computer by bluetooth module,
upload the data in real time



PORTABLE LEEB HARDNESS TESTER CODE ISH-SPHA

INSPECTION
CERTIFICATE

DATA
OUTPUT



- Based on Leeb (HL), converted to Vickers (HV), Brinell (HB), Rockwell (HRC and HRB), Shore (HS) and tensile strength (MPa)
- Connected with printer via bluetooth
- Connected with computer via USB port
- Up to 800 test results can be saved
- Tolerance testing
- Touch screen operation, large display with backlight
- Language: English, Chinese, Italian, German, French and Portuguese
- Automatic power off
- According to ASTM A 956



software flash disk (included)



hardness test block D (included)



small support ring (included)



printer (included)

SPECIFICATION

Min. reading	1HL, 1HV, 1HB, 0.1HRC, 0.1HRB, 1HS, 1MPa
Accuracy	±6HL (when HL=800)
Display	Leeb (HL), converted hardness, material, impact direction, test times, average value, deviation, time
Output	bluetooth and USB
Power supply	built-in rechargeable battery
Dimension	135×83×24mm
Weight	350g

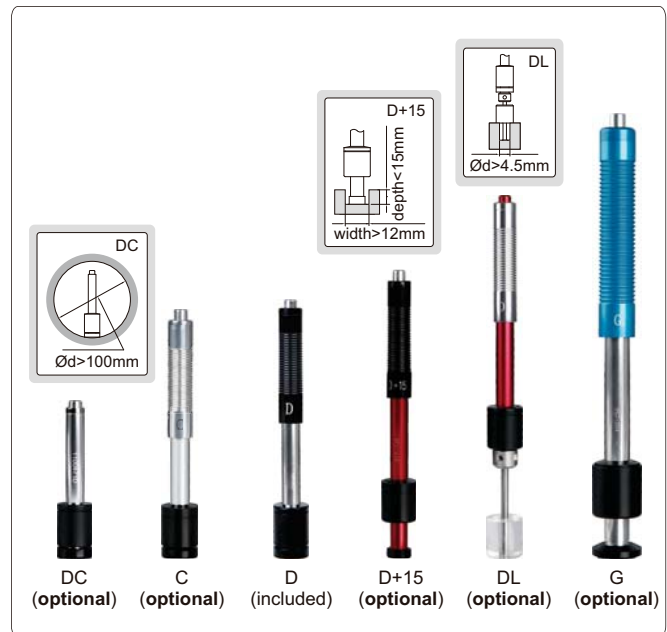
STANDARD DELIVERY

Main unit	1 pc
Impact device D	1 pc
Printer	1 pc
Hardness test block D	1 pc
Small support ring	1 pc
Cleaning brush	1 pc
AC/DC adapter	1 pc
Software flash disk and USB cable	1 pc
Pen for touch screen	1 pc

OPTIONAL ACCESSORY

Impact device DC	ISH-SPHA-DC
Impact device C	ISH-SPHA-C
Impact device D+15	ISH-SPHA-D15
Impact device DL	ISH-SPHA-DL
Impact device G	ISH-SPHA-G
Hardness test block D*	HDT-B-HLD3
Hardness test block G*	HDT-B-HLG2
Couplant	ISH-COUPPLANT
Support rings	page 706

* Hardness test block G (HDT-B-HLG2) is for impact device G (ISH-SPHA-G).
Hardness test block D (HDT-B-HLD3) is for all other impact devices.



APPLICABLE WORKPIECE

Impact device	DC	C	D	D+15	DL	G
Application	inner wall of small space	small or thin workpiece, coating layer	general use	deep groove	narrow slot or small hole	casting or forging workpiece
Maximum roughness of workpiece (Ra)	1.6µm	0.4µm	1.6µm	1.6µm	1.6µm	7µm
Minimum weight of workpiece	direct measurement	5kg	1.5kg	5kg	5kg	15kg
	on solid support	2kg	0.5kg	2kg	2kg	5kg
	coupled on plate	0.1kg	0.02kg	0.1kg	0.1kg	0.5kg
Minimum thickness of workpiece	5mm	1mm	5mm	5mm	5mm	10mm

PORTABLE LEEB HARDNESS TESTERS (BASIC TYPE)

- Can change probes
- Dual-coil probe for high accuracy
- Universal testing angle, no need to set impact direction
- Based on Leeb (HLD), converted to Vickers (HV), Brinell (HB), Rockwell (HRC, HRB), Shore (HSD) and tensile strength (σ_b)
- Dual value display, shows both Leeb and converted hardness
- Large LCD display with backlight
- Can choose large font display and statistics display
- Automatically calculate maximum, minimum and average value
- Save 300 data
- Operation temperature: $-10^{\circ}\text{C}\sim 45^{\circ}\text{C}$
- According to ASTM A956, GB/T 17394

SPECIFICATION

Code	HDT-LP200	HDT-LP200B
Printer	not included	included
Resolution	1HLD/1HV/1HB/0.1HRC/0.1HRB/ 0.1HSD/1 σ_b	
Accuracy	$\pm 6\text{HLD}$ (when HLD=800)	
Measuring range	HL 170-960/HRC 17-70/HRB 13-109/ HB 20-655/HV 80-940/HSD 32-99.5/ $\sigma_b(\text{rm})$ 255-2639N/mm ²	
Power supply	2xAA battery	
Dimension	135x77x32mm	
Weight	240g	

STANDARD DELIVERY

Main unit	1 pc
Hardness test block D	1 pc
Small support ring	1 pc
Cleaning brush	1 pc
Impact device D	1 pc
Bluetooth printer (included in HDT-LP200B)	1 pc

OPTIONAL ACCESSORY

Impact device DC	HDT-LP200-DC
Impact device C	HDT-LP200-C
Impact device D+15	HDT-LP200-D15
Impact device DL	HDT-LP200-DL
Impact device G	HDT-LP200-G
Hardness test block D**	HDT-B-HLD3
Hardness test block G*	HDT-B-HLG2
Support rings	page 706

* Hardness test block G (HDT-B-HLG2) is for impact device G (HDT-LP200-G)

** Hardness test block D (HDT-B-HLD3) is for all other impact devices

APPLICABLE WORKPIECE

Impact device	DC	C	D	D+15	DL	G
Application	inner wall of small space	small or thin workpiece, coating layer	general use	deep groove	narrow slot or small hole	casting or forging workpiece
Maximum roughness of workpiece (Ra)	2 μm	0.4 μm	2 μm	2 μm	2 μm	7 μm
Minimum weight of workpiece	direct measurement	5kg	1.5kg	5kg	5kg	15kg
	on solid support	2kg	0.5kg	2kg	2kg	5kg
	coupled on plate	0.05kg	0.02kg	0.05kg	0.1kg	0.05kg
Minimum thickness of workpiece	3mm	1mm	3mm	3mm	3mm	10mm



HDT-LP200



hardness test block D (included)



small support ring (included)



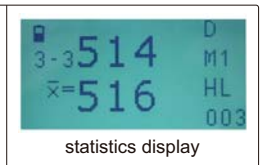
bluetooth printer (included in HDT-LP200B)



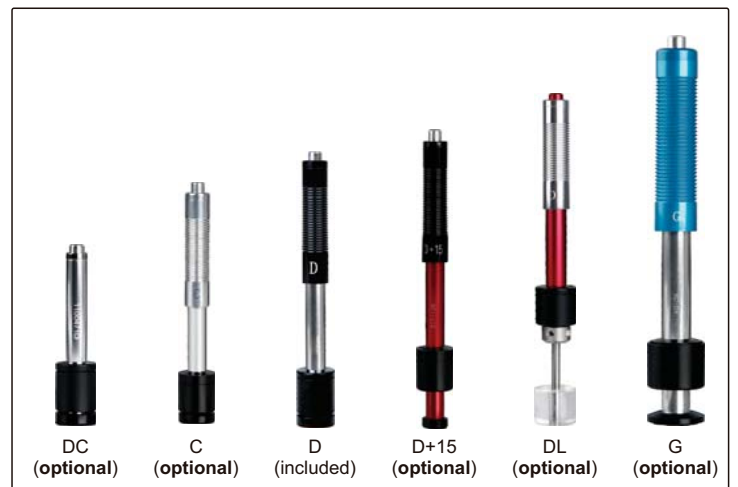
VIDEO



large font display



statistics display



PORTABLE LEEB HARDNESS TESTER (WITH WIRELESS PROBE) CODE HDT-WP201



- Bluetooth digital probe
- Universal testing angle, no need to set impact direction
- Based on Leeb (HLD), converted to Vickers (HV), Brinell (HB), Rockwell (HRC, HRB), Shore (HSD) and tensile strength (σ_b)
- Dual value display, shows both Leeb and converted hardness
- Large LCD display with backlight
- Can choose large font display and statistics display
- Automatically calculate maximum, minimum and average value
- Save 300 data
- Operation temperature: -10°C~45°C
- According to ASTM A956, DIN 50156 GB/T 17394



hardness test block D (included)



small support ring (included)



bluetooth printer (optional)

SPECIFICATION

Resolution	1HLD/1HV/1HB/0.1HRC/0.1HRB/0.1HSD/1 σ_b
Accuracy	± 6 HLD (when HLD=800)
Measuring range	HL 170-960/HRC 17-69/HRB 13-101.7/ HB 20-655/HV 80-940/HSD 32-99.5/ σ_b (rm) 255-2180N/mm ²
Power supply	2xAA battery
Dimension	135×77×32mm
Weight	240g



large font display

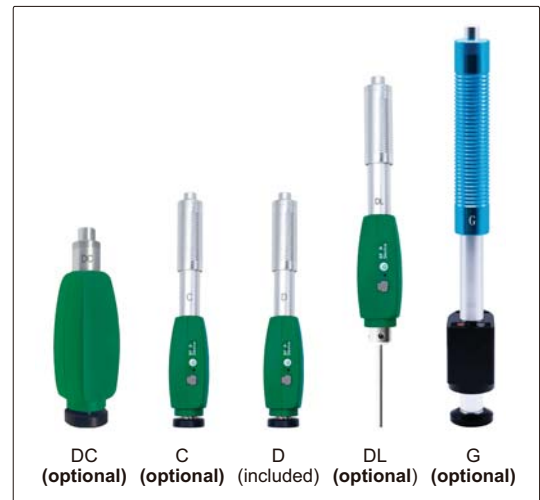
statistics display

STANDARD DELIVERY

Main unit	1 pc
Hardness test block D	1 pc
Small support ring	1 pc
Cleaning brush	1 pc
Impact device D	1 pc

OPTIONAL ACCESSORY

Impact device DC	HDT-WP201-DC
Impact device C	HDT-WP201-C
Impact device DL	HDT-WP201-DL
Impact device G	HDT-WP201-G
Hardness test block D	HDT-B-HLD3
Bluetooth printer	HDT-WP201-PT
Support rings	page 706



DC (optional) C (optional) D (included) DL (optional) G (optional)

APPLICABLE WORKPIECE

Impact device	DC	C	D	DL	G	
Application	inner wall of small space	small or thin workpiece, coating layer	general use	narrow slot or small hole	casting or forging workpiece	
Maximum roughness of workpiece (Ra)	2 μ m	0.4 μ m	2 μ m	2 μ m	7 μ m	
Minimum weight of workpiece	direct measurement	5kg	1.5kg	5kg	5kg	15kg
	on solid support	2kg	0.5kg	2kg	2kg	5kg
	coupled on plate	0.05kg	0.02kg	0.05kg	0.05kg	0.5kg
Minimum thickness of workpiece	3mm	1mm	3mm	3mm	10mm	

DATA OUTPUT

HIGH ACCURACY

DL PROBE IS OPTIONAL

PORTABLE LEEB HARDNESS TESTER (HIGH ACCURACY) CODE HDT-L410

INSPECTION CERTIFICATE



software flash disk (included)



hardness test block D (included)



wireless printer (optional)



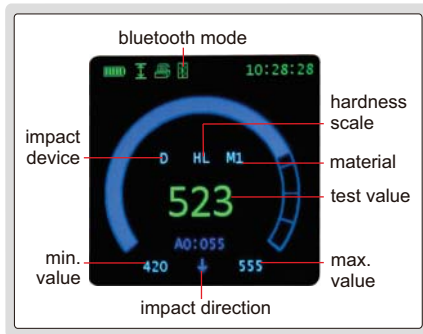
small support ring (included)

DL probe can be installed (optional)

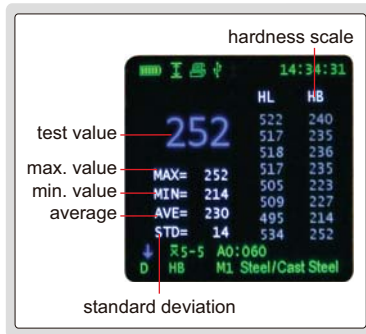


- Metal housing
- HD TFT 320×320 display
- Impact device D
- Based on Leeb (HLD), converted to Vickers (HV), Brinell (HB), Rockwell (HRC, HRA and HRB), Shore (HS) and tensile strength (SGM)
- Four display modes
- Automatic direction correction
- Tolerance testing
- Automatic power off, automatic calculation of statistics
- Dual value display, shows both Leeb and other conversion values
- 31 files can be saved, each containing 100 measurement data
- Connected to PC software via USB or Bluetooth 2.0
- Connected with printer via Bluetooth
- Operation temperature: -20°C~70°C
- According to ASTM A956, DIN 50156, GB/T 17394

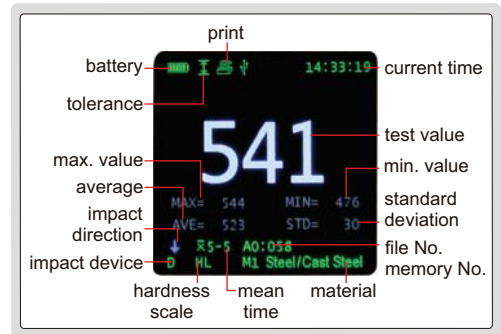
dynamic ring display



statistic display

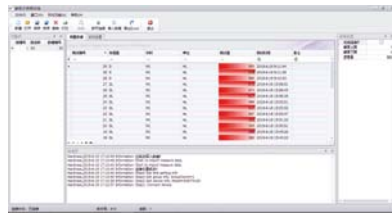


can choose large font display

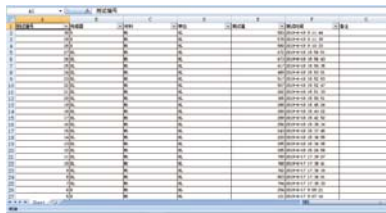


software (included), upload the memory to PC, print and send to EXCEL

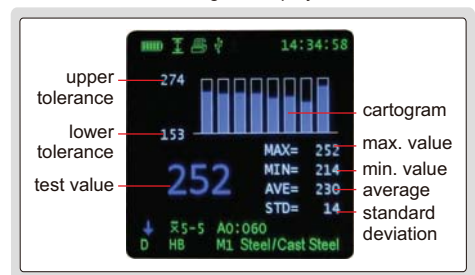
upload the memory to PC software via USB cable or Bluetooth



send the stored data to EXCEL



histogram display



SPECIFICATION

Resolution	1HLD, 1HV, 1HB, 0.1HRC, 0.1HRB, 0.1HRA, 0.1HS, 1SGM	
Accuracy	±4HLD (when HLD=800)	
Output	USB and bluetooth	
Applicable workpiece	minimum weight	5kg (direct measurement)
		2kg (on solid support)
		0.05kg (coupled on plate)
	minimum thickness: 5mm	
minimum radius of curved surface: 30mm		
maximum roughness (Ra): 2µm		
Power supply	built-in 3.7V rechargeable battery	
Dimension	148×44×22mm	
Weight	115g	

STANDARD DELIVERY

Main unit	1 pc
Hardness test block D	1 pc
Small support ring	1 pc
Cleaning brush	1 pc
AC/DC adapter	1 pc
Software flash disk and USB cable	1 pc

OPTIONAL ACCESSORY

Printer	HDT-L410-PRINTER
Support rings	page 706
Hardness test block D	HDT-B-HLD3
DL probe	HDT-L410-DL

PORTABLE LEEB HARDNESS TESTER (BASIC TYPE) CODE HDT-L411

DATA
OUTPUT

INSPECTION
CERTIFICATE



software flash disk
(included)



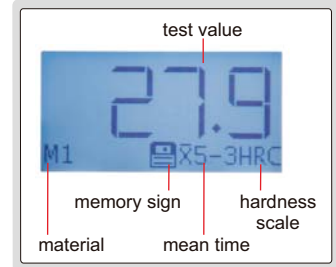
hardness test
block D (included)



small support ring
(included)



can choose large font display



software (included), upload the memory
to PC, print and send to EXCEL

upload the memory to PC
software via USB cable

send the stored data to EXCEL

- Impact device D
- Universal testing angle, no need to set impact direction
- Dual-coil probe, high accuracy
- Based on Leeb (HLD), converted to Vickers (HV), Brinell (HB), Rockwell (HRC, HRA and HRB), Shore (HS) and tensile strength (SGM)
- Dual value display, shows both Leeb and converted hardness
- High contrast digital LCD display
- Can choose large font display
- Automatically calculate maximum, minimum, average value
- Connected to PC via USB
- Save 999 data
- Operation temperature: -20°C~45°C
- According to ASTM A956, DIN 50156, GB/T 17394

SPECIFICATION

Resolution	1HLD, 1HV, 1HB, 0.1HRC, 0.1HRB, 0.1HRA, 0.1HS, 1SGM	
Accuracy	±6HLD (when HLD=800)	
Output	USB	
Measuring range	HL100-960, HRC1-74.7, HRB1.2-140, HB28-1027, HV45-1230, HS4-112, HRA7-88.5, SGM (rm) 118-3315N/mm ²	
Applicable workpiece	minimum weight	5kg (direct measurement)
		2kg (on solid support)
		0.05kg (coupled on plate)
	minimum thickness: 5mm	
minimum radius of curved surface: 30mm		
maximum roughness (Ra): 2µm		
Power supply	1xAAA battery	
Dimension	148×45×21mm	
Weight	105g	

STANDARD DELIVERY

Main unit	1 pc
Hardness test block D	1 pc
Cleaning brush	1 pc
AAA battery	1 pc
Small support ring	1 pc
Software flash disk and USB cable	1 pc

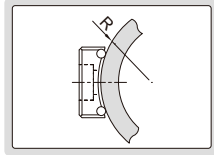
OPTIONAL ACCESSORY

Support rings	page 706
Hardness test block D	HDT-B-HLD3

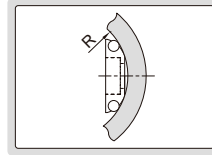


SUPPORT RING SET FOR PORTABLE LEEB HARDNESS TESTER CODE ISH-PH-SP9

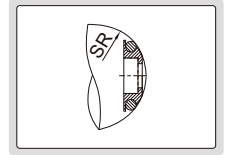
type A



type B



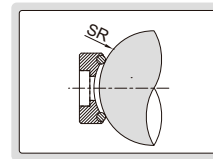
type C



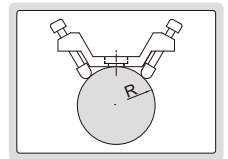
SPECIFICATION

Type	Applicable workpieces	Range (mm)	Quantity
A	cylindrical outside surface	R10-15	3 pcs
		R14.5-30	
		R25-50	
B	cylindrical inside surface	R11-13	3 pcs
		R12.5-17	
		R16.5-30	
C	spherical inside surface	SR11-13	3 pcs
		SR12.5-17	
		SR16.5-30	
D	spherical outside surface	SR10-15 SR14.5-30	2 pcs
E	cylindrical outside surface	R>10	1 pc

type D



type E



DIGITAL MAGNETIC ROCKWELL HARDNESS TESTER CODE ISHR-D121



flat anvil for test block
(included)



- Apply to large and heavy steel or iron workpieces
- With statistic function, display average, maximum and minimum values
- Convert to HV, HB and tensile strength
- According to ISO 6508, ASTM E18



SPECIFICATION

Hardness scale	HRA, HRB, HRC
Preliminary test force	10kg
Test force	60kg, 100kg, 150kg
Load control	manual
Min. reading	0.1HR
Flat workpiece requirement	length>190mm, width>60mm, thickness>5mm
Cylinder or tube workpiece requirement	length>200mm, diameter>Ø50mm, wall thickness>8mm
Power supply	3×AAA batteries
Dimension	245×105×230mm
Weight	5.3kg

STANDARD DELIVERY

Main unit	1 pc
Flat anvil	1 pc
Diamond indenter	1 pc
Ø1.5875mm carbide ball indenter	1 pc
Hardness test block HRB85~95	1 pc
Hardness test block HRC60~70	1 pc
Hardness test block HRC20~30	1 pc

MAGNETIC ROCKWELL HARDNESS TESTER CODE ISHR-M111

- Apply to large and heavy steel or iron workpieces
- According to ISO 6508, ASTM E18



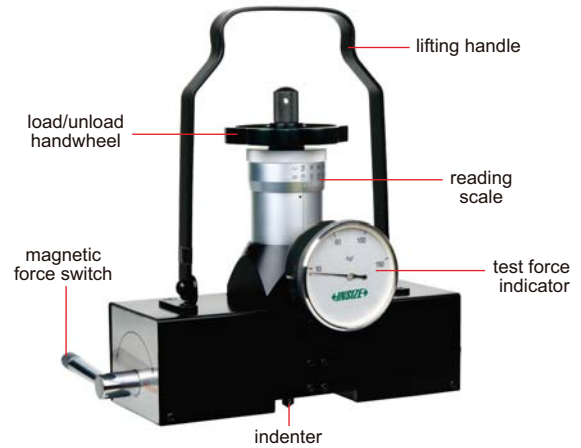
flat anvil for test block (included)



supports for cylinder or tube workpieces (included)



magnifier with LED (included)



SPECIFICATION

Hardness scale	HRA, HRB, HRC, HRD, HRF, HRG
Preliminary test force	10kg
Test force	60kg, 100kg, 150kg
Load control	manual
Min. reading	1HR
Flat workpiece requirement	length>180mm, width>60mm, thickness>5mm
Cylinder or tube workpiece requirement	length>180mm, diameter>Ø50mm, wall thickness>8mm
Dimension	220×70×220mm
Weight	4.7kg

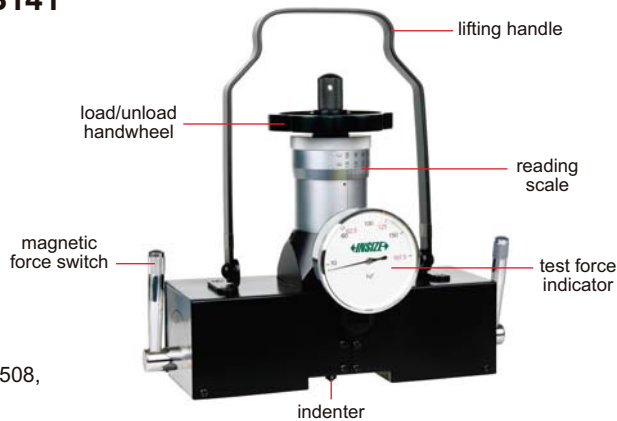
STANDARD DELIVERY

Main unit	1 pc
Diamond indenter	1 pc
Ø1.5875mm carbide ball indenter	2 pcs
Hardness test block HRB85-95	1 pc
Hardness test block HRC60-70	1 pc
Hardness test block HRC20-30	1 pc
Flat anvil	1 pc
Support	4 pcs
Magnifier with LED	1 pc

MAGNETIC BRINELL/ROCKWELL HARDNESS TESTER CODE ISHR-B141



- Apply to large steel or iron workpieces
- According to ISO 6508, ASTM E18



flat anvil for test block (included)



supports for cylinder or tube workpieces (included)



magnifier with LED (included)



measuring microscope (included)

SPECIFICATION

Rockwell scale	HRA, HRB, HRC, HRD, HRF, HRG
Brinell measuring range	20~650HBW
Rockwell test force	10kg preload, 60kg, 100kg, 150kg total load
Brinell test force	62.5kg, 125kg, 187.5kg
Load control	manual
Min. Rockwell reading	1HR
Measuring microscope	40X, graduation 0.01mm
Flat workpiece requirement	length>180mm, width>60mm, thickness>5mm
Cylinder and tube workpiece requirement	length>180mm, diameter>Ø50mm, thickness>8mm
Dimension	220×70×220mm
Weight	4.7kg

STANDARD DELIVERY

Main unit	1 pc
Flat anvil	1 pc
Support	4 pcs
Diamond Rockwell indenter	1 pc
Ø1.5875mm carbide ball indenter	1 pc
Ø2.5mm Brinell indenter	1 pc
Hardness test block HRB85-95	1 pc
Hardness test block HRC60-70	1 pc
Hardness test block HRC20-30	1 pc
Brinell test block	1 pc
Measuring microscope	1 pc
Magnifier with LED	1 pc

PORTABLE ROCKWELL HARDNESS TESTER CODE ISHR-P151



anvil extension for thin workpieces (included)



VIDEO



flat anvil (included)

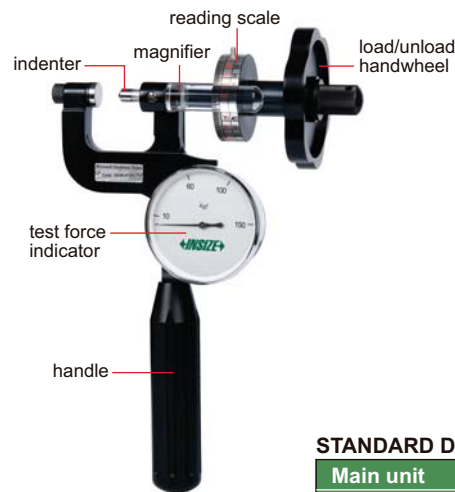


V-type anvil (included)

- According to ISO 6508, ASTM E18

SPECIFICATION

Hardness scale	HRA, HRB, HRC, HRD, HRF, HRG
Preliminary test force	10kg
Test force	60kg, 100kg, 150kg
Load control	manual
Min. reading	1HR
Max. workpiece thickness	25mm
Max. testing width	25mm (from the center of indenter to the main body)
Dimension	240×70×160mm
Weight (with base)	2.5kg



base (included)

STANDARD DELIVERY

Main unit	1 pc
Diamond indenter	1 pc
Ø1.5875mm carbide ball indenter	2 pcs
Hardness test block HRB88-95	1 pc
Hardness test block HRC60-65	1 pc
Hardness test block HRC20-30	1 pc
Flat anvil	1 pc
V-type anvil	1 pc
Base	1 pc
Anvil extension	1 pc
Magnifier	2 pcs



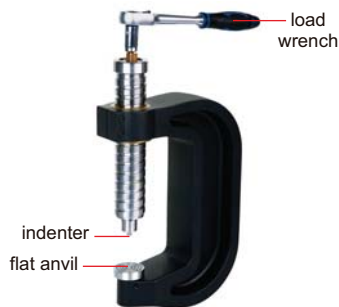
VIDEO

- Measure Brinell hardness of large and heavy workpieces
- 1580kg test force and Ø7.26mm ball indenter, equal to 3000kg test force and Ø10mm ball indenter
- Static and impact test modes
- According to ISO and ASTM standard

static test



impact test



static test clamp



impact test handle



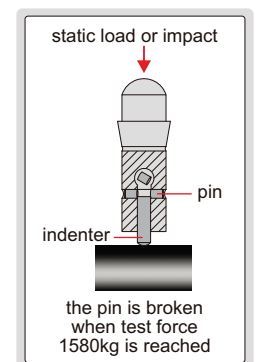
measuring microscope (included)



pins (included)



V-type anvil (included)



PIN BRINELL HARDNESS TESTER CODE ISHB-P101

SPECIFICATION

Measuring range	100~350HBW (with Ø7.26mm indenter, included) 350~650HBW (with Ø4mm indenter, optional)
Test force	1580kg
Accuracy	static test: ±3% impact test: ±5%
Measuring microscope	20X, graduation 0.01mm
Max. workpiece height of static test	150mm
Max. testing width of static test	80mm (from the center of indenter to the clamp)
Dimension	195×60×350mm
Weight	4.2kg

STANDARD DELIVERY

Static test clamp	1 pc
Impact test handle	1 pc
Flat anvil	1 pc
V-type anvil	1 pc
Ø7.26mm indenter	1 pc
Hardness test block	1 pc
Pin	250 pcs
Measuring microscope	1 pc

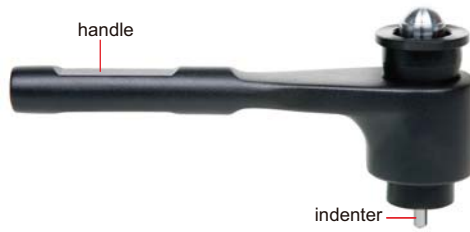
OPTIONAL ACCESSORY

Ø4mm indenter	ISHB-P101-INDENTER
Pin (250 pcs)	ISHB-P101-PIN

HAMMER IMPACT BRINELL HARDNESS TESTER CODE HDT-PB350



hammer impact
to apply test force



- Measure Brinell hardness of large and heavy workpieces
- 1580kg test force and $\varnothing 7.26\text{mm}$ ball indenter, equal to 3000kg test force and $\varnothing 10\text{mm}$ ball indenter



SPECIFICATION

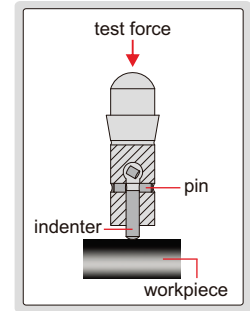
Measuring range	100~350HBW (with $\varnothing 7.26\text{mm}$ indenter, included) 350~650HBW (with $\varnothing 4\text{mm}$ indenter, optional)
Test force	1580kg
Accuracy	$\pm 5\%$ HBW
Repeatability	$\pm 5\%$ HBW
Measuring microscope	20X, graduation 0.01mm
Dimension	200×50×100mm
Weight	0.8kg



pins (included)



measuring microscope
(included)



the pin is broken when
test force 1580kg is reached

STANDARD DELIVERY

Main unit	1 pc
$\varnothing 7.26\text{mm}$ indenter	1 pc
Hardness test block	1 pc
Pin	250 pcs
Pin removal tool	1 pc
Measuring microscope	1 pc

OPTIONAL ACCESSORY

$\varnothing 4\text{mm}$ indenter	ISHB-P101-INDENTER
Pin (250 pcs)	ISHB-P101-PIN

HYDRAULIC BRINELL HARDNESS TESTER CODE ISHB-H131



V-type anvil
(included)



spherical anvil
(included)



measuring microscope
(included)

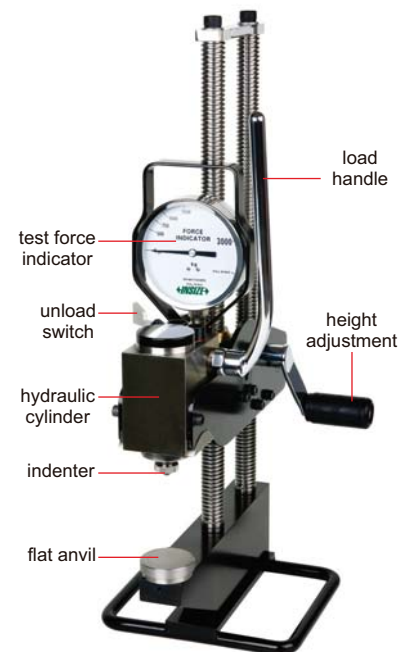
- According to ISO 6506, ASTM E10

SPECIFICATION

Measuring range	16~650HBW
Test force	3000kg
Indenter	$\varnothing 10\text{mm}$ carbide ball
Measuring microscope	20X, graduation 0.01mm
Max. workpiece height	350mm
Max. testing width	90mm (from the center of indenter to the column)
Dimension	270×225×570mm
Weight	13.8kg

STANDARD DELIVERY

Main unit	1 pc
Flat anvil	1 pc
V-type anvil	1 pc
Spherical anvil	1 pc
$\varnothing 10\text{mm}$ carbide ball	2 pcs
Brinell test block	2 pcs
Measuring microscope	1 pc



CHAIN TYPE HYDRAULIC BRINELL HARDNESS TESTER CODE ISHB-C161

- To measure the hardness of cylinders or tubes
- According to ISO 6506, ASTM E10

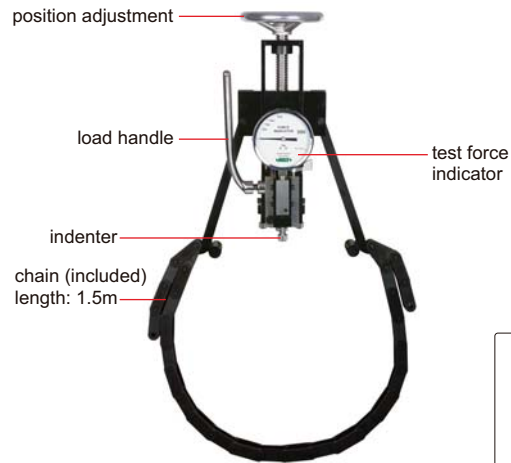


SPECIFICATION

Measuring range	32~650HBW
Workpiece diameter range	Ø150~Ø500mm
Test force	3000kg
Indenter	Ø10mm carbide ball
Measuring microscope	20X, graduation 0.01mm
Dimension	270×225×570mm
Weight	14.5kg

STANDARD DELIVERY

Main unit	1 pc
1.5m chain	1 pc
Ø10mm carbide ball	2 pcs
Brinell test block	2 pcs
Measuring microscope	1 pc



measuring microscope (included)



ALUMINUM HARDNESS TESTERS

- To measure the hardness of soft metal such as aluminum alloy, copper, brass, soft steel, etc.
- According to ASTM B647-84 (2000)

STANDARD DELIVERY

Main unit	1 pc
Spare indenter	1 pc
Hardness test block	1 pc
Wrench	1 pc



ISHW-L20B

SPECIFICATION

Code	ISHW-L20	ISHW-L20A	ISHW-L20B	ISHW-B70	ISHW-B75	ISHW-B92
Application	for aluminum alloy general use	for aluminum alloy thick workpiece	for aluminum alloy small tube	for hard aluminum alloy and hard brass	for soft brass and copper	for soft steel and cold-rolled steel
Thickness requirement of flat workpiece	0.6~6mm	0.6~13mm	0.6~8mm	0.6~6mm	0.6~6mm	0.6~6mm
Internal diameter requirement of tube workpiece	>Ø10mm	>Ø10mm	>Ø6mm	>Ø10mm	>Ø10mm	>Ø10mm
Wall thickness requirement of tube workpiece	0.6~6mm	6~13mm (internal diameter Ø10~23.3mm) 0.6~6mm (internal diameter >Ø23.3mm)	0.6~8mm	0.6~6mm	0.6~6mm	0.6~6mm
Hardness range	0~20HW					
Min. reading	1HW					
Accuracy	±0.5HW (at 5~17HW)					
Dimension	205×30×85mm					
Weight	500g					

BARCOL HARDNESS TESTER CODE ISHB-B300



SPECIFICATION

Hardness range	0~100HBa (equal to 25~150HBW)
Min. reading	1HBa
Accuracy	±2HBa (at 42~52HBa) ±1HBa (at 84~88HBa)
Min. workpiece thickness	0.8mm
Dimension	142×65×90mm
Weight	500g

STANDARD DELIVERY

Main unit	1 pc
Spare indenter	2 pcs
Hardness test block	2 pcs
Wrench	1 pc



- To measure the hardness of workpieces made of pure aluminum, aluminum alloy, fiber reinforced plastic, hard plastic, etc.
- According to ASTM B648-00, ASTM D2853-07

DIGITAL SHORE DUROMETERS



- According to ISO868, ISO7619, ASTM D 2240
- Average and peak (max.) mode
- Dwell time is adjustable
- Tolerance testing
- 500 memories
- Wireless connection to printer
- Handhold use or work with test stand (code ISH-DS-STANDA)
- Automatic power off



software flash disk
(included)



calibration block
(included)



printer (optional)

SPECIFICATION

Code	ISH-DSA	ISH-DSD	ISH-DSOO
Unit	Shore A	Shore D	Shore OO
Test material	soft plastic, soft rubber, etc.	hard plastic, hard rubber, etc.	very soft plastic, rubber, sponge, textile, etc.
Measuring range	0~100HA*	0~100HD*	0~100HOO
Resolution	0.1HA	0.1HD	0.1HOO
Accuracy	±1HA	±1HD	±1HOO
Indenter protrusion	2.5mm		
Output	wireless and USB		
Power supply	built-in rechargeable battery		
Dimension	153×50×29mm		
Weight	170g		

* Use ISH-DSD when measuring result is higher than 90HA
Use ISH-DSA when measuring result is lower than 20HD

STANDARD DELIVERY

Main unit	1 pc
Calibration block	1 pc
Software and USB cable	1 pc
AC/DC adapter	1 pc

OPTIONAL ACCESSORY

Printer	ISH-DS-PRINTER
Test stand	ISH-DS-STANDA

TEST STAND FOR DIGITAL SHORE DUROMETERS CODE ISH-DS-STANDA

- For digital shore durometers (code **ISH-DSA**, **ISH-DSD** and **ISH-DSOO**)
- Perform repeatable hardness measurement due to fewer possibilities of human error or measurement variations
- Special structure for stable loading
- Weight block A (included) is for **ISH-DSA**, weight block D (optional) is for **ISH-DSD**, remove weight block for **ISH-DSOO**



weight block D (optional) for ISH-DSD



SPECIFICATION

Stage diameter	Ø115mm
Max. workpiece height	45mm
Max. testing width	63mm (from test point to the column)
Dimension	Ø195×370mm
Weight	5.61kg

STANDARD DELIVERY

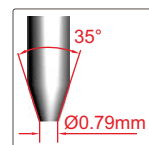
Test stand	1 pc
Weight block A (for ISH-DSA)	1 pc

OPTIONAL ACCESSORY

Weight block D (for ISH-DSD)	ISH-DS-W4
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- According to ISO868, ISO7619, ASTM D 2240
- With peak value indicator
- Handhold use or work with test stand (code **ISH-OS2**)



blunt taper indenter

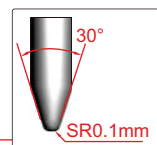


ISH-S30A

peak value indicator



ISH-S30D



sharp point indenter

SHORE DUROMETERS

INSIZE PLUS
MADE IN EUROPE

SPECIFICATION

Code	ISH-S30A	ISH-S30D
Scale	Shore A	Shore D
Test material	soft plastic, soft rubber, etc.	hard plastic, hard rubber, etc.
Measuring range *	0~100HA	0~100HD
Resolution	1HA	1HD
Accuracy	±0.5HA	±0.5HD
Indenter protrusion	2.5mm	
Weight	184g	

* Use **ISH-S30D** when measuring result is higher than 90HA
Use **ISH-S30A** when measuring result is lower than 20HD

TEST STAND FOR SHORE DUROMETERS CODE ISH-OS2

INSIZE PLUS
MADE IN EUROPE



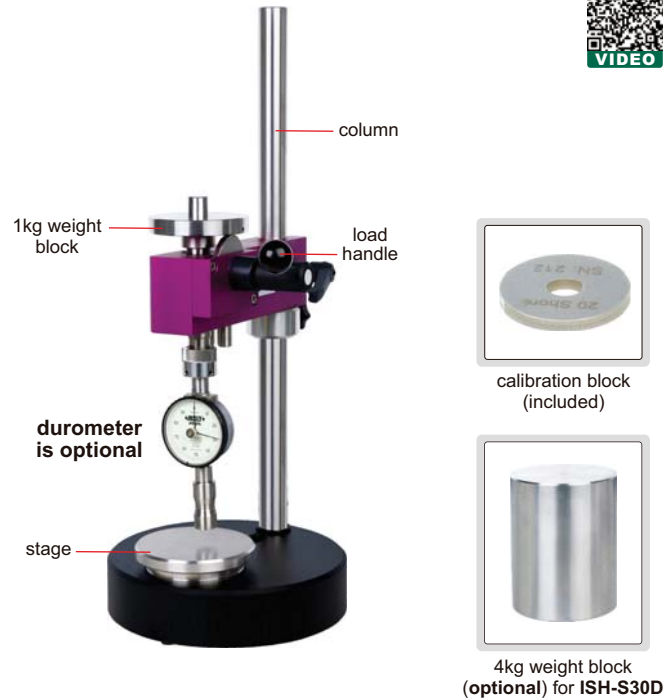
- For shore durometers (code **ISH-S30A** and **ISH-S30D**)
- Perform repeatable hardness measurement due to fewer possibilities of human error or measurement variations
- Special structure for stable loading
- 1kg weight block (included) is for **ISH-S30A**, 4kg weight block (optional) is for **ISH-S30D**

SPECIFICATION

Stage diameter	Ø98mm
Max. workpiece height	180mm
Max. testing width	115mm (from test point to the column)
Dimension	Ø200×500mm
Weight	18kg

STANDARD DELIVERY

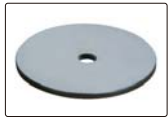
Test stand	1 pc
1kg weight block (for ISH-S30A)	1 pc
Calibration block	1 pc



OPTIONAL ACCESSORY

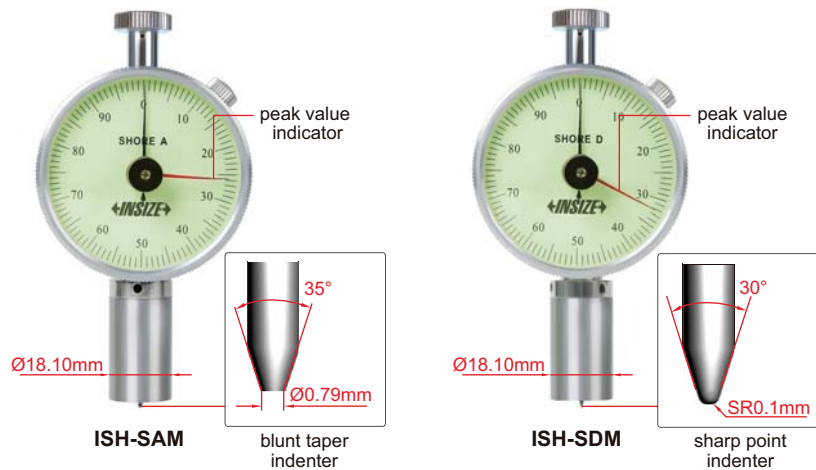
4kg weight block (for ISH-S30D)	ISH-OS2-W4
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SHORE DUROMETERS



calibration block (optional)

- According to ISO868, ISO7619, ASTM D 2240
- With peak value indicator
- Optional accessory: test stand **ISH-STAC** and **ISH-STD**



SPECIFICATION

Code	ISH-SAM	ISH-SDM
Scale	Shore A	Shore D
Application	nature rubber, soft elastomer, etc.	hard rubber, plastic, hard elastomer, etc.
Measuring range *	10~90HA	20~90HD
Graduation	1HA	1HD
Indenter protrusion	2.5mm	
Dimension	115×60×25mm	
Weight	160g	

* Use **ISH-SDM** when measuring result is higher than 90HA
Use **ISH-SAM** when measuring result is lower than 20HD

OPTIONAL ACCESSORY

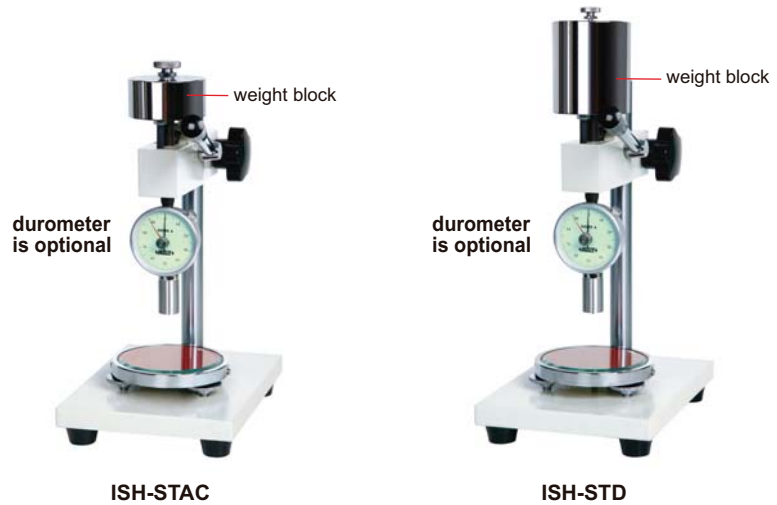
Calibration block	ISH-DS-BLOCK
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TEST STANDS FOR SHORE DUROMETERS



- For shore durometers (code **ISH-SAM** and **ISH-SDM**)
- Perform repeatable hardness measurement due to fewer possibilities of human error or measurement variations



SPECIFICATION

Code	ISH-STAC	ISH-STD
Applicable durometer	ISH-SAM	ISH-SDM
Stage diameter	Ø100mm	Ø100mm
Max. workpiece height	75mm	75mm
Max. testing width	65mm (from test point to the column)	65mm (from test point to the column)
Weight block	1kg	5kg

FRUIT HARDNESS TESTER

- Measure the hardness of apples, pears, strawberries and grapes, etc.
- The degree of ripeness can be judged by measuring the hardness of the fruit



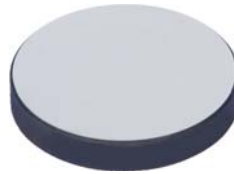
SPECIFICATION

Code	Range	Graduation	Accuracy	Probe diameter	Probe depth	Dimension	Weight
9643-4	0.5-4kg/cm ² (0.5-4×10 ⁵ Pa)	0.02kg/cm ² (0.02×10 ⁵ Pa)	±2%	Ø3.5mm	10mm	151×55×30mm	0.2kg

HARDNESS TEST BLOCKS



Rockwell



Vickers



Leeb



Micro-Vickers



Brinell



Shore

■ Supplied with manufacturer inspection certificate

Rockwell hardness test blocks

Code	Type	Hardness
HDT-B-HRA	HRA	80-84
HDT-B-HRB	HRB	88-100
HDT-B-HRC1	HRC	20-30
HDT-B-HRC2	HRC	35-55
HDT-B-HRC3	HRC	60-70
HDT-B-HRD1	HRD	40-47
HDT-B-HRD2	HRD	55-63
HDT-B-HRD3	HRD	70-75
HDT-B-HRE	HRE	107-114
HDT-B-HRF	HRF	105-114
HDT-B-HRG1	HRG	57-82
HDT-B-HRG2	HRG	80-94

Rockwell superficial hardness test blocks

Code	Type	Hardness
HDT-B-HR15N1	HR15N	70-77
HDT-B-HR15N2	HR15N	78-88
HDT-B-HR15N3	HR15N	89-91
HDT-B-HR30N1	HR30N	42-54
HDT-B-HR30N2	HR30N	55-73
HDT-B-HR30N3	HR30N	74-80
HDT-B-HR45N1	HR45N	20-31
HDT-B-HR45N2	HR45N	32-61
HDT-B-HR45N3	HR45N	63-70
HDT-B-HR15T	HR15T	88-93
HDT-B-HR30T	HR30T	73-82
HDT-B-HR45T	HR45T	58-72

Vickers hardness test blocks

Code	Type	Hardness
HDT-B-HV5A	HV5	175-200
HDT-B-HV5B	HV5	200-300
HDT-B-HV5C	HV5	300-400
HDT-B-HV5D	HV5	400-500
HDT-B-HV5E	HV5	500-600
HDT-B-HV5F	HV5	600-700
HDT-B-HV5G	HV5	700-750
HDT-B-HV10A	HV10	175-200
HDT-B-HV10B	HV10	200-300
HDT-B-HV10C	HV10	300-400
HDT-B-HV10D	HV10	400-500
HDT-B-HV10E	HV10	500-600
HDT-B-HV10F	HV10	600-700
HDT-B-HV10G	HV10	700-750
HDT-B-HV30A	HV30	175-200
HDT-B-HV30B	HV30	200-300
HDT-B-HV30C	HV30	300-400
HDT-B-HV30D	HV30	400-500
HDT-B-HV30E	HV30	500-600
HDT-B-HV30F	HV30	600-700
HDT-B-HV30G	HV30	700-750
HDT-B-HV50A	HV50	175-200
HDT-B-HV50B	HV50	200-300
HDT-B-HV50C	HV50	300-400
HDT-B-HV50D	HV50	400-500
HDT-B-HV50E	HV50	500-600
HDT-B-HV50F	HV50	600-700
HDT-B-HV50G	HV50	700-750
HDT-B-HV100A	HV100	175-200
HDT-B-HV100B	HV100	200-300
HDT-B-HV100C	HV100	300-400
HDT-B-HV100D	HV100	400-500
HDT-B-HV100E	HV100	500-600
HDT-B-HV100F	HV100	600-700
HDT-B-HV100G	HV100	700-750

To be continued



Continued from previous page

Leeb hardness test blocks

Code	Type	Hardness
HDT-B-HLD1	HLD	490-570
HDT-B-HLD2	HLD	590-670
HDT-B-HLD3	HLD	750-830
HDT-B-HLG1	HLG	460-540
HDT-B-HLG2	HLG	550-630

Micro-Vickers hardness test blocks

Code	Type	Hardness
HDT-B-HV005A	HV0.05	200-300
HDT-B-HV005B	HV0.05	300-400
HDT-B-HV005C	HV0.05	400-500
HDT-B-HV005D	HV0.05	500-600
HDT-B-HV005E	HV0.05	600-700
HDT-B-HV005F	HV0.05	700-750
HDT-B-HV01A	HV0.1	200-300
HDT-B-HV01B	HV0.1	300-400
HDT-B-HV01C	HV0.1	400-500
HDT-B-HV01D	HV0.1	500-600
HDT-B-HV01E	HV0.1	600-700
HDT-B-HV01F	HV0.1	700-750
HDT-B-HV02A	HV0.2	200-300
HDT-B-HV02B	HV0.2	300-400
HDT-B-HV02C	HV0.2	400-500
HDT-B-HV02D	HV0.2	500-600
HDT-B-HV02E	HV0.2	600-700
HDT-B-HV02F	HV0.2	700-750
HDT-B-HV03A	HV0.3	200-300
HDT-B-HV03B	HV0.3	300-400
HDT-B-HV03C	HV0.3	400-500
HDT-B-HV03D	HV0.3	500-600
HDT-B-HV03E	HV0.3	600-700
HDT-B-HV03F	HV0.3	700-750
HDT-B-HV05A	HV0.5	200-300
HDT-B-HV05B	HV0.5	300-400
HDT-B-HV05C	HV0.5	400-500
HDT-B-HV05D	HV0.5	500-600
HDT-B-HV05E	HV0.5	600-700
HDT-B-HV05F	HV0.5	700-750
HDT-B-HV1A	HV1	200-300
HDT-B-HV1B	HV1	300-400
HDT-B-HV1C	HV1	400-500
HDT-B-HV1D	HV1	500-600
HDT-B-HV1E	HV1	600-700
HDT-B-HV1F	HV1	700-750

Brinell hardness test blocks

Code	Type	Hardness
HDT-B-HB10A1	HBW10/3000	100-200
HDT-B-HB10A2	HBW10/3000	200-300
HDT-B-HB10A3	HBW10/3000	300-400
HDT-B-HB10A4	HBW10/3000	400-500
HDT-B-HB10A5	HBW10/3000	500-600
HDT-B-HB10A6	HBW10/3000	600-650
HDT-B-HB10B1	HBW10/1500	100-200
HDT-B-HB10B2	HBW10/1500	200-300
HDT-B-HB10B3	HBW10/1500	300-400
HDT-B-HB10B4	HBW10/1500	400-500
HDT-B-HB10B5	HBW10/1500	500-600
HDT-B-HB10B6	HBW10/1500	600-650
HDT-B-HB10C1	HBW10/1000	90-200
HDT-B-HB10C2	HBW10/1000	200-300
HDT-B-HB10C3	HBW10/1000	300-400
HDT-B-HB10C4	HBW10/1000	400-450
HDT-B-HB10D1	HBW10/500	90-200
HDT-B-HB10D2	HBW10/500	200-300
HDT-B-HB10D3	HBW10/500	300-400
HDT-B-HB10D4	HBW10/500	400-450
HDT-B-HB25A1	HBW2.5/187.5	100-200
HDT-B-HB25A2	HBW2.5/187.5	200-300
HDT-B-HB25A3	HBW2.5/187.5	300-400
HDT-B-HB25A4	HBW2.5/187.5	400-500
HDT-B-HB25A5	HBW2.5/187.5	500-600
HDT-B-HB25A6	HBW2.5/187.5	600-650
HDT-B-HB25B1	HBW2.5/62.5	90-200
HDT-B-HB25B2	HBW2.5/62.5	200-300
HDT-B-HB25B3	HBW2.5/62.5	300-400
HDT-B-HB25B4	HBW2.5/62.5	400-450
HDT-B-HB5A1	HBW5/750	100-200
HDT-B-HB5A2	HBW5/750	200-300
HDT-B-HB5A3	HBW5/750	300-400
HDT-B-HB5A4	HBW5/750	400-500
HDT-B-HB5A5	HBW5/750	500-600
HDT-B-HB5A6	HBW5/750	600-650
HDT-B-HB5B1	HBW5/250	90-200
HDT-B-HB5B2	HBW5/250	200-300
HDT-B-HB5B3	HBW5/250	300-400
HDT-B-HB5B4	HBW5/250	400-450

Shore hardness test blocks

Code	Type	Hardness *
HDT-B-SA	SA	6 pcs/set (30, 40, 50, 60, 70, 80)
HDT-B-SD	SD	3 pcs/set (15, 30, 90)

*The actual value may be slightly different when delivered

CONCRETE STRENGTH TESTERS

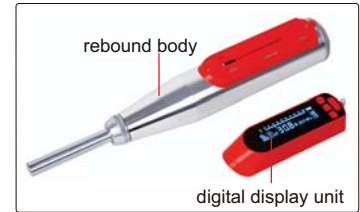
DATA OUTPUT



CST-D101

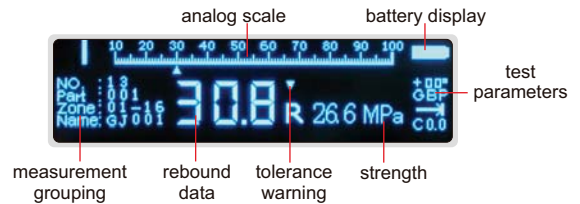


CST-D102



CST-D102 separable

- Measure the strength of general building components, bridges and various concrete components (slabs, beams, columns, bridges, etc.)
- Angle, test surface, pumping, carbonization depth and other parameters can be customized according to the requirements
- The rebound body can be used for 2000 times
- USB data transmission
- The software can automatically generate the test report, and the strength curve can be customized and stored in the tester
- Storage and reading of 1000 test data
- According to JGJ/T23-2011, the curve of rebound meter can be customized to calculate the compressive strength of concrete



SPECIFICATION

Code	CST-D101	CST-D102
Display	OLED display	
Range	10-70N/mm ²	
Accuracy	±1R	
Parameter	MPa, N/mm ² , Kg/mm ²	
Impact energy	2.207J, for testing common buildings or bridge structures	
Output	USB	
Structure	one body, non-seperable	separable, the digital display unit can be reused
Memory	1000 data	
Operation temperature	-40°C~60°C	
Power supply	built-in rechargeable battery	
Dimension	280×75×60mm	
Weight	1.1kg	



software flash disk (included)



sander (included)



calibration block (optional)

STANDARD DELIVERY

Main unit	1 pc
Sander	1 pc
Power adapter	1 pc
Software and USB cable	1 pc

OPTIONAL ACCESSORY

Rebound body (for CST-D102)	CST-D102-REBOUND
Digital display unit (for CST-D102)	CST-D102-DISPLAY
Calibration block	CST-D-BLOCK

software (included) for uploading and storing data, printing and importing/exporting strength curves



Cutting Machines
Page 719-721



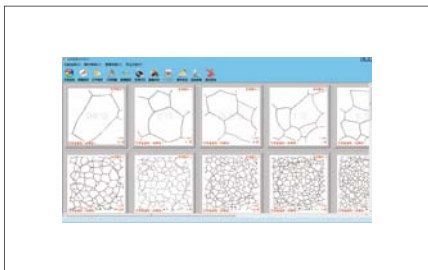
Grinders And Polishers
Page 722-725



Mounting Presses
Page 726-728



Metallurgical Microscopes
Page 728



Metallurgical Analysis Softwares
Page 728



Cutting Machine Accessories
Page 729-730

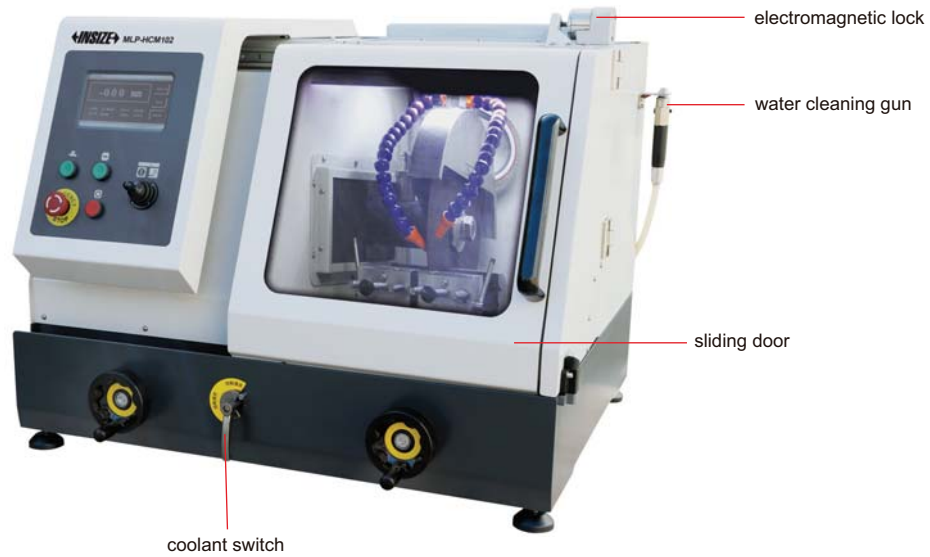


Mounting Press Accessories
Page 730-732



Grinder And Polisher Accessories
Page 732

AUTOMATIC CUTTING MACHINE (ADVANCED TYPE) CODE MLP-HCM102



- Suitable for cylinder workpieces (diameters≤100mm) and rectangular samples (height≤70mm, width≤100mm)
- Cooling system avoids overheating and destroying sample structure
- Three cutting modes (manual, pulse, continuous cutting), the cutting feed speed and cutting stroke can be programmed

SPECIFICATION

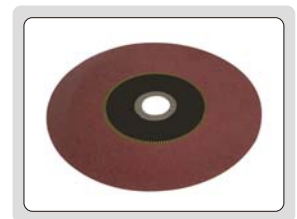
Maximum cutting diameter	Ø100mm
Cutting blade	Ø350×2.5×Ø32mm
Rotation speed	2200r/min
Spindle travel	145mm
Table travel	300mm
Illumination	LED ceiling light
Noise	≤85dB
Cooling tank	60L
Removable baffle	contain
Table dimension	330×280mm
Power	3kW
Power supply	AC 380V, 50Hz
Dimension	900×860×620mm
Weight	285kg



coolant (included)



cutting blade MLP-50Z4 (included)



cutting blade MLP-60Y4 (optional)

STANDARD DELIVERY

Main unit	1 pc
Cutting blade	5 pcs
Cutting blade chuck	2 pcs
Coolant	1 barrel (4L)
Water tank	1 pc

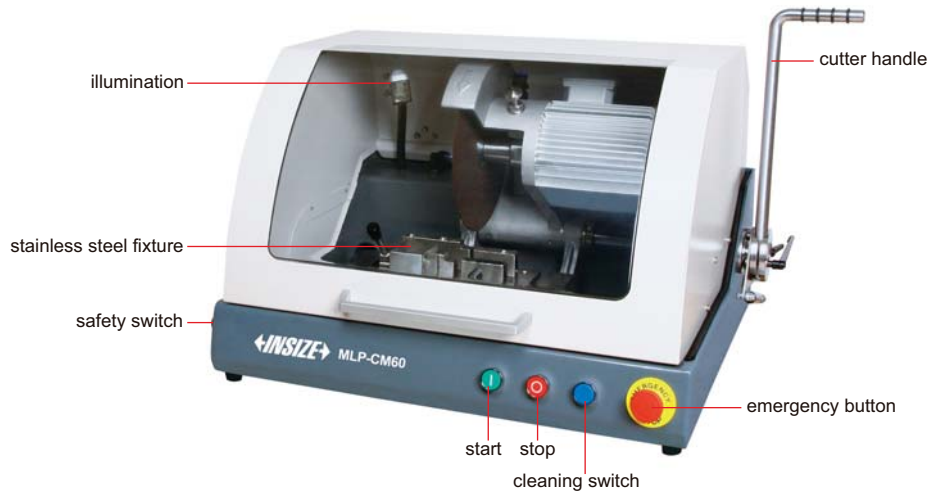
OPTIONAL ACCESSORY

Coolant (4L, 1:20 diluted with water)	MLP-OL3
Cutting blade (Ø350×2.5×Ø32mm, 40 pcs/box)	MLP-50Z4 MLP-60Y4 *
Cutting blade chuck (for Ø32mm cutting blade)	MLP-HCM102-CHUCK

* Special cutting blade for high hardness



CUTTING MACHINE (STANDARD TYPE) CODE MLP-CM60



- For metal and non-metal materials
- Cooling device avoids overheating and destroying sample structure
- With safety switch, the machine will automatically stop when the cover is opened



SPECIFICATION

Maximum cutting diameter	Ø60mm
Cutting blade	Ø250×1.5×Ø25.4mm
Rotation speed	2800r/min
Motor power	2.2kW
Power supply	AC 380V, 50Hz
Dimension	830×620×450mm
Weight	82kg



cutting blade MLP-CM60-CUT2
(included)

STANDARD DELIVERY

Main unit	1 pc
Cutting blade	2 pcs
Coolant	1 barrel (4L)
Water tank	1 pc

OPTIONAL ACCESSORY

Coolant (4L, 1:20 diluted with water)	MLP-OL3
Cutting blade (Ø250×1.5×Ø25.4mm, 60 pcs/box)	MLP-CM60-CUT2
Cutting blade (Ø250×2×Ø32mm, 50 pcs/box)	MLP-50Z2 *
Cutting blade chuck (for Ø32mm cutting blade)	MLP-CM60-CHUCK



coolant (optional)

* When use MLP-50Z2, please purchase MLP-CM60-CHUCK

CUTTING MACHINE (BASIC TYPE) CODE MLP-CM86



- For metal and non-metal materials
- Cooling device avoids overheating and destroying sample structure

SPECIFICATION

Maximum cutting diameter	Ø80mm
Cutting blade	Ø250×2×Ø32mm
Rotation speed	2800r/min
Power	3kW
Power supply	AC 380V, 50Hz
Dimension	690×790×670mm

STANDARD DELIVERY

Main unit	1 pc
Cutting blade	2 pcs
Coolant	1 barrel (4L)
Water tank	1 pc

OPTIONAL ACCESSORY

Coolant (4L, 1:20 diluted with water)	MLP-OL3
Cutting blade (Ø250×2×Ø32mm, 50 pcs/box)	MLP-60Y2*
	MLP-50Z2
Cutting blade chuck (for Ø32mm cutting blade)	MLP-CM86-CHUCK

* Special cutting blade for high hardness



coolant (included)



cutting blade MLP-50Z2 (included)



cutting blade MLP-60Y2 (optional)



GRINDER AND POLISHER (ADVANCED TYPE) CODE MLP-GP305



manual grinding wheel

- Replaceable double wheels, rotation direction can be selected
- Multi sample holder, pneumatic single point loading, automatic abrasive distribution
- Adjustable speed
- Water cooling device and abrasive cleaning nozzle prevent samples from overheating and destroying structure
- ABS case and stainless steel parts, anti-corrosion, easy to clean
- Metallographic samples can be roughly ground, finely ground, roughly polished and finely polished



silicon carbide paper (included)



polishing cloth (included)



anti-stick disc (included)



magnetic pad (included)

SPECIFICATION

Wheel diameter	Ø250mm (customizable Ø300mm)
Wheel rotation speed	50~1000r/min (stepless adjustable), 150r/min, 300r/min (two fixed speeds)
Wheel rotation direction	clockwise or counterclockwise
Grinding head speed	50~150r/min (stepless adjustable)
Pressure range	5~60N
Operation number	6
Operation time	0~995s
Sample diameter	Ø30mm (customizable Ø22mm, Ø25mm, Ø30mm, Ø40mm, Ø45mm, Ø50mm)
Air pressure	0.6~0.9MPa
Power supply	AC220V, 50Hz
Input power	1.1kW
Dimension	758×785×680mm
Weight	125kg

STANDARD DELIVERY

Main unit	1 pc
Silicon carbide paper	20 pcs each (240, 250, 400, 800, 1200), 100 pcs in total
Polishing cloth	3 pcs each (velvet silk, woolen fabric), 6 pcs in total
Polishing agent	1 pc (W2.5, 500ml)
Spray polish agent	1 pc (W2.5, 350ml)
Magnetic pad	2 pcs (Ø250mm)
Anti-stick disc	3 pcs (Ø250mm)

OPTIONAL ACCESSORY

Silicon carbide paper	MLP-SZG□□ *	50 pcs/box, select granularity: 120, 180, 240, 400, 600, 800, 1000, 1200, 1500, 2000
Polishing cloth	MLP-CT7	15 pcs/box, long velvet silk material
	MLP-CT27	15 pcs/box, woolen fabric
Diamond polishing liquid	MLP-DLA□□ *	500ml, select granularity (µm): W40, W28, W20, W14, W9, W7, W5, W3.5, W2.5, W1.5, W1.0, W0.5, W0.25
Spray polish agent	MLP-DSA□□ *	350ml, select granularity (µm): W40, W28, W20, W14, W10, W7, W5, W3.5, W2.5, W1.5, W1.0, W0.5, W0.25
Magnetic pad	MLP-AD2	Ø250mm
Anti-stick disc	MLP-DC2	Ø250mm

* □□ is granularity specification, for example, code **MLP-DLA40** stands for 40µm

GRINDER AND POLISHER (ADVANCED TYPE) CODE MLP-GP260



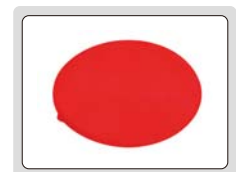
- ABS case and stainless steel parts, anti-corrosion, easy to clean
- Can hold up to 4 samples (6 holes are optional and can hold up to 6 samples)
- Smooth rotation, low noise
- Adjustable speed
- Water cooling device and abrasive cleaning nozzle prevent samples from overheating and destroying structure
- Wheel rotation direction can be selected
- Replaceable wheel

SPECIFICATION

Wheel diameter	Ø250mm
Wheel rotation speed	50~999r/min (stepless adjustable), 150 or 300r/min (two fixed speeds)
Wheel rotation direction	clockwise or counterclockwise
Grinding head speed	50~150r/min (stepless adjustable)
Pressure range	5~60N
Operation time	5~995s
Sample diameter	Ø30mm (can be customized)
Air pressure	0.6~0.9MPa
Power supply	AC 220V, 50Hz
Input power	1.1kW
Dimension	594×795×687mm
Weight	98kg



silicon carbide paper
(optional)



polishing cloth (optional)

STANDARD DELIVERY

Main unit	1 pc
Silicon carbide paper	6 pcs (200, 600, 1000)
Polishing cloth	4 pcs

OPTIONAL ACCESSORY

Silicon carbide paper	MLP-SZG□□*	50 pcs/box, select granularity: 120, 180, 240, 400, 600, 800, 1000, 1200, 1500, 2000
Polishing cloth	MLP-CT7	15 pcs/box, long velvet silk material
Diamond polishing liquid	MLP-DLA□□*	500ml, select granularity (µm): W40, W28, W20, W14, W9, W7, W5, W3.5, W2.5, W1.5, W1.0, W0.5, W0.25

* □□ is granularity specification, for example, code MLP-DLA40 stands for 40µm

GRINDERS AND POLISHERS (STANDARD TYPE)



- ABS case and stainless steel parts, anti-corrosion, easy to clean
- Replaceable double wheel, wheel can be controlled independently, rotation direction can be selected
- Smooth rotation, low noise
- Four fixed speeds/stepless adjustable speed
- Water cooling device, prevent samples from overheating and destroying structure
- Metallographic samples can be roughly ground, finely ground, roughly polished and finely polished



MLP-GP280



silicon carbide paper (optional)



polishing cloth (optional)



magnetic pad (optional)



anti-stick disc (optional)

SPECIFICATION

Code	MLP-GP270	MLP-GP280
Wheel diameter	Ø203mm	Ø250mm
Wheel rotation speed	0-1400r/min (stepless adjustable)	0-1000r/min (stepless adjustable)
Wheel rotation direction	clockwise or counterclockwise	
Fixed speed	150r/min, 300r/min, 600r/min, 1000r/min	
Power supply	AC 220V, 50Hz	
Input power	1.5kW	
Dimension	758×785×310mm	
Weight	50kg	

STANDARD DELIVERY

Main unit	1 pc
Silicon carbide paper	5 pcs each (240, 400, 800, 1200), 20 pcs in total
Polishing cloth	3 pcs
Polishing agent	1 pc

OPTIONAL ACCESSORY

Silicon carbide paper	MLP-SZD□□* (for MLP-GP270)	50 pcs/box, select granularity, Ø200mm with adhesive: 120, 180, 240, 400, 600, 800, 1000, 1200, 1500, 2000
	MLP-SZG□□* (for MLP-GP280)	50 pcs/box, select granularity, Ø250mm with adhesive: 120, 180, 240, 400, 600, 800, 1000, 1200, 1500, 2000
Polishing cloth	MLP-CT6 (for MLP-GP270)	15 pcs/box, Ø200mm with adhesive, long velvet silk material
	MLP-CT7 (for MLP-GP280)	15 pcs/box, Ø250mm with adhesive, long velvet silk material
Diamond polishing liquid	MLP-DLA□□*	500ml, select granularity (µm): W40, W28, W20, W14, W9, W7, W5, W3.5, W2.5, W1.5, W1.0, W0.5, W0.25
Magnetic pad	MLP-AD1 (for MLP-GP270)	Ø200mm
	MLP-AD2 (for MLP-GP280)	Ø250mm
Anti-stick disc	MLP-DC1 (for MLP-GP280)	Ø200mm
	MLP-DC2 (for MLP-GP280)	Ø250mm

* □□ is granularity specification, for example, code MLP-DLA40 stands for 40µm

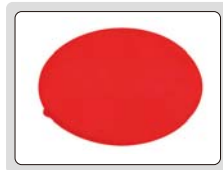
GRINDER AND POLISHER (BASIC TYPE) CODE MLP-GP314



- Double wheels, rotation direction can be selected
- Smooth rotation, low noise
- Water cooling device, prevent samples from overheating and destroying structure
- Replaceable silicon carbide paper and polishing cloth for grinding and polishing process



silicon carbide paper
(included)



polishing cloth (included)



anti-stick disc (optional)



magnetic pad (optional)

SPECIFICATION

Wheel diameter	Ø203mm
Wheel rotation speed	0~1400r/min (stepless adjustable)
Wheel rotation direction	clockwise or counterclockwise
Power supply	AC 220V, 50Hz
Input power	0.75kW
Dimension	755×700×310mm
Weight	50kg

STANDARD DELIVERY

Main unit	1 pc
Silicon carbide paper	5 pcs each (240, 400, 800, 1200), 20 pcs in total
Polishing cloth	4 pcs
Polishing agent	1 pc (W2.5, 500ml)

OPTIONAL ACCESSORY

Silicon carbide paper	MLP-SZD□□*	50 pcs/box, select granularity: 120, 180, 240, 400, 600, 800, 1000, 1200, 1500, 2000
Polishing cloth	MLP-CT6	15 pcs/box, long velvet silk material
Diamond polishing liquid	MLP-DLA□□*	500ml, select granularity (µm): W40, W28, W20, W14, W9, W7, W5, W3.5, W2.5, W1.5, W1.0, W0.5, W0.25
Magnetic pad	MLP-AD1	Ø203mm
Anti-stick disc	MLP-DC1	Ø203mm

* □□ is granularity specification, for example, code MLP-DLA40 stands for 40µm



MOUNTING PRESSES (ADVANCED TYPE)



MLP-MP43



MLP-MP53

- Built-in heating and cooling structure reduces the mounting time to 6 minutes
- The programmed control system reserves 10 customized preparation schemes to meet different mounting requirements
- The thickness of the middle mold is up to 15mm, and 2 samples can be mounted at the same time at one station
- Can accurately control the pressure size, adjustment range: 1~20MPa



hot mounting resin (included)

SPECIFICATION

Code	MLP-MP43	MLP-MP53
Station number	1	2
Power	1100W+heating power *	1200W+heating power×2
Mounting diameter	Ø30mm (customizable Ø25, Ø40, Ø50mm)	
System pressure	1~20MPa, optional increase or decrease 1MPa	
Pressure mode	automatic electro-hydraulic	
Cooling mode	automatic water cooling **	
Heating range	90~200°C	
Holding time	0~10min	
Cooling temperature/time	40~90°C/0~10min	
Power supply	AC 220V, 50Hz	
Dimension	530×485×463mm	671×485×463mm
Weight	44kg	77kg

* Heating power of mounting sleeve: 1800W (mounting diameter≤31.8mm), 2400W (mounting diameter≥38.1mm)

** Cooling water pressure should not be higher than 1MPa, must be filtered through 40µm filter

STANDARD DELIVERY

Main unit	1 pc
Hot mounting resin	1 bottle (250g)
Funnel	1 pc
Filter	1 pc
Vacuum cleaner tip	1 pc

OPTIONAL ACCESSORY

Hot mounting resin (black, 4kg)	MLP-DR3
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MOUNTING PRESS (STANDARD TYPE) CODE MLP-MP30



- Automatic heating, pressuring, cooling and pressure relief
- Water cooling system



hot mounting resin (optional)



SPECIFICATION

Diameter of workpiece	Ø30mm
Heating temperature range	100~200°C
Delay range	0~999s
Hold time	0~999s
Cooling temperature	20~90°C
Heating power	600W
Power supply	AC 220V, 50Hz
Dimension	350×450×470mm
Weight	45kg

STANDARD DELIVERY

Main unit	1 pc
Hot mounting resin	1 bottle (250g)
Funnel	1 pc

OPTIONAL ACCESSORY

Hot mounting resin (black, 4kg)	MLP-DR3
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MOUNTING PRESS (BASIC TYPE) CODE MLP-MP62



- Suitable for tiny, difficult to handle or irregular metallographic and petrographic samples
- The sample preparation program has three modes: bakelite powder, electric jade powder and user-defined
- The sample preparation program controls the sample preparation time and realizes unattended sample preparation



hot mounting resin (included)



SPECIFICATION

Mounting diameter	Ø30mm (customizable Ø22mm, Ø45mm)
Heating range	room temperature~200°C
Timing range	0~30min
Power	≤800W
Power supply	AC220V, 50Hz
Dimension	440×253×310mm
Weight	32kg

STANDARD DELIVERY

Main unit	1 pc
Hot mounting resin	1 bottle (60g)
Funnel	1 pc

OPTIONAL ACCESSORY

Hot mounting resin (black, 4kg)	MLP-DR3
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- Suitable for epoxy resins and cold mosaic compound of polyester castable
- High efficiency, simple and reliable



cold mounting compound (optional)

SPECIFICATION

Maximum vacuum	-58KPa
Vacuum chamber size	Ø260×125mm
Transposition speed	5r/min
Input power	6W
Power supply	220/110V
Dimension	460×400×403mm
Weight	30kg

STANDARD DELIVERY

Main unit	1 pc
Vacuum pump	1 pc
Ø25mm mold	1 pc
Ø30mm mold	1 pc
Ø40mm mold	1 pc
Ø50mm mold	1 pc
Epoxy resin (400g)	1 pc
Curing agent (200g)	1 pc
Waxed paper tray	10 pcs

**VACUUM MOUNTING PRESS
CODE MLP-MP25**



OPTIONAL ACCESSORY

Cold mounting compound	MLP-CM1, MLP-CM6
Epoxy resin	MLP-CM3, MLP-CM4

METALLURGICAL MICROSCOPES



5102-M600



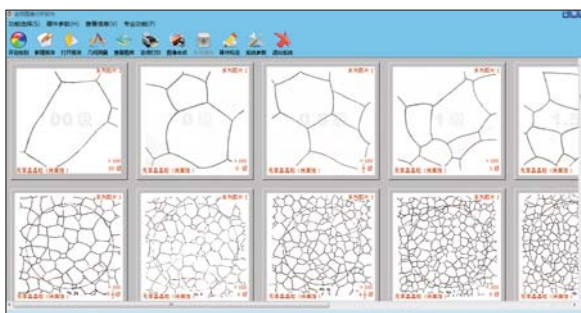
5108-M3000



5103-M1000

REFER TO PAGE 552-554 FOR DETAILS

METALLURGICAL ANALYSIS SOFTWARE AND CAMERA



ISM-MAS100C

REFER TO PAGE 569-570 FOR DETAILS

DIAMOND BLADES

- Specially for precision cutting of carbide, ceramic materials, optical glass and other brittle metal materials

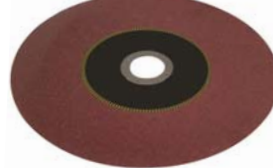


Code	Description	Specification (mm)
MLP-DQ1	1. saw blade is made of edge electroplating 2. used for small workpieces made of crystal, ceramic, glass and alloy materials	Ø100×0.4×12.7
MLP-DQ2		Ø150×0.5×12.7
MLP-DQ3	1. saw blade is made of edge sintering technology 2. used for hard alloy, ceramic, optical glass and other brittle metal materials	Ø100×0.5×20
MLP-DQ4		Ø200×1×32

CUTTING BLADES



MLP-50Z1



MLP-60Y1

Code	Application	Cutting blade size	Package (pcs/box)
MLP-10R1	1. light non-ferrous metal 2. high toughness metal (Ti) 3. HV hardness value: 0~250	Ø250×1.5×32mm	60
MLP-10R2		Ø250×2×32mm	50
MLP-10R3		Ø300×2×32mm	50
MLP-10R4		Ø350×2.5×32mm	40
MLP-20R1	1. soft ferrous metal 2. HV hardness value: 50~300	Ø250×1.5×32mm	60
MLP-20R2		Ø250×2×32mm	50
MLP-20R3		Ø300×2×32mm	50
MLP-20R4		Ø350×2.5×32mm	40
MLP-30R1	1. medium soft ferrous metal 2. HV hardness value: 120~500	Ø250×1.5×32mm	60
MLP-30R2		Ø250×2×32mm	50
MLP-30R3		Ø300×2×32mm	50
MLP-30R4		Ø350×2.5×32mm	40
MLP-40Z1	1. medium hardness ferrous metal 2. HV hardness value: 180~600	Ø250×1.5×32mm	60
MLP-40Z2		Ø250×2×32mm	50
MLP-40Z3		Ø300×2×32mm	50
MLP-40Z4		Ø350×2.5×32mm	40
MLP-50Z1	1. hard ferrous metal 2. HV hardness value: 180~700	Ø250×1.5×32mm	60
MLP-50Z2		Ø250×2×32mm	50
MLP-50Z3		Ø300×2×32mm	50
MLP-50Z4		Ø350×2.5×32mm	40
MLP-50Z5		Ø400×3×32mm	25
MLP-50Z6		Ø450×3.2×32mm	25
MLP-50Z7		Ø509×4×38.1mm	10
MLP-50Z8		Ø610×4×38.1mm	10
MLP-60Y1	1. high hardness ferrous metal 2. HV hardness value: 250~900	Ø250×1.5×32mm	60
MLP-60Y2		Ø250×2×32mm	50
MLP-60Y3		Ø300×2×32mm	50
MLP-60Y4		Ø350×2.5×32mm	40

- Cutting surfaces are bright and smooth without burning

CUTTING COOLANT

- Free of mineral oil and sodium nitrite, suitable for all kinds of metallographic cutting machines
- Harmless to human health and environment

Code	Description	Specification
MLP-OL1	1. fully synthetic concentrate, used for various types of cutting machines, specially for built-in cooling circulatory system models 2. concentrate, dilute 1:20 with water 3. replace regularly, recommended once a month	1L
MLP-OL2		2L
MLP-OL3		4L
MLP-OL4		6L
MLP-OL5		10L
MLP-OL6	1. oily mixture, use directly 2. cut water sensitive materials at low speed (high speed cutting machine is prohibited) 3. replace regularly, recommended once a month	1L
MLP-OL7		4L



HOT MOUNTING RESIN

- Suitable for small sample preparation



Code	Color	Description	Package (barrel)
MLP-DR1	black	for common sample preparation, fast grinding speed	0.5kg
MLP-DR2			1kg
MLP-DR3			4kg
MLP-DR4	black	edge protection type, low shrinkage, sample binding, high hardness, good wear resistance, slow grinding speed	0.5kg
MLP-DR5			1kg
MLP-DR6			4kg
MLP-DR7	black	carbon phenolic polymer, used in highly conductive fields, medium grinding speed	0.5kg
MLP-DR8			1kg
MLP-DR9	red	for common sample preparation, fast grinding speed	0.5kg
MLP-DR10			1kg
MLP-DR11	white	for common sample preparation, fast grinding speed	0.5kg
MLP-DR12			1kg
MLP-DR13			4kg
MLP-DR14	green	for common sample preparation, fast grinding speed	0.5kg
MLP-DR15			1kg
MLP-DR16			4kg
MLP-DR17	transparent	transparent, soluble, for sample with size, position, depth and other requirements	0.5kg
MLP-DR18			1kg
MLP-DR19			4kg

COLD MOUNTING CONSUMABLES



cold mounting resin



curing agent

Code	Description	Package
MLP-CM1	<ol style="list-style-type: none"> 1. cold mounting compound, fast speed/good transparency/low viscosity/high strength 2. for metal processing without heating, pressure and mounting press 3. curing time: 25°C, 25min 4. usage: cold mounting resin 3:curing agent 2 	<ol style="list-style-type: none"> 1. cold mounting resin 1000g 2. curing agent 800ml 3. Ø30mm cold mounting mold 1 pc 4. plastic cup 20 pcs 5. stirring rod 40 pcs, spoon 1 pc
MLP-CM2	<ol style="list-style-type: none"> 1. epoxy resin, low viscosity, good permeability, completely transparent 2. for samples which can not be heated or mounting pressed, like PCB, SMT and other micro-slice samples 3. curing time: 25°C, 5~6h 4. usage: resin liquid 2:curing agent 1 	<ol style="list-style-type: none"> 1. resin liquid 1000ml 2. curing agent 500ml 3. Ø30mm cold mounting mold 1 pc 4. plastic cup 20 pcs 5. stirring rod 40 pcs
MLP-CM3	<ol style="list-style-type: none"> 1. fast epoxy, fast curing products, completely transparent 2. for samples which can not be heated or mounting pressed, like PCB, SMT and other micro-slice samples 3. curing time: 25°C, 1h 4. usage: resin liquid 2:curing agent 1 	<ol style="list-style-type: none"> 1. resin liquid 1000ml 2. curing agent 500ml 3. Ø30mm cold mounting mold 1 pc 4. plastic cup 20 pcs 5. stirring rod 40 pcs
MLP-CM4	<ol style="list-style-type: none"> 1. low viscosity epoxy, good permeability, completely transparent 2. for samples which can not be heated or mounting pressed, like PCB, SMT and other micro-slice samples 3. curing time: 25°C, 3~4h 4. usage: resin liquid 2:curing agent 1 	<ol style="list-style-type: none"> 1. resin liquid 1000ml 2. curing agent 500ml 3. Ø30mm cold mounting mold 1 pc 4. plastic cup 20 pcs 5. stirring rod 40 pcs
MLP-CM5	<ol style="list-style-type: none"> 1. low heat release epoxy, small, shrink, completely transparent 2. for samples which can not be heated or mounting pressed, like PCB, SMT and other micro-slice samples 3. curing time: 25°C, 20~24h 4. usage: resin liquid 3:curing agent 1 	<ol style="list-style-type: none"> 1. resin liquid 1000ml, 2. curing agent 300ml 3. Ø30mm cold mounting mold 1 pc 4. plastic cup 20 pcs, 5. stirring rod 40 pcs
MLP-CM6	<ol style="list-style-type: none"> 1. cold mounting compound, fast speed/ceramics white/low viscosity/high strength 2. for metal processing without heating, pressure and mounting press 3. curing time: 25°C, 25min 4. usage: cold mounting resin 3:curing agent 2 	<ol style="list-style-type: none"> 1. cold mounting resin 1000g 2. curing agent 800ml 3. Ø30mm cold mounting mold 1 pc 4. plastic cup 20 pcs 5. stirring rod 40 pcs, spoon 1 pc

COLD MOUNTING MOLDS

Code	Description	Specification (mm)
MLP-QM1	round soft mold, for cold embedding of epoxy resin, cold mounting resin on metallographic slice specimens	Ø20×18
MLP-QM2		Ø25×18
MLP-QM3		Ø30×18
MLP-QM4		Ø40×23
MLP-QM5		Ø50×23
MLP-QM6	square soft mold, for cold embedding of epoxy resin, cold mounting resin on metallographic slice specimens	55×20×22
MLP-QM7		70×40×22
MLP-QM8	round hard mold, for cold embedding of epoxy resin, cold mounting resin on metallographic slice specimens	Ø25×23
MLP-QM9		Ø30×27
MLP-QM10		Ø32×27
MLP-QM11		Ø40×29



MOUNTING DISCHARGING AGENT



Code	Description	Specifications
MLP-RA	for hot mounting press and cold mounting mold discharging	200ml/bottle

SLICE CLIPS



MLP-QP1



MLP-QP2

Code	Description	Specifications
MLP-QP1	stainless steel roll slice clip, for hot and cold mounting fixing	100 pieces/pack
MLP-QP2	PET roll slice clip, for hot and cold mounting fixing	100 pieces/pack

DIAMOND POLISHING LIQUID

- For surface grinding and polishing of metallographic, lithographic, ferrous and non-ferrous metals, ceramics, composite materials, gems, instruments, optical glass of high finish
- Compared with ordinary polishing agent, under the same grinding and polishing quality, consumption is saved 30%, time is saved 60%



Code	Description	Granularity (μm)	Package/Bottle
MLP-DLA$\square\square$*	1. single crystal, water-based, ethylene glycol-based polishing lubricant formulation 2. for general metallographic preparation	40, 30, 28, 20, 14, 10, 9, 7, 6, 5, 3.5, 3, 2.5, 1.5, 1.0, 0.5, 0.25	500ml
MLP-DLB$\square\square$*	1. single crystal, water-based, propylene glycol-based polishing lubricant formulation 2. for grinding and polishing of soft and ductile materials	30, 20, 15, 14, 9, 7, 6, 5, 3, 2.5, 1.5, 1.0, 0.5, 0.25	500ml
MLP-DLC$\square\square$*	1. single crystal, water-based, propylene glycol-based polishing lubricant formulation 2. for ultra-precision polishing	0.05	500ml
MLP-DLD$\square\square$*	1. single crystal, oil-based, solvent-based polishing lubricant formulation 2. for grinding and polishing of soft materials and materials which cannot touch water	20, 14, 9, 7, 5, 3.5, 2.5, 1.5, 1.0, 0.5, 0.25	500ml
MLP-DLE$\square\square$*	1. polycrystalline, water-based, propylene glycol based polishing lubricant formula 2. for grinding and polishing of different materials and hardness components	9, 6, 3, 1.0, 0.5, 0.25	500ml
MLP-DLF$\square\square$*	1. polycrystalline, water-based, denatured ethanol based polishing lubricant formula 2. for grinding and polishing of materials which cannot touch water	9, 6, 3, 1.0, 0.5, 0.25	500ml

* $\square\square$ is granularity specification, for example, code **MLP-DLA40** stands for diamond polishing liquid 40 μm granularity



Universal Testing Machines
Page 734-737



Impact Testing Machines
Page 738



Digital Spring Testers
Page 739



Force Gages
Page 740-742

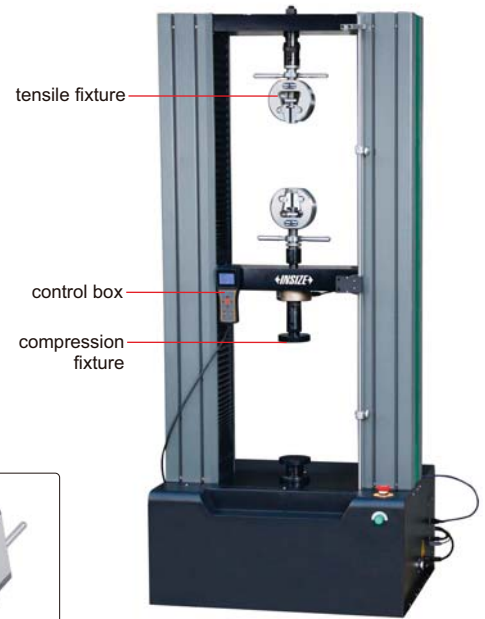
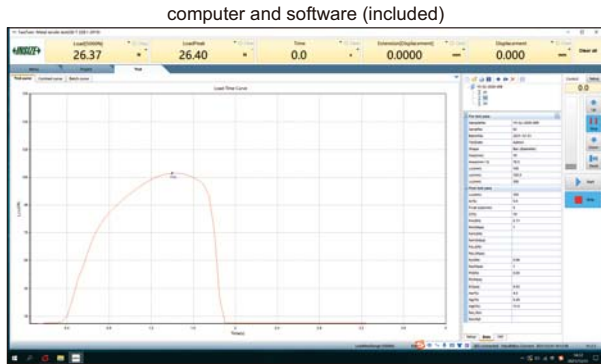


Test Stands For Force Gages
Page 742-745



Dial Tension Gages
Page 745

ELECTRONIC UNIVERSAL TESTING MACHINES



UTM-E50

STANDARD DELIVERY

Main unit	1 pc
Control box	1 pc
Computer	1 pc
Measuring software	1 pc
Printer	1 pc
Wedge tension fixture (including flat jaws and V-shaped jaws) **	1 set
Compression fixture	1 set
Extensometer (only for UTM-E100, UTM-E300)	1 pc



V-shaped jaws (included)



flat jaws (included)

- For tensile, compression, bend, shear, peel, tear tests of metal and non-metal materials

OPTIONAL ACCESSORY

Extensometer

** UTM-E10 does not have V-shaped jaws

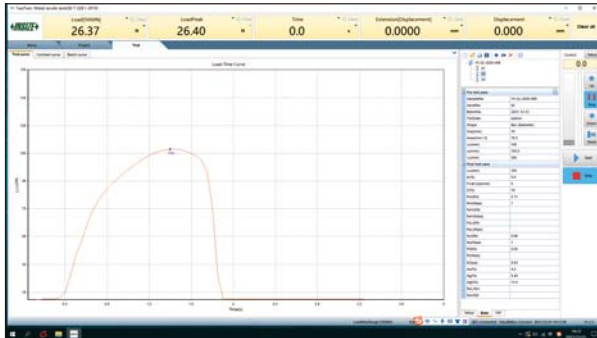
SPECIFICATION

Code	UTM-E10	UTM-E50	UTM-E100	UTM-E300
Max. test force	10kN	50kN	100kN	300kN
Accuracy class	0.5 class			
Test force measurement range	0.2%~100%FS			
Test force measurement accuracy	±0.5% of indicating value			
Resolution of test force measurement	1/300000 of Max. test force (same resolution all the way)			
Deformation measurement range	0.2%~100%FS			
Deformation measurement accuracy	±0.5% of indicating value			
Deformation measurement resolution	1/200000 of Max. deformation, up to 1/300000			
Large deformation measurement range	10~800mm			
Large deformation measurement accuracy	±1% of indicating value			
Large deformation measurement resolution	8μm			
Displacement accuracy	±0.5% of indicating value			
Displacement resolution	0.01mm			
Force control speed adjustment range	0.005~5%FS/s			
Force control speed control accuracy	±2% of the set value (speed<0.05%FS/s) ±0.5% of the set value (speed≥0.05%FS/s)			
Deformation speed adjustment range	0.005~5%FS/s			
Deformation speed control accuracy	±2% of the set value (speed<0.05%FS/s) ±0.5% of the set value (speed≥0.05%FS/s)			
Beam displacement speed adjustment range	0.001~500mm/min			
Beam displacement speed control accuracy	±1% of the set value (speed<0.5mm/min) ±0.2% of the set value (speed≥0.5mm/min)			
Crosshead travel *	1030mm	970mm	1250mm	1000mm
Effective compression travel *	800mm	700mm	700mm	600mm
Horizontal test space *	400mm	440mm	600mm	550mm
Power supply	220V, 50Hz, 0.4kW~1kW		380V, 50Hz, 2kW~5kW	
Demension	715×500×1680mm	820×620×1880mm	1070×855×2180mm	1070×920×2550mm
Weight	230kg	350kg	1000kg	1500kg

* Can be customized according to test requirements

ELECTRONIC UNIVERSAL TESTING MACHINES

computer and software (included)



- For tensile, peel, tear tests of metal and non-metal materials

STANDARD DELIVERY

Main unit	1 pc
Control box	1 pc
Computer	1 pc
Measuring software	1 pc
Printer	1 pc
Tensile fixture	1 set

OPTIONAL ACCESSORY

Extensometer



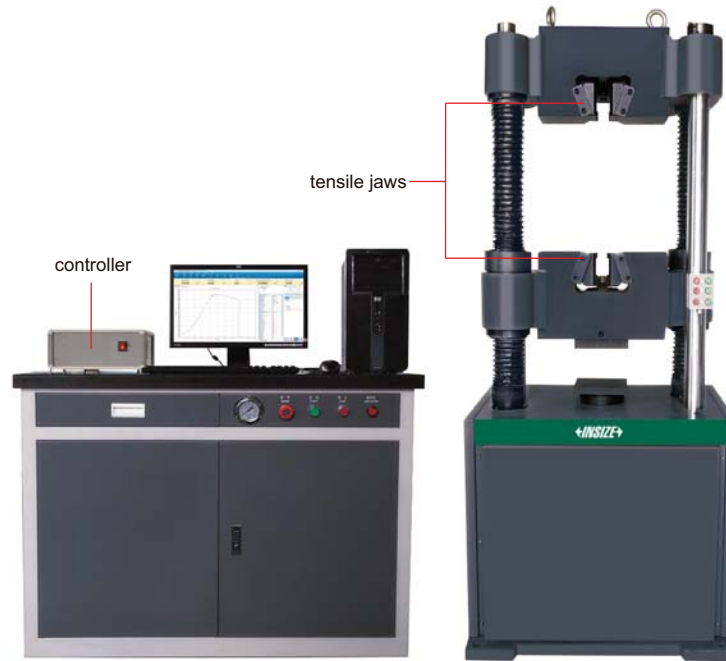
UTM-S5KA

SPECIFICATION

Code	UTM-S200A	UTM-S500A	UTM-S1KA	UTM-S2KA	UTM-S5KA
Max. test force	200N	500N	1kN	2kN	5kN
Accuracy class	0.5 class				
Test force measurement range	0.4%~100%FS				
Test force measurement accuracy	±0.5% of indicating value				
Resolution of test force measurement	1/300000 of Max. test force (same resolution all the way)				
Deformation measurement range	0.2%~100%FS				
Deformation measurement accuracy	±0.5% of indicating value				
Deformation measurement resolution	1/200000 of Max. deformation, up to 1/300000				
Large deformation measurement range	10~800mm				
Large deformation measurement accuracy	±1% of indicating value				
Large deformation measurement resolution	8µm				
Displacement accuracy	±0.5% of indicating value				
Displacement resolution	0.01mm				
Force control speed adjustment range	0.005~5%FS/s				
Force control speed control accuracy	±2% of the set value (speed<0.05%FS/s) ±0.5% of the set value (speed≥0.05%FS/s)				
Deformation speed adjustment range	0.005~5%FS/s				
Deformation speed control accuracy	±2% of the set value (speed<0.05%FS/s) ±0.5% of the set value (speed≥0.05%FS/s)				
Beam displacement speed adjustment range	0.001~500mm/min				
Beam displacement speed control accuracy	±1% of the set value (speed<0.5mm/min) ±0.2% of the set value (speed≥0.5mm/min)				
Crosshead travel*	900mm				
Effective compression travel*	630mm				
Power supply	220V, 50Hz, 0.4kW~1kW				
Demension	510×510×1580mm				
Weight	150kg				

* Can be customized according to test requirements

HYDRAULIC UNIVERSAL TESTING MACHINES



UTM-H300B

- For tensile, compression, bend, shear tests of metal and non-metal materials



SPECIFICATION

Code	UTM-H300B	UTM-H600B	UTM-H1000B	UTM-H2000B	UTM-H3000B	
Max. test force	300kN	600kN	1000kN	2000kN	3000kN	
Accuracy	±1%					
Test force measurement range	2%~100%FS					
Resolution of test force measurement	1/300000 of Max. test force (same resolution all the way)					
Deformation measurement device	extensoment					
Deformation measurement range	1%~100%FS					
Deformation measurement accuracy	±1%					
Deformation measurement resolution	1/300000					
Displacement accuracy	±1%					
Displacement resolution	0.01mm					
Displacement travel	200mm					
Max tensile space (including piston stroke)	600mm	600mm	680mm	600mm	900mm	
Max compression space (including piston stroke)	500mm	500mm	560mm	500mm	800mm	
Transmission mode	chain drive					
Safety protection device	software protection and mechanical limit protection					
Control function	special software, closed-loop of stress, strain and velocity					
Clamping range of round sample	Ø10~32mm	Ø13~40mm	Ø13~60mm	Ø20~70mm	Ø25~80mm	
Clamping range of flat sample	0~15mm	0~15mm*	0~20mm**	0~40mm	0~80mm	
Upper and lower pressure plate size	Ø188mm	Ø188mm	Ø208mm	Ø208mm	Ø208mm	
Bending branch roll width	140mm					
Total power	2.5kW	3.0kW	3.0kW	3.75kW	5.5kW	
Power supply	380V, 50Hz					
Dimension (mm)	host	800×620×1900	820×650×2000	940×780×2250	1100×760×3000	1250×930×3550
	oil source	1140×600×855				
Weight	2T	2.2T	3T	7.5T	12.6T	

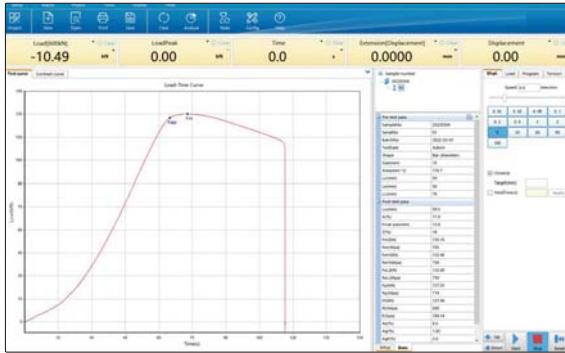
* Customizable 0~30mm

** Customizable 0~40mm

To be continued

Continued from previous page

computer and software (included)



STANDARD DELIVERY

Main unit	1 pc
Electro hydraulic servo oil source	1 pc
Electro hydraulic servo valve	1 pc
High pressure oil pump	1 pc
Oil pressure sensor	1 pc
Control box	1 pc
Extensometer	1 pc
Computer	1 pc
Measuring software	1 set
Printer	1 pc
Tensile fixture	1 set
Compression fixture	1 set



acrylic safety shield (optional)



steel wire safety shield (optional)

OPTIONAL ACCESSORY

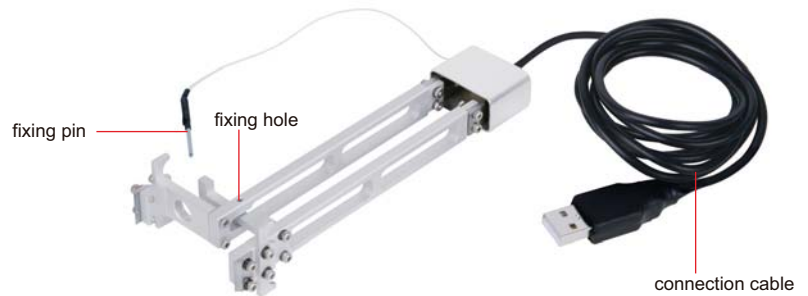
Acrylic safety shield	UTM-H-COVER1
Steel wire safety shield	UTM-H-COVER2

EXTENSOMETERS

- Used with universal testing machines

SPECIFICATION

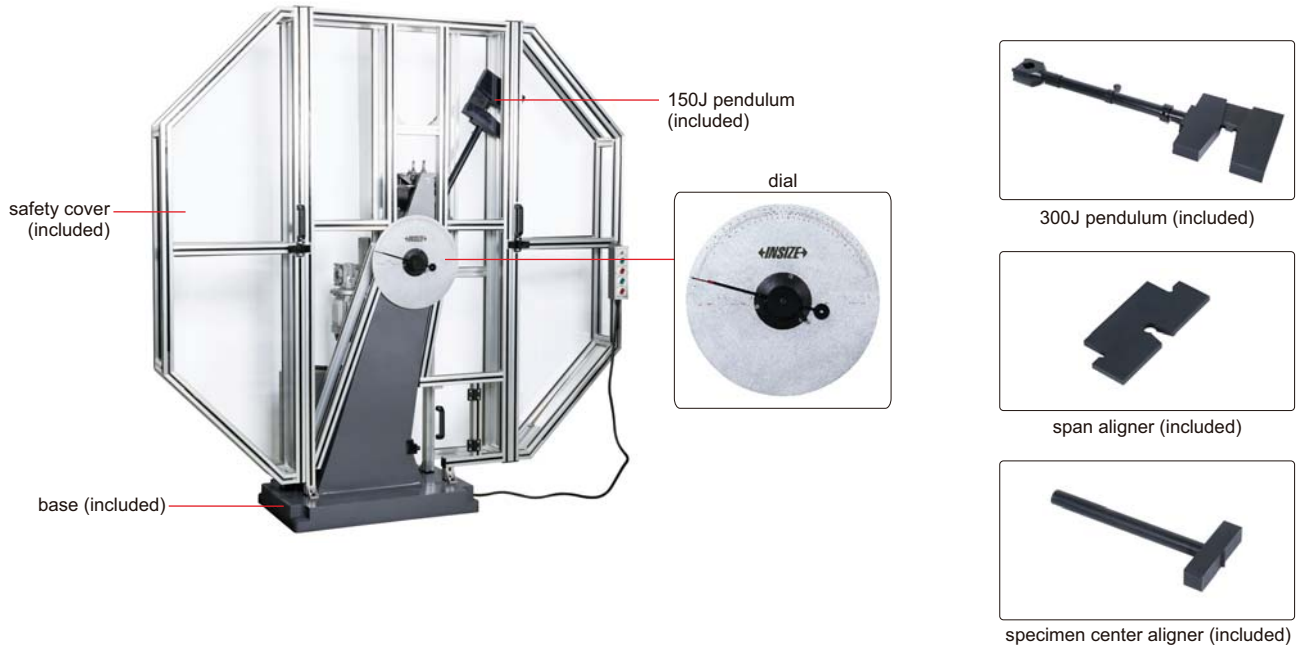
Code	Gage length	Deformation
UTM-EX25-5	25mm	5mm
UTM-EX25-10	25mm	10mm
UTM-EX25-25	25mm	25mm
UTM-EX50-5	50mm	5mm
UTM-EX50-10	50mm	10mm
UTM-EX50-25	50mm	25mm
UTM-EX100-5	100mm	5mm
UTM-EX100-10	100mm	10mm
UTM-EX100-25	100mm	25mm
UTM-EX200-5	200mm	5mm
UTM-EX200-10	200mm	10mm
UTM-EX200-25	200mm	25mm
UTM-EX-B	large deformation, customized according to the workpieces	



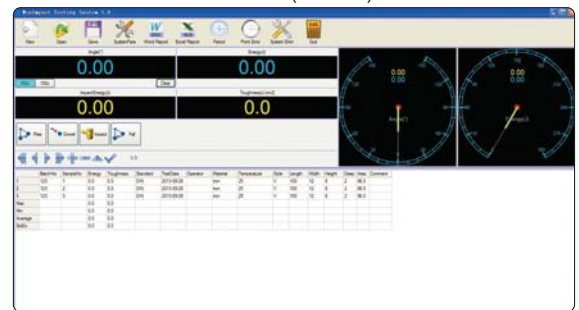
UTM-EX50-10



SEMI-AUTOMATIC IMPACT TESTING MACHINE CODE ITM-S300J



- According to ISO148
- For testing the anti-impact performance of metal materials under dynamic load
- High-precision bearings, small bearing friction, the impact absorption rate of empty pendulum is less than 0.3%
- Alloy steel impact blade, hardness HRC60
- PLC controller with built-in energy loss correction program
- Supplied with safety cover
- Supplied with software for data storage, automatic processing, etc.
- Data can be stored in Excel format, output and printed



SPECIFICATION

Impact energy	300J	150J
Dial range	0~300J	0~150J
Dial graduation	2J	1J
Pendulum moment	M=160.7695N.m	M=80.3848N.m
Pendulum preparing angle	150°	
Distance between pendulum shaft center and specimen center	750mm	
Impact speed	5.2m/s	
Span of specimen seat	40mm	
End face radius of specimen seat	R1.0~1.5mm	
Radius of impact blade	R2.0~2.5mm	
Inclination angle of support surface of specimen seat	11°	
Angle of impact blade	30°	
Thickness of impact blade	16mm	
Range of measuring angle	0~360°	
Angle resolution	≤0.06°	
Specimen size	10x10x55mm	
Base size	800x500mm	
Power supply	AC 380V, 50Hz	
Power	400W	
Dimension of main body	2150x640x1400mm	
Weight	420kg	

STANDARD DELIVERY

Main unit	1 pc
150J pendulum	1 pc
300J pendulum	1 pc
Span aligner	1 pc
Specimen center aligner	1 pc
Safety cover	1 set
Computer	1 set
Software	1 set
Printer	1 pc

OPTIONAL ACCESSORY

Workbench	7911-15
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DIGITAL SPRING TESTERS

DATA
OUTPUT



- Peak hold and automatic release function
- Set upper and lower limits, red and green indicator and buzzer alarm
- Automatic conversion of three units: N, kgf, lbf
- Built in printer
- Automatic power off



ISF-S10



ISF-S500



ISF-S1000

SPECIFICATION

Code	ISF-S10	ISF-S20	ISF-S30	ISF-S50	ISF-S100	ISF-S200
Maximum load	10N	20N	30N	50N	100N	200N
Resolution	0.001N	0.002N	0.01N	0.01N	0.02N	0.05N
Range of digital scale	65mm	65mm	65mm	95mm	95mm	95mm
Resolution of digital scale	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm
Disk diameter	Ø30mm	Ø30mm	Ø30mm	Ø49mm	Ø49mm	Ø49mm
Maximum free length of spring	65mm	65mm	65mm	95mm	95mm	95mm
Measuring range of force	5%~100% (maximum load)					
Accuracy of force	±1% (maximum load)					
Data output	RS232					
Power supply	220V, 50/60Hz					
Dimension	300×235×600mm	300×235×600mm	300×235×600mm	300×235×620mm	300×235×620mm	300×235×620mm
Weight	13.2kg	13.2kg	13.2kg	17.3kg	19.1kg	19.1kg

Code	ISF-S300	ISF-S500	ISF-S1000	ISF-S2000	ISF-S5000
Maximum load	300N	500N	1000N	2000N	5000N
Resolution	0.1N	0.1N	0.2N	0.5N	1N
Range of digital scale	95mm	95mm	150mm	150mm	150mm
Resolution of digital scale	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm
Disk diameter	Ø49mm	Ø49mm	Ø108mm	Ø108mm	Ø108mm
Maximum free length of spring	95mm	95mm	200mm	200mm	200mm
Measuring range of force	5%~100% (maximum load)				
Accuracy of force	±1% (maximum load)				
Data output	RS232				
Power supply	220V, 50/60Hz				
Dimension	300×235×620mm	300×235×620mm	490×300×920mm	490×300×920mm	490×300×920mm
Weight	19.1kg	20.8kg	47.5kg	47.5kg	47.5kg

STANDARD DELIVERY

Main unit	1 pc
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DIGITAL FORCE GAGES (HIGH ACCURACY)



software flash disk (included)

printer (optional)



ISF-DF100A type A

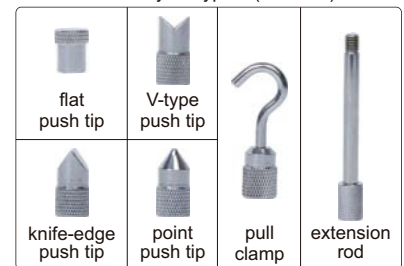
ISF-DF5KA type B

- Push and pull test
- Peak (max.) and tracking mode
- Units: mN, N, gf, kgf, ozf, lbf, MPa (only for type B)
- Tolerance testing
- 1000 memories
- Automatic power off
- Metal case, touch buttons
- LCD display with backlight
- The display flips over when the bottom faces up
- Overload alarm
- Keyboard signal, can be transmitted to Excel

accessory for type B (included)



accessory for type A (included)



SPECIFICATION

Code	ISF-DF 5A	ISF-DF 10A	ISF-DF 20A	ISF-DF 50A	ISF-DF 100A	ISF-DF 200A	ISF-DF 500A	ISF-DF 1KA	ISF-DF 2KA	ISF-DF 5KA	ISF-DF 10KA	ISF-DF 20KA
Type	A (internal sensor)								B (external sensor)			
Load capacity (N)	5	10	20	50	100	200	500	1000	2000	5000	10000	20000
Resolution (N)	0.0005	0.001	0.005	0.005	0.01	0.05	0.05	0.1	0.5	0.5	1	5
Accuracy	±0.2% (of load capacity)											
Power supply	built-in rechargeable battery											

STANDARD DELIVERY

Code	ISF-DF 5A	ISF-DF 10A	ISF-DF 20A	ISF-DF 50A	ISF-DF 100A	ISF-DF 200A	ISF-DF 500A	ISF-DF 1KA	ISF-DF 2KA	ISF-DF 5KA	ISF-DF 10KA	ISF-DF 20KA
Main unit	1 pc								1 pc			
AC/DC adapter	1 pc								1 pc			
Software and USB cable	1 pc								1 pc			
Push/pull accessory	6 pcs (flat push tip, V-type push tip, knife-edge push tip, point push tip, pull clamp, extension rod)								4 pcs (flat push tip, adapter, pull clamps)			

OPTIONAL ACCESSORY

Printer	ISF-DF-PRINTER
Test stand	ISF-MT1K

DIGITAL FORCE GAGES

INSPECTION
CERTIFICATE

DATA
OUTPUT



software flash disk
(included)



ISF-1DF100

- Push and pull test
- Units: N, gf, kgf, ozf, lbf
- 500 memories
- Automatic power off
- Metal case
- LCD display with backlight
- The display flips over when the bottom faces up
- Overload alarm

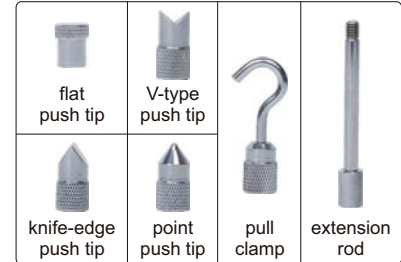


VIDEO

printer (optional)



accessory (included)



SPECIFICATION

Code	ISF-1DF10	ISF-1DF50	ISF-1DF100	ISF-1DF500	ISF-1DF1000
Load capacity (N)	10	50	100	500	1000
Resolution (N)	0.01	0.01	0.1	0.1	1
Accuracy	±0.3% (of load capacity)				
Measuring mode	tracking, peak (max.), tolerance testing				
Power supply	built-in rechargeable battery				
Dimension	150×73×33mm				
Weight	450g				

STANDARD DELIVERY

Main unit	1 pc
AC/DC adapter	1 pc
Software and USB cable	1 pc
Push/pull accessory	6 pcs (flat push tip, V-type push tip, knife-edge push tip, point push tip, pull clamp, extension rod)

OPTIONAL ACCESSORY

Printer	ISF-DF-PRINTER
Test stand	ISF-MT1K

TEST STAND FOR DIGITAL FORCE GAGE CODE ISF-MT1K

- For digital force gages (code ISF-1DF□□□ and ISF-DF□□□)
- To be used in vertical and horizontal orientation

SPECIFICATION

Load capacity	1000N
Travel	200mm (3mm vertical movement per revolution of handwheel)
Dimension	196x250x446mm
Weight	13kg

OPTIONAL ACCESSORY

Digital scale (range: 200mm, resolution: 0.01mm/0.0005")	ISF-MT1K-SCALE
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force gage
is optional



VIDEO



digital scale (optional)



horizontal orientation test

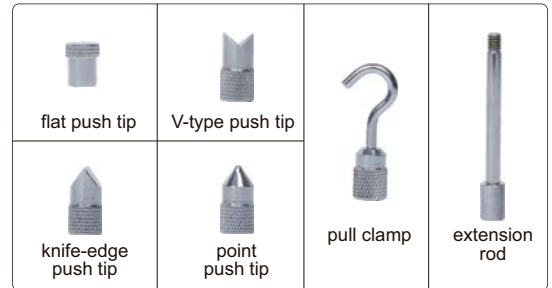
FORCE GAGES



ISF-F500

- Push and pull test
- Peak (max.) or tracking mode

accessory (included)



SPECIFICATION

Code		ISF-F10	ISF-F20	ISF-F30	ISF-F50	ISF-F100	ISF-F200	ISF-F300	ISF-F500
Capacity	N	10	20	30	50	100	200	300	500
	kgf	1	2	3	5	10	20	30	50
Graduation	N	0.05	0.1	0.2	0.25	0.5	1	2	2.5
Accuracy		±1% (of load capacity)							

STANDARD DELIVERY

Main unit	1 pc
Push tip	4 pcs (flat, V-type, knife-edge, point)
Pull clamp	1 pc
Extension rod	1 pc

OPTIONAL ACCESSORY

Test stand	ISF-MT500
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TEST STAND FOR FORCE GAGE
CODE ISF-MT500

- For force gages (code ISF-F□□□)
- To be used in vertical and horizontal orientation

force gage is optional



horizontal orientation test

SPECIFICATION

Load capacity	500N
Travel	150mm (3mm vertical movement per revolution of handwheel)
Dimension	160×240×460mm
Weight	12kg

MOTORIZED VERTICAL TEST STAND CODE ISF-RV61



- For digital force gages (code **ISF-1DF** and **ISF-DF**)
- Push and pull test
- Automatic and manual test
- Programmable automatic operation (automatic cycle)
- Four operation modes: displacement cycle (D cycle), force cycle (F cycle), demo (teaching & playback) mode and positioning mode
- Alarm indications: stroke overrange alarm, force overrange alarm, motor block alarm

SPECIFICATION

Load capacity	650N (250lbf, 65kg)
Max. travel	220mm
Resolution of displacement	0.01mm
Accuracy of displacement	±0.3mm
Range of adjustable speed	30~720mm/min
Resolution of speed	1mm/min
Accuracy of speed	±2%
Data output	USB, RS232
Work temperature and relative humidity	10~40°C, 10%~80%RH
Power supply	100~230V
Dimension	340×180×630mm
Weight	15.5kg

digital force gage
is optional



STANDARD DELIVERY

Test stand	1 pc
AC/DC adapter	1 pc
MD8 cable (for force gages)	1 pc
Software and USB cable	1 pc

MOTORIZED HORIZONTAL TEST STAND CODE ISF-RH62



- For digital force gages (code **ISF-1DF** and **ISF-DF**)
- Push and pull test
- Automatic and manual test
- Programmable automatic operation (automatic cycle)
- Four operation modes: displacement cycle (D cycle), force cycle (F cycle), demo (teaching & playback) mode and positioning mode
- Alarm indications: stroke overrange alarm, force overrange alarm, motor block alarm

SPECIFICATION

Load capacity	650N (250lbf, 65kg)
Max. travel	220mm
Resolution of displacement	0.01mm
Accuracy of displacement	±0.3mm
Range of adjustable speed	30~720mm/min
Resolution of speed	1mm/min
Accuracy of speed	±2%
Data output	USB, RS232
Work temperature and relative humidity	10~40°C, 10%~80%RH
Power supply	100~230V
Dimension	671×120×278mm
Weight	13kg

digital force gage
is optional



STANDARD DELIVERY

Test stand	1 pc
AC/DC adapter	1 pc
MD8 cable (for force gages)	1 pc
Software and USB cable	1 pc

ATTENTION:
ONLY FOR PRESS TEST

MANUAL VERTICAL TEST STANDS FOR FORCE GAGES



force gage
is optional

ISF-V10A

- For press test with force gages

SPECIFICATION

Code	ISF-V10A	ISF-V10D
Apply to	dial force gages (code ISF-F□□□)	digital force gages (code ISF-1DF□□□ and ISF-DF□□□)
Load capacity	500N	
Maximum workpiece height	280mm	
Travel	70mm	
Dimension	152×235×425mm	
Weight	10.7kg	

ATTENTION:
ONLY FOR PULL TEST

MANUAL HORIZONTAL TEST STANDS FOR FORCE GAGES



force gage
is optional

ISF-H20A

- For pull test with force gages

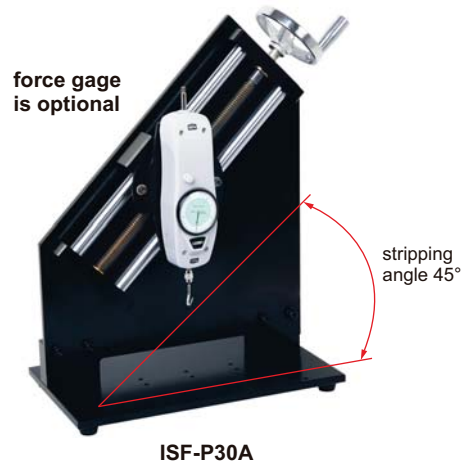
SPECIFICATION

Code	ISF-H20A	ISF-H20D
Apply to	dial force gages (code ISF-F□□□)	digital force gages (code ISF-1DF□□□ and ISF-DF□□□)
Load capacity	500N	
Travel	60mm	
Dimension	450×185×170mm	
Weight	9kg	

MANUAL STRIPPING FORCE TEST STANDS



- For stripping force test with force gages



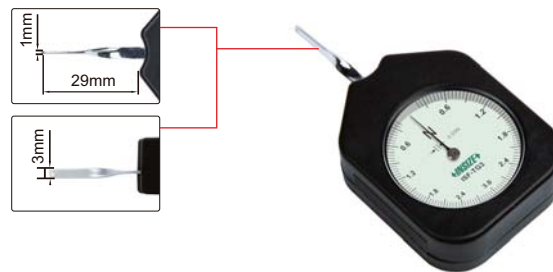
SPECIFICATION

Code	ISF-P30A	ISF-P30D
Apply to	dial force gages (code ISF-F□□□)	digital force gages (code ISF-1DF□□□ and ISF-DF□□□)
Load capacity	500N	
Horizontal travel	170mm	
Dimension	420×215×480mm	
Weight	22kg	

DIAL TENSION GAGES



- Clockwise and counter-clockwise use
- For electronic and precision mechanical industry, such as test the contact pressure of relay, adjust the tension or compression of spring



ISF-TG3

SPECIFICATION (Unit: N)

Code	ISF-TGD1	ISF-TGD3	ISF-TGD5	ISF-TG1	ISF-TG1D5	ISF-TG3	ISF-TG5
Range (N)	0.01~0.1	0.03~0.3	0.05~0.5	0.1~1	0.15~1.5	0.3~3	0.5~5
Graduation (N)	0.002	0.005	0.01	0.02	0.025	0.05	0.1
Accuracy	±2% (full scale)						
Dimension (L×W×H)	90×47×19mm						
Weight	60g						

SPECIFICATION (Unit: gf)

Code	ISF-TG10	ISF-TG30	ISF-TG50	ISF-TG100	ISF-TG150	ISF-TG300	ISF-TG500
Range (gf)	1~10	3~30	5~50	10~100	15~150	30~300	50~500
Graduation (gf)	0.2	0.5	1	2	2.5	5	10
Accuracy	±2% (full scale)						
Dimension (L×W×H)	90×47×19mm						
Weight	60g						



Digital Torque Testers
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Digital Torque Testers
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Bottle Cap Torque Testers
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Torque Wrench Test Stands
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Torque Screwdrivers
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Torque Wrenches
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Torque Adapters
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Torque Multipliers
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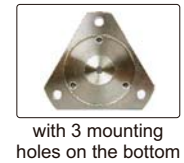
DIGITAL TORQUE TESTERS

ATTENTION: NOT SUITABLE FOR ELECTRIC WRENCHES, IMPACT WRENCHES OR PNEUMATIC WRENCHES



IST-TT550

- With external sensor, to test torque wrenches, torque screwdrivers and other torque tools
- Clockwise and counter-clockwise operation
- Peak, track and first peak working modes
- Unit: N.m, in.lb, ft.lb, kg.cm
- Tolerance testing
- LED indicator for target torque alarm:
 - Yellow LED light on when the value is below the low tolerance;
 - green LED light on when the value is within tolerance;
 - red LED light on when the value is above the high tolerance
 - The buzzer alarms when the maximum torque value is captured in the first peak mode
- Automatic power off



SPECIFICATION

Code	IST-TT05	IST-TT5	IST-TT30	IST-TT50	IST-TT220	IST-TT550	IST-TT1000	IST-TT2200
Range	0.1~0.5N.m	0.5~5N.m	3~30N.m	5~50N.m	22~220N.m	55~550N.m	100~1000N.m	220~2200N.m
Accuracy	±1% (clockwise and counter-clockwise)							
Resolution	0.0001N.m	0.0001N.m	0.001N.m	0.001N.m	0.01N.m	0.01N.m	0.1N.m	0.1N.m
Square socket (L)	1/4"	1/4"	3/8"	3/8"	1/2"	3/4"	1"	1"
Power supply	DC							
Adaptor	no	no	3/8" to 1/4"	3/8" to 1/4"	1/2" to 3/8" 3/8" to 1/4"	3/4" to 1/2" 1/2" to 3/8"	1" to 3/4" 3/4" to 1/2" 1/2" to 3/8"	1" to 3/4" 3/4" to 1/2"
Transducer dimension	63×63 ×65mm	63×63 ×65mm	89×89 ×75mm	89×89 ×75mm	109×109 ×83mm	140×140 ×107mm	160×160 ×126mm	160×160 ×126mm
Weight	0.75kg	0.75kg	1.1kg	1.1kg	1.4kg	2.9kg	5.0kg	5.1kg

STANDARD DELIVERY

Main unit	1 pc
Transducer with 1.5m cable	1 pc
Extension cable (1.2m)	1 pc
AC/DC adapter	1 pc
Adaptor	refer to details

ATTENTION: NOT SUITABLE FOR ELECTRIC WRENCHES, IMPACT WRENCHES OR PNEUMATIC WRENCHES

DIGITAL TORQUE TESTERS



IST-04TT350
type A



IST-04TT815
type B

- Test torque wrenches, torque screwdrivers and other torque tools
- Clockwise operation
- Peak, track and first peak working modes
- Tolerance testing
- LED indicator for target torque alarm:
 - Green LED light on when the value is within tolerance;
 - Red LED light on when the value is above the high tolerance
- Power off automatically in 2 minutes without any operations



adaptor
(type A included)

SPECIFICATION

Code	IST-04TT5	IST-04TT28	IST-04TT68	IST-04TT350	IST-04TT815	IST-04TT1000	IST-04TT2000
Type	A				B		
Range	0.5~5N.m	2.8~28N.m	6.8~68N.m	35~350N.m	81.5~815N.m	100~1000N.m	200~2000N.m
Accuracy	±1% (clockwise)						
Resolution	0.001N.m	0.01N.m	0.01N.m	0.1N.m	0.1N.m	1N.m	1N.m
Unit	N.m, in.lb, ft.lb, kg.cm					N.m, ft.lb	
Square socket/hex driver	1/4"	3/8"	3/8"	1/2"	27mm	27mm	27mm
Adaptor	no	3/8" to 1/4"	3/8" to 1/4"	1/2" to 3/8" 3/8" to 1/4"	no		
Power supply	DC						
Weight	0.75kg	0.75kg	1.1kg	1.1kg	5.1kg	5.1kg	5.1kg

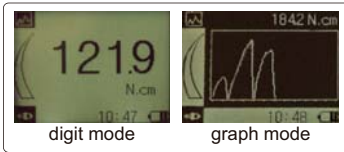
STANDARD DELIVERY

Main unit	1 pc
AC/DC adapter	1 pc
Adaptor	refer to details

DIGITAL TORQUE TESTERS

DATA OUTPUT

two display modes



software flash disk (included)

- External sensor
- Metal case, touch buttons
- Clockwise and counter-clockwise operation
- Test mode: track, peak, first peak, preset tolerance
- Unit: N.m, N.cm, kgf.cm, lbf.in, lbf.ft
- Set tolerance with judgement
- 1000 memories
- LCD display with backlight, can automatically turn 180°
- Overload alarm
- Automatic power off



SPECIFICATION

Code	IST-DTT1	IST-DTT5	IST-DTT10
Load capacity	0.05~1N.m	0.25~5N.m	0.5~10N.m
Resolution	0.0001N.m	0.0005N.m	0.001N.m
Max. clamping diameter	Ø10mm	Ø10mm	Ø13mm
Sampling frequency	2000 times per second		
Accuracy	±0.3% (of load capacity)		
Output	USB, RS232, alarm signal		
Power supply	built-in rechargeable battery		
Dimension	145x73x34mm		
Weight	1.4kg		

STANDARD DELIVERY

Main unit	1 pc
External sensor	1 pc
AC/DC adapter	1 pc
Software and USB cable	1 pc

OPTIONAL ACCESSORY

Printer	ISF-DF-PRINTER
RS232 cable	IST-DTT-CABLE



printer (optional)

DIGITAL BOTTLE CAP TORQUE TESTERS

DATA OUTPUT



- Measure the opening and tightening torque of bottle caps
- Unit: N.m, N.cm, kgf.cm, lbf.in, lbf.ft
- 1500 memories
- Wireless connection to printer
- Automatic power off
- LCD display with backlight
- Overload alarm
- With calibration function



IST-DCT20

two display modes



software flash disk (included)



printer (optional)

SPECIFICATION

Code	IST-DCT2	IST-DCT5	IST-DCT10	IST-DCT20
Load capacity	2N.m	5N.m	10N.m	20N.m
Resolution	0.0002N.m	0.0005N.m	0.001N.m	0.002N.m
Clamping range	Ø19.5~190mm			
Accuracy	±0.5% (of load capacity)			
Measuring mode	tracking, peak (max.), first peak, double peak, tolerance testing			
Output	wireless and USB			
Power supply	built-in rechargeable battery			
Dimension	200×197×142mm			
Weight	2.5kg			

STANDARD DELIVERY

Main unit	1 pc
AC/DC adapter	1 pc
Software and USB cable	1 pc

OPTIONAL ACCESSORY

Printer	ISH-DS-PRINTER
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TORQUE WRENCH TEST STANDS

application example



IST-06TS350



- Rotate the wheel to apply force. Rotary speed is adjustable
- Easy operation due to the gear box
- Used with digital torque testers (IST-TT series)

SPECIFICATION

Code	IST-06TS350	IST-06TS1100	IST-06TS2000
Max. torque value	350N.m	1100N.m	2000N.m
Arm length	197~686mm	380~1350mm	420~1690mm
Dimension	860×290×590mm	1760×350×590mm	2090×350×590mm
Weight	32.5kg	76kg	80kg

Can be customized according to test requirements



digital torque tester (optional)

OPTIONAL ACCESSORY

Digital torque tester	IST-TT series
Adaptor	IST-06TS-BLOCK1 (necessary for IST-TT05, IST-TT5, IST-TT30, IST-TT50 and IST-TT220)
	IST-06TS-BLOCK2 (necessary for IST-TT550, IST-TT1000 and IST-TT2200)



phillips screwdriver bits (included)



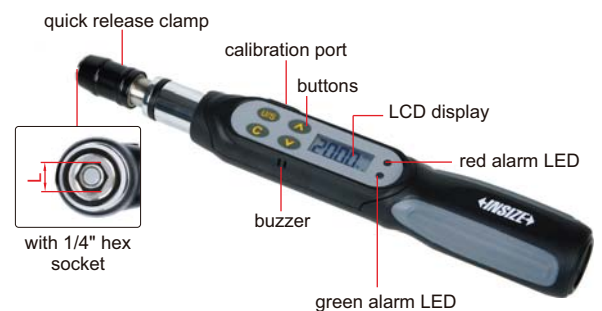
hex screwdriver bits (included)

- Clockwise and counter-clockwise operation
- Unit: cN.m, in.lb, kg.cm
- Peak and track working modes
- Target torque value can be set, with audible and visible alarm:
 - Green LED light on and buzzer sounds when target torque value is 90%~100% of target torque
 - Red LED light on and buzzer sounds when target torque value is reached
- Power off automatically in 5 minutes without any operations

SPECIFICATION

Code	IST-SD50	IST-SD200	IST-SD400
Range	10~50cN.m	40~200cN.m	80~400cN.m
Accuracy	clockwise	±2.5%	±2.5%
	counter-clockwise	±4%	±3.5%
Resolution	0.1cN.m	0.1cN.m	0.1cN.m
Size of hex socket (L)	1/4"	1/4"	1/4"
Power supply	1×AAA battery		
Length	193mm	203mm	203mm
Weight	190g	200g	200g

DIGITAL TORQUE SCREWDRIVERS



IST-SD200



STANDARD DELIVERY

Torque screwdriver	1 pc
Phillips screwdriver bits	1 pc
Hex screwdriver bits	1 pc

OPTIONAL ACCESSORY

Calibration cable	IST-SD-CABLE
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BLUETOOTH DIGITAL TORQUE SCREWDRIVERS (KEYBOARD SIGNAL)



BUILT-IN BLUETOOTH



IST-3SD50



IST-3SD200
IST-3SD400

Torque screwdrivers:

- Clockwise and counter-clockwise operation
- Unit: N.m, in.lb, ft.lb, kg.cm
- Peak and track working modes
- Target torque value can be set, with audible and visible alarm:
 - LED lights up in sequence and the buzzer sounds when target torque value is 80%~99.5% of target torque
 - Both green and red LED light on and buzzer sounds when target torque value is reached
- Power off in 2 minutes automatically
- Memory of 2000 results

Data transmission:

- Built-in Bluetooth module, which can be connected with computers (with Bluetooth function), mobile phones, tablets and other devices
- Keyboard signal, can be transmitted to Excel
- Transmission distance is 10 meters (no obstacles, no electromagnetic interference)
- Bluetooth connection and disconnection are respectively shown by indicator lights

SPECIFICATION

Code	IST-3SD50	IST-3SD200	IST-3SD400
Range	0.1~0.5N.m	0.4~2N.m	0.8~4N.m
Accuracy	clockwise	±3%	±2.5%
	counter-clockwise	±4%	±3.5%
Resolution	0.001N.m	0.001N.m	0.001N.m
Size of hex socket (L)	1/4"	1/4"	1/4"
Power supply	2×AAA batteries		
Length	193mm	193mm	193mm
Weight	304g	304g	383g



phillips screwdriver bits
(included)



hex screwdriver bits
(included)

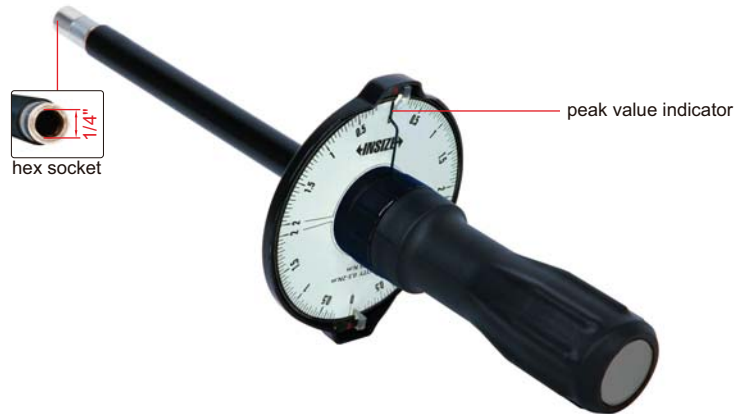
STANDARD DELIVERY

Torque screwdriver	1 pc
Phillips screwdriver bits	1 pc
Hex screwdriver bits	1 pc
Wrench (only for IST-3SD200, IST-3SD400)	1 pc

OPTIONAL ACCESSORY

Calibration cable	IST-SD-CABLE
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DIAL TORQUE SCREWDRIVERS



- Clockwise and counter-clockwise operation
- With peak value indicator

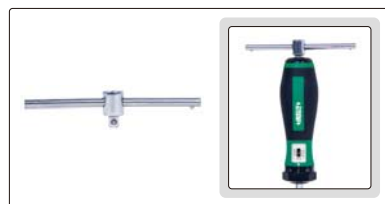
IST-DS2

SPECIFICATION

Code	IST-DS02	IST-DS05	IST-DS1	IST-DS2	IST-DS5
Range	0.05~0.2N.m	0.1~0.5N.m	0.2~1N.m	0.5~2N.m	1~5N.m
Graduation	0.005N.m	0.01N.m	0.02N.m	0.05N.m	0.1N.m
Head	1/4" hex socket				
Accuracy	±6%				
Length	152mm	273mm	273mm	273mm	273mm
Weight	170g	400g	400g	400g	400g

ATTENTION: CLOCKWISE OPERATION ONLY

TORQUE SCREWDRIVERS



T-bar wrench
(for IST-MG250, IST-MG360, IST-MG600)



IST-MG100

SPECIFICATION

Code	IST-MG100	IST-MG250	IST-MG360	IST-MG600
Range (clockwise)	20~100cN.m	50~250cN.m	60~360cN.m	1.0~6.0N.m
Graduation	2cN.m	5cN.m	5cN.m	0.1N.m
Head	1/4" hex socket			
Accuracy	±6%			
Length	172mm			
Weight	0.26kg			

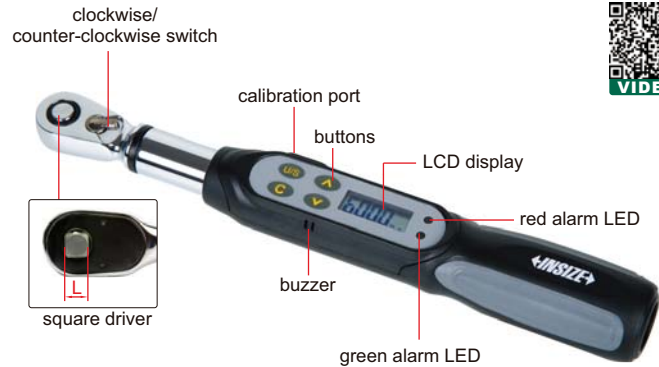
STANDARD DELIVERY

Torque screwdriver	1 pc
T-bar wrench (for IST-MG250, IST-MG360, IST-MG600)	1 pc

SMALL RANGE DIGITAL TORQUE WRENCH



- Clockwise and counter-clockwise operation
- Unit: N.m, in.lb, ft.lb, kg.cm
- Peak and track working modes
- Target torque value can be set, with audible and visible alarm:
 - Green LED light on and buzzer sounds when target torque value is 90%~100% of target torque
 - Red LED light on and buzzer sounds when target torque value is reached
- Power off automatically in 5 minutes without any operations
- Non-slip grip handle
- With overload record (once the torque reaches 110% of the maximum range)



IST-WP6

SPECIFICATION

Code	IST-WP6	
Range	1.2~6N.m	
Accuracy	clockwise	±3%
	counter-clockwise	±4%
Resolution	0.001N.m	
Square driver (L)	1/4"	
Power supply	1×AAA battery	
Length	260mm	
Weight	430g	

OPTIONAL ACCESSORY

Calibration cable	IST-SD-CABLE
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SHORT HANDLE DIGITAL TORQUE WRENCHES



- Clockwise and counter-clockwise operation
- Unit: N.m, in.lb, ft.lb, kg.cm
- Peak and track working modes
- Target torque value can be set, with audible and visible alarm:
 - Green LED light on and buzzer sounds when torque value is 90%~100% of target torque
 - Both green and red LED light on and buzzer sounds when target torque value is reached
- Power off in 5 minutes automatically
- Non-slip grip handle
- With damp record
- With overload record (once the torque reaches 110% of the maximum range)



IST-WS60

SPECIFICATION

Code	IST-WS12	IST-WS20	IST-WS30	IST-WS30A	IST-WS60	IST-WS85
Range	2.4~12N.m	4~20N.m	6~30N.m	6~30N.m	12~60N.m	17~85N.m
Accuracy	clockwise	±3%				
	counter-clockwise	±4%				
Resolution	0.01N.m	0.01N.m	0.01N.m	0.01N.m	0.01N.m	0.1N.m
Square driver (L)	1/4"	1/4"	1/4"	3/8"	3/8"	3/8"
Power supply	2×AAA batteries					
Length	215mm	215mm	215mm	215mm	225mm	271mm
Weight	750g	750g	750g	830g	917g	1000g

OPTIONAL ACCESSORY

Calibration cable	IST-SD-CABLE
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DIGITAL TORQUE WRENCHES

OPTIONAL ACCURACY:
 CLOCKWISE: $\pm 1\%$
 COUNTER-CLOCKWISE: $\pm 2\%$
 ONLY FOR RANGE 6~850N.m



**IST-W135A
type A**



**IST-W1200A
type B**

- Clockwise and counter-clockwise operation
- Unit: N.m, in.lb, ft.lb, kg.cm
- Peak and track working mode
- Target torque value can be set, with audible and visible alarm:
 - Green LED light on and buzzer sounds when torque value is 90%~100% of target torque
 - Both green and red LED light on and buzzer sounds when target torque value is reached
- Power off automatically in 5 minutes without any operations
- Non-slip grip handle
- With damp record
- With overload record (once the torque reaches 110% of the maximum range)

SPECIFICATION

Code	Type	Range	Accuracy	Resolution	Square driver (L)	Power supply	Length	Weight
IST-W30A	A	6~30N.m	clockwise: $\pm 2\%$ counter-clock wise: $\pm 3\%$	0.01N.m	1/4"	2×AA batteries, for 110 hours working	390mm	830g
IST-W135A		27~135N.m		0.1N.m	3/8"		415mm	950g
IST-W200A		40~200N.m		0.1N.m	1/2"		530mm	1.4kg
IST-W340A		68~340N.m		0.1N.m	1/2"		650mm	1.6kg
IST-W500A*	B	100~500N.m	clockwise: $\pm 2.5\%$ counter-clock wise: $\pm 3.5\%$	0.1N.m	3/4"		1285mm	7kg
IST-W850A		170~850N.m		0.1N.m	3/4"		1295mm	6kg
IST-W1200A		240~1200N.m		1N.m	1"		1920mm	13kg
IST-W1500A		300~1500N.m		1N.m	1"		1920mm	13kg
IST-W2000A		400~2000N.m		1N.m	1"	1920mm	14kg	

OPTIONAL ACCESSORY

Calibration cable **IST-W-CABLE**

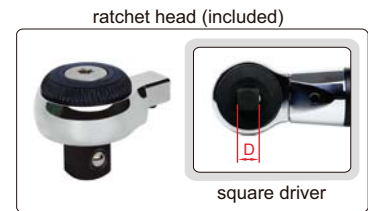
* The accuracy of this code is not optional

INTERCHANGEABLE HEAD DIGITAL TORQUE WRENCHES

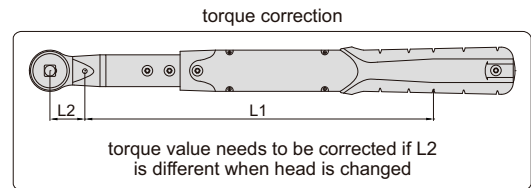
OPTIONAL ACCURACY:
CLOCKWISE: ±1%
COUNTER-CLOCKWISE: ±2%



IST-2W135A



- Clockwise and counter-clockwise operation
- Unit: N.m, in.lb, ft.lb, kg.cm, degree
- Peak and track working modes
- Target torque value can be set, with audible and visible alarm:
 - Green LED light on and buzzer sounds when torque value is 90%~100% of target torque
 - Both green and red LED light on and buzzer sounds when target torque value is reached
- Power off in 5 minutes automatically without any operations
- Non-slip grip handle
- With damp record
- With overload record (once the torque reaches 110% of the maximum range)



SPECIFICATION

Code	IST-2W30A	IST-2W135A	IST-2W200A	IST-2W340A	IST-2W410A
Range	6~30N.m	27~135N.m	40~200N.m	68~340N.m	82~410N.m
Accuracy	clockwise	±2%			
	counter-clockwise	±3%			
Resolution	0.01N.m	0.1N.m	0.1N.m	0.1N.m	0.1N.m
Socket size (A×B)	12×9mm	12×9mm	18×14mm	18×14mm	18×14mm
Arm length (L1)	272.7mm	287.7mm	381.2mm	501.2mm	501.2mm
Power supply	2xAA batteries, for 110 hours working				
Weight	1400g	1570g	2170g	2320g	2320g

STANDARD DELIVERY

Torque wrench	1 pc
Ratchet head	1 pc

OPTIONAL ACCESSORY

Calibration cable	IST-W-CABLE
Interchangeable head	refer to details

To be continued

Continued from previous page

RATCHET HEAD (INCLUDED) SPECIFICATION

Code of torque wrench	IST-2W30A	IST-2W135A	IST-2W200A	IST-2W340A	IST-2W410A
Square driver (D)	1/4"	3/8"	1/2"	1/2"	3/4"
Length (L2)	29mm	29mm	40mm	40mm	40mm



RATCHET HEAD (optional)

Code	Square driver (D)	Applicable wrenches
IST-2W-R1	1/4"	IST-2W30A
IST-2W-R2	3/8"	IST-2W135A
IST-2W-R3	1/2"	IST-2W135A
IST-2W-R4	1/2"	IST-2W200A IST-2W340A IST-2W410A

ADJUSTABLE SPANNER HEAD (optional)

Code	Open size	Applicable wrenches
IST-2W-A1	5~27mm	IST-2W135A
IST-2W-A2	5-30mm	IST-2W-200A IST-2W-410A
IST-2W-A3	10-41mm	IST-2W-340A IST-2W-410A



OPEN END HEAD (optional)

Code	Open size	Applicable wrenches	
IST-2W-K7	7mm	IST-2W30A IST-2W135A	
IST-2W-K8	8mm		
IST-2W-K9	9mm		
IST-2W-K10	10mm		
IST-2W-K11	11mm		
IST-2W-K12	12mm		
IST-2W-K13	13mm		
IST-2W-K14	14mm		
IST-2W-K15	15mm		
IST-2W-K16	16mm		
IST-2W-K17	17mm		
IST-2W-K18	18mm		
IST-2W-K19	19mm		
IST-2W-K13A	13mm		IST-2W200A IST-2W340A IST-2W410A
IST-2W-K14A	14mm		
IST-2W-K15A	15mm		
IST-2W-K16A	16mm		
IST-2W-K17A	17mm		
IST-2W-K18A	18mm		
IST-2W-K19A	19mm		
IST-2W-K21A	21mm		
IST-2W-K22A	22mm		
IST-2W-K24A	24mm		
IST-2W-K27A	27mm		

BOX END HEAD (optional)

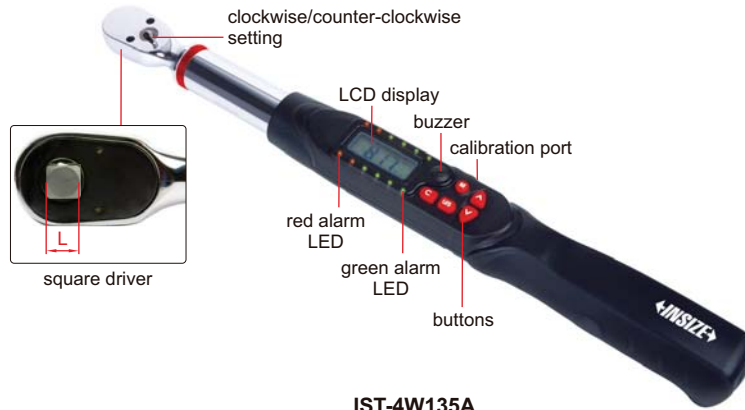
Code	Open size	Applicable wrenches	
IST-2W-M7	7mm	IST-2W30A IST-2W135A	
IST-2W-M8	8mm		
IST-2W-M10	10mm		
IST-2W-M11	11mm		
IST-2W-M12	12mm		
IST-2W-M13	13mm		
IST-2W-M14	14mm		
IST-2W-M15	15mm		
IST-2W-M16	16mm		
IST-2W-M17	17mm		
IST-2W-M18	18mm		
IST-2W-M19	19mm		
IST-2W-M21	21mm		
IST-2W-M22	22mm		IST-2W200A IST-2W340A
IST-2W-M13A	13mm		
IST-2W-M14A	14mm		
IST-2W-M15A	15mm		
IST-2W-M16A	16mm		
IST-2W-M17A	17mm		
IST-2W-M18A	18mm		
IST-2W-M19A	19mm		
IST-2W-M21A	21mm		

QUALITY INSPECTION TORQUE WRENCHES

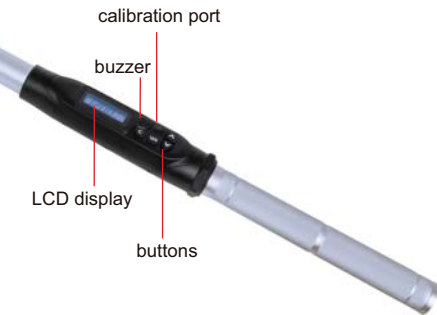
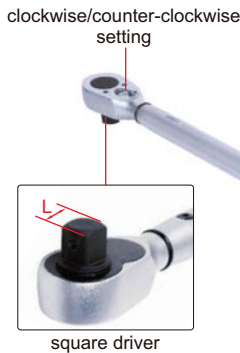


MEASURE THE TORQUE OF TIGHTENED BOLTS

OPTIONAL ACCURACY:
CLOCKWISE: $\pm 1\%$
COUNTER-CLOCKWISE: $\pm 2\%$
ONLY FOR RANGE 6~340N.m



IST-4W135A
type A



IST-4W1200A
type B

- Retighten the tightened bolts to measure the torque, read the torque value when the looseness is detected
- Two measuring modes:
 - M1: automatic detecting mode, for normal bolts. Retighten the tightened bolts, the torque value is displayed on screen when the wrench automatically detects the looseness, both green and red LED light on and buzzer sounds
 - M2: manual detecting mode, for long bolts. Retighten the tightened bolts, read the torque value when the looseness is detected by hand
- Unit: N.m, in.lb, ft.lb, kg.cm
- Peak and track working mode (only for M2 measuring mode)
- Clockwise and count-clockwise operation
- Memory of 50 results
- Power off in 15 minutes automatically
- Non-slip grip handle
- With overload record (once the torque reaches 110% of the maximum range)

SPECIFICATION

Code	Type	Range	Accuracy	Resolution	Square driver (L)	Power supply	Length	Weight
IST-4W30A	A	6~30N.m	clockwise: $\pm 2\%$ counter-clock wise: $\pm 3\%$	0.01N.m	1/4"	2×AA batteries, for 110 hours working	390mm	760g
IST-4W135A		27~135N.m		0.1N.m	3/8"		415mm	940g
IST-4W200A		40~200N.m		0.1N.m	1/2"		530mm	1340g
IST-4W340A		68~340N.m		0.1N.m	1/2"		650mm	1540g
IST-4W850A	B	170~850N.m	clockwise: $\pm 2.5\%$ counter-clock wise: $\pm 3.5\%$	0.1N.m	3/4"		1220mm	6000g
IST-4W1200A		240~1200N.m		1N.m	1"		1800mm	9100g
IST-4W1500A		300~1500N.m		1N.m	1"		1800mm	9100g
IST-4W2000A		400~2000N.m		1N.m	1"		1800mm	10500g

OPTIONAL ACCESSORY

Calibration cable	IST-W-CABLE
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TWO-WAY WIRELESS DIGITAL TORQUE WRENCHES



IST-13W135A



OPTIONAL ACCURACY:
CLOCKWISE: ±1%
COUNTER-CLOCKWISE: ±2%

TRANSMISSION DISTANCE
IS 300 METERS



two-way receiver

Torque wrench:

- The test results can be transmitted wirelessly to the computer and PLC
- Unit: N.m, in.lb, ft.lb, kg.cm
- Clockwise and counter-clockwise operation
- Peak and track working mode
- Can set tolerance with judgement in peak working mode
- 9 target torque values can be set, with audible and visible alarm:
 - Green LED light on and buzzer sounds when torque value is 80%~99.5% of target torque
 - Both green and red LED light on and buzzer sounds when torque value is over 99.5% of target torque
- Power off in 2 minutes automatically
- Non-slip grip handle
- With damp record
- With overload record (once the torque reaches 110% of the maximum range)

Two-way receiver:

- A two-way receiver can be connected with up to 10 wrenches at the same time, and the maximum transmission distance is 300 meters

Software:

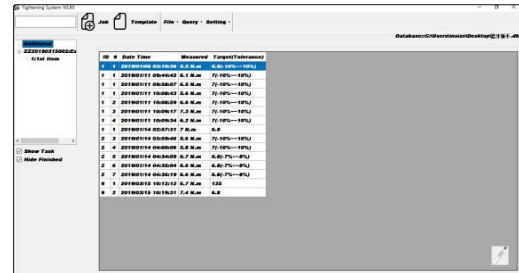
- In Windows10 system version 1709 or above
- Two operation mode:
 - Data transmission mode: wrench transmits actual torque value to software after operation
 - Program guidance mode: firstly set process on software (set sequence of tightening, select wrench and set torque values and tolerances). Then software shows which wrench the operator should use (indicator light of the selected wrench is on) and shows the target torque value, and serial number of the screw to be tightened (shows on the wrench); After the operation is finished, the actual torque value is sent to software.
- Can select whether the wrench only sends qualified data after operation (in accordance with the tolerance)
- Two data transmission modes: automatic or press button to send
- When the wrench is disconnected, data is stored in the wrench and automatically sent to computer after wireless connection
- The data in software can be printed or sent to Excel

TWO-WAY RECEIVER SPECIFICATION

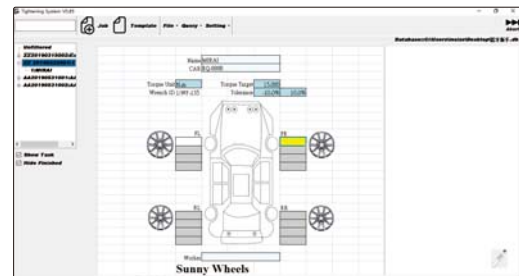
Code	IST-13WREC	IST-13WREC-PLC
Signal output to	computer	PLC
Working frequency	ISM433MHz (432.0~433.8MHz, adjustable)	
Power supply	power adapter, 24V, 0.5A	
Dimension	200×108×31mm	
Weight	500g	

OPTIONAL ACCESSORY

Calibration cable	IST-SD-CABLE
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data transmission mode



program guidance mode

SPECIFICATION

Code	Range	Accuracy	Unit	Resolution	Square driver (L)	Working frequency	Power supply	Length	Weight
IST-13W30A	6~30N.m	clockwise: ±2% counter-clockwise: ±3%	N-m/ft-lb/ in-lb/kg-cm	0.01N.m	1/4"	ISM433MHz (432.0~433.8MHz, adjustable)	2×AA batteries	390mm	760g
IST-13W60A	12~60N.m			0.01N.m	3/8"			390mm	940g
IST-13W135A	27~135N.m			0.1N.m	3/8"			415mm	940g
IST-13W200A	40~200N.m			0.1N.m	1/2"			530mm	1340g
IST-13W340A	68~340N.m			0.1N.m	1/2"			650mm	1540g
IST-13W1200A	240~1200N.m	clockwise: ±2.5% counter-clockwise: ±3.5%	N-m/ft-lb	1N.m	1"			1800mm	9000g
IST-13W1500A	300~1500N.m			1N.m	1"			1800mm	9000g
IST-13W2000A	400~2000N.m			1N.m	1"			1800mm	10500g
				1N.m	1"			1800mm	10500g

BLUETOOTH DIGITAL TORQUE WRENCHES (KEYBOARD SIGNAL)

TYPE B OPTIONAL ACCURACY:
CLOCKWISE: ±1%
COUNTER-CLOCKWISE: ±2%

BUILT-IN BLUETOOTH



INSPECTION
CERTIFICATE



IST-15W12A
type A



IST-15W135A
type B

Torque wrenches:

- Unit: in.lb, ft.lb, N.m, kg.cm
- Clockwise and counter-clockwise operation
- Peak and track working mode
- Can set tolerance with judgement in peak working mode
- 9 target torque values can be set, with audible and visible alarm:
LED lights up in sequence, and the buzzer gets louder and louder when torque value is 80%~99.5% of target torque
- Memory of 2000 results
- Power off in 2 minutes automatically
- Non-slip grip handle
- With overload record (once the torque reaches 110% of the maximum range)

Data transmission:

- Built-in Bluetooth 4.0 module, which can be connected with computers (with Bluetooth function), mobile phones, tablets and other devices
- Keyboard signal, can be transmitted to Excel, Word, TXT
- Transmission distance is 10 meters (no obstacles, no electromagnetic interference)
- Bluetooth connection and disconnection are respectively shown by indicator lights



transmission distance is 10 meters
(no obstacles, no electromagnetic interference)

SPECIFICATION

Code	IST-15W06A	IST-15W12A	IST-15W20A	IST-15W30A	IST-15W135A	IST-15W200A	IST-15W340A
Type	A (short handle)			B (long handle)			
Range	1.2~6N.m	2.4~12N.m	4~20N.m	6~30N.m	27~135N.m	40~200N.m	68~340N.m
Accuracy	clockwise	±2%					
	counter-clockwise	±3%					
Tolerance setting range	-20%~+20% (target torque value)						
Resolution	0.001N.m	0.01N.m	0.01N.m	0.01N.m	0.1N.m	0.1N.m	0.1N.m
Square driver (L)	1/4"	1/4"	1/4"	1/4"	3/8"	1/2"	1/2"
Power supply	2xAAA batteries			2xAA batteries			
Length	215mm	215mm	215mm	390mm	415mm	530mm	650mm
Weight	750g	750g	750g	760g	940g	1340g	1540g

OPTIONAL ACCESSORY

Calibration cable	IST-SD-CABLE
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ATTENTION: CLOCKWISE
OPERATION ONLY



INTERCHANGEABLE HEAD TORQUE WRENCHES



IST-11WM200

- According to DIN ISO 6789, ASME B107.300
- All-metal construction, sturdy and durable

SPECIFICATION

Code	Range (clockwise)	Accuracy	Graduation	Socket size (A×B)	Length	Weight
IST-11WM12	2.5~12N.m	±6% (<10N.m) ±4% (≥10N.m)	0.05N.m	12×9mm	284mm	580g
IST-11WM30	6.0~30N.m	±6% (<10N.m) ±4% (≥10N.m)	0.1N.m	12×9mm	303mm	720g
IST-11WM60	10~60N.m	±4%	0.5N.m	12×9mm	372mm	860g
IST-11WM125	25~125N.m	±4%	0.5N.m	12×9mm	427mm	940g
IST-11WM200	40~200N.m	±4%	1N.m	18×14mm	460mm	1060g
IST-11WM335	65~335N.m	±4%	1N.m	18×14mm	520mm	1200g
IST-11WM500	100~500N.m	±4%	2.5N.m	32×24mm	855mm	5000g
IST-11WM800	160~800N.m	±4%	4N.m	32×24mm	1055mm	5900g
IST-11WM1000	200~1000N.m	±4%	5N.m	32×24mm	1055mm	5900g
IST-11WM1500	300~1500N.m	±4%	5N.m	36×27mm	1249mm	9000g
IST-11WM2000	400~2000N.m	±4%	10N.m	36×27mm	1249mm	9000g
IST-11WM3000	600~3000N.m	±4%	15N.m	36×27mm	1249mm	10300g

RATCHET HEAD (optional)



Code	Square driver	Applicable wrenches
IST-11WM-R1	1/4"	IST-11WM12 IST-11WM30
IST-11WM-R2	3/8"	IST-11WM12 IST-11WM30 IST-11WM60 IST-11WM125
IST-11WM-R3	1/2"	IST-11WM200 IST-11WM335
IST-11WM-R4*	3/4"	IST-11WM200 IST-11WM335
IST-11WM-R5	3/4"	IST-11WM500 IST-11WM800 IST-11WM1000
IST-11WM-R6	1"	IST-11WM1500 IST-11WM2000 IST-11WM3000



HOOK HEAD (optional)

Hook head customized according to customer requirements

To be continued

Continued from previous page



OPEN END HEAD (optional)

Code	Open size	Applicable wrenches
IST-11WM-K8	8mm	IST-11WM12 IST-11WM30 IST-11WM60 IST-11WM125
IST-11WM-K10	10mm	
IST-11WM-K13	13mm	
IST-11WM-K14	14mm	
IST-11WM-K15	15mm	
IST-11WM-K17	17mm	
IST-11WM-K19*	19mm	
IST-11WM-K13A	13mm	IST-11WM200 IST-11WM335
IST-11WM-K14A	14mm	
IST-11WM-K15A	15mm	
IST-11WM-K17A	17mm	
IST-11WM-K19A	19mm	
IST-11WM-K22A	22mm	
IST-11WM-K24A	24mm	
IST-11WM-K27A*	27mm	
IST-11WM-K30A*	30mm	
IST-11WM-K32A*	32mm	
IST-11WM-K22B	22mm	IST-11WM500 IST-11WM800 IST-11WM1000
IST-11WM-K24B	24mm	
IST-11WM-K27B	27mm	
IST-11WM-K28B	28mm	
IST-11WM-K30B	30mm	
IST-11WM-K32B	32mm	
IST-11WM-K33B*	33mm	
IST-11WM-K36B*	36mm	
IST-11WM-K38B*	38mm	
IST-11WM-K40B*	40mm	
IST-11WM-K30C	30mm	IST-11WM1500 IST-11WM2000 IST-11WM3000
IST-11WM-K32C	32mm	
IST-11WM-K34C	34mm	
IST-11WM-K36C	36mm	
IST-11WM-K38C	38mm	
IST-11WM-K41C	41mm	
IST-11WM-K45C	45mm	
IST-11WM-K50C*	50mm	
IST-11WM-K55C*	55mm	
IST-11WM-K60C*	60mm	

BOX END HEAD (optional)

Code	Open size	Applicable wrenches
IST-11WM-M8	8mm	IST-11WM12 IST-11WM30 IST-11WM60 IST-11WM125
IST-11WM-M10	10mm	
IST-11WM-M13	13mm	
IST-11WM-M14	14mm	
IST-11WM-M15	15mm	
IST-11WM-M17	17mm	
IST-11WM-M19	19mm	
IST-11WM-M13A	13mm	IST-11WM200 IST-11WM335
IST-11WM-M14A	14mm	
IST-11WM-M15A	15mm	
IST-11WM-M17A	17mm	
IST-11WM-M19A	19mm	
IST-11WM-M22A	22mm	
IST-11WM-M24A	24mm	
IST-11WM-M27A	27mm	
IST-11WM-M30A	30mm	
IST-11WM-M32A	32mm	
IST-11WM-M22B	22mm	IST-11WM500 IST-11WM800 IST-11WM1000
IST-11WM-M24B	24mm	
IST-11WM-M27B	27mm	
IST-11WM-M28B	28mm	
IST-11WM-M30B	30mm	
IST-11WM-M32B	32mm	
IST-11WM-M33B	33mm	
IST-11WM-M36B*	36mm	
IST-11WM-M38B*	38mm	
IST-11WM-M40B	40mm	
IST-11WM-M30C	30mm	IST-11WM1500 IST-11WM2000 IST-11WM3000
IST-11WM-M32C	32mm	
IST-11WM-M34C	34mm	
IST-11WM-M36C	36mm	
IST-11WM-M38C	38mm	
IST-11WM-M41C	41mm	
IST-11WM-M45C	45mm	
IST-11WM-M50C	50mm	
IST-11WM-M55C*	55mm	
IST-11WM-M60C*	60mm	

*Torque value needs to be corrected for these heads



IST-9WM200

- According to DIN ISO 6789, ASME B107.300
- All-metal construction, sturdy and durable

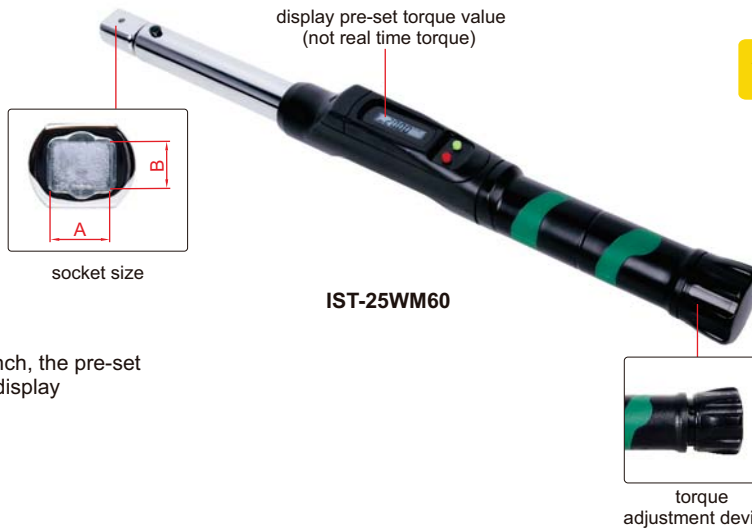
SPECIFICATION

Code	IST-9WM12	IST-9WM20	IST-9WM30	IST-9WM60	IST-9WM100
Range (clockwise)	2.5~12N.m	4~20N.m	6~30N.m	10~60N.m	20~100N.m
Accuracy	±6% (<10N.m) ±4% (≥10N.m)	±6% (<10N.m) ±4% (≥10N.m)	±6% (<10N.m) ±4% (≥10N.m)	±4%	±4%
Graduation	0.1N.m	0.1N.m	0.2N.m	0.5N.m	0.5N.m
Square driver (D)	1/4"	1/4"	3/8"	3/8"	1/2"
Length	290mm	290mm	318mm	388mm	443mm
Weight	680g	680g	820g	960g	1040g

Code	IST-9WM125	IST-9WM200	IST-9WM335	IST-9WM500	IST-9WM800
Range (clockwise)	25~125N.m	40~200N.m	65~335N.m	100~500N.m	160~800N.m
Accuracy	±4%	±4%	±4%	±4%	±4%
Graduation	0.5N.m	1N.m	1N.m	2.5N.m	4N.m
Square driver (D)	1/2"	1/2"	1/2"	3/4"	3/4"
Length	443mm	468mm	528mm	855mm	1055mm
Weight	1040g	1160g	1300g	5000g	5900g

Code	IST-9WM1000	IST-9WM1500	IST-9WM2000	IST-9WM3000
Range (clockwise)	200~1000N.m	300~1500N.m	400~2000N.m	600~3000N.m
Accuracy	±4%	±4%	±4%	±4%
Graduation	5N.m	5N.m	10N.m	15N.m
Square driver (D)	3/4"	1"	1"	1"
Length	1055mm	1260mm	1260mm	1260mm
Weight	5900g	9200g	9200g	10500g

INTERCHANGEABLE HEAD MECHANICAL TORQUE WRENCHES (DIGITAL SETTING)



ATTENTION: DISPLAY PRE-SET TORQUE VALUE (NOT REAL TIME TORQUE)

ATTENTION: CLOCKWISE OPERATION ONLY

- Unit: N.m, in.lb, ft.lb, kg.cm
- Mechanical "click" torque wrench, the pre-set torque value is shown on the display

SPECIFICATION

Code	IST-25WM60	IST-25WM100	IST-25WM140	IST-25WM200	IST-25WM300
Range (clockwise)	12~60N.m	20~100N.m	28~140N.m	40~200N.m	60~300N.m
Accuracy	±3%	±3%	±3%	±3%	±3%
Graduation	0.1N.m	0.1N.m	0.1N.m	0.1N.m	0.1N.m
Socket size (A×B)	12×9mm	12×9mm	18×14mm	18×14mm	18×14mm
Length	408mm	431mm	492mm	510mm	568mm
Weight	1.3kg	1.4kg	1.45kg	1.5kg	1.7kg



RATCHET HEAD (optional)

Code	Square driver	Applicable wrenches
IST-11WM-R1	1/4"	IST-25WM60 IST-25WM100
IST-11WM-R2	3/8"	IST-25WM60 IST-25WM100
IST-11WM-R3	1/2"	IST-25WM140 IST-25WM200 IST-25WM300
IST-11WM-R4*	3/4"	IST-25WM140 IST-25WM200 IST-25WM300

BOX END HEAD (optional)

Code	Open size	Applicable wrenches
IST-11WM-M8	8mm	IST-25WM60 IST-25WM100
IST-11WM-M10	10mm	
IST-11WM-M13	13mm	
IST-11WM-M14	14mm	
IST-11WM-M15	15mm	
IST-11WM-M17	17mm	
IST-11WM-M19	19mm	IST-25WM140 IST-25WM200
IST-11WM-M13A	13mm	
IST-11WM-M14A	14mm	
IST-11WM-M15A	15mm	
IST-11WM-M17A	17mm	
IST-11WM-M19A	19mm	
IST-11WM-M22A	22mm	
IST-11WM-M24A	24mm	
IST-11WM-M27A	27mm	
IST-11WM-M30A	30mm	
IST-11WM-M32A	32mm	



HOOK HEAD (optional)

Hook head	customized according to customer requirements
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To be continued

Continued from previous page



OPEN END HEAD (optional)

Code	Open size	Applicable wrenches	
IST-11WM-K6	6mm	IST-25WM60 IST-25WM100	
IST-11WM-K7	7mm		
IST-11WM-K8	8mm		
IST-11WM-K9	9mm		
IST-11WM-K10	10mm		
IST-11WM-K11	11mm		
IST-11WM-K12	12mm		
IST-11WM-K13	13mm		
IST-11WM-K14	14mm		
IST-11WM-K15	15mm		
IST-11WM-K16	16mm		
IST-11WM-K17	17mm		
IST-11WM-K18*	18mm		
IST-11WM-K19*	19mm		
IST-11WM-K13A	13mm		IST-25WM140 IST-25WM200 IST-25WM300
IST-11WM-K14A	14mm		
IST-11WM-K15A	15mm		
IST-11WM-K16A	16mm		
IST-11WM-K17A	17mm		
IST-11WM-K18A	18mm		
IST-11WM-K19A	19mm		
IST-11WM-K20A	20mm		
IST-11WM-K21A	21mm		
IST-11WM-K22A	22mm		
IST-11WM-K23A	23mm		
IST-11WM-K24A	24mm		
IST-11WM-K27A*	27mm		
IST-11WM-K30A*	30mm		
IST-11WM-K32A*	32mm		

*Torque value needs to be corrected for these heads

ATTENTION: CLOCKWISE OPERATION ONLY



ATTENTION: DISPLAY PRE-SET TORQUE VALUE (NOT REAL TIME TORQUE)



VIDEO

MECHANICAL TORQUE WRENCHES (DIGITAL SETTING)



- Unit: N.m, in.lb, ft.lb, kg.cm
- Mechanical "click" torque wrench, the pre-set torque value is shown on the display

SPECIFICATION

Code	IST-19WM60	IST-19WM100	IST-19WM140	IST-19WM200	IST-19WM300
Range (clockwise)	12~60N.m	20~100N.m	28~140N.m	40~200N.m	60~300N.m
Accuracy	±3%	±3%	±3%	±3%	±3%
Graduation	0.1N.m	0.1N.m	0.1N.m	0.1N.m	0.1N.m
Square driver (D)	3/8"	3/8"	1/2"	1/2"	1/2"
Length	382mm	450mm	481mm	520mm	585mm
Weight	1.3kg	1.4kg	1.45kg	1.6kg	1.8kg

PRESET TORQUE WRENCHES

ATTENTION: CLOCKWISE OPERATION ONLY

- Torque is preset, to prevent adjustment by mistake during use
- The torque is set at the factory before delivery. Customers can also set the torque with torque adjustment tool (IST-PW-TOOL, optional) and digital torque testers (IST-TT□□□, optional)
- Clockwise operation only



square driver

IST-PW60



torque adjustment tool (optional)

SPECIFICATION

Code	IST-PW12	IST-PW20	IST-PW30	IST-PW60	IST-PW125	IST-PW200
Adjustable range*	2.5~12N.m 22~105in.lb	4~20N.m 36~175in.lb	6~30N.m 55~265in.lb	10~60N.m 8~44ft.lb	25~125N.m 20~90ft.lb	40~200N.m 30~145ft.lb
Accuracy	±3%	±3%	±3%	±3%	±3%	±3%
Square driver (D)	1/4"	1/4"	3/8"	3/8"	3/8"	1/2"
Length	184mm	184mm	214mm	255mm	366mm	457mm
Weight	450g	450g	500g	560g	790g	1200g

Code	IST-PW340	IST-PW500	IST-PW650	IST-PW800	IST-PW1000A	IST-PW1000B
Adjustable range*	65~340N.m 50~250ft.lb	100~500N.m 75~365ft.lb	150~650N.m 110~475ft.lb	160~800N.m 120~585ft.lb	200~1000N.m 150~735ft.lb	200~1000N.m 150~735ft.lb
Accuracy	±3%	±3%	±4%	±4%	±4%	±4%
Square driver (D)	1/2"	3/4"	3/4"	3/4"	3/4"	1"
Length	691mm	910mm	910mm	1037mm	1265mm	1265mm
Weight	1960g	2800g	2800g	5000g	6000g	6000g

OPTIONAL ACCESSORY

Torque adjustment tool	IST-PW-TOOL
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* Adjust to a fixed torque value according to customer requirements before delivery

DIAL TORQUE WRENCHES



square driver

IST-DW70

- Clockwise and counter-clockwise operation
- According to DIN ISO 6789, ASME B107.300

SPECIFICATION

Code	IST-DW1D8	IST-DW3D5	IST-DW9	IST-DW18	IST-DW35	IST-DW70	IST-DW140	IST-DW240	IST-DW350	IST-DW480
Range	0.36~1.8N.m 3~16in.lb	0.7~3.5N.m 6~30in.lb	1.8~9N.m 15~75in.lb	3.6~18N.m 30~150in.lb	7~35N.m 60~300in.lb	14~70N.m 120~600in.lb	28~140N.m 20~100ft.lb	48~240N.m 35~175ft.lb	70~350N.m 50~250ft.lb	96~480N.m 70~350ft.lb
Accuracy	±3%	±3%	±3%	±3%	±3%	±3%	±3%	±3%	±3%	±3%
Graduation	0.02N.m 0.2in.lb	0.05N.m 0.5in.lb	0.1N.m 1in.lb	0.2N.m 2in.lb	0.5N.m 5in.lb	1N.m 10in.lb	2N.m 1ft.lb	3N.m 2.5ft.lb	2.5N.m 2.5ft.lb	6N.m 5ft.lb
Square driver (D)	1/4"	1/4"	1/4"	3/8"	3/8"	3/8"	1/2"	1/2"	1/2"	3/4"
Length	254mm	254mm	254mm	254mm	254mm	378mm	546mm	546mm	546mm	708mm
Weight	480g	480g	480g	480g	480g	820g	1300g	1300g	1300g	4030g



DIGITAL TORQUE ADAPTERS (WITH ANGLE DETECTION)

working with mechanical wrenches



- Clockwise and counter-clockwise operation
- After reaching the desired torque, turn the wrench at a angle to apply extra torque
- Unit: N.m, in.lb, ft.lb, kg.cm, degree
- Peak and track working modes
- Target torque or angle value can be set, with audible and visible alarm:
 - Green LED light on and buzzer sounds when torque or angle value is 80%~100% of target torque or angle
 - Both green and red LED light on and buzzer sounds when target torque or angle value is reached
- Power off in 2 minutes automatically
- Memory 50 measurement values for browsing
- With overload record (once the torque reaches 110% of the maximum range)



IST-5W135A



SPECIFICATION

Code		IST-5W30A	IST-5W135A	IST-5W200A	IST-5W340A
Range	torque	6~30N.m	27~135N.m	40~200N.m	68~340N.m
	angle	0~999°			
Accuracy	clockwise	±3%			
	counter-clockwise	±4%			
	angle	±2° (rotate at 90°)			
Resolution	torque	0.01N.m	0.1N.m	0.1N.m	0.1N.m
	angle	1°			
Square driver (L)		1/4"	3/8"	1/2"	1/2"
Power supply		2xAAA batteries			
Length		Ø85×60mm	Ø85×75mm	Ø85×80mm	Ø85×80mm
Weight		150g	220g	240g	240g

OPTIONAL ACCESSORY

Calibration cable	IST-SD-CABLE
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REFER TO PAGE 335 FOR DETAILS

DIGITAL ANGLE METER CODE 2177-121



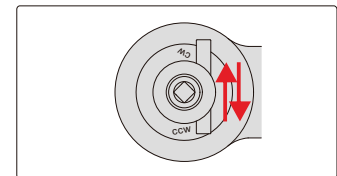
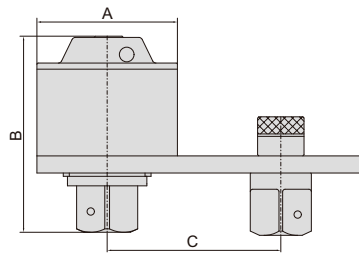
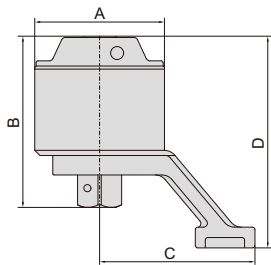
TORQUE MULTIPLIERS



IST-TM2000



IST-TM3500P



Input to output accuracy: $\pm 5\%$



after tightening, toggle the anti-bounce reversing dowel, turn the wrench in the anticlockwise direction, then remove the wrench from torque multiplier

Z TYPE (BEVEL TYPE) TORQUE MULTIPLIER

Code	Capacity	Torque ratio	Square socket	Square driver	Dimension (A×B×C×D)	For bolt	For nut	Weight
IST-TM1000	1000N.m	1:4	1/2"	1"	82x98.5x97x122.4mm	M20~30	S30~46	2.1kg
IST-TM2000	2000N.m	1:13	1/2"	1"	82x120x105x147mm	M22~35	S32~55	3.15kg
IST-TM3500	3500N.m	1:16	1/2"	1"	98x131x120x163mm	M30~45	S46~70	4.9kg
IST-TM5500	5500N.m	1:20.5	1/2"	1 1/2"	115x163.5x137x199mm	M38~52	S55~80	8.1kg
IST-TM7500	7500N.m	1:23	1/2"	1 1/2"	127x173x146x215mm	M42~60	S65~90	10.6kg
IST-TM10000	10000N.m	1:28	1/2"	1 1/2"	141x170x164x238mm	M52~72	S80~105	14kg

L TYPE (PLATE TYPE) TORQUE MULTIPLIER

Code	Capacity	Torque ratio	Square socket	Square driver	Dimension (A×B×C)	For bolt	For nut	Weight
IST-TM1000P	1000N.m	1:4	1/2"	1"	82x91x(76.7~127.3)mm	M20~30	S30~46	2.4kg
IST-TM2000P	2000N.m	1:13	1/2"	1"	82x120x(92.7~129.3)mm	M22~35	S32~55	3.5kg
IST-TM3500P	3500N.m	1:16	1/2"	1"	98x128x(102.7~145.3)mm	M30~45	S46~70	5.0kg
IST-TM5500P	5500N.m	1:20.5	1/2"	1 1/2"	115x157x(134.05~165.95)mm	M38~52	S55~80	8.7kg
IST-TM7500P	7500N.m	1:23	1/2"	1 1/2"	127x168x(139.05~190.95)mm	M42~60	S65~90	11.7kg
IST-TM10000P	10000N.m	1:28	1/2"	1 1/2"	141x186x(144.05~215.95)mm	M52~72	S80~105	15.2kg
IST-TM15000P	15000N.m	1:50	3/4"	2 1/2"	156x246x(155.25~244.75)mm	M60~85	S80~120	24.1kg
IST-TM20000P	20000N.m	1:76	3/4"	2 1/2"	170x264x(163.75~276.25)mm	M72~100	S105~145	27.8kg



Electronic Balances
Page 769-770



Weighing Scales
Page 771/774



Counting Scales
Page 772



Electronic Pocket Scales
Page 772-773



Explosion Proof Electronic Balances
Page 773



Platform Scales
Page 774



Floor Scales
Page 775



Electronic Crane Scales
Page 776



Moisture Analyzers
Page 777



Weights
Page 778-779

ELECTRONIC BALANCES (1mg)

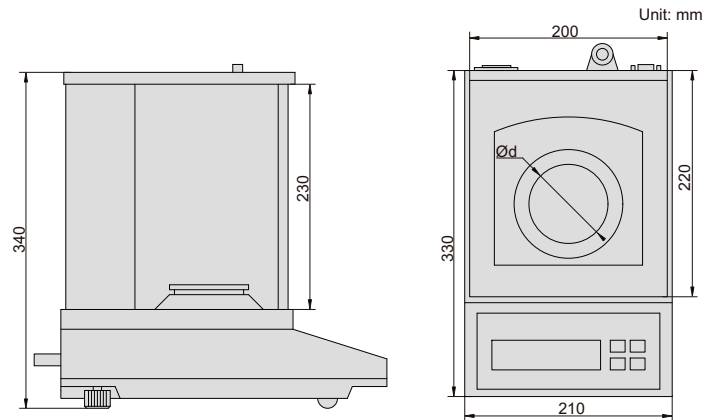
DATA
OUTPUT



calibration weight (included)

8303-520

- Aluminum alloy shell, wind shield, three side glass sliding doors
- Electromagnetic balance sensor
- Unit: g, ct, ozt, oz, gn, dwt, mg
- Weighing, counting, taring
- Data output
- With a hook at the bottom



SPECIFICATION

Code	8303-220	8303-320	8303-520	8303-620	8303-1020
Maximum weighing	220g	320g	520g	620g	1020g
Minimum weighing	20mg	20mg	100mg	100mg	100mg
Resolution (d)	1mg	1mg	1mg	1mg	1mg
Verification interval (e)	10mg	10mg	10mg	10mg	10mg
Accuracy	load capacity≤500g: ±5mg; load capacity>500g: ±10mg				
Weighing pan size (Ød)	Ø80mm				Ø120mm
Operation temperature	15~30°C		18~23°C		
Operation humidity	40%~80% RH		50%~70% RH		
Power supply	220V, 50/60Hz				
Dimension (L×W×H)	330×210×340mm				

OPTIONAL ACCESSORY

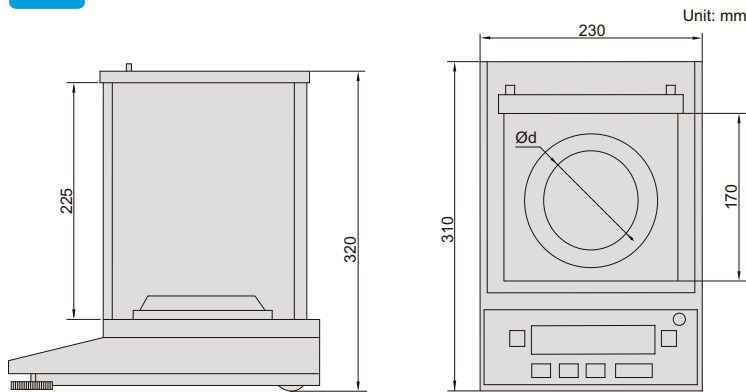
RS232 cable	8301-CABLE*
Printer	8303-PRINTER



printer (optional)

*Used to connect with computers

DATA OUTPUT



ELECTRONIC BALANCES (0.1mg)



8304-120

- Electromagnetic sensor
- Unit: g, ct, oz, lb
- Weighing, counting, taring
- Data output



calibration weight (included)



printer (optional)

SPECIFICATION

Code	8304-120	8304-220
Maximum weighing	120g	220g
Minimum weighing	10mg	10mg
Resolution (d)	0.1mg	0.1mg
Verification interval (e)	1mg	1mg
Accuracy (m is load)	m≤50g: ±0.5mg; 50g<m≤200g: ±1mg	m≤50g: ±0.5mg; 50g<m≤200g: ±1mg; m>200g: ±1.5mg
Weighing pan size (Ød)	Ø90mm	
Operation temperature	10~30°C	
Operation humidity	20~85% RH	
Power supply	power adapter (12V/2A)	
Dimension (L×W×H)	230×310×320mm	

OPTIONAL ACCESSORY

RS232 cable	8304-CABLE
Printer	8303-PRINTER

DATA OUTPUT

- Automatic zero when power on
- Unit: g (gram), ct (carat), ozt (troy ounce)
- Weighing, counting, taring
- Overload alarm
- Data output



8301-3000

ELECTRONIC BALANCES



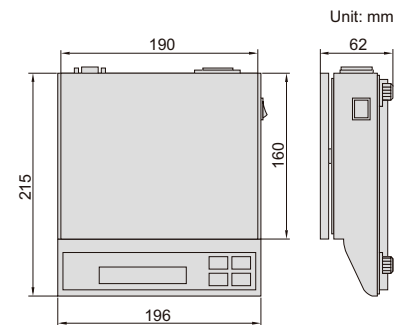
windshield (included in 8301-300, 8301-600 and 8301-1200)



calibration weight (included in 8301-300, 8301-600 and 8301-1200)

SPECIFICATION

Code	8301-300	8301-600	8301-1200	8301-3000	8301-6000
Maximum weighing	300g	600g	1200g	3000g	6000g
Minimum weighing	0.2g	0.2g	0.2g	2g	2g
Resolution (d)	0.01g	0.01g	0.01g	0.1g	0.1g
Verification interval (e)	0.1g	0.1g	0.1g	1g	1g
Accuracy (m is load)	m≤50g: ±0.05g; 50g<m≤200g: ±0.1g; m>200g: ±0.15g			m≤500g: ±0.5g; 500g<m≤2000g: ±1g; m>2000g: ±1.5g	
Weighing pan size	Ø135mm			190×160mm	
Operation temperature	0~40°C				
Operation humidity	≤80% RH				
Power supply	220V, 50/60Hz				
Dimension (L×W×H)	215×196×62mm				



OPTIONAL ACCESSORY

RS232 cable	8301-CABLE
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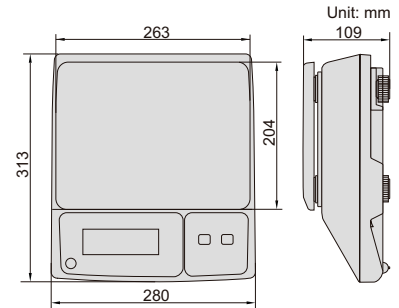
WEIGHING SCALES (OIML CERTIFICATE)



- LCD display, with backlight
- Zero-setting, subtracting tare value
- Overload alarm
- Automatic power off
- OIML certificate (No. 0200-NAWI-04601)



8002-30M



SPECIFICATION

Code	8002-6M	8002-15M	8002-30M	8002-6MD	8002-15MD	8002-30MD
Maximum capacity	3/6kg	6/15kg	15/30kg	3/6kg	6/15kg	15/30kg
Minimum capacity	20g	40g	100g	20g	40g	100g
Resolution (d)	1/2g	2/5g	5/10g	1/2g	2/5g	5/10g
Verification interval (e)	2g	5g	10g	2g	5g	10g
Accuracy (m is load)	m≤3kg: ±1g 3kg<m≤6kg: ±2g	m≤6kg: ±2g 6kg<m≤15kg: ±5g	m≤15kg: ±5g 15kg<m≤30kg: ±10g	m≤3kg: ±1g 3kg<m≤6kg: ±2g	m≤6kg: ±2g 6kg<m≤15kg: ±5g	m≤15kg: ±5g 15kg<m≤30kg: ±10g
Output	no			RS232		
Operation temperature	-10~40°C					
Power	rechargeable battery (6V/3.2Ah), power adapter (12V/500mA)					
Dimensions of pan	263×204mm					

WEIGHING SCALES (HIGH PRECISION)

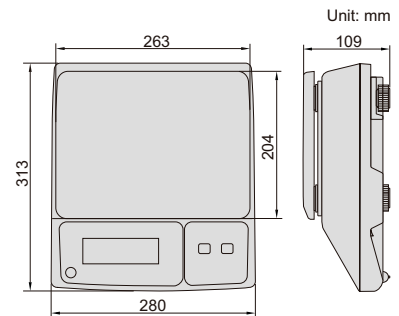


printer (optional)

- LCD display, with backlight
- Zero-setting, subtracting tare value
- Overload alarm
- Automatic power off



8001-30



SPECIFICATION

Code	8001-6	8001-15	8001-30	8001-6D	8001-15D	8001-30D
Maximum weighing	6kg	15kg	30kg	6kg	15kg	30kg
Minimum weighing	4g	10g	20g	4g	10g	20g
Resolution (d)	0.2g	0.5g	1g	0.2g	0.5g	1g
Accuracy (m is load)	m≤1kg: ±1g 1kg<m≤4kg: ±2g m>4kg: ±3g	m≤2.5kg: ±2.5g 2.5kg<m≤10kg: ±5g m>10kg: ±7.5g	m≤5kg: ±5g 5kg<m≤20kg: ±10g m>20kg: ±15g	m≤1kg: ±1g 1kg<m≤4kg: ±2g m>4kg: ±3g	m≤2.5kg: ±2.5g 2.5kg<m≤10kg: ±5g m>10kg: ±7.5g	m≤5kg: ±5g 5kg<m≤20kg: ±10g m>20kg: ±15g
Units	kg, lb			kg		
Output	no			RS232		
Operation temperature	-10~40°C					
Power	rechargeable battery (6V/3.2Ah), power adapter (12V/500mA)					
Dimensions of pan	263×204mm					

OPTIONAL ACCESSORY (for scales with RS232)

Printer	8001-PRINTER
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COUNTING SCALES

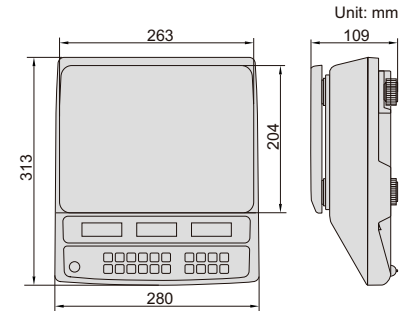


printer (optional)

- LCD display, with backlight
- Zero-setting, subtracting tare value, counting, accumulation, checking alarm
- Overload alarm
- Units: kg, g, lb, tj, hj, lb-oz



8101-30



SPECIFICATION

Code	8101-6	8101-15	8101-30	8101-6D	8101-15D	8101-30D
Maximum weighing	6kg	15kg	30kg	6kg	15kg	30kg
Minimum weighing	4g	10g	20g	4g	10g	20g
Resolution (d)	0.2g	0.5g	1g	0.2g	0.5g	1g
Accuracy (m is load)	m≤1kg: ±1g 1kg<m≤4kg: ±2g m>4kg: ±3g	m≤2.5kg: ±2.5g 2.5kg<m≤10kg: ±5g m>10kg: ±7.5g	m≤5kg: ±5g 5kg<m≤20kg: ±10g m>20kg: ±15g	m≤1kg: ±1g 1kg<m≤4kg: ±2g m>4kg: ±3g	m≤2.5kg: ±2.5g 2.5kg<m≤10kg: ±5g m>10kg: ±7.5g	m≤5kg: ±5g 5kg<m≤20kg: ±10g m>20kg: ±15g
Output	no			RS232		
Operation temperature	-10~40°C					
Power	rechargeable battery (6V/3.2Ah), power adapter (12V/500mA)					
Dimensions of pan	263×204mm					

OPTIONAL ACCESSORY (for scales with RS232)

Printer	8001-PRINTER
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ATTENTION:
LOW ACCURACY

ELECTRONIC POCKET SCALE (ECONOMIC TYPE)

- LCD display, with backlight
- Zero-setting, subtracting tare value, counting
- Overload alarm
- Automatic power off



8601-100

SPECIFICATION

Code	8601-100
Maximum weighing	100g
Minimum weighing	0.1g
Resolution (d)	0.01g
Accuracy (m is load)	0.1g≤m≤1g: ±0.03g; 1g<m≤30g: ±0.05g 30g<m≤50g: ±0.07g; m>50g: ±0.14g
Units	g, oz, dwt, ozt
Dimension of pan	55×64mm
Dimension (L×W×H)	108×65×21mm
Operation temperature	-10~40°C
Power supply	2×AAA batteries

use of pan



ELECTRONIC POCKET SCALE (ECONOMIC TYPE)

ATTENTION:
LOW ACCURACY

- LCD display, with backlight
- Zero-setting, subtracting tare value, counting
- Overload alarm
- Automatic power off



8602-200

SPECIFICATION

Code	8602-200
Maximum weighing	200g
Minimum weighing	0.2g
Resolution (d)	0.02g
Accuracy (m is load)	0.2g≤m≤2g: ±0.06g; 2g<m≤60g: ±0.1g 60g<m≤100g: ±0.14g; m>100g: ±0.28g
Units	g, oz, dwt, ozt
Dimension of pan	55×64mm
Dimension (L×W×H)	120×70×17mm
Operation temperature	-10~40°C
Power supply	2×CR2032 batteries

use of pan



EXPLOSION PROOF ELECTRONIC BALANCES

DATA
OUTPUT

Ex

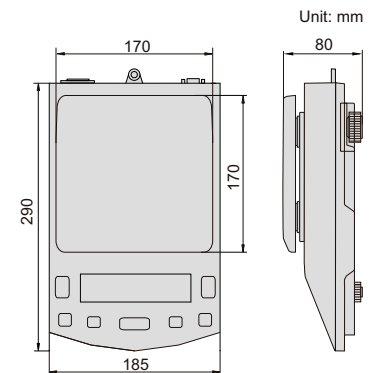


8105-30KG

- LCD display, with backlight
- Zero-setting, subtracting tare value, counting
- Unit: g, ct, oz, lb, ozt

SPECIFICATION

Code	8105-5KG	8105-30KG
Maximum weighing	5kg	30kg
Minimum weighing	0.5g	5g
Resolution (d)	0.01g	0.1g
Verification interval (e)	0.1g	1g
Accuracy (m is load)	m≤0.05kg: ±0.05g; 0.05kg≤m≤0.2kg: ±0.1g; 0.2kg≤m≤5kg: ±0.15g	m≤0.5kg: ±0.5g; 0.5kg≤m≤2kg: ±1.0g; m>2kg: ±1.5g
Dimension of pan	170×170mm	
Output	RS232	
Operation temperature	15~30°C	
Operation humidity	40%~80% RH	
Power	explosion-proof battery, DC7.4V/4.0Ah	
Dimension (L×W×H)	290×185×80mm	



OPTIONAL ACCESSORY

RS232 cable 8105-CABLE*

* Used to connect with computers

WEIGHING SCALES (ECONOMIC TYPE)

- Unit: g, oz, lb, tl

SPECIFICATION

Code	8003-3	8003-6	8003-10
Maximum weighing	3kg	6kg	10kg
Minimum weighing	2g	10g	20g
Resolution (d)	0.1g	0.5g	1g
Accuracy	±0.5g	±2.5g	±5g
Weighing pan size	157×157mm		
Operation temperature	5~35°C		
Power supply	2×AAA batteries, power adapter		
Dimension (L×W)	160×225mm		



8003-3

DATA
OUTPUT

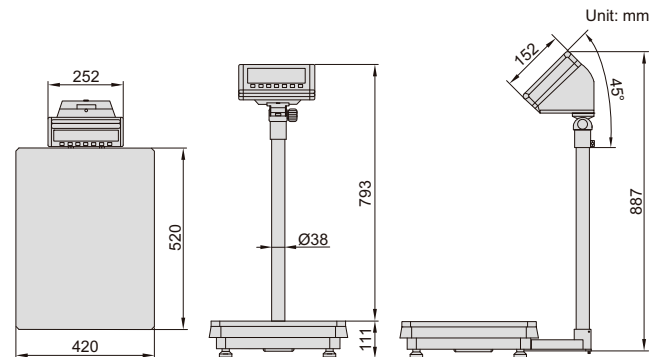
PLATFORM SCALES



8501-AL150



printer (optional)



- LCD large screen display with LED backlight
- Weighing, overweight alarm, counting, keyboard lock, accumulating, auto zero and animal scale
- Unit: kg, g, lb, oz

SPECIFICATION

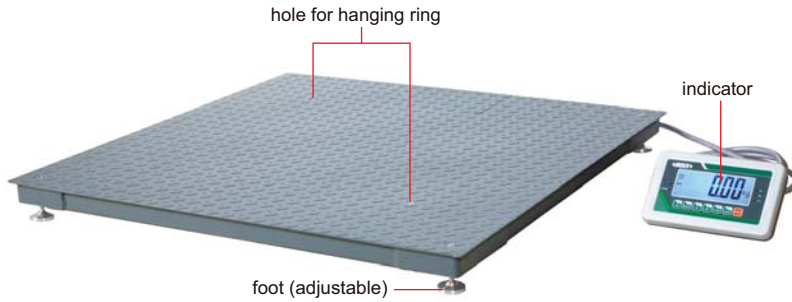
Code	8501-AL60	8501-AL150	8501-AL300
Maximum weighing	60kg	150kg	300kg
Minimum weighing	100g	200g	400g
Resolution (d)	5g	10g	20g
Accuracy	±10g	±20g	±30g
Operation temperature	-10~40°C		
Material	platform: stainless steel, base: die-cast aluminum		
Dimension of platform	420×520mm		
Power	rechargeable lead acid battery (6V/4Ah)		
Output	RS232		
Weight	18.3kg		

OPTIONAL ACCESSORY

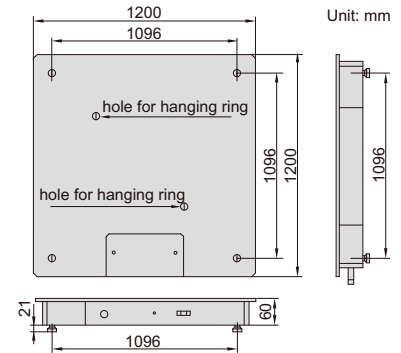
Printer	8001-PRINTER
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FLOOR SCALES

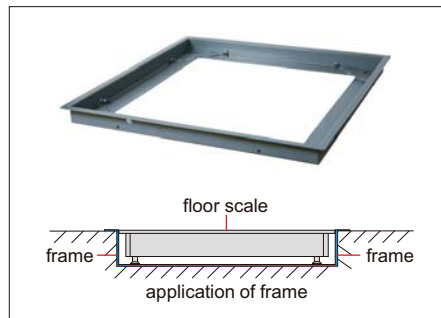
DATA
OUTPUT



8401-1T1212



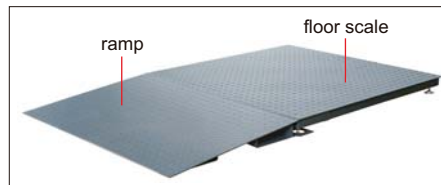
- LCD large screen display with automatic backlight
- Zero, overweight alarm, deduction, unit conversion, accumulating, animal scale, etc.
- Unit: kg, g, lb, oz
- OIML approved load cell



frame (optional)



stand (optional)



ramp (optional)



printer (optional)

SPECIFICATION

Code	8401-1T1212	8401-2T1212	8401-3T1212
Maximum capacity	1t	2t	3t
Minimum capacity	10kg	20kg	20kg
Resolution (d)	0.5kg	1kg	1kg
Verification interval (e)	0.5kg	1kg	1kg
Accuracy (m is load)	m≤250kg: ±0.25kg; 250kg<m≤1000kg: ±0.5kg	m≤500kg: ±0.5kg; 500kg<m≤2000kg: ±1kg; m>2000kg: ±1.5kg	
Load cell	4 pcs 350Ω		
Operation temperature	-10~40°C		
Material	mild steel		
Dimension of platform	1200×1200mm		
Power	rechargeable lead acid battery (6V/4Ah)		
Output	RS232		
Weight	140kg		

STANDARD DELIVERY

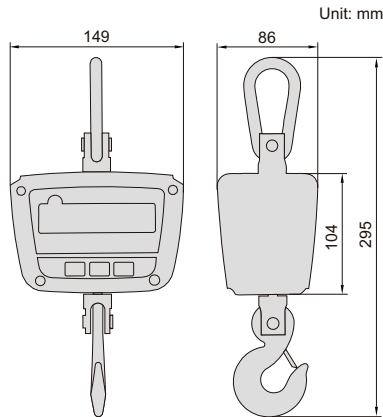
Main unit	1 pc
Indicator	1 pc
AC/DC adapter	1 pc
Stainless steel foot	4 pcs
Hanging ring	2 pcs

OPTIONAL ACCESSORY

Ramp	8401-1212-1
Frame	8401-1212-2
Stand	8401-STAND
Printer	8001-PRINTER

IP65
WATERPROOF

- Dust/waterproof level: IP65
- LED display, remote control
- Low voltage indicator
- Unit: kg, lb
- Automatic power off
- Overload alarm
- 360° safe rotary hook and shackle
- Aluminum alloy die casting case with high strength



SPECIFICATION

Code	8201-50KG	8201-150KG	8201-300KG
Maximum weighing	50kg	150kg	300kg
Minimum weighing	0.4kg	1.0kg	2.0kg
Resolution (d)	0.02kg/0.01kg	0.05kg/0.02kg	0.10kg/0.05kg
Verification interval (e)	0.02kg	0.05kg	0.10kg
Accuracy	±0.02kg	±0.05kg	±0.10kg
Operation temperature	-10~40°C		
Operation humidity	30%~90% RH		
Overload alarm	100%F.S.+9e		
Maximum safe load	125%F.S.		
Limited overload	400%F.S.		
Power supply	rechargeable battery 6V/3Ah (for 40 hours working)		
Stable reading time	≤8s		

ELECTRONIC CRANE SCALES



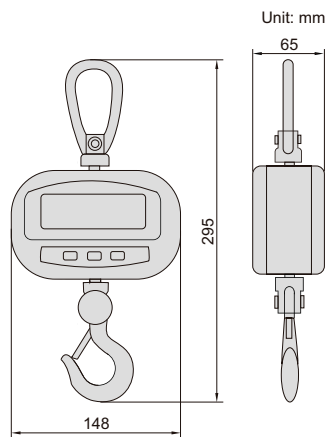
Remote controller (included)

8201-150KG

STANDARD DELIVERY

Main unit	1 pc
Remote controller	1 pc
Battery charger	1 pc

- LED display, remote control
- Low voltage indicator
- Unit: kg, lb
- Automatic power off
- Overload alarm
- 360° safe rotary hook and shackle
- Plastic case



SPECIFICATION

Code	8202-50KG	8202-150KG	8202-300KG
Maximum weighing	50kg	150kg	300kg
Minimum weighing	0.4kg	1.0kg	2.0kg
Resolution (d)	0.02kg/0.01kg	0.05kg/0.02kg	0.10kg/0.05kg
Verification interval (e)	0.02kg	0.05kg	0.10kg
Accuracy	±0.02kg	±0.05kg	±0.10kg
Operation temperature	-10~40°C		
Operation humidity	30%~90% RH		
Overload alarm	100%F.S.+9e		
Maximum safe load	125%F.S.		
Limited overload	400%F.S.		
Power supply	4×1.5V AA batteries (for 40 hours working)		
Stable reading time	≤8s		

ELECTRONIC CRANE SCALES (BASIC TYPE)



Remote controller (included)

8202-150KG

STANDARD DELIVERY

Main unit	1 pc
Remote controller	1 pc

MOISTURE ANALYZERS

DATA
OUTPUT



8701-RM40



calibration weight
(included)

- LCD screen
- High sensitivity temperature and humidity sensor
- Ring halogen lamp heating evenly, shorten drying time

SPECIFICATION

Code	8701-RM20	8701-RM30	8701-RM40
Maximum weighing	120g	120g	120g
Resolution (d)	5mg	1mg	0.1mg
Accuracy for moisture	sample<10g	±10%	±0.5%
	sample≥10g	±5%	±0.3%
Operation temperature	13~25°C		
Verification interval	2.5s		
Warm-up time	20~30 minutes		
Weighing pan size	Ø90mm		
Heating source	halogen lamp (450W)		
Range for heating temperature	60~200°C		
Heating time setting	0~99 minutes		
Heating mode	standard heating, step heating, rapid heating		
Shutdown mode	automatic shutdown, manual shutdown, timed shutdown		
Output	RS232C		
Power supply	220V, 50/60Hz		
Dimension (L×W×H)	330×210×340mm		

STANDARD DELIVERY

Main unit	1 pc
Weight	1 pc

OPTIONAL ACCESSORY

RS232 cable	8304-CABLE *
Printer	8303-PRINTER

*Used to connect with computers


OIML R111-2004 TOLERANCE

Weight	E2	F1	F2	M1
1mg	0.006mg	0.020mg	0.06mg	0.20mg
2mg	0.006mg	0.020mg	0.06mg	0.20mg
5mg	0.006mg	0.020mg	0.06mg	0.20mg
10mg	0.008mg	0.025mg	0.08mg	0.25mg
20mg	0.010mg	0.03mg	0.10mg	0.3mg
50mg	0.012mg	0.04mg	0.12mg	0.4mg
100mg	0.016mg	0.05mg	0.16mg	0.5mg
200mg	0.020mg	0.06mg	0.20mg	0.6mg
500mg	0.025mg	0.08mg	0.25mg	0.8mg
1g	0.03mg	0.10mg	0.3mg	1.0mg
2g	0.04mg	0.12mg	0.4mg	1.2mg
5g	0.05mg	0.16mg	0.5mg	1.6mg
10g	0.06mg	0.20mg	0.6mg	2.0mg
20g	0.08mg	0.25mg	0.8mg	2.5mg
50g	0.10mg	0.3mg	1.0mg	3.0mg
100g	0.16mg	0.5mg	1.6mg	5.0mg
200g	0.3mg	1.0mg	3.0mg	10mg
500g	0.8mg	2.5mg	8.0mg	25mg
1kg	1.6mg	5.0mg	16mg	50mg
2kg	3.0mg	10mg	30mg	100mg
5kg	8.0mg	25mg	80mg	250mg
10kg	16mg	50mg	160mg	500mg
20kg	30mg	100mg	300mg	1000mg

- Supplied with manufacturer inspection certificate

CLASS SELECTION

Resolution of the weighing instruments	Required class of weights
0.001mg	E1
0.01mg	E2
0.1mg	E2/F1
1mg	F2
0.01g/0.1g	M1

Weight	Class and material						Shape	
	E2 (non-magnetic stainless steel)	F1 (non-magnetic stainless steel)	F1 (304 stainless steel)	F2 (304 stainless steel)	M1 (304 stainless steel)	M1 (steel, chrome plated)		
1mg	8911-1MGE2	8911-1MGF1	8911-1MGF1S	8911-1MGF2	8911-1MGM1	—	sheet	
2mg	8911-2MGE2	8911-2MGF1	8911-2MGF1S	8911-2MGF2	8911-2MGM1			
5mg	8911-5MGE2	8911-5MGF1	8911-5MGF1S	8911-5MGF2	8911-5MGM1			
10mg	8911-10MGE2	8911-10MGF1	8911-10MGF1S	8911-10MGF2	8911-10MGM1			
20mg	8911-20MGE2	8911-20MGF1	8911-20MGF1S	8911-20MGF2	8911-20MGM1			
50mg	8911-50MGE2	8911-50MGF1	8911-50MGF1S	8911-50MGF2	8911-50MGM1			
100mg	8911-100MGE2	8911-100MGF1	8911-100MGF1S	8911-100MGF2	8911-100MGM1			
200mg	8911-200MGE2	8911-200MGF1	8911-200MGF1S	8911-200MGF2	8911-200MGM1			
500mg	8911-500MGE2	8911-500MGF1	8911-500MGF1S	8911-500MGF2	8911-500MGM1			
1g	8911-1GE2	8911-1GF1	8911-1GF1S	8911-1GF2	8911-1GM1			—
2g	8911-2GE2	8911-2GF1	8911-2GF1S	8911-2GF2	8911-2GM1			
5g	8911-5GE2	8911-5GF1	8911-5GF1S	8911-5GF2	8911-5GM1			
10g	8911-10GE2	8911-10GF1	8911-10GF1S	8911-10GF2	8911-10GM1	8911-10GM1C		
20g	8911-20GE2	8911-20GF1	8911-20GF1S	8911-20GF2	8911-20GM1	8911-20GM1C		
50g	8911-50GE2	8911-50GF1	8911-50GF1S	8911-50GF2	8911-50GM1	8911-50GM1C		
100g	8911-100GE2	8911-100GF1	8911-100GF1S	8911-100GF2	8911-100GM1	8911-100GM1C		
200g	8911-200GE2	8911-200GF1	8911-200GF1S	8911-200GF2	8911-200GM1	8911-200GM1C		
500g	8911-500GE2	8911-500GF1	8911-500GF1S	8911-500GF2	8911-500GM1	8911-500GM1C		
1kg	8911-1KGE2	8911-1KGF1	8911-1KGF1S	8911-1KGF2	8911-1KGM1	8911-1KGM1C		
2kg	8911-2KGE2	8911-2KGF1	8911-2KGF1S	8911-2KGF2	8911-2KGM1	8911-2KGM1C		
5kg	8911-5KGE2	8911-5KGF1	8911-5KGF1S	8911-5KGF2	8911-5KGM1	8911-5KGM1C		
10kg	8911-10KGE2	8911-10KGF1	8911-10KGF1S	8911-10KGF2	8911-10KGM1	8911-10KGM1C		
20kg	8911-20KGE2	8911-20KGF1	8911-20KGF1S	8911-20KGF2	8911-20KGM1	8911-20KGM1C		

WEIGHT SETS



- Supplied with manufacturer inspection certificate



8910-200GF1

CLASS AND MATERIAL

Specification	Code				
	E2 (non-magnetic stainless steel)	F1 (non-magnetic stainless steel)	F1 (304 stainless steel)	F2 (304 stainless steel)	M1 (304 stainless steel)
1mg~100g	8910-100GE2	8910-100GF1	8910-100GF1S	8910-100GF2	8910-100GM1
1mg~200g	8910-200GE2	8910-200GF1	8910-200GF1S	8910-200GF2	8910-200GM1
1mg~1kg	8910-1KGE2	8910-1KGF1	8910-1KGF1S	8910-1KGF2	8910-1KGM1
1mg~2kg	8910-2KGE2	8910-2KGF1	8910-2KGF1S	8910-2KGF2	8910-2KGM1
1mg~5kg	8910-5KGE2	8910-5KGF1	8910-5KGF1S	8910-5KGF2	8910-5KGM1

SPECIFICATION AND SHAPE

Weight	Specification				
	1mg~100g	1mg~200g	1mg~1kg	1mg~2kg	1mg~5kg
1mg	◆	◆	◆	◆	◆
2mg	◆◆*	◆◆*	◆◆*	◆◆*	◆◆*
5mg	◆	◆	◆	◆	◆
10mg	◆	◆	◆	◆	◆
20mg	◆◆*	◆◆*	◆◆*	◆◆*	◆◆*
50mg	◆	◆	◆	◆	◆
100mg	◆	◆	◆	◆	◆
200mg	◆◆*	◆◆*	◆◆*	◆◆*	◆◆*
500mg	◆	◆	◆	◆	◆
1g	■	■	■	■	■
2g	■◆*	■◆*	■◆*	■◆*	■◆*
5g	■	■	■	■	■
10g	■	■	■	■	■
20g	■◆*	■◆*	■◆*	■◆*	■◆*
50g	■	■	■	■	■
100g	■	■	■	■	■
200g		■◆*	■◆*	■◆*	■◆*
500g			■	■	■
1kg			■	■	■
2kg				■◆*	■◆*
5kg					■
Quantity	21 pcs	23 pcs	25 pcs	27 pcs	28 pcs
Total range	1mg~211.11g	1mg~611.11g	1mg~2111.11g	1mg~6111.11g	1mg~11111.11g

- ◆ sheet
- cylinder
- ◆* sheet, with mark
- * cylinder, with mark



Salt Spray Testers
Page 781



Temperature And Humidity Testers
Page 782-783

SALT SPRAY TESTER CODE SFT-S210R



- Using plastic precision nozzle and conical spray device, the salt spray drops evenly and rapidly, the nozzle has a long working life and does not crystallize
- The spraying time can be controlled internally without external time relay
- The flow rate of salt water and the pressure of compressed air are regulated by flow meter and pressure regulating valve to ensure uniform salt spray settlement
- Manual water adding system can automatically replenish when the water level is insufficient to ensure uninterrupted test

SPECIFICATION

Test condition	suitable for neutral and acid salt spray test
Working chamber dimension (WxHxD)	900x500x600mm
Working chamber volume	270L
Saline tank volume	25L
Working chamber temperature	35±1°C
Saturated barrel temperature	47±1°C
Saline temperature	35±1°C
Heating mode	heat radiation
Spray mode	continuous, intermittent
Test fluid	neutral: purified water+sodium chloride (PH6.5~7.2)
Compressed air pressure	2~3kgf/cm ²
Power supply	AC 220V, 1Ø, 50HZ, 2kW
Dimension (WxHxD)	1560x1250x910mm
Weight	118kg

STANDARD DELIVERY

Main unit	1 pc
Stick	1 group
Sodium chloride	2 bottles
10L salt water preparation measuring cup	1 pc
80ml standard cup	2 pcs
50ml metering cup	2 pcs

OPTIONAL DELIVERY

Nozzle	SFT-S210R-NOZZLE
Brine Filter	SFT-S210R-FILTER



TABLE TYPE TEMPERATURE AND HUMIDITY TESTER CODE THT-Z158



- Table design, quiet and small
- Equipped with operation system with 7-inch touch screen controller
- Intelligent refrigeration and dehumidification system, it can save 30~45% of electricity compared with traditional machines
- Output excel data report through USB port

SPECIFICATION

Working chamber dimension (WxHxD)		300x350x300mm
Working chamber volume		32L
Temperature range		-40~120°C
Humidity range		20~98%RH
Temperature/humidity fluctuation		≤2°C, ±3%RH
Temperature/humidity uniformity		±0.5°C, ±2.5%RH
Temperature/humidity stability		±0.3°C, 2.5%RH
Warming up time		1~3°C/min
Cooling time		0.7~1°C/min
Operation environment	environment temperature	5~35°C
	relative humidity	≤85%RH
Material	case material	cold rolled steel plate+varnish
	working chamber material	SUS#304 stainless steel
	thermal insulation material	polyurethane foam
Freezing system		compressor
Protector		compressor overload protection switch, refrigerant high pressure protection switch, ceramic fuse, water plate of water shortage protection switch, electromagnetic switch, air burn protection switch, alarm
Power supply		AC220, 50/60HZ, 2kW
Dimension (WxHxD)		550x850x1050mm
Weight		185kg

STANDARD DELIVERY

Main unit	1 pc
Test hole	1 pc
Shelf	2 pcs

TEMPERATURE AND HUMIDITY TESTERS



THT-A101T

- The tester is equipped with an independent operation system with 7-inch touch screen controller
- Intelligent refrigeration and dehumidification system, combined with energy-saving control algorithm, can adjust the refrigeration level and save energy. Compared with traditional machines, it can save 30~45% of electricity
- It can output excel data report through USB port

SPECIFICATION

Code	THT-A101T	THT-A102T	THT-A103T	THT-A104T	THT-A105T
Working chamber dimension (WxHxD)	500x600x500mm	500x500x400mm	500x750x600mm	700x850x700mm	1000x1000x1000mm
Working chamber volume	150L	100L	225L	416L	1000L
Temperature range	-40~150°C				
Humidity range	10~98%RH				
Temperature/humidity fluctuation	±0.5°C, ±2.5%RH				
Temperature/humidity uniformity	<2°C, 5%RH				
Temperature/humidity stability	0.2°C, 2%RH				
Temperature/humidity deviation	±2°C, 3%RH				
Warming up time	about 3°C/min				
Cooling time	about 1°C/min				
Material	case material	cold rolled steel plate+varnish			
	working chamber material	SUS#304 stainless steel			
	thermal insulation material	rigid polyurethane foam			
Freezing system	compressor				
Protector	no fuse switch, compressor overpressure, overheat protection, overtemperature protection, overload protection, dry burning protection, water shortage protection, etc				
Power supply	AC220V, 50HZ, 4.5kW	AC220V, 50HZ, 2kW	AC380V, 3Ø, 50HZ, 4kW	AC380V, 3Ø, 50HZ, 3.5kW	AC380V, 3Ø, 50HZ, 3.5kW
Dimension (WxHxD)	800x1660 x1400mm	750x1550 x1170mm	850x1750 x1200mm	950x1850 x1400mm	1300x1950 x1850mm
Weight	365kg	285kg	385kg	510kg	950kg

STANDARD DELIVERY

Main unit	1 pc
Test hole	1 pc
Shelf	2 pcs



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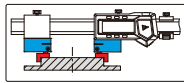
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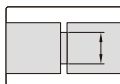
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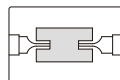
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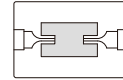
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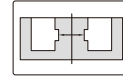
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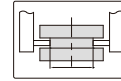
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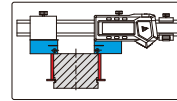
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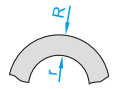
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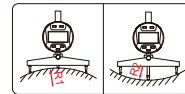
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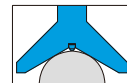
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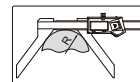
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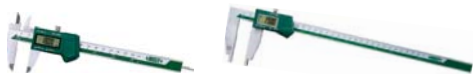


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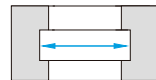
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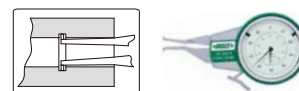
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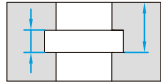


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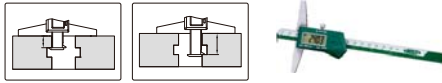
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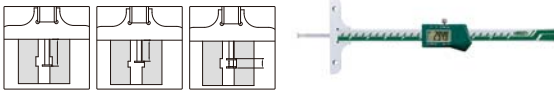
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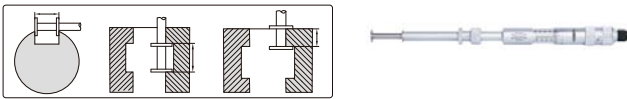
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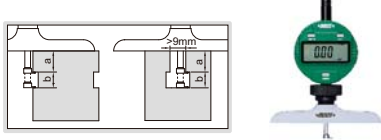
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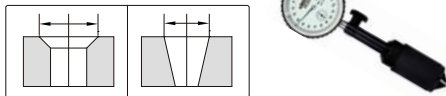
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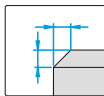
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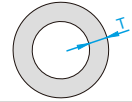
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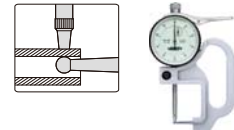
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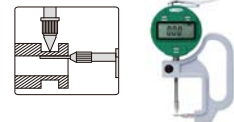
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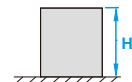
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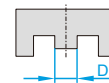
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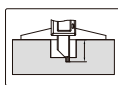
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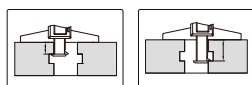
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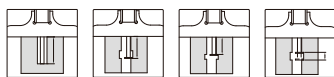
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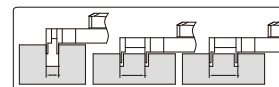
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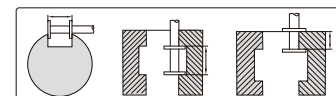
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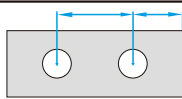


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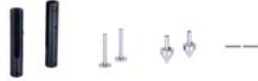
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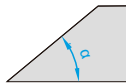


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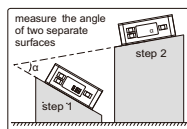
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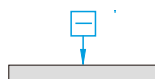


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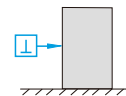
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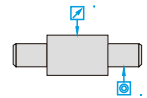


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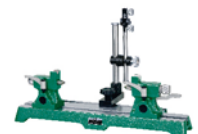
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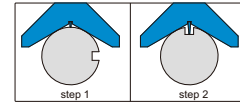
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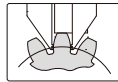
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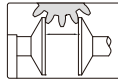
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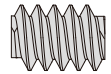
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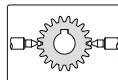
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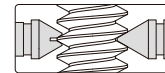
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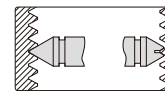
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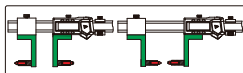
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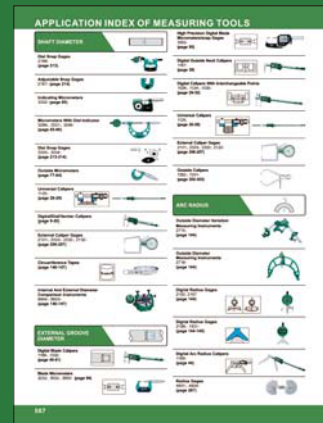
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