

2016
2017



MEASURING INSTRUMENTS

CATALOGUE NO. 101



QUALITY | INNOVATION | SERVICE | VALUE



Our aims:

- Quality products made to international standards with full guarantee
- Innovation by continually striving to improve and develop new products
- Service and support to ensure you have trouble-free use of our products
- High performance products at a good price

INSIZE is our standard quality and made in Asia

INSIZE PLUS is our premium quality and mainly made in Germany, UK and Italy

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DATA OUTPUT AND SOFTWARE PAGE 1-3



MEASURING DATA
MANAGEMENT SOFTWARE



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DEPTH GAGE



DIAL DEPTH GAGE



DEPTH MICROMETER

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DIGITAL CALIPER



DIAL CALIPER



VERNIER CALIPER



LARGE RANGE CALIPER



SPECIAL PURPOSE
CALIPER

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HEIGHT MEASUREMENT PAGE 33-35



DIGITAL HEIGHT GAGE



VERNIER HEIGHT GAGE

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MICROMETER PAGE 36-62



DIGITAL OUTSIDE
MICROMETER



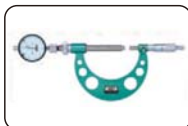
OUTSIDE MICROMETER



LARGE RANGE
MICROMETER



INDICATING
MICROMETER



MICROMETER WITH
DIAL INDICATOR



3-WIRES



SPECIAL PURPOSE
MICROMETER



MICROMETER MEASURING
FORCE DETECTOR



OPTICAL PARALLEL



MICROMETER STAND



MICROMETER HEAD

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INTERNAL AND EXTERNAL DIAMETER MEASUREMENT PAGE 62-85



INSIDE MICROMETER



PISTOL GRIP THREE
POINTS BORE GAGE



THREE POINTS
INTERNAL MICROMETER



TUBULAR INSIDE
MICROMETER



BORE PLUG GAGE



SPLIT TYPE DIAL
BORE GAGE



BORE GAGE



SETTING RING



INTERNAL CHAMFER
GAGE



TELESCOPING GAGE SET



DIGITAL RADIUS GAGE



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INDICATOR PAGE 86-115



DIGITAL INDICATOR



DIAL INDICATOR



POINTS



DIAL TEST INDICATOR



DIAL TEST INDICATOR HOLDER



MAGNETIC STAND



DIAL INDICATOR STAND



TRANSFER STAND



CONCENTRICITY GAGE



BENCH CENTER



SINE BENCH CENTER

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GAGE BLOCKS



GAGE BLOCK ACCESSORY



CYLINDER GAGE BLOCK



CHECK MASTER



ANGLE GAGE BLOCK



PIN GAGE



PIN GAGE HANDLE



PLAIN PLUG GAGE



THREAD PLUG GAGE



THREAD RING GAGE

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INTERNAL/EXTERNAL CALIPER GAGE



DIGITAL THICKNESS GAGE



THICKNESS GAGE



DIAL SNAP GAGE



ADJUSTABLE SNAP GAGE



DIGITAL SNAP GAGE



STEP AND GAP GAGE



CRANKSHAFT TESTER



SAW TEETH SETTING GAGE

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DIGITAL PROTRACTOR



PROTRACTOR



UNIVERSAL PROTRACTOR



COMBINATION SQUARE SET



COMBINATION SQUARE



PERPENDICULARITY TESTER



GRANITE SQUARE



GRANITE SQUARE WITH V GROOVE



CYLINDER SQUARE



SQUARE



45° SQUARE



STRAIGHT EDGE



GRANITE STRAIGHT EDGE



PRECISION STRAIGHT EDGE



FEELER GAGE



FEELER GAGE TAPE



PITCH GAGE



ANGLE GAGE



RADIUS GAGE



CHAMFER GAGE



TAPER GAGE



WELDING GAGE



PIPE WELDING GAGE



DRILL POINT GAGE



DRILL ANGLE GAGE



INSIDE/OUTSIDE CALIPER



DIVIDER



MEASURING TAPE



WOODEN FOLDING RULE



STEEL RULE



MARKING GAGE



CENTER MARKING GAGE



SCRIBING CALIPER



HEIGHT SCRIBER



SCRIBER



GRANITE SURFACE PLATE



STAND FOR GRANITE SURFACE PLATE



MAGNETIC RECTANGULAR BLOCKS



V-BLOCK SET



ROLLER BEARING V-BLOCK SET



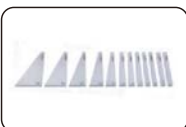
GRANITE V-BLOCK SET



MAGNETIC V-BLOCK



PARALLEL SET



ANGLE PLATE SET



ADJUSTABLE ANGLE BLOCK



RIGHT ANGLE PLATE



SINE BAR



SINE TABLE



PRECISION SINE VISE



PRECISION UNIVERSAL VISE



PRECISION VISE



CENTERING INDICATOR



3D TESTER



EDGE FINDER



ZERO SETTER



MEASURING TOOL SET



DIGITAL SCALE



LINEAR SCALE



COUNTER

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LINEAR GAGE PAGE 193-194



LINEAR GAGE AND DISPLAY UNIT



HIGH PRECISION LINEAR GAGE AND DISPLAY UNIT

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EXTERNAL THREAD MEASURING DEVICE

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TOOL PRESETTER

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PROFILE PROJECTOR PAGE 197-204



PROFILE PROJECTOR



HORIZONTAL PROFILE PROJECTOR

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VISION MEASURING SYSTEM PAGE 205-206



VISION MEASURING SYSTEM



VISION MEASURING SYSTEM

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MICROSCOPE PAGE 207-213



DIGITAL MEASURING MICROSCOPE



ZOOM STEREO MICROSCOPE



METALLURGICAL MICROSCOPE



DIGITAL CAMERA



PORTABLE MEASURING MICROSCOPE

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MAGNIFIER PAGE 213-214



FOLDING MAGNIFIER



MAGNIFIER WITH ILLUMINATION



THREE WAYS MAGNIFIER WITH ILLUMINATION

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BORESCOPE PAGE 215-221



VIDEOSCOPE



PIPE VIDEOSCOPE



RIGID BORESCOPE

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ROUGHNESS TESTER PAGE 222-232



ROUGHNESS TESTER



ROUGHNESS TESTER



SURFACE ROUGHNESS SPECIMEN

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COATING THICKNESS GAGE



CROSS CUT ADHESION TESTER



ULTRASONIC THICKNESS GAGE



DIGITAL LED TACHOMETER-STROBOSCOPE



LASER DISTANCE METER



GLOSS METER

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LEVEL PAGE 240-244



ELECTRONIC LEVEL



DIGITAL LEVEL



DIGITAL LEVEL AND PROTRACTOR



DIGITAL LEVEL AND PROTRACTOR



FRAME LEVEL



BLOCK LEVEL



DIGITAL LEVEL



ALUMINUM ALLOY LEVEL

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FORCE GAGE PAGE 263-264



DIGITAL FORCE GAGE



TEST STAND

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TORQUE TESTER TORQUE WRENCH PAGE 265-270



DIGITAL TORQUE TESTER



TORQUE WRENCH TEST STAND



DIGITAL BOTTLE CAP TORQUE TESTER



DIGITAL TORQUE SCREWDRIVER



DIGITAL TORQUE WRENCH



TORQUE WRENCH

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HARDNESS TESTER PAGE 244-263



ROCKWELL HARDNESS TESTER



BRINELL/ROCKWELL/VICKERS HARDNESS TESTER



BRINELL HARDNESS TESTER



MICRO-VICKERS HARDNESS TESTER



VICKERS HARDNESS TESTER



BRINELL INDENTATION MEASURING SYSTEM



VICKERS HARDNESS MEASURING SYSTEM



ULTRASONIC HARDNESS TESTER



PORTABLE LEEB HARDNESS TESTER



PORTABLE ROCKWELL HARDNESS TESTER



MAGNETIC ROCKWELL HARDNESS TESTER



HYDRAULIC BRINELL HARDNESS TESTER



PIN BRINELL HARDNESS TESTER



WEBSTER HARDNESS TESTER



BARCOL HARDNESS TESTER



SHORE DUROMETER

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PRECISION CUTTING MACHINE



GRINDER AND POLISHER

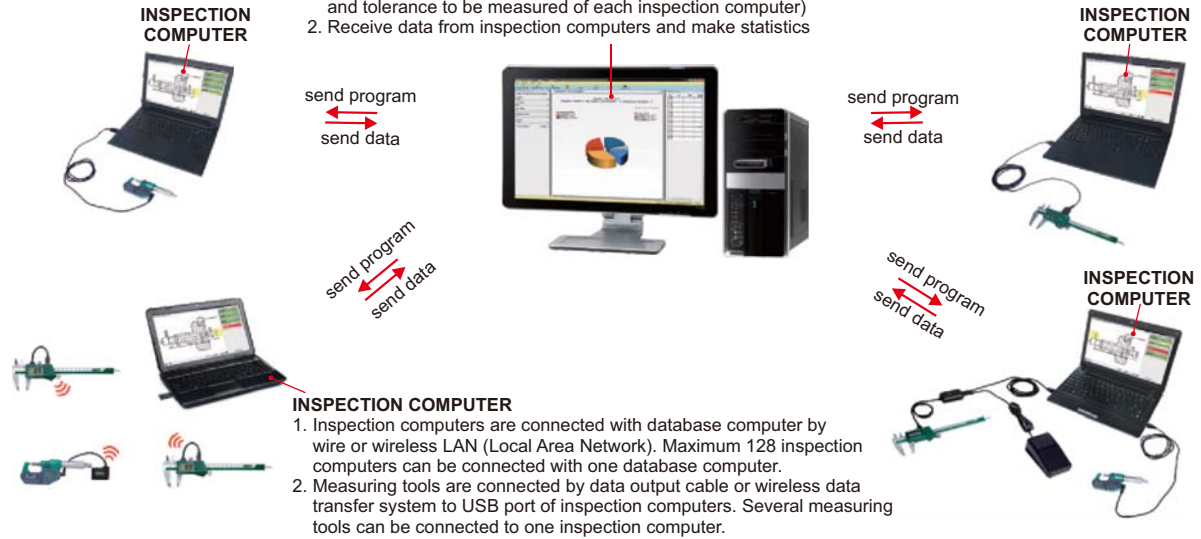


MOUNTING PRESS

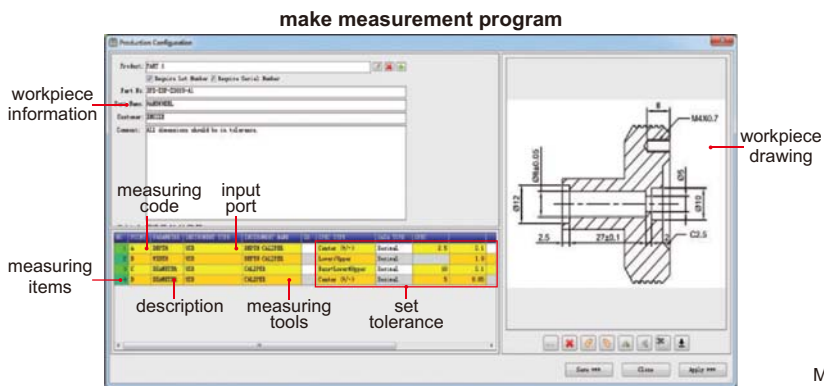
MEASURING DATA MANAGEMENT SOFTWARE

DATABASE COMPUTER

1. Make measurement program of inspection computers (set the dimension and tolerance to be measured of each inspection computer)
2. Receive data from inspection computers and make statistics

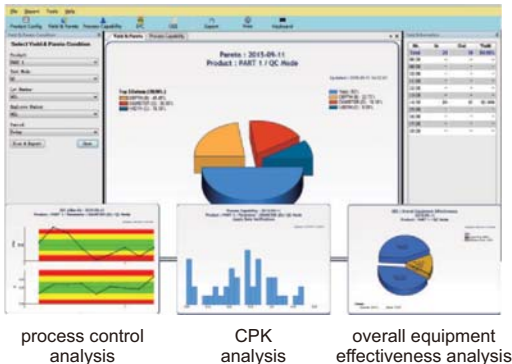


SOFTWARE FOR DATABASE COMPUTER CODE 7311-1



Make measurement program for each one inspection computer.
Maximum 200 dimensions can be measured by one inspection computer.

make data statistics

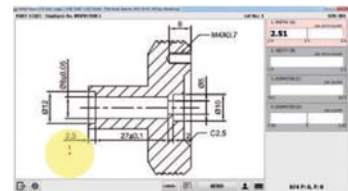


report

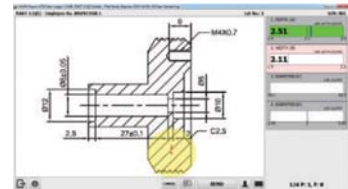
Inspection Item	Inspection Result	Inspection Date	Inspection Operator
1.1	2.5	2015-08-11	101
1.2	2.5	2015-08-11	101
1.3	2.5	2015-08-11	101
1.4	2.5	2015-08-11	101
1.5	2.5	2015-08-11	101
1.6	2.5	2015-08-11	101
1.7	2.5	2015-08-11	101
1.8	2.5	2015-08-11	101
1.9	2.5	2015-08-11	101
1.10	2.5	2015-08-11	101

SOFTWARE FOR INSPECTION COMPUTER CODE 7311-2

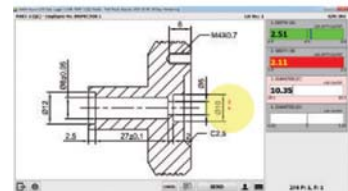
step 1



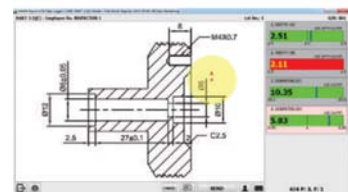
step 2



step 3



step 4



WIRELESS DATA TRANSFER SYSTEM

Code	Description	Applicable products
7306-1	receiver (with USB cable)	
7306-20	transmitter	digital calipers and digital depth gages (not for 1103)
7306-30	transmitter	digital micrometers (not for 3631, 3632, 3108, 3109, 3635)
7306-40	transmitter	digital indicators digital protractors

APPLICABLE FOR
OTHER BRANDS



receiver
7306-1



transmitter
7306-20

DATA COLLECTION:

- 1) Single collection: press the read button once to collect the reading from measuring tool once.
- 2) Multi collection: press the read button once to start collecting readings from measuring tools continuously, press the button again to stop collecting. Total collection times and interval time can be adjusted.



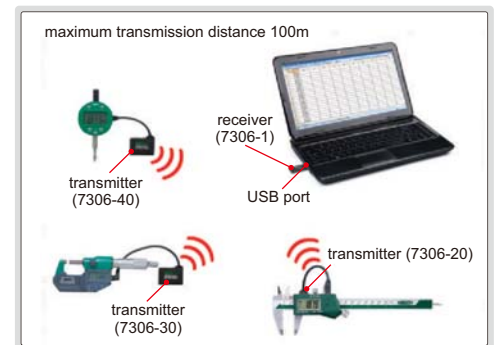
DISPLAY: data can be input to Excel as keyboard signal.

All data are displayed in the same column.
Each measuring tool can be coded such as A, B, C, etc.

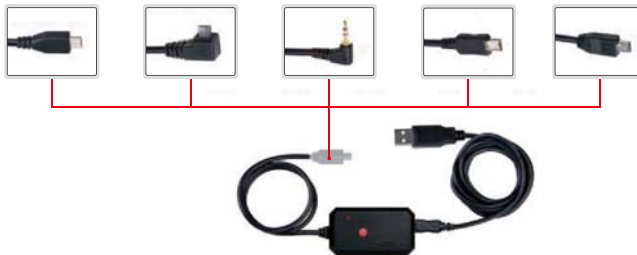
measuring tools code A, B, C

	A	B	C	D	E	F	G
1	10.58-A						
2	5.90-B						
3	50.00-C						
4	20.44-B						
5	50.00-C						
6	10.50-A						
7	28.50-C						
8	5.08-B						
9	10.57-A						
10	50.04-C						
11	28.00-C						
12	50.00-C						
13	9.99-B						
14	50.00-C						
15							
16							

CONNECTION: one receiver can be connected to 10 transmitters.



7302-SPC5A 7302-SPC5B 7302-SPC2A 7302-SPC3A 7302-SPC4



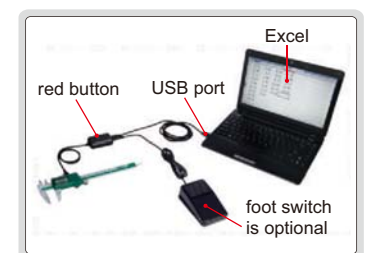
DATA OUTPUT CABLE



7304-2

Code	Description	Remark
7302-SPC5A	cable (length 2.5m)	for digital calipers and digital depth gages (not for 1103)
7302-SPC5B	cable (length 2.5m)	for digital calipers and digital depth gages (not for 1103)
7302-SPC2A	cable (length 2.5m)	for digital micrometers (not for 3631, 3632, 3108, 3109, 3635)
7302-SPC3A	cable (length 2.5m)	for digital indicators digital protractors
7302-SPC4	cable (length 2.5m)	for digital calipers 1103 series (for 1103 only)
7304-2	foot switch with cable (length 1.5m)	optional

- Connect to USB port of computer
- Without software, data can be input as keyboard signal to Excel, Word, etc.
- Press the red button or foot switch (optional) to input data



RS232 DATA OUTPUT CABLE



7305-SPC1A



7305-SPC2A



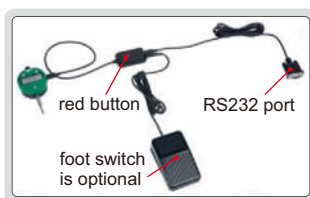
USB power port

7305-SPC3



foot switch (optional)
7304-2

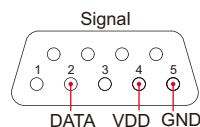
- Manual sampling and automatic sampling
- Press manual sampling button in software or red button on cable or foot switch once to collect the reading from measuring tool once
- Can be used in Windows Hyperterminal
- Supplied with software
- Voltage required: 5-10V
- Cable length 2.5m



red button

RS232 port

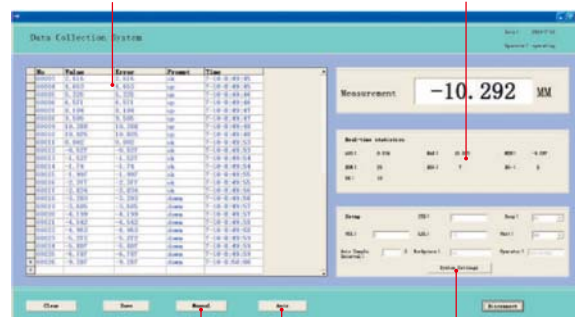
foot switch is optional



DATA VDD GND

automatic judgment by setting tolerance

test result display (maximum value, minimum value, total quantity of workpiece, quantity of Go and No-Go, quantity of exceed upper tolerance and exceed lower tolerance)



manual sampling

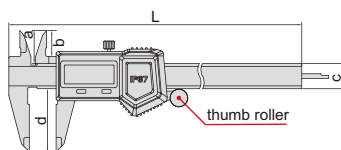
automatic sampling

set auto sampling interval and tolerance

Code	Applicable products	
7305-SPC1A		digital indicators
7305-SPC2A		digital calipers and digital depth gages (not for 1103)
7305-SPC3		digital micrometers (not for 3631, 3632, 3108, 3109, 3635)
7304-2	foot switch with cable (length 1.5m), optional	

WATERPROOF DIGITAL CALIPER

- IP67 dust/waterproof
- Resolution: 0.01mm/0.0005"
- Button function: zero, on/off, mm/inch, ABS/REL, hold
- Battery CR2032
- Meet DIN862
- Made of stainless steel



thumb roller

ATTENTION: IT IS NECESSARY TO SET ZERO AFTER POWER ON EACH TIME

ATTENTION: NO DATA OUTPUT

IP67 WATERPROOF



1118-150B



* Supplied with manufacturer inspection certificate traceable to DKD Germany

Code	Range	Accuracy	Thumb roller	L	a	b	c	d
1118-150B *	0-150mm/0-6"	±0.03mm	with	236	21	16	16	40
1118-200B *	0-200mm/0-8"	±0.03mm	with	286	24	19	16	50
1118-300B *	0-300mm/0-12"	±0.03mm	with	400	25	20.5	17	60
1118-150BW *	0-150mm/0-6"	±0.03mm	without	236	21	16	16	40
1118-200BW *	0-200mm/0-8"	±0.03mm	without	286	24	19	16	50
1118-300BW *	0-300mm/0-12"	±0.03mm	without	400	25	20.5	17	60

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>David</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	External	Internal
0.4 DIA	+0.0005	/	0.0005
2	±0.0010	-0.0005	/
4		-0.0005	/
6		-0.0010	/
8		/	/
10	±0.0015	/	/
12		/	/
Measuring Length	Permissible Error	External	Internal
Φ10	+0.01	-0.02	0.01
50	±0.02	-0.01	/
100		-0.01	/
150		-0.02	/
200		/	/
250	±0.03	/	/
300		/	/

MANUFACTURER INSPECTION
CERTIFICATE TRACEABLE
TO DKD GERMANY, FOR CALIPERS

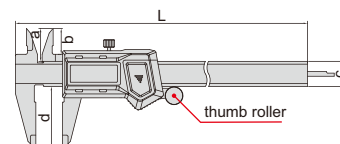
HIGH
PRECISIONABSOLUTE
SYSTEMDATA
OUTPUT

- Absolute system
- Resolution: 0.01mm/0.0005"
- Buttons: mm/inch, ABS/REL, on/off, origin set
- Battery CR2032, automatic power off
- After automatic power off, move the digital unit to turn on power
- Data output
- Meet DIN862
- Made of stainless steel
- Optional accessory: data output cable (code **7302-SPC4**)

DIGITAL CALIPER (HIGH PRECISION)



1103-150



* Supplied with manufacturer inspection certificate traceable to DKD Germany

Code	Range	Accuracy	Thumb roller	L	a	b	c	d
1103-150 *	0-150mm/0-6"	±0.02mm	with	234	21	16.5	16	40
1103-200 *	0-200mm/0-8"	±0.02mm	with	286	24	19	16	50
1103-300 *	0-300mm/0-12"	±0.03mm	with	390	26	21.5	16	60
1103-150W *	0-150mm/0-6"	±0.02mm	without	234	21	16.5	16	40
1103-200W *	0-200mm/0-8"	±0.02mm	without	286	24	19	16	50
1103-300W *	0-300mm/0-12"	±0.03mm	without	390	26	21.5	16	60

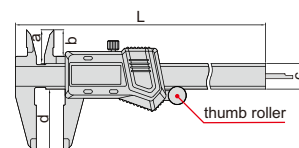
ATTENTION:
NO DATA OUTPUT

- Zinc alloy house for digital unit
- Resolution: 0.01mm/0.0005"
- Buttons: zero, on/off, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Meet DIN862
- Made of stainless steel

DIGITAL CALIPER



1114-150A



* Supplied with manufacturer inspection certificate traceable to DKD Germany

Code	Range	Accuracy	Thumb roller	L	a	b	c	d
1114-150A *	0-150mm/0-6"	±0.03mm	with	236	21	16	16	40
1114-200A *	0-200mm/0-8"	±0.03mm	with	286	24	19	16	50
1114-300A *	0-300mm/0-12"	±0.03mm	with	400	25	20.5	17	60
1114-150AW *	0-150mm/0-6"	±0.03mm	without	236	21	16	16	40
1114-200AW *	0-200mm/0-8"	±0.03mm	without	286	24	19	16	50
1114-300AW *	0-300mm/0-12"	±0.03mm	without	400	25	20.5	17	60

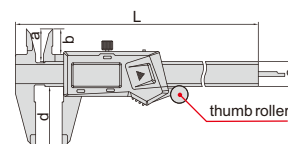
DATA
OUTPUT

- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Meet DIN862
- Made of stainless steel
- Optional accessory: data output cable (code **7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A**)

DIGITAL CALIPER (STANDARD MODEL)



1108-150



* Supplied with manufacturer inspection certificate traceable to DKD Germany

Code	Range	Accuracy	Thumb roller	L	a	b	c	d
1108-150 *	0-150mm/0-6"	±0.03mm	with	236	21	16	16	40
1108-200 *	0-200mm/0-8"	±0.03mm	with	286	24	19	16	50
1108-300 *	0-300mm/0-12"	±0.03mm	with	400	25	20.5	17	60
1108-150W *	0-150mm/0-6"	±0.03mm	without	236	21	16	16	40
1108-200W *	0-200mm/0-8"	±0.03mm	without	286	24	19	16	50
1108-300W *	0-300mm/0-12"	±0.03mm	without	400	25	20.5	17	60

METRIC DIGITAL CALIPER

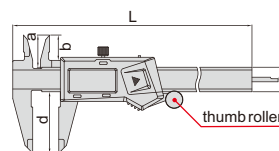
DATA
OUTPUT



- Resolution: 0.01mm
- Buttons: on/off, zero, hold
- Absolute and incremental measurement
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Meet DIN862
- Made of stainless steel
- Optional accessory: data output cable
(code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)



1109-150



* Supplied with manufacturer inspection certificate traceable to DKD Germany

Code	Range	Accuracy	Thumb roller	L	a	b	c	d
1109-150 *	0-150mm	±0.03mm	with	236	21	16	16	40
1109-200 *	0-200mm	±0.03mm	with	286	24	19	16	50
1109-300 *	0-300mm	±0.03mm	with	400	25	20.5	17	60
1109-150W *	0-150mm	±0.03mm	without	236	21	16	16	40
1109-200W *	0-200mm	±0.03mm	without	286	24	19	16	50
1109-300W *	0-300mm	±0.03mm	without	400	25	20.5	17	60

DIGITAL CALIPER WITH ROUND DEPTH BAR

DATA
OUTPUT



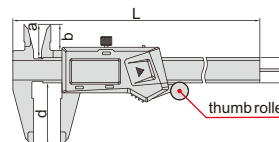
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Meet DIN862
- Made of stainless steel
- Optional accessory: data output cable
(code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)



round depth
bar Ø1.6mm



1119-150



* Supplied with manufacturer inspection certificate traceable to DKD Germany

Code	Range	Accuracy	Thumb roller	L	a	b	c	d
1119-150 *	0-150mm/0-6"	±0.03mm	with	236	21	16	16	40
1119-150W *	0-150mm/0-6"	±0.03mm	without	236	21	16	16	40

DIGITAL CALIPER WITH CARBIDE TIPPED JAWS

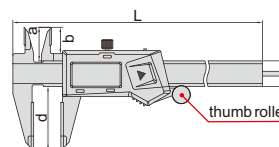
DATA
OUTPUT



- Carbide tipped jaws for inside and outside measurements
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032, data output, meet DIN862
- Made of stainless steel
- Optional accessory: data output cable
(code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)



1110-150A



* Supplied with manufacturer inspection certificate traceable to DKD Germany

Code	Range	Accuracy	Thumb roller	L	a	b	c	d
1110-150A *	0-150mm/0-6"	±0.03mm	with	236	21	16	16	40
1110-200A *	0-200mm/0-8"	±0.03mm	with	286	24	19	16	50
1110-300A *	0-300mm/0-12"	±0.03mm	with	400	25	20.5	17	60
1110-150AW *	0-150mm/0-6"	±0.03mm	without	236	21	16	16	40
1110-200AW *	0-200mm/0-8"	±0.03mm	without	286	24	19	16	50
1110-300AW *	0-300mm/0-12"	±0.03mm	without	400	25	20.5	17	60



DATA
OUTPUT

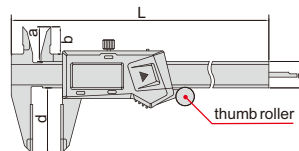
DIGITAL CALIPER WITH CERAMIC TIPPED JAWS

- Ceramic tipped jaws for outside measurement, extremely wear-resistant, non-magnetic, non-conductive
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032, data output, made of stainless steel
- Meet DIN862
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)

ceramic
tipped jaws



1193-150



* Supplied with manufacturer inspection certificate traceable to DKD Germany

Code	Range	Accuracy	Thumb roller	L	a	b	c	d
1193-150 *	0-150mm/0-6"	±0.03mm	with	235	21	16.5	16	40
1193-200 *	0-200mm/0-8"	±0.03mm	with	297	24	20	16	50
1193-300 *	0-300mm/0-12"	±0.03mm	with	390	26	21.5	16	60
1193-150W *	0-150mm/0-6"	±0.03mm	without	235	21	16.5	16	40
1193-200W *	0-200mm/0-8"	±0.03mm	without	297	24	20	16	50
1193-300W *	0-300mm/0-12"	±0.03mm	without	390	26	21.5	16	60

LEFT HAND DIGITAL CALIPER

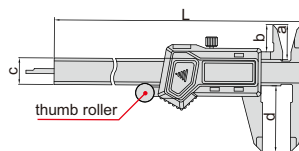


DATA
OUTPUT

- Designed for left handers
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Meet DIN862
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)



1130-150



* Supplied with manufacturer inspection certificate traceable to DKD Germany

Code	Range	Accuracy	Thumb roller	L	a	b	c	d
1130-150 *	0-150mm/0-6"	±0.03mm	with	236	21	16	16	40
1130-200 *	0-200mm/0-8"	±0.03mm	with	286	24	19	16	50
1130-300 *	0-300mm/0-12"	±0.03mm	with	400	25	20.5	17	60
1130-150W *	0-150mm/0-6"	±0.03mm	without	236	21	16	16	40
1130-200W *	0-200mm/0-8"	±0.03mm	without	286	24	19	16	50
1130-300W *	0-300mm/0-12"	±0.03mm	without	400	25	20.5	17	60

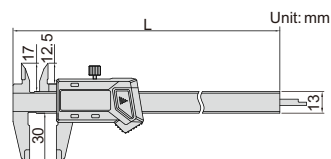
ATTENTION:
NO DATA OUTPUT

- Resolution: 0.01mm/0.0005"
- Buttons: zero, mm/inch, on/off
- Automatic power off, move the digital unit to turn on power
- Battery LR44
- Meet DIN862
- Made of stainless steel

MINI DIGITAL CALIPER



1111-100A



Code	Range	Accuracy	L
1111-75A	0-75mm/0-3"	±0.02mm	144mm
1111-100A	0-100mm/0-4"	±0.02mm	170mm

DIGITAL CALIPER

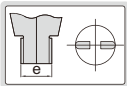
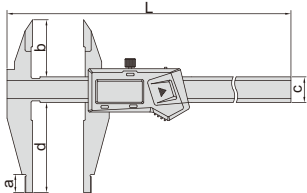
DATA
OUTPUT

- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable
(code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)



1171-300

(mm)								
Code	Range	Accuracy	a	b	c	d	e	L
1171-200	0-200mm/0-8"	±0.03mm	12	38	17	60	10	320
1171-306	0-300mm/0-12"	±0.04mm	12	38	17	60	10	420
1171-300	0-300mm/0-12"	±0.04mm	12	38	17	90	10	420



DIGITAL CALIPER

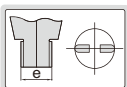
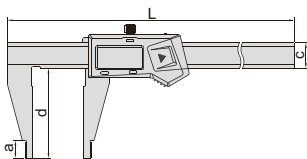
DATA
OUTPUT

- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable
(code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)



1170-300

(mm)								
Code	Range	Accuracy	a	c	d	e	L	
1170-200	0-200mm/0-8"	±0.03mm	12	17	60	10	320	
1170-306	0-300mm/0-12"	±0.04mm	12	17	60	10	420	
1170-300	0-300mm/0-12"	±0.04mm	12	17	90	10	420	



PLASTIC DIGITAL CALIPER

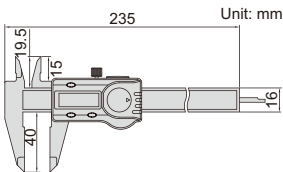
ATTENTION:
NO DATA
OUTPUT

- Made of hard plastic, non-magnetic and non-conductive
- Prevent workpieces from scratching by calipers
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Battery CR2032, automatic power off



1139-150

Code	Range	Accuracy
1139-150	0-150mm/0-6"	±0.1mm





SHOCK
PROOF

DIAL CALIPER

- Shockproof dial indicator
- Made of stainless steel

Dial indicator graduation: 0.02mm (mm)

Code	Range	Accuracy	L	a	b	c	d	D
1312-150A*	0-150mm	±0.03mm	235	21	16.5	16	40	Ø39
1312-200A*	0-200mm	±0.03mm	288	24	19	16	48	Ø39
1312-300A*	0-300mm	±0.04mm	410	28	22	20	62	Ø44.5

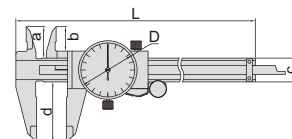
Dial indicator graduation: 0.01mm (mm)

Code	Range	Accuracy	L	a	b	c	d	D
1311-150A*	0-150mm	±0.03mm	235	21	16.5	16	40	Ø39
1311-200A*	0-200mm	±0.03mm	288	24	19	16	48	Ø39
1311-300A*	0-300mm	±0.04mm	410	28	22	20	62	Ø44.5

* Supplied with manufacturer inspection certificate traceable to DKD Germany

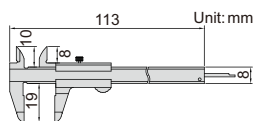


1312-150A



MINI VERNIER CALIPER

- Meet DIN862
- Made of stainless steel
- Satin chrome plated reading surface

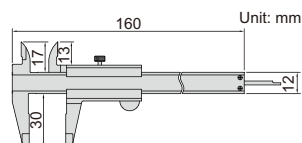


1204-70

Code	Range	Graduation	Accuracy
1204-70	0-70mm	0.05mm	±0.05mm

MINI VERNIER CALIPER

- Meet DIN862
- Made of stainless steel
- Satin chrome plated reading surface

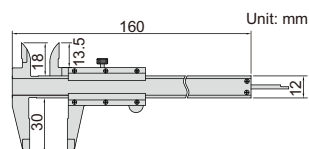


1203-1003

Code	Range	Graduation	Accuracy
1203-1003	0-100mm	0.05mm	±0.05mm

MINI VERNIER CALIPER

- Meet DIN862
- Made of stainless steel
- Satin chrome plated reading surface



1201-1003

Code	Range	Graduation	Accuracy
1201-1003	0-100mm	0.05mm	±0.05mm

VERNIER CALIPER

Graduation 0.05mm/1/128" (mm)

Code	Range	Accuracy	L	a	b	c	d
1205-150S	0-150mm/0-6"	±0.05mm	235	20.5	15.5	16	40
1205-200S	0-200mm/0-8"	±0.05mm	290	23.5	19	16	50
1205-300S	0-300mm/0-12"	±0.05mm	414	27.5	22	20	64

Graduation 0.05mm (mm)

Code	Range	Accuracy	L	a	b	c	d
1205-1503S	0-150mm	±0.05mm	235	20.5	15.5	16	40
1205-2003S	0-200mm	±0.05mm	290	23.5	19	16	50
1205-3003S	0-300mm	±0.05mm	414	27.5	22	20	64

Graduation 0.02mm/0.001" (mm)

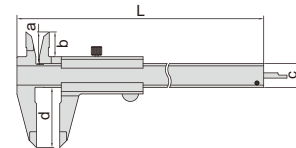
Code	Range	Accuracy	L	a	b	c	d
1205-1502S	0-150mm/0-6"	±0.03mm	235	20.5	15.5	16	40
1205-2002S	0-200mm/0-8"	±0.03mm	290	23.5	19	16	50
1205-3002S	0-300mm/0-12"	±0.03mm	414	27.5	22	20	64

Graduation 0.02mm (mm)

Code	Range	Accuracy	L	a	b	c	d
1205-1501S	0-150mm	±0.03mm	235	20.5	15.5	16	40
1205-2001S	0-200mm	±0.03mm	290	23.5	19	16	50
1205-3001S	0-300mm	±0.03mm	414	27.5	22	20	64



1205-150S



- Meet DIN862
- Made of stainless steel
- Satin chrome plated reading surface

VERNIER CALIPER WITH FINE ADJUSTMENT

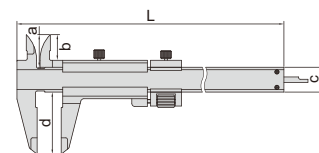
- Graduation 0.02mm/0.001"
- With fine adjustment
- Meet DIN862
- Made of stainless steel
- Satin chrome plated reading surface

(mm)

Code	Range	Accuracy	L	a	b	c	d
1233-130	0-130mm/0-5"	±0.03mm	230	20.5	16.5	16	40
1233-180	0-180mm/0-7"	±0.03mm	295	23.5	19	16	50
1233-280	0-280mm/0-11"	±0.03mm	410	26	20	20	60



1233-130



VERNIER CALIPER WITH THUMB CLAMP

- Meet DIN862
- With thumb clamp
- Made of stainless steel
- Satin chrome plated reading surface

Graduation 0.05mm/1/128" (mm)

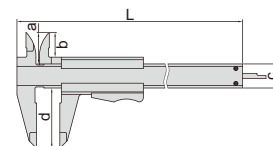
Code	Range	Accuracy	L	a	b	c	d
1223-150	0-150mm/0-6"	±0.05mm	230	20.5	16.5	16	40
1223-200	0-200mm/0-8"	±0.05mm	295	23.5	19	16	50
1223-300	0-300mm/0-12"	±0.05mm	405	26	20	20	60

Graduation 0.02mm/0.001" (mm)

Code	Range	Accuracy	L	a	b	c	d
1223-1502	0-150mm/0-6"	±0.03mm	230	20.5	16.5	16	40
1223-2002	0-200mm/0-8"	±0.03mm	295	23.5	19	16	50
1223-3002	0-300mm/0-12"	±0.03mm	405	26	20	20	60

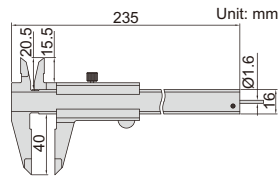


1223-150



VERNIER CALIPER WITH ROUND DEPTH BAR

- Graduation 0.05mm/1/128"
- Round depth bar
- Meet DIN862
- Made of stainless steel
- Satin chrome plated reading surface



1202-150

Code	Range	Accuracy
1202-150	0-150mm/0-6"	±0.05mm

VERNIER CALIPER WITH CARBIDE TIPPED JAWS

- Carbide tipped jaws for inside and outside measurements
- Meet DIN862
- Made of stainless steel
- Satin chrome plated reading surface

Graduation 0.05mm/1/128"

(mm)

Code	Range	Accuracy	L	a	b	c	d
1238-150	0-150mm/0-6"	±0.05mm	230	21	16.5	16	40
1238-200	0-200mm/0-8"	±0.05mm	295	24	19	16	50
1238-300	0-300mm/0-12"	±0.05mm	410	25	20	17	60

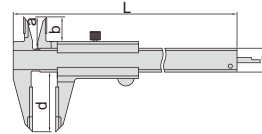


1238-150

Graduation 0.02mm/0.001"

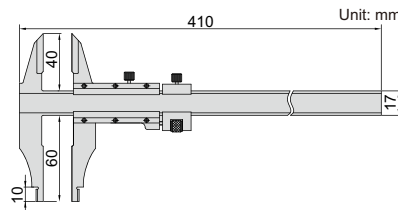
(mm)

Code	Range	Accuracy	L	a	b	c	d
1238-1502	0-150mm/0-6"	±0.03mm	230	21	16.5	16	40
1238-2002	0-200mm/0-8"	±0.03mm	295	24	19	16	50
1238-3002	0-300mm/0-12"	±0.03mm	410	25	20	17	60



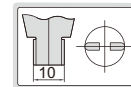
VERNIER CALIPER

- Graduation 0.02mm
- With fine adjustment
- Made of stainless steel
- Satin chrome plated reading surface



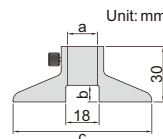
1217-3001

Code	Range	Accuracy
1217-3001	0-300mm	±0.03mm

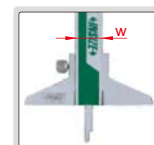


DEPTH BASE ATTACHMENT

- To increase the stability of depth measurement
- Suitable for digital calipers
- Made of stainless steel



(mm)



6140

Code	a	b	c	Application
6140	16.5	9	75	Suitable for digital calipers with beam width (w) 16mm
6140-300	17	10	125	Suitable for digital calipers with beam width (w) 17mm

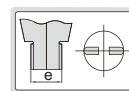
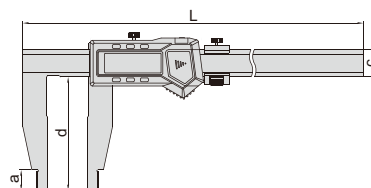
DIGITAL CALIPER

Code	Range	Accuracy	a	c	d	e	L
1106-301	0-300mm/0-12"	±0.05mm	12	24	100	20	420
1106-302	0-300mm/0-12"	±0.05mm	12	24	150	20	420
1106-451	0-450mm/0-18"	±0.05mm	18	24	100	20	625
1106-501	0-500mm/0-20"	±0.05mm	18	24	100	20	675
1106-502	0-500mm/0-20"	±0.06mm	18	24	150	20	675
1106-503	0-500mm/0-20"	±0.06mm	18	31	200	20	675
1106-505	0-500mm/0-20"	±0.08mm	18	42	300	20	675
1106-601	0-600mm/0-24"	±0.05mm	18	24	100	20	770
1106-602	0-600mm/0-24"	±0.06mm	18	24	150	20	770
1106-603	0-600mm/0-24"	±0.06mm	18	31	200	20	770
1106-802	0-800mm/0-32"	±0.07mm	24	31	150	20	1025
1106-1002	0-1000mm/0-40"	±0.08mm	24	31	150	20	1220
1106-1003	0-1000mm/0-40"	±0.08mm	24	31	200	20	1220
1106-1005	0-1000mm/0-40"	±0.10mm	24	42	300	20	1220
1106-1502	0-1500mm/0-60"	±0.11mm	24	42	150	20	1780
1106-1503	0-1500mm/0-60"	±0.12mm	24	42	200	20	1780
1106-2002	0-2000mm/0-80"	±0.14mm	24	42	150	20	2290
1106-2003	0-2000mm/0-80"	±0.14mm	24	42	200	20	2290
1106-2502	0-2500mm/0-100"	±0.22mm	24	42	150	20	2800
1106-3002	0-3000mm/0-120"	±0.26mm	24	42	150	20	3300

(mm)



1106-501



- Resolution: 0.01mm/0.0005"
- Button function: on/off, zero, mm/inch, ABS, data preset
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)

DATA
OUTPUT

DIGITAL CALIPER

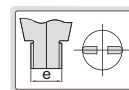
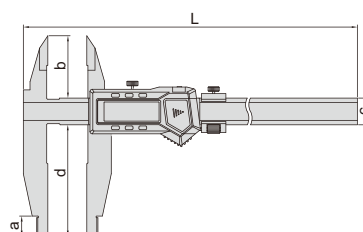
- Resolution: 0.01mm/0.0005"
- Button function: on/off, zero, mm/inch, ABS, data preset
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)

Code	Range	Accuracy	a	b	c	d	e	L
1117-301	0-300mm/0-12"	±0.05mm	12	38	24	100	20	420
1117-501	0-500mm/0-20"	±0.05mm	18	56	24	100	20	675
1117-502	0-500mm/0-20"	±0.06mm	18	56	24	150	20	675
1117-601	0-600mm/0-24"	±0.05mm	18	56	24	100	20	770
1117-802	0-800mm/0-32"	±0.07mm	24	67	31	150	20	1025
1117-1002	0-1000mm/0-40"	±0.08mm	24	67	31	150	20	1220

(mm)



1117-501



DATA
OUTPUT

DIGITAL CALIPER

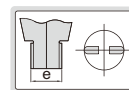
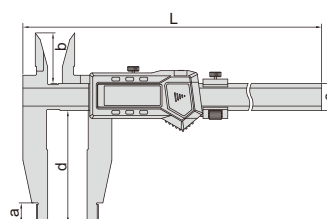
- Resolution: 0.01mm/0.0005"
- Button function: on/off, zero, mm/inch, ABS, data preset
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)

Code	Range	Accuracy	a	b	c	d	e	L
1136-301	0-300mm/0-12"	±0.05mm	12	28	24	100	20	420
1136-451	0-450mm/0-18"	±0.05mm	18	45	24	100	20	625
1136-501	0-500mm/0-20"	±0.05mm	18	45	24	100	20	675
1136-502	0-500mm/0-20"	±0.06mm	18	45	24	150	20	675
1136-503	0-500mm/0-20"	±0.06mm	18	45	31	200	20	675
1136-601	0-600mm/0-24"	±0.05mm	18	45	24	100	20	770
1136-1002	0-1000mm/0-40"	±0.08mm	24	60	31	150	20	1220
1136-1502	0-1500mm/0-60"	±0.11mm	24	60	42	150	20	1780
1136-2002	0-2000mm/0-80"	±0.14mm	24	60	42	150	20	2290

(mm)



1136-501

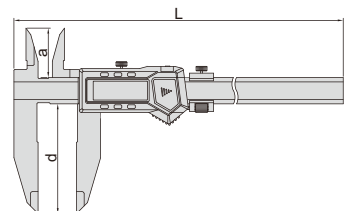


DATA
OUTPUT

- Resolution: 0.01mm/0.0005"
- Button function: on/off, zero, mm/inch, ABS, data preset
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable
(code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)



1135-601



(mm)

Code	Range	Accuracy	a	b	c	d	e	L
1135-451	0-450mm/0-18"	±0.05mm	45	24	100	625		
1135-601	0-600mm/0-24"	±0.05mm	45	24	100	770		
1135-1002	0-1000mm/0-40"	±0.08mm	60	31	150	1220		

VERNIER CALIPER (SOLID TYPE)

- With fine adjustment
- Made of stainless steel
- Satin chrome plated reading surface

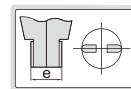
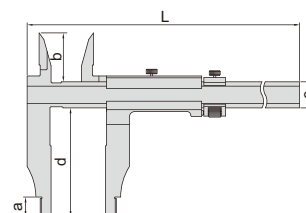
Graduation 0.05mm/1/128"

(mm)

Code	Range	Accuracy	a	b	c	d	e	L
1236-394	0-300mm/0-12"	±0.07mm	12	38	20	90	10	450
1236-514	0-500mm/0-20"	±0.07mm	18	45	24	100	20	670
1236-524	0-500mm/0-20"	±0.08mm	18	45	24	150	20	670
1236-614	0-600mm/0-24"	±0.08mm	18	45	24	100	20	770
1236-824	0-800mm/0-32"	±0.09mm	24	60	31	150	20	1030
1236-1024	0-1000mm/0-40"	±0.12mm	24	60	31	150	20	1230



1236-521



Graduation 0.02mm

(mm)

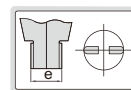
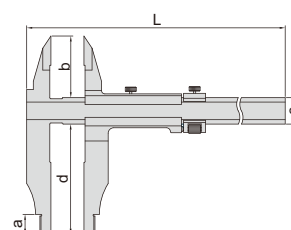
Code	Range	Accuracy	a	b	c	d	e	L
1236-511	0-500mm	±0.05mm	18	45	24	100	20	670
1236-521	0-500mm	±0.06mm	18	45	24	150	20	670
1236-1021	0-1000mm	±0.08mm	24	60	31	150	20	1230

VERNIER CALIPER (SOLID TYPE)

- Graduation 0.05mm/1/128"
- With fine adjustment
- Made of stainless steel
- Satin chrome plated reading surface



1207-514



(mm)

Code	Range	Accuracy	a	b	c	d	e	L
1207-394	0-300mm/0-12"	±0.07mm	12	40	20	90	10	440
1207-514	0-500mm/0-20"	±0.07mm	18	56	24	100	20	670
1207-524	0-500mm/0-20"	±0.08mm	18	56	24	150	20	670
1207-824	0-800mm/0-32"	±0.09mm	24	67	31	150	20	930
1207-1024	0-1000mm/0-40"	±0.12mm	24	67	31	150	20	1230

VERNIER CALIPER (SOLID TYPE)

Graduation 0.05mm/1/128"

(mm)

Code	Range	Accuracy	a	c	d	e	L
1208-214	0-200mm/0-8"	±0.06mm	10	20	100	10	330
1208-394	0-300mm/0-12"	±0.07mm	12	20	90	10	410
1208-324	0-300mm/0-12"	±0.07mm	18	24	150	20	410
1208-524	0-500mm/0-20"	±0.08mm	18	24	150	20	670
1208-614	0-600mm/0-24"	±0.08mm	18	24	100	20	770
1208-624	0-600mm/0-24"	±0.09mm	18	24	150	20	770
1208-824	0-800mm/0-32"	±0.09mm	24	31	150	20	1030
1208-1024	0-1000mm/0-40"	±0.12mm	24	31	150	20	1230
1208-1524	0-1500mm/0-60"	±0.16mm	24	42	150	20	1820
1208-2024	0-2000mm/0-80"	±0.20mm	24	42	150	20	2330

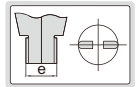
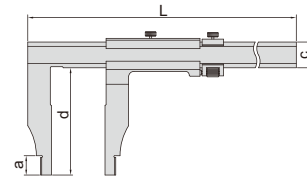
Graduation 0.02mm

(mm)

Code	Range	Accuracy	a	c	d	e	L
1208-511	0-500mm	±0.05mm	18	24	100	20	670
1208-521	0-500mm	±0.06mm	18	24	150	20	670
1208-1021	0-1000mm	±0.08mm	24	31	150	20	1230
1208-1521	0-1500mm	±0.11mm	24	42	150	20	1820



1208-511



- With fine adjustment
- Made of stainless steel
- Satin chrome plated reading surface

VERNIER CALIPER (SOLID TYPE)

- With fine adjustment
- Made of stainless steel
- Satin chrome plated reading surface

Graduation 0.05mm/1/128"

(mm)

Code	Range	Accuracy	a	c	d	L
1210-614	0-600mm/0-24"	±0.08mm	45	24	100	770
1210-1024	0-1000mm/0-40"	±0.12mm	60	31	150	1230

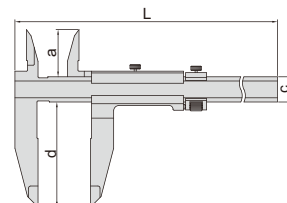
Graduation 0.02mm

(mm)

Code	Range	Accuracy	a	c	d	L
1210-611	0-600mm	±0.05mm	45	24	100	770
1210-1021	0-1000mm	±0.08mm	60	31	150	1230



1210-611



VERNIER CALIPER

- With fine adjustment
- Made of stainless steel
- Satin chrome plated reading surface

Graduation 0.02mm/0.001"

(mm)

Code	Range	Accuracy	a	c	d	e	L
1214-300	0-300mm/0-12"	±0.05mm	10	20	75	10	410
1214-450	0-450mm/0-18"	±0.05mm	18	24	100	20	620
1214-500	0-500mm/0-20"	±0.05mm	18	24	100	20	670
1214-600	0-600mm/0-24"	±0.05mm	18	24	100	20	770
1214-1000	0-1000mm/0-40"	±0.08mm	24	32	140	20	1216
1214-1500	0-1500mm/0-60"	±0.12mm	24	42	200	20	1830
1214-2000	0-2000mm/0-80"	±0.14mm	24	42	200	20	2320

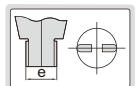
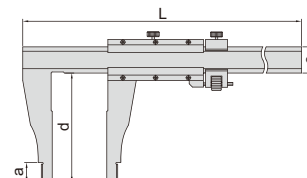
Graduation 0.05mm/1/128"

(mm)

Code	Range	Accuracy	a	c	d	e	L
1214-6004	0-600mm/0-24"	±0.08mm	18	24	100	20	770
1214-1004	0-1000mm/0-40"	±0.12mm	24	32	140	20	1216



1214-500



LONG JAW VERNIER CALIPER

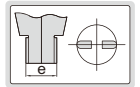
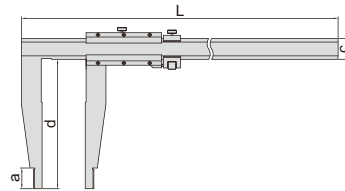
Graduation 0.02mm/0.001"

(mm)

Code	Range	Accuracy	a	c	d	e	L
1215-392	0-300mm/0-12"	±0.05mm	10	17	90	10	410
1215-322	0-300mm/0-12"	±0.05mm	18	24	150	20	470
1215-522	0-500mm/0-20"	±0.06mm	18	24	150	20	670
1215-532	0-500mm/0-20"	±0.06mm	18	24	200	20	670
1215-622	0-600mm/0-24"	±0.06mm	18	24	150	20	770
1215-642	0-600mm/0-24"	±0.08mm	24	32	250	20	870
1215-822	0-800mm/0-32"	±0.07mm	24	32	150	20	1020
1215-832	0-800mm/0-32"	±0.07mm	24	32	200	20	1020
1215-1032	0-1000mm/0-40"	±0.08mm	24	32	200	20	1220
1215-1052	0-1000mm/0-40"	±0.11mm	24	32	300	20	1330
1215-3052	0-3000mm/0-120"	±0.26mm	24	50	300	20	3360



1215-1032



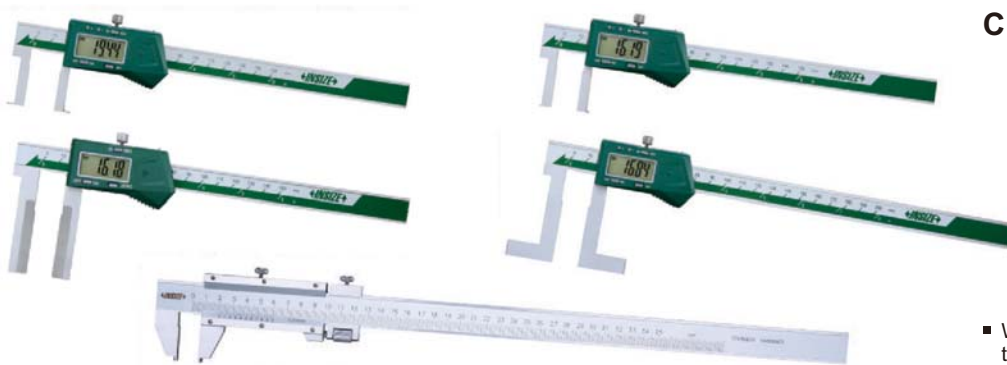
- With fine adjustment
- Made of stainless steel
- Satin chrome plated reading surface

Graduation 0.05mm/1/128"

(mm)

Code	Range	Accuracy	a	c	d	e	L
1215-524	0-500mm/0-20"	±0.08mm	18	24	150	20	670
1215-1034	0-1000mm/0-40"	±0.12mm	24	32	200	20	1330

CUSTOM-MADE CALIPER



- We are able to make calipers according to the design from customers

SET BUTTON

- In some calipers, there is a "SET" button. It is possible to set a initial reading (instead of zero) on these calipers.
- For internal measurement, if the size L is unknown, it is necessary to set. After setting, you can get a direct reading, without adding L.
 Step 1: Find a micrometer, set it at a number (for example, 25mm) and lock it.
 Step 2: Press "SET", "+" and "-" buttons to set 25 on caliper. After setting, the initial reading will be 25 instead of zero, when "SET" is pressed anytime.
 Step 3: Put caliper into the micrometer, press "SET", the reading is 25.

SET button



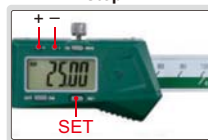
size L



step 1



step 2



step 3



- For external measurement, if the tips are spherical, it is difficult to set zero because the two tips may not be aligned.
 Step 1: Find a gage block (for example, 10mm).
 Step 2: Press "SET", "+" and "-" buttons to set 10mm on caliper. After setting, the initial reading will be 10mm instead of zero, when SET is pressed anytime.
 Step 3: Hold the gage block, press "SET", the reading is 10mm.

spherical tips



step 1



step 2



step 3



UNIVERSAL CALIPER

DATA
OUTPUT

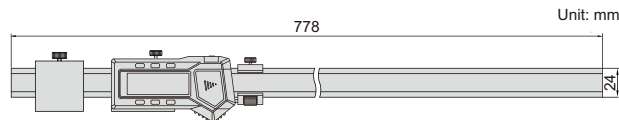
working with stands

working with measuring jaws



1125-600

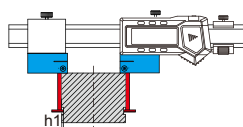
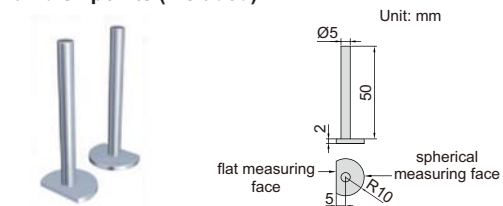
- Buttons: on/off, set, mm/inch, ABS, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable
(code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)



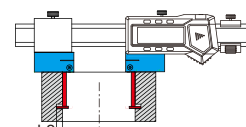
Code	Range*	Resolution	Accuracy
1125-600	0-600mm/0-24"	0.01mm/0.0005"	±0.05mm

*The range changes according to different points

Half disk points (included)

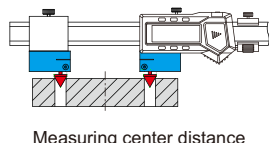
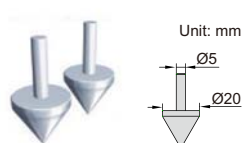


Measuring external groove diameter with flat measuring face (depth $h1 \leq 2.5\text{mm}$)



Measuring internal groove diameter with spherical measuring face (depth $h2 \leq 7.5\text{mm}$)

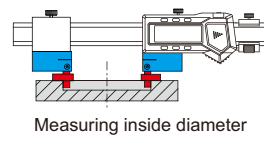
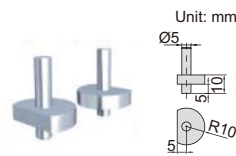
Conical points (optional)



Measuring center distance

Code
1125-T101

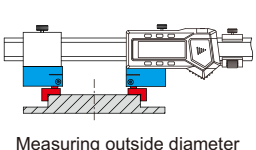
Round shoulder points (optional)



Measuring inside diameter

Code
1125-T102

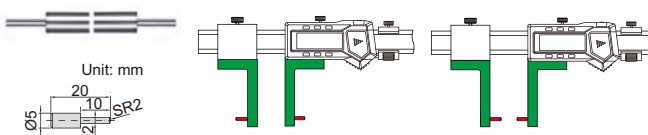
Flat shoulder points (optional)



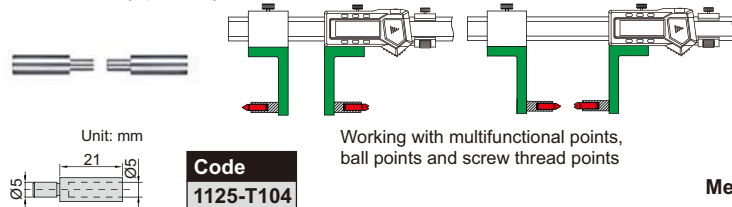
Measuring outside diameter

Code
1125-T103

Spherical points (included)



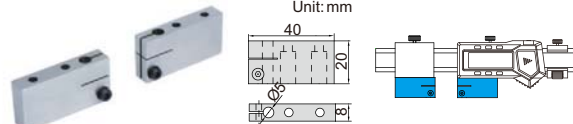
Point sleeve (optional)



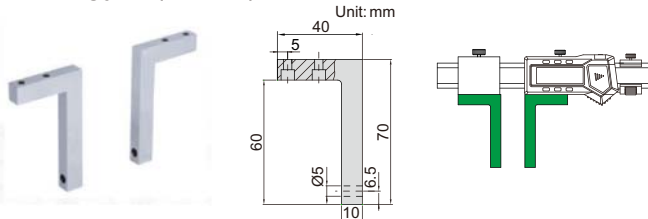
Code
1125-T104

Working with multifunctional points, ball points and screw thread points

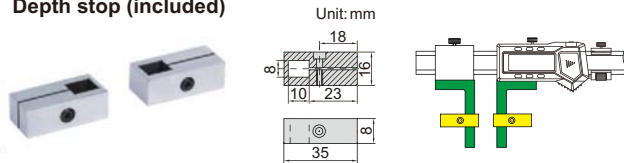
Stands (included)



Measuring jaws (included)



Depth stop (included)



Multifunctional points 7392 (optional, next page)



Ball points 7391 (optional, next page)



Screw thread points 7381, 7321 (optional, next page)



DIGITAL CALIPER WITH INTERCHANGEABLE POINTS CODE 1124-300A

DATA
OUTPUT

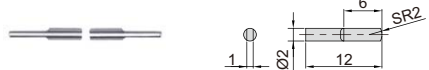
short spherical/flat points (included) Unit: mm



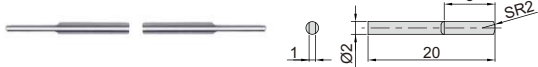
long spherical/flat points (included) Unit: mm



short spherical blade points (included) Unit: mm



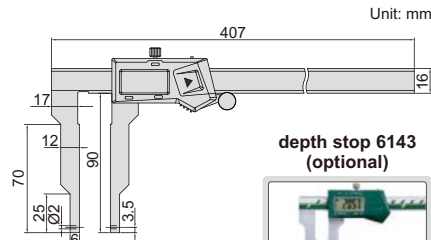
long spherical blade points (included) Unit: mm



- Supplied with 4 pairs of points and zero setting block for external measurement
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: points (code 1526-T101, 7392, 7391, 7381, 7321), depth stop (code 6143), data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)

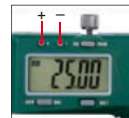


1124-300A

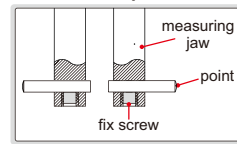


depth stop 6143
(optional)

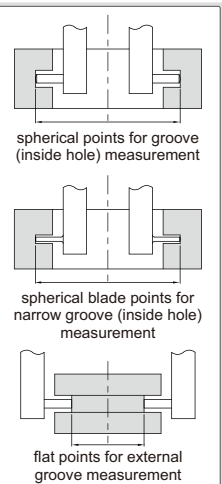
preset buttons



install points



measure internal and external grooves



zero setting block for external measurement (included)



Point	Range	Accuracy	Application
short spherical/flat points	24-324mm/1-12.7"(internal) 0-288mm/0-11.3"(external)	±0.04mm	spherical points for grooves inside hole (small hole) flat points for external grooves
long spherical/flat points	40-340mm/1.5-13.3"(internal) 0-272mm/0-10.7"(external)	±0.04mm	spherical points for grooves inside hole (large hole) flat points for external grooves
short spherical blade points	24-324mm/1-12.7"(internal) 0-288mm/0-11.3"(external)	±0.04mm	for narrow grooves inside hole (small hole)
long spherical blade points	40-340mm/1.5-13.3"(internal) 0-272mm/0-10.7"(external)	±0.04mm	for narrow grooves inside hole (large hole)

Multifunctional points 7392 (optional, previous page)



Ball points 7391 (optional, previous page)



Screw thread points 7381, 7321 (optional, previous page)

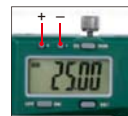


DIGITAL INSIDE GROOVE CALIPER

DATA
OUTPUT

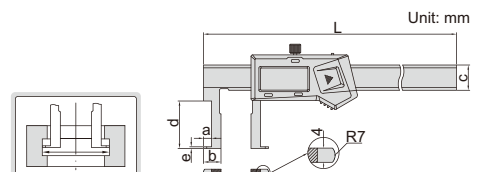
- Measure groove diameter
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: depth stop (code 6143), data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)

preset buttons



1120-150A

depth stop 6143 (optional)



Code	Range	Accuracy	L	a	b	c	d	e
1120-150A	22-150mm	±0.04mm	250	5	11	16	30	1
1120-200A	25-200mm	±0.04mm	310	5	12.5	16	40	1
1120-300A	30-300mm	±0.05mm	410	5	15	17	50	1.5

- Measure groove diameter
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: depth stop (code **6143**), data output cable (code **7306-20**, **7302-SPC5A/SPC5B**, **7305-SPC2A**)

DATA
OUTPUT

depth stop 6143(optional)



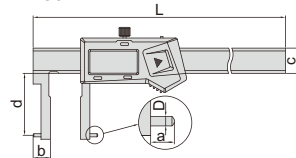
DIGITAL INSIDE POINT CALIPER

Code	Range	Accuracy	L	a	b	c	d	D
1121-150A	24-150mm	±0.04mm	250	5	12	16	30	Ø2
1121-200A	25-200mm	±0.04mm	310	5	12.5	16	40	Ø2
1121-3001A	50-300mm	±0.06mm	410	8	25	17	80	Ø3

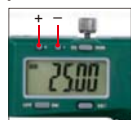
preset buttons



1121-150A



preset buttons

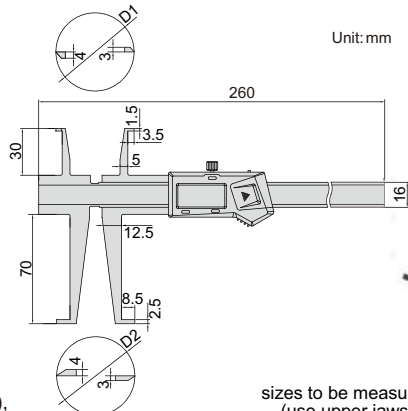


depth stop 6143(optional)



- Measure diameter of grooves inside bores
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: depth stop (code **6143**), data output cable (code **7306-20**, **7302-SPC5A/SPC5B**, **7305-SPC2A**)

Code	Range of upper jaw	Range of lower jaw	Accuracy
1176-150	9-150mm/0.35-6"	15-150mm/0.59-6"	±0.04mm

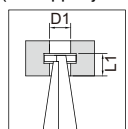


Unit: mm

DIGITAL INSIDE GROOVE CALIPER

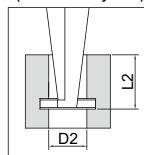
DATA
OUTPUT

sizes to be measured
(use upper jaws)



D1	L1
Ø9	<8
Ø10	<15
Ø11~150	<30

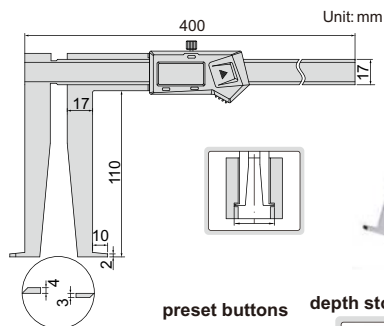
sizes to be measured
(use lower jaws)



D2	L2	D2	L2
Ø15	<10	Ø19	<42
Ø16	<18	Ø20	<50
Ø17	<26	Ø21	<58
Ø18	<34	Ø22~150	<70

- Measure diameter of grooves inside bores
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: depth stop (code **6143**), data output cable (code **7306-20**, **7302-SPC5A/SPC5B**, **7305-SPC2A**)

Code	Range	Accuracy
1178-300	25-300mm/1.18-12"	±0.05mm



Unit: mm

DIGITAL INSIDE GROOVE CALIPER

DATA
OUTPUT

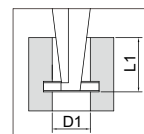
preset buttons



depth stop 6143(optional)



sizes to be measured

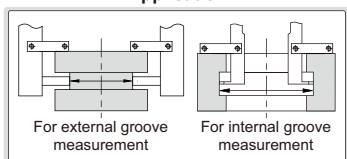


D1	L1
Ø25	<50
Ø26	<60
Ø27~300	<110

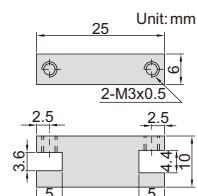
- Supplied in pair
- Made of stainless steel
- Suitable for caliper series 1124, 1526, 1520, 1176, 1178, 1120, 1121, 1187 and 1185

Code
6143

Application



DEPTH STOP FOR CALIPERS



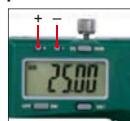
6143

DIGITAL INSIDE GROOVE CALIPER

- Measure diameter of grooves inside small bores
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: depth stop (code 6143), data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)

Code	Range	Accuracy
1520-150	11-150mm/0.43-6"	±0.04mm

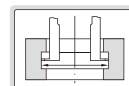
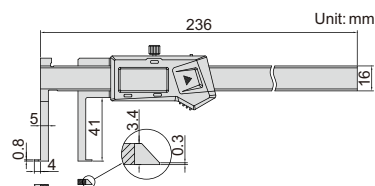
preset buttons



depth stop 6143 (optional)



1520-150



DATA
OUTPUT

DIGITAL OUTSIDE NECK CALIPER

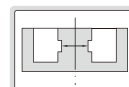
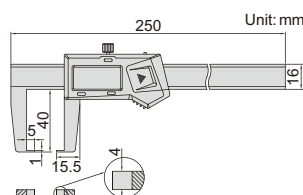
- Measure grooves and recesses
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: depth stop (code 6143), data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)

Code	Range	Accuracy
1187-150A	0-150mm/0-6"	±0.04mm

depth stop 6143
(optional)



1187-150A



DATA
OUTPUT

DIGITAL OUTSIDE POINT CALIPER

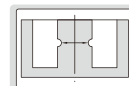
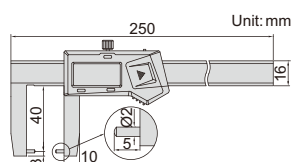
- Measure wall thickness inside bores and recesses
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: depth stop (code 6143), data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)

Code	Range	Accuracy
1185-150A	0-150mm/0-6"	±0.04mm

depth stop 6143
(optional)



1185-150A



DATA
OUTPUT

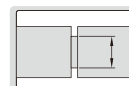
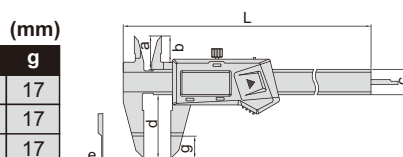
DIGITAL BLADE CALIPER

- The blade jaws fit into small grooves
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)

Code	Range	Accuracy	L	a	b	c	d	e	g
1188-150A	0-150mm/0-6"	±0.03mm	235	21	16.5	16	40	0.75	17
1188-200A	0-200mm/0-8"	±0.03mm	297	24	20	16	50	0.75	17
1188-300A	0-300mm/0-12"	±0.04mm	390	26	21.5	16	60	1.00	17



1188-150A



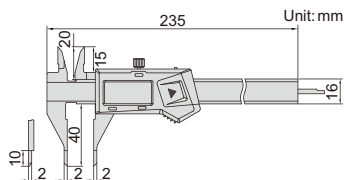
DATA
OUTPUT

- Small pointed jaws fit into small grooves and recesses
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code **7306-20**, **7302-SPC5A/SPC5B**, **7305-SPC2A**)

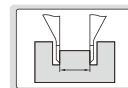
DATA
OUTPUT

DIGITAL SMALL POINT CALIPER

Code	Range	Accuracy
1169-150	0-150mm/0-6"	±0.03mm



1169-150

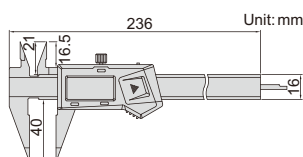


- Pointed jaws fit into small grooves and recesses
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code **7306-20**, **7302-SPC5A/SPC5B**, **7305-SPC2A**)

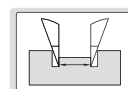
DATA
OUTPUT

DIGITAL POINT CALIPER

Code	Range	Accuracy
1183-150A	0-150mm/0-6"	±0.03mm



1183-150A

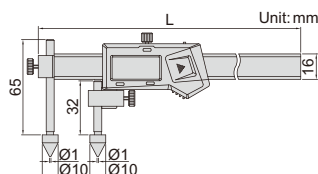


- Measure hole center distance in the same or offset planes
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code **7306-20**, **7302-SPC5A/SPC5B**, **7305-SPC2A**)

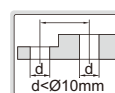
DATA
OUTPUT

DIGITAL OFFSET CENTERLINE CALIPER

Code	Range	Accuracy	L (mm)
1192-150A	10-150mm	±0.05mm	236
1192-200A	10-200mm	±0.07mm	286
1192-300A	10-300mm	±0.09mm	396



1192-150A



preset buttons

- Measure hole center distance in the same or offset planes
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code **7306-20**, **7302-SPC5A/SPC5B**, **7305-SPC2A**)

DATA
OUTPUT

DIGITAL BACK-JAW CENTERLINE CALIPER

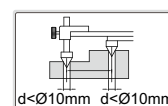
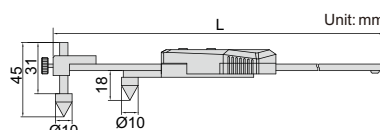
Code	Range	Accuracy	L (mm)
1177-200	10-200mm/0.4-8"	±0.1mm	310
1177-300	10-300mm/0.4-12"	±0.1mm	410



back-jaw



1177-200



DIGITAL CENTERLINE/EDGE TO CENTER CALIPER

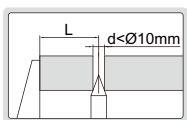
**DATA
OUTPUT**

- Measure hole center distance or edge to hole center distance
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable
(code **7306-20**, **7302-SPC5A/SPC5B**, **7305-SPC2A**)

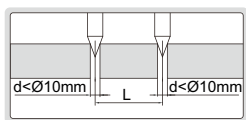


1525-300

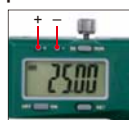
measure edge to
hole center distance



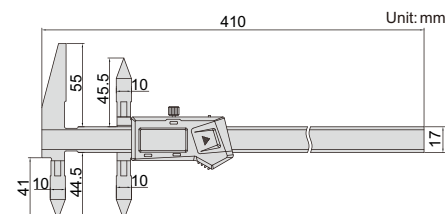
measure hole center distance



preset buttons



Code	Range of upper jaw (edge to center)	Range of lower jaw (center to center)	Accuracy
1525-300	5-300mm/0.2-12"	10-300mm/0.4-12"	±0.08mm

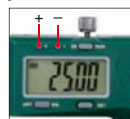


DIGITAL BACK-JAW EDGE TO CENTER CALIPER

**DATA
OUTPUT**

- Measure edge to hole center distance
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code **7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A**)

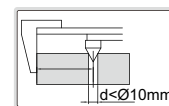
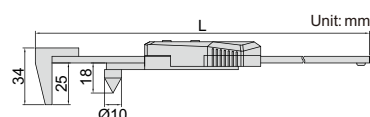
preset buttons



1524-200

(mm)			
Code	Range	Accuracy	L
1524-200	5-200mm/0.2-8"	±0.1	310
1524-300	5-300mm/0.2-12"	±0.1	410

back-jaw



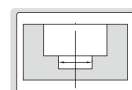
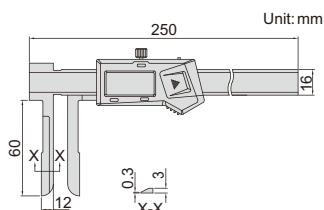
DIGITAL INSIDE KNIFE-EDGE CALIPER

**DATA
OUTPUT**

- Measure diameter of deep step holes
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code **7306-20**, **7302-SPC5A/SPC5B**, **7305-SPC2A**)



1123-150A



Code	Range	Accuracy
1123-150A	15-150mm/0.6-6"	±0.05mm

DATA
OUTPUT

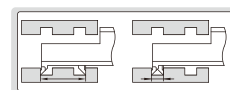
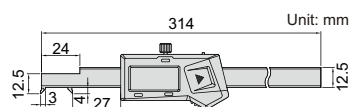
DIGITAL HOOK CALIPER

- Measure width of groove inside bores
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)



1122-200A

Code	Range	Accuracy
1122-200A	3-200mm/0.12-8"	±0.03mm



DATA
OUTPUT

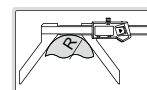
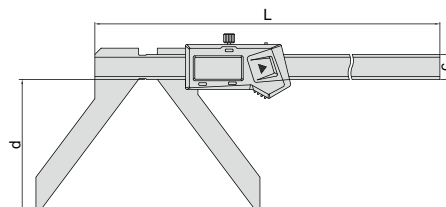
DIGITAL ARC RADIUS CALIPER

- Measure the radius of arc less than half round
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)



1189-150B

Code	Range (R)	Accuracy	L	c	d
1189-150B	5-150mm/0.2-6"	±0.05mm	263	16	65
1189-200B	5-200mm/0.2-8"	±0.07mm	313	16	85



DATA
OUTPUT

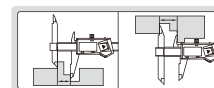
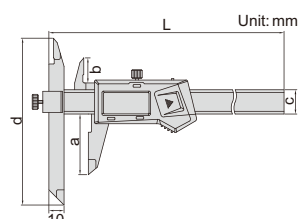
DIGITAL OFFSET CALIPER

- The left jaw can slide up and down to facilitate measurement of stepped sections
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)



1186-150A

Code	Range	Accuracy	L	a	b	c	d
1186-150A	0-150mm/0-6"	±0.04mm	239	40	16.5	16	110
1186-200A	0-200mm/0-8"	±0.04mm	289	50	19.5	16	120
1186-300A	0-300mm/0-12"	±0.05mm	389	60	20.5	17	130

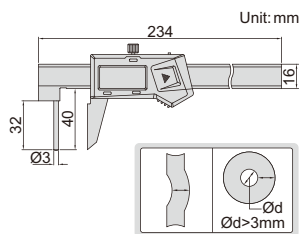


DIGITAL TUBE THICKNESS CALIPER

DATA
OUTPUT

- Measure wall thickness of tubes
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)

Code	Range	Accuracy
1161-150A	0-150mm/0-6"	±0.05mm



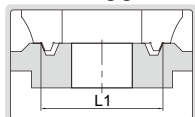
1161-150A

DIGITAL RTJ RING GROOVE CALIPER

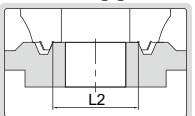
DATA
OUTPUT

- Measure ring grooves of flange
- Resolution: 0.01mm/0.0005"
- Button function: on/off, set, zero, mm/inch, data preset
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)

measure outside diameter
of RTJ ring groove



measure inside diameter
of RTJ ring groove

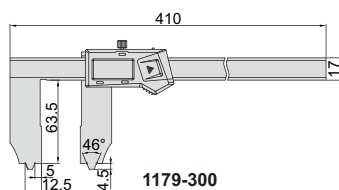
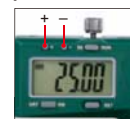


1179-300

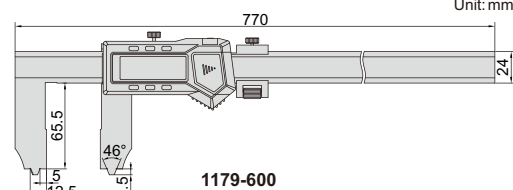


1179-600

preset buttons

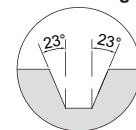


1179-300



1179-600

applicable for RTJ ring
grooves with angle 23°



Code	Range (inside diameter of RTJ ring groove)	Range (outside diameter of RTJ ring groove)	Angle of RTJ ring groove	Accuracy
1179-300	10-300mm/0.4-12"	25-300mm/1-12"	23°	±0.06mm
1179-600	10-600mm/0.4-24"	25-600mm/1-24"	23°	±0.07mm

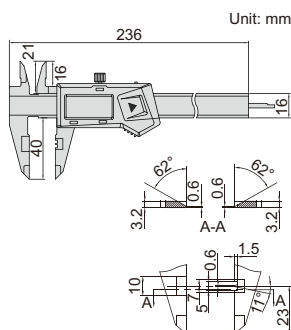
DIGITAL CRIMP HEIGHT CALIPER

RELATIVE PRODUCT: CRIMP HEIGHT
MICROMETER (CODE 3266-25BA, 3566-25BA)

DATA
OUTPUT

- Measure crimp height
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Meet DIN862
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)

Code	Range	Accuracy
1165-150A	0-150mm/0-6"	±0.03mm



1165-150A

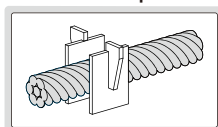


DATA OUTPUT

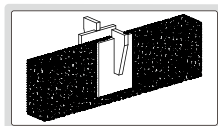
- Measure diameter of wire ropes, and thickness of soft materials like rubber, sponge, etc.
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)

Code	Range	Accuracy
1172-200	0-200mm/0-8"	±0.07mm

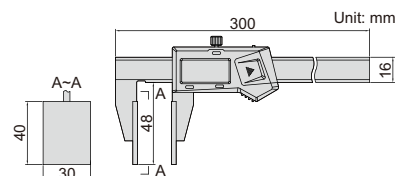
measure diameter of wire ropes



measure thickness of rubber, sponge, etc.

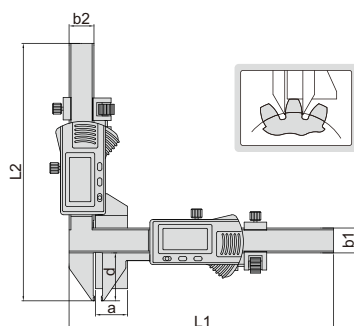


1172-200



DATA OUTPUT

- Resolution: 0.01mm/0.0005"
- Carbide tips
- Buttons: zero, on/off, mm/inch
- Battery LR44
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC1A/SPC1B, 7305-SPC2A)



Code	Range	Accuracy	L1	L2	a	b1	b2	d
1181-M25A	M1-25mm	±0.04mm	170	165.5	21	16	16	30.5
1181-M50A	M5-50mm	±0.04mm	220	190	50.5	16	16	55

(mm)



1181-M25A

RELATIVE PRODUCT: DISK BRAKE MICROMETER (CODE 3288-, 3588-)

DATA OUTPUT

- Measure thickness of disk brakes
- Resolution 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)

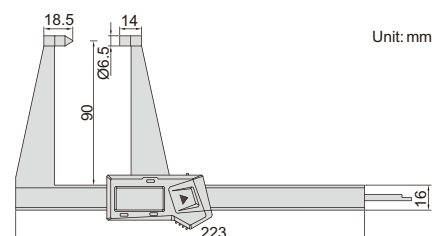
Code	Range	Accuracy
1162-125A	0-125mm/0-5"	±0.05mm



DIGITAL DISK BRAKE CALIPER



1162-125A



Unit: mm

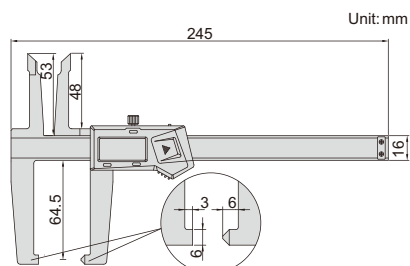
DIGITAL DISK BRAKE AND PAD CALIPER

RELATIVE PRODUCT: DISK BRAKE
MICROMETER (CODE 3288-, 3588-)

DATA
OUTPUT

- Measure thickness of disk brakes and pad wear
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)

Code	Range	Accuracy
1167-150A	0-150mm/0-6"	±0.07mm



Unit: mm

1167-150A



DIGITAL DRUM BRAKE CALIPER

RELATIVE PRODUCT: DISK BRAKE
MICROMETER (CODE 3288-, 3588-)

DATA
OUTPUT

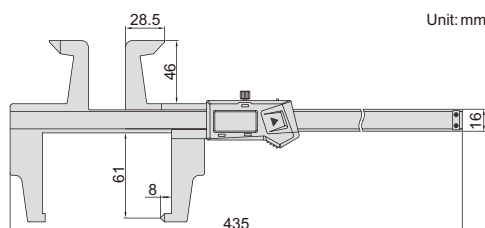
- Measure internal and external diameter of drum brakes
- Resolution 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)



Code	Range	Accuracy
1168-300A	0-300mm/0-12"	±0.07mm



1168-300A



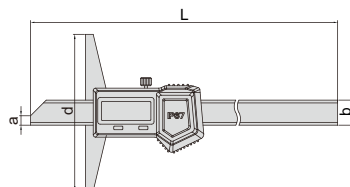
Unit: mm

WATERPROOF DIGITAL DEPTH GAGE

ATTENTION: NO
DATA OUTPUT

ATTENTION: IT IS NECESSARY TO SET
ZERO AFTER POWER ON EACH TIME

- IP67 dust/waterproof
- Resolution: 0.01mm/0.0005"
- Button function: zero, on/off, mm/inch, ABS/REL, hold
- Meet DIN862
- Battery CR2032
- Made of stainless steel



(mm)

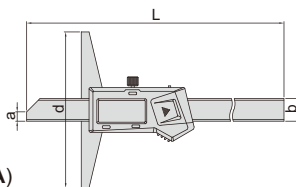
Code	Range	Accuracy	L	a	b	d
1149-150	0-150mm/0-6"	±0.03mm	240	6	16	100
1149-200	0-200mm/0-8"	±0.03mm	290	6	16	100
1149-300	0-300mm/0-12"	±0.03mm	390	6	16	150

IP67
WATERPROOF



1149-150

- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Meet DIN862 (except 1141-500A)
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)



(mm)

Code	Range	Accuracy	L	a	b	d
1141-150A	0-150mm/0-6"	±0.03mm	230	6	14.5	100
1141-200A	0-200mm/0-8"	±0.03mm	280	6	14.5	100
1141-300A	0-300mm/0-12"	±0.03mm	380	6	14.5	150
1141-500A	0-500mm/0-20"	±0.05mm	585	7	15	150

DIGITAL DEPTH GAGE (STANDARD MODEL)

DATA
OUTPUT



1141-150A

DIGITAL DEPTH GAGE WITH MOUNTING HOLES FOR EXTENSION BASE

- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Meet DIN862
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A), extension base (code 6141)

(mm)

Code	Range	Accuracy	L
1147-150	0-150mm/0-6"	±0.03mm	237
1147-200	0-200mm/0-8"	±0.03mm	287
1147-300	0-300mm/0-12"	±0.03mm	403

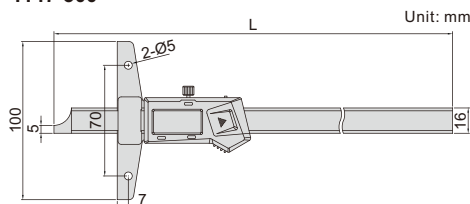
extension base (optional)



6141 series

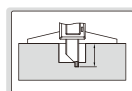
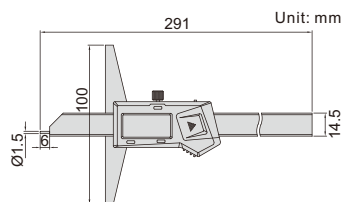


1147-300



DATA
OUTPUT

- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Meet DIN862
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)



DIGITAL POINT DEPTH GAGE

DATA
OUTPUT

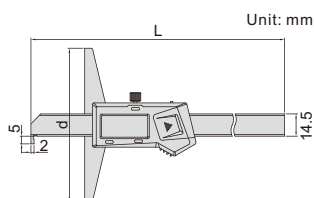


1143-200A

Code	Range	Accuracy
1143-200A	0-200mm/0-8"	±0.03mm

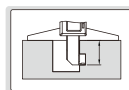
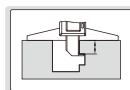
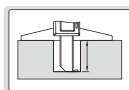
DIGITAL HOOK DEPTH GAGE

- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)



(mm)

Code	Range	Accuracy	L	d
1142-150A	0-150mm/0-6"	±0.03mm	230	100
1142-200A	0-200mm/0-8"	±0.03mm	280	100
1142-300A	0-300mm/0-12"	±0.04mm	380	150



1142-150A

DATA
OUTPUT

DIGITAL DOUBLE HOOK DEPTH GAGE

DATA
OUTPUT

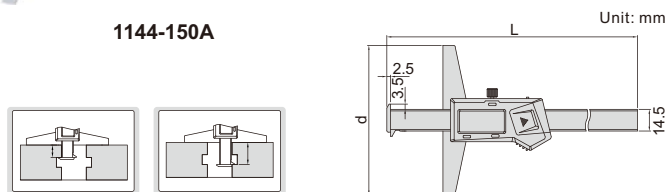
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Meet DIN862
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable
(code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)



1144-150A

Code	Range	Accuracy	L	d
1144-150A	0-150mm/0-6"	±0.03mm	233	100
1144-200A	0-200mm/0-8"	±0.03mm	283	100
1144-300A	0-300mm/0-12"	±0.03mm	383	150

(mm)



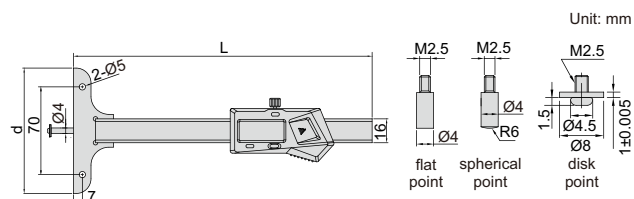
DIGITAL DEPTH GAGE WITH ROUND DEPTH BAR

MEASURE WIDTH AND DEPTH
OF GROOVES INSIDE BORE

MEASURE DEPTH OF
SMALL HOLES (>Ø4mm)

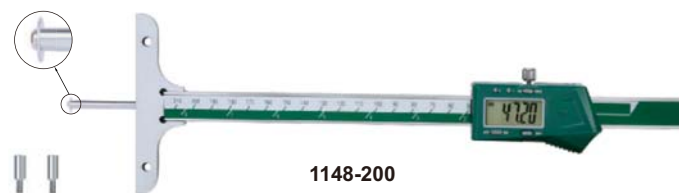
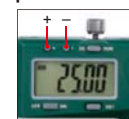
DATA
OUTPUT

- Resolution: 0.01mm/0.0005"
- Supplied with three interchangeable points (flat, spherical, disk)
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable
(code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A),
disk points (see below table),
extension base (code 6141, for 1148-120 and 1148-200)



1148-100S

preset buttons



1148-200



1148-120

Code	Range*	Accuracy	L	d	Remark
1148-100S	0-100mm/0-4"	±0.02mm	200	45	
1148-100	0-100mm/0-4"	±0.02mm	200	85	
1148-120	0-120mm/0-4.7"	±0.03mm	300	101	one-hand use, with mounting holes for extension base
1148-200	0-200mm/0-8"	±0.03mm	300	101	with mounting holes for extension base

(mm)

* When disk points are used, the range is reduced by 10mm

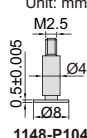
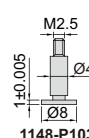
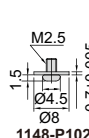
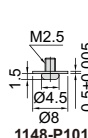
OPTIONAL DISK POINTS

Code	Description	Remark
1148-P101	0.5mm disk point	for narrow grooves
1148-P102	0.7mm disk point	for narrow grooves
1148-P103	1mm disk point	for grooves inside blind hole
1148-P104	0.5mm disk point	for grooves inside blind hole

1148-P101
(optional)



1148-P103
(optional)



Unit: mm

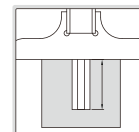
one-hand use of 1148-120



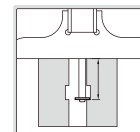
extension base for 1148-120
and 1148-200 (optional)



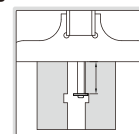
measure depth of
small holes (>Ø4mm)



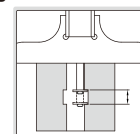
measure depth of
grooves inside bore



measure depth of
grooves inside bore



measure width of
grooves inside bore



VERNIER DEPTH GAGE (STANDARD MODEL)

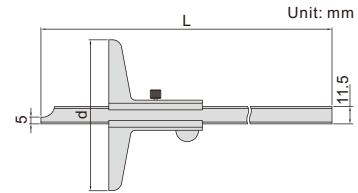
- Made of stainless steel
- Satin chrome plated reading surface

Graduation 0.05mm (mm)				
Code	Range	Accuracy	L	d
1240-150	0-150mm	±0.05mm	245	100
1240-200	0-200mm	±0.05mm	282	100
1240-300	0-300mm	±0.08mm	382	100
1240-500	0-500mm	±0.09mm	585	150

Graduation 0.02mm (mm)				
Code	Range	Accuracy	L	d
1240-1501	0-150mm	±0.03mm	245	100
1240-2001	0-200mm	±0.03mm	282	100
1240-3001	0-300mm	±0.04mm	382	100
1240-5001	0-500mm	±0.05mm	585	150



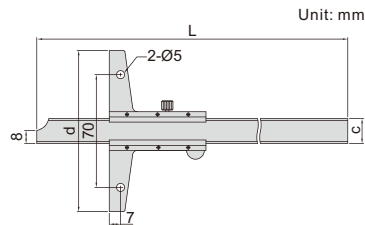
1240-2001



WITH MOUNTING HOLES FOR EXTENSION BASE

- Made of stainless steel
- Satin chrome plating finish on reading surface
- Optional accessory: extension base (code 6141)

extension base (optional)



Graduation 0.05mm		
Code	Range	Accuracy
1247-150	0-150mm	±0.05mm
1247-200	0-200mm	±0.05mm
1247-300	0-300mm	±0.08mm
1247-600	0-600mm	±0.10mm
1247-1000	0-1000mm	±0.15mm

Graduation 0.02mm		
Code	Range	Accuracy
1247-1501	0-150mm	±0.03mm
1247-2001	0-200mm	±0.03mm
1247-3001	0-300mm	±0.04mm
1247-6001	0-600mm	±0.05mm
1247-1001	0-1000mm	±0.07mm

(mm)			
Range	L	c	d
0-150mm	240	16	100
0-200mm	290	16	100
0-300mm	390	16	100
0-600mm	704	16	150
0-1000mm	1124	18	200

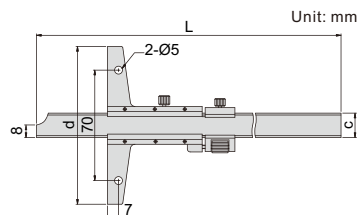


1247-1501

WITH MOUNTING HOLES FOR EXTENSION BASE

- With fine adjustment
- Made of stainless steel
- Satin chrome plating finish on reading surface
- Optional accessory: extension base (code 6141)

extension base (optional)



Graduation 0.05mm		
Code	Range	Accuracy
1249-150	0-150mm	±0.05mm
1249-200	0-200mm	±0.05mm
1249-300	0-300mm	±0.08mm

Graduation 0.02mm		
Code	Range	Accuracy
1249-1501	0-150mm	±0.03mm
1249-2001	0-200mm	±0.03mm
1249-3001	0-300mm	±0.04mm

(mm)			
Range	L	c	d
0-150mm	256	16	100
0-200mm	306	16	100
0-300mm	406	16	100



1249-1501

VERNIER HOOK DEPTH GAGE

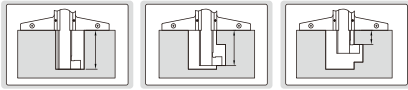
WITH MOUNTING HOLES
FOR EXTENSION BASE

- Made of stainless steel
- Satin chrome plating finish on reading surface
- Optional accessory: extension base (code **6141**)



1248-1501

extension base (optional)

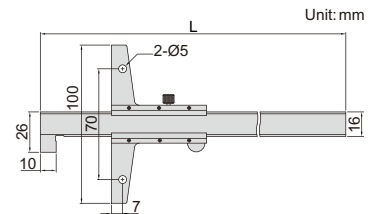


Graduation 0.05mm

Code	Range	Accuracy	L
1248-150	0-150mm	±0.05mm	266mm
1248-200	0-200mm	±0.05mm	316mm
1248-300	0-300mm	±0.08mm	416mm

Graduation 0.02mm

Code	Range	Accuracy	L
1248-1501	0-150mm	±0.03mm	266mm
1248-2001	0-200mm	±0.03mm	316mm
1248-3001	0-300mm	±0.04mm	416mm

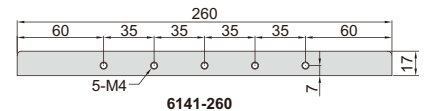
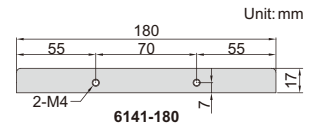


EXTENSION BASE

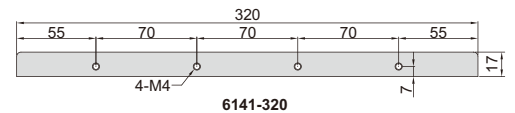
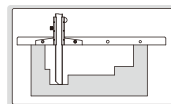
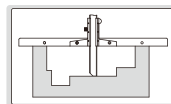
- Supplied with two screws
- Made of stainless steel
- Suitable for depth gauges series 1147, 1148, 1247, 1248 and 1249



6141-260



Code	Length
6141-180	180mm
6141-260	260mm
6141-320	320mm



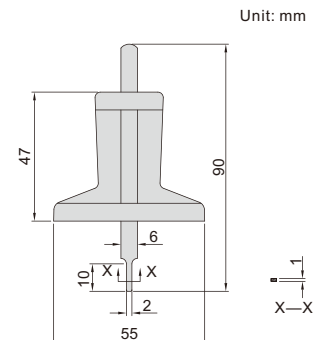
VERNIER DEPTH GAGE

ATTENTION:
BASIC MODEL

- Graduation: 0.1mm
- Made of stainless steel



1244-30

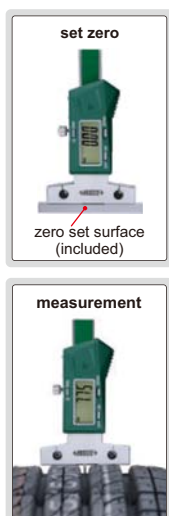


Code	Range	Accuracy
1244-30	0-30mm	±0.10mm

DATA OUTPUT

- Measure depth of small groove and hole, also measure depth of tire tread
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Supplied with zero set surface (included)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)

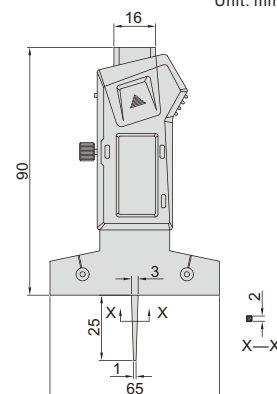
Code	Range	Accuracy
1145-25A	0-25mm/0-1"	±0.03mm



1145-25A

DIGITAL DEPTH GAGE

Unit: mm



- Accuracy: ±0.017mm
- Stainless steel base
- Pointed tip

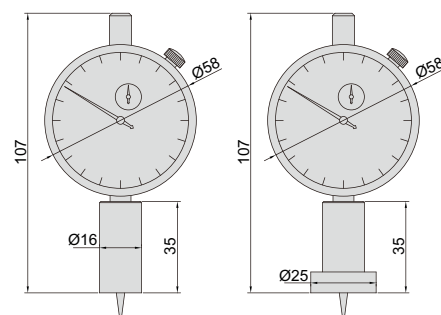
Code	Range	Dial indicator stroke	Dial indicator graduation	Base
2343-101	0-10mm	10mm	0.01mm	Ø16mm
2343-102	0-10mm	10mm	0.01mm	Ø25mm



2343-102

DIAL DEPTH GAGE

Unit: mm



2343-101

2343-102

DATA OUTPUT

- Accuracy: ±0.02mm
- Button function: on/off, zero, mm/inch, ABS, data preset, change measuring direction
- CR2032 battery, automatic power off
- Data output
- Stainless steel base
- Pointed tip
- Optional accessory: data output cable (code 7306-40, 7302-SPC3A, 7305-SPC1A)

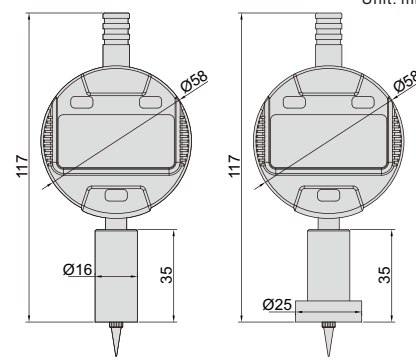
Code	Range	Digital indicator stroke	Digital indicator resolution	Base
2142-101	0-12.7mm/0-0.5"	12.7mm/0.5"	0.01mm/0.0005"	Ø16mm
2142-102	0-12.7mm/0-0.5"	12.7mm/0.5"	0.01mm/0.0005"	Ø25mm



2142-102

DIGITAL DEPTH GAGE

Unit: mm



2142-101

2142-102

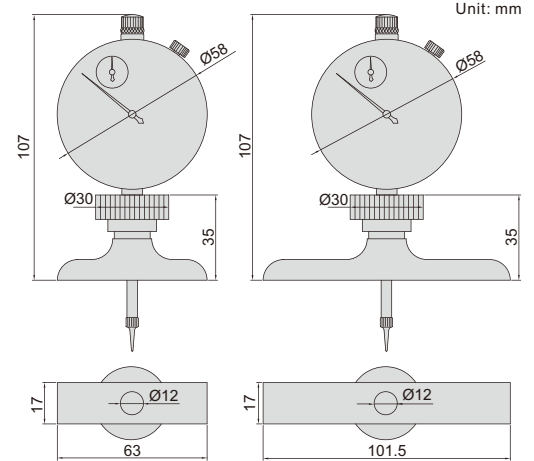
DIAL DEPTH GAGE



2342-202

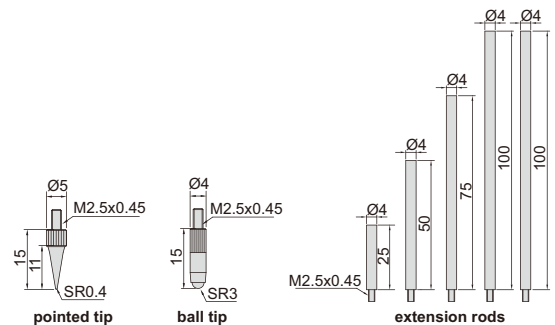
- Dial indicator graduation: 0.01mm
- Accuracy: $\pm 0.03\text{mm}$
- Stainless steel base
- Extension rods: 25mm (1pc), 50mm (1pc), 75mm (1pc), 100mm (2pcs)
- Supplied with pointed tip and ball tip

Code	Range	Dial indicator stroke	Base
2342-201	0-300mm	30mm	63x17mm
2342-202	0-300mm	30mm	101.5x17mm



2342-201

2342-202



pointed tip

ball tip

extension rods

DIGITAL DEPTH GAGE

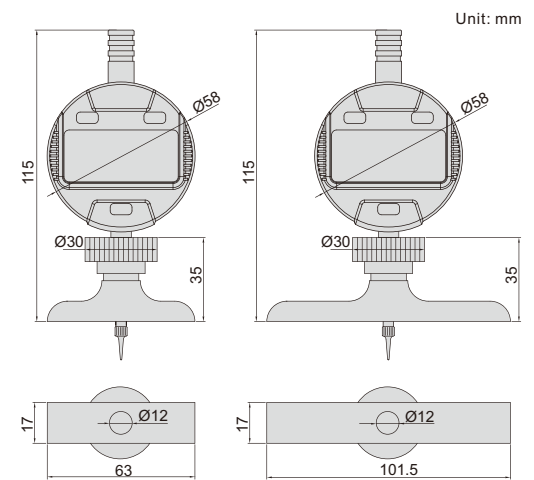
DATA
OUTPUT



2141-202A

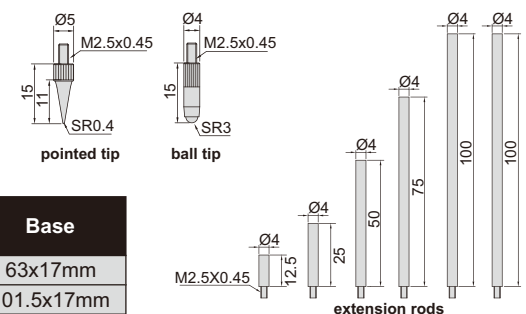
- Button function: on/off, zero, mm/inch, ABS, data preset, change measuring direction
- CR2032 battery, automatic power off
- Data output
- Stainless steel base
- Extension rods: 12.5mm (1pc), 25mm (1pc), 50mm (1pc), 75mm (1pc), 100mm (2pcs)
- Supplied with pointed tip and ball tip
- Optional accessory: data output cable (code 7306-40, 7302-SPC3A, 7305-SPC1A)

Code	Range	Digital indicator stroke	Digital indicator resolution	Accuracy	Base
2141-201A	0-300mm/0-12"	12.7mm/0.5"	0.01mm/0.0005"	$\pm 0.02\text{mm}$	63x17mm
2141-202A	0-300mm/0-12"	12.7mm/0.5"	0.01mm/0.0005"	$\pm 0.02\text{mm}$	101.5x17mm



2141-201A

2141-202A



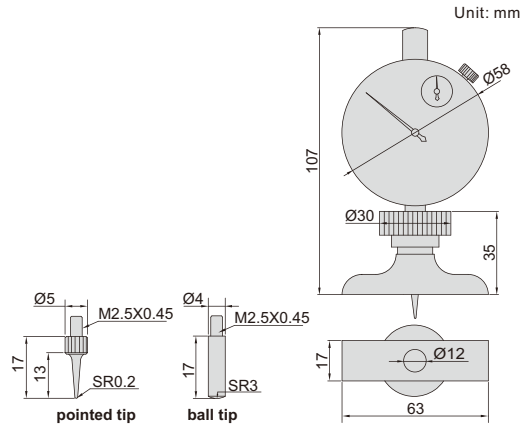
pointed tip

ball tip

extension rods

DIAL DEPTH GAGE

- Accuracy: $\pm 0.017\text{mm}$
- Stainless steel base
- Supplied with pointed tip and ball tip



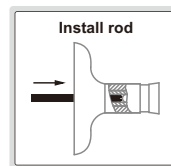
2341-101A

Code	Range	Dial indicator stroke	Dial indicator graduation
2341-101A	0-10mm	10mm	0.01mm

IP54
WATERPROOF

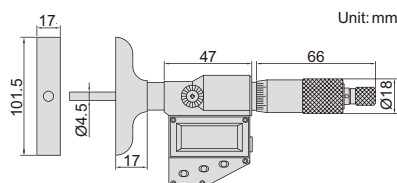
DATA
OUTPUT

- Resolution: 0.001mm/0.00005"
- Micrometer head accuracy: $\pm 3\mu\text{m}$
- Rod accuracy: $\pm (2+L/75)\mu\text{m}$, L is the measuring range in mm
- Button function: on/off, set, mm/inch, ABS/INC, data output
- IP54 dust/waterproof
- Data output
- LR44 battery, automatic power off
- Rods with flat end
- Ratchet stop
- Optional accessory: data output cable (code 7306-30, 7302-SPC2A, 7305-SPC3)



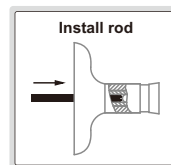
3540-50

Code	Range	Rods
3540-50	0-50mm/0-2"	2pcs
3540-150	0-150mm/0-6"	6pcs
3540-300	0-300mm/0-12"	12pcs

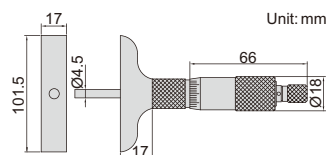


DEPTH MICROMETER

- Graduation: 0.01mm
- Micrometer head accuracy: $\pm 3\mu\text{m}$
- Rod accuracy: $\pm (2+L/75)\mu\text{m}$, L is the measuring range in mm
- Rods with flat end
- Ratchet stop



Code	Range	Rods
3240-25	0-25mm	1pc
3240-50	0-50mm	2pcs
3240-75	0-75mm	3pcs
3240-100	0-100mm	4pcs
3240-150	0-150mm	6pcs
3240-200	0-200mm	8pcs
3240-300	0-300mm	12pcs



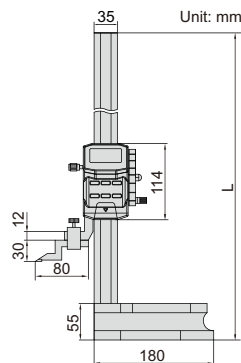
3240-100

DATA OUTPUT

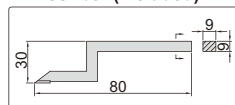
DIGITAL HEIGHT GAGE WITH DRIVING WHEEL

- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch, preset +, preset -, hold
- Automatic power off, move the digital unit to turn on power
- Carbide tipped scriber
- Made of stainless steel
- Battery CR2032
- Data output
- Supplied with dust cover
- Optional accessory: data output cable (code **7306-20**, **7302-SPC5A/SPC5B**, **7305-SPC2A**), dial test indicator holder (code **6293-6**)

supplied with dust cover



scriber (included)

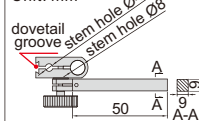


dial test indicator holder (optional)



6293-6

Unit: mm



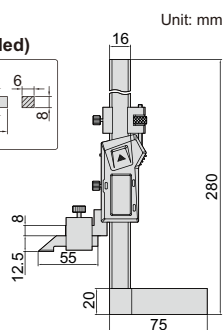
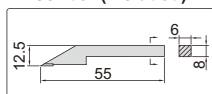
1156-300

DATA OUTPUT

DIGITAL HEIGHT GAGE

- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Carbide tipped scriber
- With fine adjustment
- Made of stainless steel
- Battery CR2032
- Data output
- Optional accessory: data output cable (code **7306-20**, **7302-SPC5A/SPC5B**, **7305-SPC2A**), dial test indicator holder (code **7151-CL1**)

scriber (included)

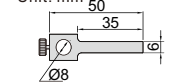


dial test indicator holder (optional)



7151-CL1

Unit: mm



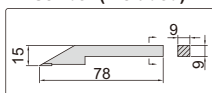
1154-150

Code	Range	Accuracy
1154-150	0-150mm/0-6"	±0.03mm

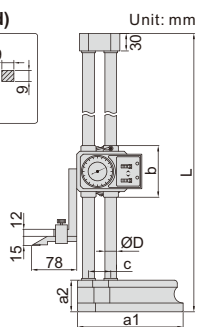
DIAL HEIGHT GAGE

- Dial indicator graduation: 0.01mm
- One counter reads in the plus direction and another in the minus direction, so incremental measurement can be made in either direction
- Carbide tipped scriber
- Made of stainless steel (except the base)
- With driving wheel
- Supplied with dust cover
- Optional accessory: dial test indicator holder (code **6293-6**)

scriber (included)



supplied with dust cover



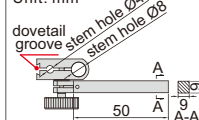
(mm)

dial test indicator holder (optional)



6293-6

Unit: mm



1351-300

Code	Range	Accuracy	L	a1	a2	b	c	ØD
1351-300	0-300mm	±0.04mm	475	135	43	84	33	15
1351-450	0-450mm	±0.05mm	660	180	54	88	38	20
1351-600	0-600mm	±0.05mm	810	180	54	88	38	20



driving wheel

VERNIER HEIGHT GAGE

- Graduation: 0.02mm/0.001"
- Adjustable main scale to set zero
- Carbide tipped scriber
- Made of stainless steel (except the base)
- Satin chrome plated scale
- Supplied with magnifier
- With fine adjustment
- Supplied with dust cover
- Optional accessory: dial test indicator holder (code **6293-6**)

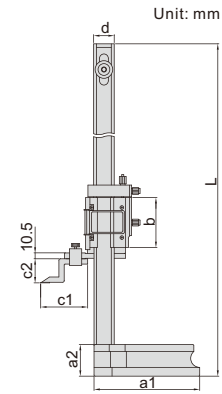
supplied with
dust cover



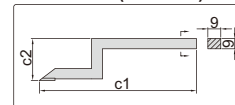
1250-300

(mm)

Code	Range	Accuracy	L	a1	a2	b	c1	c2	d
1250-300	0-300mm/0-12"	±0.04mm	545	135	43	75	80	30	28
1250-450	0-450mm/0-18"	±0.05mm	720	180	54	85	80	41	35
1250-600	0-600mm/0-24"	±0.05mm	870	180	54	85	80	41	35



scriber (included)

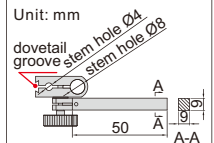


dial test indicator
holder (optional)



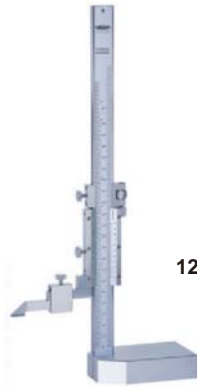
6293-6

Unit: mm



VERNIER HEIGHT GAGE

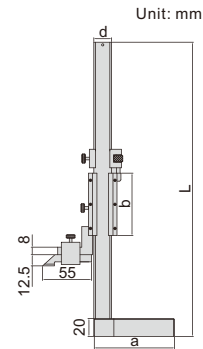
- Graduation 0.02mm/0.001"
- Carbide tipped scriber
- Made of stainless steel (except the base)
- Satin chrome plated scale
- Optional accessory: dial test indicator holder (code **7151-CL1**)



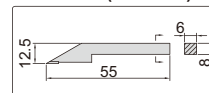
1253-200

(mm)

Code	Range	Accuracy	L	a	b	d
1253-150	0-150mm/0-6"	±0.03mm	265	75	57	16
1253-200	0-200mm/0-8"	±0.03mm	325	90	70	20



scriber (included)

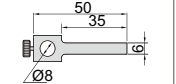


dial test indicator
holder (optional)



7151-CL1

Unit: mm



SCRIBER FOR HEIGHT GAGES

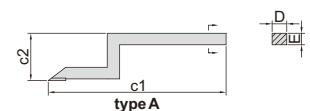


7150-SC1

- Carbide tipped

(mm)

Code	For height gages	Type	c1	c2	D	E
7150-SC1	1150-300	A	76	25	6	8
7150-SC2	1150-500, 1150-600	A	103	25	10	12
7150-SC3	1150-1000, 1150-1500, 1150-2000	A	110	39	10	15
7150-SC4	1351-300, 1351-450, 1351-600	B	78	15	9	9
7150-SC6	1250-300, 1156-300, 1156-600	A	80	30	9	9
7150-SC7	1250-450, 1250-600	A	80	41	9	9
7150-SC9	1253-150, 1253-200, 1154-150	B	55	12.5	6	8



type A



type B



QUICK MEASUREMENT
ONE TURN OF SLEEVE OR RATCHET
STOP MAKES 1MM SPINDLE FEED

NON-ROTATING SPINDLE DIGITAL MICROMETER

NON-ROTATING
SPINDLE

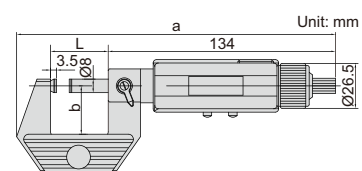
DATA
OUTPUT

- Resolution: 0.001mm/0.00005"
- Repeatability: 1µm
- Measuring force: 5-10N
- Non-rotating spindle, suitable for cylinders
- Quick measurement: one turn of sleeve or ratchet stop makes 1mm spindle feed
- Carbide measuring faces
- Ratchet stop
- Data output
- Button function: mm/inch, max./min. value tracking, tolerance measurement, hold, on/off, zero
- CR2032 battery, automatic power off
- Supplied with setting standards (except 0-25mm/0-1")



3631-25

(mm)					
Code	Range	Accuracy	L	a	b
3631-25	0-25mm/0-1"	±2µm	34	188	28.5
3631-50	25-50mm/1-2"	±2µm	59	211	30
3631-75	50-75mm/2-3"	±3µm	84	240	44
3631-100	75-100mm/3-4"	±3µm	109	264	56
3631-125	100-125mm/4-5"	±3µm	134	289	76
3631-150	125-150mm/5-6"	±3µm	160	314	89



QUICK MEASUREMENT
ONE TURN OF SLEEVE OR RATCHET
STOP MAKES 1MM SPINDLE FEED

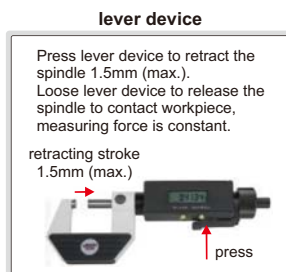
NON-ROTATING SPINDLE DIGITAL MICROMETER

LEVER DEVICE SUITABLE
FOR MASS PRODUCTION

NON-ROTATING
SPINDLE

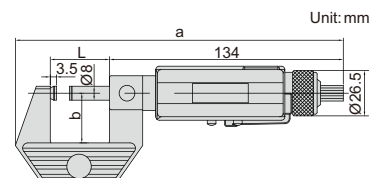
DATA
OUTPUT

- Resolution: 0.001mm/0.00005"
- Repeatability: 1µm
- Measuring force: 5-10N
- Lever device suitable for mass production
- Non-rotating spindle, suitable for cylinders
- Quick measurement: one turn of sleeve or ratchet stop makes 1mm spindle feed
- Carbide measuring faces
- Ratchet stop
- Data output
- Button function: mm/inch, max./min. value tracking, tolerance measurement, hold, on/off, zero
- CR2032 battery, automatic power off



3632-25

(mm)					
Code	Range	Accuracy	L	a	b
3632-25	0-25mm/0-1"	±2µm	34	188	28.5



INSIZE		Inspection Certificate	
Product name	Outside Micrometer	Unit: µm	
Code No.	3203-25A	Measuring Length(mm)	Permissible Error
Measuring range	0-25mm	0	0
Graduation	0.01mm	7.7	+1
Serial No.	0910120004	12.9	-1
Standard temperature	20 °C	17.6	0
Based on	DIN 863-1 (1999)	22.8	+1
Traceable to	Germany DKD No.D-K-15190-01-00	25	+1
Inspector	<i>Paulo</i>	Judgement:	Passed

**MANUFACTURER INSPECTION
CERTIFICATE TRACEABLE
TO DKD GERMANY, FOR MICROMETERS**

DIGITAL OUTSIDE MICROMETER

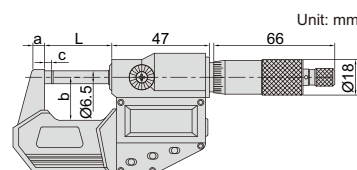
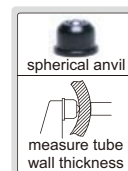
- Resolution 0.001mm/0.00005"
(resolution of **3101-275A** and **3101-300A** is 0.001mm/0.0001")
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC, data output
- Data output
- LR44 battery, automatic power off
- Carbide measuring faces
- Supplied with spherical anvil
- Setting standards are included (except 0-25mm/0-1")
- Optional accessory: data output cable
(code **7306-30**, **7302-SPC2A**, **7305-SPC3**)

IP65
WATERPROOF

DATA
OUTPUT



3101-25A



Ratchet stop type (mm)

Code	Range	Accuracy	L	a	b	c
3101-25A*	0-25mm/0-1"	±2µm	32.5	6	24	3
3101-50A*	25-50mm/1-2"	±2µm	57.5	8	32	3
3101-75A*	50-75mm/2-3"	±3µm	82.5	8	44.5	3
3101-100A*	75-100mm/3-4"	±3µm	107.5	8	57	3
3101-125A	100-125mm/4-5"	±3µm	133	10	70	3
3101-150A	125-150mm/5-6"	±3µm	158.5	10	82	3
3101-175A	150-175mm/6-7"	±4µm	184	12	94.5	5.5
3101-200A	175-200mm/7-8"	±4µm	209.5	12	107	5.5
3101-225A	200-225mm/8-9"	±4µm	234	19.4	129.5	5.5
3101-250A	225-250mm/9-10"	±4µm	259.5	19.4	142.5	5.5
3101-275A	250-275mm/10-11"	±5µm	285	19.4	155	5.5
3101-300A	275-300mm/11-12"	±5µm	310.5	19.4	167.5	5.5

Friction thimble type (mm)

Code	Range	Accuracy	L	a	b	c
3101-25FA*	0-25mm/0-1"	±2µm	32.5	6	24	3

* Supplied with manufacturer inspection certificate traceable to DKD Germany

METRIC DIGITAL OUTSIDE MICROMETER

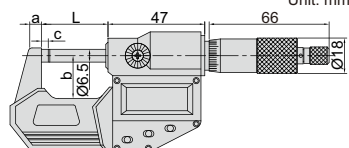
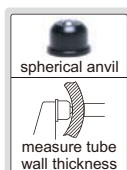
- Resolution 0.001mm
- IP54 dust/waterproof
- Button function: on/off, set, ABS/INC
- No data output
- LR44 battery, automatic power off
- Carbide measuring faces
- Supplied with spherical anvil
- Setting standards are included (except 0-25mm)



3108-25A

IP54
WATERPROOF

ATTENTION: NO
DATA OUTPUT



Ratchet stop type (mm)

Code	Range	Accuracy	L	a	b	c
3108-25A*	0-25mm	±2µm	32.5	6	24	3
3108-50A*	25-50mm	±2µm	57.5	8	32	3
3108-75A*	50-75mm	±3µm	82.5	8	44.5	3
3108-100A*	75-100mm	±3µm	107.5	8	57	3
3108-125A	100-125mm	±3µm	133	10	70	3
3108-150A	125-150mm	±3µm	158.5	10	82	3
3108-175A	150-175mm	±4µm	184	12	94.5	5.5
3108-200A	175-200mm	±4µm	209.5	12	107	5.5

Friction thimble type (mm)

Code	Range	Accuracy	L	a	b	c
3108-25FA*	0-25mm	±2µm	32.5	6	24	3

* Supplied with manufacturer inspection certificate traceable to DKD Germany

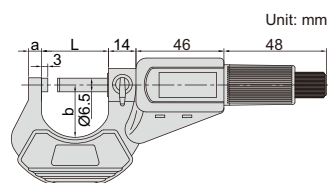
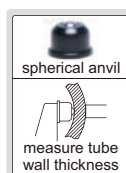
DIGITAL OUTSIDE MICROMETER

- Resolution 0.001mm/0.00005"
- Button function: on/off, set, mm/inch, ABS/INC
- No data output
- LR44 battery, automatic power off
- Carbide measuring faces
- Friction thimble
- Supplied with spherical anvil
- Setting standards are included (except 0-25mm/0-1")

ATTENTION: NO
DATA OUTPUT



3109-25A



Ratchet stop type (mm)

Code	Range	Accuracy	L	a	b
3109-25A*	0-25mm/0-1"	±2µm	32	6	27.5
3109-50A*	25-50mm/1-2"	±2µm	57	8	37
3109-75A*	50-75mm/2-3"	±3µm	82	8	50
3109-100A*	75-100mm/3-4"	±3µm	107	10	61

* Supplied with manufacturer inspection certificate traceable to DKD Germany



- Graduation 0.001mm
- Carbide measuring faces
- Meet DIN863
- Supplied with setting standards (except 0-25mm)

Ratchet stop type (mm)

Code	Range	Accuracy	L	a	b
3210-25A *	0-25mm	4μm	32	9	28
3210-50A *	25-50mm	4μm	57	14	38
3210-75A *	50-75mm	5μm	82	15	49
3210-100A *	75-100mm	5μm	107	15	60
3210-125A	100-125mm	6μm	133	16.5	73
3210-150A	125-150mm	6μm	158	16.5	85
3210-175A	150-175mm	7μm	183	19.4	104
3210-200A	175-200mm	7μm	209	19.4	117

Friction thimble type (mm)

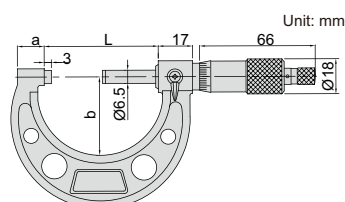
Code	Range	Accuracy	L	a	b
3210-25FA *	0-25mm	4μm	32	9	28
3210-50FA *	25-50mm	4μm	57	14	38

* Supplied with manufacturer inspection certificate traceable to DKD Germany

1μm GRADUATION OUTSIDE MICROMETER



3210-25A



ratchet stop

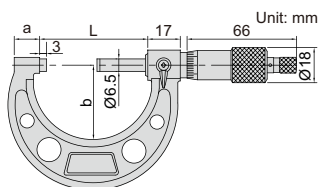


friction thimble for one hand operation



Micrometer set (ratchet stop type)

Code	Range	Micrometers included
3210-753A *	0-75mm	3210-25A, 3210-50A, 3210-75A
3210-1004A *	0-100mm	3210-25A, 3210-50A, 3210-75A, 3210-100A
3210-1506A	0-150mm	3210-25A, 3210-50A, 3210-75A, 3210-100A, 3210-125A, 3210-150A



- Graduation: 0.01mm
- Carbide measuring faces
- Meet DIN863
- Supplied with setting standards (except 0-25mm)

Ratchet stop type (mm)

Code	Range	Accuracy	L	a	b
3203-25A *	0-25mm	4μm	32	9	28
3203-50A *	25-50mm	4μm	57	14	38
3203-75A *	50-75mm	5μm	82	15	49
3203-100A *	75-100mm	5μm	107	15	60
3203-125A	100-125mm	6μm	133	16.5	73
3203-150A	125-150mm	6μm	158	16.5	85
3203-175A	150-175mm	7μm	183	19.4	104
3203-200A	175-200mm	7μm	209	19.4	117
3203-225A	200-225mm	8μm	234	19.4	130
3203-250A	225-250mm	8μm	260	19.4	142
3203-275A	250-275mm	9μm	285	19.4	155
3203-300A	275-300mm	9μm	310	19.4	168

Micrometer set (ratchet stop type)

Code	Range	Micrometers included
3203-753A *	0-75mm	3203-25A, 3203-50A, 3203-75A
3203-1004A *	0-100mm	3203-25A, 3203-50A, 3203-75A, 3203-100A
3203-1506A	0-150mm	3203-25A, 3203-50A, 3203-75A, 3203-100A, 3203-125A, 3203-150A
3203-3006A	150-300mm	3203-175A, 3203-200A, 3203-225A, 3203-250A, 3203-275A, 3203-300A
3203-3012A	0-300mm	3203-25A, 3203-50A, 3203-75A, 3203-100A, 3203-125A, 3203-150A, 3203-175A, 3203-200A, 3203-225A, 3203-250A, 3203-275A, 3203-300A

* Supplied with manufacturer inspection certificate traceable to DKD Germany

OUTSIDE MICROMETER



3203-25A



3203-50A



3203-1506A



ratchet stop



friction thimble for one hand operation

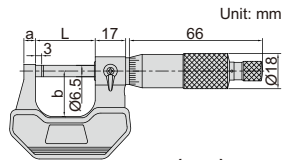


Friction thimble type (mm)

Code	Range	Accuracy	L	a	b
3203-25FA *	0-25mm	4μm	32	9	28
3203-50FA *	25-50mm	4μm	57	14	38

OUTSIDE MICROMETER

- Graduation 0.01mm
- Carbide measuring faces
- Meet DIN863
- Supplied with setting standards (except 0-25mm)



(mm)

Code	Range	Accuracy	L	a	b
3202-25A *	0-25mm	4μm	32	6	24
3202-50A *	25-50mm	4μm	57	8	32
3202-75A *	50-75mm	5μm	82	8	45
3202-100A *	75-100mm	5μm	107	8	57



3202-25A

Micrometer set

Code	Range	Micrometers included
3202-753A *	0-75mm	3202-25A, 3202-50A, 3202-75A
3202-1004A *	0-100mm	3202-25A, 3202-50A, 3202-75A, 3202-100A

* Supplied with manufacturer inspection certificate traceable to DKD Germany



QUICK FEEDING OUTSIDE MICROMETER

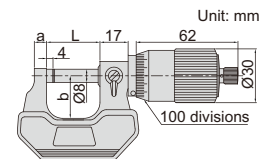
- Graduation 0.01mm
- 1mm feeding of each turn
- Friction thimble
- Carbide measuring faces
- Meet DIN863
- Supplied with setting standards (except 0-25mm)

(mm)

Code	Range	Accuracy	L	a	b
3208-25B	0-25mm	4μm	32	6	24
3208-50B	25-50mm	4μm	57	8	32
3208-75B	50-75mm	5μm	82	8	45
3208-100B	75-100mm	5μm	107	8	57



3208-25B

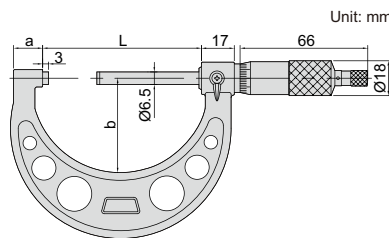


LONG SPINDLE OUTSIDE MICROMETER

- Graduation 0.01mm
- Carbide measuring faces
- Meet DIN863
- Ratchet stop
- Supplied with setting standards (except 0-25mm)

(mm)

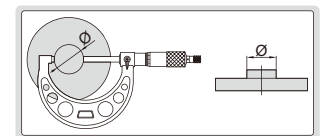
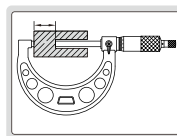
Code	Range	Accuracy	L	a	b
3209-25	0-25mm	4μm	57	14	38
3209-50	25-50mm	4μm	82	15	49
3209-75	50-75mm	5μm	107	15	60
3209-100	75-100mm	5μm	133	16.5	73



Unit: mm



3209-25

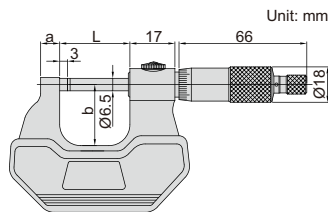


OUTSIDE MICROMETER FOR LEFT AND RIGHT HAND

- Graduation 0.01mm
- Graduations on two sides
- Ratchet stop
- Carbide measuring faces
- Meet DIN863
- Supplied with setting standards (except 0-25mm)

(mm)

Code	Range	Accuracy	L	a	b
3236-25B	0-25mm	4μm	32	6	24
3236-50B	25-50mm	4μm	57	8	32



Unit: mm



front

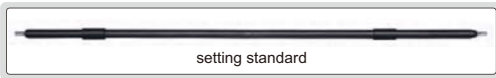
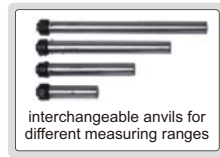


back

3236-25B

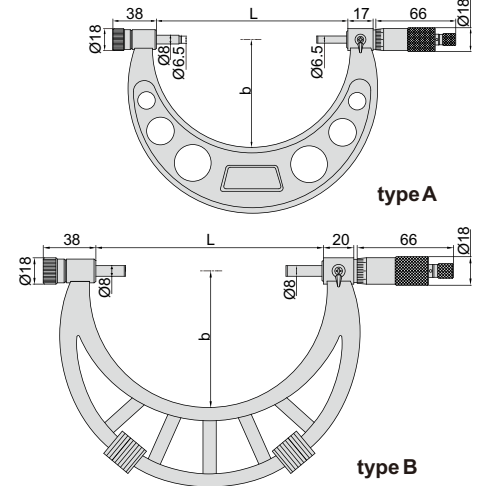
OUTSIDE MICROMETER WITH INTERCHANGEABLE ANVILS

- Graduation 0.01mm
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards



Unit: mm

Code	Range	Type	Accuracy	L	b	Setting standard (included)
3206-50A	0-50mm	A	4μm	58	35	25
3206-100A	0-100mm	A	5μm	108	57	25, 50, 75
3206-150A	0-150mm	A	6μm	158	82	25, 50, 75, 100, 125
3206-151A	50-150mm	A	6μm	158	82	50, 75, 100, 125
3206-200A	100-200mm	A	7μm	208	114	100, 125, 150, 175
3206-300A	150-300mm	A	9μm	308	165	150, 175, 200, 225, 250, 275
3206-301A	200-300mm	A	9μm	308	165	200, 225, 250, 275
3206-400	300-400mm	B	11μm	409	224	325, 375
3206-500	400-500mm	B	13μm	509	275	425, 475
3206-600	500-600mm	B	14μm	609	321	525, 575
3206-700	600-700mm	B	16μm	709	371	625, 675
3206-800	700-800mm	B	18μm	809	426	725, 775
3206-900	800-900mm	B	20μm	909	476	825, 875
3206-1000	900-1000mm	B	22μm	1009	576	925, 975

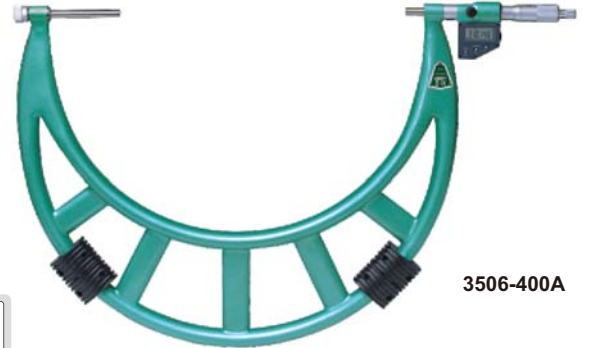
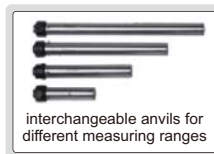
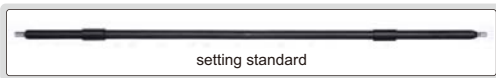


IP54
WATERPROOF

DATA
OUTPUT

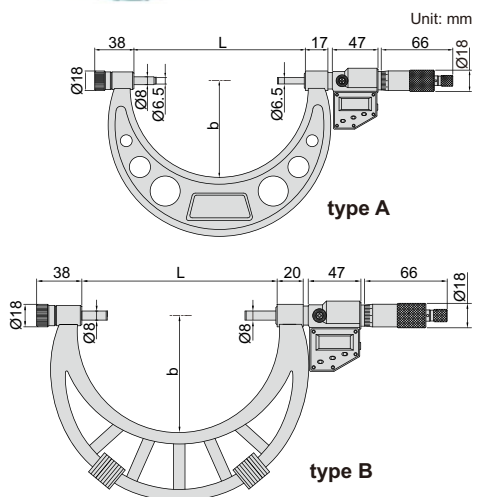
DIGITAL OUTSIDE MICROMETER WITH INTERCHANGEABLE ANVILS

- Resolution 0.001mm/0.0001"
(resolution of 3506-100A and 3506-150A is 0.001mm/0.00005")
- IP54 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC, data output
- Data output
- LR44 battery, automatic power off
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards
- Optional accessory: data output cable (code 7306-30, 7302-SPC2A, 7305-SPC3)



Unit: mm

Code	Range	Type	Accuracy	L	b	Setting standard (included)
3506-100A	0-100mm/0-4"	A	±5μm	105	57	25, 50, 75
3506-150A	0-150mm/0-6"	A	±6μm	155	82	25, 50, 75, 100, 125
3506-300A	150-300mm/6-12"	A	±8μm	305	165	150, 175, 200, 225, 250, 275
3506-301A	200-300mm/8-12"	A	±8μm	305	165	200, 225, 250, 275
3506-400A	300-400mm/12-16"	B	±9μm	405	224	325, 375
3506-500A	400-500mm/16-20"	B	±11μm	505	275	425, 475
3506-600A	500-600mm/20-24"	B	±12μm	605	321	525, 575
3506-700A	600-700mm/24-28"	B	±13μm	705	371	625, 675
3506-800A	700-800mm/28-32"	B	±15μm	805	426	725, 775
3506-900A	800-900mm/32-36"	B	±16μm	905	476	825, 875
3506-1000A	900-1000mm/36-40"	B	±17μm	1005	576	925, 975

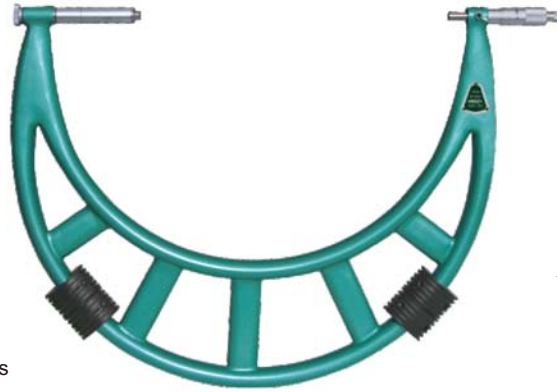


OUTSIDE MICROMETER WITH EXTENSION ANVIL COLLAR

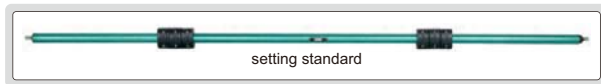


adjust collars for different measuring ranges

- Graduation 0.01mm
- Adjust collars for different measuring ranges
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards



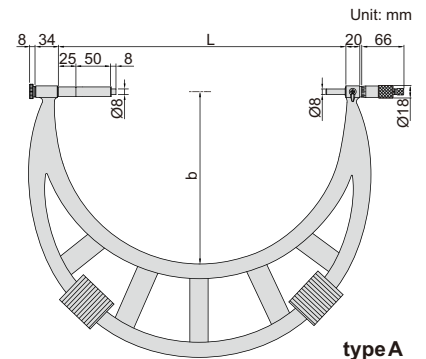
3205-400



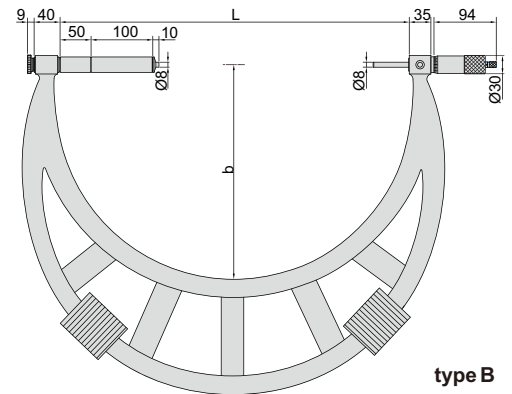
setting standard

Code	Range	Type	Accuracy	L	b	Setting standard (included)
3205-400	300-400mm	A	11μm	410	250	325, 375
3205-500	400-500mm	A	13μm	510	295	425, 475
3205-600	500-600mm	A	14μm	610	345	525, 575
3205-700	600-700mm	A	16μm	710	395	625, 675
3205-800	700-800mm	A	18μm	810	445	725, 775
3205-900	800-900mm	A	20μm	910	495	825, 875
3205-1000	900-1000mm	A	22μm	1010	545	925, 975
3205-1200	1000-1200mm	B	22μm	1210	645	1050, 1150
3205-1400	1200-1400mm	B	24μm	1410	745	1250, 1350
3205-1600	1400-1600mm	B	28μm	1610	845	1450, 1550
3205-1800	1600-1800mm	B	31μm	1810	945	1650, 1750
3205-2000	1800-2000mm	B	34μm	2010	1045	1850, 1950

(mm)

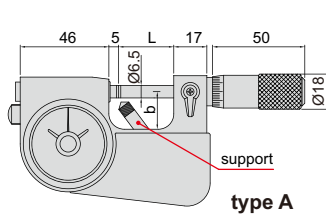


type A

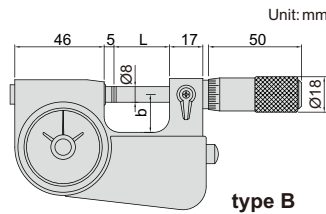


type B

INDICATING MICROMETER



type A

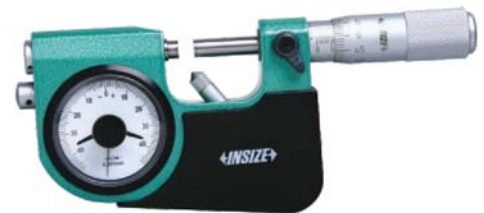


type B

- Micrometer head graduation: 0.002mm
- Dial indicator: range ± 0.04 mm, graduation 0.001mm, accuracy 0.001mm
- Carbide measuring faces
- Supplied with setting standards (except 0-25mm)

Code	Micrometer head range	Micrometer head accuracy	Type	L	b	Remark
3332-25	0-25mm	4μm	A	28.5	19	with support
3332-50	25-50mm	4μm	A	53.5	30	with support
3332-75	50-75mm	5μm	A	78.5	45	without support
3332-100	75-100mm	5μm	A	103.5	57	without support
3332-25B	0-25mm	4μm	B	28.5	19	without support

(mm)



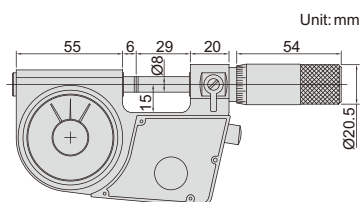
3332-25



3332-25B



INDICATING MICROMETER

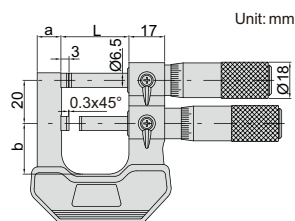


3333-25

- Carbide measuring faces
- Measuring force 5-10N

Code	Micrometer head			Dial indicator		
	Range	Graduation	Accuracy	Range	Graduation	Accuracy
3333-25	0-25mm	0.01mm	2µm	±0.07mm	1µm	1µm

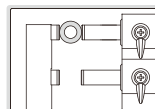
LIMIT MICROMETER



3235-25A

- Used as Go/No-Go gauge by setting upper and lower limits
- Graduation 0.002mm
- Carbide measuring faces
- Supplied with setting standard (except 0-25mm)

Code	Range	Accuracy	L	a	b
3235-25A	0-25mm	4µm	32	12	24
3235-50A	25-50mm	4µm	57	15	32



ATTENTION: NOT SUITABLE
FOR 0.001MM INDICATORS

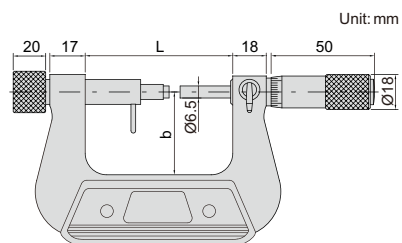
MICROMETER WITH DIAL INDICATING



3331-25A

- Micrometer head graduation 0.01mm
- Anvil retracting range: 8mm
- Carbide measuring faces
- Supplied with setting standards (except 0-25mm)
- Optional accessory: dial indicators (graduation 0.01mm), digital indicators (resolution 0.01mm/0.0005")

Code	Micrometer head range	Micrometer head accuracy	L	b
3331-25A	0-25mm	4µm	67	38
3331-50A	25-50mm	4µm	92.4	50
3331-75A	50-75mm	5µm	117.6	62
3331-100A	75-100mm	5µm	143	70
3331-125A	100-125mm	6µm	168.2	82
3331-150A	125-150mm	6µm	192	94.5
3331-175A	150-175mm	7µm	217	107

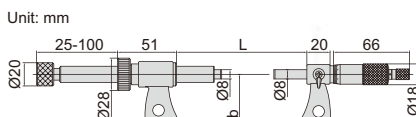


ATTENTION: NOT SUITABLE
FOR 0.001mm INDICATORS

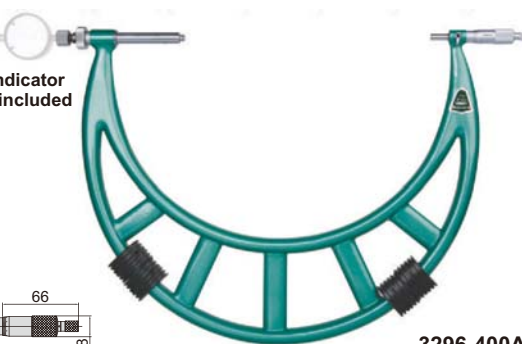


3296-100A

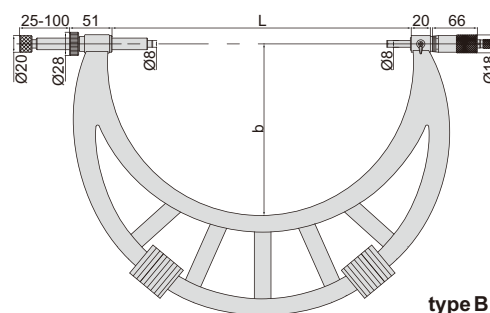
- Graduation 0.01mm
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards
- Optional accessory:
dial indicators (graduation 0.01mm)
digital indicators (resolution 0.01mm/0.0005")



type A



3296-400A



type B

Code	Range	Type	Accuracy	L	b
3296-100A	0-100mm	A	6μm	115	68
3296-200A	100-200mm	A	7μm	215	120
3296-300A	200-300mm	A	8μm	315	170
3296-400A	300-400mm	B	9μm	415	225
3296-500A	400-500mm	B	10μm	515	275
3296-600A	500-600mm	B	11μm	615	325
3296-700A	600-700mm	B	12μm	715	375
3296-800A	700-800mm	B	13μm	815	430
3296-900A	800-900mm	B	14μm	915	480
3296-1000A	900-1000mm	B	15μm	1015	530

ATTENTION: SETTING
STANDARDS ARE NOT INCLUDED

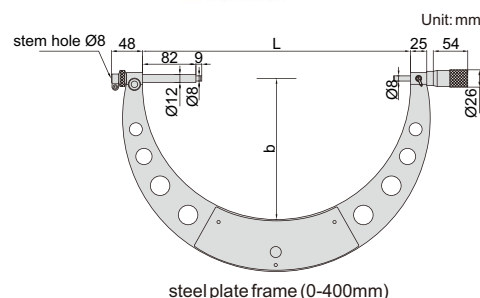


- Micrometer head graduation: 0.01mm
- Adjust collars for different measuring ranges
- Anvil retracting range: 3mm
- Carbide measuring faces
- Optional accessory: dial indicators or digital indicators, setting standards

MICROMETER WITH DIAL INDICATOR



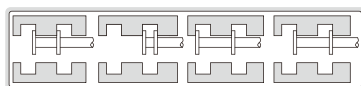
3633-300



steel plate frame (0-400mm)

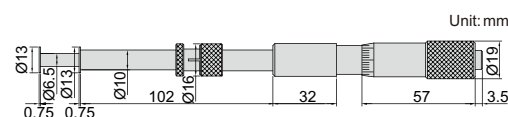
Code	Range	Micrometer head range	Frame type	L	b
3633-100	0-100mm	25mm	steel plate	116	65
3633-200	100-200mm	25mm	steel plate	217	109
3633-300	200-300mm	25mm	steel plate	317	159
3633-400	300-400mm	25mm	steel plate	417	209
3633-500	400-500mm	25mm	steel tube	517	259
3633-600	500-600mm	25mm	steel tube	617	310
3633-700	600-700mm	25mm	steel tube	717	360
3633-800	700-800mm	25mm	steel tube	817	408
3633-900	800-900mm	25mm	steel tube	917	460
3633-1000	900-1000mm	25mm	steel tube	1017	512

- Graduation 0.01mm
- Measure width of grooves inside bores
- Non-rotating spindle
- Two graduations for inside and outside measurement



3287-25A

Code	Range (outside)	Range (inside)	Accuracy
3287-25A	0-25mm	1.6-26.5mm	10μm
3287-50A	25-50mm	26.5-51.5mm	10μm
3287-75A	50-75mm	51.5-76.5mm	10μm
3287-100A	75-100mm	76.5-101.5mm	10μm



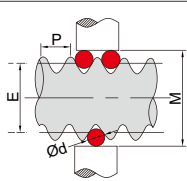


3-WIRES

- Used with standard outside micrometers with spindle Ø6.35mm or Ø6.50mm to measure pitch diameter of screw threads
- Diameter accuracy: $\pm 0.5\mu\text{m}$
- Cylindricity: $1\mu\text{m}$
- Hardness: HRC60
- Supplied with manufacturer inspection certificate



7382-19

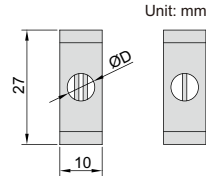


Formula of pitch diameter E

$$E = M - 3d + 0.866025P$$

M=measured value of the micrometer
d=diameter of the pin gage (choose diameter of pin gage according to pitch: $d = 0.577P$)
P=screw thread pitch

The formula is suitable for 60° screw



Unit: mm

For outside micrometers with spindle Ø6.35mm (ØD)

Code	Pin gage diameter (Ød)	Applicable pitch
7382-11	0.170mm	0.25mm
7382-12	0.195mm	0.35mm
7382-13	0.220mm	0.35mm
7382-14	0.250mm	0.4mm
7382-15	0.290mm	0.45mm, 0.5mm
7382-16	0.335mm	0.6mm
7382-17	0.390mm	0.7mm
7382-18	0.455mm	0.7mm, 0.75mm, 0.8mm
7382-19	0.530mm	0.9mm
7382-110	0.620mm	1mm
7382-111	0.725mm	1.25mm
7382-112	0.895mm	1.5mm
7382-113	1.100mm	1.75mm
7382-114	1.350mm	2mm
7382-115	1.650mm	2.5mm
7382-116	2.050mm	3mm, 3.5mm
7382-117	2.550mm	4mm, 4.5mm
7382-118	3.200mm	5mm, 5.5mm
7382-1S	18 pairs/set, including all above 3-wires	

For outside micrometers with spindle Ø6.50mm (ØD)

Code	Pin gage diameter (Ød)	Applicable pitch
7382-21	0.170mm	0.25mm
7382-22	0.195mm	0.35mm
7382-23	0.220mm	0.35mm
7382-24	0.250mm	0.4mm
7382-25	0.290mm	0.45mm, 0.5mm
7382-26	0.335mm	0.6mm
7382-27	0.390mm	0.7mm
7382-28	0.455mm	0.7mm, 0.75mm, 0.8mm
7382-29	0.530mm	0.9mm
7382-210	0.620mm	1mm
7382-211	0.725mm	1.25mm
7382-212	0.895mm	1.5mm
7382-213	1.100mm	1.75mm
7382-214	1.350mm	2mm
7382-215	1.650mm	2.5mm
7382-216	2.050mm	3mm, 3.5mm
7382-217	2.550mm	4mm, 4.5mm
7382-218	3.200mm	5mm, 5.5mm
7382-2S	18 pairs/set, including all above 3-wires	



- Measure pitch diameter of screw thread
- Graduation 0.01mm
- Ratchet thimble
- Optional accessory: measuring tips for external screw thread micrometer (code 7384)

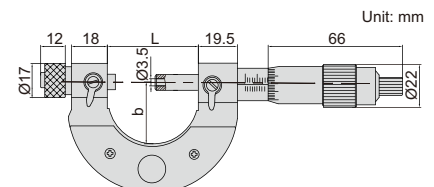
EXTERNAL SCREW THREAD MICROMETER



tips are not included

3639-25

Code	Range	Accuracy	L	b
3639-25	0-25mm	4 μm	45	31
3639-50	25-50mm	4 μm	70	35
3639-75	50-75mm	5 μm	95	48.5
3639-100	75-100mm	5 μm	120	60
3639-125	100-125mm	6 μm	145	72.5
3639-150	125-150mm	6 μm	170	80
3639-175	150-175mm	7 μm	195	97.5
3639-200	175-200mm	7 μm	220	110
3639-225	200-225mm	8 μm	245	122



MEASURING TIPS FOR EXTERNAL SCREW THREAD MICROMETER

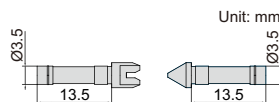


TIPS FOR TRAPEZOIDAL, ACME
THREAD ARE ALSO AVAILABLE

- Supplied in pair
- Made of hardened steel
- Suitable for 3639 series



7384-T108



60° thread angle

Code	Applicable pitch (mm)
7384-T101	0.2
7384-T102	0.225
7384-T103	0.25
7384-T104	0.3
7384-T105	0.35
7384-T106	0.4/0.45
7384-T107	0.5/0.6

60° thread angle

Code	Applicable pitch (mm)
7384-T108	0.7/0.75/0.8
7384-T109	1/1.25
7384-T110	1.5/1.75
7384-T111	2.0/2.5
7384-T112	3.0/3.5
7384-T113	4.0/4.5/5.0
7384-T114	5.5/6.0

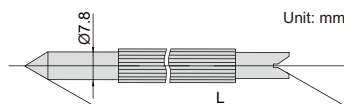
55° thread angle

Code	Applicable pitch (TPI)
7384-T201	80
7384-T202	72/64
7384-T203	60/48
7384-T204	40/32
7384-T205	28/26/24/22
7384-T206	20/19/18/16
7384-T207	14/12/11
7384-T208	10/9/8
7384-T209	7/6
7384-T210	5/4.5/4
7384-T211	3.5/3.25/3/2.875/2.75
7384-T212	2.625/2.5/2

SETTING STANDARD FOR EXTERNAL SCREW THREAD MICROMETER



7384-A100



60° thread angle

Code	L	Accuracy
7384-A25	25mm	±1.5µm
7384-A50	50mm	±2µm
7384-A75	75mm	±2.5µm
7384-A100	100mm	±3µm
7384-A125	125mm	±3.5µm
7384-A150	150mm	±4µm

Code	L	Accuracy
7384-A175	175mm	±4.5µm
7384-A200	200mm	±5µm
7384-A225	225mm	±5.5µm
7384-A250	250mm	±6µm
7384-A275	275mm	±6.5µm
7384-A300	300mm	±7µm

55° thread angle

Code	L	Accuracy
7384-B25	25mm	±1.5µm
7384-B50	50mm	±2µm
7384-B75	75mm	±2.5µm
7384-B100	100mm	±3µm
7384-B125	125mm	±3.5µm
7384-B150	150mm	±4µm

Code	L	Accuracy
7384-B175	175mm	±4.5µm
7384-B200	200mm	±5µm
7384-B225	225mm	±5.5µm
7384-B250	250mm	±6µm
7384-B275	275mm	±6.5µm
7384-B300	300mm	±7µm

MEASURING TIPS FOR INTERNAL SCREW THREAD MICROMETER

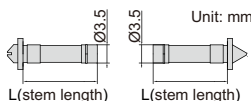


TIPS FOR TRAPEZOIDAL, ACME
THREAD ARE ALSO AVAILABLE

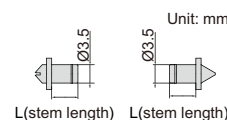
- Supplied in pair
- Made of hardened steel
- Suitable for 3640, 3641 series



7385-T106A



7385-T106B



60° thread angle

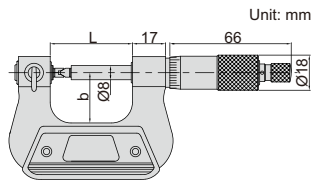
Code		Applicable pitch (mm)
L=13.5mm	L=5mm	
7385-T101A	7385-T101B	0.35
7385-T102A	7385-T102B	0.4/0.45
7385-T103A	7385-T103B	0.5/0.6
7385-T104A	7385-T104B	0.7/0.75/0.8
7385-T105A	7385-T105B	1/1.25
7385-T106A	7385-T106B	1.5/1.75
7385-T107A	7385-T107B	2.0/2.5
7385-T108A	7385-T108B	3.0/3.5
7385-T109A	7385-T109B	4.0/4.5/5.0
7385-T110A	7385-T110B	5.5/6.0

55° thread angle

Code		Applicable pitch (TPI)
L=13.5mm	L=5mm	
7385-T201A	7385-T201B	60/48
7385-T202A	7385-T202B	40/32
7385-T203A	7385-T203B	28/26/24/22
7385-T204A	7385-T204B	20/19/18/16
7385-T205A	7385-T205B	14/12/11
7385-T206A	7385-T206B	10/9/8
7385-T207A	7385-T207B	7/6
7385-T208A	7385-T208B	5/4.5/4
7385-T209A	7385-T209B	3.5/3.25/3/2.875/2.75
7385-T210A	7385-T210B	2.625/2.5/2

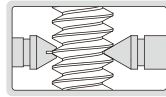
NON-ROTATING SPINDLE

- Measure pitch diameter of screw threads
- Graduation 0.01mm
- Non-rotating spindle
- Ratchet stop
- Supplied with 60° setting standards
- Optional accessory: 55° setting standards, measuring tips (code 7381)



(mm)

Code	Range	L	b	55° setting standard (optional)
3281-25A	0-25mm	42	26	—
3281-50A	25-50mm	67	38	3281-SP1
3281-75A	50-75mm	92	50	3281-SP2
3281-100A	75-100mm	117.6	62	3281-SP3
3281-125A	100-125mm	143	70	3281-SP4
3281-150A	125-150mm	168.2	82	3281-SP5
3281-175A	150-175mm	192	94.5	3281-SP6
3281-200A	175-200mm	217	107	3281-SP7



SCREW THREAD MICROMETER

measuring tips are not included



3281-25A

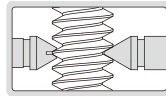
accuracy of micrometers with tips (mm)

Pitch	Range					
	0-25	25-50	50-75	75-100	100-125	125-200
0.4~0.5	±0.01	-	-	-	-	-
0.6~0.8	±0.01	±0.013	-	-	-	-
1~1.25	±0.012	±0.015	±0.017	±0.017	-	-
1.5~2.0	±0.014	±0.017	±0.019	±0.019	±0.020	±0.023
2.5~3.5	±0.016	±0.019	±0.021	±0.021	±0.023	±0.025
4.0~7.0	-	±0.021	±0.023	±0.023	±0.025	±0.028

DATA OUTPUT

NON-ROTATING SPINDLE

- Measure pitch diameter of screw threads
- Resolution 0.001mm/0.00005"
- Button function: on/off, set, mm/inch, ABS/INC, data output
- Data output
- LR44 battery, automatic power off
- Non-rotating spindle
- Ratchet stop
- Supplied with 60° setting standards
- Optional accessory: 55° setting standards, measuring tips (code 7381), data output cable (code 7306-30, 7302-SPC2A, 7305-SPC3)



DIGITAL SCREW THREAD MICROMETER

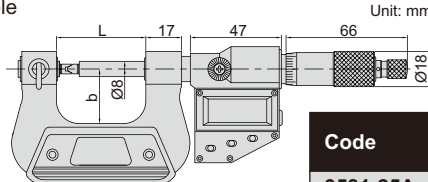
measuring tips are not included



3581-25A

accuracy of micrometers with tips (mm)

Pitch	Range			
	0-25	25-50	50-75	75-100
0.4~0.5	±0.01	-	-	-
0.6~0.8	±0.01	±0.013	-	-
1~1.25	±0.012	±0.015	±0.017	±0.017
1.5~2.0	±0.014	±0.017	±0.019	±0.019
2.5~3.5	±0.016	±0.019	±0.021	±0.021
4.0~7.0	-	±0.021	±0.023	±0.023



(mm)

Code	Range	L	b	55° setting standard (optional)
3581-25A	0-25mm/0-1"	42	26	—
3581-50A	25-50mm/1-2"	67	38	3281-SP1
3581-75A	50-75mm/2-3"	92	50	3281-SP2
3581-100A	75-100mm/3-4"	117.6	62	3281-SP3

MEASURING TIPS FOR SCREW THREAD MICROMETER

- Supplied in pair
- Suitable for 3281, 3581 series

Whitworth thread (55° thread angle)

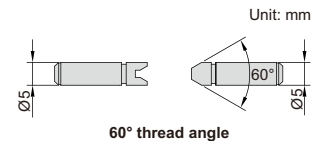
Code	Pitch
7381-T21	60-48TPI
7381-T22	48-40TPI
7381-T23	40-32TPI
7381-T24	32-24TPI
7381-T25	24-18TPI
7381-T26	18-14TPI
7381-T27	14-10TPI
7381-T28	10-7TPI
7381-T29	7-4.5TPI
7381-T210	4.5-3.5TPI
7381-T2S	10 pairs/set, including all above tips



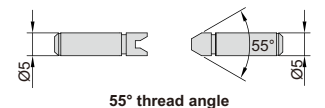
7381-T11

Metric and unified thread (60° thread angle)

Code	Pitch
7381-T11	0.4-0.5mm/ 64-48TPI
7381-T12	0.6-0.9mm/ 44-28TPI
7381-T13	1-1.75mm/ 24-14TPI
7381-T14	2-3mm/ 13-9TPI
7381-T15	3.5-5mm/ 8-5TPI
7381-T16	5.5-7mm/ 4.5-3.5TPI
7381-TS	6 pairs/set, including all above tips



60° thread angle



55° thread angle

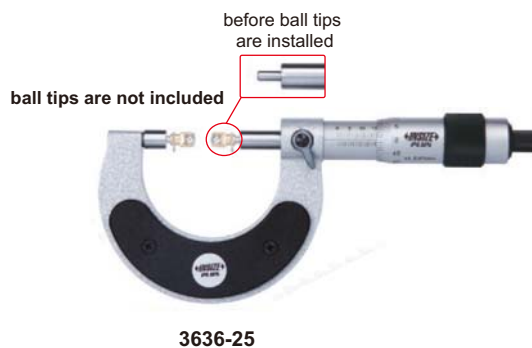
EXTERNAL GEAR TOOTH MICROMETER



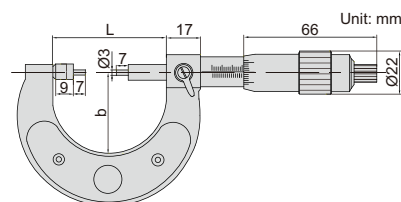
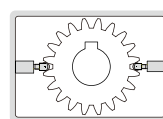
- Measure over-pin diameter of gears
- Graduation 0.01mm
- Ratchet stop
- Optional accessory: ball tips (code **7383**)

Code	Range	Accuracy	L	b
3636-25	0-25mm	4μm	56	40
3636-50	25-50mm	4μm	81.5	52
3636-75	50-75mm	5μm	106.5	64.5
3636-100	75-100mm	5μm	131.5	76
3636-125	100-125mm	6μm	156.5	88.5
3636-150	125-150mm	6μm	181.5	100
3636-175	150-175mm	7μm	242.5	121.5
3636-200	175-200mm	7μm	242.5	121.5
3636-225	200-225mm	8μm	267.5	134
3636-250	225-250mm	8μm	292.5	146.5
3636-275	250-275mm	9μm	318	159
3636-300	275-300mm	9μm	342.5	171.5
3636-325	300-325mm	10μm	367.5	184
3636-350	325-350mm	10μm	392.5	196.5
3636-375	350-375mm	11μm	417.5	209

(mm)



3636-25



BALL TIPS FOR GEAR TOOTH MICROMETER



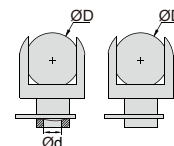
- Supplied in pair
- Made of hardened special steel
- Suitable for **3636**, **3637**, **3638** series



7383-8

Code	Ball dia. (D)	Accuracy of D	d
7383-1	SØ1mm	±1μm	Ø3mm
7383-2	SØ2mm	±1μm	Ø3mm
7383-3	SØ3mm	±1μm	Ø3mm
7383-4	SØ4mm	±1μm	Ø3mm
7383-5	SØ5mm	±1μm	Ø3mm
7383-6	SØ6mm	±1μm	Ø3mm
7383-7	SØ7mm	±1μm	Ø3mm
7383-8	SØ8mm	±1μm	Ø3mm

Code	Ball dia. (D)	Accuracy of D	d
7383-9	SØ9mm	±1μm	Ø3mm
7383-10	SØ10mm	±1μm	Ø3mm
7383-11	SØ11mm	±1μm	Ø3mm
7383-12	SØ12mm	±1μm	Ø3mm
7383-13	SØ13mm	±1μm	Ø3mm
7383-14	SØ14mm	±1μm	Ø3mm
7383-15	SØ15mm	±1μm	Ø3mm
7383-16	SØ16mm	±1μm	Ø3mm



GEAR TOOTH MICROMETER

- Measure over-pin diameter of gears
- Graduation 0.01mm
- Ratchet stop
- Supplied with setting standards (except 0-25mm)
- Optional accessory: ball tips (code **7391**)

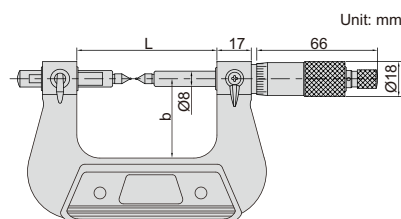
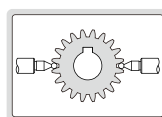
Code	Range	Accuracy	L	b
3291-25	0-25mm	4μm	67	38
3291-50	25-50mm	4μm	92.4	50
3291-75	50-75mm	5μm	117.6	62
3291-100	75-100mm	5μm	143	70
3291-125	100-125mm	6μm	168.2	82
3291-150	125-150mm	6μm	192	94.5
3291-175	150-175mm	7μm	217	107

(mm)

ball tips are not included



3291-25

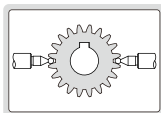


IP54
WATERPROOF

DATA
OUTPUT

DIGITAL GEAR TOOTH MICROMETER

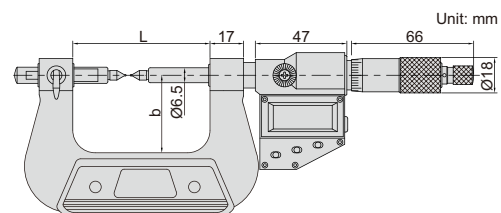
- Measure over-pin diameter of gears
- Resolution 0.001mm/0.00005"
- IP54 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC, data output
- Data output
- LR44 battery, automatic power off
- Ratchet stop
- Supplied with setting standards (except 0-25mm/0-1")
- Optional accessory: ball tips (code 7391), data output cable (code 7306-30, 7302-SPC2A, 7305-SPC3)



ball tips are not included



3591-25A



Code	Range	Accuracy	L	b
3591-25A	0-25mm/0-1"	±4μm	67	38
3591-50A	25-50mm/1-2"	±4μm	92.4	50
3591-75A	50-75mm/2-3"	±5μm	117.6	62
3591-100A	75-100mm/3-4"	±5μm	143	70

BALL TIPS FOR GEAR TOOTH MICROMETER

- Supplied in pair
- Suitable for 3291, 3591 series



7391-T5



Code	Ball dia.(D)
7391-T3	SØ2.0mm
7391-T4	SØ2.5mm
7391-T5	SØ3.0mm
7391-T6	SØ3.5mm

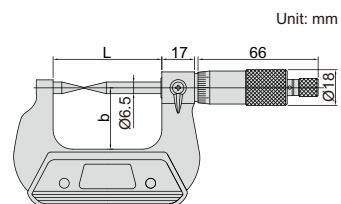
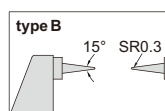
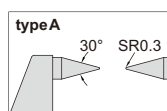
Code	Ball dia.(D)
7391-T7	SØ4.0mm
7391-T8	SØ4.5mm
7391-T9	SØ5.0mm
7391-T10	SØ6.0mm

POINT MICROMETER

- Measure the web thickness of drills, small grooves and keyways
- Graduation 0.01mm
- Ratchet stop
- Carbide tips
- Supplied with setting standards (except 0-25mm)



3230-25A



Code	Range	Type	Accuracy	L	b
3230-25A	0-25mm	A	4μm	57	32
3230-50A	25-50mm	A	4μm	82	44.5
3230-75A	50-75mm	A	5μm	107	57
3230-100A	75-100mm	A	5μm	132.6	69.5
3230-25BA	0-25mm	B	4μm	57	32
3230-50BA	25-50mm	B	4μm	82	44.5
3230-75BA	50-75mm	B	5μm	107	57
3230-100BA	75-100mm	B	5μm	132.6	69.5

DIGITAL POINT MICROMETER

- Measure the web thickness of drills, small grooves and keyways
- Resolution 0.001mm/0.00005"
- IP54 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC, data output
- Data output
- LR44 battery, automatic power off
- Ratchet stop
- Carbide tips
- Supplied with setting standards (except 0-25mm/0-1")
- Optional accessory: data output cable (code 7306-30, 7302-SPC2A, 7305-SPC3)

IP54
WATERPROOF

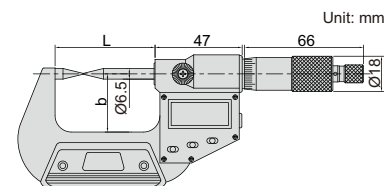
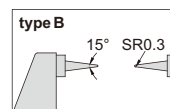
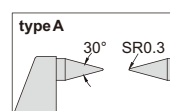
DATA
OUTPUT



3530-25A

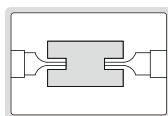
Code	Range	Type	Accuracy	L	b
3530-25A	0-25mm/0-1"	A	±4μm	57	32
3530-50A	25-50mm/1-2"	A	±4μm	82	44.5
3530-75A	50-75mm/2-3"	A	±5μm	107	57
3530-100A	75-100mm/3-4"	A	±5μm	132.6	69.5
3530-25BA	0-25mm/0-1"	B	±4μm	57	32
3530-50BA	25-50mm/1-2"	B	±4μm	82	44.5
3530-75BA	50-75mm/2-3"	B	±5μm	107	57
3530-100BA	75-100mm/3-4"	B	±5μm	132.6	69.5

(mm)



BLADE MICROMETER

- Measure the groove diameter of shafts and keyways
- Graduation 0.01mm
- Non-rotating spindle
- Ratchet stop
- Supplied with setting standards (except 0-25mm)

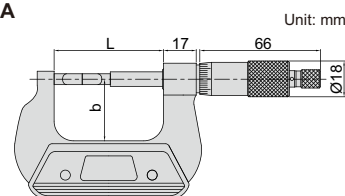
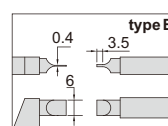
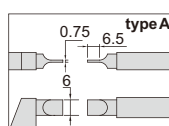


(mm)

Code	Range	Type	Accuracy	L	b
3232-25A	0-25mm	A	4μm	57	32
3232-50A	25-50mm	A	4μm	82	44.5
3232-75A	50-75mm	A	5μm	107	57
3232-100A	75-100mm	A	5μm	132.6	69.5
3232-125A	100-125mm	A	6μm	158	82
3232-150A	125-150mm	A	6μm	183.4	94.5
3232-175A	150-175mm	A	7μm	208.8	107
3232-25BA	0-25mm	B	4μm	57	32
3232-50BA	25-50mm	B	4μm	82	44.5



3232-25A



DIGITAL BLADE MICROMETER

- Measure the groove diameter of shafts and keyways
- Resolution 0.001mm/0.00005"
- Non-rotating spindle
- Button function: on/off, set, mm/inch, ABS/INC, data output
- Data output
- LR44 battery, automatic power off
- Ratchet stop
- Supplied with setting standards (except 0-25mm/0-1")
- Optional accessory: data output cable (code 7306-30, 7302-SPC2A, 7305-SPC3)

DATA
OUTPUT

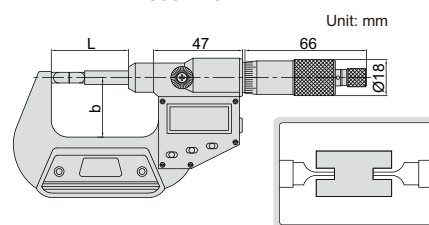
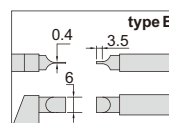
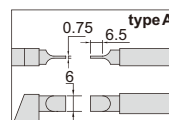
NON-ROTATING
SPINDLE



3532-25A

Code	Range	Type	Accuracy	L	b
3532-25A	0-25mm/0-1"	A	±4μm	57	32
3532-50A	25-50mm/1-2"	A	±4μm	82	44.5
3532-75A	50-75mm/2-3"	A	±5μm	107	57
3532-100A	75-100mm/3-4"	A	±5μm	132.6	69.5
3532-25BA	0-25mm/0-1"	B	±4μm	57	32
3532-50BA	25-50mm/1-2"	B	±4μm	82	44.5

(mm)



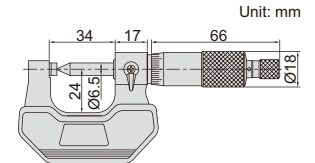
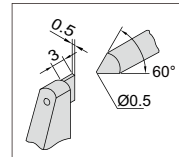
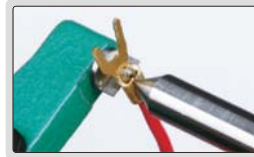
RELATIVE PRODUCT: DIGITAL CRIMP
HEIGHT CALIPER (CODE 1165-150A)

CRIMP HEIGHT MICROMETER

- Measure the height of crimp contact
- Graduation 0.01mm
- Ratchet stop



3266-25BA



Code	Range	Accuracy
3266-25BA	0-25mm	4µm

IP54
WATERPROOF

DATA
OUTPUT

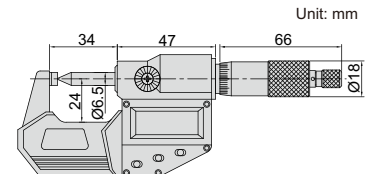
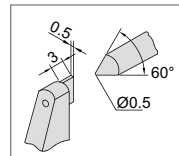
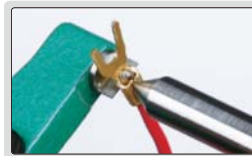
RELATIVE PRODUCT: DIGITAL CRIMP
HEIGHT CALIPER (CODE 1165-150A)

DIGITAL CRIMP HEIGHT MICROMETER

- Measure the height of crimp contact
- Resolution 0.001mm/0.00005"
- IP54 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC, data output
- Data output
- LR44 battery, automatic power off
- Ratchet stop
- Optional accessory: data output cable (code 7306-30, 7302-SPC2A, 7305-SPC3)



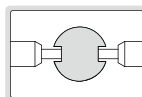
3566-25BA



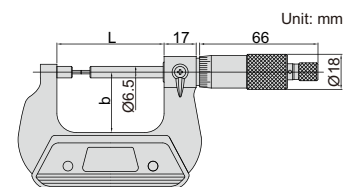
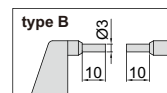
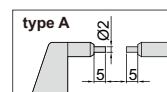
Code	Range	Accuracy
3566-25BA	0-25mm/0-1"	±4µm

SPLINE MICROMETER

- Measure splined shafts, slots and keyways
- Graduation 0.01mm
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards (except 0-25mm)



3233-25BA



Code	Range	Type	Accuracy	L	b
3233-25A	0-25mm	A	4µm	57	32
3233-25BA	0-25mm	B	4µm	57	32
3233-50BA	25-50mm	B	4µm	82	44.5
3233-75BA	50-75mm	B	5µm	107	57
3233-100BA	75-100mm	B	5µm	132.6	69.5
3233-125BA	100-125mm	B	6µm	158	82
3233-150BA	125-150mm	B	6µm	183.4	94.5
3233-175BA	150-175mm	B	7µm	208.8	107

DIGITAL SPLINE MICROMETER

IP54
WATERPROOF

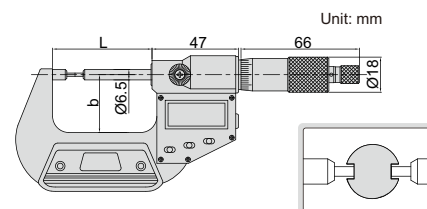
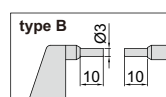
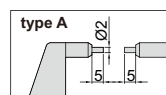
**DATA
OUTPUT**

- Measure splined shafts, slots and keyways
- Resolution 0.001mm/0.00005"
- IP54 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC, data output
- Data output
- LR44 battery, automatic power off
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards (except 0-25mm/0-1")
- Optional accessory: data output cable
(code **7306-30, 7302-SPC2A, 7305-SPC3**)



3533-25BA

					(mm)
Code	Range	Type	Accuracy	L	b
3533-25A	0-25mm/0-1"	A	±4μm	57	32
3533-50A	25-50mm/1-2"	A	±4μm	82	44.5
3533-75A	50-75mm/2-3"	A	±5μm	107	57
3533-100A	75-100mm/3-4"	A	±5μm	132.6	69.5
3533-25BA	0-25mm/0-1"	B	±4μm	57	32
3533-50BA	25-50mm/1-2"	B	±4μm	82	44.5
3533-75BA	50-75mm/2-3"	B	±5μm	107	57
3533-100BA	75-100mm/3-4"	B	±5μm	132.6	69.5



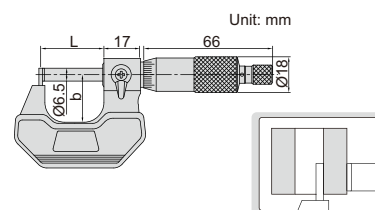
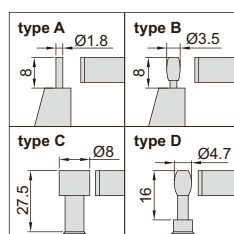
CYLINDRICAL ANVIL TUBE MICROMETER

- Measure wall thickness of tubes
- Graduation 0.01mm
- Ratchet stop
- Carbide spindle tip
- Supplied with setting standards (except 0-25mm)



3261-25A

					(mm)
Code	Range	Type	Accuracy	L	b
3261-25A	0-25mm	A	6µm	31	24
3261-50A	25-50mm	A	6µm	57	32
3261-25BA	0-25mm	B	6µm	31	24
3261-50BA	25-50mm	B	6µm	57	32
3261-25CA	0-25mm	C	6µm	31	24
3261-25DA	0-25mm	D	6µm	31	24



DIGITAL CYLINDRICAL ANVIL TUBE MICROMETER

IP54
WATERPROOF

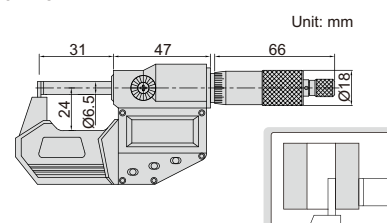
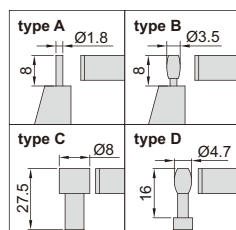
**DATA
OUTPUT**

- Measure wall thickness of tubes
- Resolution 0.001mm/0.00005"
- IP54 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC, data output
- Data output
- LR44 battery, automatic power off
- Ratchet stop
- Carbide spindle tip
- Supplied with setting standards (except 0-25mm/0-1")
- Optional accessory: data output cable
(code **7306-30, 7302-SPC2A, 7305-SPC3**)



3561-25A

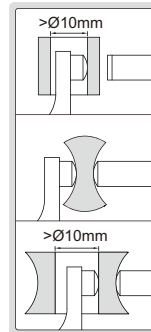
Code	Range	Type	Accuracy
3561-25A	0-25mm/0-1"	A	±6μm
3561-25BA	0-25mm/0-1"	B	±6μm
3561-25CA	0-25mm/0-1"	C	±6μm
3561-25DA	0-25mm/0-1"	D	±6μm



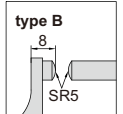
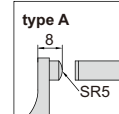
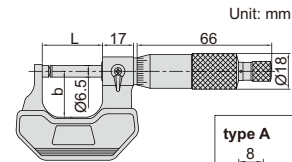
SPHERICAL ANVIL TUBE MICROMETER

- Measure wall thickness of tubes
- Graduation 0.01mm
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards (except 0-25mm)

Code	Range	Type	Accuracy	L	b
3260-25A	0-25mm	A	4μm	32	24
3260-50A	25-50mm	A	4μm	57	32
3260-75A	50-75mm	A	5μm	82	44.5
3260-100A	75-100mm	A	5μm	107	57
3260-25SA	0-25mm	B	4μm	32	24
3260-50SA	25-50mm	B	4μm	57	32
3260-75SA	50-75mm	B	5μm	82	44.5
3260-100SA	75-100mm	B	5μm	107	57



3260-25A



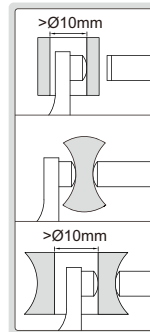
DIGITAL SPHERICAL ANVIL TUBE MICROMETER

IP54
WATERPROOF

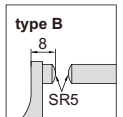
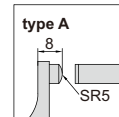
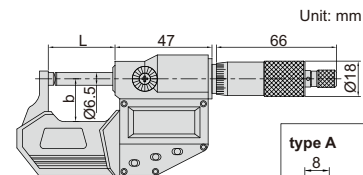
DATA
OUTPUT

- Measure wall thickness of tubes
- Resolution 0.001mm/0.00005"
- IP54 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC, data output
- Data output
- LR44 battery, automatic power off
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards (except 0-25mm/0-1")
- Optional accessory: data output cable (code 7306-30, 7302-SPC2A, 7305-SPC3)

Code	Range	Type	Accuracy	L	b
3560-25A	0-25mm/0-1"	A	±4μm	32	24
3560-50A	25-50mm/1-2"	A	±4μm	57	32
3560-75A	50-75mm/2-3"	A	±5μm	82	44.5
3560-100A	75-100mm/3-4"	A	±5μm	107	57
3560-25SA	0-25mm/0-1"	B	±4μm	32	24
3560-50SA	25-50mm/1-2"	B	±4μm	57	32
3560-75SA	50-75mm/2-3"	B	±5μm	82	44.5
3560-100SA	75-100mm/3-4"	B	±5μm	107	57

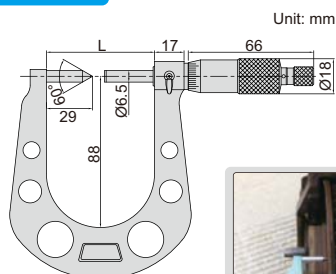


3560-25A



RELATIVE PRODUCT: DIGITAL DISK BRAKE AND PAD CALIPER
DIGITAL DRUM BRAKE CALIPER (CODE 1162-150A, 1167-150A, 1168-300A)

- Measure thickness of disk brakes
- Graduation 0.01mm
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards



Code	Range	Accuracy	L
3288-33A	7.6-33mm	5μm	64.5
3288-50A	25-50mm	5μm	82



DISK BRAKE MICROMETER



3288-33A

DIGITAL DISK BRAKE MICROMETER

IP54
WATERPROOF

DATA
OUTPUT

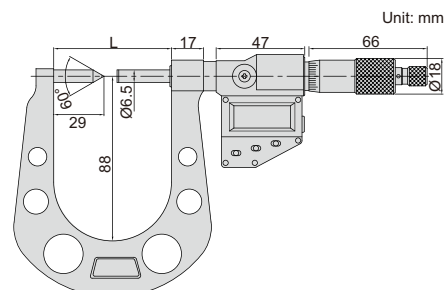
- Measure thickness of disk brakes
- Resolution 0.001mm/0.00005"
- IP54 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC, data output
- Data output
- LR44 battery, automatic power off
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards
- Optional accessory: data output cable (code 7306-30, 7302-SPC2A, 7305-SPC3)

(mm)

Code	Range	Accuracy	L
3588-33A	7.6-33mm/0.3-1.3"	±5μm	64.5
3588-50A	25-50mm/1-2"	±5μm	82



3588-33A



SHEET METAL MICROMETER

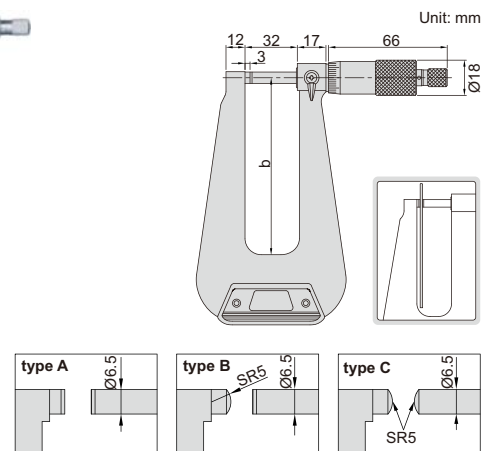
- Deep frame suitable for sheet metal, paper and plastic
- Graduation 0.01mm
- Ratchet stop
- Carbide measuring faces

(mm)

Code	Range	Type	Accuracy	b
3239-253	0-25mm	A	7μm	155
3239-253F	0-25mm	B	7μm	155
3239-254F	0-25mm	B	10μm	310
3239-253S	0-25mm	C	7μm	155



3239-253



DIGITAL SHEET METAL MICROMETER

IP54
WATERPROOF

DATA
OUTPUT

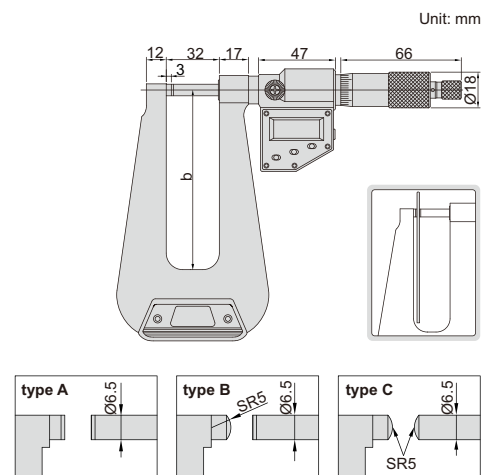
- Deep frame suitable for sheet metal, paper and plastic
- Resolution 0.001mm/0.00005"
- IP54 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC, data output
- Data output
- LR44 battery, automatic power off
- Ratchet stop
- Carbide measuring faces
- Optional accessory: data output cable (code 7306-30, 7302-SPC2A, 7305-SPC3)

(mm)

Code	Range	Type	Accuracy	b
3539-253A	0-25mm/0-1"	A	±7μm	155
3539-253FA	0-25mm/0-1"	B	±7μm	155
3539-254FA	0-25mm/0-1"	B	±10μm	310
3539-253SA	0-25mm/0-1"	C	±7μm	155

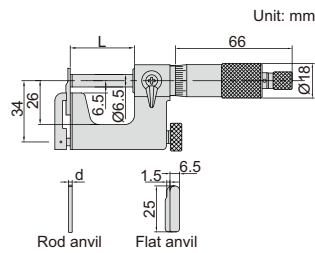


3539-253A

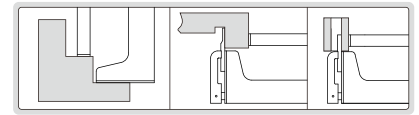


INTERCHANGEABLE ANVIL MICROMETER

- Measure tube thickness, shoulder edge distance, rivet head height, etc.
- Supplied with flat anvil and rod anvil
- Graduation 0.01mm
- Ratchet stop
- Carbide spindle tip
- Setting standards are included (except 0-25mm)



(mm)				
Code	Range	Accuracy	L	d
3262-25A	0-25mm	4µm	28.5	Ø3
3262-50A	25-50mm	4µm	53.5	Ø5



DIGITAL INTERCHANGEABLE ANVIL MICROMETER

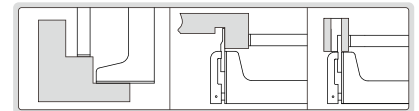
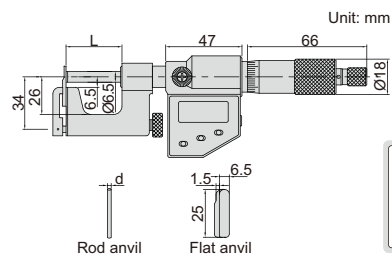
IP54
WATERPROOF

**DATA
OUTPUT**

- Measure tube thickness, shoulder edge distance, rivet head height, etc.
- Supplied with flat anvil and rod anvil
- Resolution 0.001mm/0.00005"
- IP54 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC, data output
- Data output
- LR44 battery, automatic power off
- Ratchet stop
- Carbide spindle tip
- Setting standards are included (except 0-25mm/0-1")
- Optional accessory: data output cable (code **7306-30**, **7302-SPC2A**, **7305-SPC3**)



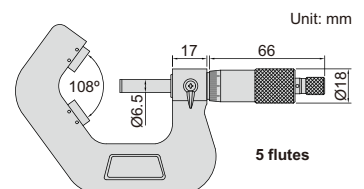
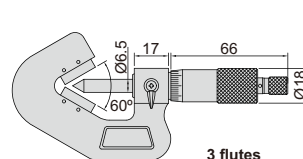
(mm)				
Code	Range	Accuracy	L	d
3562-25A	0-25mm/0-1"	±4µm	28.5	Ø3
3562-50A	25-50mm/1-2"	±4µm	53.5	Ø5



V-ANVIL MICROMETER

- Measure the outside diameter of cutting tools (such as taps, reamers, end mills) with 3 or 5 flutes
- Graduation 0.01mm
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards

Code	Range	Flutes	Accuracy
3290-153A	1-15mm	3	4µm
3290-203A	5-20mm	3	4µm
3290-353A	20-35mm	3	5µm
3290-503A	35-50mm	3	5µm
3290-653A	50-65mm	3	6µm
3290-803A	65-80mm	3	6µm
3290-953A	80-95mm	3	7µm
3290-255A	5-25mm	5	4µm
3290-455A	25-45mm	5	5µm
3290-655A	45-65mm	5	6µm
3290-855A	65-85mm	5	7µm



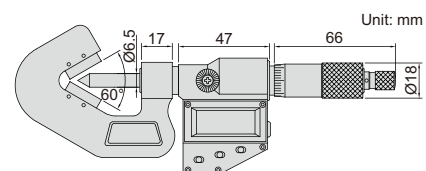
DIGITAL V-ANVIL MICROMETER

- Measure the outside diameter of cutting tools (such as taps, reamers, end mills) with 3 flutes
- Resolution 0.001mm/0.00005"
- IP54 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC, data output
- Data output
- LR44 battery, automatic power off
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards
- Optional accessory: data output cable (code 7306-30, 7302-SPC2A, 7305-SPC3)

Code	Range	Flutes	Accuracy
3590-153A	1-15mm/0.04-0.6"	3	±4μm
3590-203A	5-20mm/0.2-0.8"	3	±4μm
3590-353A	20-35mm/0.8-1.4"	3	±5μm
3590-503A	35-50mm/1.4-2.0"	3	±5μm



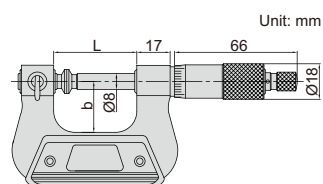
3590-153A



Unit: mm

NON-ROTATING SPINDLE UNIVERSAL MICROMETER

NON-ROTATING
SPINDLE



Unit: mm



3280-25A

- Graduation 0.01mm
- Non-rotating spindle
- Ratchet stop
- Supplied with 7 pairs of anvil/spindle tip
- Setting standards are included (except 0-25mm)
- Optional accessory: 55° anvil/spindle tip (code 3280-SP1 and 3280-SP2)

Code	Range	Accuracy	L	b
3280-25A	0-25mm	4μm	42	26
3280-50A	25-50mm	4μm	67	38

(mm)

55° anvil/spindle tip (optional)

Unit: mm

Code 3280-SP1 Knife-edge		
Code 3280-SP2 Point		

Anvil/spindle tip (included)

Unit: mm

Flat		
Spherical		
Spline		
Disk		
Blade		
Knife-edge		
Point		

DIGITAL UNIVERSAL MICROMETER

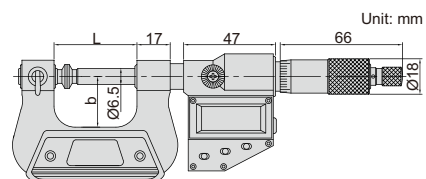
- Resolution 0.001mm/0.00005"
- IP54 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC, data output
- Data output
- LR44 battery, automatic power off
- Ratchet stop
- Supplied with 7 pairs of anvil/spindle tip (same as series 3280)
- Setting standards are included (except 0-25mm/0-1")
- Optional accessory: 55° anvil/spindle tip code 3280-SP1 and 3280-SP2 (same as series 3280), data output cable (code 7306-30, 7302-SPC2A, 7305-SPC3)

Code	Range	Accuracy	L	b
3580-25A	0-25mm/0-1"	±4μm	42	26
3580-50A	25-50mm/1-2"	±4μm	67	38

(mm)



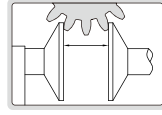
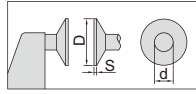
3580-25A



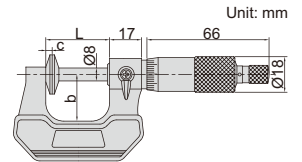
Unit: mm

DISK MICROMETER

- Measure root tangent length of gear
- Graduation 0.01mm
- Ratchet stop
- Supplied with setting standards



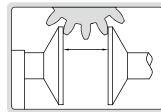
3282-25



Code	Range	Accuracy	Parallelism	L	b	c	D	S	d
3282-25	0-25mm	4µm	5µm	34	24	3.3	Ø20	0.7	Ø8
3282-50	25-50mm	4µm	5µm	59	32	3.3	Ø20	0.7	Ø8
3282-75	50-75mm	5µm	5µm	85	45	3.3	Ø20	0.7	Ø8
3282-100	75-100mm	5µm	5µm	110	57	3.3	Ø20	0.7	Ø8

NON-ROTATING SPINDLE

- Measure root tangent length of gear
- Graduation 0.01mm
- Non-rotating spindle
- Ratchet stop
- Supplied with setting standards



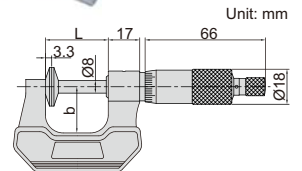
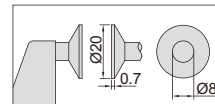
(mm)

Code	Range	Accuracy	Parallelism	L	b
3294-25	0-25mm	4µm	5µm	34	24
3294-50	25-50mm	4µm	5µm	59	32
3294-75	50-75mm	5µm	5µm	85	45
3294-100	75-100mm	5µm	5µm	110	57

NON-ROTATING SPINDLE DISK MICROMETER



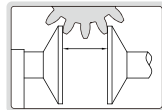
3294-25



DATA OUTPUT

NON-ROTATING SPINDLE

- Measure root tangent length of gear
- Resolution 0.001mm/0.00005"
- Non-rotating spindle
- Button function: on/off, set, mm/inch, ABS/INC, data output
- Data output
- LR44 battery, automatic power off
- Ratchet stop
- Supplied with setting standards
- Optional accessory: data output cable (code 7306-30, 7302-SPC2A, 7305-SPC3)



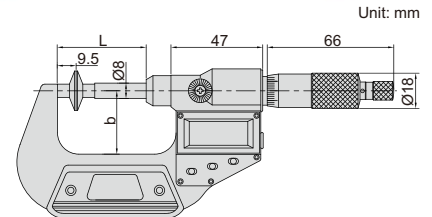
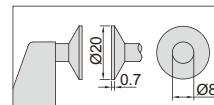
(mm)

Code	Range	Accuracy	Parallelism	L	b
3594-25A	0-25mm/0-1"	±4µm	5µm	43	32
3594-50A	25-50mm/1-2"	±4µm	5µm	68	44.5
3594-75A	50-75mm/2-3"	±5µm	5µm	93	57
3594-100A	75-100mm/3-4"	±5µm	5µm	118.5	70

DIGITAL NON-ROTATING SPINDLE DISK MICROMETER

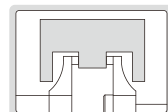


3594-25A



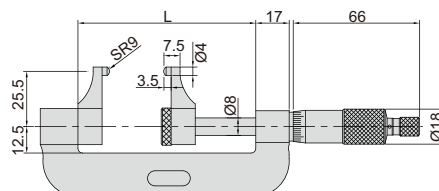
CALIPER TYPE MICROMETER

- Graduation 0.01mm
- Non-rotating spindle
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards (except 0-25mm)



Unit: mm

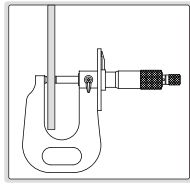
Code	Range	Accuracy	L
3238-25	0-25mm	5µm	56
3238-50	25-50mm	6µm	81



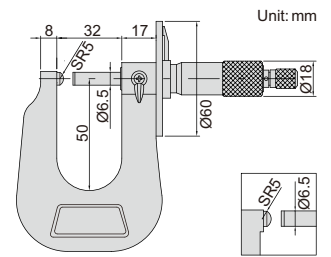
3238-25

SHEET METAL MICROMETER

- Measure thickness of sheet metal, paper, plastic and rubber parts
- Graduation 0.01mm
- Ratchet stop
- Carbide measuring faces



3263-25A



Code	Range	Accuracy
3263-25A	0-25mm	4µm

HUB MICROMETER

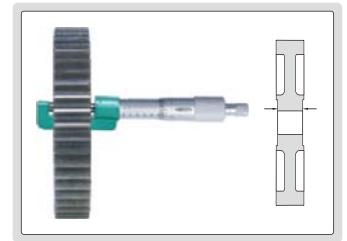
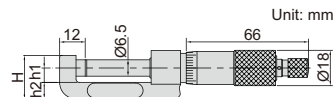
- Measure hub thickness and shoulder inside a bore
- Graduation 0.01mm
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards (except 0-25mm)



3292-25

(mm)

Code	Range	Accuracy	h1	h2	H
3292-25	0-25mm	4µm	6	9	18.7
3292-50	25-50mm	4µm	6.5	11	21.2
3292-75	50-75mm	5µm	6.5	11	21.2
3292-100	75-100mm	5µm	6.5	11	21.2

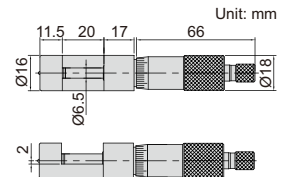
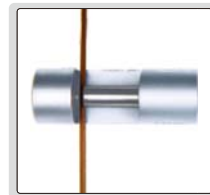


WIRE MICROMETER

- Measure diameter of wires and small balls
- Graduation 0.01mm
- Ratchet stop
- Carbide measuring faces



3285-10



Code	Range	Accuracy
3285-10	0-10mm	4µm

CAN SEAM MICROMETER



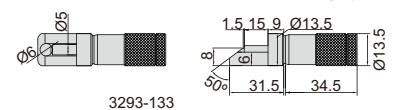
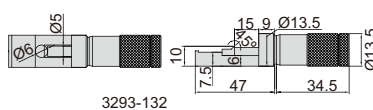
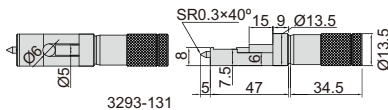
3293-131



3293-132

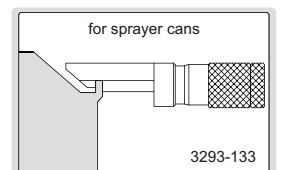
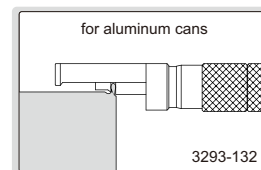
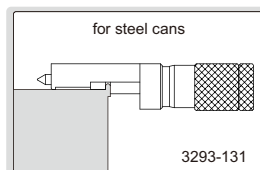


3293-133



- Measure the width, height and depth of can seams
- Graduation 0.01mm

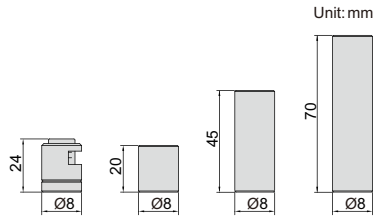
Code	Range	Accuracy
3293-131	0-13mm	4µm
3293-132	0-13mm	4µm
3293-133	0-13mm	4µm



MICROMETER MEASURING FORCE DETECTOR

- For outside micrometers
0-25mm/0-1", 25-50mm/1-2",
50-75mm/2-3" and 75-100mm/3-4"

Code	Measuring force
6315	5-12N



6315

OPTICAL PARALLEL

- Check the flatness and parallelism of measuring faces of micrometer

Code	Parallels included	Applicable micrometer
4184-41A	15.62mm, 15.75mm, 15.87mm, 16.00mm	0-25mm
4184-42A	40.62mm, 40.75mm, 40.87mm, 41.00mm	25-50mm
4184-43B	65.62mm, 65.75mm, 65.87mm, 66.00mm	50-75mm
4184-44B	90.62mm, 90.75mm, 90.87mm, 91.00mm	75-100mm

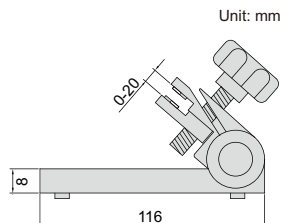


4184-41A

MICROMETER STAND

- Suitable for micrometers
up to 100mm

Code
6300

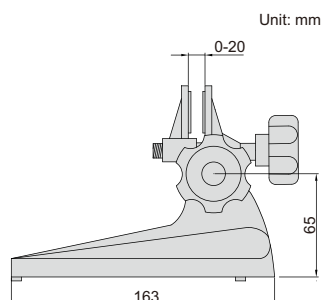


6300

MICROMETER STAND

- Suitable for micrometers
up to 100mm

Code
6301



6301

MICROMETER SETTING STANDARD



6310-100



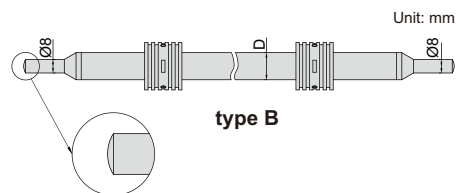
type A



6310-300

Code	Length	Type	Accuracy	D
6310-25	25	A	$\pm 1.5\mu\text{m}$	$\varnothing 7$
6310-50	50	A	$\pm 2\mu\text{m}$	$\varnothing 7$
6310-75	75	A	$\pm 2.5\mu\text{m}$	$\varnothing 7$
6310-100	100	A	$\pm 3\mu\text{m}$	$\varnothing 8$
6310-125	125	A	$\pm 3.5\mu\text{m}$	$\varnothing 8$
6310-150	150	A	$\pm 4\mu\text{m}$	$\varnothing 8$
6310-175	175	A	$\pm 4.5\mu\text{m}$	$\varnothing 8$
6310-200	200	A	$\pm 5\mu\text{m}$	$\varnothing 8$
6310-225	225	A	$\pm 5.5\mu\text{m}$	$\varnothing 8$
6310-250	250	A	$\pm 6\mu\text{m}$	$\varnothing 8$
6310-275	275	A	$\pm 6.5\mu\text{m}$	$\varnothing 8$
6310-300	300	B	$\pm 7\mu\text{m}$	$\varnothing 16$
6310-325	325	B	$\pm 7.5\mu\text{m}$	$\varnothing 16$
6310-350	350	B	$\pm 8\mu\text{m}$	$\varnothing 16$
6310-375	375	B	$\pm 8.5\mu\text{m}$	$\varnothing 16$
6310-400	400	B	$\pm 9\mu\text{m}$	$\varnothing 16$
6310-425	425	B	$\pm 9.5\mu\text{m}$	$\varnothing 16$

Code	Length	Type	Accuracy	D
6310-450	450	B	$\pm 10\mu\text{m}$	$\varnothing 16$
6310-475	475	B	$\pm 10.5\mu\text{m}$	$\varnothing 16$
6310-500	500	B	$\pm 11\mu\text{m}$	$\varnothing 16$
6310-525	525	B	$\pm 11.5\mu\text{m}$	$\varnothing 16$
6310-575	575	B	$\pm 12.5\mu\text{m}$	$\varnothing 16$
6310-625	625	B	$\pm 13.5\mu\text{m}$	$\varnothing 16$
6310-675	675	B	$\pm 14.5\mu\text{m}$	$\varnothing 16$
6310-725	725	B	$\pm 15.5\mu\text{m}$	$\varnothing 16$
6310-775	775	B	$\pm 16.5\mu\text{m}$	$\varnothing 16$
6310-825	825	B	$\pm 17.5\mu\text{m}$	$\varnothing 16$
6310-875	875	B	$\pm 18.5\mu\text{m}$	$\varnothing 16$
6310-925	925	B	$\pm 19.5\mu\text{m}$	$\varnothing 16$
6310-975	975	B	$\pm 20.5\mu\text{m}$	$\varnothing 16$
6310-1050	1050	B	$\pm 22\mu\text{m}$	$\varnothing 23$
6310-1150	1150	B	$\pm 24\mu\text{m}$	$\varnothing 23$
6310-1250	1250	B	$\pm 26\mu\text{m}$	$\varnothing 23$
6310-1350	1350	B	$\pm 28\mu\text{m}$	$\varnothing 23$



type B

Unit: mm

Code	Length	Type	Accuracy	D
6310-1450	1450	B	$\pm 30\mu\text{m}$	$\varnothing 23$
6310-1550	1550	B	$\pm 32\mu\text{m}$	$\varnothing 23$
6310-1650	1650	B	$\pm 34\mu\text{m}$	$\varnothing 23$
6310-1750	1750	B	$\pm 36\mu\text{m}$	$\varnothing 23$
6310-1850	1850	B	$\pm 38\mu\text{m}$	$\varnothing 23$
6310-1950	1950	B	$\pm 40\mu\text{m}$	$\varnothing 23$

DIGITAL MICROMETER HEAD

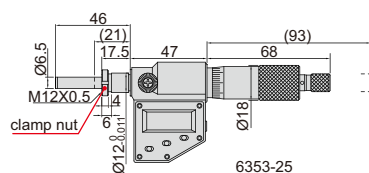
- Resolution 0.001mm/0.00005"
- IP54 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC, data output
- Data output
- LR44 battery, automatic power off
- Ratchet stop
- Optional accessory: data output cable (code 7306-30, 7302-SPC2A, 7305-SPC3)



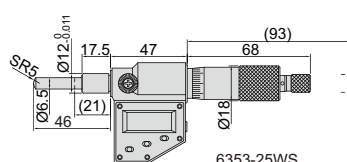
6353-25W

IP54
WATERPROOF

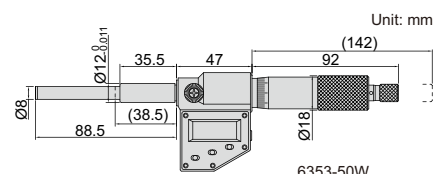
DATA
OUTPUT



6353-25



6353-25WS



6353-50W

Rotating spindle

Code	Range	Stem	Spindle tip	Accuracy
6353-25	0-25mm/0-1"	with clamp nut	flat (carbide)	$\pm 2\mu\text{m}$
6353-25W	0-25mm/0-1"	plain	flat (carbide)	$\pm 2\mu\text{m}$
6353-25S	0-25mm/0-1"	with clamp nut	spherical (SR5)	$\pm 2\mu\text{m}$
6353-25WS	0-25mm/0-1"	plain	spherical (SR5)	$\pm 2\mu\text{m}$
6353-50W	0-50mm/0-2"	plain	flat (carbide)	$\pm 4\mu\text{m}$

Non-rotating spindle

Code	Range	Stem	Spindle tip	Accuracy
6354-25W	0-25mm/0-1"	plain	flat (carbide)	$\pm 2\mu\text{m}$

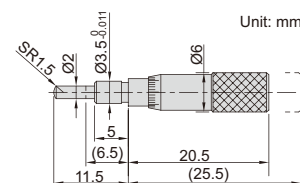
SMALL MICROMETER HEAD

- Graduation 0.02mm



6372-5WS

Code	Range	Stem	Spindle tip	Accuracy
6372-5WS	0-5mm	plain	spherical (SR1.5)	$5\mu\text{m}$

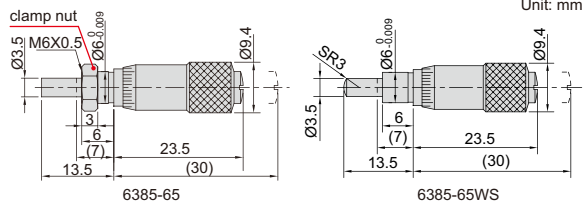


Unit: mm

SMALL MICROMETER HEAD

- Range 0-6.5mm
- Graduation 0.01mm
- Accuracy 5µm

Code	Stem	Spindle tip
6385-65	with clamp nut	flat (carbide)
6385-65W	plain	flat (carbide)
6385-65S	with clamp nut	spherical (SR3)
6385-65WS	plain	spherical (SR3)

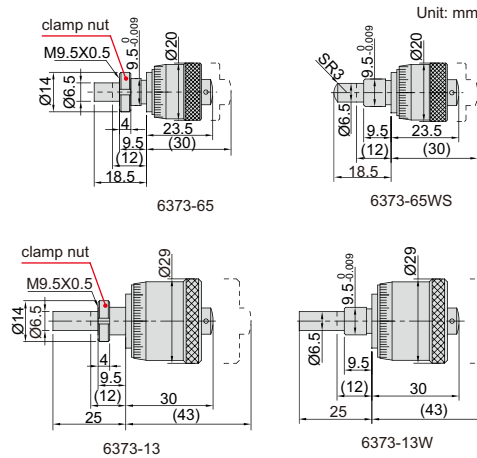


6385-65W

LARGE THIMBLE MICROMETER HEAD

- Large thimble diameter for easy reading
- Graduation 0.01mm
- Accuracy 3µm

Code	Range	Stem	Spindle tip
6373-65	0-6.5mm	with clamp nut	flat (carbide)
6373-65W	0-6.5mm	plain	flat (carbide)
6373-65S	0-6.5mm	with clamp nut	spherical (SR3)
6373-65WS	0-6.5mm	plain	spherical (SR3)
6373-13	0-13mm	with clamp nut	flat (carbide)
6373-13W	0-13mm	plain	flat (carbide)



6373-65

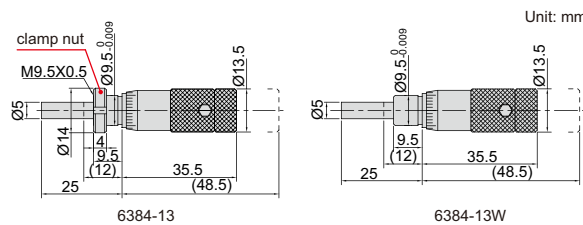


6373-13

MICROMETER HEAD WITH ZERO ADJUSTABLE THIMBLE

- Range 0-13mm
- Graduation 0.01mm
- Accuracy 3µm
- The thimble can be set to zero at any position

Code	Stem	Spindle tip
6384-13	with clamp nut	flat (carbide)
6384-13W	plain	flat (carbide)

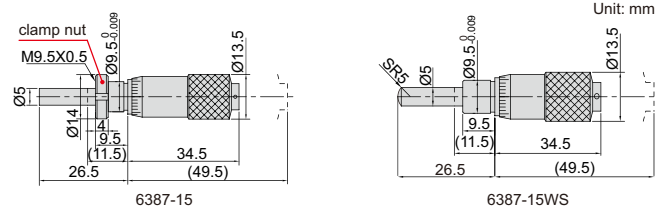


6384-13W

MICROMETER HEAD

- Graduation 0.01mm
- Accuracy 3µm

Code	Range	Stem	Spindle tip
6387-15	0-15mm	with clamp nut	flat (carbide)
6387-15W	0-15mm	plain	flat (carbide)
6387-15S	0-15mm	with clamp nut	spherical (SR5)
6387-15WS	0-15mm	plain	spherical (SR5)



6387-15WS

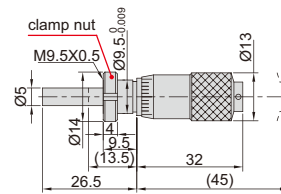
MICROMETER HEAD



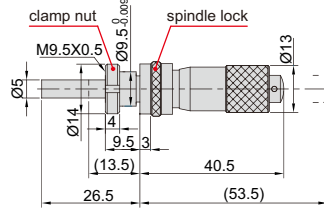
6386-13W



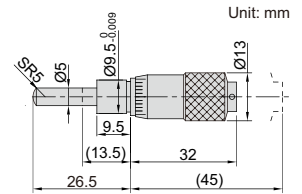
6386-13P



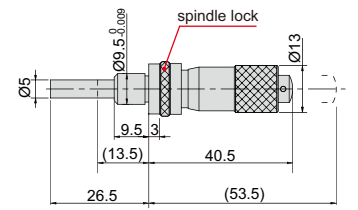
6386-13



6386-13P



6386-13WS



6386-13WP

Code	Range	Stem	Spindle tip	Remark	Accuracy
6386-13	0-13mm	with clamp nut	flat (carbide)		3μm
6386-13W	0-13mm	plain	flat (carbide)		3μm
6386-13S	0-13mm	with clamp nut	spherical (SR5)		3μm
6386-13WS	0-13mm	plain	spherical (SR5)		3μm
6386-13P	0-13mm	with clamp nut	flat (carbide)	with spindle lock	3μm
6386-13WP	0-13mm	plain	flat (carbide)	with spindle lock	3μm

■ Graduation 0.01mm

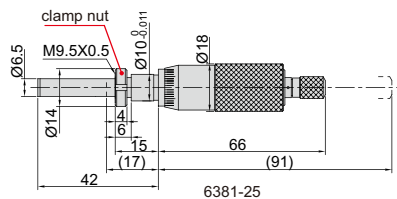
MICROMETER HEAD



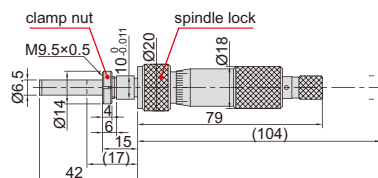
6381-25



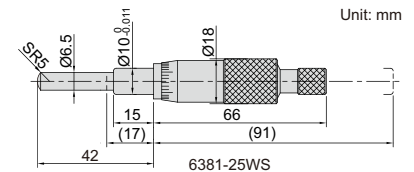
6381-25P



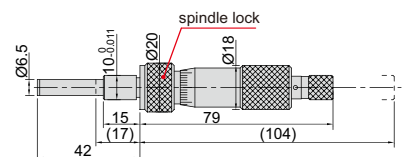
6381-25



6381-25P



6381-25WS



6381-25WP

Code	Range	Stem	Spindle tip	Remark	Accuracy
6381-25	0-25mm	with clamp nut	flat (carbide)		3μm
6381-25W	0-25mm	plain	flat (carbide)		3μm
6381-25S	0-25mm	with clamp nut	spherical (SR5)		3μm
6381-25WS	0-25mm	plain	spherical (SR5)		3μm
6381-25P	0-25mm	with clamp nut	flat (carbide)	with spindle lock	3μm
6381-25WP	0-25mm	plain	flat (carbide)	with spindle lock	3μm

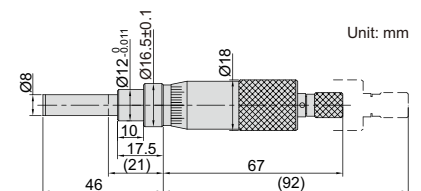
■ Graduation 0.01mm
■ Ratchet stop

NON-ROTATING SPINDLE MICROMETER HEAD



6377-25W

- Graduation 0.01mm
- Ratchet stop
- Non-rotating spindle



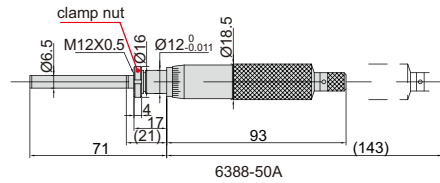
Code	Range	Stem	Spindle tip	Accuracy
6377-25W	0-25mm	plain	flat (carbide)	3μm

LARGE MICROMETER HEAD

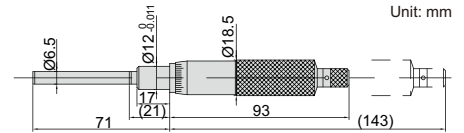


6388-50AW

- Graduation 0.01mm
- Ratchet stop



6388-50A



6388-50AW

Unit: mm

Code	Range	Stem	Spindle tip	Accuracy
6388-50A	0-50mm	with clamp nut	flat (carbide)	5μm
6388-50AW	0-50mm	plain	flat (carbide)	5μm

QUICK SPINDLE FEEDING MICROMETER HEAD



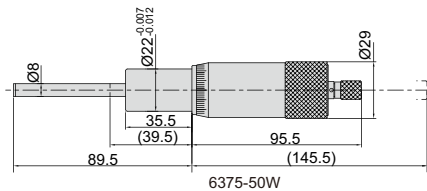
6375-50W



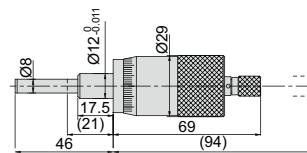
6375-25W



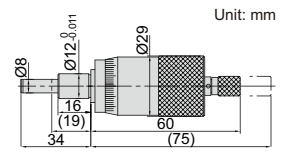
6375-15W



6375-50W



6375-25W



6375-15W

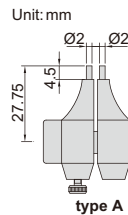
Unit: mm

Code	Range	Stem	Spindle tip	Accuracy
6375-15W	0-15mm	plain	flat (carbide)	3μm
6375-25W	0-25mm	plain	flat (carbide)	3μm
6375-50W	0-50mm	plain	flat (carbide)	5μm

- Graduation 0.01mm
- Quick spindle feed of 1mm/rev.
- Ratchet stop

INSIDE MICROMETER

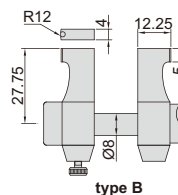
- Graduation 0.01mm
- Ratchet stop
- Carbide measuring faces
- Optional accessory: setting ring (code 6312)



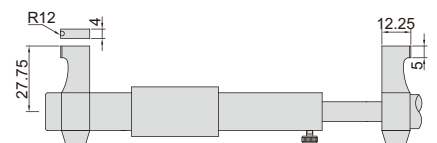
type A



3220-50



type B



type C

Code	Range	Type	Setting ring	Accuracy
3220-30	5-30mm	A	5mm (included)	7μm
3220-50	25-50mm	B	25mm (included)	8μm
3220-75	50-75mm	B	50mm (optional)	9μm
3220-100	75-100mm	C	75mm (optional)	10μm

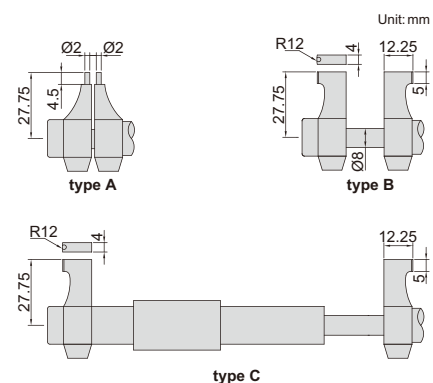
DIGITAL INSIDE MICROMETER

DATA
OUTPUT

- Resolution 0.001mm/0.00005"
- Button function: on/off, set, mm/inch, ABS/INC, data output
- Data output
- LR44 battery, automatic power off
- Ratchet stop
- Carbide measuring faces
- Optional accessory: data output cable (code **7306-30**, **7302-SPC2A**, **7305-SPC3**), setting ring (code **6312**)



3520-30



Code	Range	Type	Setting ring	Accuracy
3520-30	5-30mm/0.2-1.2"	A	5mm(included)	±5μm
3520-50	25-50mm/1-2"	B	25mm(included)	±6μm
3520-75	50-75mm/2-3"	B	50mm(optional)	±7μm
3520-100	75-100mm/3-4"	C	75mm(optional)	±8μm

INTERNAL SCREW THREAD MICROMETER

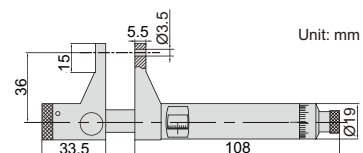


tips are not included

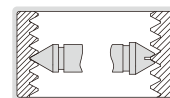


3640-45

- Measure pitch diameter of screw thread
- Graduation 0.01mm
- Ratchet stop
- Optional accessory: measuring tips for internal screw thread micrometer (code **7385**)



Code	Range	Accuracy	Applicable tips
3640-45	20-45mm	4μm	stem length L=5mm
3640-70	45-70mm	5μm	stem length L=5mm
3640-95	70-95mm	5μm	stem length L=13.5mm
3640-120	95-120mm	6μm	stem length L=13.5mm



INTERNAL GEAR TOOTH MICROMETER

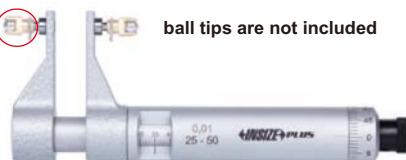
RELATIVE PRODUCT:
GEAR BORE GAGE (CODE 2428)



before ball tips
are installed

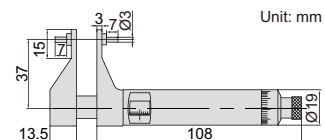


ball tips are not included

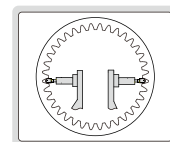


3637-50

- Measure over-pin diameter of gears
- Graduation 0.01mm
- Ratchet stop
- Optional accessory: ball tips (code **7383**)



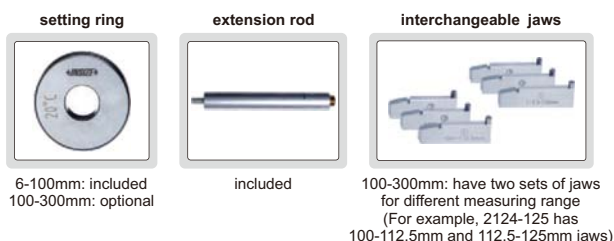
Code	Range	Accuracy
3637-50	25-50mm	4μm
3637-75	50-75mm	5μm





PISTOL GRIP THREE POINTS BORE GAGE

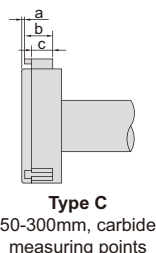
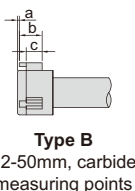
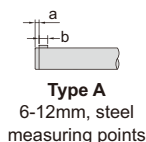
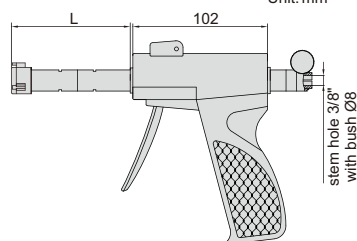
- Optional accessory:
digital indicators (code **2103-10F**,
resolution 0.001mm/0.00005")
or dial indicators (graduation 0.001mm),
setting rings (code **6312**)



Manufacturer Inspection Certificate

INSIZE Inspection Certificate			
Product name	Pistol Grip Three Points Internal Micrometer		
Code No.	2124-30	Traceable to	Germany 10339/D-K-15015-01-02/2012-09
Measuring range	25-30mm	Judgement	Germany 31-0830/DKD-K-08901/2012-09
Serial No.	0910120014	Inspected	
Standard temperature	20 °C	Inspector	<i>Paulo</i>
Actual Ring Size(mm)	Permissible Error(without digital indicator)	Measured Deviation	
25.0007	4	0	
25.9994		1	
27.9978		1	
29.9992		-1	

Unit: mm



Individual

Code	Range	Type	Accuracy (without digital indicator)	Setting ring	Extension rod (included)	L	a	b	c
2124-8 *	6-8mm	A	4µm	Ø6mm(included)	100mm	50	1.5	2.5	—
2124-10 *	8-10mm	A	4µm	Ø8mm(included)	100mm	50	1.5	2.5	—
2124-12 *	10-12mm	A	4µm	Ø10mm(included)	100mm	50	1.5	2.5	—
2124-16 *	12-16mm	B	4µm	Ø16mm(included)	150mm	65	0.5	6	4.5
2124-20 *	16-20mm	B	4µm	Ø16mm(included)	150mm	65	0.5	6	4.5
2124-25 *	20-25mm	B	4µm	Ø25mm(included)	150mm	91	0.5	8	6
2124-30 *	25-30mm	B	4µm	Ø25mm(included)	150mm	91	0.5	8	6
2124-40 *	30-40mm	B	4µm	Ø40mm(included)	150mm	97	0.5	14	12
2124-50 *	40-50mm	B	5µm	Ø40mm(included)	150mm	97	0.5	14	12
2124-63 *	50-63mm	C	5µm	Ø62mm(included)	150mm	112	0.5	17.5	14.5
2124-75 *	62-75mm	C	5µm	Ø62mm(included)	150mm	112	0.5	17.5	14.5
2124-88 *	75-88mm	C	5µm	Ø87mm(included)	150mm	112	0.5	17.5	14.5
2124-100 *	87-100mm	C	5µm	Ø87mm(included)	150mm	112	0.5	17.5	14.5
2124-125 *	100-125mm	C	5µm	Ø112.5mm(optional)	150mm	130	0.5	19.5	14.5
2124-150 *	125-150mm	C	5µm	Ø137.5mm(optional)	150mm	130	0.5	19.5	14.5
2124-175 *	150-175mm	C	5µm	Ø162.5mm(optional)	150mm	130	0.5	19.5	14.5
2124-200 *	175-200mm	C	5µm	Ø187.5mm(optional)	150mm	130	0.5	19.5	14.5
2124-225 *	200-225mm	C	7µm	Ø212.5mm(optional)	150mm	130	0.5	19.5	14.5
2124-250 *	225-250mm	C	7µm	Ø237.5mm(optional)	150mm	130	0.5	19.5	14.5
2124-275 *	250-275mm	C	7µm	Ø262.5mm(optional)	150mm	130	0.5	19.5	14.5
2124-300 *	275-300mm	C	7µm	Ø287.5mm(optional)	150mm	130	0.5	19.5	14.5

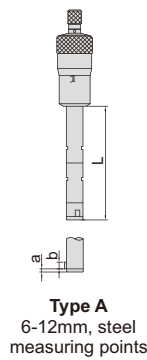
Set

Code	Range	Probes included	Setting ring (included)	Extension rod (included)
2124-S123 *	6-12mm	6-8mm, 8-10mm, 10-12mm	Ø6mm, Ø8mm, Ø10mm	100mm
2124-S202 *	12-20mm	12-16mm, 16-20mm	Ø16mm	150mm
2124-S504 *	20-50mm	20-25mm, 25-30mm, 30-40mm, 40-50mm	Ø25mm, Ø40mm	150mm
2124-S1004 *	50-100mm	50-63mm, 62-75mm, 75-88mm, 87-100mm	Ø62mm, Ø87mm	150mm

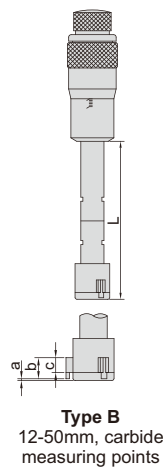
* Supplied with manufacturer inspection certificate



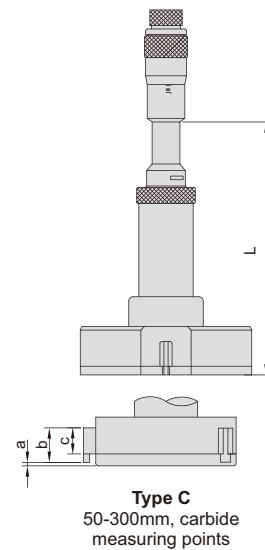
THREE POINTS INTERNAL MICROMETER



3227- 8



3227- 16



Manufacturer Inspection Certificate

INSIZE Inspection Certificate			
Product name	Three Points Internal Micrometer	Standard temperature	20 °C
Code No.	3227-30	Traceable to	Germany 10338D-K-12015-01-02/2012-09
Measuring range	25-30mm	Germany 31-0830/DKD-K-089012012-09	
Graduation	0.005mm	Judgement	Passed
Serial No.	0910120004	Inspector	<i>Paulo</i>
Unit: µm			
Actual Ring Size(mm)	Permissible Error	Measured Deviation	
25.0007	4	0	
25.9994		1	
27.9978		1	
29.9992		-1	

- 6-12mm: graduation 0.001mm
- 12-300mm: graduation 0.005mm
- Ratchet stop
- Optional accessory: setting rings (code 6312)

Individual

Code	Range	Type	Accuracy	Setting ring	Extension rod (included)	L	a	b	c
3227-8 *	6-8mm	A	4µm	Ø6mm(included)	100mm	54.5	1.5	2.5	—
3227-10 *	8-10mm	A	4µm	Ø8mm(included)	100mm	54.5	1.5	2.5	—
3227-12 *	10-12mm	A	4µm	Ø10mm(included)	100mm	54.5	1.5	2.5	—
3227-16 *	12-16mm	B	4µm	Ø16mm(included)	150mm	80	0.5	6	4.5
3227-20 *	16-20mm	B	4µm	Ø16mm(included)	150mm	80	0.5	6	4.5
3227-25 *	20-25mm	B	4µm	Ø25mm(included)	150mm	90	0.5	8	6
3227-30 *	25-30mm	B	4µm	Ø25mm(included)	150mm	90	0.5	8	6
3227-40 *	30-40mm	B	4µm	Ø40mm(included)	150mm	97	0.5	14	12
3227-50 *	40-50mm	B	5µm	Ø40mm(included)	150mm	97	0.5	14	12
3227-63 *	50-63mm	C	5µm	Ø62mm(included)	150mm	114	0.5	17.5	14.5
3227-75 *	62-75mm	C	5µm	Ø62mm(included)	150mm	114	0.5	17.5	14.5
3227-88 *	75-88mm	C	5µm	Ø87mm(included)	150mm	114	0.5	17.5	14.5
3227-100 *	87-100mm	C	5µm	Ø87mm(included)	150mm	114	0.5	17.5	14.5
3227-125 *	100-125mm	C	5µm	Ø112.5mm(optional)	150mm	145	0.5	19.5	14.5
3227-150 *	125-150mm	C	5µm	Ø137.5mm(optional)	150mm	145	0.5	19.5	14.5
3227-175 *	150-175mm	C	5µm	Ø162.5mm(optional)	150mm	145	0.5	19.5	14.5
3227-200 *	175-200mm	C	5µm	Ø187.5mm(optional)	150mm	145	0.5	19.5	14.5
3227-225	200-225mm	C	7µm	Ø212.5mm(optional)	150mm	145	0.5	19.5	14.5
3227-250	225-250mm	C	7µm	Ø237.5mm(optional)	150mm	145	0.5	19.5	14.5
3227-275	250-275mm	C	7µm	Ø262.5mm(optional)	150mm	145	0.5	19.5	14.5
3227-300	275-300mm	C	7µm	Ø287.5mm(optional)	150mm	145	0.5	19.5	14.5

Set

Code	Range	Micrometers included	Setting ring (included)	Extension rod (included)
3227-123 *	6-12mm	6-8mm, 8-10mm, 10-12mm	Ø6mm, Ø8mm, Ø10mm	100mm
3227-202 *	12-20mm	12-16mm, 16-20mm	Ø16mm	150mm
3227-504 *	20-50mm	20-25mm, 25-30mm, 30-40mm, 40-50mm	Ø25mm, Ø40mm	150mm
3227-1004 *	50-100mm	50-63mm, 62-75mm, 75-88mm, 87-100mm	Ø62mm, Ø87mm	150mm

* Supplied with manufacturer inspection certificate

setting ring



6-100mm: included
100-300mm: optional

extension rod



included

interchangeable jaws



100-300mm: have two sets of jaws for different measuring range (For example, 3227-125 has 100-112.5mm and 112.5-125mm jaws)



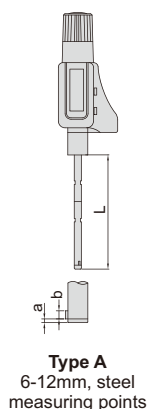
3227-504



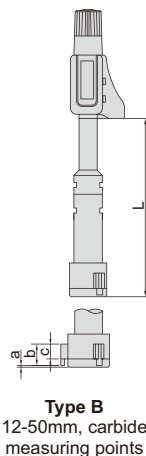
IP54
WATERPROOF

DATA
OUTPUT

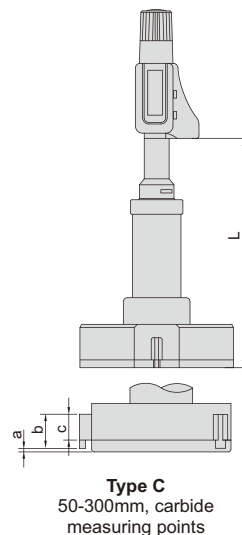
DIGITAL THREE POINTS INTERNAL MICROMETER



3127-12



3127-40



3127-125

Manufacturer Inspection Certificate

INSIZE Inspection Certificate			
Product name	Digital Three Points Internal Micrometer	Standard temperature	20 °C
Code No.	3127-30	Traceable to	Germany 10330/D-K-15015-01-02/2012-09
Measuring range	25-30mm / 0.98-1.18"	Judgement	Germany 51-0830/DKD-K-06901/2012-09
Resolution	0.001mm / 0.00005"	Passed	
Serial No.	0910120004	Inspector	<i>Paulo</i>
Unit: µm			
Actual Ring Size(mm)	Permissible Error	Measured Deviation	
25.0007	4	0	
25.9994		1	
27.9978		1	
29.9992		-1	

- Resolution 0.001mm/0.00005"
- IP54 dust/waterproof
- Buttons: on/off, set, mm/inch, ABS/INC
- Data output
- LR44 battery, automatic power off
- Ratchet stop
- Optional accessory: data output cable (code **7306-30**, **7302-SPC2A**, **7305-SPC3**), setting ring (code **6312**)

Individual

Code	Range	Type	Accuracy	Setting ring	Extension rod (included)	L	a	b	c
3127-8*	6-8mm/0.24-0.31"	A	4µm	Ø6mm(included)	100mm	54.5	1.5	2.5	—
3127-10*	8-10mm/0.31-0.39"	A	4µm	Ø8mm(included)	100mm	54.5	1.5	2.5	—
3127-12*	10-12mm/0.39-0.47"	A	4µm	Ø10mm(included)	100mm	54.5	1.5	2.5	—
3127-16*	12-16mm/0.47-0.63"	B	4µm	Ø16mm(included)	150mm	80	0.5	6	4.5
3127-20*	16-20mm/0.63-0.79"	B	4µm	Ø16mm(included)	150mm	80	0.5	6	4.5
3127-25*	20-25mm/0.79-0.98"	B	4µm	Ø25mm(included)	150mm	90	0.5	8	6
3127-30*	25-30mm/0.98-1.18"	B	4µm	Ø25mm(included)	150mm	90	0.5	8	6
3127-40*	30-40mm/1.18-1.57"	B	4µm	Ø40mm(included)	150mm	97	0.5	14	12
3127-50*	40-50mm/1.57-1.97"	B	5µm	Ø40mm(included)	150mm	97	0.5	14	12
3127-63*	50-63mm/1.97-2.48"	C	5µm	Ø62mm(included)	150mm	114	0.5	17.5	14.5
3127-75*	62-75mm/2.44-2.95"	C	5µm	Ø62mm(included)	150mm	114	0.5	17.5	14.5
3127-88*	75-88mm/2.95-3.46"	C	5µm	Ø87mm(included)	150mm	114	0.5	17.5	14.5
3127-100*	87-100mm/3.43-3.94"	C	5µm	Ø87mm(included)	150mm	114	0.5	17.5	14.5
3127-125*	100-125mm/3.94-4.92"	C	5µm	Ø112.5mm(optional)	150mm	150	0.5	19.5	14.5
3127-150*	125-150mm/4.92-5.91"	C	5µm	Ø137.5mm(optional)	150mm	150	0.5	19.5	14.5
3127-175*	150-175mm/5.91-6.89"	C	5µm	Ø162.5mm(optional)	150mm	150	0.5	19.5	14.5
3127-200*	175-200mm/6.89-7.87"	C	5µm	Ø187.5mm(optional)	150mm	150	0.5	19.5	14.5
3127-225	200-225mm/7.87-8.86"	C	7µm	Ø212.5mm(optional)	150mm	150	0.5	19.5	14.5
3127-250	225-250mm/8.86-9.84"	C	7µm	Ø237.5mm(optional)	150mm	150	0.5	19.5	14.5
3127-275	250-275mm/9.84-10.83"	C	7µm	Ø262.5mm(optional)	150mm	150	0.5	19.5	14.5
3127-300	275-300mm/10.83-11.81"	C	7µm	Ø287.5mm(optional)	150mm	150	0.5	19.5	14.5

Set

Code	Range	Micrometers included	Setting ring (included)	Extension rod (included)
3127-123*	6-12mm/0.24-0.47"	6-8mm, 8-10mm, 10-12mm	Ø6mm, Ø8mm, Ø10mm	100mm
3127-202*	12-20mm/0.47-0.79"	12-16mm, 16-20mm	Ø16mm	150mm
3127-504*	20-50mm/0.79-1.97"	20-25mm, 25-30mm, 30-40mm, 40-50mm	Ø25mm, Ø40mm	150mm
3127-1004*	50-100mm/1.97-3.94"	50-63mm, 62-75mm, 75-88mm, 87-100mm	Ø62mm, Ø87mm	150mm

* Supplied with manufacturer inspection certificate

setting ring



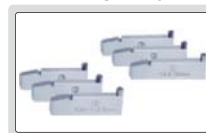
6-100mm: included
100-300mm: optional

extension rod



included

interchangeable jaws



100-300mm: have two sets of jaws for different measuring range (For example, 3127-125 has 100-112.5mm and 112.5-125mm jaws)



3127-504

WIDE RANGE THREE POINTS INTERNAL MICROMETER

- Graduation 0.001mm
- Carbide measuring faces
- Ratchet stop
- Setting rings are included (except 200-300mm)

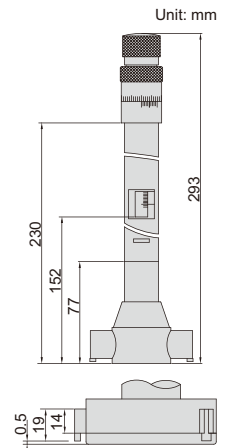


Code	Range	Accuracy	Setting ring
3228-70*	50-70mm	5μm	Ø50mm(included)
3228-100*	70-100mm	5μm	Ø70mm(included)
3228-150*	100-150mm	6μm	Ø100mm(included)
3228-250*	150-250mm	8μm	Ø150mm(included)
3228-300*	200-300mm	9μm	Ø200mm(optional)

* Supplied with manufacturer inspection certificate



3228-70



DIGITAL WIDE RANGE THREE POINTS INTERNAL MICROMETER

- Resolution 0.001mm/0.00005"
- IP54 dust/waterproof
- Buttons: on/off, set, mm/inch, ABS/INC
- Data output
- LR44 battery, automatic power off
- Carbide measuring faces
- Ratchet stop
- Supplied with extension rods
- Setting rings are included (except 200-300mm)
- Optional accessory: data output cable (code 7306-30, 7302-SPC2A, 7305-SPC3)

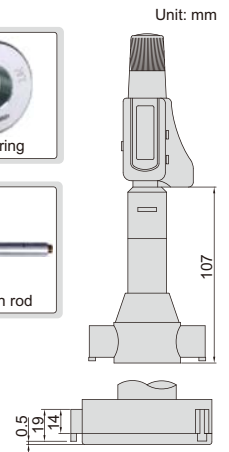
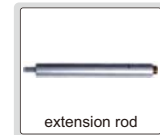


Code	Range	Accuracy	Setting ring	Extension rod (included)
3128-70*	50-70mm/1.97-2.76"	5μm	Ø50mm(included)	150mm
3128-100*	70-100mm/2.76-3.94"	5μm	Ø70mm(included)	150mm
3128-150*	100-150mm/3.94-5.91"	6μm	Ø100mm(included)	150mm
3128-250*	150-250mm/5.91-9.84"	8μm	Ø150mm(included)	150mm
3128-300*	200-300mm/7.87-11.81"	9μm	Ø200mm(optional)	150mm

* Supplied with manufacturer inspection certificate

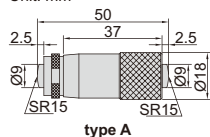


3128-70

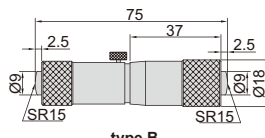


TUBULAR INSIDE MICROMETER

Unit: mm



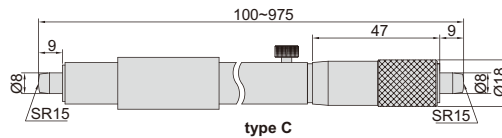
type A



type B



3229-225



type C

Code	Range	Type	Accuracy
3229-75	50-75mm	A	5μm
3229-100	75-100mm	B	5μm
3229-125	100-125mm	C	6μm
3229-150	125-150mm	C	6μm
3229-175	150-175mm	C	7μm
3229-200	175-200mm	C	7μm
3229-225	200-225mm	C	8μm
3229-250	225-250mm	C	8μm
3229-275	250-275mm	C	9μm

Code	Range	Type	Accuracy
3229-300	275-300mm	C	9μm
3229-325	300-325mm	C	9μm
3229-350	325-350mm	C	9μm
3229-375	350-375mm	C	10μm
3229-400	375-400mm	C	10μm
3229-425	400-425mm	C	10μm
3229-450	425-450mm	C	10μm
3229-475	450-475mm	C	11μm
3229-500	475-500mm	C	11μm

- Graduation 0.01mm
- Carbide measuring faces

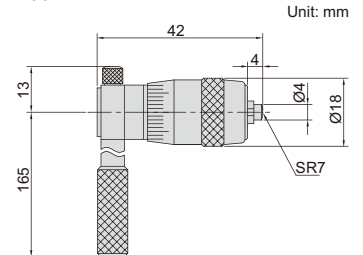
Code	Range	Type	Accuracy
3229-525	500-525mm	C	11μm
3229-550	525-550mm	C	11μm
3229-575	550-575mm	C	11μm
3229-600	575-600mm	C	12μm
3229-625	600-625mm	C	12μm
3229-650	625-650mm	C	12μm
3229-675	650-675mm	C	13μm
3229-700	675-700mm	C	13μm
3229-725	700-725mm	C	13μm
3229-750	725-750mm	C	14μm
3229-775	750-775mm	C	14μm
3229-800	775-800mm	C	14μm
3229-825	800-825mm	C	15μm
3229-850	825-850mm	C	15μm
3229-875	850-875mm	C	15μm
3229-900	875-900mm	C	16μm
3229-925	900-925mm	C	16μm
3229-950	925-950mm	C	16μm
3229-975	950-975mm	C	17μm
3229-1000	975-1000mm	C	17μm

TUBULAR INSIDE MICROMETER

- Graduation 0.01mm
- Accuracy: $(6+L/50)\mu\text{m}$
L=maximum measuring length (mm)
- Optional accessory: setting ring (code **6312**)



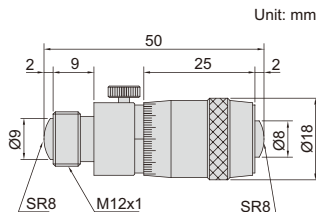
3221-200



Code	Range	Travel of micrometer head	Extension rods
3221-32	25-32mm	7mm	—
3221-50	25-50mm	7mm	2pcs
3221-63	50-63mm	13mm	—
3221-200	50-200mm	13mm	6pcs
3221-300	50-300mm	13mm	10pcs
3221-225	200-225mm	25mm	—
3221-500	200-500mm	25mm	3pcs
3221-1000	200-1000mm	25mm	8pcs

TUBULAR INSIDE MICROMETER

- Graduation 0.01mm
- Accuracy: $(3+n+L/50)\mu\text{m}$
n=number of rods
L=maximum measuring length(mm)
- Supplied with setting standards
- Carbide measuring faces

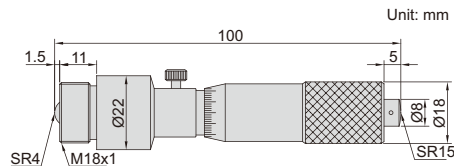


3222-150

Code	Range	Travel of micrometer head	Extension rods
3222-63	50-63mm	13mm	—
3222-150	50-150mm	13mm	13mm, 25mm, 50mm
3222-300	50-300mm	13mm	13mm, 25mm, 50mm (2pcs), 100mm
3222-500	50-500mm	13mm	13mm, 25mm, 50mm (2pcs), 100mm, 200mm
3222-600	50-600mm	13mm	13mm, 25mm, 50mm, 100mm, 150mm, 200mm
3222-1000	50-1000mm	13mm	13mm, 25mm, 50mm (2pcs), 100mm, 200mm (2pcs), 300mm
3222-1500	50-1500mm	13mm	13mm, 25mm, 50mm (2pcs), 100mm, 200mm (3pcs), 300mm (2pcs)

TUBULAR INSIDE MICROMETER

- Graduation 0.01mm
- Accuracy: $(3+n+L/50)\mu\text{m}$
n=number of rods
L=maximum measuring length(mm)
- Travel of micrometer head 25mm
- Supplied with setting standards
- Carbide measuring faces



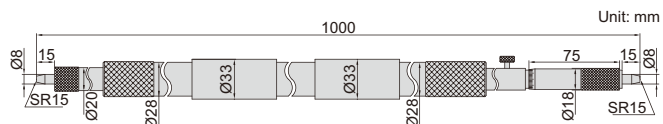
3225-500

Code	Range	Extension rods
3225-125	100-125mm	—
3225-500	100-500mm	25mm, 50mm, 100mm, 200mm
3225-900	100-900mm	25mm, 50mm, 100mm, 200mm, 400mm
3225-1300	100-1300mm	25mm, 50mm, 100mm, 200mm, 400mm (2pcs)
3225-1700	100-1700mm	25mm, 50mm, 100mm, 200mm, 400mm (3pcs)
3225-2100	100-2100mm	25mm, 50mm, 100mm, 200mm, 400mm (4pcs)

TUBULAR INSIDE MICROMETER



3224-2000



Code	Range	Extension rods
3224-2000	1000-2000mm	50mm, 100mm (2pcs), 200mm, 500mm
3224-3000	1000-3000mm	50mm, 100mm (2pcs), 200mm, 500mm, 1000mm
3224-4000	1000-4000mm	50mm, 100mm (2pcs), 200mm, 500mm, 1000mm (2pcs)
3224-5000	1000-5000mm	50mm, 100mm (2pcs), 200mm, 500mm, 1000mm (3pcs)

- Graduation 0.01mm
- Accuracy: $(7+n+L/50)\mu\text{m}$
n=number of rods
L=maximum measuring length (mm)
- Travel of micrometer head 50mm
- Carbide measuring faces

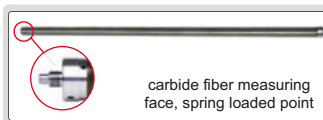
DIGITAL NON-ROTATING SPINDLE TUBULAR INSIDE MICROMETER



3635-950

- Micrometer head: 150-175mm
- Carbide measuring faces for micrometer head and extension rods
- Points of extension rods are spring loaded
- Data output
- Button function: mm/inch, max./min. value tracking, tolerance measurement, hold, on/off, zero
- CR2032 battery, automatic power off

1m carbon fiber extension rod,
light weight, no deform



Code	Range	Extension rods
3635-350	150-350mm	25mm, 50mm, 100mm
3635-550	150-550mm	25mm, 50mm, 100mm, 200mm
3635-950	150-950mm	25mm, 50mm, 100mm, 200mm, 400mm
3635-1550	150-1550mm	25mm, 50mm, 100mm, 200mm(2pcs), 400mm(2pcs)
3635-2150	150-2150mm	25mm, 50mm, 100mm, 200mm, 400mm(4pcs)
3635-3150	150-3150mm	25mm, 50mm, 100mm, 200mm(2pcs), 400mm, 1000mm(2pcs)
3635-4150	150-4150mm	25mm, 50mm, 100mm, 200mm(2pcs), 400mm, 1000mm(3pcs)
3635-5150	150-5150mm	25mm, 50mm, 100mm, 200mm(2pcs), 400mm, 1000mm(4pcs)
3635-6150	150-6150mm	25mm, 50mm, 100mm, 200mm(2pcs), 400mm, 1000mm(5pcs)

Micrometer head

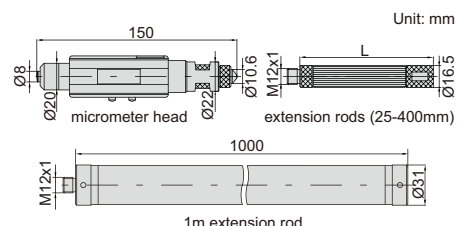
Range	Resolution	Accuracy	Repeatability	Measuring force	Weight
150-175mm	0.001mm/0.00005" 0.01mm/0.0005" (switchable)	$\pm 4\mu\text{m}$	$1\mu\text{m}$	5-10N	275g

NON-ROTATING
SPINDLE



DATA
OUTPUT

SPRING LOADED
MEASURING POINT



non-rotating spindle, spring loaded point and
max./min. value tracking make it easy to find
the right measuring position

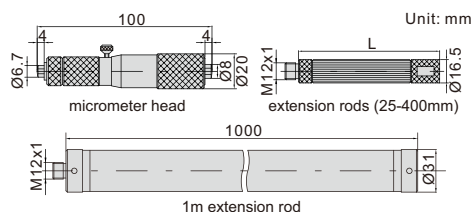


Extension rods

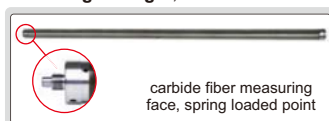
Length (L)	Accuracy	Weight	Material
25mm	$\pm 1.25\mu\text{m}$	37g	steel
50mm	$\pm 1.25\mu\text{m}$	65g	steel
100mm	$\pm 2\mu\text{m}$	113g	steel
200mm	$\pm 3.5\mu\text{m}$	208g	steel
400mm	$\pm 4.5\mu\text{m}$	402g	steel
1000mm	$\pm 7.5\mu\text{m}$	909g	carbon fiber



TUBULAR INSIDE MICROMETER



1m carbon fiber extension rod,
light weight, no deform



- Micrometer head: 100-125mm
- Carbide measuring faces for micrometer head and extension rods
- Points of extension rods are spring loaded

3634-1300

Micrometer head

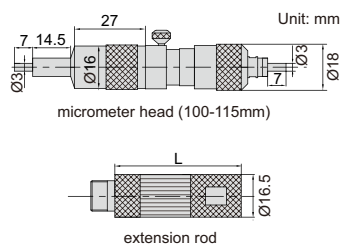
Range	Graduation	Accuracy	Weight
100-125mm	0.01mm	±4μm	154g

Extension rods

Length (L)	Accuracy	Weight	Material
25mm	±1.25μm	37g	steel
50mm	±1.25μm	65g	steel
100mm	±2μm	113g	steel
200mm	±3.5μm	208g	steel
400mm	±4.5μm	402g	steel
1000mm	±7.5μm	909g	carbon fiber



RELATIVE PRODUCT:
GEAR BORE GAGE (CODE 2428)



before ball tips
are installed



ball tips are
not included

INTERNAL GEAR TOOTH MICROMETER



ball tips are
not included

3638-200

Micrometer head

Range	Graduation	Accuracy
100-115mm	0.01mm	±4μm
150-175mm	0.01mm	±4μm

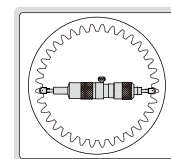
Extension rod

Length (L)	Accuracy
15mm	±1μm
25mm	±1.25μm
30mm	±1.25μm
50mm	±1.25μm
100mm	±2μm
200mm	±3.5μm
400mm	±4.5μm

- Measure over-pin diameter of gears
- Points of extension rods are spring loaded
- Optional accessory: ball tips (code 7383)

(mm)

Code	Range	Micrometer head	Extension rod (L)
3638-200	100-205mm	100-115mm	15, 25, 30
3638-500	100-505mm	100-115mm	15, 25, 50, 100, 200
3638-900	100-905mm	100-115mm	15, 25, 50, 100, 200, 400
3638-1100	150-1150mm	150-175mm	25, 50, 100, 200, 200, 400



INTERNAL SCREW THREAD MICROMETER



3641-200

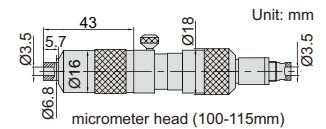
- Measure pitch diameter of screw thread
- Points of extension rods are spring loaded
- Optional accessory: measuring tips for internal screw thread micrometer (code 7385)

Micrometer head

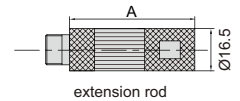
Range	Graduation	Accuracy
100-115mm	0.01mm	$\pm 4\mu\text{m}$
150-175mm	0.01mm	$\pm 4\mu\text{m}$

(mm)

Code	Range	Micrometer head	Extension rod (A)	Applicable tips
3641-200	100-205mm	100-115mm	15, 25, 50	stem length L=13.5mm
3641-500	100-505mm	100-115mm	15, 25, 50, 100, 200	stem length L=13.5mm
3641-900	100-905mm	100-115mm	15, 25, 50, 100, 200, 400	stem length L=13.5mm
3641-1100	150-1150mm	150-175mm	25, 50, 100, 200, 200, 400	stem length L=13.5mm



micrometer head (100-115mm)



extension rod

Extension rod

Length (A)	Accuracy
15mm	$\pm 1\mu\text{m}$
25mm	$\pm 1.25\mu\text{m}$
50mm	$\pm 1.25\mu\text{m}$
100mm	$\pm 2\mu\text{m}$
200mm	$\pm 3.5\mu\text{m}$
400mm	$\pm 4.5\mu\text{m}$

INTERNAL SCREW THREAD MICROMETER



3226-1001

measuring tips for internal screw thread micrometer (optional)



- Graduation: 0.01mm
- Optional accessory: measuring tips for internal screw thread micrometer (code 7321), zero block (code 3226-SP)

zero block (optional)



Code	Range	Zero Block (optional)
3226-1001	75-100mm	100mm (code 3226-SP100)
3226-1251	100-125mm	100mm (code 3226-SP100)
3226-1501	125-150mm	150mm (code 3226-SP150)
3226-1751	150-175mm	150mm (code 3226-SP150)
3226-2001	175-200mm	200mm (code 3226-SP200)
3226-2251	200-225mm	200mm (code 3226-SP200)
3226-2501	225-250mm	250mm (code 3226-SP250)
3226-2751	250-275mm	250mm (code 3226-SP250)
3226-3001	275-300mm	300mm (code 3226-SP300)

MEASURING TIPS FOR INTERNAL SCREW THREAD MICROMETER

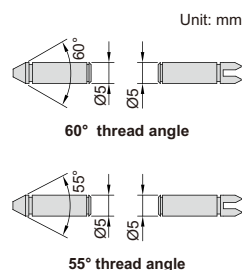
- Supplied in pair
- Suitable for 3226 series



7321-T1S

Metric and unified screw (60° thread angle)

Code	Pitch
7321-T11	0.4-0.5mm/64-48TPI
7321-T12	0.6-0.9mm/44-28TPI
7321-T13	1-1.75mm/24-14TPI
7321-T14	2-3mm/13-9TPI
7321-T15	3.5-5mm/8-5TPI
7321-T16	5.5-7mm/4.5-3.5TPI
7321-T1S	6 pairs/set, including all above tips



Whitworth screw (55° thread angle)

Code	Pitch
7321-T21	60-48TPI
7321-T22	48-40TPI
7321-T23	40-32TPI
7321-T24	32-24TPI
7321-T25	24-18TPI
7321-T26	18-14TPI
7321-T27	14-10TPI
7321-T28	10-7TPI
7321-T29	7-4.5TPI
7321-T210	4.5-3.5TPI
7321-T2S	10 pairs/set, including all above tips

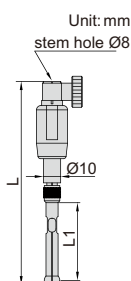
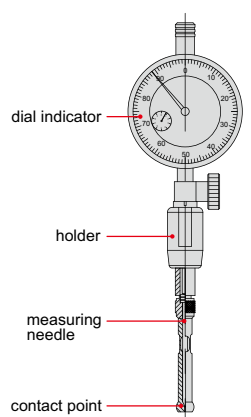
SPLIT TYPE DIAL BORE GAGE



dial indicator
is not included



- Split type contact points
- Accuracy (without indicator):
3µm (measuring range 0.95~10mm),
4µm (measuring range 10~20.6mm)
- Repeatability (without indicator): 1µm



2426-HOLDER1



2426-HOLDER2

(mm)

Contact point					Measuring needle	Setting ring	
Code	Measuring range	Measuring depth (L1)	Total length (L)	Material	Code	Code	Diameter
2426-1	0.95 - 1.15	13	89	carbide tip	2426-N1D4	6312-R1	1
2426-1D1	1.07 - 1.25	13	89	carbide tip		6312-R1D1	1.1
2426-1D2	1.17 - 1.35	13	89	carbide tip		6312-R1D2	1.2
2426-1D3	1.27 - 1.45	13	89	carbide tip		6312-R1D3	1.3
2426-1D4	1.37 - 1.55	13	89	carbide tip		6312-R1D4	1.4
2426-1D75	1.5 - 1.9	17	93	carbide tip	2426-N2D25	6312-1D75	1.75
2426-2	1.8 - 2.2	17	93	carbide tip		6312-2	2
2426-2D25	2.05 - 2.45	17	93	carbide tip	2426-N4	6312-2D25	2.25
2426-2D5	2.3 - 2.7	25	101	carbide tip		6312-2D5	2.5
2426-2D75	2.55 - 2.95	25	101	carbide tip		6312-2D75	2.75
2426-3	2.8 - 3.2	25	101	carbide tip		6312-3	3
2426-3D25	3.05 - 3.45	25	101	carbide tip		6312-3D25	3.25
2426-3D5	3.3 - 3.7	25	101	carbide tip		6312-3D5	3.5
2426-3D75	3.55 - 3.95	25	101	carbide tip		6312-3D75	3.75
2426-4	3.8 - 4.2	25	101	carbide tip		6312-4	4
2426-4D5	4.15 - 4.8	41	118	hard chromed	2426-N9	6312-4D5	4.5
2426-5	4.7 - 5.3	41	118	hard chromed		6312-5	5
2426-5D5	5.2 - 5.8	41	118	hard chromed		6312-5D5	5.5
2426-6	5.7 - 6.3	41	118	hard chromed		6312-6	6
2426-6D5	6.2 - 6.8	41	118	hard chromed		6312-6D5	6.5
2426-7	6.7 - 7.3	41	118	hard chromed		6312-7	7
2426-7D5	7.2 - 7.8	45	118	hard chromed		6312-7D5	7.5
2426-8	7.7 - 8.3	45	118	hard chromed		6312-8	8
2426-8D5	8.2 - 8.8	45	118	hard chromed		6312-8D5	8.5
2426-9	8.7 - 9.3	45	118	hard chromed	2426-N20	6312-9	9
2426-10	9.2 - 10.5	45	118	hard chromed		6312-10	10
2426-11	10.2 - 11.5	45	118	hard chromed		6312-11	11
2426-12	11.2 - 12.5	45	118	hard chromed		6312-12	12
2426-13	12.2 - 13.5	45	118	hard chromed		6312-13	13
2426-14	13.4 - 14.6	45	118	hard chromed		6312-14	14
2426-15	14.4 - 15.6	45	118	hard chromed		6312-15	15
2426-16	15.4 - 16.6	45	118	hard chromed		6312-16	16
2426-17	16.4 - 17.6	45	118	hard chromed		6312-17	17
2426-18	17.4 - 18.6	45	118	hard chromed		6312-18	18
2426-19	18.4 - 19.6	45	118	hard chromed		6312-19	19
2426-20	19.4 - 20.6	45	118	hard chromed		6312-20	20

HOLDER

Code	Retraction	Applicable points
2426-HOLDER1	without	all
2426-HOLDER2	with	all



SPLIT TYPE DIAL BORE GAGE SET

- Split type contact points
- Accuracy (without indicator): 3µm (measuring range 0.95~10mm), 4µm (measuring range 10~20.6mm)
- Repeatability (without indicator): 1µm
- Setting rings and dial indicators are optional

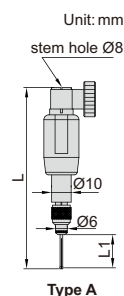


(mm)

Code	Range	Quantity of points	Measuring range of point	Measuring depth (L1)	Total length (L)	Material	Type of point	Setting ring (optional)	
								Code	Diameter
2421-1D4	0.95-1.55	5	0.95 - 1.15	13	89	carbide tip	A	6312-R1	1
			1.07 - 1.25	13	89	carbide tip	A	6312-R1D1	1.1
			1.17 - 1.35	13	89	carbide tip	A	6312-R1D2	1.2
			1.27 - 1.45	13	89	carbide tip	A	6312-R1D3	1.3
			1.37 - 1.55	13	89	carbide tip	A	6312-R1D4	1.4
2421-4	1.5-4.2	10	1.5 - 1.9	17	93	carbide tip	A	6312-1D75	1.75
			1.8 - 2.2	17	93	carbide tip	A	6312-2	2
			2.05 - 2.45	17	93	carbide tip	A	6312-2D25	2.25
			2.3 - 2.7	25	101	carbide tip	A	6312-2D5	2.5
			2.55 - 2.95	25	101	carbide tip	A	6312-2D75	2.75
			2.8 - 3.2	25	101	carbide tip	A	6312-3	3
			3.05 - 3.45	25	101	carbide tip	A	6312-3D25	3.25
			3.3 - 3.7	25	101	carbide tip	A	6312-3D5	3.5
			3.55 - 3.95	25	101	carbide tip	A	6312-3D75	3.75
			3.8 - 4.2	25	101	carbide tip	A	6312-4	4
2421-7D5	4.15-7.8	7	4.15 - 4.8	41	118	hard chromed	B	6312-4D5	4.5
			4.7 - 5.3	41	118	hard chromed	B	6312-5	5
			5.2 - 5.8	41	118	hard chromed	B	6312-5D5	5.5
			5.7 - 6.3	41	118	hard chromed	B	6312-6	6
			6.2 - 6.8	41	118	hard chromed	B	6312-6D5	6.5
			6.7 - 7.3	41	118	hard chromed	B	6312-7	7
			7.2 - 7.8	45	118	hard chromed	C	6312-7D5	7.5
2421-12	7.7-12.5	6	7.7 - 8.3	45	118	hard chromed	C	6312-8	8
			8.2 - 8.8	45	118	hard chromed	C	6312-8D5	8.5
			8.7 - 9.3	45	118	hard chromed	C	6312-9	9
			9.2 - 10.5	45	118	hard chromed	C	6312-10	10
			10.2 - 11.5	45	118	hard chromed	C	6312-11	11
			11.2 - 12.5	45	118	hard chromed	C	6312-12	12
2421-20	12.2-20.6	8	12.2 - 13.5	45	118	hard chromed	C	6312-13	13
			13.4 - 14.6	45	118	hard chromed	C	6312-14	14
			14.4 - 15.6	45	118	hard chromed	C	6312-15	15
			15.4 - 16.6	45	118	hard chromed	C	6312-16	16
			16.4 - 17.6	45	118	hard chromed	C	6312-17	17
			17.4 - 18.6	45	118	hard chromed	C	6312-18	18
			18.4 - 19.6	45	118	hard chromed	C	6312-19	19
			19.4 - 20.6	45	118	hard chromed	C	6312-20	20
2421-121	4.15-12.5	13	4.15 - 4.8	41	118	hard chromed	B	6312-4D5	4.5
			4.7 - 5.3	41	118	hard chromed	B	6312-5	5
			5.2 - 5.8	41	118	hard chromed	B	6312-5D5	5.5
			5.7 - 6.3	41	118	hard chromed	B	6312-6	6
			6.2 - 6.8	41	118	hard chromed	B	6312-6D5	6.5
			6.7 - 7.3	41	118	hard chromed	B	6312-7	7
			7.2 - 7.8	45	118	hard chromed	C	6312-7D5	7.5
			7.7 - 8.3	45	118	hard chromed	C	6312-8	8
			8.2 - 8.8	45	118	hard chromed	C	6312-8D5	8.5
			8.7 - 9.3	45	118	hard chromed	C	6312-9	9
			9.2 - 10.5	45	118	hard chromed	C	6312-10	10
			10.2 - 11.5	45	118	hard chromed	C	6312-11	11
			11.2 - 12.5	45	118	hard chromed	C	6312-12	12

2421-121

dial indicator is not included

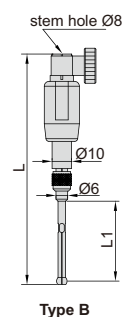


Type A



type A

dial indicator is not included

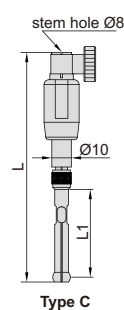


Type B



type B

dial indicator is not included



Type C



type C

SPLIT TYPE DIAL BORE GAGE FOR BLIND HOLES



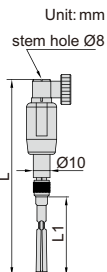
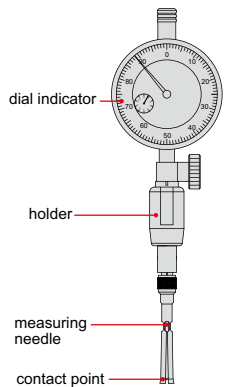
dial indicator
is not included



- Split type contact points
- Accuracy (without indicator):
3µm (measuring range 1.5~10mm),
4µm (measuring range 10~20.6mm)
- Repeatability (without indicator): 1µm

(mm)

Contact point				Measuring needle	Setting ring	
Code	Measuring range	Measuring depth (L1)	Total length (L)	Code	Code	Diameter
2427-1D75	1.5 - 1.9	17	93	2426-N2D25	6312-1D75	1.75
2427-2	1.8 - 2.2	17	93		6312-2	2
2427-2D25	2.05 - 2.45	17	93		6312-2D25	2.25
2427-2D5	2.3 - 2.7	25	101	2426-N4	6312-2D5	2.5
2427-2D75	2.55 - 2.95	25	101		6312-2D75	2.75
2427-3	2.8 - 3.2	25	101		6312-3	3
2427-3D25	3.05 - 3.45	25	101		6312-3D25	3.25
2427-3D5	3.3 - 3.7	25	101		6312-3D5	3.5
2427-3D75	3.55 - 3.95	25	101		6312-3D75	3.75
2427-4	3.8 - 4.2	25	101		6312-4	4
2427-4D5	4.15 - 4.8	41	118	2427-N9	6312-4D5	4.5
2427-5	4.7 - 5.3	41	118		6312-5	5
2427-5D5	5.2 - 5.8	41	118		6312-5D5	5.5
2427-6	5.7 - 6.3	41	118		6312-6	6
2427-6D5	6.2 - 6.8	41	118		6312-6D5	6.5
2427-7	6.7 - 7.3	41	118		6312-7	7
2427-7D5	7.2 - 7.8	45	118		6312-7D5	7.5
2427-8	7.7 - 8.3	45	118		6312-8	8
2427-8D5	8.2 - 8.8	45	118		6312-8D5	8.5
2427-9	8.7 - 9.3	45	118		6312-9	9
2427-10	9.2 - 10.5	45	118	2427-N20	6312-10	10
2427-11	10.2 - 11.5	45	118		6312-11	11
2427-12	11.2 - 12.5	45	118		6312-12	12
2427-13	12.2 - 13.5	45	118		6312-13	13
2427-14	13.4 - 14.6	45	118		6312-14	14
2427-15	14.4 - 15.6	45	118		6312-15	15
2427-16	15.4 - 16.6	45	118		6312-16	16
2427-17	16.4 - 17.6	45	118		6312-17	17
2427-18	17.4 - 18.6	45	118		6312-18	18
2427-19	18.4 - 19.6	45	118		6312-19	19
2427-20	19.4 - 20.6	45	118		6312-20	20



2426-HOLDER1



2426-HOLDER2

HOLDER

Code	Retraction	Applicable points
2426-HOLDER1	without	all
2426-HOLDER2	with	all



SPLIT TYPE DIAL BORE GAGE SET FOR BLIND HOLES

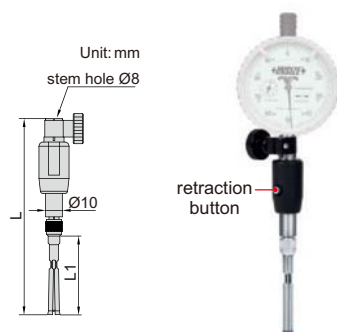
(mm)

Code	Range	Quantity of points	Measuring range of point	Measuring depth (L1)	Total length (L)	Setting ring (optional)	
						Code	Diameter
2429-4	1.5 - 4.2	10	1.5 - 1.9	17	93	6312-1D75	1.75
			1.8 - 2.2	17	93	6312-2	2
			2.05 - 2.45	17	93	6312-2D25	2.25
			2.3 - 2.7	25	101	6312-2D5	2.5
			2.55 - 2.95	25	101	6312-2D75	2.75
			2.8 - 3.2	25	101	6312-3	3
			3.05 - 3.45	25	101	6312-3D25	3.25
			3.3 - 3.7	25	101	6312-3D5	3.5
			3.55 - 3.95	25	101	6312-3D75	3.75
			3.8 - 4.2	25	101	6312-4	4
2429-7D5	4.15 - 7.8	7	4.15 - 4.8	41	118	6312-4D5	4.5
			4.7 - 5.3	41	118	6312-5	5
			5.2 - 5.8	41	118	6312-5D5	5.5
			5.7 - 6.3	41	118	6312-6	6
			6.2 - 6.8	41	118	6312-6D5	6.5
			6.7 - 7.3	41	118	6312-7	7
2429-12	7.7 - 12.5	6	7.2 - 7.8	45	118	6312-7D5	7.5
			7.7 - 8.3	45	118	6312-8	8
			8.2 - 8.8	45	118	6312-8D5	8.5
			8.7 - 9.3	45	118	6312-9	9
			9.2 - 10.5	45	118	6312-10	10
			10.2 - 11.5	45	118	6312-11	11
2429-20	12.2 - 20.6	8	11.2 - 12.5	45	118	6312-12	12
			12.2 - 13.5	45	118	6312-13	13
			13.4 - 14.6	45	118	6312-14	14
			14.4 - 15.6	45	118	6312-15	15
			15.4 - 16.6	45	118	6312-16	16
			16.4 - 17.6	45	118	6312-17	17
			17.4 - 18.6	45	118	6312-18	18
			18.4 - 19.6	45	118	6312-19	19
			19.4 - 20.6	45	118	6312-20	20



2429-4

dial indicator
is not included

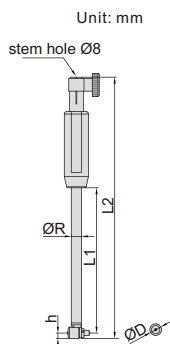


- Split type contact points
- Accuracy (without indicator):
3µm (measuring range 1.5~10mm),
4µm (measuring range 10~20.6mm)
- Repeatability (without indicator): 1µm
- Setting rings and dial indicators are optional

BORE GAGE FOR SMALL HOLES



- Applicable for 0.01mm or 0.001mm graduation dial indicators
- Carbide contact point and anvil
- Optional accessory: dial indicator or dial comparator, setting ring (code 6312)



(mm)

Code	Range	Accuracy (without dial comparator)	Repeatability (without dial comparator)	L1	L2	ØR	ØD	h
2425-6	4.5-6mm	2µm	0.5µm	80	147	4	4	2
2425-8	6-8mm	2µm	0.5µm	100	165	5	5.2	2.6
2425-12	8-12mm	2µm	0.5µm	100	166	5	6.5	3.25
2425-20	12-20mm	2µm	0.5µm	110	204	8	9	4.5

dial comparator
is not included



2425-6

DIAL BORE GAGE

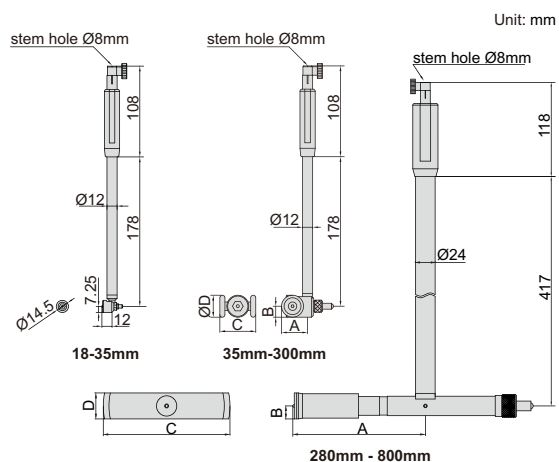


dial comparator
is not included



2422-150

- Applicable for 0.01mm or 0.001mm graduation dial indicators
- Optional accessory:
 - Dial indicator or dial comparator
 - Setting ring (code 6312)
 - Long handle (code 7352)



Code	Range	Accuracy (without dial comparator)	Repeatability (without dial comparator)
2422-35	18-35mm	4µm	2µm
2422-60	35-60mm	4µm	2µm
2422-150	50-150mm	4µm	2µm
2422-300	150-300mm	4µm	2µm
2422-510	280-510mm	3µm	1.5µm
2422-800	400-800mm	3µm	1.5µm

Range	A	B	C	D
35-60mm	19.5	10.5	28	21
50-150mm	30.8	13	42.5	26
150-300mm	30.8	13	76.5	26
280-510mm	164	16	156	32
400-800mm	305	18	300	36

BORE GAGE SET



dial comparator is not included



2423-S2

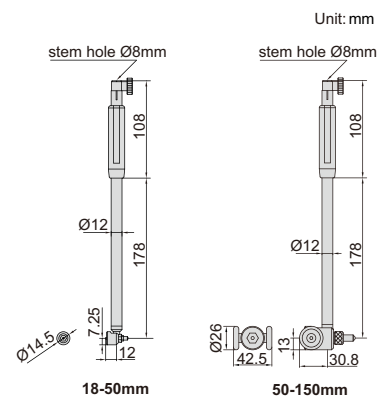
- Includes bore gages 18-50mm and 50-150mm
- Optional accessory:
 - 0.01mm or 0.001mm graduation dial indicator or dial comparator
 - Setting ring (code 6312)
 - Long handle (code 7352)



18-50mm



50-150mm



Code	Range	Accuracy (without dial comparator)	Repeatability (without dial comparator)
2423-S2	18-150mm	4µm	2µm



RELATIVE PRODUCT:
INTERNAL GEAR TOOTH MICROMETER
(CODE 3637, 3638)

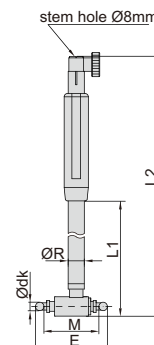
GEAR BORE GAGE

- Tungsten carbide ball points, diameter accuracy 2µm
- Optional accessory:
 - Dial indicator or dial comparator
 - Ball points
 - Thread adaptor
 - Setting ring (code 6312)
 - Long handle (code 7352)

dial comparator
is not included



2428-55

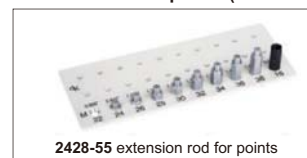


Code	Range (E)	Accuracy (without dial comparator)	Repeatability (without dial comparator)	ØR	L1	L2	Thread for ball points
2428-12	8-12mm	2µm	0.5µm	5	100	165	M1.6
2428-22	12-22mm	2µm	0.5µm	5	102	168	M1.6
2428-55	22-55mm	2µm	0.5µm	8	110	204	M2.5
2428-250	55-250mm	2µm	0.5µm	12	177	290	M4
2428-510	250-510mm	2µm	0.5µm	18	235	363	M4

Ball points (optional)

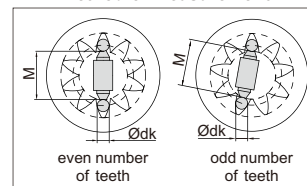
Ball point diameter Ødk	2428-12	2428-22	2428-55	2428-250	2428-510
	point thread M1.6	point thread M1.6	point thread M2.5	point thread M4	point thread M4
	point code	point code	point code	point code	point code
1mm	2428-A1	2428-A1	2428-B1	2428-C1	2428-C1
1.5mm	2428-A1D5	2428-A1D5	2428-B1D5	2428-C1D5	2428-C1D5
2mm	2428-A2	2428-A2	2428-B2	2428-C2	2428-C2
2.5mm	—	2428-A2D5	2428-B2D5	2428-C2D5	2428-C2D5
3mm	—	2428-A3	2428-B3	2428-C3	2428-C3
3.5mm	—	2428-A3D5	2428-B3D5	2428-C3D5	2428-C3D5
4mm	—	2428-A4	2428-B4	2428-C4	2428-C4
4.5mm	—	—	2428-B4D5	2428-C4D5	2428-C4D5
5mm	—	—	2428-B5	2428-C5	2428-C5
5.5mm	—	—	2428-B5D5	2428-C5D5	2428-C5D5
6mm	—	—	2428-B6	2428-C6	2428-C6
6.5mm	—	—	2428-B6D5	2428-C6D5	2428-C6D5
7mm	—	—	2428-B7	2428-C7	2428-C7
7.5mm	—	—	2428-B7D5	2428-C7D5	2428-C7D5
8mm	—	—	2428-B8	2428-C8	2428-C8
8.5mm	—	—	2428-B8D5	2428-C8D5	2428-C8D5
9mm	—	—	2428-B9	2428-C9	2428-C9
9.5mm	—	—	2428-B9D5	2428-C9D5	2428-C9D5
10mm	—	—	2428-B10	2428-C10	2428-C10

extension rod for points (included)



2428-55 extension rod for points

method of measurement

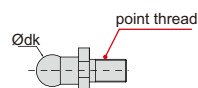


ball points(optional), in pair



Thread adaptor (optional)

Code	Thread	Remark
2428-D1	M1.6/M2.5	For example, use 2428-A1 with 2428-D1 to replace 2428-B1
2428-D2	M2.5/M4	For example, use 2428-B1 with 2428-D2 to replace 2428-C1



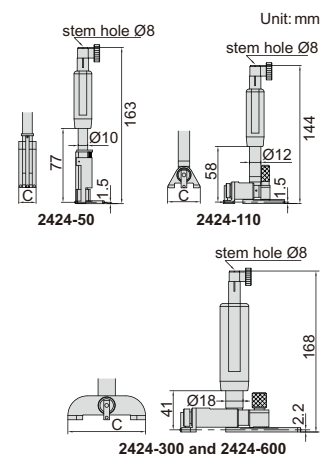
BORE GAGE FOR BLIND HOLES

- To measure diameter of shallow and blind holes
- Optional accessory:
 - 0.01mm or 0.001mm graduation dial indicators
 - Setting ring (code **6312**)
 - Long handle (code **7352**)



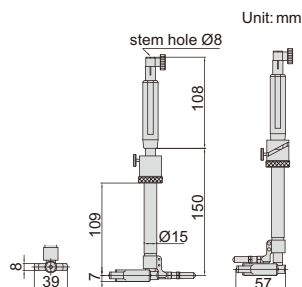
Code	Range	Accuracy (without dial indicator)	Repeatability (without dial indicator)	C
2424-50	20-50mm	4µm	1µm	18
2424-110	50-110mm	4µm	1µm	34
2424-300	110-300mm	4µm	1µm	81
2424-600	300-600mm	4µm	1µm	140

dial indicator is not included



ROTARY BORE GAGE

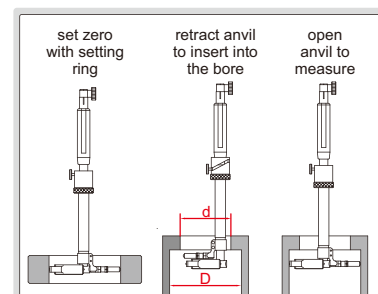
- Rotary anvil, to measure bores with small opening
D: bore diameter to be measured,
d: minimum opening diameter
(see right drawing)
d=57mm (D ≤ 95mm)
d=D-38 (D > 95mm)
- Optional accessory:
 - 0.01mm or 0.001mm graduation dial indicator or dial comparator
 - Setting ring (code **6312**)
 - Long handle (code **7352**)



Code	Range	Accuracy (without dial indicator)	Repeatability* (without dial indicator)
2921-150	80-150mm	2µm	1µm

* Repeatability includes the error of rotary anvil

dial indicator is not included



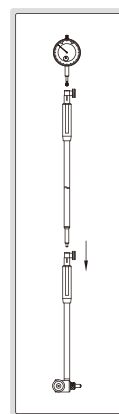
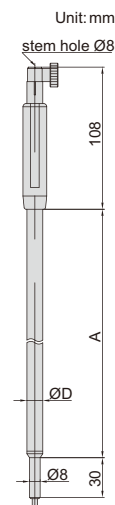
LONG HANDLE

- To assist deep-hole measurement
- Can be used for bore gages **2422**, **2423**, **2424** and **2921**

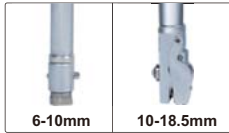
Code	Applicable bore gages	A	ØD
7352-500	above 35mm	438	12
7352-1000		938	12



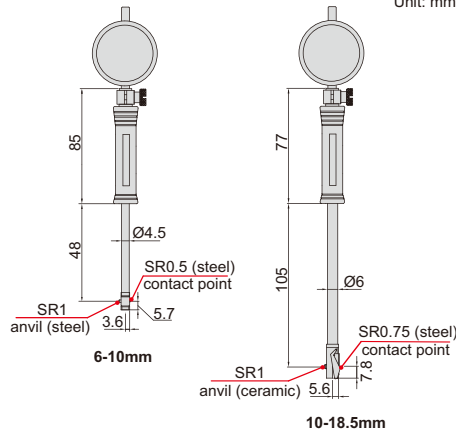
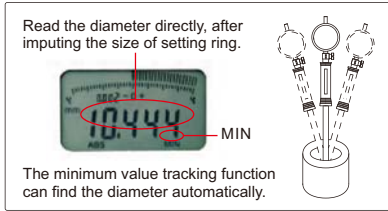
7352-500



BORE GAGE FOR SMALL HOLES



**ATTENTION: NOT SUITABLE
FOR 0.001MM DIAL INDICATORS**



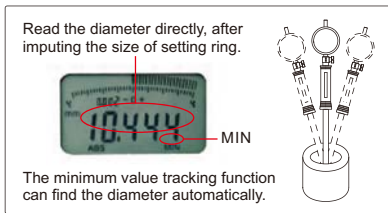
■ Optional accessory: setting ring (code **6312**)

Code	Range	Indicator	Accuracy	Repeatability
2852-10	6-10mm	dial indicator, range 3mm, graduation 0.01mm (code 2311-3F)	±0.012mm	0.003mm
2852-18	10-18.5mm		±0.012mm	0.003mm

Code	Range	Indicator	Accuracy	Repeatability
2152-10	6-10mm	digital indicator, range 12.7mm/0.5", resolution 0.002mm/0.0001" (code 2108-10F)	±0.012mm	0.003mm
2152-18	10-18.5mm		±0.012mm	0.003mm



**ATTENTION: NOT SUITABLE
FOR 0.001MM DIAL INDICATORS**

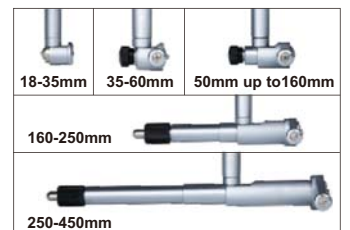
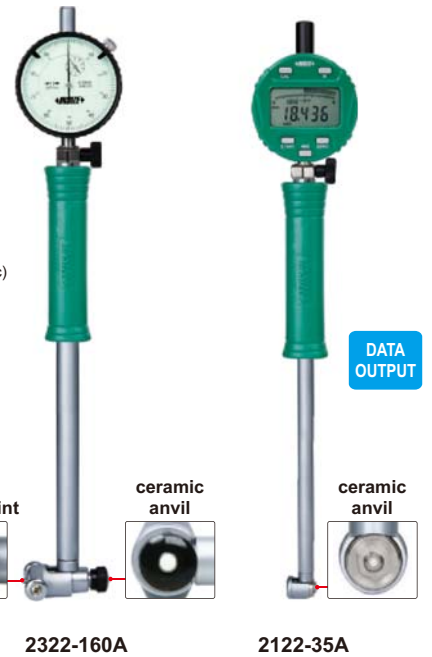
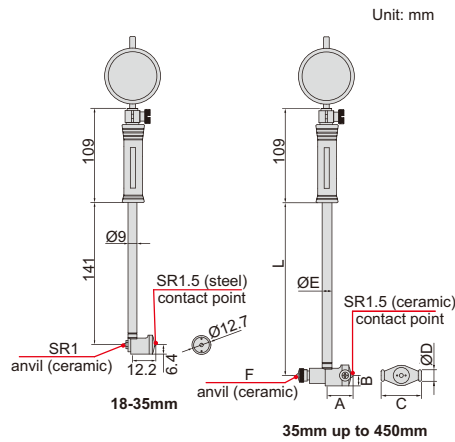


Range	A	B	C	ØD	ØE	F	L
35-60mm	12.2	6.4	27	13	12.8	SR2	141
50-100mm	26	9	27	13	12.8	SR2	141
50-160mm	26	9	35	13	12.8	SR2	141
100-160mm	26	9	35	13	12.8	SR2	141
160-250mm	56.5	13	74.5	15	12.8	SR2	241
250-450mm	86.5	15	101.5	15	14.5	SR2.5	241

Code	Range	Indicator	Accuracy	Repeatability
2322-35A	18-35mm	dial indicator, range 10mm, graduation 0.01mm (code 2308-10FA)	±0.015mm	0.003mm
2322-60A	35-60mm		±0.018mm	0.003mm
2322-100A	50-100mm		±0.018mm	0.003mm
2322-160A	50-160mm		±0.018mm	0.003mm
2322-161A	100-160mm		±0.018mm	0.003mm
2322-250A	160-250mm		±0.018mm	0.003mm
2322-450A	250-450mm		±0.018mm	0.003mm

Code	Range	Indicator	Accuracy	Repeatability
2122-35A	18-35mm	digital indicator, range 12.7mm/0.5", resolution 0.002mm/0.0001" (code 2108-10F)	±0.015mm	0.003mm
2122-60A	35-60mm		±0.018mm	0.003mm
2122-100A	50-100mm		±0.018mm	0.003mm
2122-160A	50-160mm		±0.018mm	0.003mm
2122-161A	100-160mm		±0.018mm	0.003mm
2122-250A	160-250mm		±0.018mm	0.003mm
2122-450A	250-450mm		±0.018mm	0.003mm

■ Optional accessory:
setting ring (code **6312**),
long handle (code **7351**)



BORE GAGE SET

ATTENTION: NOT SUITABLE
FOR 0.001MM DIAL INDICATORS



2824-S3

■ Optional accessory: setting ring (code 6312)

Code	Range	Indicator	Bore gages included	Accuracy	Repeatability
2824-S3	18-160mm	dial indicator code 2308-10FA range 10mm, graduation 0.01mm	18-35mm	18-35mm ±0.015mm	0.003mm
			35-60mm	35-60mm ±0.018mm	
			50-160mm	50-160mm ±0.018mm	

BORE GAGE

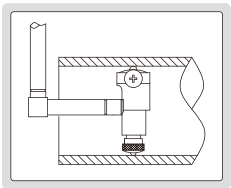
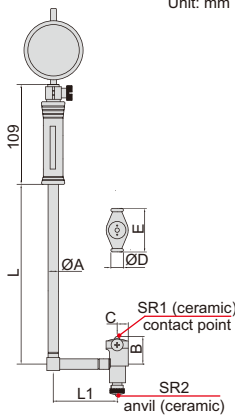
ATTENTION: NOT SUITABLE
FOR 0.001MM DIAL INDICATORS

■ Optional accessory:
setting ring (code 6312)



2827-160A

Unit: mm

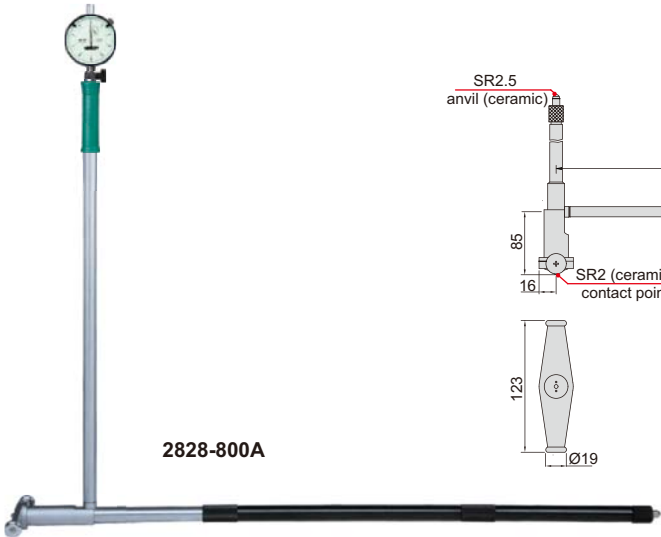


Code	Range	Indicator	Accuracy	Repeatability
2827-160A	50-160mm	dial indicator code 2308-10FA range 10mm, graduation 0.01mm	±0.018mm	0.003mm
2827-250A	160-250mm		±0.018mm	0.003mm
2827-450A	250-450mm		±0.018mm	0.003mm

(mm)							
Range	ØA	B	C	ØD	E	L	L1
50-160mm	12.8	28.5	9.2	13	35	141	76.2
160-250mm	14.5	62.0	12.7	13	74.5	391	100
250-450mm	14.5	91.5	15.0	15	101.5	391	100

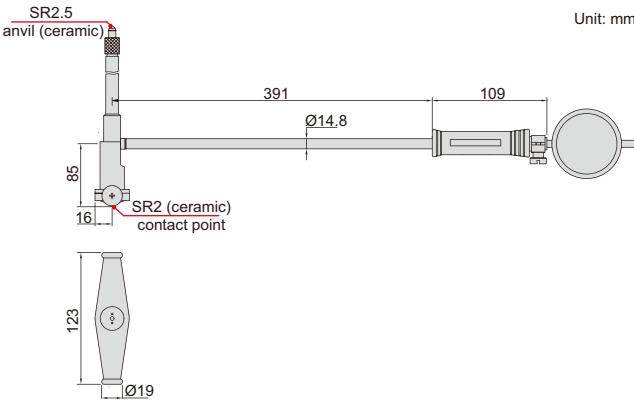
BORE GAGE

ATTENTION: NOT SUITABLE
FOR 0.001MM DIAL INDICATORS



2828-800A

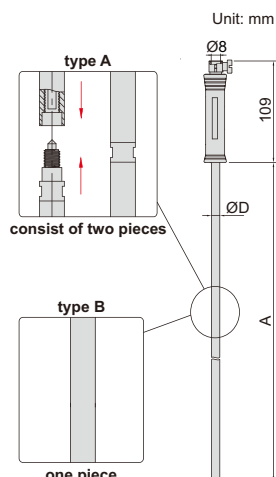
Unit: mm



Code	Range	Indicator	Accuracy	Repeatability
2828-800A	400-800mm	dial indicator code 2308-10FA, range 10mm, graduation 0.01mm	±0.025mm	0.003mm

- To assist deep-hole measurement
- Can be used for bore gages 2322 and 2122

Code	Applicable bore gages	A	ØD	Type
7351-EX11	35-60mm, 50-100mm, 50-160mm, 100-160mm	475	13	B
7351-EX12		980	13	
7351-EX13		1480	14.5	A
7351-EX14		1980	14.5	
7351-EX21	160-250mm, 250-450mm	480	14.5	B
7351-EX22		980	14.5	
7351-EX23		1480	14.5	A
7351-EX24		1980	14.5	

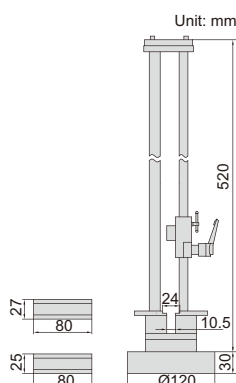


LONG HANDLE

7351-EX11

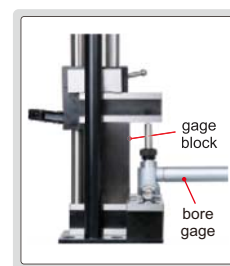
- Used together with gage blocks to set bore gages

Code	Setting range
2395-400	18-400mm



BORE GAGE SETTER

2395-400



CAN SUPPLY CUSTOM SETTING RING FROM Ø1.500MM TO Ø315.000MM, FOR EXAMPLE, Ø17.085MM

- For zero setting of inside micrometers, three points internal micrometers and bore gages
- Deviation (difference between the ordered size and the size marked on the setting ring when supplied):
For example, the ordered size is Ø10.125mm, the size marked on the setting ring when supplied may be Ø10.127mm
- Meet DIN2250-1:2008

Manufacturer Inspection Certificate

INSIZE		Inspection Certificate	
Product name		Setting Ring	
Code No.		6312-20	
Serial No.		0512110112	
Standard temperature		20°	
Traceable to		Germany 10139 D-K 15015 01 02 2012 09	
Judgement		Passed	
Inspector		S. Yang	
Marked Size		19.998	
Diameter		at 0°	at 90°
Top		19.9987	19.9985
Middle		19.9984	19.9985
Bottom		19.9985	19.9986
Average		19.9985	
Cylindricity		0.0003	
Roundness		0.0002	

SETTING RING



6312-20

Code	Size (mm)	Code	Size (mm)	Code	Size (mm)	Code	Size (mm)	Code	Size (mm)	Diameter **	Deviation	Roundness and cylindricity
6312-1D5*	Ø1.5	6312-17*	Ø17	6312-33*	Ø33	6312-49*	Ø49	6312-137D5*	Ø137.5	Ø1.5-3mm	±2.0µm	0.3µm
6312-2*	Ø2	6312-18*	Ø18	6312-34*	Ø34	6312-50*	Ø50	6312-150*	Ø150	Ø3-10mm	±2.0µm	0.4µm
6312-3*	Ø3	6312-19*	Ø19	6312-35*	Ø35	6312-55*	Ø55	6312-162D5*	Ø162.5	Ø10-18mm	±3.0µm	0.5µm
6312-4*	Ø4	6312-20*	Ø20	6312-36*	Ø36	6312-60*	Ø60	6312-175*	Ø175	Ø18-25mm	±3.0µm	0.6µm
6312-5*	Ø5	6312-21*	Ø21	6312-37*	Ø37	6312-62*	Ø62	6312-187D5*	Ø187.5	Ø25-30mm	±4.0µm	0.6µm
6312-6*	Ø6	6312-22*	Ø22	6312-38*	Ø38	6312-65*	Ø65	6312-200*	Ø200	Ø30-50mm	±4.0µm	0.7µm
6312-7*	Ø7	6312-23*	Ø23	6312-39*	Ø39	6312-70*	Ø70	6312-212D5*	Ø212.5	Ø50-80mm	±4.0µm	0.8µm
6312-8*	Ø8	6312-24*	Ø24	6312-40*	Ø40	6312-75*	Ø75	6312-225*	Ø225	Ø80-100mm	±4.0µm	1.0µm
6312-9*	Ø9	6312-25*	Ø25	6312-41*	Ø41	6312-80*	Ø80	6312-237D5*	Ø237.5	Ø100-120mm	±5.0µm	1.0µm
6312-10*	Ø10	6312-26*	Ø26	6312-42*	Ø42	6312-85*	Ø85	6312-250*	Ø250	Ø120-180mm	±6.0µm	1.2µm
6312-11*	Ø11	6312-27*	Ø27	6312-43*	Ø43	6312-87*	Ø87	6312-262D5*	Ø262.5	Ø180-250mm	±7.0µm	1.4µm
6312-12*	Ø12	6312-28*	Ø28	6312-44*	Ø44	6312-90*	Ø90	6312-275*	Ø275	Ø250-315mm	±8.0µm	1.6µm
6312-13*	Ø13	6312-29*	Ø29	6312-45*	Ø45	6312-95*	Ø95	6312-287D5*	Ø287.5			
6312-14*	Ø14	6312-30*	Ø30	6312-46*	Ø46	6312-100*	Ø100	6312-300*	Ø300			
6312-15*	Ø15	6312-31*	Ø31	6312-47*	Ø47	6312-112D5*	Ø112.5					
6312-16*	Ø16	6312-32*	Ø32	6312-48*	Ø48	6312-125*	Ø125					

** For example Ø3-10mm means Ø3mm<diameter≤Ø10mm

* Supplied with manufacturer inspection certificate

ANVIL FOR BORE GAGES



■ For 2852, 2152, 2322, 2122, 2824, 2827

7350-160

Code	Applicable bore gages	Material of measuring face	Quantity per set	Measuring range of anvil (mm)
7350-10	6-10mm	steel	9pcs	6, 6.5, 7, 7.5, 8, 8.5, 9, 9.5, 10
7350-18	10-18.5mm	ceramic	9pcs	10, 11, 12, 13, 14, 15, 16, 17, 18
7350-35	18-35mm	ceramic	9pcs	18, 20, 22, 24, 26, 28, 30, 32, 34
7350-60	35-60mm	ceramic	6pcs	35, 40, 45, 50, 55, 60
7350-100	50-100mm	ceramic	11pcs	50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100
7350-160	50-160mm	ceramic	12pcs	50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100, 105
7350-161	100-160mm	ceramic	12pcs	50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100, 105
7350-250	160-250mm	ceramic	5pcs	160, 170, 180, 190, 200
7350-450	250-450mm	ceramic	5pcs	250, 260, 270, 280, 290

INTERNAL CHAMFER GAGE

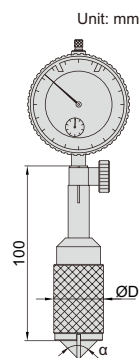
- Measure end diameter of chamfer or taper holes
- With limit pointers

(mm)

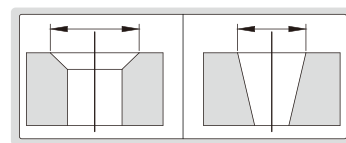
Code	Range	Graduation	Accuracy	ØD	α
2941-20	0.5-20.1mm	0.01mm	±0.02mm	28.3	90°
2941-40	20-40mm	0.01mm	±0.02mm	50	90°
2941-203	0.5-20.1mm	0.02mm	±0.02mm	28.3	127°
2941-403	20-40mm	0.02mm	±0.02mm	50	127°



2941-20



measure end diameter of chamfer or taper holes



DIGITAL INTERNAL CHAMFER GAGE

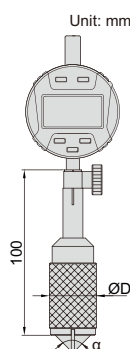
- Measure end diameter of chamfer or taper holes
- Resolution: 0.01mm/0.0005"

(mm)

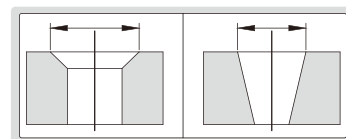
Code	Range	Accuracy	ØD	α
2942-20	0.5-20.1mm	±0.02mm	28.3	90°
2942-40	20-40mm	±0.02mm	50	90°
2942-203	0.5-20.1mm	±0.02mm	28.3	127°
2942-403	20-40mm	±0.02mm	50	127°



2942-20



measure end diameter of chamfer or taper holes



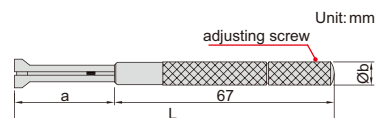
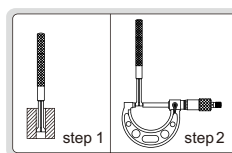
SMALL HOLE GAGE SET

- 4 gages per set
- For small holes, slots and grooves, etc.
- Satin chrome finish



4208-1

Code	Total range	Gages included
4208-1	3-13mm	3-5mm, 5-7.5mm, 7.5-10mm, 10-13mm

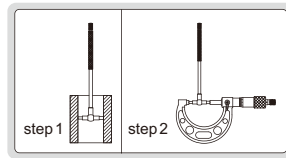
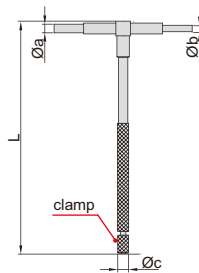


(mm)

Range	L	a	Øb
3-5mm	90	22.5	5.5
5-7.5mm	97.6	30	5.5
7.5-10mm	102.8	35	8.5
10-13mm	108	40	8.5

TELESCOPING GAGE SET

- 6 gages per set
- For quick measurement of inside diameter of holes and width of slots
- Satin chrome finish



Range	L	Øa	Øb	Øc
8-12.7mm	115	3.9	2.9	6.2
12.7-19mm	115	5.3	3.8	6.2
19-32mm	115	5.3	3.8	6.2
32-54mm	137	7.6	6.1	7.2
54-90mm	137	7.6	6.1	7.2
90-150mm	137	7.6	6.1	7.2



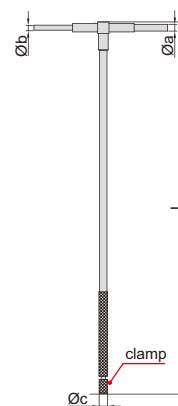
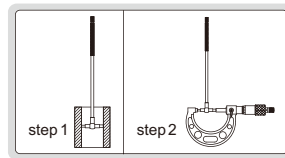
4206-1

Code	Total range	Gages included
4206-1	8-150mm	8-12.7mm, 12.7-19mm, 19-32mm, 32-54mm, 54-90mm, 90-150mm

LONG HANDLE TELESCOPING GAGE

- For quick measurement of inside diameter of deep holes and width of slots
- Satin chrome finish

Code	Range	L	Øa	Øb	Øc
4209-1	8-12.7mm	250	3.9	2.9	6.2
4209-2	12.7-19mm	250	5.3	3.8	6.2
4209-3	19-32mm	250	5.3	3.8	6.2
4209-4	32-54mm	300	7.6	6.1	7.2
4209-5	54-90mm	300	7.6	6.1	7.2
4209-6	90-150mm	300	7.6	6.1	7.2



4209-6

LARGE DIAMETER GAGE CODE ISQ-RA600

DATA OUTPUT

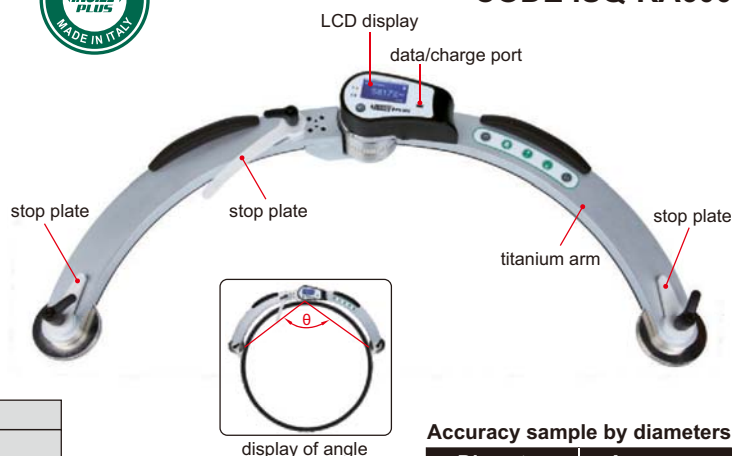
- To measure large external or internal diameters
- Automatic judgment and display external or internal diameter
- Titanium arm, light in weight
- Backlight LCD display, can rotate 180° for easy reading
- Memory of 12 readings and average calculation
- With minimum and maximum measurement mode
- Angle can be displayed



external diameter measurement



internal diameter measurement



SPECIFICATION

Range	external	Ø500~6000mm/19.69~236.22"
	internal	Ø1100~6000mm/43.31~236.22"
Resolution	0.01mm/0.001"	
Accuracy	±(0.01+D²/30)mm (D is the diameter to be measured, in meter)	
Power supply	rechargeable battery (for 8 hours working)	
Weight	3.8kg	

STANDARD DELIVERY

Main unit	1pc
AC/DC adapter	1pc
USB cable and software	1pc



software (included), data output, save and print

Accuracy sample by diameters

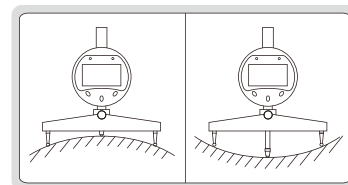
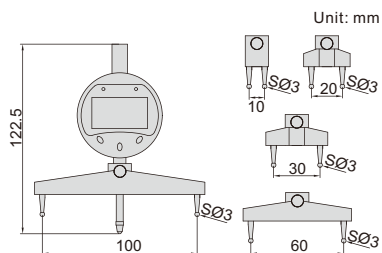
Diameter	Accuracy
500mm	±0.018mm
1000mm	±0.043mm
1500mm	±0.085mm
2000mm	±0.143mm
2500mm	±0.218mm
3000mm	±0.310mm
4000mm	±0.543mm
5000mm	±0.843mm
6000mm	±1.210mm

DIGITAL RADIUS GAGE

ATTENTION: NO
DATA OUTPUT



2183

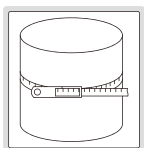


- Measure radius of internal and external arcs
- Supplied with 5 jaws for different sizes of arc
- Battery CR2032

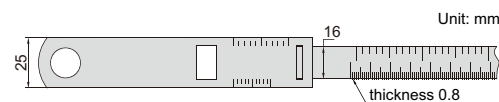
Code	Range of radius (R)	Resolution	Accuracy (mm)
2183	5-700mm/0.2-27.5"	0.005mm/0.00005"	±0.01R *

* R is the radius to be measured

CIRCUMFERENCE TAPE



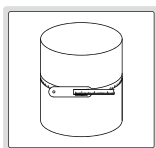
7114-950



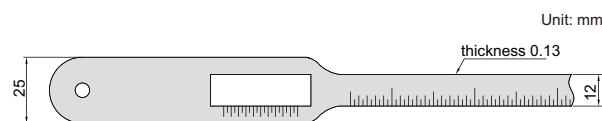
Code	Circumference range	Diameter range	Accuracy	
			Circumference	Diameter
7114-950	60-950mm	Ø20-300mm	±1.5mm	±0.5mm
7114-2200	940-2200mm	Ø300-700mm	±1.5mm	±0.5mm
7114-3460	2190-3460mm	Ø700-1100mm	±1.5mm	±0.5mm

- Graduation: 0.1mm
- Measure diameter and circumference of pipes, trees, tires, etc.
- Laser engraved scale
- Made of stainless steel

CIRCUMFERENCE TAPE



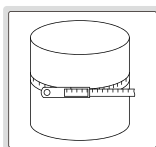
7116-115



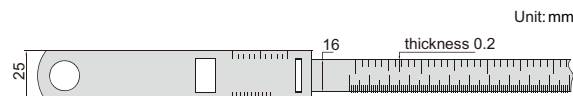
Code	Diameter range	Graduation	Accuracy
7116-115	Ø20-115mm	0.05mm	±0.10mm
7116-230	Ø100-230mm	0.05mm	±0.10mm
7116-330	Ø200-330mm	0.05mm	±0.15mm
7116-620	Ø300-620mm	0.05mm	±0.20mm

- Measure diameter of cables, thin plastic pipes, etc., which may deform
- Laser engraved scale
- Made of stainless steel

CIRCUMFERENCE TAPE



7115-3460



Code	Circumference range	Diameter range	Accuracy	
			Circumference	Diameter
7115-950	150-950mm	Ø50-300mm	±0.50mm	±0.15mm
7115-2200	940-2200mm	Ø300-700mm	±0.60mm	±0.20mm
7115-3460	2190-3460mm	Ø700-1100mm	±0.60mm	±0.20mm
7115-4720	3450-4720mm	Ø1100-1500mm	±0.75mm	±0.25mm
7115-5980	4710-5980mm	Ø1500-1900mm	±0.90mm	±0.30mm

- Graduation: 0.1mm
- Measure diameter and circumference of pipes, trees, tires, etc.
- Laser engraved scale
- Made of stainless steel

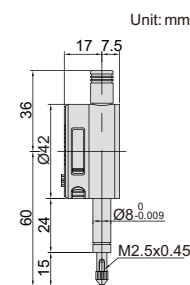
- Button function:
in/mm: short press for inch/metric conversion
long press to change measuring direction
ABS: short press for absolute/incremental measurement
long press to preset data
0/ON: short press to turn on when power is off
short press to set zero when power is on
long press to turn off

- CR1632 battery, automatic power off
- Data output
- Optional accessory: data output cable (code **7306-40**, **7302-SPC3A**, **7305-SPC1A**), contact points (page 98~100)



DATA
OUTPUT

COMPACT DIGITAL INDICATOR



2114-51F

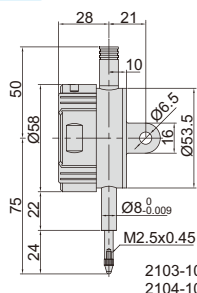
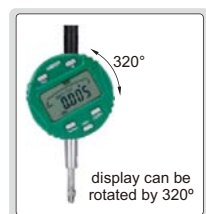
Code	Range	Resolution	Accuracy	Hysteresis	Remark
2114-5F *	5mm/0.2"	0.01mm/0.0005"	20µm	10µm	flat back
2114-51F *	5mm/0.2"	0.001mm/0.00005"	5µm	2µm	flat back

* Supplied with manufacturer inspection certificate traceable to NIST USA

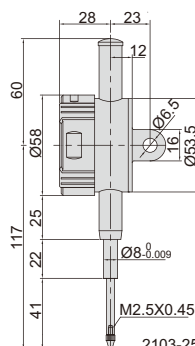


DATA
OUTPUT

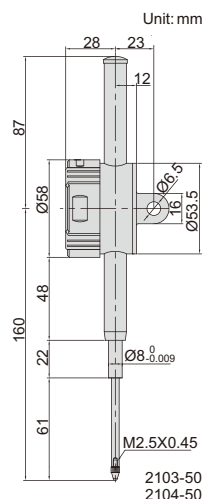
DIGITAL INDICATOR (ADVANCED MODEL)



2103-10



2103-25
2104-25



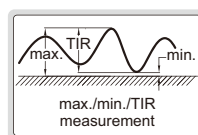
2103-50
2104-50



2103-50

- Reading in digit and analog
- Display can be rotated by 320°
- 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
- Data output
- Optional accessory: data output cable (code **7306-40**, **7302-SPC3A**, **7305-SPC1A**), backs (page 101), contact points (page 98~100)

spindle lift knob is included



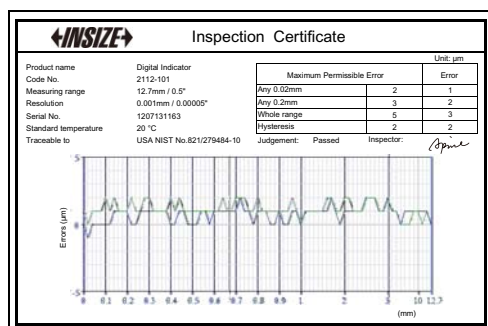
Resolution 0.001mm/0.00005"

Code	Range	Accuracy	Hysteresis	Remark
2103-10F *	12.7mm/0.5"	5µm	2µm	flat back
2103-25F *	25.4mm/1"	5µm	3µm	flat back
2103-50F *	50.8mm/2"	6µm	3µm	flat back
2103-10 *	12.7mm/0.5"	5µm	2µm	lug back
2103-25 *	25.4mm/1"	5µm	3µm	lug back
2103-50 *	50.8mm/2"	6µm	3µm	lug back

Resolution 0.01mm/0.0005"

Code	Range	Accuracy	Hysteresis	Remark
2104-10F *	12.7mm/0.5"	20µm	10µm	flat back
2104-25F *	25.4mm/1"	20µm	10µm	flat back
2104-50F *	50.8mm/2"	30µm	10µm	flat back
2104-10 *	12.7mm/0.5"	20µm	10µm	lug back
2104-25 *	25.4mm/1"	20µm	10µm	lug back
2104-50 *	50.8mm/2"	30µm	10µm	lug back

* Supplied with manufacturer inspection certificate traceable to NIST USA

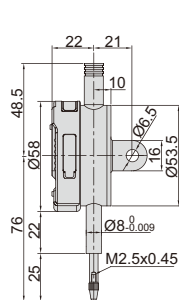


**MANUFACTURER INSPECTION
CERTIFICATE TRACEABLE TO
NIST USA, FOR DIAL INDICATORS,
DIGITAL INDICATORS AND
DIAL TEST INDICATORS**

DIGITAL INDICATOR (STANDARD MODEL)



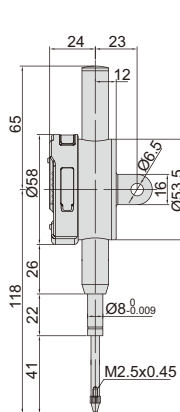
DATA
OUTPUT



2112-10
2112-101



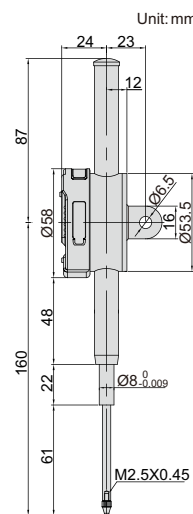
2112-10



2112-25
2112-251



2112-251



2112-50
2112-501



2112-501

- Button function: on/off, inch/mm, zero
- CR2032 battery, automatic power off
- Data output
- Optional accessory: data output cable (code **7306-40**, **7302-SPC3A**, **7305-SPC1A**), backs (page 101), contact points (page 98~100)

spindle lift knob is included



Resolution 0.001mm/0.00005"

Code	Range	Accuracy	Hysteresis	Remark
2112-101F *	12.7mm/0.5"	5μm	2μm	flat back
2112-251F *	25.4mm/1"	5μm	3μm	flat back
2112-501F *	50.8mm/2"	6μm	3μm	flat back
2112-101 *	12.7mm/0.5"	5μm	2μm	lug back
2112-251 *	25.4mm/1"	5μm	3μm	lug back
2112-501 *	50.8mm/2"	6μm	3μm	lug back

Resolution 0.01mm/0.0005"

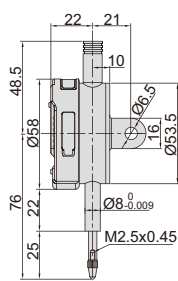
Code	Range	Accuracy	Hysteresis	Remark
2112-10F *	12.7mm/0.5"	20μm	10μm	flat back
2112-25F *	25.4mm/1"	20μm	10μm	flat back
2112-50F *	50.8mm/2"	30μm	10μm	flat back
2112-10 *	12.7mm/0.5"	20μm	10μm	lug back
2112-25 *	25.4mm/1"	20μm	10μm	lug back
2112-50 *	50.8mm/2"	30μm	10μm	lug back

* Supplied with manufacturer inspection certificate traceable to NIST USA

METRIC DIGITAL INDICATOR



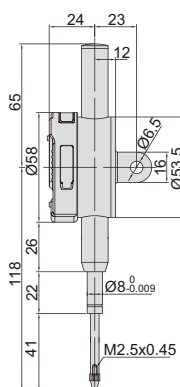
DATA
OUTPUT



2116-10
2116-101



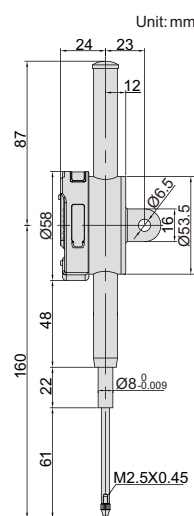
2116-10



2116-25
2116-251



2116-251



2116-50
2116-501



2116-501

- Button function: on/off, +/-, zero
- CR2032 battery, automatic power off
- Data output
- Optional accessory: data output cable (code **7306-40**, **7302-SPC3A**, **7305-SPC1A**), backs (page 101), contact points (page 98~100)

spindle lift knob is included



Resolution 0.001mm

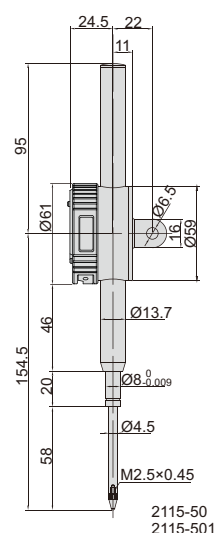
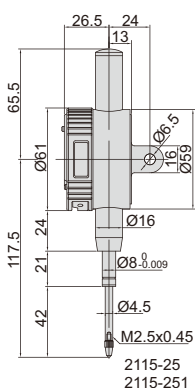
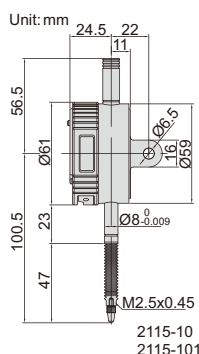
Code	Range	Accuracy	Hysteresis	Remark
2116-101F *	12.7mm	5μm	2μm	flat back
2116-251F *	25.4mm	5μm	3μm	flat back
2116-501F *	50.8mm	6μm	3μm	flat back
2116-101 *	12.7mm	5μm	2μm	lug back
2116-251 *	25.4mm	5μm	3μm	lug back
2116-501 *	50.8mm	6μm	3μm	lug back

Resolution 0.01mm

Code	Range	Accuracy	Hysteresis	Remark
2116-10F *	12.7mm	20μm	10μm	flat back
2116-25F *	25.4mm	20μm	10μm	flat back
2116-50F *	50.8mm	30μm	10μm	flat back
2116-10 *	12.7mm	20μm	10μm	lug back
2116-25 *	25.4mm	20μm	10μm	lug back
2116-50 *	50.8mm	30μm	10μm	lug back

* Supplied with manufacturer inspection certificate traceable to NIST USA

WATERPROOF DIGITAL INDICATOR



spindle lift knob is included
(except **2115-101/101F, 2115-10/10F**)



2115-50

Resolution 0.001mm/0.00005"

Code	Range	Dust/waterproof	Accuracy	Hysteresis	Remark
2115-101*	12.7mm/0.5"	IP65	5µm	2µm	lug back
2115-251*	25.4mm/1"	IP54	5µm	3µm	lug back
2115-501*	50.8mm/2"	IP54	6µm	3µm	lug back
2115-101F*	12.7mm/0.5"	IP65	5µm	2µm	flat back
2115-251F*	25.4mm/1"	IP54	5µm	3µm	flat back
2115-501F*	50.8mm/2"	IP54	6µm	3µm	flat back

Resolution 0.01mm/0.0005"

Code	Range	Dust/waterproof	Accuracy	Hysteresis	Remark
2115-10 *	12.7mm/0.5"	IP65	20μm	10μm	lug back
2115-25 *	25.4mm/1"	IP54	20μm	10μm	lug back
2115-50 *	50.8mm/2"	IP54	30μm	10μm	lug back
2115-10F *	12.7mm/0.5"	IP65	20μm	10μm	flat back
2115-25F *	25.4mm/1"	IP54	20μm	10μm	flat back
2115-50F *	50.8mm/2"	IP54	30μm	10μm	flat back

* Supplied with manufacturer inspection certificate traceable to NIST USA

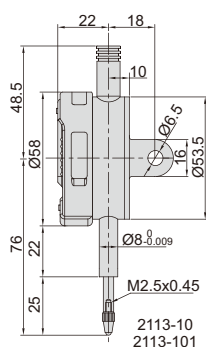
- Dust/waterproof
- Button function: on/off, zero, mm/inch
- CR2032 battery, automatic power off
- Data output
- Optional accessory: data output cable (code **7306-40**, **7302-SPC3A**, **7305-SPC1A**), backs (page 101), contact points (page 98~100)



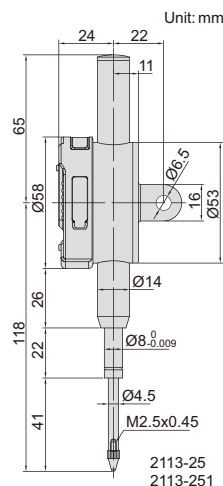
**ONE BATTERY FOR
4000 WORKING HOURS**

**DATA
OUTPUT**

spindle lift knob is included



2113-10



2113-251

data output
cable (optional)



7305-SPC1A

- No auto power off, tracking the deformation of mould and steel structure for a long time
- Low power consumption
- Button function: on/off, zero, inch/mm
- CR2032 battery
- Data output
- Optional accessory: backs (page 101), contact points (page 98~100), data output cable (code **7305-SPC1A**)

Resolution 0.001mm/0.00005"

Code	Range	Accuracy	Hysteresis	Remark
2113-101F*	12.7mm/0.5"	5µm	2µm	flat back
2113-251F*	25.4mm/1"	5µm	3µm	flat back
2113-101	12.7mm/0.5"	5µm	2µm	lug back
2113-251*	25.4mm/1"	5µm	3µm	lug back

Resolution 0.01mm/0.0005"

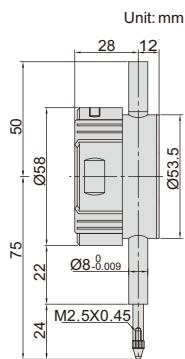
Code	Range	Accuracy	Hysteresis	Remark
2113-10F *	12.7mm/0.5"	20µm	10µm	flat back
2113-25F *	25.4mm/1"	20µm	10µm	flat back
2113-10 *	12.7mm/0.5"	20µm	10µm	lug back
2113-25 *	25.4mm/1"	20µm	10µm	lug back

* Supplied with manufacturer inspection certificate traceable to NIST USA

DIGITAL INDICATOR FOR BORE GAGES



2108-10F



- Specially designed for bore gages
- The minimum value tracking function can find the diameter automatically
- Read the diameter directly, after inputting the size of setting ring
- Reading in digit and analog
- Display can be rotated by 320°
- Button function: minimum value tracking, calibration, data preset, inch/metric conversion, absolute/incremental measurement
- CR2032 battery, automatic power off
- Data output
- Optional accessory: data output cable (code **7306-40**, **7302-SPC3A**, **7305-SPC1A**), backs (page 101), contact points (page 98~100)



DATA
OUTPUT

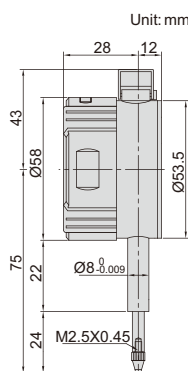
Code	Range	Resolution	Accuracy	Hysteresis	Remark
2108-10F *	12.7mm/0.5"	0.002mm/0.0001"	20µm	10µm	flat back
2108-101F *	12.7mm/0.5"	0.001mm/0.00005"	5µm	2µm	flat back

* Supplied with manufacturer inspection certificate traceable to NIST USA

DIGITAL INDICATOR WITH LIFTING LEVER



2109-10



- Reading in digit and analog
- Display can be rotated by 320°
- 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
- Data output
- Optional accessory: data output cable (code **7306-40**, **7302-SPC3A**, **7305-SPC1A**), backs (page 101), contact points (page 98~100)



Code	Range	Resolution	Accuracy	Hysteresis	Remark
2109-10 *	10mm/0.4"	0.01mm/0.0005"	20µm	10µm	flat back
2109-101 *	10mm/0.4"	0.001mm/0.00005"	5µm	2µm	flat back

* Supplied with manufacturer inspection certificate traceable to NIST USA

LARGE STROKE DIGITAL INDICATOR

- Button function: on/off, zero, mm/inch
- CR2032 battery, automatic power off
- Data output
- Optional accessory: data output cable (code **7306-40**, **7302-SPC3A**, **7305-SPC1A**), backs (page 101), contact points (page 98~100)

Resolution 0.01mm/0.0005"

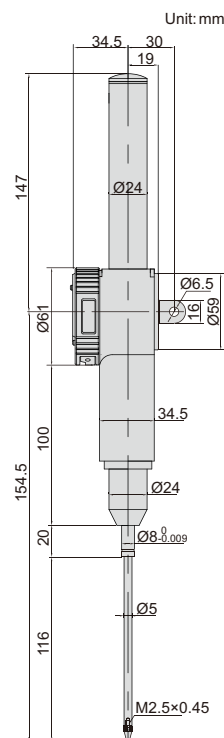
Code	Range	Accuracy	Hysteresis	Remark
2117-100	100mm/4"	30µm	10µm	lug back

Resolution 0.001mm/0.00005"

Code	Range	Accuracy	Hysteresis	Remark
2117-1001	100mm/4"	9µm	3µm	lug back



2117-100



DATA
OUTPUT

spindle lift knob is included





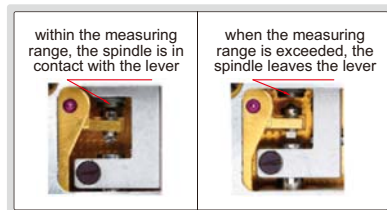
JEWELLED BEARING

SHOCK PROOF

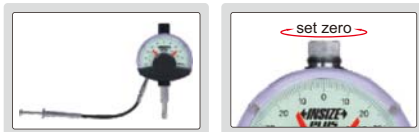


- Shockproof
- Jeweled bearing
- Overtravel: 3mm
- Shadow free dial face cover
- Supplied with limit pointers
- Initial measuring force 1.2N
- Optional accessory:
lifting lever (code 6289-150)

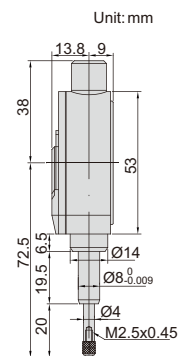
lever construction



lifting lever (optional)



2881-01



Code	Range	Graduation	Accuracy	Hysteresis	Dial reading	Remark
2881-01*	0.1mm	0.001mm	1.2µm	0.5µm	50-0-50	flat back

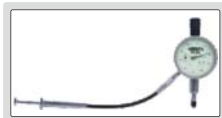
*Supplied with manufacturer inspection certificate traceable to NIST USA

SHOCK PROOF

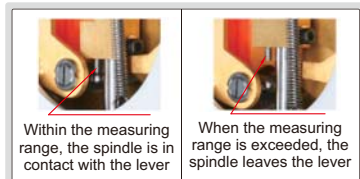
HIGH PRECISION COMPACT DIAL INDICATOR



lifting lever (optional)



lever device

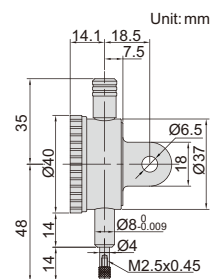


2890-1

- Shockproof
- Jeweled bearing
- With limit pointers
- Optional accessory: backs (page 101), contact points (page 98~100), lifting lever (code 6289-150)

Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Remark
2890-1*	1mm	0.001mm	4µm	1.5µm	0.1mm	0-100	lug back
2890-1F*	1mm	0.001mm	4µm	1.5µm	0.1mm	0-100	flat back

*Supplied with manufacturer inspection certificate traceable to NIST USA

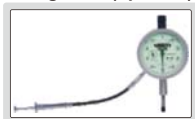


SHOCK PROOF

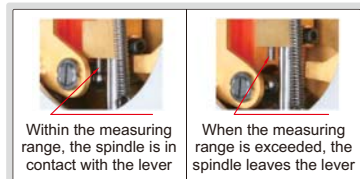
HIGH PRECISION DIAL INDICATOR



lifting lever (optional)



lever device

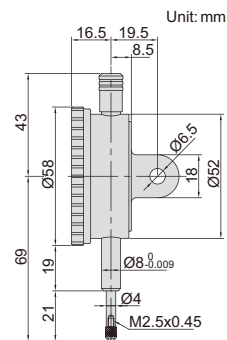


2891-1

- Shockproof
- Jeweled bearing
- With limit pointers
- Optional accessory: backs (page 101), contact points (page 98~100), lifting lever (code 6289-150)

Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Remark
2891-1*	1mm	0.001mm	4µm	1.5µm	0.1mm	0-100	lug back
2891-1F*	1mm	0.001mm	4µm	1.5µm	0.1mm	0-100	flat back

*Supplied with manufacturer inspection certificate traceable to NIST USA



PRECISION DIAL INDICATOR

JEWELLED
BEARING

SHOCK
PROOF

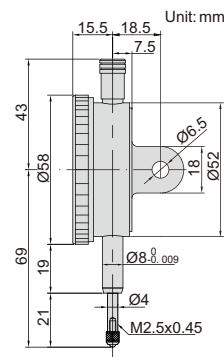
- Shockproof
- Jeweled bearing
- With limit pointers
- Optional accessory: backs (page 101), contact points (page 98~100)



2830-1

Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Remark
2830-1*	1mm	0.001mm	4μm	2μm	0.2mm	0-100-0	lug back
2830-1F*	1mm	0.001mm	4μm	2μm	0.2mm	0-100-0	flat back

* Supplied with manufacturer inspection certificate traceable to NIST USA



COMPACT DIAL INDICATOR

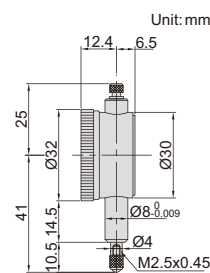
- With limit pointers
- Optional accessory: contact points (page 98~100)



2886-3F

Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Remark
2886-3F*	3mm	0.01mm	12μm	3μm	0.5mm	0-50	flat back

* Supplied with manufacturer inspection certificate traceable to NIST USA



COMPACT DIAL INDICATOR

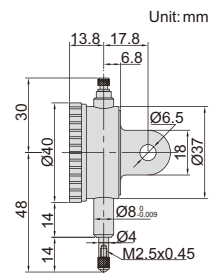
- With limit pointers
- Optional accessory: backs (page 101), contact points (page 98~100)



2887-5

Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Remark
2887-5*	5mm	0.01mm	14μm	3μm	0.5mm	0-50	lug back
2887-5F*	5mm	0.01mm	14μm	3μm	0.5mm	0-50	flat back

* Supplied with manufacturer inspection certificate traceable to NIST USA



LARGE DIAL FACE DIAL INDICATOR



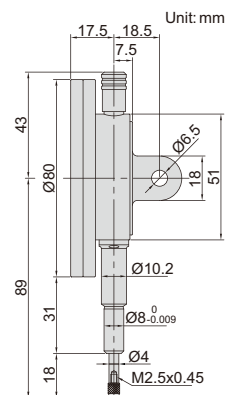
- Large, easy-to-read dial face
- With limit pointers
- Optional accessory: backs (page 101), contact points (page 98~100)



2888-10

Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Remark
2888-10*	10mm	0.01mm	17μm	5μm	1mm	0-100	flat back, with spare lug back

* Supplied with manufacturer inspection certificate traceable to NIST USA





- With limit pointers
- Optional accessory: backs (page 101), contact points (page 98~100)

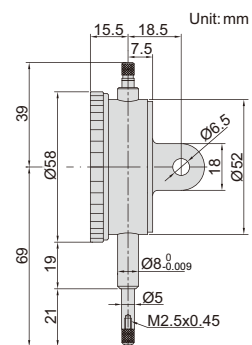


2892-10

Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Remark
2892-10*	10mm	0.01mm	17µm	3µm	1mm	0-100	lug back
2892-10F*	10mm	0.01mm	17µm	3µm	1mm	0-100	flat back

*Supplied with manufacturer inspection certificate traceable to NIST USA

DIAL INDICATOR



- With limit pointers
- Optional accessory: contact points (page 98~100)

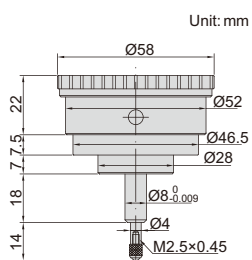


2893-3

Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading
2893-3*	3mm	0.01mm	15µm	5µm	1mm	0-100

*Supplied with manufacturer inspection certificate traceable to NIST USA

BACK PLUNGER DIAL INDICATOR



SHOCK
PROOF

IP67
WATERPROOF

- Shockproof
- IP67 dust/waterproof
- Optional accessory: contact points (page 98~100)

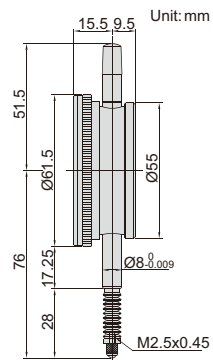


2894-10F

Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Remark
2894-10F*	10mm	0.01mm	17µm	3µm	1mm	0-100	flat back

*Supplied with manufacturer inspection certificate traceable to NIST USA

WATERPROOF DIAL INDICATOR



- With limit pointers
- Optional accessory: backs (page 101), contact points (page 98~100)

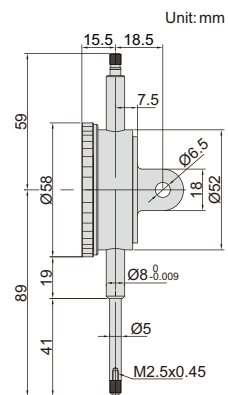


2889-30

Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Remark
2889-30*	30mm	0.01mm	25µm	5µm	1mm	0-100	lug back
2889-30F*	30mm	0.01mm	25µm	5µm	1mm	0-100	flat back

*Supplied with manufacturer inspection certificate traceable to NIST USA

DIAL INDICATOR

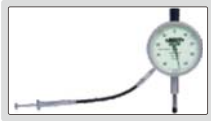


ONE REVOLUTION PRECISION DIAL INDICATOR

SHOCK
PROOF



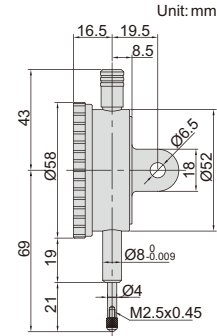
lifting lever(optional)



- Eliminate the possibility of reading errors due to miscounting
- Shockproof
- Jeweled bearing
- Free stroke: 4.5mm
- With limit pointers
- Optional accessory: backs (page 101), contact points (page 98~100), lifting lever(code 6289-150)



2885-008



lever device



Within the measuring range, the spindle is in contact with the lever



When the measuring range is exceeded, the spindle leaves the lever

Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Remark
2885-008*	0.08mm	0.001mm	3µm	1.5µm	1mm	40-0-40	lug back
2885-008F*	0.08mm	0.001mm	3µm	1.5µm	1mm	40-0-40	flat back

*Supplied with manufacturer inspection certificate traceable to NIST USA

ONE REVOLUTION DIAL INDICATOR

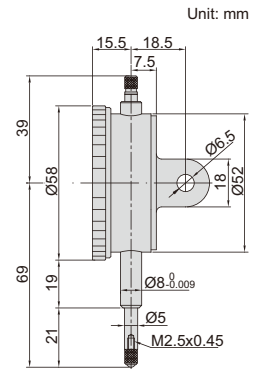
SHOCK
PROOF



- Eliminate the possibility of reading errors due to miscounting
- Shockproof
- Free stroke: 7mm
- With limit pointers
- Optional accessory: backs (page 101), contact points (page 98~100)



2882-08



Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Remark
2882-08*	0.8mm	0.01mm	9µm	3µm	1mm	40-0-40	lug back
2882-08F*	0.8mm	0.01mm	9µm	3µm	1mm	40-0-45	flat back

*Supplied with manufacturer inspection certificate traceable to NIST USA

PRECISION DIAL INDICATOR

JEWELLED
BEARING



- Graduation: 0.001mm
- Jeweled bearing
- Supplied with limit pointers and bezel clamp
- Optional accessory: backs (page 101), contact points (page 98~100)

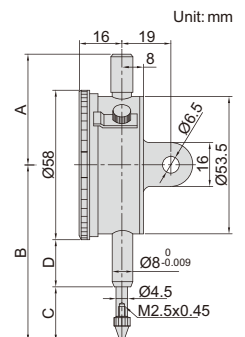


2313-1A

(mm)

Code	Range	Accuracy	Hysteresis	Range/rev	Dial reading	Remark	A	B	C	D
2313-1FA*	1mm	5µm	2µm	0.2mm	0-100-0	flat back	45	62.5	19.5	15
2313-2FA*	2mm	8µm	2.5µm	0.2mm	0-100-0	flat back	45	62.5	19.5	15
2313-1A*	1mm	5µm	2µm	0.2mm	0-100-0	lug back	45	62.5	19.5	15
2313-2A*	2mm	8µm	2.5µm	0.2mm	0-100-0	lug back	45	62.5	19.5	15

*Supplied with manufacturer inspection certificate traceable to NIST USA





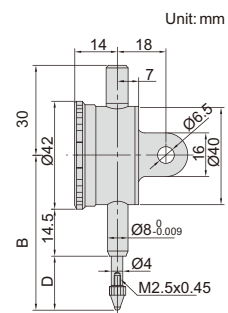
JEWELLED BEARING

COMPACT DIAL INDICATOR

- Jeweled bearing
- Supplied with limit pointers
- Optional accessory: backs (page 101), contact points (page 98~100)



2311-5



Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Remark	B	D
2311-3F *	3mm	0.01mm	14µm	3µm	0.5mm	0-50	flat back	46	10.5
2311-5F *	5mm	0.01mm	16µm	3µm	0.5mm	0-50	flat back	48	12.5
2311-3 *	3mm	0.01mm	14µm	3µm	0.5mm	0-50	lug back	46	10.5
2311-5 *	5mm	0.01mm	16µm	3µm	0.5mm	0-50	lug back	48	12.5

* Supplied with manufacturer inspection certificate traceable to NIST USA



ATTENTION: PROMOTION MODEL

carton box



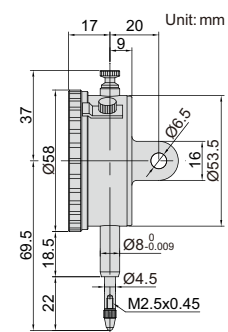
2301-10

- Jeweled bearing
- Supplied with limit hands and bezel clamp
- Packed in carton box
- Optional accessory: backs (page 101), contact points (page 98~100)

Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Remark
2301-10F *	10mm	0.01mm	17µm	3µm	1mm	0-100	flat back
2301-10 *	10mm	0.01mm	17µm	3µm	1mm	0-100	lug back

* Supplied with manufacturer inspection certificate traceable to NIST USA

DIAL INDICATOR



ATTENTION: PROMOTION MODEL

carton box



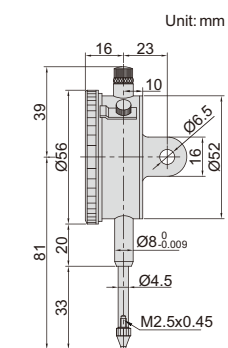
2302-25

- Supplied with limit pointers and bezel clamp
- Packed in carton box
- Optional accessory: backs (page 101), contact points (page 98~100)

Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Remark
2302-25F *	25mm	0.01mm	35µm	7µm	1mm	0-100	flat back
2302-25 *	25mm	0.01mm	35µm	7µm	1mm	0-100	lug back

* Supplied with manufacturer inspection certificate traceable to NIST

DIAL INDICATOR



DIAL INDICATOR



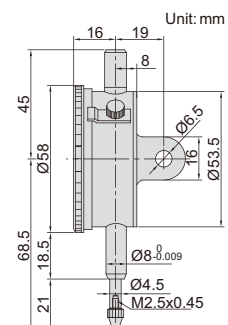
2308-10A

- Jeweled bearing
- Supplied with limit pointers and bezel clamp
- Optional accessory: backs (page 101), contact points (page 98~100)

Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Remark
2308-3FA *	3mm	0.01mm	14μm	3μm	1mm	0-100	flat back
2308-5FA *	5mm	0.01mm	16μm	3μm	1mm	0-100	flat back
2308-10FA *	10mm	0.01mm	17μm	3μm	1mm	0-100	flat back
2308-3A *	3mm	0.01mm	14μm	3μm	1mm	0-100	lug back
2308-5A *	5mm	0.01mm	16μm	3μm	1mm	0-100	lug back
2308-10A *	10mm	0.01mm	17μm	3μm	1mm	0-100	lug back

* Supplied with manufacturer inspection certificate traceable to NIST USA

JEWELLED
BEARING



REVERSE READING DIAL INDICATOR



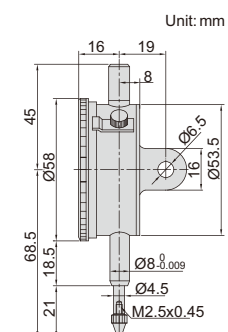
2801-10

- Suitable for depth and step measurements
- Jeweled bearing
- Supplied with limit pointers and bezel clamp
- Optional accessory: backs (page 101), contact points (page 98~100)

Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Remark
2801-10F *	10mm	0.01mm	17μm	3μm	1mm	100-0	flat back
2801-10 *	10mm	0.01mm	17μm	3μm	1mm	100-0	lug back

* Supplied with manufacturer inspection certificate traceable to NIST USA

JEWELLED
BEARING



SHOCKPROOF DIAL INDICATOR



2314-10A

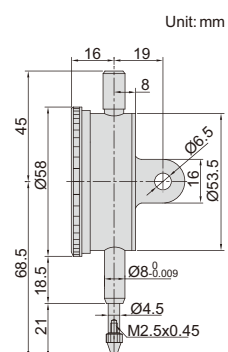
- Shockproof
- Jeweled bearing
- Supplied with limit pointers and bezel clamp
- Optional accessory: backs (page 101), contact points (page 98~100)

Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Remark
2314-3FA *	3mm	0.01mm	14μm	3μm	1mm	0-100	flat back
2314-5FA *	5mm	0.01mm	16μm	3μm	1mm	0-100	flat back
2314-10FA *	10mm	0.01mm	20μm	3μm	1mm	0-100	flat back
2314-3A *	3mm	0.01mm	14μm	3μm	1mm	0-100	lug back
2314-5A *	5mm	0.01mm	16μm	3μm	1mm	0-100	lug back
2314-10A *	10mm	0.01mm	20μm	3μm	1mm	0-100	lug back

* Supplied with manufacturer inspection certificate traceable to NIST USA

SHOCK
PROOF

JEWELLED
BEARING





BACK PLUNGER TYPE DIAL INDICATOR

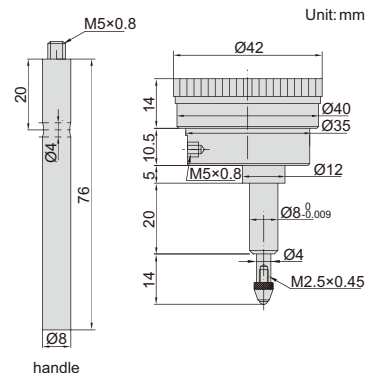
with handle



- Supplied with handle
- With limit pointers
- Optional accessory: contact points (page 98~100)



2357-5



Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading
2357-5*	5mm	0.01mm	15µm	5µm	1mm	0-100

* Supplied with manufacturer inspection certificate traceable to NIST USA



WATERPROOF DIAL INDICATOR

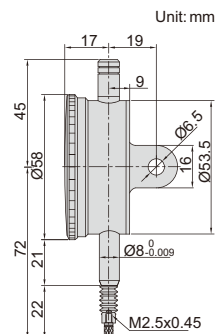
IP54
WATERPROOF

JEWELLED BEARING

- IP54 dust/waterproof
- Jeweled bearing



2324-10



Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Remark
2324-10F*	10mm	0.01mm	17µm	3µm	1mm	0-100	flat back
2324-10*	10mm	0.01mm	17µm	3µm	1mm	0-100	lug back

* Supplied with manufacturer inspection certificate traceable to NIST USA



DOUBLE FACE DIAL INDICATOR

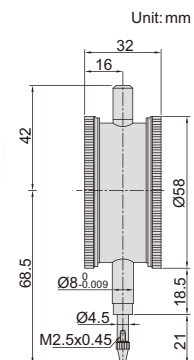
- Read from both sides
- Jeweled bearing
- Supplied with limit pointers
- Optional accessory: contact points (page 98~100)



front

back

2328-10



Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading
2328-10*	10mm	0.01mm	17µm	3µm	1mm	0-100

* Supplied with manufacturer inspection certificate traceable to NIST USA

DIAL INDICATOR



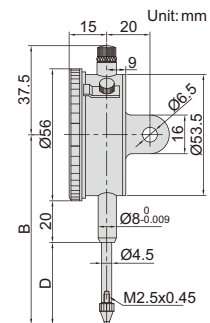
- Supplied with limit pointers and bezel clamp
- Optional accessory: backs (page 101), contact points (page 98~100)

2310-30A

(mm)

Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Remark	B	D
2310-20FA*	20mm	0.01mm	25μm	5μm	1mm	0-100	flat back	83	35
2310-30FA*	30mm	0.01mm	35μm	7μm	1mm	0-100	flat back	88	40
2310-20A*	20mm	0.01mm	25μm	5μm	1mm	0-100	lug back	83	35
2310-30A*	30mm	0.01mm	35μm	7μm	1mm	0-100	lug back	88	40

* Supplied with manufacturer inspection certificate traceable to NIST USA



DIAL INDICATOR

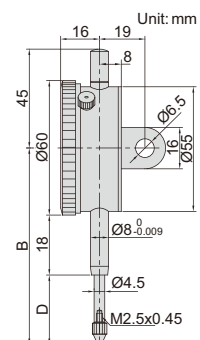


2318-30

(mm)

- Supplied with limit pointers and bezel clamp
- Optional accessory: backs (page 101), contact points (page 98~100)

Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Remark	B	D
2318-10F	10mm	0.1mm	40μm	20μm	10mm	0-10	flat back	70	20
2318-20F	20mm	0.1mm	50μm	20μm	10mm	0-10	flat back	85	35
2318-25F	25mm	0.1mm	60μm	20μm	10mm	0-10	flat back	85	35
2318-30F	30mm	0.1mm	60μm	20μm	10mm	0-10	flat back	90	40
2318-10	10mm	0.1mm	40μm	20μm	10mm	0-10	lug back	70	20
2318-20	20mm	0.1mm	50μm	20μm	10mm	0-10	lug back	85	35
2318-25	25mm	0.1mm	60μm	20μm	10mm	0-10	lug back	85	35
2318-30	30mm	0.1mm	60μm	20μm	10mm	0-10	lug back	90	40



ONE REVOLUTION DIAL INDICATOR



2316-05

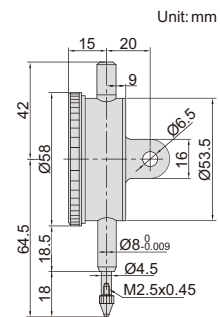
SHOCK PROOF



- Eliminate the possibility of reading errors due to miscounting
- Shockproof
- Supplied with limit pointers
- Optional accessory: backs (page 101), contact points (page 98~100)

Code	Range	Graduation	Accuracy	Hysteresis	Dial reading	Remark
2316-05F*	0.5mm	0.01mm	9μm	3μm	25-0-25	flat back
2316-1F*	1mm	0.01mm	9μm	3μm	50-0-50	flat back
2316-05*	0.5mm	0.01mm	9μm	3μm	25-0-25	lug back
2316-1*	1mm	0.01mm	9μm	3μm	50-0-50	lug back

* Supplied with manufacturer inspection certificate traceable to NIST USA



**JEWELLED
BEARING**

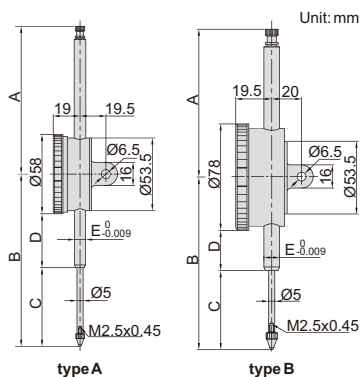
**SHOCK
PROOF**

DIAL INDICATOR

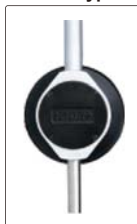
- Shockproof
- Jeweled bearing
- Supplied with limit pointers
- Optional accessory: backs (page 101), contact points (page 98~100)



2309-50



back of type B



stem clamp Ø10mm
for 2309-100D



Code	Type	A	B	C	D	E
2309-30F	A	37.5	89.5	40.9	19.5	Ø8
2309-30	A	37.5	89.5	40.9	19.5	Ø8
2309-50	A	108.3	126.2	57.7	39.5	Ø8
2309-50D	B	108.3	126.2	57.7	29.5	Ø8
2309-80	A	138.4	168.4	88	51.3	Ø8
2309-80D	B	138.4	168.4	88	41.3	Ø8
2309-100D	B	167.6	207.8	108	60.8	Ø10

Code	Range	Graduation	Type	Accuracy	Hysteresis	Range/rev	Dial reading	Remark
2309-30F *	30mm	0.01mm	A	35µm	7µm	1mm	0-100	flat back
2309-30 *	30mm	0.01mm	A	35µm	7µm	1mm	0-100	lug back
2309-50 *	50mm	0.01mm	A	40µm	8µm	1mm	0-100	flat back with spare lug back
2309-50D *	50mm	0.01mm	B	40µm	8µm	1mm	0-100	flat back with spare lug back
2309-80	80mm	0.01mm	A	50µm	9µm	1mm	0-100	flat back with spare lug back
2309-80D	80mm	0.01mm	B	50µm	9µm	1mm	0-100	flat back with spare lug back
2309-100D	100mm	0.01mm	B	50µm	9µm	1mm	0-100	flat back with spare lug back

Note: 1) 2309-80, 2309-80D and 2309-100D can only be used vertically
 2) 2309-100D is supplied with stem clamp Ø10mm for magnetic stands (code 6200-60, 6201-60, 6202-80, 6202-100)
 3) 2309-30 and 2309-30F can not accept optional backs (page 101)

* Supplied with manufacturer inspection certificate traceable to NIST USA

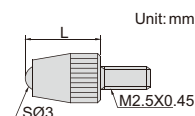
BALL POINT

Code	Material of measuring face	L (mm)
6282-0101	carbide	7.3
6282-0103	ceramic	7.3
6282-0104	carbide	8.3
6282-0106	carbide	12.1
6282-0107	carbide	14
6282-0108	carbide	15
6282-0109	ceramic	15
6282-0110	carbide	17

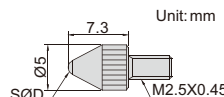
Code	Material of measuring face	L (mm)
6282-0111	carbide	19.3
6282-0112	carbide	20
6282-0113	ceramic	20
6282-0114	carbide	22
6282-0115	carbide	25
6282-0116	ceramic	25
6282-0117	carbide	30
6282-0118	ceramic	30



6282-0101



Code	Material of measuring face	SØD (mm)
6282-0301	steel	1
6282-0302	carbide	1.5
6282-0303	carbide	1.8
6282-0304	carbide	2.5
6282-0305	carbide	4

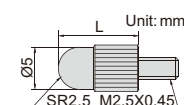


6282-0303

SHELL TYPE POINT

Code	Material of measuring face	L (mm)
6282-0202	steel	5
6282-0203	steel	10
6282-0205	steel	15

Code	Material of measuring face	L (mm)
6282-0207	steel	20
6282-0208	steel	25
6282-0210	steel	30

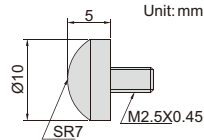


6282-0202

SPHERICAL POINT



6282-0401



Code	Material of measuring face
6282-0401	steel

CONICAL POINT



6282-0601



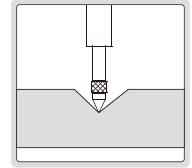
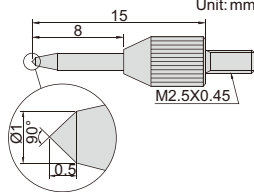
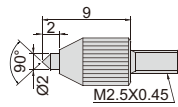
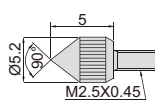
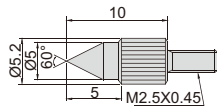
6282-0701



6282-0801



6282-0901

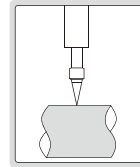
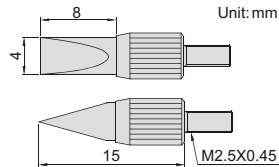


Code	Material of measuring face
6282-0601	steel
6282-0701	steel
6282-0801	steel
6282-0901	steel

KNIFE EDGE POINT



6282-1001

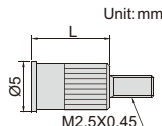


Code	Material of measuring face
6282-1001	steel

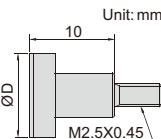
FLAT POINT



6282-1101



6282-1201

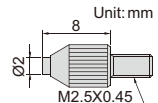


Code	Material of measuring face	L (mm)
6282-1101	steel	8
6282-1102	steel	10

Code	Material of measuring face	ØD (mm)
6282-1201	steel	10
6282-1202	steel	15
6282-1203	steel	20
6282-1204	steel	25
6282-1205	steel	30



6282-1301

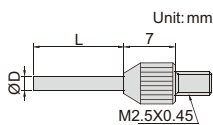


Code	Material of measuring face
6282-1301	carbide

NEEDLE POINT

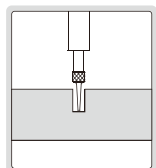


6282-1711

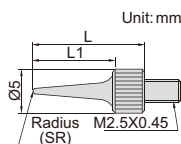


Code	Material of measuring face	ØD (mm)	L (mm)
6282-1701	steel	0.45	3
6282-1702	steel	0.45	5
6282-1703	carbide	1	3
6282-1704	carbide	1	5
6282-1705	carbide	1	8
6282-1706	carbide	1	10
6282-1707	carbide	1	20
6282-1708	carbide	1	40
6282-1709	carbide	1.5	5

Code	Material of measuring face	ØD (mm)	L (mm)
6282-1710	carbide	1.5	10
6282-1711	carbide	1.5	13
6282-1712	carbide	1.5	20
6282-1713	carbide	1.5	40
6282-1714	carbide	2	8
6282-1715	carbide	2	18
6282-1716	carbide	2	28
6282-1717	carbide	2	40

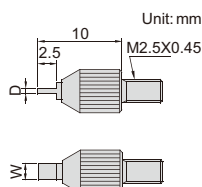
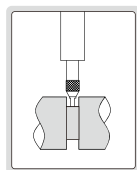


6282-1601



Code	Material of measuring face	L1 (mm)	L (mm)	SR (mm)
6282-1601	steel	11	15	0.4
6282-1602	steel	13	17	0.2
6282-1603	steel	21	25	0.4
6282-1604	steel	31	35	0.4

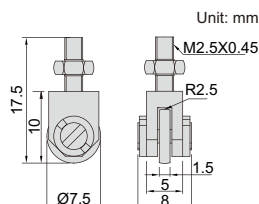
(mm)			
Code	Material of measuring face	D	W
6282-1801	steel	0.4	2
6282-1802	steel	0.6	2
6282-1803	steel	1	4



6282-1801

BLADE POINT

Code	Material of measuring face
6282-1901	steel



6282-1901

ROLLER POINT

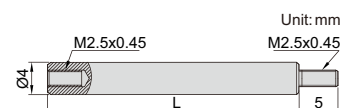
Code	Material	L(mm)
6282-2001	steel	10
6282-2002	steel	15
6282-2003	steel	20
6282-2004	steel	25
6282-2005	steel	30
6282-2006	steel	35

Code	Material	L(mm)
6282-2007	steel	40
6282-2008	steel	45
6282-2009	steel	50
6282-2010	steel	55
6282-2011	steel	60
6282-2012	steel	65

Code	Material	L(mm)
6282-2013	steel	70
6282-2014	steel	75
6282-2015	steel	80
6282-2016	steel	90
6282-2017	steel	100

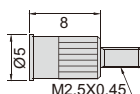


6282-2010

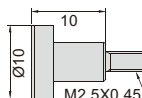


EXTENSION ROD

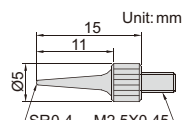
Code	Material of measuring face
6282-S6	steel



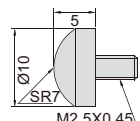
Flat Point



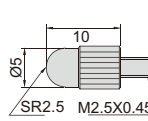
Flat Point



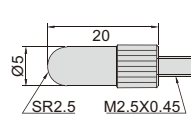
Needle Point



Spherical Point



Shell Type Point

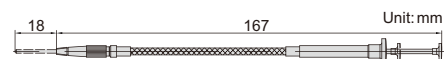


Shell Type Point



6282-S6

POINT SET



Code
6289-150

- The lifting cable permits quick lifting of the spindle of 2881, 2890, 2891, 2885 series



6289-150

LIFTING LEVER

Code
7332

- For dial/digital indicators with spindle diameter Ø4.5mm or Ø5mm



7332

SPINDLE LIFT KNOB

MAGNETIC BACK

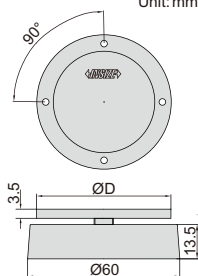


front



back

7331-M2

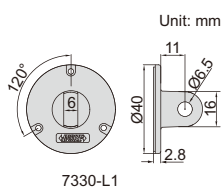


Unit: mm

(mm)

Code	ØD	For digital/dial indicators
7331-M1	53	2103
		2104
		2108
		2109
		2112
		2113
		2115
		2116
		2117
7331-M2	54	2318

LUG BACK



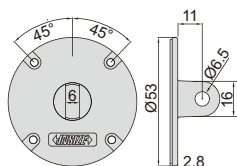
7330-L1



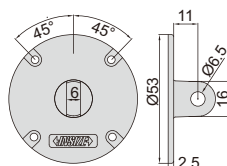
7330-L2



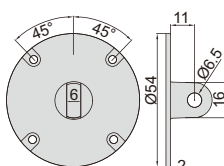
7330-L8



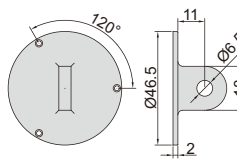
7330-L2 and 7330-L10



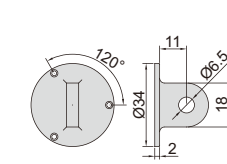
7330-L5



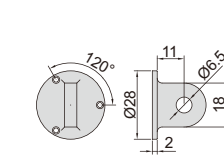
7330-L6



7330-L7



7330-L8



7330-L9

Code	For digital/dial indicators
7330-L1	2311
7330-L2	2301
	2302
	2308
	2309 (except 2309-30, 2309-30F)
	2313
	2314
	2316
	2801
7330-L5	2103
	2104
	2108
	2109
	2112
	2112

Code	For digital/dial indicators
7330-L5	2113
	2115
	2116
7330-L6	2318
7330-L7	2830
	2882
	2885
	2888
	2889
	2891
	2892
7330-L8	2890
	2887
7330-L9	2886
7330-L10	2310

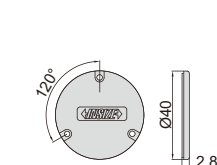
FLAT BACK



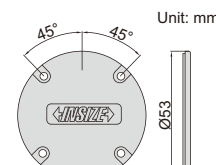
7330-F2



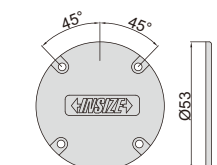
7330-F8



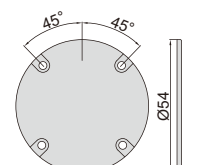
7330-F1



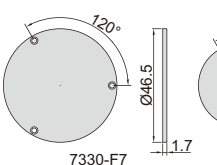
7330-F2 and 7330-F10



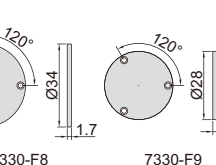
7330-F5



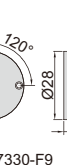
7330-F6



7330-F7



7330-F8



7330-F9

Unit: mm

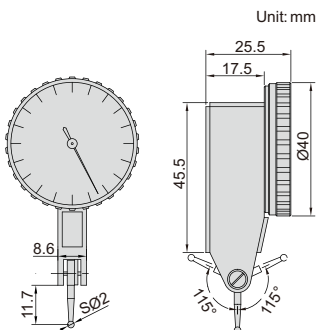
Code	For digital/dial indicators
7330-F1	2311
7330-F2	2301
	2302
	2308
	2309 (except 2309-30, 2309-30F)
	2313
	2314
	2316
	2801
7330-F5	2103
	2104
	2108
	2109
	2112
	2112

Code	For digital/dial indicators
7330-F5	2113
	2115
	2116
7330-F6	2318
7330-F7	2830
	2882
	2885
	2888
	2889
	2891
	2892
7330-F8	2890
	2887
7330-F9	2886
7330-F10	2310



ANTI MAGNETIC
CARBIDE CONTACT POINT

- Ceramic bearing
- Anti magnetic carbide contact point
- Two measuring directions
- Supplied with one clamp: diameter Ø8mm
- Optional accessory: styli (page 106)

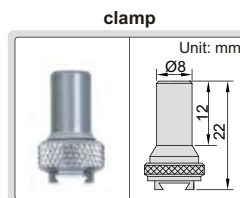


Code	Range	Graduation	Accuracy	Hysteresis	Dial reading
2897-02 *	0.2mm	0.001mm	4µm	2µm	0-100-0

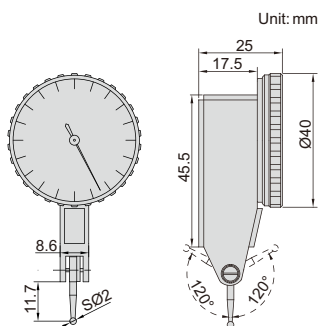
* Supplied with manufacturer inspection certificate traceable to NIST USA



2897-02



- Ceramic bearing
- Two measuring directions
- Supplied with one clamp: diameter Ø8mm
- Optional accessory: styli (page 106)



ruby contact
point of 2880-02R

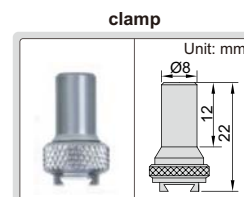


Code	Range	Graduation	Accuracy	Hysteresis	Dial reading	Remark
2880-02 *	0.2mm	0.002mm	4µm	2µm	0-100-0	anti magnetic carbide contact point
2880-02R *	0.2mm	0.002mm	4µm	2µm	0-100-0	ruby contact point

* Supplied with manufacturer inspection certificate traceable to NIST USA

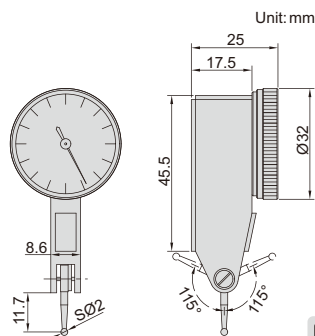


2880-02



ANTI MAGNETIC
CARBIDE CONTACT POINT

- Ceramic bearing
- Anti magnetic carbide contact point
- Two measuring directions
- Supplied with one clamp: diameter Ø8mm
- Optional accessory: styli (page 106)

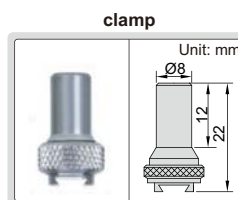


Code	Range	Graduation	Accuracy	Hysteresis	Dial reading
2895-08 *	0.8mm	0.01mm	13µm	3µm	0-40-0

* Supplied with manufacturer inspection certificate traceable to NIST USA



2895-08



DIAL TEST INDICATOR

LONG STYLI DIAL TEST INDICATOR

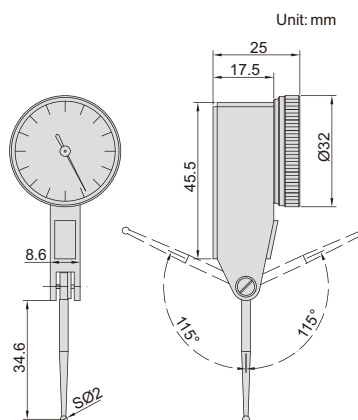


2896-05

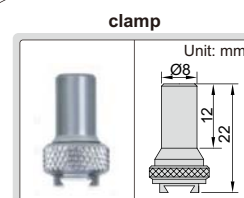
- Ceramic bearing
- Anti magnetic carbide contact point
- Two measuring directions
- Supplied with one clamp: diameter Ø8mm
- Optional accessory: styli (page 106)

Code	Range	Graduation	Accuracy	Hysteresis	Dial reading
2896-05*	0.5mm	0.01mm	13µm	3µm	0-25-0

* Supplied with manufacturer inspection certificate traceable to NIST USA



ANTI MAGNETIC
CARBIDE CONTACT POINT



BACK PLUNGER LONG STYLI DIAL TEST INDICATOR

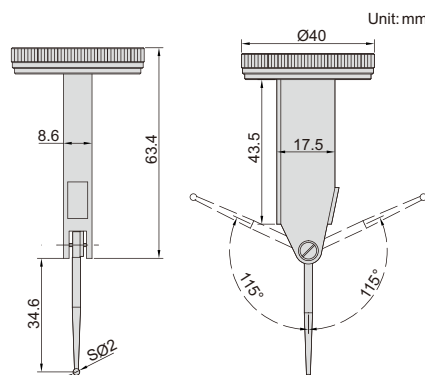


2899-05

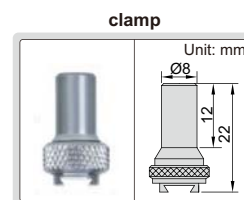
- Ceramic bearing
- Anti magnetic carbide contact point
- Two measuring directions
- Supplied with one clamp: diameter Ø8mm
- Optional accessory: styli (page 106)

Code	Range	Graduation	Accuracy	Hysteresis	Dial reading
2899-05*	0.5mm	0.01mm	13µm	3µm	0-25-0

* Supplied with manufacturer inspection certificate traceable to NIST USA



ANTI MAGNETIC
CARBIDE CONTACT POINT



SIDE TYPE DIAL TEST INDICATOR

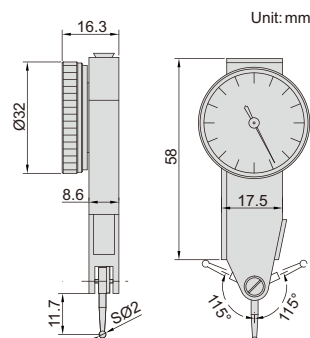


2898-08

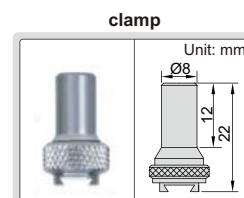
- Ceramic bearing
- Anti magnetic carbide contact point
- Two measuring directions
- Supplied with one clamp: diameter Ø8mm
- Optional accessory: styli (page 106)

Code	Range	Graduation	Accuracy	Hysteresis	Dial reading
2898-08*	0.8mm	0.01mm	13µm	3µm	0-40-0

* Supplied with manufacturer inspection certificate traceable to NIST USA



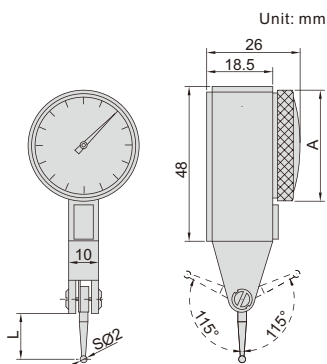
ANTI MAGNETIC
CARBIDE CONTACT POINT





JEWELLED BEARING

- Jeweled bearing
- Carbide contact point
- Two measuring directions
- Anti magnetic body
- Supplied with two clamps: diameter Ø4mm and Ø8mm
- Optional accessory: styli (page 106)

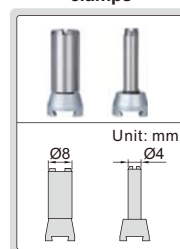


DIAL TEST INDICATOR



2380-08

clamps



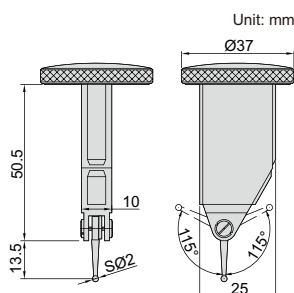
Code	Range	Graduation	Accuracy	Hysteresis	Dial reading	A	L
2380-08*	0.8mm	0.01mm	13µm	3µm	0-40-0	Ø30	13.5
2381-08*	0.8mm	0.01mm	13µm	3µm	0-40-0	Ø37	13.5
2380-02*	0.2mm	0.002mm	6µm	2µm	0-100-0	Ø30	12.5
2381-02*	0.2mm	0.002mm	6µm	2µm	0-100-0	Ø37	12.5

* Supplied with manufacturer inspection certificate traceable to NIST USA



JEWELLED BEARING

- Jeweled bearing
- Carbide contact point
- Two measuring directions
- Anti magnetic body
- Supplied with two clamps: diameter Ø4mm and Ø8mm
- Optional accessory: styli (page 106)

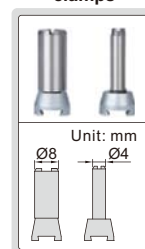


BACK PLUNGER TYPE DIAL TEST INDICATOR



2398-08

clamps



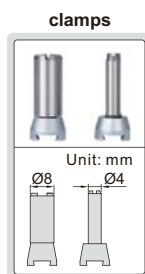
Code	Range	Graduation	Accuracy	Hysteresis	Dial Reading
2398-08*	0.8mm	0.01mm	13µm	3µm	0-40-0

* Supplied with manufacturer inspection certificate traceable to NIST USA



JEWELLED BEARING

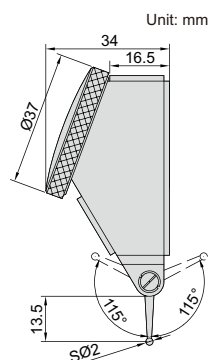
- Jeweled bearing
- Carbide contact point
- Two measuring directions
- Anti magnetic body
- Supplied with two clamps: diameter Ø4mm and Ø8mm
- Optional accessory: styli (page 106)



Code	Range	Graduation	Accuracy	Hysteresis	Dial Reading
2399-08*	0.8mm	0.01mm	13µm	3µm	0-40-0

* Supplied with manufacturer inspection certificate traceable to NIST USA

DIAL TEST INDICATOR



2399-08

LONG STYLI DIAL TEST INDICATOR

JEWELLED
BEARING

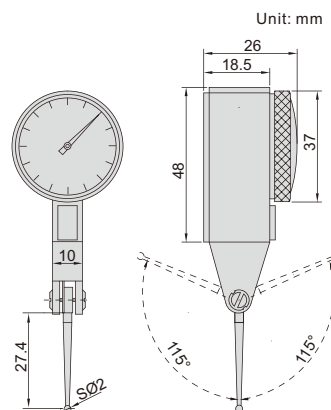


2383-08A

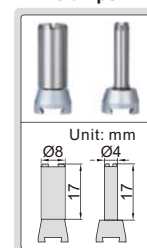
- Jeweled bearing
- Carbide contact point
- Two measuring directions
- Anti magnetic body
- Supplied with two clamps:
diameter Ø4mm and Ø8mm
- Optional accessory: styli (page 106)

Code	Range	Graduation	Accuracy	Hysteresis	Dial reading
2383-08A*	0.8mm	0.01mm	13µm	3µm	0-40-0

* Supplied with manufacturer inspection certificate traceable to NIST USA



clamps



LARGE RANGE DIAL TEST INDICATOR

JEWELLED
BEARING

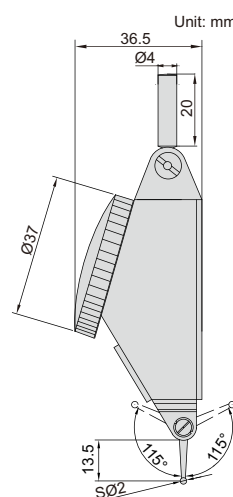


2386-16A

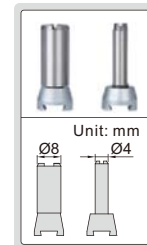
- Dial Reading: 0-40-0
- Jeweled bearing
- Carbide contact point
- Two measuring directions
- Anti magnetic body
- Supplied with two clamps:
diameter Ø4mm and Ø8mm
- Optional accessory: styli (page 106)

Code	Range	Graduation	Accuracy	Hysteresis
2386-16A*	1.6mm	0.01mm	25µm	8µm

* Supplied with manufacturer inspection certificate traceable to NIST USA



clamps

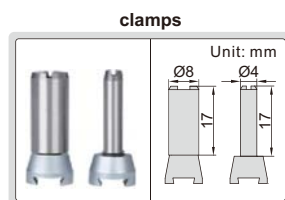


ROUND BODY DIAL TEST INDICATOR

JEWELLED
BEARING



- Jeweled bearing
- Carbide contact point
- Adjustable two measuring directions
- Anti magnetic body
- Supplied with two clamps:
diameter Ø4mm and Ø8mm
- Optional accessory: styli (page 106)

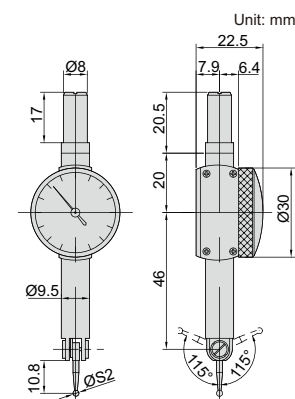


Code	Range	Graduation	Accuracy	Hysteresis	Dial reading
2391-08*	0.8mm	0.01mm	13µm	3µm	0-40-0

* Supplied with manufacturer inspection certificate traceable to NIST USA



2391-08



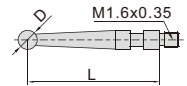
STYLI FOR DIAL TEST INDICATORS

Code	For dial test indicator	Material of contact point	L (mm)	D (mm)
6284-1	2380-08, 2398-08 2381-08, 2399-08 2386-16A	steel	13.5	SØ1
6284-3		carbide	13.5	SØ2
6284-4		ruby	13.5	SØ2
6284-8	2380-02 2381-02	carbide	13.5	SØ3
6284-21		steel	12.5	SØ1
6284-22		carbide	12.5	SØ2
6284-23	2880-02 2880-02R 2895-08 2897-02 2898-08	carbide	12.5	SØ3
6284-44		carbide	11.7	SØ0.4
6284-41		carbide	11.7	SØ1
6284-42		carbide	11.7	SØ2
6284-45		ruby	11.7	SØ2
6284-43		carbide	11.7	SØ3

Code	For dial test indicator	Material of contact point	L (mm)	D (mm)
6284-51	2896-05 2899-05	carbide	34.6	SØ1
6284-52		carbide	34.6	SØ2
6284-55		ruby	34.6	SØ2
6284-53	2391-08	carbide	34.6	SØ3
6284-71		carbide	10.8	SØ2
6284-81		steel	27.4	SØ1
6284-82	2383-08A	carbide	27.4	SØ2
6284-83		ruby	27.4	SØ2
6284-84		carbide	27.4	SØ3



6284-3



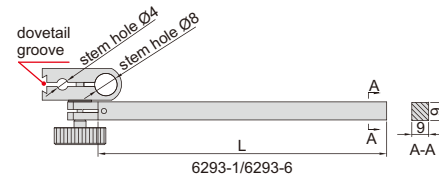
DIAL TEST INDICATOR HOLDER



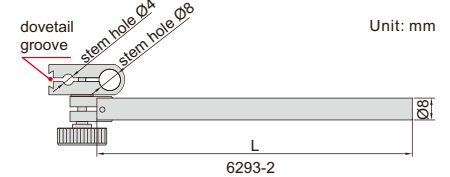
Code	Stem section	Stem length (L)
6293-1	9x9mm	100mm
6293-6	9x9mm	50mm
6293-2	Ø8mm	115mm



6293-1



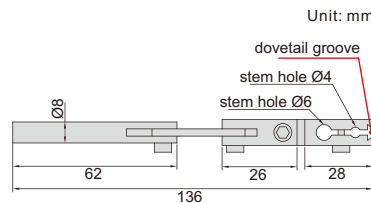
6293-2



DIAL TEST INDICATOR HOLDER

- Supplied with fixing spanner

Code
6296-1

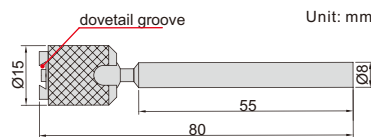


6296-1

DIAL TEST INDICATOR UNIVERSAL HOLDER

- Set the indicators at the desired attitude to the workpiece

Code
6297-1

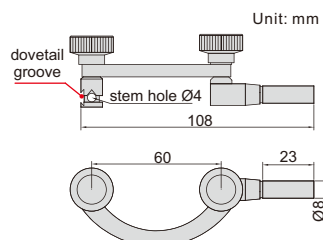


6297-1

DIAL TEST INDICATOR CENTERING HOLDER

- Center cylinders or holes on machine tools

Code
6291-1



6291-1

DIAL TEST INDICATOR CENTERING HOLDER

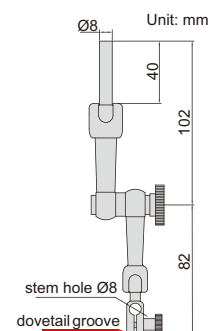
- Center cylinders or holes on machine tools
- Can be used with dial test indicators

Code

6295-1A



6295-1A



INDICATOR CENTERING HOLDER

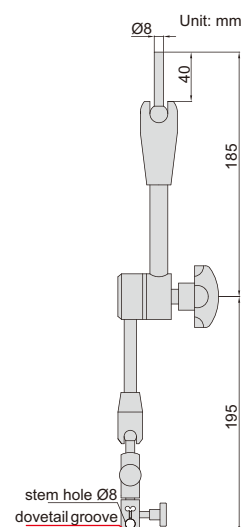
- Center cylinders or holes on machine tools
- Can be used with dial test indicators or dial indicators

Code

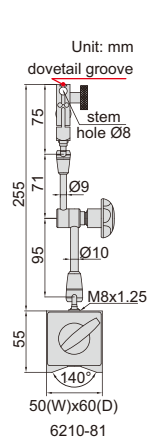
6294-1A



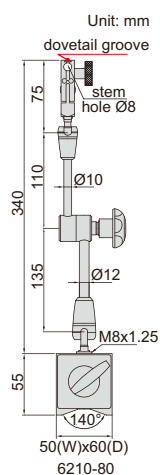
6294-1A



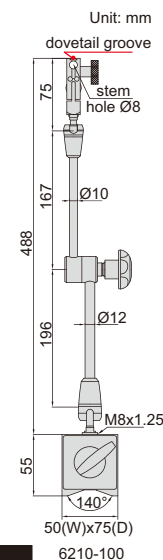
UNIVERSAL MAGNETIC STAND



6210-81



6210-80



6210-100

- For digital/dial indicators and dial test indicators

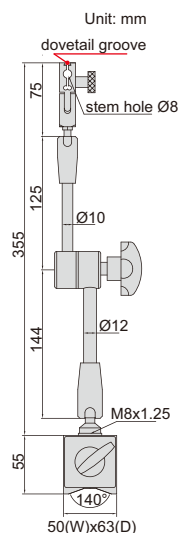
Code	Magnetic force	Applicable holding stem	Remark
6210-81	80kgf	Ø8mm	with fine adjustment and dovetail groove
6210-80	80kgf	Ø8mm	with fine adjustment and dovetail groove
6210-100	100kgf	Ø8mm	with fine adjustment and dovetail groove

**ATTENTION: LOW
LOCKING FORCE**

UNIVERSAL MAGNETIC STAND

- For digital/dial indicators and dial test indicators

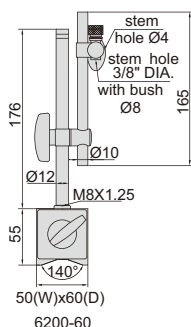
Code	Magnetic force	Applicable holding stem	Remark
6208-80A	80kgf	Ø8mm	with fine adjustment and dovetail groove



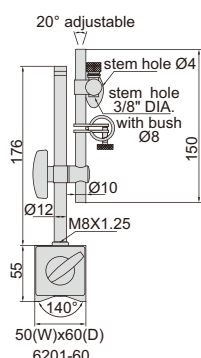
6208-80A

MAGNETIC STAND

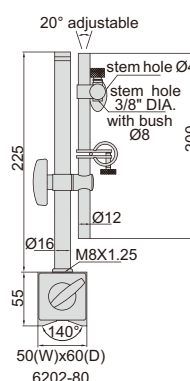
Unit: mm



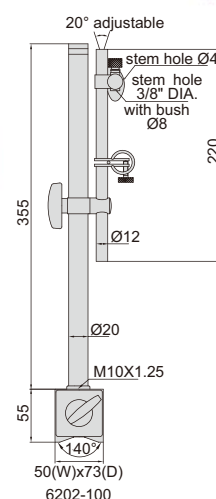
6200-60



6201-60



6202-80



6202-100

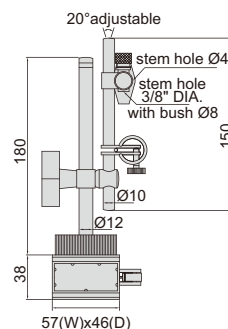
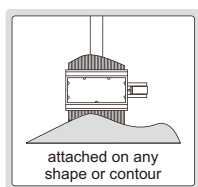
Code	Magnetic force	Applicable holding stem	Remark
6200-60	60kgf	Ø8mm, Ø4mm, 3/8" DIA.	without fine adjustment
6201-60	60kgf	Ø8mm, Ø4mm, 3/8" DIA.	with fine adjustment
6202-80	80kgf	Ø8mm, Ø4mm, 3/8" DIA.	with fine adjustment
6202-100	100kgf	Ø8mm, Ø4mm, 3/8" DIA.	with fine adjustment

- For digital/dial indicators and dial test indicators

MAGNETIC STAND FOR UNEVEN SURFACE

Unit: mm

- For digital/dial indicators and dial test indicators
- With fine adjustment



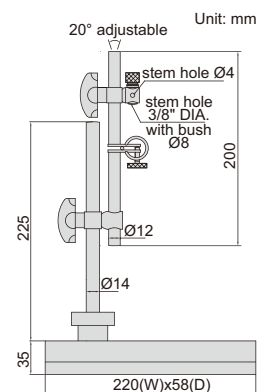
6215-60

Code	Magnetic force	Applicable holding stem
6215-60	60kgf	Ø8mm, Ø4mm, 3/8" DIA.

UNIVERSAL STAND

- For digital/dial indicators and dial test indicators
- With fine adjustment

Code	Applicable holding stem
6214-A	Ø8mm, Ø4mm, 3/8" DIA.

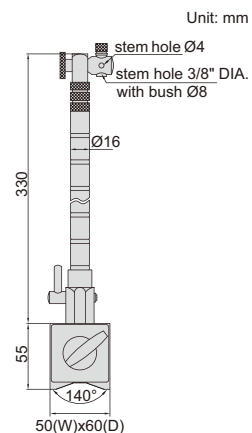


FLEX ARM MAGNETIC STAND

ATTENTION: FOR DIAL TEST INDICATORS ONLY

- For dial test indicators

Code	Magnetic force	Applicable holding stem
6207-80A	80kgf	Ø8mm, Ø4mm, 3/8" DIA.

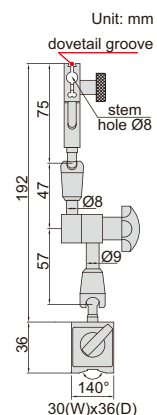


MINI MAGNETIC STAND

ATTENTION: FOR DIAL TEST INDICATORS ONLY

- For dial test indicators
- With fine adjustment and dovetail groove

Code	Magnetic force	Applicable holding stem
6224-40	40kgf	Ø8mm

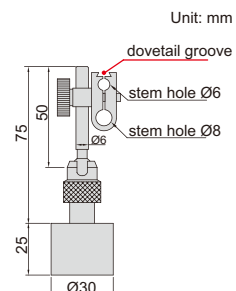


MINI MAGNETIC STAND

ATTENTION: FOR DIAL TEST INDICATORS ONLY

- For dial test indicators
- With dovetail groove

Code	Magnetic force	Applicable holding stem
6211-10	10kgf	Ø6mm, Ø8mm

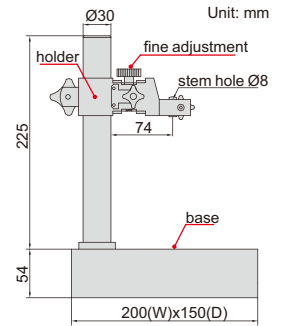


GRANITE DIAL INDICATOR STAND

- Vertical travel of holder: 150mm
- Fine adjustment range: 2mm
- Supplied with dust cover



6866-150



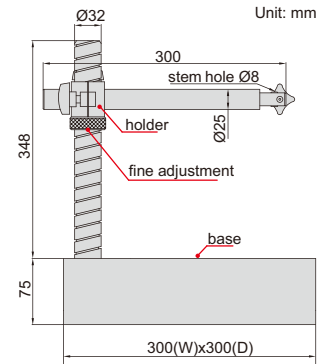
Code	Applicable holding stem	Base
6866-150	Ø8mm	flatness 2.5µm

GRANITE DIAL INDICATOR STAND

- Vertical travel of holder: 250mm
- Fine adjustment range: entire stroke
- Supplied with dust cover



6867-250



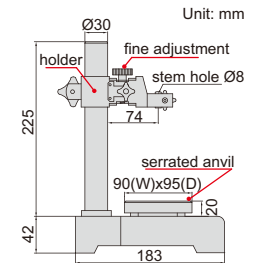
Code	Applicable holding stem	Base
6867-250	Ø8mm	flatness 2.8µm

DIAL INDICATOR STAND

- Vertical travel of holder: 150mm
- Fine adjustment range: 2mm
- Supplied with dust cover



6863-150



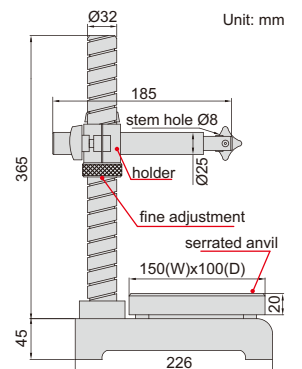
Code	Applicable holding stem	Anvil
6863-150	Ø8mm	serrated, flatness 1.5µm, hardness HRC60±2

DIAL INDICATOR STAND

- Vertical travel of holder: 250mm
- Fine adjustment range: entire stroke
- Supplied with dust cover



6864-250



Code	Applicable holding stem	Anvil
6864-250	Ø8mm	serrated, flatness 1.5µm, hardness HRC60±2

DIAL INDICATOR STAND



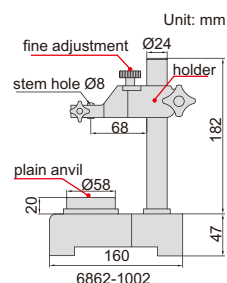
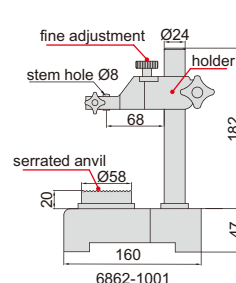
6862-1001

6862-1002

supplied with dust cover



- Vertical travel of holder: 100mm
- Fine adjustment range: 2mm
- Supplied with dust cover



Code	Applicable holding stem	Anvil
6862-1001	Ø8mm	serrated, flatness 1.5µm, hardness HRC60±2
6862-1002	Ø8mm	plain, flatness 1.5µm, hardness HRC60±2

TRANSFER STAND

supplied with dust cover



- Vertical travel of holder: 335mm
- Fine adjustment range: 2mm
- Supplied with dust cover

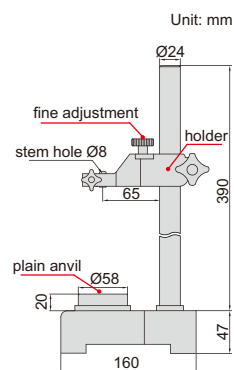


6865-300

Application



Rigid construction, designed to make comparison height measurement (set zero with gage block then measure height of workpiece) with dial indicators or digital indicators (variation of measuring force is high)



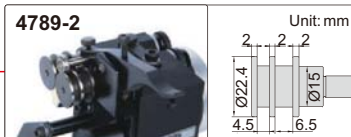
Code	Applicable holding stem	Anvil
6865-300	Ø8mm	plain, flatness 1.5µm, hardness HRC60±2

CONCENTRICITY GAGE

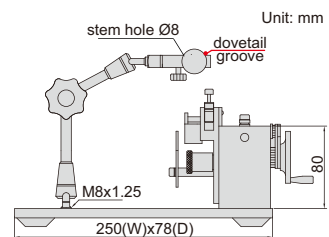
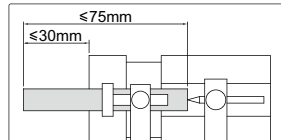


- Accuracy 2µm
- Optional accessory: dial test indicator, mini magnetic stand (code 6224-40)

Code	Applicable diameter
4789-1	Ø3.5mm-25mm
4789-2	Ø1mm-25mm
4789-3	Ø1mm-25mm



maximum workpiece length 75mm,
maximum outstretch length 30mm

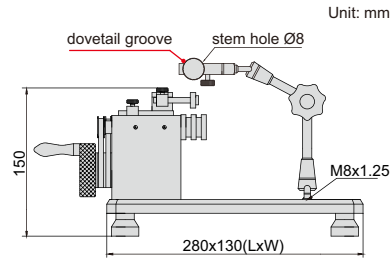


HIGH STABILITY,
LONG WORKING LIFE

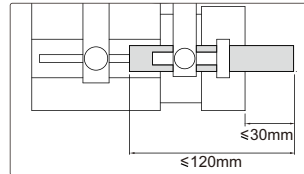


- With ball bearing
- High stability, long working life

Code	Accuracy	Diameter range	Load
4725-45	2μm	3-45mm	6kg



maximum workpiece length 120mm,
maximum outstretch length 30mm



CONCENTRICITY GAGE

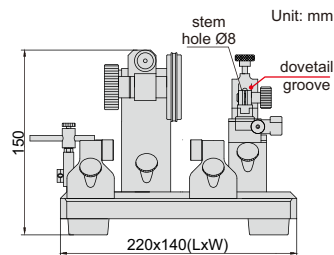
dial test indicator is not included



4725-45

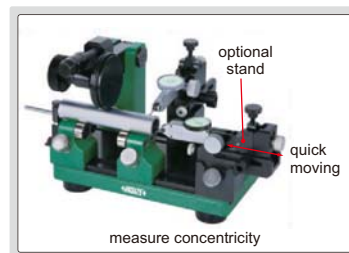
CONCENTRICITY GAGE

dial test indicator is not included



Code	Accuracy	Diameter range	Workpiece length		Load
			Without optional stand	With optional stand	
4724-25	3μm	3-25mm	0-220mm	0-120mm	5kg

Application



Stand (optional)

Code
4724-STAND

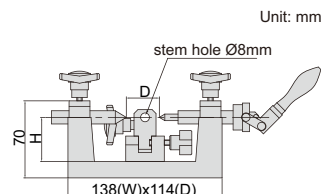


4724-25



4724-STAND

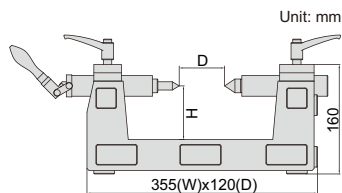
MINI BENCH CENTER



4721-75

Code	Horizontal parallelism	Vertical parallelism	Center height (H)	Distance between two centers (D)	Taper of center	Weight	Load
4721-75	3μm	3μm	40mm	75mm	MT1	3.7kg	4kg

VERTICAL AND HORIZONTAL BENCH CENTER



- For vertical, side and horizontal use



horizontal use



side use



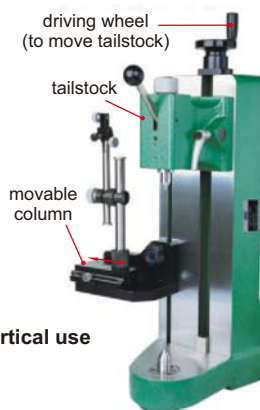
vertical use

Code	Horizontal parallelism	Vertical parallelism	Center height (H)	Distance between two centers (D)	Taper of center	Weight	Load
4722-200	4μm	5μm	80mm	200mm	MT1/MT3	22kg	25kg

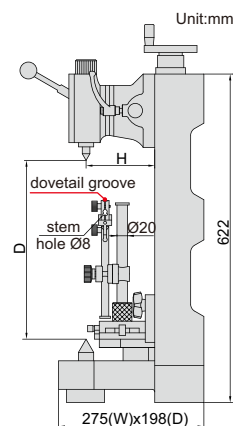
VERTICAL AND HORIZONTAL BENCH CENTER



horizontal use



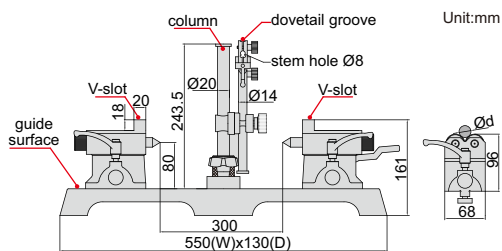
vertical use



- For vertical and horizontal use
- Move tailstock by driving wheel

Code	Horizontal parallelism	Vertical parallelism	Center height (H)	Distance between two centers (D)	Taper of upper center	Taper of lower center	Weight	Load
4783-380	0.01mm	0.01mm	130mm	380mm	MT2	MT3	80kg	60kg

BENCH CENTER WITH ROLLER TAILSTOCKS



- Hardened cast-iron guide surface
- Supplied with V-slot/center tailstocks and roller tailstocks
- V-slot for cylinder Ø4~22mm
- Roller for cylinder Ø5~100mm

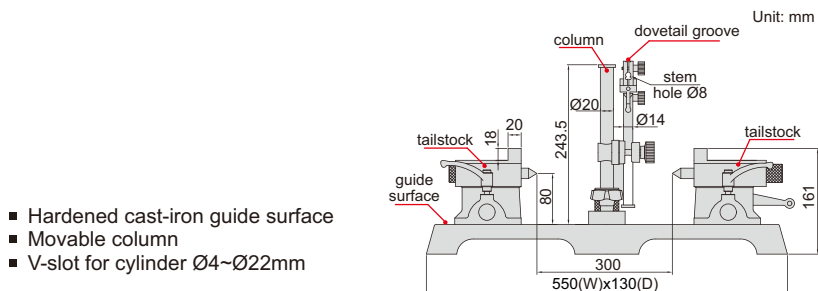


4720-300

roller tailstocks (included)

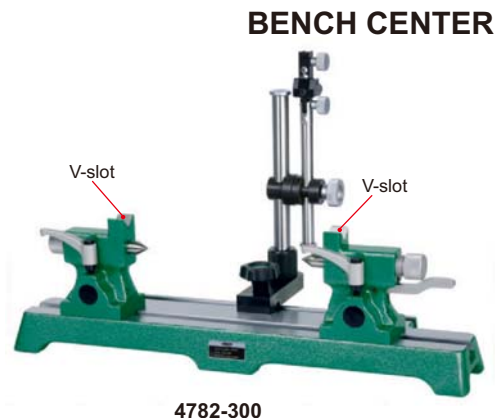


Code	Horizontal parallelism	Vertical parallelism	Center height	Distance between two centers	Taper of center	Load
4720-300	0.01mm	0.015mm	80mm	300mm	MT1	25kg (40kg for roller tailstocks)



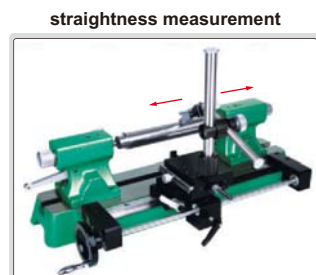
- Hardened cast-iron guide surface
- Movable column
- V-slot for cylinder Ø4~Ø22mm

Code	Horizontal parallelism	Vertical parallelism	Center height	Distance between two centers	Taper of center	Load
4782-300	0.01mm	0.015mm	80mm	300mm	MT1	25kg



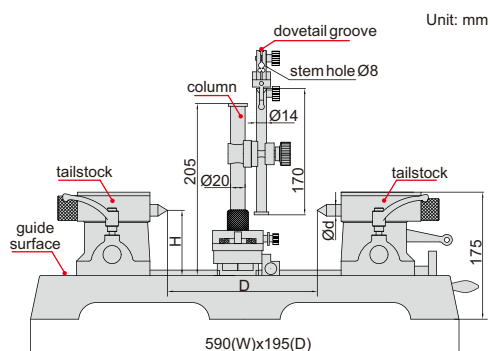
4782-300

BENCH CENTER WITH STRAIGHTNESS MEASUREMENT



straightness measurement

- Hardened cast-iron guide surface



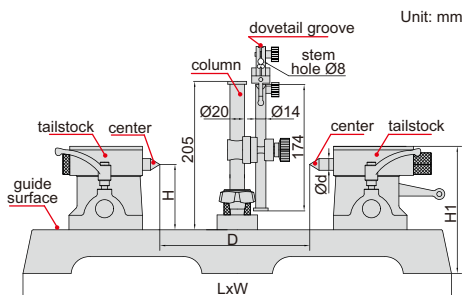
4723-300

Code	Horizontal parallelism	Vertical parallelism	Accuracy of straightness measurement	Center height(H)	Distance between two centers(D)	Diameter of center(Ød)	Taper of center	Weight	Load
4723-300	4µm	6µm	0.01mm	90mm	300mm	12.3mm	MT1	38kg	25kg

HEAVY DUTY

HIGH PRECISION

- Vertical parallelism: 0.01mm
- Horizontal parallelism: 0.01mm
- Hardened cast-iron guide surface
- Movable column



4788-300

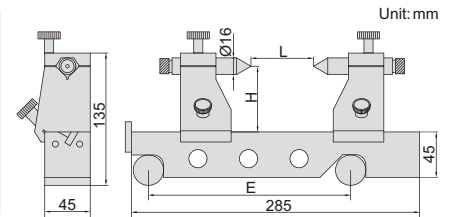
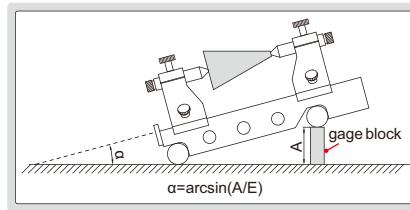
(mm)

Code	Center height (H)	Distance between two centers(D)	Length (L)	Width (W)	Height (H1)	Diameter of center (Ød)	Taper of center	Weight	Load
4788-300	90	300	590	192	175	12.2	MT2	34kg	25kg
4788-400	130	400	770	206	241	18.0	MT3	66kg	60kg
4788-600	130	600	930	220	250	18.0	MT3	90kg	60kg
4788-600H2	200	600	930	220	325	24.1	MT3	105kg	60kg
4788-1000	130	1000	1330	220	262	18.0	MT3	112kg	60kg
4788-1000H2	200	1000	1330	220	337	24.1	MT3	125kg	85kg
4788-1000H3	300	1000	1330	220	442	31.6	MT3	165kg	85kg

SINE BENCH CENTER



4157-200



Unit: mm

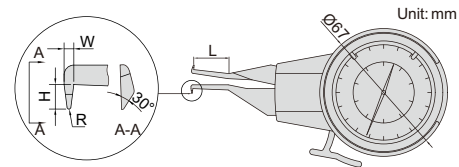
- Check taper or runout of taper bars
- Sine bar accuracy ($\alpha=30^\circ$): ± 5 seconds

Code	Accuracy	Center height (H)	Center distance (L)
4157-200	0.01mm	65mm	200mm

INTERNAL DIAL CALIPER GAGE



2222-15



Unit: mm

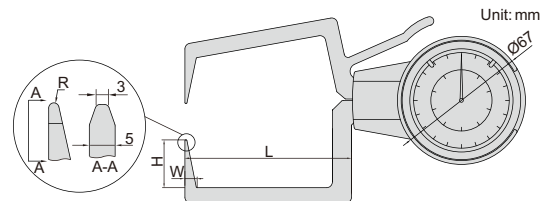
Code	Range	Graduation	Accuracy	L	H	W	R
2222-15	5-15mm	0.01mm	± 0.03 mm	20	2	2.5	R0.3
2222-25	5-25mm	0.01mm	± 0.03 mm	35	1.5	1.0	R0.3
2222-301	10-30mm	0.01mm	± 0.03 mm	55	5.5	2.5	R0.5
2222-401	20-40mm	0.01mm	± 0.03 mm	80	6.0	3.0	R0.5
2222-501	30-50mm	0.01mm	± 0.03 mm	80	8.0	3.0	R0.5
2222-60	40-60mm	0.01mm	± 0.03 mm	80	8.0	3.0	R0.5

(mm)

EXTERNAL DIAL CALIPER GAGE



2333-201



Unit: mm

Code	Range	Graduation	Accuracy	L	H	W	R
2333-201	0-20mm	0.01mm	± 0.03 mm	80	25	6.5	R0.5
2333-301	10-30mm	0.01mm	± 0.03 mm	80	25	6.5	R0.5
2333-401	20-40mm	0.01mm	± 0.03 mm	80	25	6.5	R0.5
2333-501	30-50mm	0.01mm	± 0.03 mm	80	25	6.5	R0.5
2333-601	40-60mm	0.01mm	± 0.03 mm	80	25	6.5	R0.5

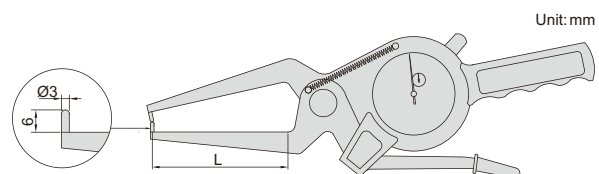
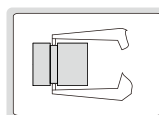
(mm)

EXTERNAL DIAL CALIPER GAGE



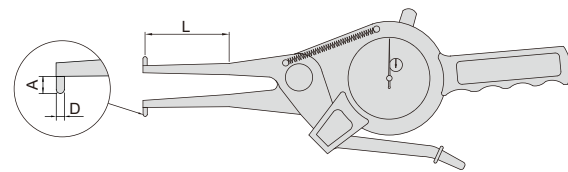
2332-20

- Carbide measuring tips



Unit: mm

Code	Range	Graduation	Accuracy	L (mm)
2332-20	0-20mm	0.01mm	± 0.04 mm	60
2332-40	20-40mm	0.01mm	± 0.04 mm	60
2332-60	40-60mm	0.01mm	± 0.04 mm	55
2332-80	60-80mm	0.01mm	± 0.04 mm	55
2332-100	80-100mm	0.01mm	± 0.04 mm	55



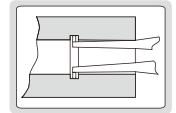
Code	Range	Graduation	Accuracy	L	A	D
2321-35	15-35mm	0.01mm	±0.04mm	50	3	Ø3
2321-AL35	15-35mm	0.01mm	±0.04mm	200	3	Ø3
2321-55	35-55mm	0.01mm	±0.04mm	80	6	Ø3
2321-AL55	35-55mm	0.01mm	±0.04mm	250	8	Ø3
2321-75	55-75mm	0.01mm	±0.04mm	90	8	Ø3
2321-AL75	55-75mm	0.01mm	±0.04mm	250	8	Ø3
2321-95	75-95mm	0.01mm	±0.04mm	100	8	Ø3
2321-115	95-115mm	0.01mm	±0.04mm	120	10	Ø3.2
2321-135	115-135mm	0.01mm	±0.04mm	120	10	Ø3.2

(mm)

INTERNAL DIAL CALIPER GAGE



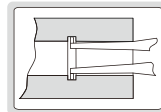
2321-35



■ Carbide measuring tips

DATA OUTPUT

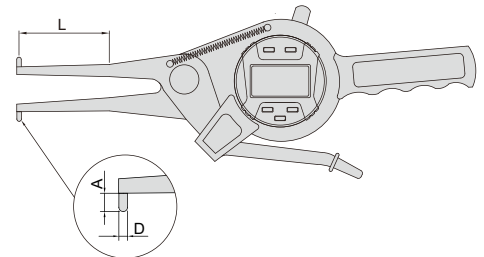
- Carbide measuring tips
- Reading in digit and analog
- Display can be rotated by 320°
- Button function: tolerance Go and No-Go display, data preset, measuring direction change, max./min./TIR measurement, inch/metric conversion, absolute/incremental measurement
- CR2032 battery, automatic power off
- Data output
- Optional accessory: data output cable (code 7306-40, 7302-SPC3A, 7305-SPC1A)



DIGITAL INTERNAL CALIPER GAGE



2151-35

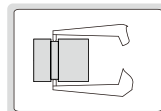


(mm)

Code	Range	Resolution	Accuracy	L	A	D
2151-35	15-35mm/0.6-1.4"	0.01mm/0.0005"	±0.04mm	50	3	Ø3
2151-AL35	15-35mm/0.6-1.4"	0.01mm/0.0005"	±0.04mm	200	3	Ø3
2151-55	35-55mm/1.4-2.2"	0.01mm/0.0005"	±0.04mm	80	6	Ø3
2151-AL55	35-55mm/1.4-2.2"	0.01mm/0.0005"	±0.04mm	250	8	Ø3
2151-75	55-75mm/2.2-3"	0.01mm/0.0005"	±0.04mm	90	8	Ø3
2151-AL75	55-75mm/2.2-3"	0.01mm/0.0005"	±0.04mm	250	8	Ø3
2151-95	75-95mm/3-3.8"	0.01mm/0.0005"	±0.04mm	100	8	Ø3
2151-115	95-115mm/3.8-4.6"	0.01mm/0.0005"	±0.04mm	120	10	Ø3.2
2151-135	115-135mm/4.6-5.4"	0.01mm/0.0005"	±0.04mm	120	10	Ø3.2

DATA OUTPUT

- Carbide measuring tips
- Reading in digit and analog
- Display can be rotated by 320°
- 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
- Data output
- Optional accessory: data output cable (code 7306-40, 7302-SPC3A, 7305-SPC1A)

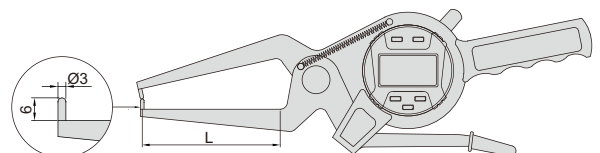


DIGITAL EXTERNAL CALIPER GAGE



2132-20

Unit: mm

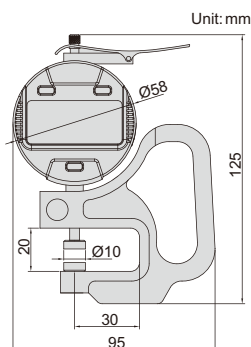


Code	Range	Resolution	Accuracy	L(mm)
2132-20	0-20mm/0-0.8"	0.01mm/0.0005"	±0.04mm	60
2132-40	20-40mm/0.8-1.6"	0.01mm/0.0005"	±0.04mm	60
2132-60	40-60mm/1.6-2.4"	0.01mm/0.0005"	±0.04mm	55
2132-80	60-80mm/2.4-3.2"	0.01mm/0.0005"	±0.04mm	55
2132-100	80-100mm/3.2-4"	0.01mm/0.0005"	±0.04mm	55

DIGITAL THICKNESS GAGE

- Ceramic spindle tip and anvil
- Buttons: on/off, zero, mm/inch
- Battery CR2032, automatic power off
- Data output
- Optional accessory: data output cable (code 7306-40, 7302-SPC3A, 7305-SPC1A)

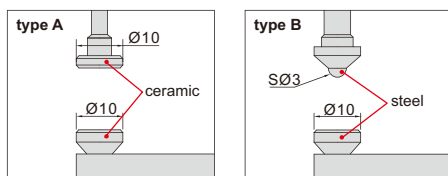
Code	Range	Resolution	Accuracy
2871-10	0-10mm/0-0.4"	0.01mm/0.0005"	±0.02mm
2871-101	0-10mm/0-0.4"	0.001mm/0.00005"	±0.005mm



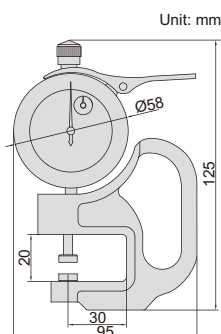
2871-101

DATA
OUTPUT

THICKNESS GAGE

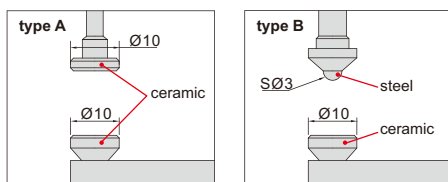


Code	Range	Graduation	Accuracy	Type
2364-10	0-10mm	0.01mm	±0.02mm	A
2364-10B	0-10mm	0.01mm	±0.02mm	B

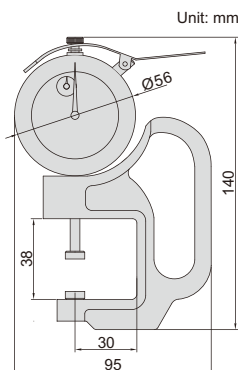


2364-10

THICKNESS GAGE



Code	Range	Graduation	Accuracy	Type
2366-30	0-30mm	0.01mm	±0.035mm	A
2366-30B	0-30mm	0.01mm	±0.035mm	B

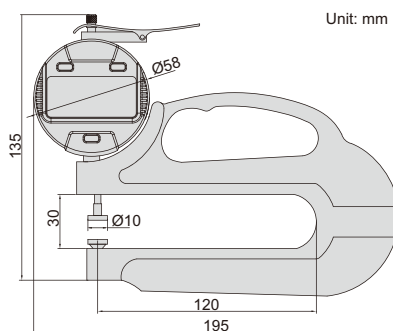


2366-30

DIGITAL THICKNESS GAGE

- Ceramic spindle tip and anvil
- Buttons: on/off, zero, mm/inch
- Battery CR2032, automatic power off
- Data output
- Optional accessory: data output cable (code 7306-40, 7302-SPC3A, 7305-SPC1A)

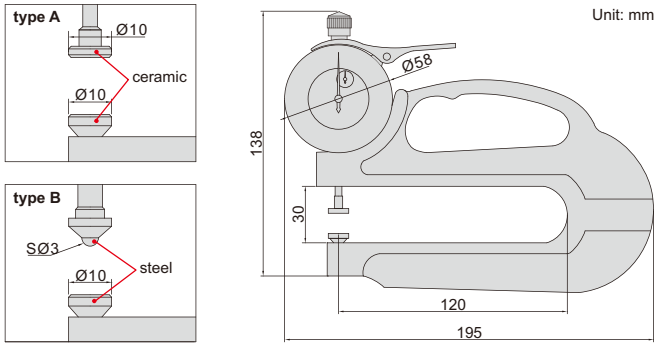
Code	Range	Resolution	Accuracy
2872-10	0-10mm/0-0.4"	0.01mm/0.0005"	±0.02mm



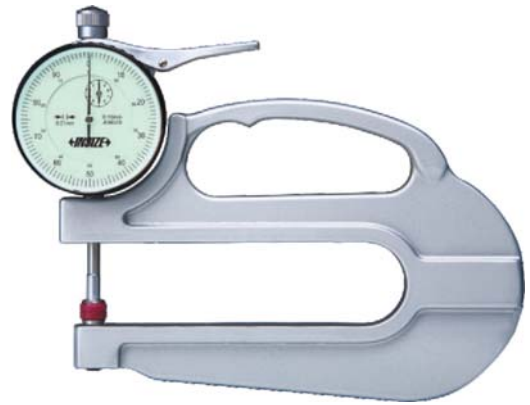
2872-10

DATA
OUTPUT

THICKNESS GAGE

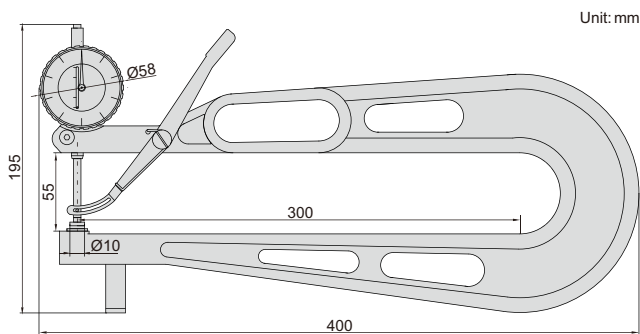


Code	Range	Graduation	Accuracy	Type
2365-10	0-10mm	0.01mm	±0.02mm	A
2365-20	0-20mm	0.01mm	±0.03mm	A
2365-10B	0-10mm	0.01mm	±0.02mm	B
2365-20B	0-20mm	0.01mm	±0.03mm	B



2365-10

THICKNESS GAGE



Code	Range	Graduation	Accuracy
2875-30	0-30mm	0.1mm	±0.05mm

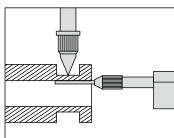


2875-30

DIGITAL TUBE THICKNESS GAGE

DATA
OUTPUT

Measure wall
thickness of groove

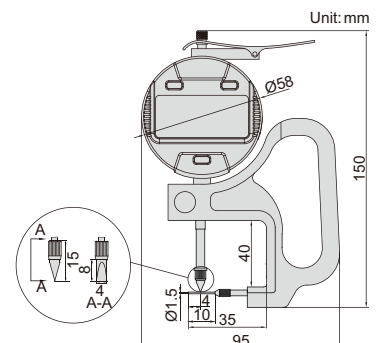


- Buttons: on/off, zero, mm/inch
- Battery CR2032, automatic power off
- Data output
- Optional accessory: data output cable (code 7306-40, 7302-SPC3A, 7305-SPC1A)

Code	Range	Resolution	Accuracy
2873-10	0-10mm/0-0.4"	0.01mm/0.0005"	±0.02mm

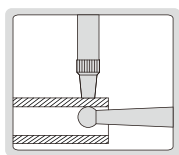


2873-10



DIGITAL TUBE THICKNESS GAGE

DATA
OUTPUT

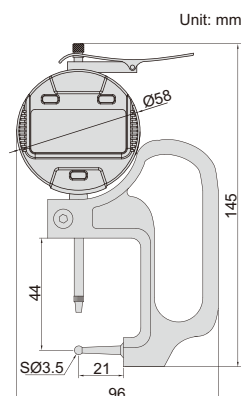


- Buttons: on/off, zero, mm/inch
- Battery CR2032, automatic power off
- Data output
- Optional accessory: data output cable
(code 7306-40, 7302-SPC3A, 7305-SPC1A)

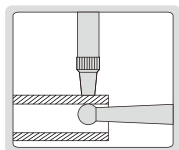
Code	Range	Resolution	Accuracy
2876-10	0-10mm/0-0.4"	0.01mm/0.0005"	±0.02mm



2876-10



TUBE THICKNESS GAGE

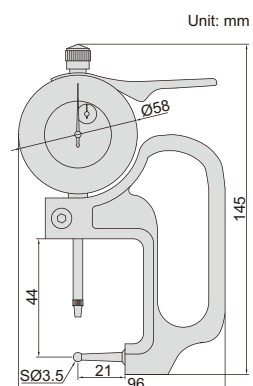


- Measure tube wall thickness

Code	Range	Graduation	Accuracy
2367-10A	0-10mm	0.01mm	±0.02mm

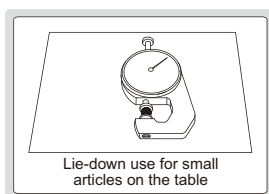


2367-10A



THICKNESS GAGE

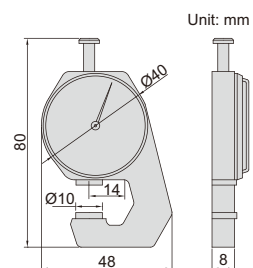
SUITABLE FOR
JEWELLERY



Code	Range	Graduation	Accuracy
2361-10	0-10mm	0.1mm	±0.05mm



2361-10



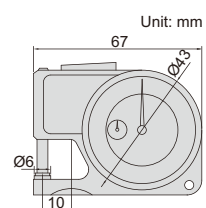
THICKNESS GAGE

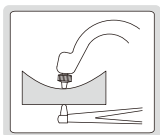
- Stainless steel spindle tip and anvil

Code	Range	Graduation	Accuracy
2363-10	0-10mm	0.01mm	±0.03mm



2363-10



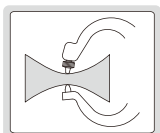
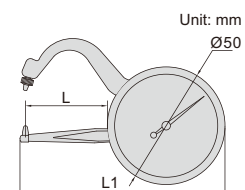


THICKNESS GAGE

(mm)					
Code	Range	Graduation	Accuracy	L	L1
2862-101	0-10mm	0.05mm	±0.1mm	35	85
2862-102	0-10mm	0.05mm	±0.1mm	60	110



2862-101

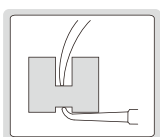
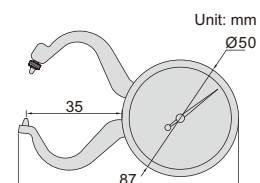


THICKNESS GAGE

Code	Range	Graduation	Accuracy
2863-10	0-10mm	0.05mm	±0.1mm



2863-10



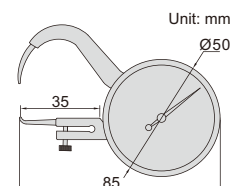
THICKNESS GAGE WITH POINTED TIPS

- Pointed tips fit into small grooves and recesses

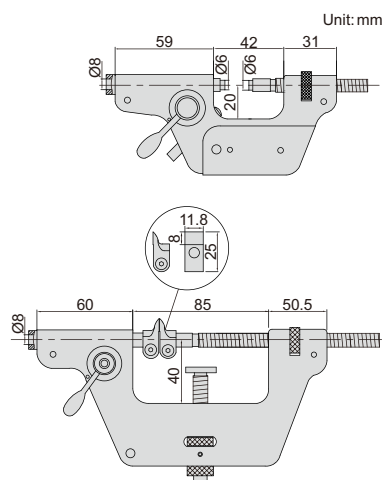
Code	Range	Graduation	Accuracy
2866-10	0-10mm	0.05mm	±0.1mm



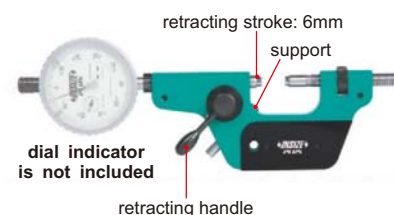
2866-10



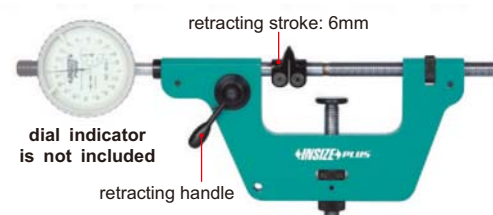
- For quick Go/No-Go judgement
- Carbide measuring faces
- Height of support is adjustable
- Optional accessory: dial indicators (graduation 0.001mm) and digital indicators (resolution 0.001mm)



DIAL SNAP GAGE



3337-40

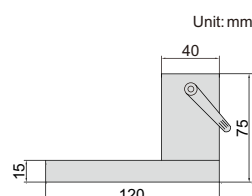


3337-60

Code	Range	Parallelism of measuring faces	Retracting stroke	Remark
3337-40	0-40mm	1µm	6mm	
3337-60	0-60mm	3µm	6mm	jaw type measuring tips

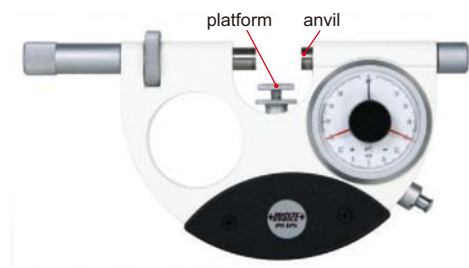
Stand (optional)

Code
3337-STAND



3337-STAND

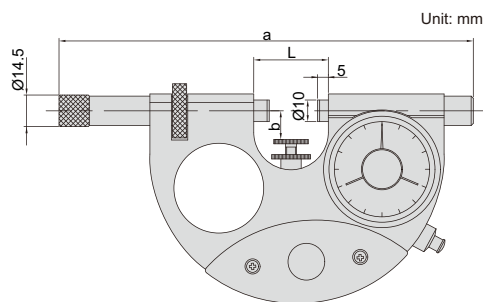
DIAL SNAP GAGE



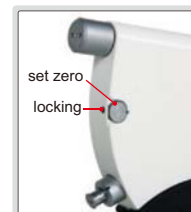
3335-25

(mm)

Code	Range	L	a	b
3335-25	0-25mm	35	191	<15
3335-50	25-50mm	60	215	<25
3335-75	50-75mm	84	239	<37.5
3335-100	75-100mm	110	265	<50

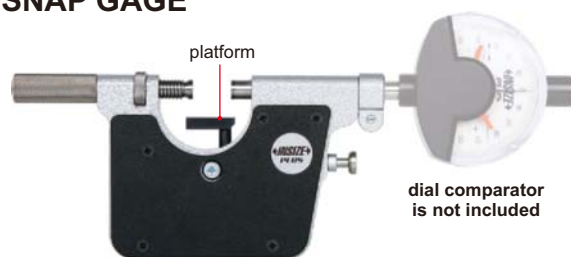


IP54
WATERPROOF



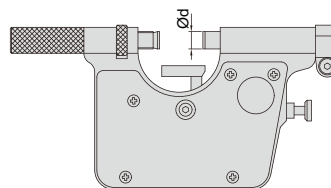
- Quick Go/No-Go measurement for mass production
- Anvil retracting stroke: 2.5mm
- Dial indicator: measuring range $\pm 0.07\text{mm}$, graduation $1\mu\text{m}$, accuracy $1\mu\text{m}$
- Constant measuring force over the whole range: 8.5N
- Carbide measuring faces
- IP54 dust/waterproof
- Zero position of dial indicator is adjustable and can be locked (supplied with locking wrench)
- Adjustable platform height

DIAL SNAP GAGE



3336-25

Code	Range	Diameter of measuring faces ($\varnothing d$)
3336-25	0-25mm	8mm
3336-50	25-50mm	8mm
3336-100	50-100mm	15mm



- Quick Go/No-Go judgement for mass production
- Carbide measuring faces
- Adjustable platform height
- Optional accessory: dial comparator (code 2881-01)

DIAL SNAP GAGE

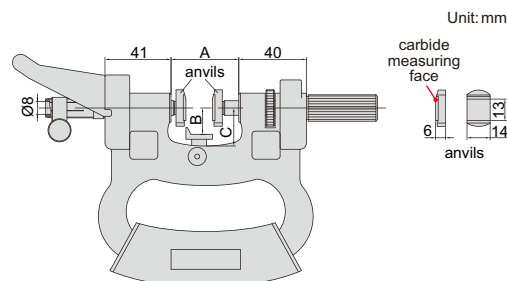
- For quick Go/No-Go judgment of diameter of cylinders and shafts
- Left anvil retracting stroke: 2mm
- Measuring force: 6-8N
- Flatness of anvil: $1.5\mu\text{m}$
- Repeatability: $1\mu\text{m}$
- Carbide measuring faces for anvils
- Front edges of anvils are chamfered for easy workpiece insertion
- Optional accessory: dial indicators and digital indicators (reading 0.001mm or 0.01mm)



2186-25

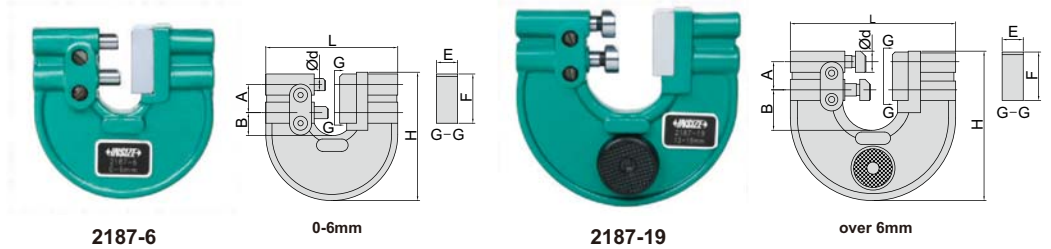
Code	Range	Parallelism of measuring faces	A	B	C
2186-25	0-25mm	$4\mu\text{m}$	42	11-18	20
2186-50	25-50mm	$4\mu\text{m}$	69	11-32	41
2186-75	50-75mm	$5\mu\text{m}$	94	17-41	51
2186-100	75-100mm	$6\mu\text{m}$	119	31-55	65
2186-125	100-125mm	$6\mu\text{m}$	144	42-70	75
2186-150	125-150mm	$8\mu\text{m}$	169	55-82	90
2186-175	150-175mm	$8\mu\text{m}$	194	68-95	100
2186-200	175-200mm	$10\mu\text{m}$	219	85-110	115
2186-225	200-225mm	$10\mu\text{m}$	244	95-120	130
2186-250	225-250mm	$10\mu\text{m}$	269	110-135	145
2186-275	250-275mm	$12\mu\text{m}$	294	120-150	160
2186-300	275-300mm	$12\mu\text{m}$	319	128-160	170

(mm)



ADJUSTABLE SNAP GAGE

- Used as Go/No-Go gage by setting upper and lower limits
- Flatness of anvil: 1.5µm
- Parallelism of measuring faces:
range 0-32mm: 3µm
range 32-89mm: 4µm
range 89-300mm: 5µm



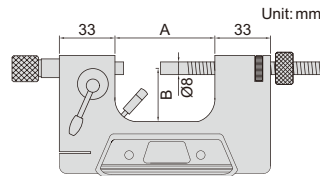
Code	Range	L	A	B	E	F	H	Ød
2187-6	0-6mm	74	15	23.5	12.2	27.2	71.5	7
2187-13	6-13mm	85	15	26	12.2	27.2	79.5	12.3
2187-19	13-19mm	93	15	30	12.2	27.2	83	12.3
2187-25	19-25mm	100	15	33.5	12.2	27.2	89.5	12.3
2187-32	25-32mm	111	18	38.5	15.2	35.2	104	15.3
2187-38	32-38mm	117	18	41.5	15.2	35.2	105	15.3
2187-44	38-44mm	123	18	44.5	15.2	35.2	109	15.3
2187-51	44-51mm	130	18	48	15.2	35.2	117	15.3
2187-57	51-57mm	136	18	51	15.2	35.2	119	15.3
2187-63	57-63mm	143	18	54.5	15.2	35.2	122	15.3
2187-70	63-70mm	156	20	58	15.2	35.2	132	15.3
2187-76	70-76mm	163	20	60.5	15.2	35.2	137	15.3
2187-82	76-82mm	169	20	64.5	15.2	35.2	140	15.3
2187-89	82-89mm	175	20	66.5	15.2	35.2	146	15.3
2187-95	89-95mm	181	20	69.5	15.2	35.2	149	15.3
2187-101	95-101mm	188	20	73	15.2	35.2	154	15.3
2187-108	101-108mm	198	24	79	15.2	35.2	166	15.3
2187-114	108-114mm	204	24	81	15.2	39.2	172	15.3

Code	Range	L	A	B	E	F	H	Ød
2187-120	114-120mm	210	24	86	15.2	39.2	179	15.3
2187-127	120-127mm	217	24	89.5	15.2	39.2	186	15.3
2187-133	127-133mm	223	24	92.5	15.2	39.2	192	15.3
2187-139	133-139mm	229	24	95.5	15.2	39.2	197	15.3
2187-146	139-146mm	235	24	98.5	15.2	39.2	201	15.3
2187-152	146-152mm	242	24	102	15.2	39.2	205	15.3
2187-163	152-163mm	273	21.4	106.7	18.2	39.2	211	18.3
2187-175	163-175mm	273	21.4	106.7	18.2	39.2	211	18.3
2187-188	175-188mm	298.5	21.4	119.7	18.2	39.2	227	18.3
2187-200	188-200mm	298.5	21.4	119.7	18.2	39.2	227	18.3
2187-213	200-213mm	324	21.4	131.7	18.2	39.2	242	18.3
2187-225	213-225mm	324	21.4	131.7	18.2	39.2	242	18.3
2187-238	225-238mm	349.5	21.4	144.7	18.2	39.2	250	18.3
2187-250	238-250mm	349.5	21.4	144.7	18.2	39.2	250	18.3
2187-263	250-263mm	375.5	21.4	157.7	18.2	39.2	278	18.3
2187-275	263-275mm	375.5	21.4	157.7	18.2	39.2	278	18.3
2187-288	275-288mm	400	21.4	170.7	18.2	39.2	291	18.3
2187-300	288-300mm	400	21.4	170.7	18.2	39.2	291	18.3

- For quick Go/No-Go judgment of diameter of cylinders and shafts
- Anvil retracting stroke: 3mm
- Measuring force: 6-9N
- Carbide measuring faces
- Optional accessory:
dial indicators (graduation 0.01mm),
digital indicators (resolution 0.01mm/0.0005")

ATTENTION: NOT SUITABLE
FOR 0.001MM INDICATORS

Code	Range	A	B
2184-25W	0-25mm	34	18
2184-50W	0-50mm	62	32
2184-100W	50-100mm	112	62
2184-150W	100-150mm	162	85
2184-200W	150-200mm	212	110



2184-50W

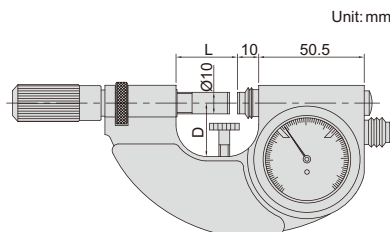
DIAL SNAP GAGE

- Go/No-Go judgement for mass production
- Dial indicator: range ± 0.04 mm, graduation 0.001mm, accuracy 0.001mm
- IP54 dust/waterproof
- Measuring force: 5-10N
- Carbide measuring faces
- Supplied with setting standards (except 0-25mm)

IP54
WATERPROOF

ATTENTION:
BASIC MODEL

Code	Range	L	D
3334-25	0-25mm	28.5	25
3334-50	25-50mm	53.5	35
3334-75	50-75mm	78.5	47.5
3334-100	75-100mm	103.5	60



3334-25

DIAL SNAP GAGE

DIGITAL SNAP GAGE

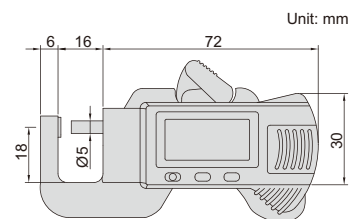
DATA
OUTPUT

- Optional accessory: data output cable (code 7306-20, 7302-SPC1A/SPC1B, 7305-SPC2A)



2166-12

Code	Range	Resolution	Accuracy
2166-12	0-12mm/0-0.5"	0.01mm/0.0005"	±0.03mm



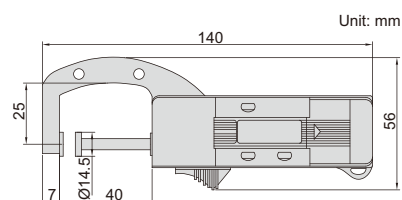
DIGITAL SNAP GAGE

ATTENTION: NO
DATA OUTPUT



2167-25

Code	Range	Resolution	Accuracy
2167-25	0-25mm/0-1"	0.01mm/0.0005"	±0.03mm



DIGITAL SNAP GAGE

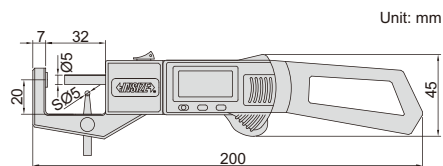
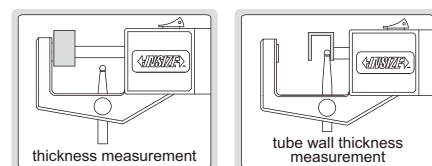
DATA
OUTPUT



2163-25

- Resolution: 0.01mm/0.0005"
- Accuracy: ±0.04mm
- For thickness and tube wall thickness measurement
- Optional accessory: data output cable (code 7306-20, 7302-SPC1A/SPC1B, 7305-SPC2A)

Code	Thickness range	Tube wall thickness range
2163-25	0-25mm/0-1"	0-2mm/0.08"



DIGITAL SNAP GAGE

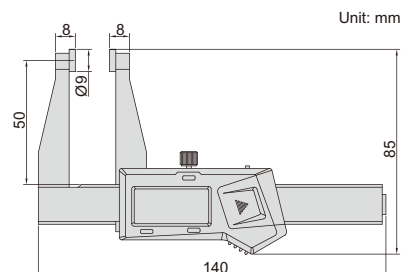
DATA
OUTPUT

- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)



1163-50A

Code	Range	Resolution	Accuracy
1163-50A	0-50mm/0-2"	0.01mm/0.0005"	±0.03mm

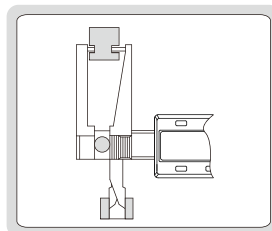
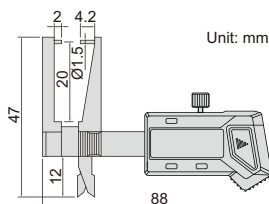


ATTENTION: NO
DATA OUTPUT

SUITABLE FOR
JEWELLERY

DIGITAL 3-PURPOSE SNAP GAGE

- Buttons: zero, mm/inch, on/off
- Battery LR44
- Made of stainless steel



2164-25A

Code	Range	Resolution	Accuracy
2164-25A	0-25mm/0-1"	0.01mm/0.0005"	±0.03mm

DATA
OUTPUT

STEP AND GAP GAGE

zero setting block
(included)



- Measure step height and gap width
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Supplied with zero setting block
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)

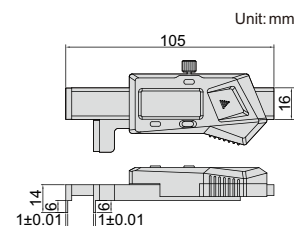
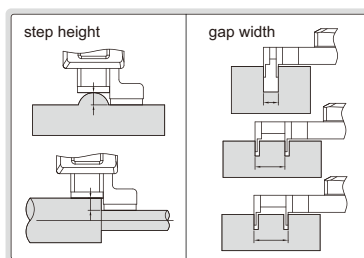


front

2168-12



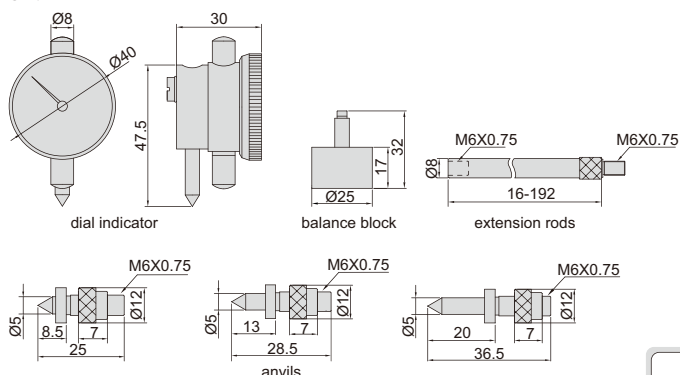
back



Code	Range	Accuracy
2168-12	0-12.7mm/0-0.5"	±0.03mm

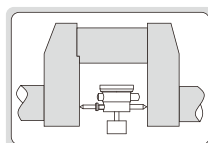
CRANKSHAFT TESTER

Unit: mm



2841-500

- To test crankshaft deflection
- The balance block is mounted on the back of dial indicator to keep the dial indicator facing up

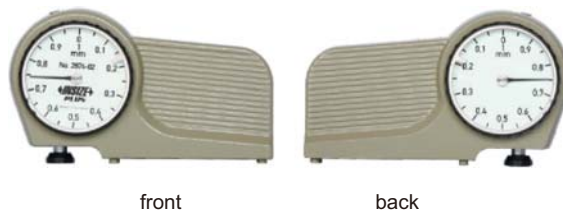


Code	Range	Dial indicator range	Graduation	Extension rods	Accuracy
2841-300	60-300mm	3mm	0.01mm	16mm, 32mm, 64mm, 128mm	±0.016mm
2841-500	60-500mm	3mm	0.01mm	16mm, 32mm, 64mm, 96mm, 128mm, 192mm	±0.016mm

SAW TEETH SETTING GAGE

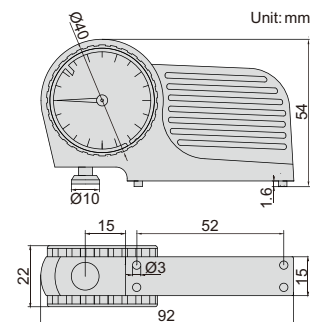


- Supplied with limit pointer
- Read from both sides



2874-02

Code	Range	Graduation	Accuracy
2874-02	0-2mm	0.05mm	±0.05mm



GAGE BLOCKS

Accuracy according to ISO3650

Nominal length (mm)	Grade 0		Grade 1		Grade 2	
	Limit deviation of length	Tolerance for the variation in length	Limit deviation of length	Tolerance for the variation in length	Limit deviation of length	Tolerance for the variation in length
over 0.5 to 10	±0.12µm	0.10µm	±0.20µm	0.16µm	±0.45µm	0.30µm
over 10 to 25	±0.14µm	0.10µm	±0.30µm	0.16µm	±0.60µm	0.30µm
over 25 to 50	±0.20µm	0.10µm	±0.40µm	0.18µm	±0.80µm	0.30µm
over 50 to 75	±0.25µm	0.12µm	±0.50µm	0.18µm	±1.00µm	0.35µm
over 75 to 100	±0.30µm	0.12µm	±0.60µm	0.20µm	±1.20µm	0.35µm
over 100 to 150	±0.40µm	0.14µm	±0.80µm	0.20µm	±1.60µm	0.40µm
over 150 to 200	±0.50µm	0.16µm	±1.00µm	0.25µm	±2.00µm	0.40µm
over 200 to 250	±0.60µm	0.16µm	±1.20µm	0.25µm	±2.40µm	0.45µm
over 250 to 300	±0.70µm	0.18µm	±1.40µm	0.25µm	±2.80µm	0.50µm
over 300 to 400	±0.90µm	0.20µm	±1.80µm	0.30µm	±3.60µm	0.50µm
over 400 to 500	±1.10µm	0.25µm	±2.20µm	0.35µm	±4.40µm	0.60µm
over 500 to 600	±1.30µm	0.25µm	±2.60µm	0.40µm	±5.00µm	0.70µm
over 600 to 700	±1.50µm	0.30µm	±3.00µm	0.45µm	±6.00µm	0.70µm
over 700 to 800	±1.70µm	0.30µm	±3.40µm	0.50µm	±6.50µm	0.80µm
over 800 to 900	±1.90µm	0.35µm	±3.80µm	0.50µm	±7.50µm	0.90µm
over 900 to 1000	±2.00µm	0.40µm	±4.20µm	0.60µm	±8.00µm	1.00µm

Grade and application

Grade	Application
0	To be used as basic standards in calibration laboratories by skilled inspection staff, to calibrate or set high accuracy measuring instruments, to calibrate gage blocks of grade 1 and 2.
1	To be used in inspection rooms, to check gages, inspect high accuracy parts and set measuring instruments.
2	To be used in workshops, to check production gages, set measuring instruments and mount tools.

Inspection certificate

INSPECTION CERTIFICATE

GAGE BLOCKS

CODE: 4100-32
GRADE: 0

Nominal Size (mm)	Identification No.	Deviation (µm)	Nominal Size (mm)	Identification No.	Deviation (µm)	Nominal Size (mm)	Identification No.	Deviation (µm)
1.005	118456	+0.04	1.20	108950	+0.08	4	115716	+0.08
1.01	119466	0.00	1.30	091140	+0.03	5	114033	-0.02
1.02	101529	+0.08	1.40	112170	-0.02	6	111940	+0.07
1.03	112666	+0.08	1.5	116887	-0.02	7	116970	0.00
1.04	112140	0.00	1.6	102449	+0.05	8	119266	+0.05
1.05	106748	0.00	1.7	114888	+0.07	9	114947	+0.02
1.06	113899	-0.03	1.8	101023	+0.02	10	111703	+0.06
1.07	092053	+0.03	1.9	111542	+0.05	20	115666	+0.02
1.08	111782	0.00	1	115273	0.00	30	101817	+0.09
1.09	106008	-0.02	2	114741	+0.05	50	115454	0.00
1.10	110489	+0.07	3	116618	+0.05			

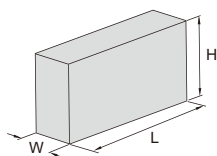
Set Serial No. 110019
Standard ISO3650

Material: Steel
Standard reference temperature: 20°C

Date: Jun. 8th. 2011
Inspector:



CERAMIC GAGE BLOCK SET



Dimension:

Size (L)	W	H
$0.5 \leq L \leq 10\text{mm}$	9mm	30mm
$L > 10\text{mm}$	9mm	35mm



4105-87

- Made of ceramic, extremely wear resistance and corrosion resistance, excellent dimension stability
- Meet ISO3650
- Supplied with manufacturer inspection certificate

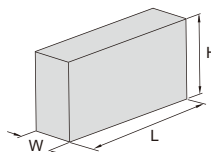
Blocks per set	Gage blocks included in set			Code	
	Size (mm)	Step (mm)	Quantity	Grade 0	Grade 1
112	1.0005		1	4105-112	4105-1112
	1.001-1.009	0.001	9		
	1.01-1.49	0.01	49		
	0.5-24.5	0.5	49		
	25-100	25	4		
103	1.005		1	4105-103	4105-1103
	1.01-1.49	0.01	49		
	0.5-24.5	0.5	49		
	25-100	25	4		
88	1.0005		1	4105-88	4105-188
	1.001-1.009	0.001	9		
	1.01-1.49	0.01	49		
	0.5-9.5	0.5	19		
	10-100	10	10		
87	1.001-1.009	0.001	9	4105-87	4105-187
	1.01-1.49	0.01	49		
	0.5-9.5	0.5	19		
	10-100	10	10		
76	1.005		1	4105-76	4105-176
	1.01-1.49	0.01	49		
	0.5-9.5	0.5	19		
	10-40	10	4		
	50-100	25	3		
56	0.5		1	4105-56	4105-156
	1.001-1.009	0.001	9		
	1.01-1.09	0.01	9		
	1.1-1.9	0.1	9		
	1-24	1	24		
	25-100	25	4		

Blocks per set	Gage blocks included in set			Code	
	Size (mm)	Step (mm)	Quantity	Grade 0	Grade 1
47	1.005		1	4105-47A	4105-147A
	1.01-1.09	0.01	9		
	1.1-1.9	0.1	9		
	1-24	1	24		
	25-100	25	4		
47	1.005		1	4105-47	4105-147
	1.01-1.19	0.01	19		
	1.2-1.9	0.1	8		
	1-9	1	9		
	10-100	10	10		
46	1.001-1.009	0.001	9	4105-46	4105-146
	1.01-1.09	0.01	9		
	1.1-1.9	0.1	9		
	1-9	1	9		
	10-100	10	10		
34	1.0005		1	4105-34	4105-134
	1.001-1.009	0.001	9		
	1.01-1.09	0.01	9		
	1.1-1.9	0.1	9		
	1-5	1	5		
32	1.005		1	4105-32	4105-132
	1.01-1.09	0.01	9		
	1.1-1.9	0.1	9		
	1-9	1	9		
	10-30	10	3		
8	50		1	4105-8	4105-18
	125-175	25	3		
	200-250	50	2		
	300-500	100	3		

INDIVIDUAL CERAMIC GAGE BLOCK



4106-A80



Dimension:

Size (L)	W	H
0.5 ≤ L ≤ 10mm	9mm	30mm
L > 10mm	9mm	35mm

Code explanation:

4106-X□□□□□

→ A for grade 0

→ B for grade 1

Code examples:

Size (L)	Grade	Code
0.5mm	0	4106-AD5
10mm	1	4106-B10

- Made of ceramic, extremely wear resistance and corrosion resistance
- Meet ISO3650
- Supplied with manufacturer inspection certificate

Size	Code
0.5mm	4106- <u>X</u> D5
1mm	4106- <u>X</u> 1
1.0005mm	4106- <u>X</u> 1D0005
1.001mm	4106- <u>X</u> 1D001
1.002mm	4106- <u>X</u> 1D002
1.003mm	4106- <u>X</u> 1D003
1.004mm	4106- <u>X</u> 1D004
1.005mm	4106- <u>X</u> 1D005
1.006mm	4106- <u>X</u> 1D006
1.007mm	4106- <u>X</u> 1D007
1.008mm	4106- <u>X</u> 1D008
1.009mm	4106- <u>X</u> 1D009
1.01mm	4106- <u>X</u> 1D01
1.02mm	4106- <u>X</u> 1D02
1.03mm	4106- <u>X</u> 1D03
1.04mm	4106- <u>X</u> 1D04
1.05mm	4106- <u>X</u> 1D05
1.06mm	4106- <u>X</u> 1D06
1.07mm	4106- <u>X</u> 1D07
1.08mm	4106- <u>X</u> 1D08
1.09mm	4106- <u>X</u> 1D09
1.1mm	4106- <u>X</u> 1D1
1.11mm	4106- <u>X</u> 1D11
1.12mm	4106- <u>X</u> 1D12
1.13mm	4106- <u>X</u> 1D13
1.14mm	4106- <u>X</u> 1D14
1.15mm	4106- <u>X</u> 1D15
1.16mm	4106- <u>X</u> 1D16
1.17mm	4106- <u>X</u> 1D17
1.18mm	4106- <u>X</u> 1D18
1.19mm	4106- <u>X</u> 1D19
1.2mm	4106- <u>X</u> 1D2
1.21mm	4106- <u>X</u> 1D21
1.22mm	4106- <u>X</u> 1D22

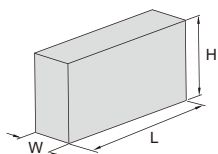
Size	Code
1.23mm	4106- <u>X</u> 1D23
1.24mm	4106- <u>X</u> 1D24
1.25mm	4106- <u>X</u> 1D25
1.26mm	4106- <u>X</u> 1D26
1.27mm	4106- <u>X</u> 1D27
1.28mm	4106- <u>X</u> 1D28
1.29mm	4106- <u>X</u> 1D29
1.3mm	4106- <u>X</u> 1D3
1.31mm	4106- <u>X</u> 1D31
1.32mm	4106- <u>X</u> 1D32
1.33mm	4106- <u>X</u> 1D33
1.34mm	4106- <u>X</u> 1D34
1.35mm	4106- <u>X</u> 1D35
1.36mm	4106- <u>X</u> 1D36
1.37mm	4106- <u>X</u> 1D37
1.38mm	4106- <u>X</u> 1D38
1.39mm	4106- <u>X</u> 1D39
1.4mm	4106- <u>X</u> 1D4
1.41mm	4106- <u>X</u> 1D41
1.42mm	4106- <u>X</u> 1D42
1.43mm	4106- <u>X</u> 1D43
1.44mm	4106- <u>X</u> 1D44
1.45mm	4106- <u>X</u> 1D45
1.46mm	4106- <u>X</u> 1D46
1.47mm	4106- <u>X</u> 1D47
1.48mm	4106- <u>X</u> 1D48
1.49mm	4106- <u>X</u> 1D49
1.5mm	4106- <u>X</u> 1D5
1.6mm	4106- <u>X</u> 1D6
1.7mm	4106- <u>X</u> 1D7
1.8mm	4106- <u>X</u> 1D8
1.9mm	4106- <u>X</u> 1D9
2mm	4106- <u>X</u> 2
2.5mm	4106- <u>X</u> 2D5

Size	Code
3mm	4106- <u>X</u> 3
3.5mm	4106- <u>X</u> 3D5
4mm	4106- <u>X</u> 4
4.5mm	4106- <u>X</u> 4D5
5mm	4106- <u>X</u> 5
5.1mm	4106- <u>X</u> 5D1
5.5mm	4106- <u>X</u> 5D5
6mm	4106- <u>X</u> 6
6.5mm	4106- <u>X</u> 6D5
7mm	4106- <u>X</u> 7
7.5mm	4106- <u>X</u> 7D5
7.7mm	4106- <u>X</u> 7D7
8mm	4106- <u>X</u> 8
8.5mm	4106- <u>X</u> 8D5
9mm	4106- <u>X</u> 9
9.5mm	4106- <u>X</u> 9D5
10mm	4106- <u>X</u> 10
10.3mm	4106- <u>X</u> 10D3
10.5mm	4106- <u>X</u> 10D5
11mm	4106- <u>X</u> 11
11.5mm	4106- <u>X</u> 11D5
12mm	4106- <u>X</u> 12
12.5mm	4106- <u>X</u> 12D5
12.9mm	4106- <u>X</u> 12D9
13mm	4106- <u>X</u> 13
13.5mm	4106- <u>X</u> 13D5
14mm	4106- <u>X</u> 14
14.5mm	4106- <u>X</u> 14D5
15mm	4106- <u>X</u> 15
15.5mm	4106- <u>X</u> 15D5
16mm	4106- <u>X</u> 16
16.5mm	4106- <u>X</u> 16D5
17mm	4106- <u>X</u> 17
17.5mm	4106- <u>X</u> 17D5

Size	Code
17.6mm	4106- <u>X</u> 17D6
18mm	4106- <u>X</u> 18
18.5mm	4106- <u>X</u> 18D5
19mm	4106- <u>X</u> 19
19.5mm	4106- <u>X</u> 19D5
20mm	4106- <u>X</u> 20
20.2mm	4106- <u>X</u> 20D2
20.5mm	4106- <u>X</u> 20D5
21mm	4106- <u>X</u> 21
21.5mm	4106- <u>X</u> 21D5
22mm	4106- <u>X</u> 22
22.5mm	4106- <u>X</u> 22D5
22.8mm	4106- <u>X</u> 22D8
23mm	4106- <u>X</u> 23
23.5mm	4106- <u>X</u> 23D5
24mm	4106- <u>X</u> 24
24.5mm	4106- <u>X</u> 24D5
25mm	4106- <u>X</u> 25
30mm	4106- <u>X</u> 30
40mm	4106- <u>X</u> 40
41.3mm	4106- <u>X</u> 41D3
50mm	4106- <u>X</u> 50
60mm	4106- <u>X</u> 60
70mm	4106- <u>X</u> 70
75mm	4106- <u>X</u> 75
80mm	4106- <u>X</u> 80
90mm	4106- <u>X</u> 90
100mm	4106- <u>X</u> 100
125mm	4106- <u>X</u> 125
131.4mm	4106- <u>X</u> 131D4
150mm	4106- <u>X</u> 150



STEEL GAGE BLOCK SET



Dimension:

Size (L)	W	H
$0.5 \leq L \leq 10\text{mm}$	9mm	30mm
$L > 10\text{mm}$	9mm	35mm



4100-87

- Made of alloy steel
- Meet ISO3650
- Supplied with manufacturer inspection certificate

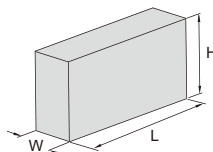
Blocks per set	Gage blocks included in set			Code		
	Size (mm)	Step (mm)	Quantity	Grade 0	Grade 1	Grade 2
122	1.0005		1	4100-122	4100-1122	4100-2122
	1.001-1.009	0.001	9			
	1.01-1.49	0.01	49			
	1.6-1.9	0.1	4			
	0.5-24.5	0.5	49			
	30-100	10	8			
	25-75	50	2			
112	1.0005		1	4100-112	4100-1112	4100-2112
	1.001-1.009	0.001	9			
	1.01-1.49	0.01	49			
	0.5-24.5	0.5	49			
	25-100	25	4			
103	1.005		1	4100-103	4100-1103	4100-2103
	1.01-1.49	0.01	49			
	0.5-24.5	0.5	49			
	25-100	25	4			
88	1.0005		1	4100-88	4100-188	4100-288
	1.001-1.009	0.001	9			
	1.01-1.49	0.01	49			
	0.5-9.5	0.5	19			
	10-100	10	10			
87	1.001-1.009	0.001	9	4100-87	4100-187	4100-287
	1.01-1.49	0.01	49			
	0.5-9.5	0.5	19			
	10-100	10	10			
83	0.5		1	4100-83	4100-183	4100-283
	1		1			
	1.005		1			
	1.01-1.49	0.01	49			
	1.5-1.9	0.1	5			
	2-9.5	0.5	16			
	10-100	10	10			
76	1.005		1	4100-76	4100-176	4100-276
	1.01-1.49	0.01	49			
	0.5-9.5	0.5	19			
	10-40	10	4			
	50-100	25	3			

Blocks per set	Gage blocks included in set			Code		
	Size (mm)	Step (mm)	Quantity	Grade 0	Grade 1	Grade 2
56	0.5		1	4100-56	4100-156	4100-256
	1.001-1.009	0.001	9			
	1.01-1.09	0.01	9			
	1.1-1.9	0.1	9			
	1-24	1	24			
	25-100	25	4			
47	1.005		1	4100-47A	4100-147A	4100-247A
	1.01-1.09	0.01	9			
	1.1-1.9	0.1	9			
	1-24	1	24			
	25-100	25	4			
47	1.005		1	4100-47	4100-147	4100-247
	1.01-1.19	0.01	19			
	1.2-1.9	0.1	8			
	1-9	1	9			
	10-100	10	10			
46	1.001-1.009	0.001	9	4100-46	4100-146	4100-246
	1.01-1.09	0.01	9			
	1.1-1.9	0.1	9			
	1-9	1	9			
	10-100	10	10			
34	1.0005		1	4100-34	4100-134	4100-234
	1.001-1.009	0.001	9			
	1.01-1.09	0.01	9			
	1.1-1.9	0.1	9			
	1-5	1	5			
	10		1			
32	1.005		1	4100-32	4100-132	4100-232
	1.01-1.09	0.01	9			
	1.1-1.9	0.1	9			
	1-9	1	9			
	10-30	10	3			
	50		1			
9	1.001-1.009	0.001	9	4100-9	4100-19	4100-29
9	0.991-0.999	0.001	9	4100-9A	4100-19A	4100-29A
8	125-175	25	3	4100-8	4100-18	4100-28
	200-250	50	2			
	300-500	100	3			

INDIVIDUAL STEEL GAGE BLOCK



4101-A70



Dimension:

Size (L)	W	H
0.5 ≤ L ≤ 10mm	9mm	30mm
L > 10mm	9mm	35mm

- Made of alloy steel
- Meet ISO3650
- Supplied with manufacturer inspection certificate

Code explanation:

4101-X□□□□□

- A for grade 0
- B for grade 1
- C for grade 2

Code examples:

Size (L)	Grade	Code
0.5mm	0	4101-AD5
1mm	1	4101-B1
10.5mm	2	4101-C10D5

Size	Code
0.5mm	4101-XD5
0.991mm	4101-XD991
0.992mm	4101-XD992
0.993mm	4101-XD993
0.994mm	4101-XD994
0.995mm	4101-XD995
0.996mm	4101-XD996
0.997mm	4101-XD997
0.998mm	4101-XD998
0.999mm	4101-XD999
1mm	4101-X1
1.0005mm	4101-X1D0005
1.001mm	4101-X1D001
1.002mm	4101-X1D002
1.003mm	4101-X1D003
1.004mm	4101-X1D004
1.005mm	4101-X1D005
1.006mm	4101-X1D006
1.007mm	4101-X1D007
1.008mm	4101-X1D008
1.009mm	4101-X1D009
1.01mm	4101-X1D01
1.02mm	4101-X1D02
1.03mm	4101-X1D03
1.04mm	4101-X1D04
1.05mm	4101-X1D05
1.06mm	4101-X1D06
1.07mm	4101-X1D07
1.08mm	4101-X1D08
1.09mm	4101-X1D09
1.1mm	4101-X1D1
1.11mm	4101-X1D11
1.12mm	4101-X1D12
1.13mm	4101-X1D13
1.14mm	4101-X1D14
1.15mm	4101-X1D15
1.16mm	4101-X1D16
1.17mm	4101-X1D17
1.18mm	4101-X1D18

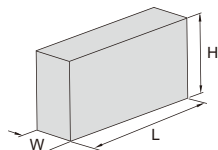
Size	Code
1.19mm	4101-X1D19
1.2mm	4101-X1D2
1.21mm	4101-X1D21
1.22mm	4101-X1D22
1.23mm	4101-X1D23
1.24mm	4101-X1D24
1.25mm	4101-X1D25
1.26mm	4101-X1D26
1.27mm	4101-X1D27
1.28mm	4101-X1D28
1.29mm	4101-X1D29
1.3mm	4101-X1D3
1.31mm	4101-X1D31
1.32mm	4101-X1D32
1.33mm	4101-X1D33
1.34mm	4101-X1D34
1.35mm	4101-X1D35
1.36mm	4101-X1D36
1.37mm	4101-X1D37
1.38mm	4101-X1D38
1.39mm	4101-X1D39
1.4mm	4101-X1D4
1.41mm	4101-X1D41
1.42mm	4101-X1D42
1.43mm	4101-X1D43
1.44mm	4101-X1D44
1.45mm	4101-X1D45
1.46mm	4101-X1D46
1.47mm	4101-X1D47
1.48mm	4101-X1D48
1.49mm	4101-X1D49
1.5mm	4101-X1D5
1.6mm	4101-X1D6
1.7mm	4101-X1D7
1.8mm	4101-X1D8
1.9mm	4101-X1D9
2mm	4101-X2
2.5mm	4101-X2D5
3mm	4101-X3

Size	Code
3.5mm	4101-X3D5
4mm	4101-X4
4.5mm	4101-X4D5
5mm	4101-X5
5.1mm	4101-X5D1
5.5mm	4101-X5D5
6mm	4101-X6
6.5mm	4101-X6D5
7mm	4101-X7
7.5mm	4101-X7D5
7.7mm	4101-X7D7
8mm	4101-X8
8.5mm	4101-X8D5
9mm	4101-X9
9.5mm	4101-X9D5
10mm	4101-X10
10.3mm	4101-X10D3
10.5mm	4101-X10D5
11mm	4101-X11
11.5mm	4101-X11D5
12mm	4101-X12
12.5mm	4101-X12D5
12.9mm	4101-X12D9
13mm	4101-X13
13.5mm	4101-X13D5
14mm	4101-X14
14.5mm	4101-X14D5
15mm	4101-X15
15.5mm	4101-X15D5
16mm	4101-X16
16.5mm	4101-X16D5
17mm	4101-X17
17.5mm	4101-X17D5
17.6mm	4101-X17D6
18mm	4101-X18
18.5mm	4101-X18D5
19mm	4101-X19
19.5mm	4101-X19D5
20mm	4101-X20

Size	Code
20.2mm	4101-X20D2
20.5mm	4101-X20D5
21mm	4101-X21
21.5mm	4101-X21D5
22mm	4101-X22
22.5mm	4101-X22D5
22.8mm	4101-X22D8
23mm	4101-X23
23.5mm	4101-X23D5
24mm	4101-X24
24.5mm	4101-X24D5
25mm	4101-X25
30mm	4101-X30
35mm	4101-X35
40mm	4101-X40
41.3mm	4101-X41D3
45mm	4101-X45
50mm	4101-X50
60mm	4101-X60
70mm	4101-X70
75mm	4101-X75
80mm	4101-X80
90mm	4101-X90
100mm	4101-X100
125mm	4101-X125
131.4mm	4101-X131D4
150mm	4101-X150
175mm	4101-X175
200mm	4101-X200
250mm	4101-X250
300mm	4101-X300
400mm	4101-X400
500mm	4101-X500
600mm	4101-X600
700mm	4101-X700
750mm	4101-X750
800mm	4101-X800
900mm	4101-X900
1000mm	4101-X1000



CARBIDE GAGE BLOCK SET



Dimension:

Size (L)	W	H
$0.5 \leq L \leq 10\text{mm}$	9mm	30mm
$L > 10\text{mm}$	9mm	35mm



4164-32

- Made of carbide, extremely wear resistance and corrosion resistance, excellent dimension stability
- Meet ISO3650
- Supplied with manufacturer inspection certificate

Blocks per set	Gage blocks included in set			Code	
	Size (mm)	Step (mm)	Quantity	Grade 0	Grade 1
122	1.0005		1	4164-122	4164-1122
	1.001-1.009	0.001	9		
	1.01-1.49	0.01	49		
	1.6-1.9	0.1	4		
	0.5-24.5	0.5	49		
	30-100	10	8		
	25-75	50	2		
112	1.0005		1	4164-112	4164-1112
	1.001-1.009	0.001	9		
	1.01-1.49	0.01	49		
	0.5-24.5	0.5	49		
	25-100	25	4		
103	1.005		1	4164-103	4164-1103
	1.01-1.49	0.01	49		
	0.5-24.5	0.5	49		
	25-100	25	4		
87	1.001-1.009	0.001	9	4164-87	4164-187
	1.01-1.49	0.01	49		
	0.5-9.5	0.5	19		
	10-100	10	10		
83	0.5		1	4164-83	4164-183
	1		1		
	1.005		1		
	1.01-1.49	0.01	49		
	1.5-1.9	0.1	5		
	2-9.5	0.5	16		
	10-100	10	10		

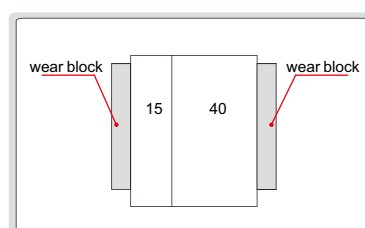
Blocks per set	Gage blocks included in set			Code	
	Size (mm)	Step (mm)	Quantity	Grade 0	Grade 1
76	1.005		1	4164-76	4164-176
	1.01-1.49	0.01	49		
	0.5-9.5	0.5	19		
	10-40	10	4		
	50-100	25	3		
47	1.005		1	4164-47A	4164-147A
	1.01-1.09	0.01	9		
	1.1-1.9	0.1	9		
	1-24	1	24		
47	1.005		1	4164-47	4164-147
	1.01-1.19	0.01	19		
	1.2-1.9	0.1	8		
	1-9	1	9		
46	1.001-1.009	0.001	9	4164-46	4164-146
	1.01-1.09	0.01	9		
	1.1-1.9	0.1	9		
	1-9	1	9		
	10-100	10	10		
32	1.005		1	4164-32	4164-132
	1.01-1.09	0.01	9		
	1.1-1.9	0.1	9		
	1-9	1	9		
	10-30	10	3		
	50		1		

- Protect the measuring surfaces of gage blocks from excessive wear
- Meet ISO3650
- Supplied with manufacturer inspection certificate



WEAR BLOCK SET

Blocks per set	Size	Material	Code	
			Grade 0	Grade 1
2	1.0mm	ceramic	4111-1	4111-11
2	1.0mm	alloy steel	4111-1A	4111-11A
2	2.0mm	ceramic	4111-2	4111-12
2	2.0mm	alloy steel	4111-2A	4111-12A

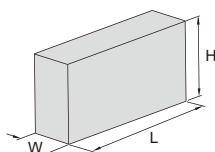


4111-2

MICROMETER INSPECTION GAGE BLOCK SET



4107-10



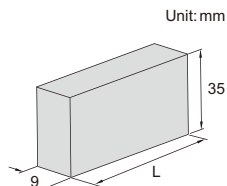
Dimension:

Size (L)	W	H
$0.5 \leq L \leq 10\text{mm}$	9mm	30mm
$L > 10\text{mm}$	9mm	35mm

- One piece of optical flat is included in **4107-10**, **4107-101**
- Meet ISO3650/grade 0
- Supplied with manufacturer inspection certificate

Code	Material	Gage blocks included in set	Applicable micrometer	Optical flat
4107-10	ceramic	2.5mm, 5.1mm, 7.7mm, 10.3mm, 12.9mm, 15mm, 17.6mm, 20.2mm, 22.8mm, 25mm, optical flat	0-25mm	included
4107-101	alloy steel	2.5mm, 5.1mm, 7.7mm, 10.3mm, 12.9mm, 15mm, 17.6mm, 20.2mm, 22.8mm, 25mm, optical flat	0-25mm	included
4107-112	alloy steel	25mm, 27.5mm, 30.1mm, 32.7mm, 35.3mm, 37.9mm, 40mm, 42.6mm, 45.2mm, 47.8mm, 50mm	25-50mm	not included
4107-113	alloy steel	50mm, 52.5mm, 55.1mm, 57.7mm, 60.3mm, 62.9mm, 65mm, 67.6mm, 70.2mm, 72.8mm, 75mm	50-75mm	not included
4107-114	alloy steel	75mm, 77.5mm, 80.1mm, 82.7mm, 85.3mm, 87.9mm, 90mm, 92.6mm, 95.2mm, 97.8mm, 100mm	75-100mm	not included

CALIPER INSPECTION GAGE BLOCK SET



4108-3005

- Meet ISO3650/grade 2
- Supplied with manufacturer inspection certificate

Code	Material	Blocks per set	Gage blocks included in set (L)	Applicable calipers
4108-3005	alloy steel	5	30, 41.3, 131.4, 243.5, 281.2	0-150, 0-200, 0-300

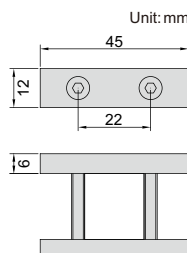
GAGE BLOCK HOLDER

- Made of aluminum
- To be used with individual steel gage block (code **4101**) as Go and No-Go gage

Code	Applicable gage block size
6883-1	1.5-5mm
6883-2	5-10mm
6883-3	10-15mm
6883-4	15-20mm
6883-5	20-25mm



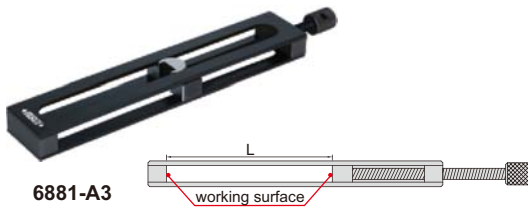
6883-4



To be used as Go and No-Go gage



GAGE BLOCK ACCESSORY



6881-A3

Code	Name	Clamping range* (L)
6881-A1	holder	0-25mm
6881-A2	holder	25-50mm
6881-A3	holder	50-100mm
6881-A4	holder	100-200mm
6881-A5	holder	200-300mm
6881-A6**	holder	300-500mm

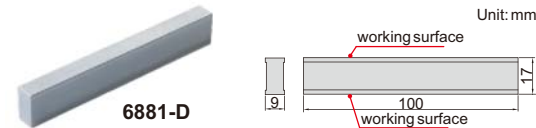
* The actual clamping range should deduct the width of jaws

** Not suitable for base 6881-B



6881-F

Code	Name	Remark
6881-F	scriber	made of carbide



6881-D

Code	Name	Remark
6881-D	parallel jaw	made of carbide



6881-S17

GAGE BLOCK ACCESSORY SET

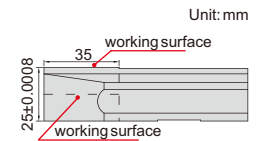
Code	Mark
6881-S17	17pcs (including the below items)

holder, 0-25mm (code 6881-A1)	1pc
holder, 25-50mm (code 6881-A2)	1pc
holder, 50-100mm (code 6881-A3)	1pc
holder, 100-200mm (code 6881-A4)	1pc
holder, 200-300mm (code 6881-A5)	1pc
base (code 6881-B)	1pc
plain jaw (code 6881-C)	1 pair
parallel jaw (code 6881-D)	1pc
half round jaw, 2.5mm (code 6881-E1)	1 pair
half round jaw, 5.0mm (code 6881-E2)	1 pair
half round jaw, 6.0mm (code 6881-E3)	1 pair
scriber (code 6881-F)	1pc
centre point (code 6881-G)	1pc

Code	Name
6881-B	base



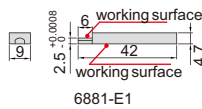
6881-B



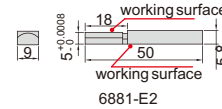
Unit: mm



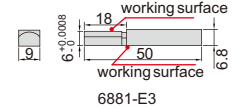
6881-E2



6881-E1



6881-E2



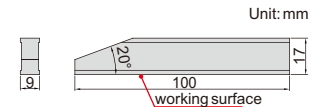
6881-E3

Unit: mm

Code	Name	Size	Remark
6881-E1	half round jaw	2.5mm	made of carbide, supplied in pair
6881-E2	half round jaw	5.0mm	made of carbide, supplied in pair
6881-E3	half round jaw	6.0mm	made of carbide, supplied in pair



6881-C

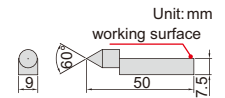


Unit: mm

Code	Name	Remark
6881-C	plain jaw	made of carbide, supplied in pair



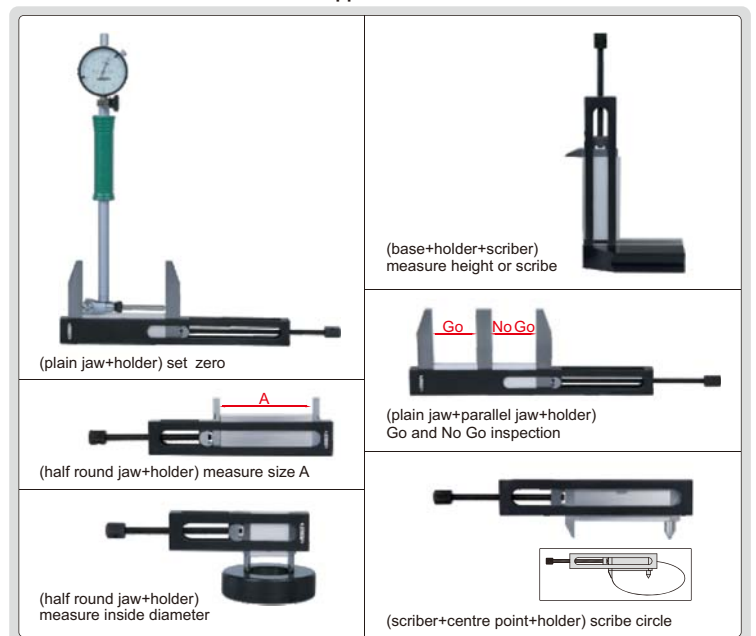
6881-G



Unit: mm

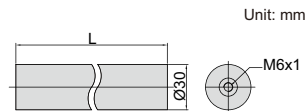
Code	Name	Remark
6881-G	centre point	the tip is made of carbide

application



CYLINDER GAGE BLOCK

CUSTOM-MADE
CAN SUPPLY ANY LENGTH, SUCH AS 80.672MM



Unit: mm

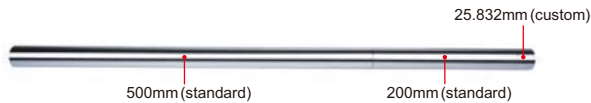
- Made of special alloy steel, hardness HRC64, high stability, wear resistance and easy combination
- Meet ISO3650 grade 1
- Can be connected with M6x1 screw and combined to any sizes up to 4m

Code	Length(L)
4001-25*	25mm
4001-50*	50mm
4001-75*	75mm
4001-100*	100mm
4001-200*	200mm
4001-300*	300mm
4001-400*	400mm
4001-500*	500mm

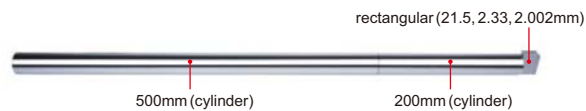
* Supplied with manufacturer inspection certificate

can be combined to any sizes up to 4m

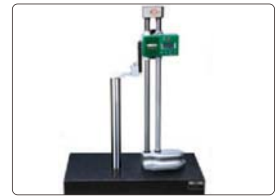
Combination 1: combined by several standard size cylinder gage blocks and one custom size cylinder gage block
For example: 500 (standard) + 200 (standard) + 25.832 (custom)=725.832mm
Note: in order to reduce cost, custom size should be within 100mm



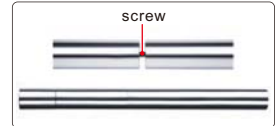
Combination 2: combined by standard size cylinder gage blocks and rectangular gage blocks
For example: 500 (cylinder) + 200 (cylinder) + 21.5 (rectangular) + 2.33 (rectangular) + 2.002 (rectangular)=725.832mm



high stability in vertical position,
suitable for checking height gages



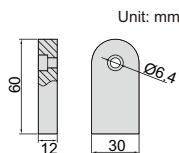
connected with M6x1 screw



INTERNAL BLOCKS



4001-A



Unit: mm

- Can be attached to cylinder and rectangular gage blocks
- Made of special alloy steel, hardness HRC64, high stability, wear resistance and easy combination
- Supplied in a matched pair

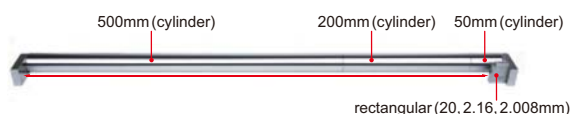
Code	Size	Flatness
4001-A	12mm	0.2μm

Combination 1: combined by several standard size cylinder gage blocks and one custom size cylinder gage block

For example: 500 (standard) + 200 (standard) + 25.832 (custom)=725.832mm
Note: in order to reduce cost, custom size should be within 100mm



Combination 2: combined by standard size cylinder gage blocks and rectangular gage blocks
For example: 500 (cylinder) + 200 (cylinder) + 50 (rectangular) - 20 (rectangular) - 2.16 (rectangular) - 2.008 (rectangular)=725.832mm

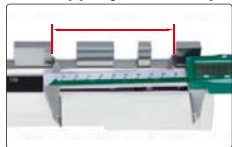




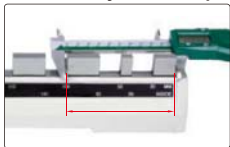
CALIPER/HEIGHT GAGE CHECKER

- To check calipers and height gages
- Constructed with steel gage blocks

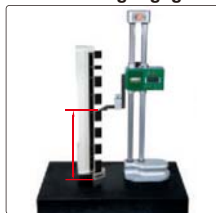
check upper jaws of caliper



check lower jaws of caliper



check height gage

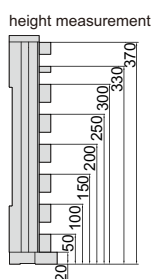


horizontal

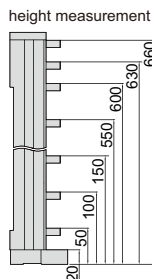
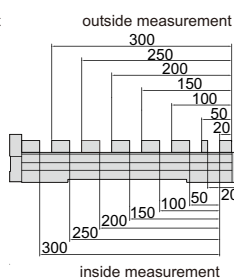
vertical



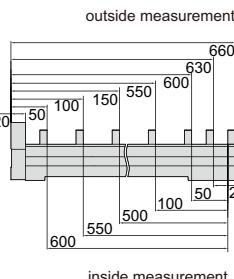
6884-300



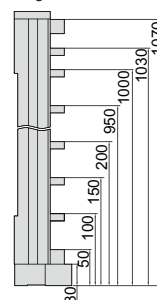
6884-300



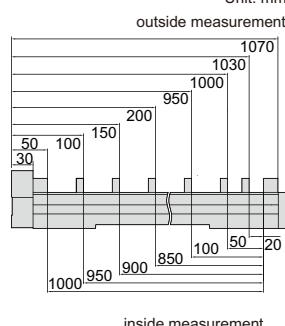
6884-600



height measurement



6884-1000



Unit: mm

Code	Size	Range of inside measurement	Range of outside measurement	Range of height measurement	Accuracy
6884-300*	0-300mm	20,50,100,150,200,250,300	20, 50, 100, 150, 200, 250, 300	20,50,100,150,200,250,300,330,370	±5μm
6884-600*	0-600mm	20,50,100,150,200,250,300,350,400,450,500,550,600	20,50,100,150,200,250,300,350,400,450,500,550,600,630,660	20,50,100,150,200,250,300,350,400,450,500,550,600,630,660	±7μm
6884-1000*	0-1000mm	20,50,100,150,200,250,300,350,400,450,500,550,600,650,700,750,800,850,900,950,1000	30,50,100,150,200,250,300,350,400,450,500,550,600,650,700,750,800,850,900,950,1000,1030,1070	30,50,100,150,200,250,300,350,400,450,500,550,600,650,700,750,800,850,900,950,1000,1030,1070	±7μm

* Supplied with manufacturer inspection certificate

INSIDE MICROMETER ACCESSORY



6884-A3

- Supplied with a pair of 5mm carbide gage blocks, ISO3650 grade 0

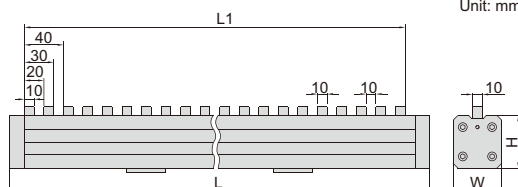
Code	Applicable caliper/height gage checker
6884-A3*	0-300mm
6884-A6*	0-600mm
6884-A10*	0-1000mm

* Supplied with manufacturer inspection certificate

set inside micrometer



- To check the accuracy of table movement of machine tools, to calibrate height gages and CMMs
- Ceramic gage blocks
- Can be used in either vertical and horizontal orientation
- Supplied with manufacturer inspection certificate



Unit: mm

(mm)

Code	Range	Step	Accuracy	Parallelism of blocks	L	L1	H	W
6882-300A	300mm	10mm	±2.5μm	1.2μm	350	310	49	45
6882-450A	450mm	10mm	±3.5μm	1.5μm	510	470	54	50
6882-600A	600mm	10mm	±3.5μm	1.5μm	650	610	54	50



6882-600A



horizontal orientation



vertical orientation

ANGLE GAGE BLOCK SET



4109-7A

- Standard for angle measurement
- Accuracy $\pm 10''$

Code	Blocks per set	Angle	Step	Quantity
4109-7A	7	15°10'		1
		30°20'		1
		45°30'		1
		50°		1
		60°40'		1
		75°50'		1
		90°/90°/90°/90°		1
4109-36A	36	10° - 20°	1°	11
		30° - 70°	10°	5
		45°		1
		15°10' - 15°50'	10'	5
		15°1' - 15°9'	1'	9
		10°00'30"		1
		80°/81°/100°/99°		1
		89°10'/89°20'/90°50'/90°40'		1
		89°30'/89°40'/90°30'/90°20'		1
		90°/90°/90°/90°		1
				1

ANGLE GAGE BLOCK

Individual

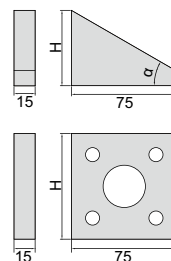
Code	Angle (α)	H(mm)
4002-A1 *	1°	11.5
4002-A3 *	3°	14.0
4002-A5 *	5°	16.5
4002-A9 *	9°	22.0
4002-A15 *	15°	30.5
4002-A27 *	27°	48.0
4002-A30 *	30°	53.5
4002-A41 *	41°	75.0
4002-A45 *	45°	84.0
4002-B1 *	1'	10.0
4002-B3 *	3'	10.0
4002-B5 *	5'	10.0
4002-B9 *	9'	10.0
4002-B20 *	20'	10.0
4002-B27 *	27'	10.0
4002-B30 *	30'	10.0
4002-C6 *	6"	10.0
4002-C12 *	12"	10.0
4002-C18 *	18"	10.0
4002-C30 *	30"	10.0
4002-D *	90°/90°/90°/90°	75.0

* Supplied with manufacturer inspection certificate

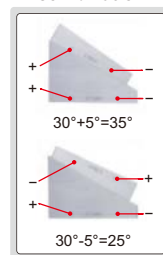
4002-15



Unit: mm



combination



set angle of plate



inspect angle



- Accuracy: $\pm 2''$
- To inspect protractor, taper gage, index plate, index head and goniometer, can also be used to set angle
- Made of special alloy steel, hardness HRC64, high stability, wear resistance and easy combination
- Can be combined to any angle with interval 6 seconds after combination (6", 12", 18", ... , 360")

Set

Code	Angle (α)	Total Quantity
4002-13 *	1°, 3°, 9°, 27°, 41°, 1', 3', 9', 27', 6", 18", 30", 90°/90°/90°/90°	13
4002-15 *	1°, 3°, 5°, 15°, 30°, 45°, 1', 3', 5', 20', 30', 6", 12", 30", 90°/90°/90°/90°	15

CUSTOM-MADE PIN GAGE

- Custom-made pin gages, diameter range $\varnothing 0.200$ ~ $\varnothing 30.000$ mm with three decimal, for example 0.211mm, 5.562mm, 16.298mm
- Diameter accuracy: $\pm 1\mu\text{m}$
- Made of alloy steel
- Hardness HRC62-65
- Optional accessory: wooden box

Code	Diameter range $\varnothing d$ (mm)
4118-xxxxx *	0.200~30.000

* Supplied with manufacturer inspection certificate



4118-8D015

Unit: mm



Ordering examples:

Diameter	Code
0.211mm	4118-0D211
5.562mm	4118-5D562
16.298mm	4118-16D298

Note: "D" stands for "."

INDIVIDUAL PIN GAGE

- Diameter range: Ø0.20~Ø20.00mm
- Diameter accuracy: $\pm 1\mu\text{m}$
- Made of alloy steel
- Hardness HRC62-65
- Optional accessory: wooden box

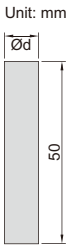
Diameter Ød (mm)
0.20, 0.21, 0.22, 0.23, 1.00
1.01, 1.02, 1.03, 1.04, 2.00
2.01, 2.02, 2.03, 2.04, 3.00
3.01, 3.02, 3.03, 3.04, 4.00
4.01, 4.02, 4.03, 4.04, 5.00
5.01, 5.02, 5.03, 5.04, 6.00
6.01, 6.02, 6.03, 6.04, 7.00
7.01, 7.02, 7.03, 7.04, 8.00
8.01, 8.02, 8.03, 8.04, 9.00
9.01, 9.02, 9.03, 9.04, 10.00

Diameter Ød (mm)
10.01, 10.02, 10.03, 10.04, 11.00
11.01, 11.02, 11.03, 11.04, 12.00
12.01, 12.02, 12.03, 12.04, 13.00
13.01, 13.02, 13.03, 13.04, 14.00
14.01, 14.02, 14.03, 14.04, 15.00
15.01, 15.02, 15.03, 15.04, 16.00
16.01, 16.02, 16.03, 16.04, 17.00
17.01, 17.02, 17.03, 17.04, 18.00
18.01, 18.02, 18.03, 18.04, 19.00
19.01, 19.02, 19.03, 19.04, 20.00



4110-9D98

Code
4110-xxxx



Ordering examples:

Diameter Code
0.21mm 4110-0D21
5.56mm 4110-5D56
16.00mm 4110-16D00
Note : "D" stands for "."

PIN GAGE SET

Code	Diameter Ød (mm)	Step	Pin gages per set
4166-2S	1.00, 1.01, 1.02, 2.00	0.01mm	101
4166-3S	2.00, 2.01, 2.02, 3.00	0.01mm	101
4166-4S	3.00, 3.01, 3.02, 4.00	0.01mm	101
4166-5S	4.00, 4.01, 4.02, 5.00	0.01mm	101
4166-6S	5.00, 5.01, 5.02, 6.00	0.01mm	101
4166-7S	6.00, 6.01, 6.02, 7.00	0.01mm	101
4166-8S	7.00, 7.01, 7.02, 8.00	0.01mm	101
4166-9S	8.00, 8.01, 8.02, 9.00	0.01mm	101
4166-10S	9.00, 9.01, 9.02, 10.00	0.01mm	101

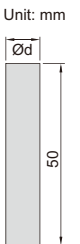
Code	Diameter Ød (mm)	Step	Pin gages per set
4166-411	1.0, 1.1, 1.2, 5.0	0.1mm	41
4166-511	5.0, 5.1, 5.2, 10.0	0.1mm	51
4166-512	10.0, 10.1, 10.2, 15.0	0.1mm	51
4166-513	15.0, 15.1, 15.2, 20.0	0.1mm	51

Code	Diameter Ød (mm)	Step	Pin gages per set
4166-0D	0.20, 0.21, 0.22, 0.50	0.01mm	31
4166-1	0.50, 0.51, 0.52, 1.00	0.01mm	51
4166-1D	1.00, 1.01, 1.02, 1.50	0.01mm	51
4166-2	1.50, 1.51, 1.52, 2.00	0.01mm	51
4166-2D	2.00, 2.01, 2.02, 2.50	0.01mm	51
4166-3	2.50, 2.51, 2.52, 3.00	0.01mm	51
4166-3D	3.00, 3.01, 3.02, 3.50	0.01mm	51
4166-4	3.50, 3.51, 3.52, 4.00	0.01mm	51
4166-4D	4.00, 4.01, 4.02, 4.50	0.01mm	51
4166-5	4.50, 4.51, 4.52, 5.00	0.01mm	51
4166-5D	5.00, 5.01, 5.02, 5.50	0.01mm	51
4166-6	5.50, 5.51, 5.52, 6.00	0.01mm	51
4166-6D	6.00, 6.01, 6.02, 6.50	0.01mm	51
4166-7	6.50, 6.51, 6.52, 7.00	0.01mm	51
4166-7D	7.00, 7.01, 7.02, 7.50	0.01mm	51
4166-8	7.50, 7.51, 7.52, 8.00	0.01mm	51
4166-8D	8.00, 8.01, 8.02, 8.50	0.01mm	51
4166-9	8.50, 8.51, 8.52, 9.00	0.01mm	51
4166-9D	9.00, 9.01, 9.02, 9.50	0.01mm	51
4166-10	9.50, 9.51, 9.52, 10.00	0.01mm	51



4166-6D

- Made of alloy steel
- Hardness HRC62-65
- Diameter accuracy: $\pm 1\mu\text{m}$



Code	Diameter Ød (mm)	Step	Pin gages per set
4166-10D	10.00, 10.01, 10.02, 10.50	0.01mm	51
4166-11	10.50, 10.51, 10.52, 11.00	0.01mm	51
4166-11D	11.00, 11.01, 11.02, 11.50	0.01mm	51
4166-12	11.50, 11.51, 11.52, 12.00	0.01mm	51
4166-12D	12.00, 12.01, 12.02, 12.50	0.01mm	51
4166-13	12.50, 12.51, 12.52, 13.00	0.01mm	51
4166-13D	13.00, 13.01, 13.02, 13.50	0.01mm	51
4166-14	13.50, 13.51, 13.52, 14.00	0.01mm	51
4166-14D	14.00, 14.01, 14.02, 14.50	0.01mm	51
4166-15	14.50, 14.51, 14.52, 15.00	0.01mm	51
4166-15D	15.00, 15.01, 15.02, 15.50	0.01mm	51
4166-16	15.50, 15.51, 15.52, 16.00	0.01mm	51
4166-16D	16.00, 16.01, 16.02, 16.50	0.01mm	51
4166-17	16.50, 16.51, 16.52, 17.00	0.01mm	51
4166-17D	17.00, 17.01, 17.02, 17.50	0.01mm	51
4166-18	17.50, 17.51, 17.52, 18.00	0.01mm	51
4166-18D	18.00, 18.01, 18.02, 18.50	0.01mm	51
4166-19	18.50, 18.51, 18.52, 19.00	0.01mm	51
4166-19D	19.00, 19.01, 19.02, 19.50	0.01mm	51
4166-20	19.50, 19.51, 19.52, 20.00	0.01mm	51

BOX FOR PIN GAGES



7340

- For individual pin gages (4110 and 4118 series)

Code	Applicable pin gage diameter Ød (mm)	Quantity of pin gages
7340	0.20-10.00	51pcs
7340-101	0.20-10.00	101pcs
7340-201	10.00-15.00	51pcs
7340-202	15.00-20.00	51pcs

PIN GAGE HANDLE



- Wrench is needed to install pins
- Clamping bushes (0.2~10.31mm) are made of brass, clamping bushes (10.31~20.62mm) are made of aluminum



Handle



brass
(0.2~10.31mm)



aluminum
(10.31~20.62mm)

clamping bush

Code	Applicable pin gage diameter (mm)	Including	
		Handle	Clamping bush (mm)
7341-0S	0.2 - 1.02	1pc	6 pairs (the clamping range are 0.2-0.38, 0.38-0.51, 0.51-0.64, 0.64-0.76, 0.76-0.89, 0.89-1.02)
7341-1S	1.02 - 1.91	1pc	7 pairs (the clamping range are 1.02-1.14, 1.14-1.27, 1.27-1.40, 1.40-1.52, 1.52-1.65, 1.65-1.78, 1.78-1.91)
7341-2S	1.91 - 3.33	1pc	8 pairs (the clamping range are 1.91-2.08, 2.08-2.26, 2.26-2.44, 2.44-2.62, 2.62-2.79, 2.79-2.97, 2.97-3.15, 3.15-3.33)
7341-3S	3.33 - 4.57	1pc	7 pairs (the clamping range are 3.33-3.51, 3.51-3.68, 3.68-3.86, 3.86-4.04, 4.04-4.22, 4.22-4.39, 4.39-4.57)
7341-4S	4.57 - 5.79	1pc	6 pairs (the clamping range are 4.57-4.78, 4.78-4.98, 4.98-5.18, 5.18-5.38, 5.38-5.59, 5.59-5.79)
7341-5S	5.79 - 7.14	1pc	6 pairs (the clamping range are 5.79-5.99, 5.99-6.20, 6.20-6.40, 6.40-6.63, 6.63-6.88, 6.88-7.14)

Code	Applicable pin gage diameter (mm)	Including	
		Handle	Clamping bush (mm)
7341-6S	7.14 - 8.66	1pc	6 pairs (the clamping range are 7.14-7.39, 7.39-7.65, 7.65-7.90, 7.90-8.15, 8.15-8.41, 8.41-8.66)
7341-7S	8.66 - 10.31	1pc	6 pairs (the clamping range are 8.66-8.92, 8.9-9.17, 9.17-9.42, 9.42-9.70, 9.70-10.01, 10.01-10.31)
7341-8S	10.31 - 11.81	1pc	4 pairs (the clamping range are 10.31-10.67, 10.67-11.05, 11.05-11.43, 11.43-11.81)
7341-9S	11.81 - 12.95	1pc	3 pairs (the clamping range are 11.81-12.19, 12.19-12.57, 12.57-12.95)
7341-10S	12.95 - 14.71	1pc	4 pairs (the clamping range are 12.95-13.51, 13.51-13.89, 13.89-14.30, 14.30-14.71)
7341-11S	14.71 - 16.13	1pc	4 pairs (the clamping range are 14.71-15.09, 15.09-15.49, 15.49-15.88, 15.88-16.13)
7341-12S	16.13 - 17.88	1pc	4 pairs (the clamping range are 16.13-16.66, 16.66-17.07, 17.07-17.48, 17.48-17.88)
7341-13S	17.88 - 19.30	1pc	4 pairs (the clamping range are 17.88-18.26, 18.26-18.67, 18.67-19.05, 19.05-19.30)
7341-14S	19.30 - 20.62	1pc	2 pairs (the clamping range are 19.30-19.84, 19.84-20.62)

CUSTOM-MADE

OTHER CLASSES ARE AVAILABLE, SUCH AS H8, H9
OTHER DIAMETERS ARE AVAILABLE, SUCH AS 19.003mm
OTHER LENGTHS ARE AVAILABLE, SUCH AS 70mm

- Supplied with Go and No-Go gages together
- Class H7
- Hardness HRC 60±2
- Standard DIN7150-2

Size tolerance of H7

Diameter Ød (mm)	Size tolerance of Go gage	Size tolerance of No-Go gage	L1	L2	L	S1, S2
≥2, ≤3	+0.0010 / +0.0022	+0.0088 / +0.010	6.5	4.5	20	—
>3, ≤6	+0.0013 / +0.0027	+0.0106 / +0.012	8	6	24	—
>6, ≤10	+0.0015 / +0.0033	+0.0132 / +0.015	10	7	29	—
>10, ≤14	+0.0018 / +0.0038	+0.0160 / +0.018	12	8	34	—
>14, ≤18	+0.0018 / +0.0038	+0.0160 / +0.018	14	10	36	—
>18, ≤24	+0.0023 / +0.0046	+0.0186 / +0.021	16	12	42	—
>24, ≤30	+0.0023 / +0.0046	+0.0186 / +0.021	18	14	42	—
>30, ≤40	+0.0023 / +0.0055	+0.0220 / +0.025	20	15	55	—
>40, ≤50	+0.0023 / +0.0055	+0.0220 / +0.025	25	18	60	—
>50, ≤65	+0.0028 / +0.0064	+0.0264 / +0.030	30	18	—	164, 152
>65, ≤80	+0.0028 / +0.0064	+0.0264 / +0.030	35	25	—	169, 159
>80, ≤100	+0.0032 / +0.0075	+0.0308 / +0.035	35	25	—	169, 159

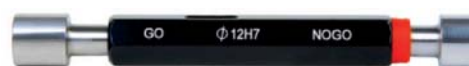
Code	Diameter (mm)	Type
4124-2	2	A
4124-3	3	A
4124-4	4	A
4124-5	5	A
4124-6	6	A
4124-7	7	A
4124-8	8	A
4124-9	9	A
4124-10	10	A
4124-11	11	A
4124-12	12	A
4124-13	13	A
4124-14	14	A
4124-15	15	A
4124-16	16	A

Code	Diameter (mm)	Type
4124-17	17	A
4124-18	18	A
4124-19	19	A
4124-20	20	A
4124-21	21	A
4124-22	22	A
4124-23	23	A
4124-24	24	A
4124-25	25	A
4124-26	26	A
4124-27	27	A
4124-28	28	A
4124-29	29	A
4124-30	30	A
4124-31	31	A

Code	Diameter (mm)	Type
4124-32	32	A
4124-33	33	A
4124-34	34	A
4124-35	35	A
4124-36	36	A
4124-37	37	A
4124-38	38	A
4124-39	39	A
4124-40	40	A
4124-41	41	A
4124-42	42	A
4124-43	43	A
4124-44	44	A
4124-45	45	A
4124-46	46	A

Code	Diameter (mm)	Type
4124-47	47	A
4124-48	48	A
4124-49	49	A
4124-50	50	A
4124-52	52	B
4124-55	55	B
4124-60	60	B
4124-65	65	B
4124-70	70	B
4124-75	75	B
4124-80	80	B
4124-85	85	B
4124-90	90	B
4124-95	95	B
4124-100	100	B

PLAIN PLUG GAGE

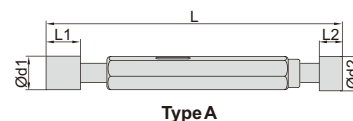


4124-12

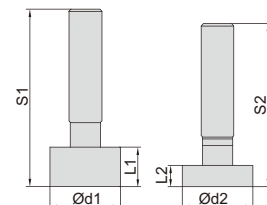
Type A



Type B



Type A



Type B



ATTENTION:
BASIC MODEL

METRIC THREAD PLUG GAGE

- Supplied with Go and No-Go gages together
- Class 6H
- Standard ISO1502



4130-10

Individual

Code	Size (mm)
4130-2*	M2x0.4
4130-2D2*	M2.2x0.45
4130-2D5*	M2.5x0.45
4130-3*	M3x0.5
4130-3D5*	M3.5x0.6
4130-4*	M4x0.7
4130-5*	M5x0.8
4130-6*	M6x1

Code	Size (mm)
4130-7*	M7x1
4130-8*	M8x1.25
4130-9*	M9x1.25
4130-10*	M10x1.5
4130-11*	M11x1.5
4130-12*	M12x1.75
4130-14*	M14x2
4130-16*	M16x2

Code	Size (mm)
4130-18*	M18x2.5
4130-20*	M20x2.5
4130-22*	M22x2.5
4130-24*	M24x3
4130-27*	M27x3
4130-30*	M30x3.5
4130-33*	M33x3.5
4130-36*	M36x4

Code	Size (mm)
4130-39*	M39x4
4130-42*	M42x4.5
4130-45*	M45x4.5
4130-48*	M48x5
4130-52*	M52x5
4130-56*	M56x5.5
4130-60*	M60x5.5

Set

Code	Thread plug gages included
4130-S7*	M3x0.5(4130-3), M4x0.7(4130-4), M5x0.8(4130-5), M6x1(4130-6), M8x1.25(4130-8), M10x1.5(4130-10), M12x1.75(4130-12)

* Supplied with manufacturer inspection certificate

METRIC FINE THREAD PLUG GAGE

- Supplied with Go and No-Go gages together
- Class 6H
- Standard ISO1502



4139-20G

ATTENTION:
BASIC MODEL



Code	Size (mm)	Code	Size (mm)	Code	Size (mm)	Code	Size (mm)	Code	Size (mm)
4139-2B *	M2x0.25	4139-11L *	M11x0.75	4139-20L *	M20x0.75	4139-33L *	M33x0.75	4139-45X *	M45x4
4139-2D2B *	M2.2x0.25	4139-11P *	M11x1	4139-20P *	M20x1	4139-33P *	M33x1	4139-48P *	M48x1
4139-2D5D *	M2.5x0.35	4139-12G *	M12x0.5	4139-20R *	M20x1.5	4139-33R *	M33x1.5	4139-48R *	M48x1.5
4139-3D *	M3x0.35	4139-12L *	M12x0.75	4139-20T *	M20x2	4139-33T *	M33x2	4139-48T *	M48x2
4139-3D5D *	M3.5x0.35	4139-12P *	M12x1	4139-22G *	M22x0.5	4139-33V *	M33x3	4139-48V *	M48x3
4139-4G *	M4x0.5	4139-12Q *	M12x1.25	4139-22L *	M22x0.75	4139-36P *	M36x1	4139-48X *	M48x4
4139-5G *	M5x0.5	4139-12R *	M12x1.5	4139-22P *	M22x1	4139-36R *	M36x1.5	4139-52P *	M52x1
4139-6G *	M6x0.5	4139-14G *	M14x0.5	4139-22R *	M22x1.5	4139-36T *	M36x2	4139-52R *	M52x1.5
4139-6L *	M6x0.75	4139-14L *	M14x0.75	4139-22T *	M22x2	4139-36V *	M36x3	4139-52T *	M52x2
4139-7G *	M7x0.5	4139-14P *	M14x1	4139-24L *	M24x0.75	4139-39P *	M39x1	4139-52V *	M52x3
4139-7L *	M7x0.75	4139-14Q *	M14x1.25	4139-24P *	M24x1	4139-39R *	M39x1.5	4139-52X *	M52x4
4139-8G *	M8x0.5	4139-14R *	M14x1.5	4139-24R *	M24x1.5	4139-39T *	M39x2	4139-56P *	M56x1
4139-8L *	M8x0.75	4139-16G *	M16x0.5	4139-24T *	M24x2	4139-39V *	M39x3	4139-56R *	M56x1.5
4139-8P *	M8x1	4139-16L *	M16x0.75	4139-27L *	M27x0.75	4139-42P *	M42x1	4139-56T *	M56x2
4139-9G *	M9x0.5	4139-16P *	M16x1	4139-27P *	M27x1	4139-42R *	M42x1.5	4139-56V *	M56x3
4139-9L *	M9x0.75	4139-16R *	M16x1.5	4139-27R *	M27x1.5	4139-42T *	M42x2	4139-56X *	M56x4
4139-9P *	M9x1	4139-18G *	M18x0.5	4139-27T *	M27x2	4139-42V *	M42x3	4139-60P *	M60x1
4139-10G *	M10x0.5	4139-18L *	M18x0.75	4139-30L *	M30x0.75	4139-42X *	M42x4	4139-60R *	M60x1.5
4139-10L *	M10x0.75	4139-18P *	M18x1	4139-30P *	M30x1	4139-45P *	M45x1	4139-60T *	M60x2
4139-10P *	M10x1	4139-18R *	M18x1.5	4139-30R *	M30x1.5	4139-45R *	M45x1.5	4139-60V *	M60x3
4139-10Q *	M10x1.25	4139-18T *	M18x2	4139-30T *	M30x2	4139-45T *	M45x2	4139-60X *	M60x4
4139-11G *	M11x0.5	4139-20G *	M20x0.5	4139-30V *	M30x3	4139-45V *	M45x3		

* Supplied with manufacturer inspection certificate

METRIC THREAD RING GAGE

- Go and No-Go gages are supplied separately
- Class 6g
- Standard ISO1502



4120-16



4120-16N

ATTENTION:
BASIC MODEL



Individual

Code (GO)	Code (NOGO)	Size (mm)	Code (GO)	Code (NOGO)	Size (mm)	Code (GO)	Code (NOGO)	Size (mm)
4120-2 *	4120-2N *	M2x0.4	4120-10 *	4120-10N *	M10x1.5	4120-33 *	4120-33N *	M33x3.5
4120-2D2 *	4120-2D2N *	M2.2x0.45	4120-11 *	4120-11N *	M11x1.5	4120-36 *	4120-36N *	M36x4
4120-2D5 *	4120-2D5N *	M2.5x0.45	4120-12 *	4120-12N *	M12x1.75	4120-39 *	4120-39N *	M39x4
4120-3 *	4120-3N *	M3x0.5	4120-14 *	4120-14N *	M14x2	4120-42 *	4120-42N *	M42x4.5
4120-3D5 *	4120-3D5N *	M3.5x0.6	4120-16 *	4120-16N *	M16x2	4120-45 *	4120-45N *	M45x4.5
4120-4 *	4120-4N *	M4x0.7	4120-18 *	4120-18N *	M18x2.5	4120-48 *	4120-48N *	M48x5
4120-5 *	4120-5N *	M5x0.8	4120-20 *	4120-20N *	M20x2.5	4120-52 *	4120-52N *	M52x5
4120-6 *	4120-6N *	M6x1	4120-22 *	4120-22N *	M22x2.5	4120-56 *	4120-56N *	M56x5.5
4120-7 *	4120-7N *	M7x1	4120-24 *	4120-24N *	M24x3	4120-60 *	4120-60N *	M60x5.5
4120-8 *	4120-8N *	M8x1.25	4120-27 *	4120-27N *	M27x3			
4120-9 *	4120-9N *	M9x1.25	4120-30 *	4120-30N *	M30x3.5			

Go ring gage set

Code	Thread ring gages included
4120-S7 *	M3x0.5(4120-3), M4x0.7(4120-4), M5x0.8(4120-5), M6x1(4120-6), M8x1.25(4120-8), M10x1.5(4120-10), M12x1.75(4120-12)

No Go ring gage set

Code	Thread ring gages included
4120-S7N *	M3x0.5(4120-3N), M4x0.7(4120-4N), M5x0.8(4120-5N), M6x1(4120-6N), M8x1.25(4120-8N), M10x1.5(4120-10N), M12x1.75(4120-12N)

* Supplied with manufacturer inspection certificate



**ATTENTION:
BASIC MODEL**

METRIC FINE THREAD RING GAGE

- Go and No-Go gages are supplied separately
- Class 6g
- Standard ISO1502



4129-10P



4129-10PN

Code (GO)	Code (NOGO)	Size (mm)
4129-2B *	4129-2BN *	M2x0.25
4129-2D2B *	4129-2D2BN *	M2.2x0.25
4129-2D5D *	4129-2D5DN *	M2.5x0.35
4129-3D *	4129-3DN *	M3x0.35
4129-3D5D *	4129-3D5DN *	M3.5x0.35
4129-4G *	4129-4GN *	M4x0.5
4129-5G *	4129-5GN *	M5x0.5
4129-6G *	4129-6GN *	M6x0.5
4129-6L *	4129-6LN *	M6x0.75
4129-7G *	4129-7GN *	M7x0.5
4129-7L *	4129-7LN *	M7x0.75
4129-8G *	4129-8GN *	M8x0.5
4129-8L *	4129-8LN *	M8x0.75
4129-8P *	4129-8PN *	M8x1
4129-9G *	4129-9GN *	M9x0.5
4129-9L *	4129-9LN *	M9x0.75
4129-9P *	4129-9PN *	M9x1
4129-10G *	4129-10GN *	M10x0.5
4129-10L *	4129-10LN *	M10x0.75
4129-10P *	4129-10PN *	M10x1
4129-10Q *	4129-10QN *	M10x1.25
4129-11G *	4129-11GN *	M11x0.5
4129-11L *	4129-11LN *	M11x0.75
4129-11P *	4129-11PN *	M11x1
4129-12G *	4129-12GN *	M12x0.5
4129-12L *	4129-12LN *	M12x0.75
4129-12P *	4129-12PN *	M12x1
4129-12Q *	4129-12QN *	M12x1.25
4129-12R *	4129-12RN *	M12x1.5
4129-14G *	4129-14GN *	M14x0.5
4129-14L *	4129-14LN *	M14x0.75
4129-14P *	4129-14PN *	M14x1
4129-14Q *	4129-14QN *	M14x1.25
4129-14R *	4129-14RN *	M14x1.5
4129-16G *	4129-16GN *	M16x0.5
4129-16L *	4129-16LN *	M16x0.75
4129-16P *	4129-16PN *	M16x1

Code (GO)	Code (NOGO)	Size (mm)
4129-16R *	4129-16RN *	M16x1.5
4129-18G *	4129-18GN *	M18x0.5
4129-18L *	4129-18LN *	M18x0.75
4129-18P *	4129-18PN *	M18x1
4129-18R *	4129-18RN *	M18x1.5
4129-18T *	4129-18TN *	M18x2
4129-20G *	4129-20GN *	M20x0.5
4129-20L *	4129-20LN *	M20x0.75
4129-20P *	4129-20PN *	M20x1
4129-20R *	4129-20RN *	M20x1.5
4129-20T *	4129-20TN *	M20x2
4129-22G *	4129-22GN *	M22x0.5
4129-22L *	4129-22LN *	M22x0.75
4129-22P *	4129-22PN *	M22x1
4129-22R *	4129-22RN *	M22x1.5
4129-22T *	4129-22TN *	M22x2
4129-24L *	4129-24LN *	M24x0.75
4129-24P *	4129-24PN *	M24x1
4129-24R *	4129-24RN *	M24x1.5
4129-24T *	4129-24TN *	M24x2
4129-27L *	4129-27LN *	M27x0.75
4129-27P *	4129-27PN *	M27x1
4129-27R *	4129-27RN *	M27x1.5
4129-27T *	4129-27TN *	M27x2
4129-30L *	4129-30LN *	M30x0.75
4129-30P *	4129-30PN *	M30x1
4129-30R *	4129-30RN *	M30x1.5
4129-30T *	4129-30TN *	M30x2
4129-30V *	4129-30VN *	M30x3
4129-33L *	4129-33LN *	M33x0.75
4129-33P *	4129-33PN *	M33x1
4129-33R *	4129-33RN *	M33x1.5
4129-33T *	4129-33TN *	M33x2
4129-33V *	4129-33VN *	M33x3
4129-36P *	4129-36PN *	M36x1
4129-36R *	4129-36RN *	M36x1.5
4129-36T *	4129-36TN *	M36x2

Code (GO)	Code (NOGO)	Size (mm)
4129-36V *	4129-36VN *	M36x3
4129-39P *	4129-39PN *	M39x1
4129-39R *	4129-39RN *	M39x1.5
4129-39T *	4129-39TN *	M39x2
4129-39V *	4129-39VN *	M39x3
4129-42P *	4129-42PN *	M42x1
4129-42R *	4129-42RN *	M42x1.5
4129-42T *	4129-42TN *	M42x2
4129-42V *	4129-42VN *	M42x3
4129-42X *	4129-42XN *	M42x4
4129-45P *	4129-45PN *	M45x1
4129-45R *	4129-45RN *	M45x1.5
4129-45T *	4129-45TN *	M45x2
4129-45V *	4129-45VN *	M45x3
4129-45X *	4129-45XN *	M45x4
4129-48P *	4129-48PN *	M48x1
4129-48R *	4129-48RN *	M48x1.5
4129-48T *	4129-48TN *	M48x2
4129-48V *	4129-48VN *	M48x3
4129-48X *	4129-48XN *	M48x4
4129-52P *	4129-52PN *	M52x1
4129-52R *	4129-52RN *	M52x1.5
4129-52T *	4129-52TN *	M52x2
4129-52V *	4129-52VN *	M52x3
4129-52X *	4129-52XN *	M52x4
4129-56P *	4129-56PN *	M56x1
4129-56R *	4129-56RN *	M56x1.5
4129-56T *	4129-56TN *	M56x2
4129-56V *	4129-56VN *	M56x3
4129-56X *	4129-56XN *	M56x4
4129-60P *	4129-60PN *	M60x1
4129-60R *	4129-60RN *	M60x1.5
4129-60T *	4129-60TN *	M60x2
4129-60V *	4129-60VN *	M60x3
4129-60X *	4129-60XN *	M60x4

* Supplied with manufacturer inspection certificate

Code	Size
4131-41 *	4-40UNC
4131-61 *	6-32UNC
4131-81 *	8-32UNC
4131-102 *	10-32UNF
4131-1B1 *	1/4-20UNC
4131-1B2 *	1/4-28UNF
4131-5D1 *	5/16-18UNC
4131-5D2 *	5/16-24UNF
4131-3C1 *	3/8-16UNC

Code	Size
4131-3C2 *	3/8-24UNF
4131-7D2 *	7/16-20UNF
4131-1A1 *	1/2-13UNC
4131-1A2 *	1/2-20UNF
4131-9D2 *	9/16-18UNF
4131-5C1 *	5/8-11UNC
4131-5C2 *	5/8-18UNF
4131-3B1 *	3/4-10UNC
4131-3B2 *	3/4-16UNF

AMERICAN STANDARD THREAD PLUG GAGE



4131-1B1



**ATTENTION:
BASIC MODEL**

- Class 2B
- Standard ANSI B1.2

* Supplied with manufacturer inspection certificate

AMERICAN STANDARD THREAD RING GAGE

ATTENTION:
BASIC MODEL



4121-1B1



4121-1B1N

- Class 2A
- Standard ANSI B1.2

Code (GO)	Code (NOGO)	Size
4121-41 *	4121-41N *	4 -40UNC
4121-61 *	4121-61N *	6 -32UNC
4121-81 *	4121-81N *	8 -32UNC
4121-102 *	4121-102N *	10-32UNF
4121-1B1 *	4121-1B1N *	1/4 -20UNC
4121-1B2 *	4121-1B2N *	1/4 -28UNF

Code (GO)	Code (NOGO)	Size
4121-5D1 *	4121-5D1N *	5/16 -18UNC
4121-5D2 *	4121-5D2N *	5/16 -24UNF
4121-3C1 *	4121-3C1N *	3/8 -16UNC
4121-3C2 *	4121-3C2N *	3/8 -24UNF
4121-7D2 *	4121-7D2N *	7/16 -20UNF
4121-1A1 *	4121-1A1N *	1/2 -13UNC

Code (GO)	Code (NOGO)	Size
4121-1A2 *	4121-1A2N *	1/2 -20UNF
4121-9D2 *	4121-9D2N *	9/16 -18UNF
4121-5C1 *	4121-5C1N *	5/8 -11UNC
4121-5C2 *	4121-5C2N *	5/8 -18UNF
4121-3B1 *	4121-3B1N *	3/4 -10UNC
4121-3B2 *	4121-3B2N *	3/4 -16UNF

* Supplied with manufacturer inspection certificate

METRIC THREAD PLUG GAGE

- Class 6H
- Standard ISO1502
- Material: OHNS
(Oil Hardened Non-shrinking Steel),
stable dimension and wear resistance
- Hardness HRC60-62



4641-6



CLASS 5H OF M1.0, M1.1,
M1.2, M1.4 ARE AVAILABLE

Code	Size (mm)
4641-1D6 *	M1.6x0.35
4641-2 *	M2x0.4
4641-2D5 *	M2.5x0.45
4641-3 *	M3x0.5
4641-3D5 *	M3.5x0.6

Code	Size (mm)
4641-4 *	M4x0.7
4641-5 *	M5x0.8
4641-6 *	M6x1
4641-8 *	M8x1.25
4641-10 *	M10x1.5

Code	Size (mm)
4641-12 *	M12x1.75
4641-14 *	M14x2
4641-16 *	M16x2
4641-18 *	M18x2.5
4641-20 *	M20x2.5

Code	Size (mm)
4641-22 *	M22x2.5
4641-24 *	M24x3
4641-27 *	M27x3
4641-30 *	M30x3.5
4641-33 *	M33x3.5

Code	Size (mm)
4641-36 *	M36x4
4641-42 *	M42x4.5
4641-48 *	M48x5

* Supplied with manufacturer inspection certificate

METRIC FINE THREAD PLUG GAGE

- Class 6H
- Standard ISO1502
- Material: OHNS
(Oil Hardened Non-shrinking Steel),
stable dimension and wear resistance
- Hardness HRC60-62



4642-12R



Code	Size (mm)
4642-8G *	M8x0.5
4642-8L *	M8x0.75
4642-8P *	M8x1
4642-10L *	M10x0.75
4642-10P *	M10x1
4642-10Q *	M10x1.25
4642-12P *	M12x1
4642-12Q *	M12x1.25
4642-12R *	M12x1.5
4642-14P *	M14x1
4642-14Q *	M14x1.25

Code	Size (mm)
4642-14R *	M14x1.5
4642-16P *	M16x1
4642-16R *	M16x1.5
4642-18P *	M18x1
4642-18R *	M18x1.5
4642-20P *	M20x1
4642-20R *	M20x1.5
4642-22R *	M22x1.5
4642-24P *	M24x1
4642-24R *	M24x1.5
4642-24T *	M24x2

Code	Size (mm)
4642-25R *	M25x1.5
4642-26R *	M26x1.5
4642-27R *	M27x1.5
4642-27T *	M27x2
4642-28R *	M28x1.5
4642-30P *	M30x1
4642-30R *	M30x1.5
4642-30T *	M30x2
4642-32R *	M32x1.5
4642-33R *	M33x1.5
4642-33T *	M33x2

Code	Size (mm)
4642-35R *	M35x1.5
4642-36R *	M36x1.5
4642-36T *	M36x2
4642-38R *	M38x1.5
4642-40R *	M40x1.5
4642-40T *	M40x2
4642-42R *	M42x1.5
4642-42T *	M42x2
4642-45R *	M45x1.5
4642-45T *	M45x2
4642-48R *	M48x1.5

Code	Size (mm)
4642-48T *	M48x2
4642-50R *	M50x1.5
4642-50T *	M50x2
4642-52R *	M52x1.5
4642-52T *	M52x2
4642-55R *	M55x1.5
4642-55T *	M55x2
4642-58R *	M58x1.5
4642-60T *	M60x2

* Supplied with manufacturer inspection certificate



METRIC THREAD RING GAGE

CLASS 6h OF M1.2, M1.4
ARE AVAILABLE

- Class 6g
- Standard ISO1502
- Material: OHNS (Oil Hardened Non-shrinking Steel), stable dimension and wear resistance
- Hardness HRC60-62



4631-12



4631-12N

Code (GO)	Code (NOGO)	Size(mm)
4631-1D2 *	4631-1D2N *	M1.2x0.25
4631-1D4 *	4631-1D4N *	M1.4x0.30
4631-1D6 *	4631-1D6N *	M1.6x0.35
4631-2 *	4631-2N *	M2x0.4
4631-2D5 *	4631-2D5N *	M2.5x0.45
4631-3 *	4631-3N *	M3x0.5
4631-3D5 *	4631-3D5N *	M3.5x0.6
4631-4 *	4631-4N *	M4x0.7
4631-5 *	4631-5N *	M5x0.8

Code (GO)	Code (NOGO)	Size (mm)
4631-6 *	4631-6N *	M6x1
4631-8 *	4631-8N *	M8x1.25
4631-10 *	4631-10N *	M10x1.5
4631-12 *	4631-12N *	M12x1.75
4631-14 *	4631-14N *	M14x2
4631-16 *	4631-16N *	M16x2
4631-18 *	4631-18N *	M18x2.5
4631-20 *	4631-20N *	M20x2.5
4631-22 *	4631-22N *	M22x2.5

Code (GO)	Code (NOGO)	Size (mm)
4631-24 *	4631-24N *	M24x3
4631-27 *	4631-27N *	M27x3
4631-30 *	4631-30N *	M30x3.5
4631-33 *	4631-33N *	M33x3.5
4631-36 *	4631-36N *	M36x4
4631-42 *	4631-42N *	M42x4.5
4631-48 *	4631-48N *	M48x5

* Supplied with manufacturer inspection certificate



METRIC FINE THREAD RING GAGE

- Class 6g
- Standard ISO1502
- Material: OHNS (Oil Hardened Non-shrinking Steel), stable dimension and wear resistance
- Hardness HRC60-62



4632-10Q



4632-10QN

Code (GO)	Code (NOGO)	Size (mm)
4632-8G *	4632-8GN *	M8x0.5
4632-8L *	4632-8LN *	M8x0.75
4632-8P *	4632-8PN *	M8x1
4632-10L *	4632-10LN *	M10x0.75
4632-10P *	4632-10PN *	M10x1
4632-10Q *	4632-10QN *	M10x1.25
4632-12P *	4632-12PN *	M12x1
4632-12Q *	4632-12QN *	M12x1.25
4632-12R *	4632-12RN *	M12x1.5
4632-14P *	4632-14PN *	M14x1
4632-14Q *	4632-14QN *	M14x1.25
4632-14R *	4632-14RN *	M14x1.5
4632-16P *	4632-16PN *	M16x1
4632-16R *	4632-16RN *	M16x1.5
4632-18P *	4632-18PN *	M18x1
4632-18R *	4632-18RN *	M18x1.5
4632-20P *	4632-20PN *	M20x1
4632-20R *	4632-20RN *	M20x1.5

Code (GO)	Code (NOGO)	Size (mm)
4632-22R *	4632-22RN *	M22x1.5
4632-24P *	4632-24PN *	M24x1
4632-24R *	4632-24RN *	M24x1.5
4632-24T *	4632-24TN *	M24x2
4632-25R *	4632-25RN *	M25x1.5
4632-26R *	4632-26RN *	M26x1.5
4632-27R *	4632-27RN *	M27x1.5
4632-27T *	4632-27TN *	M27x2
4632-28R *	4632-28RN *	M28x1.5
4632-30P *	4632-30PN *	M30x1
4632-30R *	4632-30RN *	M30x1.5
4632-30T *	4632-30TN *	M30x2
4632-32R *	4632-32RN *	M32x1.5
4632-33R *	4632-33RN *	M33x1.5
4632-33T *	4632-33TN *	M33x2
4632-35R *	4632-35RN *	M35x1.5
4632-36R *	4632-36RN *	M36x1.5
4632-36T *	4632-36TN *	M36x2

Code (GO)	Code (NOGO)	Size (mm)
4632-38R *	4632-38RN *	M38x1.5
4632-40R *	4632-40RN *	M40x1.5
4632-40T *	4632-40TN *	M40x2
4632-42R *	4632-42RN *	M42x1.5
4632-42T *	4632-42TN *	M42x2
4632-45R *	4632-45RN *	M45x1.5
4632-45T *	4632-45TN *	M45x2
4632-48R *	4632-48RN *	M48x1.5
4632-48T *	4632-48TN *	M48x2
4632-50R *	4632-50RN *	M50x1.5
4632-50T *	4632-50TN *	M50x2
4632-52R *	4632-52RN *	M52x1.5
4632-52T *	4632-52TN *	M52x2
4632-55R *	4632-55RN *	M55x1.5
4632-55T *	4632-55TN *	M55x2
4632-58R *	4632-58RN *	M58x1.5
4632-60T *	4632-60TN *	M60x2

* Supplied with manufacturer inspection certificate

AMERICAN STANDARD THREAD PLUG GAGE



4643-1B1

- Class 2B
- Standard ANSI B1.2
- Material: OHNS (Oil Hardened Non-shrinking Steel), stable dimension and wear resistance
- Hardness HRC60-62

Code	Size
4643-41 *	4-40UNC
4643-61 *	6-32UNC
4643-81 *	8-32UNC
4643-102 *	10-32UNF
4643-1B1 *	1/4-20UNC
4643-1B2 *	1/4-28UNF

Code	Size
4643-5D1 *	5/16-18UNC
4643-5D2 *	5/16-24UNF
4643-3C1 *	3/8-16UNC
4643-3C2 *	3/8-24UNF
4643-7D2 *	7/16-20UNF
4643-1A1 *	1/2-13UNC

Code	Size
4643-1A2 *	1/2-20UNF
4643-9D2 *	9/16-18UNF
4643-5C1 *	5/8-11UNC
4643-5C2 *	5/8-18UNF
4643-3B1 *	3/4-10UNC
4643-3B2 *	3/4-16UNF

* Supplied with manufacturer inspection certificate

AMERICAN STANDARD THREAD RING GAGE



4633-1B1



4633-1B1N

- Class 2A
- Standard ANSI B1.2
- Material: OHNS (Oil Hardened Non-shrinking Steel), stable dimension and wear resistance
- Hardness HRC60-62

Code (GO)	Code (NOGO)	Size
4633-41 *	4633-41N *	4-40UNC
4633-61 *	4633-61N *	6-32UNC
4633-81 *	4633-81N *	8-32UNC
4633-102 *	4633-102N *	10-32UNF
4633-1B1 *	4633-1B1N *	1/4-20UNC
4633-1B2 *	4633-1B2N *	1/4-28UNF
4633-5D1 *	4633-5D1N *	5/16-18UNC
4633-5D2 *	4633-5D2N *	5/16-24UNF
4633-3C1 *	4633-3C1N *	3/8-16UNC

Code (GO)	Code (NOGO)	Size
4633-3C2 *	4633-3C2N *	3/8-24UNF
4633-7D2 *	4633-7D2N *	7/16-20UNF
4633-1A1 *	4633-1A1N *	1/2-13UNC
4633-1A2 *	4633-1A2N *	1/2-20UNF
4633-9D2 *	4633-9D2N *	9/16-18UNF
4633-5C1 *	4633-5C1N *	5/8-11UNC
4633-5C2 *	4633-5C2N *	5/8-18UNF
4633-3B1 *	4633-3B1N *	3/4-10UNC
4633-3B2 *	4633-3B2N *	3/4-16UNF

* Supplied with manufacturer inspection certificate

NPT THREAD PLUG GAGE



4644-1B18

- American tapered pipe thread for threads with sealant
- Standard ANSI / ASME B1.20.1
- Taper 1:16
- Material: OHNS (Oil Hardened Non-shrinking Steel), stable dimension and wear resistance
- Hardness HRC60-62

Code	Size
4644-1D27 *	1/16x27NPT
4644-1C27 *	1/8x27NPT
4644-1B18 *	1/4x18NPT
4644-3C18 *	3/8x18NPT
4644-1A14 *	1/2x14NPT
4644-3B14 *	3/4x14NPT
4644-112 *	1x11.5NPT

Code	Size
4644-1G12 *	1-1/4x11.5NPT
4644-1H12 *	1-1/2x11.5NPT
4644-212 *	2x11.5NPT
4644-1J8 *	2-1/2x8NPT
4644-38 *	3x8NPT
4644-1N8 *	3-1/2x8NPT
4644-48 *	4x8NPT

* Supplied with manufacturer inspection certificate

NPT THREAD RING GAGE



front

4634-3C18



back

- American tapered pipe thread for threads with sealant
- Standard ANSI / ASME B1.20.1
- Taper 1:16
- Material: OHNS (Oil Hardened Non-shrinking Steel), stable dimension and wear resistance
- Hardness HRC60-62

Code	Size
4634-1D27 *	1/16x27NPT
4634-1C27 *	1/8x27NPT
4634-1B18 *	1/4x18NPT
4634-3C18 *	3/8x18NPT
4634-1A14 *	1/2x14NPT
4634-3B14 *	3/4x14NPT
4634-112 *	1x11.5NPT

Code	Size
4634-1G12 *	1-1/4x11.5NPT
4634-1H12 *	1-1/2x11.5NPT
4634-212 *	2x11.5NPT
4634-1J8 *	2-1/2x8NPT
4634-38 *	3x8NPT
4634-1N8 *	3-1/2x8NPT
4634-48 *	4x8NPT

* Supplied with manufacturer inspection certificate



WHITWORTH PIPE THREAD PLUG GAGE (G SERIES)

Code	Size
4645-1C28 *	G 1/8-28
4645-1B19 *	G 1/4-19
4645-3C19 *	G 3/8-19
4645-1A14 *	G 1/2-14
4645-3B14 *	G 3/4-14

Code	Size
4645-111 *	G 1-11
4645-1G11 *	G 1.1/4-11
4645-1H11 *	G 1.1/2-11
4645-211 *	G 2-11



4645-1A14

■ Standard ISO 228

* Supplied with manufacturer inspection certificate



WHITWORTH PIPE THREAD RING GAGE (G SERIES)

Code (GO)	Code (NOGO)	Size
4635-1C28 *	4635-1C28N *	G 1/8-28
4635-1B19 *	4635-1B19N *	G 1/4-19
4635-3C19 *	4635-3C19N *	G 3/8-19
4635-1A14 *	4635-1A14N *	G 1/2-14
4635-3B14 *	4635-3B14N *	G 3/4-14

Code (GO)	Code (NOGO)	Size
4635-111 *	4635-111N *	G 1-11
4635-1G11 *	4635-1G11N *	G 1.1/4-11
4635-1H11 *	4635-1H11N *	G 1.1/2-11
4635-211 *	4635-211N *	G 2-11



4635-1A14



4635-1A14N

* Supplied with manufacturer inspection certificate

■ Class A
■ Standard ISO 228



BSPT TAPER THREAD PLUG GAGE

Code	Size
4646-1C28 *	1/8-28 BSPT
4646-1B19 *	1/4-19 BSPT
4646-3C19 *	3/8-19 BSPT
4646-1A14 *	1/2-14 BSPT
4646-3B14 *	3/4-14 BSPT
4646-111 *	1-11 BSPT
4646-1G11 *	1.1/4-11 BSPT

Code	Size
4646-1H11 *	1.1/2-11 BSPT
4646-211 *	2-11 BSPT
4646-2H11 *	2.1/2-11 BSPT
4646-311 *	3-11 BSPT
4646-411 *	4-11 BSPT
4646-511 *	5-11 BSPT
4646-611 *	6-11 BSPT



4646-1A14

■ Standard BS 21-1985

* Supplied with manufacturer inspection certificate



BSPT TAPER THREAD RING GAGE

Code	Size
4636-1C28 *	1/8-28 BSPT
4636-1B19 *	1/4-19 BSPT
4636-3C19 *	3/8-19 BSPT
4636-1A14 *	1/2-14 BSPT
4636-3B14 *	3/4-14 BSPT
4636-111 *	1-11 BSPT
4636-1G11 *	1.1/4-11 BSPT

Code	Size
4636-1H11 *	1.1/2-11 BSPT
4636-211 *	2-11 BSPT
4636-2H11 *	2.1/2-11 BSPT
4636-311 *	3-11 BSPT
4636-411 *	4-11 BSPT
4636-511 *	5-11 BSPT
4636-611 *	6-11 BSPT



front



back

4636-1A14

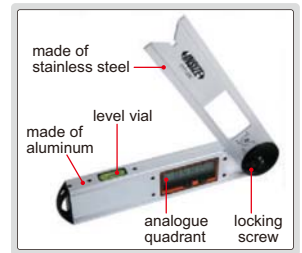
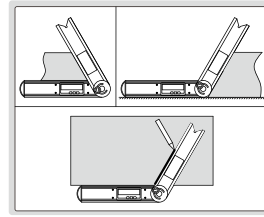
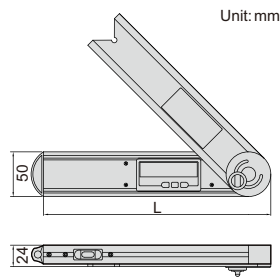
■ Standard BS 21-1985

* Supplied with manufacturer inspection certificate

DIGITAL PROTRACTOR



2171-250



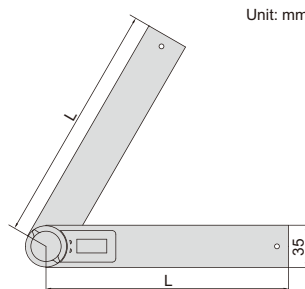
- Buttons: on/off, hold (keep the reading), zero, ABS (absolute and incremental measurement)
- Fix the locking screw at 4 positions for different measuring ranges: 0°~225°, -225°~0°, -45°~180°, -180°~45°
- Remove the locking screw for 360° range
- With level vial
- Battery CR2032
- Automatic power off

Code	Size (L)	Range	Resolution	Accuracy
2171-250	250mm	0-360°	0.05°	±0.15°

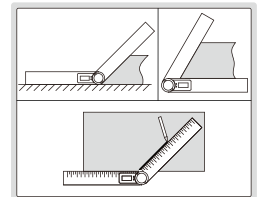
DIGITAL PROTRACTOR



2176-300



- Buttons: on/off, zero
- With clamping screw to lock the blades
- Graduation of blade: 1mm and 1/32"
- CR2032 battery
- Automatic power off



Code	Size(L)	Range	Resolution	Accuracy
2176-200	200mm	0-360°	0.1°	±0.3°
2176-300	300mm	0-360°	0.1°	±0.3°

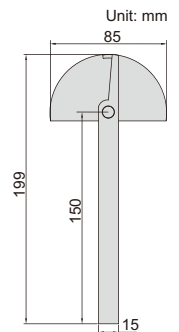
PROTRACTOR

- Made of stainless steel
- Satin chrome plated scale
- With clamping screw



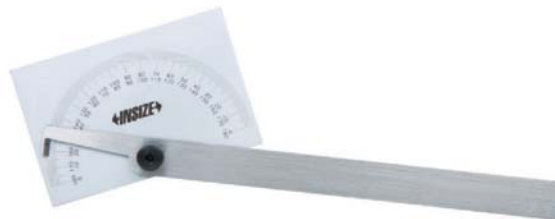
4780-85

Code	Size	Range	Graduation	Accuracy
4780-85	85x150mm	0-180°	1°	±0.3°



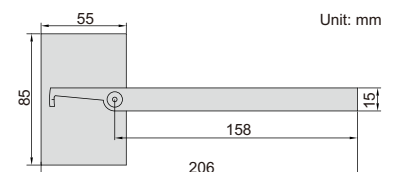
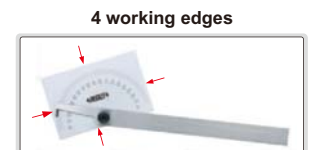
PROTRACTOR

- Made of stainless steel
- Satin chrome plated scale
- With clamping screw



4781-85

Code	Size	Range	Graduation	Accuracy
4781-85	85x158mm	0-180°	1°	±0.3°



PROTRACTOR

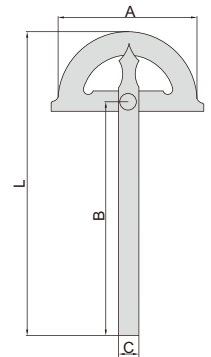


4799-180

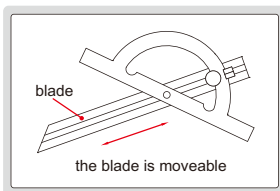
- Made of stainless steel
(4799-1300 is made of carbon steel)
- Satin chrome plated scale
- With clamping screw

(mm)

Code	Size(AxB)	Range	Graduation	Accuracy	L	C
4799-180	80x120mm	0 - 180°	1°	±0.3°	168	11
4799-1120	120x150mm	0 - 180°	1°	±0.3°	220	14
4799-1150	150x200mm	0 - 180°	1°	±0.3°	285	16
4799-1200	200x300mm	0 - 180°	1°	±0.3°	413	20
4799-1300	300x500mm	0 - 180°	1°	±0.3°	675	30



PROTRACTOR



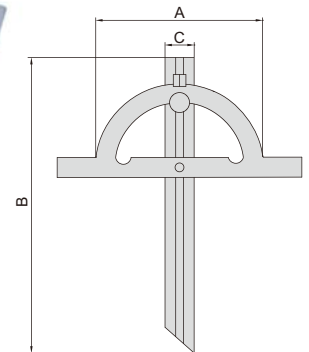
- Made of carbon steel
- Satin chrome plated
- With clamping screw
- The blade is moveable



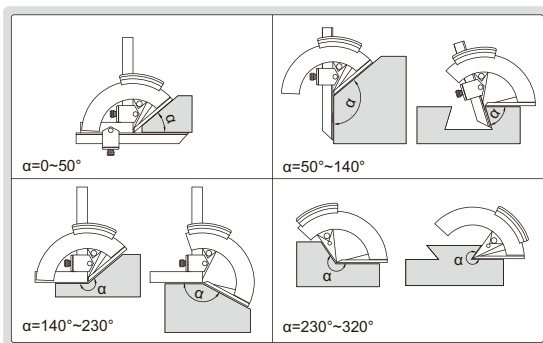
4797-100

(mm)

Code	Size(AxB)	Range	Graduation	Accuracy	C
4797-100	100x150mm	10 - 170°	1°	±0.3°	18
4797-150	150x300mm	10 - 170°	1°	±0.3°	22
4797-200	200x400mm	10 - 170°	1°	±0.3°	24
4797-250	250x500mm	10 - 170°	1°	±0.3°	28
4797-300	300x600mm	10 - 170°	1°	±0.3°	32



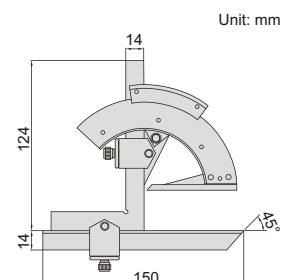
PROTRACTOR



2374-320

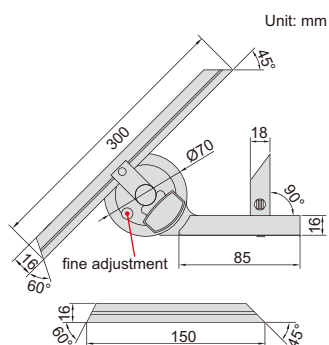
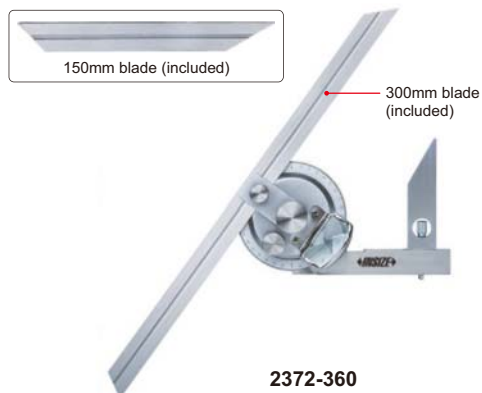
- Made of stainless steel
- Satin chrome plated scale

Code	Range	Graduation	Accuracy
2374-320	0 - 320°	2'	±2'

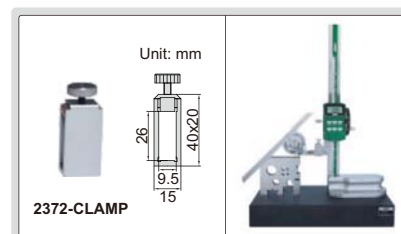


Unit: mm

UNIVERSAL PROTRACTOR



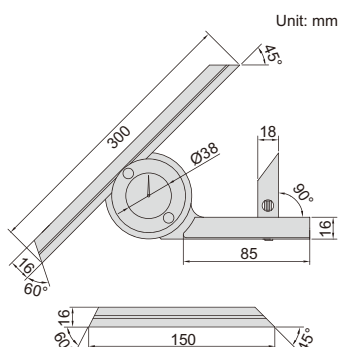
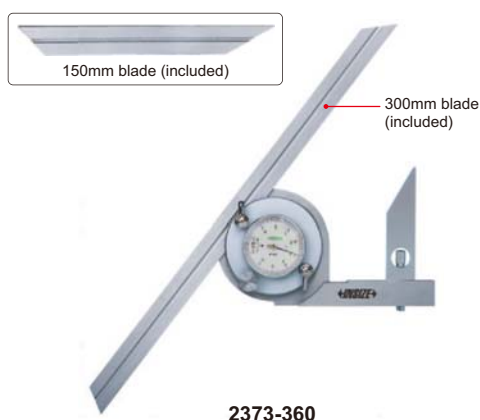
clamp for height gages



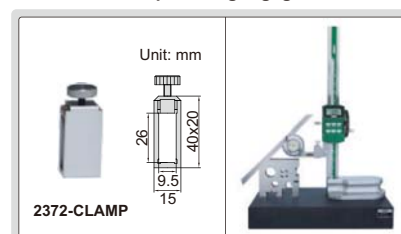
- Parallax-free reading
- Made of stainless steel
- Optional accessory: clamp (code **2372-CLAMP**), suitable for height gages **1156**, **1351** and **1250**

Code	Range	Graduation	Accuracy
2372-360	0-360°	5'	±5'

DIAL PROTRACTOR



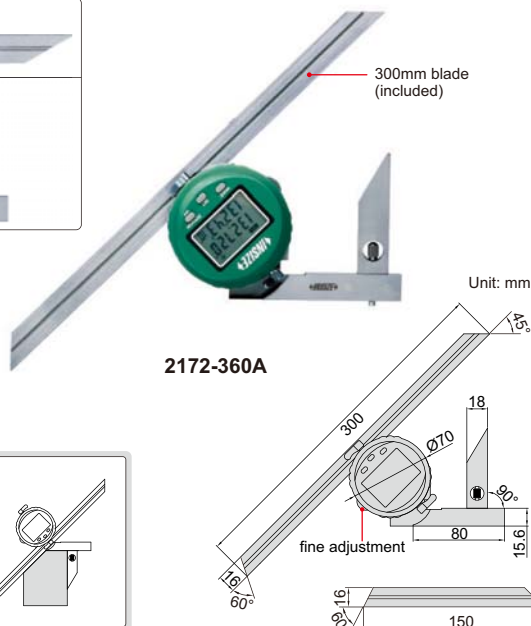
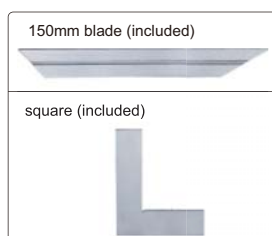
clamp for height gages



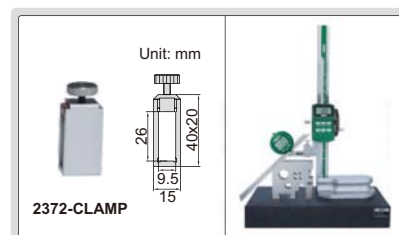
- Made of stainless steel
- Optional accessory: clamp (code **2372-CLAMP**), suitable for height gages **1156**, **1351** and **1250**

Code	Range	Graduation	Accuracy
2373-360	0-360°	5'	±5'

DIGITAL PROTRACTOR



clamp for height gages



- Display in degree (for example 32.655°) and degree/minute/second (for example 32°39'30")
- SET button: preset the reading, change measuring direction
- MODE button: choose 0~90°, 0~180° or 0~360° display
- ZERO/ON/OFF button: zero and power on/off
- Battery CR2032, automatic power off
- Data output
- Supplied with square to set 90°
- Made of stainless steel
- Optional accessory: data output cable (code **7305-SPC1A**), clamp (code **2372-CLAMP**), suitable for height gages **1156**, **1351** and **1250**

Code	Range	Resolution	Accuracy
2172-360A	0-360°	10"/0.005°	±5'

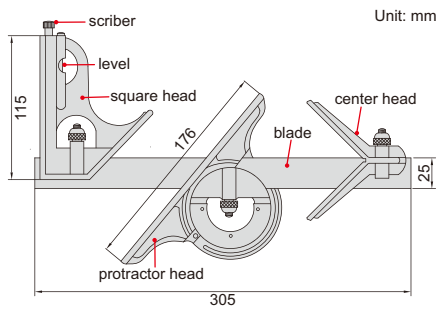
**DATA
OUTPUT**

COMBINATION SQUARE SET

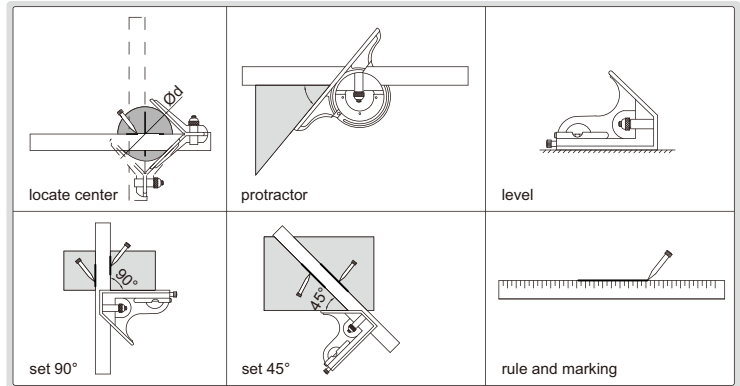
- Center head:
To locate center of cylinder with diameter ($\varnothing d$): 30 - 100mm
Accuracy: $\pm 0.15\text{mm}$
- Protractor head:
To set the blade at desired angle to an edge of a workpiece,
and can be used to measure angles
Range: $0-180^\circ$
Accuracy: $\pm 7\text{min}$.
- Square head:
To set the blade at 90° or 45° to an edge of a workpiece
Accuracy: $\pm 8\text{min}$ for 90° square, $\pm 10\text{min}$ for 45° square
- Blade:
Range: 300mm/12",
Graduation: 0.5mm and $1/32"$ on front face, 1mm and $1/64"$ on back face
- Optional accessory: rigid rule (code 7113)



2278-180

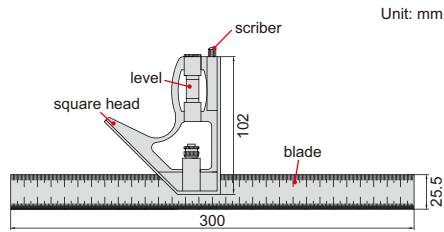
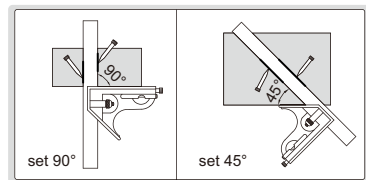


Code
2278-180



COMBINATION SQUARE

- Square head:
To set the blade at 90° or 45°
to an edge of a workpiece
Accuracy: $\pm 0.5^\circ$
- Blade:
Range: 300mm,
Graduation: 0.5mm and 1mm
on front and back sides

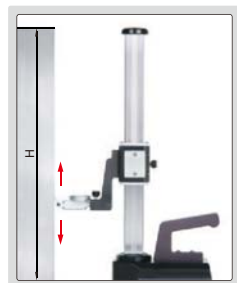


Code
2276-300

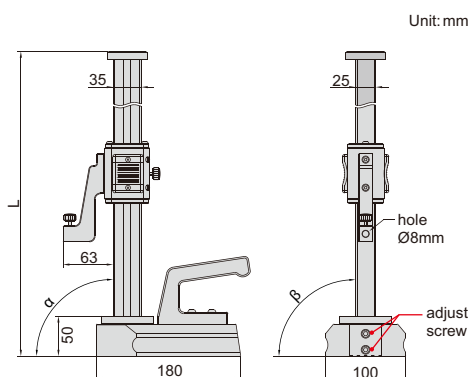


2276-300

PERPENDICULARITY TESTER



- Optional accessory:
dial test indicators (graduation: $1\mu\text{m}$ or $2\mu\text{m}$),
cylinder square (code 4710, for calibration),
granite square (code 4141, for calibration)



4770-300

dial test indicator
is not included

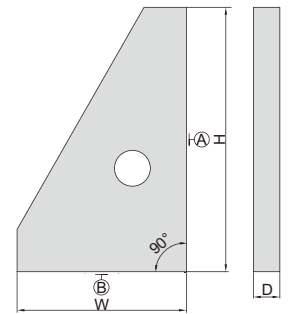
Code	Range (H)	Perpendicularity (α)	Side perpendicularity (β)	L
4770-300	0-300mm	$3\mu\text{m}$	$10\mu\text{m}$	460mm
4770-600	0-600mm	$5\mu\text{m}$	$20\mu\text{m}$	760mm

GRANITE SQUARE

Code	Size (HxW)	Flatness of A	Flatness of B	Squareness of A to B	D
4141-250	250x160mm	1 μ m	1 μ m	2 μ m	25mm
4141-400	400x250mm	1.5 μ m	1 μ m	3 μ m	40mm
4141-630	630x400mm	2 μ m	1.5 μ m	4 μ m	63mm



4141-250

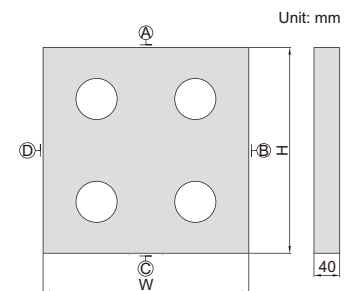


GRANITE SQUARE

Code	Size (HxW)	Flatness of A, B, C and D	Squareness and parallelism between A, B, C and D
4144-315	315x315mm	1.1 μ m	2.6 μ m



4144-315



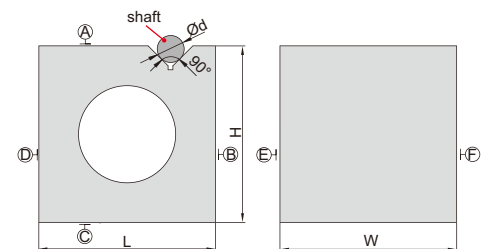
GRANITE SQUARE WITH V GROOVE

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

Code	Size (LxWxH)	Range of shaft (ϕ d)
4142-200	200x200x200mm	9~70mm



4142-200



CYLINDER SQUARE



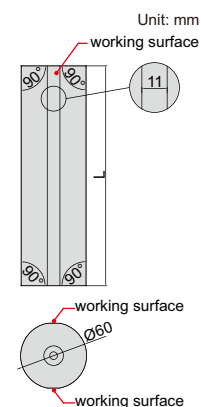
- Made of special alloy steel, hardness HRC58~60
- The handle can be removed

Code	Length (L)	Squareness
4710-200*	200mm	1 μ m
4710-300*	300mm	2 μ m

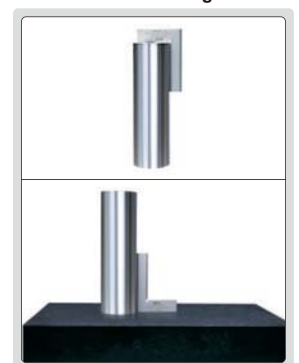
* Supplied with manufacturer inspection certificate



4710-200



inspect 90° internal and external angles

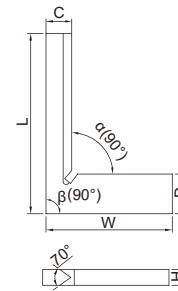


90° TOOL MAKER SQUARE

- DIN875 grade 00
- Beveled edge for inside measurement
- Made of hardened stainless steel

Code	Size (LxW)	Squareness		C	D	H
		Inside (α)	Outside (β)			
4794-025	25x20mm	2.2 μ m	2.3 μ m	4	6.5	3.5
4794-040	40x28mm	2.3 μ m	2.4 μ m	5.5	8.5	3.5

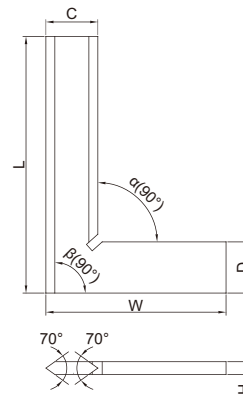
(mm)



4794-040

90° BEVELED EDGE SQUARE

- Satin chrome plating
- Beveled edges for inside and outside measurement
- Made of hardened stainless steel



4790-0100

DIN875 grade 00 (mm)

Code	Size (LxW)	Squareness		C	D	H
		Inside (α)	Outside (β)			
4790-050	50x40mm	2.4 μ m	2.5 μ m	13	13	4
4790-075	75x50mm	2.6 μ m	2.8 μ m	15	15	4
4790-0100	100x70mm	2.8 μ m	3.0 μ m	20	20	5
4790-0150	150x100mm	3.2 μ m	3.5 μ m	30	30	6
4790-0200	200x130mm	3.7 μ m	4.0 μ m	34	34	7
4790-0250	250x165mm	4.2 μ m	4.5 μ m	35	35	7
4790-0300	300x200mm	4.6 μ m	5.0 μ m	40	40	8

DIN875 grade 0 (mm)

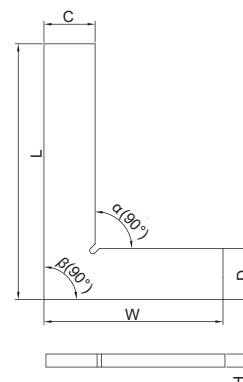
Code	Size (LxW)	Squareness		C	D	H
		Inside (α)	Outside (β)			
4790-500	50x40mm	6 μ m	6 μ m	13	13	4
4790-750	75x50mm	6 μ m	7 μ m	15	15	4
4790-1000	100x70mm	7 μ m	7 μ m	20	20	5
4790-1500	150x100mm	7 μ m	8 μ m	30	30	6
4790-2000	200x130mm	8 μ m	9 μ m	34	34	7
4790-2500	250x165mm	9 μ m	10 μ m	35	35	7
4790-3000	300x200mm	10 μ m	11 μ m	40	40	8

90° FLAT EDGE SQUARE

- DIN875 grade 0
- Made of hardened stainless steel

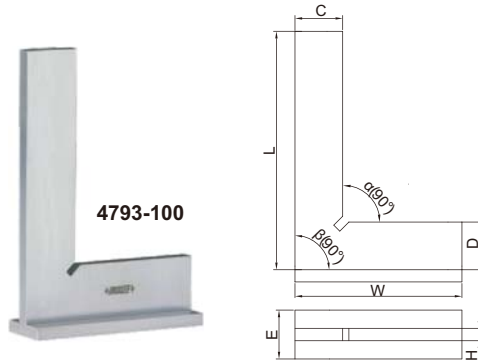
Code	Size (LxW)	Squareness		C	D	H
		Inside (α)	Outside (β)			
4791-50	50x40mm	6 μ m	6 μ m	13	13	4
4791-75	75x50mm	6 μ m	7 μ m	15	15	4
4791-100	100x70mm	7 μ m	7 μ m	20	20	5
4791-150	150x100mm	7 μ m	8 μ m	30	30	6
4791-200	200x130mm	8 μ m	9 μ m	30	30	7
4791-250	250x165mm	9 μ m	10 μ m	35	35	7
4791-300	300x200mm	10 μ m	11 μ m	40	40	8

(mm)



4791-100

90° FLAT EDGE SQUARE WITH WIDE BASE

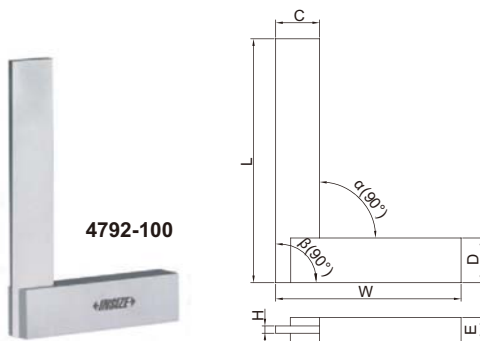


- DIN875 grade 0
- Made of hardened stainless steel

(mm)

Code	Size (LxW)	Squareness		C	D	H	E
		Inside (α)	Outside (β)				
4793-50	50x40mm	6 μ m	6 μ m	13	13	4	13
4793-75	75x50mm	6 μ m	7 μ m	15	15	4	15
4793-100	100x70mm	7 μ m	7 μ m	20	20	5	20
4793-150	150x100mm	7 μ m	8 μ m	30	30	6	30
4793-200	200x130mm	8 μ m	9 μ m	30	30	7	30
4793-250	250x165mm	9 μ m	10 μ m	35	35	7	35
4793-300	300x200mm	10 μ m	11 μ m	40	40	8	40

90° FLAT EDGE SQUARE WITH WIDE BASE

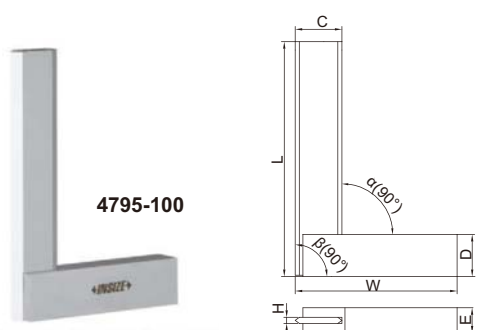


- DIN875 grade 0
- Made of hardened stainless steel

(mm)

Code	Size (LxW)	Squareness		C	D	H	E
		Inside (α)	Outside (β)				
4792-50	50x40mm	6 μ m	6 μ m	12	12	3	10
4792-75	75x50mm	6 μ m	7 μ m	14	14	3	10
4792-100	100x70mm	7 μ m	7 μ m	18	18	3	10
4792-150	150x100mm	8 μ m	8 μ m	22	22	4	12
4792-200	200x130mm	9 μ m	9 μ m	25	25	4	12

90° BEVELED EDGE SQUARE WITH WIDE BASE

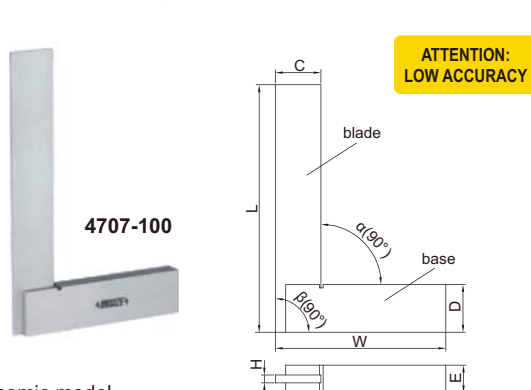


- DIN875 grade 0
- Beveled edges for inside and outside measurement
- Made of hardened stainless steel

(mm)

Code	Size (LxW)	Squareness		C	D	H	E
		Inside (α)	Outside (β)				
4795-50	50x40mm	6 μ m	6 μ m	12	12	3	10
4795-75	75x50mm	6 μ m	7 μ m	14	14	3	10
4795-100	100x70mm	7 μ m	7 μ m	18	18	3	10
4795-150	150x100mm	8 μ m	8 μ m	22	22	4	12
4795-200	200x130mm	9 μ m	9 μ m	25	25	4	12

MACHINIST SQUARE WITH WIDE BASE



- Economic model
- DIN875 grade 2
- Made of carbon steel, no anti-rust treatment, not hardend

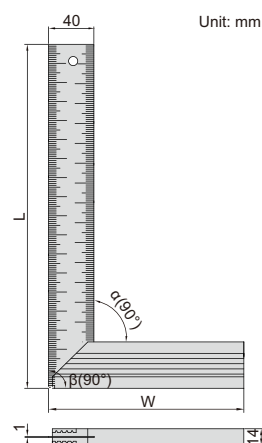
(mm)

Code	Size (LxW)	Squareness		C	D	H	E
		Inside (α)	Outside (β)				
4707-50	50x40mm	24 μ m	25 μ m	16	12	3	9
4707-75	75x50mm	26 μ m	28 μ m	16	16	3	9
4707-100	100x70mm	28 μ m	30 μ m	19	19	3	12
4707-150	150x100mm	33 μ m	35 μ m	25	25	3	16
4707-200	200x130mm	37 μ m	40 μ m	30	32	4	16
4707-250	250x165mm	42 μ m	45 μ m	30	32	4	19
4707-300	300x200mm	47 μ m	50 μ m	32	32	4	19
4707-400	400x250mm	56 μ m	60 μ m	38	38	5	22
4707-500	500x300mm	65 μ m	70 μ m	45	50	6	25
4707-600	600x350mm	75 μ m	80 μ m	50	50	6	30
4707-750	750x400mm	90 μ m	95 μ m	55	55	6	50
4707-900	900x500mm	103 μ m	110 μ m	65	75	9	50
4707-1000	1000x550mm	113 μ m	120 μ m	65	75	9	50

TRY SQUARE

- Graduation: 1mm
- Stainless steel blade, aluminum base

Code	Size (LxW)	Squareness	
		Inside (α)	Outside (β)
2275-300	300x170mm	0.5mm	0.5mm



Unit: mm

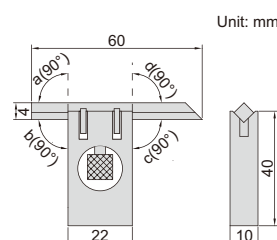
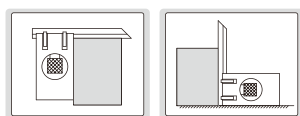


2275-300

ADJUSTABLE SQUARE

- The straight edge can move and can be locked by the clamping screw
- Made of hardened stainless steel

Code	Squareness (a, b, c, d)
4701-1	7 μ m



Unit: mm

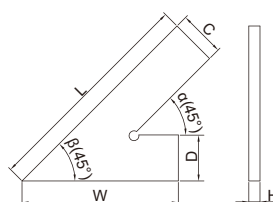


4701-1

45° SQUARE

- Made of hardened stainless steel

Code	Size (LxW)	Accuracy		(mm)		
		Inside (α)	Outside (β)	C	D	H
4745-1100	100x70mm	27 μ m	30 μ m	20	20	5
4745-1120	120x80mm	29 μ m	32 μ m	20	20	5
4745-1150	150x100mm	32 μ m	35 μ m	20	20	5
4745-1200	200x130mm	36 μ m	40 μ m	25	25	5

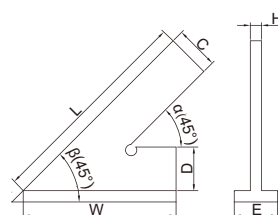


4745-1100

45° SQUARE WITH WIDE BASE

- Made of hardened stainless steel

Code	Size (LxW)	Accuracy		(mm)			
		Inside (α)	Outside (β)	C	D	H	E
4747-100	100x70mm	27 μ m	31 μ m	20	20	5	20
4747-120	120x80mm	29 μ m	33 μ m	20	20	5	20
4747-150	150x100mm	32 μ m	36 μ m	20	20	5	20
4747-200	200x130mm	36 μ m	41 μ m	25	25	5	25

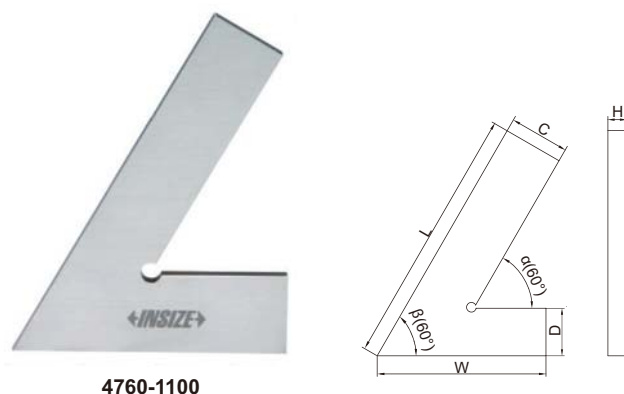


4747-100

60° SQUARE

- Made of hardened stainless steel

Code	Size (LxW)	Accuracy		C	D	H
		Inside (α)	Outside (β)			
4760-1100	100x70mm	28 μ m	30 μ m	20	20	5
4760-1120	120x80mm	30 μ m	32 μ m	20	20	5
4760-1150	150x100mm	32 μ m	35 μ m	20	20	5
4760-1200	200x130mm	37 μ m	40 μ m	25	25	5

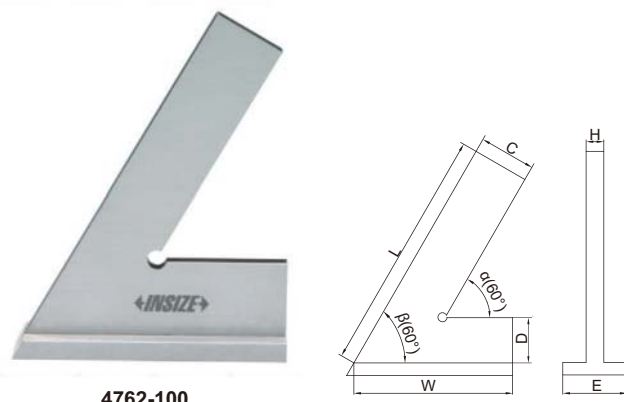


4760-1100

60° SQUARE WITH WIDE BASE

- Made of hardened stainless steel

Code	Size (LxW)	Accuracy		C	D	H	E
		Inside (α)	Outside (β)				
4762-100	100x70mm	28 μ m	31 μ m	20	20	5	20
4762-120	120x80mm	30 μ m	33 μ m	20	20	5	20
4762-150	150x100mm	33 μ m	36 μ m	20	20	5	20
4762-200	200x130mm	37 μ m	41 μ m	25	25	5	25

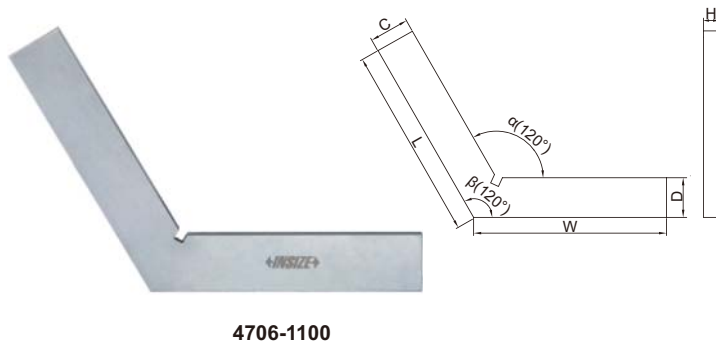


4762-100

120° SQUARE

- Made of hardened stainless steel

Code	Size (LxW)	Accuracy		C	D	H
		Inside (α)	Outside (β)			
4706-150	50x50mm	24 μ m	25 μ m	15	15	5
4706-175	75x75mm	26 μ m	28 μ m	20	20	5
4706-1100	100x100mm	29 μ m	30 μ m	20	20	5
4706-1150	150x150mm	34 μ m	35 μ m	25	25	5
4706-1200	200x200mm	38 μ m	40 μ m	30	30	7

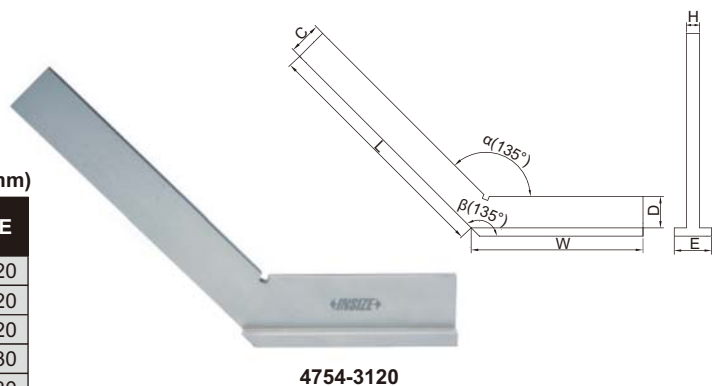


4706-1100

135° SQUARE WITH WIDE BASE

- Made of hardened stainless steel

Code	Size (LxW)	Accuracy		C	D	H	E
		Inside (α)	Outside (β)				
4754-3100	100x70mm	29 μ m	31 μ m	20	20	5	20
4754-3120	120x80mm	31 μ m	33 μ m	20	20	5	20
4754-3150	150x100mm	34 μ m	36 μ m	20	20	5	20
4754-3200	200x130mm	39 μ m	41 μ m	30	30	7	30
4754-3250	250x165mm	44 μ m	46 μ m	30	30	7	30
4754-3300	300x175mm	49 μ m	51 μ m	35	35	7	35



4754-3120

STRAIGHT EDGE

Code	Size (L)	Straightness	W	H
4700-50	50mm	2.2μm	5	20
4700-75	75mm	2.3μm	5	25
4700-100	100mm	2.4μm	5	25
4700-125	125mm	2.5μm	5	25
4700-150	150mm	2.6μm	6	30
4700-200	200mm	2.8μm	6	30
4700-250	250mm	3.0μm	8	40
4700-300	300mm	3.2μm	8	40
4700-400	400mm	3.6μm	10	50
4700-500	500mm	4.0μm	10	50



4700-100

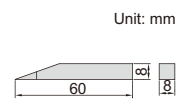
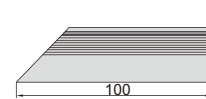
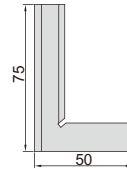
- DIN874
- Beveled edge
- Made of hardened stainless steel
- Satin chrome plating

SQUARE SET

- Includes:
 - 90° tool maker square 25x20mm DIN875 grade 00 (code **4794-025**)
 - 90° tool maker square 40x28mm DIN875 grade 00 (code **4794-040**)
 - 90° beveled edge square 75x50mm DIN875 grade 00 (code **4790-075**)
 - straight edge 100mm DIN874 (code **4700-100**)
 - scriber
- Made of hardened stainless steel



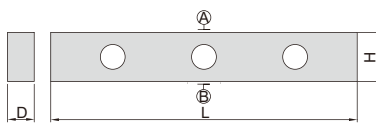
4702-1



Unit: mm

Code
4702-1

GRANITE STRAIGHT EDGE

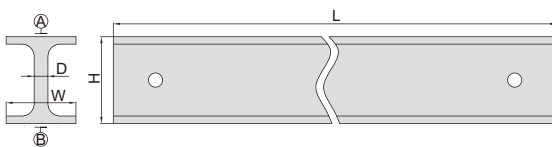


Code	Length (L)	Flatness of A and B	Parallelism between A and B	D (mm)	H (mm)
4147-500A	500mm	2.1μm	3.2μm	50	80
4147-1000A	1000mm	3μm	4.5μm	60	120



4147-500A

MAGNALIUM STRAIGHT EDGE



- Made of magnalium, light weight, non-deform, no rusty



4180-500

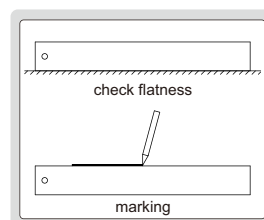
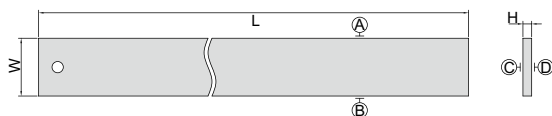
Code	Length (L)	Flatness of A and B	Parallelism between A and B	H	W	D
4180-500	500mm	3μm	4μm	60mm	30mm	5mm
4180-1000	1000mm	5μm	8μm	60mm	30mm	5mm
4180-1500	1500mm	15μm	22μm	100mm	40mm	5mm
4180-2000	2000mm	18μm	27μm	100mm	40mm	8mm

PRECISION STRAIGHT EDGE



7117-300

- Check flatness, straightness and for marking
- Made of tool steel
- Hardness HRC58



(mm)

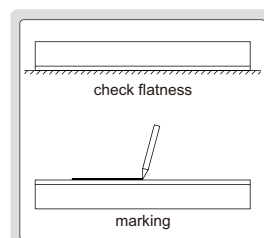
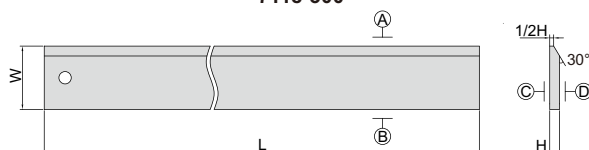
Code	Range(L)	Straightness and parallelism of A and B	Straightness and parallelism of C and D	W	H
7117-300	305	0.005	0.05	41	6.3
7117-600	610	0.006	0.06	51	7.9
7117-900	914	0.007	0.06	64	9.5

PRECISION STRAIGHT EDGE WITH BEVELED EDGE



7118-300

- Check flatness, straightness and for marking
- Made of tool steel
- Hardness HRC58



(mm)

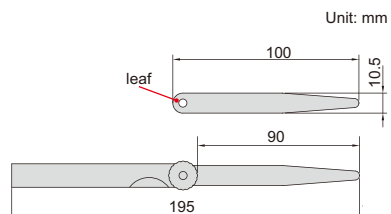
Code	Range (L)	Straightness and parallelism of A and B	Straightness and parallelism of C and D	W	H
7118-300	305	0.005	0.05	41	6.5
7118-600	610	0.006	0.06	51	8
7118-900	914	0.007	0.06	64	10

FEELER GAGE

- Made of hardened alloy steel
- Meet DIN2275
- Accuracy: $\pm(3+T/80) \mu\text{m}$, 'T' is the thickness of leaves in μm



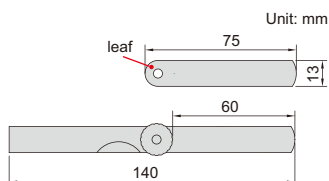
4602-20



Unit: mm

Code	Range (mm)	Thickness of leaves included (mm)	Quantity of leaves
4602-13A	0.03-0.50	0.03, 0.04, 0.05, 0.06, 0.07, 0.08, 0.09, 0.10, 0.15, 0.20, 0.30, 0.40, 0.50	13
4602-13	0.05-1.00	0.05, 0.10, 0.15, 0.20, 0.25, 0.30, 0.40, 0.50, 0.60, 0.70, 0.80, 0.90, 1.00	13
4602-17	0.02-1.00	0.02, 0.03, 0.04, 0.05, 0.06, 0.07, 0.08, 0.09, 0.10, 0.15, 0.20, 0.25, 0.30, 0.40, 0.50, 0.75, 1.00	17
4602-20	0.05-1.00	0.05, 0.10, 0.15, 0.20, 0.25, 0.30, 0.35, 0.40, 0.45, 0.50, 0.55, 0.60, 0.65, 0.70, 0.75, 0.80, 0.85, 0.90, 0.95, 1.00	20
4602-28	0.05-1.00	0.05, 0.06, 0.07, 0.08, 0.09, 0.10, 0.11, 0.12, 0.13, 0.14, 0.15, 0.20, 0.25, 0.30, 0.35, 0.40, 0.45, 0.50, 0.55, 0.60, 0.65, 0.70, 0.75, 0.80, 0.85, 0.90, 0.95, 1.00	28
4602-32	0.03-1.00	0.03, 0.04, 0.05, 0.06, 0.07, 0.08, 0.09, 0.10, 0.13, 0.15, 0.18, 0.20, 0.23, 0.25, 0.28, 0.30, 0.33, 0.35, 0.38, 0.40, 0.45, 0.50, 0.55, 0.60, 0.63, 0.65, 0.70, 0.75, 0.80, 0.85, 0.90, 1.00	32

FEELER GAGE



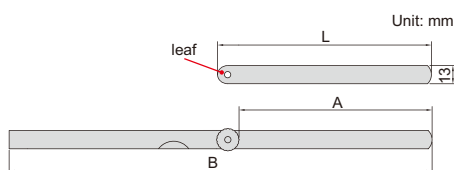
- Made of hardened alloy steel
- Meet DIN2275
- Accuracy: $\pm(3+T/80)$ μm , 'T' is the thickness of leaves in μm



4601-25

Code	Range	Thickness of leaves included (mm)	Quantity of leaves
4601-25	0.04 - 1.00mm	0.04, 0.05, 0.06, 0.07, 0.08, 0.09, 0.10, 0.15, 0.20, 0.25, 0.30, 0.35, 0.40, 0.45, 0.50, 0.55, 0.60, 0.65, 0.70, 0.75, 0.80, 0.85, 0.90, 0.95, 1.00	25

LONG FEELER GAGE



- Made of hardened alloy steel
- Meet DIN2275
- Accuracy: $\pm(3+T/80)$ μm , 'T' is the thickness of leaves in μm

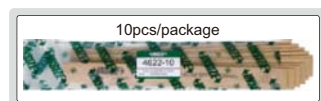


4605-20

Code	Range	Thickness of leaves included (mm)	Quantity of leaves	L	A	B
4605-13	0.05 - 1.00mm	0.05, 0.10, 0.15, 0.20, 0.25, 0.30, 0.40, 0.50, 0.60, 0.70, 0.80, 0.90, 1.00	13	150	135	295
4605-131	0.05 - 1.00mm		13	200	185	395
4605-132	0.05 - 1.00mm		13	300	285	590
4605-20	0.05 - 1.00mm	0.05, 0.10, 0.15, 0.20, 0.25, 0.30, 0.35, 0.40, 0.45, 0.50, 0.55, 0.60, 0.65, 0.70, 0.75, 0.80, 0.85, 0.90, 0.95, 1.00	20	150	135	295
4605-201	0.05 - 1.00mm		20	200	185	395
4605-202	0.05 - 1.00mm		20	300	285	590

(mm)

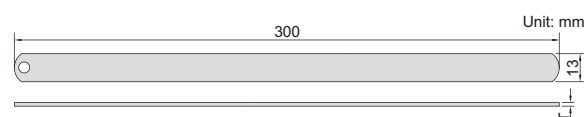
FEELER GAGE STOCK



- Used as shims to accurately set spacing
- Made of hardened alloy steel
- Length 300mm
- Width 13mm
- 10pcs/package



4622-10



Code	Thickness (T)	Accuracy
4622-02	0.02mm	$\pm 3\mu\text{m}$
4622-03	0.03mm	$\pm 3\mu\text{m}$
4622-04	0.04mm	$\pm 3\mu\text{m}$
4622-05	0.05mm	$\pm 3\mu\text{m}$
4622-06	0.06mm	$\pm 3\mu\text{m}$
4622-07	0.07mm	$\pm 4\mu\text{m}$
4622-08	0.08mm	$\pm 4\mu\text{m}$
4622-09	0.09mm	$\pm 4\mu\text{m}$
4622-10	0.10mm	$\pm 4\mu\text{m}$
4622-12	0.12mm	$\pm 5\mu\text{m}$

Code	Thickness (T)	Accuracy
4622-15	0.15mm	$\pm 5\mu\text{m}$
4622-18	0.18mm	$\pm 6\mu\text{m}$
4622-20	0.20mm	$\pm 6\mu\text{m}$
4622-25	0.25mm	$\pm 6\mu\text{m}$
4622-30	0.30mm	$\pm 7\mu\text{m}$
4622-35	0.35mm	$\pm 7\mu\text{m}$
4622-40	0.40mm	$\pm 8\mu\text{m}$
4622-45	0.45mm	$\pm 8\mu\text{m}$
4622-50	0.50mm	$\pm 9\mu\text{m}$
4622-55	0.55mm	$\pm 9\mu\text{m}$

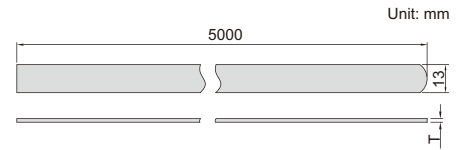
Code	Thickness (T)	Accuracy
4622-60	0.60mm	$\pm 9\mu\text{m}$
4622-65	0.65mm	$\pm 9\mu\text{m}$
4622-70	0.70mm	$\pm 12\mu\text{m}$
4622-75	0.75mm	$\pm 12\mu\text{m}$
4622-80	0.80mm	$\pm 13\mu\text{m}$
4622-85	0.85mm	$\pm 13\mu\text{m}$
4622-90	0.90mm	$\pm 14\mu\text{m}$
4622-95	0.95mm	$\pm 14\mu\text{m}$
4622-100	1.00mm	$\pm 16\mu\text{m}$

FEELER GAGE TAPE



4621-30

- Used as shims to accurately set spacing
- Made of hardened alloy steel
- Length 5m
- Width 13mm

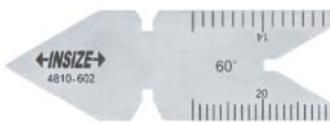


Code	Thickness (T)	Accuracy
4621-02	0.02mm	±4μm
4621-03	0.03mm	±4μm
4621-04	0.04mm	±4μm
4621-05	0.05mm	±4μm
4621-06	0.06mm	±4μm
4621-07	0.07mm	±5μm
4621-08	0.08mm	±5μm
4621-09	0.09mm	±5μm
4621-10	0.10mm	±5μm
4621-12	0.12mm	±5μm

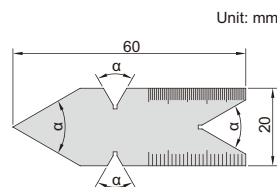
Code	Thickness (T)	Accuracy
4621-15	0.15mm	±6μm
4621-18	0.18mm	±7μm
4621-20	0.20mm	±8μm
4621-25	0.25mm	±9μm
4621-30	0.30mm	±9μm
4621-35	0.35mm	±11μm
4621-40	0.40mm	±12μm
4621-45	0.45mm	±12μm
4621-50	0.50mm	±14μm
4621-55	0.55mm	±14μm

Code	Thickness (T)	Accuracy
4621-60	0.60mm	±14μm
4621-65	0.65mm	±14μm
4621-70	0.70mm	±17μm
4621-75	0.75mm	±17μm
4621-80	0.80mm	±19μm
4621-85	0.85mm	±19μm
4621-90	0.90mm	±22μm
4621-95	0.95mm	±22μm
4621-100	1.00mm	±24μm

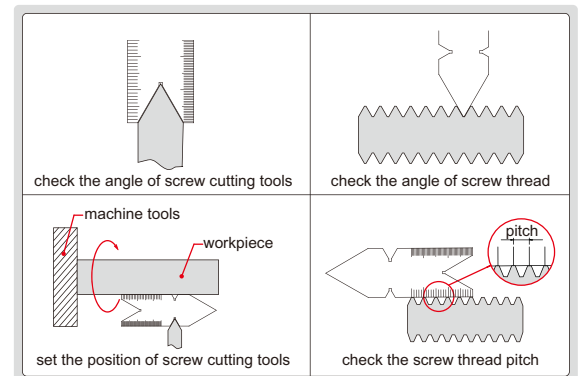
CENTER GAGE



4810-602



- To check and set screw cutting tools, and check the angle and pitch of screw thread
- Angle accuracy: ±30min.



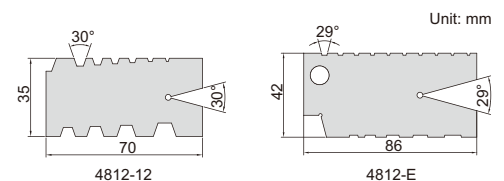
Code	Thread type	Angle (α)	Graduation
4810-601	METRIC 60°	60°	0.5mm and 1mm
4810-602	UNIFIED 60°	60°	14ths and 20ths on front side, 24ths and 32ths on back side
4810-55	WHITWORTH 55°	55°	14ths and 20ths on front side, 24ths and 32ths on back side

THREAD GAGE

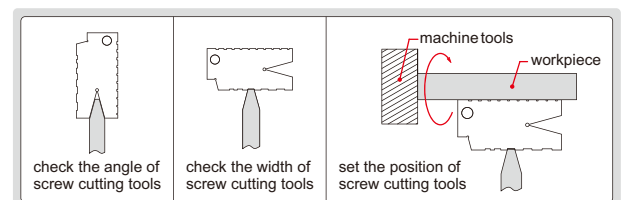


4812-E

- To check and set screw cutting tools
- Angle accuracy: ±10min.

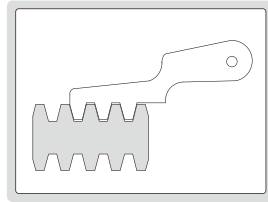


Code	Range	Thread type	Pitch
4812-12	2-12mm	Tr30°	2, 3, 4, 5, 6, 7, 8, 9, 10, 12mm
4812-E	1-10TPI	ACME 29°	1, 1-1/3, 1-1/2, 1-3/4, 2, 2-1/2, 3, 4, 5, 6, 7, 8, 9, 10TPI



PITCH GAGE

- Check the pitch of screw thread
- Accuracy: $\pm 0.07\text{mm}$

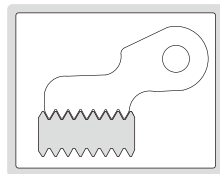


4824-12

Code	Range	Thread type	Pitch of leaves included	Quantity of leaves
4824-12	2-20mm	Tr30°	2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 16, 20mm	12
4824-16	1-12TPI	ACME 29°	1, 1-1/3, 1-1/2, 1-3/4, 2, 2-1/2, 3, 3-1/2, 4, 5, 6, 7, 8, 9, 10, 12TPI	16

PITCH GAGE

- Check the pitch of screw thread
- Accuracy: $\pm 0.07\text{mm}$



4820-122

Metric 60° screw

Code	Range	Pitch of leaves included (mm)	Quantity of leaves
4820-122	0.4-7.0mm	0.4, 0.5, 0.6, 0.7, 0.75, 0.8, 0.9, 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7	22
4820-124	0.25-7.0mm	0.25, 0.3, 0.35, 0.4, 0.5, 0.7, 0.75, 0.8, 0.9, 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7	24
4820-1241	0.25-6.0mm	0.25, 0.3, 0.35, 0.4, 0.45, 0.5, 0.6, 0.7, 0.75, 0.8, 0.9, 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6	24

Unified 60° screw

Code	Range	Pitch of leaves included	Quantity of leaves
4820-230	4-42TPI	4, 4-1/2, 5, 5-1/2, 6, 7, 8, 9, 10, 11, 11-1/2, 12, 13, 14, 15, 16, 18, 20, 22, 24, 26, 27, 28, 30, 32, 34, 36, 38, 40, 42TPI	30

Whitworth 55° screw

Code	Range	Pitch of leaves included	Quantity of leaves
4820-330	4-42TPI	4, 4-1/2, 5, 5-1/2, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 18, 19, 20, 22, 24, 26, 27, 28, 30, 32, 34, 36, 38, 40, 42TPI	30
4820-328	4-62TPI	4, 4-1/2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16, 18, 19, 20, 22, 24, 25, 26, 28, 30, 32, 36, 40, 48, 60, 62TPI	28

Metric 60° and Whitworth 55° screw

Code	Range	Pitch of leaves included	Quantity of leaves
4820-452	0.25-6.0mm	0.25, 0.3, 0.35, 0.4, 0.45, 0.5, 0.6, 0.7, 0.75, 0.8, 0.9, 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6mm	52
	4-62TPI	4, 4-1/2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16, 18, 19, 20, 22, 24, 25, 26, 28, 30, 32, 36, 40, 48, 60, 62TPI	
4820-450	0.4-7.0mm	0.4, 0.5, 0.6, 0.7, 0.75, 0.8, 0.9, 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7mm	50
	4-62TPI	4, 4-1/2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16, 18, 19, 20, 22, 24, 25, 26, 28, 30, 32, 36, 40, 48, 60, 62TPI	

Metric 60° and Unified 60° screw

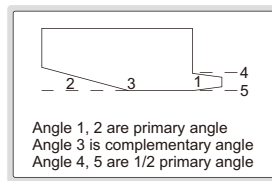
Code	Range	Pitch of leaves included	Quantity of leaves
4820-552	0.4-7.0mm	0.4, 0.5, 0.6, 0.7, 0.75, 0.8, 0.9, 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7mm	52
	4-42TPI	4, 4-1/2, 5, 5-1/2, 6, 7, 8, 9, 10, 11, 11-1/2, 12, 13, 14, 15, 16, 18, 20, 22, 24, 26, 27, 28, 30, 32, 34, 36, 38, 40, 42TPI	

ANGLE GAGE SET

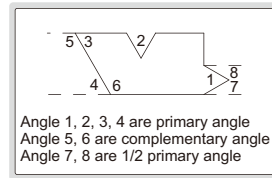


4807

- Each blade checks primary, 1/2 primary and complementary angles



type A



type B

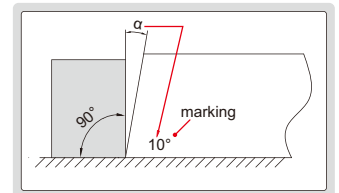
Primary angle	½ primary angle	Complementary angle	Type
5°	2°30'	175°	A
10°	5°	170°	A
15°	7°30'	165°	A
20°	10°	160°	B
25°	12°30'	155°	B
30°	15°	150°	B
35°	17°30'	145°	B
40°	20°	140°	B
45°	22°30'	135°	B
50°	25°	130°	B
55°	27°30'	125°	B
60°	30°	120°	B
65°	32°30'	115°	B
70°	35°	110°	B
75°	37°30'	105°	B
80°	40°	100°	B
85°	42°30'	95°	B
90°	45°	90°	B

Code	Quantity of leaves	Accuracy
4807	18	±10'

ANGLE GAGE



4806-20



Code	Range	Angle of leaves included	Quantity of leaves	Accuracy
4806-20	1°-45°	1°, 2°, 3°, 4°, 5°, 6°, 7°, 8°, 9°, 10°, 12°, 14°, 16°, 18°, 20°, 25°, 30°, 35°, 40°, 45°	20	±30'

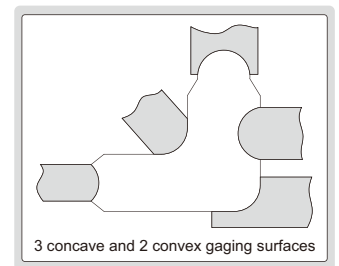
RADIUS GAGE SET



4804-26



use of handle

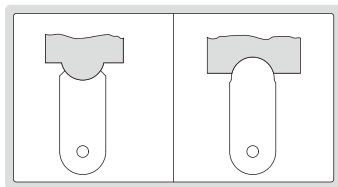


3 concave and 2 convex gaging surfaces

- Each piece has 3 concave and 2 convex gauging surfaces
- Supplied with handle

Code	Range	Radius of leaves included (mm)	Quantity of leaves	Accuracy
4804-26	0.5-13mm	0.5, 1, 1.5, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7, 7.5, 8, 8.5, 9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13	26	±0.05mm

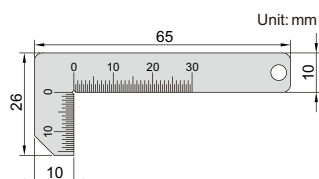
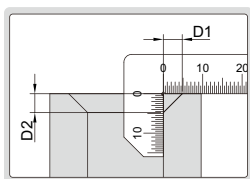
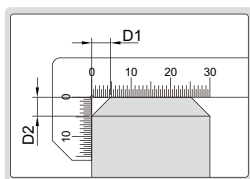
RADIUS GAGE



4801-17

Code	Range	Radius of leaves included (mm)	Quantity of leaves (internal + external)	Accuracy
4801-17	1 - 7mm	1, 1.25, 1.5, 1.75, 2, 2.25, 2.5, 2.75, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7	17+17	±0.03mm
4801-16	7.5 - 15mm	7.5, 8, 8.5, 9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13, 13.5, 14, 14.5, 15	16+16	±0.035mm
4801-15	15.5 - 25mm	15.5, 16, 16.5, 17, 17.5, 18, 18.5, 19, 19.5, 20, 21, 22, 23, 24, 25	15+15	±0.042mm

CHAMFER GAGE



4844-1

Code	Graduation	Accuracy
4844-1	0.5mm	±0.25mm

- To measure internal and external chamfers
- Made of stainless steel

DIGITAL CHAMFER GAGE

DATA OUTPUT

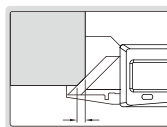
- Measure 45° chamfer dimension
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)

Code	Range	Accuracy
1180-6	0-6mm/0-0.24"	±0.06mm

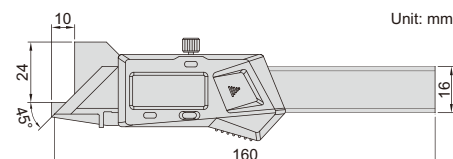
preset buttons



measure 45° chamfer dimension



1180-6

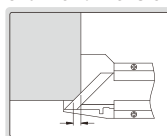


CHAMFER GAGE

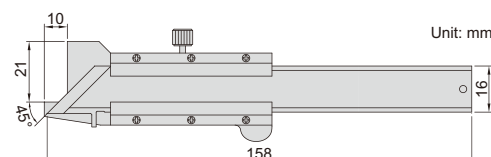
- Measure 45° chamfer dimension
- Graduation 0.02mm
- Made of stainless steel
- Satin chrome plated reading surface

Code	Range	Accuracy
1267-6	0-6mm	±0.06mm

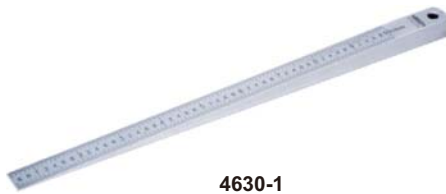
measure 45° chamfer dimension



1267-6

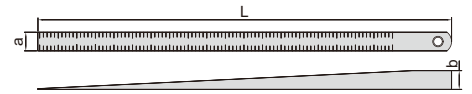
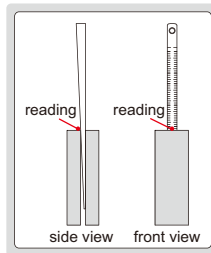


TAPER GAGE



4630-1

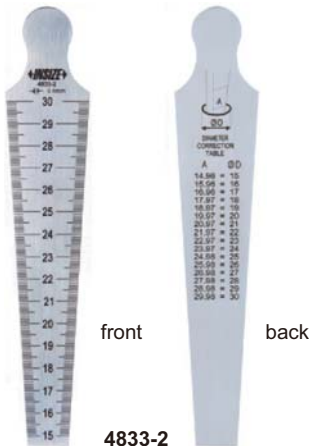
- For quick measurement of gap width
- Stain chrome plated reading surface
- Made of stainless steel



(mm)

Code	Range	Graduation	Accuracy	L	a	b
4630-3	0.4 - 6mm	0.05mm	±0.04mm	164	12.5	6.5
4630-1	0.5 - 10mm	0.05mm	±0.07mm	220	10	10.5
4630-2	0.5 - 15mm	0.1mm	±0.08mm	184	12.5	16.5

TAPER GAGE



front

back

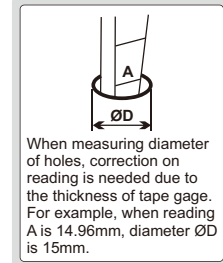
4833-2



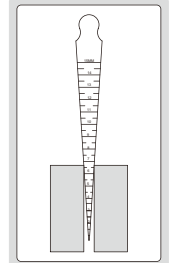
- Measure opening, slot width, hole diameter, etc.
- Diameter correction table on the back (only for 4833-1, 4833-2)
- Made of stainless steel

measure diameter of hole

measure slot width



When measuring diameter of holes, correction on reading is needed due to the thickness of tape gage. For example, when reading A is 14.96mm, diameter ØD is 15mm.



(mm)

Code	Range	Graduation	Accuracy	L	W
4833-1	0.8-15mm	0.1mm	±0.1mm	146	17
4833-2	15-30mm	0.1mm	±0.1mm	159	30.4
4833-3	30-45mm	0.1mm	±0.1mm	166	45.4
4833-4	45-60mm	0.1mm	±0.1mm	170	60.5

TAPER GAGE SET



front

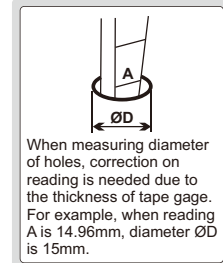
4837-1

back

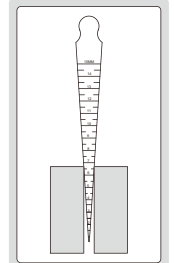


measure diameter of hole

measure slot width



When measuring diameter of holes, correction on reading is needed due to the thickness of tape gage. For example, when reading A is 14.96mm, diameter ØD is 15mm.



- Include 4pcs (1-8mm, 8-15mm, 15-22mm, 22-29mm)
- Measure opening, slot width, hole diameter, etc.
- Diameter correction table on the back
- Made of stainless steel

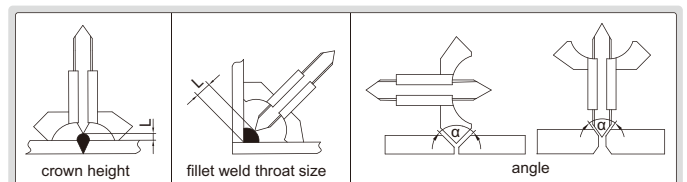
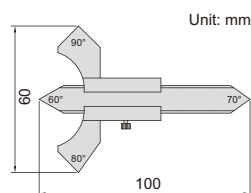
Code	Range	Graduation	Accuracy
4837-1	1 - 29mm	0.05mm	±0.05mm

WELDING GAGE



4830

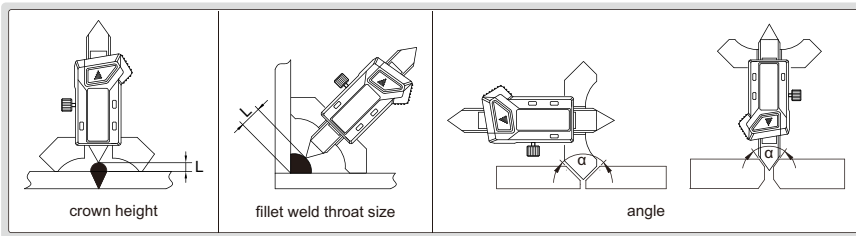
- Made of stainless steel
- Stain chrome plated reading surface



Code	Measurement	Range	Graduation	Accuracy
4830	crown height	0-8mm	0.1mm	±0.1mm
	fillet weld throat size	0-20mm	0.1mm	±0.3mm
	angle	60°, 70°, 80°, 90°	—	±1°

ATTENTION:
NO DATA OUTPUT

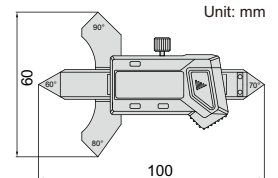
DIGITAL WELDING GAGE



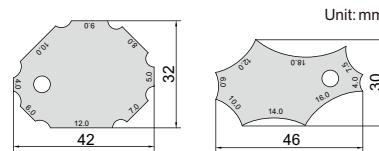
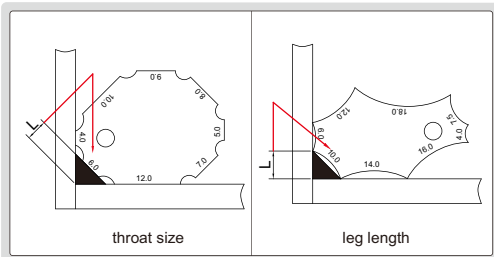
4831-20A

- Buttons: zero, mm/inch, on/off
- Battery LR44
- Made of stainless steel

Code	Measurement	Range	Resolution	Accuracy
4831-20A	crown height	0 - 7mm	0.01mm/0.0005"	±0.03mm
	fillet weld throat size	0 - 20mm	0.01mm/0.0005"	±0.1mm
	angle	60°, 70°, 80°, 90°	—	±1°



FILLET WELDING GAGE

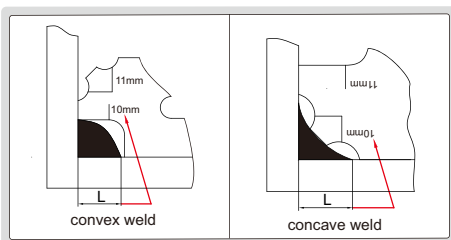


4832-1

Code	Throat size (mm)	Leg length (mm)	Accuracy
4832-1	4, 5, 6, 7, 8, 9, 10, 12	4, 6, 7.5, 10, 12, 14, 16, 18	±0.5mm

- Made of stainless steel
- Sizes marked on both faces

FILLET WELDING GAGE



- Measure concave and convex weld sizes
- 7 blades are included
- Made of stainless steel

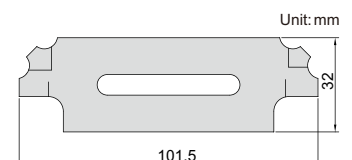


4836-1

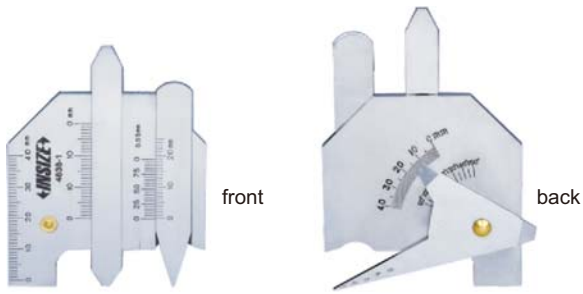


4836-2

Code	Size	Accuracy
4836-1	3mm, 4mm, 5mm, 6mm, 8mm, 9mm, 10mm, 11mm, 12mm, 14mm, 16mm, 19mm, 22mm, 25mm	±0.5mm
4836-2	1/8" (3.2mm), 3/16" (4.8mm), 1/4" (6.4mm), 5/16" (7.9mm), 3/8" (9.5mm), 7/16" (11.1mm), 1/2" (12.7mm), 5/8" (15.9mm), 3/4" (19.1mm), 7/8" (22.2mm), 1" (25.4mm)	±0.02" (0.5mm)

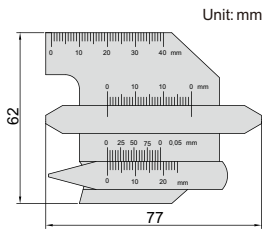


WELDING GAGE

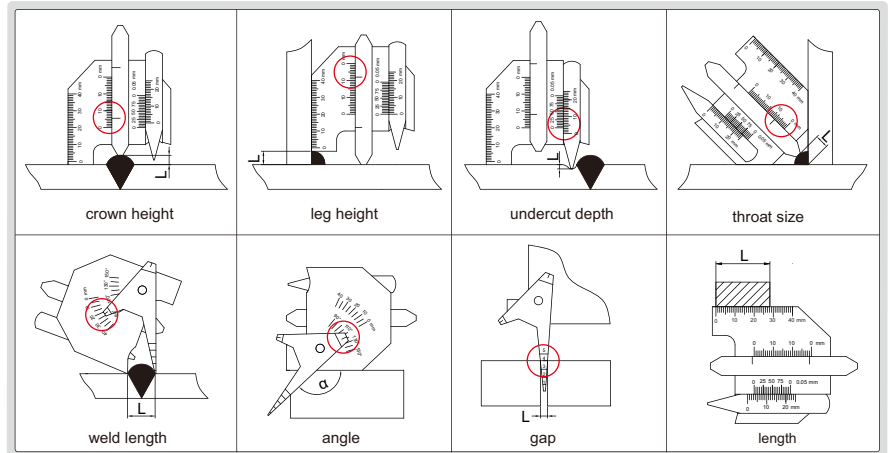


4838-1

Code	Measurement	Range	Graduation	Accuracy
4838-1	crown height	0 - 10mm	1mm	±0.5mm
	leg height	0 - 14mm	1mm	±0.5mm
	undercut depth	0 - 5mm	0.05mm	±0.05mm
	throat size	0 - 13mm	1mm	±0.5mm
	weld length	0 - 40mm	1mm	±1mm
	angle	90° - 150°	5°	±1°
	gap	0.5 - 5mm	1mm	±0.5mm
	length	0 - 40mm	1mm	±0.5mm



- Made of stainless steel

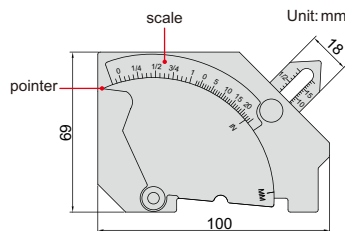


WELDING GAGE

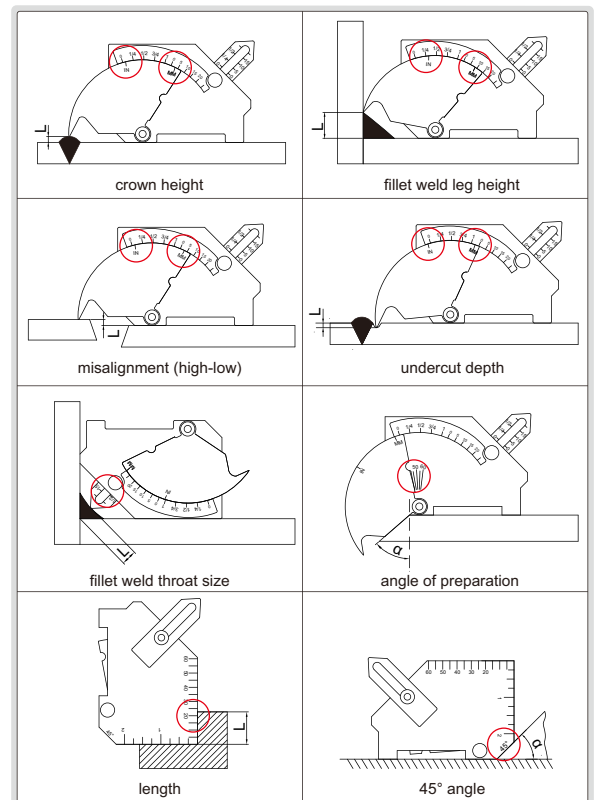


4835-1

- Adjustable scale to compensate pointer wear
- Made of stainless steel

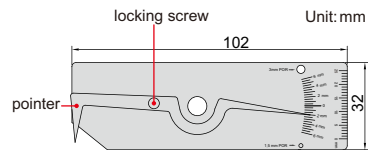
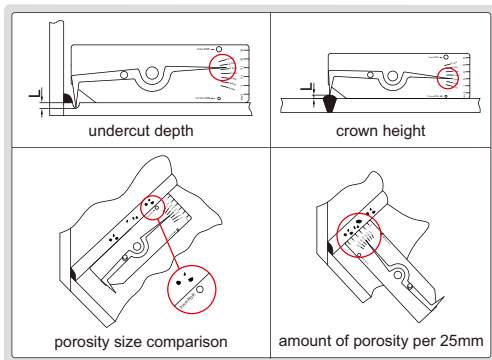


Code	Measurement	Range	Graduation	Accuracy
4835-1	crown height	0 - 25mm (0 - 1")	1mm (1/16")	±0.5mm
	fillet weld leg height	0 - 25mm (0 - 1")	1mm (1/16")	±0.5mm
	misalignment (high-low)	0 - 25mm (0 - 1")	1mm (1/16")	±0.5mm
	undercut depth	0 - 2mm (0 - 1/8")	1mm (1/16")	±0.5mm
	fillet weld throat size	0 - 20mm (0 - 3/4")	1mm (1/16")	±0.5mm
	angle of preparation	0 - 60°	5°	±1°
	length	0 - 60mm (0 - 2")	1mm (1/16")	±0.5mm
	45° angle	—	—	±1°



WELDING GAGE

- Pointer can be locked for later reference
- Made of stainless steel



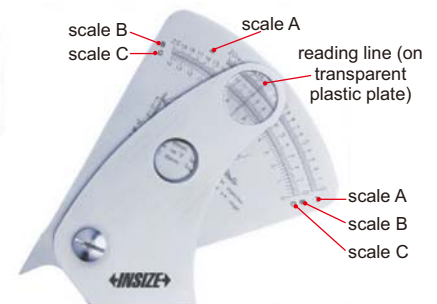
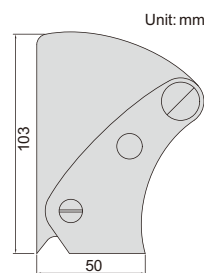
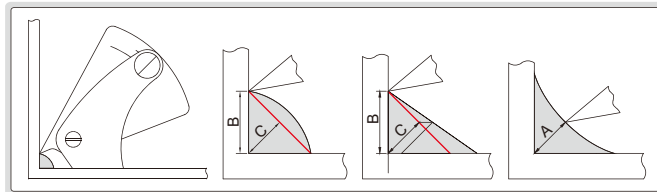
4834-1

Code	Measurement	Range	Graduation	Accuracy
4834-1	undercut depth	0 - 6mm	0.5mm	±0.5mm
	crown height	0 - 6mm	0.5mm	±0.5mm
	porosity size comparison	1.5mm, 3mm	—	±0.2mm
	amount of porosity per 25mm	25mm	1mm	—

WELDING GAGE

- Made of stainless steel

Code	Graduation	Accuracy
4840-1	0.2mm	±0.3mm

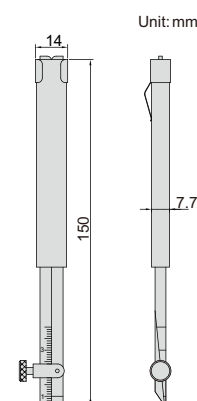
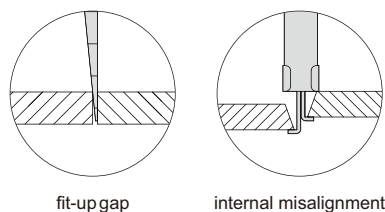


4840-1

PIPE WELDING GAGE

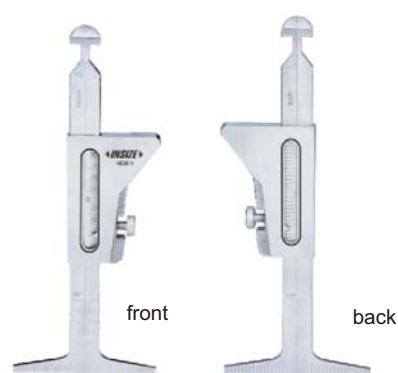
- Made of stainless steel

Code	Measurement	Range	Graduation	Accuracy
4841-1	internal misalignment	0 - 30mm	1mm	±0.5mm
	fit-up gap	0.7 - 4mm	0.1mm	±0.1mm

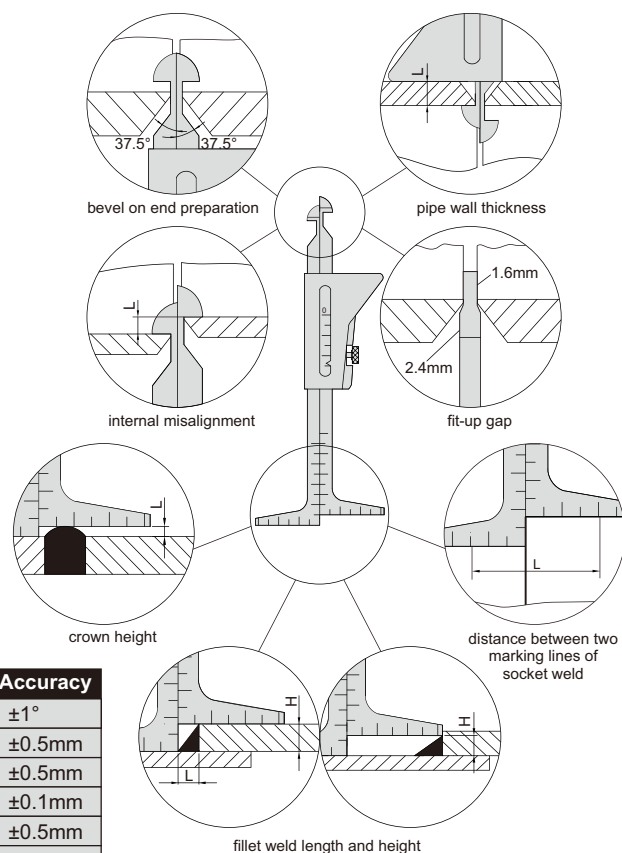
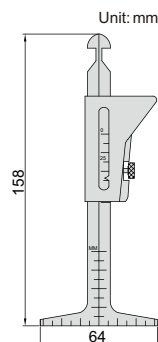


4841-1

PIPE WELDING GAGE



4839-1



- Made of stainless steel

Code	Measurement	Range	Graduation	Accuracy
4839-1	bevel on end preparation	37.5°	—	±1°
	pipe wall thickness	0 - 45mm (0 - 1-3/4")	1mm (1/16")	±0.5mm
	internal misalignment	0 - 35mm (0 - 1-3/8")	1mm (1/32")	±0.5mm
	fit-up gap	1.6mm, 2.4mm	—	±0.1mm
	crown height	0 - 35mm (0 - 1-3/8")	1mm (1/32")	±0.5mm
	distance between two marking lines of socket weld	0 - 60mm (0 - 2-3/8")	1mm (1/16")	±0.5mm
	fillet weld length	0 - 30mm (0 - 1-1/4")	1mm (1/16")	±0.5mm
	fillet weld height	0 - 35mm (0 - 1-3/8")	1mm (1/32")	±0.5mm

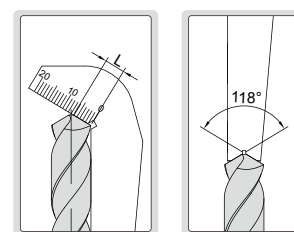
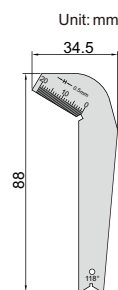
DRILL POINT GAGE

- For twist drills with 118° angle, to check if the center of tip is concentric with the drill body
- Made of stainless steel

Code	Accuracy	
	Angle	Length
4843-1	±0.5°	±0.05mm



4843-1



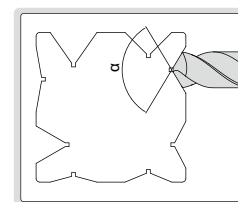
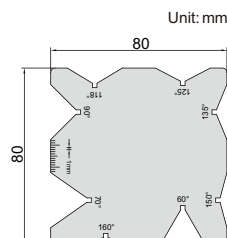
DRILL ANGLE GAGE

- Check drills with angle 60°, 70°, 90°, 118°, 125°, 135°, 150° or 160°
- Made of stainless steel

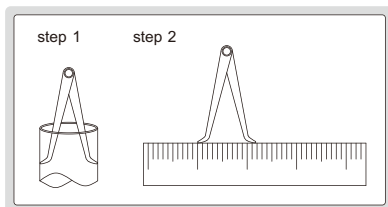
Code	Accuracy
4842-1	±0.5°



4842-1



INSIDE CALIPER

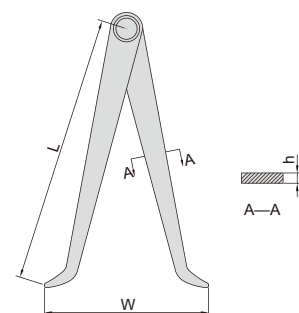


Code	Size (L)	Range (W)	h
7240-150	150mm	17-150mm	2mm
7240-200	200mm	17-200mm	3mm
7240-300	300mm	18-300mm	3mm

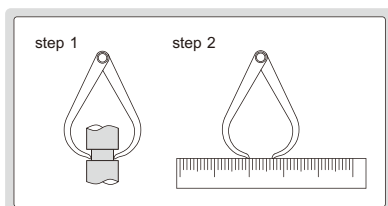
■ Made of carbon steel



7240-150



OUTSIDE CALIPER

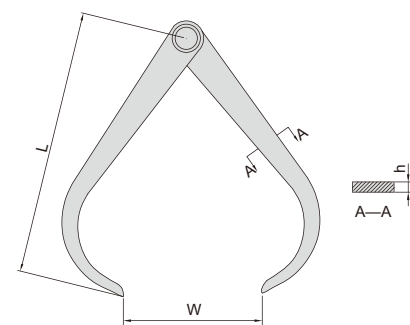


■ Made of carbon steel

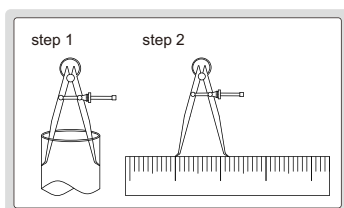
Code	Size (L)	Range (W)	h
7241-150	150mm	0-150mm	2mm
7241-200	200mm	0-200mm	3mm
7241-300	300mm	0-300mm	3mm



7241-150



INSIDE SPRING CALIPER



Code	Size (L)	Range (W)
7261-150	150mm	20-170mm
7261-200	200mm	22-220mm
7261-250	245mm	30-270mm
7261-300	300mm	30-320mm

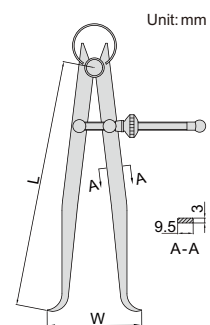
■ Made of carbon steel



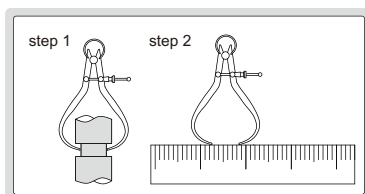
tips



7261-150



OUTSIDE SPRING CALIPER



Code	Size (L)	Range (W)
7262-150	155mm	0-140mm
7262-200	210mm	0-210mm
7262-250	265mm	0-270mm
7262-300	310mm	0-320mm

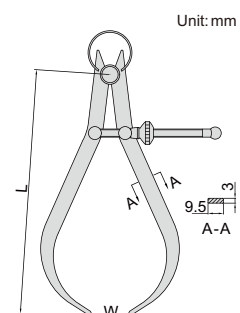
■ Made of carbon steel



tips



7262-150

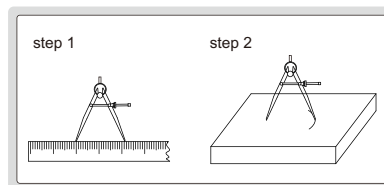
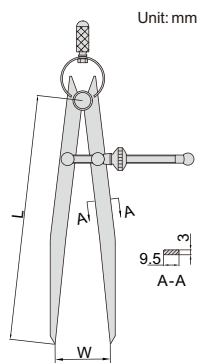


SPRING DIVIDER

- Made of carbon steel
- Hardened points



7260-150



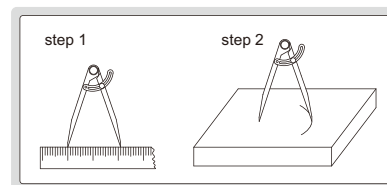
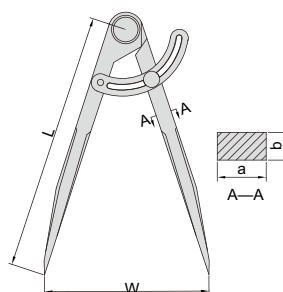
Code	Size (L)	Range (W)
7260-150	150mm	0-150mm
7260-200	200mm	0-210mm
7260-250	245mm	0-260mm
7260-300	300mm	0-320mm

DIVIDER

- Made of carbon steel
- Hardened points



7247-150



Code	Size (L)	Range (W)	(mm)	
			a	b
7247-150	150mm	0-140mm	8.5	7
7247-200	200mm	0-190mm	10	7
7247-300	300mm	0-290mm	12	7

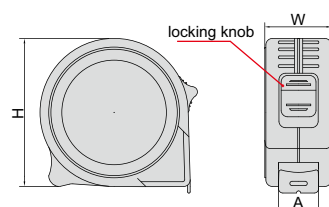
MEASURING TAPE

EG II



7140-5

packaging



Code	Range	Graduation	Width of tape A	(mm)	
				W	H
7140-3	0-3m	1mm	16mm	28	62
7140-5	0-5m	1mm	19mm	30	68
7140-8	0-8m	1mm	25mm	38	78

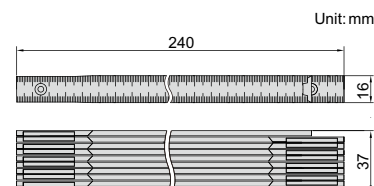
WOODEN FOLDING RULE

- 10 sections
- Graduation on both sides



7124-210

closed



Code	Range	Graduation
7124-210	2m	1mm



FLEXIBLE RULE

flexible use

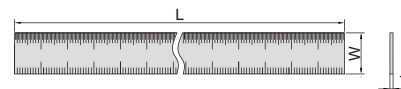


- Flexible use
- Graduation on both sides
- Made of special alloy steel
- Satin chrome plated



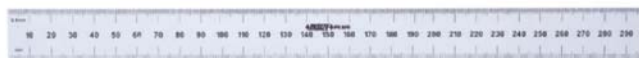
7121-150

Code	Range (L)	Graduation	Accuracy	W	T
7121-150	150mm	0.5mm/1mm	+0.10/-0.09mm	12.50mm	0.40mm
7121-300	300mm	0.5mm/1mm	+0.13/-0.09mm	12.50mm	0.40mm
7121-600	600mm	0.5mm/1mm	+0.18/-0.09mm	19.50mm	0.50mm



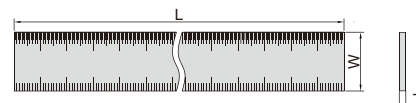
RIGID RULE

- Rigid rule
- Graduation on both sides
- Made of special alloy steel
- Satin chrome plated



7122-300

Code	Range (L)	Graduation	Accuracy	W	T
7122-150	150mm	0.5mm/1mm	+0.10/-0.09mm	18.50mm	1mm
7122-300	300mm	0.5mm/1mm	+0.13/-0.09mm	24.50mm	1mm
7122-600	600mm	0.5mm/1mm	+0.18/-0.09mm	29.50mm	1mm



RIGID RULE

- Rigid rules
- With groove on the back, suitable for combination square set (code 2278-180)
- Satin chrome plated

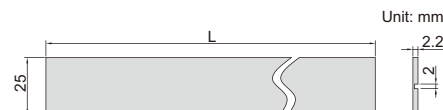


groove on the back



7113-300A

Code	Range	Graduation		Accuracy	L
		front	back		
7113-300A	300mm/12"	0.5mm and 1/32"	1mm and 1/64"	±0.15mm	300mm



Unit: mm

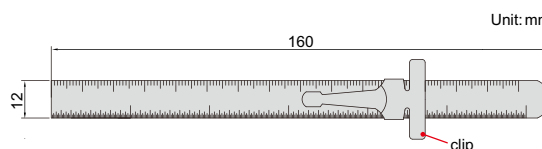
POCKET RULE WITH SLIDING CLIP

- With sliding clip, clip also can be used as depth gage base
- With inch/metric conversion table on the back
- Made of stainless steel



7119-150

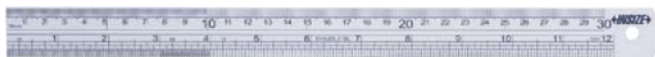
Code	Range	Graduation	Accuracy
7119-150	150mm/6"	1mm, 1/64"	0.08mm



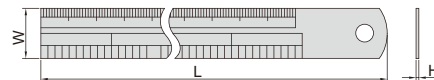
Unit: mm

STEEL RULE

ATTENTION:
BASIC MODEL



7110-300



- Graduation: 0.5mm, 1mm, 1/64", 1/32", 1/16"
- Semi-flexible rules
- Made of stainless steel
- Non-glare surface

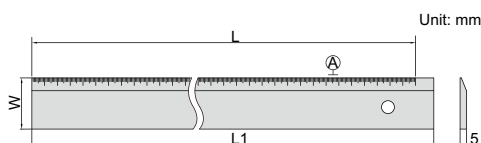
(mm)

Code	Range	Accuracy	L	W	H	Remark
7110-150	150mm/6"	±0.08mm	170	18	1.0	graduation on front and back
7110-200	200mm/8"	±0.08mm	220	18	1.0	graduation on front and back
7110-300	300mm/12"	±0.11mm	330	25	1.0	graduation on front and back
7110-500	500mm/20"	±0.14mm	530	30	1.2	graduation on front and back
7110-600	600mm/24"	±0.15mm	630	30	1.2	graduation on front and back
7110-1000	1000mm/40"	±0.20mm	1040	32	1.5	graduation on front and back
7110-1200	1200mm/48"	±0.24mm	1240	35	1.8	graduation on front
7110-1500	1500mm/60"	±0.35mm	1550	38	1.8	graduation on front
7110-2000	2000mm/80"	±0.45mm	2065	40	2.0	graduation on front

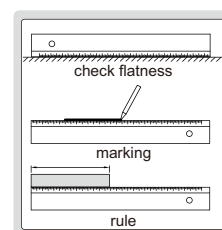
STRAIGHT EDGE



7111-300A



- Check flatness and straightness, as well as for marking
- Graduation on the beveled edge
- Made of hardened tool steel
- Chrome plated

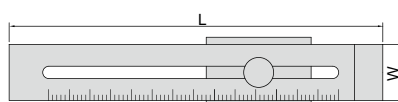


Code	Range (L)	Straightness of A	L1	W
7111-300A	300mm	0.02mm	320mm	40mm
7111-500A	500mm	0.03mm	520mm	40mm
7111-1000A	1000mm	0.04mm	1020mm	50mm

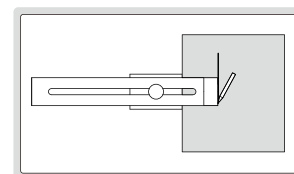
MARKING GAGE



7120-200A



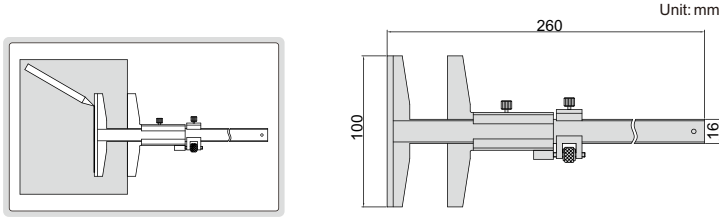
- Made of carbon steel
- Satin chrome plated



(mm)

Code	Range	Graduation	Accuracy	L	W
7120-200A	0 - 200mm	0.1mm	±0.1mm	250	40
7120-250A	0 - 250mm	0.1mm	±0.1mm	300	40
7120-300A	0 - 300mm	0.1mm	±0.1mm	350	40

T-SHAPE MARKING GAGE

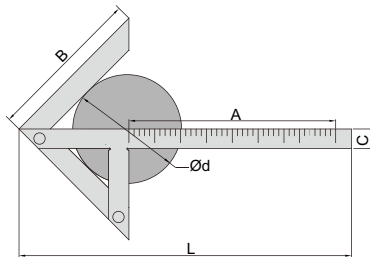
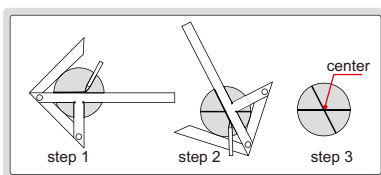


1275-150A

Code	Range	Graduation	Accuracy
1275-150A	0-150mm	0.05mm	±0.05mm

- Made of stainless steel
- Satin chrome plated reading surface

CENTER MARKING GAGE



7205-100

Code	Size (AxB)	Diameter of shafts (Ød)	Accuracy	C	L
7205-100	100X70mm	4 - 90mm	±0.15mm	12	153
7205-150	150x130mm	4 - 190mm	±0.15mm	15	245
7205-200	200x150mm	6 - 220mm	±0.15mm	15	310

- Marking the center of round plates and shafts
- Made of stainless steel
- Satin chrome plated

SCRIBING CALIPER

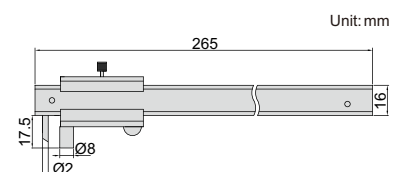
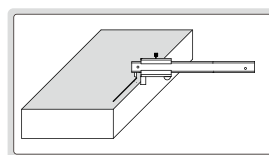
- Made of stainless steel
- Satin chrome plated reading surface
- Carbide scriber tip

the position of scriber tip can be adjusted



7202-200A

Code	Range	Graduation	Accuracy
7202-200A	0-200mm/0-8"	0.1mm, 1/128"	±0.1mm



DIGITAL SCRIBING CALIPER

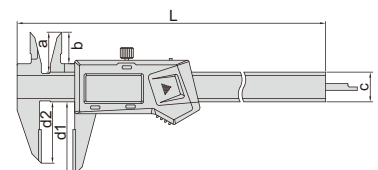
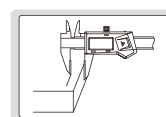
- The carbide-tipped jaws facilitate scribing on workpieces
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: data output cable (code 7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A)



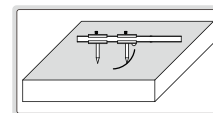
1166-150A

DATA OUTPUT

Code	Range	Accuracy	L	a	b	c	d1	d2
1166-150A	0-150mm/0-6"	±0.03mm	236	21	16.5	16	40	33
1166-200A	0-200mm/0-8"	±0.03mm	286	24	19.5	16	50	43
1166-300A	0-300mm/0-12"	±0.04mm	400	25	20.5	17	60	53



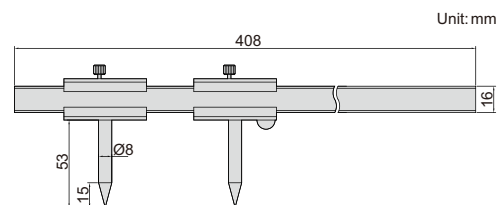
SCRIBING CALIPER



- Made of stainless steel
- Satin chrome plated reading surface
- Hardened scriber tips

7203-300A

Code	Range	Graduation	Accuracy
7203-300A	51-300mm	0.1mm	±0.1mm



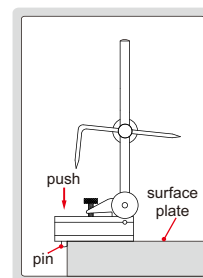
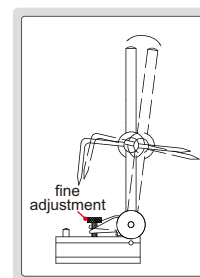
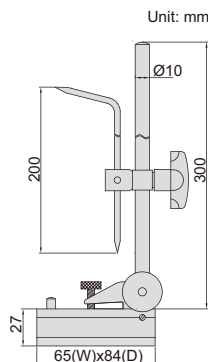
HEIGHT SCRIBER

- Grooved bottom for cylinder
- Two pins to be set against the edge of surface plate

Code
6990-300A



6990-300A



SCRIBER



7230



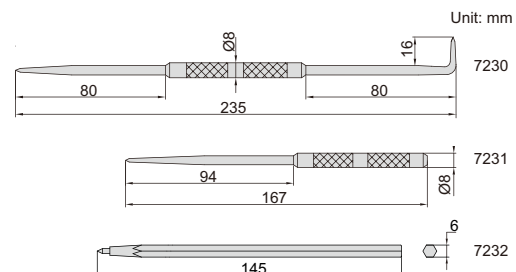
7231



7232

- Nickel plated

Code	Tip
7230	hardened tips
7231	hardened tip
7232	carbide tip





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

GRANITE SURFACE PLATE



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

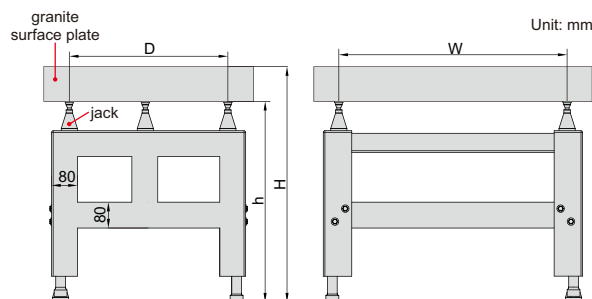
* Supplied with manufacturer inspection certificate

Grade 0

Code	Size (LxWxH)	Flatness	Weight (Kg)	Load (Kg)
6900-032*	300x200x60mm	5.4µm	11	60
6900-042*	400x250x60mm	5.9µm	18	100
6900-044*	400x400x60mm	6.3µm	29	120
6900-053*	500x315x70mm	6.4µm	33	120
6900-064*	630x400x80mm	7.0µm	60	130
6900-066*	630x630x100mm	7.6µm	119	150
6900-085*	800x500x100mm	7.8µm	120	200
6900-0106*	1000x630x140mm	8.7µm	265	400
6900-0101*	1000x1000x150mm	9.7µm	450	800
6900-0128*	1200x800x160mm	9.8µm	461	1000
6900-0161*	1600x1000x180mm	11.5µm	864	1200
6900-0201*	2000x1000x220mm	12.9µm	1320	1300
6900-0202*	2000x1500x250mm	14.0µm	2250	1500

STAND FOR GRANITE SURFACE PLATE

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



6902-64A

adjustable foot

(mm)

Low stands

Code	For granite surface plate	W	D	H (with granite surface plate)	h (without granite surface plate)
6902-64A	630x400x80mm (code 6900-064 and 6900-164)	352	224	775-800	695-720
6902-66A	630x630x100mm (code 6900-066 and 6900-166)	352	352	775-800	675-700
6902-85A	800x500x100mm (code 6900-085 and 6900-185)	448	280	775-800	675-700
6902-106A	1000x630x140mm (code 6900-0106 and 6900-1106)	560	352	755-780	615-640
6902-101A	1000x1000x150mm (code 6900-0101 and 6900-1101)	560	560	755-780	605-630
6902-128A	1200x800x160mm (code 6900-0128 and 6900-1128)	672	448	755-780	595-620
6902-161A	1600x1000x180mm (code 6900-0161 and 6900-1161)	896	560	755-780	575-600

High stands

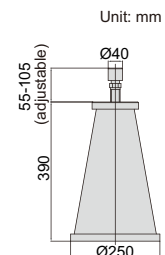
Code	For granite surface plate	W	D	H (with granite surface plate)	h (without granite surface plate)
6902-64H	630x400x80mm (code 6900-064 and 6900-164)	352	224	1000-1025	920-945
6902-66H	630x630x100mm (code 6900-066 and 6900-166)	352	352	1000-1025	900-925
6902-85H	800x500x100mm (code 6900-085 and 6900-185)	448	280	1000-1025	900-925
6902-106H	1000x630x140mm (code 6900-0106 and 6900-1106)	560	352	1000-1025	860-885
6902-101H	1000x1000x150mm (code 6900-0101 and 6900-1101)	560	560	1000-1025	850-875
6902-128H	1200x800x160mm (code 6900-0128 and 6900-1128)	672	448	1000-1025	840-865
6902-161H	1600x1000x180mm (code 6900-0161 and 6900-1161)	896	560	1000-1025	820-845

JACK SET FOR GRANITE SURFACE PLATE

- 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

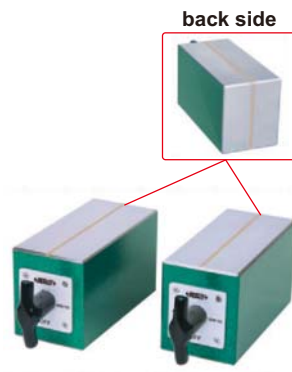
MAGNETIC RECTANGULAR BLOCKS

HARDENED
SURFACES

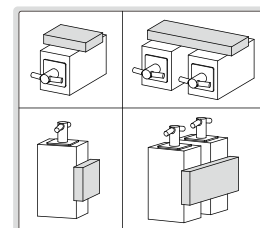
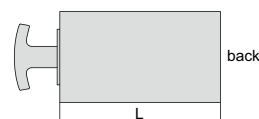
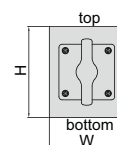
HIGH
PRECISION

STRONG
MAGNETIC FORCE

- 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

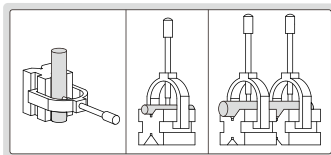


6898-150



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 SET



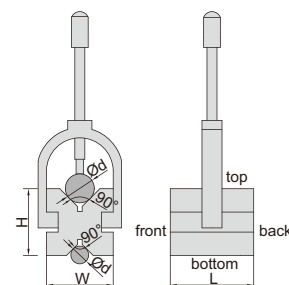
- Hold cylindrical workpieces for inspection and machining
- Two V-blocks per set
- Made of alloy steel
- Hardened to HRC60±2
- V groove on the top for large shafts
- V groove on the bottom for small shafts (except **6896-10**)



6896-10



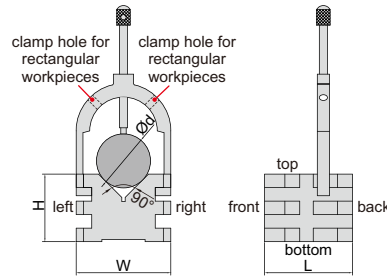
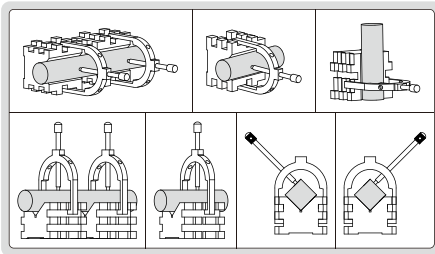
6896-11



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	140x70x140mm	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

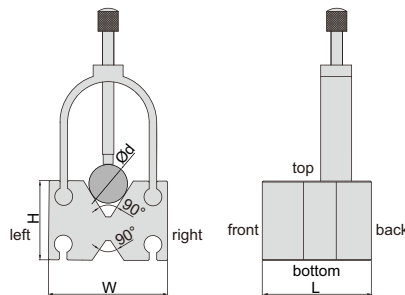
SIDE LIE-DOWN
USE IS POSSIBLE

V-BLOCK SET

side lie-down use is possible



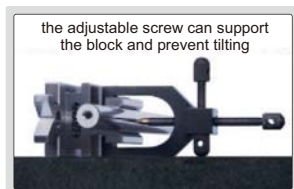
- Hold cylindrical workpieces for inspection and machining
- Two V-blocks per set
- Made of alloy steel
- Hardened to HRC60±2
- V groove on the top for large shafts
- V groove on the bottom for small shafts



6803-1

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	25x20x20mm	4-35mm	5µm	5µm	5µm
6803-2	50x40x40mm	4-47mm	5µm	5µm	5µm

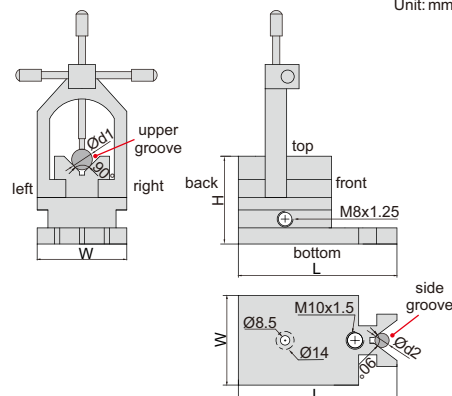
V-BLOCK



- Hold cylindrical workpieces for inspection and machining
- Hardened to HRC60±2



side groove is for shouldered studs and pins



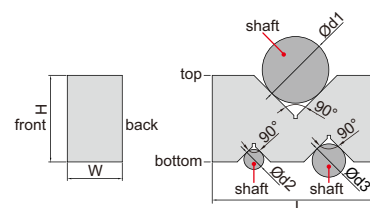
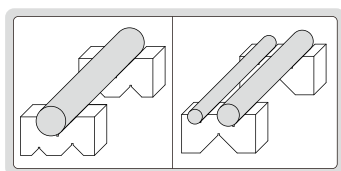
Unit: mm



6804-M2

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 SET



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

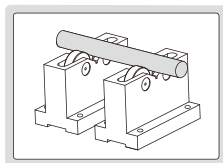
6887-3

(mm)

Code	Size (LxWxH)	Range of shafts(Ød1)	Range of shafts(Ød2)	Range of shafts(Ød3)
6887-1	50x19x24	3-32	3-16	3-22
6887-2	75x24x35	3-50	3-20	3-32
6887-3	100x33x52	3-68	3-26	3-40
6887-4	125x44x69	3-87	3-34	3-50

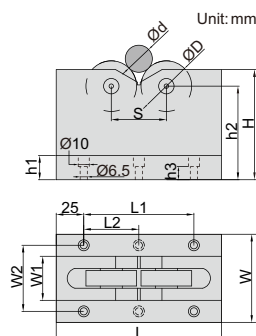
Code	Parallelism of three V grooves to top and bottom sides	Squareness of three V grooves to front and back sides	Height difference of a matched pair
6887-1	5µm	5µm	5µm
6887-2	5µm	5µm	5µm
6887-3	5µm	5µm	5µm
6887-4	5µm	5µm	5µm

ROLLER BEARING V-BLOCK SET



6888-1

- Two V-blocks per set
- Workpieces don't get damaged due to bearings
- Suitable for heavy workpieces

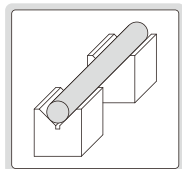


Code	Size (LxWxH)	Diameter of bearings (ØD)	Range of shafts (Ød)	Parallelism of bearings to bottom	Load capacity
6888-1	150x60x100mm	42mm	25-70mm	12µm	500kg
6888-2	150x80x100mm	47mm	5-55mm	12µm	1000kg
6888-3	230x100x150mm	72mm	70-200mm	12µm	1000kg

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

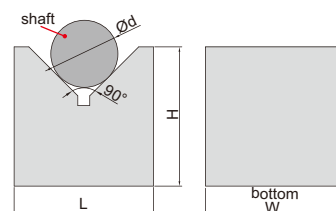
(mm)

GRANITE V-BLOCK SET



6897-1

- Two V-blocks per set



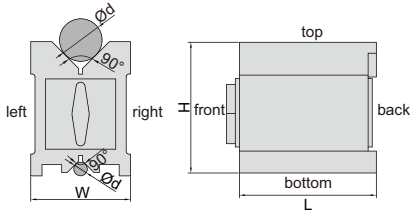
Code	Size (LxWxH)	Range of shafts (Ød)	Parallelism of V groove to bottom	Height difference of a matchet pair
6897-1	70x50x70mm	6-75mm	4µm	5µm
6897-2	100x50x70mm	6-99mm	4µm	5µm

**HARDENED
SURFACES**

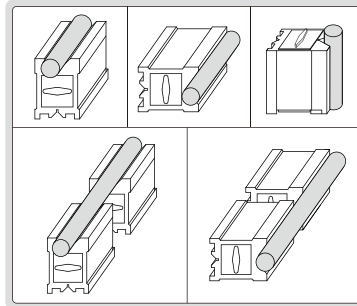
**HIGH
PRECISION**

**STRONG
MAGNETIC FORCE**

MAGNETIC V-BLOCK



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



6889-11



6889-1

Individual

Code	Size (LxWxH)	Range of shafts (Ød)	Magnetic force	Parallelism of V groove to top, bottom, left, right sides	Squareness of V groove to back side
6889-11	75x56x75mm	5-40mm	75kgf	5µm	5µm
6889-22	100x70x95mm	5-65mm	100kgf	5µm	5µm
6889-33	150x75x100mm	5-70mm	125kgf	5µm	5µm
6889-44	200x124x150mm	10-140mm	175kgf	10µm	10µm

Matched pair

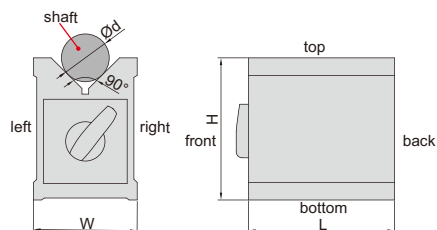
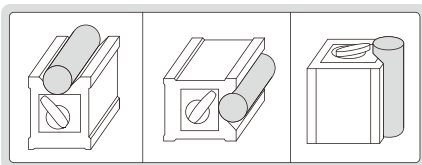
Code	Size (LxWxH)	Range of shafts (Ød)	Magnetic force	Parallelism of V grooves to top, bottom, left, right sides	Squareness of V grooves to back side	Height difference of a matched pair
6889-1	75x56x75mm	5-40mm	75kgf	5µm	5µm	5µm
6889-2	100x70x95mm	5-65mm	100kgf	5µm	5µm	5µm
6889-3	150x75x100mm	5-70mm	125kgf	5µm	5µm	5µm
6889-4	200x124x150mm	10-140mm	175kgf	10µm	10µm	10µm

**ATTENTION: NOT SUITABLE
FOR STEEL OR IRON SURFACE**

**ATTENTION:
NOT HARDENED**

MAGNETIC V-BLOCK

- Hold cylindrical workpieces for inspection and machining
- Supplied in single piece
- Not hardened
- Not suitable for steel or iron surface



6890-702

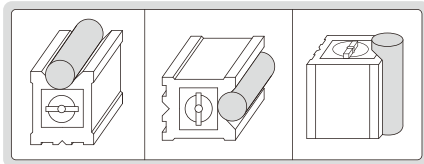
Code	Size (LxWxH)	Range of shafts (Ød)	Magnetic force	Parallelism of V groove to top, bottom, left and right sides	Squareness of V groove to back side
6890-702	70x60x73mm	6-44mm	56kgf	10µm	10µm

MAGNETIC V-BLOCK

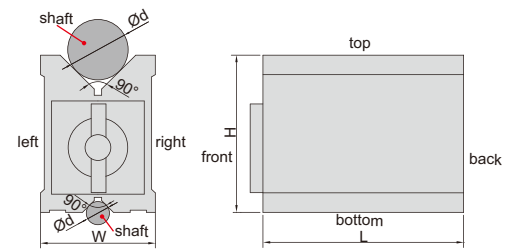
ATTENTION: NOT SUITABLE
FOR STEEL OR IRON SURFACE

ATTENTION:
NOT HARDENED

- Hold cylindrical workpieces for inspection and machining
- Supplied in single piece
- Not hardened
- V groove on the top for large shafts
- V groove on the bottom for small shafts
- Not suitable for steel or iron surface



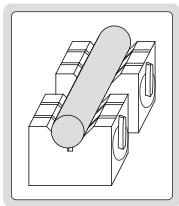
6801-1201



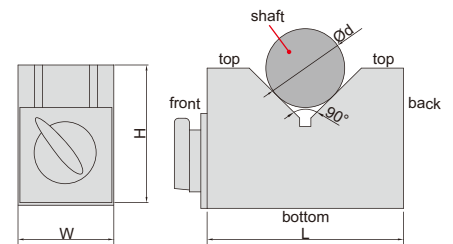
Code	Size (LxWxH)	Range of shafts (Ød)	Magnetic force	Parallelism of V grooves to top, bottom, left, right side	Squareness of V grooves to back side
6801-1201	80x70x95mm	6-67mm	64kgf	10µm	10µm
6801-1202	100x70x95mm	6-67mm	80kgf	10µm	10µm
6801-1203	120x70x95mm	6-67mm	96kgf	10µm	10µm

MAGNETIC V-BLOCK SET

ATTENTION: LOW
MAGNETIC FORCE



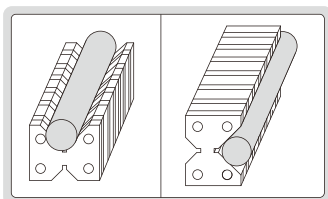
6891-1



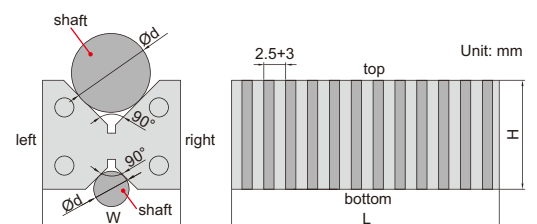
Code	Size (LxWxH)	Range of shafts (Ød)	Magnetic force	Parallelism of V groove to bottom and back sides	Height difference of a matched pair
6891-1	70x40x50mm	6-46mm	8kgf	10µm	10µm
6891-3	150x50x100mm	6-125mm	14kgf	10µm	10µm

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

MAGNETIC INDUCTION V-BLOCK



6892-1

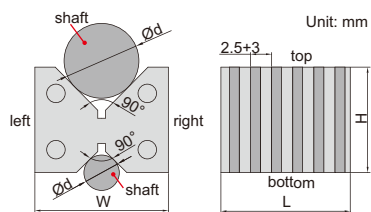
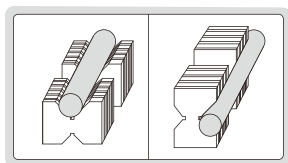


Code	Size (LxWxH)	Range of shafts (Ød)	Pole pitch	Parallelism of both V grooves to top, bottom, left, right sides
6892-1	110x60x48mm	6-50mm	2.5+3mm	10µm

- 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

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

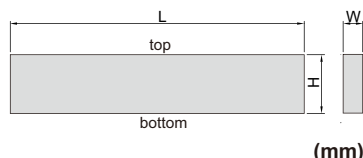


6899-1

Code	Size (LxWxH)	Range of shafts (Ød)	Pole pitch	Parallelism of both V grooves to top, bottom, left and right sides	Height difference of a matched pair
6899-1	55x60x48mm	6-50mm	2.5+3mm	10µm	10µm

PARALLEL SET

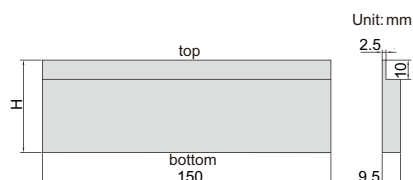
- Parallelism between top and bottom: 5µm
- Height difference of a matched pair: 5µm
- Hardened to HRC55-60



6533-144

Code	Parallels per set	Length (L)	Thickness (W)	Height (H)
6533-10	10 pairs	150	3	13, 16, 19, 22, 25, 28, 31, 35, 38, 4
6533-144	14 pairs	150	10	14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 35, 40, 45, 50
6533-6	6 pairs	200	9.5	35, 40, 45, 50, 55, 58

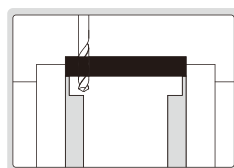
PARALLEL SET



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

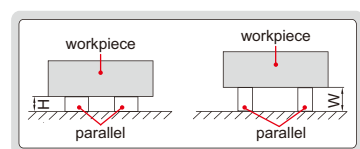
(mm)

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

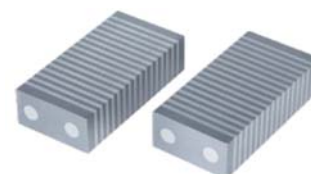
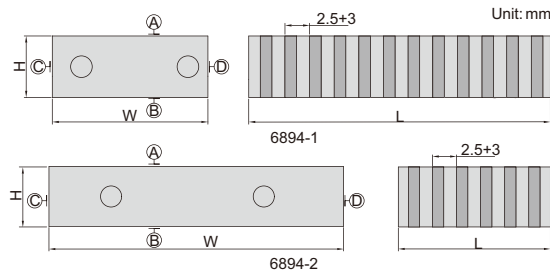


6534-6

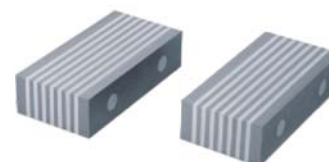
MAGNETIC INDUCTION PARALLEL SET



- To be used on magnetic chucks
- Two parallels per set



6894-1



6894-2

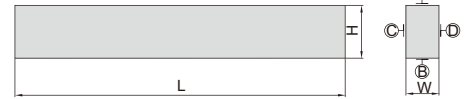
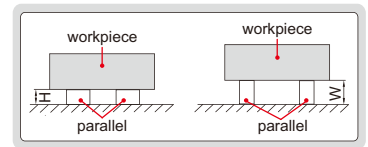
Code	Size (LxWxH)	Pole pitch	Parallelism between A and B	Parallelism between C and D	Height difference of a matched pair
6894-1	100x50x25mm	2.5+3mm	10µm	10µm	10µm
6894-2	50x100x25mm	2.5+3mm	10µm	10µm	10µm

GRANITE PARALLEL SET



4143-250

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



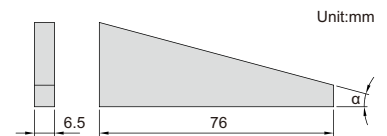
Code	Size (LxWxH)	Parallelism between A and B	Parallelism between C and D	Height difference of a matched pair
4143-250	250x25x40mm	3μm	3μm	3μm

ANGLE PLATE SET



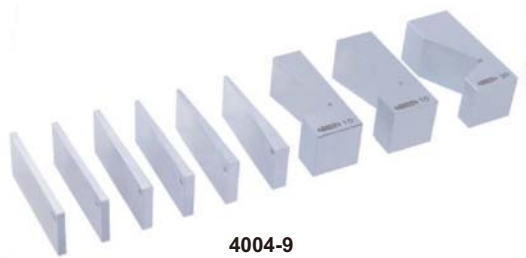
4003-12

- For angle set-up in tooling, production and inspection
- Hardness HRC55



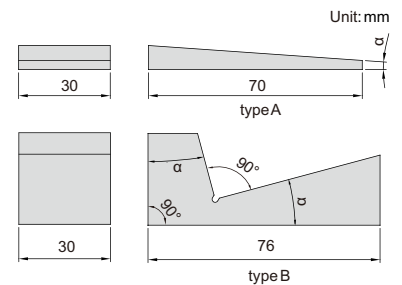
Code	Angle plates included	Angle α	Accuracy
4003-10	10 pcs	1°, 2°, 3°, 4°, 5°, 10°, 15°, 20°, 25°, 30°	±9"
4003-12	12 pcs	1/4°, 1/2°, 1°, 2°, 3°, 4°, 5°, 10°, 15°, 20°, 25°, 30°	±9"

UNIVERSAL ANGLE PLATE SET



4004-9

- For angle set-up in tooling, production and inspection
- Hardness HRC55



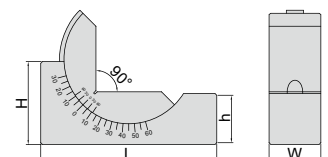
Code	Angle plates included	Angle α	Type	Accuracy
4004-9	9 pcs	1/2°, 1°, 2°, 3°, 4°, 5°	type A	±9"
		10°, 15°, 30°	type B	

ADJUSTABLE ANGLE BLOCK



6535-30

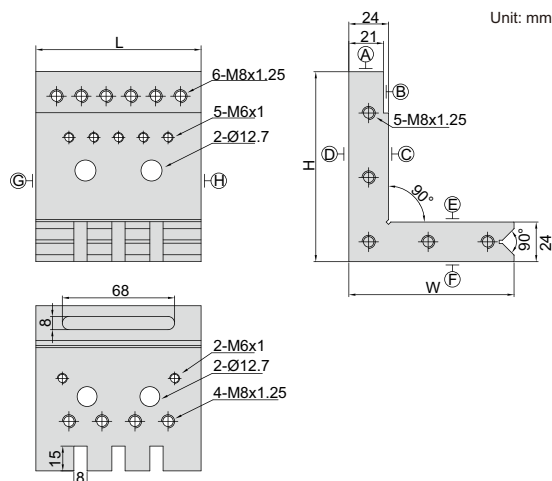
- Made of hardened tool steel
- With locking screw
- Accuracy of angle: 10'



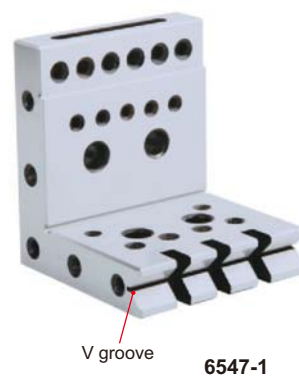
Code	Size (LxWxH)	h	Adjustable angle	Graduation of angle
6535-25	75x25x36mm	25mm	30°~0°~60°	10'
6535-30	102x30x49mm	30mm	30°~0°~60°	10'

- Hardened to HRC60±2
- V groove for cylinders
- Parallelism and squareness between A, B, C, D, E, F, G and H: 6µm
- Parallelism and squareness of V groove to A, B, C, D, E, F, G and H: 6µm

Code	Size (LxWxH)
6547-1	100x100x115mm



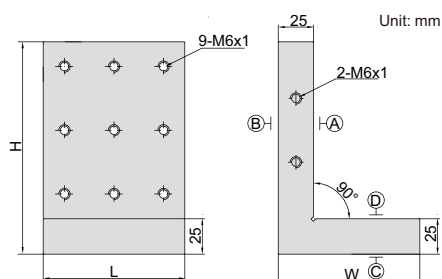
RIGHT ANGLE PLATE



6547-1

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

Code	Size (LxWxH)
6548-1	100x100x150mm



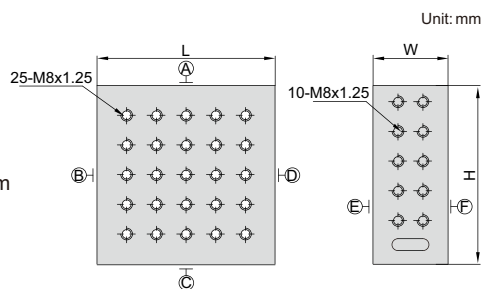
RIGHT ANGLE PLATE



6548-1

- 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

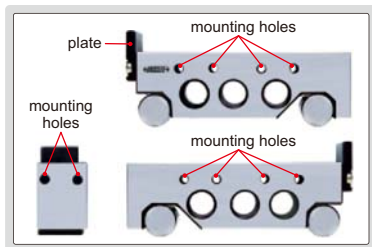


RIGHT ANGLE PLATE



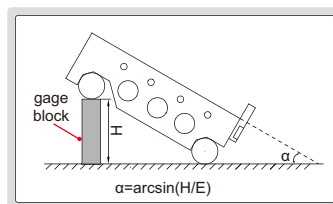
6549-1

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



HIGH PRECISION

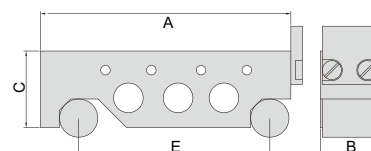
Code	Roller distance (E)	Table size (AxB)	C	Accuracy of α at 30°
4155-100	100mm	130x30mm	40mm	±5 seconds
4155-200	200mm	230x30mm	40mm	±5 seconds
4155-300	300mm	345x40mm	50mm	±8 seconds



SINE BAR



4155-100



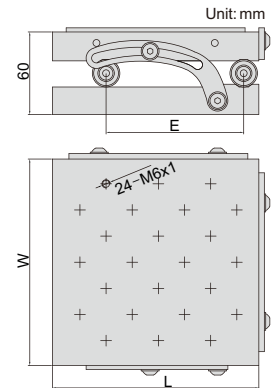
SINE TABLE



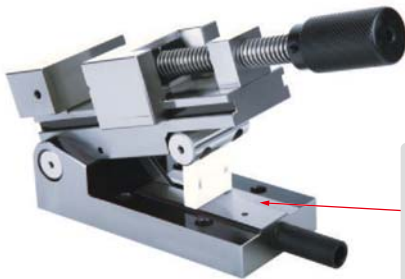
6527-100

- Accuracy of angle: $\pm 15''$
- Hardness HRC58-60

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

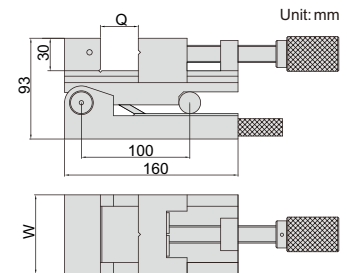
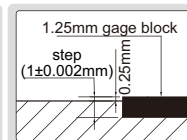


PRECISION SINE VISE



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

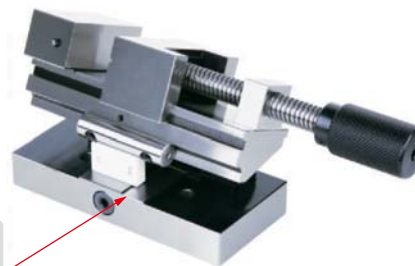
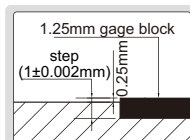


- Parallelism: $3\mu\text{m}/100\text{mm}$
- Squareness: $5\mu\text{m}/100\text{mm}$
- Accuracy of angle: $\pm 15''$
- Made of SKS tool steel, subzero treatment
- Hardness HRC58-60

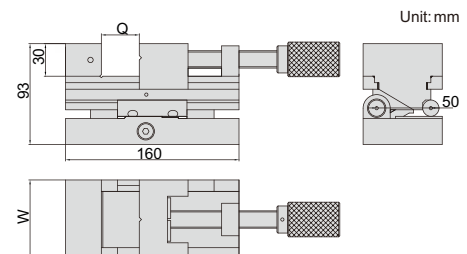
Code	Jaw opening (Q)	Jaw width (W)	Adjustable angle
6522-80	0-80mm	73mm	0-46°

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



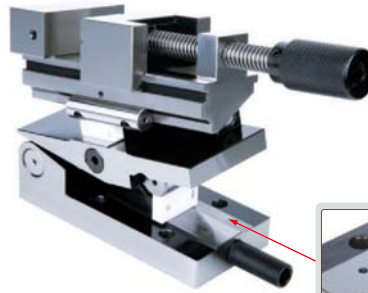
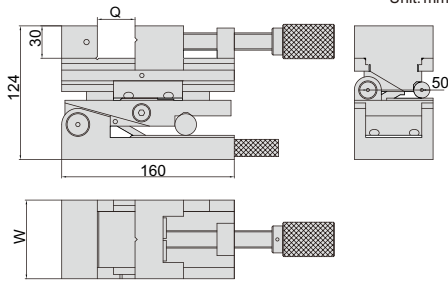
6523-80



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

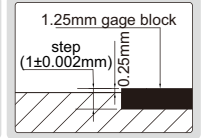
Code	Jaw opening (Q)	Jaw width (W)	Adjustable angle
6523-80	0-80mm	73mm	0-46°

PRECISION COMPOUND SINE VISE



6524-80

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

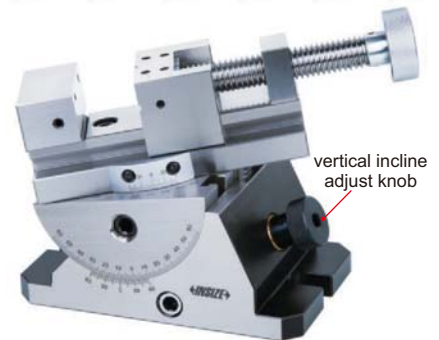
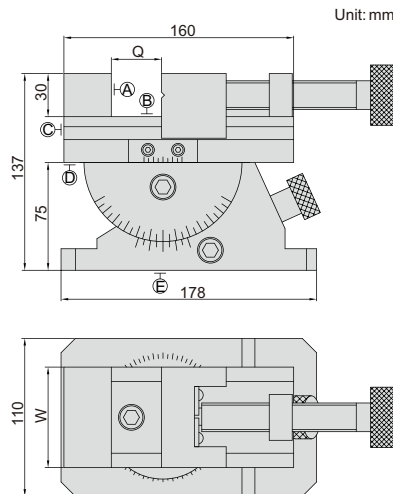


- Parallelism: $3\mu\text{m}/100\text{mm}$
- Squareness: $5\mu\text{m}/100\text{mm}$
- Accuracy of angle: $\pm 15''$
- Made of SKS tool steel, subzero treatment
- Hardness HRC58-60

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

PRECISION UNIVERSAL VISE

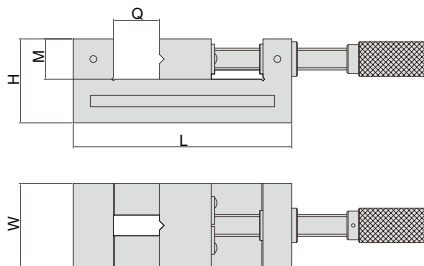
- Horizontal rotary: range 360° , graduation 0.05°
- Vertical incline: range 45° , graduation 0.05°
- With vertical incline adjust knob
- Parallelism and squareness between A, B, C and D: $5\mu\text{m}/100\text{mm}$, parallelism between D and E at 0° : $10\mu\text{m}/100\text{mm}$
- Made of tool steel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



6521-80

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

PRECISION VISE



6525-76

Code	Jaw opening (Q)	Jaw width (W)	L	H	M
6525-73	0-73mm	63mm	176	63	30
6525-76	0-76mm	73mm	190	73	35
6525-120	0-120mm	98mm	255	82	40

(mm)

- Parallelism: $4\mu\text{m}/100\text{mm}$
- Squareness: $6\mu\text{m}/100\text{mm}$
- Made of SK2 tool steel
- Hardness HRC52-58

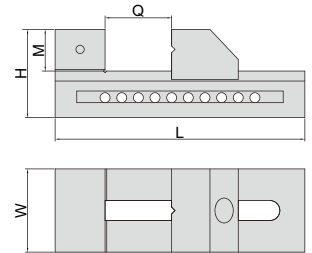
PRECISION VISE



6526-80

- Parallelism: 3µm/100mm
- Squareness: 5µm/100mm
- Made of SK2 tool steel
- Hardness HRC55-60

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



CENTERING INDICATOR

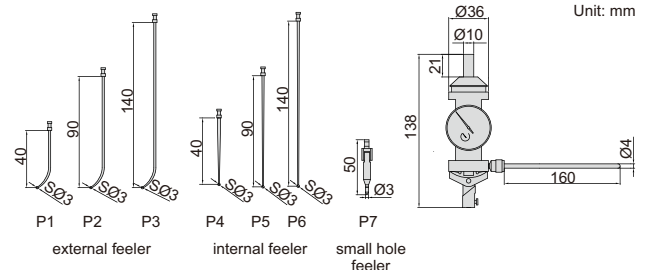
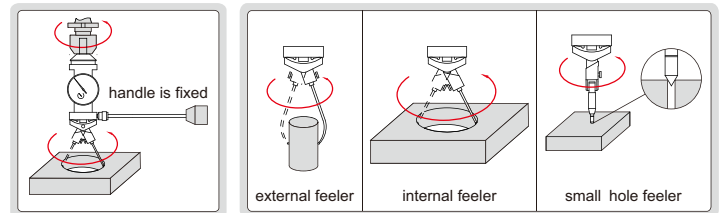


2385-3

- Accuracy: 0.01mm
- Provides quick and accurate centering in boring and milling set-up

Code
2385-3

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



Unit: mm

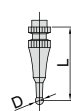
3D TESTER



2842-3D

Code	Range	Graduation	Accuracy
2842-3D	1.5mm	0.01mm	0.01mm

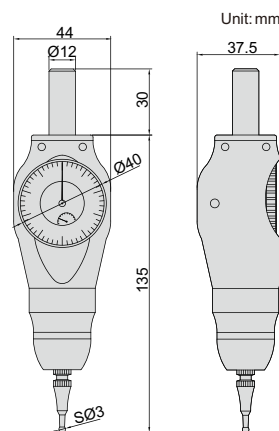
Probe (optional) (mm)			
Code	Name	L	D
2842-N1	standard probe	27	SØ3
2842-N2	long probe	62	SØ6



2842-N1



2842-N2

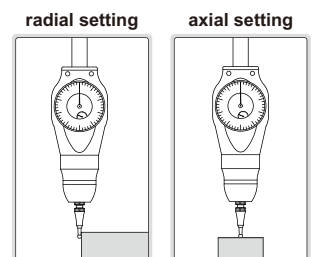


Unit: mm

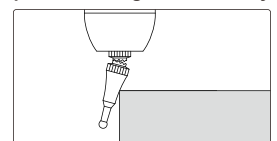
COMPACT
DESIGN



ANTI MAGNETIC
CARBIDE CONTACT POINT

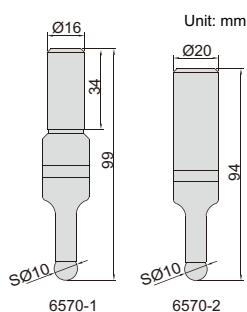
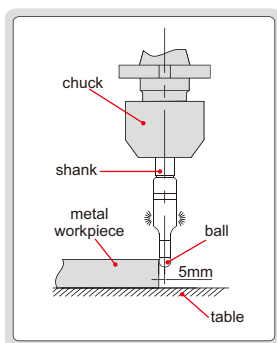


If probe tip is pressed too much, the probe breaks at the breaking point, in order to prevent damage of main body





2D ELECTRONIC EDGE FINDER



6570-1



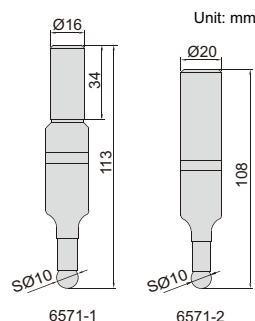
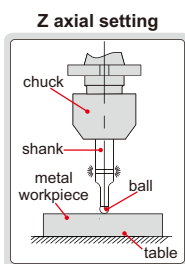
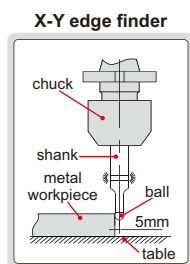
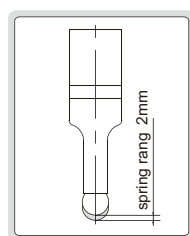
6570-2

Code	Shank	Contact ball	Accuracy	Battery
6570-1	Ø16mm	SØ10mm	10µm	A23S, 12Vx1pc
6570-2	Ø20mm	SØ10mm	10µm	A23S, 12Vx1pc

- 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



3D ELECTRONIC EDGE FINDER



6571-1



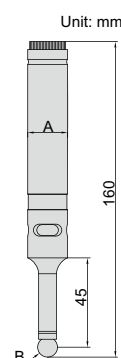
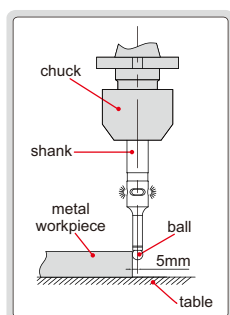
6571-2

Code	Shank	Contact ball	Accuracy	Battery
6571-1	Ø16mm	SØ10mm	10µm	A23S, 12Vx1pc
6571-2	Ø20mm	SØ10mm	10µm	A23S, 12Vx1pc

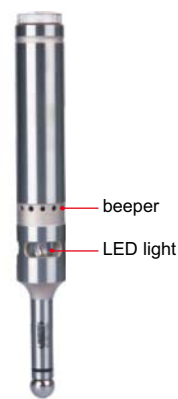
- The shank is electrically conducted to the metal workpiece through the chuck and table, the LED lights up, when the ball touches the workpiece
- Not suitable for rotary use
- Hardened contact ball

ELECTRONIC EDGE FINDER

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



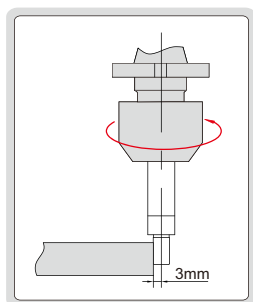
6566-2



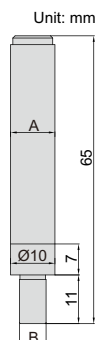
6566-3

Code	Shank (A)	Contact ball (B)	Accuracy	Beeper	Battery
6566-2	Ø20mm	SØ10mm	5µm	without	23AE, 12Vx1pc
6566-3	Ø20mm	SØ10mm	5µm	with	23AE, 12Vx1pc

EDGE FINDER



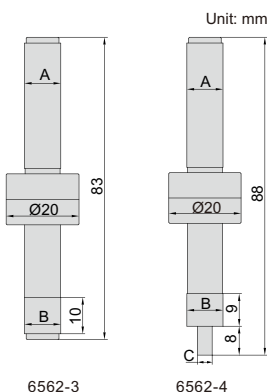
6567-1



- Hardened shank and contact point

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

EDGE FINDER



6562-3

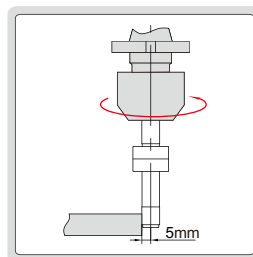
6562-4



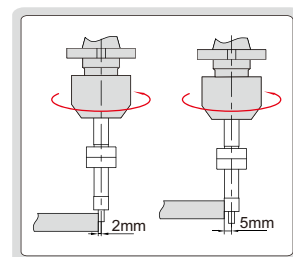
6562-3



6562-4



6562-3

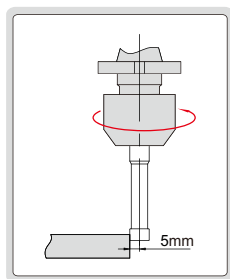


6562-4

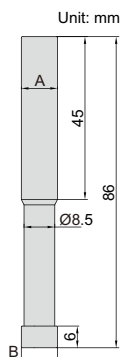
- Hardened shank and contact point

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

CERAMIC EDGE FINDER



6568-1

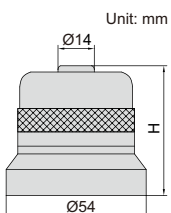


- Ceramic contact point, non magnetic

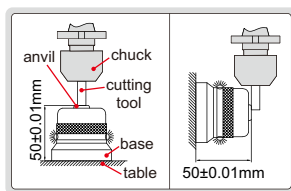
Code	Shank (A)	Contact point (B)	Accuracy
6568-1	Ø10mm	Ø10mm	8µm

ELECTRONIC ZERO SETTER

ATTENTION:
HIGH TEST FORCE



6550-50A



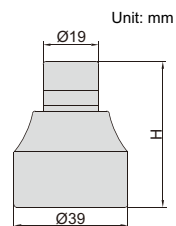
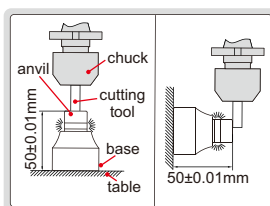
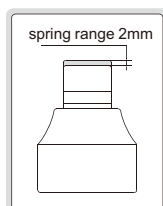
- The base is electrically conducted to the cutting tools through the table and chuck, the LED lights up when the cutting tool touches the anvil
- Magnetic base
- Battery LR44

Code	Height (H)	Accuracy	Test force
6550-50A	50mm	±10µm	27N (at 49mm)



LOW TEST
FORCE

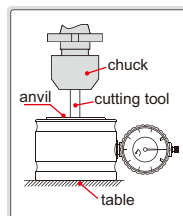
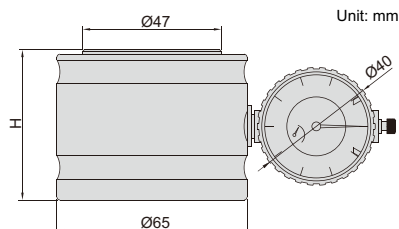
- The base is electrically conducted to the cutting tools through the table and chuck, the LED lights up when the cutting tool touches the anvil
- Magnetic base
- Two batteries LR44



6553-50

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

ELECTRONIC ZERO SETTER

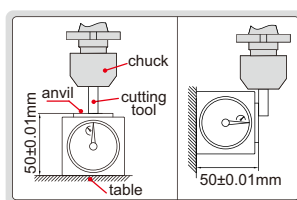
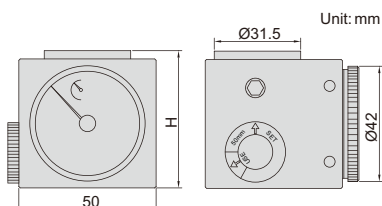


6554-50

Code	Height (H)	Accuracy	Test force
6554-50	50mm	±10µm	9N (at 50mm)

ZERO SETTER

- Magnetic base

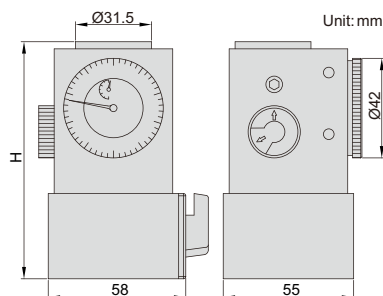
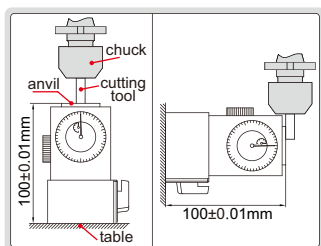


2397-502A

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)

ZERO SETTER

2-PIECE MEASURING TOOL SET

■ Includes:

- 1) Vernier caliper, range 0-150mm/0-6", graduation 0.05mm/1/128" (code **1205-150**)
- 2) Outside micrometer, range 0-25mm, graduation 0.01mm (code **3202-25A**)

Code

5021



5021

2-PIECE MEASURING TOOL SET

■ Includes:

- 1) Digital caliper, range 0-150mm/0-6", resolution 0.01mm/0.0005" (code **1108-150**)
- 2) Digital outside micrometer, range 0-25mm/0-1", resolution 0.001mm/0.00005" (code **3109-25B**)

Code

5022



5022

2-PIECE MEASURING TOOL SET

■ Includes:

- 1) Dial test indicator, range 0.8mm, graduation 0.01mm (code **2380-08**)
- 2) Magnetic stand

Code

5023



5023

2-PIECE MEASURING TOOL SET

■ Includes:

- 1) Dial indicator, range 10mm, graduation 0.01mm (code **2308-10A**)
- 2) Magnetic stand (code **6201-60**)

Code

5024



5024

3-PIECE MEASURING TOOL SET

■ Includes:

- 1) Digital indicator, range 12.7mm/0.5", resolution 0.01mm/0.0005" (code **2112-10**)
- 2) Flex arm
- 3) Locking pliers, adjustable jaw opening from 0 to 25mm



Code

5031



5031

4-PIECE MEASURING TOOL SET

■ Includes:

- 1) Vernier caliper, range 0-150mm/0-6", graduation 0.05mm/1/128" (code **1205-150**)
- 2) Outside micrometer, range 0-25mm, graduation 0.01mm (code **3202-25A**)
- 3) 90° beveled edge square, 100x70mm, grade 0 (code **4790-1000**)
- 4) Steel rule, 150mm/6" (code **7110-150**)

Code

5041



5041

4-PIECE MEASURING TOOL SET

■ Includes:

- 1) Digital caliper, range 0-150mm/0-6", resolution 0.01mm/0.0005" (code **1108-150**)
- 2) Outside micrometer, range 0-25mm, graduation 0.01mm, (code **3202-25A**)
- 3) 90° beveled edge square, 100x70mm, grade 0 (code **4790-1000**)
- 4) Steel rule, 150mm/6" (code **7110-150**)

Code

5042



5042

5-PIECE MEASURING TOOL SET

■ Includes:

- 1) Digital caliper, range 0-150mm/0-6", resolution 0.01mm/0.0005", (code **1108-150**)
- 2) Outside micrometer, range 0-25mm, graduation 0.01mm (code **3203-25A**)
- 3) Dial indicator, range 10mm, graduation 0.01mm (code **2308-10A**)
- 4) Magnetic stand (code **6201-60**)
- 5) Micrometer stand (code **6300**)

Code

5051



5051

5-PIECE MEASURING TOOL SET

■ Includes:

- 1) Digital caliper, range 0-150mm/0-6", resolution 0.01mm/0.0005" (code **1108-150**)
- 2) Digital outside micrometer, range 0-25mm/0-1", resolution 0.001mm/0.00005" (code **3109-25B**)
- 3) Digital indicator, range 12.7mm/0.5", resolution 0.01mm/0.0005" (code **2112-10**)
- 4) Magnetic stand (code **6201-60**)
- 5) Micrometer stand (code **6300**)



5052

Code

5052

6-PIECE MEASURING TOOL SET

■ Includes:

- 1) Digital caliper, range 0-150mm/0-6", resolution 0.01mm/0.0005" (code **1108-150**)
- 2) Outside micrometer, range 0-25mm, graduation 0.01mm (code **3202-25A**)
- 3) Dial indicator, range 10mm, graduation 0.01mm (code **2308-10FA**)
- 4) 90° beveled edge square, 100x70mm, grade 0 (code **4790-1000**)
- 5) Scriber (code **7230**)
- 6) Steel rule, 150mm/6" (code **7110-150**)



5061

Code

5061

6-PIECE MEASURING TOOL SET

■ Includes:

- 1) Digital caliper, range 0-150mm/0-6", resolution 0.01mm/0.0005" (code **1108-150**)
- 2) Outside micrometer, range 0-25mm graduation 0.01mm (code **3202-25A**)
- 3) 90° beveled edge square, 100x70mm grade 00 (code **4790-0100**)
- 4) Straight edge, 100mm (code **4700-100**)
- 5) Spring divider, 150mm (code **7260-150**)
- 6) Steel rule, 200mm/8" (code **7110-200**)



5062

Code

5062

6-PIECE MEASURING TOOL SET

■ Includes:

- 1) Vernier caliper, range 0-150mm/0-6" graduation 0.05mm/1/128" (code **1205-150**)
- 2) Outside micrometer, range 0-25mm graduation 0.01mm (code **3202-25A**)
- 3) 90° beveled edge square, 100x70mm grade 00 (code **4790-0100**)
- 4) Straight edge, 100mm (code **4700-100**)
- 5) Spring divider, 150mm (code **7260-150**)
- 6) Steel rule, 200mm/8" (code **7110-200**)



5063

Code

5063

9-PIECE MEASURING TOOL SET

■ Includes:

- 1) Digital caliper, range 0-150mm/0-6", resolution 0.01mm/0.0005" (code **1108-150**)
- 2) Outside micrometer, range 0-25mm, graduation 0.01mm (code **3202-25A**)
- 3) Protractor, range 0-180°, graduation 1° (code **4799-180**)
- 4) Pitch gauge, range 0.25-7mm, 24pcs, metric 60° thread (code **4820-124**)
- 5) Radius gauge, range 1-7mm (code **4801-17**)
- 6) Feeler gauge, range 0.05-1.00mm, 20pcs (code **4602-20**)
- 7) 90° beveled edge square, 100x70mm, grade 0 (code **4790-1000**)
- 8) Scriber (code **7230**)
- 9) Steel rule, 150mm/6" (code **7110-150**)



5091

Code

5091

13-PIECE MEASURING TOOL SET

■ Includes:

- 1) Digital caliper, range 0-150mm/0-6", resolution 0.01mm/0.0005", (code **1108-150**)
- 2) Outside micrometer, range 0-25mm, graduation 0.01mm (code **3202-25A**)
- 3) Dial indicator, range 10mm, graduation 0.01mm (code **2308-10A**)
- 4) Magnetic stand (code **6201-60**)
- 5) Protractor, range 0-180°, graduation 1° (code **4799-180**)
- 6) Pitch gauge, range 0.25-7mm, 24pcs, metric 60° thread (code **4820-124**)
- 7) Radius gauge, range 1-7mm (code **4801-17**)
- 8) Feeler gauge, range 0.05-1.00mm, 20pcs (code **4602-20**)
- 9) 90° beveled edge square, 100x70mm, grade 0 (code **4790-1000**)
- 10) Scriber (code **7230**)
- 11) Steel rule, 150mm/6" (code **7110-150**)
- 12) Depth base attachment (code **6140**)
- 13) Zero setting bar



5013

Code

5013

DIGITAL HORIZONTAL SCALE

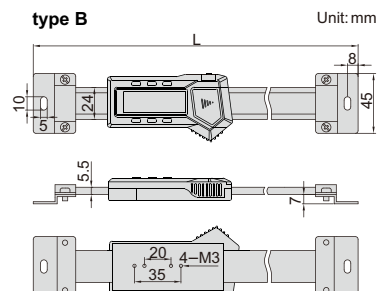
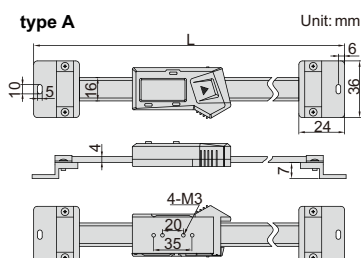
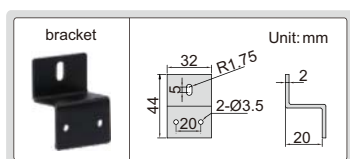
**DATA
OUTPUT**



7101-300A



7101-400A

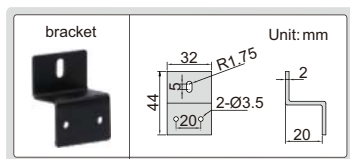


				(mm)
Code	Range	Type	Accuracy	L
7101-100A	100mm	A	±0.02mm	215
7101-150A	150mm	A	±0.03mm	265
7101-200A	200mm	A	±0.03mm	315
7101-300A	300mm	A	±0.04mm	445
7101-400A	400mm	B	±0.05mm	590
7101-500A	500mm	B	±0.05mm	690
7101-600A	600mm	B	±0.08mm	790
7101-800A	800mm	B	±0.10mm	990
7101-1000A	1000mm	B	±0.10mm	1190

- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- 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
- Optional accessory: data output cable (code **7306-20**, **7302-SPC5A/SPC5B**, **7305-SPC2A**)

- Resolution: 0.01mm/0.0005"
- Button function: on/off, zero, mm/inch, ABS, data preset
- Absolute and incremental measurement
- Battery CR2032
- Data output
- Made of stainless steel
- Supplied with bracket to be mounted on the back
- Optional accessory: data output cable (code **7306-20, 7302-SPC5A/SPC5B, 7305-SPC2A**)

DIGITAL VERTICAL SCALE

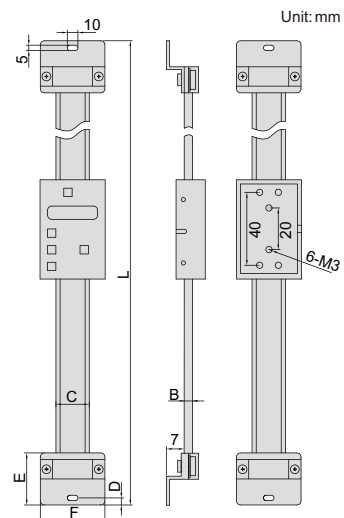


- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero set, mm/in, data set
- Battery LR44
- Made of stainless steel
- Supplied with bracket to be mounted on the back

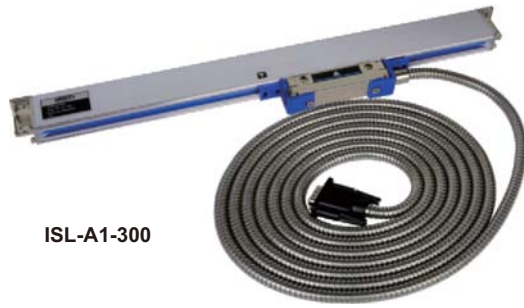
								(mm)
Code	Range	Accuracy	B	C	D	E	F	L
7102-100	100mm	±0.02mm	4	20	6	24	40	245
7102-150	150mm	±0.03mm	4	20	6	24	40	296
7102-200	200mm	±0.03mm	4	20	6	24	40	345
7102-300	300mm	±0.04mm	4	20	6	24	40	445
7102-400	400mm	±0.05mm	4	20	6	24	40	545
7102-500	500mm	±0.05mm	5.5	24	8	32	45	685
7102-600	600mm	±0.08mm	5.5	24	8	32	45	785
7102-800	800mm	±0.10mm	5.5	24	8	32	45	985
7102-1000	1000mm	±0.10mm	5.5	24	8	32	45	1185



7102-300

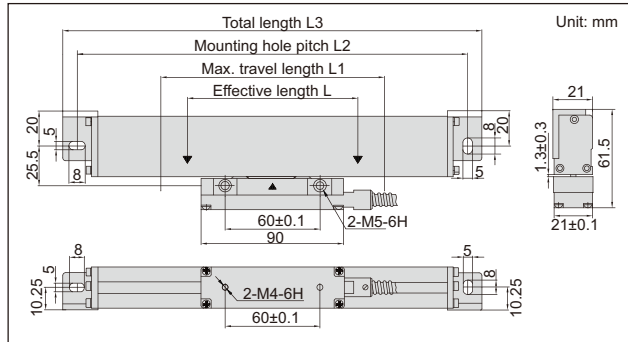


LINEAR SCALE

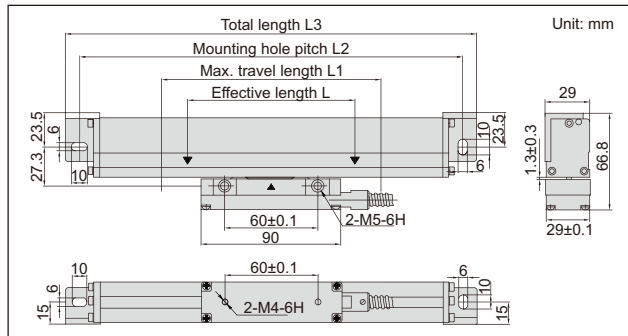


ISL-A1-300

Series ISL-A1 and ISL-A5



Series ISL-B5

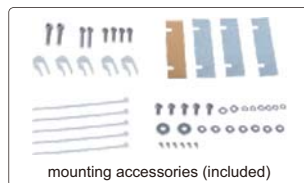


STANDARD DELIVERY

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



'L' shape support (included)



mounting accessories (included)



anti-dust cover (included)



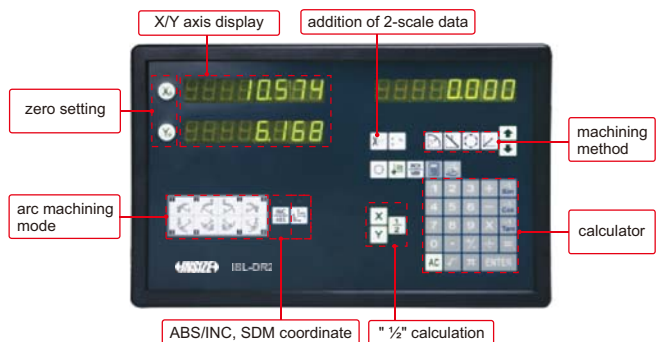
plain base (included, for L ≥ 1500mm)

SPECIFICATION

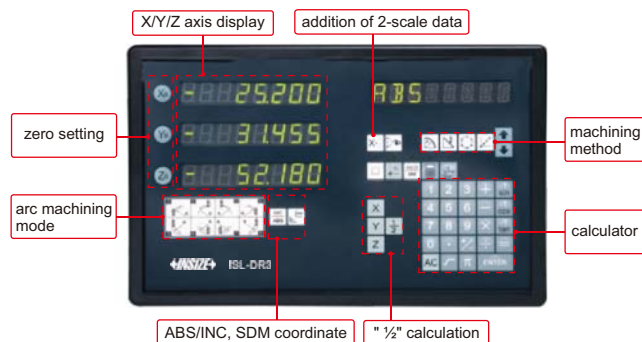
Code	Series ISL-A1		Series ISL-A5		Series ISL-B5	
L1 (mm)	L+30(L<950)	L+50(L≥ 950)	L+30(L<950)	L+50(L≥ 950)	L+30(L<950)	L+50(L≥ 950)
L2 (mm)	L+132(L<950)	L+152(L≥ 950)	L+132(L<950)	L+152(L≥ 950)	L+136(L<950)	L+156(L≥ 950)
L3 (mm)	L+149(L<950)	L+169(L≥ 950)	L+149(L<950)	L+169(L≥ 950)	L+154(L<950)	L+174(L≥ 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)					

Effective length (L)	Code		
	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-A5-1100	ISL-B5-1100
1200mm		ISL-A5-1200	ISL-B5-1200
1300mm		ISL-A5-1300	ISL-B5-1300
1400mm		ISL-A5-1400	ISL-B5-1400
1500mm		ISL-A5-1500	ISL-B5-1500
1600mm		ISL-A5-1600	ISL-B5-1600
1700mm		ISL-A5-1700	ISL-B5-1700
1800mm		ISL-A5-1800	ISL-B5-1800
1900mm		ISL-A5-1900	ISL-B5-1900
2000mm		ISL-A5-2000	ISL-B5-2000
2100mm		ISL-A5-2100	ISL-B5-2100
2200mm		ISL-A5-2200	ISL-B5-2200
2300mm		ISL-A5-2300	ISL-B5-2300
2400mm		ISL-A5-2400	ISL-B5-2400
2500mm		ISL-A5-2500	ISL-B5-2500
2600mm		ISL-A5-2600	ISL-B5-2600
2700mm		ISL-A5-2700	ISL-B5-2700
2800mm		ISL-A5-2800	ISL-B5-2800
2900mm		ISL-A5-2900	ISL-B5-2900
3000mm		ISL-A5-3000	ISL-B5-3000
3100mm		ISL-A5-3100	ISL-B5-3100
3200mm		ISL-A5-3200	ISL-B5-3200

COUNTER



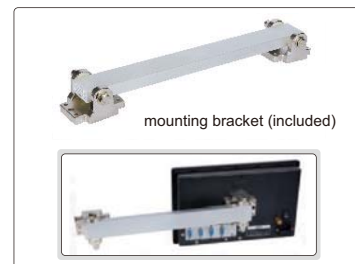
ISL-DR2



ISL-DR3

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	

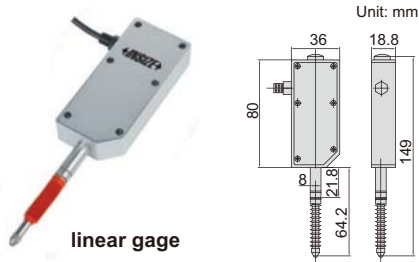


STANDARD DELIVERY

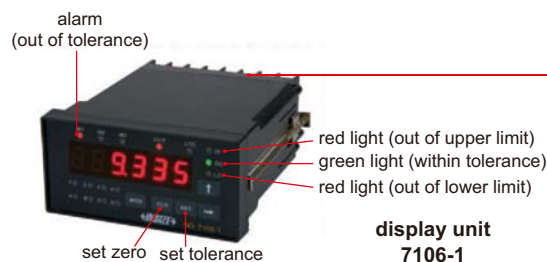
Main unit	1pc
Mounting bracket	1pc
Ground cable	1pc
RS232C cable	1pc
Software CD for RS232C	1pc

LINEAR GAGE AND DISPLAY UNIT

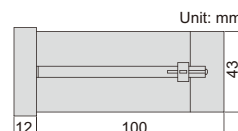
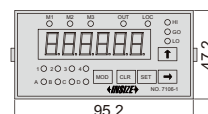
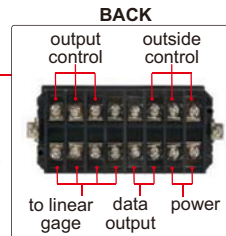
LINEAR GAGE
IP65
WATERPROOF



linear gage



display unit
7106-1



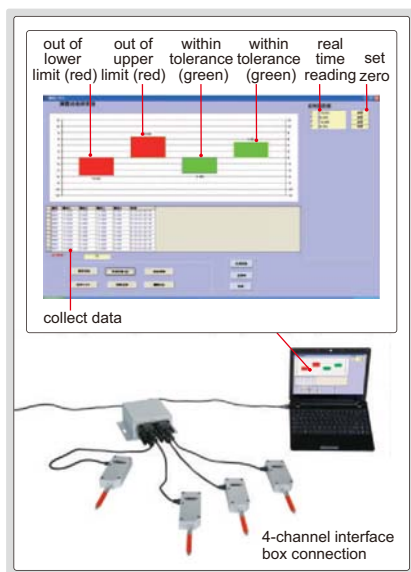
- Linear gage: shock-proof, water proof, dust proof, suitable for high speed movement, long working life
- Display unit: set tolerance and make judgment (out of upper limit, within tolerance, out of lower limit), output the judgment to control outside devices, set zero and hold reading from outside

LINEAR GAGE SPECIFICATION

Code	7106-11	7106-12
Measuring range	12mm	12mm
Resolution	0.01mm	0.001mm
Accuracy	20μm	5μm
Hysteresis	10μm	2μm
Measuring principle	capacity system	
Voltage	5V	
Sampling frequency	100 times/sec.	
Working life	ten million times	
Dust/waterproof	IP65	
Measuring force	1.5N	
Cable length	2m	
Data output	four-core wire	

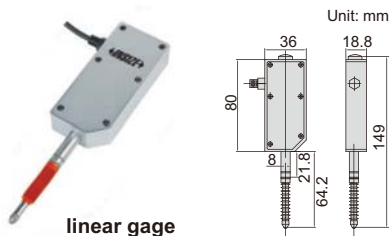
DISPLAY UNIT SPECIFICATION

Code	7106-1
Display	6 digits
Quantity of linear gages to be connected	1pc
Tolerance	set tolerance and make judgment with alarm and lights (out of upper limit, within tolerance, out of lower limit)
Output control	output the tolerance judgment (out of upper tolerance, within tolerance, out of lower tolerance) to control outside devices
Outside control	control the display units from outside (set zero, hold reading)
Data output	connect to PC
Power supply	DC 9~24V



INTERFACE BOX SPECIFICATION

Code	7107-1	7107-2
Quantity of linear gages to be connected	4pcs	8pcs
Data port	RS232 and RS485	
Power supply	DC 9~24V	

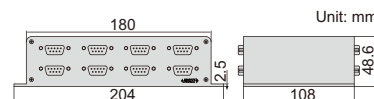
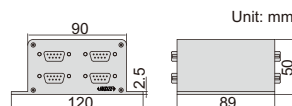


linear gage

- Software is supplied with interface boxes. In the software, it is possible to set tolerance of each channel and show judgment (red when out of tolerance, green when within tolerance), set zero, collect data manually or automatically (time is adjustable), output data to Excel, print report

LINEAR GAGE SPECIFICATION

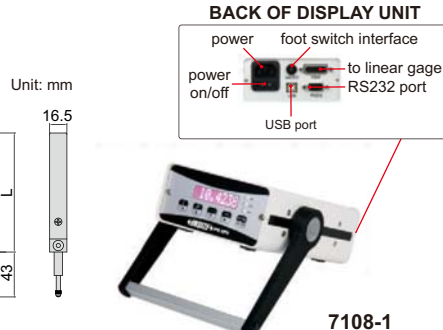
Code	7107-11	7107-12
Measuring range	12mm	12mm
Resolution	0.01mm	0.001mm
Accuracy	20μm	5μm
Hysteresis	10μm	2μm
Measuring principle	capacity system	
Voltage	5V	
Sampling frequency	100 times/sec.	
Working life	ten million times	
Dust/waterproof	IP65	
Measuring force	1.5N	
Cable length	2m	
Data output	RS232	



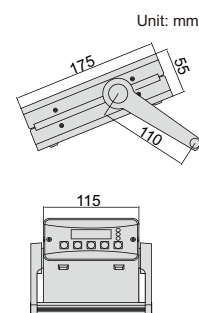
APPLICATION



7108-10



7108-1



LINEAR GAGE SPECIFICATION

Code	7108-10	7108-30
Measuring range	10mm	30mm
Resolution	0.01μm	
Accuracy	(0.5+L/60)μm, L is measuring length in mm	
Dust/waterproof	IP50	
Output signal	1Vss	
Grating pitch	8μm	
Measuring force	0.7~1.6N	
Cable length	1.5m	
Linear gage length (L)	113.5mm	133.5mm

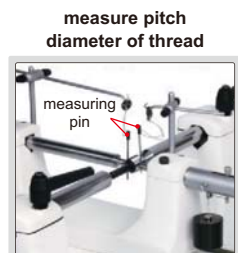
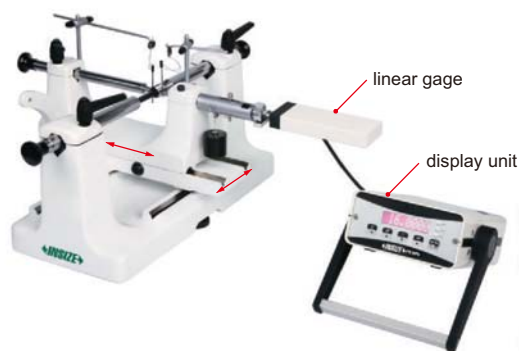
DISPLAY UNIT SPECIFICATION

Code	7108-1
Display	8 digits
Character height	9mm
Quantity of linear gages to be connected	single channel, to connect one linear gage *
Dust/waterproof	IP20
Display unit	mm, inch, grad
Resolution	1μm, 0.1μm, 0.01μm
Data output	USB, RS232
Power supply	AC 85~264V, 150mA

* Double channel display is optional

- Linear gage:
 - Incremental glass scale sensor, with built-in roller bearing, high precision
 - With lifting lever, for quick measurement
- Display unit:
 - Set zero or output data through foot switch (optional)
 - Measuring direction can be changed
 - The reading can be preset
 - Can make accuracy compensation

EXTERNAL THREAD MEASURING DEVICE CODE ISQ-TE100



- Quickly measure major, pitch and minor diameters of external thread
- Suitable for metric, inch, Whitworth, NPT and BSPT

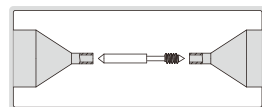
Measuring prism (optional)

- To measure minor diameter of external thread
- Each size is supplied in pair



Code	Prisms included	Size
ISQ-TE100-B	4 pairs	A, B, C, D (for different types and sizes of thread)

Female center (optional)



- With small holes to support small workpieces without female centers
- Supplied in pair

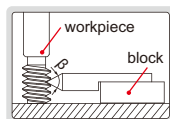
Code
ISQ-TE100-C

Find pointer (optional)

- To find measuring point of NPT or BSPT



Code	Angle β	Applicable thread
ISQ-TE100-F	60°	NPT
ISQ-TE100-G	55°	BSPT



Code	Range	Resolution	Accuracy	Repeatability
ISQ-TE100	0-100mm	0.1μm	2μm	0.5μm

OPTIONAL ACCESSORY

Measuring pin	ISQ-TE100-A
Measuring prism	ISQ-TE100-B
Female center	ISQ-TE100-C
Clamp	ISQ-TE100-D
Setting disc	ISQ-TE100-E
60° find pointer	ISQ-TE100-F
55° find pointer	ISQ-TE100-G
Display unit	7108-30
Linear gage	7108-1

Setting disc (optional)

- To set initial value



Code	Discs included	Disc diameter (mm)
ISQ-TE100-E	22 pcs	3, 5, 8, 12, 16, 20, 24, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100

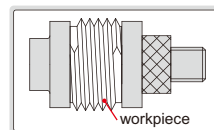
Measuring pin (optional)

- To measure pitch diameter of external thread
- Each size is supplied in pair
- Hardness: 60±2HRC

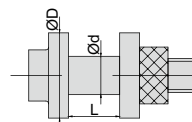


Code	Pins included	Pin diameter (mm)
ISQ-TE100-A	21 pairs	0.170, 0.195, 0.220, 0.250, 0.290, 0.335, 0.390, 0.455, 0.530, 0.620, 0.725, 0.895, 1.100, 1.350, 1.650, 2.050, 2.550, 3.200, 4.000, 5.050, 6.350

Clamp (optional)



- To hold large workpieces with inner bore



Code	Clamps included	d	D	L
ISQ-TE100-D	3 pcs	13.5	30	0-18
		23	60	0-18
		23	75	0-18

(mm)

To be continued

Continued from previous page

Display unit (optional)



7108-1

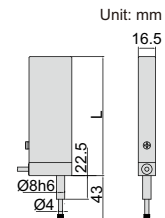
Code	7108-1*
Display	8 digits
Character height	9mm
Dust/waterproof	IP20
Resolution	0.1μm

* Refer to 7108-1 for details

Linear gage (optional)

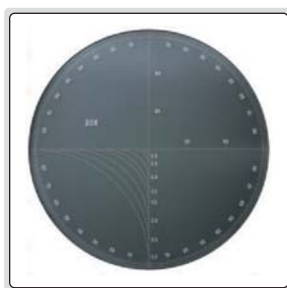
Code	7108-30 *
Measuring range	30mm
Resolution	0.01μm
Accuracy	(0.5+L/60)μm L is measuring length in mm
Dust/waterproof	IP50

* Refer to 7108-30 for details



TOOL PRESETTER CODE ISP-TP300

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)



- Projection screen
- Measure radius, angle, height and squareness
- 99 presetting data can be saved and selected quickly

SPECIFICATION

Maximum tool diameter (X axis)		Ø300mm
Height measuring range (Z axis)		45~450mm
Accuracy	X axis	±6μm
	Z axis	±13μm
Resolution		0.5μm
Diameter of projection screen		Ø120mm
Lens	magnification	20X
	view filed	Ø6mm
Illumination		24V/20W halogen lamp
Spindle holder		BT50
Air source pressure		0.6Mpa
Dimension (L×W×H)		690×620×922mm
Weight		160kg

STANDARD DELIVERY

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



standard rod (included)



BT50/BT40 converter (optional)



BT50/BT30 converter (optional)

OPTIONAL ACCESSORY

BT50/BT30 converter	ISP-TP300-C1
BT50/BT40 converter	ISP-TP300-C2

PROFILE PROJECTOR

Screen diameter: 300mm

X-Y travel: 150x50mm



ISP-Z3015



ISP-A1000E

digital readout of ISP-A1000E

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



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



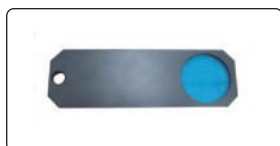
V-block with clamp



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

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

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 PROJECTOR

Screen diameter: 300mm

X-Y travel: 200x100mm



ISP-AZ3020



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

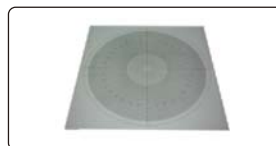
- touch buttons
- USB data output to Excel and CAD
- show diagram directly



OPTIONAL ACCESSORY



lens



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



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			
		accuracy: (3+L/75)µm L is the measuring length in mm			
	Z(focus) travel range	100mm			
max. load capacity	50kg				
Illumination		contour illumination: 24V/150W halogen lamp, brightness is adjustable			
		surface illumination: 24V/150W halogen lamp, brightness is adjustable			
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	1pc
10X lens with half-reflection mirror and oblique illuminator mirror	1pc
Overlay chart clip	4pcs
Foot-switch	1pc
Anti-dust cover	1pc
USB cable and software (only for ISP-A5000E)	1pc

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
Overlay chart	ISP-A5000-CHART

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 PROJECTOR

Screen diameter: 300mm

X-Z travel: 200x100mm



ISP-W3020



ISP-A3000E

digital readout of ISP-A3000E

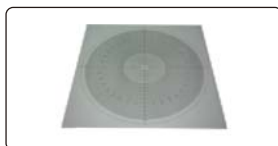
- touch buttons
- USB data output to Excel and CAD
- show diagram directly



OPTIONAL ACCESSORY



lens



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



50mm reading scale (check magnification accuracy)



demo sample



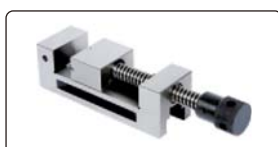
V-block with clamp



rotary table



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



vise



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			
		accuracy: (4+L/25)µm L is the measuring length in mm			
	Y (focus) travel range	75mm			
max. load capacity	50kg				
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			
advanced function	—		Programming for batch measurements		
Power supply		110/220V, 50/60Hz			
Dimension (L×W×H)		1090×830×1010mm			
Weight		160kg			

STANDARD DELIVERY

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

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-A1000-VBLOCK
Rotary table	ISP-A3000-RTABLE
Vice	ISP-A3000-VICE
Printer (only for ISP-A3000E)	ISP-A3000-PRINTER

HORIZONTAL PROFILE PROJECTOR

Screen diameter: 400mm

X-Z travel: 250x150mm



ISP-W4025



ISP-A7000E

digital readout of ISP-A7000E

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



OPTIONAL ACCESSORY



lens



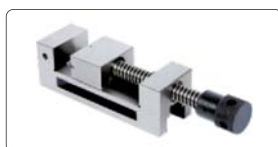
V-block with clamp



rotary table



demo sample (need rotary table)



vise



printer (only for ISP-A7000E)



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)



50mm reading scale (check magnification accuracy)

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				
		accuracy: (4+L/25)µm L is the measuring length in mm				
	Y (focus) travel range	100mm				
max. load capacity	50kg					
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				
	—	Programming for batch measurements				
Power supply		110/220V, 50/60Hz				
Dimension (L×W×H)		1215×646×1210mm				
Weight		240kg				

STANDARD DELIVERY

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

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-A1000-VBLOCK
Rotary table	ISP-A3000-RTABLE
Vice	ISP-A3000-VICE
Printer (only for ISP-A7000E)	ISP-A3000-PRINTER

VISION MEASURING SYSTEM CODE ISD-A100**



- Measures small workpiece (less than 15mm) easily and accurately



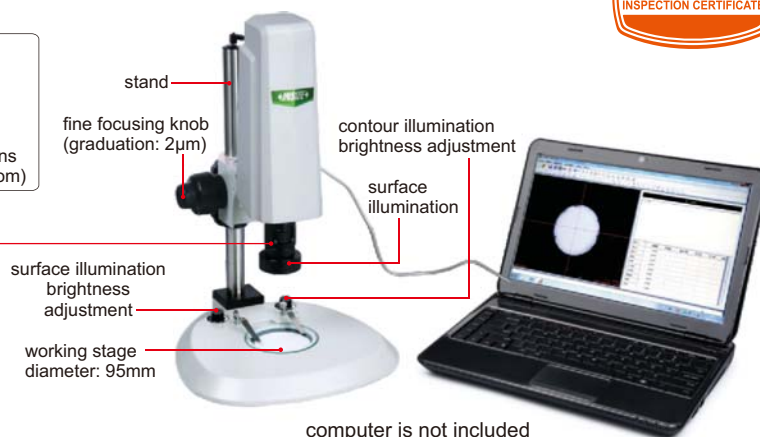
X-Y stage (included)



calibration block (included)



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



computer is not included

SPECIFICATION

Objective	0.75X~5X (zoom)	
Auxiliary objective	1X (included)	0.5X (included)
Focus distance	82mm	175mm
View field (diagonal length)	1.15mm~7.5mm	2.3mm~15mm
Magnification (19" widescreen display)	44X~280X	22X~140X
Camera	CMOS (color)	
Resolution (pixel)	1280×1024 (1.3M)	
Output	USB2.0	
Accuracy	4μm	
Repeatability	2μm	
Illumination	surface: adjustable ring LED contour: adjustable LED	
Dimension (L×W×H)	300×350×450mm	
Weight	2.8kg	

STANDARD DELIVERY

Main unit	1pc
Software disc	1pc
X-Y stage (travel: 74×60mm)	1pc
Calibration block	1pc
0.5X auxiliary objective	1pc
1X auxiliary objective	1pc
Ø95mm glass plate	1pc
Ø95mm white/black plate	1pc
Anti-dust cover	1pc

** Add "-P" on code No. when power supply is 220V, 50/60Hz
Add "-U" on code No. when power supply is 110V, 50/60Hz

SOFTWARE

- Operation system: Windows 7/XP, screen resolution is 1366×768
- Language: English, Chinese
- Output to CAD, EXCEL and WORD
- Input CAD, to compare with workpieces

- coordinate transform

Focus indicator:



fast and accurately find the focus distance, eliminate the visual error

Single measuring tools:



measure coordinate of point



measure center coordinate, radius, diameter and area of circle



measure length of line



measure length and diameter of arc

Combined measuring tools:



find midpoint of a line



measure angle between two lines



measure distance from point to line



measure distance from circle to line



measure distance between two lines



measure distance between two circles



find tangent lines between two circles



measure distance between two points



find angular bisector between two lines



find tangent lines between point and circle



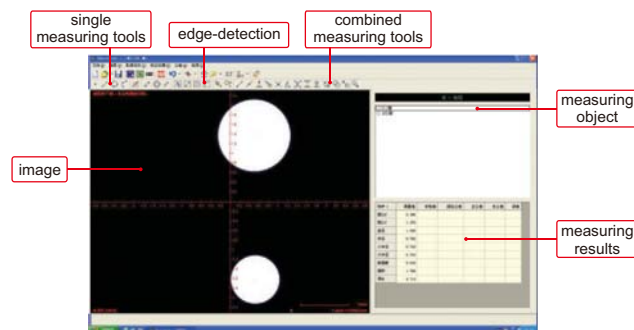
find intersection points between two circles



measure intersection point between two lines

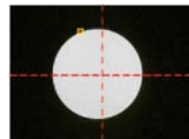


find intersection points between circle and line

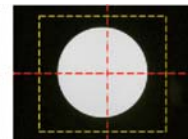


Edge-detection:

Point tool



Box tool



Circle tool



SPECIFICATION

Code	ISD-V150	ISD-V250	ISD-V300
Measuring range (X×Y×Z)	150×100×200mm	250×150×200mm	300×200×200mm
Stage size	354×228mm	450×280mm	500×330mm
Stage glass size	210×160mm	306×196mm	350×250mm
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)		
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, 1.5M pixel		
Illumination	surface and contour with adjustable LED		
Max. height of workpiece	160mm		
Max. weight of workpiece	20kg		
Operation system	Windows 7		
Drive method	manual		
Power supply	110/220V, 50/60Hz		
Dimension (L×W×H)	560×540×850mm	760×600×900mm	760×600×900mm
Weight	100kg	120kg	140kg

STANDARD DELIVERY

Main unit	1pc
Video card with dongle	1pc
Software disc	1pc
Calibration glass chart	1pc
Laser positioner	1pc
Clay	1pc
Foot switch	1pc
Anti-dust cover	1pc

OPTIONAL ACCESSORY

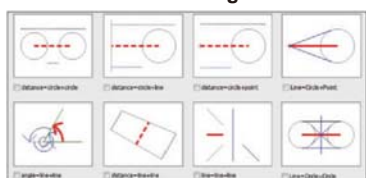
0.5X auxiliary objective	Code: ISD-V-OB05X Working distance: 175mm Magnification: 16.5~97.5X (on 19" monitor)
2X auxiliary objective	Code: ISD-V-OB2X Working distance: 36mm Magnification: 66~390X (on 19" monitor)
Probe	Code: ISD-V-PROBE Includes Ø2mm and Ø3mm styli, Ø25mm calibration ball
Lens with coaxial light	Code: ISD-V-LENS (must be installed in factory)

SOFTWARE

- Operation system: Windows 7
- Language: English
- Single measuring tools:

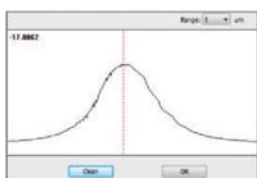
measure coordinate of point	measure center coordinate, diameter and area of circle	measure distance between two points	measure length and diameter of arc	measure angle of two lines
measure distance of two elements	measure length, width and diameter of key slot	measure width and diameter of ring	measure length of open curve	measure length and area of close curve
measure focus distance of surface	measure length, width and area of rectangle	measure center coordinate and axis length of ellipse		

Combined measuring tools:

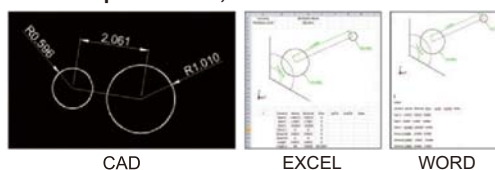


measure distance and angle of two elements

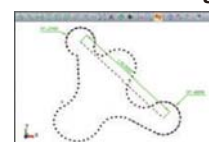
Focus indicator:



Data export to CAD, EXCEL and WORD:



Contour scanning:



Coordinate transfer:



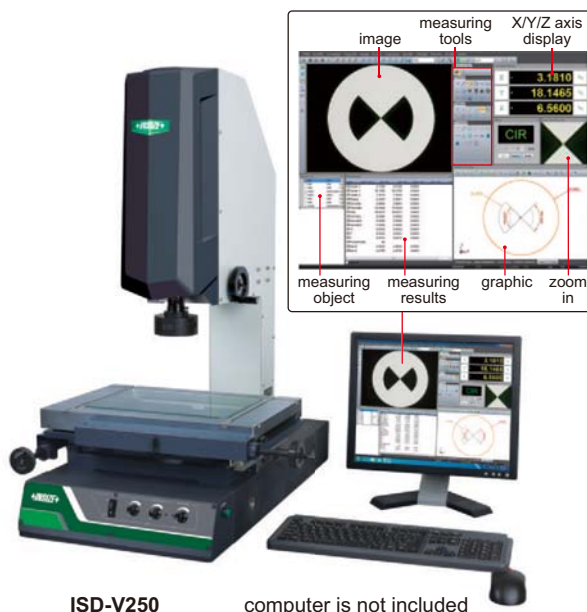
Edge-detection:



Profile detection:

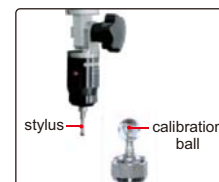


VISION MEASURING SYSTEM



ISD-V250

computer is not included

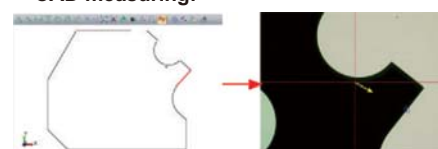


probe (optional), includes Ø2mm and Ø3mm styli, Ø25mm calibration ball, measuring accuracy is 10μm



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

CAD measuring:

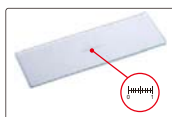


Input CAD drawing and set reference, then move the stage to make the target box in the center of crosshair, the software will do automatic measurement

WiFi DIGITAL MEASURING MICROSCOPE CODE ISM-WF200



calibration rule
(graduation 1mm)



calibration rule
(graduation 0.1mm)

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

SPECIFICATION

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

STANDARD DELIVERY

Microscope	1pc
Base support	1pc
Focus support ring for 80X/150X	1pc
Focus support ring for 60X/200X	1pc
Calibration rule (graduation 0.1mm)	1pc
Calibration rule (graduation 1mm)	1pc
USB cable and software	1pc
AC/DC adapter	1pc

OPTIONAL ACCESSORY

Stand	ISM-WSTD
--------------	-----------------



connected to iPad by WiFi



connected to Android device by WiFi



connected to computer by WiFi



connected to computer by USB cable

STAND (code: ISM-WSTD, optional)



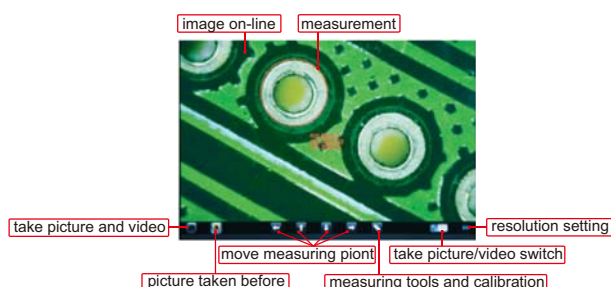
MAGNIFICATION, FOCUS DISTANCE, VIEW FIELD AND ACCURACY

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

1 Software ISM-PAD (for iPad by WiFi)

Measuring tools:

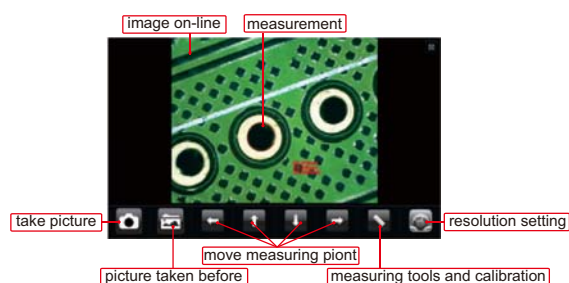
- measure length of line or distance between two points
- measure angle
- measure radius, girth and area of circle with three points



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

Measuring tools:

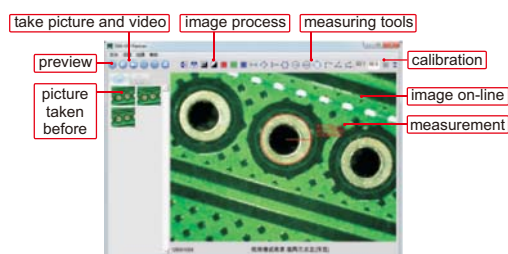
- measure length of line or distance between two points
- measure angle
- measure radius, girth and area of circle with three points



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

Measuring tools:

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



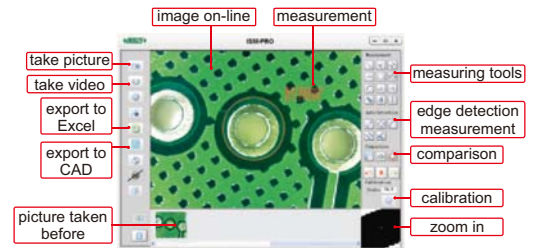
To be continued

Continued from previous page

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 three points |
|  measure distance between two circles |  add text |
|  measure distance between two parallel lines |  measure angle with two lines |
|  measure radius, girth and area of circle |  add number with circle |

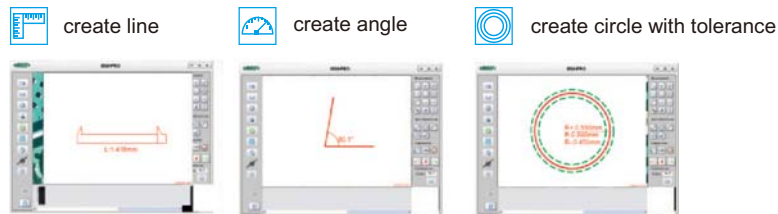


■ Edge detection measurement:

- | | | |
|--|---|---|
|  detect line automatically, and calculate length |  detect circle automatically, and calculate radius, girth and area |  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 | |

■ Comparison:

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



■ Data export to CAD or Excel:



TV DIGITAL MICROSCOPE

STAND (code: ISM-WSTD, optional)



- Connected to TV directly
- For observation, cannot take pictures and videos



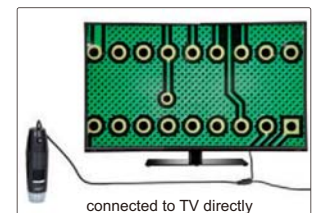
ISM-TV200 (with wire)



ISM-TV200W (wireless)

SPECIFICATION

Code	ISM-TV200	ISM-TV200W
Type	with wire	wireless (maximum transmission distance 5m)
Magnification	10X~200X (on 17" TV)	
Pixel	0.35M	
Illumination	adjustable brightness LED	
Focus	supplied with focus ring, stand (ISM-WSTD) is optional	
Power supply	DC	built-in rechargeable battery

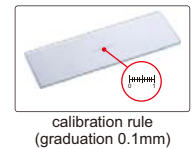
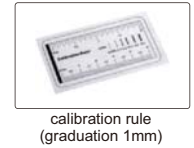
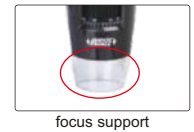
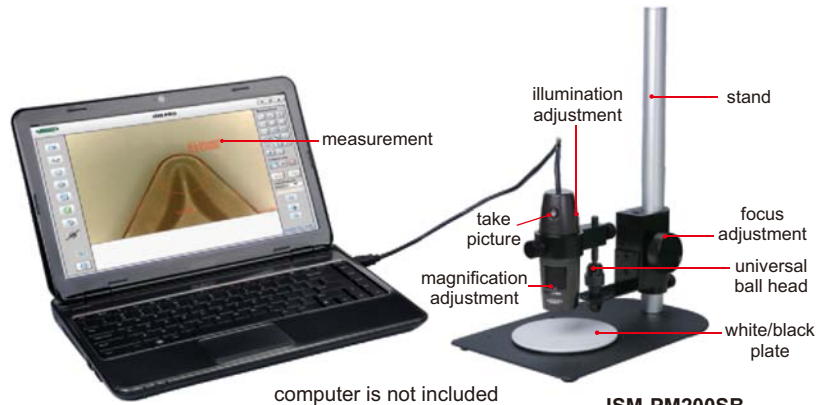


MAGNIFICATION, FOCUS DISTANCE AND VIEW FIELD

ISM-TV200			ISM-TV200W		
Magnification	Focus distance	View field	Magnification	Focus distance	View field
50X	21mm	8.1×6.4mm	60X	19mm	6.9×5.2mm
100X	13mm	3.9×3.1mm	80X	16mm	5.0×3.8mm
150X	16mm	2.6×2.1mm	150X	16mm	2.6×2.1mm
200X	19mm	1.8×1.5mm	200X	19mm	1.8×1.5mm

DIGITAL MEASURING MICROSCOPE

- Can take pictures and videos
- Supplied with software



ISM-PM200SB



SPECIFICATION

Code	ISM-PM200SB	ISM-PM600SB	ISM-PM160LA
Magnification	10X~200X	450X~600X	35X~160X
Type	short focus distance	short focus distance	long focus distance
Focus support	included	not included	not included
Calibration rule	graduation 0.1 and 1mm	graduation 0.1mm	graduation 0.1 and 1mm
Pixel	2M (resolution: 1600×1200)		
Illumination	built-in adjustable LED		
Power supply	USB 2.0 cable (voltage required: 5±0.1V)		

MAGNIFICATION, FOCUS DISTANCE, VIEW FIELD AND ACCURACY

ISM-PM200SB				ISM-PM600SB				ISM-PM160LA			
Magnification	Focus distance	View field (mm)	Accuracy	Magnification	Focus distance	View field (mm)	Accuracy	Magnification	Focus distance	View field (mm)	Accuracy
50X	21mm	8.1×6.4	30μm	450X	1.4mm	0.85×0.67	6μm	50X	62mm	8.1×6.4	30μm
100X	13mm	3.9×3.1	15μm	500X	5.5mm	0.76×0.61	6μm	100X	45mm	3.9×3.1	15μm
150X	16mm	2.6×2.1	10μm	550X	8.6mm	0.69×0.55	5μm	160X	50mm	2.4×1.9	10μm
200X	19mm	1.8×1.5	8μm	600X	11.5mm	0.63×0.51	5μm				

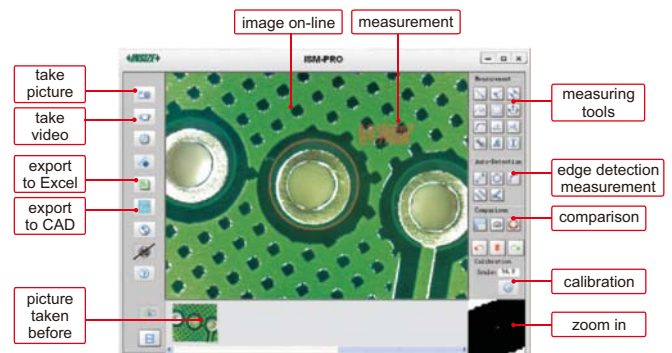
SOFTWARE

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

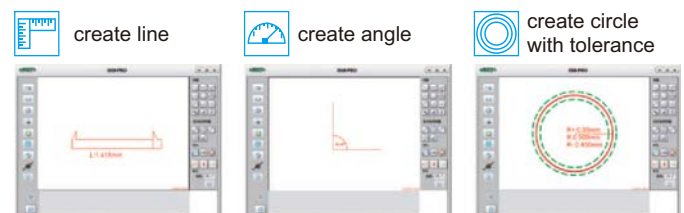
■ Edge detection measurement:

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



■ Comparison:

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



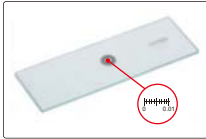
■ Data export to CAD or Excel:



METALLURGICAL MICROSCOPE CODE ISM-M2000

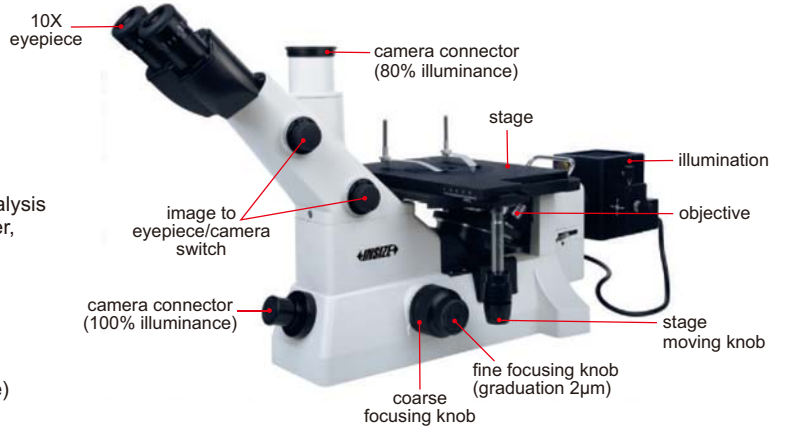


adapter 0.5X
(included)



calibration rule
(graduation 0.01mm)

- For high magnification observation and metallurgical image analysis
- Infinite optical system, can add optical accessories like polarizer, analyzer, DIC (code ISM-M2000-DIC) into optical path without image quality influence
- Objective can be used in both bright field and dark field
- Kohler illumination system provides uniform illumination field
- Three working modes: 100% eyepiece observation, 100% camera observation, both eyepiece and camera observation (80% illuminance for camera and 20% illuminance for eyepiece)



SPECIFICATION

Eyepiece (wide field)	10X (view field: Ø22mm)				
Objective (plan achromatic)	5X (included)	10X (included)	20X (included)	50X (included)	100X (included)
Numerical aperture	0.12	0.25	0.40	0.75	0.90
Working distance	10mm	10mm	5mm	1.3mm	0.7mm
Stage	double layer, size: 160×140mm, travel: 75×50mm (graduation: 0.1mm)				
Kohler illumination	12V/50W halogen lamp, brightness is adjustable with polarizer and analyzer, built-in green, yellow, blue, gray and frosted glass				
Pupil distance	48~75mm				
Diopter adjustment	±5 diopter (two eyepieces)				
Power supply	110/220V, 50/60Hz				
Dimension (L×W×H)	647×268×376mm				
Weight	12kg				

STANDARD DELIVERY

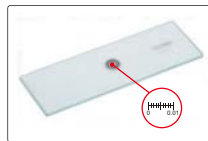
Main unit	1pc
10X dividing eyepiece (0.1mm/div.)	1pc
Calibration rule (graduation 0.01mm)	1pc
Camera adapter	1pc
Adapter 0.5X	1pc
Anti-dust cover	1pc

OPTIONAL ACCESSORY

15X eyepiece (view field: Ø16mm)	ISM-M2000-15X
20X eyepiece (view field: Ø12mm)	ISM-M2000-20X
DIC	ISM-M2000-DIC
Metallurgical image analysis software and camera	ISM-MAS100

METALLURGICAL IMAGE ANALYSIS SOFTWARE AND CAMERA CODE ISM-MAS100

application example



calibration rule
(optional)



adapter 0.5X
(optional)

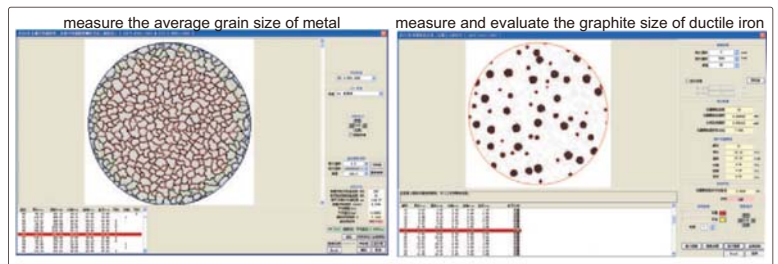


- Inserted into eyepiece tube or camera connector of microscopes
- Supplied with software for metallurgical structure analysis, measurement and evaluation

SPECIFICATION

Sensor	1/2" CMOS
Pixel	300M
Resolution	2048×1536
Frame rate	6fps
Exposure	manual or auto, exposure time is adjustable
SNR	43dB
Power supply	USB
Weight	400g

metallurgical image analysis software (included)



STANDARD DELIVERY

Camera	1pc
USB cable and software	1pc

OPTIONAL ACCESSORY

Calibration rule (graduation 0.01mm)	ISM-MAS-SCALE
Adapter 0.5X	ISM-MAS-ADAPTER

ZOOM STEREO MICROSCOPE

SPECIFICATION

Code	ISM-ZS50	ISM-ZS50T
Optical tube	binocular	trinocular
Eyeiece (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	215mm	
Illumination	adjustable reflected and transmitted LED light	
Power supply	110/220V, 50/60Hz	
Dimension (L×W×H)	290×260×480mm	
Weight	4.9kg	



ISM-ZS50

STANDARD DELIVERY

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

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
Digital camera		ISM-D500

ZOOM STEREO MICROSCOPE

SPECIFICATION

Code	ISM-ZS30
Optical tube	binocular
Eyeiece (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	147mm
Illumination	adjustable reflected and transmitted LED light
Power supply	110/220V, 50/60Hz
Dimension (L×W×H)	260×190×400mm
Weight	4.3kg



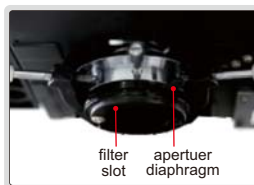
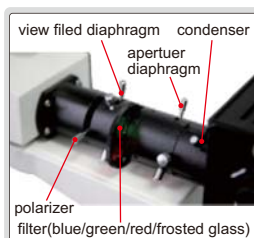
STANDARD DELIVERY

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

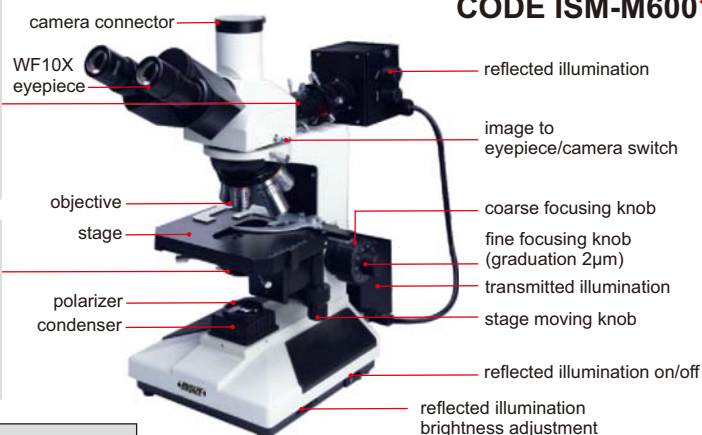
OPTIONAL ACCESSORY

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 (0.1mm/div.)	ISM-ZS30-EPD10X
	WF15X (view field: Ø16mm)	ISM-ZS50-EP15X
	WF20X (view field: Ø12mm)	ISM-ZS50-EP20X
Digital camera		ISM-D500

HIGH MAGNIFICATION MICROSCOPE CODE ISM-M600**



- For high magnification observation
- Reflected and transmitted illumination can work at the same time
- Objectives 40X, 60X are spring type



SPECIFICATION

Eyepiece (wide field)	10X (view field: Ø18mm)				
Objective (plan achromatic)	5X	10X	20X	40X	60X
Numerical aperture	0.12	0.25	0.40	0.60	0.75
Working distance	18.4mm	8.8mm	8.6mm	3.7mm	1.34mm
Stage	double layer with sample clamp size: 160×140mm travel: 75×50mm (graduation: 0.1mm)				
Pupil distance	53~75mm				
Diopter adjustment	±5 diopter (one eyepiece)				
Illumination	reflected and transmitted: 6V/20W halogen lamp, brightness is adjustable				
Dimension (L×W×H)	450×300×350mm				
Weight	11kg				

** Add "-P" on code No. when power supply is 220V, 50/60Hz
Add "-U" on code No. when power supply is 110V, 50/60Hz

STANDARD DELIVERY

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

OPTIONAL ACCESSORY

Objective	PL80X	ISM-MTM-OB80X
	PL100X (dry type)	ISM-MTM-OB100X
10X dividing eyepiece (0.1mm/div.)		ISM-MTM-EPD10X
WF16X eyepiece		ISM-MTM-EP16X
WF20X eyepiece		ISM-MTM-EP20X
Camera adapter (1X)		ISM-M600-ADAPTER
Digital camera		ISM-D500

HIGH MAGNIFICATION MICROSCOPE CODE ISM-M1000**

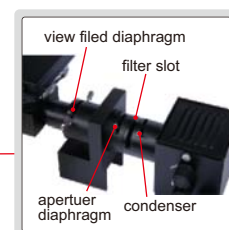
- For high magnification observation
- Kohler illumination system provides uniform illumination field
- Objectives 20X, 40X, 100X are spring type

STANDARD DELIVERY

Main unit	1pc
Oil for 100X objective	1bottle
Anti-dust cover	1pc
Filter (blue/green/yellow)	1pc of each

SPECIFICATION

Eyepiece (wide field)	10X (view field: Ø18mm)			
Objective (plan achromatic)	10X	20X	40X	100X (oil type)
Numerical aperture	0.25	0.40	0.60	1.25
Working distance	8.8mm	8.6mm	3.3mm	0.33mm
Stage	double layer size: 180×150mm travel: 15×15mm			
Pupil distance	53~75mm			
Diopter adjustment	±5 diopter (one eyepiece)			
Illumination	6V/20W halogen lamp			
Power supply	220V, 50/60Hz **			
Dimension (L×W×H)	385×300×440mm			
Weight	11kg			



OPTIONAL ACCESSORY

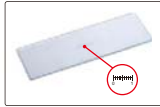
Objective	PL50X	ISM-MTM-OB50X
	PL60X	ISM-MTM-OB60X
	PL80X	ISM-MTM-OB80X
	PL100X (dry type)	ISM-MTM-OB100X
10X dividing eyepiece (0.1mm/div.)		ISM-MTM-EPD10X
WF16X eyepiece		ISM-MTM-EP16X
WF20X eyepiece		ISM-MTM-EP20X
Camera adapter (1X)		ISM-M1000-ADAPTER
Digital camera		ISM-D500

** Add "-U" on code No. when power supply is 110V, 50/60Hz

DIGITAL CAMERA CODE ISM-D500



connector
Ø23.2/Ø30mm



calibration rule
(graduation 0.1mm)



adapter
0.45X

- Inserted into eyepiece tube or camera connector of microscopes
- Supplied with software

OPTIONAL ACCESSORY

Connector Ø23.2/Ø30.5mm	ISM-DCA-CON
-------------------------	-------------

SOFTWARE FOR DIGITAL CAMERA (INCLUDED)



Measuring Tools:



measure distance between two points



measure angle with three points



measure circle



measure rectangle



calibration

- Can take pictures and videos
- Exposure/gain/gamma/saturation/colour adjustment
- Image process feature: zoom in/out, image flip and so on

SPECIFICATION

Sensor	1/2.5" CMOS
Pixel	5M
Resolution	2592×1944 or 1296×972
Frame rate	3fps (2592×1944) 12fps (1296×972)
Exposure	manual or auto, exposure time is adjustable
SNR	41dB
Power supply	USB
Weight	400g

STANDARD DELIVERY

Main unit	1pc
Adapter 0.45X	1pc
Calibration rule (graduation 0.1mm)	1pc
Connector Ø23.2/Ø30mm	1pc
USB cable	1pc
Software disc	1pc

PORTABLE MEASURING MICROSCOPE



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

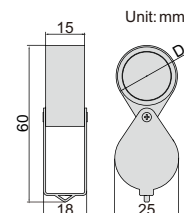
FOLDING MAGNIFIER

- Glass lens

Code	Magnification	Lens diameter (D)
7511-8	8X	Ø21mm



7511-8



closed

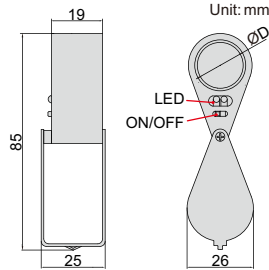


closed



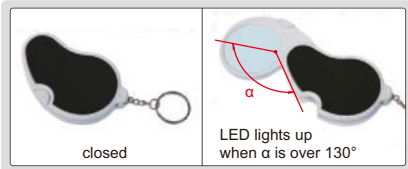
- Glass lens
- Powered by 3xLR927 batteries

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

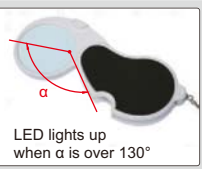


7515-10

FOLDING MAGNIFIER WITH ILLUMINATION

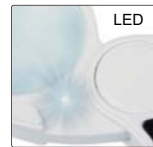
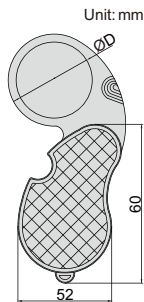


closed



- Plastic lens
- Powered by 2xCR1620 batteries
- LED lights up automatically when α is over 130°

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



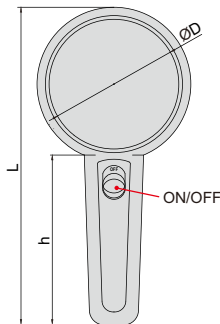
7514-1

MAGNIFIER WITH ILLUMINATION

- Glass lens
- Powered by 3xAAA batteries



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



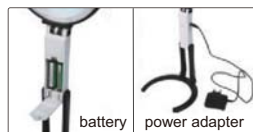
7513-2



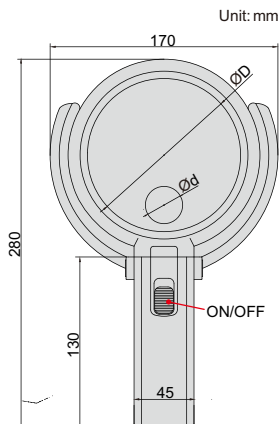
7513-4

THREE WAYS MAGNIFIER WITH ILLUMINATION

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



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



7512-1

MOTORIZED 360° SWIVEL VIDEOSCOPE CODE ISV-4000D

ATTENTION: THE CABLE CAN BE BENT
BUT CAN'T BE SET AT A FIXED SHAPE

TUNGSTEN WIRE WEAVED CABLE
RESISTANCE TO BREAK AND WEAR

IP65
WATERPROOF

- Motorized joystick to bend the lens at any direction
- Lens bending is automatically locked when joystick is hold for more than 3 seconds

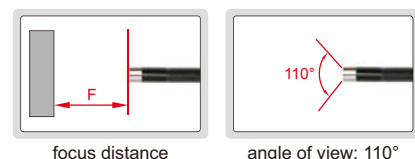
SPECIFICATION

Lens	diameter(D)	6mm
	focus distance(F)	15mm ~ ∞
	illumination	6pcs LED
	pixel	0.41M
	dust/waterproof	IP65
	bend control	motorized joystick
Cable	length	1.5m
	type	tungsten wire weaved cable
Main unit	function	take picture, take video
	file format	picture: JPG, video: AVI
	image process	brightness, image quality zoom (1X, 2X, 3X)
	memory	8G SD card
	output	TV, USB
power supply		rechargeable battery (for 4 hours working) AC/DC adapter (for continuous working)
Weight		1kg



STANDARD DELIVERY

Main unit	1pc
Cable with lens	1pc
8G SD card	1pc
AC/DC adapter	1pc
Video output cable	1pc
USB cable	1pc



MANUAL 360° SWIVEL VIDEOSCOPE

STEEL WIRE WEAVED CABLE
RESISTANCE TO BREAK AND WEAR

IP65
WATERPROOF



ISV-2000D

STANDARD DELIVERY

Main unit	1pc
Cable with lens	1pc
8G SD card	1pc
AC/DC adapter	1pc
Video output cable	1pc
USB cable	1pc

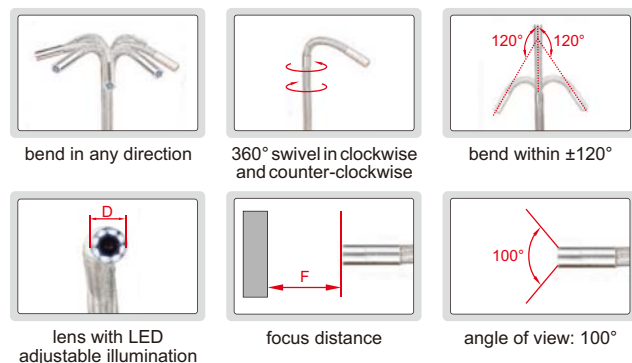
OPTIONAL ACCESSORY

Base	ISV-2000D-BASE
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base (optional)

ATTENTION: THE CABLE CAN BE BENT
BUT CAN'T BE SET AT A FIXED SHAPE

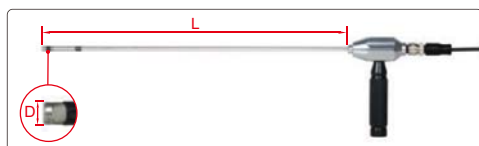
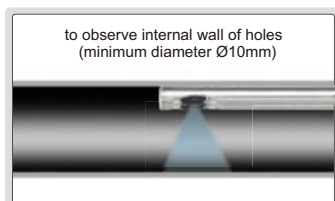
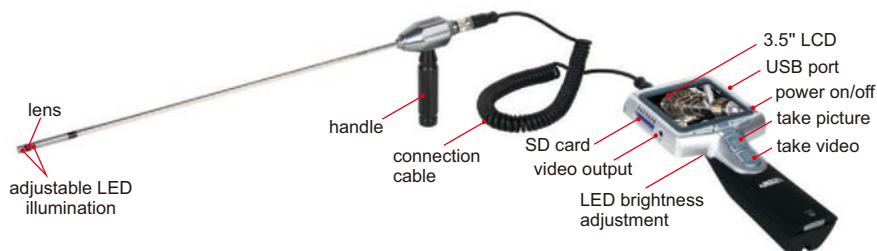
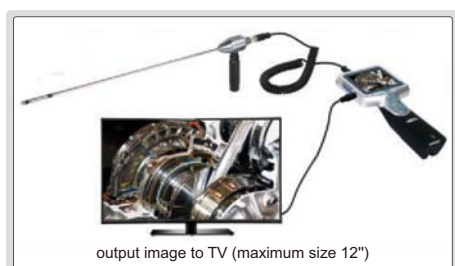


SPECIFICATION

Code	ISV-2000D	ISV-2001D	ISV-3000D	ISV-3001D
Lens	diameter(D)	6.5mm	4.5mm	
	focus distance(F)	15mm~∞	8~80mm	
	illumination	8pcs LED	6pcs LED	
	pixel	0.35M		
	dust/waterproof	IP65		
	bend control	manual joystick		
Cable	length	1.5m	3m	1.5m
	type	steel wire weaved cable		
Main unit	function	take picture, take video		
	file format	picture: JPG, video: AVI		
	image process	brightness, image quality zoom (1X, 2X, 3X, 4X, 5X)		
	memory	8G SD card		
	output	TV, USB		
power supply		rechargeable battery (for 2 hours working) AC/DC adapter (for continuous working)		
Weight		650g	800g	600g

IP57
WATERPROOF

SIDE VIEW VIDEOSCOPE (RIGID) CODE ISV-RV

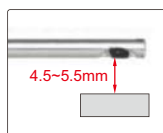


SPECIFICATION

Diameter (D)	5.5mm
Length (L)	350mm
Dust/waterproof probe	IP57
Pixel	0.3M
Resolution	640×480
Frame rate	30fps
Function	take picture, take video
File format	picture: JPG, video: AVI
Memory	2G SD card
Output	TV, USB
Power supply	rechargeable battery (for 3 hours working)
Weight	570g

STANDARD DELIVERY

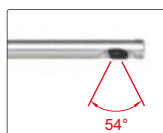
Main unit	1pc
2G SD card	1pc
AC/DC adapter	1pc
Video output cable	1pc
USB cable	1pc



focus distance



side view



angle of view

ATTENTION: THE CABLE CAN BE BENT
BUT CAN'T BE SET AT A FIXED SHAPE

STEEL WIRE WEAVED CABLE
RESISTANCE TO BREAK AND WEAR

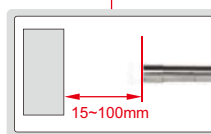
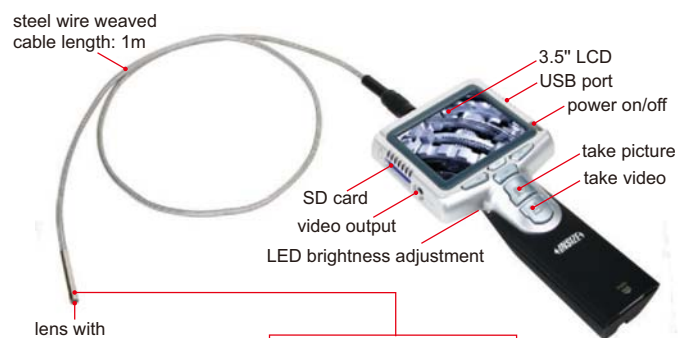
OPTIONAL CABLE
LENGTH 3M, 5M AND 10M

IP65
WATERPROOF

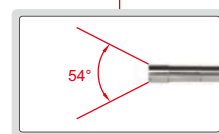
VIDEOSCOPE CODE ISV-E10

SPECIFICATION

Lens	diameter	5.5mm
	pixel	0.3M
	resolution	640×480
	frame rate	30fps
Cable	length	1m
	type	steel wire weaved cable
Main unit	function	take picture, take video
	file format	picture: JPG, video: AVI
	image process	brightness, contrast, color saturation
	memory	2G SD card
	output	TV, USB
	power supply	rechargeable battery (for 3 hours working)
Weight		450g



focus distance



angle of view

STANDARD DELIVERY

Main unit	1pc
Cable with lens	1pc
2G SD card	1pc
45° mirror	1pc
AC/DC adapter	1pc
Video output cable	1pc
USB cable	1pc
Lens cleaning kit	1pc



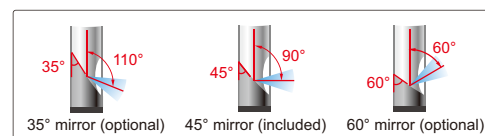
front view



side view (with mirror)

OPTIONAL ACCESSORY

35° mirror	ISV-E55-M35
60° mirror	ISV-E55-M60

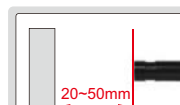
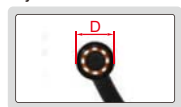


VIDEOSCOPE CODE ISV-E20

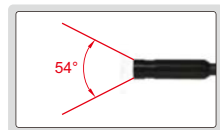
the cable has high illumination
and can be set at any shape.
it is suitable to observe large
internal space like turbocharger.



lens with 8pcs LED
adjustable illumination



focus distance



angle of view

memory cable
length: 1m



IP57
WATERPROOF

SPECIFICATION

Lens	diameter (D)	12mm
	pixel	0.4M
	resolution	720×682
	frame rate	30fps
Cable	length	1m
	type	memory (can be set at any shape)
Main unit	function	take picture, take video
	file format	picture: JPG, video: AVI
	image process	brightness, contrast, color saturation
	memory	2G SD card
	output	TV, USB
	power supply	rechargeable battery (for 3 hours working)
Weight		600g

STANDARD DELIVERY

Main unit	1pc
Cable with lens	1pc
2G SD card	1pc
AC/DC adapter	1pc
Video output cable	1pc
USB cable	1pc
Lens cleaning kit	1pc

OPTIONAL ACCESSORY

45° mirror	ISV-E20-MIRROR
Hook	ISV-E20-HOOK
Magnet pick up	ISV-E20-MAGNET



45° mirror (optional)



hook (optional)



magnet pick up (optional)

PIPE VIDEOSCOPE CODE ISV-VP280

SPECIFICATION

Lens	diameter	28mm
	dust/waterproof	IP68
	pixel	0.3M
	resolution	640×480
Cable	length	22m
	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		5kg

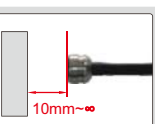
STANDARD DELIVERY

Main unit	1pc
Cable with lens	1pc
Stand	1pc
4G SD card	1pc
Ø100mm brush	1pc
AA battery	4pcs
Video output cable	1pc
USB cable	1pc

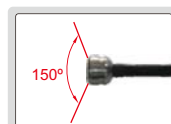


ATTENTION: RESISTANCE TO ACID AND
ALKALI LIQUID (CONSULT IS NEEDED)

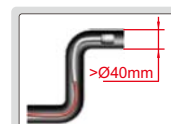
IP68
WATERPROOF



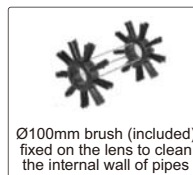
focus distance



angle of view



can turn at least
two times in the
pipe (>Ø40mm)



Ø100mm brush (included)
fixed on the lens to clean
the internal wall of pipes



Ø50mm centering ring
(optional) fixed on the lens
to center lens in the pipe



vertical horizontal

OPTIONAL ACCESSORY

Ø50mm centering ring	ISV-VP280-R50
Ø150mm brush	ISV-VP280-B150

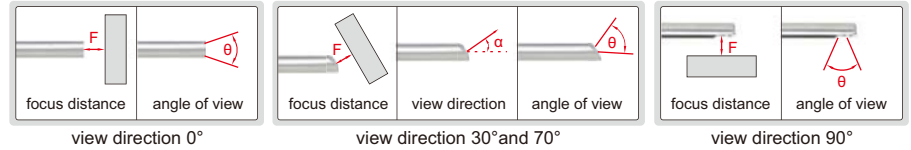
IP67
WATERPROOF

RIGID BORESCOPE



ISV-1H4300

- Focus distance: 2mm, depth of view: 5~100mm
- Dust/waterproof level: IP67
- Can be used in the liquid with temperature -10°C~85°C



SPECIFICATION

Code	Length (L)	View direction (α)	Diameter (D)	Angle of view (θ)
ISV-1H4170	174mm	0°	4mm	≥60°
ISV-1H4173	174mm	30°		
ISV-1H4177	174mm	70°		
ISV-1H4179	166mm	90°		
ISV-1H4300	302mm	0°		
ISV-1H4303	302mm	30°		
ISV-1H4307	302mm	70°		
ISV-1H4309	297mm	90°		

Code	Length (L)	View direction (α)	Diameter (D)	Angle of view (θ)
ISV-1H6200	209mm	0°	6mm	≥70°
ISV-1H6203	209mm	30°		
ISV-1H6207	209mm	70°		
ISV-1H6209	166mm	90°		
ISV-1H6320	328mm	0°		
ISV-1H6323	328mm	30°		
ISV-1H6327	328mm	70°		
ISV-1H6329	330mm	90°		

OPTIONAL ACCESSORY

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



LED light handle (optional)



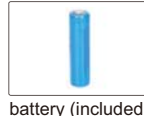
adjustable LED light source (optional)



camera (optional)

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	1pc
Battery	1pc
Charger	1pc



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	1pc
1.8m optical fiber cable	1pc



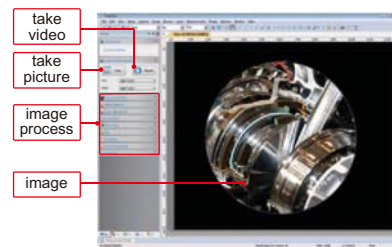
CAMERA CODE ISV-1CAM



- For rigid borescopes
- Connected to computer USB port
- Auto-exposure, auto-gain, auto white balance
- Focus is adjustable

SPECIFICATION

Sensor	color CMOS
Pixel	1.3M
Resolution	1280×1024
Frame rate	15~50fps
Software	take picture, take video, zoom in, zoom out, image rotation
Power supply	USB



STANDARD DELIVERY

Camera	1pc
Connector	1pc
USB cable and software	1pc

FRONT VIEW BORESCOPE (RIGID) CODE ISV-HF4030

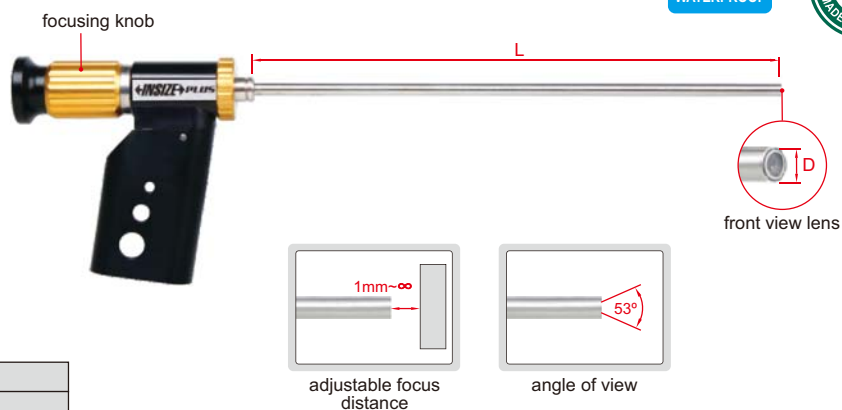
- Dust/waterproof level: IP67
- Lens can be used in the liquid with temperature -10°C~100°C
- LED light source is needed



camera (optional)



LED light source (optional)



IP67
WATERPROOF



SPECIFICATION

Diameter (D)	4mm
Length (L)	300mm
Depth of view	>15mm
Dust/waterproof lens	IP67
Dimension	410×105×30mm
Weight	220g

STANDARD DELIVERY

Main unit	1pc
Handle	1pc

OPTIONAL ACCESSORY

LED light source	ISV-HL3000
Camera and software	ISV-HCAM

ROTARY SIDE VIEW BORESCOPE (RIGID) CODE ISV-HR6032

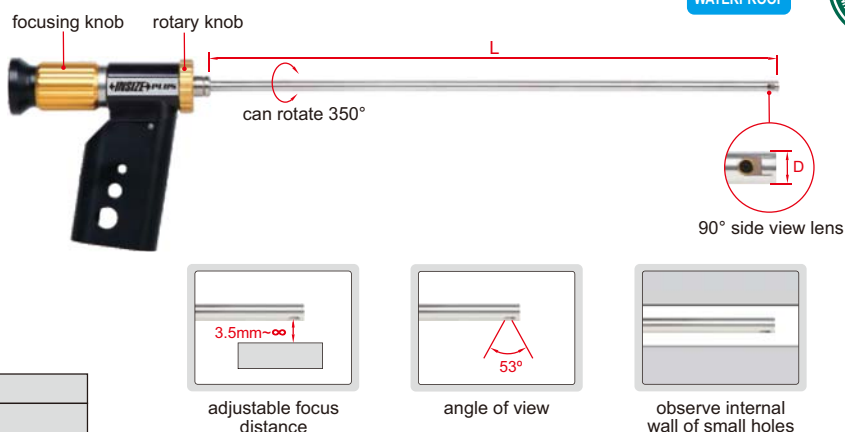
- Lens can rotate 350°
- Dust/waterproof level: IP67
- Lens can be used in the liquid with temperature -10°C~100°C
- LED light source is needed



camera (optional)



LED light source (optional)



IP67
WATERPROOF



SPECIFICATION

Diameter (D)	6mm
Length (L)	320mm
Depth of view	>15mm
Dust/waterproof lens	IP67
Dimension	430×105×30mm
Weight	300g

STANDARD DELIVERY

Main unit	1pc
Handle	1pc

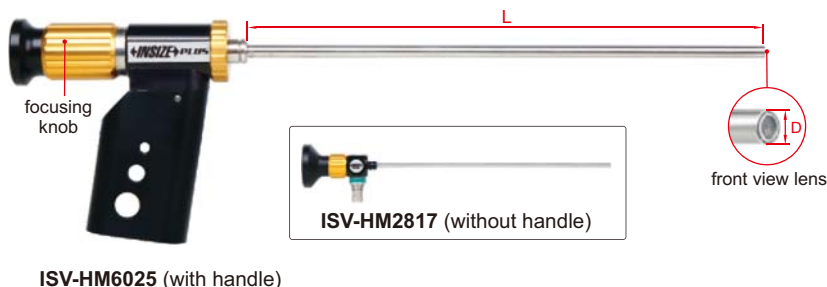
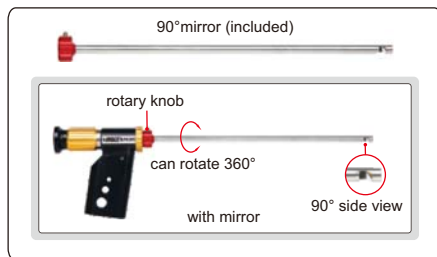
OPTIONAL ACCESSORY

LED light source	ISV-HL3000
Camera and software	ISV-HCAM



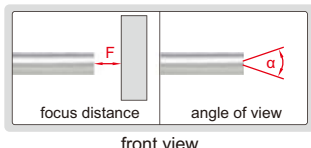
IP67
WATERPROOF

BORESCOPE WITH MIRROR (RIGID)

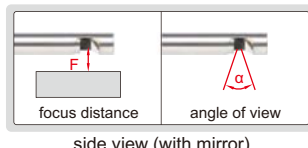


ISV-HM6025 (with handle)

- Front view, side view with mirror
- Dust/waterproof level: IP67
- Lens can be used in the liquid with temperature $-10^{\circ}\text{C} \sim 80^{\circ}\text{C}$
- LED light source is needed



front view



side view (with mirror)



LED light source (optional)



camera (optional)

SPECIFICATION

Code	ISV-HM2817	ISV-HM4023	ISV-HM6025	ISV-HM6051
Diameter (D)	2.8mm	4mm	6mm	6mm
Length (L)	175mm	240mm	258mm	490mm
Focus distance (F)	2mm~ ∞ (adjustable)	6mm~ ∞ (adjustable)	4mm~ ∞ (adjustable)	3mm~ ∞ (adjustable)
Angle of view (α)	22°	22°	34°	48°
Depth of view	>15mm			
Dust/waterproof lens	IP67			
Handle	without	included	included	included
Dimension	235×33×30mm	368×105×30mm	368×105×30mm	610×105×30mm
Weight	55g	250g	260g	300g

STANDARD DELIVERY

Main unit	1pc
Handle (except ISV-HM2817)	1pc
90° mirror	1pc

OPTIONAL ACCESSORY

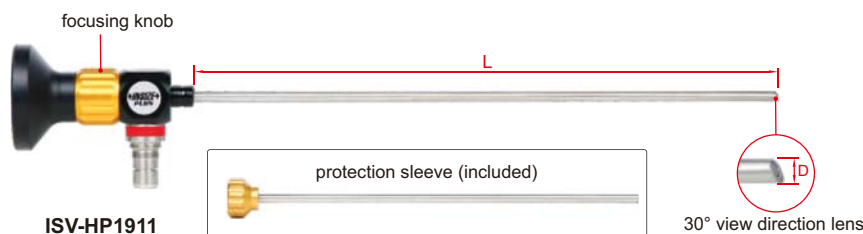
LED light source	ISV-HL3000
Camera and software	ISV-HCAM



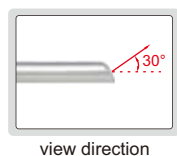
IP67
WATERPROOF

OBLIQUE VIEW BORESCOPE (RIGID)

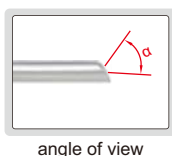
- Small diameter, used to observe small space
- Dust/waterproof level: IP67
- Lens can be used in the liquid with temperature $-10^{\circ}\text{C} \sim 100^{\circ}\text{C}$
- Supplied with protection sleeve
- LED light source is needed



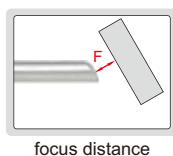
ISV-HP1911



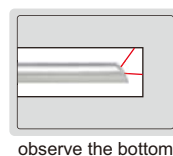
view direction



angle of view



focus distance



observe the bottom of small blind holes



LED light source (optional)



camera (optional)

SPECIFICATION

Code	ISV-HP1911	ISV-HP2811	ISV-HP2817
Diameter (D)	1.9mm	2.8mm	2.8mm
Length (L)	110mm	110mm	175mm
Focus distance (F)	0.5mm~ ∞ (adjustable)	0.5mm~ ∞ (adjustable)	0.5mm~ ∞ (adjustable)
View direction	30°		
Angle of view (α)	70°	80°	80°
Depth of view	3~40mm		
Dust/waterproof lens	IP67		
Dimension	162×33×30mm	228×33×30mm	228×33×30mm
Weight	55g	60g	65g

STANDARD DELIVERY

Main unit	1pc
Protection sleeve	1pc

OPTIONAL ACCESSORY

LED light source	ISV-HL3000
Camera and software	ISV-HCAM

LED LIGHT SOURCE CODE ISV-HL3000



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

SPECIFICATION

Brightness	470lm
Color temperature	5800K
Cooling method	fan cooling
Operating temperature	10~40°C
Working life	30000h
Power supply	12V DC, 5420mA
Dimension	170x196x98mm
Weight	3.8kg

STANDARD DELIVERY

Main unit	1pc
2.3m optical fiber cable	1pc



filter (optional)

OPTIONAL ACCESSORY

Red filter	ISV-HL3000-RED
Green filter	ISV-HL3000-GREEN
Yellow filter	ISV-HL3000-YELLOW
Blue filter	ISV-HL3000-BLUE
3500K color temperature filter	ISV-HL3000-3500K

CAMERA CODE ISV-HCAM



- For rigid borescopes
- Connected to computer USB port
- High quality CCD
- Auto-exposure, auto-gain, auto white balance
- Focus is adjustable

SPECIFICATION

Sensor	1/3" color CCD
Pixel	1.3M
Resolution	1280×960
Frame rate	22fps
Focus distance	18~35mm
Software	take picture, take video, zoom in, zoom out, mirror, image rotation
Power supply	USB
Dimension	95x50x50mm
Weight	150g



STANDARD DELIVERY

Camera	1pc
Connector	1pc
USB cable and software	1pc

- 16 roughness parameters
- With probe position indicator
- Connected with printer via bluetooth
- Can display roughness values, profile and curve
- Memory of maximum 100 results
- Automatic power off

probe cover (included)



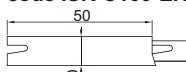
can put the small workpieces directly on the probe for measurement

adjustable stand (included)

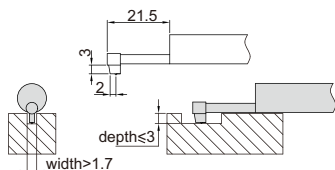


Unit: mm

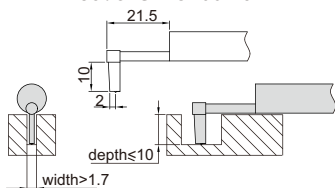
extension rod (optional),
code ISR-C100-ER



groove probe (optional),
code ISR-C100-130



deep groove probe (optional),
code ISR-C100-131



wireless printer (optional)



test stand (optional)



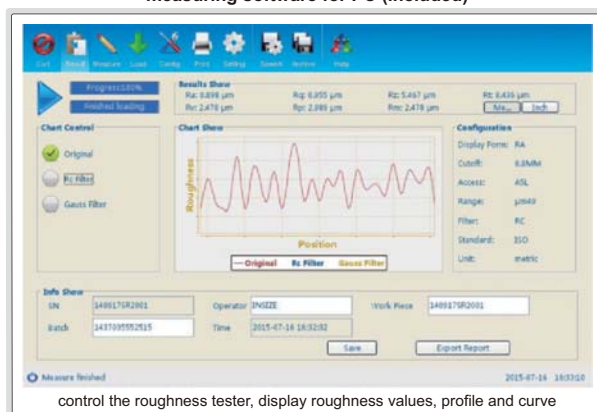
the maximum workpiece height is 310mm

remote control (included)



Android APP for mobile device (included), the roughness tester can be controlled by mobile phone or tablet via bluetooth, the maximum working distance is 5m

measuring software for PC (included)



control the roughness tester, display roughness values, profile and curve

SPECIFICATION

Parameters		Ra, Rq, Rz, Rv, Rp, Rm, Rt, RS, Rsm, R3z, R3y, Rz (JIS), Rku, Rsk, Rmax, Rpc
Range		160μm
Accuracy		±10%
Resolution (Ra)		0.001μm
Probe	type	inductive
	stylus radius/angle	5μm/90°
	stylus material	diamond
Measuring force		0.4mN
Measuring unit		μm/μin
Cut off		0.25/0.8/2.5mm
Number of cut-offs		1 to 5
Traverse speed		0.5mm/s, 1mm/s
Memory		100 measurement results
Output		USB and bluetooth
Power		built-in rechargeable battery
Dimension (L×W×H)		140×52×48mm
Weight		440g

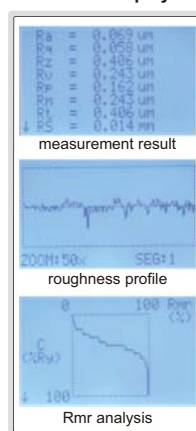
STANDARD DELIVERY

Main unit	1pc
Standard probe	1pc
Calibration block and support	1pc of each
Adjustable stand	1pc
Probe cover	1pc
USB cable and software for PC	1pc
Android APP for mobile device	1pc
AC/DC adapter	1pc

OPTIONAL ACCESSORY

Extension rod	ISR-C100-ER
Groove probe	ISR-C100-130
Deep groove probe	ISR-C100-131
Test stand	ISR-C100-STAND
Wireless printer	ISR-C100-PRINTER

screen display



measurement result

roughness profile

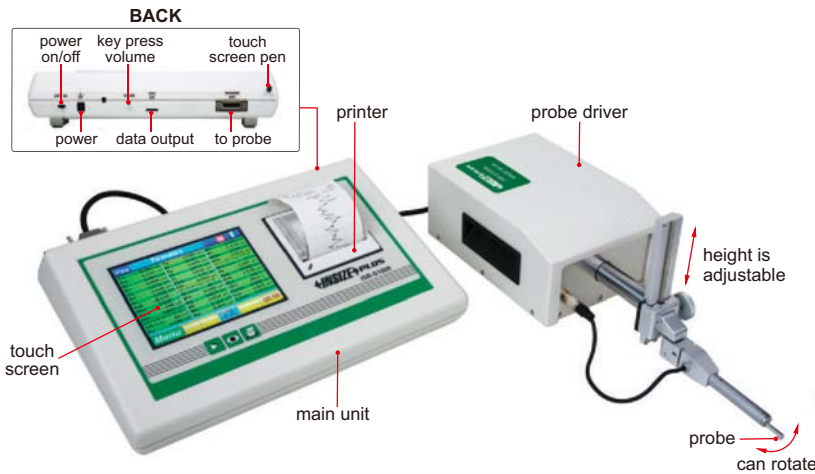
Rmr analysis

SURFACE ROUGHNESS TESTER CODE ISR-S1000B

CAN MEASURE WAVINESS AND
CURVED SURFACE WITH RADIUS>5MM

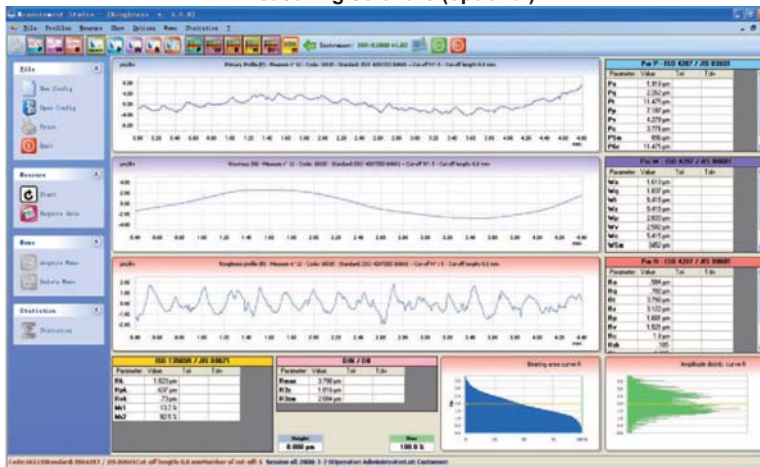
DATA
OUTPUT

CUSTOM-MADE
PROBES ARE AVAILABLE

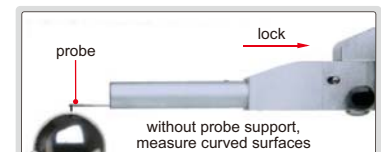
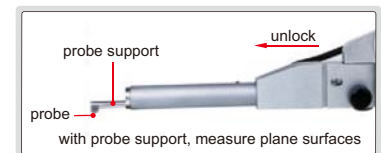


- 48 roughness parameters according to ISO-4287, JIS-B0601, ISO-12085, JIS-B0631
- Automatic probe leveling
- Measuring range up to 1000µm, can measure grit and shot blasting
- Traverse length up to 50mm
- The probe can rotate from -90° to +90°
- Color touch screen, display roughness values, profile and curves
- Can print roughness values, profile and curves
- Memory of maximum 1000 results
- Can set tolerance

measuring software (optional)



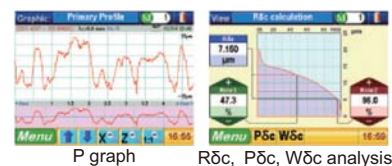
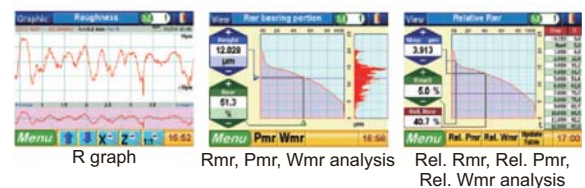
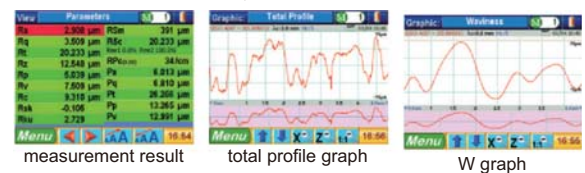
measuring software (optional), can control the roughness tester, display roughness values, profile and curve, data statistics



SPECIFICATION

Parameters		Ra, Rq, Rt, Rz, Rp, Rv, Rc, Rsk, Rku, RSm, R ₃ c, R ₃ p, Pa, Pq, Pt, Pp, Pv, Pc, Psm, P ₃ c, P ₃ p, Wa, Wq, Wt, Wz, Wp, Wv, Wc, Wsm, W ₃ c, W ₃ p, Rk, Rpk, Rvk, Mr1, Mr2, Rmax, R3z, R3zm, R, AR, Rx, Aw, Rke, Rpk, Rvke, Mr1e, Mr2e
Range		1000µm
Accuracy		±3%
Resolution (Ra)		0.001µm
Probe	type	inductive
	stylus radius/angle	5µm/90°
	stylus material	diamond
Measuring force		0.75mN
Measuring unit		µm/µin
Cut off		0.08/0.25/0.8/2.5/8mm
Number of cut-offs		1-19 (cut off 0.08/0.25/0.8/2.5mm) 1-5 (cut off 8mm)
Traverse speed		0.5mm/s or 1mm/s
Memory		1000 measurement results
Output		USB
Power		built-in rechargeable battery
Dimension (LxWxH)		320x210x80mm
Weight		2.2kg

ROUGHNESS VALUE, PROFILE AND DATA ANALYSIS



To be continued

STANDARD DELIVERY

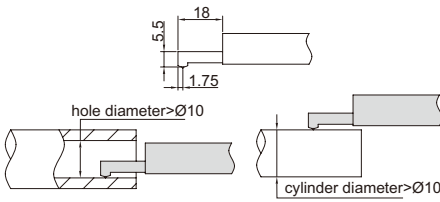
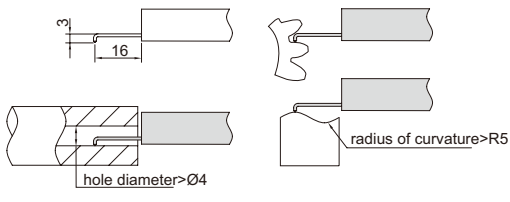
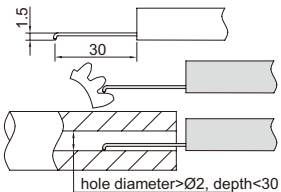
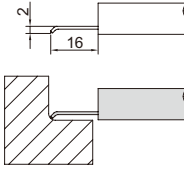
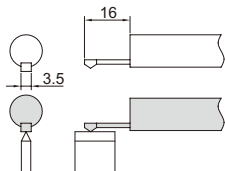
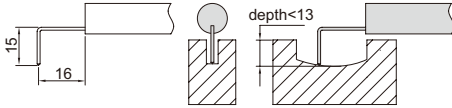
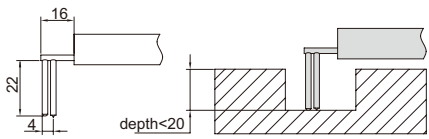
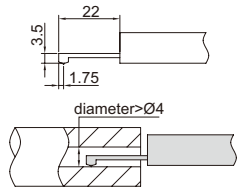
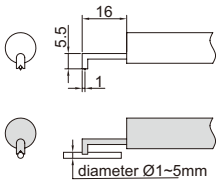
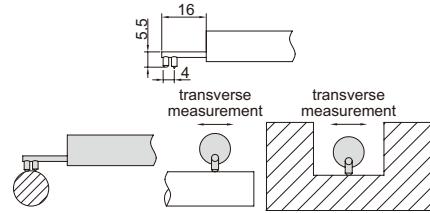
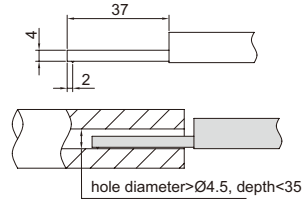
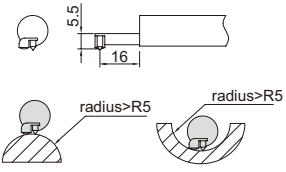
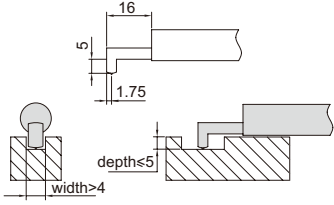
Main unit	1pc
Probe driver	1pc
Standard probe	1pc
Calibration block	1pc
AC/DC adapter	1pc

OPTIONAL ACCESSORY

Probe	see details
USB cable and software	ISR-S-SOFTWARE

SPECIFICATION OF PROBES

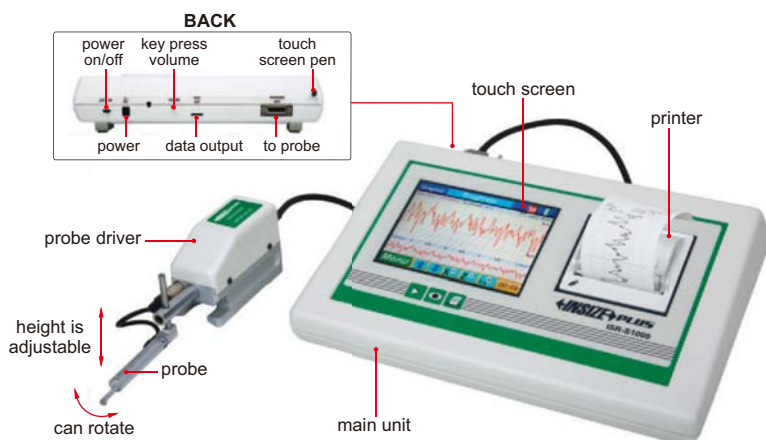
Unit: mm

standard probe (included, support is removable), code ISR-SB10B					
 with probe support, measure plane surfaces, holes and cylinders with diameter>Ø10mm			 without probe support, measure holes with diameter>Ø4mm, can measure curved surfaces, narrow spaces and waviness		
small hole probe (optional), code ISR-SB60B  without probe support, measure holes with diameter>Ø2mm and depth<30mm, can measure curved surfaces, narrow spaces and waviness		internal angle probe (optional), code ISR-SB70B  without probe support, measure internal angles, can measure curved surfaces, narrow spaces and waviness		knife edge probe (optional), code ISR-SB130B  without probe support, measure knife edges and small rods	
deep groove probe (optional), code ISR-SB150B  without probe support, measure curved surfaces and grooves with depth<13mm, can measure curved surfaces, narrow spaces and waviness			deep groove probe (optional), code ISR-SB120B  measure grooves with depth<20mm		
hole probe (optional), code ISR-SB30B  measure plane surfaces and holes with diameter>Ø4mm and depth<20mm		small rod probe (optional), code ISR-SB40B  measure small rods with diameter 1~5mm		transverse probe (optional), code ISR-SB50B  transverse measurement for plane surfaces, cylinders and grooves	
deep hole probe (optional), code ISR-SB80B  measure holes with diameter>Ø4.5mm and depth<35mm		cylinder/hole probe (optional), code ISR-SB110B  measure cylinders and holes with radius>R5mm		groove probe (optional), code ISR-SB20B  measure plane surfaces and grooves	

SURFACE ROUGHNESS TESTER CODE ISR-S1000A

DATA
OUTPUT

CUSTOM-MADE
PROBES ARE AVAILABLE



- 38 roughness parameters according to ISO-4287, JIS-B0601, ISO-12085, JIS-B0631
- Automatic probe leveling
- Measuring range up to 1000μm, can measure grit and shot blasting
- Traverse length up to 25mm
- The probe can be set at 90° or 270°, for transverse measurement
- Color touch screen, display roughness values, profile and curves
- Can print roughness values, profile and curves
- Memory of maximum 1000 results
- Can set tolerance

measuring software (optional)



measuring software (optional), can control the roughness tester, display roughness values, profile and curve, data statistics



test stand (optional)



handhold use



probe can be inverted

SPECIFICATION

Parameters		Ra, Rq, Rt, Rz, Rp, Rv, Rc, Rsk, Rku, Rsm, Rδc, Rρc, Pa, Pq, Pt, Pp, Pv, Pc, PSm, Pδc, PPc, Rk, Rpk, Rvk, Mr1, Mr2, Rmax, R3z, R3zm, R, AR, Rx, Aw, Rke, Rpke, Rvke, Mr1e, Mr2e
Range		1000μm
Accuracy		±3%
Resolution (Ra)		0.001μm
Probe	type	inductive
	stylus radius/angle	5μm/90°
	stylus material	diamond
Measuring force		0.75mN
Measuring unit		μm/μin
Cut off		0.08/0.25/0.8/2.5mm
Number of cut-offs		1-19 (cut off 0.08/0.25/0.8mm) 1-9 (cut off 2.5mm)
Traverse speed		0.5mm/s or 1mm/s
Memory		1000 measurement results
Output		USB
Power		built-in rechargeable battery
Dimension (LxWxH)		320x210x80mm
Weight		2.2kg

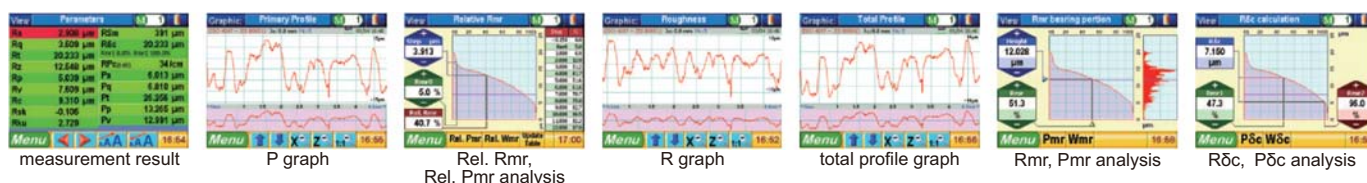
STANDARD DELIVERY

Main unit	1pc
Probe driver	1pc
Standard probe	1pc
Calibration block	1pc
AC/DC adapter	1pc

OPTIONAL ACCESSORY

Probe	see details
USB cable and software	ISR-S-SOFTWARE
Test stand	ISR-S400-DK

To be continued



SPECIFICATION OF PROBES

Unit: mm

standard probe (included), code ISR-SB10A measure plane surfaces, holes and cylinders with diameter > Ø10mm	small roughness probe (optional), code ISR-SB10A-R2 measure surfaces with small roughness
groove probe (optional), code ISR-SB20A measure plane surfaces and grooves	deep groove probe (optional), code ISR-SB120A measure grooves with depth < 20mm
small hole probe (optional), code ISR-SB30A measure plane surfaces and holes with diameter > Ø4mm and depth < 20mm	deep hole probe (optional), code ISR-SB80A measure holes with diameter > Ø4.5mm and depth < 35mm
small rod probe (optional), code ISR-SB40A measure small rods with diameter Ø1~5mm	cylinder/hole probe (optional), code ISR-SB110A measure cylinders and holes with radius > R5mm
transverse probe (optional), code ISR-SB50A transverse measurement for plane surfaces, cylinders and grooves	internal angle probe (optional), code ISR-SB140A measure internal angles

ROUGHNESS TESTER CODE ISR-S500

DATA
OUTPUT

CUSTOM-MADE
PROBES ARE AVAILABLE



- Automatic probe leveling
- Language: English, French, German, Italian, Spanish, Portuguese
- 30 roughness parameters
- Can set tolerance
- Measuring range up to 600µm, can measure grit and shot blasting
- Traverse length up to 16mm
- The probe can be set at 90° or 270°, for transverse measurement
- Color screen, display roughness values, profile and curves
- Memory of maximum 1000 results



measuring software (optional), can control the roughness tester, display roughness values, profile and curve, data statistics



transverse measurement



adjustable stand (included)



probe cover (included), can put the small workpieces directly on the probe for measurement

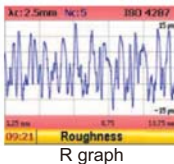


printer (optional), print measuring results and roughness graph

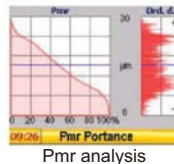
ROUGHNESS VALUE, PROFILE AND DATA ANALYSIS

Ra	5.315 µm
Rq	6.134 µm
Rt	27.050 µm
Rp	11.574 µm

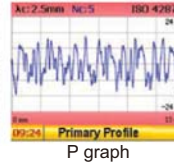
09-20 Parameters measurement result



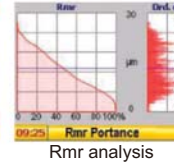
R graph



Pmr analysis



P graph



Rmr analysis



test stand (optional)

SPECIFICATION

Parameters	Ra, Rq, Rt, Rp, Rv, Rz, Rc, RSm, Rδc, Rpc, Pa, Pq, Pt, Pp, Pv, Pc, Psm, Pδc, Ppc, Rk, Rpk, Rvk, Mr1, Mr2, Rmax, R3z, R3zm, R, AR, Rx
Range	600µm
Accuracy	±3%
Resolution (Ra)	0.001µm
Probe	type inductive stylus radius/angle 5µm/90° stylus material diamond
Measuring force	0.75mN
Measuring unit	µm/µin
Cut of	0.25/0.8/2.5mm
Number of cut-offs	1-10 (cut off 0.25/0.8mm) 1-5 (cut off 2.5mm)
Traverse speed	1mm/s
Memory	1000 measurement results
Output	USB
Power	built-in rechargeable battery
Dimension (L×W×H)	122×53×75mm
Weight	590g

STANDARD DELIVERY

Main unit	1pc
Standard probe	1pc
Calibration block	1pc
Adjustable stand	1pc
AC/DC adapter	1pc
Probe cover	1pc

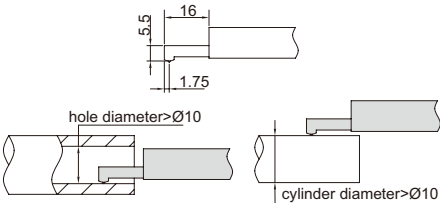
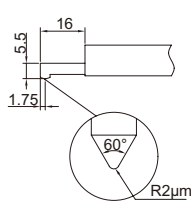
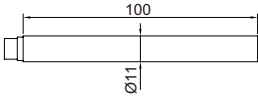
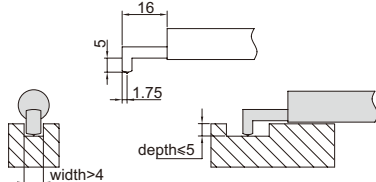
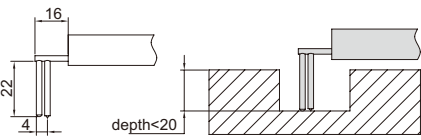
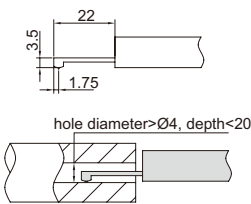
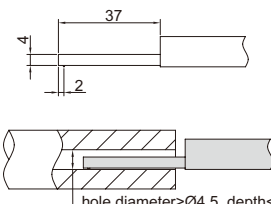
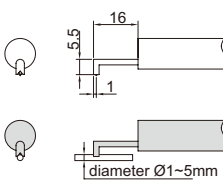
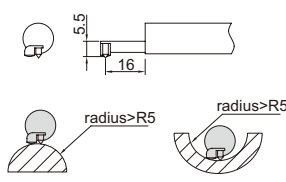
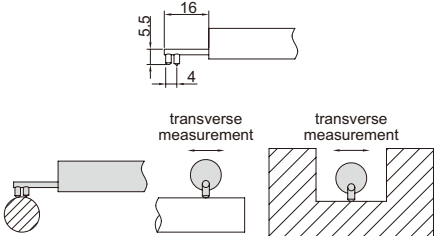
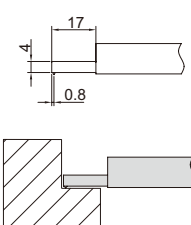
OPTIONAL ACCESSORY

Extension rod	ISR-S400-ER100
Probe	see details
Printer	ISR-S500-PRINTER
USB cable and software	ISR-S-SOFTWARE
Test stand	ISR-S400-DK

To be continued

SPECIFICATION OF PROBES

Unit: mm

standard probe (included)  measure plane surfaces, holes and cylinders with diameter > Ø10mm	small roughness probe, code ISR-S400-SB10R2  measure surfaces with small roughness
extension rod, code ISR-S400-ER100  for long holes	
groove probe, code ISR-S400-SB20  measure plane surfaces and grooves	deep groove probe, code ISR-S400-SB120  measure grooves with depth < 20mm
small hole probe, code ISR-S400-SB30  measure plane surfaces and holes with diameter > Ø4mm and depth < 20mm	deep hole probe, code ISR-S400-SB80  measure holes with diameter > Ø4.5mm and depth < 35mm
small rod probe, code ISR-S400-SB40  measure small rods with diameter Ø1~5mm	cylinder/hole probe, code ISR-S400-SB110  measure cylinders and holes with radius > Ø5mm
transverse probe, code ISR-S400-SB50  transverse measurement for plane surfaces, cylinders and grooves	internal angle probe, code ISR-S400-SB140  measure internal angles

ROUGHNESS TESTER

DATA
OUTPUT

CUSTOM-MADE
PROBES ARE AVAILABLE



ISR-S300
(probe can't be changed)



ISR-S400
(probe can be changed)

- Automatic probe leveling
- Language: English, French, German, Italian, Spanish, Portuguese
- 12 roughness parameters
- Can set tolerance
- Measuring range up to 400µm, can measure grit and shot blasting
- Traverse length up to 16mm
- The probe can be set at 90° or 270°, for transverse measurement
- Memory of maximum 100 results



measuring software (optional), can control the roughness tester, display roughness values, profile and curve, data statistics



adjustable stand (included)



transverse measurement



probe cover (included), can put the small workpieces directly on the probe for measurement



printer (optional), print measuring results and roughness graphic

SPECIFICATION

Code	ISR-S300	ISR-S400
Remark	probe can't be changed	probe can be changed
Parameters	Ra, Rq, Rt, Rz, Rc, Rmax, Rsm, Rpc, Rmr, R, AR, Rx	
Range	Ra: 0~100µm, Rt: 0.05~400µm	
Accuracy	±3%	
Resolution (Ra)	0.001µm	
Probe	type	inductive
	stylus radius/angle	5µm/90°
	stylus material	diamond
Measuring force	0.75mN	
Measuring unit	µm/µin	
Cut off	0.25/0.8/2.5mm	
Number of cut-offs	1 to 5	
Traverse speed	1mm/s	
Memory	100 measurement results	
Output	USB	
Power	built-in rechargeable battery	
Dimension (L×W×H)	122×52×68mm	
Weight	650g	

STANDARD DELIVERY

Main unit	1pc
Standard probe	1pc
Calibration block	1pc
Adjustable stand	1pc
AC/DC adapter	1pc
Probe cover	1pc



test stand (optional)

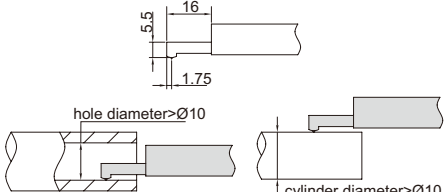
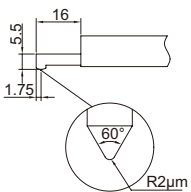
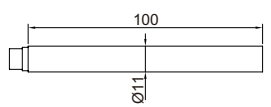
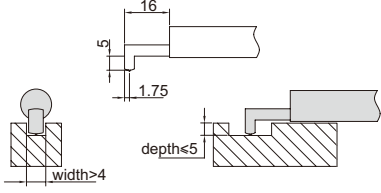
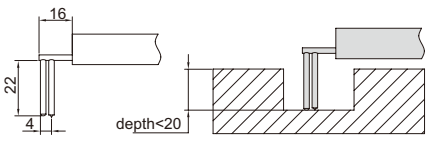
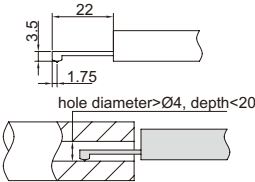
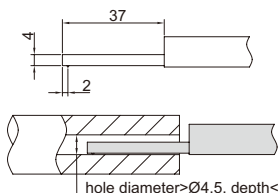
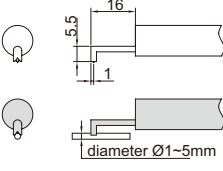
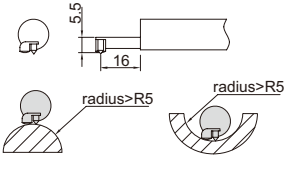
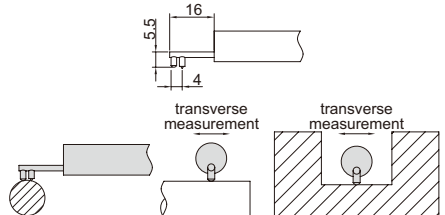
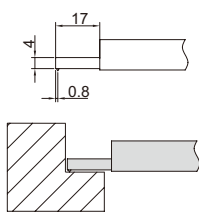
OPTIONAL ACCESSORY

Extension rod (only for ISR-S400)	ISR-S400-ER100
Probe (only for ISR-S400)	see details
Printer	ISR-S400-PRINTER
USB cable and software	ISR-S-SOFTWARE
Test stand	ISR-S400-DK

To be continued

SPECIFICATION OF PROBES

Unit: mm

standard probe (included)  measure plane surfaces, holes and cylinders with diameter > Ø10mm	small roughness probe (for ISR-S400, optional) code ISR-S400-SB10R2  measure surfaces with small roughness
extension rod (for ISR-S400, optional) code ISR-S400-ER100  for long holes	
groove probe (for ISR-S400, optional) code ISR-S400-SB20  measure plane surfaces and grooves	deep groove probe (for ISR-S400, optional) code ISR-S400-SB120  measure grooves with depth < 20mm
small hole probe (for ISR-S400, optional) code ISR-S400-SB30  measure plane surfaces and holes with diameter > Ø4mm and depth < 20mm	deep hole probe (for ISR-S400, optional) code ISR-S400-SB80  measure holes with diameter > Ø4.5mm and depth < 35mm
small rod probe (for ISR-S400, optional) code ISR-S400-SB40  measure small rods with diameter Ø1~5mm	cylinder/hole probe (for ISR-S400, optional) code ISR-S400-SB110  measure cylinders and holes with radius > R5mm
transverse probe (for ISR-S400, optional) code ISR-S400-SB50  transverse measurement for plane surfaces, cylinders and grooves	internal angle probe (for ISR-S400, optional) code ISR-S400-SB140  measure internal angles

SURFACE ROUGHNESS SPECIMEN



ISR-CS315

- For checking, identifying and specifying the roughness by symbol
- Accuracy: +20% ~ -25%, $Ra \leq 0.1\mu m$
Accuracy: +12% ~ -17%, $Ra > 0.1\mu m$
- Meets ISO 2632 (ISR-CS329 meets ISO 8503/1)
- Rust-proof, made of pure Nickel

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, 3.2 μm	0.29, 0.55, 0.91, 1.74, 2.6, 4.65, 7.87, 15.6 μm	8pcs
ISR-CS316	Cylindrical grinding		0.025, 0.05, 0.1, 0.2, 0.4, 0.8, 1.6, 3.2 μm	0.3, 0.53, 0.88, 1.56, 2.64, 4.4, 7.71, 15.3 μm	8pcs
ISR-CS317	Flat lapping	Criss-cross	0.025, 0.05, 0.1, 0.2 μm	0.4, 0.6, 0.74, 1.26 μm	4pcs
		Parallel	0.025, 0.05, 0.1, 0.2 μm	0.34, 0.56, 1.12, 1.5 μm	4pcs
ISR-CS318	Cylindrical lapping		0.025, 0.05, 0.1, 0.2 μm	0.46, 0.54, 0.63, 1.23 μm	4pcs
	Superfinishing		0.025, 0.05, 0.1, 0.2 μm	0.36, 0.7, 1, 1.4 μm	4pcs
ISR-CS319	Face turning		0.4, 0.8, 1.6, 3.2, 6.3, 12.5, 25, 50 μm	1.92, 3.2, 6.15, 12.5, 23.7, 48.7, 102, 185 μm	8pcs
ISR-CS320	Cylindrical turning		0.4, 0.8, 1.6, 3.2, 6.3, 12.5, 25, 50 μm	1.7, 3.2, 6.1, 12.2, 23.7, 47.5, 95, 190 μm	8pcs
ISR-CS321	End milling		0.4, 0.8, 1.6, 3.2, 6.3, 12.5, 25, 50 μm	1.92, 3.82, 6.45, 12.2, 25.2, 49.8, 92.6, 191 μm	8pcs
ISR-CS322	Reaming		0.4, 0.8, 1.6, 3.2 μm	1.7, 3.2, 6.4, 12.8 μm	4pcs
	Drilling		1.6, 3.2, 6.3, 12.5 μm	7.5, 15.5, 31, 60 μm	4pcs
ISR-CS323	Horizontal milling		0.4, 0.8, 1.6, 3.2, 6.3, 12.5, 25, 50 μm	1.8, 3.68, 6.63, 12.8, 25.6, 53, 97.5, 197 μm	8pcs
ISR-CS325	Shaping (planing)		0.8, 1.6, 3.2, 6.3, 12.5, 25, 50, 100 μm	3.84, 6.7, 12.2, 25.2, 48.7, 99.9, 190, 361 μm	8pcs
ISR-CS326	Linishing (belt sanding)		0.1, 0.2, 0.4, 0.8, 1.6, 3.2 μm	0.9, 1.55, 3.37, 7.42, 18.5, 31 μm	6pcs
ISR-CS328	Vertical grinding		0.2, 0.4, 0.8, 1.6, 3.2, 6.3 μm	1.1, 3.5, 6.15, 8.78, 22.19, 40.8 μm	6pcs
ISR-CS329	Grit blasting		3.2, 10.5, 18, 25 μm	19.2, 63, 108, 150 μm	4pcs
	Shot blasting		3.2, 8, 13, 18 μm	19.2, 48, 78, 108 μm	4pcs
ISR-CS331	Spark erosion (EDM)		0.4, 0.8, 1.6, 3.2, 6.3, 12.5, 25, 50 μm	2.5, 4.5, 7.2, 14.2, 24.7, 51.2, 105, 196 μm	8pcs
ISR-CS333	Hand filing		0.4, 0.8, 1.6, 3.2, 6.3 μm	3, 5.6, 12.4, 22.5, 61 μm	5pcs
ISR-CS334	Castings		0.8, 1.6, 3.2, 6.3, 12.5, 25, 50 μm	3.2, 8, 16, 32, 56, 112, 225 μm	7pcs
ISR-CS335	Honing		0.05, 0.1, 0.2, 0.4, 0.8, 1.6 μm	0.31, 0.56, 1, 2, 4.2, 9 μm	6pcs
ISR-CS336	Polishing		0.0125, 0.025, 0.05, 0.1, 0.2 μm	0.29, 0.35, 0.67, 0.72, 1.52 μm	5pcs

SURFACE ROUGHNESS SPECIMEN SET CODE ISR-CS130



- For checking, identifying and specifying the roughness by symbol
- Accuracy: +20% ~ -25%, $Ra \leq 0.1\mu m$
Accuracy: +12% ~ -17%, $Ra > 0.1\mu m$
- Meets ISO 2632
- 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	3pcs
	2, 4, 8 μm		
Reaming	0.4, 0.8, 1.6 μm	3, 6, 10 μm	3pcs
	16, 32, 63 μm		
Plain grinding	0.05, 0.1, 0.2, 0.4, 0.8, 1.6 μm	0.55, 1, 1.6, 3, 6, 10 μm	6pcs
	2, 4, 8, 16, 32, 63 μm		
Horizontal milling	0.4, 0.8, 1.6, 3.2, 6.3, 12.5 μm	2.5, 4, 8, 16, 32, 50 μm	6pcs
	16, 32, 63, 125, 250, 500 μm		
Vertical milling	0.4, 0.8, 1.6, 3.2, 6.3, 12.5 μm	2.5, 4, 8, 16, 32, 50 μm	6pcs
	16, 32, 63, 125, 250, 500 μm		
Turning	0.4, 0.8, 1.6, 3.2, 6.3, 12.5 μm	2.5, 4, 8, 16, 32, 50 μm	6pcs
	16, 32, 63, 125, 250, 500 μm		

MEASURING ACCURACY CAN BE IMPROVED, IF THE CALIBRATION IS MADE ON A REFERENCE SPECIMEN WITH THE ROUGHNESS VALUE CLOSE TO THE WORKPIECE TO BE MEASURED

SURFACE ROUGHNESS REFERENCE SPECIMEN

Code	Roughness (Ra)
ISR-RS525X	6.25µm *
ISR-RS526X	3.15µm *
ISR-RS527X	3.0µm *
ISR-RS528X	0.5µm *
ISR-RS529X	0.1µm * (not suitable for ISR-S300, ISR-S400 and ISR-S500)
ISR-RS530X	1.0µm *
ISR-RS531X	0.3µm * (not suitable for ISR-S300, ISR-S400 and ISR-S500)

* The actual value may be slightly different



ISR-RS529X

- To calibrate roughness testers
- Meets ISO 5436-1: 2000
- Rust proof, made of pure Nickel



SHOT AND GRIT BLASTING SURFACE ROUGHNESS SPECIMEN

- 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

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



ISR-CS017



SUITABLE FOR SMALL SURFACES, CONCAVE OR CONVEX SURFACES

- Suitable for small surfaces, concave or convex surfaces
- Magnetic induction probe (Fe) is to measure the thickness of non-magnetic coating on magnetic substrate
Substrate: iron, steel, magnetic stainless steel (does not include non-magnetic stainless steel)
Coating: zinc, copper, chrome-tin, plastic powder, paint (does not include nickel)
- Eddy current probe (NFe) is to 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

MAIN UNIT SPECIFICATION

Code	ISO-2000FN	
Measuring range	magnetic induction probe (Fe)	0~2000µm
	eddy current probe (NFe)	0~800µm
Accuracy	±(1.5+2%L)µm L is measuring thickness in µm	
Resolution	0.1µm (range<100µm)	
	1µm (range 100~1000µm)	
	10µm (range ≥ 1000µm)	
Repeatability	1µm (range 0~1000µm)	
	10µm (range ≥ 1000µm)	
Measuring mode	continuous or single	
Calibration mode	four points calibration	
Minimum substrate thickness	magnetic induction probe (Fe): 0.2mm, eddy current probe (NFe): 0.05mm	
Minimum measuring area	5x5mm, calibration should be made on workpiece without coating, test stand (optional) is recommended in order to have same position for calibration and measurement	
Power supply	2×1.5V AA batteries	
Dimension of main unit	122×65×22mm	
Weight of main unit	150g	



COATING THICKNESS GAGE



magnetic induction probe Fe (optional)
ISO-2000FN-FE

eddy current probe NFe (optional)
ISO-2000FN-NFE

connected to probe



main unit
ISO-2000FN



standard foil (included)

STANDARD DELIVERY

Main unit	1pc
Zero calibration block for Fe probe	1pc
Zero calibration block for NFe probe	1pc
Standard foil	7pcs
Battery (AA)	2pcs

PROBE (OPTIONAL) SPECIFICATION

Magnetic induction probe (Fe)	ISO-2000FN-FE
Eddy current probe (NFe)	ISO-2000FN-NFE

COATING THICKNESS GAGE

main unit
ISO-3000FN



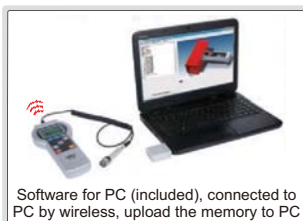
probe interface

magnetic induction and
eddy current integrated
probe (optional)
ISO-3000FN-52DS



probe can rotate 0~90°,
suitable for inclined
surfaces, grooves
and bore surfaces

magnetic induction
probe (optional),
for bores and grooves
ISO-3000FN-3T



Software for PC (included), connected to
PC by wireless, upload the memory to PC

DATA
OUTPUT

FOR MAGNETIC AND
NON-MAGNETIC SUBSTRATE



- Magnetic induction probe (Fe) is to measure the thickness of non-magnetic coating on magnetic substrate
Substrate: iron, steel, magnetic stainless steel
(does not include non-magnetic stainless steel)
Coating: zinc, copper, chrome, tin, plastic powder, paint (does not include nickel)
- Eddy current probe (NFe) is to 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
- Low and high limits with judgement
- Two points calibration
- Memory of 10000 measurement values for browsing and output
- Power off automatically

MAIN UNIT SPECIFICATION

Code	ISO-3000FN
Accuracy	±1μm (range<100μm) ±(1%L)μm (range 100~1000μm) ±(3%L)μm (range 1000~2000μm) ±(5%L)μm (range>2000μm) L is measuring thickness in μm
Resolution	0.1μm (range<100μm) 1μm (range 100~1000μm) 10μm (range>1000μm)
Repeatability	1μm (range<1000μm) 10μm (range>1000μm)
Measuring mode	single and continuous
Calibration mode	two points calibration
Minimum substrate thickness	magnetic induction (Fe): 0.3mm eddy current (NFe): 0.05mm
Output	wireless
Power supply	3×1.5V AA battery
Dimension	198×92×35mm
Weight	265g

PROBE (OPTIONAL) SPECIFICATION

Code	ISO-3000FN-52DS	ISO-3000FN-3T
Measuring range	magnetic induction probe (Fe) 0~5000μm eddy current probe (NFe) 0~2500μm	0~3000μm ---
Minimum measuring area	Ø6mm	Ø3mm
Minimum curvature radius of workpiece	concave 38mm convex 6mm	13mm 2mm

STANDARD DELIVERY

Main unit	1pc
Zero calibration block for Fe probe	1pc
Zero calibration block for NFe probe	1pc
USB wireless receiver and software	1pc
Standard foil	2pcs
1.5V AA battery	3pcs



USB wireless receiver
(included)



standard foils
(included)

OPTIONAL DELIVERY

Magnetic induction and eddy current integrated probe	ISO-3000FN-52DS
Magnetic induction probe (for bores and grooves)	ISO-3000FN-3T

COATING THICKNESS GAGE CODE ISO-5000F

probe can rotate 0~90°,
suitable for inclined
surfaces, grooves
and bore surfaces



- Magnetic induction probe (Fe) is to measure the thickness of non-magnetic coating on magnetic substrate
Substrate: iron, steel, magnetic stainless steel
(does not include non-magnetic stainless steel)
Coating: zinc, copper, chrome, tin, plastic powder, paint
(does not include nickel)
- Two points calibration
- Probe can rotate 0~90°, suitable for inclined surfaces, grooves and bore surfaces
- Power off automatically

STANDARD DELIVERY

Main unit	1pc
Zero calibration block for Fe probe	1pc
Standard foil	2pcs
1.5V AA battery	1pc



standard foils
(included)

SPECIFICATION

Measuring range	0~5000μm
Accuracy	±1μm (range<100μm) ±(1%L)μm (range 100~1000μm) ±(3%L)μm (range 1000~2000μm) ±(5%L)μm (range>2000μm) L is measuring thickness in μm
Resolution	0.1μm (range<100μm) 1μm (range 100~1000μm) 10μm (range>1000μm)
Repeatability	1μm (range<1000μm) 10μm (range>1000μm)
Measuring mode	single
Calibration mode	two points calibration
Minimum substrate thickness	0.3mm
Minimum measuring area	Ø8mm
Minimum curvature radius of workpiece	concave 38mm convex 3mm
Power supply	1×1.5V AA battery
Dimension	98×28×28mm
Weight	72g

FOR MAGNETIC
SUBSTRATE





DATA
OUTPUT

FOR MAGNETIC AND
NON-MAGNETIC SUBSTRATE



Software for PC (included),
connected to PC by Bluetooth,
upload the memory to PC



Android APP (included),
connected to mobile
device by Bluetooth,
display measurement
value and data statistics

COATING THICKNESS GAGE CODE ISO-5000FN

probe can rotate 0~90°,
suitable for inclined surfaces,
grooves and bore surfaces



SPECIFICATION

Measuring range	magnetic induction probe (Fe)	0~5000μm
	eddy current probe (NFe)	0~2000μm
Accuracy	±1μm (range<100μm)	
	±(1%L)μm (range 100~1000μm)	
	±(3%L)μm (range 1000~2000μm)	
	±(5%L)μm (range>2000μm)	
	L is measuring thickness in μm	
Resolution	0.1μm (range<100μm)	
	1μm (range 100~1000μm)	
	10μm (range>1000μm)	
Repeatability	1μm (range<1000μm)	
	10μm (range>1000μm)	
Measuring mode	single	
Calibration mode	two points calibration	
Minimum substrate thickness	magnetic induction probe (Fe): 0.3mm	
	eddy current probe (NFe): 0.05mm	
Minimum measuring area	Ø8mm	
Minimum curvature radius of workpiece	concave	38mm
	convex	3mm
Output	Bluetooth	
Power supply	1×1.5V AA battery	
Dimension	98x28x28mm	
Weight	72g	

- Integrated with magnetic-induction probe (Fe) and eddy current probe (NFe), switch to the suitable probe automatically according to the material to be measured
- Magnetic induction probe (Fe) is to measure the thickness of non-magnetic coating on magnetic substrate
Substrate: iron, steel, magnetic stainless steel (does not include non-magnetic stainless steel)
Coating: zinc, copper, chrome, tin, plastic powder, paint (does not include nickel)
- Eddy current probe (NFe) is to 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
- Two points calibration
- Probe can rotate 0~90°, suitable for inclined surfaces, grooves and bore surfaces
- Memory of 500 measurement values for browsing and output
- Power off automatically

STANDARD DELIVERY

Main unit	1pc
Zero calibration block for Fe probe	1pc
Zero calibration block for NFe probe	1pc
USB wireless receiver and software	1pc
Standard foil	2pcs
1.5V AA battery	1pc



standard foils
(included)

- To measure the thickness of any non-magnetic coating on magnetic substrate
substrate: steel, iron, magnetic stainless steel (non-magnetic stainless steel is not included)
coating: zinc, copper, chrome, tin, plastic, paint (nickel is not included)
- Low and high limits with judgement
- Calculate average value automatically

MEASURE NON-MAGNETIC COATING
ON MAGNETIC SUBSTRATE

COATING THICKNESS GAGE CODE ISO-1500F



zero calibration
block (included)



calibration foil
(included)



printer (optional)

SPECIFICATION

Measuring range		0~1500μm
Accuracy		±(2%L+2)μm L is measuring thickness in μm
Resolution		0.1μm (range<1000μm)
		1μm (range≥1000μm)
Repeatability		±1μm (range<100μm)
		±(1%L)μm (range≥100μm)
		L is measuring thickness in μm
Measuring mode		continuous and single
Calibration mode		zero calibration, one point calibration, two points calibration
Minimum substrate thickness		0.5mm
Minimum measuring area		10×10mm
Minimum curvature radius of workpiece	concave	30mm
	convex	5mm
Output		USB
Memory		1200
Power supply		3×1.5V AAA batteries (power off automatically)
Dimension		88×67×30mm
Weight		120g

STANDARD DELIVERY

Main unit	1pc
Zero calibration block	1pc
Calibration foil (50μm, 100μm, 500μm, 1000μm, 1500μm)	1set
1.5V AAA battery	3pcs
Software and USB cable	1pc

OPTIONAL ACCESSORY

Printer	ISH-DS-PRINTER
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COATING THICKNESS GAGE CODE ISO-1000F

ATTENTION:
BASIC MODEL

MEASURE NON-MAGNETIC COATING
ON MAGNETIC SUBSTRATE



zero calibration block
(included)



calibration foils
(included)



- To measure the thickness of non-magnetic coating on magnetic substrate
substrate: steel, iron, magnetic stainless steel (non-magnetic stainless steel is not included)
coating: zinc, copper, chrome, tin, plastic, paint (nickel is not included)
- Low and high limits with judgement
- Calculate average value automatically
- Automatic power off

SPECIFICATION

Measuring range	0~1250μm
Accuracy	±(3%L+1)μm L is measuring thickness in μm
Resolution	0.1μm (range<50μm) 1μm (range≥50μm)
Repeatability	±(2%L)μm L is measuring thickness in μm
Measuring mode	continuous and single
Minimum substrate thickness	0.5mm
Minimum measuring area	Ø7mm
Minimum curvature radius of convex workpiece	1.5mm
Memory	500
Power supply	3x1.5V AAA batteries
Dimension	155×72×27mm
Weight	230g

STANDARD DELIVERY

Main unit	1pc
Magnetic induction probe	1pc
Zero calibration block	1pc
Calibration foils (50μm, 100μm, 250μm, 500μm, 1000μm)	1set
1.5V AAA battery	3pcs

CROSS CUT ADHESION TESTER CODE ISQ-PK100



1mm pitch blade (included)



2mm pitch blade (included)



3mm pitch blade (included)



test tape (included)
ISQ-PK100-1



2X magnifier (included)



brush (included)

- To test the adhesion of paint coating on metal, wood, plastic, etc.
- According to ISO 2409, ASTM D3359, DIN53151

SPECIFICATION

Blade		1mm pitch blade	2mm pitch blade	3mm pitch blade
Applied paint thickness	hard substrate (like metal)	0~60μm	61~120μm	121~250μm
	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

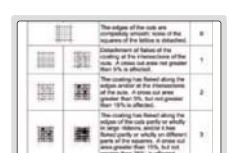
Handle	1pc
1mm pitch blade	1pc
2mm pitch blade	1pc
3mm pitch blade	1pc
Test tape (ISQ-PK100-1)	1pc
2X magnifier	1pc
Brush	1pc



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



Ø15.1mm flat dolly
(included)



Ø19.5mm flat dolly
(included)

PULL OFF ADHESION TESTER CODE ISQ-PF200

- To measure the pull off adhesion of paint coating on metal, wood, plastic, etc.
- According to ISO 4624, EN13144

SPECIFICATION

Test range	Ø15.1mm flat dolly	1~10Mpa
	Ø19.5mm flat dolly	2~6Mpa
Minimum size of test sample	30×30mm	
Dimension	70×70×150mm	
Weight	1kg	

STANDARD DELIVERY

Main unit	1pc
Ø15.1mm flat dolly	3pcs
Ø19.5mm flat dolly	3pcs
Ring cutter	1pc
Glue (ISQ-PF200-1)	3g
Glue for rough surface (ISQ-PF200-2)	6ml



ring cutter (included)



glue (included)
ISQ-PK100-1



glue for rough surface
(included) ISQ-PK100-2



step 1: glue the dolly
on the paint coating



step 2: cut the paint around
dolly by using ring cutter



step 3: rotate the handwheel,
read the adhesion
when dolly is pulled off

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 substrate, can penetrate coating and measure the thickness of substrate
 - T-E is to measure the thickness of material without coating, such as metal, plastic, glass, nylon, resin, ceramics, rubber, ice, etc.
- Low and high limits with judgment
- Average calculation of maximum 9 readings
- Memory of maximum 500 readings

SPECIFICATION

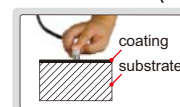
Measuring range	E-E mode: coating thickness 0~1mm, substrate thickness 4~25mm
	T-E mode: substrate thickness 1.5~200mm
Resolution	0.01mm (range<100mm)
	0.1mm (range≥100mm)
Repeatability	0.03mm (range<100mm)
	0.1mm (range≥100mm)
Accuracy	±0.04mm (range<10mm)
	±(0.04+H/1000)mm (range 10~100mm)
	±H/333mm (range≥100mm) H is the thickness to be measured in mm
Velocity	1000~9999m/s
Power supply	2×1.5V AAA batteries
Dimension	116×64×27mm
Weight	220g



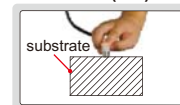
STANDARD DELIVERY

Main unit	1pc
Transducer ISU-T07	1pc
Battery (AAA)	2pcs
Couplant (for ISU-T04, ISU-T06, ISU-T07, ISU-T12)	1bottle
USB cable and software disc	1pc

Echo-Echo mode (E-E)



Transmit-Echo mode (T-E)



couplant (included)



transducer ISU-T04 (optional)



transducer ISU-T06 (optional)



transducer ISU-T12 (optional)



transducer ISU-T13 (optional)



OPTIONAL ACCESSARY

Transducer	ISU-T04, ISU-T06, ISU-T12, ISU-T13
Couplant (for ISU-T13)	ISU-HT5-COUPPLANT

SPECIFICATION OF TRANSDUCERS

Code	Mode	Frequency	Diameter (Ød)	Measuring range	Minimum size of pipe for measurement (diameter × wall thickness)	Applicable temperature	Application
ISU-T07	T-E E-E	5.0MHz	10.8mm	T-E mode: 1.5~200mm E-E mode: 4~25mm	T-E mode: 20×1.2mm E-E mode: 20×4mm	<60°C	general use
ISU-T04	T-E	10.0MHz	6mm	0.7~20mm	10×1mm	<60°C	for small tube
ISU-T06	T-E	7.5MHz	8.5mm	0.7~50mm	15×1.2mm	<60°C	for thin material
ISU-T12	T-E	2.0MHz	16.3mm	2~400mm	30×4mm	<60°C	for casting iron
ISU-T13	T-E	5.0MHz	13mm	2~200mm	25×3mm	<350°C	for high temperature

ULTRASONIC THICKNESS GAGE CODE ISU-250C

- Measure the thickness from one side of object, suitable for pipe, tank, etc.
- Applicable material: metal, plastic, glass, nylon, resin, ceramic, rubber, ice
- Low and high limits with judgement
- Average calculation of maximum 9 readings
- Memory of maximum 5000 readings with location number

SPECIFICATION

Resolution	0.01mm (range<100mm)
	0.1mm (range≥100mm)
Repeatability	0.03mm (range<100mm)
	0.1mm (range≥100mm)
Accuracy	±0.04mm (range<10mm)
	±(0.04+H/1000)mm (range 10~100mm)
	±H/333mm (range≥100mm)
	H is the thickness to be measured in mm
Velocity	1000-9999m/s
Power supply	2×1.5V AAA batteries
Dimension	64×116×27mm
Weight	220g



STANDARD DELIVERY

Main unit	1pc
Transducer ISU-T08	1pc
Battery (AAA)	2pcs
Couplant (for ISU-T04, ISU-T06, ISU-T08, ISU-T12)	1bottle
USB cable and software disc	1pc

DATA
OUTPUT



couplant (included)



transducer ISU-T04 (optional)



transducer ISU-T06 (optional)



transducer ISU-T12 (optional)



transducer ISU-T13 (optional)

OPTIONAL ACCESSARY

Transducer	ISU-T04, ISU-T06, ISU-T12, ISU-T13
Couplant (for ISU-T13)	ISU-HT5-COUPPLANT

SPECIFICATION OF TRANSDUCERS

Code	Frequency	Diameter (Ød)	Measuring range	Minimum size of pipe for measurement (diameter × wall thickness)	Applicable temperature	Application
ISU-T08	5.0MHz	10.8mm	0.8~300mm	20×1.2mm	<60°C	general use
ISU-T04	10.0MHz	6mm	0.7~20mm	10×1mm	<60°C	for small tube
ISU-T06	7.5MHz	8.5mm	0.7~50mm	15×1.2mm	<60°C	for thin material
ISU-T12	2.0MHz	16.3mm	2~400mm	30×4mm	<60°C	for casting steel
ISU-T13	5.0MHz	13mm	2~200mm	25×3mm	<350°C	for high temperature

ULTRASONIC THICKNESS GAGE CODE ISU-100D

- Measure the thickness from one side of object, suitable for pipe, tank, etc.
- Applicable material: metal, plastic, glass, nylon, resin, ceramic, rubber, ice



SPECIFICATION

Measuring range		0.8~300mm
Resolution	0.01mm (range<100mm)	
	0.1mm (range≥100mm)	
Accuracy	±0.04mm (range<10mm)	
	±(0.04+H/1000)mm (range 10~100mm)	
	±H/333mm (range≥100mm)	
	H is the thickness to be measured in mm	
Transducer	frequency	5MHz
	diameter (Ød)	10.8mm
Minimum size of pipe for measurement		20×1.2mm (diameter × wall thickness)
Applicable temperature		<60°C
Velocity		1000-9999m/s
Power supply		2×AAA batteries
Dimension		114×64×28mm
Weight		200g

ATTENTION:
BASIC MODEL

ATTENTION: NOT SUITABLE
FOR CASTING WORKPIECE



STANDARD DELIVERY

Main unit	1pc
Transducer	1pc
Couplant	1bottle
Battery (AAA)	2pcs

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

proximity trigger (included)



SPECIFICATION

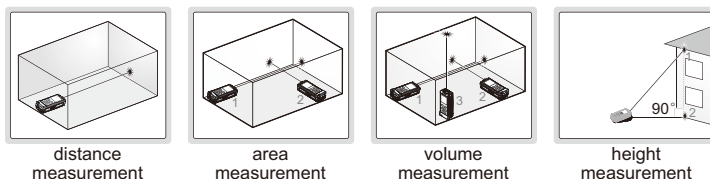
Flash frequency range		60~120000FPM (Flash Per Minute), 1~2000Hz
Resolution	FPM	0.1FPM (<100000FPM), 1FPM (≥100000FPM)
	Hz	0.01Hz (<200Hz), 0.1Hz (≥200Hz)
Setting accuracy		±0.01%
Phase shift increment		3°
Flash pulse duration time		0.1~2.5°
LED light		3pcs CREE 10W lamp
LED life		3~5 years
Trigger mode		internal and external
Power supply		built-in rechargeable battery or AC/DC adapter
Dimension		208×70×60mm
Weight		380g

STANDARD DELIVERY

Main unit	1pc
AC/DC adapter	1pc
Proximity trigger	1pc

IP52
WATERPROOF

LASER DISTANCE METER CODE ISN-L70



SPECIFICATION

Measuring range	0.05~70m
Accuracy	±1.5mm
Resolution	1mm
Measuring speed	0.5 second
Dust/waterproof	IP52
Laser type	650nm, Class II, <1mW
Beam size	25mm@30m
Memory	20 measuring data
Power supply	2xAA batteries, for 10000 measurements
Dimension (L×W×H)	110×45×30mm
Weight	130g

- Large display with backlight
- Unit: m, ft, in
- Distance, area, volume and height measurement
- With continuous measuring mode to track maximum and minimum value
- Automatic power-off: laser 30s, main unit 180s

STANDARD DELIVERY

Main unit	1pc
Battery (AA)	2pcs
Strap	1pc
Carrying bag	1pc

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



base with calibration block
(included)

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
Power supply	1×1.5V AA battery
Dimension	123×38×65mm
Weight	300g

STANDARD DELIVERY

Main unit	1pc
Base with calibration block	1pc
Spare calibration block	1pc

20°/60°/85° GLOSS METER CODE ISQ-DG8

DATA
OUTPUT

- 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



base with calibration block
(included)

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
Power supply	1×1.5V AA battery		
Dimension	155×48×75mm		
Weight	400g		



software (included), output to Excel

STANDARD DELIVERY

Main unit	1pc
Base with calibration block	1pc
USB cable and software	1pc

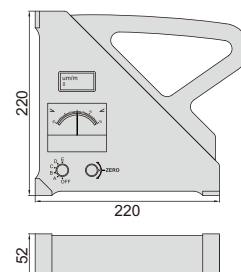


ELECTRONIC LEVEL CODE ISE-L051

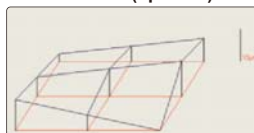
DATA
OUTPUT

SHOCK
PROOF

Unit: mm

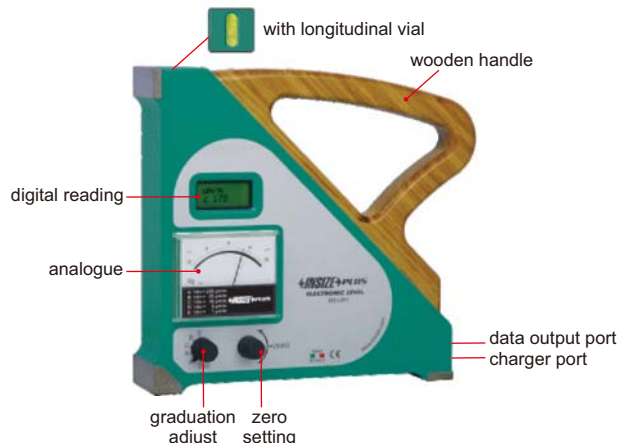


software (optional)



measure flatness of surface plates

- Shockproof
- Analogue and digital reading modes



SPECIFICATION

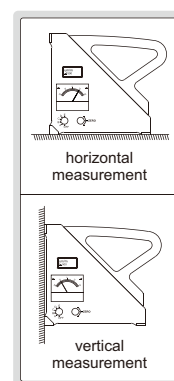
Graduation of analogue reading	250µm/m(=0.014°)	50µm/m(=10")	10µm/m(=2")	5µm/m(=1")	1µm/m(=0.2")
Range of analogue reading	5000µm/m	1000µm/m	200µm/m	100µm/m	20µm/m
Resolution of digital reading	1µm/m(=0.2")				
Range of digital reading	5000µm/m				
Accuracy	±2%				
Range of zero setting	±1500µm/m				
Response time	<3 sec				
Data output	RS232				
Power supply	rechargeable battery, for 100 hours working				
Dimension	220x220x52mm				
Weight	4.4kg				

STANDARD DELIVERY

Main unit	1pc
AC/DC adapter	1pc

OPTIONAL ACCESSORY

USB Cable and software	ISE-L051-SOFTWARE
------------------------	-------------------

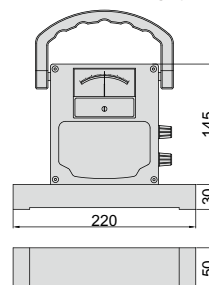


ELECTRONIC LEVEL CODE ISE-L050

DATA
OUTPUT

SHOCK
PROOF

Unit: mm

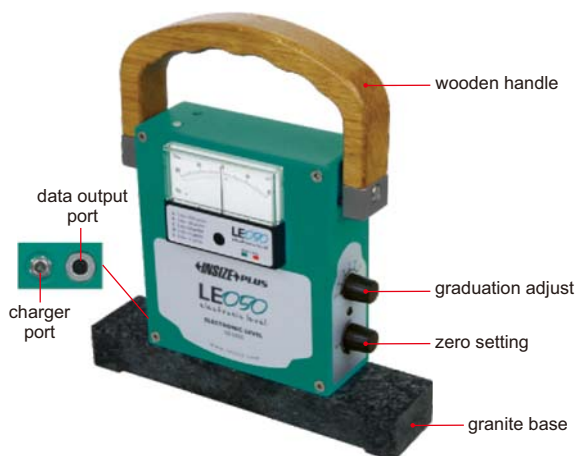


- Shockproof

software (optional)



measure flatness of surface plates



SPECIFICATION

Graduation (adjustable)	250µm/m(=0.014°)	50µm/m(=10")	10µm/m(=2")	5µm/m(=1")	1µm/m(=0.2")
Range	5000µm/m	1000µm/m	200µm/m	100µm/m	20µm/m
Accuracy	±2%				
Range of zero setting	±1500µm/m				
Response time	<3 sec				
Data output	RS232				
Power supply	rechargeable battery, for 100 hours working				
Dimension	220x236x50mm				
Weight	2.8kg				

STANDARD DELIVERY

Main unit	1pc
AC/DC adapter	1pc

OPTIONAL ACCESSORY

USB Cable and software	ISE-L050-SOFTWARE
------------------------	-------------------

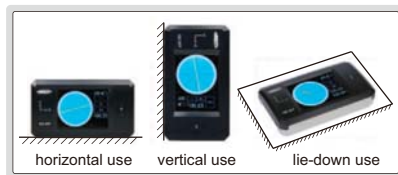
DIGITAL LEVEL CODE ISE-2DT

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

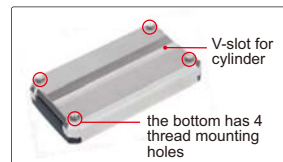


within the tolerance (green) slightly out of the tolerance (yellow) seriously out of the tolerance (red)

- To show the incline with line or bubble



DATA
OUTPUT



SPECIFICATION

Measuring range	±30°
Resolution	0.01°, 0.1mm/m
Accuracy	±0.03° (range 0~3°) ±0.05° (range >3°)
Power supply	rechargeable battery
Dimension	115×66×23mm
Weight	224g

STANDARD DELIVERY

Main unit	1pc
USB cable	1pc

OPTIONAL ACCESSORY

Software	ISE-2DT-SOFTWARE
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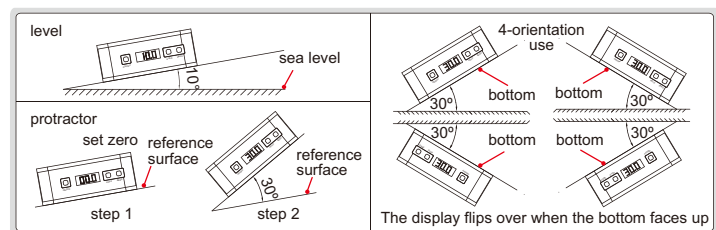
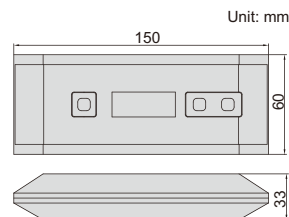
DIGITAL LEVEL AND PROTRACTOR



2173-360

Code	Range	Resolution	Accuracy
2173-360	0-360° (90°x4)	0.1° (= 1.745 mm/m)	0° and 90°: ±0.1°; others: ±0.2°

- Aluminum frame
- Magnetic bottom with V-groove for shafts
- Zero setting can be made on any plain surfaces
- Buttons: ON/OFF, ZERO, HOLD (keep the reading)
- CR2032 battery
- Automatic power off



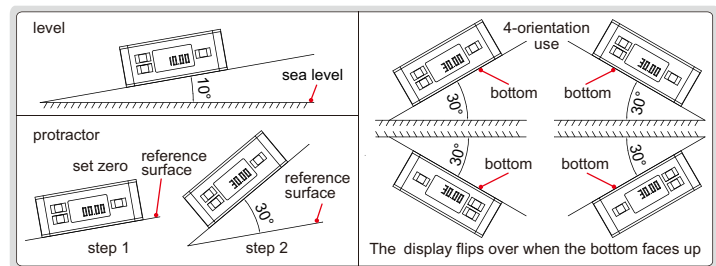
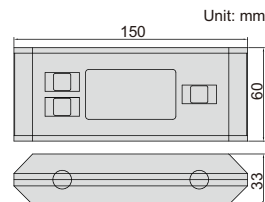
DIGITAL LEVEL AND PROTRACTOR



2179-360

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

- IP54 dust/waterproof
- Aluminum frame
- 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, absolute and incremental measurement, keep the reading, buzzer alarm, unit (mm/m, %, in/ft), backlight
- Two AAA batteries
- Automatic power off



BACKLIGHT

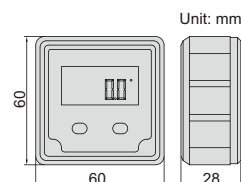
ABSOLUTE
LEVEL

MAGNETIC
BOTTOM

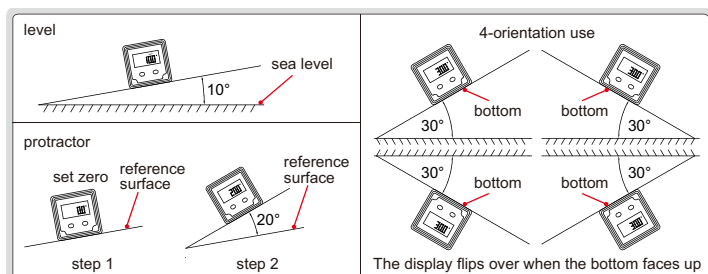
DISPLAY FLIPS OVER WHEN
THE BOTTOM FACES UP

DIGITAL LEVEL AND PROTRACTOR

- 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 minutes 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



2170-1



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



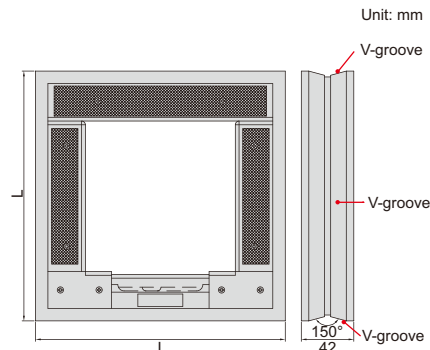
NO NEED TO SET
ZERO BEFORE USE

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

Code	Size (LxL)	Sensitivity
4906-150	150x150mm	0.02mm/m(=0.001°)
4906-200	200x200mm	0.02mm/m(=0.001°)
4906-300	300x300mm	0.02mm/m(=0.001°)



4906-200



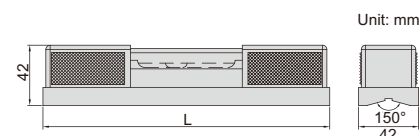
NO NEED TO SET
ZERO BEFORE USE

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

Code	Size (L)	Sensitivity
4905-160	160mm	0.02mm/m(=0.001°)
4905-200	200mm	0.02mm/m(=0.001°)
4905-300	300mm	0.02mm/m(=0.001°)
4905-500	500mm	0.02mm/m(=0.001°)



4905-200



BLOCK LEVEL

ATTENTION:
BASIC MODEL

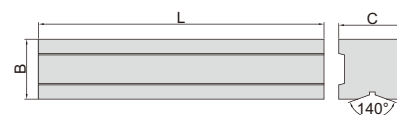
- V-groove on bottom for shafts (shafts dia. 15~70mm)
- With transverse vial
- Supplied with adjusting wrench



(mm)

4903-200A

Code	Length (L)	Sensitivity	B	C
4903-150A	150mm	0.02mm/m($=0.001^\circ$)	40	45
4903-200A	200mm	0.02mm/m($=0.001^\circ$)	42	47
4903-300A	300mm	0.02mm/m($=0.001^\circ$)	45	50



SHORT LEVEL

NO NEED TO SET
ZERO BEFORE USE

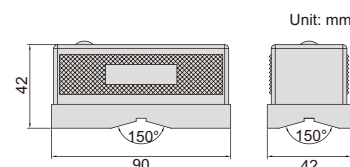


- No need to set zero before use
- Suitable for small spaces like crankshaft
- Longitudinal and transverse V-grooves on bottom for shafts (shafts dia. 19.3~115.9mm)
- With transverse vial



4907-90

Code	Length	Sensitivity
4907-90	90mm	0.1mm/m($=0.0057^\circ$)



MINI LEVEL

NO NEED TO SET
ZERO BEFORE USE

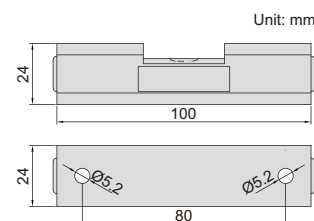


- No need to set zero before use
- With mounting holes (for M5 screws)



4908-100

Code	Length	Sensitivity
4908-100	100mm	0.1mm/m($=0.0057^\circ$)



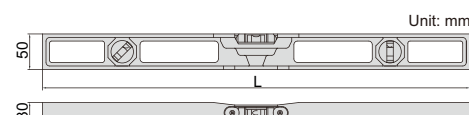
ALUMINUM ALLOY LEVEL

- Die casting aluminum alloy frame
- With three vials: 180°, 90° and 45°
- Zero position of vial 180° can be set



4911-600

Code	Length (L)	Accuracy
4911-400	400mm	0.75mm/m
4911-600	600mm	0.75mm/m
4911-800	800mm	0.75mm/m



ABSOLUTE
LEVEL

BACKLIGHT

BUZZER ALARM
AT 0° AND 90°

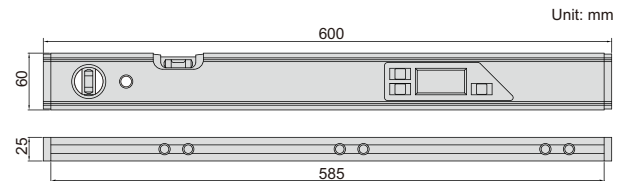
DIGITAL LEVEL

- With transverse and longitudinal vials
- Used as level and protractor
- 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, unit (mm/m, %, in/ft) conversion, backlight
- The display flips over when the bottom faces up
- Two AAA batteries
- Automatic power off

Code	Range	Resolution	Accuracy
4910-600	0-360° (90°x4)	0.1° (=1.745mm/m)	0° and 90°: ±0.1°; others: ±0.2°



4910-600

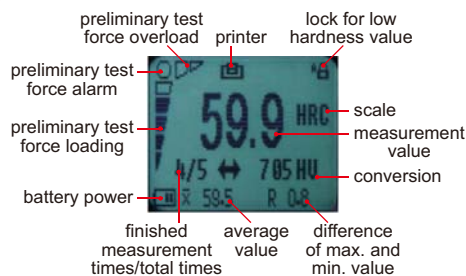


Unit: mm



DATA
OUTPUT

AUTOMATIC DIGITAL ROCKWELL HARDNESS TESTER CODE ISH-MRD200**



- Tolerance measurement with alarm
- Set measurement times (2~9) to have average value and the difference of max. and min. value
- Convert to HV or HB automatically
- Memory of 1000 measurement values for browsing and output
- Measurement value can be sent to wireless printer automatically
- Calibration function compensates the measurement 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



Ø60mm flat anvil
(included)



Ø150mm flat anvil
(included)



V-type anvil
(included)



wireless printer
(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	automatic (load/dwell/unload)
Load dwell time	1~99 second
Resolution	0.1HR
Output	wireless and USB
Memory	1000
Max. workpiece height	170mm
Max. workpiece depth	165mm (from the center of indenter)
Power supply of the display unit	built-in rechargeable battery
Power supply	220V, 50/60Hz **
Dimension	520×160×700mm
Weight	60kg

** Add "U" on code No. when power supply is 110V, 50/60Hz

STANDARD DELIVERY

Main unit	1pc
Ø60mm flat anvil	1pc
Ø150mm flat anvil	1pc
V-type anvil	1pc
Diamond indenter	1pc
Ø1.5875mm carbide ball indenter	1pc
Hardness test block HRB88~95	1pc
Hardness test block HRC60~65	1pc
Hardness test block HRC20~30	1pc
Anti-dust cover	1pc
USB cable and software	1pc
AC/DC adapter	1pc

OPTIONAL ACCESSORY

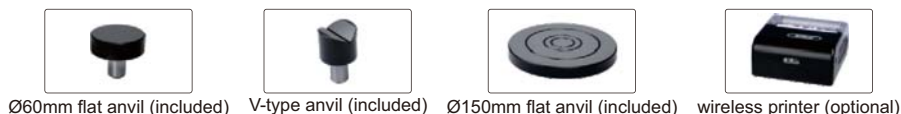
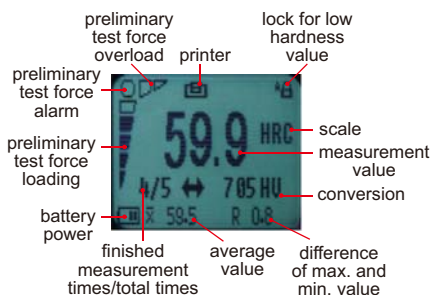
Wireless printer	ISH-DS-PRINTER
Ø3.175mm carbide ball indenter	ISH-EHK-INDENTER
Hardness test block HRB88~95	ISH-BHRB
Hardness test block HRC60~65	ISH-BHRC3
Hardness test block HRC20~30	ISH-BHRC1



DATA
OUTPUT

MANUAL DIGITAL ROCKWELL HARDNESS TESTER CODE ISH-RD200

- Tolerance measurement with alarm
- Set measurement times (2~9) to have average value and the difference of max. and min. value
- Convert to HV or HB automatically
- Memory of 1000 measurement values for browsing and output
- Measurement value can be sent to wireless printer automatically
- Calibration function compensates the measurement 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



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	1000
Max. workpiece height	170mm
Max. workpiece depth	165mm (from the center of indenter)
Power supply	built-in rechargeable battery
Dimension	520×160×700mm
Weight	60kg

STANDARD DELIVERY

Main unit	1pc
Ø60mm flat anvil	1pc
Ø150mm flat anvil	1pc
V-type anvil	1pc
Diamond indenter	1pc
Ø1.5875mm carbide ball indenter	1pc

Hardness test block HRB88~95	1pc
Hardness test block HRC60~65	1pc
Hardness test block HRC20~30	1pc
Anti-dust cover	1pc
USB cable and software	1pc
AC/DC adapter	1pc

OPTIONAL ACCESSORY

Wireless printer	ISH-DS-PRINTER
Ø3.175mm carbide ball indenter	ISH-EHK-INDENTER
Hardness test block HRB88~95	ISH-BHRB
Hardness test block HRC60~65	ISH-BHRC3
Hardness test block HRC20~30	ISH-BHRC1

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. workpiece depth	165mm (from the center of indenter)
Power supply	220V, 50/60Hz **
Dimension	520×160×700mm
Weight	60kg

STANDARD DELIVERY

Main unit	1pc
Ø60mm flat anvil	1pc
Ø150mm flat anvil	1pc
V-type anvil	1pc
Diamond indenter	1pc
Ø1.5875mm carbide ball indenter	1pc
Hardness test block HRB88~95	1pc
Hardness test block HRC60~65	1pc

STANDARD DELIVERY

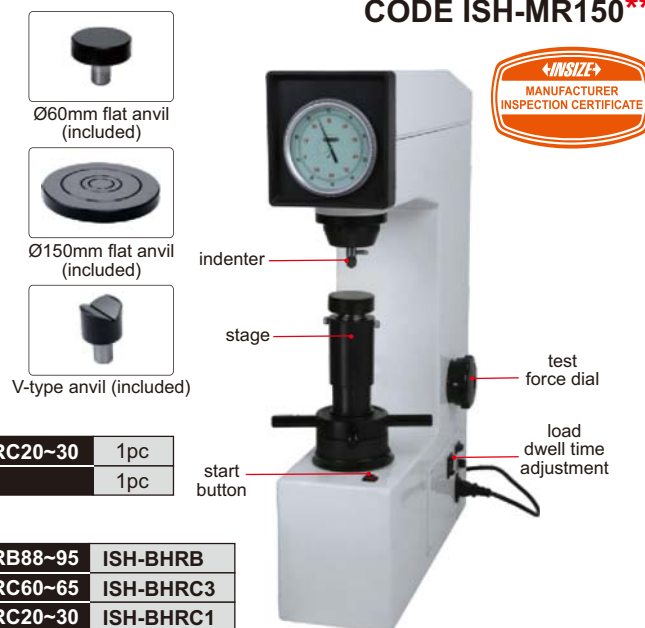
Hardness test block HRC20~30	1pc
Anti-dust cover	1pc

OPTIONAL ACCESSORY

Hardness test block HRB88~95	ISH-BHRB
Hardness test block HRC60~65	ISH-BHRC3
Hardness test block HRC20~30	ISH-BHRC1

** Add "-U" on code No. when power supply is 110V, 50/60Hz

AUTOMATIC ROCKWELL HARDNESS TESTER CODE ISH-MR150**



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. workpiece depth	165mm (from the center of indenter)
Dimension	520×160×700mm
Weight	60kg

STANDARD DELIVERY

Main unit	1pc
Ø60mm flat anvil	1pc
Ø150mm flat anvil	1pc
V-type anvil	1pc
Diamond indenter	1pc
Ø1.5875mm carbide ball indenter	1pc
Hardness test block HRB88~95	1pc
Hardness test block HRC60~65	1pc

STANDARD DELIVERY

Hardness test block HRC20~30	1pc
Anti-dust cover	1pc

OPTIONAL ACCESSORY

Hardness test block HRB88~95	ISH-BHRB
Hardness test block HRC60~65	ISH-BHRC3
Hardness test block HRC20~30	ISH-BHRC1

MANUAL ROCKWELL HARDNESS TESTER CODE ISH-R150



SPECIFICATION

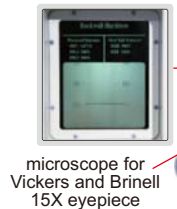
Rockwell test load	98N preload, 588, 980, 1471N total load
Min. Rockwell reading	0.5HR
Brinell test load	306, 613, 1839N
Vickers test load	294N
Stage elevation	manual
Load control	manual
Magnification of microscope	37.5X/75X (selectable)
Max. workpiece height	180mm
Max. workpiece depth	200mm (from the center of indenter)
Power supply	220V, 50/60Hz**
Dimension	546×300×767mm
Weight	90kg

STANDARD DELIVERY

Main unit	1pc
Ø1.5875mm carbide ball indenter	1pc
Diamond Rockwell indenter	1pc
Ø5mm Brinell indenter	1pc
Ø2.5mm Brinell indenter	1pc
Vickers indenter	1pc
Ø60mm flat anvil for Rockwell	1pc
Ø150mm flat anvil for Rockwell	1pc
V-anvil for Rockwell	1pc
Ø60mm flat anvil for Vickers and Brinell	1pc
V-type anvil for Vickers and Brinell	1pc

BRINELL/ROCKWELL/VICKERS HARDNESS TESTER CODE ISH-BRV**

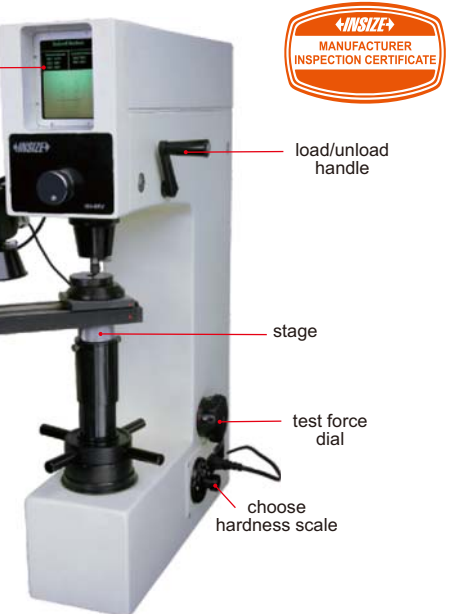
projection screen with scale, for reading Rockwell hardness



graduation 0.01mm

objective 2.5X/5X

slider



Hardness test block HRB88~95	1pc
Hardness test block HRC60~65	1pc
Hardness test block HRC20~30	1pc
Hardness test block 400~500HV30	1pc
Hardness test block 180~200HBW2.5/187.5	1pc
Anti-dust cover	1pc

OPTIONAL ACCESSORY

Hardness test block HRB88~95	ISH-BHRB
Hardness test block HRC60~65	ISH-BHRC3
Hardness test block HRC20~30	ISH-BHRC1
Hardness test block 400~500HV30	ISH-BHV30
Hardness test block 180~220HBW2.5/187.5	ISH-BHB25B

** Add "-U" on code No. when power supply is 110V, 50/60Hz



**AUTOMATIC TESTING AFTER
PRELIMINARY TEST FORCE
IS LOADED BY HAND**

- Automatic testing after preliminary test force is loaded by hand
- Measure indentation by measuring microscope then find the hardness value from table
- Electronic close-loop load control system

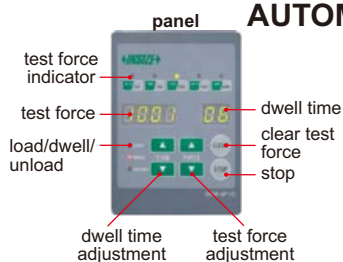
SPECIFICATION

Range	8~650HBW
Reading mode	from table
Test force	62.5, 100, 125, 187.5, 250, 500, 750, 1000, 1500, 3000kgf
Max. height of workpiece	230mm
Max. depth of workpiece	160mm (from the center of indenter)
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	550x210x750mm
Weight	90kg

** Add "-U" on code No. when power supply is 110V, 50/60Hz

OPTIONAL ACCESSORY

Hardness test block 150~250HBW2.5/187.5	ISH-BHB25B
Hardness test block 75~125HBW10/1000	ISH-BHB10A
Hardness test block 175~250HBW10/3000	ISH-BHB10B
Brinell indentation measuring system	ISHB-TSA/TSB



AUTOMATIC BRINELL HARDNESS TESTER CODE ISHB-M100**



STANDARD DELIVERY

Main unit	1pc
Ø80mm flat anvil	1pc
Ø180mm flat anvil	1pc
V-type anvil	1pc
Ø2.5mm carbide ball indenter	1pc
Ø5mm carbide ball indenter	1pc

Ø10mm carbide ball indenter	1pc
Hardness test block 150~250HBW2.5/187.5	1pc
Hardness test block 75~125HBW10/1000	1pc
Hardness test block 175~250HBW10/3000	1pc
Measuring microscope	1pc
Anti-dust cover	1pc



**AUTOMATIC TESTING AFTER
PRELIMINARY TEST FORCE
IS LOADED BY HAND**

- Automatic testing after preliminary test force is loaded by hand
- Measure indentation by measuring microscope then read the hardness value from LCD
- Electronic close-loop load control system
- Take tests up to 40 times and display maximum, minimum and average value
- Converted to HRA, HRB, HRC, HRD, HRF, HV, HK, HR15N, HR30N, HR45N, HR15T, HR30T, HR45T

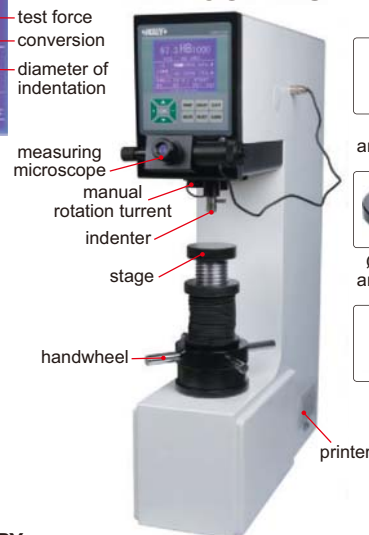
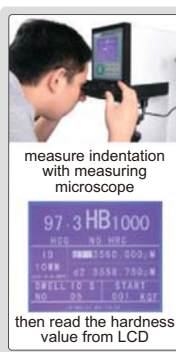
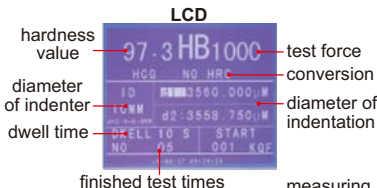
SPECIFICATION

Range	8~650HBW
Reading mode	directly read from LCD
Test force	62.5, 100, 125, 187.5, 250, 500, 750, 1000, 1500, 3000kgf
Max. height of workpiece	200mm
Max. depth of workpiece	135mm (from the center of indenter)
Stage elevation	manual
Load control	automatic (load/dwell/unload)
Load dwell time	5~60 second
Measuring microscope	magnification 20X resolution 0.625mm
Power supply	220V, 50/60Hz**
Dimension	550x210x750mm
Weight	90kg

OPTIONAL ACCESSORY

Hardness test block 150~250HBW2.5/187.5	ISH-BHB25B
Hardness test block 75~125HBW10/1000	ISH-BHB10A
Hardness test block 175~250HBW10/3000	ISH-BHB10B
Brinell indentation measuring system	ISHB-TSA/TSB

AUTOMATIC DIGITAL BRINELL HARDNESS TESTER CODE ISHB-D200**



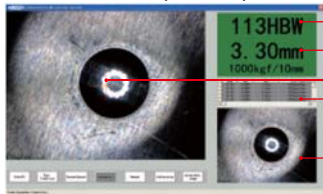
STANDARD DELIVERY

Main unit	1pc
Ø80mm flat anvil	1pc
Ø180mm flat anvil	1pc
V-type anvil	1pc
Ø2.5mm carbide ball indenter	1pc
Ø5mm carbide ball indenter	1pc

Ø10mm carbide ball indenter	1pc
Hardness test block 150~250HBW2.5/187.5	1pc
Hardness test block 75~125HBW10/1000	1pc
Hardness test block 175~250HBW10/3000	1pc
Anti-dust cover	1pc

** Add "-U" on code No. when power supply is 110V, 50/60Hz

software (included)



result and scale
diameter of indentation
indentation
result list
picture

- Connected to computer USB port
- Automatically measure the indentation
- Result saved to Excel automatically
- Low and high limits with judgement
- Calibration with indentation on standard hardness block

SPECIFICATION

Code	ISHB-TSA	ISHB-TSB
Applicable Brinell indenter	Ø10mm	Ø2.5mm, Ø5mm
Hardness range	8~650HB	
Range of indentation diameter	Ø2.4~6mm	Ø0.6~3mm
Test force	100, 250, 500, 1000, 1500, 3000kgf	62.5, 125, 187.5, 250, 750kgf
Hardness resolution	1HB	
Length resolution	0.01mm	
Length accuracy	±1%(diameter of indentation)	
Camera	Sensor	1/3.2" CMOS
	Pixel	2M (resolution 1024x768)
	View filed	9×6.8mm 4.5×3.4mm
Dimension	170×54×54mm	
Weight	420g	

BRINELL INDENTATION MEASURING SYSTEM



magnetic anvil

ISHB-TSA

application



STANDARD DELIVERY

Main unit	1pc
Software and dongle	1pc of each

- Based on Vickers (HV), can be converted to HRA, HRB, HRC, HRD, HR15N, HR30N, HR45N, HR15T, HR30T, HR45T, HK, HBW
- Can take tests up to 99 times, display average value and the difference of max. and mini. value
- Low and high limits with judgement
- Also for Knoop hardness test, Knoop indenter is needed (optional)



slice holder (included)



vice (included)

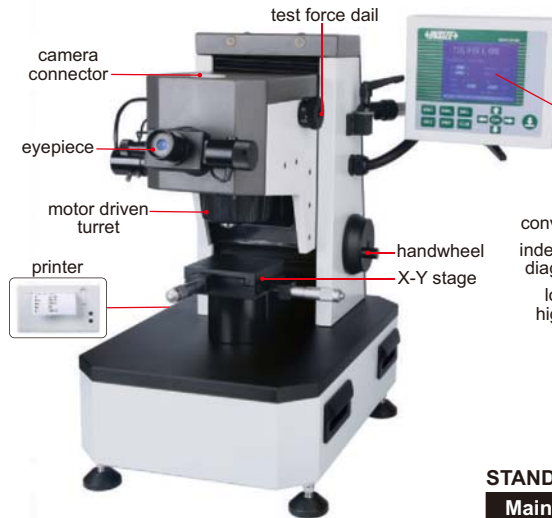


cylinder holder (included)



level (included)

AUTOMATIC DIGITAL MICRO-VICKERS HARDNESS TESTER CODE ISHV-D120**



hardness value
test force
load dwell time
finished test times
conversion
indentation diagonals
low and high limits
average value
difference of max. and mini. value

STANDARD DELIVERY

Main unit	1pc
Micro Vickers indenter	1pc
Hardness test block (400~500HV0.2)	1pc
Hardness test block (700~800HV1)	1pc
Slice holder	1pc
Vice	1pc
Cylinder holder	1pc
Level	1pc
Anti-dust cover	1pc

OPTIONAL ACCESSORY

Hardness test block (400~500HV0.2)	ISH-BHV02A
Hardness test block (700~800HV1)	ISH-BHV1
Knoop indenter	ISHV-D120-KNOOP
Measuring system	ISH-HVC

** Add "-U" on code No. when power supply is 110V, 50/60Hz

SPECIFICATION

Range		10~3000HV
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
Load control		automatic (load/dwell/unload)
Load dwell time		0~60 second
Eyepiece	magnification	10X
	resolution	0.01μm (D≥10μm), 0.001μm (D<10μm) D is diagonal length of indentation
Objective		10X, 40X
Total magnification		100X (for observation), 400X (for measurement)
Max. height of workpiece		210mm
Max. depth of workpiece		135mm (from the center of indenter)
X-Y stage		dimension: 100×100mm, travel range: 25×25mm, graduation: 0.01mm
Power supply		220V, 50/60Hz **
Dimension		490×320×530mm
Weight		45kg

DIGITAL VICKERS HARDNESS TESTER

- Based on Vickers (HV), converted to Rockwell (HRA, HRB, HRC, HRD, HRE, HRF, HRG, HRK), Brinell (HB), Superficial Rockwell (HR15N, HR15T, HR30N, HR30T, HR45N, HR45T), Shore (HS) and Strength (MPa)
- Memory of 27 measurement values for print, browsing and output
- LCD display with backlight
- Can measure Knoop hardness, Knoop indenter is needed

SPECIFICATION

Code	ISH-DV10	ISH-DV50
Measuring range	8HV0.3 ~ 2500HV10	5HV1 ~ 2500HV50
Test force	0.3, 0.5, 1, 3, 5, 10kgf	1, 5, 10, 20, 30, 50kgf
Accuracy	±3%	±3% (test force 1, 5, 10, 20kgf) ±2% (test force 30, 50kgf)
Eyepiece	magnification	10X
	resolution	0.0625μm
Objective	10X, 20X	10X
Total magnification	100X (for observation) 200X (for measuring)	100X (for measuring)
Stage elevation	manual	
Load control	automatic (load/dwell/unload)	
Dwell time	5~60 second	
Max. workpiece height	160mm	
Max. workpiece depth	135mm	
Data output	RS232C	
Power supply	220V, 50/60Hz **	
Dimension	540×270×650mm	
Weight	35kg	45kg



STANDARD DELIVERY

Main unit	1pc
Ø60mm flat anvil	1pc
Ø150mm flat anvil	1pc
V-type anvil	1pc
Vickers indenter	1pc

10X objective	1pc
20X objective	1pc (for ISH-DV10)
Vickers test block	2pcs
Anti-dust cover	1pc

OPTIONAL ACCESSORY

Knoop indenter	ISH-KNOOP
Measuring system	ISH-HVC
Hardness test block 400~500HV5	ISH-BHV5B
Hardness test block 400~500HV10	ISH-BHV10A
Hardness test block 400~500HV30	ISH-BHV30

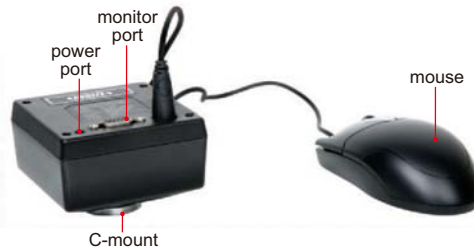
** Add "-U" on code No. when power supply is 110V, 50/60Hz

VICKERS HARDNESS MEASURING SYSTEM CODE ISH-HVC

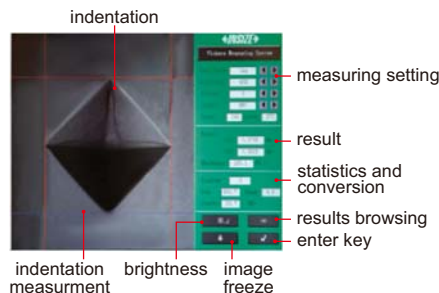
- Computer is not needed. Use mouse to measure on monitor
- Set measuring times (maximum 9) to have average value and the difference of max. and min. value
- Convert to HRA, HRB, HRC, HB, HR45T, HR45N, HR30T, HR30N, HR15T, HR15N
- Memory of 9 last results for browsing
- Result can be printed automatically (wireless printer is optional)
- Hardness block calibration
- Tolerance measurement with alarm
- Image freeze function eliminates error due to vibration

SPECIFICATION

Sensor	1/2" CMOS
Pixel	2M (resolution 800×600)
Hardness measurement resolution	0.1HV
Length measurement resolution	0.1μm
Length measurement accuracy	±0.5% (diagonal length of indentation)
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, 100, 120kgf
Objective	1X, 2X, 4X, 10X, 20X, 40X
Dimension	120×68×55mm
Weight	500g



COMPUTER IS NOT NEEDED



STANDARD DELIVERY

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

application example



OPTIONAL ACCESSORY

Wireless printer	ISH-DS-PRINTER
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DATA
OUTPUT

ULTRASONIC HARDNESS TESTER CODE ISHU-460

Application:

1. For steel, non-ferrous metal and alloy
2. Test surface hardening layers (carburized, nitriding, high frequency hardened, etc.) and plating (like chrome plating)
3. Suitable for thin wall or edge of workpieces
4. Suitable for small areas like arc, conical surface and other complex shapes
5. Suitable for small or light workpieces
6. Suitable for narrow spaces, like grooves and blind holes
7. Test large workpieces at any direction
8. Suitable for rough surfaces

SPECIFICATION OF MAIN UNIT

Hardness scale		HV, HB, HRB, HRC, HS, Mpa
Resolution		1HV, 1HB, 1HRB, 0.1HRC, 1HS
Accuracy	HB	±10HB
	HV	±15HV
	HRC	±2HRC
Data output		USB
Operating temperature		-20°C ~ +40°C
Power supply		built-in rechargeable battery
Dimension and weight of main unit		160×80×40mm, 315g



cover

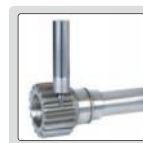
- Small test indentation
- Test force and time are not affected by the operator
- Quick test, only 2 seconds
- Memory of 1000 test results
- Automatic power off
- Anti-dust and waterproof



test flat surfaces
(with the cover)



test cylinder surfaces
(use V-groove
on the cover)



test narrow areas
(remove the cover)

SPECIFICATION OF PROBE

Type	A (standard)	B (optional)
Measuring force	50N	10N (small force)
Application	general use	plating
Maximum roughness of workpiece (Ra)	2.5μm	1.5μm
Minimum weight of workpiece (direct measurement)	0.1kg *	0.1kg *
Minimum thickness of workpiece (direct measurement)	1mm *	1mm *
Minimum radius of workpiece (direct measurement)	5mm	5mm
Minimum thickness of surface hardening layer or plating	0.1mm	0.03mm
Minimum measuring area	Ø1mm	Ø1mm
Dimension and weight of probe	140×Ø37mm, 271g	145×Ø37mm, 271g

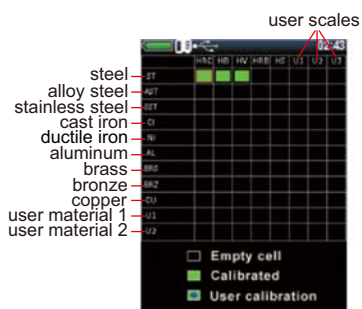
* If the weight or thickness of workpiece is less than required, the workpiece should be fixed or coupled on solid support.

STANDARD DELIVERY

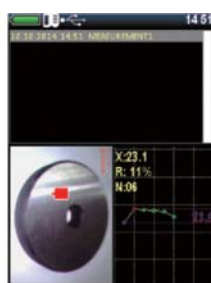
Main unit	1pc
Probe A	1pc
AC/DC adapter	1pc
USB cable and software	1pc

OPTIONAL ACCESSORY

Probe B	ISHU-460-B
Couplant	ISH-COULPLANT



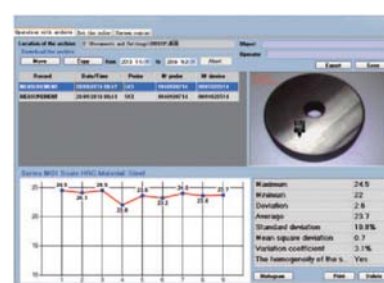
select the material and scale, use the corresponding standard hardness blocks or workpieces for calibration (calibration of HRC, HB and HV for steel are already made, calibration is needed before use other materials and scales)



can take a picture on the workpiece and get a report with testing result and picture, the report can be sent to computer



back



software (included), output data, make and print reports, screen capture, set screen colors of hardness tester



Graph display mode, show average value, relative range and test times



Histogram display mode, show average value, relative range and relative standard deviation



Statistics display mode, show maximum, minimum, deviation, average, relative range and test times



Smart display mode, can set tolerance, automatically reject the result when out of tolerance

ULTRASONIC/LEEB HARDNESS TESTER CODE ISHU-470

DATA
OUTPUT



Application and features:

1. For steel, non-ferrous metal and alloy
2. Test surface hardening layers (carburized, nitriding, high frequency hardened, etc.) and plating (like chrome plating)
3. Suitable for thin wall or edge of workpieces
4. Suitable for small areas like arc, conical surface and other complex shapes
5. Suitable for small or light workpieces
6. Suitable for narrow spaces, like grooves and blind holes
7. Test large workpieces at any direction
8. Suitable for rough surfaces
9. Small test indentation
10. Test force and time are not affected by the operator
11. Quick test, only 2 seconds



main unit
(included)



ultrasonic probe A
(included)



Leeb probe type D
(included)



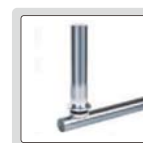
Application and features:

1. Suitable for large and heavy workpieces, such as casting parts, molds, machine guides, etc.
2. For steel, non-ferrous metal and alloy
3. Based on Leeb (HLD), converted to Rockwell (HRC), Vickers (HV), Brinell (HB) and strength (Mpa)
4. Impact direction is adjustable
5. According to ASTM A956

- Automatic detect the ultrasonic probe or Leeb probe type D
- Memory of 1000 test results for browsing and output
- Automatic power off
- Anti-dust and waterproof



ultrasonic probe to test flat
surfaces (with the cover)



ultrasonic probe to test
cylinder surfaces (use
V-groove on the cover)



ultrasonic probe to test
narrow areas
(remove the cover)

APPLICATION OF ULTRASONIC HARDNESS TESTER AND LEEB HARDNESS TESTER

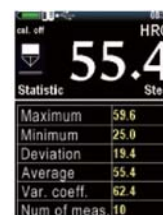
Application	Ultrasonic	Leeb
Solid parts, molds, etc.	well suited	especially suited
Coarse grain materials, cast iron parts, etc.	not recommended	especially suited
Steel and aluminum cast alloys	suited sometimes	especially suited
HAZ with welds	especially suited	not recommended
Tubes: wall thickness>10 mm	especially suited	especially suited
Tubes: wall thickness<10 mm	especially suited	not recommended
Rough surfaces	not recommended	well suited
Thin workpieces	especially suited	not recommended
Difficult to access positions, like turbine blades, gears, etc.	especially suited	well suited



Graph display mode, show
average value, relative
range and test times



Histogram display mode,
show average value,
relative range and relative
standard deviation



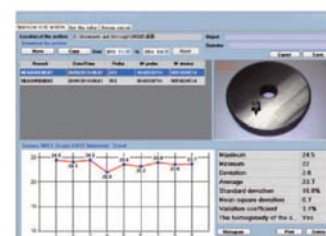
Statistics display mode,
show maximum, minimum,
deviation, average,
relative range and test times

SPECIFICATION OF MAIN UNIT

Hardness scale	HV, HB, HRC, HRC, HS, HL, Mpa	
Resolution	1HV, 1HB, 1HRC, 0.1HRC, 1HS, 1HL, 1Mpa	
Accuracy of ultrasonic test	HB	±10HB
	HV	±15HV
	HRC	±2HRC
Accuracy of Leeb test	HL	±6HL
Data output	USB	
Operating temperature	-20°C ~ +40°C	
Power supply	built-in rechargeable battery	
Dimension of main unit	160×80×40mm	
Weight of main unit	315g	



Smart display mode,
can set tolerance,
automatically reject the
result when out of tolerance



software (included), output data,
make and print reports, screen capture,
set screen colors of hardness tester

SPECIFICATION OF PROBE

Type	ultrasonic A (standard)	ultrasonic B (optional)	Leeb type D (standard)
Test force	50N	10N (small force)	-
Application	general use	plating	large and heavy workpieces
Maximum roughness of workpiece (Ra)	2.5μm	1.5μm	1.6μm
Minimum weight of workpiece (direct measurement)	0.1kg *	0.1kg *	5kg *
Minimum thickness of workpiece (direct measurement)	1mm *	1mm *	5mm *
Minimum radius of workpiece	5mm	5mm	30mm
Minimum thickness of surface hardening layer or plating	0.1mm	0.03mm	-
Minimum test area	Ø1mm	Ø1mm	Ø20mm
Dimension and weight of probe	140×Ø37mm, 271g	145×Ø37mm, 271g	148×Ø20mm, 100g

* If the weight or thickness of workpiece is less than required, the workpiece should be fixed or coupled on solid support.

To be continued

Continued from previous page



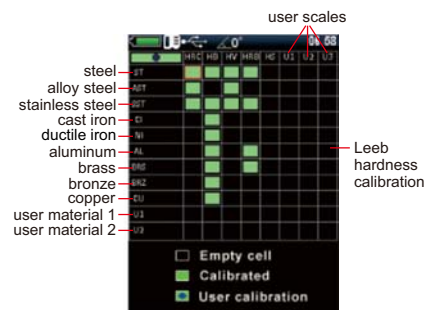
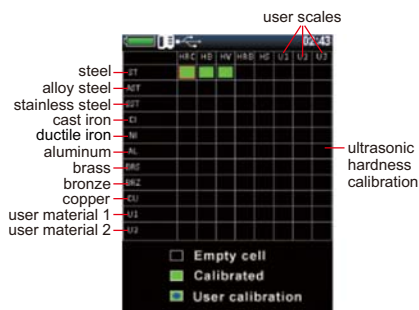
take a picture on the workpiece and get a report with testing result and picture, the report can be sent to computer



back

STANDARD DELIVERY

Main unit	1pc
Ultrasonic probe A	1pc
Leeb probe type D	1pc
Hardness test block D	1pc
AC/DC adapter	1pc
USB cable and software	1pc



select the material and scale, use the corresponding standard hardness blocks or workpieces for calibration ("■" means the calibration is already made, calibration is needed before using other materials and scales)

OPTIONAL ACCESSORY

Ultrasonic probe B	ISHU-460-B
Leeb support rings	see details
Couplant	ISH-COUPPLANT

Application:

1. For steel, non-ferrous metal and alloy
2. Test surface hardening layers (carburized, nitriding, high frequency hardened, etc.) and plating (like chrome plating)
3. Suitable for thin wall or edge of workpieces
4. Suitable for small areas like arc, conical surface and other complex shapes
5. Suitable for small or light workpieces
6. Suitable for narrow spaces, like grooves and blind holes
7. Test large workpieces at any direction
8. Suitable for rough surfaces

- Small test indentation
- Test force and time are not affected by the operator
- Quick test, only 2 seconds
- Average and statistics test modes
- Memory of 1024 test results for browsing and output
- Automatic power off
- Anti-dust and waterproof

SPECIFICATION OF MAIN UNIT

Hardness scale		HV, HB, HRC, Mpa
Resolution		1HV, 1HB, 0.1HRC, 1Mpa
Accuracy	HB	±10HB
	HV	±15HV
	HRC	±2HRC
Data output		USB
Operating temperature		-20℃ ~ +40℃
Power supply		built-in rechargeable battery
Dimension of main unit		120×60×25mm
Weight of main unit		200g

SPECIFICATION OF PROBE

Type	A (standard)	B (optional)
Test force	50N	10N (small force)
Application	general use	plating
Maximum roughness of workpiece (Ra)	2.5μm	1.5μm
Minimum weight of workpiece (direct measurement)	0.1kg *	0.1kg *
Minimum thickness of workpiece (direct measurement)	1mm *	1mm *
Minimum radius of workpiece	5mm	5mm
Minimum thickness of surface hardening layer or plating	0.1mm	0.03mm
Minimum test area	Ø1mm	Ø1mm
Dimension and weight of probe	140×Ø37mm, 271g	145×Ø37mm, 271g

* If the weight or thickness of workpiece is less than required, the workpiece should be fixed or coupled on solid support.



ULTRASONIC HARDNESS TESTER CODE ISHU-330



DATA
OUTPUT



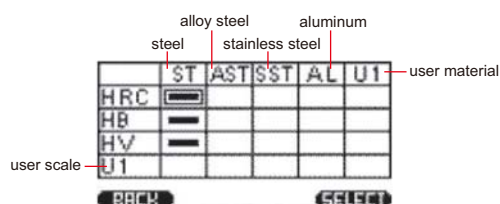
test flat surfaces
(with the cover)



test cylinder surfaces
(use V-groove
on the cover)



test narrow areas
(remove the cover)



select the material and scale, use the corresponding standard hardness blocks or workpieces for calibration (calibration of HRC, HB and HV for steel are already made, calibration is needed before use other materials and scales)

STANDARD DELIVERY

Main unit	1pc
Probe A	1pc
Rechargeable battery	2pcs
Charger	1pc
USB cable and software	1pc

OPTIONAL ACCESSORY

Probe B	ISHU-460-B
Couplant	ISH-COUPPLANT

ULTRASONIC/LEEB HARDNESS TESTER CODE ISHU-340

DATA
OUTPUT



main unit
(included)

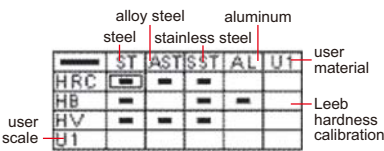
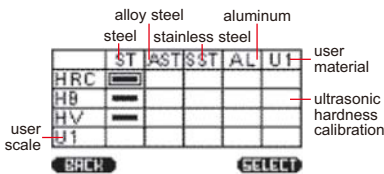


ultrasonic probe A
(included)



Leeb probe type D
(included)

- Automatic detect the ultrasonic probe or Leeb probe type D
- Average and statistics test modes
- Memory of 1024 test results for browsing and output
- Automatic power off
- Anti-dust and waterproof



select the material and scale, use the corresponding standard hardness blocks or workpieces for calibration (" " means the calibration is already made, calibration is needed before using other materials and scales)



software (included), output data, make and print reports

Application and features:

1. For steel, non-ferrous metal and alloy
2. Test surface hardening layers (carburized, nitriding, high frequency hardened, etc.) and plating (like chrome plating)
3. Suitable for thin wall or edge of workpieces
4. Suitable for small areas like arc, conical surface and other complex shapes
5. Suitable for small or light workpieces
6. Suitable for narrow spaces, like grooves and blind holes
7. Test large workpieces at any direction
8. Suitable for rough surfaces
9. Small test indentation
10. Test force and time are not affected by the operator
11. Quick test, only 2 seconds



Ultrasonic hardness tester

Application and features:

1. Suitable for large and heavy workpieces, such as casting parts, molds, machine guides, etc.
2. For steel, non-ferrous metal and alloy
3. Based on Leeb (HLD), converted to Rockwell (HRC), Vickers (HV), Brinell (HB) and strength (Mpa)
4. Impact direction is adjustable
5. According to ASTM A956



Leeb hardness tester



ultrasonic probe to test flat surfaces (with the cover)



ultrasonic probe to test cylinder surfaces (use V-groove on the cover)



ultrasonic probe to test narrow areas (remove the cover)

APPLICATION OF ULTRASONIC HARDNESS TESTER AND LEEB HARDNESS TESTER

Application	Ultrasonic	Leeb
Solid parts, molds, etc.	well suited	especially suited
Coarse grain materials, cast iron parts, etc.	not recommended	especially suited
Steel and aluminum cast alloys	suited sometimes	especially suited
HAZ with welds	especially suited	not recommended
Tubes: wall thickness>10 mm	especially suited	especially suited
Tubes: wall thickness<10 mm	especially suited	not recommended
Rough surfaces	not recommended	well suited
Thin workpieces	especially suited	not recommended
Difficult to access positions, like turbine blades, gears, etc.	especially suited	well suited

SPECIFICATION OF MAIN UNIT

Hardness scale		HV, HB, HRC, HL, Mpa
Resolution		1HV, 1HB, 0.1HRC, 1HL, 1Mpa
Accuracy of ultrasonic test	HB	±10HB
	HV	±15HV
	HRC	±2HRC
Accuracy of Leeb test	HL	±6HL
Data output		USB
Operating temperature		-20°C ~ +40°C
Power supply		built-in rechargeable battery
Dimension of main unit		120×60×25mm
Weight of main unit		200g

STANDARD DELIVERY

Main unit	1pc
Ultrasonic probe A	1pc
Leeb probe type D	1pc
Hardness test block D	1pc
Rechargeable battery	2pcs
Charger	1pc
USB cable and software	1pc

OPTIONAL ACCESSORY

Ultrasonic probe B	ISHU-460-B
Leeb support rings	see details
Couplant	ISH-COULPLANT

SPECIFICATION OF PROBE

Type	ultrasonic A (standard)	ultrasonic B (optional)	Leeb type D (standard)
Test force	50N	10N (small force)	-
Application	general use	plating	large and heavy workpieces
Maximum roughness of workpiece (Ra)	2.5μm	1.5μm	1.6μm
Minimum weight of workpiece (direct measurement)	0.1kg *	0.1kg *	5kg *
Minimum thickness of workpiece (direct measurement)	1mm *	1mm *	5mm *
Minimum radius of workpiece	5mm	5mm	30mm
Minimum thickness of surface hardening layer or plating	0.1mm	0.03mm	-
Minimum test area	Ø1mm	Ø1mm	Ø20mm
Dimension and weight of probe	140×Ø37mm, 271g	145×Ø37mm, 271g	148×Ø20mm, 100g

* If the weight or thickness of workpiece is less than required, the workpiece should be fixed or coupled on solid support.



DATA
OUTPUT

PORTABLE LEEB HARDNESS TESTER CODE ISH-SPHA

- 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
- Low and high limits with judgement
- Touch screen operation, large display with backlight
- Language: English, Chinese, Italian, German, French and Portuguese
- Automatic power off
- According to ASTM A 956



included



printer



hardness test block D



small support ring

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

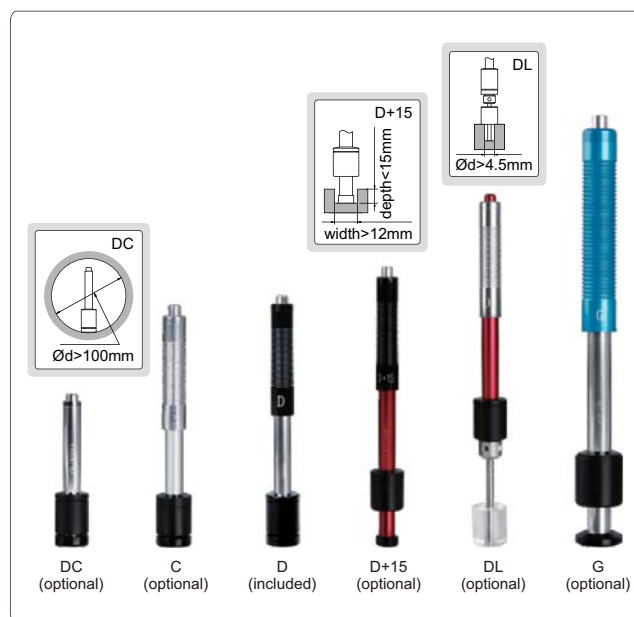
STANDARD DELIVERY

Main unit	1pc
Impact device D	1pc
Printer	1pc
Hardness test block D	1pc
Small support ring	1pc
Cleaning brush	1pc
AC/DC adapter	1pc
USB cable and software disc	1pc
Pen for touch screen	1pc

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*	ISH-BHLD
Hardness test block G*	ISH-BHLG
Couplant	ISH-COUPPLANT
Support rings	see details

* Hardness test block G (ISH-BHLG) is for impact device G (ISH-SPHA-G).
Hardness test block D (ISH-BHLD) is for all others 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 TESTER CODE ISH-PHB



hardness test block D (included)



small support ring (included)



wireless printer (optional)

STANDARD DELIVERY

Main unit	1pc
Impact device D	1pc
Hardness test block D	1pc
Small support ring	1pc
Cleaning brush	1pc

OPTIONAL ACCESSORY

Wireless printer	ISH-DS-PRINTER
Couplant	ISH-COUPPLANT
Support rings	see details
Hardness test block D	ISH-BHLD

- 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

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	

APPLICABLE MATERIAL AND HARDNESS RANGE FOR 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 TESTER CODE ISHL-P100

ATTENTION:
BASIC MODEL



hardness test block D (included)



small support ring (included)



STANDARD DELIVERY

Main unit	1pc
Impact device D	1pc
Hardness test block D	1pc
Small support ring	1pc
Cleaning brush	1pc

OPTIONAL ACCESSORY

Couplant	ISH-COUPPLANT
Hardness test block D	ISHL-P100-BLOCK
Support rings	see details

- Supplied with impact device D
- Set measurement times (1~32) to have average value
- Based on Leeb(HLD), converted to Vickers(HV), Brinell(HB), Rockwell(HRC and HRB), Shore(HS) and tensile strength(MPa)
- Memory of 100 measurement values for browsing
- Automatic power off

SPECIFICATION

Min. reading	1HLD, 1HV, 1HB, 0.1HRC, 0.1HRB, 1HS, 1MPa	
Accuracy	±8HLD (when HLD=760±30)	
Display	Leeb, conversion hardness, material, impact direction, test times, average value, time	
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	155×72×27mm	
Weight	280g	

APPLICABLE MATERIAL AND HARDNESS RANGE FOR 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				



- Impact device D
- Based on Leeb (HLD), converted to Vickers (HV), Brinell (HB), Rockwell (HRC and HRB), Shore (HS) and tensile strength (MPa)
- Automatic direction correction
- Connected with printer via bluetooth
- Connected with computer via USB port
- Up to 500 test results can be saved
- According to ASTM A 956

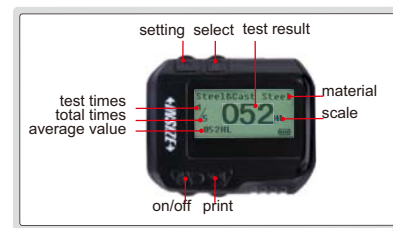
SPECIFICATION

Min. reading	1HLD, 1HV, 1HB, 0.1HRC, 0.1HRB, 1HS		
Accuracy	±6HLD (when HLD=800)		
Output	USB and bluetooth		
Applicable workpiece	minimum weight	5kg (direct measurement)	
		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	built-in rechargeable battery		
Dimension	147×35×22mm		
Weight	65g		

included



PORTABLE LEEB HARDNESS TESTER CODE ISH-SPHD



STANDARD DELIVERY

Main unit	1pc
Printer	1pc
Hardness test block D	1pc
Small support ring	1pc
Cleaning brush	1pc
AC/DC adapter	1pc
USB cable and software disc	1pc

OPTIONAL ACCESSORY

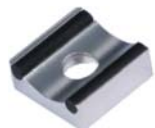
Couplant	ISH-COUPPLANT
Support rings	see details
Hardness test block D	ISH-BHLD

APPLICABLE MATERIAL AND HARDNESS RANGE FOR IMPACT DEVICE D

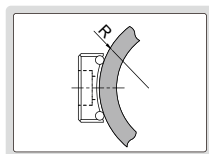
Material	HLD	HV	HB	HRC	HRB	HS
Steel & cast steel	300-900	81-955	81-654	20-68	38-100	32-100
Tool steel	300-840	80-898		20-67		
Stainless steel	300-800	85-802	85-655		46-101	
Cast iron	360-650		93-334			
Cast aluminum alloy	170-570		19-164		23-84	
Brass	200-550		40-173		13-95	
Bronze	300-700		60-290			
Copper	200-690		45-315			

SUPPORT RINGS FOR PORTABLE LEEB HARDNESS TESTER

type A



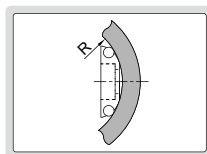
ISH-R1015



type B



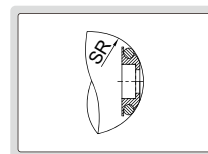
ISH-R1113



type C



ISH-SR1113



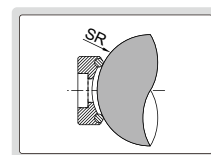
SPECIFICATION

Code	Type	Applicable workpiece	Range (mm)
ISH-R1015	A	cylindrical outside surface	R10 - 15
ISH-R14530			R14.5 - 30
ISH-R2550			R25 - 50
ISH-R1113	B	cylindrical inside surface	R11 - 13
ISH-R12517			R12.5 - 17
ISH-R16530			R16.5 - 30
ISH-SR1113	C	spherical inside surface	SR11 - 13
ISH-SR12517			SR12.5 - 17
ISH-SR16530			SR16.5 - 30
ISH-SR1015	D	spherical outside surface	SR10 - 15
ISH-SR14530			SR14.5 - 30
ISH-RUN	E	cylindrical outside surface	R > 10

type D



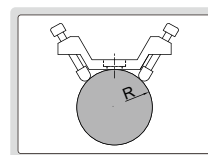
ISH-SR1015



type E



ISH-RUN



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

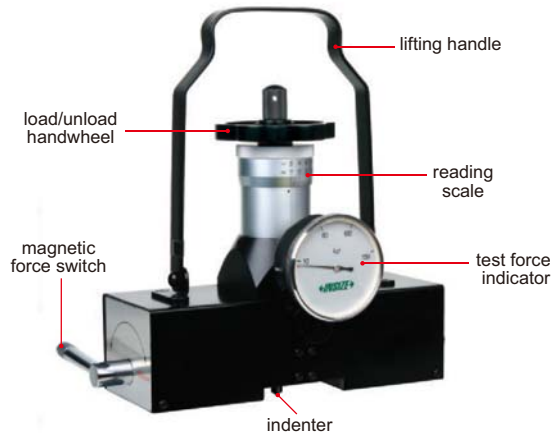
SPECIFICATION

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	1pc
Flat anvil	1pc
Diamond indenter	1pc
Ø1.5875mm carbide ball indenter	1pc
Hardness test block HRB85~95	1pc
Hardness test block HRC60~70	1pc
Hardness test block HRC20~30	1pc

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	1pc
Diamond indenter	1pc
Ø1.5875mm carbide ball indenter	2pcs
Hardness test block HRB85~95	1pc
Hardness test block HRC60~70	1pc
Hardness test block HRC20~30	1pc
Flat anvil	1pc
Support	4pcs
Magnifier with LED	1pc

MAGNETIC BRINELL/ROCKWELL HARDNESS TESTER CODE ISHR-B141



flat anvil for test block
(included)



supports for cylinder or
tube workpieces (included)

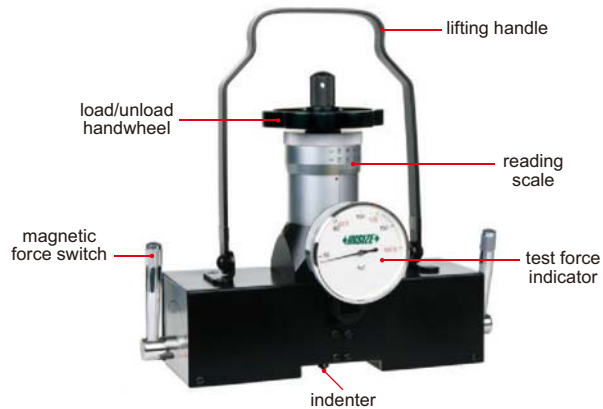


magnifier with LED
(included)



measuring microscope
(included)

- Apply to large steel or iron workpieces
- According to ISO 6508, ASTM E18



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	1pc
Flat anvil	1pc
Support	4pcs
Diamond Rockwell indenter	1pc
Ø1.5875mm carbide ball indenter	1pc
Ø2.5mm Brinell indenter	1pc
Hardness test block HRB85~95	1pc
Hardness test block HRC60~70	1pc
Hardness test block HRC20~30	1pc
Brinell test block	1pc
Measuring microscope	1pc
Magnifier with LED	1pc

PORTABLE ROCKWELL HARDNESS TESTER CODE ISHR-P151

- 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. workpiece depth	25mm
Dimension	240×70×160mm
Weight (with base)	2.5kg

STANDARD DELIVERY

Main unit	1pc
Diamond indenter	1pc
Ø1.5875mm carbide ball indenter	2pcs
Hardness test block HRB88~95	1pc
Hardness test block HRC60~65	1pc
Hardness test block HRC20~30	1pc
Flat anvil	1pc
V-type anvil	1pc
Base	1pc
Anvil extension	1pc
Magnifier	2pcs



flat anvil (included)



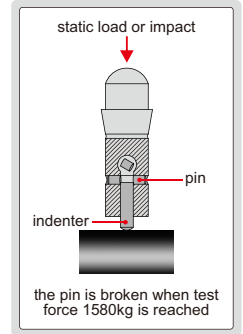
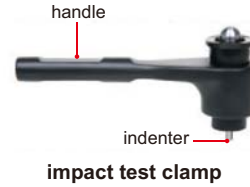
V-type anvil (included)



anvil extension for thin
workpieces (included)

PIN BRINELL HARDNESS TESTER CODE ISHB-P101

- 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



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 in static test	150mm
Max. workpiece depth in static test	80mm (from the center of indenter)
Dimension	195×60×350mm
Weight	4.2kg

STANDARD DELIVERY

Static test clamp	1pc
Impact test clamp	1pc
Flat anvil	1pc
V-type anvil	1pc
Ø7.26mm indenter	1pc
Hardness test block	1pc
Pin	250pcs
Measuring microscope	1pc

OPTIONAL ACCESSORY

Ø4mm indenter	ISHB-P101-INDENTER
Pin (250pcs)	ISHB-P101-PIN

HYDRAULIC BRINELL HARDNESS TESTER CODE ISHB-H131

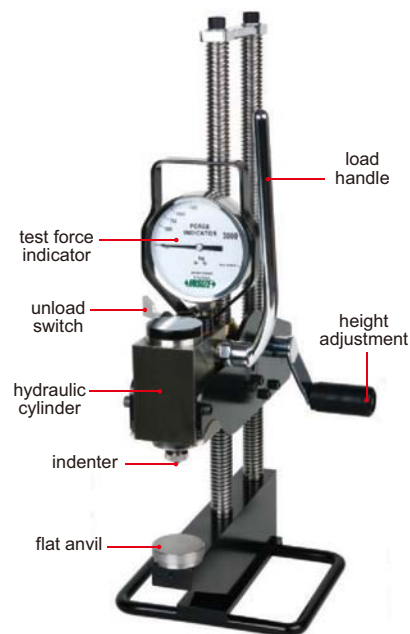
- According to ISO 6505, ASTM E10

SPECIFICATION

Measuring range	16~650HBW
Test force	3000kg
Indenter	Ø10mm carbide ball
Measuring microscope	20X, graduation 0.01mm
Max. workpiece height	350mm
Max. workpiece depth	90mm (from the center of indenter)
Dimension	270×225×570mm
Weight	13.8kg

STANDARD DELIVERY

Main unit	1pc
Flat anvil	1pc
V-type anvil	1pc
Spherical anvil	1pc
Ø10mm carbide ball	2pcs
Brinell test block	2pcs
Measuring microscope	1pc



WEBSTER HARDNESS TESTER

- To measure the hardness of soft metal such as aluminum alloy, copper, brass, soft steel, etc.
- According to ASTM B647-84 (2000)



ISHW-L20

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					

STANDARD DELIVERY

Main unit	1pc
Spare indenter	1pc
Hardness test block	1pc
Wrench	1pc

BARCOL HARDNESS TESTER CODE ISHB-B300

- To measure the hardness of thick workpieces made of pure aluminum, aluminum alloy, fiber reinforced plastic, hard plastic, etc.
- According to ASTM B648-00, ASTM D2853-07

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	1pc
Spare indenter	2pcs
Hardness test block	2pcs
Wrench	1pc



DIGITAL SHORE DUROMETER

DATA
OUTPUT

- According to ISO868, ISO7619, ASTM D 2240
- Average and peak (max.) mode
- Dwell time is adjustable
- Low and high limits with judgement
- 500 memories
- Wireless connection to printer
- Handhold use or work with test stand (code **ISH-DS-STAND**)
- Automatic power off

SPECIFICATION

Code	ISH-DSA	ISH-DSD
Unit	Shore A	Shore D
Test material	soft plastic, soft rubber, etc.	hard plastic, hard rubber, etc.
Measuring range*	0~100HA	0~100HD
Resolution	0.1HA	0.1HD
Accuracy	±1HA	±1HD
Indenter protrusion	2.5mm	
Output	wireless and USB	
Power supply	built-in rechargeable battery	
Dimension	153×50×29mm	
Weight	170g	

STANDARD DELIVERY

Main unit	1pc
Calibration block	1pc
USB cable and software	1pc
AC/DC adapter	1pc



OPTIONAL ACCESSORY

Printer	ISH-DS-PRINTER
Test stand	ISH-DS-STAND
1kg weight block (for ISH-DSA)	ISH-DSA-W1
5kg weight block (for ISH-DSD)	ISH-DSD-W5

* Use **ISH-DSD** when measuring result is higher than 90HA
Use **ISH-DSA** when measuring result is lower than 20HD

TEST STAND FOR DIGITAL SHORE DUROMETER CODE ISH-DS-STAND

- Can perform repeatable hardness measurement due to fewer possibilities of human error or measurement variations
- 1kg weight block is for **ISH-DSA**, 5kg weight block is for **ISH-DSD**

SPECIFICATION

Stage diameter	Ø88mm
Maximum workpiece height	75mm
Dimension	125×163×350mm
Weight	4kg

STANDARD DELIVERY

Test stand	1pc
Durometer supporter	1pc

OPTIONAL ACCESSORY

1kg weight block (for ISH-DSA)	ISH-DSA-W1
5kg weight block (for ISH-DSD)	ISH-DSD-W5





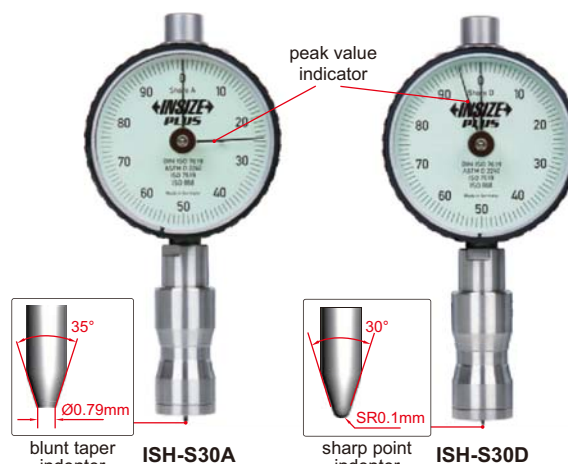
SHORE DUROMETER

- According to ISO868, ISO7619, ASTM D 2240
- With peak value indicator
- Handhold use or work with test stand (code **ISH-OS2**)

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	
Bezel diameter	57mm	
Overall height	121mm	
Weight	184g	

- * Use **ISH-S30D** when measuring result is higher than 90HA
Use **ISH-S30A** when measuring result is lower than 20HD



HARDNESS TEST BLOCK FOR SHORE DUROMETER

SPECIFICATION

Code	ISH-S30A-BLOCK	ISH-S30D-BLOCK
Type	Shore A	Shore D
Hardness value	7pcs/set: 30, 40, 50, 60, 70, 80, 90HA	3pcs/set: 60, 75, 85HD



ISH-S30A-BLOCK



ISH-S30D-BLOCK



- Can perform repeatable hardness measurement due to fewer possibilities of human error or measurement variations
- Special structure for stable loading
- 1kg weight block is for **ISH-S30A**, 4kg weight block is for **ISH-S30D**

SPECIFICATION

Stage diameter	Ø98mm
Maximum workpiece height	180mm
Maximum workpiece depth	115mm (from test point to column)
Weight block	1kg (for ISH-S30A)
Dimension	Ø200×500mm
Weight	18kg

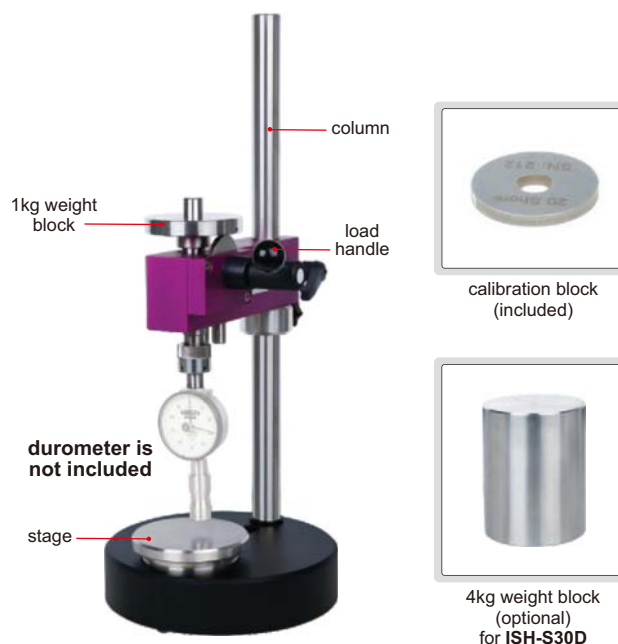
STANDARD DELIVERY

Test stand	1pc
Calibration block	1pc

OPTIONAL ACCESSORY

4kg weight block (for ISH-S30D)	ISH-OS2-W4
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TEST STAND FOR SHORE DUROMETER CODE ISH-OS2



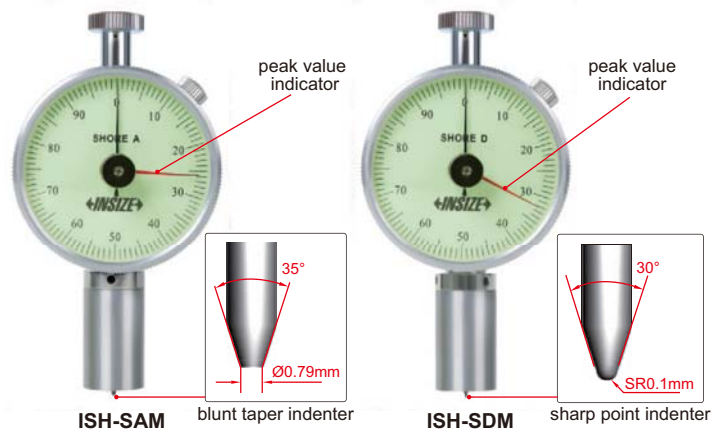
SHORE DUROMETER

- 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

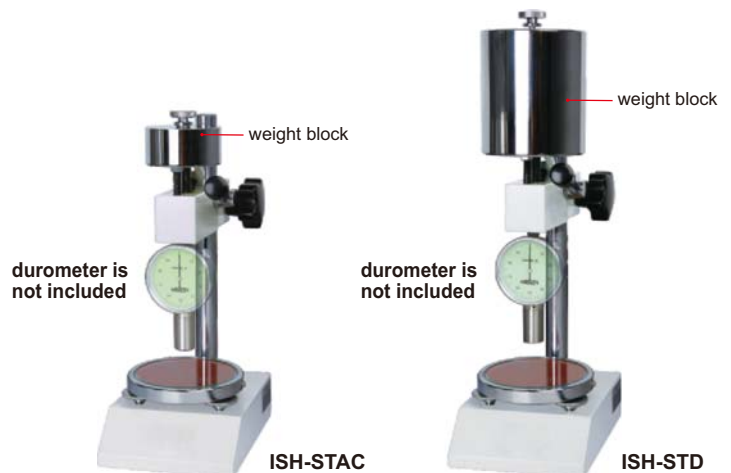


TEST STAND FOR SHORE DUROMETER

- 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
Maximum workpiece height	75mm	75mm
Weight block	1kg	5kg



DATA
OUTPUT

- Push and pull test
- Units: N, gf, kgf, ozf, lbf
- 500 memories
- Automatic power off
- Metal case
- LCD display with backlight, can turn 180°
- Overload alarm

printer (optional)



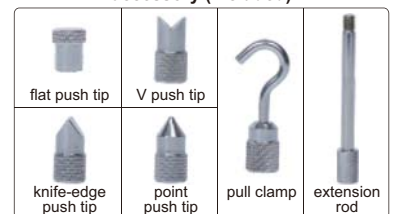
ISF-1DF100

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.), low and high limits with judgement				
Power supply	built-in rechargeable battery				
Dimension	150×73×33mm				
Weight	450g				

DIGITAL FORCE GAGE

accessory (included)



STANDARD DELIVERY

Main unit	1pc
AC/DC adapter	1pc
USB cable and software	1pc
Push/pull accessory	6pcs (flat push tip, V push tip, knife-edge push tip, point push tip, pull clamp, extension rod)

OPTIONAL ACCESSORY

Printer	ISF-DF-PRINTER
Test stand	ISF-MT1K



DATA
OUTPUT

DIGITAL FORCE GAGE (HIGH RESOLUTION)

printer (optional)



- Push and pull test
- Peak (max.) and tracking mode
- Units: mN, N, gf, kgf, ozf, lbf
- Low and high limits with judgement
- 1000 memories
- Automatic power off
- Metal case, touch buttons
- LCD display with backlight, can automatically turn 180°
- Overload alarm

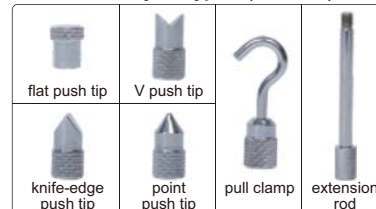


ISF-DF100A
type A



ISF-DF5KA
type B

accessory for type A (included)



accessory for type B (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	1	1	10	10
Accuracy	±0.3% (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	1pc								1pc			
AC/DC adapter	1pc								1pc			
USB cable and software	1pc								1pc			
Push/pull accessory	6pcs (flat push tip, V push tip, knife-edge push tip, point push tip, pull clamp, extension rod)								4pcs (flat push tip, adapter, pull clamps)			

OPTIONAL ACCESSORY

Printer	ISF-DF-PRINTER
Test stand	ISF-MT1K

TEST STAND FOR DIGITAL FORCE GAGE CODE ISF-MT1K

- For tensile and compress test with force gages (code ISF-1DFxx and ISF-DFxx)
- To be used in vertical and horizontal orientation



horizontal orientation test



digital scale (optional)

force gages are
not included



SPECIFICATION

Load capacity	1000N
Travel	200mm (3mm vertical movement per revolution of handwheel)
Dimension	196 x 250 x 446mm
Weight	13kg

OPTIONAL ACCESSORY

Digital scale (range: 200mm, resolution: 0.01mm/0.0005")

ISF-MT1K-SCALE

DIGITAL TORQUE TESTER

DATA
OUTPUT

ATTENTION: NOT SUITABLE FOR ELECTRIC WRENCHES,
IMPACT WRENCHES OR PNEUMATIC WRENCHES

- With external sensor, to test torque wrenches, torque screwdrivers and other torque tools
- Clockwise and counter-clockwise operation
- Peak and track working modes
- Unit: N.m, in.lb, kg.cm
- Target torque value can be set (9 target torque values can be saved and selected quickly), with audible and visible alarm:
 - Green LED light on and buzzer sounds when the value is 90%~100% of target torque
 - Both green and red LED light on and buzzer sounds when the target torque value is reached
- Memory of 250 measurement values for browsing and output
- Power off in 5 minutes automatically



SPECIFICATION

Code	IST-TT5	IST-TT50	IST-TT220	IST-TT550	IST-TT2200
Range	0.5~5N.m	5~50N.m	22~220N.m	55~550N.m	220~2200N.m
Accuracy	±1% (clockwise and counter-clockwise)				
Resolution	0.001N.m	0.01N.m	0.1N.m	0.1N.m	1N.m
Square socket (L)	1/4"	3/8"	1/2"	3/4"	1"
Power supply	built-in rechargeable battery				
Adaptor	no	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"
Transducer dimension	60×60×47 mm	89×89×65 mm	109×109×73 mm	140×140×97 mm	160×160×116 mm
Weight	0.7kg	1.1kg	1.4kg	2.8kg	4.7kg



STANDARD DELIVERY

Main unit	1pc
Transducer with 1m cable	1pc
AC/DC adapter	1pc
USB cable and software	1pc
Adaptor	refer to the left

TORQUE WRENCH TEST STAND CODE IST-TS500

application example



digital torque tester (optional)



adaptor (optional, for digital torque tester **IST-TT5, IST-TT50, IST-TT220**)

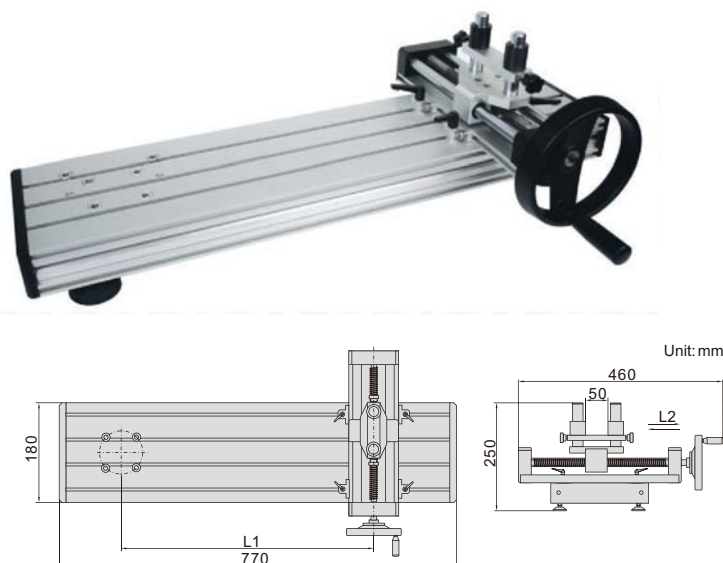
- Work with digital torque testers (IST-TT5, IST-TT50, IST-TT220, IST-TT550)

SPECIFICATION

Digital torque tester	IST-TT5 (optional)	IST-TT50 (optional)	IST-TT220 (optional)	IST-TT550 (optional)
Applicable torque wrenches	0.5~5N.m	5~50N.m	22~220N.m	220~340N.m
Arm length (L1)	150~550mm, adjustable			
Maximum travel (L2)	200mm			
Weight	12kg			

OPTIONAL ACCESSORY

Digital torque tester	IST-TT5, IST-TT50, IST-TT220, IST-TT550
Adaptor	IST-TS500-BLOCK (necessary for IST-TT5, IST-TT50 and IST-TT220, not needed for IST-TT550)



Unit: mm

- Measure the open and tighten torque of bottle cap
- 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

DATA
OUTPUT

SPECIFICATION

Code	IST-DCT2	IST-DCT5	IST-DCT10	IST-DCT20
Load capacity	2N.m	5N.m	10N.m	20N.m
Resolution	0.001N.m	0.001N.m	0.01N.m	0.01N.m
Clamping range	Ø19.5~190mm			
Accuracy	±0.5% (of load capacity)			
Measuring mode	tracking, peak (max.), first peak, double peak, low and high limits with judgement			
Output	wireless and USB			
Power supply	built-in rechargeable battery			
Dimension	200×197×142mm			
Weight	2.5kg			

OPTIONAL ACCESSORY

Printer	ISH-DS-PRINTER
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DIGITAL BOTTLE CAP TORQUE TESTER

printer (optional)



two display modes



digital mode



graph mode



IST-DCT20

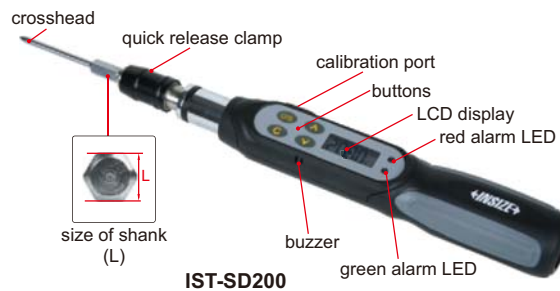
STANDARD DELIVERY

Main unit	1pc
AC/DC adapter	1pc
USB cable and software	1pc

- Clockwise and counter-clockwise operation
- Unit: cN.m, in.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 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



DIGITAL TORQUE SCREWDRIVER



IST-SD200

SPECIFICATION

Code	IST-SD50	IST-SD200	IST-SD400
Range	10~50cN.m	40~200cN.m	80~400cN.m
Accuracy	clockwise	±3%	±2.5%
	counter-clockwise	±4%	±3.5%
Resolution	0.1cN.m	0.1cN.m	0.1cN.m
Size of shank (L)	1/4"	1/4"	1/4"
Power supply	1×AAA battery		
Length	193mm	203mm	203mm
Weight	190g	200g	200g

OPTIONAL ACCESSORY

Calibration cable	IST-SD-CABLE
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- 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 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)

SPECIFICATION

Code	IST-WP6	IST-WP12	IST-WP20
Range	1.2~6N.m	2.4~12N.m	4~20N.m
Accuracy	clockwise	±3%	±3%
	counter-clockwise	±4%	±4%
Resolution	0.001N.m	0.01N.m	0.01N.m
Square driver (L)	1/4"	1/4"	1/4"
Power supply	1×AAA battery		
Length	260mm	260mm	260mm
Weight	430g	430g	430g

SMALL RANGE DIGITAL TORQUE WRENCH



IST-WP20

OPTIONAL ACCESSORY

Calibration cable	IST-SD-CABLE
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SHORT HANDLE DIGITAL TORQUE WRENCH

- 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 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-WS30	IST-WS30A	IST-WS60	IST-WS85
Range	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	0.1N.m
Square driver (L)	1/4"	3/8"	3/8"	3/8"
Power supply	2×AAA batteries			
Length	215mm	215mm	225mm	271mm
Weight	750g	830g	917g	1000g

OPTIONAL ACCESSORY

Calibration cable	IST-SD-CABLE
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WIRELESS DATA TRANSFER DIGITAL TORQUE WRENCH

- Wireless data transfer to computer
- 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)



DIGITAL TORQUE WRENCH
IST-3W135A



RECEIVER
IST-3WREC

DIGITAL TORQUE WRENCH SPECIFICATION

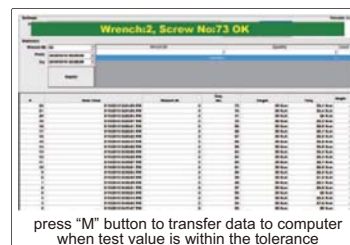
Code		IST-3W30A	IST-3W135A	IST-3W200A	IST-3W340A
Range		6~30N.m	27~135N.m	40~200N.m	68~340N.m
Accuracy	clockwise	±2%			
	counter-clockwise	±3%			
Tolerance setting range		-25% ~ +25% (target torque value)			
Resolution		0.01N.m	0.1N.m	0.1N.m	0.1N.m
Square driver (L)		1/4"	3/8"	1/2"	1/2"
Working frequency		ISM433MHz (432.0~433.8MHz, adjustable)			
Power supply		2xAA batteries, for 110 hours working			
Length		390mm	415mm	530mm	650mm
Weight		760g	940g	1340g	1540g

RECEIVER SPECIFICATION

Code	IST-3WREC
Working frequency	ISM433MHz (432.0~433.8MHz adjustable)
Power supply	DC 24V, 0.5A
Dimension	200×108×31mm
Weight	500g

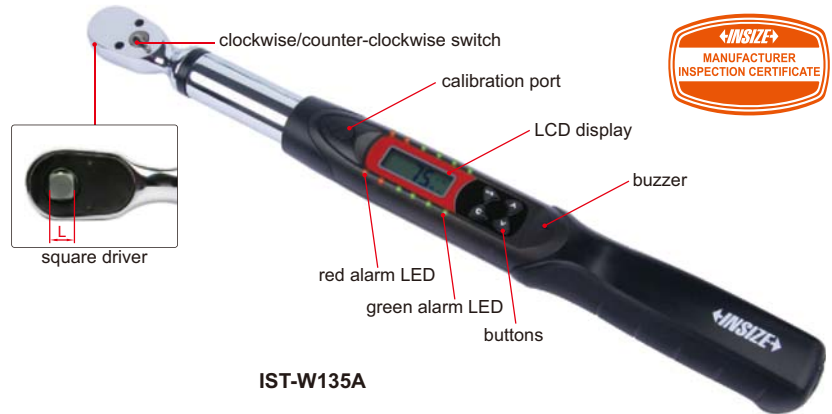
OPTIONAL ACCESSORY

Calibration cable	IST-SD-CABLE
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DIGITAL TORQUE WRENCH

- 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 overload record (once the torque reaches 110% of the maximum range)



IST-W135A

SPECIFICATION

Code	Range	Accuracy	Resolution	Square driver (L)	Power supply	Length	Weight
IST-W30A	6~30N.m	clockwise: $\pm 2\%$ counter-clockwise: $\pm 3\%$	0.01N.m	1/4"	2xAA batteries	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	100~500N.m	clockwise: $\pm 2.5\%$ counter-clockwise: $\pm 3.5\%$	0.1N.m	3/4"		950mm	2.1kg
IST-W850A	170~850N.m		0.1N.m	3/4"		1220mm	2.55kg
IST-W1200A	240~1200N.m		1N.m	1"		1800mm	13kg
IST-W1500A	300~1500N.m		1N.m	1"		1800mm	13kg
IST-W2000A	400~2000N.m		1N.m	1"		1800mm	14kg

OPTIONAL ACCESSORY

Calibration cable	IST-W-CABLE
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DIGITAL ANGLE TORQUE WRENCH

- Clockwise and counter-clockwise operation
- Set the desired torque first. After reaching the desired torque, set the angle and turn the wrench at this angle to apply extra torque
- Unit: N.m, in.lb, ft.lb, kg.cm, degree
- Peak and track working mode
- 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 90%~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 5 minutes automatically
- Non-slip grip handle
- With damp record
- With overload record (once the torque reaches 110% of the maximum range)



IST-1W135A

SPECIFICATION

Code		IST-1W30A	IST-1W135A	IST-1W200A	IST-1W340A
Range	torque	6~30N.m	27~135N.m	40~200N.m	68~340N.m
	angle	0~999°			
Accuracy	clockwise	$\pm 2\%$			
	counter-clockwise	$\pm 3\%$			
	angle	$\pm 2^\circ$ (rotate 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		2xAA batteries, for 110 hours working			
Length		390mm	415mm	530mm	650mm
Weight		830g	950g	1400g	1600g

OPTIONAL ACCESSORY

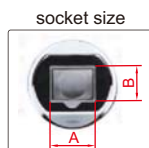
Calibration cable	IST-W-CABLE
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Set the desired torque first. After reaching the desired torque, set the angle and turn the wrench at this angle to apply extra torque

INTERCHANGEABLE HEAD DIGITAL TORQUE WRENCH

- Clockwise and counter-clockwise operation
- Unit: N.m, in.lb, ft.lb, kg.cm, degree
- 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 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

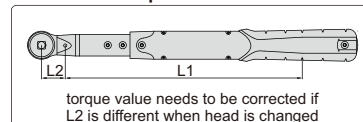
Code	IST-2W30A	IST-2W135A	IST-2W200A	IST-2W340A
Range	6~30N.m	27~135N.m	40~200N.m	68~340N.m
Accuracy	clockwise	±2%		
	counter-clockwise	±3%		
Resolution	0.01N.m	0.1N.m	0.1N.m	0.1N.m
Socket size (A×B)	12×9mm	12×9mm	18×14mm	18×14mm
Arm length (L1)	272.7mm	287.7mm	381.2mm	501.2mm
Power supply	2xAA batteries, for 110 hours working			
Weight	1400g	1570g	2170g	2320g

IST-2W135A

Ratchet head (included)



torque correction



RATCHET HEAD (INCLUDED) SPECIFICATION

Code of torque wrench	IST-2W30A	IST-2W135A	IST-2W200A	IST-2W340A
Square driver (D)	1/4"	3/8"	1/2"	1/2"
Length (L2)	29mm	29mm	40mm	40mm

STANDARD DELIVERY

Torque wrench	1 pc
Ratchet head	1 pc

OPTIONAL ACCESSORY

Calibration cable	IST-W-CABLE
Interchangeable head	see details



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



ADJUSTABLE SPANNER HEAD (optional)

Code	Open size	Applicable wrenches
IST-2W-A1	5~27mm	IST-2W135A
IST-2W-A2	5~30mm	IST-2W200A
IST-2W-A3	10~41mm	IST-2W340A



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-2W-M13A	13mm	IST-2W200A IST-2W340A
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	



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-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	



ACCURACY $\pm 3\%$

ATTENTION: CLOCKWISE
OPERATION ONLY

TORQUE WRENCH

- According to DIN ISO 6789,
ASME B107.300-2010

Set torque:



step 1: unlock



step 2: set



step 3: lock



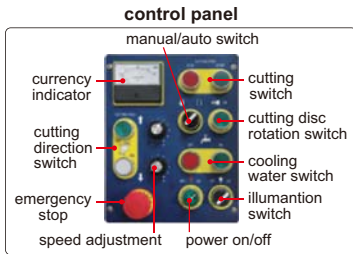
IST-2WM100

SPECIFICATION

Code	IST-2WM25	IST-2WM60	IST-2WM100	IST-2WM200	IST-2WM340	IST-2WM600	IST-2WM800
Range (clockwise)	5~25N.m	10~60N.m	20~100N.m	40~200N.m	60~340N.m	100~600N.m	150~800N.m
Accuracy	$\pm 3\%$	$\pm 3\%$	$\pm 3\%$	$\pm 3\%$	$\pm 3\%$	$\pm 3\%$	$\pm 3\%$
Graduation	0.2N.m	0.5N.m	0.5N.m	1N.m	2N.m	5N.m	5N.m
Square driver (D)	1/4"	3/8"	3/8"	1/2"	1/2"	3/4"	3/4"
Length	281mm	337mm	436mm	512mm	614mm	1050mm	1240mm
Weight	590g	760g	1320g	1580g	1800g	5030g	6110g

- Low noise
- Manual and automatic mode switch
- Built-in recycling water cooling system
- Ball bearing for long working life
- With currency overload protection

PRECISION CUTTING MACHINE CODE ISJ-CMA35



cutting blade



coolant



wrench

SPECIFICATION

Maximum cutting diameter	Ø35mm
Maximum cutting depth	200mm
Diameter of cutting blade	Ø255mm
Hole diameter of cutting blade	Ø31.75mm
Feeding method	manual or automatic
Rotating speed	2500rpm
Power supply	AC 380V, 50Hz, 900W
Dimension	830×900×1300mm
Weight	226kg

STANDARD DELIVERY

Main unit	1pc
Cutting blade	2pcs
Coolant	3bottles
Wrench	2pcs

OPTIONAL ACCESSORY

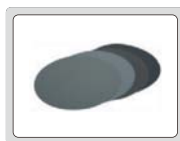
Cutting blade	ISJ-CMA35-CUT
Coolant	ISJ-CMA35-COLT

GRINDER AND POLISHER CODE ISJ-PMA200

- Low noise
- With motor overload protection



aluminum
oxide powder



silicon carbide paper



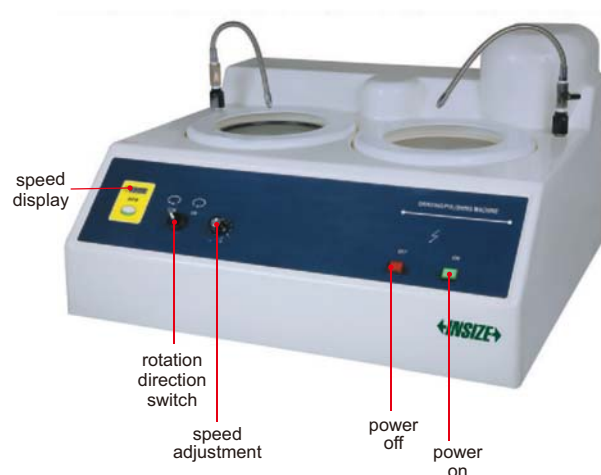
polishing cloth

SPECIFICATION

Quantity of platen	2
Grinding method	manual
Platen diameter	Ø200mm
Rotation speed	50~600rpm (adjustable)
Power supply	AC 220V, 50Hz, 250W
Dimension	750×690×460mm
Weight	55kg

STANDARD DELIVERY

Main unit	1pc
Aluminum oxide powder (100g)	1bag
Silicon carbide paper	4pcs
Polishing cloth	2pcs



OPTIONAL ACCESSORY

Aluminum oxide powder (100g)	ISJ-PMA200-ALU
Silicon carbide paper	ISJ-PMA200-SAN
Polishing cloth	ISJ-PMA200-CLT

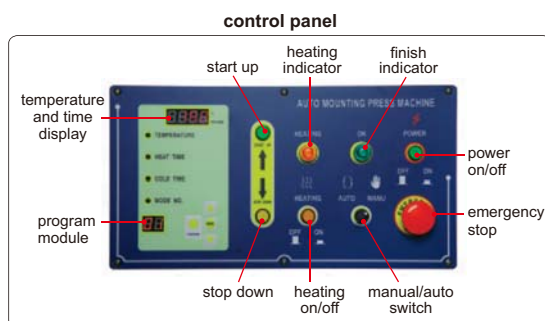
MOUNTING PRESS CODE ISJ-MMA32



spray



hot mounting resin



- Low noise
- Water cooling system
- Can set temperature, heating time and cooling time
- Maximum 40 settings can be saved

SPECIFICATION

Maximum diameter of workpiece	Ø32mm
Mounting quantity	1pc
Power supply	AC 220V, 50Hz, 1600W
Dimension	580×550×590mm
Weight	80kg

STANDARD DELIVERY

Main unit	1pc
Spray	1bottle
Hot mounting resin (1kg)	1bag

OPTIONAL ACCESSORY

Spray	ISJ-MMA32-LQD
Hot mounting resin (1kg)	ISJ-MMA32-PDR

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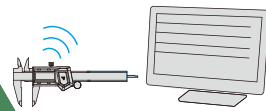
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DATA OUTPUT AND SOFTWARE



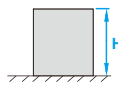
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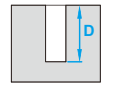
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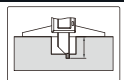
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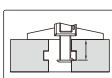
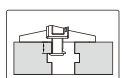
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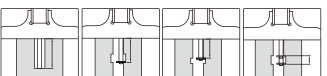
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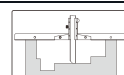
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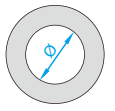
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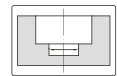
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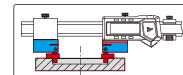
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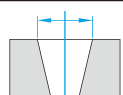
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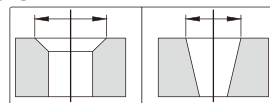
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DIAMETER OF HOLE WITH CHAMFER

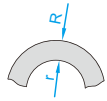


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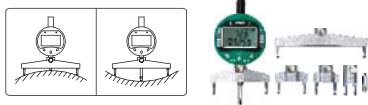
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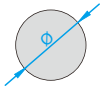
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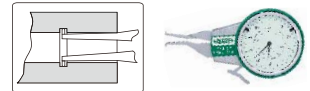
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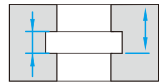
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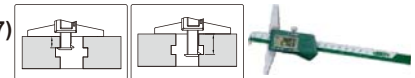
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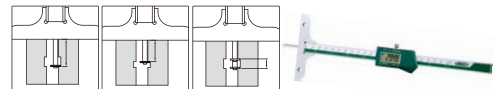
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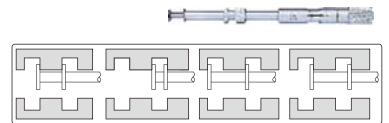
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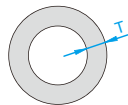
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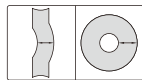
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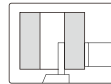
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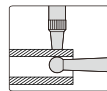
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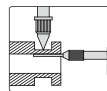
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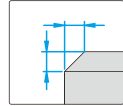
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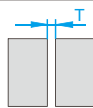
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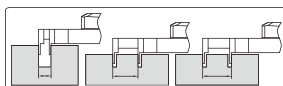
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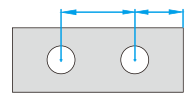
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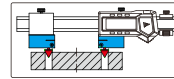
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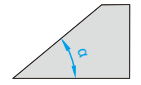
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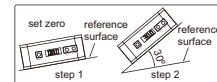
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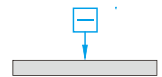
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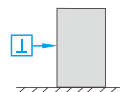
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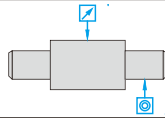


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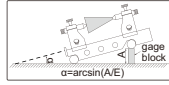
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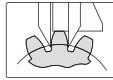
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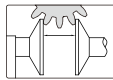
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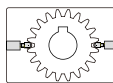
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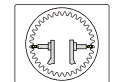
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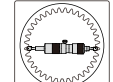
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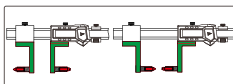
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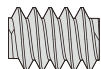
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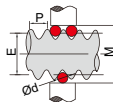
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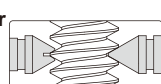
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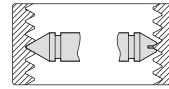
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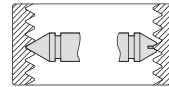
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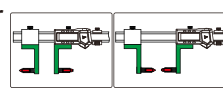
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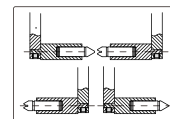
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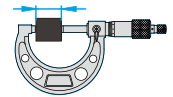
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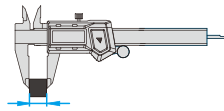
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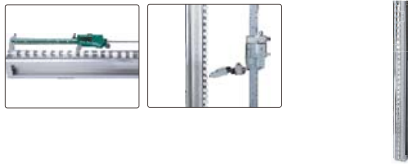
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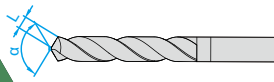
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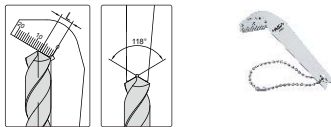
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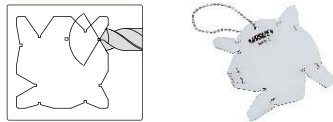
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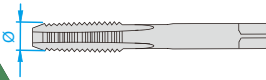
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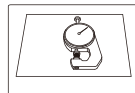
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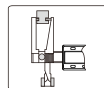
Lie-down use for small articles on the table



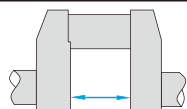
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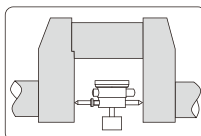
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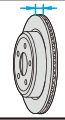


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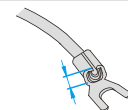
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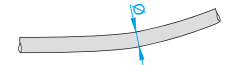
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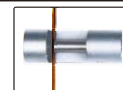
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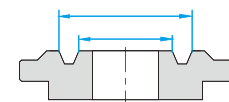
WIRE DIAMETER



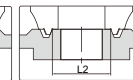
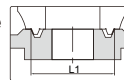
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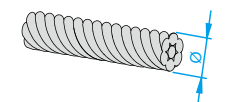
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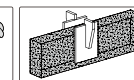
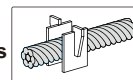
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WIRE ROPE DIAMETER, RUBBER AND SPONGE THICKNESS



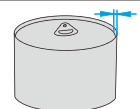
Digital caliper
with large
measuring faces
1172-
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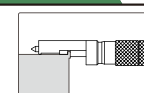
measure diameter
of wire ropes

measure thickness of
rubber, sponge, etc.

CAN SEAM

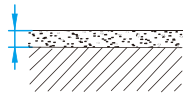


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ADHESION TESTER

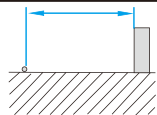
Cross cut adhesion tester
ISQ-PK100
(PAGE 235)



Pull off adhesion tester
ISQ-PF200
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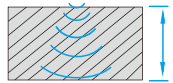
DISTANCE



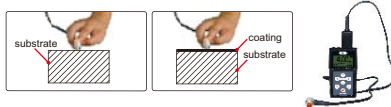
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MEASURING THICKNESS FROM ONE SIDE



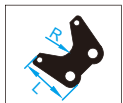
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Ultrasonic thickness gage
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ISP-AZ3020/A5000E
ISP-W3020/A3000E
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Vision measuring system
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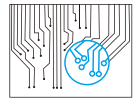
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Portable measuring microscope
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VISION INSPECTION



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/PM160LA/TV200/TV200W
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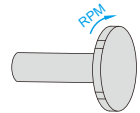
Portable measuring microscope
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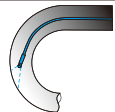


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Gloss meter
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Pipe videoscope
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Borescope
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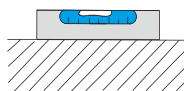
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Linear scale
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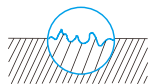
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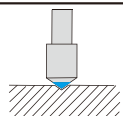
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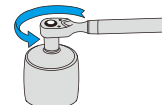
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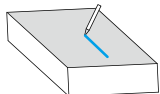
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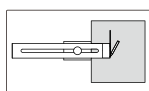
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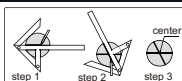
MARK AND SCRIBE



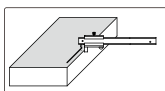
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