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2. According to the product functions, search following index.



Please scan QR code to watch the basic operation video of the products.



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2227108117

P1-3

**OUTPUT INTERFACE
WIRELESS DATA TRANSFER SYSTEM**



P4-49

**DIGITAL CALIPER
VERNIER CALIPER
DIAL CALIPER**



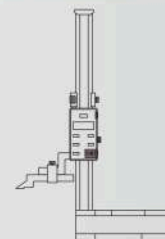
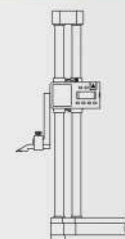
P50-67

**DEPTH CALIPER
DEPTH MICROMETER
DEPTH INDICATOR**



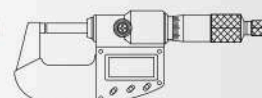
P68-77

HEIGHT GAGE



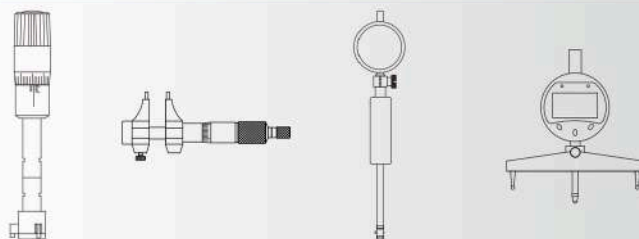
P78-125

**OUTSIDE MICROMETER
MICROMETER HEAD
MICROMETER STAND**



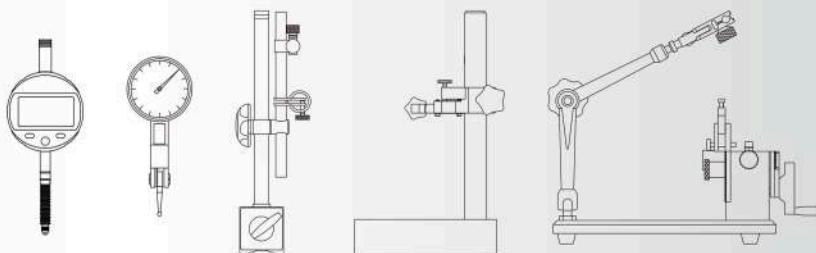
P126-152

INSIDE MICROMETER
BORE GAUGE
RADIUS GAUGE
CIRCUMFERENCE TAPE



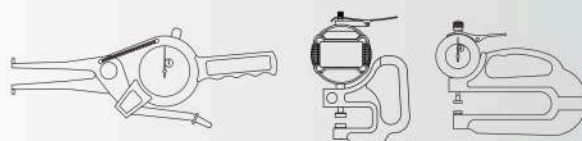
P153-198

LINEAR GAUGE
DIAL INDICATOR
DIGITAL INDICATOR
DIAL TEST INDICATOR
STYLI
MAGNETIC STAND
INDICATOR STAND
CONCENTRICITY GAUGE



P199-220

DIAL CALIPER GAUGE
DIGITAL CALIPER GAUGE
THICKNESS GAUGE
SNAP GAUGE
CRANKSHAFT TESTER



P221-251

GAUGE BLOCK
PIN GAUGE
STEEL BALL
MASTER SETTING DISC
RING GAUGE
PLUG GAUGE



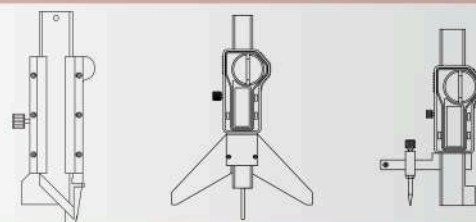
P251-278

PROTRACTOR
SQUARE
STRAIGHT EDGE
LEVEL



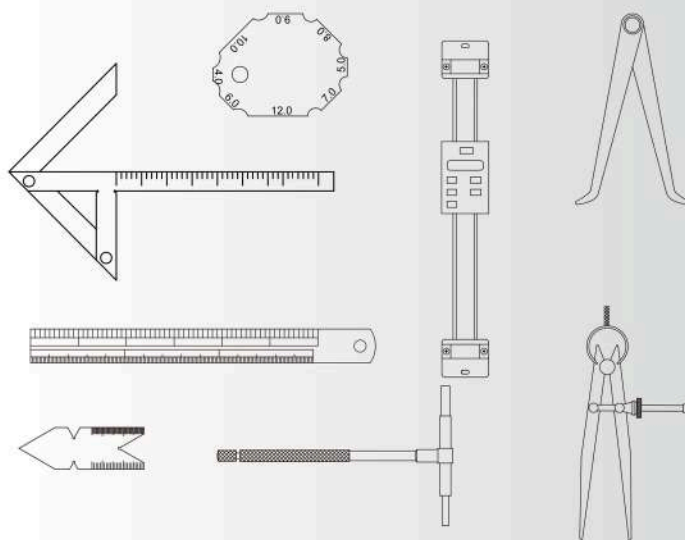
P279-284

CHAMFER GAUGE
DIGITAL KEYWAY GAUGE
DIGITAL STEP GAUGE



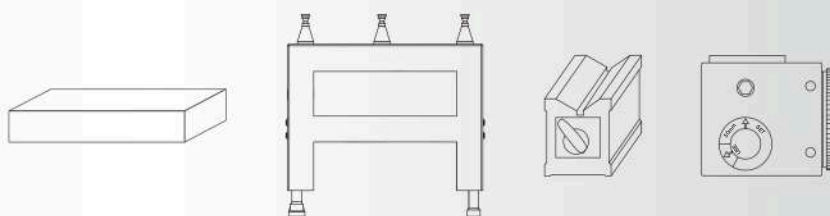
P285-325

FEELER
PITCH GAUGE
ANGLE GAUGE
RADIUS GAUGE
TELESCOPING GAUGE
TAPER GAUGE
WELDING GAUGE
CHAMFER GAUGE
KEY GAUGE
INSIDE/OUTSIDE CALIPER
DIVIDER
STEEL RULE
MEASURING TAPE
MARKING GAUGE
DIGITAL SCALE
STEP GAUGE



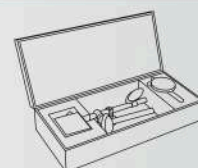
P326-346

GRANITE SURFACE PLATE
V-BLOCK
PARALLEL SET
ANGLE PLATE SET
PRECISION VISE
CENTERING INDICATOR
EDGE FINDER
ZERO SET



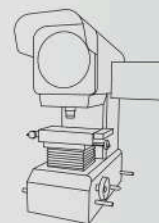
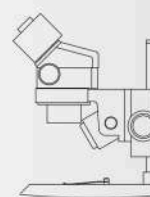
P346-351

MEASURING TOOLS SET



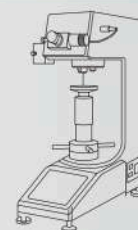
P352-384

ENDOSCOPE
DIGITAL MICROSCOPE
STEREO MICROSCOPE
VIDEO MICROSCOPE
CAMERA
PROFILE PROJECTOR
VISION MACHINE
TOOL PRESETTER



P385-409

HARDNESS TESTER



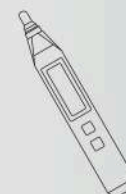
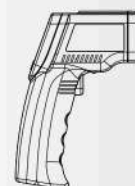
P409-417

ROUGHNESS SPECIMEN
ROUGHNESS TESTER
ROUNDNESS TESTER



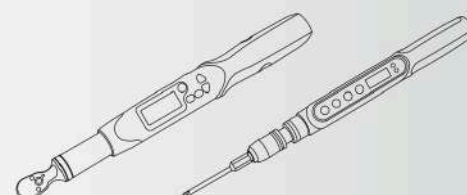
P418-442

ULTRASONIC THICKNESS GAUGE
COATING THICKNESS GAUGE
TEMPERATURE METER
INFRARED THERMOMETER
DIGITAL MULTIMETER
LASER TACHOMETER
LASER DISTANCE METER
LASER LEVEL
GLOSS METER
COLOR METER



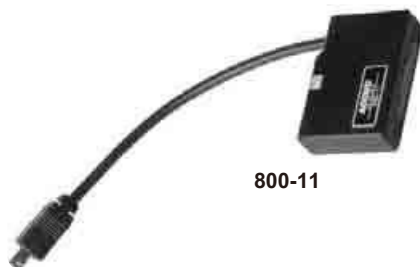
P443-463

FORCE GAUGE
TORQUE WRENCH
TORQUE SCREWDRIVER
TORQUE METER
WEIGHING SCALE
WEIGHT





VIDEO

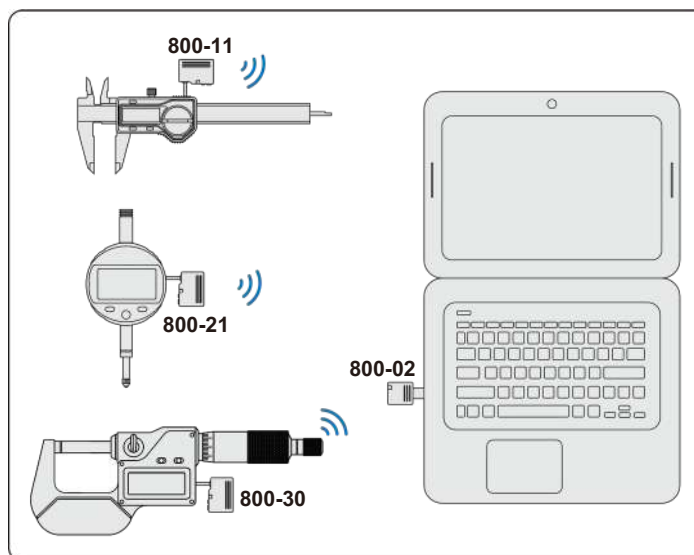


800-11



800-02

- ◆ Max. transmission distance: 15m
- ◆ For single channel receiver (code: 800-01), it can be only connected to one receiver(gages). There is no software, the data can be transferred into Excel, Word directly.
- ◆ For multi- channel receiver(code: 800-02) , it can be connected to Max. 10 receivers(gages). It includes a software, the data can be transferred into the software.
- ◆ Wireless zigbee protocol, conforming to IEEE802, 2.4GHz band



Code	Name	Plug to product	Products
800-01	single channel receiver		for follow measuring tools
800-02	multi- channel receiver		for follow measuring tools
800-10	transmitter		for digital calipers with following electronics *
800-10L	transmitter		for digital height gage with following electronics *
800-11	transmitter		for digital calipers with following electronics

*Confirm the electronics output port type when placing orders

Code	Name	Plug to product	Products
800-15	transmitter		for digital calipers and height gage with following electronics
800-21	transmitter		for digital indicators with following electronics
800-20	transmitter		for digital indicators with following electronics
800-30	transmitter		for digital micrometers with data output with following electronics



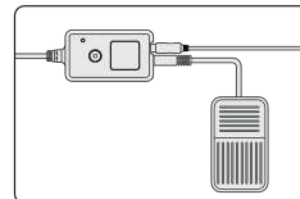
VIDEO



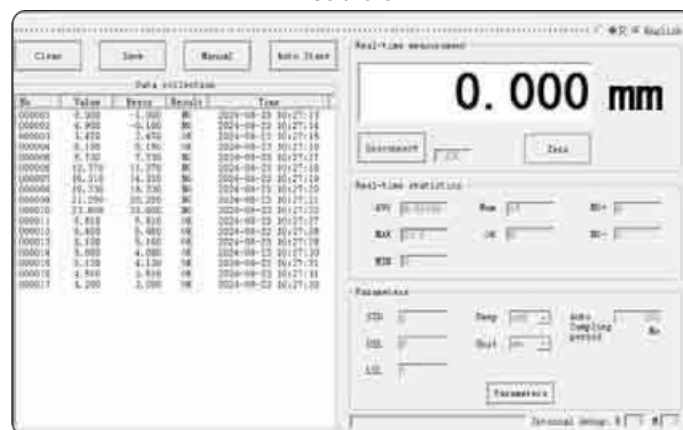
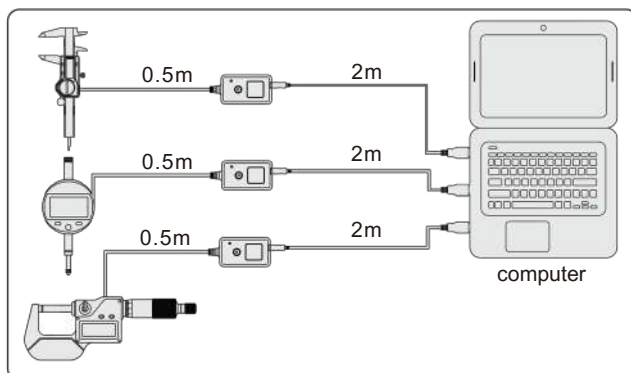
100-11

- ◆ The cable without software, push the black button or footswitch, the data can be transferred into Excel, Word directly. The cable with software, the data can be transferred into the software at a set interval time automatically.

Connect foot switch to transfer the data
(code: 400-01)



Software



Code	Software	Plug to product	Products
100-03	Without		for digital calipers with following electronics
100-04	With		*
100-03L	Without		for digital height gage with following electronics
100-04L	With		*
100-11	Without		for digital calipers with following electronics
100-12	With		
100-15	Without		for digital calipers and height gage with following electronics
100-17	Without		for digital calipers with following electronics

Code	Software	Plug to product	Products
200-03	Without		for digital indicators with following electronics
200-04	With		
200-01	Without		for digital indicators with following electronics
200-02	With		
200-05	Without		for digital indicators with following electronics (output radius)
200-06	With		
300-03	Without		for digital micrometers with data output with following electronics
300-04	With		

Code	Name
400-01	foot switch

* Confirm the electronics output port type when placing orders

- ◆ Connecting series 208 (software is included)
- ◆ Connecting 206 (software is included)

For following series 208
(counter for linear gauge)



208-004-01



208-008-01

For following 206

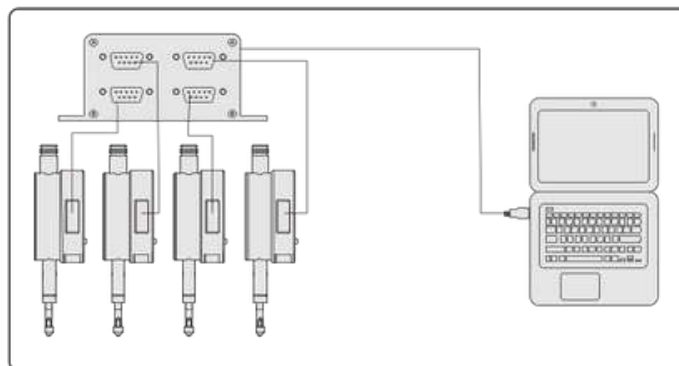


206-010-01



200-92

Work with series 208 (counter for linear gauge)



code	Plug to product	Products
200-91		for digital indicators with following electronics
200-92		for digital indicators with following electronics

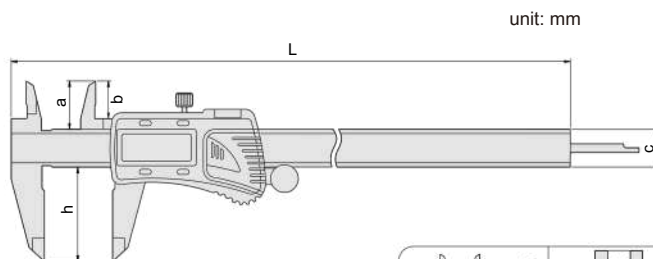
SERIES 111

DIGITAL CALIPER



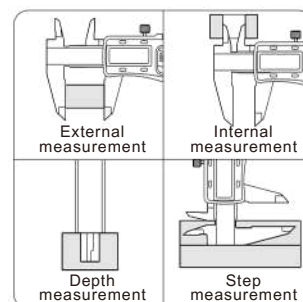
111-006-17

- ♦ High accuracy
- ♦ Absolute system
- ♦ Resolution: 0.01mm/0.0005"
- ♦ Buttons: on/off, ABS/ZERO, inch/mm, ORIGIN
- ♦ Data output(cablecode:100-17)
- ♦ Meet DIN862
- ♦ Made of stainless steel



Code	Range	Accuracy	a	b	c	h	L
111-006-17	0-150mm/0-6"	±0.02mm	21	16.5	16	40	236
111-008-17	0-200mm/0-8"	±0.02mm	24	19	16	50	286
111-012-17	0-300mm/0-12"	±0.03mm	26	20.5	16	60	400

With manufacturer inspection certificate



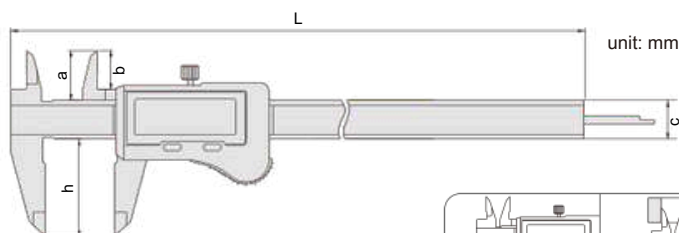
SERIES 112

IP67 DIGITAL CALIPER



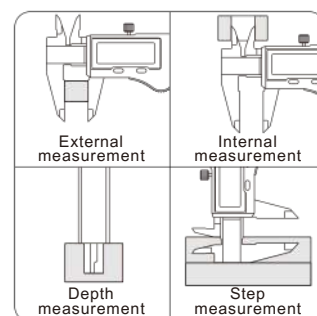
112-006-11H

- ◆ IP67 protection level
- ◆ Absolute measuring system
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Automatic power off
- ◆ Buttons: zero, mm/inch, data preset
- ◆ Made of stainless steel



Code	Range	Accuracy	a	b	c	h	L
112-006-11H	0-150mm/0-6"	±0.02mm	21	16.5	16	40	236
112-008-11H	0-200mm/0-8"	±0.02mm	24	19	16	50	286
112-012-11H	0-300mm/0-12"	±0.03mm	25	20.5	16	60	400

With manufacturer inspection certificate

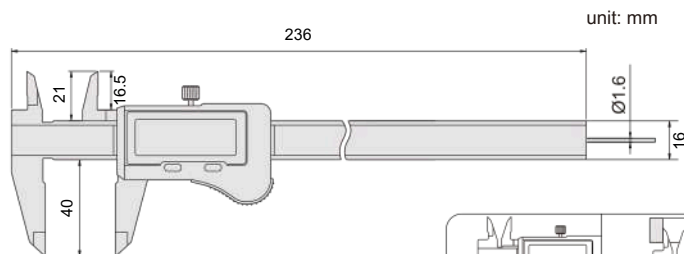


SERIES 112

WATERPROOF DIGITAL CALIPER
WITH ROUND DEPTH BAR

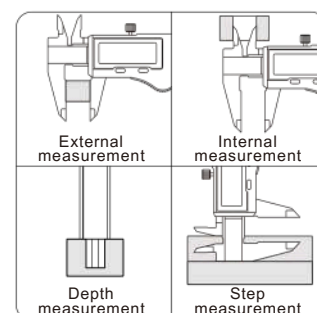
112-006-11HR

- ◆ IP67 protection level
- ◆ Absolute measuring system
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Automatic power off
- ◆ Buttons: zero, mm/inch, data preset
- ◆ Made of stainless steel



Code	Range	Accuracy
112-006-11HR	0-150mm/0-6"	±0.02mm

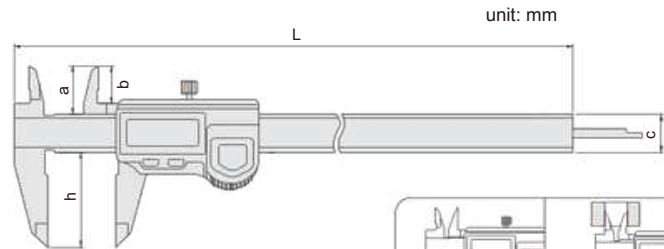
With manufacturer inspection certificate





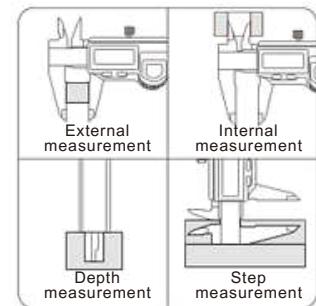
112-006-12

- ◆ IP67 protection level
- ◆ Absolute measuring system
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Automatic power off
- ◆ Buttons: on/off, zero, mm/inch



Code	Range	Accuracy	a	b	c	h	L
112-006-12	0-150mm/0-6"	±0.03mm	21	16.5	16	40	236
112-008-12	0-200mm/0-8"	±0.03mm	24	20	16	50	286
112-012-12	0-300mm/0-12"	±0.03mm	25	20.5	16	60	400

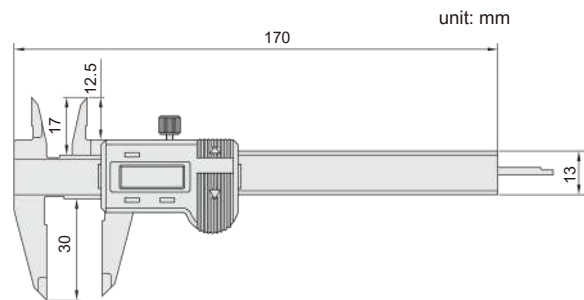
With manufacturer inspection certificate



MASUP *innova*

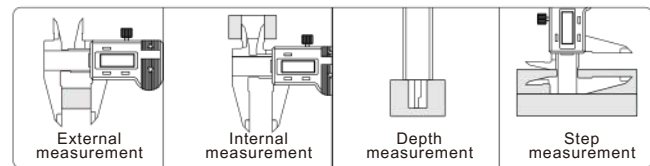


- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Meet DIN862
- ◆ Made of stainless steel



Code	Range	Accuracy
114-004-11	0-100mm/0-4"	±0.02mm

With manufacturer inspection certificate



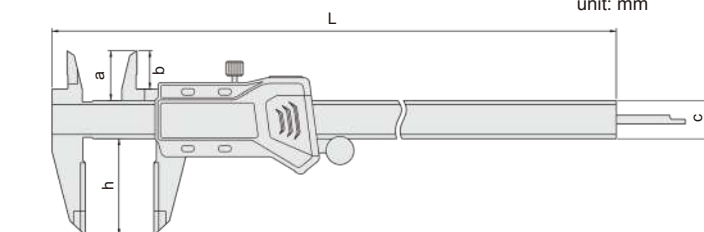
MASUP *innova*



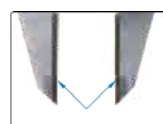
116-006-11

unit: mm

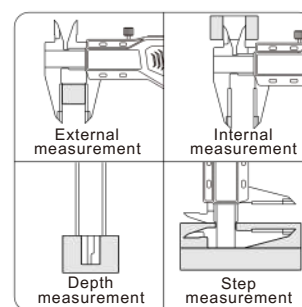
- ◆ Carbide tipped jaws for inside and outside measurements, good wear- resistance
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/in, INC
- ◆ Dataoutput(cablecode:100-03 or 100-04)
- ◆ Automatic power on/off
- ◆ Made of stainless steel



Carbide tipped jaws



Carbide tipped jaws

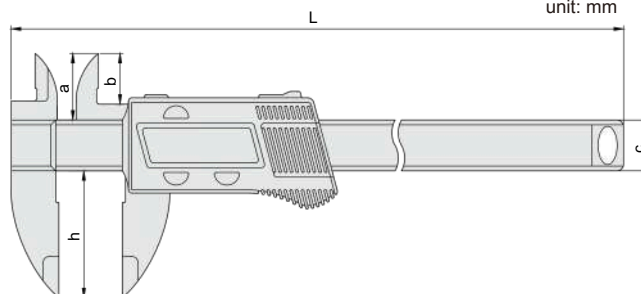


Code	Range	Accuracy	a	b	c	h	L
116-006-11	0-150mm/0-6"	±0.03mm	21	16	16	40	236
116-008-11	0-200mm/0-8"	±0.03mm	24	19	16	50	286
116-012-11	0-300mm/0-12"	±0.03mm	25	20.5	16	60	400

With manufacturer inspection certificate

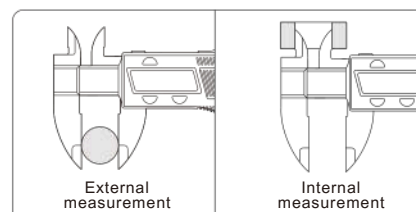


unit: mm



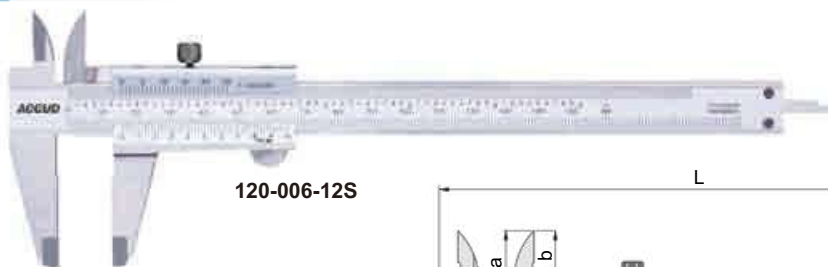
- ◆ Made of hard plastic
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/inch

Code	Range	Accuracy	a	b	c	h	L
117-006-11	0-150mm/0-6"	±0.2mm	21	16	16	40	243



SERIES 120

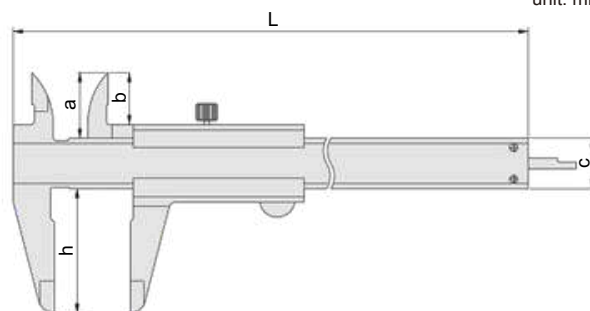
VERNIER CALIPER



120-006-12S

unit: mm

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

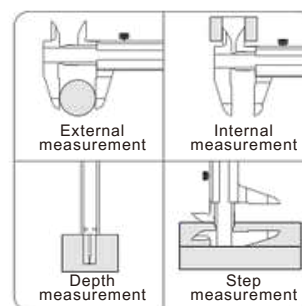


Graduation 0.02mm/0.001"

Code	Range	Accuracy	a	b	c	h	L
120-006-12S	0-150mm/0-6"	±0.03mm	20.5	15.5	16	40	235
120-008-12S	0-200mm/0-8"	±0.03mm	23.5	19	16	50	290
120-012-12S	0-300mm/0-12"	±0.03mm	27.5	22	20	64	414

Graduation 0.05mm/1/128"

Code	Range	Accuracy	a	b	c	h	L
120-006-14S	0-150mm/0-6"	±0.05mm	20.5	15.5	16	40	235
120-008-14S	0-200mm/0-8"	±0.05mm	23.5	19	16	50	290
120-012-14S	0-300mm/0-12"	±0.05mm	27.5	22	20	64	414



CALIPER

SERIES 124

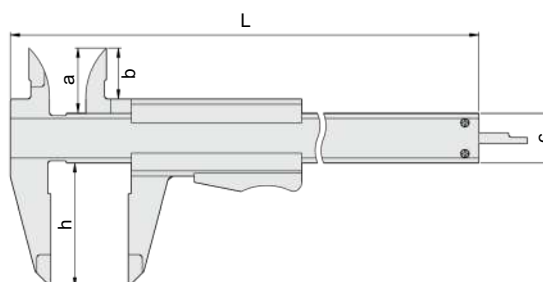
VERNIER CALIPER



124-006-14

unit: mm

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

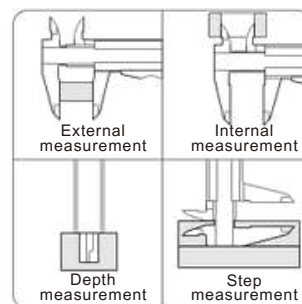


Graduation 0.02mm/0.001"

Code	Range	Accuracy	a	b	c	h	L
124-006-12	0-150mm/0-6"	±0.03mm	20.5	15.5	16	40	235
124-008-12	0-200mm/0-8"	±0.03mm	23.5	19	16	50	290

Graduation 0.05mm/1/128"

Code	Range	Accuracy	a	b	c	h	L
124-006-14	0-150mm/0-6"	±0.05mm	20.5	15.5	16	40	235
124-008-14	0-200mm/0-8"	±0.05mm	23.5	19	16	50	290

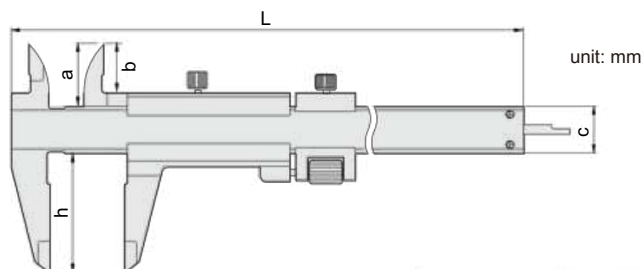


SERIES 125

VERNIER CALIPER

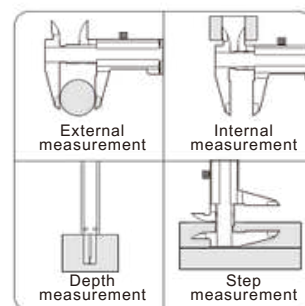


125-005-11



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

Code	Range	Accuracy	a	b	c	h	L
125-005-11	0-130mm/0-5"	±0.03mm	20.5	16.5	16	40	230
125-007-11	0-180mm/0-7"	±0.03mm	23.5	19	16	50	295
125-011-11	0-280mm/0-11"	±0.03mm	27.5	22	20	60	410

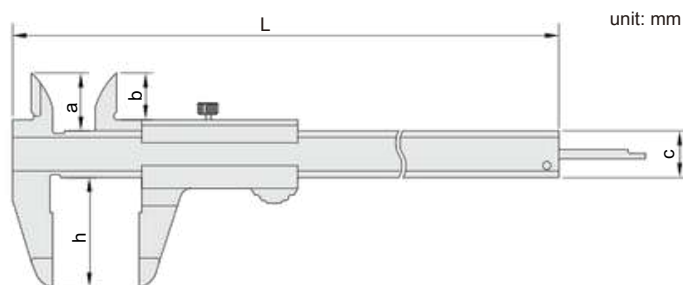


SERIES 121

MINI VERNIER CALIPER

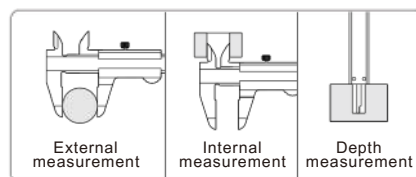


121-003-11



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

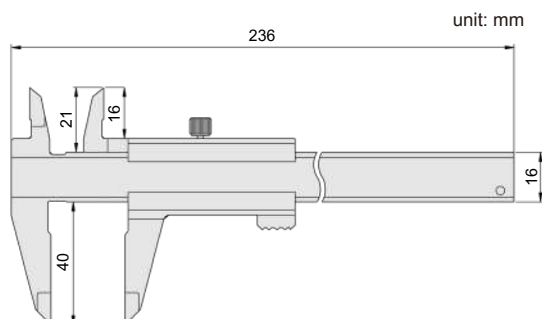
Code	Range	Graduation	Accuracy	a	b	h	L	C
121-003-11	0-70mm	0.05mm	±0.05mm	10	8	19	113	8
121-004-11	0-100mm	0.05mm	±0.05mm	17	13	30	160	12





123-006-11

- ♦ Suitable for magnetic parts
- ♦ Made of pure copper

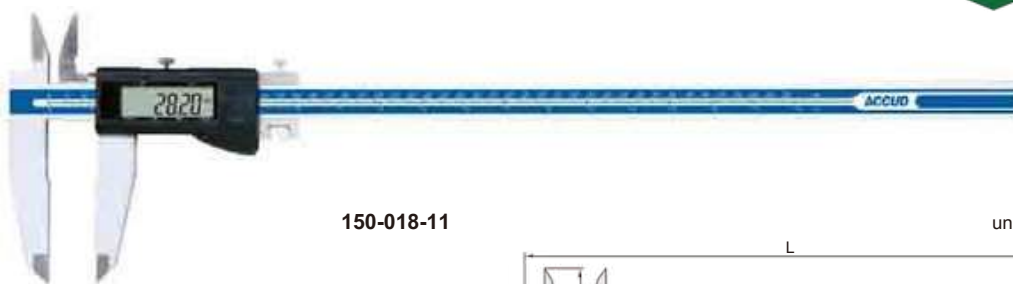
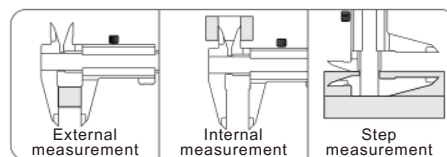


Graduation 0.02mm

Code	Range	Accuracy
123-006-11	0-150mm	±0.05mm

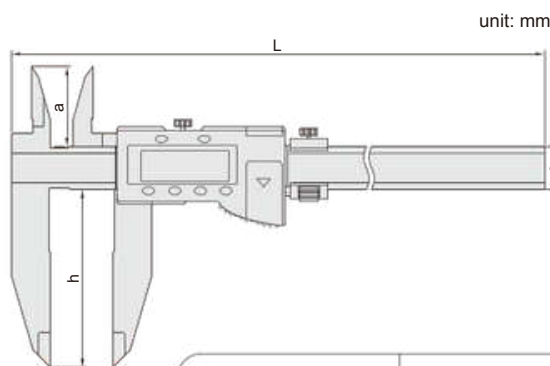
Graduation 0.05mm

Code	Range	Accuracy
123-006-13	0-150mm	±0.05mm

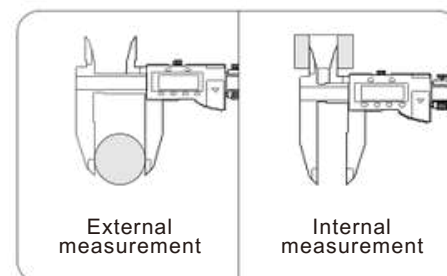


150-018-11

- ♦ Resolution: 0.01mm/0.0005"
- ♦ Button function: on/off, zero, mm/inch, ABS, data preset
- ♦ Data output(cablecode:100-15)
- ♦ Made of stainless steel



Code	Range	Accuracy	a	c	h	L
150-018-11	0-450mm/0-18"	±0.05mm	45	24	100	610
150-024-11	0-600mm/0-24"	±0.05mm	45	24	100	770
150-040-11	0-1000mm/0-40"	±0.08mm	60	31	150	1220

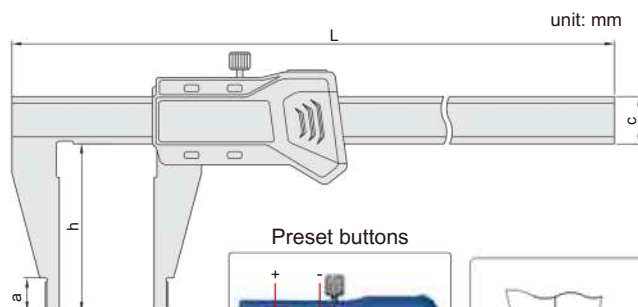


SERIES 118

DIGITAL CALIPER

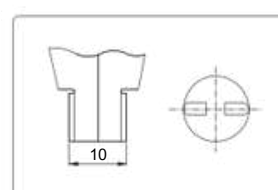


118-012-14

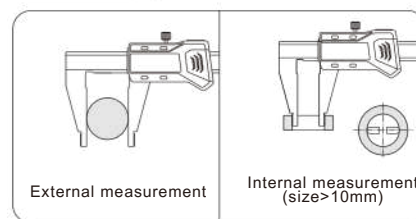


- ♦ Resolution: 0.01mm/0.0005"
- ♦ Buttons: mm/in, SET, preset(P+,P-)
- ♦ Preset: 10mm, don't need to add the width of the jaws on the reading
- ♦ Automatic power on/off
- ♦ Data output(cablecode:100-03or100-04)
- ♦ Made of stainless steel

Preset buttons



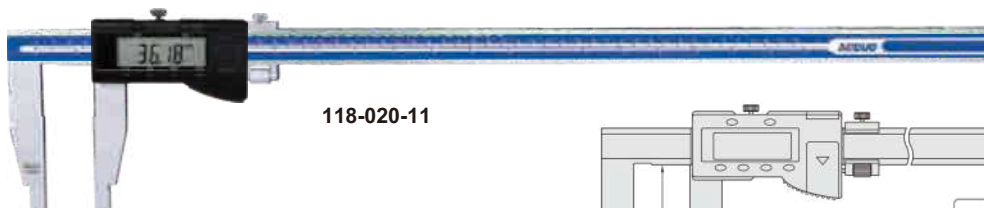
Code	Range	Accuracy	a	c	h	L
118-008-11	0-200mm/0-8"	±0.03mm	12	17	60	320
118-012-14	0-300mm/0-12"	±0.04mm	12	17	60	420
118-012-15	0-300mm/0-12"	±0.06mm	12	17	90	420



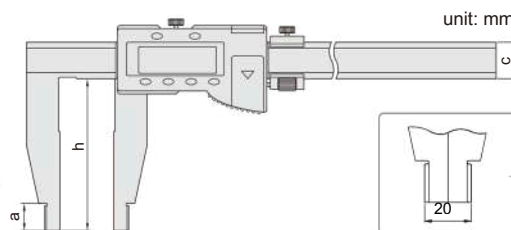
CALIPER

SERIES 118

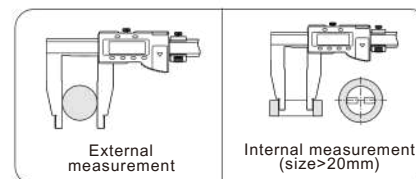
DIGITAL CALIPER



118-020-11

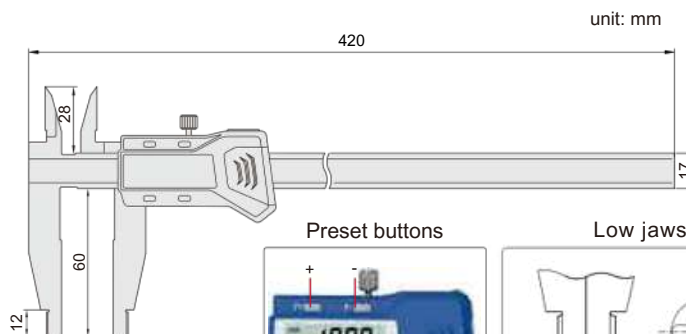
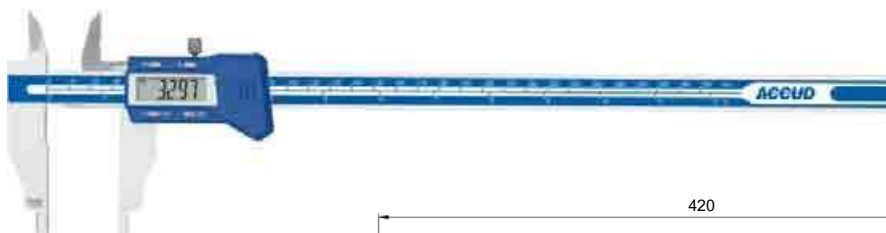


Code	Range	Accuracy	a	c	h
118-012-11	0-300mm/0-12"	±0.04mm	18	24	100
118-012-12	0-300mm/0-12"	±0.05mm	18	24	150
118-012-13	0-300mm/0-12"	±0.05mm	18	24	200
118-020-11	0-500mm/0-20"	±0.05mm	18	24	100
118-020-12	0-500mm/0-20"	±0.06mm	18	24	150
118-020-13	0-500mm/0-20"	±0.06mm	24	32	200
118-020-14	0-500mm/0-20"	±0.08mm	24	42	300
118-024-11	0-600mm/0-24"	±0.05mm	18	24	100
118-024-12	0-600mm/0-24"	±0.06mm	18	24	150
118-024-13	0-600mm/0-24"	±0.06mm	24	32	200
118-024-15	0-600mm/0-24"	±0.08mm	24	42	300
118-032-11	0-800mm/0-32"	±0.07mm	24	32	150
118-040-11	0-1000mm/0-40"	±0.08mm	24	32	150
118-040-12	0-1000mm/0-40"	±0.08mm	24	32	200
118-040-13	0-1000mm/0-40"	±0.10mm	24	42	300
118-060-11	0-1500mm/0-60"	±0.11mm	24	42	150
118-080-11	0-2000mm/0-80"	±0.14mm	24	42	150



- ♦ Resolution: 0.01mm/0.0005"
- ♦ Buttons: on/off, zero, mm/inch, ABS, data preset
- ♦ Preset: 20mm, don't need to add the width of the jaws on the reading
- ♦ Data output(cablecode:100-15)
- ♦ Made of stainless steel



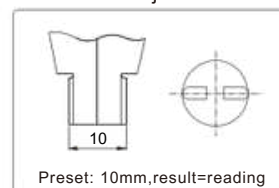


- ♦ Resolution: 0.01mm/0.0005"
- ♦ Buttons: mm/in, SET, preset(P+,P-)
- ♦ Automatic power on/off
- ♦ Data output(cablecode:100-03 or 100-04)
- ♦ Made of stainless steel

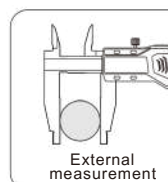
Preset buttons



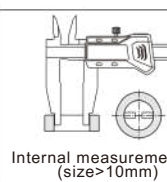
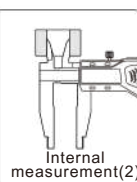
Low jaws



Preset: 10mm,result=reading



External measurement

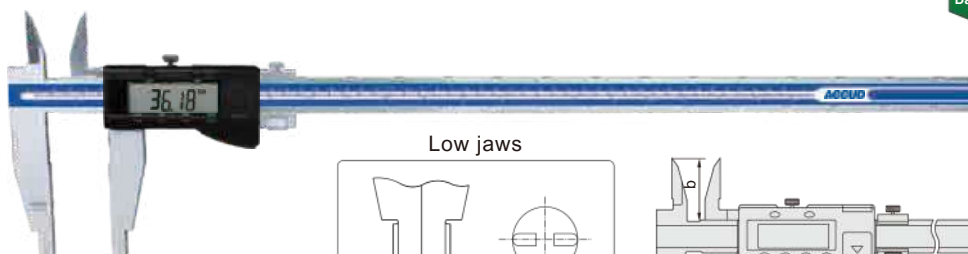
Internal measurement(1)
(size>10mm)

Internal measurement(2)

Code	Range	Accuracy
119-012-11	0-300mm/0-12"	±0.04mm

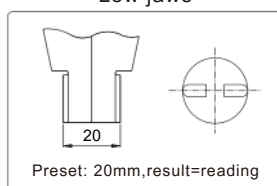
SERIES 119

DIGITAL CALIPER

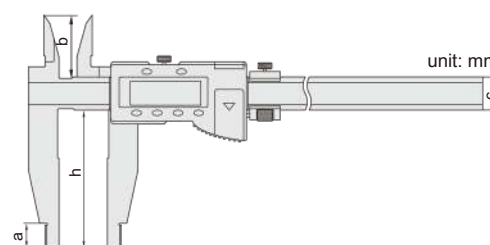


119-020-11

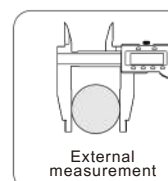
Low jaws



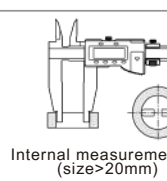
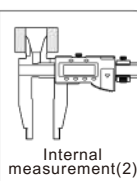
Preset: 20mm,result=reading



Code	Range	Accuracy	a	b	c	h
119-012-12	0-300mm/0-12"	±0.05mm	18	45	24	100
119-018-11	0-450mm/0-18"	±0.05mm	18	45	24	100
119-020-11	0-500mm/0-20"	±0.05mm	18	45	24	100
119-020-12	0-500mm/0-20"	±0.06mm	18	45	24	150
119-020-13	0-500mm/0-20"	±0.06mm	24	60	32	200
119-024-11	0-600mm/0-24"	±0.05mm	18	45	24	100
119-024-12	0-600mm/0-24"	±0.06mm	18	45	24	150
119-024-14	0-600mm/0-24"	±0.06mm	24	60	32	200
119-040-11	0-1000mm/0-40"	±0.08mm	24	60	32	150
119-040-12	0-1000mm/0-40"	±0.08mm	24	60	32	200
119-060-11	0-1500mm/0-60"	±0.11mm	24	60	42	150
119-060-12	0-1500mm/0-60"	±0.12mm	24	60	42	200



External measurement

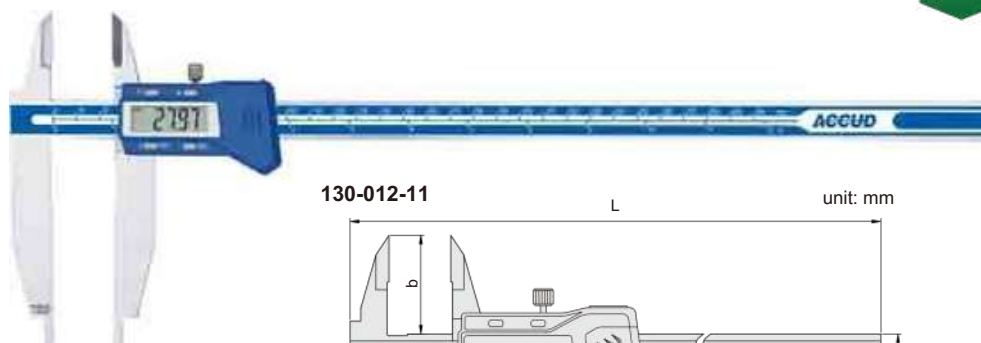
Internal measurement(1)
(size>20mm)

Internal measurement(2)

- ♦ Resolution: 0.01mm/0.0005"
- ♦ Buttons: on/off, zero, mm/inch, ABS, data preset
- ♦ Data output(cablecode:100-15)
- ♦ Made of stainless steel

SERIES 130

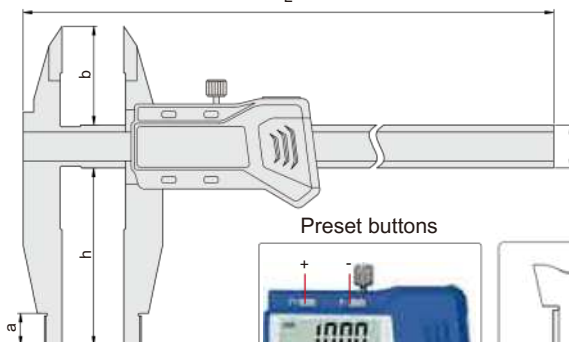
DIGITAL CALIPER



130-012-11

L

unit: mm

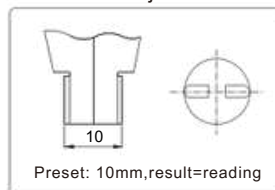


- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: mm/in, SET, preset(P+,P-)
- ◆ Automatic power on/off
- ◆ Data output(cablecode:100-03 or 100-04)
- ◆ Made of stainless steel

Preset buttons

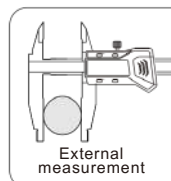


Low jaws

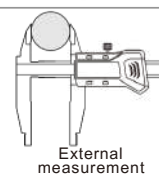


Preset: 10mm,result=reading

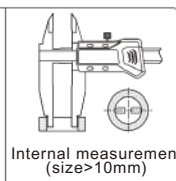
Code	Range	Accuracy	a	b	c	h	L
130-008-11	0-200mm/0-8"	±0.03mm	12	38	17	60	320
130-012-11	0-300mm/0-12"	±0.04mm	12	38	17	60	420
130-012-12	0-300mm/0-12"	±0.04mm	12	38	17	90	420



External measurement



External measurement

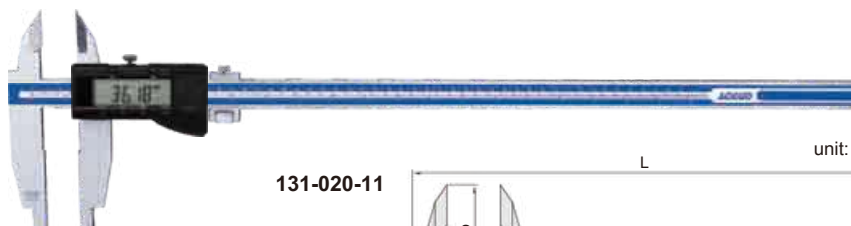


Internal measurement (size>10mm)

CALIPER

SERIES 131

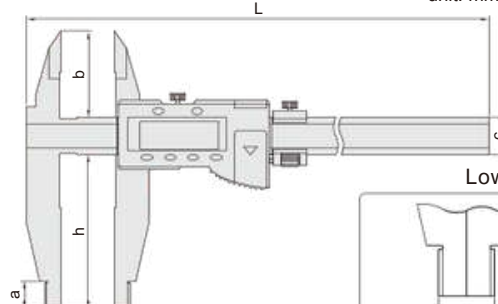
DIGITAL CALIPER



131-020-11

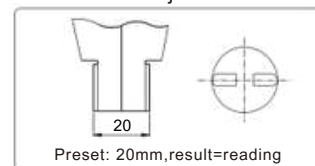
L

unit: mm



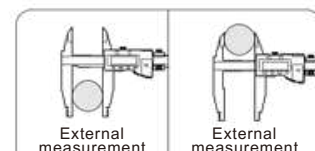
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/inch, ABS, data preset
- ◆ Data output(cablecode:100-15)
- ◆ Made of stainless steel

Low jaws

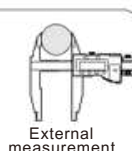


Preset: 20mm,result=reading

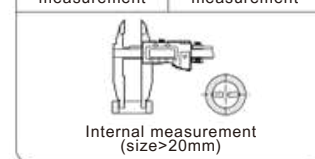
Code	Range	Accuracy	a	b	c	h	L
131-012-11	0-300mm/0-12"	±0.05mm	18	56	24	100	420
131-020-11	0-500mm/0-20"	±0.05mm	18	56	24	100	675
131-020-12	0-500mm/0-20"	±0.06mm	18	56	24	150	675
131-024-11	0-600mm/0-24"	±0.05mm	18	56	24	100	770
131-028-11	0-800mm/0-32"	±0.07mm	24	67	31	150	1025
131-040-11	0-1000mm/0-40"	±0.08mm	24	67	31	150	1220



External measurement



External measurement



Internal measurement (size>20mm)



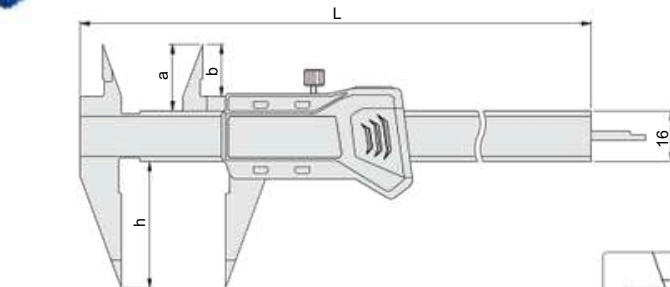
SERIES 138

DIGITAL POINT CALIPER

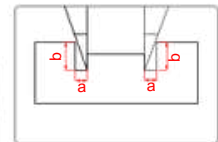
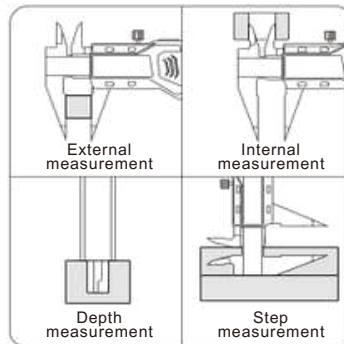
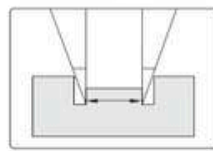


138-006-11

- ◆ Measure small holes or grooves
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Automatic power on/off
- ◆ Buttons: on/off, zero, mm/in, INC
- ◆ Data output(cable code:100-03 or 100-04)
- ◆ Made of stainless steel



unit: mm



(mm)

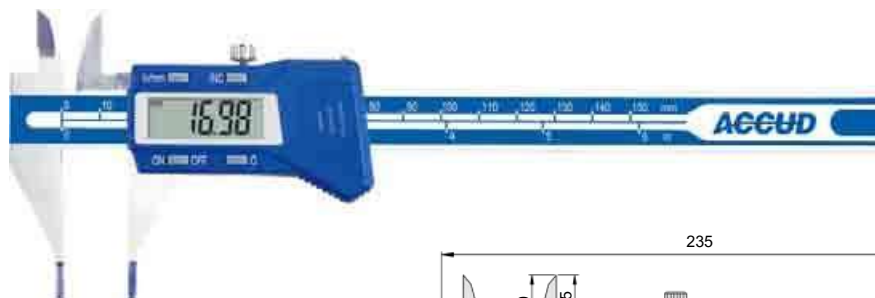
a	b
1	2.5
2	5
3	7.5
4	10
5	12.5
6	15

CALIPER

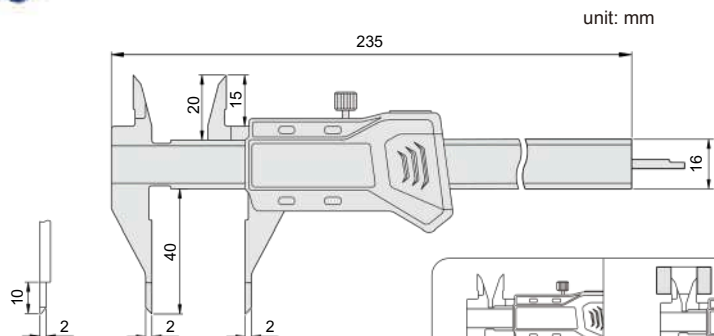
Code	Range	Accuracy	a	b	h	L
138-006-11	0-150mm/0-6"	±0.03mm	21	16	40	236
138-008-11	0-200mm/0-8"	±0.03mm	24	19	50	286
138-012-11	0-300mm/0-12"	±0.03mm	25	21	60	400

168

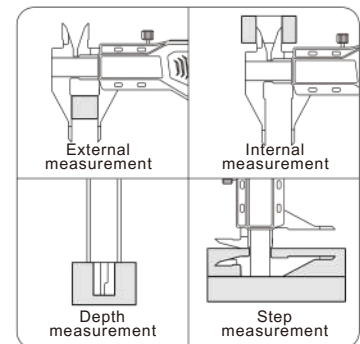
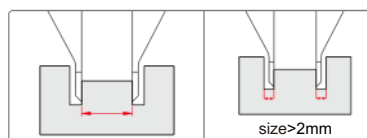
DIGITAL SMALL POINT CALIPER



- ◆ Small point jaws fits into small grooves and recesses
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/in, INC
- ◆ Automatic power on/off
- ◆ Data output(cablecode:100-03 or 100-04)
- ◆ Made of stainless steel



unit: mm



Code	Range	Accuracy
168-006-11	0-150mm/0-6"	±0.03mm





SERIES 133

DIGITAL OUTSIDE NECK CALIPER

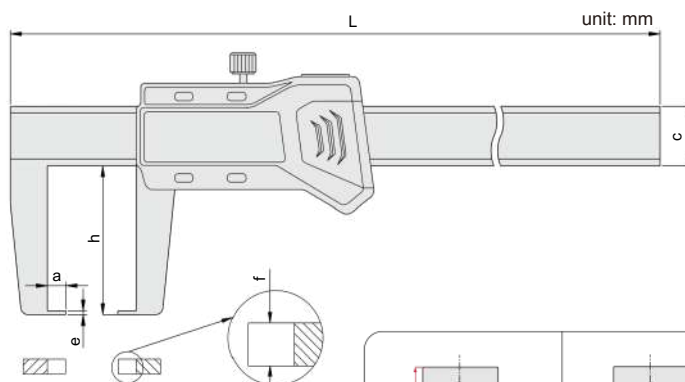


VIDEO

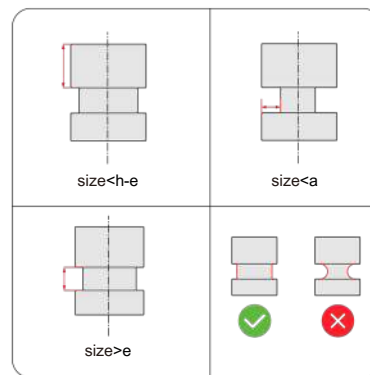
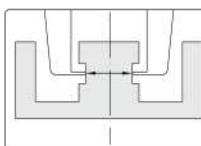


133-006-11

- ◆ Measure wall thickness and recesses
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Automatic power on/off
- ◆ Buttons: on/off, zero, mm/in, INC
- ◆ Data output
- ◆ Made of stainless steel



133-012-12



Code	Range	Accuracy	a	c	e	f	h	L
133-006-11	0-150mm/0-6"	±0.04mm	5	16	1	4	40	250
133-008-11	0-200mm/0-8"	±0.05mm	9	16	1.5	4	80	310
133-012-11	0-300mm/0-12"	±0.05mm	10	16	1.5	4	60	410
133-012-12	0-300mm/0-12"	±0.06mm	12	24	2	5	150	490

CALIPER

MASUP *innova*

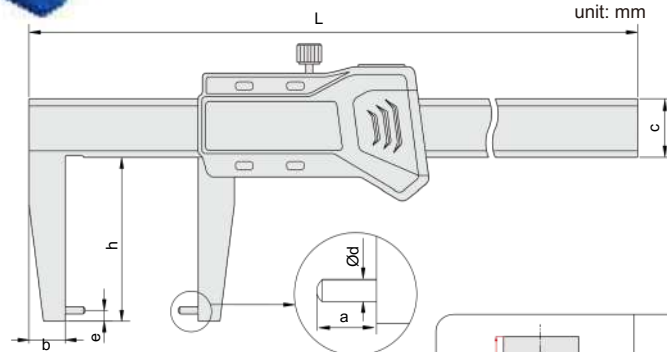




VIDEO

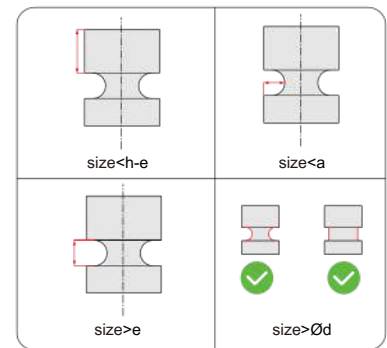
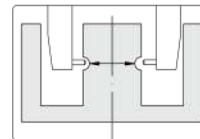


134-006-11



- ◆ Measure wall thickness of inside bores and recesses
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Automatic power on/off
- ◆ Buttons: on/off, zero, mm/in, INC
- ◆ Data output
- ◆ Made of stainless steel

For range 300mm

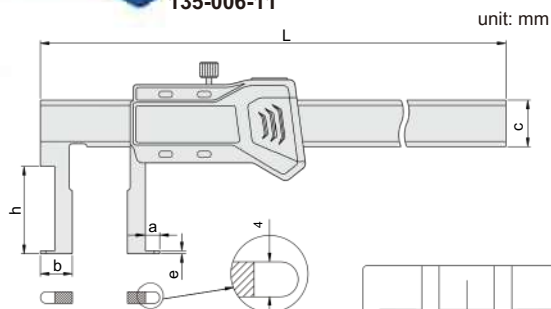


Code	Range	Accuracy	a	b	c	Ød	e	h	L
134-006-11	0-150mm/0-6"	±0.04mm	5	10	16	2	2	40	250
134-008-11	0-200mm/0-8"	±0.05mm	9	14	16	3	3	80	310
134-012-12	0-300mm/0-12"	±0.06mm	12	20	24	3	3	150	490

MASUP *innova*



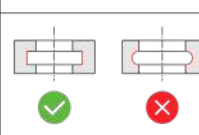
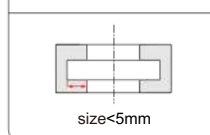
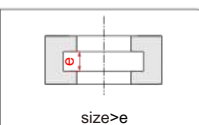
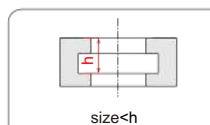
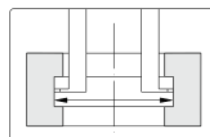
- ◆ Measure the grooves
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Automatic power on/off
- ◆ Buttons: mm/in, SET, preset(P+,P-)
- ◆ Preset: 2b, don't need to add the width of the jaws on the reading
- ◆ Data output
- ◆ Made of stainless steel



For range 500mm



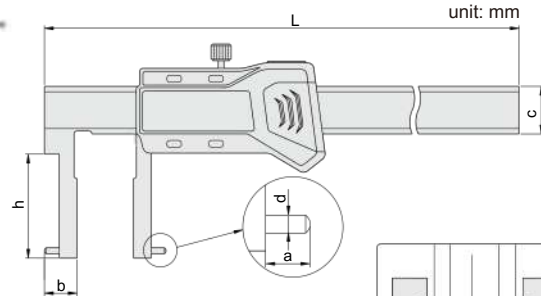
Preset buttons



Code	Range	Accuracy	a	b	c	e	h	L
135-006-11	22-150mm	±0.04mm	5	11	16	1	30	250
135-008-11	25-200mm	±0.04mm	5	12.5	16	1	40	310
135-012-11	30-300mm	±0.05mm	5	15	17	1.5	50	410
135-020-11	80-500mm	±0.07mm	16	40	24	4	90	680
135-006-12	35-150mm	±0.06mm	6	17.5	16	1.5	60	250
135-008-12	40-200mm	±0.06mm	7	20	16	1.5	70	310
135-012-12	50-300mm	±0.07mm	8	25	16	1.5	80	410
135-020-12	80-500mm	±0.08mm	16	40	24	5	150	680



- ◆ Measure the grooves
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Automatic power on/off
- ◆ Buttons: mm/in, SET, preset(P+,P-)
- ◆ Preset: 2b, don't need to add the width of the jaws on the reading
- ◆ Data output
- ◆ Made of stainless steel



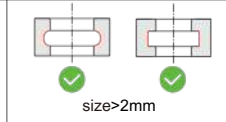
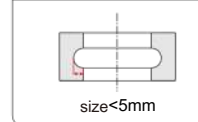
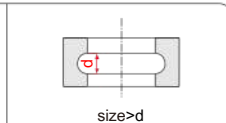
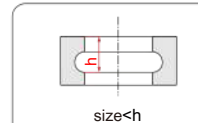
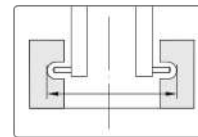
For range 500mm



Preset buttons



Code	Range	Accuracy	a	b	c	d	h	L
136-006-11	24-150mm	±0.04mm	5	12	16	Ø2	30	250
136-008-11	25-200mm	±0.04mm	5	12.5	16	Ø2	40	310
136-012-11	50-300mm	±0.07mm	8	25	17	Ø3	80	410
136-020-11	80-500mm	±0.07mm	16	40	24	Ø3	90	680
136-006-12	35-150mm	±0.05mm	6	17.5	16	Ø2	60	250
136-008-12	40-200mm	±0.05mm	7	20	16	Ø2	70	310
136-012-12	30-300mm	±0.05mm	5	15	16	Ø3	50	410
136-020-12	80-500mm	±0.08mm	16	40	24	Ø3	150	680



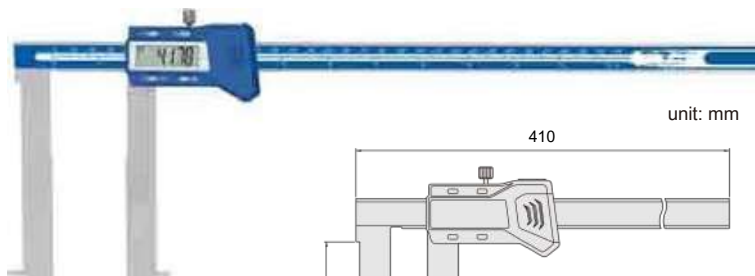
MASUP *innova*

136

DIGITAL INSIDE POINT CALIPER

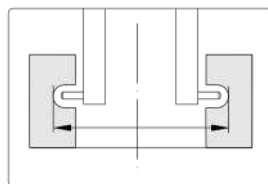
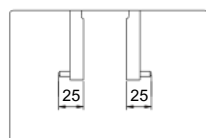
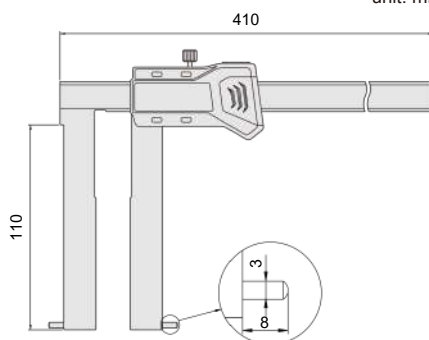


VIDEO

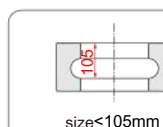


unit: mm

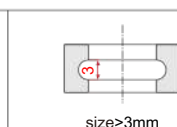
- ◆ Measure the grooves
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Automatic power on/off
- ◆ Buttons: mm/in, SET, preset(P+,P-)
- ◆ Preset: 50mm, don't need to add the width of the jaws on the reading
- ◆ Data output (cable code: 100-03 or 100-04)
- ◆ Made of stainless steel



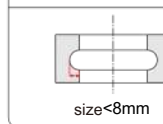
Preset buttons



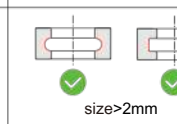
size<105mm



size>3mm



size<8mm



size>2mm

Code	Range	Accuracy
136-012-13S	50-300mm	±0.06mm

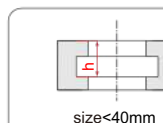
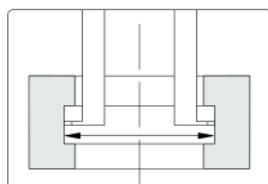
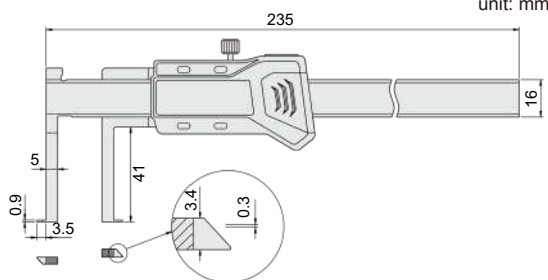
132

DIGITAL INSIDE GROOVE CALIPER

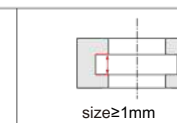


unit: mm

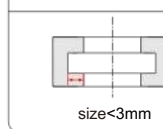
- ◆ Measure diameter of grooves inside small bores
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/in, INC
- ◆ Automatic power on/off
- ◆ Data output(cable code: 100-03 or 100-04)
- ◆ Made of stainless steel



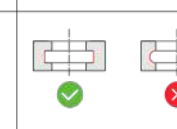
size<40mm



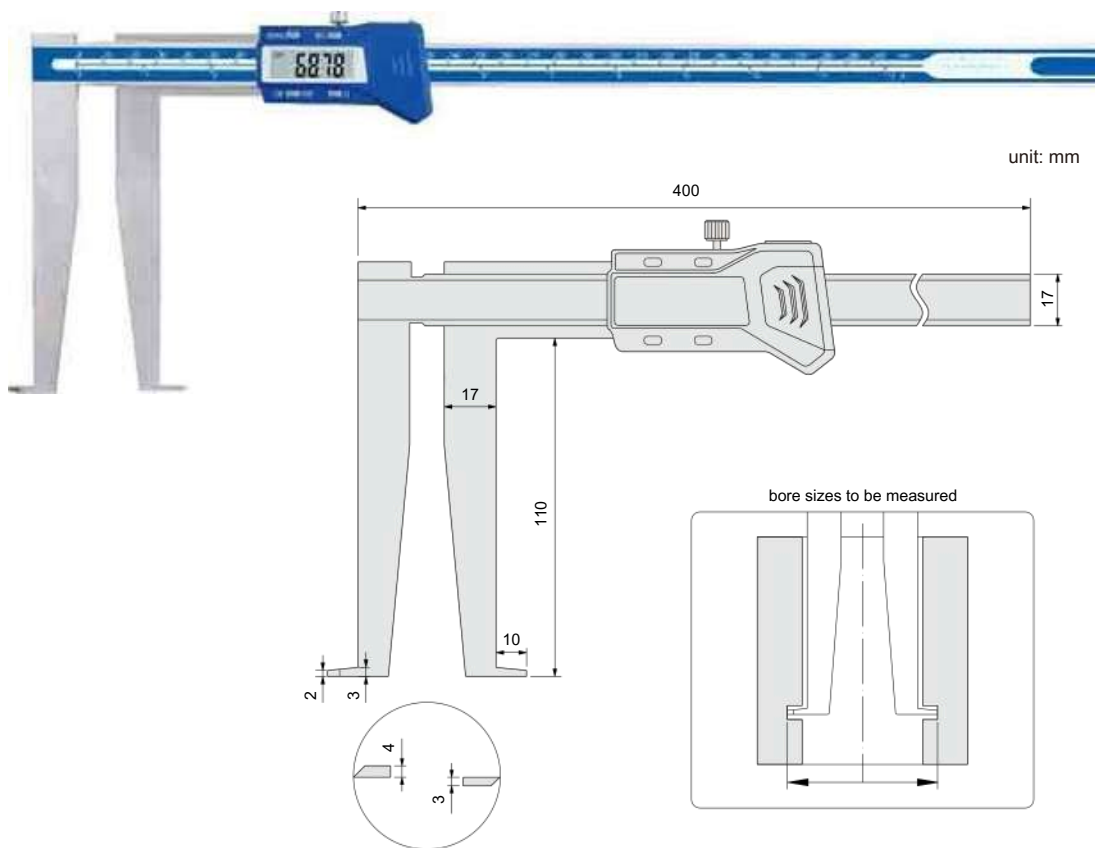
size≥1mm



size<3mm

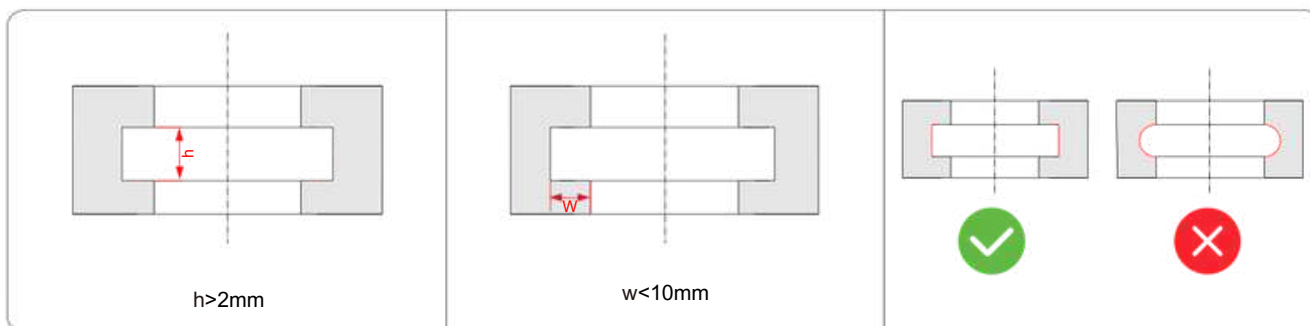


Code	Range	Accuracy
132-006-21	10-150mm/0.39-6"	±0.04mm



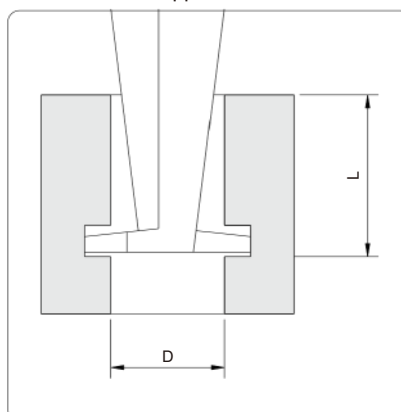
unit: mm

CALIPER



- ◆ Measure diameter of grooves inside bores
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Automatic power on/off
- ◆ Buttons: on/off, zero, mm/in, INC
- ◆ Data output(cable code: 100-03 or 100-04)
- ◆ Made of stainless steel

Application



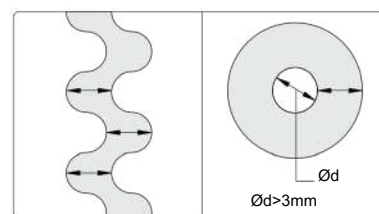
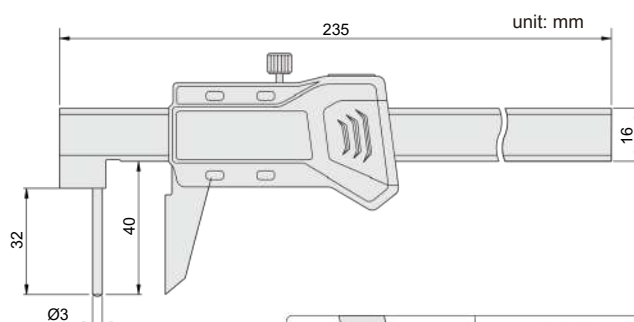
Code	Range	Accuracy
132-012-11	25-300mm	±0.05mm

D	L
Ø25	<50mm
Ø26	<60mm
Ø27~300	<110mm





- ◆ Measure the wall thickness
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Automatic power on/off
- ◆ Buttons: on/off, zero, mm/in, INC
- ◆ Data output(cable code:100-03 or 100-04)
- ◆ Made of stainless steel



Code	Range	Accuracy
137-006-11	0-150mm/0-6"	±0.05mm

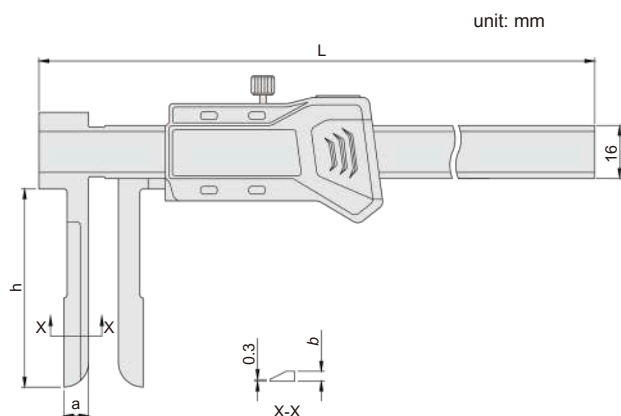
SERIES 139

DIGITAL INSIDE KNIFE-EDGE CALIPER

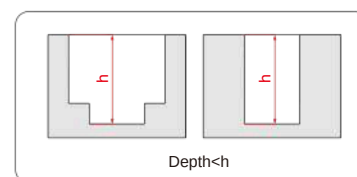
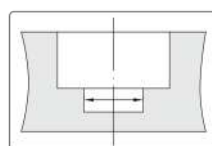


139-006-11

- ◆ Measure the diameter of deep holes or grooves
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Automatic power on/off
- ◆ Buttons: on/off, zero, mm/in, INC
- ◆ Data output(cable code: 100-03 or 100-04)
- ◆ Made of stainless steel

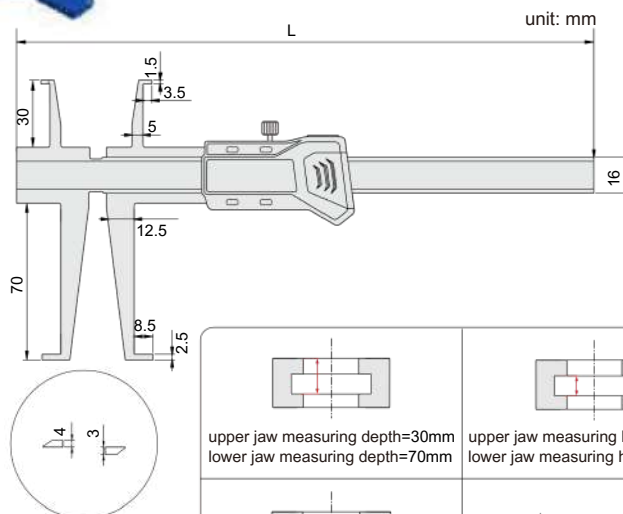


Code	Range	Accuracy	L	h	a	b
139-006-11	15-150mm	±0.05mm	250	60	12	3
139-008-11	20-200mm	±0.05mm	310	90	15	4
139-012-11	20-300mm	±0.06mm	410	90	16	4



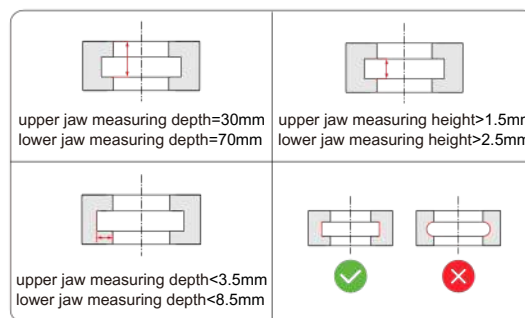


159-006-11

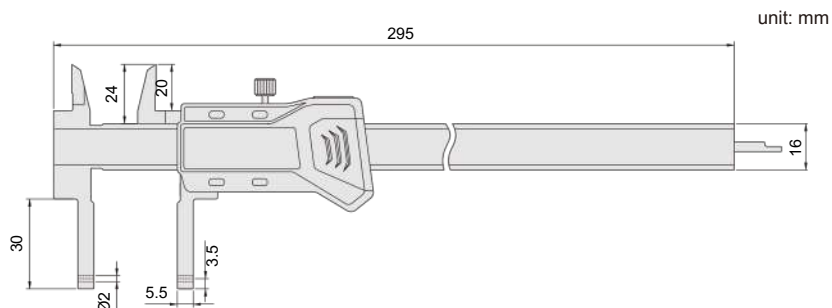


- ◆ Measure diameter of grooves inside bores
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/in, INC
- ◆ Automatic power on/off
- ◆ Data output(cable code: 100-03 or 100-04)
- ◆ Made of stainless steel

Code	Range of upper jaw	Range of lower jaw	Accuracy	L
159-006-11	9-150mm	15-150mm	±0.04mm	260
159-008-11	9-200mm	15-200mm	±0.06mm	310



MASUP *innova*

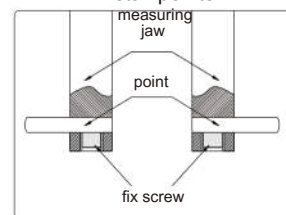


- ◆ Supplied with 3 pairs of points and one zero setting block for external measurement
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: mm/in, SET, preset(P+,P-)
- ◆ Automatic power on/off
- ◆ Data output (cable code: 100-03 or 100-04)
- ◆ Made of stainless steel

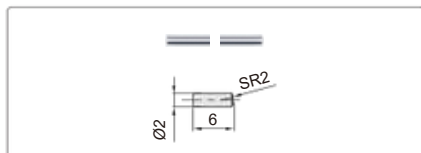
Preset buttons



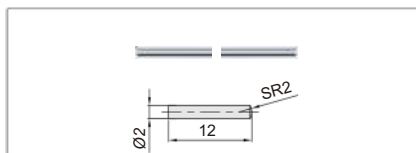
Install points



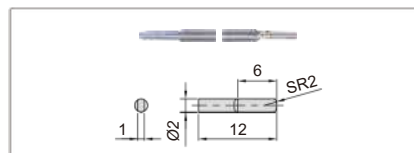
Short spherical points (included)



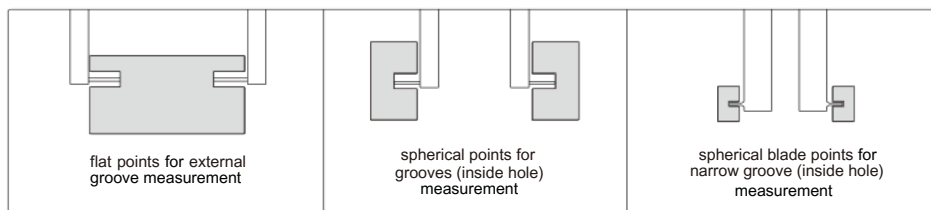
Long spherical/flat points (included)



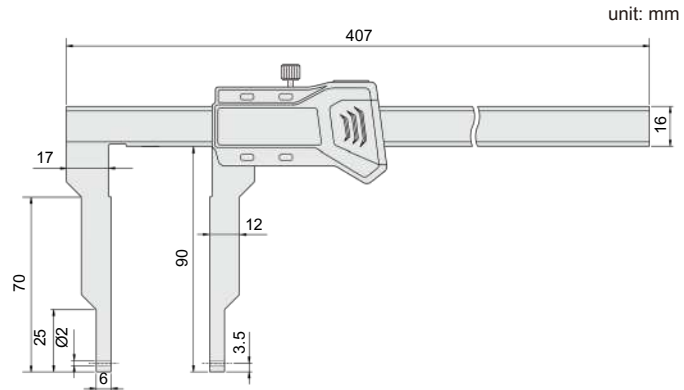
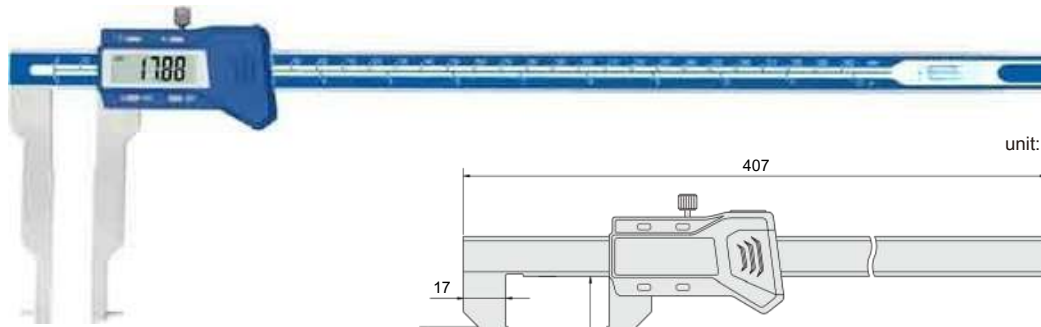
Short spherical blade points (included)

Zero setting block for external
measurement (included)

Measure internal and external grooves



Code	Point	Range	Accuracy	Application
149-008-11	short spherical points	12-212mm/0.5-8.5"(internal)	±0.03mm	for grooves/inside small hole
	long spherical/flat points	24-224mm/1-8.8"(internal) 0-187mm/0-7.5"(external)	±0.03mm	spherical points for grooves/inside hole, flat points for external grooves
	spherical blade points	24-224mm/1-8.8"(internal) 0-187mm/0-7.5"(external)	±0.03mm	for narrow grooves/inside hole

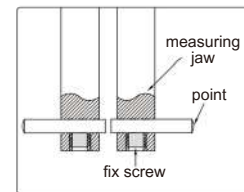


- ◆ Supplied with 4 pairs of points and one zero setting block for external measurement
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: mm/in, SET, preset(P+,P-)
- ◆ Automatic power on/off
- ◆ Data output(cable code: 100-03 or 100-04)
- ◆ Made of stainless steel

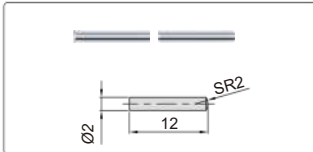
Preset buttons



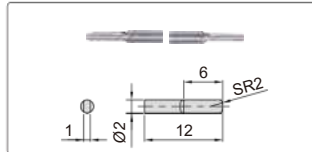
Install points



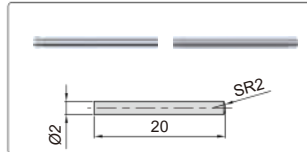
Short spherical/flat points



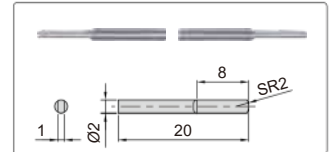
Short spherical blade points



Long spherical/flat points



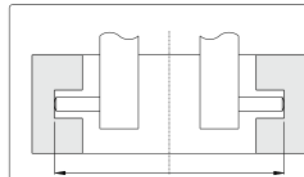
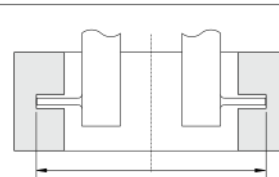
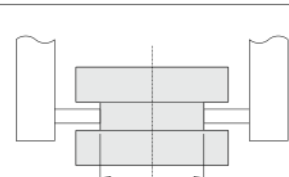
Long spherical blade points



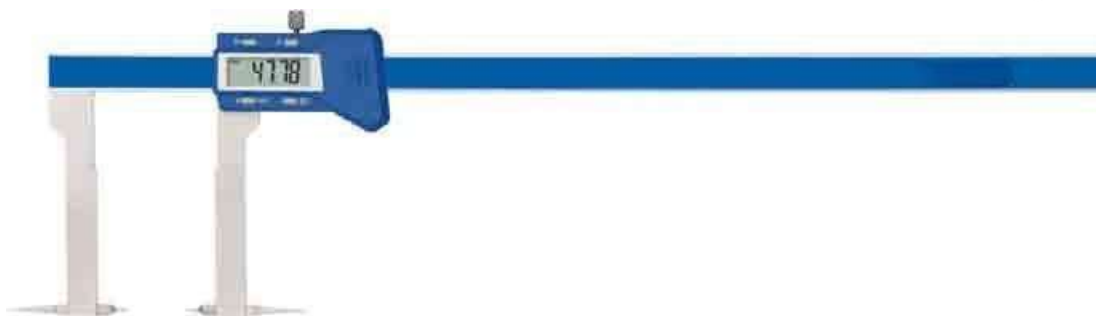
Zero setting block for external measurement (included)



Measure internal and external grooves

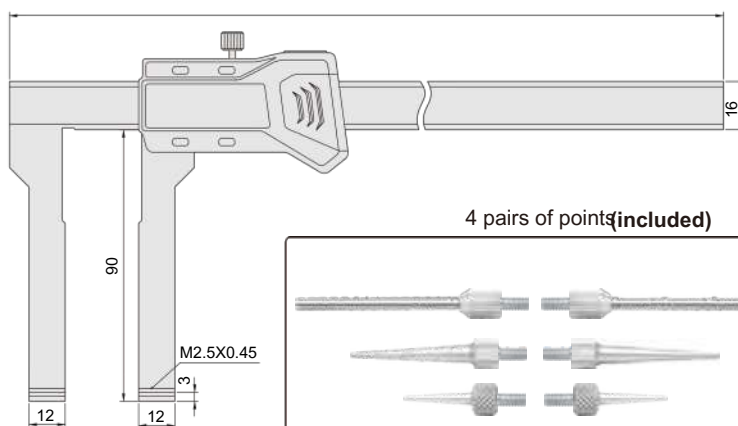
spherical points for groove
(inside hole) measurementspherical blade points for
narrow groove measurementflat points for external
groove measurement

Code	Point	Range	Accuracy	Application
149-012-11	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 (small hole)
	long spherical blade points	40-340mm/1.5-13.3"(internal) 0-272mm/0-10.7"(external)	±0.04mm	for narrow grooves (large hole)

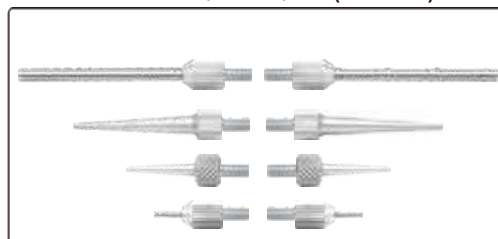


unit: mm

- ◆ Supplied with 4 pairs of points
(Cylindrical needle point: 270-006-16 2pc,
Cylindrical needle point: 270-006-04 2pc,
Conical needle point: 270-006-21 2pc,
Conical needle point: 270-006-23 2pc)
- ◆ Zero setting block for external measurement
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: mm/in, SET, preset(P+,P-)
- ◆ Automatic power on/off
- ◆ Data output (cable code: 100-03 or 100-04)
- ◆ Made of stainless steel



4 pairs of points (included)



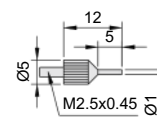
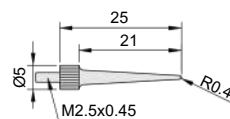
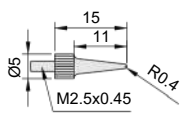
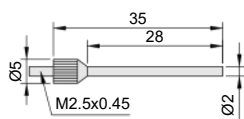
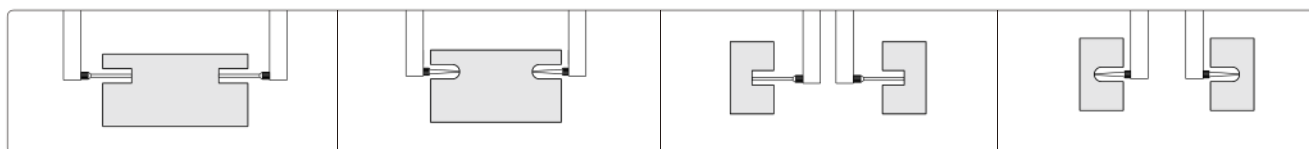
Preset buttons



Points (optional)

Zero setting block for external
measurement (included)

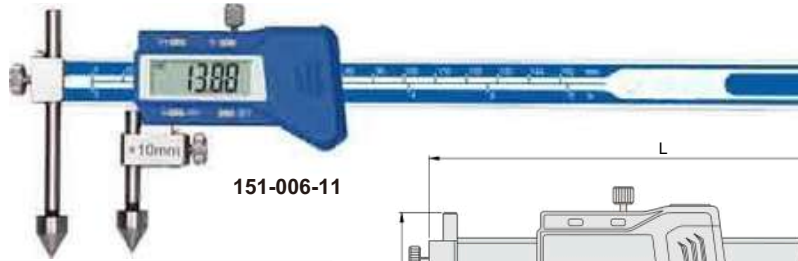
Measure internal and external grooves



Code	Range	Accuracy
149-012-21	0-300mm/0-12"	±0.04mm

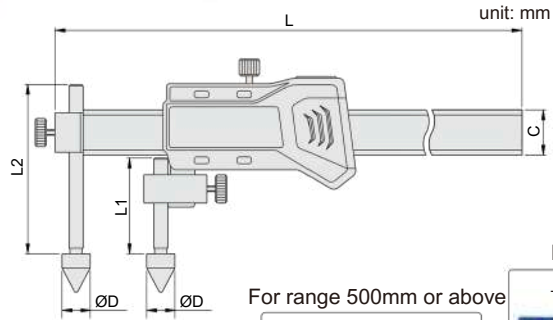


VIDEO



151-006-11

- ◆ Measure the hole center-to-center distance in same plane, or between offset planes
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Automatic power on/off
- ◆ Buttons: mm/in, SET, preset(P+,P-)
- ◆ Data output
- ◆ Made of stainless steel



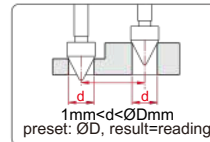
unit: mm

Preset buttons

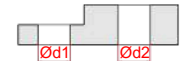
For range 500mm or above



Code	Range	Accuracy	c	ØD	L1	L2	L
151-006-11	10-150mm/0.4-6"	±0.05mm	16	10	32	65	236
151-008-11	10-200mm/0.4-8"	±0.07mm	16	10	32	65	306
151-012-11	10-300mm/0.4-12"	±0.09mm	16	10	32	65	396
151-020-11	20-500mm/0.8-20"	±0.09mm	24	20	48	88	686
151-040-11	30-1000mm/1.2-40"	±0.12mm	31	30	42	88	1242



1mm< d < ØDmm
preset: ØD, result=reading



Ød1=Ød2 or Ød1≠Ød2
both can be measured

MASUP *innova*

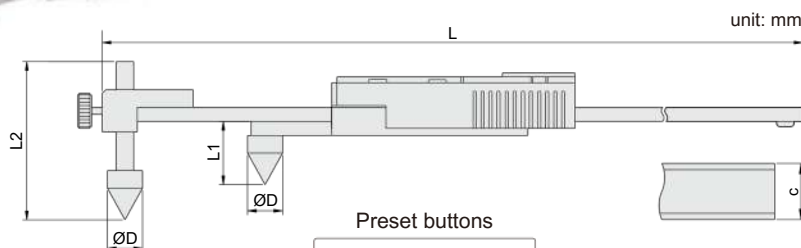


VIDEO



141-008-11

- ◆ Measure hole center distance in the same or offset planes
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: mm/in, SET, preset(P+,P-)
- ◆ Data output
- ◆ Automatic power on/off
- ◆ Made of stainless steel



unit: mm

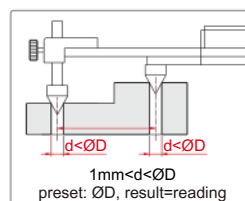
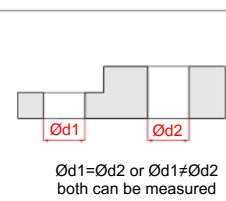
Preset buttons



For range 500mm or above



Code	Range	Accuracy	ØD	c	L1	L2	L
141-008-11	10-200mm/0.4-8"	±0.1mm	10	16	18	45	310
141-012-11	10-300mm/0.4-12"	±0.1mm	10	16	18	45	410
141-020-11	20-500mm/0.8-20"	±0.1mm	20	24	26	70	692
141-040-11	30-1000mm/1.2-40"	±0.12mm	30	31	39	70	1242
141-060-11	30-1500mm/1.2-60"	±0.15mm	30	31	39	70	1745

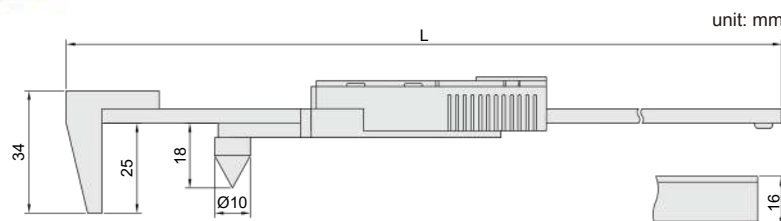
1mm<d<ØD
preset: ØD, result=readingØd1=Ød2 or Ød1≠Ød2
both can be measured

VIDEO



147-008-11

- ◆ Measure edge to hole center distance
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: mm/in, SET, preset(P+,P-)
- ◆ Data output(cable code: 100-03 or 100-04)
- ◆ Automatic power on/off
- ◆ Made of stainless steel

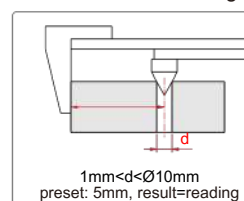


unit: mm

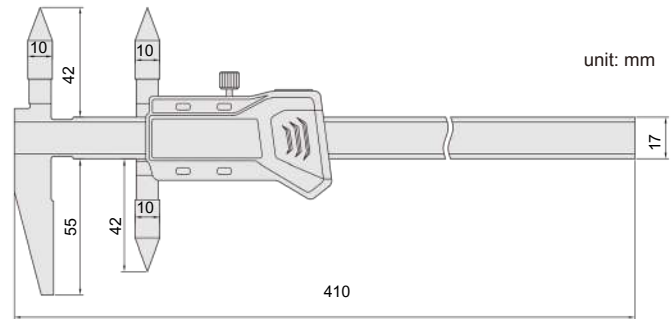
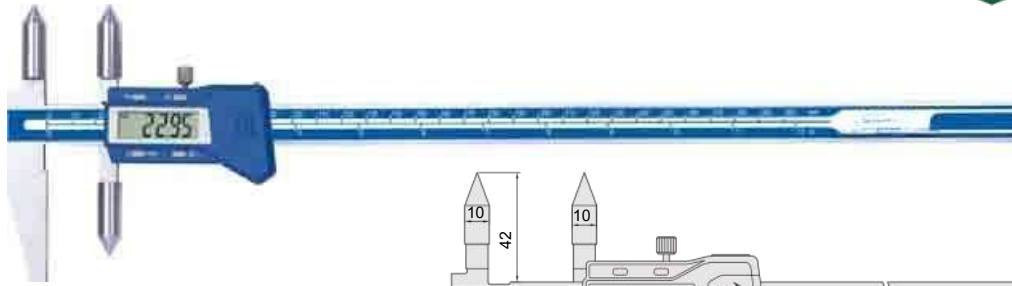
Preset buttons



Measure edge to hole center distance

1mm<d<Ø10mm
preset: 5mm, result=readingd>Ø10mm
preset: d/2, result=reading

Code	Range	Accuracy	L
147-008-11	5-200mm/0.2-8"	±0.1mm	310
147-012-11	5-300mm/0.2-12"	±0.1mm	410

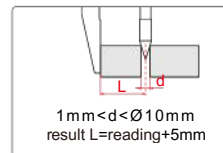


- ◆ Measure hole center distance or edge to hole center distance
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: mm/in, SET, preset(P+,P-)
- ◆ Data output(cable code: 100-03 or 100-04)
- ◆ Automatic power on/off
- ◆ Made of stainless steel

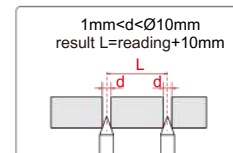
Preset buttons



Measure edge to hole center distance



Measure hole center distance



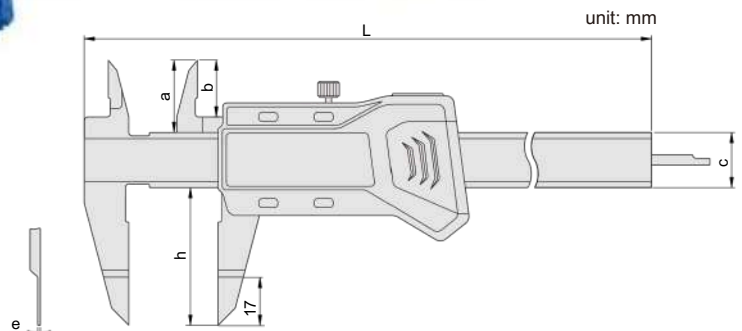
Code	Range of upper jaw (center to center)	Range of lower jaw (edge to center)	Accuracy
148-012-11	10-300mm/0.4-12"	5-300mm/0.2-12"	±0.08mm

SERIES 153

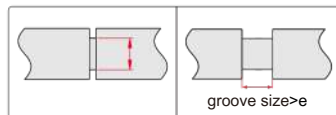
DIGITAL BLADE CALIPER



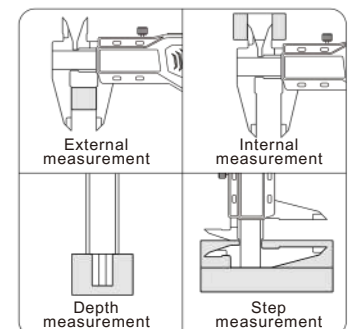
153-006-11



- ◆ Measure small grooves
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Automatic power on/off
- ◆ Buttons: on/off, zero, mm/in, INC
- ◆ Data output(cable code: 100-03 or 100-04)
- ◆ Made of stainless steel



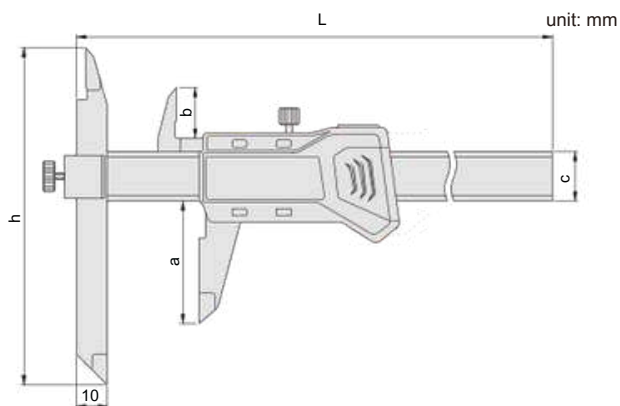
Code	Range	Accuracy	a	b	c	h	e	L
153-006-11	0-150mm/0-6"	±0.03mm	21	16	16	40	0.75	235
153-008-11	0-200mm/0-8"	±0.03mm	24	19	16	50	0.75	297
153-012-11	0-300mm/0-12"	±0.04mm	26	20.5	16	60	1.00	390



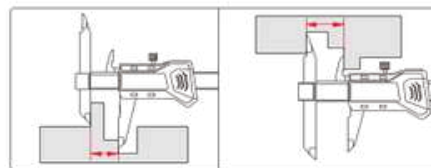


152-006-11

- ◆ Adjust the beam-mounted jaw to facilitate measurement of stepped sections and hard-to reach workpiece
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Automatic power on/off
- ◆ Buttons: on/off, zero, mm/in, INC
- ◆ Data output(cable code: 100-03 or 100-04)
- ◆ Made of stainless steel



Code	Range	Accuracy	a	b	c	h	L
152-006-11	0-150mm/0-6"	±0.04mm	40	16.5	16	110	239
152-008-11	0-200mm/0-8"	±0.04mm	50	19.5	16	120	289
152-012-11	0-300mm/0-12"	±0.05mm	60	20.5	17	130	389



MASUP



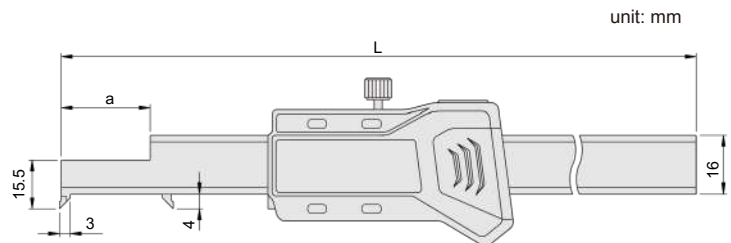
SERIES 154

DIGITAL HOOK CALIPER

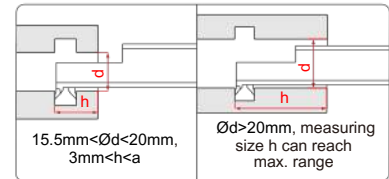
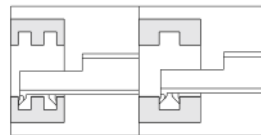


154-005-11

- ◆ Measure width of groove inside bores
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/in, INC
- ◆ Automatic power on/off
- ◆ Data output(cable code: 100-03 or 100-04)
- ◆ Made of stainless steel



Code	Range	Accuracy	a	L
154-005-11	3-125mm	±0.04mm	24	250
154-008-11	3-200mm	±0.04mm	34	310
154-012-11	3-300mm	±0.05mm	86	460



CALIPER

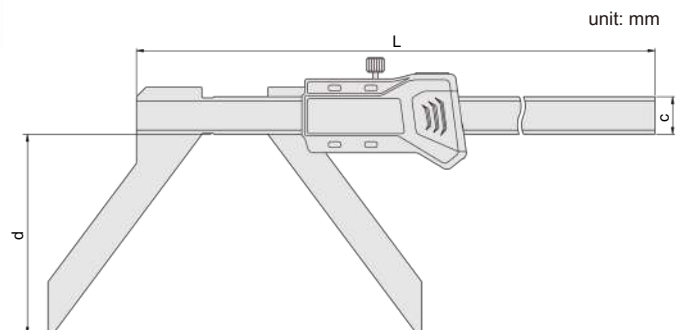
SERIES 169

DIGITAL ARC RADIUS CALIPER

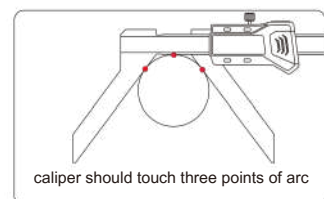
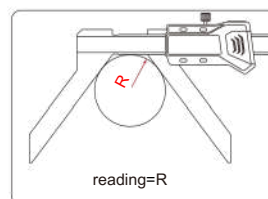


169-006-11

- ◆ Measure the radius of arc less than half round
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/in, INC
- ◆ Automatic power on/off
- ◆ Data output(cable code: 100-03 or 100-04)
- ◆ Made of stainless steel



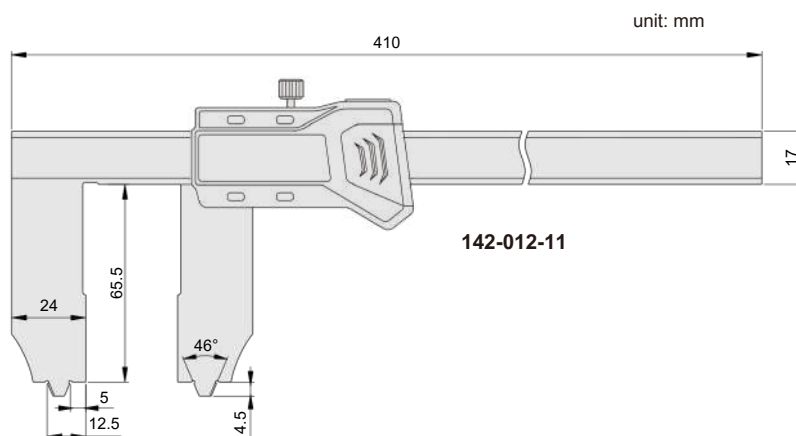
Code	Range(R)	Accuracy	c	d	L
169-006-11	5-150mm/0.2-6"	±0.05mm	16	65	263
169-008-11	5-200mm/0.2-8"	±0.07mm	16	85	313



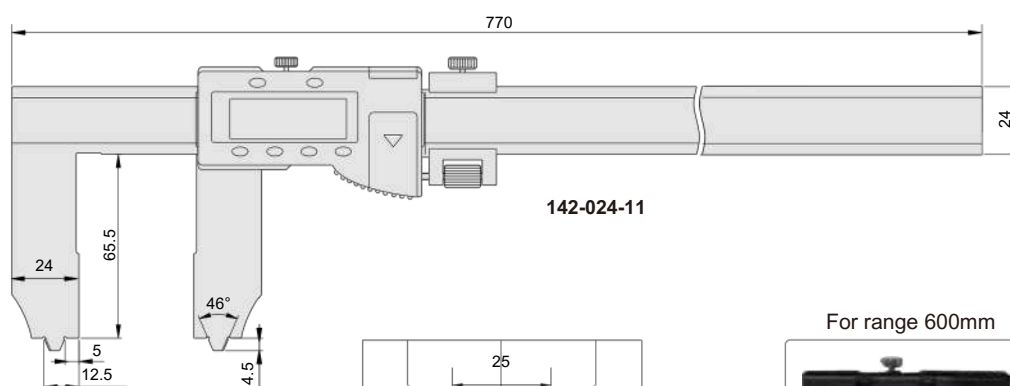


142-012-11

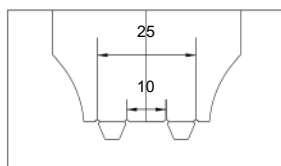
Preset buttons



142-012-11



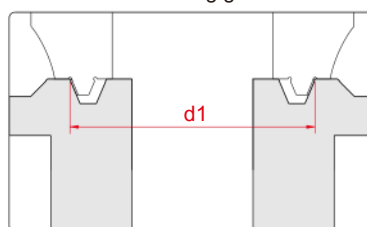
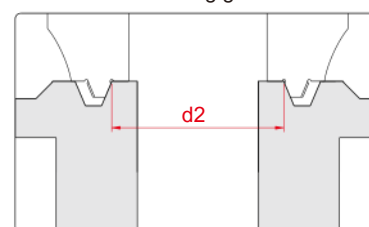
142-024-11



For range 600mm



- ◆ Measure ring grooves of flange
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Automatic power on/off
- ◆ Buttons: mm/in, SET, preset(P+,P-)
- ◆ Preset: 25mm, don't need to add the width of the jaws on the reading
- ◆ Data output
- ◆ Made of stainless steel

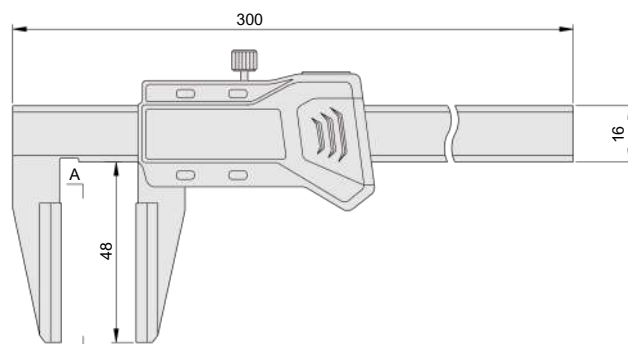
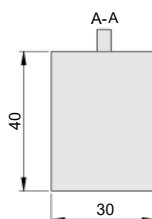
Measure outside diameter
of RTJ ring grooveMeasure inside diameter
of RTJ ring groove

Code	Range (inside diameter of RTJ ring groove)	Range (outside diameter of RTJ ring groove)	Angle of RTJ ring groove	Accuracy
142-012-11	10-300mm/0.4-12"	25-300mm/1-12"	23°	±0.06mm
142-024-11	600mm/0.4-24"	600mm/1-24"	23°	±0.07mm



unit: mm

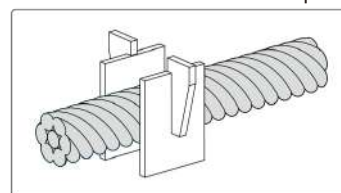
- ◆ Measure diameter of wire ropes, and thickness of soft materials like rubber, etc.
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/in, INC
- ◆ Automatic power on/off
- ◆ Data output(cable code: 100-03 or 100-04)
- ◆ Made of stainless steel



Measure thickness of rubber



Measure diameter of wire ropes



Code	Range	Accuracy
167-008-11	0-200mm/0-8"	±0.07mm

SERIES 107

DIGITAL CALIPER WITH LONG UPPER JAWS

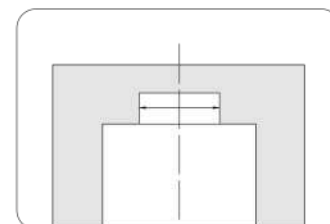
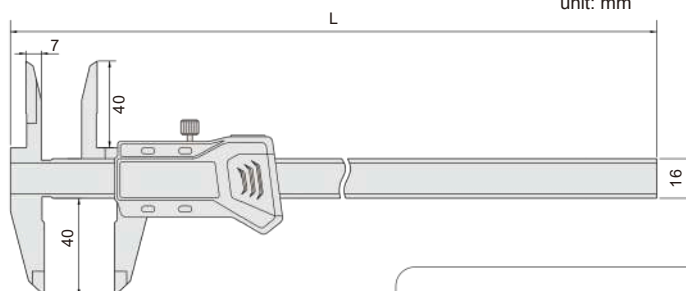


- ◆ Non waterproof
- ◆ Long upper jaws for measuring diameter of deep holes
- ◆ Resolution: 0.01 mm/0.0005"
- ◆ Buttons: on/off, zero, mm/in, INC
- ◆ Automatic power off, move the digital unit to turn on power
- ◆ Data output(cable code: 100-03 or 100-04)
- ◆ Made of stainless steel

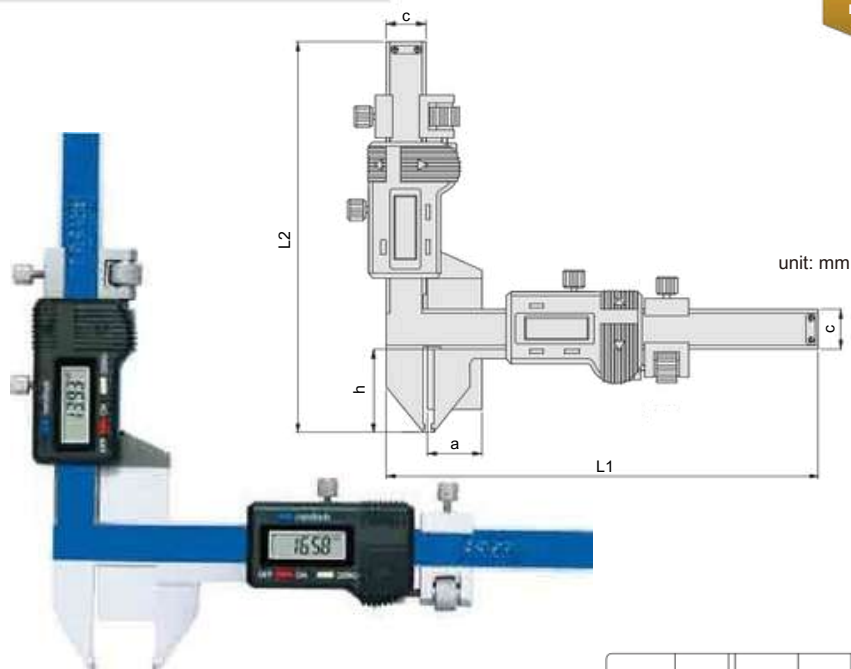


107-008-11

unit: mm



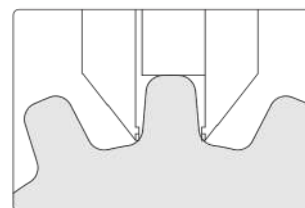
Code	Range	Accuracy	L
107-006-11	0-150mm/0-6"	±0.04mm	236
107-008-11	0-200mm/0-8"	±0.04mm	286



- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Made of stainless steel

156-001-11

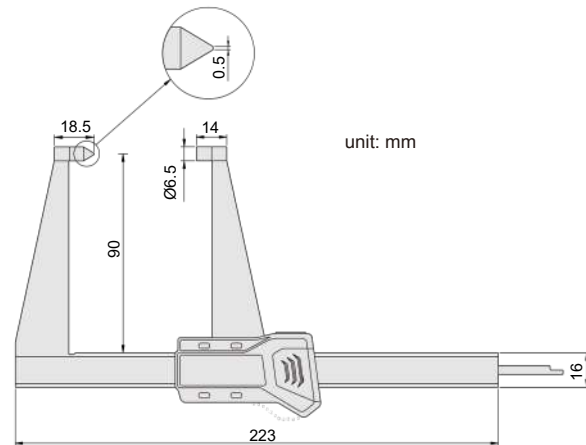
Code	Range	Accuracy	L1	L2	a	c	h
156-001-11	M1-25mm	±0.04mm	170	165.5	21	16	30.5
156-002-11	M5-50mm	±0.04mm	220	190	50.5	16	55





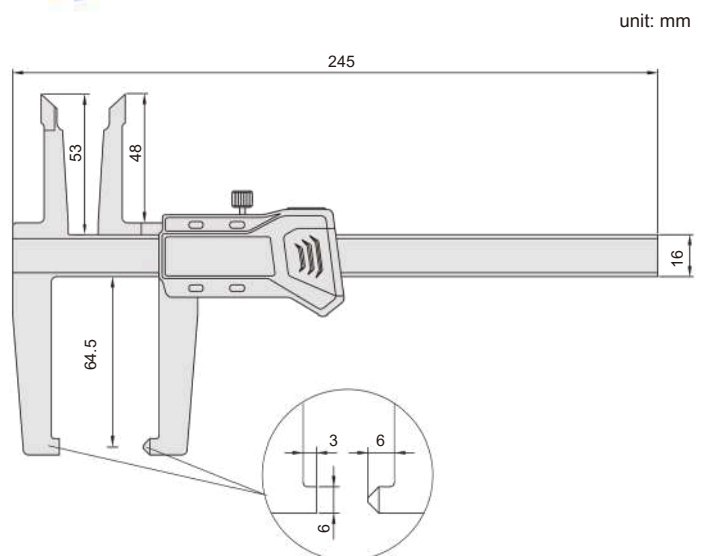
- ◆ Measure thickness of disk brakes
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/in, INC
- ◆ Automatic power on/off
- ◆ Data output(cable code: 100-03 or 100-04)
- ◆ Made of stainless steel

Code	Range	Accuracy
157-005-11	0-125mm/0-5"	±0.05mm



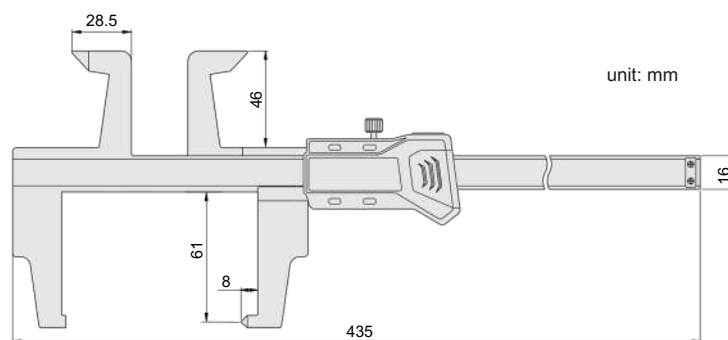
- ◆ Measure thickness of disk brakes and pad wear
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/in, INC
- ◆ Automatic power on/off
- ◆ Data output(cable code: 100-03 or 100-04)
- ◆ Made of stainless steel

Code	Range	Accuracy
165-006-11	0-150mm/0-6"	±0.07mm



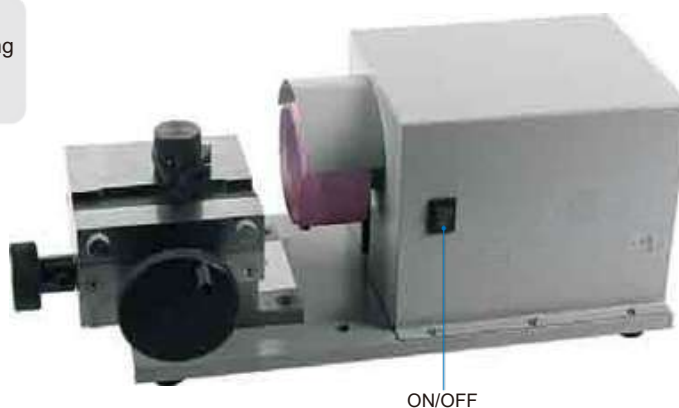


- ◆ Measure internal and external diameter of drum brakes
- ◆ Resolution 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/in, INC
- ◆ Automatic power on/off
- ◆ Data output(cable code: 100-03 or 100-04)
- ◆ Made of stainless steel



Code	Range	Accuracy
158-012-11	0-300mm/0-12"	±0.07mm

- ◆ Used for grinding the depth measuring surface of the end of calipers



Application

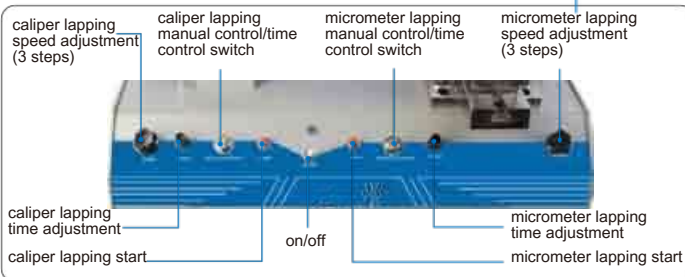


Code	Power supply	Dimension (L xWxH)	Weight
880-000-11	220V, 50/60Hz	370x200x 160mm	15kg

881

CALIPER/MICROMETER LAPPING MACHINE

- ◆ For lapping measuring surfaces of caliper lower jaws and outside micrometer
- ◆ Suitable for 0-300mm range calipers and 0-100mm range outside micrometers



Micrometer lapping block (optional)

Caliper lapping block (included)



Lapping measuring surfaces of outside micrometer



lapping measuring surfaces of caliper lower jaws



CALIPER

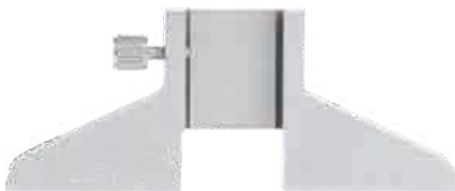
Code	Power supply	Dimension (L xWxH)	Weight
881-002-11	220V, 50/60Hz	430x400x 210mm	28kg

SERIES 179

ACCESSORY FOR CALIPER



VIDEO

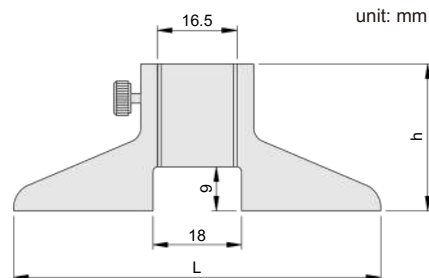


179-000-00



179-000-01

- ◆ For caliper to increase the stability of depth measurement
- ◆ For all calipers which range is 150mm and 200mm and beam width is 16mm
- ◆ Made of stainless steel



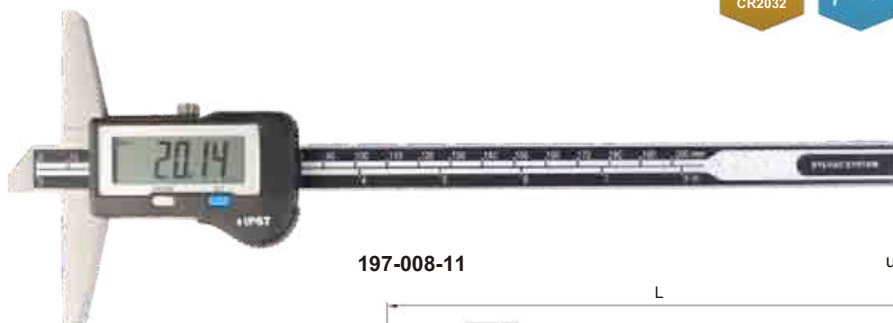
Application



Code	h	L
179-000-00	30	75
179-000-01	32	100



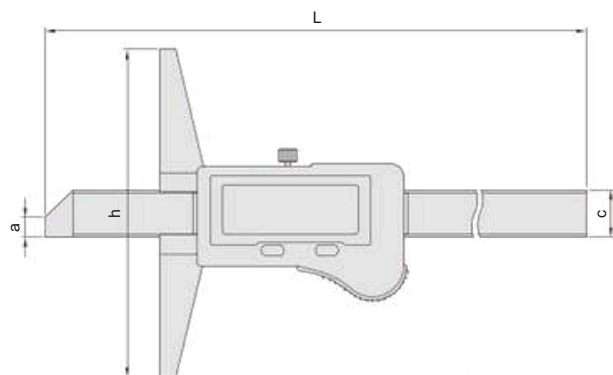
SERIES 197

IP67 WATERPROOF DIGITAL
DEPTH CALIPER

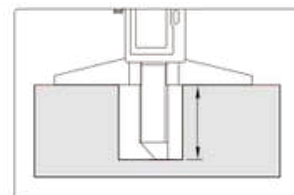
197-008-11

unit: mm

- ◆ IP67 protection level
- ◆ Absolute measuring system
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Automatic power off
- ◆ Buttons: zero, mm/inch, data preset
- ◆ Made of stainless steel



Code	Range	Accuracy	a	c	h	L
197-006-11	0-150mm/0-6"	±0.02mm	5	14.5	100	232
197-008-11	0-200mm/0-8"	±0.02mm	5	14.5	100	285
197-012-11	0-300mm/0-12"	±0.03mm	5	14.5	150	390



SERIES 197

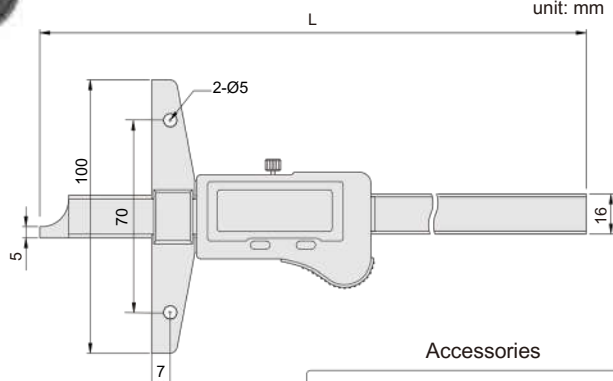
IP67 WATERPROOF DIGITAL
DEPTH CALIPER WITH HOLES

197-006-21

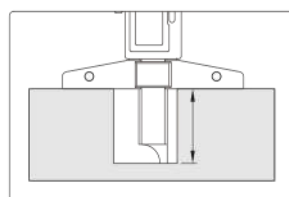
unit: mm

- ◆ IP67 protection level
- ◆ Absolute measuring system
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Automatic power off
- ◆ Buttons: zero, mm/inch, data preset
- ◆ Made of stainless steel
- ◆ Optional accessory: series 170 extension base

Code	Range	Accuracy	L
197-006-21	0-150mm/0-6"	±0.02mm	237
197-008-21	0-200mm/0-8"	±0.02mm	287
197-012-21	0-300mm/0-12"	±0.03mm	403



Accessories



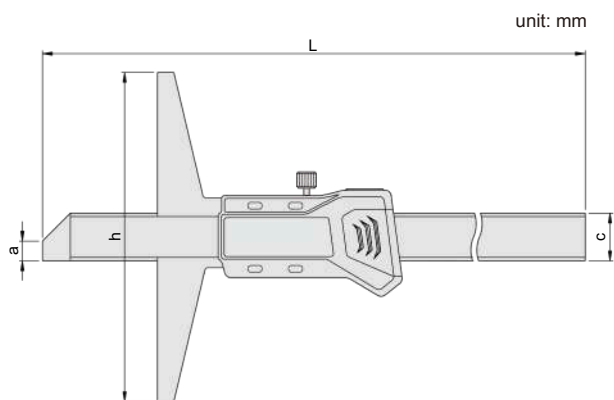
SERIES 171

DIGITAL DEPTH CALIPER

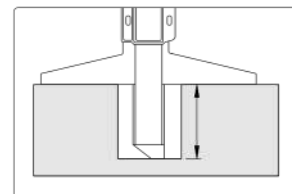


171-006-11

- ◆ Resolution: 0.01mm/0.0005"
- ◆ Automatic power on/off
- ◆ Buttons: on/off, zero, mm/in, INC
- ◆ Data output(cable code:100-03 or 100-04)
- ◆ Made of stainless steel



Code	Range	Accuracy	a	c	h	L
171-006-11	0-150mm/0-6"	±0.03mm	6	14.5	100	230
171-008-11	0-200mm/0-8"	±0.03mm	6	14.5	100	280
171-012-11	0-300mm/0-12"	±0.04mm	6	14.5	150	380
171-020-11	0-500mm/0-20"	±0.05mm	7	15	150	585



DEPTH

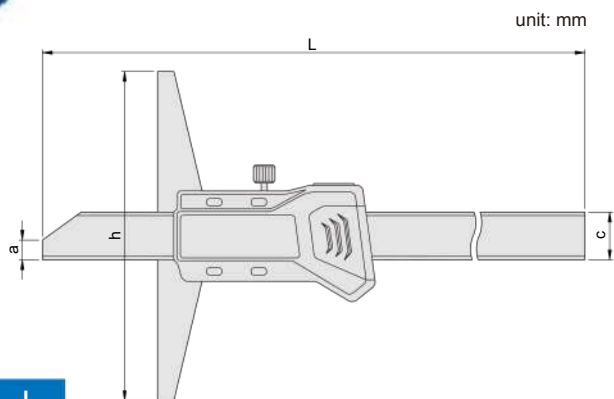
SERIES 171

DIGITAL DEPTH CALIPER

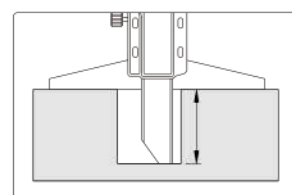


171-006-61P

- ◆ Resolution: 0.01mm/0.0005"
- ◆ Automatic power on/off
- ◆ Buttons: on/off, zero, mm/in, INC
- ◆ Data output(cable code:100-03 or 100-04)
- ◆ Made of stainless steel



Code	Range	Accuracy	a	c	h	L
171-006-61P	0-150mm/0-6"	±0.03mm	6	14.5	100	230
171-008-61P	0-200mm/0-8"	±0.03mm	6	14.5	100	280
171-012-61P	0-300mm/0-12"	±0.04mm	6	14.5	150	380
171-020-61P	0-500mm/0-20"	±0.05mm	7	16	150	585
171-024-61P	0-600mm/0-24"	±0.05mm	7	16	150	685



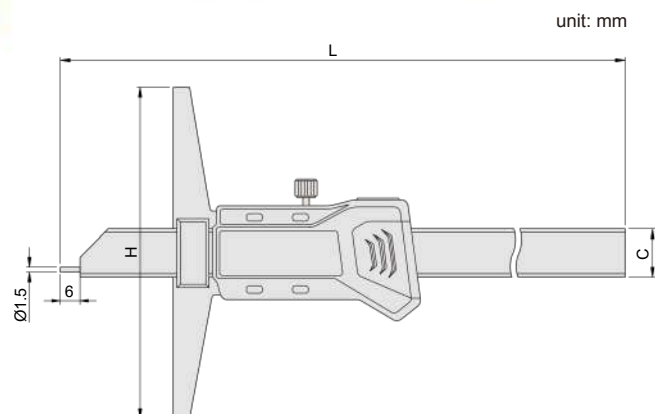
SERIES 172

DIGITAL PIN DEPTH CALIPER



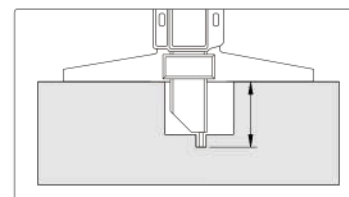
172-008-11

- ◆ Measure the depth of small holes or grooves
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Automatic power on/off
- ◆ Buttons: on/off, zero, mm/in, INC
- ◆ Data output(cable code:100-03 or 100-04)
- ◆ Made of stainless steel



unit: mm

Code	Range	Accuracy	H	L	C
172-008-11	0-200mm/0-8"	±0.03mm	100	291	14.5
172-012-11	0-300mm/0-12"	±0.04mm	150	395	15



SERIES 173

DIGITAL HOOK DEPTH CALIPER



VIDEO

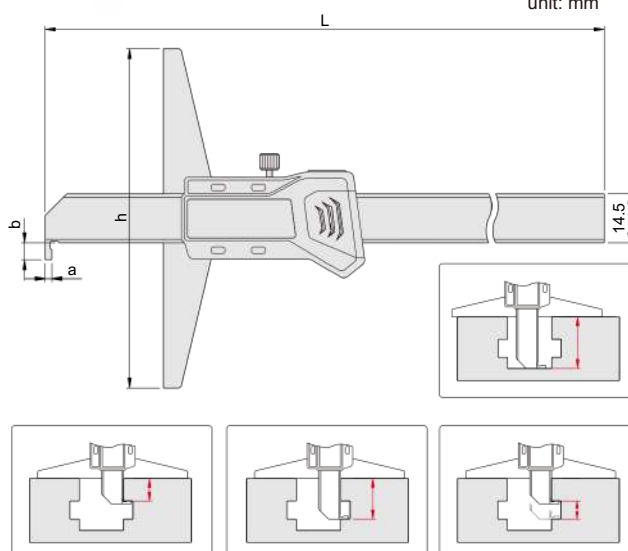
- ◆ Measure the depth of grooves
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Automatic power on/off
- ◆ Buttons: mm/in, SET, preset(P+,P-)
- ◆ Data output(cable code:100-03 or 100-04)
- ◆ Made of stainless steel



173-006-11

unit: mm

Code	Range	Accuracy	a	b	h	L
173-006-11	0-150mm/0-6"	±0.04mm	2	5	100	235
173-008-11	0-200mm/0-8"	±0.04mm	2	5	100	285
173-012-11	0-300mm/0-12"	±0.05mm	2	5	150	390
173-020-11	0-500mm/0-20"	±0.05mm	3	8	150	585
173-006-21	0-150mm/0-6"	±0.04mm	1	4	100	235
173-008-21	0-200mm/0-8"	±0.04mm	1	4	100	285
173-012-21	0-300mm/0-12"	±0.05mm	1	4	150	390
173-020-21	0-500mm/0-20"	±0.05mm	3	8	200	585



SERIES 174

DIGITAL DOUBLE HOOK DEPTH CALIPER

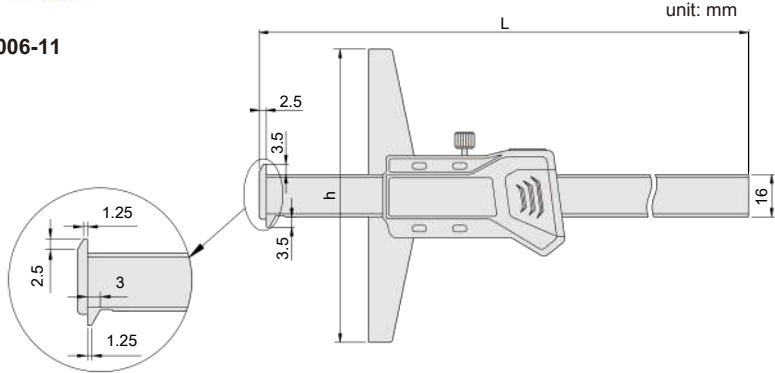


VIDEO

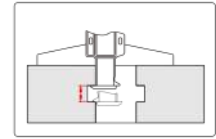
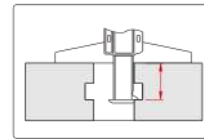
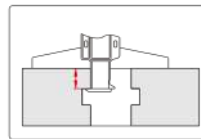


174-006-11

- ◆ Measure the depth of grooves
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Automatic power on/off
- ◆ Buttons: on/off, zero, mm/in, INC
- ◆ Data output(cable code:100-03 or 100-04)
- ◆ Made of stainless steel



Code	Range	Accuracy	h	L
174-006-11	0-150mm/0-6"	±0.03mm	100	233
174-008-11	0-200mm/0-8"	±0.03mm	100	283
174-012-11	0-300mm/0-12"	±0.04mm	150	383



DEPTH

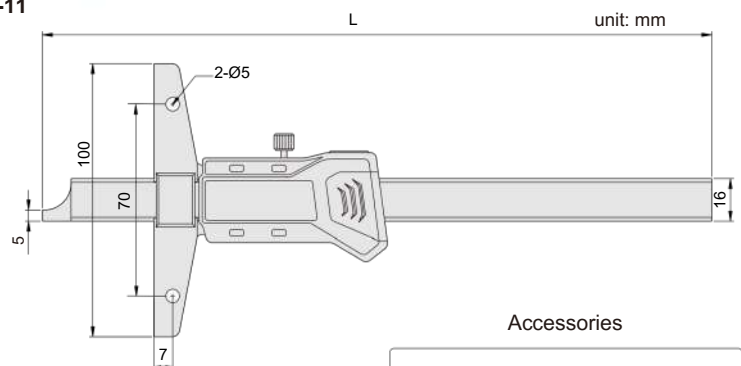
SERIES 191

DIGITAL DEPTH CALIPER WITH HOLES



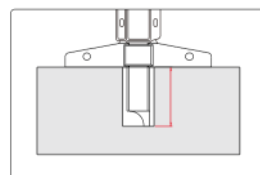
191-006-11

- ◆ With hole, for mounting the extension base
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/in, INC
- ◆ Automatic power on/off
- ◆ Data output(cable code:100-03 or 100-04)
- ◆ Made of stainless steel
- ◆ Optional accessory: series 170 extension base



Accessories

Code	Range	Accuracy	L
191-006-11	0-150mm/0-6"	±0.03mm	237
191-008-11	0-200mm/0-8"	±0.03mm	287
191-012-11	0-300mm/0-12"	±0.04mm	403



series 170(optional)





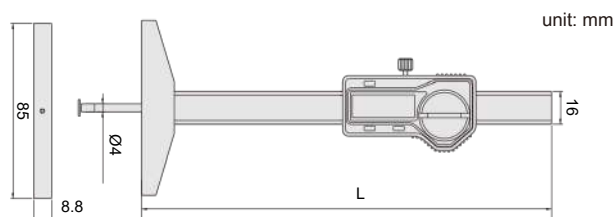
193-004-11

- ♦ Resolution: 0.01mm/0.0005"
- ♦ Supplied with three interchangeable points (flat, spherical, disk)
- ♦ Buttons: on/off, set, mm/inch
- ♦ Automatic power off
- ♦ Data output (cable code: 100-11 or 100-12)
- ♦ Made of stainless steel

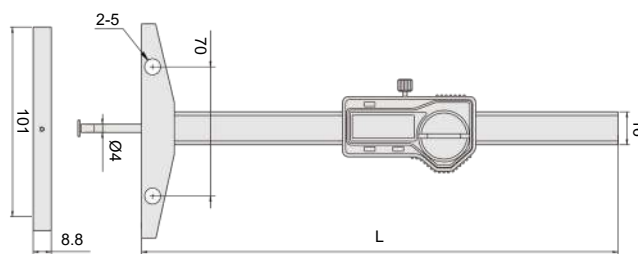
Accessory application



170 series (optional)

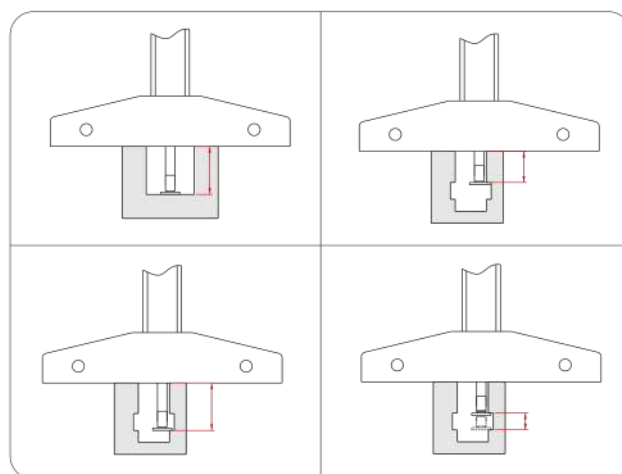
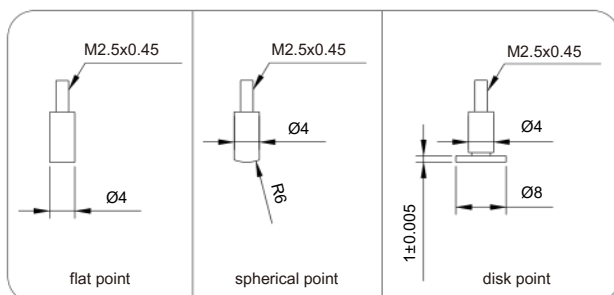


unit: mm



193-006-11, 193-008-11 and 193-012-11

points (include)

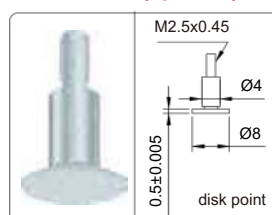


Code	Range	Accuracy	L
193-004-11	0-100mm/0-4"	±0.02mm	200
193-006-11	0-150mm/0-6"	±0.03mm	300
193-008-11	0-200mm/0-8"	±0.03mm	300
193-012-11	0-300mm/0-12"	±0.04mm	400

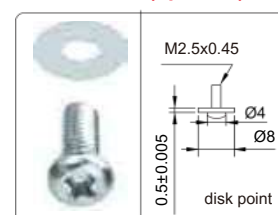
OPTIONAL ACCESSORIES

Code	Description	Remark
193-T04	0.5mm disk point	for grooves inside blind hole
193-T05	0.5mm disk point	for narrow grooves

193-T04 (optional)

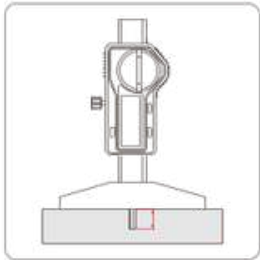


193-T05 (optional)

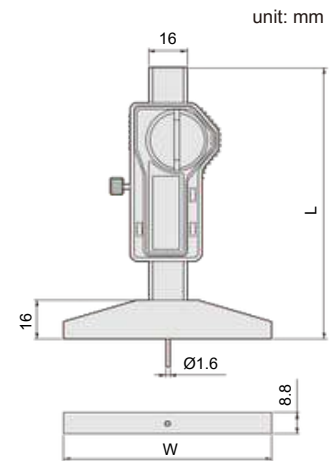




- ◆ Measure depth of small groove and hole
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, set, mm/inch
- ◆ Automatic power off
- ◆ Data output (cable code: 100-11 or 100-12)
- ◆ Made of stainless steel



194-002-11



Code	Range	Accuracy	L	W
194-001-11	0-25mm/0-1"	±0.02mm	110	85
194-002-11	0-50mm/0-2"	±0.02mm	135	85
194-006-11	0-150mm/0-6"	±0.03mm	235	100

MASUP *innova*

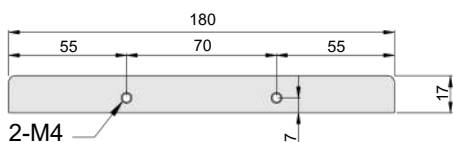


VIDEO

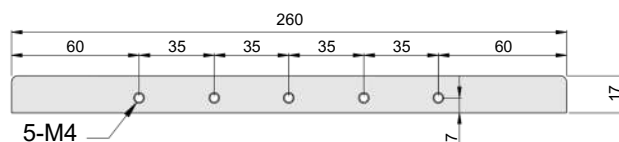


170-260-01

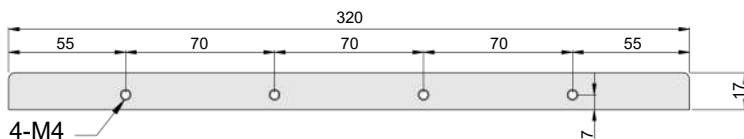
unit: mm



170-180-01



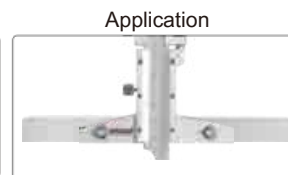
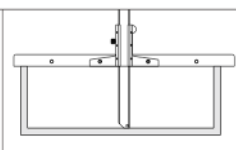
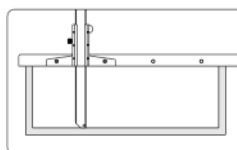
170-260-01



170-320-01

- ◆ Add extension base to measure large hole or gap
- ◆ For depth caliper 175, 178, 191, 192, 197-xxx-21 series and 193(range 150, 200, 300mm) series

Code	Length
170-180-01	180mm
170-260-01	260mm
170-320-01	320mm



Application



- ◆ Measure the depth of grooves, small holes and tire thread
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Automatic power on/off
- ◆ Buttons: on/off, zero, mm/in, INC
- ◆ Data output(cable code:100-03 or 100-04)
- ◆ Made of stainless steel

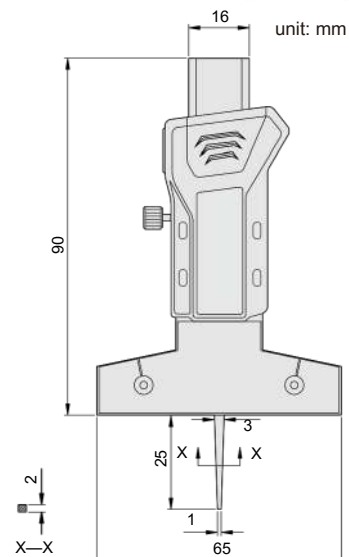
Set zero



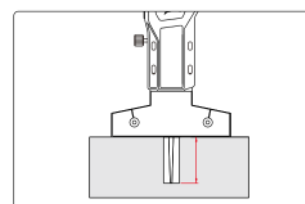
Measure tire thread



Zero setting block (included)



unit: mm

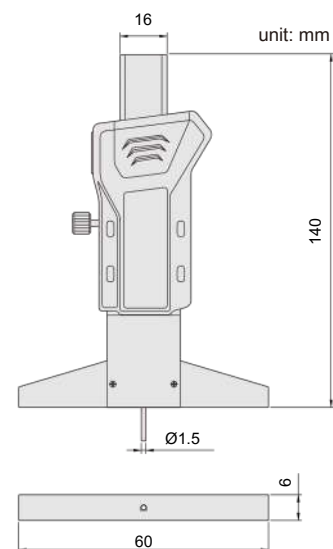
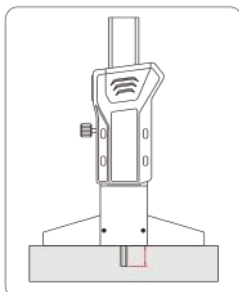


Code	Range	Accuracy
176-001-11	0-25mm/0-1"	±0.03mm



- ◆ Measure depth of small groove and hole
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/in, INC
- ◆ Automatic power off
- ◆ Data output (cable code: 100-03 or 100-04)
- ◆ Made of stainless steel

Set zero



Zero setting block (included)



Code	Range	Accuracy
176-001-21	0-30mm/0-1.2"	±0.03mm

MASUP *innova*

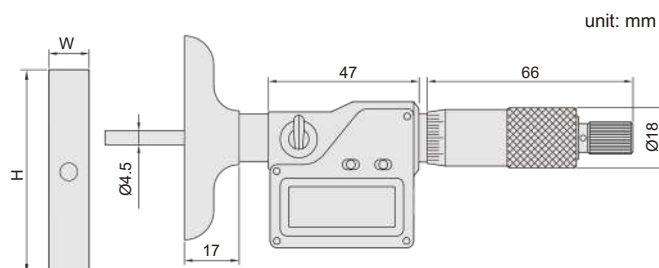


VIDEO

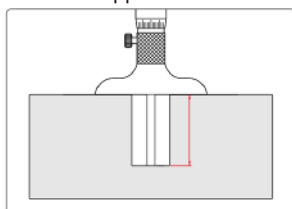


395-002-01

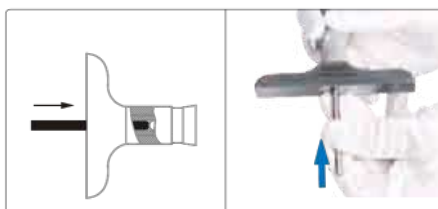
- ◆ Resolution: 0.001mm/0.00005"
- ◆ Micrometer head accuracy: $\pm 3\mu\text{m}$
Rod accuracy: $\pm(2+L/75)\mu\text{m}$, L is the measuring range in mm
- ◆ Button: on/off, set, mm/inch, ABS/INC, data output
- ◆ IP65 protection leve
- ◆ Data output
- ◆ Automatic power off
- ◆ Rods with flat end
- ◆ Ratchet stop



Application



Install rod



Rod(included)



Code	Range	Base(HxW)	Rod
395-001-01	0-25mm/0-1"	101x17mm	1pc
395-002-01	0-50mm/0-2"	101x17mm	2pcs
395-004-01	0-100mm/0-4"	101x17mm	4pcs
395-006-01	0-150mm/0-6"	101x17mm	6pcs
395-008-01	0-200mm/0-8"	101x17mm	8pcs
395-012-01	0-300mm/0-12"	101x17mm	12pcs
395-001-02	0-25mm/0-1"	63x17mm	1pc
395-002-02	0-50mm/0-2"	63x17mm	2pcs
395-004-02	0-100mm/0-4"	63x17mm	4pcs
395-006-02	0-150mm/0-6"	63x17mm	6pcs
395-008-02	0-200mm/0-8"	63x17mm	8pcs
395-012-02	0-300mm/0-12"	63x17mm	12pcs

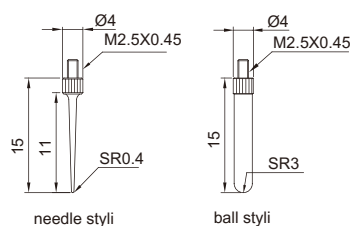


VIDEO

- ◆ Button: tolerance set, data preset, inch/mm conversion, measuring direction set, max./min./range measurement, absolute/incremental measurement
- ◆ Data output(cable code:200-03 or 200-04)
- ◆ Automatic power off
- ◆ Stainless steel base
- ◆ Supplied with pointed tip and ball tip

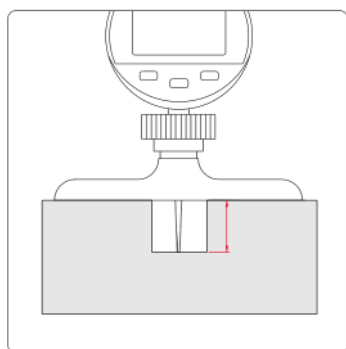


Styli (included)



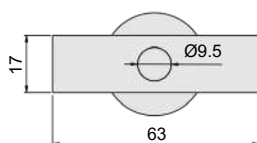
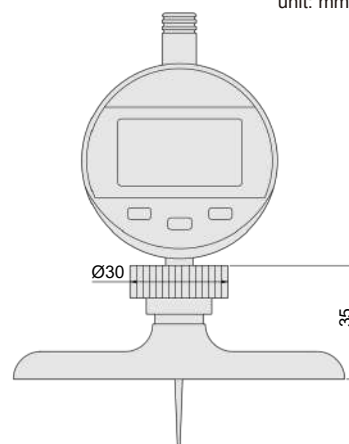
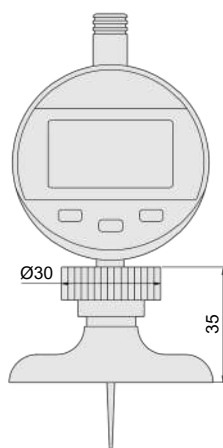
needle styli

ball styli

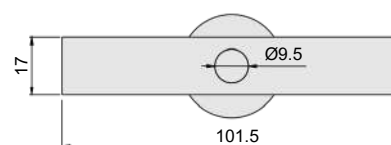


293-010-12

unit: mm



293-010-01 and 293-010-11



293-010-02 and 293-010-12

Resolution 0.001mm/0.00005"

Code	Range	Accuracy	Digital indicator stroke	Base
293-010-01	0-10mm/0-0.4"	±5μm	12.7mm/0.5"	63x17mm
293-010-02	0-10mm/0-0.4"	±5μm	12.7mm/0.5"	101.5x17mm

Resolution 0.01mm/0.0005"

Code	Range	Accuracy	Digital indicator stroke	Base
293-010-11	0-10mm/0-0.4"	±0.03mm	12.7mm/0.5"	63x17mm
293-010-12	0-10mm/0-0.4"	±0.03mm	12.7mm/0.5"	101.5x17mm

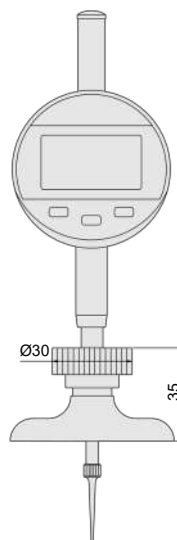
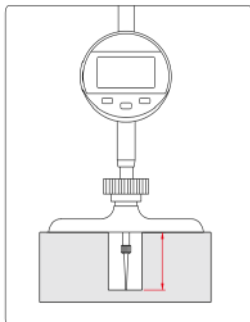
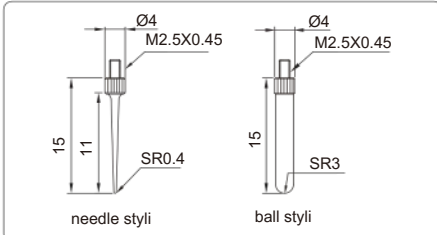


VIDEO

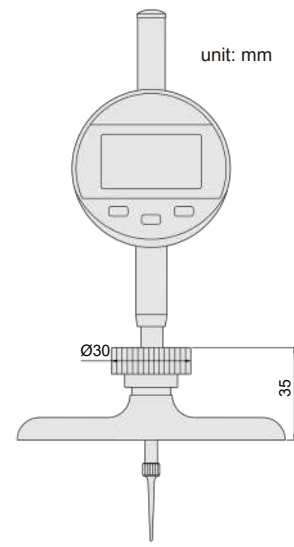
- ◆ Button: tolerance set, data preset, inch/mm conversion, measuring direction set, max./min./range measurement, absolute/incremental measurement
- ◆ Data output(cable code:200-03 or 200-04)
- ◆ Automatic power off
- ◆ Stainless steel base
- ◆ Supplied with pointed tip and ball tip



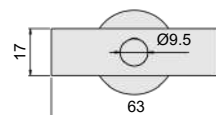
Styli (included)



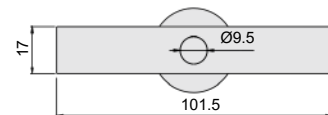
293-025-12



unit: mm



293-025-01 and 293-025-11



293-025-02 and 293-025-12

Resolution 0.001mm/0.00005"

Code	Range	Accuracy	Digital indicator stroke	Base
293-025-01	0-25mm/0-1"	±5µm	25.4mm/1"	63x17mm
293-025-02	0-25mm/0-1"	±5µm	25.4mm/1"	101.5x17mm

Resolution 0.01mm/0.0005"

Code	Range	Accuracy	Digital indicator stroke	Base
293-025-11	0-25mm/0-1"	±0.03mm	25.4mm/1"	63x17mm
293-025-12	0-25mm/0-1"	±0.03mm	25.4mm/1"	101.5x17mm

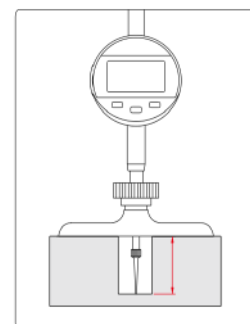
DEPTH



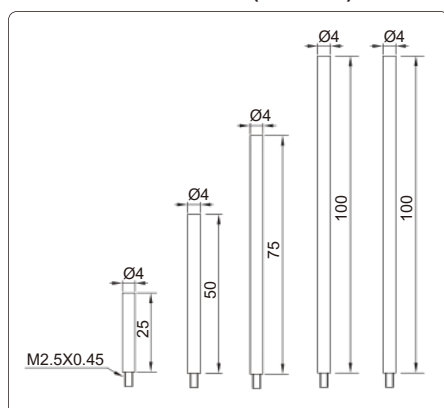


VIDEO

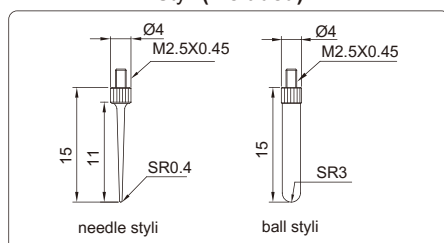
- ◆ Button: tolerance set, data preset, inch/mm conversion, measuring direction set, max./min./range measurement, absolute/incremental measurement
- ◆ Data output(cable code:200-03 or 200-04)
- ◆ Automatic power off
- ◆ Stainless steel base
- ◆ Supplied with pointed tip and ball tip



Extension rods (included)

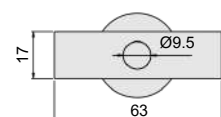
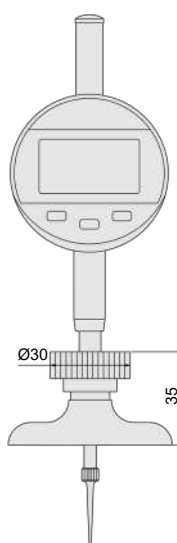


Styli (included)

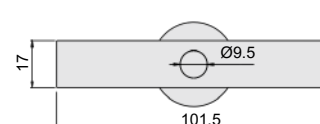
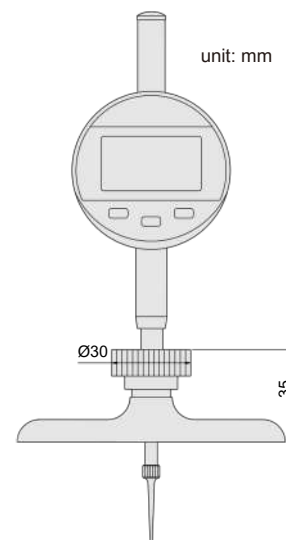


293-300-12

unit: mm



293-300-11 and 293-300-01



293-300-12 and 293-300-02

Resolution 0.001mm/0.00005"

Code	Range	Accuracy	Digital indicator stroke	Base
293-300-01	0-300mm/0-12"	±5µm	25.4mm/1"	63x17mm
293-300-02	0-300mm/0-12"	±5µm	25.4mm/1"	101.5x17mm

Resolution 0.01mm/0.0005"

Code	Range	Accuracy	Digital indicator stroke	Base
293-300-11	0-300mm/0-12"	±0.03mm	25.4mm/1"	63x17mm
293-300-12	0-300mm/0-12"	±0.03mm	25.4mm/1"	101.5x17mm

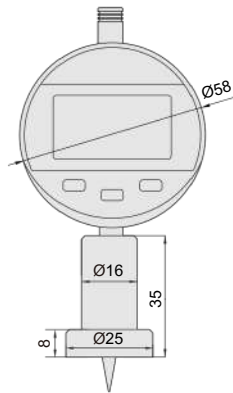
SERIES 299

DIGITAL DEPTH INDICATOR

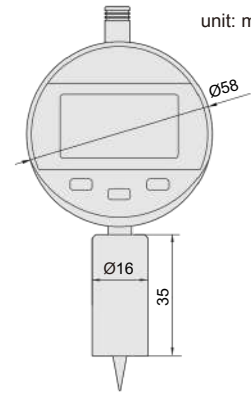


- ◆ Button: on/off, zero, mm/inch, ABS, data preset, change measuring direction
- ◆ Data output(cable code:200-03 or 200-04)
- ◆ Automatic power off
- ◆ Stainless steel base
- ◆ Pointed tip

299-010-02



Type B



Type A

unit: mm

Resolution 0.01mm/0.0005"

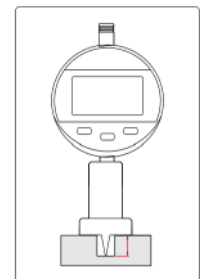
Code	Range	Accuracy	Digital indicator stroke	Base	Type
299-010-11	0-12.7mm/0-0.5"	±20μm	12.7mm/0.5"	Ø16mm	A
299-010-12	0-12.7mm/0-0.5"	±20μm	12.7mm/0.5"	Ø25mm	B

Resolution 0.001mm/0.00005"

Code	Range	Accuracy	Digital indicator stroke	Base	Type
299-010-01	0-12.7mm/0-0.5"	±5μm	12.7mm/0.5"	Ø16mm	A
299-010-02	0-12.7mm/0-0.5"	±5μm	12.7mm/0.5"	Ø25mm	B



299-010-11



SERIES 399

DEPTH MICROMETER CHECKERS



- ◆ To check depth micrometers and set zero
- ◆ Constructed with steel gage blocks
- ◆ Supplied with anvil block

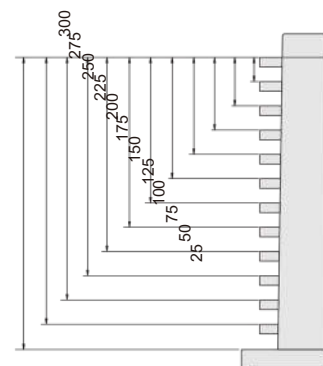
Application



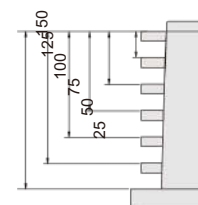
anvil block (included)



399-012-01



399-012-01



399-006-01

unit: mm

DEPTH

Code	Size	Range	Accuracy
399-006-01	0-150mm	25, 50, 75, 100, 125, 150mm	±2μm
399-012-01	0-300mm	25, 50, 75, 100, 125, 150, 175, 200, 225, 250, 275, 300mm	±3μm

With manufacturer inspection certificate



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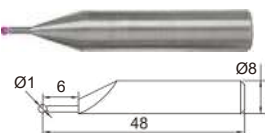
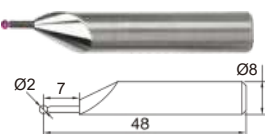
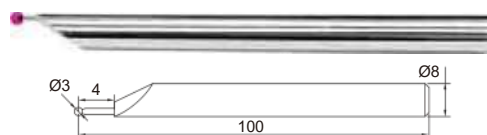
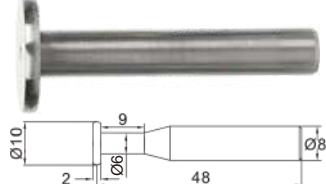
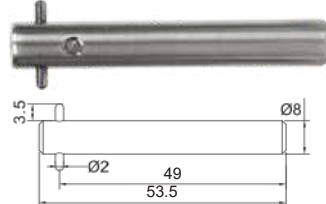
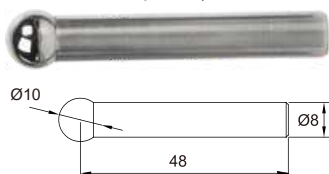
2227108117

- ◆ The instrument is suitable for One-Dimensional as well as Two-Dimensional measurements
- ◆ Programming, for batch quantities measurements
- ◆ Color LCD screen
- ◆ The probe moves up and down automatically
- ◆ Low and high limits with judgement
- ◆ Built-in air compressor provides smooth movement on granite surface plate.
- ◆ With re-chargeable battery, for 10 hours working
- ◆ With manufacturer inspection certificate



Optional Accessories

unit: mm

Ø1mm concentric ruby ball probe(code: **R1HC**)Ø2mm eccentric ruby ball probe(code: **R2H**)Ø3mm eccentric ruby ball probe(code: **R3H100**)Ø10mm disc probe (code: **DS10H**)Ø2mm depth probe(code: **DP2H**)Ø10 carbide ball probe(code: **SR10H**)Depth hole probe(code: **DP80H**)
 Squareness probe
(Optional, Code: **SQ10**)


AccuGage700

Ø4mm carbide ball probe



Basic Measurement

-  1 Contacting a plane from above
-  2 Contacting a shaft from above/bore below
-  3 Measuring a shaft diameter and center
-  4 Measuring groove width and center
-  5 Measuring MIN-MAX-DELTA
-  6 Measuring job squareness
-  7 Contacting a plane from below
-  8 Contacting a shaft from below/ bore above
-  9 Measuring bore diameter and center
-  0 Measuring ledge width and center
-  +/- Difference key
-  +/- Set references

SPECIFICATION

Code	AccuGage700	AccuGage1000
Range	0-700mm	0-1000mm
Expandable range	1015mm 6μm	1315mm
Squareness	0.5μm, 1μm	10μm
Resolutions		
Accuracy	2+L/330μm, L is measuring length in mm (working temperature is 20±1°C)	
Repeatability (with standard probe)	0.001 mm on plane and 0.002 mm on bore	
Measuring force	1±0.2N	
Output	USB or RS232	
Power supply	Rechargeable battery	
Working temperature	10°C - 40°C	
Weight	25kg	

INCLUDED ACCESSORIES

Main unit	1pc
Ø4x48mm ruby ball probe	1pc
Calibration block	1pc
Software and USB cable	1pc each
Allen key	1set
AC/DC Adapter	1pc

2D Measurement

-  ♦ Measure pitch circle diameter(PCD)
- ♦ Measure distance between two points
- ♦ Measure angles
- ♦ Preset coordinates

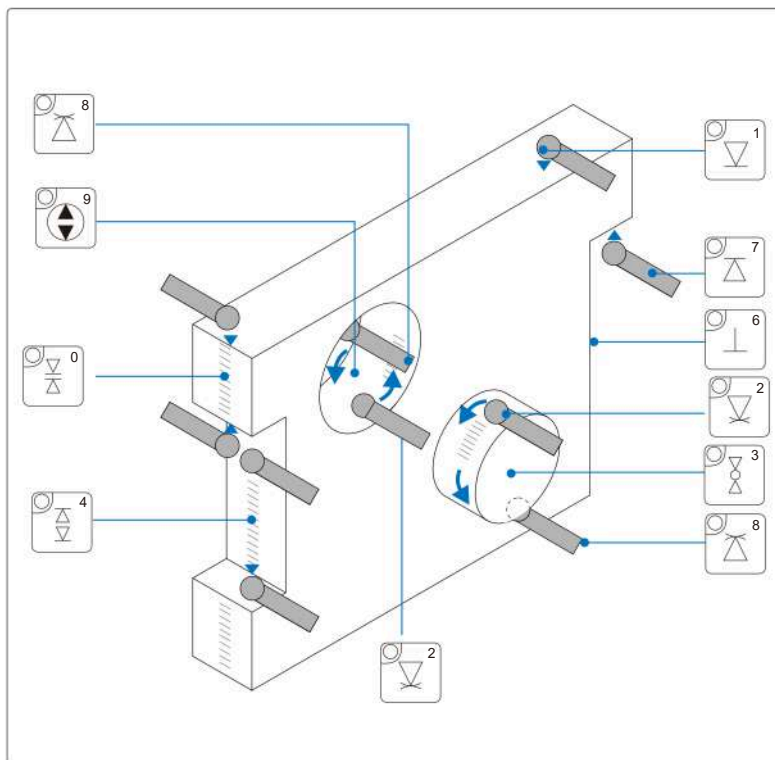
Programming and replay, for batch quantities measurements



Calculation

-  Calculate height difference
-  Calculate height center

Application Demo



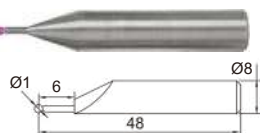
- ◆ The instrument is only suitable for One-Dimensional measurement
- ◆ The probe moves up and down automatically
- ◆ Low and high limits with judgement
- ◆ Built-in air compressor provides smooth movement on granite surface plate.
- ◆ With re-chargeable battery, for 10 hours working
- ◆ With manufacturer inspection certificate



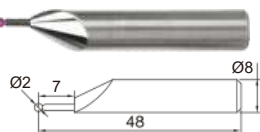
Optional Accessories

unit: mm

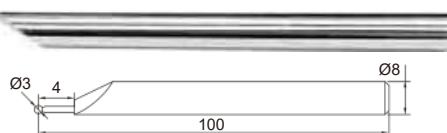
Ø1mm concentric ruby ball probe(code:R1HC)



Ø2mm eccentric ruby ball probe(code: R2H)



Ø3mm eccentric ruby ball probe(code:R3H100)



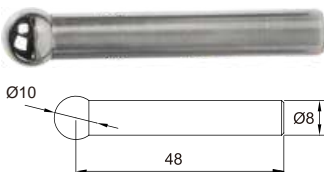
Ø10mm disc probe (code:DS10H)



Ø2mm depth probe(code:DP2H)



Ø10 carbide ball probe(code:SR10H)



Ø4mm carbide ball probe

Depth hole probe(code: DP80H)

Squareness probe
(Optional, Code:SQ10)

AccuHite700

Basic Measurement

-  1 Contacting a plane from above
-  2 Contacting a shaft from above/bore below
-  3 Measuring a shaft diameter and center
-  4 Measuring groove width and center
-  5 Contacting a plane from below
-  6 Contacting a shaft from below/ bore above
-  7 Measuring bore diameter and center
-  8 Measuring ledge width and center
-  9 Measuring MIN-MAX-DELTA
-  0 Difference key
-  4 Measuring job squareness
-  +/- Set references

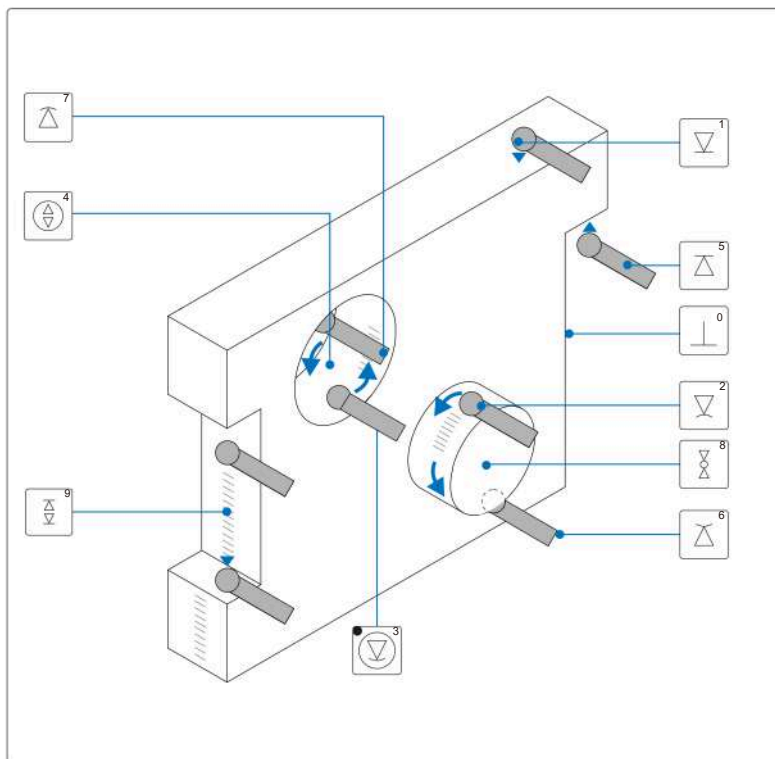
SPECIFICATION

Code	AccuHite700	AccuHite1000
Range	0-700mm	0-1000mm
Expandable range	1015mm	1315mm
Squareness	10µm	12µm
Resolutions	0.5µm, 1µm, 10µm	
Accuracy	3+L/250µm, L is measuring length in mm (working temperature is 20±1°C)	
Repeatability (with standard probe)	0.0015 mm on plane and 0.003 mm on bore	
Measuring force	1±0.2N	
Output	USB or RS232	
Power supply	Rechargeable battery	
Working temperature	10°C - 40°C	
Weight	21kg	

INCLUDED ACCESSORIES

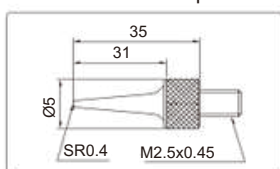
Main unit	1pc
Ø4x48mm carbide ball probe	1pc
Calibration block	1pc
Software and USB cable	1pc each
Allen key	1set
AC/DC Adapter	1pc

Demo Application

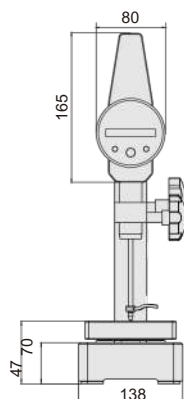
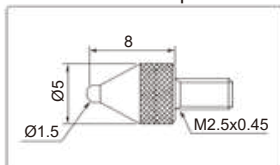


- ◆ Working table is made of ceramic
- ◆ Response speed: max.5000mm/sec
- ◆ Easy convert between metric and inch8 bits
- ◆ Highlight green LED
- ◆ Power off automatically
- ◆ Data output (USB port)
- ◆ Optional accessories series 270

Needle contact point

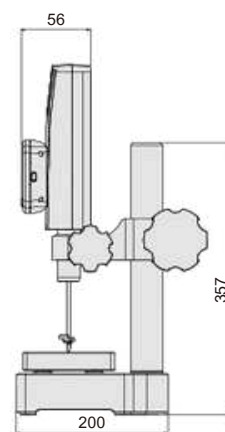


Ball contact point



HG100E

unit:mm



SPECIFICATION

Code	HG50E	HG100E	HG50S	HG100S
Measuring range	0-50mm	0-100mm	0-50mm	0-100mm
Accuracy	2 μ m*	3 μ m*	3 μ m*	4 μ m*
Resolution	0.5 μ m/1 μ m(adjustable)		1 μ m	
Repeatability	0.5 μ m	1 μ m	1 μ m	2 μ m
Tip force	≤ 1.2 N	≤ 1.6 N	≤ 1.2 N	≤ 1.6 N
Dimension of working table	130x130mm			
Flatness of working table	1.5 μ m			
Power supply	5V/1A adapter			
Working temperature	0°C - 40°C			
Weight	11.6kg			

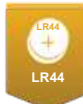
*Working temperature is 20 $\pm$ 1°C

INCLUDED ACCESSORIES

Main unit	1pc
Stand with ceramic table	1pc
Needle contact point	1pc
Ball contact point	1pc
AD/DC adapter	1pc
Spindle lift knob	2pcs

SERIES 181

DIGITAL HEIGHT GAGE



- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, inch/mm, ABS/INC, data hold, tolerance measurement, data preset, set data
- ◆ Carbide tipped scriber
- ◆ Made of stainless steel (except the base)
- ◆ Data output(cable code:100-03L or 100-04L)
- ◆ With clamps (Ø8mm holder)

Clamp (included)

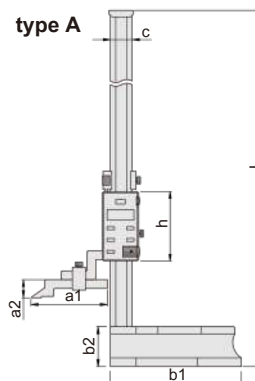


Carbide tipped jaws

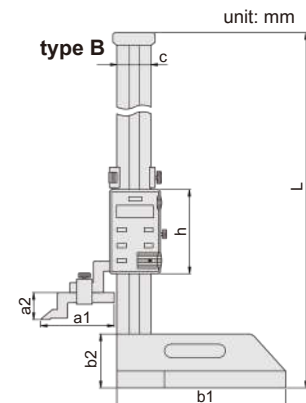


181-024-11

type A



type B



unit: mm

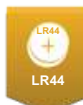
Code	Range	Type	Accuracy	a1	a2	b1	b2	c	h	L
181-012-11	0-300mm/0-12"	A	±0.04mm	76	25	135	45	23	80	470
181-020-11	0-500mm/0-20"	A	±0.05mm	103	25	180	55	30	95	720
181-024-11	0-600mm/0-24"	A	±0.05mm	103	25	180	55	30	95	820
181-040-11	0-1000mm/0-40"	B	±0.07mm	110	39	250	80	50	125	1275
181-060-11	0-1500mm/0-60"	B	±0.11mm	110	39	280	80	50	125	1790
181-080-11	0-2000mm/0-80"	B	±0.15mm	110	39	280	80	50	125	2290

Application with clamps(optional)



SERIES 182

DIGITAL HEIGHT GAGE



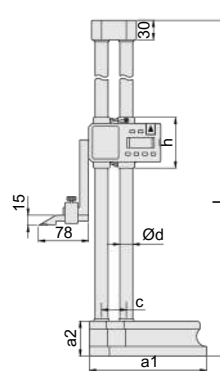
HEIGHT

- ◆ Resolution: 0.01mm/0.001"
- ◆ Buttons: on/off, inch/mm, ABS/INC, data preset, set data
- ◆ Carbide tipped scriber
- ◆ Made of stainless steel beam
- ◆ With driving wheel
- ◆ Optional accessory: 267 series clamps

Application with clamps(optional)

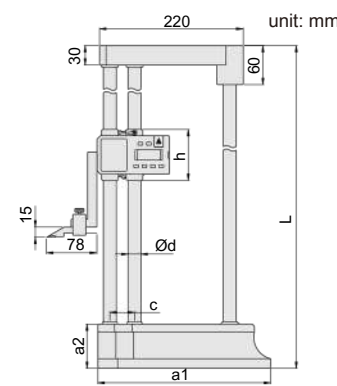


182-012-11



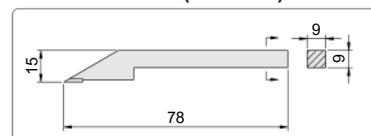
type A

Carbide tipped jaws



type B

Scriber (included)



Code	Range	Type	Accuracy	a1	a2	c	Ød	h	L
182-012-11	0-300mm/0-12"	A	±0.04mm	135	43	33	15	84	475
182-018-11	0-450mm/0-18"	A	±0.05mm	180	54	38	20	88	660
182-024-11	0-600mm/0-24"	A	±0.05mm	180	54	38	20	88	810
182-040-11	0-1000mm/0-40"	B	±0.05mm	265	68	38	20	88	1230

Driving wheel



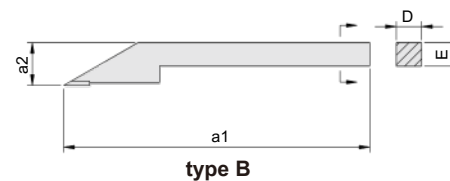
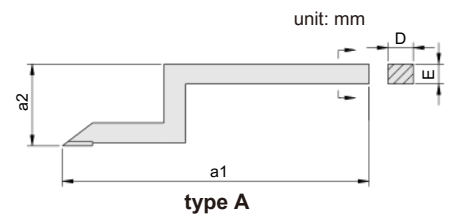
SERIES 180

SCRIBER FOR HEIGHT GAGE



180-000-SC1

◆ Carbide tipped



HEIGHT

Code	For height gage	Type	a1	a2	D	E
180-000-SC1	181-012-11	A	76	25	6	8
180-000-SC2	181-024-11	A	103	25	10	12
180-000-SC3	181-040-11, 181-060-11, 181-080-11	A	110	39	10	15
180-000-SC4	185-012-11, 185-018-11, 185-024-11, 182-012-11, 182-018-11, 182-024-11	B	78	15	9	9
180-000-SC6	186-012-11, 184-012-11	A	80	30	9	9
180-000-SC7	186-024-11, 186-018-11, 184-024-11	A	80	41	9	9

Carbide tipped jaws



SERIES 183

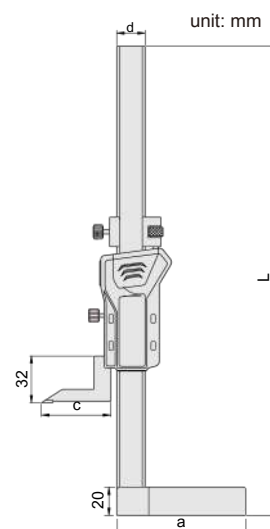
MINI DIGITAL HEIGHT GAGE



- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/in, INC
- ◆ Carbide tipped scriber
- ◆ Made of stainless steel (except the base)
- ◆ Data output(cable code:100-03 or 100-04)
- ◆ Automatic power off



183-006-11



Carbide tipped jaws



Code 183-	Range	Accuracy	a	c	d	L
006-11	0-150mm/0-6"	±0.03mm	75	43	16	265
183-008-11	0-200mm/0-8"	±0.03mm	90	49	16	325
183-010-11	0-250mm/0-10"	±0.03mm	90	49	16	380

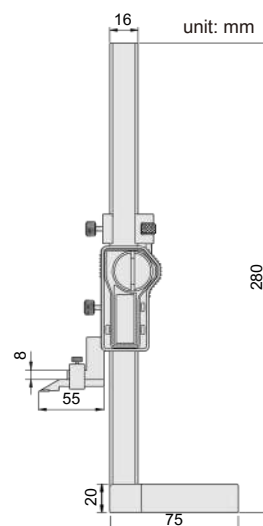
183

MINI DIGITAL HEIGHT GAGE

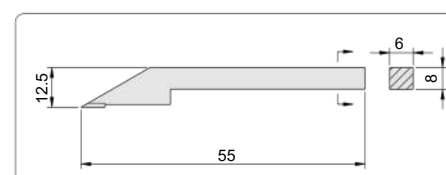


- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Carbide tipped scriber
- ◆ With fine adjustment
- ◆ Made of stainless steel (except the base)
- ◆ Data output(cable code:100-11 or 100-12)
- ◆ Automatic power off

Carbide tipped jaws



Scriber (included)

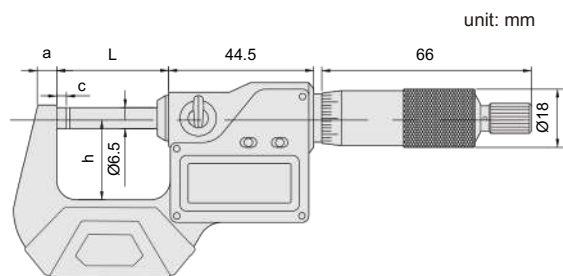


Code	Range	Accuracy
183-006-12	0-150mm/0-6"	±0.03mm



313-001-01S

- ◆ Resolution: 0.001mm/0.00005"
- ◆ IP65 protection level
- ◆ Button: on/off, mm/inch, set, zero
- ◆ Automatic power off
- ◆ Data output
- ◆ Carbide measuring faces, ratchet stop
- ◆ Setting standards are included(except 313-001-01S)



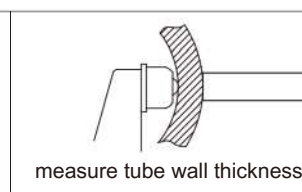
Setting standards (included)



Data output interface



spherical anvil



measure tube wall thickness

Code	Range	Accuracy	a	c	h	L	Setting standards(included)
313-001-01S*	0-25mm/0-1"	±2μm	6	3	25	34.5	-
313-002-01S*	25-50mm/1-2"	±2μm	8	3	32	59.5	25mm
313-003-01S*	50-75mm/2-3"	±3μm	8	3	44.5	84.5	50mm
313-004-01S*	75-100mm/3-4"	±3μm	8	3	57	109.5	75mm
313-005-01S	100-125mm/4-5"	±3μm	10	3	70	135	100mm
313-006-01S	125-150mm/5-6"	±3μm	10	3	82	160.5	125mm
313-007-01S	150-175mm/6-7"	±4μm	12	5.5	94.5	186	150mm
313-008-01S	175-200mm/7-8"	±4μm	12	5.5	107	211.5	175mm
313-009-01S	200-225mm/8-9"	±4μm	23	5.5	129.5	236	200mm
313-010-01S	225-250mm/9-10"	±4μm	23	5.5	142.5	261.5	225mm
313-011-01S	250-275mm/10-11"	±5μm	23	5.5	155	287	250mm
313-012-01S	275-300mm/11-12"	±5μm	23	5.5	167.5	312.5	275mm

Set

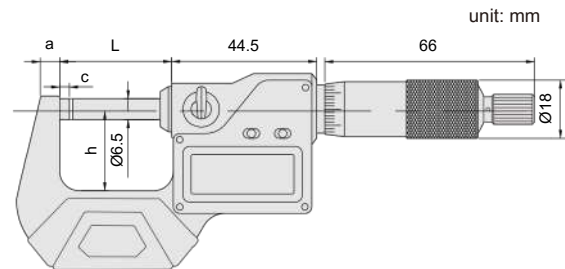
Code	Range	Total QTY.	Included micrometers	Package
313-003-03S*	0-75mm/0-3"	3pcs	0-25mm/0-1", 25-50mm/1-2", 50-75mm/2-3"	blow mould case
313-004-04S*	0-100mm/0-4"	4pcs	0-25mm/0-1", 25-50mm/1-2", 50-75mm/2-3", 75-100mm/3-4"	blow mould case
313-006-06S	0-150mm/0-6"	6pcs	0-25mm/0-1", 25-50mm/1-2", 50-75mm/2-3", 75-100mm/3-4", 100-125mm/4-5", 125-150mm/5-6"	aluminum box

*With manufacturer inspection certificate

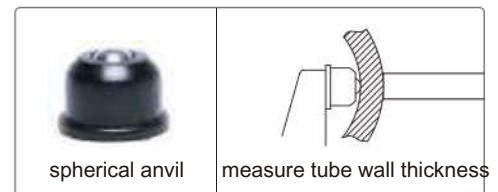


313-001-01

- ◆ Resolution: 0.001mm/0.00005"
- ◆ IP65 protection level
- ◆ Button: on/off, mm/inch, set, zero
- ◆ Automatic power off
- ◆ Carbide measuring faces, ratchet stop
- ◆ Setting standards are included
(except 313-001-01)



Setting standards (included)



Code	Range	Accuracy	a	c	h	L	Setting standards(included)
313-001-01*	0-25mm/0-1"	±2µm	6	3	25	34.5	-
313-002-01*	25-50mm/1-2"	±2µm	8	3	32	59.5	25mm
313-003-01*	50-75mm/2-3"	±3µm	8	3	44.5	84.5	50mm
313-004-01*	75-100mm/3-4"	±3µm	8	3	57	109.5	75mm
313-005-01	100-125mm/4-5"	±3µm	10	3	70	135	100mm
313-006-01	125-150mm/5-6"	±3µm	10	3	82	160.5	125mm
313-007-01	150-175mm/6-7"	±4µm	12	5.5	94.5	186	150mm
313-008-01	175-200mm/7-8"	±4µm	12	5.5	107	211.5	175mm

Set

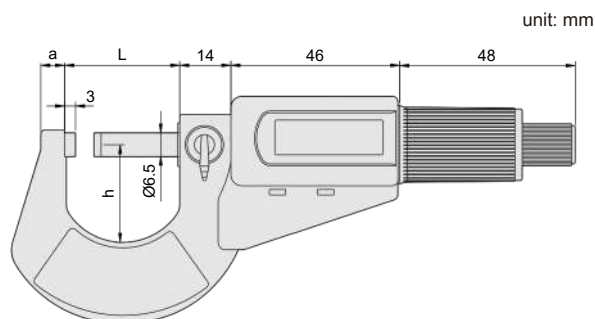
Code	Range	Total QTY.	Included micrometers	Package
313-003-03*	0-75mm/0-3"	3pcs	0-25mm/0-1", 25-50mm/1-2", 50-75mm/2-3"	blow mould case
313-004-04*	0-100mm/0-4"	4pcs	0-25mm/0-1", 25-50mm/1-2", 50-75mm/2-3", 75-100mm/3-4"	blow mould case
313-006-06	0-150mm/0-6"	6pcs	0-25mm/0-1", 25-50mm/1-2", 50-75mm/2-3", 75-100mm/3-4", 100-125mm/4-5", 125-150mm/5-6"	aluminum box

*With manufacturer inspection certificate

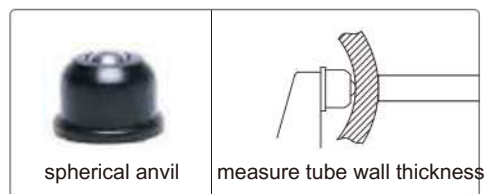


312-001-03

- ◆ Resolution: 0.001mm/0.00005"
- ◆ Button: ON/OFF/SET, ABS/INC/UNIT
- ◆ Carbide measuring faces
- ◆ Ratchet stop
- ◆ Setting standards are included
(except 312-001-03)



Setting standards (included)



Code	Range	Accuracy	a	h	L	Setting standards(included)
312-001-03*	0-25mm/0-1"	±2µm	6	27.5	32	-
312-002-03*	25-50mm/1-2"	±2µm	8	37	57	25mm
312-003-03*	50-75mm/2-3"	±3µm	8	50	82	50mm
312-004-03*	75-100mm/3-4"	±3µm	10	61	107	75mm
312-005-03	100-125mm/4-5"	±3µm	10	73	132	100mm
312-006-03	125-150mm/5-6"	±3µm	10	85	157	125mm
312-007-03	150-175mm/6-7"	±4µm	21	104	182	150mm
312-008-03	175-200mm/7-8"	±4µm	21	117	207	175mm

Set

Code	Range	Total QTY.	Included micrometers	Package
312-003-33*	0-75mm/0-3"	3pcs	0-25mm/0-1", 25-50mm/1-2", 50-75mm/2-3"	blow mould
312-004-44*	0-100mm/0-4"	4pcs	0-25mm/0-1", 25-50mm/1-2", 50-75mm/2-3", 75-100mm/3-4"	case blow
312-006-66	0-150mm/0-6"	6pcs	0-25mm/0-1", 25-50mm/1-2", 50-75mm/2-3", 75-100mm/3-4", 100-125mm/4-5", 125-150mm/5-6"	mould case aluminum box

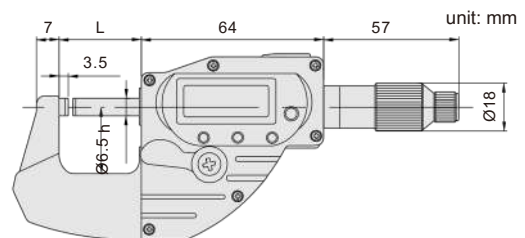
*With manufacturer inspection certificate



- ◆ Quick measurement with lever
- ◆ Resolution: 0.001mm/0.00005"
- ◆ IP65 protection level
- ◆ Button: on/off, mm/inch, origin, ABS/zero
- ◆ Automatic power off
- ◆ Carbide measuring faces
- ◆ Setting standards are included
(except 314-001-02)



314-001-02



Code	Range	Accuracy	h	L	Setting standards (included)
314-001-02	0-25mm/0-1"	3μm	25	31	-
314-002-02	25-50mm/1-2"	3μm	32	57	25mm
314-003-02	50-75mm/2-3"	4μm	44.5	82	50mm
314-004-02	75-100mm/3-4"	4μm	57	107	75mm

Setting standards (included)



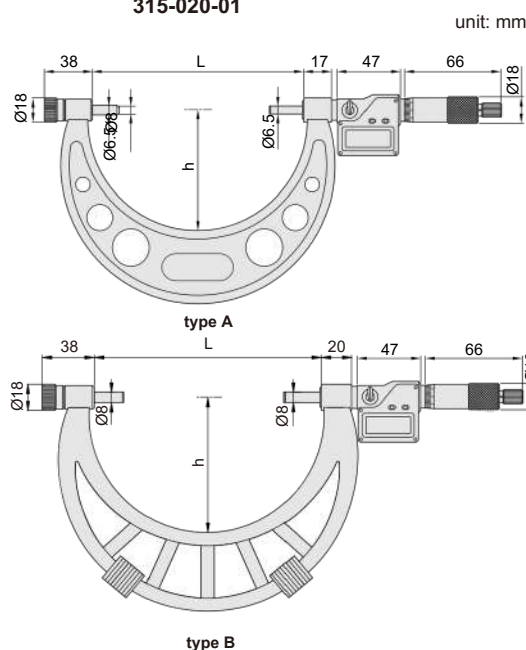
Quick movement



MASUP *INNOVA*

- ♦ Resolution 0.001mm/0.0001"
(resolution of **315-004-01** and **315-006-01**
is 0.001mm/0.00005")
- ♦ IP65 protection level
- ♦ Button: on/off, set, mm/inch, ABS/INC,
data output
- ♦ Automatic power off
- ♦ Data output
- ♦ Carbide measuring faces
- ♦ Supplied with setting standards

Setting standards(included)

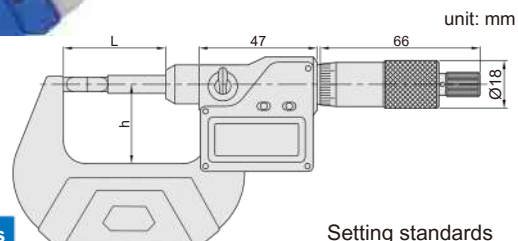


Code	Range	Accuracy	L	h	Type	Setting standards (included)
315-004-01	0-100mm/0-4"	±5μm	105	57	A	25,50,75mm
315-006-01	0-150mm/0-6"	±6μm	155	82	A	25,50,75,100,125mm
315-012-01	150-300mm/6-12"	±8μm	305	165	A	150,175,200,225,250,275mm
315-012-02	200-300mm/8-12"	±8μm	305	165	A	200,225,250,275mm
315-016-01	300-400mm/12-16"	±9μm	405	224	B	325,375mm
315-020-01	400-500mm/16-20"	±11μm	505	275	B	425,475mm
315-024-01	500-600mm/20-24"	±12μm	605	321	B	525,575mm
315-028-01	600-700mm/24-28"	±13μm	705	371	B	625,675mm
315-032-01	700-800mm/28-32"	±15μm	805	426	B	725,775mm
315-036-01	800-900mm/32-36"	±16μm	905	476	B	825,875mm
315-040-01	900-1000mm/36-40"	±17μm	1005	576	B	925,975mm

- ◆ Measure the groove diameter of shafts and keyways
- ◆ Resolution 0.001mm/0.00005"
- ◆ Non-rotating spindle
- ◆ Button: on/off, set, mm/inch, ABS/INC
- ◆ Automatic power off
- ◆ Data output
- ◆ Ratchet stop
- ◆ Supplied with setting standards(except 0-25mm/0-1")

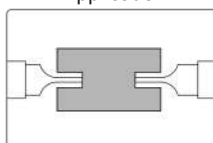


316-001-01

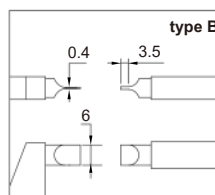
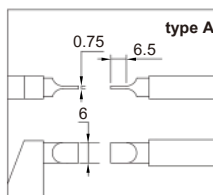


Code	Range	Accuracy	Type	h	L	Setting standards (included)
316-001-01	0-25mm/0-1"	±4μm	A	32	57	-
316-002-01	25-50mm/1-2"	±4μm	A	44.5	82	25mm
316-003-01	50-75mm/2-3"	±5μm	A	57	107	50mm
316-004-01	75-100mm/3-4"	±5μm	A	70	133	75mm
316-005-01	100-125mm/4-5"	±6μm	A	82	158	100mm
316-006-01	125-150mm/5-6"	±6μm	A	94.5	183.4	125mm
316-007-01	150-175mm/6-7"	±7μm	A	107	208.8	150mm
316-001-02	0-25mm/0-1"	±4μm	B	32	57	-
316-002-02	25-50mm/1-2"	±4μm	B	44.5	82	25mm

Application



Setting standards (included)



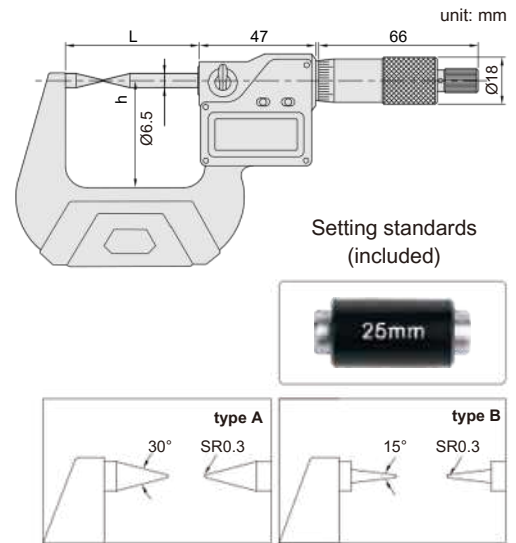
MASUP *INNOVA*



- ◆ Measure the web thickness of drills, small grooves and keyways
- ◆ Resolution 0.001mm/0.00005"
- ◆ IP65 protection level
- ◆ Button: on/off, set, mm/inch, ABS/INC, data output
- ◆ Automatic power off
- ◆ Data output
- ◆ Ratchet stop
- ◆ Carbide tips
- ◆ Supplied with setting standards (except 0-25mm/0-1")



317-002-02



Code	Range	Accuracy	Type	h	L	Setting standards (included)
317-001-01	0-25mm/0-1"	±4μm	A	32	57	-
317-002-01	25-50mm/1-2"	±4μm	A	44.5	82	25mm
317-003-01	50-75mm/2-3"	±5μm	A	57	107	50mm
317-004-01	75-100mm/3-4"	±5μm	A	70	133	75mm
317-001-02	0-25mm/0-1"	±4μm	B	32	57	-
317-002-02	25-50mm/1-2"	±4μm	B	44.5	82	25mm
317-003-02	50-75mm/2-3"	±5μm	B	57	107	50mm
317-004-02	75-100mm/3-4"	±5μm	B	70	133	75mm

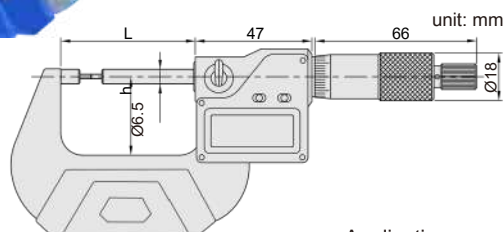
MASUP *innova*



- ◆ Measure splined shafts, slots and keyways
- ◆ Resolution 0.001mm/0.00005"
- ◆ IP65 protection level
- ◆ Button: on/off, set, mm/inch, ABS/INC, data output
- ◆ Automatic power off
- ◆ Data output
- ◆ Ratchet stop
- ◆ Carbide measuring faces
- ◆ Supplied with setting standards (except 0-25mm/0-1")



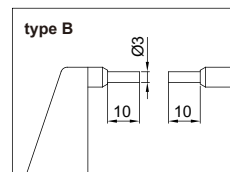
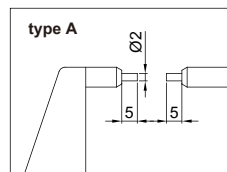
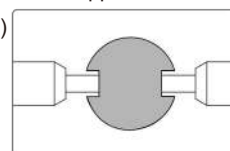
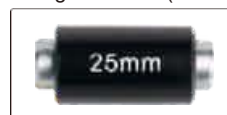
318-001-02



Code	Range	Accuracy	Type	h	L	Setting standards (included)
318-001-01	0-25mm/0-1"	±4μm	A	32	57	-
318-002-01	25-50mm/1-2"	±4μm	A	44.5	82	25mm
318-003-01	50-75mm/2-3"	±5μm	A	57	107	50mm
318-004-01	75-100mm/3-4"	±5μm	A	70	133	75mm
318-001-02	0-25mm/0-1"	±4μm	B	32	57	-
318-002-02	25-50mm/1-2"	±4μm	B	44.5	82	25mm
318-003-02	50-75mm/2-3"	±5μm	B	57	107	50mm
318-004-02	75-100mm/3-4"	±5μm	B	70	133	75mm

Application

Setting standards(included)

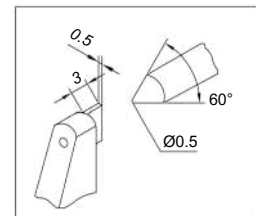
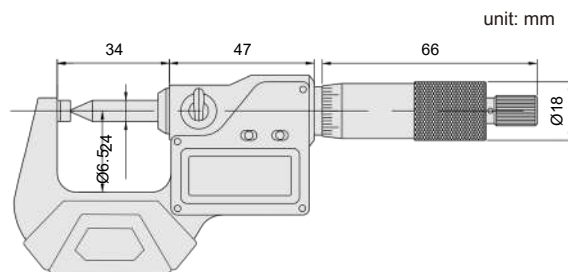


MASUP





- ◆ Measure the height of crimp contact
- ◆ Resolution 0.001mm/0.00005"
- ◆ IP65 protection level
- ◆ Button: on/off, set, mm/inch, ABS/INC, data output
- ◆ Automatic power off
- ◆ Data output
- ◆ Ratchet stop

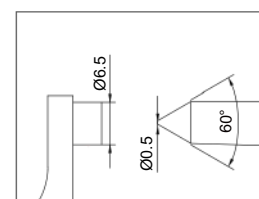
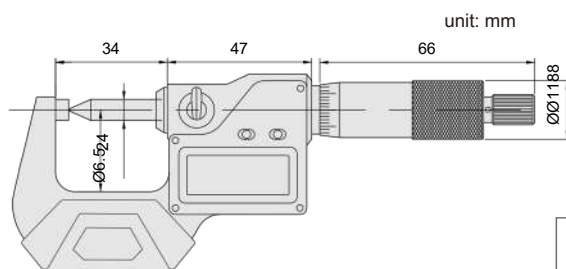


Code	Range	Accuracy
319-001-01	0-25mm/0-1"	±4μm

MASUP *INNOVA*



- ◆ Measure the height of crimp contact
- ◆ Resolution 0.001mm/0.00005"
- ◆ IP65 protection level
- ◆ Button: on/off, set, mm/inch, ABS/INC, data output
- ◆ Automatic power off
- ◆ Data output
- ◆ Ratchet stop



Code	Range	Accuracy
319-001-21	0-25mm/0-1"	±4μm

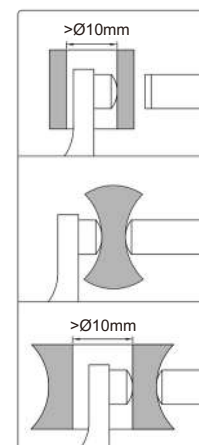
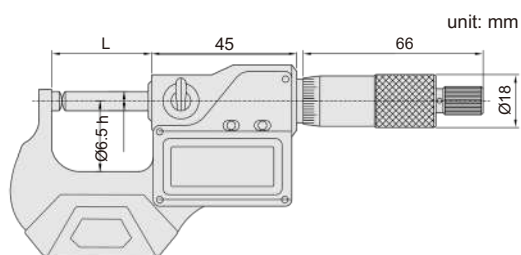
SERIES 331

DIGITAL SPHERICAL ANVIL
TUBE MICROMETER

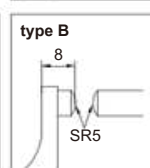
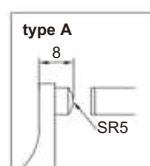
- ◆ Measure wall thickness of tubes
- ◆ Resolution 0.001mm/0.00005"
- ◆ IP65 protection level
- ◆ Button: on/off, set, mm/inch, ABS/INC, data output
- ◆ Automatic power off
- ◆ Data output
- ◆ Ratchet stop
- ◆ Carbide measuring faces
- ◆ Supplied with setting standards (except 0-25mm/0-1")



331-001-02



Code	Range	Accuracy	Type	L	h	Setting standards(included)
331-001-01	0-25mm/0-1"	4μm	A	32	24	-
331-002-01	25-50mm/1-2"	4μm	A	57	32	25mm
331-003-01	50-75mm/2-3"	5μm	A	82	44.5	50mm
331-004-01	75-100mm/3-4"	5μm	A	107	57	75mm
331-001-02	0-25mm/0-1"	4μm	B	32	24	100mm
331-002-02	25-50mm/1-2"	4μm	B	57	32	125mm
331-003-02	50-75mm/2-3"	5μm	B	82	44.5	150mm
331-004-02	75-100mm/3-4"	5μm	B	107	57	175mm

Setting standards
(included)

SERIES 380

DIGITAL CYLINDRICAL ANVIL TUBE MICROMETER

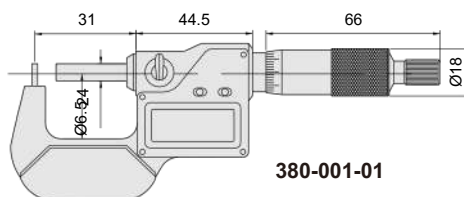


- ◆ Measure wall thickness of tubes
- ◆ Resolution 0.001mm/0.00005"
- ◆ IP65 protection level
- ◆ Button: on/off, set, mm/inch, ABS/INC, data output
- ◆ Automatic power off
- ◆ Data output
- ◆ Ratchet stop
- ◆ Carbide spindle tip



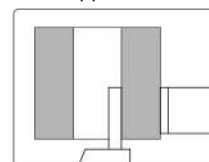
380-001-04

unit: mm

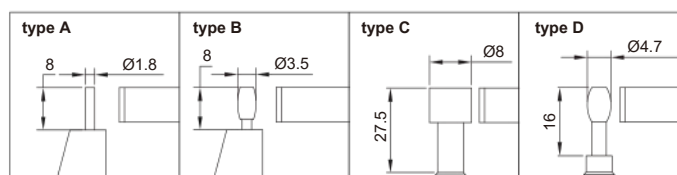


380-001-01

Application



Code	Range	Accuracy	Type
380-001-01	0-25mm/0-1"	±6μm	A
380-001-02	0-25mm/0-1"	±6μm	B
380-001-03	0-25mm/0-1"	±6μm	C
380-001-04	0-25mm/0-1"	±6μm	D



MASUP *INNOVA*

332

DIGITAL NON ROTATING SPINDLE DISK MICROMETER

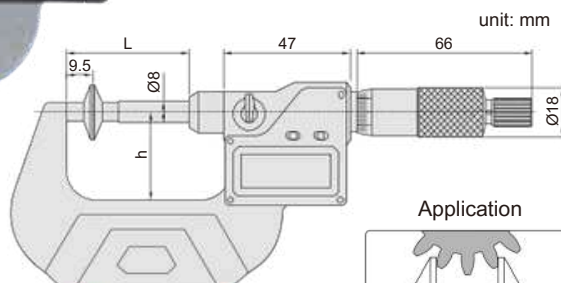


- ◆ Measure root tangent length of gear
- ◆ Resolution 0.001mm/0.00005"
- ◆ Non-rotating spindle
- ◆ Button: on/off, set, mm/inch, ABS/INC, data output
- ◆ Automatic power off
- ◆ Data output
- ◆ Ratchet stop
- ◆ Supplied with setting standards (except 332-001-01)

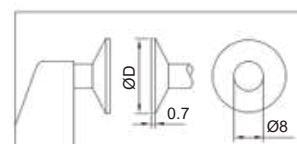
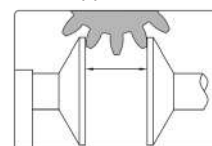


332-001-01

Setting standards(included)



Application

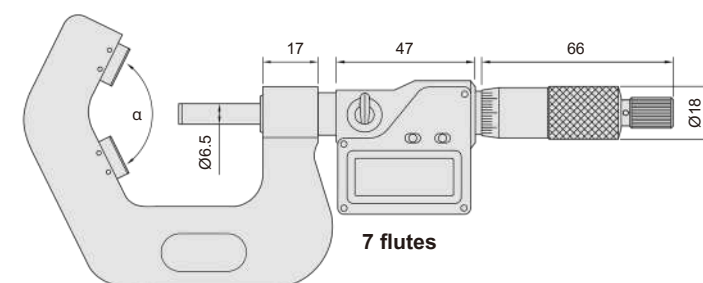
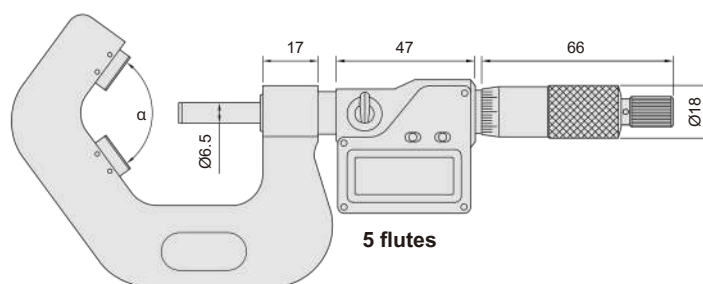
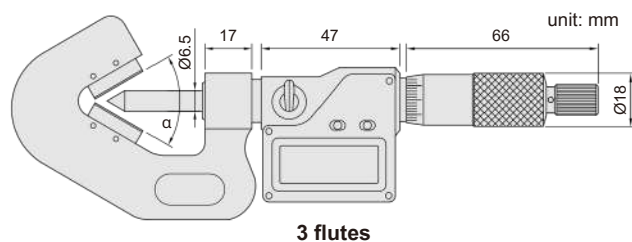


Code	Range	Accuracy	L	h	ØD	Setting standards (included)
332-001-01	0-25mm/0-1"	±4µm	43	32	20	-
332-002-01	25-50mm/1-2"	±4µm	68	44.5	20	25mm
332-003-01	50-75mm/2-3"	±5µm	93	57	20	50mm
332-004-01	75-100mm/3-4"	±5µm	118.5	70	20	75mm
332-005-01	100-125mm/4-5"	±6µm	144	82	30	100mm
332-006-01	125-150mm/5-6"	±6µm	169.5	94.5	30	125mm

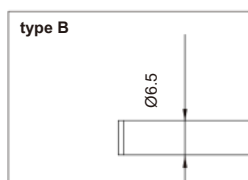
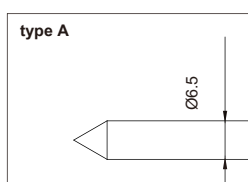


334-020-01

- ◆ Measure the diameter of parts or cutting tools with odd grooves such as taps, reamers and end mills
- ◆ Resolution: 0.001mm/0.00005"
- ◆ Button: on/off, set, mm/inch, ABS/INC, data output
- ◆ Automatic power off, Ratchet stop
- ◆ Data output
- ◆ Carbide measuring faces



Setting standards
(included)



Code	Range	Accuracy	Flutes	α	Type	Setting standards (included)
334-015-01	1-15mm/0.04-0.6"	$\pm 4\mu\text{m}$	3	60°	A	5mm
334-020-01	5-20mm/0.2-0.8"	$\pm 4\mu\text{m}$	3	60°	B	5mm
334-035-01	20-35mm/0.8-1.4"	$\pm 5\mu\text{m}$	3	60°	B	20mm
334-050-01	35-50mm/1.4-2.0"	$\pm 5\mu\text{m}$	3	60°	B	35mm
334-065-01	50-65mm/2.0-2.6"	$\pm 6\mu\text{m}$	3	60°	B	50mm
334-080-01	65-80mm/2.6-3.2"	$\pm 6\mu\text{m}$	3	60°	B	65mm
334-095-01	80-95mm/3.2-3.6"	$\pm 6\mu\text{m}$	3	60°	B	80mm
334-025-55	5-25mm/0.2-1.0"	$\pm 4\mu\text{m}$	5	108°	B	5mm
334-045-55	25-45mm/1.0-1.8"	$\pm 5\mu\text{m}$	5	108°	B	25mm
334-065-55	45-65mm/1.8-2.6"	$\pm 6\mu\text{m}$	5	108°	B	50mm
334-085-55	65-85mm/2.6-3.4"	$\pm 6\mu\text{m}$	5	108°	B	65mm
334-105-55	85-105mm/3.3-4.2"	$\pm 6\mu\text{m}$	5	108°	B	85mm
334-025-77	5-25mm/0.2-1.0"	$\pm 4\mu\text{m}$	7	$128^\circ 34' 17''$	B	5mm
334-045-77	25-45mm/1.0-1.8"	$\pm 4\mu\text{m}$	7	$128^\circ 34' 17''$	B	25mm
334-065-77	45-65mm/1.8-2.6"	$\pm 5\mu\text{m}$	7	$128^\circ 34' 17''$	B	50mm
334-085-77	65-85mm/2.6-3.4"	$\pm 5\mu\text{m}$	7	$128^\circ 34' 17''$	B	65mm

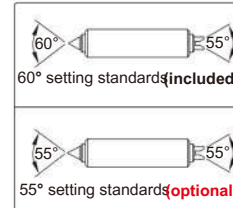
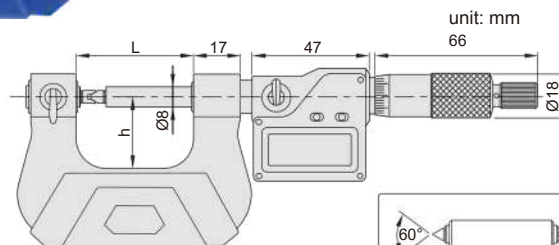


- ◆ Measure pitch diameter of screw threads
- ◆ Resolution 0.001mm/0.00005"
- ◆ Button: on/off, set, mm/inch, ABS/INC, data output
- ◆ Automatic power off
- ◆ Data output
- ◆ Non- rotating spindle
- ◆ Ratchet stop
- ◆ Supplied with 60° setting standards (except 333-001-01)
- ◆ Optional accessory: 55° setting standards

Measuring tips are not included



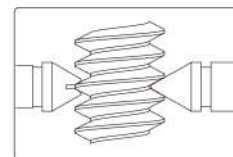
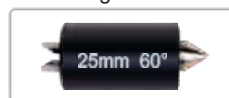
333-001-01



60° setting standard (included)

55° setting standard (optional)

Setting standards



Accuracy of micrometers with tips

Pitch	Range (mm)							
	0-25	25-50	50-75	75-100	100-125	125-200	200-225	225-300
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	±0.025	±0.028
2.5-3.5	±0.016	±0.019	±0.021	±0.021	±0.023	±0.025	±0.028	±0.031
4.0-7.0	-	±0.021	±0.023	±0.023	±0.025	±0.028	±0.031	±0.033

Code	Range	Micrometer head accuracy	L	h	Setting standards (included)
333-001-01	0-25mm/0-1"	±4μm	42	26	-
333-002-01	25-50mm/1-2"	±4μm	67	38	25mm
333-003-01	50-75mm/2-3"	±5μm	92	50	50mm
333-004-01	75-100mm/3-4"	±5μm	117.6	62	75mm
333-005-01	100-125mm/4-5"	±6μm	143	70	100mm
333-006-01	125-150mm/5-6"	±6μm	168	82	125mm
333-007-01	150-175mm/6-7"	±7μm	192	94.5	150mm
333-008-01	175-200mm/7-8"	±7μm	217	107	175mm
333-009-01	200-225mm/8-9"	±8μm	242	130	200mm
333-010-01	225-250mm/9-10"	±8μm	267	142	225mm
333-011-01	250-275mm/10-11"	±9μm	291	155	250mm
333-012-01	275-300mm/11-12"	±9μm	317	167	275mm





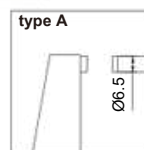
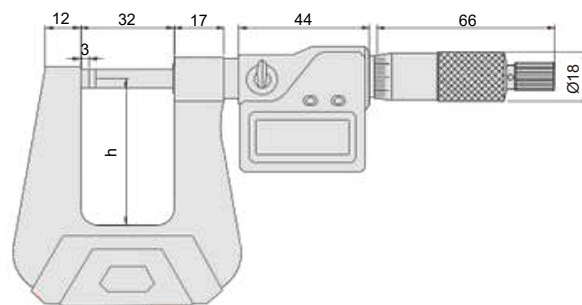
- ◆ Deep frame suitable for sheet metal, paper and plastic
- ◆ Resolution: 0.001mm/0.00005"
- ◆ IP65 protection level
- ◆ Button: on/off, mm/inch, set, zero, ABS/INC, date output
- ◆ Automatic power off
- ◆ Data output
- ◆ Carbide measuring faces, ratchet stop



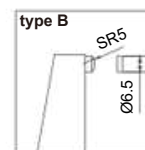
350-001-11

unit: mm

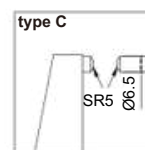
Code	Range	Accuracy	Type	h
350-001-11	0-25mm/0-1"	±3μm	A	50
350-001-12	0-25mm/0-1"	±5μm	A	100
350-001-13	0-25mm/0-1"	±7μm	A	150
350-001-21	0-25mm/0-1"	±3μm	B	50
350-001-22	0-25mm/0-1"	±5μm	B	100
350-001-23	0-25mm/0-1"	±7μm	B	150
350-001-24	0-25mm/0-1"	±10μm	B	310
350-001-31	0-25mm/0-1"	±3μm	C	50
350-001-32	0-25mm/0-1"	±5μm	C	100
350-001-33	0-25mm/0-1"	±7μm	C	150



type A



type B



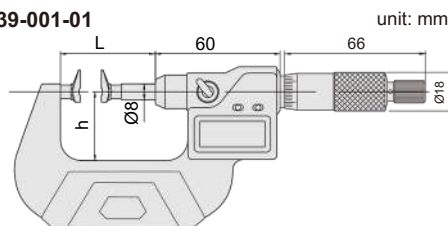
type C



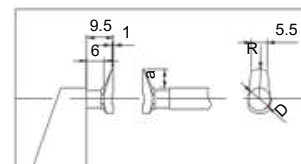
- ◆ Resolution: 0.001mm/0.00005"
- ◆ Buttons: on/off, set, mm/inch, ABS/INC data output
- ◆ Automatic power off
- ◆ Data output
- ◆ Non-rotating spindle
- ◆ Supplied with setting standards (except **339-001-01**)



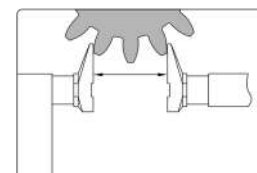
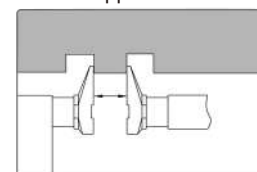
339-001-01



Setting standards(included)



Application



Code	Range	Accuracy	L	a	h	R	D	Setting standards(included)
339-001-01	0-25mm/0-1"	4μm	43	6.5	32	10	8	-
339-002-01	25-50mm/1-2"	4μm	85	6.5	44.5	10	8	25mm
339-003-01	50-75mm/2-3"	5μm	110	6.5	57	10	8	50mm
339-004-01	75-100mm/3-4"	5μm	135	6.5	70	10	8	75mm
339-005-01	100-125mm/4-5"	6μm	160	11.5	86	15	12	100mm
339-006-01	125-150mm/5-6"	6μm	186	11.5	94.5	15	12	125mm
339-007-01	150-175mm/6-7"	7μm	211	11.5	107	15	12	150mm
339-008-01	175-200mm/7-8"	7μm	236	11.5	120	15	12	175mm

MASUP

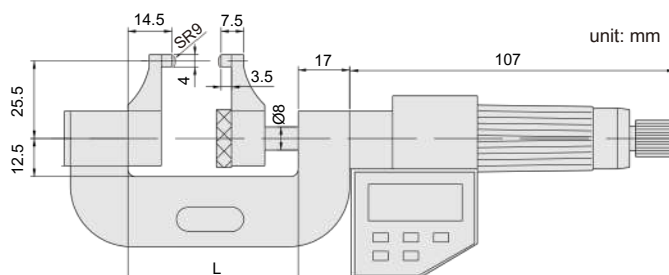
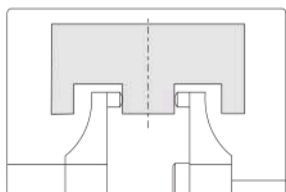




- ◆ Resolution: 0.001mm/0.00005"
- ◆ Buttons: on/off, set, mm/inch, ABS/INC data output
- ◆ Automatic power off
- ◆ Date output
- ◆ Supplied with setting standards (except 338-001-01)



338-001-01



Code	Range	Accuracy	L	Setting standards(included)
338-001-01	0-25mm/0-1"	10μm	56	-
338-002-01	25-50mm/1-2"	10μm	81	25mm
338-003-01	50-75mm/2-3"	11μm	106	50mm
338-004-01	75-100mm/3-4"	11μm	131	75mm

Setting standards(included)



MASUP

innova

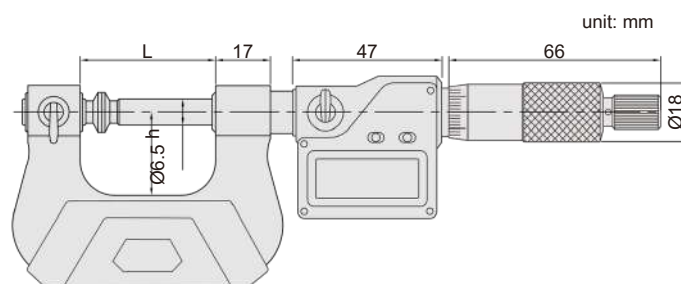
- ◆ Resolution 0.001mm/0.00005"
- ◆ Button: on/off, set, mm/inch, ABS/INC, data output
- ◆ Automatic power off
- ◆ Data output
- ◆ Ratchet stop
- ◆ Supplied with 7 pairs of anvil/spindle tips
- ◆ Setting standards are included (except 0-25mm/0-1")
- ◆ Optional accessory: 55° anvil/spindle tip



302-001-01

Standard anvil/spindle tip

Flat		
Spherical		
Spline		
Disk		
Blade		
Knife-edge		
Point		

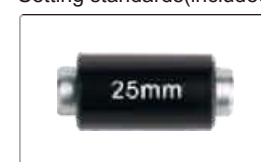


Optional 55° anvil/spindle tip

301-000-01 Knife-edge		
301-000-02 Point		

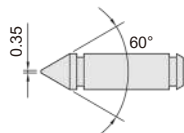
Code	Range	Accuracy	L	h	Setting standards(included)
302-001-01	0-25mm/0-1"	4μm	42	26	-
302-002-01	25-50mm/1-2"	4μm	67	38	25mm
302-003-01	50-75mm/2-3"	5μm	92	50	50mm
302-004-01	75-100mm/3-4"	5μm	118	62	75mm
302-005-01	100-125mm/4-5"	6μm	143	70	100mm
302-006-01	125-150mm/5-6"	6μm	168	82	125mm
302-007-01	150-175mm/6-7"	7μm	192	95	150mm
302-008-01	175-200mm/7-8"	7μm	217	107	175mm

Setting standards(included)

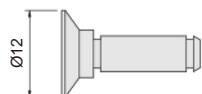




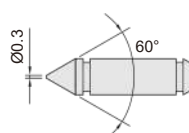
301-000-11



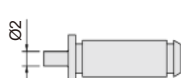
301-000-14



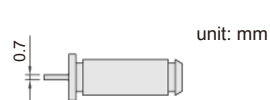
301-000-12



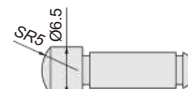
301-000-15



301-000-13



301-000-16



301-000-17



Code	Name
301-000-11	Knife-edge
301-000-12	Point
301-000-13	Blade
301-000-14	Disk
301-000-15	Spline
301-000-16	Spherical
301-000-17	Flat
301-000-TS	7pairs/set, including all above tips

♦ For series 301 non rotating spindle universal micrometer and series 302 digital universal micrometer

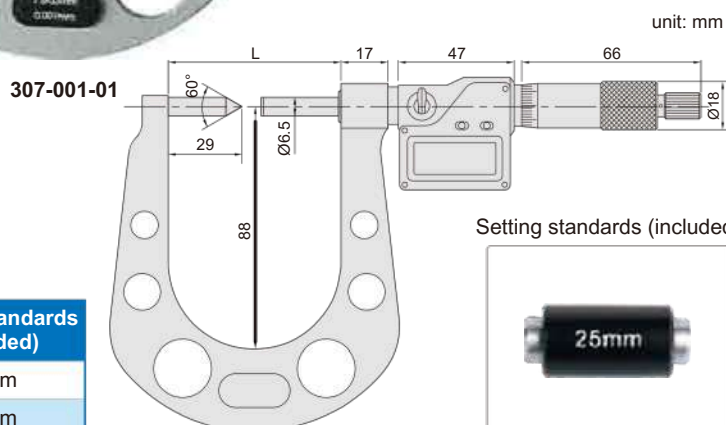
MASUP *innova*

SERIES 307

DIGITAL DISK BRAKE MICROMETER



- ◆ Measure thickness of disk brakes
- ◆ Resolution: 0.001mm/0.00005"
- ◆ IP65 protection level
- ◆ Button: on/off, mm/inch, set, zero
- ◆ Data output
- ◆ Automatic power off
- ◆ Ratchet stop
- ◆ Carbide measuring faces
- ◆ Supplied with setting standards



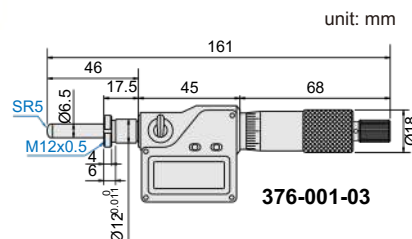
Code	Range	Accuracy	L	Setting standards (included)
307-001-01	7.6-33mm	±5μm	64.5	25mm
307-002-01	25-50mm	±5μm	82	25mm



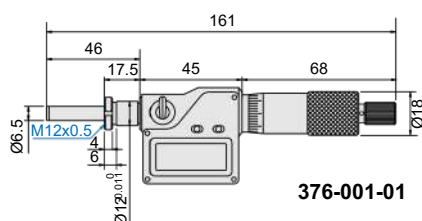
- ◆ Resolution 0.001mm/0.00005"
- ◆ IP65 protection level
- ◆ Button: on/off, set, mm/inch, ABS/INC, data output
- ◆ Automatic power off
- ◆ Data output
- ◆ Ratchet stop



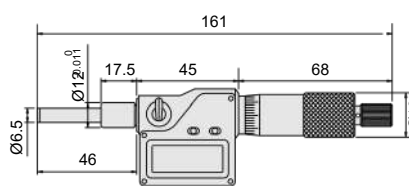
376-001-04



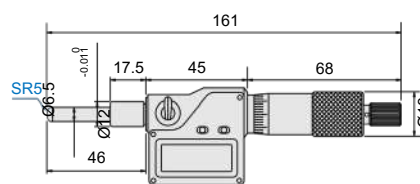
376-001-03



376-001-01



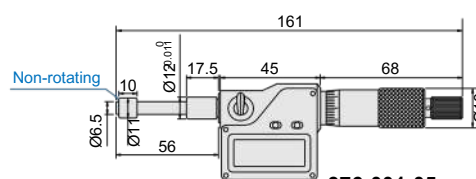
376-001-02



376-001-04

Rotating spindle

Code	Range	Accuracy	Stem	Spindle tip
376-001-01	0-25mm/0-1"	±2µm	with clamp nut	flat(carbide)
376-001-02	0-25mm/0-1"	±2µm	plain	flat(carbide)
376-001-03	0-25mm/0-1"	±2µm	with clamp nut	spherical(SR5)
376-001-04	0-25mm/0-1"	±2µm	plain	spherical(SR5)



376-001-05

Non-rotating spindle

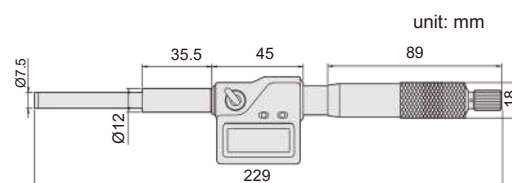
Code	Range	Accuracy	Stem	Spindle tip
376-001-05	0-25mm/0-1"	±2µm	plain	flat(carbide)



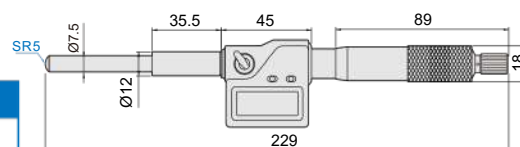
- ◆ Resolution 0.001mm/0.00005"
- ◆ IP65 protection level
- ◆ Button: on/off, set, mm/inch, ABS/INC, data output
- ◆ Automatic power off
- ◆ Data output
- ◆ Ratchet stop



376-002-03



376-002-03



376-002-04

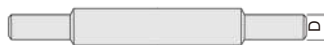
Code	Range	Accuracy	Stem	Spindle tip
376-002-03	0-50mm/0-2"	4µm	plain	flat (carbide)
376-002-04	0-50mm/0-2"	4µm	plain	spherical (SR5)

◆ For standard value setting



321-004-ST

unit: mm



type A



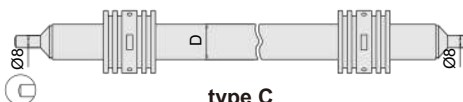
321-015-ST



type B



321-042-ST



type C

Code	Length	Accuracy	D	Type
321-001-ST	25mm	±1.5μm	Ø7mm	A
321-002-ST	50mm	±2μm	Ø7mm	A
321-003-ST	75mm	±2.5μm	Ø7mm	A
321-004-ST	100mm	±3μm	Ø8mm	A
321-005-ST	125mm	±3.5μm	Ø8mm	A
321-006-ST	150mm	±4μm	Ø8mm	A
321-007-ST	175mm	±4.5μm	Ø8mm	A
321-008-ST	200mm	±5μm	Ø8mm	A
321-009-ST	225mm	±5.5μm	Ø8mm	A
321-010-ST	250mm	±6μm	Ø8mm	A
321-011-ST	275mm	±6.5μm	Ø8mm	A
321-012-ST	300mm	±7μm	Ø16mm	B
321-013-ST	325mm	±7.5μm	Ø16mm	B
321-014-ST	350mm	±8μm	Ø16mm	B
321-015-ST	375mm	±8.5μm	Ø16mm	B
321-016-ST	400mm	±9μm	Ø16mm	B
321-017-ST	425mm	±9.5μm	Ø16mm	B
321-018-ST	450mm	±10μm	Ø16mm	B
321-019-ST	475mm	±10.5μm	Ø16mm	B
321-020-ST	500mm	±11μm	Ø16mm	B
321-021-ST	525mm	±11.5μm	Ø16mm	B
321-022-ST	550mm	±12μm	Ø16mm	B
321-023-ST	575mm	±12.5μm	Ø16mm	B
321-024-ST	600mm	±13μm	Ø16mm	B
321-025-ST	625mm	±13.5μm	Ø16mm	B
321-026-ST	650mm	±14μm	Ø16mm	B
321-027-ST	675mm	±14.5μm	Ø16mm	B

Code	Length	Accuracy	D	Type
321-028-ST	700mm	±15μm	Ø16mm	B
321-029-ST	725mm	±15.5μm	Ø16mm	B
321-030-ST	750mm	±16μm	Ø16mm	B
321-031-ST	775mm	±16.5μm	Ø16mm	B
321-032-ST	800mm	±17μm	Ø16mm	B
321-033-ST	825mm	±17.5μm	Ø16mm	B
321-034-ST	850mm	±18μm	Ø16mm	B
321-035-ST	875mm	±18.5μm	Ø16mm	B
321-036-ST	900mm	±19μm	Ø16mm	B
321-037-ST	925mm	±19.5μm	Ø16mm	B
321-038-ST	950mm	±20μm	Ø16mm	B
321-039-ST	975mm	±20.5μm	Ø16mm	B
321-040-ST	1000mm	±21μm	Ø16mm	B
321-042-ST	1050mm	±22μm	Ø23mm	C
321-046-ST	1150mm	±24μm	Ø23mm	C
321-050-ST	1250mm	±26μm	Ø23mm	C
321-054-ST	1350mm	±28μm	Ø23mm	C
321-058-ST	1450mm	±30μm	Ø23mm	C
321-062-ST	1550mm	±32μm	Ø23mm	C
321-066-ST	1650mm	±34μm	Ø23mm	C
321-070-ST	1750mm	±36μm	Ø23mm	C
321-074-ST	1850mm	±38μm	Ø23mm	C
321-078-ST	1950mm	±40μm	Ø23mm	C

SERIES 324

INCH MICROMETER SETTING STANDARD

◆ For standard value setting



324-004-ST



324-012-ST



type A



type B

Code	Length	Accuracy	D	Type
324-001-ST	1"	±0.00006"	Ø0.276"	A
324-002-ST	2"	±0.00008"	Ø0.276"	A
324-003-ST	3"	±0.00010"	Ø0.276"	A
324-004-ST	4"	±0.00012"	Ø0.315"	A
324-005-ST	5"	±0.00014"	Ø0.315"	A
324-006-ST	6"	±0.00016"	Ø0.315"	A
324-007-ST	7"	±0.00018"	Ø0.315"	A
324-008-ST	8"	±0.00020"	Ø0.315"	A
324-009-ST	9"	±0.00022"	Ø0.315"	A
324-010-ST	10"	±0.00024"	Ø0.315"	A
324-011-ST	11"	±0.00026"	Ø0.315"	A
324-012-ST	12"	±0.00028"	Ø0.630"	B
324-013-ST	13"	±0.00030"	Ø0.630"	B
324-014-ST	14"	±0.00032"	Ø0.630"	B
324-015-ST	15"	±0.00034"	Ø0.630"	B
324-016-ST	16"	±0.00036"	Ø0.630"	B
324-017-ST	17"	±0.00038"	Ø0.630"	B
324-018-ST	18"	±0.00040"	Ø0.630"	B
324-019-ST	19"	±0.00042"	Ø0.630"	B
324-020-ST	20"	±0.00044"	Ø0.630"	B

Code	Length	Accuracy	D	Type
324-021-ST	21"	±0.00046"	Ø0.630"	B
324-022-ST	22"	±0.00048"	Ø0.630"	B
324-023-ST	23"	±0.00050"	Ø0.630"	B
324-024-ST	24"	±0.00052"	Ø0.630"	B
324-025-ST	25"	±0.00054"	Ø0.630"	B
324-026-ST	26"	±0.00056"	Ø0.630"	B
324-027-ST	27"	±0.00058"	Ø0.630"	B
324-028-ST	28"	±0.00060"	Ø0.630"	B
324-029-ST	29"	±0.00062"	Ø0.630"	B
324-030-ST	30"	±0.00064"	Ø0.630"	B
324-031-ST	31"	±0.00066"	Ø0.630"	B
324-032-ST	32"	±0.00068"	Ø0.630"	B
324-033-ST	33"	±0.00070"	Ø0.630"	B
324-034-ST	34"	±0.00072"	Ø0.630"	B
324-035-ST	35"	±0.00074"	Ø0.630"	B
324-036-ST	36"	±0.00076"	Ø0.630"	B
324-037-ST	37"	±0.00078"	Ø0.630"	B
324-038-ST	38"	±0.00080"	Ø0.630"	B
324-039-ST	39"	±0.00082"	Ø0.630"	B
324-040-ST	40"	±0.00084"	Ø0.630"	B

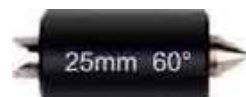
SERIES 343

SCREW THREAD MICROMETER SETTING STANDARD

◆ For screw thread micrometer (series 333 or 343)



343-001-ST



343-001-ST1

unit: mm

55° thread angle



60° thread angle



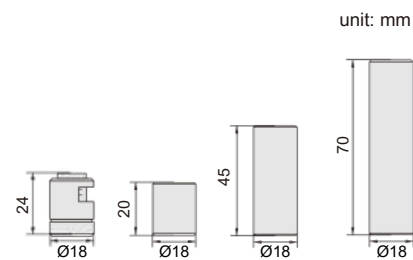
Code	Length	Accuracy
343-001-ST	25mm	±3μm
343-002-ST	50mm	±3.5μm
343-003-ST	75mm	±4μm
343-004-ST	100mm	±4.5μm
343-005-ST	125mm	±5μm
343-006-ST	150mm	±5.5μm
343-007-ST	175mm	±6μm
343-008-ST	200mm	±6μm

Code	Length	Accuracy
343-001-ST1	25mm	±3μm
343-002-ST1	50mm	±3.5μm
343-003-ST1	75mm	±4μm
343-004-ST1	100mm	±4.5μm
343-005-ST1	125mm	±5μm
343-006-ST1	150mm	±5.5μm
343-007-ST1	175mm	±6μm
343-008-ST1	200mm	±6μm

387

MICROMETER MEASURING FORCE DETECTOR

- ◆ For outside micrometers
0-25mm, 25-50mm, 50-75mm
and 75-100mm



Code	Measuring force
387-000-00	5-12N

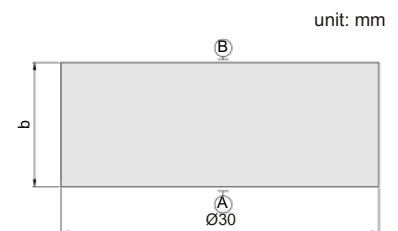
SERIES 551

OPTICAL PARALLEL

- ◆ Check the flatness and parallelism of measuring faces of micrometer
- ◆ Flatness of A and $B \leq 0.1 \mu\text{m}$
- ◆ Parallelism between A and B $\leq 0.6 \mu\text{m}$



551-001-02



MICROMETER

Application



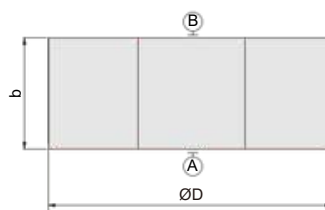
Code	Parallels included
551-001-02	12, 12.12, 12.25, 12.37mm
551-002-02	25, 25.12, 25.25, 25.37mm





551-001-01

unit: mm



- ◆ Check the flatness and parallelism of measuring faces of micrometer
- ◆ Flatness of A and B: $0.03\mu\text{m}$
- ◆ Parallelism between A and B: $0.6\mu\text{m}$

Application



micrometer is optional

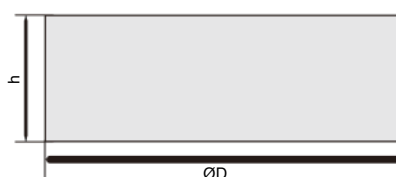
Code	Parallels included (b)	ØD	Applicable micrometer
551-001-01	15.62mm, 15.75mm, 15.87mm, 16.00mm	30	0-25mm
551-002-01	40.62mm, 40.75mm, 40.87mm, 41.00mm	30	25-50mm
551-003-01	65.62mm, 65.75mm, 65.87mm, 66.00mm	40	50-75mm
551-004-01	90.62mm, 90.75mm, 90.87mm, 91.00mm	50	75-100mm

- ◆ Check the flatness of measuring faces



553-045-01

unit: mm



Code	Flatness	Parallels included(h)	ØD
553-045-01	$0.1\mu\text{m}$	15mm	45
553-060-01	$0.1\mu\text{m}$	20mm	60

381

MICROMETER STAND

- ◆ For micrometers which measuring range is less than 100mm

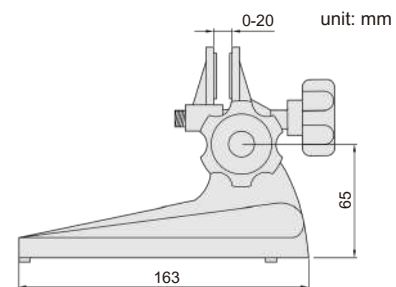
Application



micrometer is optional

Code

381-000-00



383

MICROMETER STAND

- ◆ For micrometers which measuring range is less than 100mm

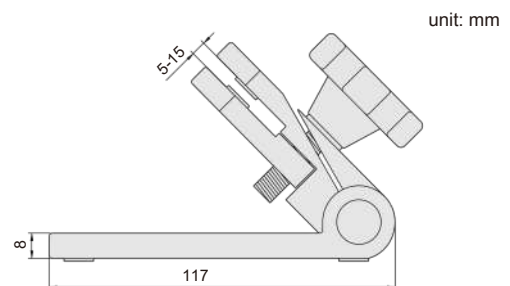
Application



micrometer is optional

Code

383-000-00



- ◆ Resolution: 0.001mm/0.00005"
- ◆ IP65 protection level Button:
- ◆ on/off, set, mm/inch, ABS/INC, data output Automatic power
- ◆ off Data output Ratchet stop
- ◆ Carbide measuring faces (over 12mm series) Extension rod are included Setting rings are included (Range<100mm)



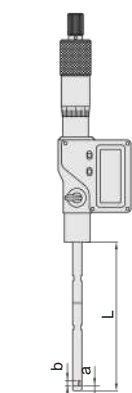
VIDEO



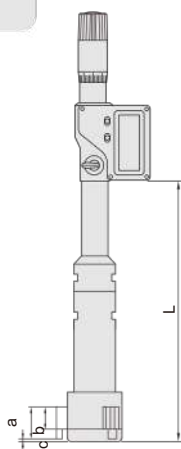
361-002-01



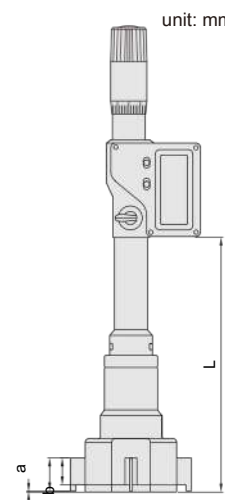
361-007-01



Range 6-20mm



Range 20-50mm



Range 50-300mm

unit: mm

Code	Range	Accuracy	Setting ring	Extension rod	a	b	c	L
361-001-01*	6-8mm/0.24-0.31"	4μm	Ø6mm(included)	100mm	1.5	2.5	/	57
361-002-01*	8-10mm/0.31-0.39"	4μm	Ø8mm(included)	100mm	1.5	2.5	/	57
361-003-01*	10-12mm/0.39-0.47"	4μm	Ø10mm(included)	100mm	1.5	2.5	/	57
361-004-01*	12-16mm/0.47-0.63"	4μm	Ø16mm(included)	150mm	0.5	6	4.5	72
361-005-01*	16-20mm/0.63-0.79"	4μm	Ø16mm(included)	150mm	0.5	6	4.5	72
361-006-01*	20-25mm/0.79-0.98"	4μm	Ø25mm(included)	150mm	0.5	8	6	105
361-007-01*	25-30mm/0.98-1.18"	4μm	Ø25mm(included)	150mm	0.5	8	6	105
361-008-01*	30-40mm/1.18-1.57"	4μm	Ø40mm(included)	150mm	0.5	14	12	110
361-009-01*	40-50mm/1.57-1.97"	5μm	Ø40mm(included)	150mm	0.5	14	12	110
361-010-01*	50-63mm/1.97-2.48"	5μm	Ø62mm(included)	150mm	0.5	17.5	14.5	127
361-011-01*	62-75mm/2.44-2.95"	5μm	Ø62mm(included)	150mm	0.5	17.5	14.5	127
361-012-01*	75-88mm/2.95-3.46"	5μm	Ø87mm(included)	150mm	0.5	17.5	14.5	127
361-013-01*	87-100mm/3.43-3.94"	5μm	Ø87mm(included)	150mm	0.5	17.5	14.5	127
361-014-01	100-125mm/3.94-4.92"	6μm	optional	150mm	0.9	29	25	175
361-015-01	125-150mm/4.92-5.91"	6μm	optional	150mm	0.9	29	25	175
361-016-01	150-175mm/5.91-6.89"	7μm	optional	150mm	0.9	29	25	175
361-017-01	175-200mm/6.89-7.87"	7μm	optional	150mm	0.9	29	25	175
361-018-01	200-225mm/7.87-8.86"	8μm	optional	150mm	0.9	29	25	175
361-019-01	225-250mm/8.86-9.84"	8μm	optional	150mm	0.9	29	25	175
361-020-01	250-275mm/9.84-10.83"	9μm	optional	150mm	0.9	29	25	175
361-024-01	275-300mm/10.83-11.81"	9μm	optional	150mm	0.9	29	25	175

* With manufacturer inspection certificate

Setting ring



Range<100mm (included)
Range>100mm (optional)

Extension rod (included)



SERIES 361

DIGITAL TWO POINTS INSIDE MICROMETER

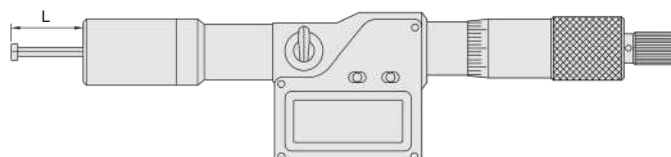


- ◆ Resolution: 0.001mm/0.00005"
- ◆ IP65 protection level
- ◆ Button: on/off, set, mm/inch, ABS/INC, data output
- ◆ Automatic power off
- ◆ Data output
- ◆ Ratchet stop
- ◆ Carbide measuring faces
- ◆ Setting rings are included



361-000-50

unit: mm



Code	Range	Accuracy	Setting ring	L
361-000-25	2-2.5mm/0.08-0.10"	6μm	Ø2.5mm	12
361-000-30	2.5-3mm/0.10-0.12"	6μm	Ø2.5mm	12
361-000-40	3-4mm/0.12-0.16"	6μm	Ø4mm	22
361-000-50	4-5mm/0.16-0.20"	6μm	Ø5mm	22
361-000-60	5-6mm/0.20-0.24"	6μm	Ø6mm	22

Setting ring(included)



SERIES 361

DIGITAL TWO/THREE POINTS INSIDE MICROMETER SET



Extension rod (included) Setting ring (included)



Digital two points inside micrometer set

Code	Range	Micrometers included	Setting ring
361-000-02	2-3mm/0.08-0.12"	2-2.5mm, 2.5-3mm	Ø2.5mm
361-000-03	3-6mm/0.12-0.24"	3-4mm, 4-5mm, 5-6mm	Ø4mm, Ø5mm, Ø6mm

Digital three points inside micrometer set

Code	Range	Micrometers included	Setting ring	Extension rod
361-103-03	6-12mm	6-8, 8-10, 10-12mm	Ø6, Ø8, Ø10mm	100mm
361-305-03	12-20mm	12-16, 16-20mm	Ø16mm	150mm
361-509-05	20-50mm	20-25, 25-30, 30-40, 40-50mm	Ø25mm, Ø40mm	150mm
361-913-05	50-100mm	50-63, 62-75, 75-88, 87-100mm	Ø62mm, Ø87mm	150mm



361-103-03

INSIDE/OUTSIDE
MEASUREMENT





SERIES 362

TWO/THREE POINTS INSIDE MICROMETER SET



362-913-05

Two points inside micrometer set

Code	Range	Micrometers included	Setting ring
362-000-02	2-3mm	2-2.5mm, 2.5-3mm	Ø2.5mm
362-000-03	3-6mm	3-4mm, 4-5mm, 5-6mm	Ø4mm, Ø5mm, Ø6mm

Three points inside micrometer set

Code	Range	Micrometers included	Setting ring	Extension rod
362-103-03	6-12mm	6-8, 8-10, 10-12mm	Ø6, Ø8, Ø10mm	100mm
362-305-03	12-20mm	12-16, 16-20mm	Ø16mm	150mm
362-509-05	20-50mm	20-25, 25-30, 30-40, 40-50mm	Ø25mm, Ø40mm	150mm
362-913-05	50-100mm	50-63, 62-75, 75-88, 87-100mm	Ø62mm, Ø87mm	150mm

Extension rod(included)



Setting ring(included)



MASUP *innova*

SERIES 364

DIGITAL WIDE RANGE THREE POINTS INTERNAL MICROMETER

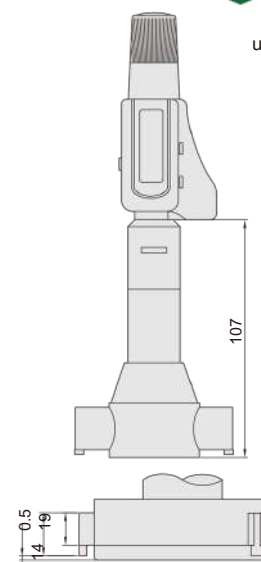


unit: mm

- ◆ Resolution: 0.001mm/0.00005"
- ◆ IP54 protection level
- ◆ Buttons: on/off, set, mm/inch, ABS/INC
- ◆ Data output
- ◆ Automatic power off
- ◆ Carbide measuring faces
- ◆ Ratchet stop
- ◆ Supplied with extension rods
- ◆ Setting rings are included(except 200-300mm)



364-003-01



Code	Range	Accuracy	Setting ring	Extension rod
364-003-01	50-70mm/1.97-2.76"	5μm	Ø50mm(included)	150mm
364-004-01	70-100mm/2.76-3.94"	5μm	Ø70mm(included)	150mm
364-006-01	100-150mm/3.94-5.91"	6μm	Ø100mm(included)	150mm
364-010-01	150-250mm/5.91-9.84"	8μm	Ø150mm(included)	150mm
364-012-01	200-300mm/7.87-11.81"	9μm	Ø200mm(optional)	150mm

Extension rod (included)



Setting ring

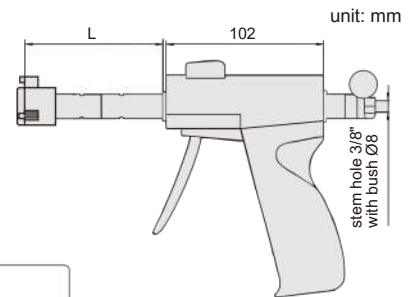




- Optional accessory:
digital indicator(code:series 211 or 216)
setting ring(code: series 531)

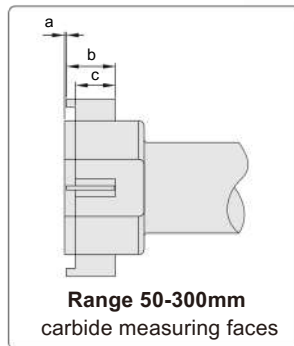


216-010-01
digital indicator
is optional

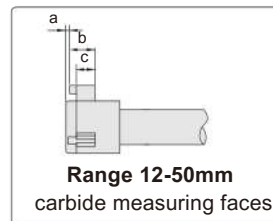


unit: mm

365-007-01

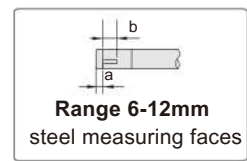


Range 50-300mm
carbide measuring faces



Range 12-50mm
carbide measuring faces

Extension rod (included)



Range 6-12mm
steel measuring faces

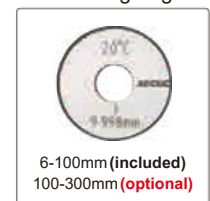
INDIVIDUAL

Code	Range	Accuracy	Setting ring	Extension rod	a	b	c	L
365-001-01	6-8mm/0.275-0.35"	4µm	Ø6mm (included)	100mm	1.5	2.5	/	50
365-002-01	8-10mm/0.35-0.425"	4µm	Ø8mm (included)	100mm	1.5	2.5	/	50
365-003-01	10-12mm/0.425-0.5"	4µm	Ø10mm (included)	100mm	1.5	2.5	/	50
365-004-01	12-16mm/0.5-0.65"	4µm	Ø16mm (included)	150mm	0.5	6	4.5	65
365-005-01	16-20mm/0.65-0.8"	4µm	Ø16mm (included)	150mm	0.5	6	4.5	65
365-006-01	20-25mm/0.8-1"	4µm	Ø25mm (included)	150mm	0.5	8	6	91
365-007-01	25-30mm/1-1.2"	4µm	Ø25mm (included)	150mm	0.5	8	6	91
365-008-01	30-40mm/1.2-1.6"	4µm	Ø40mm (included)	150mm	0.5	14	12	97
365-009-01	40-50mm/1.6-2"	5µm	Ø40mm (included)	150mm	0.5	14	12	97
365-010-01	50-63mm/2-2.5"	5µm	Ø62mm (included)	150mm	0.5	17.5	14.5	112
365-011-01	62-75mm/2.5-3"	5µm	Ø62mm (included)	150mm	0.5	17.5	14.5	112
365-012-01	75-88mm/3-3.5"	5µm	Ø87mm (included)	150mm	0.5	17.5	14.5	112
365-013-01	87-100mm/3.5-4"	5µm	Ø87mm (included)	150mm	0.5	17.5	14.5	112
365-014-01	100-125mm/4-5"	6µm	optional	150mm	0.9	29	25	140
365-015-01	125-150mm/5-6"	6µm	optional	150mm	0.9	29	25	140
365-016-01	150-175mm/6-7"	7µm	optional	150mm	0.9	29	25	140
365-017-01	175-200mm/7-8"	7µm	optional	150mm	0.9	29	25	140
365-018-01	200-225mm/8-9"	8µm	optional	150mm	0.9	29	25	140
365-019-01	225-250mm/9-10"	8µm	optional	150mm	0.9	29	25	140
365-020-01	250-275mm/10-11"	9µm	optional	150mm	0.9	29	25	140
365-024-01	275-300mm/11-12"	9µm	optional	150mm	0.9	29	25	140

SET

Code	Range	Micrometers included	Setting ring (included)	Extension rod (included)
365-103-03	6-12mm	6-8, 8-10, 10-12mm	Ø6, Ø8, Ø10mm	100mm
365-305-03	12-20mm	12-16, 16-20mm	Ø16mm	150mm
365-509-05	20-50mm	20-25, 25-30, 30-40, 40-50mm	Ø25mm, Ø40mm	150mm
365-913-05	50-100mm	50-63, 62-75, 75-88, 87-100mm	Ø62mm, Ø87mm	150mm

Setting ring



6-100mm (included)
100-300mm (optional)

Indicators (optional)



Series 211



Series 216

INSIDE/OUTSIDE
MEASUREMENT



SERIES 356

DIGITAL INSIDE MICROMETER

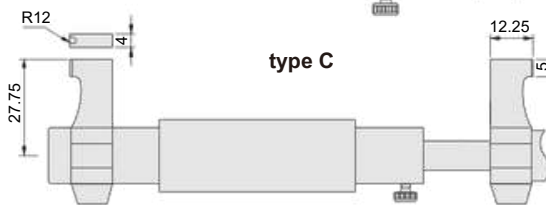
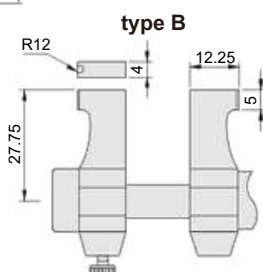
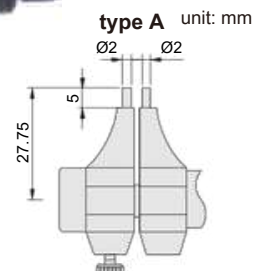
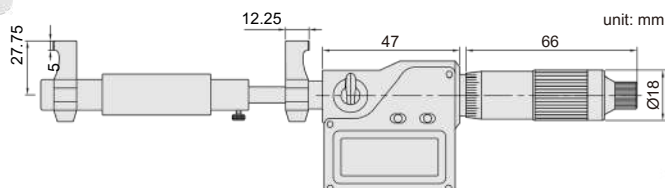
ATTENTION: LOW PARALLELISM
OF TWO MEASURING FACES



- ◆ Resolution 0.001mm/0.00005"
- ◆ Button function: on/off, set, mm/inch, ABS/INC, data output
- ◆ Data output
- ◆ Automatic power off
- ◆ Ratchet stop
- ◆ Carbide measuring faces



356-003-01



Code	Range	Accuracy	Type	Setting ring
356-001-01	5-30mm/0.2-1.2"	±5μm	A	5mm
356-002-01	25-50mm/1-2"	±6μm	B	25mm
356-003-01	50-75mm/2-3"	±7μm	C	optional
356-004-01	75-100mm/3-4"	±8μm	C	optional
356-005-01	100-125mm/4-5"	±9μm	C	optional
356-006-01	125-150mm/5-6"	±9μm	C	optional
356-007-01	150-175mm/6-7"	±10μm	C	optional
356-008-01	175-200mm/7-8"	±10μm	C	optional

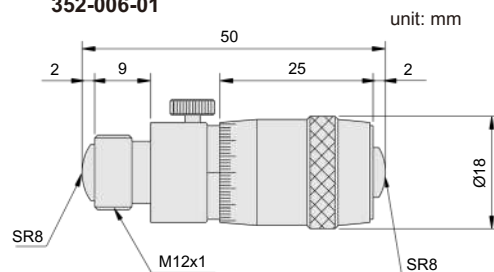
SERIES 352

TUBULAR INSIDE MICROMETER

- ◆ Graduation: 0.01mm
- ◆ Travel of micrometer head: 13mm
- ◆ Accuracy: $(3+n+L/50)\mu m$, n is number of rods, L is max. measuring length in mm
- ◆ Supplied with setting standards
- ◆ Carbide measuring faces



352-006-01



Set zero



Code	Range	Extension rods (mm)
352-002-01	50-63mm	—
352-006-01	50-150mm	13, 25, 50
352-012-01	50-300mm	13, 25, 50(2pcs), 100
352-020-01	50-500mm	13, 25, 50(2pcs), 100, 200
352-024-01	50-600mm	13, 25, 50, 100, 150, 200
352-040-01	50-1000mm	13, 25, 50(2pcs), 100, 200(2pcs), 300
352-060-01	50-1500mm	13, 25, 50(2pcs), 100, 200(3pcs), 300(2pcs)

INSIDE/OUTSIDE
MEASUREMENT



SERIES 352

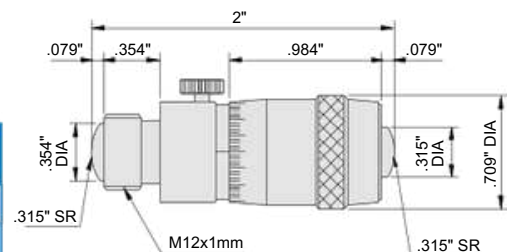
TUBULAR INSIDE MICROMETER

- ◆ Graduation: .001"
- ◆ Accuracy: $[(.00005(3+n+L/2))]$, n = number of rods, L = maximum measuring length (inch)
- ◆ Supplied with setting standards
- ◆ Carbide measuring faces

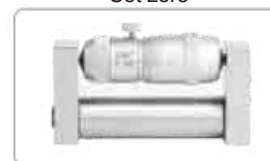


352-024-E01

Code	Range	Travel of micrometer head	Extension rods
352-002-E01	2-2.5"	.5"	-
352-006-E01	2-6"	.5"	.5", 1", 2"
352-012-E01	2-12"	.5"	.5", 1", 2"(2pcs), 4"
352-020-E01	2-20"	.5"	.5", 1", 2"(2pcs), 4", 8"
352-024-E01	2-24"	.5"	.5", 1", 2", 4", 6", 8"
352-040-E01	2-40"	.5"	.5", 1", 2"(2pcs), 4", 8"(2pcs), 12"
352-060-E01	2-60"	.5"	.5", 1", 2"(2pcs), 4", 8"(3pcs), 12"(2pcs)



Set zero



SERIES 359

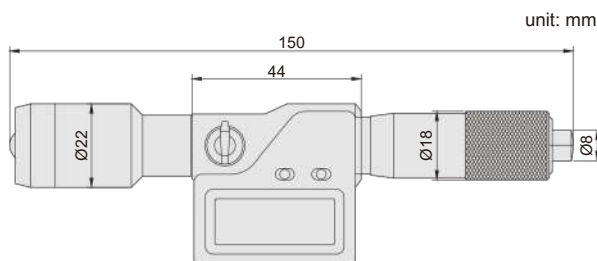
DIGITAL TUBULAR INSIDE MICROMETER



- ◆ Micrometer head: 150-175mm
- ◆ Graduation: 0.001mm/0.00005"
- ◆ Accuracy: $(3+n+L/50)\mu m$
n= number of rods
L=maximum measuring length (mm)
- ◆ Carbide measuring faces
- ◆ The diameter of extension rods is 22mm
- ◆ IP65 dust/waterproof
- ◆ Button function: on/off, set, mm/inch, ABS/INC
- ◆ Data output
- ◆ Automatic power off
- ◆ Supplied with setting standards



359-007-01



Code	Range	Travel of micrometer head	Extension rods
359-007-01	150-175mm	25mm	-
359-040-01	150-1000mm	25mm	25, 50(2pcs), 100, 200, 400
359-060-01	150-1500mm	25mm	25, 50(2pcs), 100(2pcs), 200, 400(2pcs)
359-080-01	150-2000mm	25mm	25, 50(2pcs), 100, 200(2pcs), 400(3pcs)

Set zero



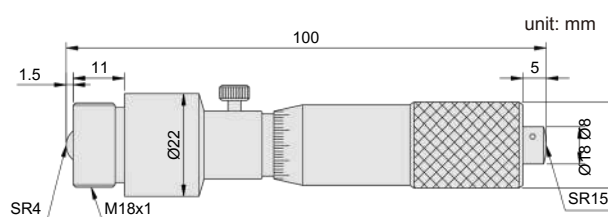
- ♦ Graduation 0.01mm
- ♦ Accuracy: $(3+n+L/50)\mu\text{m}$
n is number of rods, L is maximum measuring length in mm
- ♦ Travel of micrometer head: 25mm
- ♦ Supplied with setting standards
- ♦ Carbide measuring faces

Set zero



353-020-01

Code	Range	Extension rods (mm)
353-005-01	100-125mm	—
353-020-01	100-500mm	25, 50, 100, 200
353-036-01	100-900mm	25, 50, 100, 200, 400
353-052-01	100-1300mm	25, 50, 100, 200, 400(2pcs)
353-068-01	100-1700mm	25, 50, 100, 200, 400(3pcs)
353-084-01	100-2100mm	25, 50, 100, 200, 400(4pcs)



MASUP *innova*

SERIES 355

TUBULAR INSIDE MICROMETER

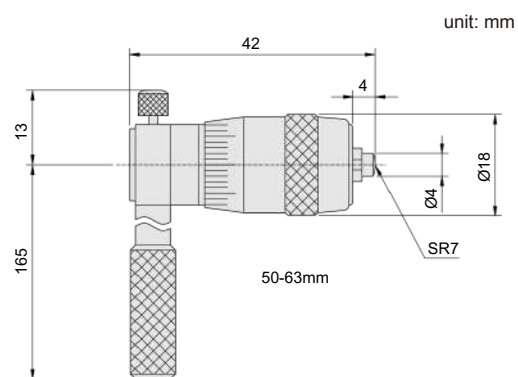
- ◆ Graduation 0.01mm
- ◆ Accuracy: $(6+L/50)\mu\text{m}$
L=maximum measuring length(mm)
- ◆ Optional accessory: setting ring(code531)

Setting ring (optional)



355-008-01

Code	Range	Extension rods	Travel of micrometer head
355-001-01	25-32mm	—	7mm
355-002-01	25-50mm	2pcs	7mm
355-003-01	50-63mm	—	13mm
355-008-01	50-200mm	6pcs	13mm
355-009-01	200-225mm	—	25mm
355-012-01	50-300mm	10pcs	13mm
355-020-01	200-500mm	3pcs	25mm
355-040-01	200-1000mm	8pcs	25mm



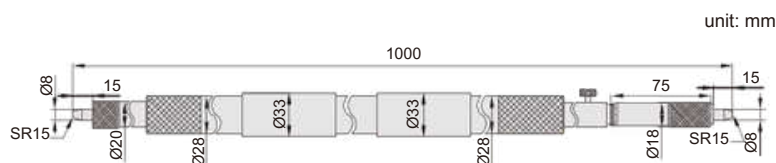
SERIES 357

TUBULAR INSIDE MICROMETER

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



357-080-01



Code	Range	Travel of micrometer head	Extension rods
357-080-01	1000-2000mm	50mm	50mm, 100mm(2pcs), 200mm, 500mm
357-120-01	1000-3000mm	50mm	50mm, 100mm(2pcs), 200mm, 500mm, 1000mm
357-160-01	1000-4000mm	50mm	50mm, 100mm(2pcs), 200mm, 500mm, 1000mm(2pcs)
357-200-01	1000-5000mm	50mm	50mm, 100mm(2pcs), 200mm, 500mm, 1000mm(3pcs)

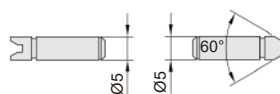
SERIES 358

MEASURING TIPS FOR INTERNAL SCREW THREAD MICROMETER

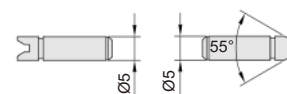
- ◆ Supplied in pair
- ◆ For 358 series micrometers



358-000-19



60° thread angle



55° thread angle

unit: mm

Metric and unified thread (60° thread angle)

Code	Pitch
358-000-01	0.4-0.5mm/ 64-48TPI
358-000-02	0.6-0.9mm/ 44-28TPI
358-000-03	1-1.75mm/ 24-14TPI
358-000-04	2-3mm/ 13-9TPI
358-000-05	3.5-5mm/ 8-5TPI
358-000-06	5.5-7mm/ 4.5-3.5TPI
358-000-TS	6 pairs/set, including all above tips

Whitworth thread (55° thread angle)

Code	Pitch
358-000-11	60-48TPI
358-000-12	48-40TPI
358-000-13	40-32TPI
358-000-14	32-24TPI
358-000-15	24-18TPI
358-000-16	18-14TPI
358-000-17	14-10TPI

Code	Pitch
358-000-18	10-7TPI
358-000-19	7-4.5TPI
358-000-20	4.5-3.5TPI
358-000-2TS	10 pairs/set, including all above tips

- ◆ Optional accessory: series 531 setting rings



Bore gauge setter for setting zero **(optional)**

Setting ring **(optional)**



Measuring tips **(included)**

Gasket **(included)**



Series 215 **(optional)**



251-046-11



251-346-13

Code	Range	indicator	Accuracy	Repeatability	Bore gages included
251-046-11	35-160mm	range 10mm graduation 0.01mm	35-50mm $\pm 0.018\text{mm}$ 50-160mm $\pm 0.018\text{mm}$	0.003mm	35-50mm anvil (dial indicator and handle are not included) 50-160mm bore gage
251-346-13	18-160mm	range 10mm graduation 0.01mm	18-35mm $\pm 0.015\text{mm}$ 35-60mm $\pm 0.018\text{mm}$ 50-160mm $\pm 0.018\text{mm}$	0.003mm	18-35mm bore gage 35-60mm (dial indicator is not included) 50-160mm (dial indicator is not included)

◆ Optional accessory: series 531 setting rings

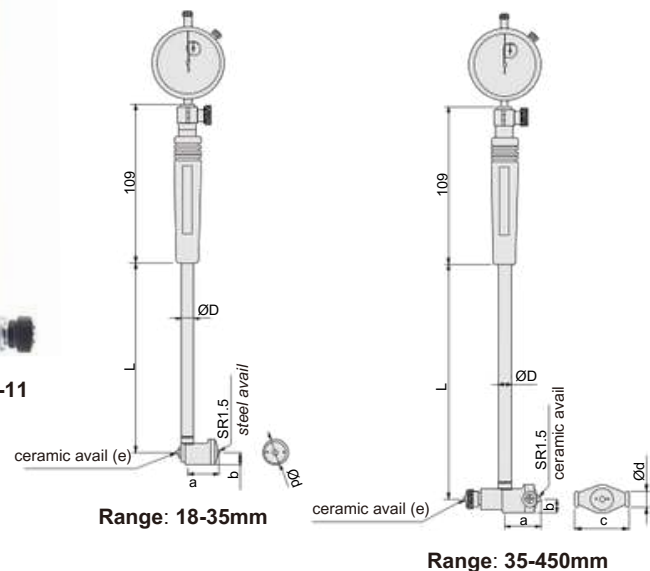
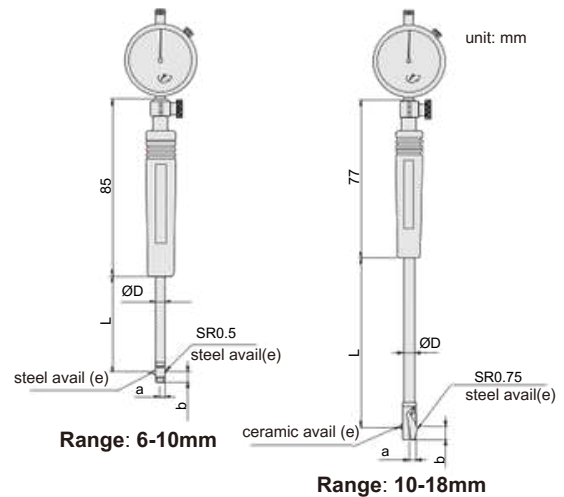


Bore gauge setter for setting zero (optional)

Setting ring (optional)



251-160-11



Measuring tips (included)

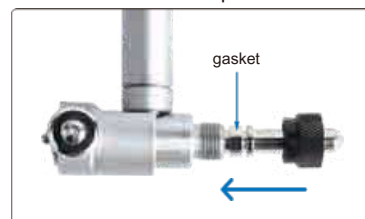
Gasket (included)



Series 215 (optional)



Install tips



Code	Range	Dial indicator	Tips	Gasket	Accuracy	Repeatability	a	b	c	Ød	ØD	e	L
251-010-11	6-10mm	Range: 3mm graduation: 0.01mm	9pcs	2pcs	±0.012mm	3µm	3.6	5.7	/	/	4.5	SR1	48
251-018-11	10-18mm		9pcs	2pcs	±0.012mm	3µm	5.6	7.8	/	/	6	SR1	105
251-035-11	18-35mm		9pcs	2pcs	±0.015mm	3µm	12.2	6.4	/	12.7	9	SR1	141
251-060-11	35-60mm	Range: 10mm graduation: 0.01mm	6pcs	4pcs	±0.018mm	3µm	26	9	27	13	12.8	SR2	141
251-100-11	50-100mm		11pcs	4pcs	±0.018mm	3µm	26	9	35	13	12.8	SR2	141
251-160-11	50-160mm		12pcs	4pcs	±0.018mm	3µm	26	9	35	13	12.8	SR2	141
251-160-12	100-160mm		12pcs	4pcs	±0.018mm	3µm	26	9	35	13	12.8	SR2	141
251-250-11	160-250mm		5pcs	5pcs	±0.018mm	3µm	56.5	13	74.5	15	14.5	SR3.5	400
251-450-11	250-450mm		5pcs	5pcs	±0.018mm	3µm	86.5	15	101.5	15	14.5	SR3.5	400

- Optional accessory: series 531 setting rings and long handle series 250.

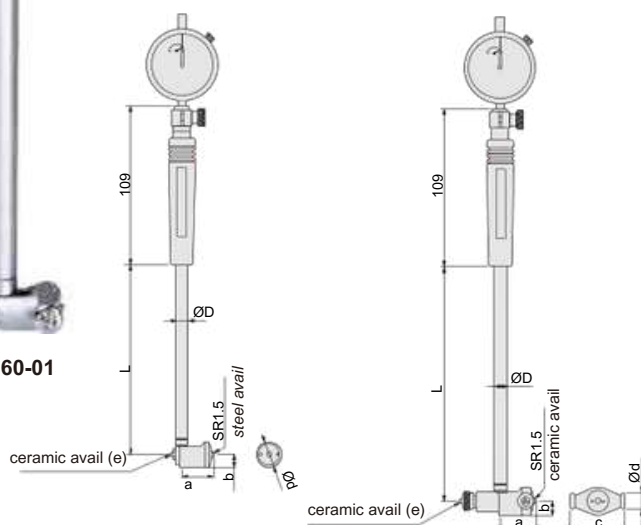
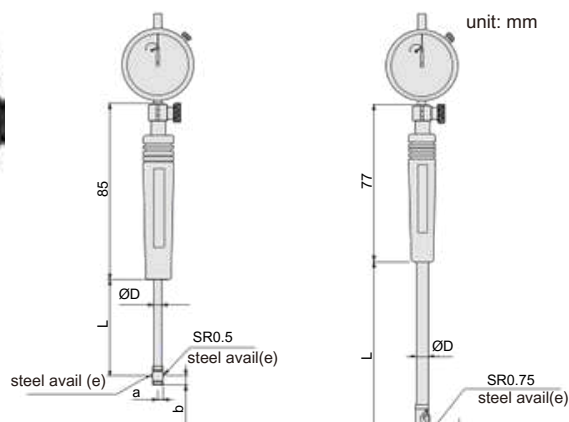


Bore gauge setter for setting zero **(optional)**

Setting ring **(optional)**



251-160-01



Measuring tips **(included)**

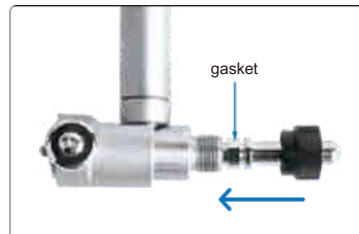
Gasket **(included)**



Series 215 **(optional)**



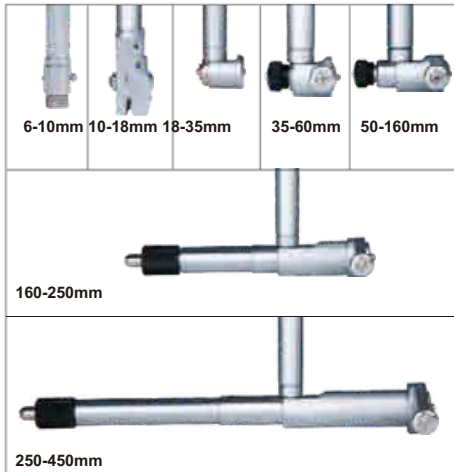
Install tips



Code	Range	Dial indicator	Tips	Gasket	Accuracy	Repeatability	a	b	c	Ød	ØD	e	L
251-010-01	6-10mm	Range: 1mm graduation: 0.001mm	9pcs	2pcs	±0.005mm	2µm	3.6	5.7	/	/	4.5	SR1	48
251-018-01	10-18mm		9pcs	2pcs	±0.005mm	2µm	5.6	7.8	/	/	6	SR1	105
251-035-01	18-35mm		9pcs	2pcs	±0.006mm	2µm	12.2	6.4	/	12.7	9	SR1	141
251-060-01	35-60mm		6pcs	4pcs	±0.007mm	2µm	26	9	27	13	12.8	SR2	141
251-100-01	50-100mm		11pcs	4pcs	±0.007mm	2µm	26	9	35	13	12.8	SR2	141
251-160-01	50-160mm		12pcs	4pcs	±0.007mm	2µm	26	9	35	13	12.8	SR2	141
251-160-02	100-160mm		12pcs	4pcs	±0.007mm	2µm	26	9	35	13	12.8	SR2	141
251-250-01	160-250mm		5pcs	5pcs	±0.007mm	2µm	56.5	13	74.5	15	14.5	SR3.5	400
251-450-01	250-450mm		5pcs	5pcs	±0.007mm	2µm	86.5	15	101.5	15	14.5	SR3.5	400



- ◆ With min. value tracking function, get the diameter automatically
- ◆ Optional accessory: series 531 setting rings



Bore gauge setter for setting zero(optional)

Setting ring(optional)

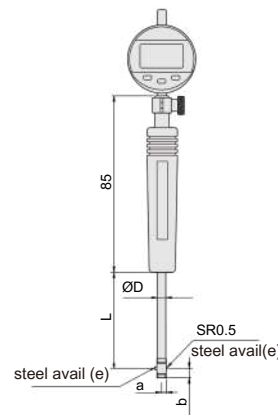


Measuring tips(included)

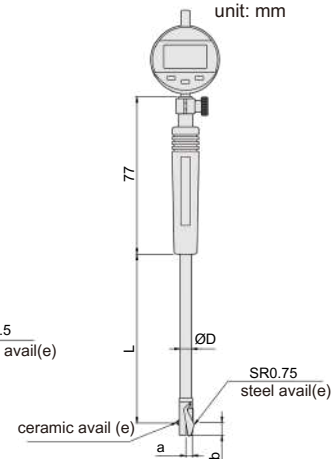
Gasket(included)



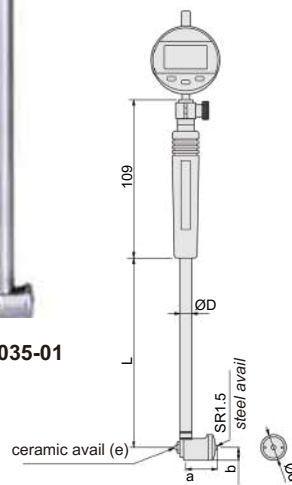
241-035-01



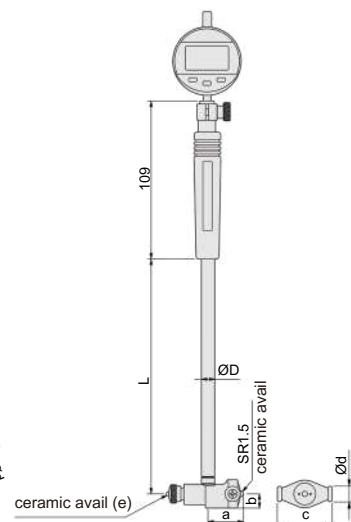
Range: 6-10mm



Range: 10-18mm

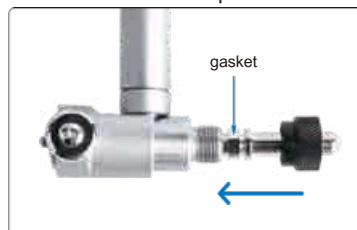


Range: 18-35mm



Range: 35-450mm

Install tips



INSIDE/OUTSIDE
MEASUREMENT

Code	Range	Digital indicator	Tips	Gasket	Accuracy	Repeatability	a	b	c	Ød	ØD	e	L
241-010-01	6-10mm	Range:12.7 mm resolution: 0.001mm	9pcs	2pcs	±0.005mm	2µm	3.6	5.7	/	/	4.5	SR1	48
241-018-01	10-18mm		9pcs	2pcs	±0.005mm	2µm	5.6	7.8	/	/	6	SR1	105
241-035-01	18-35mm		9pcs	2pcs	±0.006mm	2µm	12.2	6.4	/	12.7	9	SR1	141
241-060-01	35-60mm		6pcs	4pcs	±0.007mm	2µm	26	9	27	13	12.8	SR2	141
241-100-01	50-100mm		11pcs	4pcs	±0.007mm	2µm	26	9	35	13	12.8	SR2	141
241-160-01	50-160mm		12pcs	4pcs	±0.007mm	2µm	26	9	35	13	12.8	SR2	141
241-160-02	100-160mm		12pcs	4pcs	±0.007mm	2µm	26	9	35	13	12.8	SR2	141
241-250-01	160-250mm		5pcs	5pcs	±0.007mm	2µm	56.5	13	74.5	15	14.5	SR3.5	400
241-450-01	250-450mm		5pcs	5pcs	±0.007mm	2µm	86.5	15	101.5	15	14.5	SR3.5	400

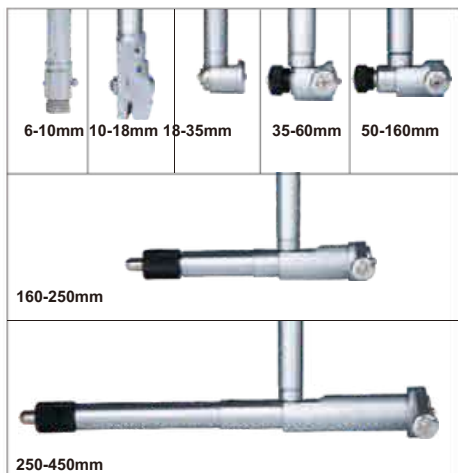


SERIES 241

DIGITAL BORE GAUGE



- ◆ With min. value tracking function, get the diameter automatically
- ◆ Optional accessory: series 531 setting rings

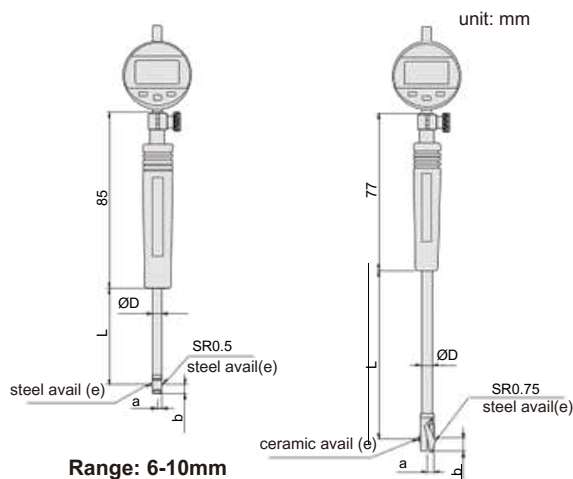


Bore gauge setter for setting zero(**optional**)

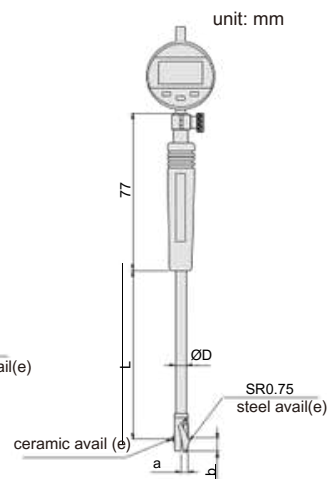
Setting ring(**optional**)



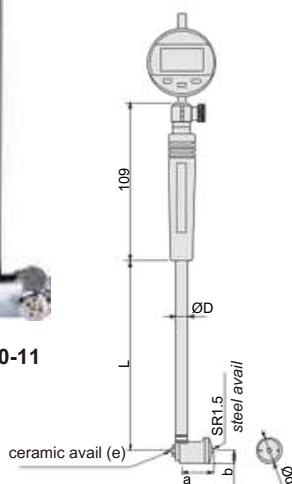
241-160-11



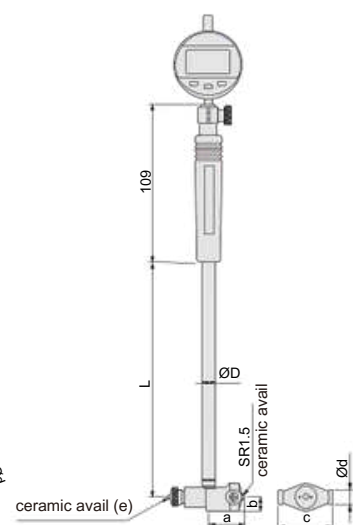
Range: 6-10mm



Range: 10-18mm



Range: 18-35mm



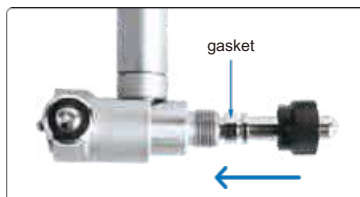
Range: 35-450mm

Measuring tips(**included**)

Gasket(**included**)



Install tips



Code	Range	Digital indicator	Tips	Gasket	Accuracy	Repeatability	a	b	c	Ød	ØD	e	L
241-010-11	6-10mm	Range:12.7 mm resolution: 0.002mm	9pcs	2pcs	±0.012mm	3µm	3.6	5.7	/	/	4.5	SR1	48
241-018-11	10-18mm		9pcs	2pcs	±0.012mm	3µm	5.6	7.8	/	/	6	SR1	105
241-035-11	18-35mm		9pcs	2pcs	±0.015mm	3µm	12.2	6.4	/	12.7	9	SR1	141
241-060-11	35-60mm		6pcs	4pcs	±0.018mm	3µm	12.2	9	27	13	12.8	SR2	141
241-100-11	50-100mm		11pcs	4pcs	±0.018mm	3µm	26	9	35	13	12.8	SR2	141
241-160-11	50-160mm		12pcs	4pcs	±0.018mm	3µm	26	9	35	13	12.8	SR2	141
241-160-12	100-160mm		12pcs	4pcs	±0.018mm	3µm	26	9	35	13	12.8	SR2	141
241-250-11	160-250mm		5pcs	5pcs	±0.018mm	3µm	56.5	13	74.5	15	14.5	SR3.5	400
241-450-11	250-450mm		5pcs	5pcs	±0.018mm	3µm	86.5	15	101.5	15	14.5	SR3.5	400



- ♦ Carbide tipped contact point, wheel guide
- ♦ Optional accessory: series 531 setting rings

Tips style



Bore gauge setter for setting zero (optional)

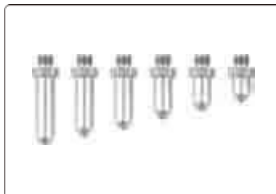


Setting ring (optional)



245-050-11

Measuring tips (included)



Measuring tips (included)

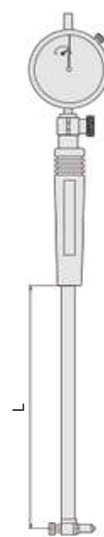


Gasket (included)

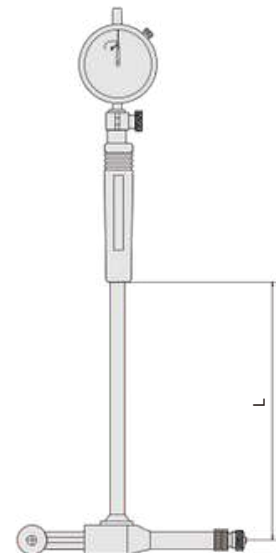


Code	Range	Dial indicator	Tips	Gasket	Probe Travel	Extension rod	L
245-050-11	18-50mm	Range: 10mm graduation: 0.01mm	8pcs	2pcs	1.5mm	1	150
245-100-11	30-100mm		5pcs	3pcs	1.8mm	2	150
245-100-12	50-100mm		10pcs	2pcs	4mm	-	200
245-160-11	100-160mm		7pcs	4pcs	4mm	-	300
245-250-11	160-250mm		6pcs	4pcs	3mm	2	250
245-300-11	100-300mm		5pcs	4pcs	4mm	2	400
245-450-11	250-450mm		5pcs	4pcs	6mm	2	500
245-700-11	450-700mm		5pcs	4pcs	8mm	4	500
245-1000-11	700-1000mm		5pcs	4pcs	8mm	5	500

unit: mm

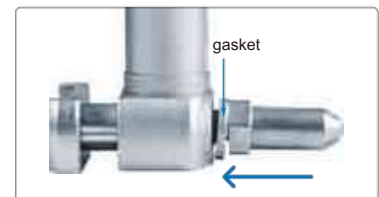


Range: 18-50mm

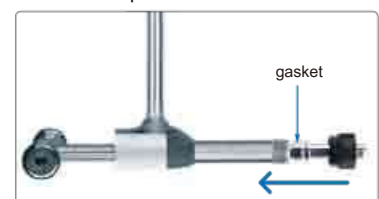


Range: 30-1000mm

Install tips (245-050-11)

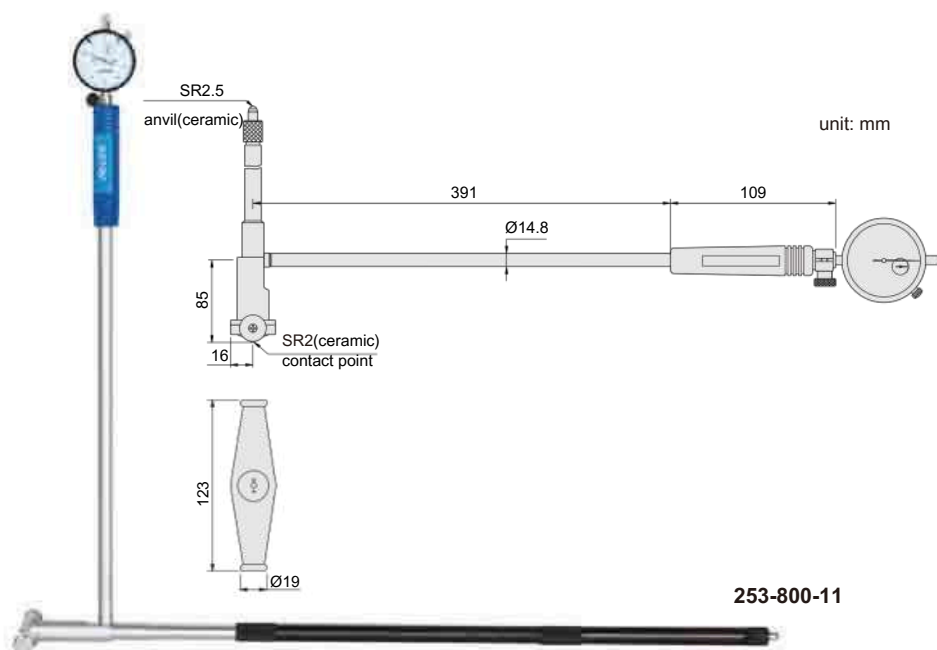


Install tips (except 245-050-11)



BORE GAUGE

Digital indicator for
243-800-11

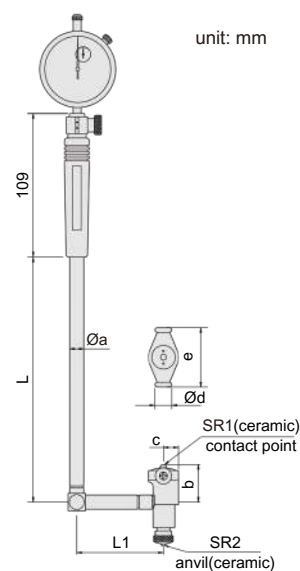


Code	Range	Accuracy	Repeatability	Indicator
253-800-11	400-800mm	±0.025mm	0.003mm	dial indicator (Code: 222-010-12) range 10mm, graduation 0.01mm
243-800-11	400-800mm	±0.025mm	0.003mm	digital indicator (Code: 215-010-12) range 12.7mm, resolution 0.002mm/0.0001"

SERIES 244/254

BORE GAUGE

- ◆ Accuracy: 0.018mm
- ◆ Repeatability: 0.003mm

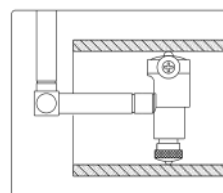
Digital indicator for
series **244**

Dial type		
Code	Range	Indicator
254-060-11	35-60mm	dial indicator: (Code: 222-010-12) range 10mm, graduation 0.01mm
254-160-11	50-160mm	
254-250-11	160-250mm	
254-450-11	250-450mm	

Digital type

Code	Range	Indicator
244-060-11	35-60mm	digital indicator
244-160-11	50-160mm	(Code: 215-010-12)
244-250-11	160-250mm	range: 12.7mm/0.5",
244-450-11	250-450mm	graduation: 0.002mm/0.0001"

Range	Øa	b	c	Ød	e	L	L1
35-60mm	12.8	22	9	13	27	141	75
50-160mm	12.8	28.5	9.2	13	35	141	76.2
160-250mm	14.5	62.0	12.7	15	74.5	391	100
250-450mm	14.5	91.5	15.0	15	101.5	391	100



SERIES 240

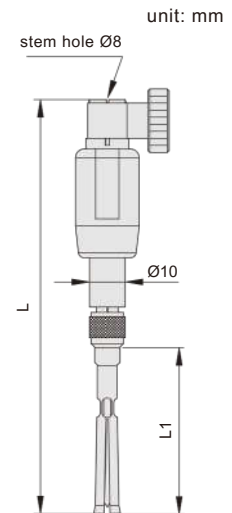
SPLIT TYPE DIAL BORE GAGE SET FOR BLIND HOLES

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



240-120-11M

Code	Range	Quantity of points	Measuring range of point	Measuring depth (L1)	Total length(L)	Material of points	Setting ring (optional)
240-040-11M	1.5-4.2	10	1.5-1.9	17	93	carbide	Ø1.75
			1.8-2.2	17	93	carbide	Ø2
			2.05-2.45	17	93	carbide	Ø2.25
			2.3-2.7	25	101	carbide	Ø2.5
			2.55-2.95	25	101	carbide	Ø2.75
			2.8-3.2	25	101	carbide	Ø3
			3.05-3.45	25	101	carbide	Ø3.25
			3.3-3.7	25	101	carbide	Ø3.5
			3.55-3.9	25	101	carbide	Ø3.75
			5.3-8-4.2	25	101	carbide	Ø4
240-075-11M	4.15-7.8	7	4.15-4.8	41	118	hard chromed	Ø4.5
			4.7-5.3	41	118	hard chromed	Ø5
			5.2-5.8	41	118	hard chromed	Ø5.5
			5.7-6.3	41	118	hard chromed	Ø6
			6.2-6.8	41	118	hard chromed	Ø6.5
			6.7-7.3	41	118	hard chromed	Ø7
			7.2-7.8	45	118	hard chromed	Ø7.5
240-120-11M	7.7-12.5	6	7.7-8.3	45	118	hard chromed	Ø8
			8.2-8.8	45	118	hard chromed	Ø8.5
			8.7-9.3	45	118	hard chromed	Ø9
			9.2-10.5	45	118	hard chromed	Ø10
			10.2-11.5	45	118	hard chromed	Ø11
			11.2-12.5	45	118	hard chromed	Ø12
240-200-11M	12.2-20.6	8	12.2-13.5	45	118	hard chromed	Ø13
			13.4-14.6	45	118	hard chromed	Ø14
			14.4-15.6	45	118	hard chromed	Ø15
			15.4-16.6	45	118	hard chromed	Ø16
			16.4-17.6	45	118	hard chromed	Ø17
			17.4-18.6	45	118	hard chromed	Ø18
			18.4-19.6	45	118	hard chromed	Ø19
			19.4-20.6	45	118	hard chromed	Ø20



Setting ring (optional)



Series 531

Optional indicators (optional)



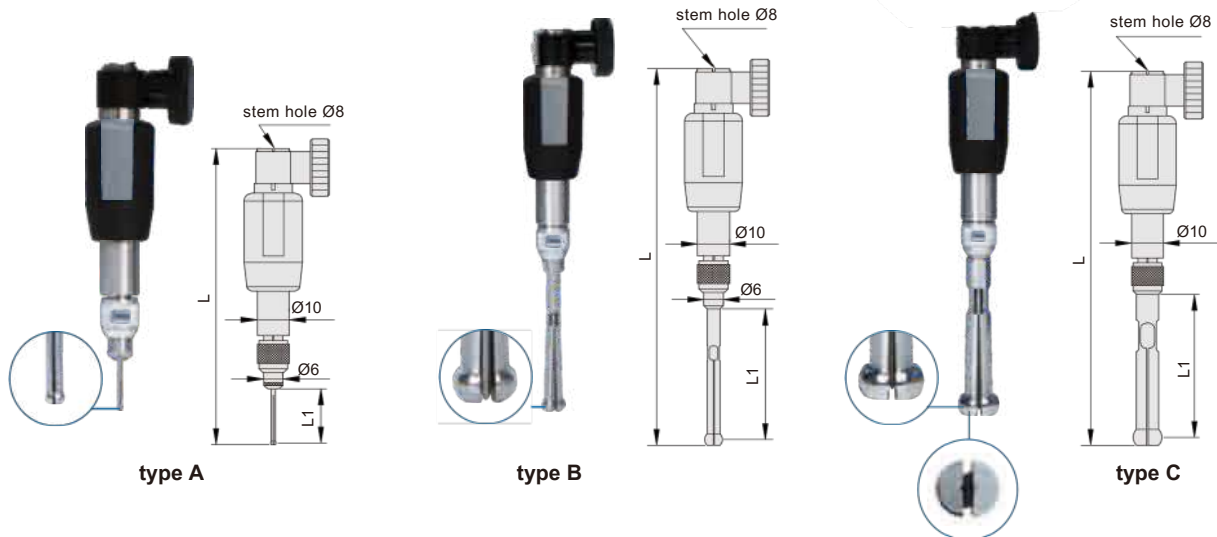
Series 215

222-001-02

INSIDE/OUTSIDE
MEASUREMENT



unit: mm



- ◆ Split type contact points
- ◆ Accuracy (without indicator):
3 μ m (measuring range 0.95~ 10mm),
4 μ m (measuring range 10~ 20.6mm)
- ◆ Repeatability (without indicator): 1 μ m
- ◆ Dial indicators are optional

Setting ring(optional)



Optional indicators(optional)



Code	Range	Quantity of points	Measuring range of point	Measuring depth (L1)	Total length (L)	Material of points	Type of point	Setting ring (optional)
240-014-11	0.95-1.55	5	0.95-1.15	13	89	carbide	A	Ø1
			1.07-1.25	13	89	carbide	A	Ø1.1
			1.17-1.35	13	89	carbide	A	Ø1.2
			1.27-1.45	13	89	carbide	A	Ø1.3
			1.37-1.55	13	89	carbide	A	Ø1.4
240-040-11	1.5-4.2	10	1.5-1.9	17	93	carbide	A	Ø1.75
			1.8-2.2	17	93	carbide	A	Ø2
			2.05-2.45	17	93	carbide	A	Ø2.25
			2.3-2.7	25	101	carbide	A	Ø2.5
			2.55-2.95	25	101	carbide	A	Ø2.75
			2.8-3.2	25	101	carbide	A	Ø3
			3.05-3.45	25	101	carbide	A	Ø3.25
			3.3-3.7	25	101	carbide	A	Ø3.5
			3.55-3.95	25	101	carbide	A	Ø3.75
			3.8-4.2	25	101	carbide	A	Ø4
			0.95-1.15	13	89	carbide	A	1
			1.07-1.25	13	89	carbide	A	Ø1.1
			1.17-1.35	13	89	carbide	A	Ø1.2

Code	Range	Quantity of points	Measuring range of point	Measuring depth (L1)	Total length (L)	Material of points	Type of point	Setting ring (optional)
240-040-12	0.95-4.2	15	1.27-1.45	13	89	carbide	A	Ø1.3
			1.37-1.55	13	89	carbide	A	Ø1.4
			1.5-1.9	17	93	carbide	A	Ø1.75
			1.8-2.2	17	93	carbide	A	Ø2
			2.05-2.45	17	93	carbide	A	Ø2.25
			2.3-2.7	25	101	carbide	A	Ø2.5
			2.55-2.95	25	101	carbide	A	Ø2.75
			2.8-3.2	25	101	carbide	A	Ø3
			3.05-3.45	25	101	carbide	A	Ø3.25
			3.3-3.7	25	101	carbide	A	Ø3.5
			3.55-3.95	25	101	carbide	A	Ø3.75
			3.8-4.2	25	101	carbide	A	Ø4
240-075-11	4.15-7.8	7	4.15-4.8	41	118	hard chromed	B	Ø4.5
			4.7-5.3	41	118	hard chromed	B	Ø5
			5.2-5.8	41	118	hard chromed	B	Ø5.5
			5.7-6.3	41	118	hard chromed	B	Ø6
			6.2-6.8	41	118	hard chromed	B	Ø6.5
			6.7-7.3	41	118	hard chromed	B	Ø7
			7.2-7.8	45	118	hard chromed	C	Ø7.5
240-120-11	7.7-12.5	6	7.7-8.3	45	118	hard chromed	C	Ø8
			8.2-8.8	45	118	hard chromed	C	Ø8.5
			8.7-9.3	45	118	hard chromed	C	Ø9
			9.2-10.5	45	118	hard chromed	C	Ø10
			10.2-11.5	45	118	hard chromed	C	Ø11
			11.2-12.5	45	118	hard chromed	C	Ø12
240-120-12	4.15-12.5	13	4.15-4.8	41	118	hard chromed	B	Ø4.5
			4.7-5.3	41	118	hard chromed	B	Ø5
			5.2-5.8	41	118	hard chromed	B	Ø5.5
			5.7-6.3	41	118	hard chromed	B	Ø6
			6.2-6.8	41	118	hard chromed	B	Ø6.5
			6.7-7.3	41	118	hard chromed	B	Ø7
			7.2-7.8	45	118	hard chromed	C	Ø7.5
			7.7-8.3	45	118	hard chromed	C	Ø8
			8.2-8.8	45	118	hard chromed	C	Ø8.5
			8.7-9.3	45	118	hard chromed	C	Ø9
			9.2-10.5	45	118	hard chromed	C	Ø10
			10.2-11.5	45	118	hard chromed	C	Ø11
			11.2-12.5	45	118	hard chromed	C	Ø12
240-200-11	12.2-20.6	8	12.2-13.5	45	118	hard chromed	C	Ø13
			13.4-14.6	45	118	hard chromed	C	Ø14
			14.4-15.6	45	118	hard chromed	C	Ø15
			15.4-16.6	45	118	hard chromed	C	Ø16
			16.4-17.6	45	118	hard chromed	C	Ø17
			17.4-18.6	45	118	hard chromed	C	Ø18
			18.4-19.6	45	118	hard chromed	C	Ø19
			19.4-20.6	45	118	hard chromed	C	Ø20



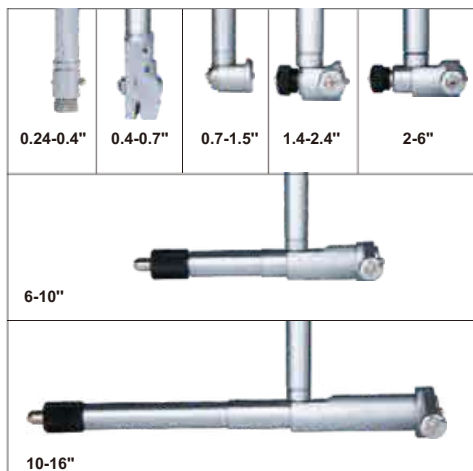
INSIDE/OUTSIDE
MEASUREMENT



SERIES 252

INCH DIAL BORE GAUGE

◆ Optional accessory: Long handle series 250



Bore gauge setter for setting zero **(optional)**



Setting ring **(optional)**



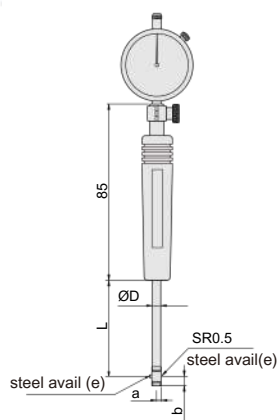
Measuring tips **(included)**



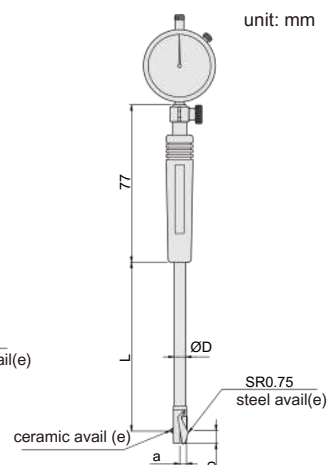
Gasket **(included)**



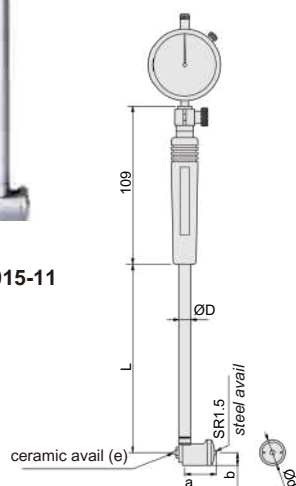
252-015-11



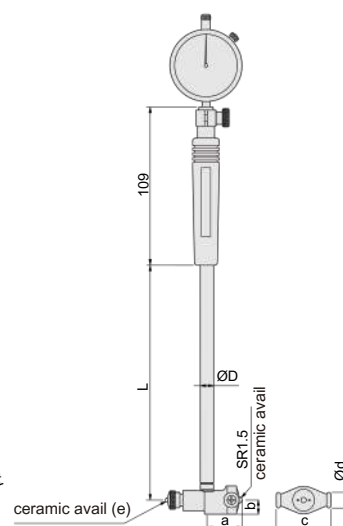
Range: 0.24-0.4"



Range: 0.4-0.7"



Range: 0.7-1.5"



Range: 1.4-16"

unit: mm

Code	Range	Dial indicator	Accuracy	Repeatability	a	b	c	Ød	ØD	e	L
252-004-11	0.24-0.4"	dial indicator, range 0.25", graduation 0.0005"	±0.00075"	0.00015"	3.6	5.7	/	/	4.5	SR1	48
252-007-11	0.4-0.7"		±0.00075"	0.00015"	5.6	7.8	/	/	6	SR1	105
252-015-11	0.7-1.5"		±0.00075"	0.00015"	12.2	6.4	/	12.7	9	SR1	141
252-024-11	1.4-2.4"		±0.0009"	0.00015"	26	9	27	13	12.8	SR2	141
252-060-11	2-6"		±0.0009"	0.00015"	26	9	35	13	12.8	SR2	141
252-100-11	6-10"		±0.0009"	0.00015"	56.5	13	74.5	15	14.5	SR3.5	400
252-160-11	10-16"		±0.0009"	0.00015"	86.5	15	101.5	15	14.5	SR3.5	400



SERIES 250

ANVIL FOR BORE GAUGES

- ♦ Measuring face is made of ceramic



250-060-11

Code	For bore gauges	QTY. per set	Measuring tip material	Measuring range of anvil (mm)
250-010-11	6-10mm	9pcs	steel	6, 6.5, 7, 7.5, 8, 8.5, 9, 9.5, 10
250-018-11	10-18.5mm	9pcs	ceramic	10, 11, 12, 13, 14, 15, 16, 17, 18
250-035-11	18-35mm	9pcs	ceramic	18, 20, 22, 24, 26, 28, 30, 32, 34
250-060-11	35-60mm	6pcs	ceramic	35, 40, 45, 50, 55, 60
250-100-11	50-100mm	11pcs	ceramic	50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100, 50,
250-160-11	50-160mm	12pcs	ceramic	55, 60, 65, 70, 75, 80, 85, 90, 95, 100, 105
250-160-12	100-160mm	12pcs	ceramic	50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100,
250-250-11	160-250mm	5pcs	ceramic	105 160, 170, 180, 190, 200
250-450-11	250-450mm	5pcs	ceramic	250, 260, 270, 280, 290

SERIES 250

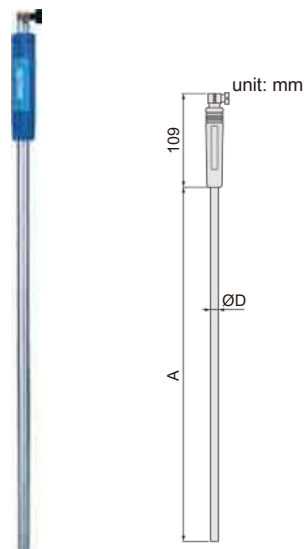
LONG HANDLE

- ♦ To assist deep-hole measurement



Install

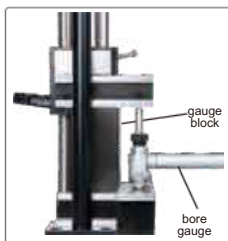
Code	For bore gauges	A	ØD
250-000-01	35-60mm, 50-100mm, 50-160mm, 100-160mm	473	13
250-000-02		980	13
250-000-03	160-250mm, 250-450mm	480	14.5
250-000-04		980	14.5



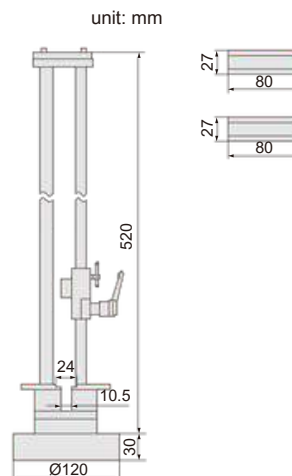
255

BORE GAUGE CHECKER

- ♦ Used together with gauge blocks to set bore gauges



Code	Range
255-016-11	18-400mm



SERIES 256

BORE GAUGE SETTER



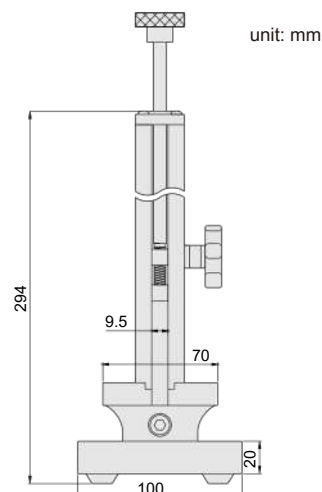
- ◆ Can be used in vertical and horizontal
- ◆ To be used with gauge blocks

Gauge block set (grade 2,ISO3650) for 256-160-11

Blocks per set	Size(mm)	Step(mm)	Quantity(pcs)
33	1.005	—	1
	1.01-1.09	0.01	9
	1.1-1.9	0.1	9
	9	1	9
	10-30	10	3
	50	—	1
	100	—	1

Code	Range	Repeatability	Gauge block set
256-160- 11 *	0-160mm	1.2µm	with
256-160- 1 0	0-160mm	1.2µm	without

*With manufacturer inspection certificate for gauge block set



unit: mm

Application



Gauge block set for 256-160-11



SERIES 401

UNIVERSAL GAUGE

- ◆ For external, internal dimensions and center line space
- ◆ Tips movable range:8mm
- ◆ Tips effective measuring range:±2mm



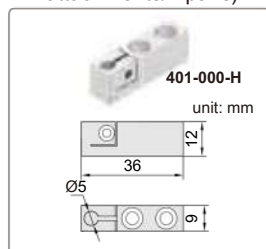
Indicator is not included
(211-010-03)

401-012-01

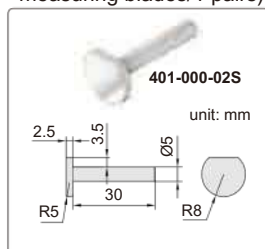
unit: mm



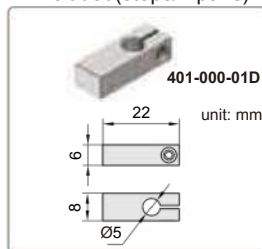
Included(mounting attachments/1 pairs)



Included(disk head with round measuring blades/1 pairs)



Included(stops/1 pairs)



Code	Range		Accuracy	Repeatability
	outside	inside		
401-012-01	0-270mm	35-300mm	±5µm	2µm
401-024-01	0-570mm	35-600mm	±5µm	2µm
401-040-01	570-1000mm	600-1000mm	±5µm	2µm



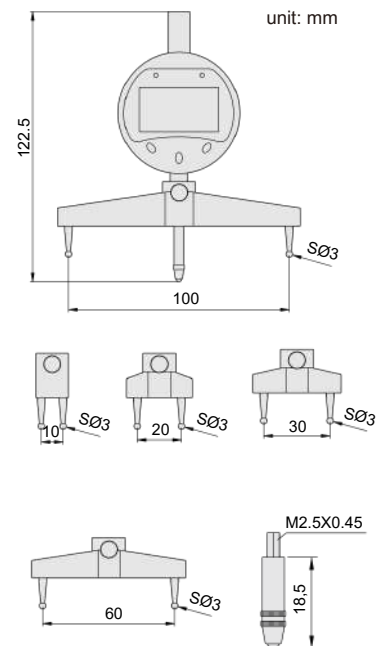


- ◆ Measure radius of internal and external arcs
- ◆ Accuracy: $\pm 0.01R$, R is the radius to be measured in mm
- ◆ Data output (cable code: 200-01 or 200-02), can't output radius
- ◆ Supplied with 5 jaws for different sizes of arc

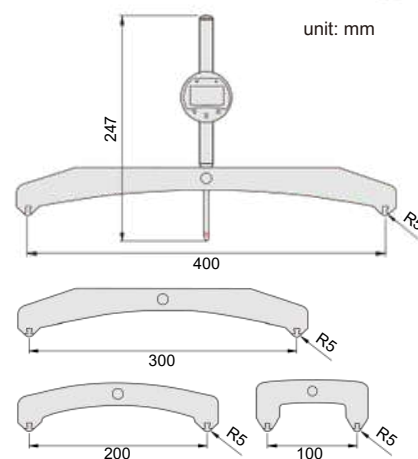
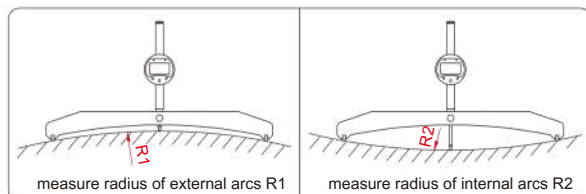
Measure shaft



Measure bore



Code	Range of radius	Resolution
296-700-11	5-700mm/0.2-27.5"	0.01mm/0.001"



Code	Range of external radius (R1)	Range of internal radius (R2)	Accuracy
406-590-44	100-15000mm/4-590"	100-15000mm/4-590"	$\pm 0.005R^*$

* R is the radius to be measured. For example, radius is 100mm, the accuracy is $\pm 0.005 \times 100 = \pm 0.5\text{mm}$

- ◆ Measure radius of internal or external arcs
- ◆ Resolution: 0.01mm/0.001"
- ◆ Buttons: on/off, hold, mm/inch, c (select jaws), MODE(zero)
- ◆ Supplied with 4 jaws for different sizes of arc
- ◆ Automatic power off (time is adjustable)
- ◆ Data output(cable code:200-05 or 200-06, output radius)

SERIES 956

CIRCUMFERENCE TAPE

- ◆ Measure diameter and circumference of pipes, trees, etc.
- ◆ Graduation: 0.1mm
- ◆ Accuracy:
Circumference: $\pm 1.5\text{mm}$
Diameter: $\pm 0.5\text{mm}$
- ◆ Laser engraved scale
- ◆ Made of stainless steel



956-012-11



Code	Range	
	Diameter	Circumference
956-012-11	20 - 300mm	60 - 950mm
956-028-11	300 - 700mm	940 - 2200mm
956-044-11	700 - 1100mm	2190 - 3460mm

SERIES 955

CIRCUMFERENCE TAPE

- ◆ Measure diameter and circumference of pipes, trees, tires, etc.
- ◆ Laser engraved scale
- ◆ Made of stainless steel

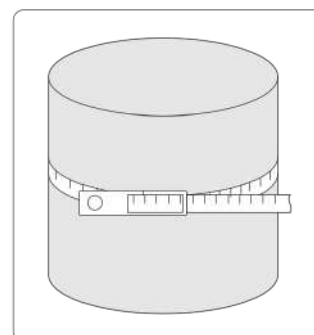


955-122-11



Code	Range		Graduation	Accuracy	
	Diameter	Circumference		Diameter	Circumference
955-012-11	20 - 300mm	60-950mm	0.1mm	$\pm 0.20\text{mm}$	$\pm 0.60\text{mm}$
955-028-11	300 - 700mm	940-2200mm	0.1mm	$\pm 0.20\text{mm}$	$\pm 0.60\text{mm}$
955-044-11	700 - 1100mm	2190-3460mm	0.1mm	$\pm 0.20\text{mm}$	$\pm 0.60\text{mm}$
955-060-11	1100-1500mm	3450-4720mm	0.1mm	$\pm 0.30\text{mm}$	$\pm 0.90\text{mm}$
955-075-11	1500-1900mm	4710-5980mm	0.1mm	$\pm 0.30\text{mm}$	$\pm 0.90\text{mm}$
955-090-11	1900-2300mm	5960-7230mm	0.1mm	$\pm 0.35\text{mm}$	$\pm 1.05\text{mm}$
955-106-11	2300-2700mm	7220-8500mm	0.1mm	$\pm 0.40\text{mm}$	$\pm 1.20\text{mm}$
955-122-11	2700-3100mm	8480-9760mm	0.1mm	$\pm 0.45\text{mm}$	$\pm 1.35\text{mm}$
955-138-11	3100-3500mm	9730-11010mm	0.1mm	$\pm 0.50\text{mm}$	$\pm 1.50\text{mm}$

Application



- ◆ Suitable for measuring the height, thickness, squareness, coaxiality and so on.
- ◆ IP65 protection level
- ◆ High frequency: 100 times/s, can measure high speed workpiece
- ◆ Output signal: 90° phase difference wave
- ◆ Standard cable length: 2m
- ◆ Long working life due to the special bearing



201-010-11

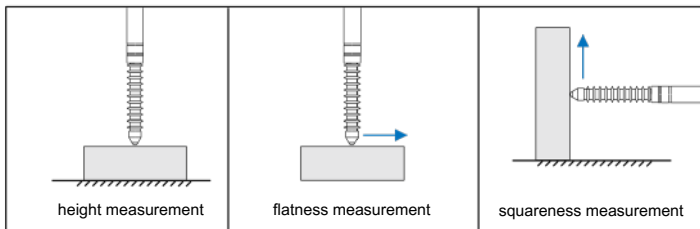
Interface(RS232)



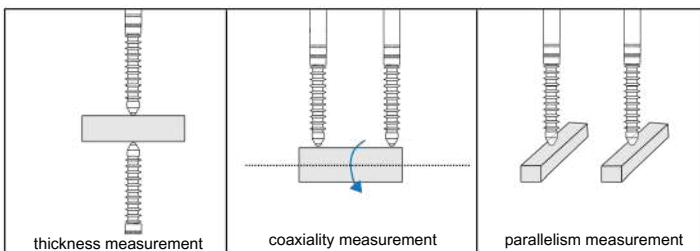
Interface(Pin4)



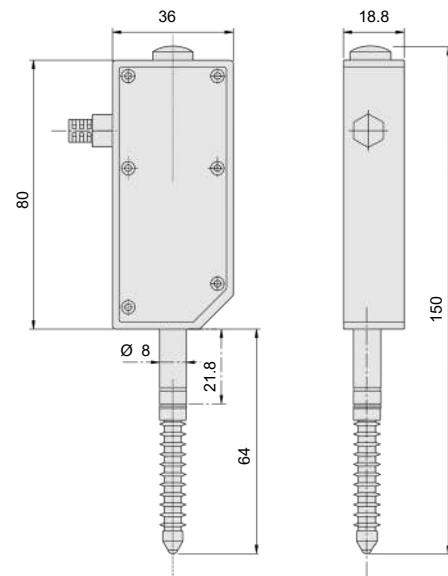
Single gauge application



Multi-gauges application



unit: mm



Resolution 0.001mm

Code	Interface	Range	Measuring force	Stem	Accuracy	Hysteresis
201-010-01	Pin4	0-12.7mm	1.5N	Ø8mm	5µm	2µm
201-010-02	RS232	0-12.7mm	1.5N	Ø8mm	5µm	2µm

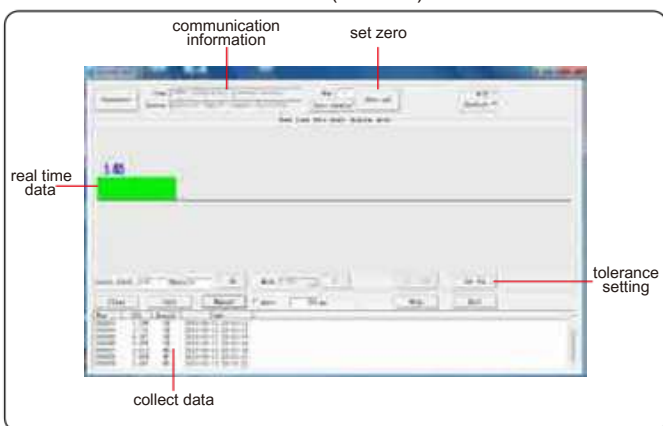
Resolution 0.01mm

Code	Interface	Range	Measuring force	Stem	Accuracy	Hysteresis
201-010-11	Pin4	0-12.7mm	1.5N	Ø8mm	20µm	10µm
201-010-12	RS232	0-12.7mm	1.5N	Ø8mm	20µm	10µm

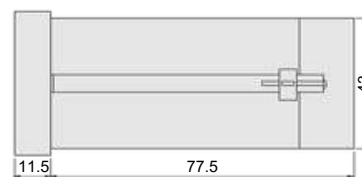
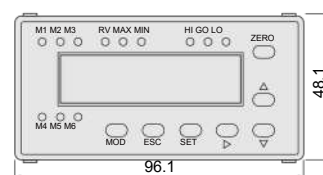
- ◆ High and low limits with judgement
- ◆ With control signal input interface
- ◆ With input/output interface
- ◆ Power: supply DC9-24V



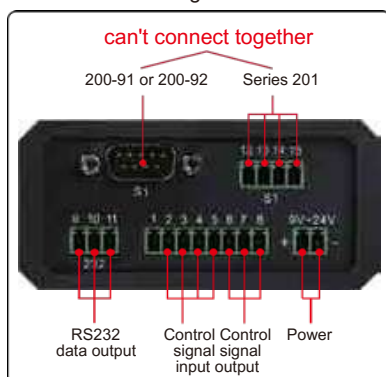
Software(included)



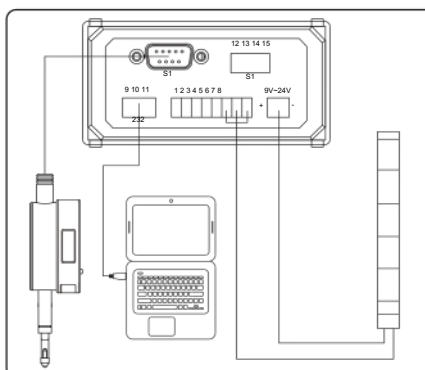
unit: mm



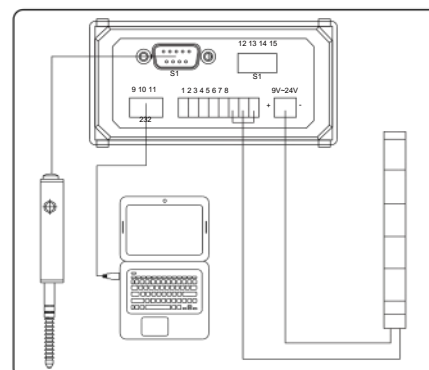
Signal



Connected digital indicator



Connected linear gauge



Code	206-010-01
Display	6 digits
Quantity of linear gauge or digital indicator to be connected	1pc
Tolerance signal	tolerance and judgement with alarm and lights(out of upper tolerance, within tolerance, out of lower tolerance)
Output control	output the tolerance judgement (out of upper tolerance, within tolerance, out of lower tolerance) to control external devices
External control	control the display units from external devices (set zero, hold reading and collect data)
Data output	connect to computer software and serial communication port
Power supply	DC 9~24V

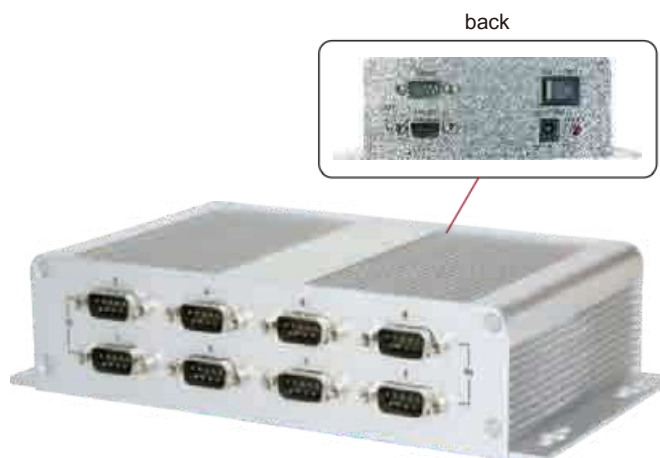
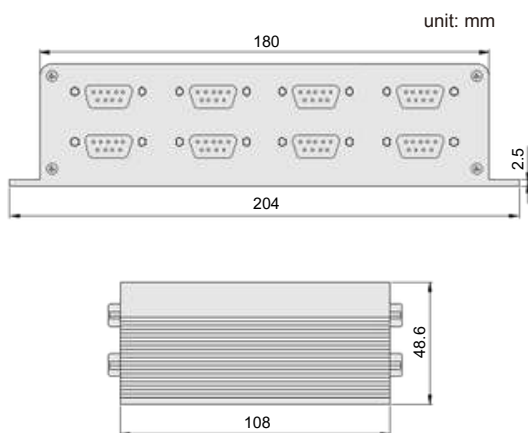
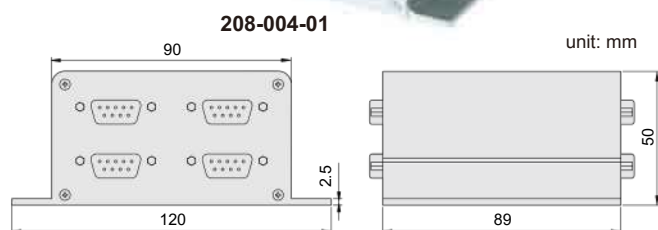
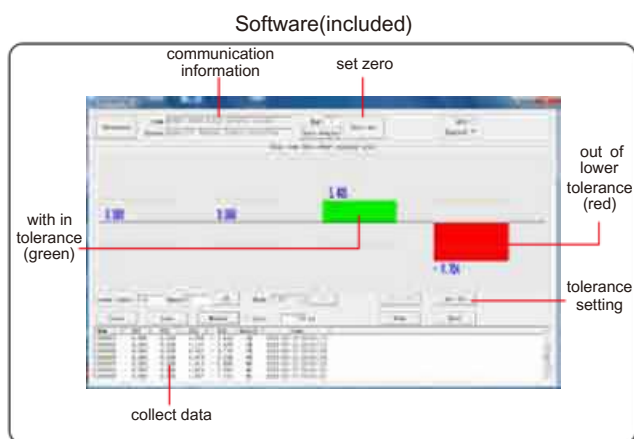
206-13(Optional)



OPTIONAL ACCESSORIES

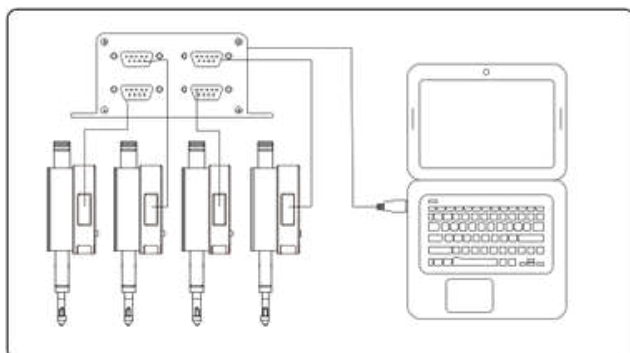
Code	Name	Power	Remark
206-13	alarm lamp	12V	with buzzer

- ♦ With data recording software, can transfer the data into Excel

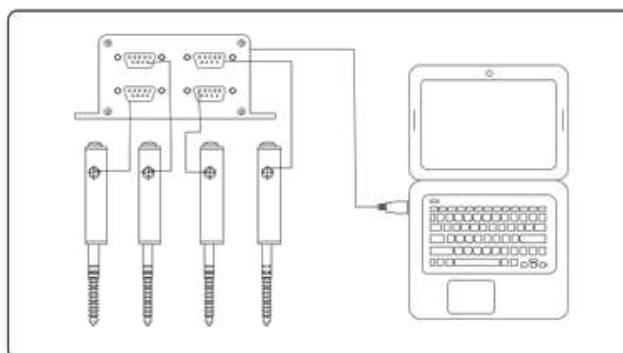


208-008-01

Connected digital indicator



Connected linear gauge

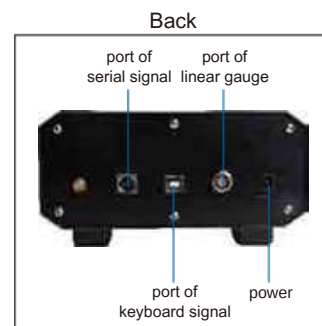
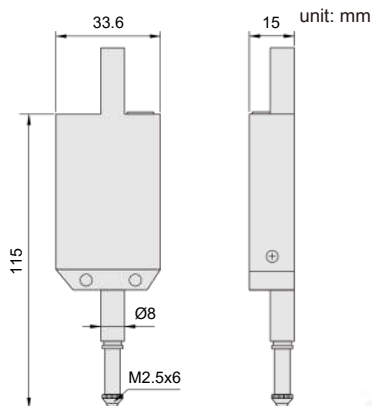


Code	Gauges input	Interface
208-004-01	4	RS232/485
208-008-01	8	RS232/485



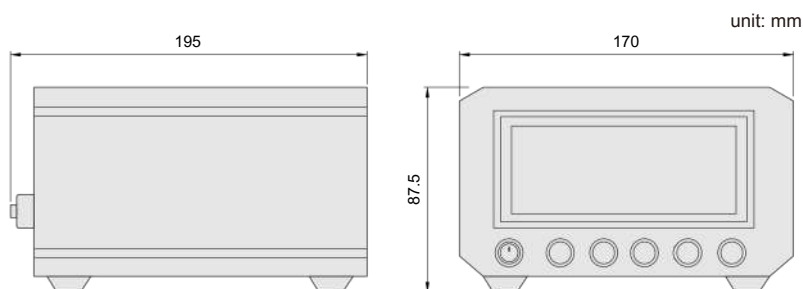
205-010-01

Spindle lift knob is included



205-000-01

- ◆ Linear gage type: optical grating
- ◆ Display unit: display displacement data in real time, data preset tolerance and make judgment (out of upper tolerance, within tolerance, out of lower tolerance), set zero, change measuring direction, resolution (0.1μm/1 μm), unit switch (μm/mm/inch)
- ◆ Two data transmission methods: can output keyboard signal and data can be transmitted to excel, word, txt etc, can also output serial signal and transmit data to serial communication software



LINEAR GAGE SPECIFICATION

Code	205-010-01	205-010-11
Range	12.7mm	12.7mm
Resolution	0.1μm	1μm
Accuracy (19~20°C)	1μm	3μm
Repeatability	0.2μm	2μm
Linear gage type	optical grating	
Working life	tenmillion times	
Dust/waterproof	IP50	
Measuring force	0.7±0.3N	
Cable length	900mm	
Operation environment	0~40°C, 20~80%RH	
Power supply	5~24V	
Dimension (LxWxH)	33.6x15x115mm	
Weight	133g	

Application



DISPLAY UNIT SPECIFICATION

Code	205-000-01
Display	4" LCD screen
Unit	μm, mm
Quantity of linear gage to be connected	1pc
Dimension (LxWxH)	170x195x87.5mm
Weight	1.45kg

SERIES 210

DIGITAL INDICATOR

- ◆ Button: tolerance set, data preset, inch/mm conversion, measuring direction set, max./min./range measurement, absolute/incremental measurement
- ◆ Data output(cable code:200-03 or 200-04)
- ◆ Automatic power off
- ◆ Supplied with flat and lug back

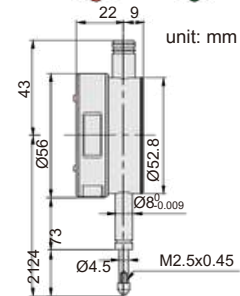


VIDEO

210-010-03



Range: 0-12.7mm



Resolution 0.001mm/0.00005"

Code	Range	Accuracy	Hysteresis
210-010-03	12.7mm/0.5"	5µm	2µm
210-025-03	25.4mm/1"	5µm	3µm
210-050-03	50.8mm/2"	6µm	3µm

Resolution 0.01mm/0.0005"

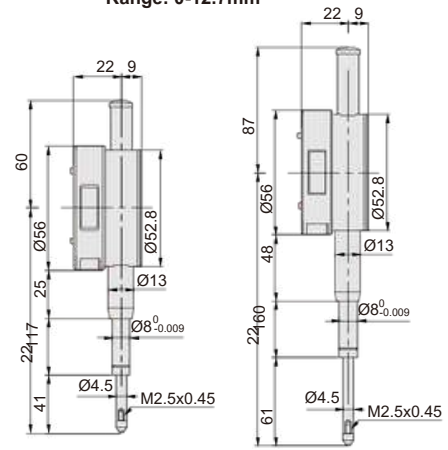
Code	Range	Accuracy	Hysteresis
210-010-13	12.7mm/0.5"	20µm	10µm
210-025-13	25.4mm/1"	20µm	10µm
210-050-13	50.8mm/2"	30µm	10µm

With manufacturer inspection certificate

Styli(optional)



Application



Range: 0-25.4mm

Range: 0-50.8mm

SERIES 211

DIGITAL INDICATOR

- ◆ With analog reading Button: tolerance set, data preset, inch/mm conversion, measuring direction set, max./min./range measurement, absolute/incremental measurement Data output(cable code:200-03 or 200-04) Automatic power off Supplied with flat and lug back
- ◆

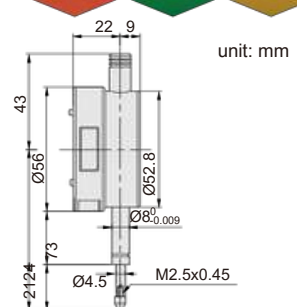


VIDEO

211-010-13



Range: 0-12.7mm



Resolution 0.001mm/0.00005"

Code	Range	Accuracy	Hysteresis
211-010-03	12.7mm/0.5"	5µm	2µm
211-025-03	25.4mm/1"	5µm	3µm
211-050-03	50.8mm/2"	6µm	3µm

Resolution 0.01mm/0.0005"

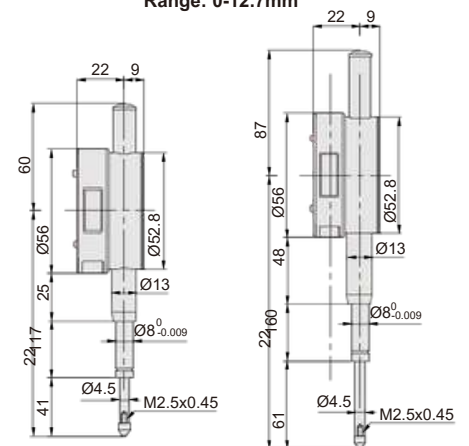
Code	Range	Accuracy	Hysteresis
211-010-13	12.7mm/0.5"	20µm	10µm
211-025-13	25.4mm/1"	20µm	10µm
211-050-13	50.8mm/2"	30µm	10µm

With manufacturer inspection certificate

Styli(optional)



Application



Range: 0-25.4mm

Range: 0-50.8mm

INDICATOR

SERIES 212

DIGITAL INDICATOR

- ◆ Button: on/off, zero, inch/mm conversion, measuring direction set, data preset absolute/incremental measurement
- ◆ Data output(cable code:200-03 or 200-04)
- ◆ Automatic power off
- ◆ Supplied with flat and lug back



VIDEO



212-010-13



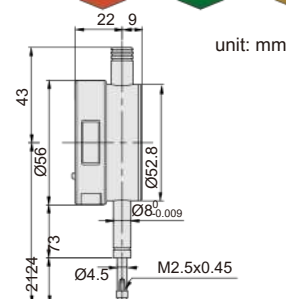
Certificate



Data output



CR2032



unit: mm

Resolution 0.001mm/0.00005"

Code	Range	Accuracy	Hysteresis
212-010-03	12.7mm/0.5"	5μm	2μm
212-025-03	25.4mm/1"	5μm	3μm
212-050-03	50.8mm/2"	6μm	3μm

Resolution 0.01mm/0.0005"

Code	Range	Accuracy	Hysteresis
212-010-13	12.7mm/0.5"	20μm	10μm
212-025-13	25.4mm/1"	20μm	10μm
212-050-13	50.8mm/2"	30μm	10μm

With manufacturer inspection certificate

Styli(optional)

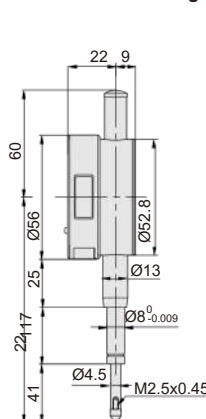


Series 270

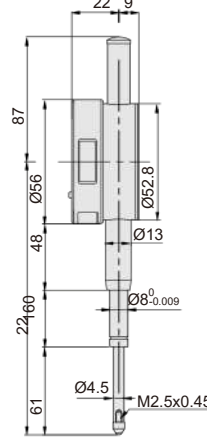
Application



Range: 0-12.7mm



Range: 0-25.4mm



Range: 0-50.8mm

SERIES 215

DIGITAL INDICATOR FOR BORE GAUGE

- ◆ Specially designed for bore gauges
- ◆ 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
- ◆ Button: minimum value tracking, calibration, data preset, inch/metric conversion, absolute/incremental measurement
- ◆ Automatic power off
- ◆ Data output(cable code:200-03 or 200-04)



VIDEO



215-010-12



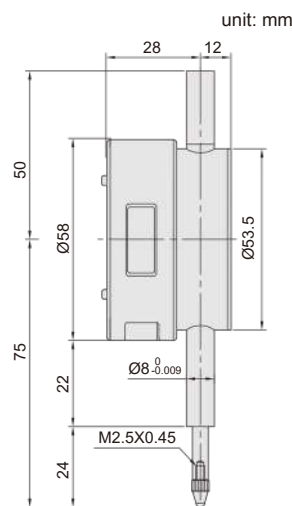
Certificate



Data output



CR2032



unit: mm

Resolution 0.001mm/0.00005"

Code	Range	Accuracy(fges)	Hysteresis(fu)	Remark
215-010-02	12.7mm/0.5"	5μm	2μm	flat back

Resolution 0.002mm/0.0001"

Code	Range	Accuracy(fges)	Hysteresis(fu)	Remark
215-010-12	12.7mm/0.5"	20μm	10μm	flat back

With manufacturer inspection certificate

Application



Series 251(optional)

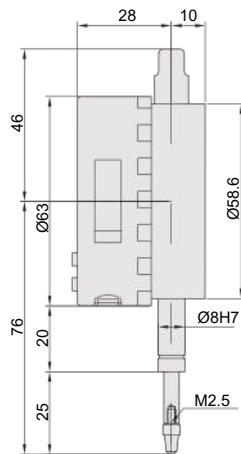


- ◆ Reading in digital and analog
- ◆ Display can be rotated by 320°
- ◆ Button : on/off, zero, tolerance Go and No-Go display, data preset, measuring direction change, max./min./TIR, absolute/incremental measurement, mm/inch, data output
- ◆ Keep preset data and tolerance data in memory after restart
- ◆ Automatic power off
- ◆ Data output (cable code: 200-01 or 200-02)
- ◆ Supplied with lug and flat back

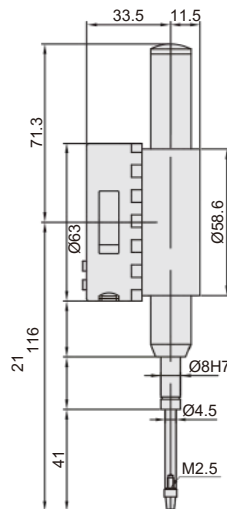


216-010-01

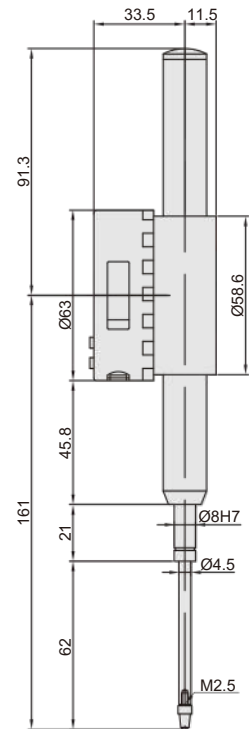
unit: mm



Range: 0-12.7mm



Range: 0-25.4mm



Range: 0-50.8mm

Resolution 0.001mm/0.00005"

Code	Range	Accuracy	Hysteresis
216-010-01	12.7mm/0.5"	5µm	2µm
216-025-01	25.4mm/1"	5µm	3µm
216-050-01	50.8mm/2"	6µm	3µm

Resolution 0.002mm/0.0005"

Code	Range	Accuracy	Hysteresis
216-010-11	12.7mm/0.5"	20µm	10µm
216-025-11	25.4mm/1"	20µm	10µm
216-050-11	50.8mm/2"	30µm	10µm

With manufacturer inspection certificate

Contact points **(optional)**



Application



- ◆ Dust/waterproof
- ◆ Button: on/off, zero, inch/mm conversion, measuring direction set, data preset absolute/incremental measurement
- ◆ Automatic power off
- ◆ Data output(cable code:200-01 or 200-02)
- ◆ Supplied with lug and flat back



VIDEO



Certificate



Data output



CR2032



IP65



IP54



Styli(optional)



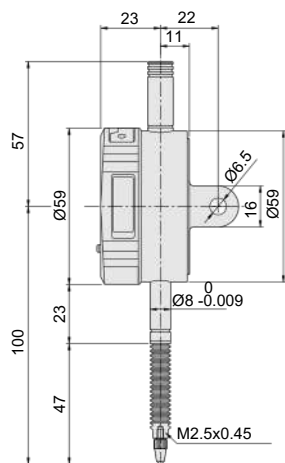
Series 270

Application

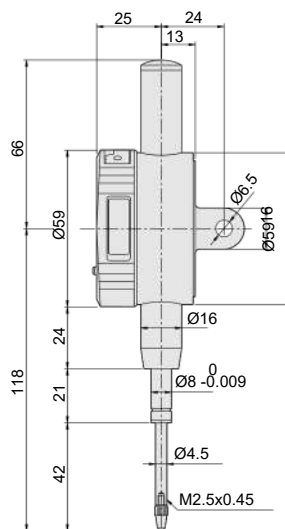


213-010-01

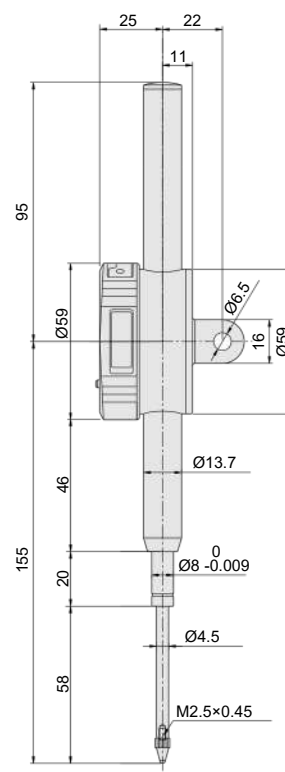
unit: mm



Range: 0-12.7mm



Range: 0-25.4mm



Range: 0-50.8mm

Resolution 0.001mm/0.00005"

Code	Range	Proof level	Accuracy	Hysteresis
213-010-01	12.7mm/0.5"	IP65	5µm	2µm
213-025-01	25.4mm/1"	IP54	5µm	3µm
213-050-01	50.8mm/2"	IP54	6µm	3µm

Resolution 0.01mm/0.0005"

Code	Range	Proof level	Accuracy	Hysteresis
213-010-11	12.7mm/0.5"	IP65	20µm	10µm
213-025-11	25.4mm/1"	IP54	20µm	10µm
213-050-11	50.8mm/2"	IP54	30µm	10µm

With manufacturer inspection certificate

SERIES 214

DIGITAL INDICATOR



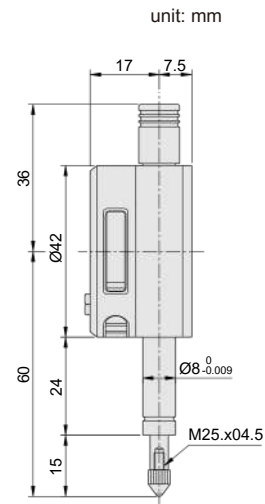
- ◆ Button: on/off, zero, inch/mm conversion, measuring direction set, data preset absolute/incremental measurement
- ◆ Automatic power off
- ◆ Data output(cable code:200-01 or 200-02)
- ◆ Supplied with flat back



VIDEO



214-005-12



Styli (optional)



Series 270

Application



Resolution 0.001mm/0.00005"

Code	Range Accuracy	Hysteresis
214-005-02	5mm/0.2"	5µm
		3µm

Resolution 0.01mm/0.0005"

Code	Range Accuracy	Hysteresis
214-005-12	5mm/0.2"	20µm
		10µm

With manufacturer inspection certificate

SERIES 214

DIGITAL INDICATOR



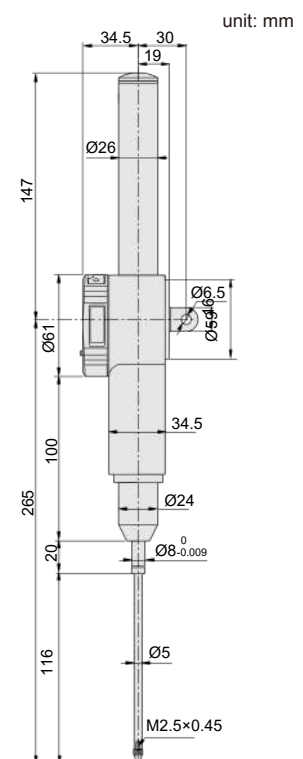
- ◆ Button: on/off, zero, inch/mm conversion, measuring direction set, data preset absolute/incremental measurement
- ◆ Automatic power off
- ◆ Data output(cable code:200-01 or 200-02)
- ◆ Supplied with lug and flat back



VIDEO



214-100-11



Styli(optional)



Series 270

Application



Resolution 0.001mm/0.00005"

Code	Range Accuracy	Hysteresis
214-100-01	100mm/4"	9µm
		3µm

Resolution 0.01mm/0.0005"

Code	Range Accuracy	Hysteresis
214-100-11	100mm/4"	30µm
		10µm

INDICATOR



- ◆ With analog reading
- ◆ Supplied with cable for communication
- ◆ Button: data output, on/off, zero, inch/mm conversion, measuring direction set, data preset absolute/incremental measurement, max./min./range measurement, tolerance set, hold
- ◆ IP54 protection level
- ◆ Automatic power off
- ◆ Power: rechargeable battery, for 30 hours continuous working(full charge)



217-015-01

Contact points (optional)



Series 270

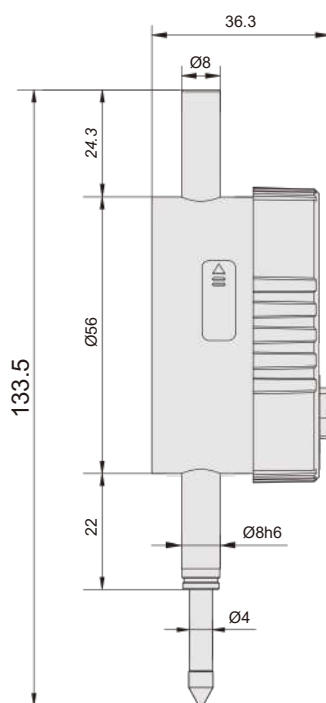
Cable (Included)



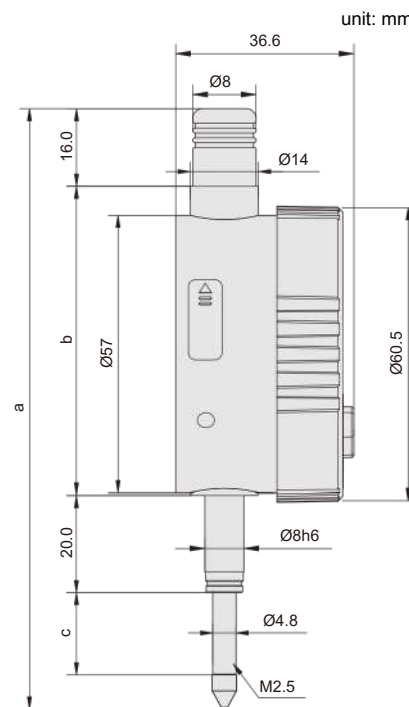
Application



display can be rotated by 270°



217-015-01



217-010-01, 217-025-01 and 217-050-01

unit: mm

Code	Range	Resolution	Accuracy	Hysteresis	Styli
217-015-01	15mm/0.6"	0.0005mm/0.00002"	2μm	1.5μm	Carbide

Code	Range	Resolution	Accuracy	Hysteresis	Styli	a	b	c
217-010-01	12.7mm/0.5"	0.0005mm/ 0.00002"	2μm	1.5μm	Carbide	118.7	61	14.7
217-025-01	25.4mm/1"		2μm	1.5μm	Carbide	151.7	81	27.7
217-050-01	50.8mm/2"		2μm	1.5μm	Carbide	222.2	126	53.2

HIGH PRECISION DIGITAL INDICATOR



- ◆ Built-in bluetooth
- ◆ Supplied with cable for communication
- ◆ Button: data output, on/off, zero, inch/mm conversion, measuring direction set, data preset absolute/incremental measurement, max./min./range measurement, tolerance set, hold, resolution adjustment
- ◆ IP54 protection level
- ◆ Automatic power off
- ◆ Power: rechargeable battery, for 30 hours continuous working(full charge)



217-015-01H

Cable (Included)



Application



Contact points (optional)



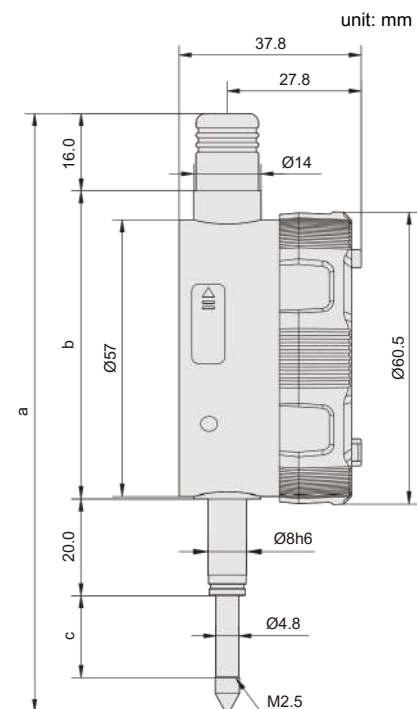
Series 270



display can be rotated by 270°



Smart phone, Computer, Ipad



unit: mm

INDICATOR

Code	Range	Resolution(adjustable)	Accuracy	Hysteresis	Styli	a	b	c
217-010-01H	12.7mm/0.5"	0.0005mm/0.00002" 0.001mm/0.00005"	2μm	1.5μm	Carbide	118.7	61	14.7
217-015-01H	15mm/0.6"		2μm	1.5μm	Carbide	123.7	63.5	17
217-025-01H	25.4mm/1"		2μm	1.5μm	Carbide	151.7	81	27.7
217-050-01H	50.8mm/2"		2μm	1.5μm	Carbide	222.2	126	53.2

- ◆ Linear ball bearings for ten million times use
- ◆ Absolute encoder, the original data remains after power off
- ◆ Reading in digital and analog
- ◆ Supplied with RS232 cable (with software)
- ◆ Button: tolerance, data preset, data hold, measuring direction change, max./min./TIR, power off time, on/off, mm/inch, resolution adjustment
- ◆ Power: rechargeable battery, for 24 hours continuous working(full charge)



RS232 cable (Included)



218-010-01



218-025-01

unit: mm

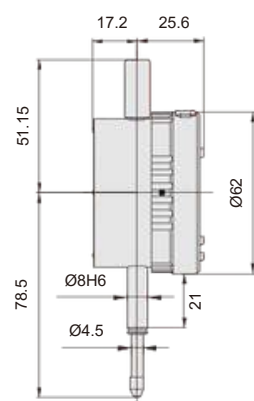
Lifting lever (Included)



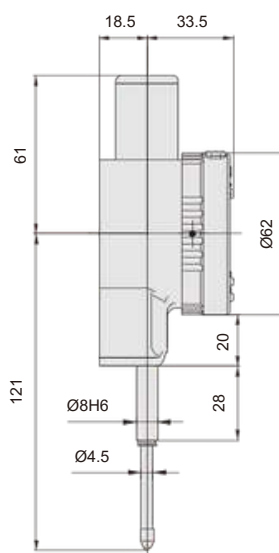
Application



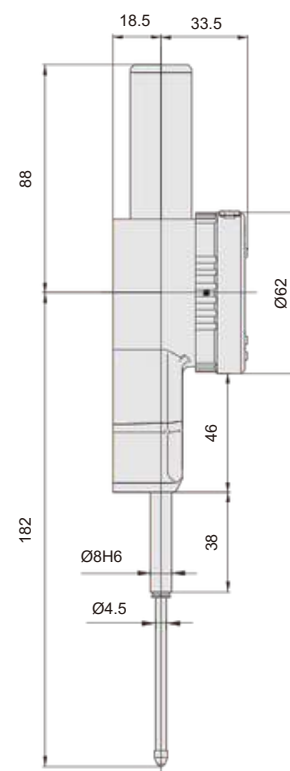
Contact points (optional)



Range:0-12.7mm



Range:0-25.4mm



Range:0-50.8mm

Code	Range	Resolution(adjustable)	Accuracy	Hysteresis	Styli	Back
218-010-01	12.7mm/0.5"	0.0002mm/0.00001"	1.5µm	1µm	Ruby	flat
218-025-01	25.4mm/1"	0.001mm/0.00005"	1.8µm	1µm	Ruby	flat
		0.01mm/0.0005"				

Code	Range	Resolution(adjustable)	Accuracy	Hysteresis	Styli	Back
218-010-11	12.7mm/0.5"	0.0005mm/0.00002"	3µm	1.5µm	Carbide	flat
218-025-11	25.4mm/1"	0.001mm/0.00005"	3µm	1.5µm	Carbide	flat
218-050-11	50.8mm/2"	0.01mm/0.0005"	3µm	1.5µm	Carbide	flat



- ◆ Built-in wireless transmission, Zigbee singal
- ◆ Built-in bluetooth
- ◆ Absolute encoder, the original data remains after power off
- ◆ Reading in digital and analog
- ◆ Supplied with RS232 cable (with software)
- ◆ Button: data output, tolerance, data preset, data hold, measuring direction change, max./min./TIR, power off time, on/off, mm/inch, resolution adjustment
- ◆ Power: rechargeable battery, for 24 hours continuous working(full charge)



VIDEO

Lifting lever (Included)



218-010-01W



218-025-01W

unit: mm



display can be rotated by 320°



Smart phone, Ipad

RS232 cable (Included)



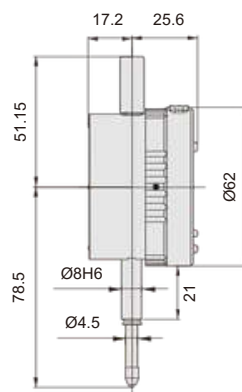
Contact points (optional)



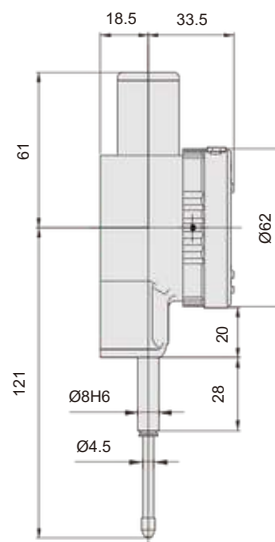
Series 270



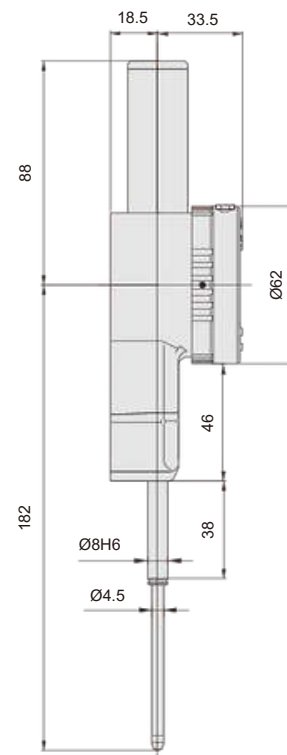
Application



0-12.7mm



0-25.4mm



0-50.8mm

Code	Range	Resolution(adjustable)	Accuracy	Hysteresis	Styli	Back
218-010-01W	12.7mm/0.5"	0.0002mm/0.00001"	1.5μm	1μm	Ruby	flat
218-025-01W	25.4mm/1"	0.001mm/0.00005"	1.8μm	1μm	Ruby	flat
		0.01mm/0.0005"				

Code	Range	Resolution(adjustable)	Accuracy	Hysteresis	Styli	Back
218-010-11W	12.7mm/0.5"	0.0005mm/0.00002"	3μm	1.5μm	Carbide	flat
218-025-11W	25.4mm/1"	0.001mm/0.00005"	3μm	1.5μm	Carbide	flat
218-050-11W	50.8mm/2"	0.01mm/0.0005"	3μm	1.5μm	Carbide	flat



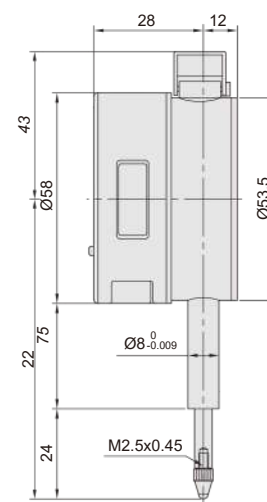
- ◆ Button: on/off, zero, inch/mm conversion, measuring direction set, data preset absolute/incremental measurement
- ◆ Data output(cable code:200-03 or 200-04)
- ◆ Automatic power off



VIDEO



unit: mm



Styli(optional)



Series 270

Application



Resolution 0.001mm/0.00005"

227-010-12

Code	Range	Accuracy(fges)	Hysteresis(fu)	Remark
227-010-02	10mm/0.4"	5µm	2µm	flat back

Resolution 0.01mm/0.0005"

Code Range		Accuracy(fges)	Hysteresis(fu)	Remark
227-010-12	10mm/0.4"	20µm	10µm	flat back

MASUP



SERIES 261

DIAL TEST INDICATOR

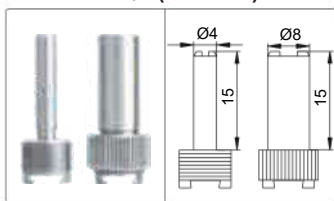


- ◆ Jeweled bearing
- ◆ Double scale spacing
- ◆ Anti-magnetic copper body
- ◆ With two clamps: Ø4mm and Ø8mm

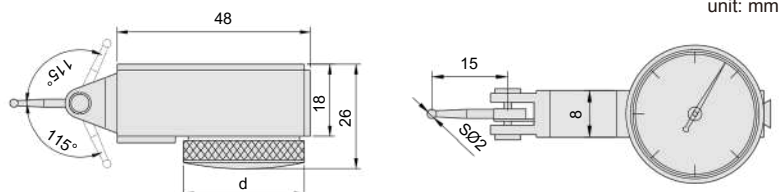
Application



Clamps (included)



261-002-01



Code	Range	Bezel(d)	Graduation	Styli	Accuracy	Hysteresis	Scale
261-002-01	0.2mm	Ø33mm	0.002mm	carbide	6µm	2µm	0-100-0
261-002-02	0.2mm	Ø37.5mm	0.002mm	carbide	6µm	2µm	0-100-0

With manufacturer inspection certificate

SERIES 261

DIAL TEST INDICATOR

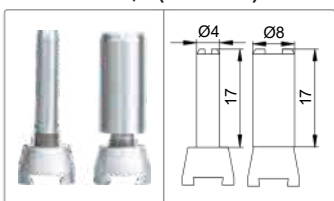


- ◆ Economic type
- ◆ Jeweled bearing
- ◆ Double scale spacing
- ◆ Anti-magnetic copper body
- ◆ With two clamps: Ø4mm and Ø8mm

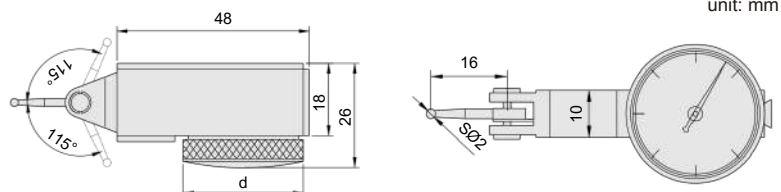
Application



Clamps (included)



261-002-61P

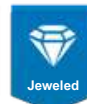


Code	Range	Bezel(d)	Graduation	Styli	Accuracy	Hysteresis	Scale
261-002-61P	0.2mm	Ø33mm	0.002mm	carbide	6µm	2µm	0-100-0
261-002-62P	0.2mm	Ø37.5mm	0.002mm	carbide	6µm	2µm	0-100-0

With manufacturer inspection certificate

SERIES 261

DIAL TEST INDICATOR

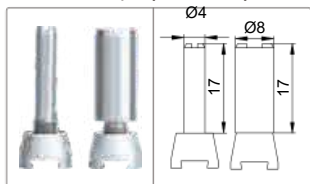


- ◆ Jeweled bearing
- ◆ Double scale spacing
- ◆ Anti-magnetic copper body
- ◆ With two clamps: Ø4mm and Ø8mm

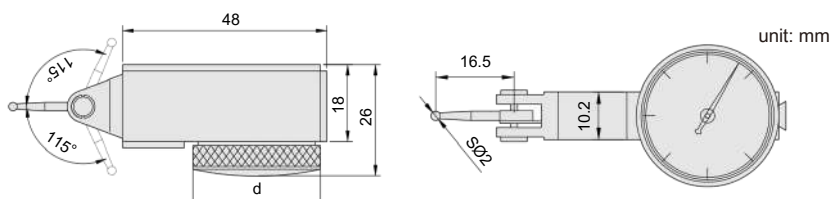
Application



Clamps (included)



261-008-12

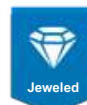


Code	Range	Bezel(d)	Graduation	Styli	Accuracy	Hysteresis	Scale
261-008-11	0.8mm	Ø30mm	0.01mm	carbide	13µm	3µm	0-40-0
261-008-12	0.8mm	Ø37.5mm	0.01mm	carbide	13µm	3µm	0-40-0

With manufacturer inspection certificate

SERIES 261

DIAL TEST INDICATOR

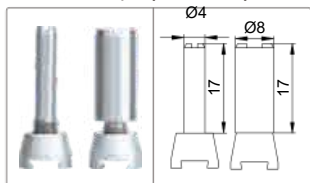


- ◆ Economic type
- ◆ Jeweled bearing
- ◆ Double scale spacing
- ◆ Anti-magnetic copper body
- ◆ With two clamps: Ø4mm and Ø8mm

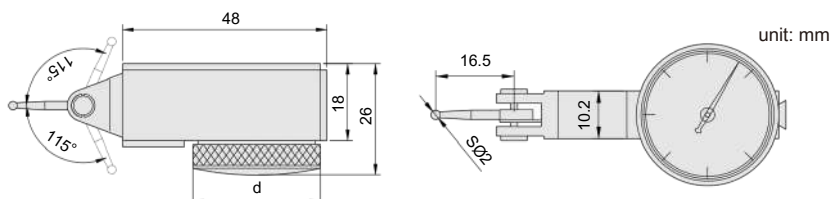
Application



Clamps (included)



261-008-62P



Code	Range	Bezel(d)	Graduation	Styli	Accuracy	Hysteresis	Scale
261-008-61P	0.8mm	Ø30mm	0.01mm	carbide	13µm	3µm	0-40-0
261-008-62P	0.8mm	Ø37.5mm	0.01mm	carbide	13µm	3µm	0-40-0

With manufacturer inspection certificate





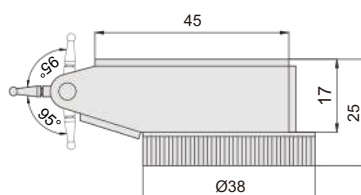
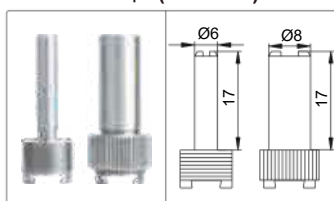
- ◆ Meet DIN2270
- ◆ Jeweled bearing
- ◆ Double scale spacing
- ◆ With two clamps: Ø6mm and Ø8mm



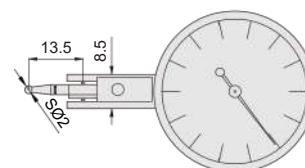
Application



Clamps (included)



unit: mm



Code	Range	Bezel(d)	Graduation	Styli	Accuracy	Hysteresis	Scale
261-014-01	0.14mm	Ø38mm	0.001mm	carbide	4µm	2µm	0-70-0

With manufacturer inspection certificate

SERIES 261

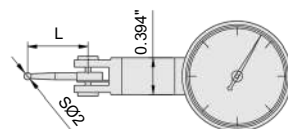
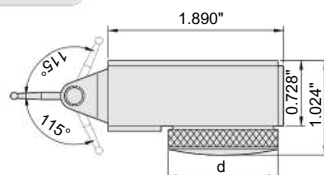
DIAL TEST INDICATOR



- ◆ Jeweled bearing
- ◆ Carbide contact point
- ◆ Two measuring directions
- ◆ Anti magnetic body
- ◆ Supplied with two clamps: 5/32" DIA and 3/8" DIA



261-030-51



Graduation 0.001"

Code	Range	Accuracy	Dial reading	d	L
261-030-11	0.03"	±0.001"	0-15-0	1.181"DIA	0.50"

Graduation 0.0001"

Code	Range	Accuracy	Dial reading	d	L
261-080-01	0.008"	±0.0001"	0-40-0	1.181"DIA	0.563"

Graduation 0.0005"

Code	Range	Accuracy	Dial reading	d	L
261-030-51	0.03"	±0.0005"	0-15-0	1.181"DIA	0.50"
261-030-52	0.03"	±0.0005"	0-15-0	1.457"DIA	0.50"

With manufacturer inspection certificate

Application



Clamp (included)



SERIES 263

LONG STYLI DIAL TEST INDICATOR



- ◆ Jeweled bearing
- ◆ Double scale spacing
- ◆ Anti-magnetic copper body
- ◆ With two clamps: Ø4mm and Ø8mm

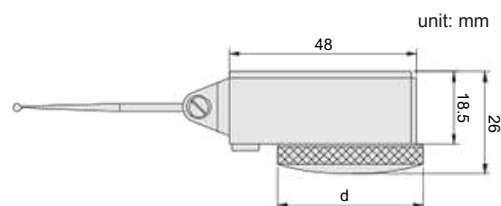
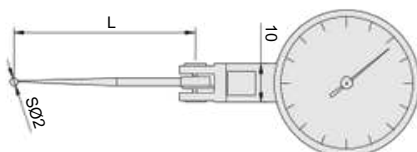
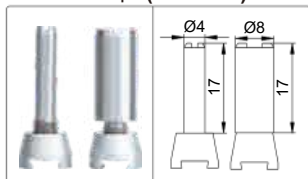


263-008-11L

Application



Clamps (included)



unit: mm

Code	Range	Bezel(d)	Graduation	Styli	Accuracy	Hysteresis	Scale	L
263-008-11	0.8mm	Ø37.5mm	0.01mm	carbide	13µm	3µm	0-40-0	30.5
263-008-11L	0.8mm	Ø37.5mm	0.01mm	ruby	13µm	9µm	0-40-0	46.4

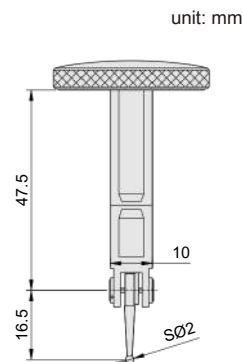
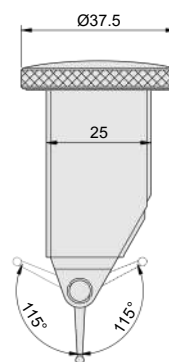
With manufacturer inspection certificate

264

BACK PLUNGER TYPE DIAL TEST INDICATOR



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

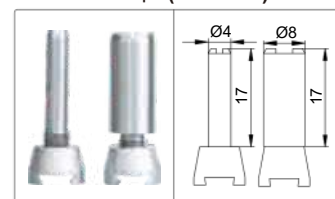


unit: mm

Application



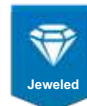
Clamps (included)



Code	Range	Graduation	Accuracy(fges)	Hysteresis(fu)	Dial Reading
264-008-11	0.8mm	0.01mm	13µm	3µm	0-40-0

With manufacturer inspection certificate

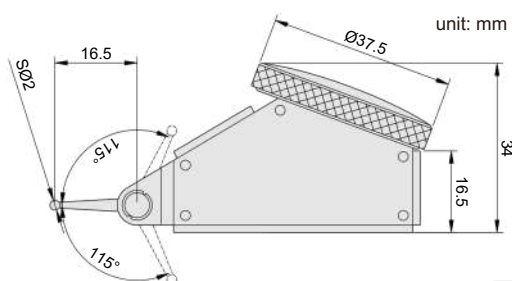
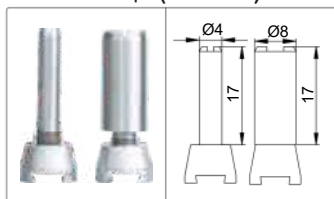




- ♦ Jeweled bearing
- ♦ Carbide contact point
- ♦ Two measuring directions
- ♦ Anti magnetic body
- ♦ Supplied with two clamps: diameter Ø4mm and Ø8mm
- ♦ Optional accessory: styli



Clamps (included)



Application



Code	Range	Graduation	Accuracy(fgs)	Hysteresis	Dial Reading
265-008-11	0.8mm	0.01mm	13µm	3µm	0-40-0

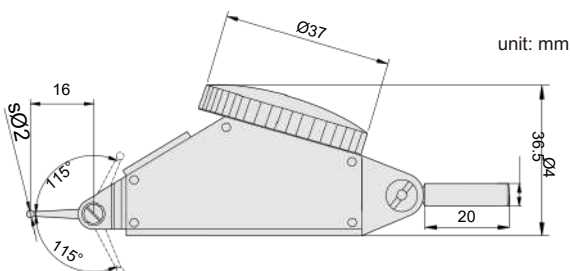
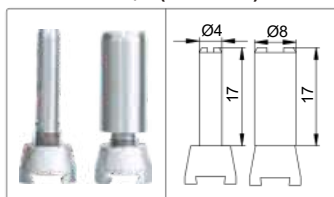
With manufacturer inspection certificate



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



Clamps (included)

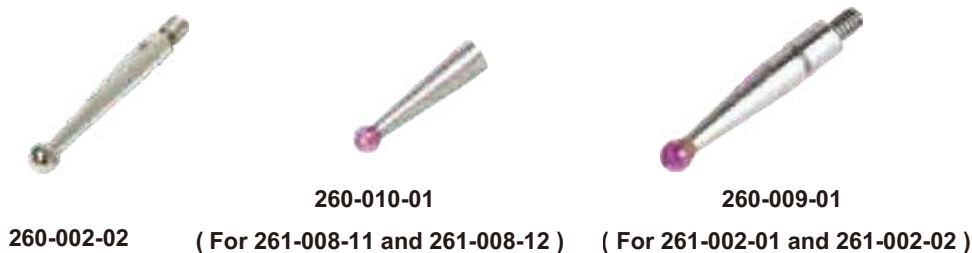


Code	Range	Graduation	Accuracy	Hysteresis	Dial reading
266-016-11	1.6mm	0.01mm	25µm	8µm	0-40-0

With manufacturer inspection certificate

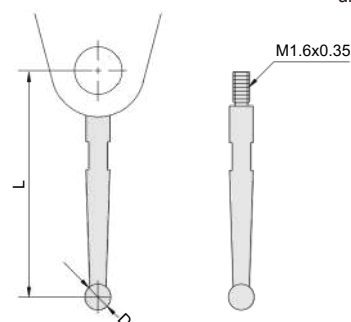
SERIES 260

STYLI FOR DIAL TEST INDICATOR



unit: mm

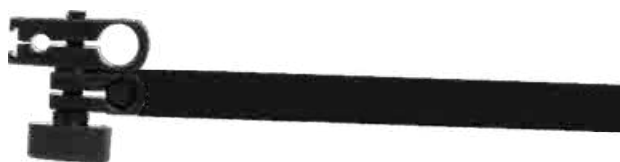
Code	For products	Tip material	D	L
260-001-01	261-008-11	steel	SØ1	16.5
260-002-02	261-008-12	carbide	SØ2	16.5
260-003-02	266-016-11	carbide	SØ3	16.5
260-010-01	264-008-11	carbide	SØ3	16.5
260-010-01	265-008-11	ruby	SØ2	16.5
260-009-01	261-002-01	ruby	SØ2	15
260-010-02	261-002-02	ruby	SØ2	15
260-010-02	263-008-11	carbide	SØ2	30.5
260-010-03	263-008-11L	carbide	SØ2	46.4



SERIES 267

HOLDER FOR INDICATOR

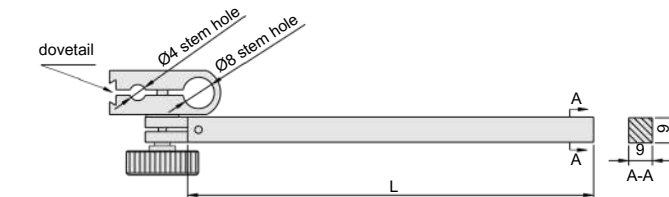
- ◆ Use as holder for dial/digital indicators, dial test indicators and height gages



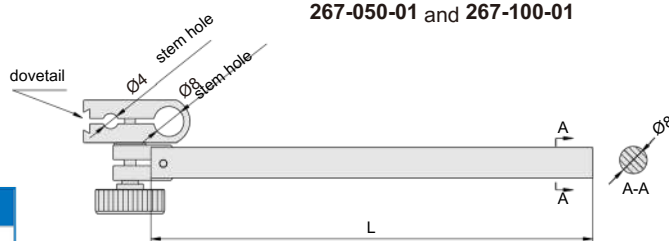
267-100-01

unit: mm

Application(optional)



267-050-01 and 267-100-01



267-115-02

Code	Section size	Size(L)
267-050-01	9x9mm	50mm
267-100-01	9x9mm	100mm
267-115-02	Ø8mm	115mm

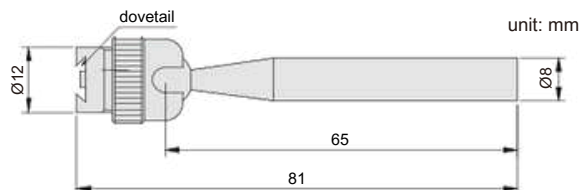
INDICATOR



268

UNIVERSAL HOLDER FOR DIAL TEST INDICATOR

- ◆ Universal head



Application



Code

268-055-01

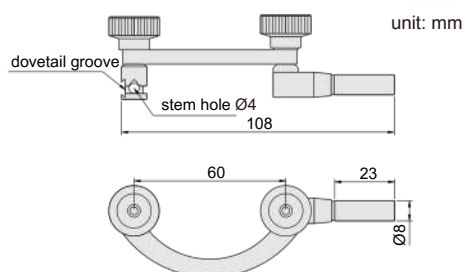
Section size

Ø8mm

269

DIAL TEST INDICATOR CENTERING HOLDER

- ◆ Center cylinders or holes on a machine tool



Application



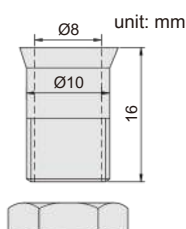
Code

269-060-01

273

SHAFT SLEEVE

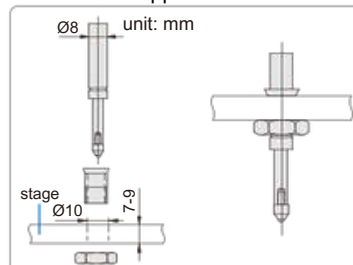
- ◆ For dial indicators and probes with shaft diameter Ø8mm
- ◆ Made of stainless steel



Code

273-001-01

Application



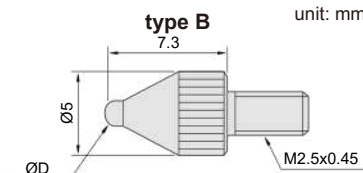
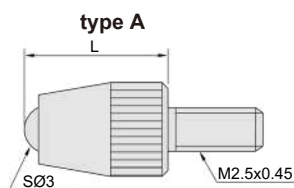
type A

Code	Material	L
270-001-01	carbide	7.3
270-001-02	ceramic	7.3
270-001-03	carbide	8.3
270-001-04	carbide	12.1
270-001-05	carbide	14
270-001-06	carbide	15
270-001-07	ceramic	15
270-001-08	carbide	17
270-001-09	carbide	19.3
270-001-10	carbide	20
270-001-11	ceramic	20
270-001-12	carbide	22
270-001-13	carbide	25
270-001-14	ceramic	25
270-001-15	carbide	30
270-001-16	ceramic	30

Ball Point



270-001-03



unit: mm

type B

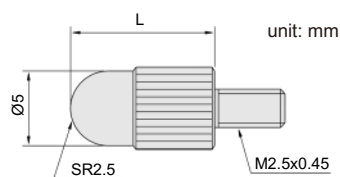
Code	Material	ØD
270-001-21	steel	1
270-001-22	carbide	1.5
270-001-23	carbide	1.8
270-001-24	carbide	2.5
270-001-25	carbide	4

Shell Type Point



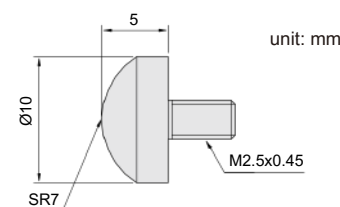
270-002-02

Code	Material	L
270-002-01	steel	5
270-002-02	steel	10
270-002-03	steel	15
270-002-04	steel	20
270-002-05	steel	25
270-002-06	steel	30



unit: mm

Spherical Point



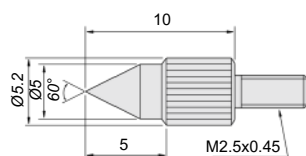
unit: mm

Code	Material
270-003-01	steel

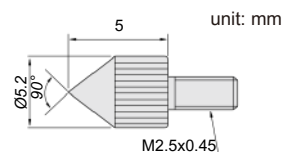
Conical Point



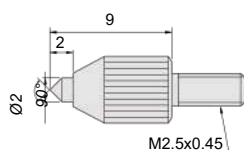
270-004-02



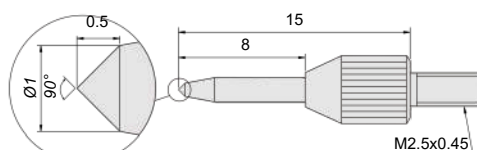
270-004-01



270-004-02



270-004-03



270-004-04

Code	Material
270-004-01	steel
270-004-02	steel
270-004-03	steel
270-004-04	steel

type A

Code	Material	L
270-005-01	steel	8
270-005-02	steel	10

Flat Point



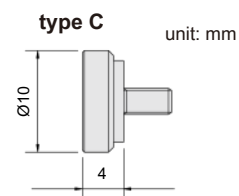
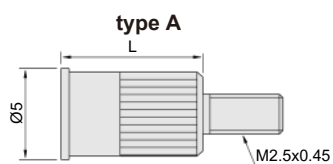
270-005-12



270-010-16

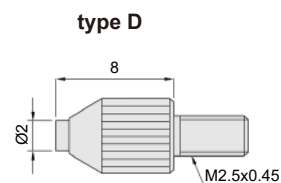
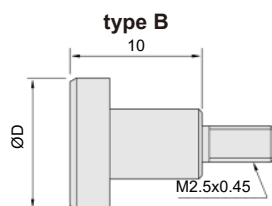
type B

Code	Material	ØD
270-005-11	steel	10
270-005-12	steel	15
270-005-13	steel	20
270-005-14	steel	25
270-005-15	steel	30



type C

Code	Material	ØD
270-010-16	ceramic	10



type D

Code	Material
270-005-21	carbide

type A

Code	Material	ØD	L
270-006-01	steel	0.45	3
270-006-02	steel	0.45	5
270-006-03	carbide	1	3
270-006-04	carbide	1	5
270-006-05	carbide	1	8
270-006-06	carbide	1	10
270-006-07	carbide	1	20
270-006-08	carbide	1	40
270-006-09	carbide	1.5	5
270-006-10	carbide	1.5	10
270-006-11	carbide	1.5	13
270-006-12	carbide	1.5	20
270-006-13	carbide	1.5	40
270-006-14	carbide	2	8
270-006-15	carbide	2	18
270-006-16	carbide	2	28
270-006-17	carbide	2	40

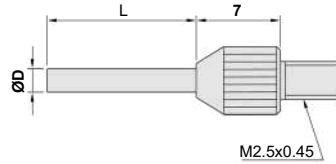
Needle Point



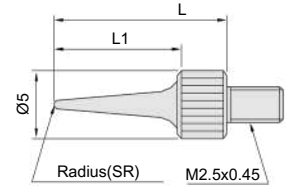
270-006-16

270-006-22

type A



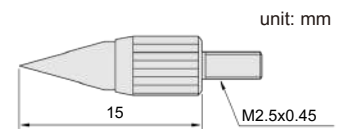
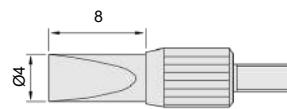
type B



type B

Code	Material	L1	L	SR
270-006-21	steel	11	15	0.4
270-006-22	steel	13	17	0.2
270-006-23	steel	21	25	0.4
270-006-24	steel	31	35	0.4

Knife Edge Point

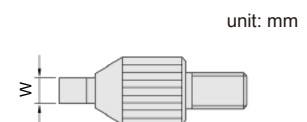
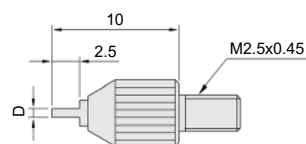


Code	Material
270-007-01	steel

Blade Point



270-008-03



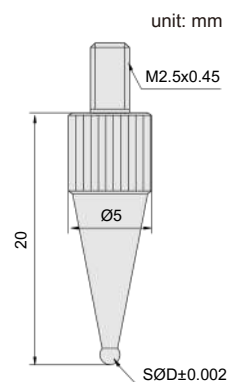
Code	Material	D	W
270-008-01	steel	0.4	2
270-008-02	steel	0.6	2
270-008-03	steel	1	4

Ball Point

Code	Material	SØD
270-011-01	carbide	1
270-011-02	carbide	1.5
270-011-03	carbide	2
270-011-04	carbide	2.5
270-011-05	carbide	3
270-011-06	carbide	3.5
270-011-07	carbide	4
270-011-08	carbide	4.5
270-011-09	carbide	5
270-011-10	carbide	5.5
270-011-11	carbide	6
270-011-12	carbide	6.5
270-011-14	carbide	7
270-011-16	carbide	8
270-011-18	carbide	9
270-011-20	carbide	10
270-011-24	carbide	12



270-011-08

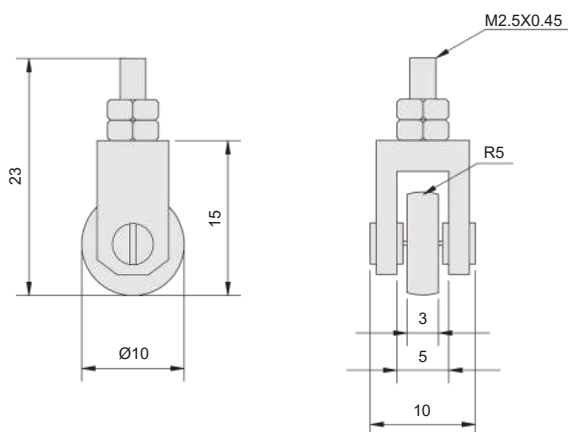


270

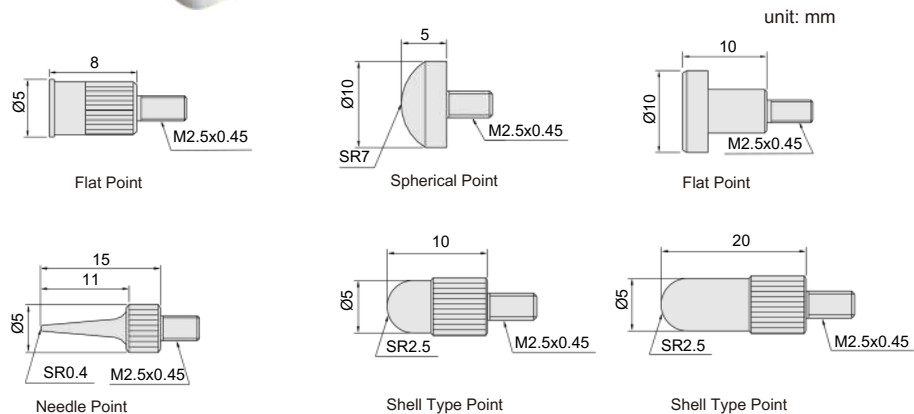
ROLLER POINT



unit: mm



Code	Material of measuring face
270-009-01	steel



Code	Material of measuring face
270-100-06	steel

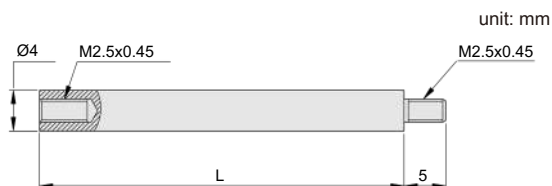
SERIES 270

EXTENSION ROD FOR CONTACT POINTS



270-000-15

Package



Code	Material	L
270-000-01	steel	10
270-000-02	steel	15
270-000-03	steel	20
270-000-04	steel	25
270-000-05	steel	30
270-000-06	steel	35

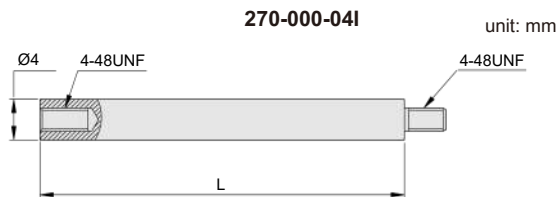
Code	Material	L
270-000-07	steel	40
270-000-08	steel	45
270-000-09	steel	50
270-000-10	steel	55
270-000-11	steel	60
270-000-12	steel	65

Code	Material	L
270-000-13	steel	70
270-000-14	steel	75
270-000-15	steel	80
270-000-16	steel	90
270-000-17	steel	100

SERIES 270

EXTENSION ROD FOR CONTACT POINTS

- ♦ For series 225 Inch indicator



Code	Material	L
270-000-01I	steel	1"
270-000-02I	steel	2"
270-000-03I	steel	3"
270-000-04I	steel	4"

271

SPINDLE LIFT KNOB

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



Code

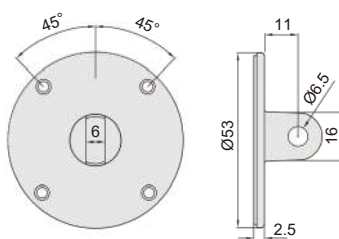
271-045-01

SERIES 272

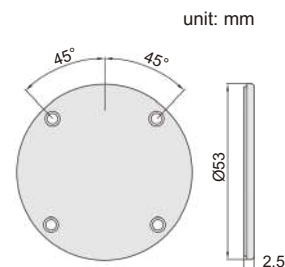
LUG AND FLAT BACK



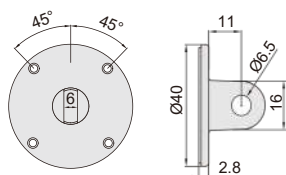
272-000-01



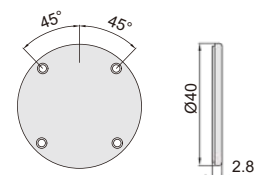
272-000-01



272-000-02



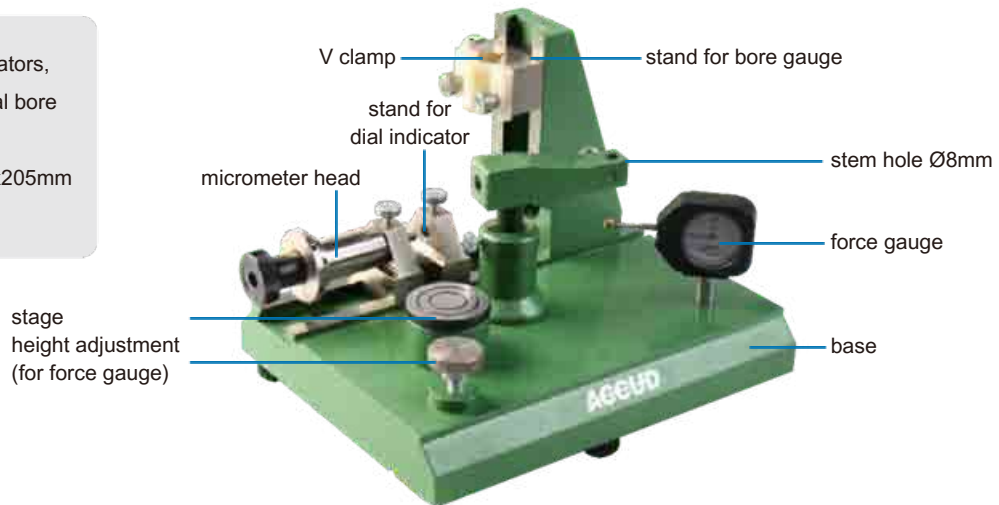
272-000-03



272-000-04

Code	Type	Material
272-000-01	lug	metal
272-000-02	flat	plastic
272-000-03	lug	metal
272-000-04	flat	plastic

- ◆ To calibrate dial indicators, test indicators and dial bore gauges
- ◆ Dimension: 270x210x205mm
- ◆ Weight: 11kg



Inspect accuracy of dial indicators
(range 0-25mm)



Inspect accuracy of dial bore gauges
(range 6-450mm)



Inspect accuracy of test indicators



Check force of dial indicators



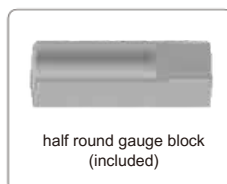
Check repeatability of dial indicators



Check the effect of lateral force on
accuracy of dial indicators



Check the effect of lateral force on
accuracy of test indicators



half round gauge block
(included)

Micrometer head

Range	Sampling interval	Accuracy	Hysteresis
0-25mm	0.1mm	4μm(0-25mm), 3μm(any section 10mm), 2μm(any section 1mm)	1μm

Force gauge

Range	Graduation	Accuracy
0-1.6N	0.05N	±5%

Stage

Diameter	Flatness	Roughness
0-1.6N	1μm	0.05μm

Half round gauge block (included)

Dimension	Parallelism
10mm	1μm



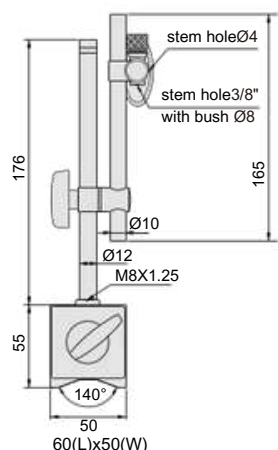
Code

499-025-01



- ◆ For dial/digital indicators and dial test indicators
- ◆ V-block base

Application



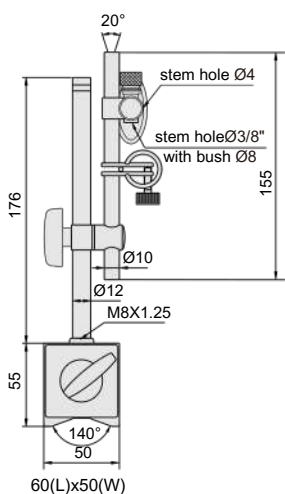
281-060-02



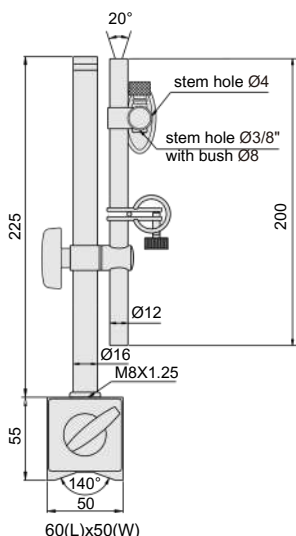
281-060-02



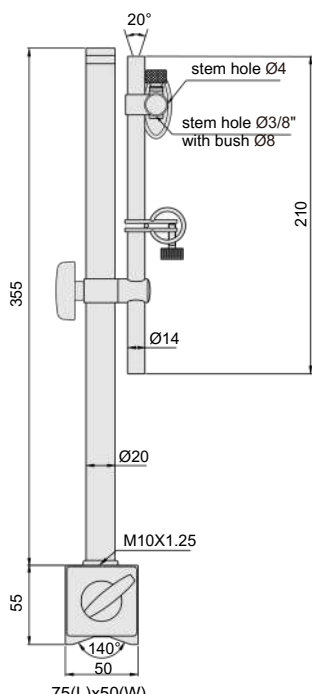
281-060-01



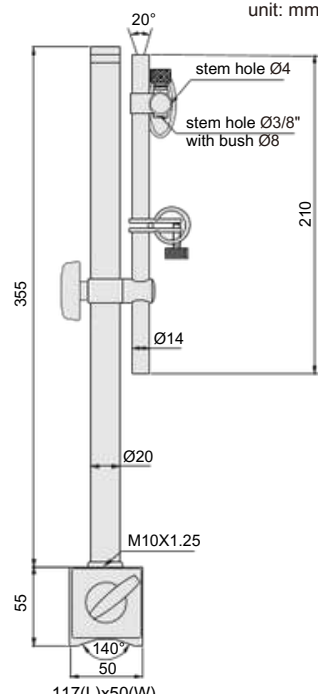
281-060-01



281-080-01



281-100-01



281-130-01

unit: mm

Code	Stem hole	Magnetic force	Fine adjustment
281-060-01	Ø8mm, Ø4mm, 3/8"	60kgf	With
281-060-02	Ø8mm, Ø4mm, 3/8"	60kgf	Without
281-080-01	Ø8mm, Ø4mm, 3/8"	80kgf	With
281-100-01	Ø8mm, Ø4mm, 3/8"	100kgf	With
281-130-01	Ø8mm, Ø4mm, 3/8"	130kgf	With

SERIES 282

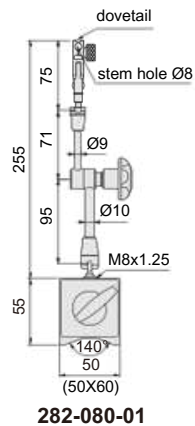
UNIVERSAL MAGNETIC STAND

- ♦ For dial/digital indicators and dial test indicators
- ♦ Stem hole: Ø8mm
- ♦ With find adjustment and dovetail
- ♦ V-block base

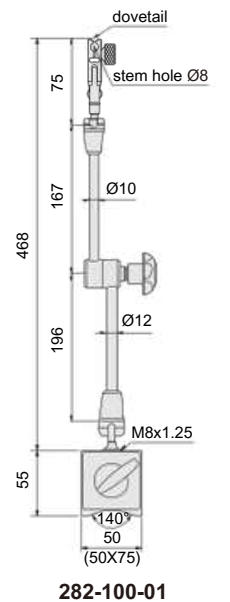
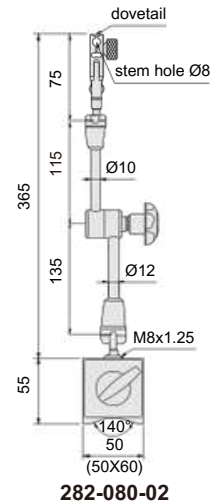
Application



Code	Magnetic force
282-080-01	80kgf
282-080-02	80kgf
282-100-01	100kgf



282-080-01



283

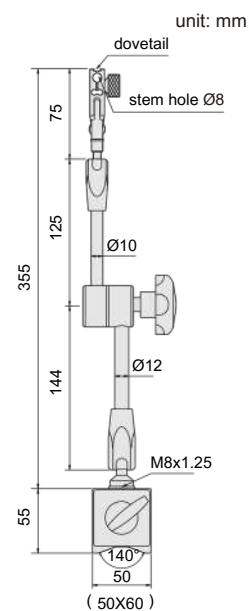
UNIVERSAL MAGNETIC STAND

- ♦ Economic type
- ♦ For dial/digital indicators and dial test indicators
- ♦ Stem hole: Ø8mm
- ♦ With find adjustment and dovetail
- ♦ V-block base

Application



Code	Magnetic force
283-080-01	80kgf



SERIES 279

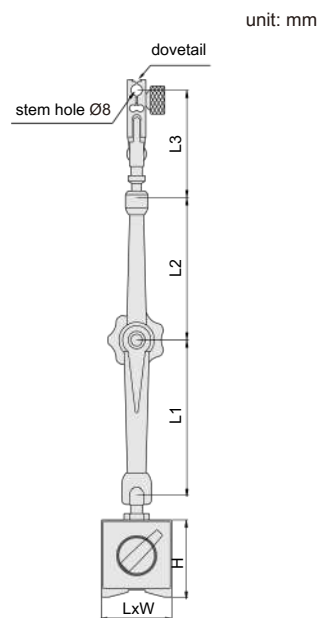
UNIVERSAL MAGNETIC STAND

- ◆ For dial/digital indicators and dial test indicators
- ◆ Aluminum arm
- ◆ With fine adjustment and dovetail
- ◆ V-block base

Application



279-080-01



Code	Magnetic force	Base (LxWxH)	L1	L2	L3
279-030-01	30kgf	35x30x35	56	51	73
279-080-01	80kgf	60x50x55	110	101	76
279-100-01	100kgf	73x50x55	147	130	76

SERIES 277

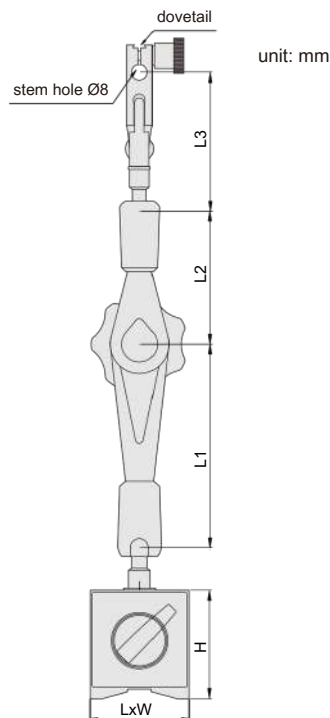
HYDRAULIC UNIVERSAL MAGNETIC STAND

- ◆ For dial/digital indicators and dial test indicators
- ◆ With fine adjustment and dovetail
- ◆ V-block base
- ◆ Magnetic switch made of metal

Application



277-080-01



Code	Magnetic force	Base(LxWxH)	L1	L2	L3
277-080-01	80kgf	60x50x55	65	55	70
277-080-02	80kgf	60x50x55	125	90	70
277-100-01	100kgf	75x50x55	160	125	70

SERIES 278

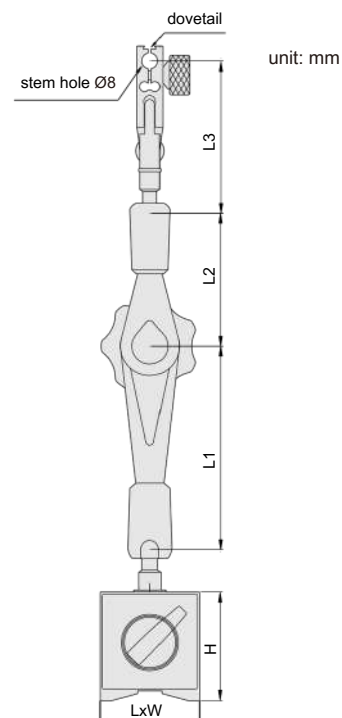
UNIVERSAL MAGNETIC STAND

- ◆ For dial/digital indicators and dial test indicators
- ◆ Super strong arm
- ◆ With fine adjustment and dovetail
- ◆ V-block base

Application



278-080-01



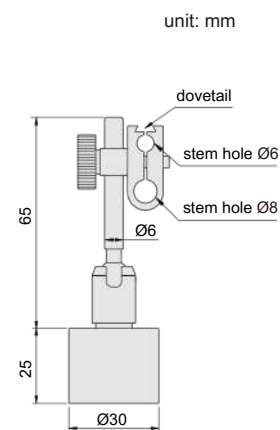
Code	Magnetic force	Base (LxWxH)	L1	L2	L3
278-050-01	50kgf	40x40x40	62	52	79
278-080-01	80kgf	60x50x55	100	81	67
278-100-01	100kgf	73x50x55	145	95	81

288

MINI MAGNETIC STAND

- ◆ For dial test indicators

Application



Code	Magnetic force	Stem hole
288-010-01	10kgf	Ø8mm, Ø6mm

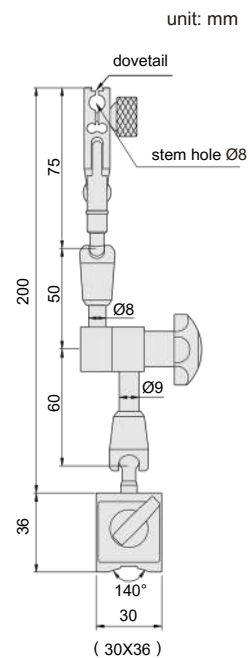


286

MINI MAGNETIC STAND

- ◆ For dial test indicators
- ◆ Stem hole: Ø8mm
- ◆ With find adjustment and dovetail
- ◆ V-block base

Application



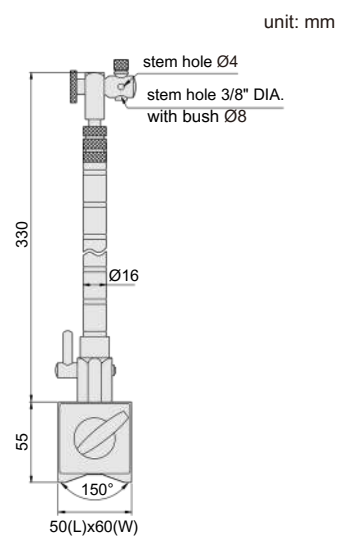
Code	Magnetic force	Stem hole
286-040-01	40kgf	Ø8mm

285

FLEX ARM MAGNETIC STAND

- ◆ For dial test indicators

Application



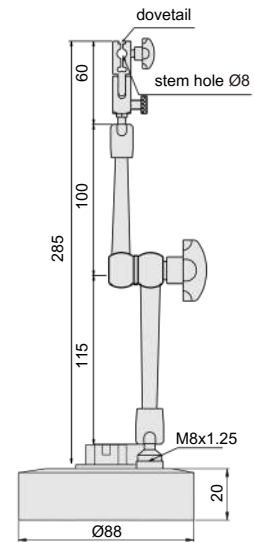
Code	Magnetic force	Applicable holding stem
285-080-01	80kgf	Ø8mm, Ø4mm, 3/8" DIA.

284

VACUUM STAND

- ◆ To be used on granite plates
- ◆ For digital/dial indicators and dial test indicators

Application



unit: mm

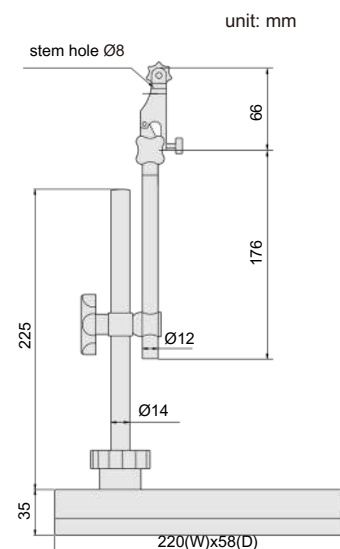
Code	Applicable holding stem	Remark
284-080-01	Ø8mm	with fine adjustment and dovetail groove

287

UNIVERSAL STAND

- ◆ For dial/digital indicators and dial test indicators

Application



unit: mm

Code	Applicable holding stem	Remark
287-001-01	Ø8mm, Ø4mm	with fine adjustment

SERIES 289

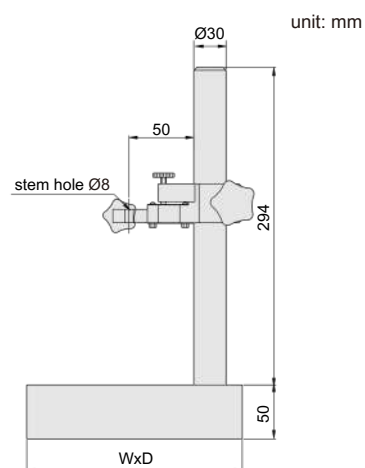
INDICATOR STAND WITH GRANITE BASE

- ◆ Holder vertical travel: 150mm
- ◆ Fine adjustment range: 2mm

Application



289-008-01

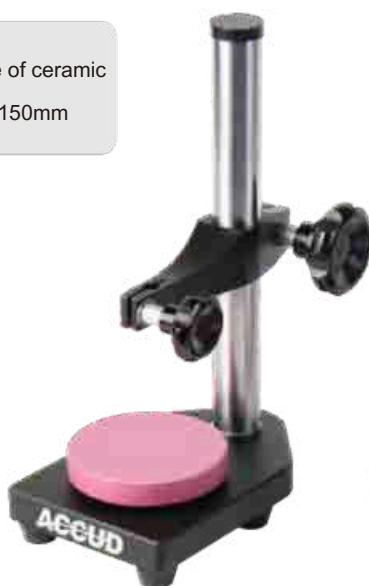


Code	Stem hole	Base flatness	Base size (WxD)
289-008-01	Ø8mm	3.2µm	200x150mm
289-012-01	Ø8mm	3.2µm	300x200mm

SERIES 290

INDICATOR STAND WITH CERAMIC BASE

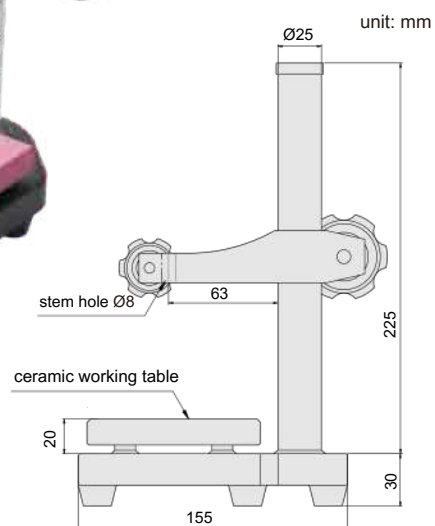
- ◆ Working table is made of ceramic
- ◆ Holder vertical travel: 150mm



290-080-01



290-100-01



Code	Stem hole	Ceramic flatness	Ceramic size
290-080-01	Ø8mm	1.5µm	Ø80mm

Code	Stem hole	Ceramic flatness	Ceramic size
290-100-01	Ø8mm	1.5µm	100x100mm

- ◆ Working table is made of steel
- ◆ Holder vertical travel: 100mm
- ◆ With fine adjustment: $\pm 1.5\text{mm}$
- ◆ Working table surface hardness is $60\pm 2\text{HRC}$



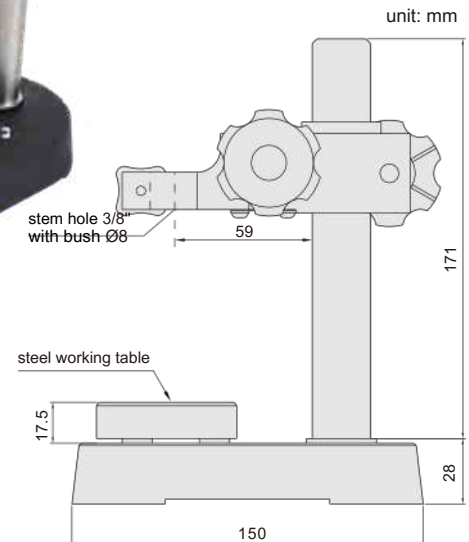
294-080-12



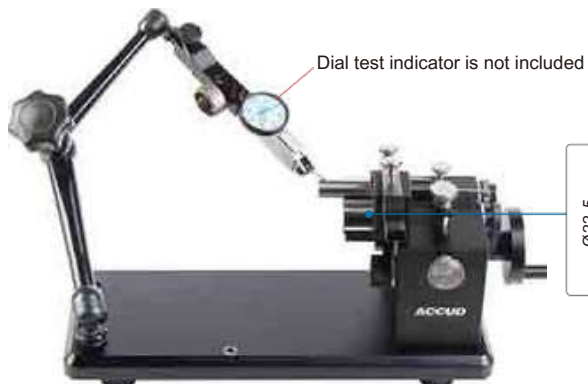
294-060-11

Code	Working table flatness	Working table size
294-060-11	1.5 μm	$\varnothing 60\text{mm}$

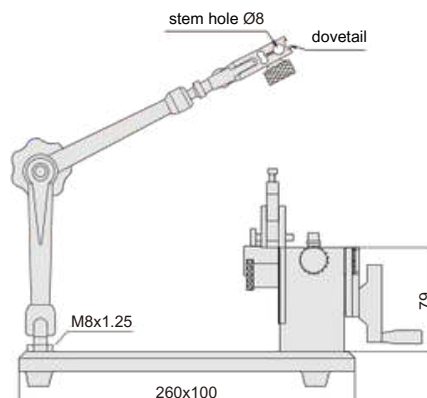
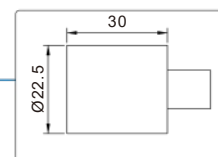
Code	Working table flatness	Working table size
294-080-12	1.5 μm	80x80mm



- ◆ Optional accessories: dial test indicator (code: 261-002-01 or 261-002-02) and Mini magnetic stand (code: 286-040-01)

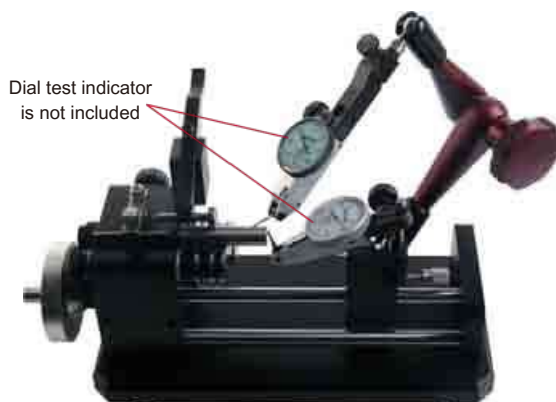


unit: mm

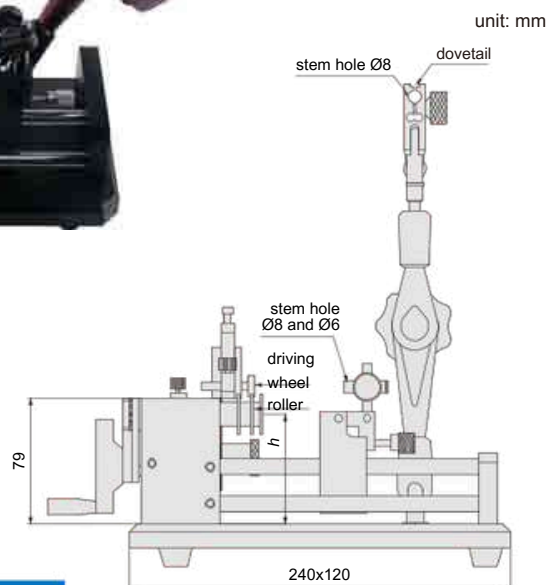


Code	Applicable diameter	Accuracy
660-001-01	$\varnothing 3\text{-}35\text{mm}$	0.002mm

QUICK POSITIONING CONCENTRICITY GAUGE



- ◆ Quick positioning, suitable for mass measurement
- ◆ Optional accessories: dial test indicator (code: 261-002-01 or 261-002-02)



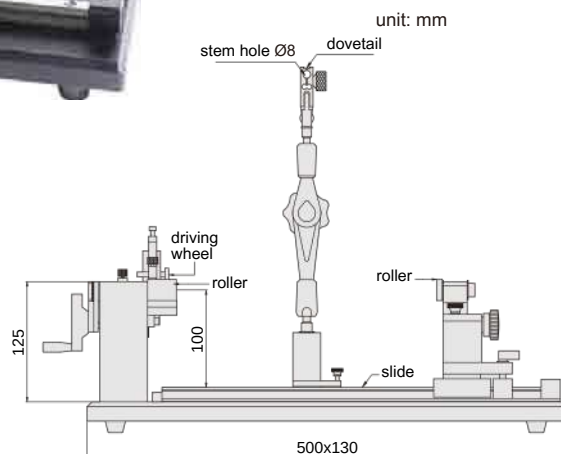
Code	Diameter range	Workpiece length	Accuracy	Center height (h)
661-002-01	Ø1-35mm	15-100mm	2µm	70mm

CONCENTRICITY GAUGE

Dial test indicator is not included



- ◆ Double guide
- ◆ Holding height can be adjusted



Code	Applicable diameter	Workpiece length
662-300-01	Ø3-40mm	300mm

SERIES 410

DIGITAL INTERNAL CALIPER GAUGE



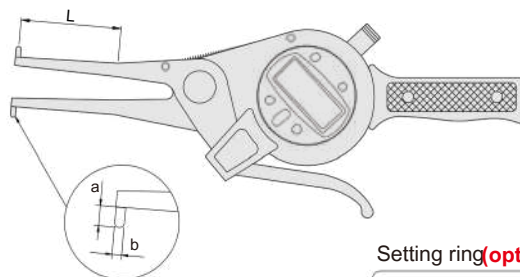
- ◆ Measure the internal dimension
- ◆ Resolution: 0.01mm/0.0005"



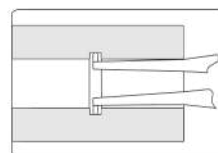
Code	Range	Accuracy	a	b	L
410-035-11	15-35mm/0.6-1.4"	±0.04mm	3	Ø3	50
410-035-11L	15-35mm/0.6-1.4"	±0.04mm	3	Ø3	200
410-055-11	35-55mm/1.4-2.2"	±0.04mm	6	Ø3	80
410-055-11L	35-55mm/1.4-2.2"	±0.04mm	6	Ø3	250
410-075-11	55-75mm/2.2-3" 55-	±0.04mm	8	Ø3	90
410-075-11L	75mm/2.2-3" 75-	±0.04mm	8	Ø3	250
410-095-11	95mm/3-3.8" 75-	±0.04mm	8	Ø3	100
410-095-11L	95mm/3-3.8" 95-	±0.04mm	8	Ø3	250
410-115-11	115mm/3.8-4.6" 95-	±0.04mm	10	Ø3.2	120
410-115-11L	115mm/3.8-4.6"	±0.04mm	10	Ø3.2	250
410-135-11	115-135mm/4.6-5.4"	±0.04mm	10	Ø3.2	120
410-135-11L	115-135mm/4.6-5.4"	±0.04mm	10	Ø3.2	250

410-055-11

unit: mm



Setting ring (optional)



SERIES 411

INTERNAL DIAL CALIPER GAUGE

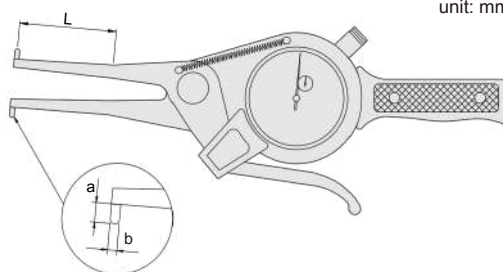
- ◆ Measure the internal dimension
- ◆ Graduation: 0.01mm



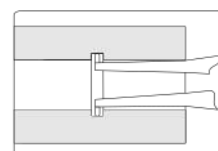
Code	Range	Accuracy	a	b	L
411-035-11	15-35mm	±0.04mm	3	Ø3	50
411-035-11L	15-35mm	±0.04mm	3	Ø3	200
411-055-11	35-55mm	±0.04mm	6	Ø3	80
411-055-11L	35-55mm	±0.04mm	6	Ø3	250
411-075-11	55-75mm	±0.04mm	8	Ø3	90
411-075-11L	55-75mm	±0.04mm	8	Ø3	250
411-095-11	75-95mm	±0.04mm	8	Ø3	100
411-115-11	95-115mm	±0.04mm	10	Ø3.2	120
411-135-11	115-135mm	±0.04mm	10	Ø3.2	120
411-155-11	135-155mm	±0.04mm	10	Ø3.4	190
411-175-11	155-175mm	±0.04mm	10	Ø3.4	190
411-195-11	175-195mm	±0.04mm	10	Ø3.4	190
411-215-11	195-215mm	±0.04mm	10	Ø3.4	190

411-035-11

unit: mm



Setting ring (optional)



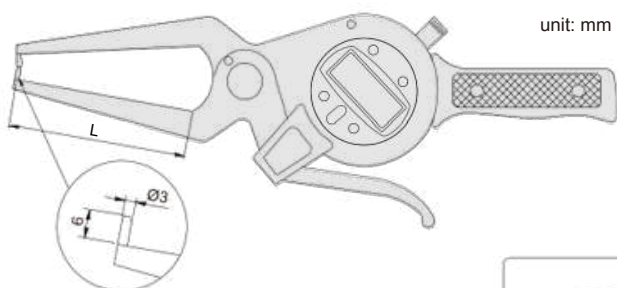
THICKNESS



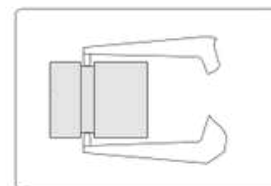
- ◆ Measure the external dimension
- ◆ Resolution: 0.01mm/0.0005"



420-020-11



Code	Range	Accuracy	L
420-020-11	0-20mm/0-0.8" 20-	±0.04mm	60
420-040-11	40mm/0.8-1.6" 40-	±0.04mm	60
420-060-11	60mm/1.6-2.4" 60-	±0.04mm	55
420-080-11	80mm/2.4-3.2" 80-	±0.04mm	55
420-100-11	100mm/3.2-4" 100-	±0.04mm	55



MASUP *innova*

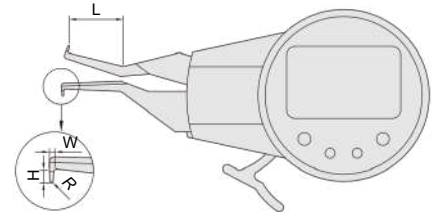


- ◆ Resolution:0.005mm/0.0002"
- ◆ Reading in digit and analog
- ◆ Display can be rotated by 170°
- ◆ Button function: tolerance Go and No-Go display, data preset,max./min. measurement, data holding,inch/metric conversion,absolute/incremental measurement
- ◆ Automatic power off



412-015-11

unit: mm



Code	Range	Repeatability	Accuracy	L	H	W	R
412-015-11	5-15mm	0.01mm	±0.03mm	20	2	1.5	R0.3
412-025-11	5-25mm	0.01mm	±0.03mm	35	1.5	1.0	R0.3
412-030-11	10-30mm	0.01mm	±0.03mm	55	5.5	2.5	R0.5
412-040-11	20-40mm	0.01mm	±0.03mm	80	6.0	3.0	R0.5
412-050-11	30-50mm	0.01mm	±0.03mm	80	8.0	3.0	R0.5
412-060-11	40-60mm	0.01mm	±0.03mm	80	8.0	3.0	R0.5



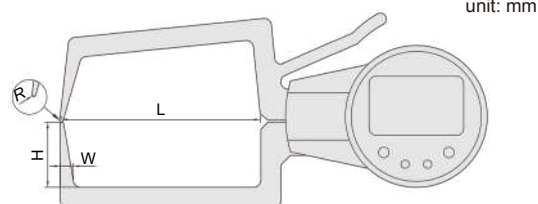
display can be rotated by 170°

MASUP *INNOVA*

- ◆ Resolution: 0.005mm/0.0002"
- ◆ Reading in digit and analog
- ◆ Display can be rotated by 170°
- ◆ Button function: tolerance Go and No-Go display, data preset, max./min. measurement, data holding, inch/metric conversion, absolute/incremental measurement
- ◆ Automatic power off



422-020-11



Code	Range	Repeatability	Accuracy	L	H	W	R
422-020-11	0-20mm	0.01mm	±0.03mm	80	25	6.5	R0.5
422-030-11	10-30mm	0.01mm	±0.03mm	80	25	6.5	R0.5
422-040-11	20-40mm	0.01mm	±0.03mm	80	25	6.5	R0.5
422-050-11	30-50mm	0.01mm	±0.03mm	80	25	6.5	R0.5
422-060-11	40-60mm	0.01mm	±0.03mm	80	25	6.5	R0.5



display can be rotated by 170°

MASUP



SERIES 419

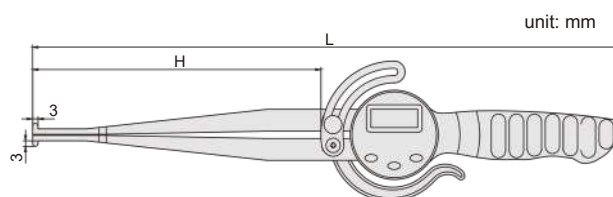
DIGITAL INTERNAL CALIPER GAUGE



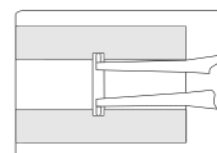
- ◆ For measuring the internal dimension
- ◆ Buttons: on/off, zero, data preset, mm/inch, data hold
- ◆ With fraction reading
- ◆ Automatic power off



419-008-11



Code	Range	Resolution	Accuracy	L	H
419-006-11	12.7-165mm/0.5-6.5"	0.1mm/0.01"/1/64"	0.2mm/0.01"	252	85
419-008-11	12.7-216mm/0.5-8.5"	0.1mm/0.01"/1/64"	0.3mm/0.02"	327	160



SERIES 429

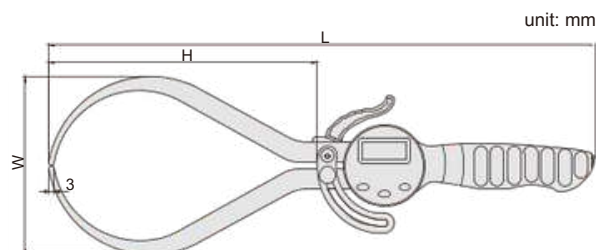
DIGITAL EXTERNAL CALIPER GAUGE



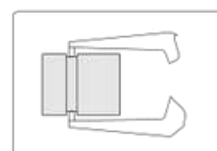
- ◆ For measuring the thickness
- ◆ Buttons: on/off, zero, data preset, mm/inch, data hold
- ◆ With fraction reading
- ◆ Automatic power off



429-008-11

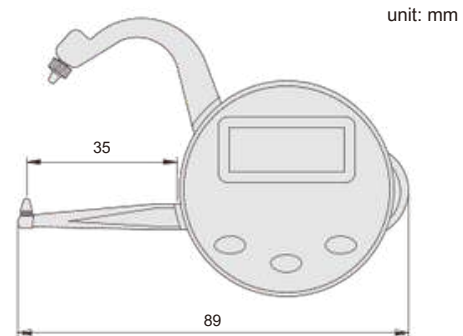


Code	Range	Resolution	Accuracy	L	H	W
429-006-11	0-150mm/0-6"	0.1mm/0.01"/1/64"	0.2mm/0.01"	273	105	75
429-008-11	0-200mm/0-8"	0.1mm/0.01"/1/64"	0.3mm/0.02"	328	160	106





- ◆ Buttons: on/off, zero, mm/inch, data hold
- ◆ Automatic power off



Code	Range	Resolution	Accuracy	Repeatability
457-001-01	0-25.4mm/0-1"	0.01mm, 0.001"	0.05mm	0.02mm

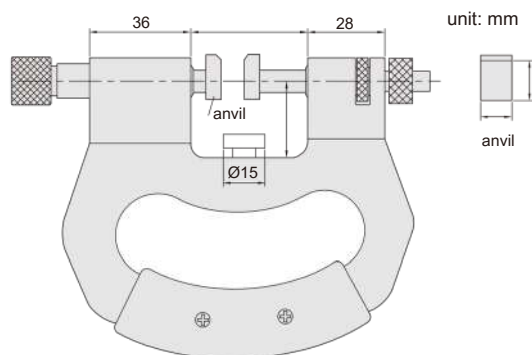
MASUP *INNOVA*



dial indicator is
not included

431-025-11

- ◆ For quick Go/No-Go judgment of diameter of cylinders and shafts
- ◆ Anvil retracting stroke: 3mm
- ◆ Measuring force: 6-9N
- ◆ Carbide measuring faces
- ◆ Front edges of anvils are chamfered for easy workpiece insertion
- ◆ Optional indicators:
 - dial indicator, range 10mm, graduation 0.01mm (code 222-010-11)
 - digital indicator, range 12.7mm/0.5", resolution 0.001mm/0.0005" (code 211-010-03)
 - digital indicator, range 12.7mm/0.5", resolution 0.01mm/0.0005" (code 211-010-13)



Optional indicators (optional)

Code	Range	a	h
431-025-11	0-25mm	25-	42
431-050-11	50mm	50-	69
431-075-11	75mm	75-	94
431-100-11	100mm		119
431-125-11	100-125mm		144
431-150-11	125-150mm		169
431-175-11	150-175mm		194
431-200-11	175-200mm		219
431-225-11	200-225mm		244
431-250-11	225-250mm		269
431-275-11	250-275mm		294
431-300-11	275-300mm		319





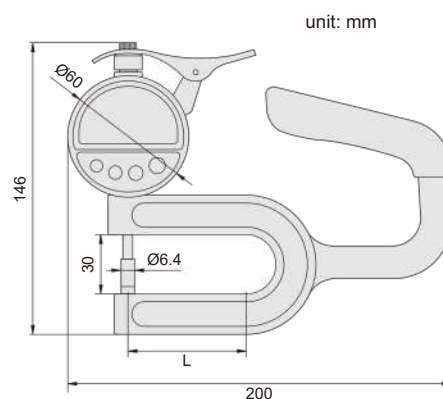
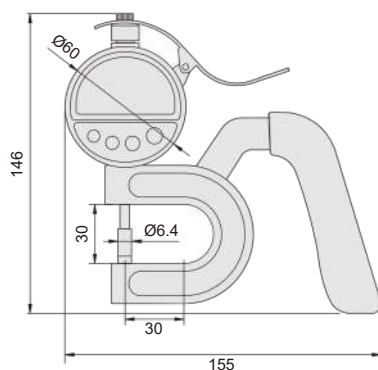
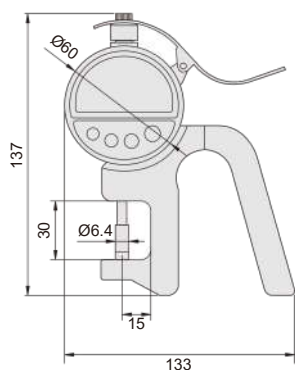
442-105-15



442-101-30



442-101-60



- ◆ Absolute encoder, the original data remains after power off
- ◆ With recharge cable (only 442-105-15 recharge and data output shared)
- ◆ Button: data output, on/off, zero, inch/mm conversion, measuring direction set, data preset absolute/incremental measurement, max./min./range measurement, tolerance set, hold
- ◆ Measuring force: 0.5-1N
- ◆ With analog reading
- ◆ Power: rechargeable battery, for 12 hours continuous working (full charge)

Cable (included)



Code	Range	Resolution	Accuracy	Repeatability	L
442-105-15	0-10mm/0-0.4"	0.0005mm/0.00002"	±0.0015mm	0.0005mm	-
442-101-15	0-10mm/0-0.4"	0.001mm/0.00005"	±0.002mm	0.001mm	-
442-101-30	0-10mm/0-0.4"	0.001mm/0.00005"	±0.002mm	0.001mm	-
442-101-60	0-10mm/0-0.4"	0.001mm/0.00005"	±0.003mm	0.001mm	60
442-101-00	0-10mm/0-0.4"	0.001mm/0.00005"	±0.004mm	0.001mm	100

SERIES 441

THICKNESS GAUGE



- ◆ Ceramic anvil
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Automatic power off
- ◆ Data output(cable code:200-03 or 200-04)



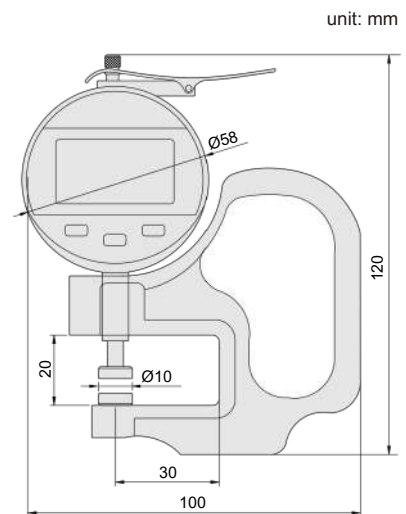
Resolution 0.001mm/0.00005"

Code	Range	Accuracy
441-010-01	0-10mm/0-0.4"	±0.005mm

Resolution 0.01mm/0.0005"

Code Range	Accuracy
441-010-11	±0.02mm

441-010-11

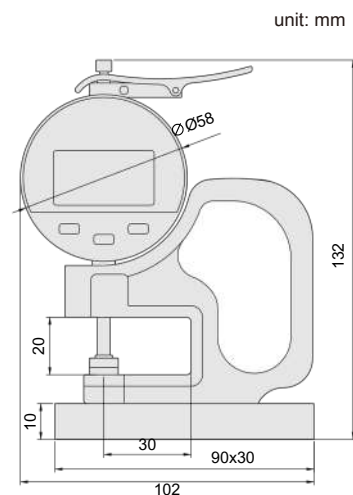


441

THICKNESS GAUGE



- ◆ Ceramic spindle tip and anvil
- ◆ Buttons: on/off, zero, mm/inch, ABS
- ◆ Automatic power off
- ◆ Data output(cable code:200-03 or 200-04)



Code	Range	Resolution	Accuracy
441-010-11B	0-10mm/0-0.4"	0.01mm/0.0005"	±0.02mm

THICKNESS



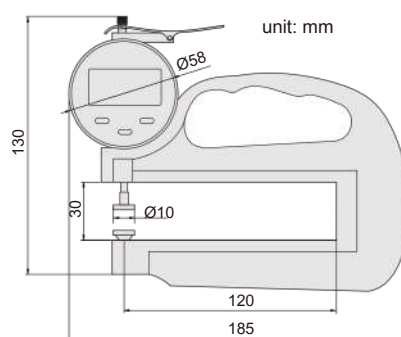
460

DIGITAL THICKNESS GAUGE



S

- ◆ Ceramic spindle tip and anvil
- ◆ Buttons: on/off, zero, mm/inch, ABS
- ◆ Automatic power off
- ◆ Data output(cable code:200-03 or 200-04)



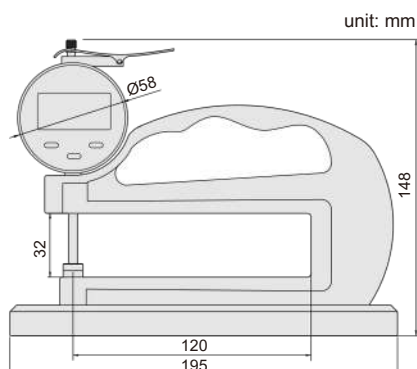
Code	Range	Resolution	Accuracy
460-010-11	0-10mm/0-0.4"	0.01mm/0.0005"	±0.02mm

460

DIGITAL THICKNESS GAUGE



- ◆ Ceramic spindle tip and anvil
- ◆ Buttons: on/off, zero, mm/inch, ABS
- ◆ Automatic power off
- ◆ Data output(cable code:200-03 or 200-04)
- ◆ With metal base



Code	Range	Resolution	Accuracy
460-010-11B	0-10mm/0-0.4"	0.01mm/0.0005"	±0.02mm

THICKNESS

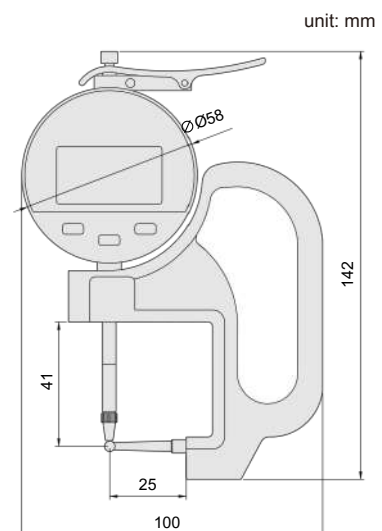
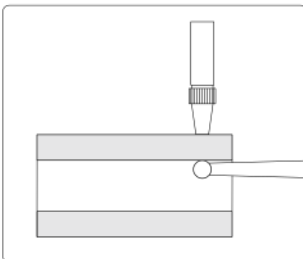


461

DIGITAL TUBE THICKNESS GAUGE



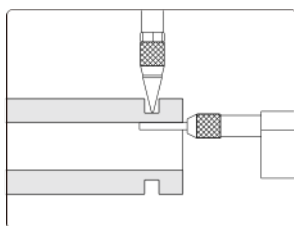
- ◆ Buttons: on/off, zero, mm/inch, ABS
- ◆ Automatic power off
- ◆ Data output(cable code:200-03 or 200-04)



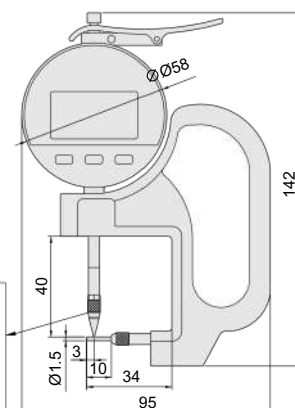
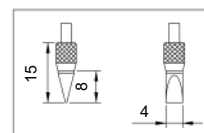
Code	Range	Resolution	Accuracy
461-010-11	0-10mm/0-0.4"	0.01mm/0.0005"	±0.02mm



- ◆ Buttons: on/off, zero, mm/inch, ABS
- ◆ Automatic power off
- ◆ Data output(cable code:200-03 or 200-04)



unit: mm

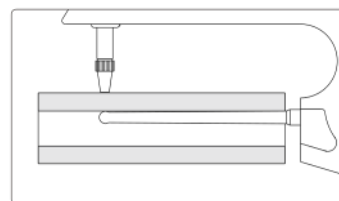
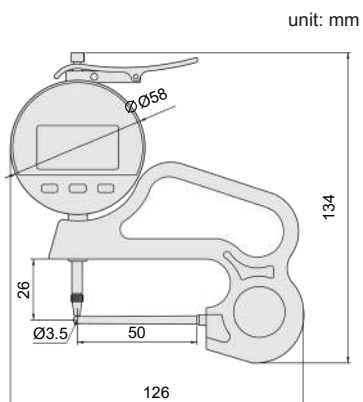


Code	Range	Resolution	Accuracy
462-010-11	0-10mm/0-0.4"	0.01mm/0.0005"	±0.02mm

MASUP *INNOVA*



- ◆ Buttons: on/off, zero, mm/inch, ABS
- ◆ Automatic power off
- ◆ Data output(cable code:200-03 or 200-04)



Code	Range	Resolution	Accuracy
463-010-11	0-10mm/0-0.4"	0.01mm/0.0005"	±0.02mm

MASUP

INNOVA



MASUP *INNOVA*

SERIES 465

DIGITAL THICKNESS GAUGE WITH CONSTANT MEASURING FORCE

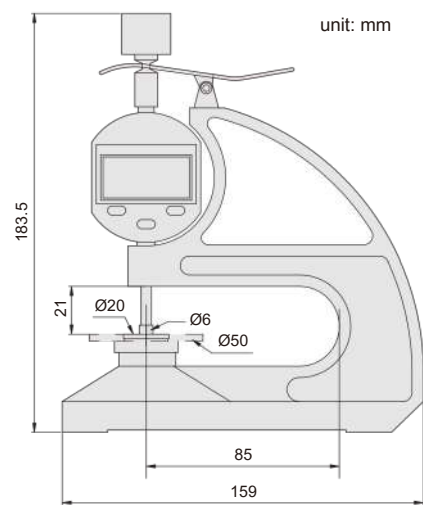


- Buttons: on/off, zero, unit (mm/in/fraction)
- Automatic power off
- With 50g standard weight block

Aluminum alloy stage



465-010-01



unit: mm

Code	Range	Resolution	Accuracy
465-010-01	0-12.7mm/0.5"	0.001mm/0.00005"	±0.005mm
465-010-11	0-12.7mm/0.5"	0.01mm/0.0005"	±0.02mm

450

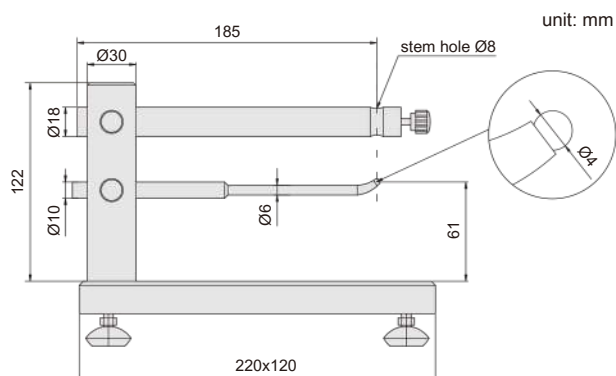
PET BOTTLE WALL THICKNESS GAUGE

- Optional accessories: digital indicator (code: 212-010-13)

Digital indicator is not included



Application



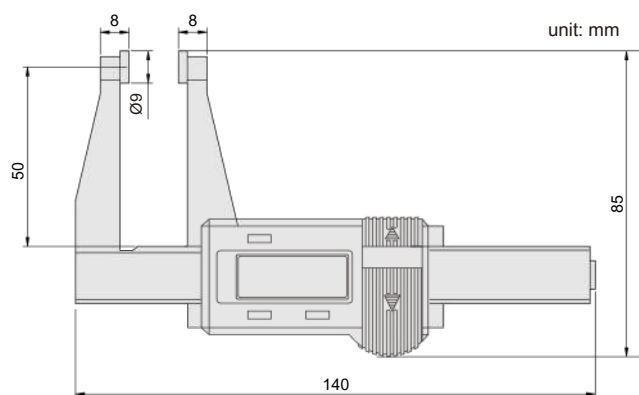
Code	Measuring thickness	Accuracy
450-010-11	12.7mm	±0.02mm

433

DIGITAL SNAP GAUGE



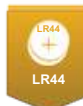
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power on/off
- Data output
- Made of stainless steel



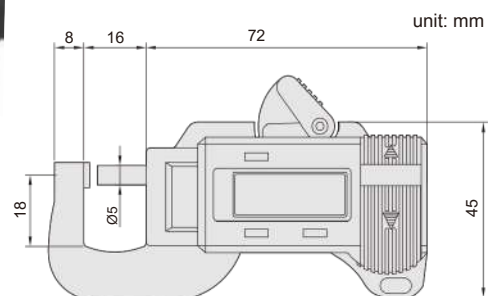
Code	Range	Accuracy
433-002-11	0-50mm/0-2"	±0.03mm

432

DIGITAL SNAP GAUGE



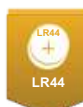
- Buttons: on/off, zero, mm/inch



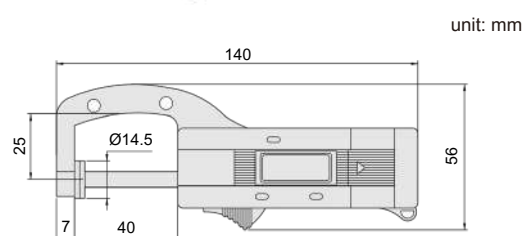
Code	Range	Resolution	Accuracy
432-012-11	0-12.7mm/0-0.5"	0.01mm/0.0005"	±0.03mm

434

DIGITAL SNAP GAUGE



- Buttons: on/off, zero, mm/inch
- Automatic power on/off



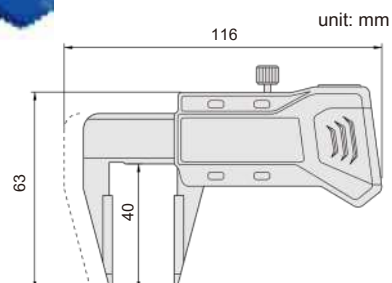
Code	Range	Resolution	Accuracy
434-001-11	0-25mm/0-1"	0.01mm/0.0005"	±0.03mm

435

DIGITAL SNAP GAUGE



- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/in, INC
- Automatic power on/off
- Data output(cable code:100-03 or 100-04)
- Made of stainless steel

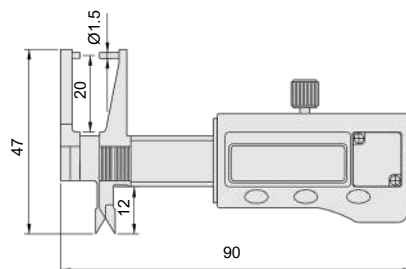
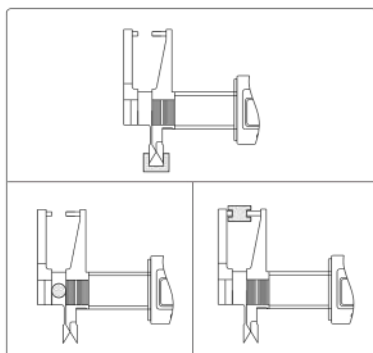


Code	Range	Accuracy
435-001-11	0-25mm/0-1"	±0.03mm

THICKNESS



- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Made of stainless steel



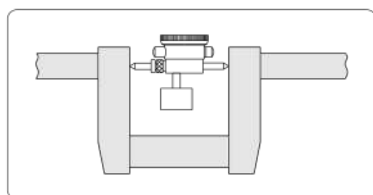
unit: mm

Code	Range	Accuracy
436-001-11	0-25mm/0-1"	±0.03mm

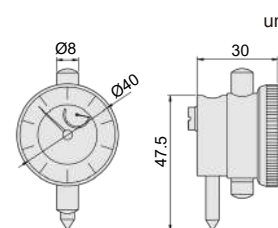
SERIES 298

CRANKSHAFT TESTER

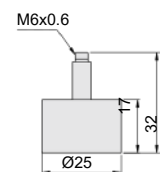
- ◆ To test crankshaft deflection
- ◆ The balance block is mounted on the back of dial indicator to keep the dial indicator facing up



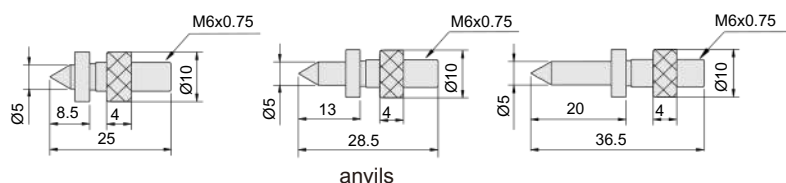
298-012-11



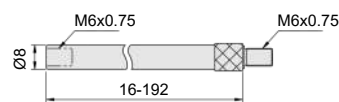
dial indicator



balance block



anvils



extension rods

Code	Range	Dial indicator range	Graduation	Accuracy	Extension rods
298-012-11	60-300mm	3mm	0.01mm	±0.016mm	16mm, 32mm, 64mm, 128mm
298-020-11	60-500mm	3mm	0.01mm	±0.016mm	16mm, 32mm, 64mm, 96mm, 128mm, 192mm



- ◆ Made of ceramic
- ◆ Meet ISO 3650
- ◆ With manufacturer inspection certificate
- ◆ Code explanation

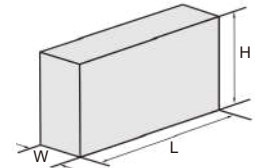
511-□□□-□X

→ 0: grade0
→ 1: grade1



Size:

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



Example:

Code	Quantity	Grade
511-112-00	112	0
511-112-01	112	1

511-087-00

Code	Blocks per set	Block allocation		
		Size(mm)	Step(mm)	Quantity
511-122-0X	122	1.0005		1
		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		2
511-112-0X	112	1.0005		1
		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
511-103-0X	103	1.005		1
		1.01-1.49	0.01	49
		0.5-24.5	0.5	49
		25-100	25	4
511-088-0X	88	1.0005		1
		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
511-087-0X	87	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
		1.005		1
511-076-0X	76	1.005		1
		1.01-1.49	0.01	49
		0.5-9.5	0.5	19
		10-40	10	4
		50-100	25	3

Code	Blocks per set	Block allocation		
		Size(mm)	Step(mm)	Quantity
511-056-0X	56	0.5		1
		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
511-047-0X	47	25-100	25	4
		1.005		1
		1.01-1.09	0.01	9
		1.1-1.9	0.1	9
		1-24	1	24
511-047-1X	47	25-100	25	4
		1.005		1
		1.01-1.19	0.01	19
		1.2-1.9	0.1	8
		1-9	1	9
511-046-0X	46	10-100	10	10
		1.001-1.009	0.001	9
		1.01-1.09	0.01	9
		1.1-1.9	0.1	9
		1-9	1	9
511-034-0X	34	10-100	10	10
		1.0005		1
		1.001-1.009	0.001	9
		1.01-1.09	0.01	9
		1.1-1.9	0.1	9
511-032-0X	32	1-5	1	5
		10		1
		1.005		1
		1.01-1.09		9
		1.1-1.9	0.01	9
		1-9	0.1	9
		10-30	1	3
		60	10	1

- ◆ Made of carbide
- ◆ Meet ISO 3650
- ◆ With manufacturer inspection certificate
- ◆ Code explanation

512-□□□-□XT

→ 0: grade0

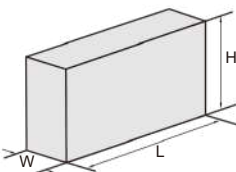
→ 1: grade1

Example:

Code	Grade	Quantity
512-112-00T	0	112
512-112-01T	1	112

Size:

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



512-087-01T

Plastic box



Code	Blocks per set	Block allocation		
		Size(mm)	Step(mm)	Quantity
512-122-0XT	122	1.0005		1
		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
512-112-0XT	112	25-75	50	2
		1.0005		1
		1.001-1.009	0.001	9
		1.01-1.49	0.01	49
		0.5-24.5	0.5	49
512-103-0XT	103	25-100	25	4
		1.005		1
		1.01-1.49	0.01	49
		0.5-24.5	0.5	49
512-087-0XT	87	25-100	25	4
		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
512-083-0XT	83	0.5		1
		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
		1.005		1
		1.01-1.49	0.01	49
512-076-0XT	76	0.5-9.5	0.5	19
		10-40	10	4
		50-100	25	3

Code	Blocks per set	Block allocation		
		Size(mm)	Step(mm)	Quantity
512-047-0XT	47	1.005		1
		1.01-1.09	0.01	9
		1.1-1.9	0.1	9
		1-24	1	24
		25-100	25	4
512-047-1XT	47	1.005		1
		1.01-1.19	0.01	19
		1.2-1.9	0.1	8
		1-9	1	9
		10-100	10	10
512-046-0XT	46	1.001-1.009	0.001	9
		1.01-1.09	0.01	9
		1.1-1.9	0.1	9
		1-9	1	9
		10-100	10	10
512-034-0XT	34	1.0005		1
		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
512-032-0XT	32	1.005		1
		1.01-1.09	0.01	9
		1.1-1.9	0.1	9
		1-9	1	9
		10-30	10	3
		50		1



- ◆ Made of steel
- ◆ Meet ISO 3650
- ◆ With manufacturer inspection certificate
- ◆ Code explanation

512-□□□-□X

- 0: grade0
- 1: grade1
- 2: grade2

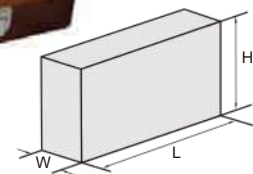
Example:

Code	Grade	Quantity
512-112-00	0	112
512-112-01	1	112
512-112-02	2	112

Plastic box



512-087-02



Size:

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

Code	Blocks per set	Block allocation		
		Size(mm)	Step (mm)	Quantity
512-122-0X	122	1.0005		1
		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
512-112-0X	112	25-75	50	2
		1.0005		1
		1.001-1.009	0.001	9
		1.01-1.49	0.01	49
512-103-0X	103	0.5-24.5	0.5	49
		25-100	25	4
		1.0005		1
		1.01-1.49	0.01	49
512-088-0X	88	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
512-087-0X	87	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

Code	Blocks per set	Block allocation		
		Size(mm)	Step (mm)	Quantity
512-083-0X	83	0.5		1
		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
512-076-0X	76	10-100	10	10
		1.005		1
		1.01-1.49	0.01	49
		0.5-9.5	0.5	19
512-056-0X	56	10-40	10	4
		50-100	25	3
		0.5		1
		1.001-1.009	0.001	9
512-047-0X	47	1.01-1.09	0.01	9
		1.1-1.9	0.1	9
		1-24	1	24
		25-100	25	4
512-047-1X	47	1.005		1
		1.01-1.19	0.01	19
		1.2-1.9	0.1	8
		1-9	1	9

Code	Blocks per set	Block allocation		
		Size(mm)	Step (mm)	Quantity
512-046-0X	46	1.001-1.009	0.001	9
		1.01-1.09	0.01	9
		1.1-1.9	0.1	9
		1-9	1	9
512-038-0X	38	10-100	10	10
		1.005		1
		1.01-1.09	0.01	9
		1.1-1.9	0.1	9
512-034-0X	34	1-9	1	9
		10-100	10	10
		1.0005		1
		1.001-1.009	0.001	9
512-032-0X	32	1.01-1.09	0.01	9
		1.1-1.9	0.1	9
		1-9	1	9
		10-30	10	3
512-032-1X	32	50		1
		1.005		1
		1.01-1.09	0.01	9
		1.1-1.9	0.1	9
512-008-0X	8	1-9	1	9
		10-30	10	3
		60		1
		125-175	25	3

SERIES 512

STEEL GAUGE BLOCK SET



- ◆ Made of alloy steel
- ◆ Meet ASME B89.1.9
- ◆ With manufacturer inspection certificate
- ◆ Code explanation

512-□□□-□X^I

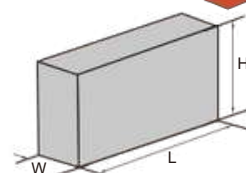
→ 0: grade 0
→ 1: grade 1
→ 2: grade 2

Plastic box



512-081-00I

Size:



Size(L)	W	H
0.02≤L≤0.394"	0.354"	1.181"
L>0.394"	0.354"	1.378"

Example:

Code	Quantity	Grade
512-036-00I	36	0
512-036-01I	36	1
512-036-02I	36	2

Code	Blocks per set	Block allocation		
		Size(inch)	Step(inch)	Quantity
512-008-0XI	8	5-8	1	4
		10-12	2	2
		16		1
		20		1
512-081-0XI	81	0.1001-0.1009	0.0001	9
		0.101-0.149	0.001	49
		0.05-0.95	0.05	19
		1-4	1	4

Code	Blocks per set	Block allocation		
		Size(inch)	Step(inch)	Quantity
512-036-0XI	36	0.05		1
		0.1001-0.1009	0.0001	9
		0.101-0.109	0.001	9
		0.11-0.19 0.1-	0.01	9
		0.5	0.1	5
		1		1
		2		1
		4		1

SERIES 515

CERAMIC INDIVIDUAL GAUGE BLOCK(<10MM)



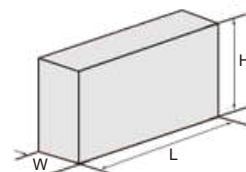
- ◆ Made of ceramic
- ◆ Meet ISO 3650
- ◆ With manufacturer inspection certificate
- ◆ Code explanation

515-□□□-□X

decimal ← integer
→ 0: grade 0
→ 1: grade 1



515-700-70



Size:

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

Supplied below size, unit:mm

0.5	1.01	1.13	1.25	1.37	1.49	5
1	1.02	1.14	1.26	1.38	1.5	5.1
1.0005	1.03	1.15	1.27	1.39	1.6	5.5
1.001	1.04	1.16	1.28	1.4	1.7	6
1.002	1.05	1.17	1.29	1.41	1.8	6.5
1.003	1.06	1.18	1.3	1.42	1.9	7
1.004	1.07	1.19	1.31	1.43	2	7.5
1.005	1.08	1.2	1.32	1.44	2.5	7.7
1.006	1.09	1.21	1.33	1.45	3	8
1.007	1.1	1.22	1.34	1.46	3.5	8.5
1.008	1.11	1.23	1.35	1.47	4	9
1.009	1.12	1.24	1.36	1.48	4.5	9.5

Example:

Code	Grade	Size(mm)
515-500-00	0	0.5
515-500-01	1	0.5
515-000-10	0	1
515-0005-11	1	1.0005
515-400-11	1	1.4
515-480-11	1	1.48

SERIES 516

CERAMIC INDIVIDUAL GAUGE BLOCK (≥10MM)

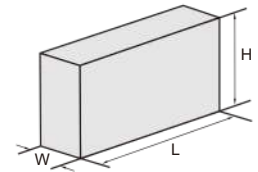


- ◆ Made of ceramic
- ◆ Meet ISO 3650
- ◆ With manufacturer inspection certificate
- ◆ Code explanation

516-□□□-□X
 → 0: grade 0
 → 1: grade 1



516-800-01



Example:

Code	Grade	Size(mm)
516-200-00	0	20
516-200-01	1	20

Size:

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

Code	Size(mm)	Code	Size(mm)	Code	Size(mm)	Code	Size(mm)	Code	Size(mm)
516-100-0X	10	516-140-0X	14	516-185-0X	18.5	516-228-0X	22.8	516-600-0X	60
516-103-0X	10.3	516-145-0X	14.5	516-190-0X	19	516-230-0X	23	516-700-0X	70
516-105-0X	10.5	516-150-0X	15	516-195-0X	19.5	516-235-0X	23.5	516-750-0X	75
516-110-0X	11	516-155-0X	15.5	516-200-0X	20	516-240-0X	24	516-800-0X	80
516-115-0X	11.5	516-160-0X	16	516-202-0X	20.2	516-245-0X	24.5	516-900-0X	90
516-120-0X	12	516-165-0X	16.5	516-205-0X	20.5	516-250-0X	25	516-004-1X	100
516-125-0X	12.5	516-170-0X	17	516-210-0X	21	516-300-0X	30	516-005-1X	125
516-129-0X	12.9	516-175-0X	17.5	516-215-0X	21.5	516-400-0X	40	516-006-1X	150
516-130-0X	13	516-176-0X	17.6	516-220-0X	22	516-413-0X	41.3		
516-135-0X	13.5	516-180-0X	18	516-225-0X	22.5	516-500-0X	50		

SERIES 513

STEEL INDIVIDUAL GAUGE BLOCK (<10MM)

CUSTOM-MADE

other sizes are available upon request

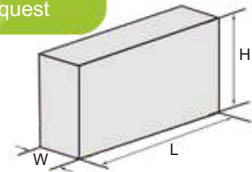


- ◆ Made of steel
- ◆ Meet ISO 3650
- ◆ With manufacturer inspection certificate
- ◆ Code explanation

513-□□□-□X
 decimal ← integer
 → 0: grade 0
 → 1: grade 1
 → 2: grade 2



513-700-70



Size:

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

Supplied below size, unit:mm

0.5	0.69	0.88	0.998	1.07	1.26	1.45	2.008	2.19	2.38	4
0.51	0.7	0.89	0.999	1.08	1.27	1.46	2.009	2.2	2.39	4.5
0.52	0.71	0.9	1	1.09	1.28	1.47	2.01	2.21	2.4	5
0.53	0.72	0.91	1.0005	1.1	1.29	1.48	2.02	2.22	2.41	5.1
0.54	0.73	0.92	1.001	1.11	1.3	1.49	2.03	2.23	2.42	5.5
0.55	0.74	0.93	1.002	1.12	1.31	1.5	2.04	2.24	2.43	6
0.56	0.75	0.94	1.003	1.13	1.32	1.6	2.05	2.25	2.44	6.5
0.57	0.76	0.95	1.004	1.14	1.33	1.7	2.06	2.26	2.45	7
0.58	0.77	0.96	1.005	1.15	1.34	1.8	2.07	2.27	2.46	7.5
0.59	0.78	0.97	1.006	1.16	1.35	1.9	2.08	2.28	2.47	7.7
0.6	0.79	0.98	1.007	1.17	1.36		2.09	2.29	2.48	8
0.61	0.8	0.99	1.008	1.18	1.37	2.0005	2.1	2.3	2.49	8.5
0.62	0.81	0.991	1.009	1.19	1.38	2.001	2.11	2.31	2.5	9
0.63	0.82	0.992	1.01	1.2	1.39	2.002	2.12	2.32	2.6	9.5
0.64	0.83	0.993	1.02	1.21	1.4	2.003	2.13	2.33	2.7	
0.65	0.84	0.994	1.03	1.22	1.41	2.004	2.14	2.34	2.8	
0.66	0.85	0.995	1.04	1.23	1.42	2.005	2.15	2.35	2.9	
0.67	0.86	0.996	1.05	1.24	1.43	2.006	2.16	2.36	3	
0.68	0.87	0.997	1.06	1.25	1.44	2.007	2.17	2.37	3.5	

GAUGE



SERIES 514

STEEL INDIVIDUAL GAUGE BLOCK ($\geq 10\text{mm}$)

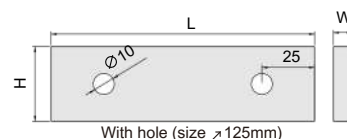
- ◆ Made of steel
- ◆ Meet ISO 3650
- ◆ With manufacturer inspection certificate
- ◆ Code explanation

514-□□□-□X
 → 0: grade0
 → 1: grade1
 → 2: grade2



514-004-1X

CUSTOM-MADE
 other sizes are available
 upon request



Size:

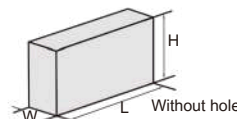
Size (L)	W	H
$0.5\text{mm} \leq L \leq 10\text{mm}$	9mm	30mm
$L > 10\text{mm}$	9mm	35mm

Code	Size(mm)
514-100-0X	10
514-103-0X	10.3
514-105-0X	10.5
514-110-0X	11
514-115-0X	11.5
514-120-0X	12
514-125-0X	12.5
514-129-0X	12.9
514-130-0X	13
514-135-0X	13.5
514-140-0X	14
514-145-0X	14.5
514-150-0X	15

Code	Size(mm)
514-155-0X	15.5
514-160-0X	16
514-165-0X	16.5
514-170-0X	17
514-175-0X	17.5
514-176-0X	17.6
514-180-0X	18
514-185-0X	18.5
514-190-0X	19
514-195-0X	19.5
514-200-0X	20
514-202-0X	20.2
514-205-0X	20.5

Code	Size(mm)
514-210-0X	21
514-215-0X	21.5
514-220-0X	22
514-225-0X	22.5
514-228-0X	22.8
514-230-0X	23
514-235-0X	23.5
514-240-0X	24
514-245-0X	24.5
514-250-0X	25
514-300-0X	30
514-350-0X	35
514-400-0X	40

Code	Size(mm)
514-413-0X	41.3
514-450-0X	45
514-500-0X	50
514-600-0X	60
514-700-0X	70
514-750-0X	75
514-800-0X	80
514-900-0X	90
514-004-1X	100
514-005-1X	125
514-006-1X	150
514-007-1X	175
514-008-1X	200



Code	Size(mm)
514-010-1X	250
514-012-1X	300
514-016-1X	400
514-020-1X	500
514-024-1X	600
514-028-1X	700
514-030-1X	750
514-032-1X	800
514-036-1X	900
514-040-1X	1000

SERIES 514

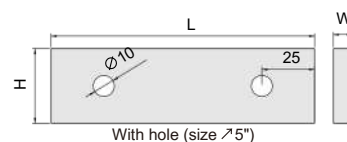
INDIVIDUAL STEEL GAUGE BLOCKS

- ◆ Made of alloy steel
- ◆ Meet ASME B89.1.9
- ◆ With manufacturer inspection certificate
- ◆ Code explanation

514-□□□-□XI
 → 0: grade0
 → 1: grade1
 → 2: grade2



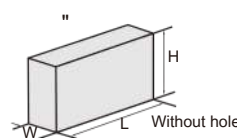
514-000-4XI



Size:

Size (L)	W	H
$.02" \leq L \leq .394"$	.354	1.181"
$L > .394"$	"	1.378"

.354



Example:

Code	Grade	Size (L)
514-000-10I	0	1"
514-000-11I	1	1"
514-000-12I	2	1"

Code	Size(L)
514-000-1XI	1"
514-000-2XI	2"
514-000-3XI	3"
514-000-4XI	4"
514-000-5XI	5"
514-000-6XI	6"

Code	Size(L)
514-000-7XI	7"
514-000-8XI	8"
514-010-0XI	10"
514-012-0XI	12"
514-016-0XI	16"
514-020-0XI	20"

SERIES 517

GAUGE BLOCK SET FOR CALIPER INSPECTION



- ◆ For checking calipers accuracy
- ◆ With ring gauges
- ◆ Meet ISO 3650
- ◆ Gauge blocks are made of alloy steel
- ◆ With manufacturer inspection certificate



517-005-01

Code	Gauge block allocation	Quantity	Grade	Ring gauge
517-005-01	30, 41.3, 131.4mm 30,	5pcs	1	Ø4, Ø25mm
517-006-01	41.3, 131.4, 243.5mm	6pcs	1	Ø4, Ø25mm

SERIES 517

GAUGE BLOCK SET FOR CALIPER INSPECTION



- ◆ For checking calipers accuracy
- ◆ Meet ISO 3650
- ◆ Gauge blocks are made of alloy steel
- ◆ With manufacturer inspection certificate



517-012-01

Code	Gauge block allocation	Quantity	Grade
517-012-01	10, 20, 20, 41.2, 51.2, 81.5, 101.2, 121.5, 121.8, 191.8, 201.5, 291.8mm	12pcs	0
517-012-02	10, 20, 20, 41.2, 51.2, 81.5, 101.2, 121.5, 121.8, 191.8, 201.5, 291.8mm	12pcs	1
517-012-03	10, 20, 20, 41.2, 51.2, 81.5, 101.2, 121.5, 121.8, 191.8, 201.5, 291.8mm	12pcs	2

SERIES 518

GAUGE BLOCK SET FOR MICROMETER INSPECTION



- ◆ For checking micrometers accuracy
- ◆ With optical parallel
- ◆ Grade 0
- ◆ Meet ISO 3650
- ◆ With manufacturer inspection certificate



518-001-03

Measure



Code	Quantity	For micrometers	Material	Block allocation
518-001-02	11pcs	0-25mm	ceramic	2.5, 5.1, 7.7, 10.3, 12.9, 15, 17.6, 20.2, 22.8, 25mm
518-001-03	11pcs	0-25mm	alloy steel	2.5, 5.1, 7.7, 10.3, 12.9, 15, 17.6, 20.2, 22.8, 25mm

SERIES 518

GAUGE BLOCK SET FOR MICROMETER INSPECTION



- ◆ For checking micrometers accuracy
- ◆ Grade 0
- ◆ Meet ISO 3650
- ◆ With manufacturer inspection certificate



518-001-01

Code	Quantity	For micrometers	Material	Block allocation
518-001-01	10pcs	0-25mm	alloy steel	2.5, 5.1, 7.7, 10.3, 12.9, 15, 17.6, 20.2, 22.8, 25mm
518-002-01	11pcs	25-50mm	alloy steel	25, 27.5, 30.1, 32.7, 35.3, 37.9, 40, 42.6, 45.2, 47.8, 50mm
518-003-01	11pcs	50-75mm	alloy steel	50, 52.5, 55.1, 57.7, 60.3, 62.9, 65, 67.6, 70.2, 72.8, 75mm
518-004-01	11pcs	75-100mm	alloy steel	75, 77.5, 80.1, 82.7, 85.3, 87.9, 90, 92.6, 95.2, 97.8, 100mm

518

GAUGE BLOCK SET FOR MICROMETER INSPECTION



- ◆ Meet ISO3650
- ◆ Grade 0
- ◆ With manufacturer inspection certificate



S



Code	Quantity	Applicable micrometer	Material	Gauge blocks included in set
518-104-01	20pcs	0-100mm	alloy steel	5.12mm, 10.24mm, 15.36mm, 21.5mm, 25mm, 30.12mm, 35.24mm, 40.36mm, 46.5mm, 50mm, 55.12mm, 60.24mm, 65.36mm, 71.5mm, 75mm, 80.12mm, 85.24mm, 90.36mm, 96.5mm, 100mm

508

GAUGE BLOCK SET FOR MICROMETER INSPECTION

- ◆ Use to check the accuracy of micrometer with series 518 gauge block set



Application



GAUGE

Code	Applicable micrometer
508-001-00	0-25mm



- ◆ To expand gage block applications

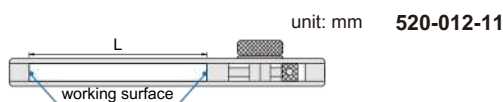


Code	Total quantity	Accessory allocation
519-016-01	17pcs	3pcs holder (50mm, 100mm, 200mm) 6pcs half round jaw (2mm, 5mm, 10mm, 2pcs each) 1pc holder base, 2pcs 100mm plain jaws, 1pc scriber point, 1pc center point, 2pcs triangular straight edge jaw 60mm 1pc 100mm straight edge

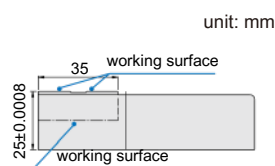


Code	Remark	Accessory allocation
519-016-01H	16pcs	4pcs holder(0-50mm, 50-100mm, 100-200mm, 200-300mm); 1pc base; 1pair plain jaw; 1pc parallel jaw; 3pairs half round jaw(2.5mm, 5mm, 6mm); 1pc scriber; 1pc center point

Code	Name	Clamping range (L)
520-002-11	holder	0-50mm
520-004-11	holder	50-100mm
520-008-11	holder	100-200mm
520-012-11	holder	200-300mm
520-016-11	holder	300-400mm
520-020-11	holder	400-500mm



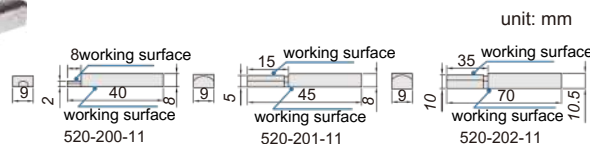
Code	Name
520-100-11	base



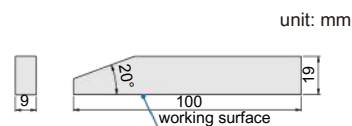
Code	Name	Size	Material
520-200-11	half round jaw	2mm	carbide
520-201-11	half round jaw	5mm	carbide
520-202-11	half round jaw	10mm	carbide



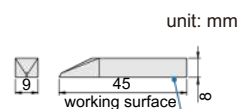
supplied a pair



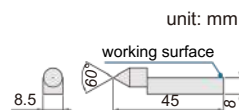
Code	Name	Material
520-300-11	plain jaw	carbide



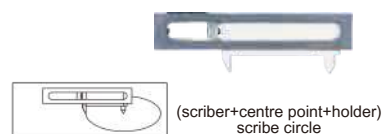
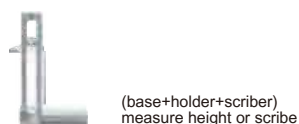
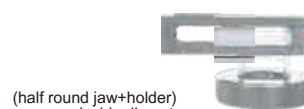
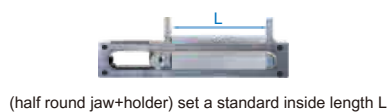
Code	Name	Material
520-400-11	scriber	carbide



Code	Name	Tip Material
520-500-11	center point	carbide

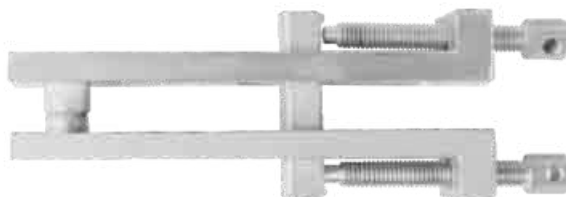


Application

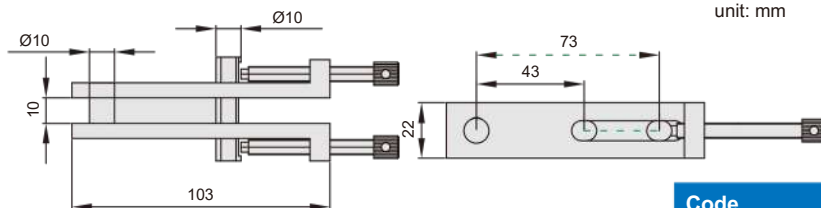
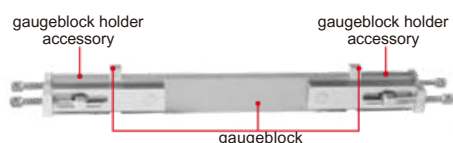
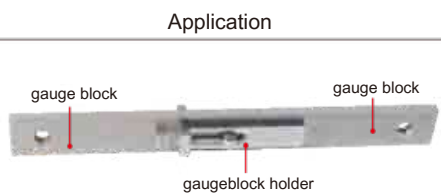


GAUGE BLOCK HOLDER

- ◆ For gauge blocks over 100mm with clamping holes
- ◆ Optional accessory: gauge block holder accessory, gauge block accessory



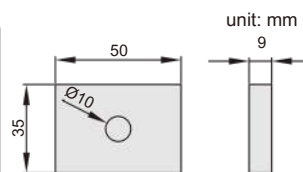
510-000-01



unit: mm

Code

510-000-01



unit: mm

9

Code

510-000-02

Code

Include

510-302-01

510-000-01 (3 set)
510-000-02 (1pairs)

SERIES 561

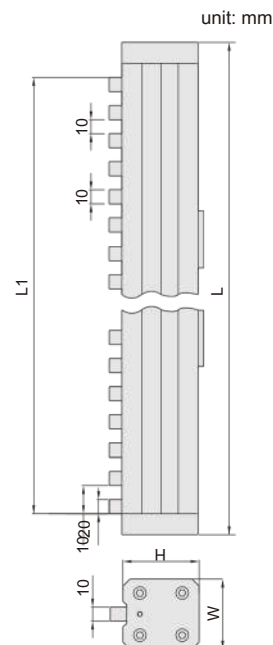
CHECK MASTER



- ◆ For checking the accuracy of measuring tools like calipers, height gage and so on
- ◆ Can be used in vertical and horizontal orientation
- ◆ With manufacturer inspection certificate



561-024-01



Code	Range	Parallelism of blocks	Accuracy	W	H	L1	L
561-012-01	300mm	1.2μm	±2.5μm	35	32	310	350
561-018-01	450mm	1.5μm	±3.5μm	42	50	470	510
561-024-01	600mm	1.5μm	±3.5μm	42	50	610	650



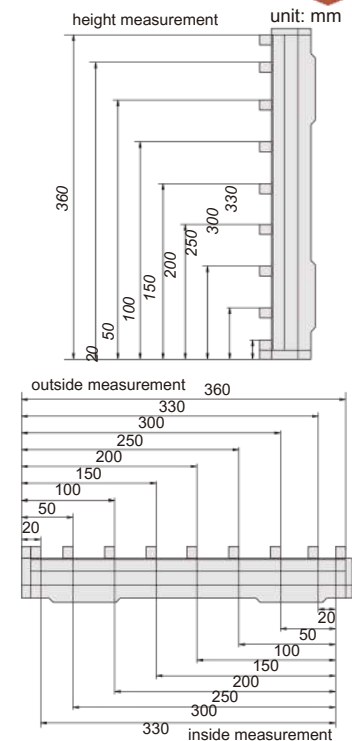
- ◆ To check calipers and height gages
- ◆ Constructed with steel gage blocks
- ◆ With manufacturer inspection certificate



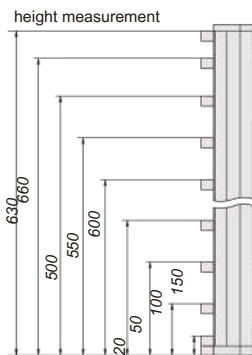
vertical use



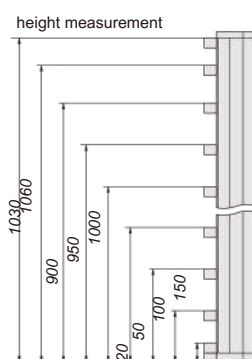
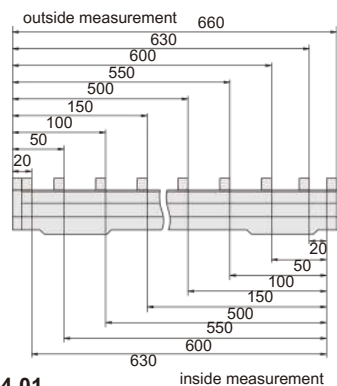
560-024-01



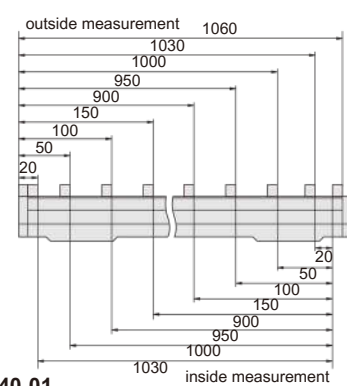
560-012-01



560-024-01



560-040-01



Check upper jaws of calipers



Check lower jaws of calipers



Check height gage



Code	Size	Range of inside measurement	Range of outside measurement	Range of height measurement	Accuracy
560-012-01	0-300mm	20, 50, 100, 150, 200, 250, 300, 330mm	20, 50, 100, 150, 200, 250, 300, 330, 360mm	20, 50, 100, 150, 200, 250, 300, 330, 360mm	±3μm
560-024-01	0-600mm	20, 50, 100, 150, 200, 250, 300, 350, 400, 450, 500, 550, 600, 630mm	20, 50, 100, 150, 200, 250, 300, 350, 400, 450, 500, 550, 600, 630, 660mm	20, 50, 100, 150, 200, 250, 300, 350, 400, 450, 500, 550, 600, 630, 660mm	±5μm
560-040-01	0-1000mm	20, 50, 100, 150, 200, 250, 300, 350, 400, 450, 500, 550, 600, 650, 700, 750, 800, 850, 900, 950, 1000, 1030mm	20, 50, 100, 150, 200, 250, 300, 350, 400, 450, 500, 550, 600, 650, 700, 750, 800, 850, 900, 950, 1000, 1030, 1060mm	20, 50, 100, 150, 200, 250, 300, 350, 400, 450, 500, 550, 600, 650, 700, 750, 800, 850, 900, 950, 1000, 1030, 1060mm	±7μm

SERIES 570

ANGLE GAUGE BLOCK SET



- ◆ 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)
- ◆ With manufacturer inspection certificate



570-015-01

Code	Angle	Total quantity
570-013-01	1°, 3°, 9°, 27°, 41°, 1', 3', 9', 27', 6", 18", 30", 90°/90°/90°/90°	13pcs
570-015-01	1°, 3°, 5°, 15°, 30°, 45°, 1', 3', 5', 20', 30', 6", 12", 30", 90°/90°/90°/90°	15pcs

571

ANGLE GAUGE BLOCK SET



571-007-01

- ◆ For angle comparison
- ◆ One angle can be as used in triangle blocks
four angles can be as used in rectangle blocks
- ◆ With manufacturer inspection certificate

Code	Angle	Blocks per set	Accuracy	Sharp
571-007-01	15°10', 30°20', 45°30', 50°, 60°40', 75°50', 90°	7	$\pm 10''$	triangle/rectangle

SERIES 522

INDIVIDUAL PIN GAUGE

CUSTOM-MADE

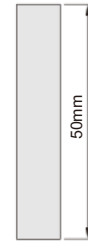
Standard size above 40mm
are available upon request

- ♦ Accuracy:
±1µm (range:0.1-13mm)
±2µm (range:13-40mm)
- ♦ Made of alloy steel
- ♦ Hardness HRC62-65
- ♦ Code explanation:
522-□□□□-2
diameter



522-06933-2

unit: mm



Package



Example:

Code	Size(mm)	Accuracy
522-00125-2	0.125	±1µm
522-09125-2	9.125	±1µm
522-19125-2	19.125	±2µm

522

INDIVIDUAL CARBIDE PIN GAUGE

CUSTOM-MADE

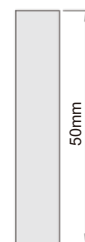
Size between 13 to 30mm,
are available upon request

- ♦ Supplied diameter from 0.3 to 30mm,
- ♦ Accuracy:
±1µm (range:0.3-13mm)
±2µm (range:13-30mm)
- ♦ Carbide material
- ♦ Hardness HRA90-90.5
- ♦ Length 50mm
- ♦ Code explanation:
522-□□□□-2T
diameter



522-06000-2T

unit: mm



Package



Example:

Code	Size(mm)	Accuracy
522-10000-2T	10	±1µm

SERIES 528

INDIVIDUAL CERAMIC PIN GAUGE

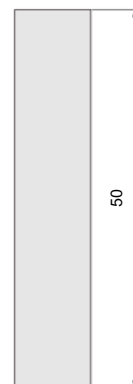
- ◆ Meet DIN2269, grade 1
- ◆ Diameter range: 01.000-10.000mm
- ◆ Diameter accuracy: $\pm 1\mu\text{m}$
- ◆ Made of ceramic, extremely wear resistance, corrosion resistance and dimensional stability
- ◆ Code explanation:

528- -1
 diameter



528-10000-1

unit: mm



Example:

Code	Size(mm)
528-05000-1	5
528-10000-1	10

SERIES 521

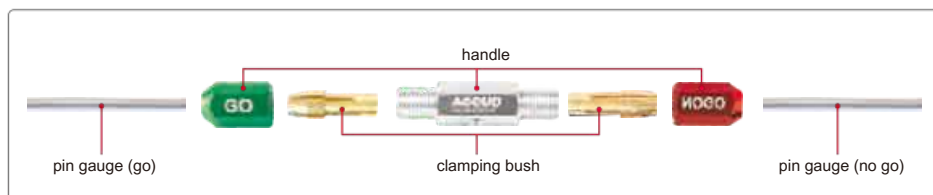
PIN GAUGE HANDLE

- ◆ Supplied with wrench for installing pin gauges
- ◆ Clamping bushes are made of brass



handle

Before assemble



After assemble



Code	Applicable pin gauge diameter
521-001-11	0.2-1.0mm
521-002-11	1.0-2.0mm
521-003-11	2.0-3.0mm
521-004-11	3.0-4.0mm
521-005-11	4.0-5.0mm
521-006-11	5.0-6.0mm

Code	Applicable pin gauge diameter
521-007-11	6.0-7.0mm
521-008-11	7.0-8.0mm
521-009-11	8.0-9.0mm
521-010-11	9.0-10.0mm
521-011-11	10.0-11.0mm
521-012-11	11.0-12.0mm

Code	Applicable pin gauge diameter
521-013-11	12.0-13.0mm
521-014-11	13.0-14.0mm
521-015-11	14.0-15.0mm
521-016-11	15.0-16.0mm
521-017-11	16.0-17.0mm
521-018-11	17.0-18.0mm

Code	Applicable pin gauge diameter
521-019-11	18.0-19.0mm
521-020-11	19.0-20.0mm
521-021-11	20.0-21.0mm
521-022-11	21.0-22.0mm



523-650-51



523-300-101

Blow mould case

Code	Diameter(mm)	Step	Quantity
523-100-091	0.1-1.00	0.01mm	91
523-200-101	1.00-2.00	0.01mm	101
523-300-101	2.00-3.00	0.01mm	101
523-400-101	3.00-4.00	0.01mm	101
523-500-101	4.00-5.00	0.01mm	101
523-600-101	5.00-6.00	0.01mm	101
523-700-101	6.00-7.00	0.01mm	101
523-800-101	7.00-8.00	0.01mm	101
523-900-101	8.00-9.00	0.01mm	101
523-1000-101	9.00-10.00	0.01mm	101

- ◆ Made of alloy steel
- ◆ Hardness HRC62-65
- ◆ Accuracy:
 $\pm 1\mu\text{m}$ (range:0.1-13mm)
 $\pm 2\mu\text{m}$ (range:13-40mm)

Code	Diameter(mm)	Step	Quantity
523-0110-100	0.1-10.00	0.1mm	100
523-500-41	1.0-5.0 5.0-	0.1mm	41
523-500-51	10.0	0.1mm	51
523-1000-01	10.0-15.0	0.1mm	51
523-1500-01	15.0-20.0	0.1mm	51

Aluminum box

Code	Diameter(mm)	Step	Quantity
523-010-41	0.10-0.50	0.01mm	41
523-020-31	0.20-0.50	0.01mm	31
523-050-51	0.50-1.00	0.01mm	51
523-100-51	1.00-1.50	0.01mm	51
523-150-51	1.50-2.00	0.01mm	51
523-200-51	2.00-2.50	0.01mm	51
523-250-51	2.50-3.00	0.01mm	51
523-300-51	3.00-3.50	0.01mm	51
523-350-51	3.50-4.00	0.01mm	51
523-400-51	4.00-4.50	0.01mm	51
523-450-51	4.50-5.00	0.01mm	51
523-500-01	5.00- 5.50	0.01mm	51
523-550-51	5.50-6.00	0.01mm	51
523-600-51	6.00-6.50	0.01mm	51
523-650-51	6.50-7.00	0.01mm	51
523-700-51	7.00-7.50	0.01mm	51
523-750-51	7.50-8.00	0.01mm	51
523-800-51	8.00-8.50	0.01mm	51
523-850-51	8.50- 9.00	0.01mm	51
523-900-51	9.00- 9.50	0.01mm	51
523-950-51	9.50-10.00	0.01mm	51

Aluminum box

Code	Diameter(mm)	Step	Quantity
523-1000-51	10.00-10.50	0.01mm	51
523-1050-51	10.50-11.00	0.01mm	51
523-1100-51	11.00-11.50	0.01mm	51
523-1150-51	11.50-12.00	0.01mm	51
523-1200-51	12.00-12.50	0.01mm	51
523-1250-51	12.50-13.00	0.01mm	51
523-1300-51	13.00-13.50	0.01mm	51
523-1350-51	13.50-14.00	0.01mm	51
523-1400-51	14.00-14.50	0.01mm	51
523-1450-51	14.50-15.00	0.01mm	51
523-1500-51	15.00-15.50	0.01mm	51
523-1550-51	15.50-16.00	0.01mm	51
523-1600-51	16.00-16.50	0.01mm	51
523-1650-51	16.50-17.00	0.01mm	51
523-1700-51	17.00-17.50	0.01mm	51
523-1750-51	17.50-18.00	0.01mm	51
523-1800-51	18.00-18.50	0.01mm	51
523-1850-51	18.50-19.00	0.01mm	51
523-1900-51	19.00-19.50	0.01mm	51
523-1950-51	19.50-20.00	0.01mm	51

SERIES 523

CARBIDE PIN GAUGE SET

- ◆ Meet DIN2269, grade 1
- ◆ Made of carbide
- ◆ Hardness HRA90-90.5
- ◆ Diameter accuracy: $\pm 1\mu\text{m}$



523-1000-51T



523-300-101T

Aluminum box

Code	Diameter(mm)	Step	Quantity
523-1000-51T	10.00-10.50	0.01mm	51
523-1050-51T	10.50-11.00	0.01mm	51
523-1100-51T	11.00-11.50	0.01mm	51
523-1150-51T	11.50-12.00	0.01mm	51
523-1200-51T	12.00-12.50	0.01mm	51
523-1250-51T	12.50-13.00	0.01mm	51
523-1300-51T	13.00-13.50	0.01mm	51
523-1350-51T	13.50-14.00	0.01mm	51
523-1400-51T	14.00-14.50	0.01mm	51
523-1450-51T	14.50-15.00	0.01mm	51

Blow mould case

Code	Diameter(mm)	Step	Quantity
523-100-091T	0.10-1.00	0.01mm	91
523-200-101T	1.00-2.00	0.01mm	101
523-300-101T	2.00-3.00	0.01mm	101
523-400-101T	3.00-4.00	0.01mm	101
523-500-101T	4.00-5.00	0.01mm	101
523-600-101T	5.00-6.00	0.01mm	101
523-700-101T	6.00-7.00	0.01mm	101
523-800-101T	7.00-8.00	0.01mm	101
523-900-101T	8.00-9.00	0.01mm	101
523-1000-101T	9.00-10.00	0.01mm	101

SERIES 528

CERAMIC PIN GAUGE SET

- ◆ Meet DIN2269, grade 1
- ◆ Diameter range: 1.00-10.00mm
- ◆ Diameter accuracy: $\pm 1\mu\text{m}$
- ◆ Made of ceramic, extremely wear resistance, corrosion resistance and dimensional stability



528-0650-51



528-0300-101

Aluminum box

Code	Diameter(mm)	Step	Quantity
528-0150-51	1.00-1.50	0.01mm	51
528-0200-51	1.50-2.00	0.01mm	51
528-0250-51	2.00-2.50	0.01mm	51
528-0300-51	2.50-3.00	0.01mm	51
528-0350-51	3.00-3.50	0.01mm	51
528-0400-51	3.50-4.00	0.01mm	51
528-0450-51	4.00-4.50	0.01mm	51
528-0500-51	4.50-5.00	0.01mm	51
528-0550-51	5.00-5.50	0.01mm	51
528-0600-51	5.50-6.00	0.01mm	51
528-0650-51	6.00-6.50	0.01mm	51
528-0700-51	6.50-7.00	0.01mm	51
528-0750-51	7.00-7.50	0.01mm	51
528-0800-51	7.50-8.00	0.01mm	51
528-0850-51	8.00-8.50	0.01mm	51
528-0900-51	8.50-9.00	0.01mm	51
528-0950-51	9.00-9.50	0.01mm	51
528-1000-51	9.50-10.00	0.01mm	51

Blow mould case

Code	Diameter(mm)	Step	Quantity
528-0200-101	1.00-2.00	0.01mm	101
528-0300-101	2.00-3.00	0.01mm	101
528-0400-101	3.00-4.00	0.01mm	101
528-0500-101	4.00-5.00	0.01mm	101
528-0600-101	5.00-6.00	0.01mm	101
528-0700-101	6.00-7.00	0.01mm	101
528-0800-101	7.00-8.00	0.01mm	101
528-0900-101	8.00-9.00	0.01mm	101
528-1000-101	9.00-10.00	0.01mm	101

Code	Diameter(mm)	Step	Quantity
528-0105-41	1.00-5.00	0.1mm	41
528-0510-51	5.00-10.00	0.1mm	51
528-0110-91	1.00-10.00	0.1mm	91

SERIES 524

BOX FOR PIN GAUGE SET

◆ For containing pin gauges



524-001-01



524-101-01

Aluminum box

Code	Gauge range	Max. packed QTY
524-001-01	0.10-10mm	51
524-001-02	10-13mm	72
524-001-03	13-20mm	50
524-001-04	20-34mm	32

Blow mould case

Code	Gauge range	Max. packed QTY
524-101-01	0.10-10mm	101

526

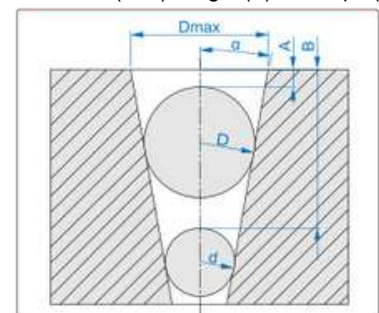
STEEL BALL SET



- ◆ To measure diameter and angle of taper holes
- ◆ Each size has a pair of steel ball
- ◆ Material: tool steel
- ◆ Hardness: HRC63
- ◆ Diameter accuracy: $\pm 2\mu\text{m}$
- ◆ Roundness: $0.6\mu\text{m}$



Calculate angle (α) and diameter (D_{max}) according to the ball diameter (D , d), height (A) and depth (B)



Code	Steel balls per set	Diameter(mm)
526-025-01	25 pairs	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25

SERIES 525

MASTER SETTING DISC

CUSTOM-MADE

other sizes are available
upon request

- ◆ Hardness: HRC60-62
- ◆ Conforms to standard ASME B89.1.5



525-020-01

Diameter	Supplied difference	Roundness and conicity
3-21mm	±0.8μm	0.5μm
21-30mm	±0.8μm	0.7μm
30-40mm	±1.1μm	0.7μm
40-65mm	±1.5μm	1.0μm

Diameter	Supplied difference	Roundness and conicity
65-110mm	±1.9μm	1.2μm
110-120mm	±1.9μm	1.6μm
120-130mm	±2.4μm	1.6μm

Code	Size(mm)
525-003-01	Ø3
525-004-01	Ø4
525-005-01	Ø5
525-006-01	Ø6
525-007-01	Ø7
525-008-01	Ø8
525-009-01	Ø9
525-010-01	Ø10
525-011-01	Ø11
525-012-01	Ø12
525-013-01	Ø13
525-014-01	Ø14
525-015-01	Ø15

Code	Size(mm)
525-016-01	Ø16
525-017-01	Ø17
525-018-01	Ø18
525-019-01	Ø19
525-020-01	Ø20
525-021-01	Ø21
525-022-01	Ø22
525-023-01	Ø23
525-024-01	Ø24
525-025-01	Ø25
525-026-01	Ø26
525-027-01	Ø27
525-028-01	Ø28

Code	Size(mm)
525-029-01	Ø29
525-030-01	Ø30
525-031-01	Ø31
525-032-01	Ø32
525-033-01	Ø33
525-034-01	Ø34
525-035-01	Ø35
525-036-01	Ø36
525-037-01	Ø37
525-038-01	Ø38
525-039-01	Ø39
525-040-01	Ø40
525-041-01	Ø41

Code	Size(mm)
525-042-01	Ø42
525-043-01	Ø43
525-044-01	Ø44
525-045-01	Ø45
525-046-01	Ø46
525-047-01	Ø47
525-048-01	Ø48
525-049-01	Ø49
525-050-01	Ø50
525-055-01	Ø55
525-060-01	Ø60
525-065-01	Ø65
525-070-01	Ø70

Code	Size(mm)
525-075-01	Ø75
525-080-01	Ø80
525-085-01	Ø85
525-090-01	Ø90
525-095-01	Ø95
525-100-01	Ø100
525-105-01	Ø105
525-110-01	Ø110
525-115-01	Ø115
525-120-01	Ø120
525-125-01	Ø125
525-130-01	Ø130

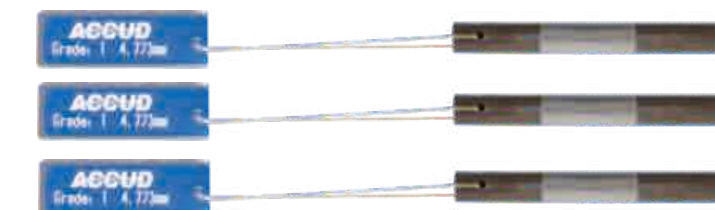
SERIES 529

THREE WIRE MEASURING UNITS

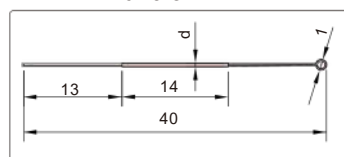
- ◆ Made of alloy steel
- ◆ One unit includes 3pcs same size
Hardness HRC60-62
- ◆ Accuracy:
- ◆ ±0.25μm (grade 0), ±0.5μm (grade 1)
- ◆ Roundness:
- ◆ 0.25μm (grade 0), 0.5μm (grade 1)
- ◆ Code explanation

529-□□□□-0X

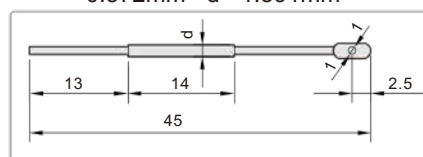
→ 0: grade 0
→ 1: grade 1



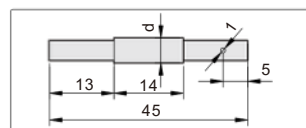
d ≤ 0.572mm



0.572mm < d < 1.591mm



d ≥ 1.591mm



529-4773-01

unit: mm

Example:

Code	Size(mm)	Grade
529-2886-00	2.886	0
529-2886-01	2.886	1

Supplied all 55 size as a set

Code	Quantity	Grade
529-055-00	55×3pcs	0
529-055-01	55×3pcs	1

Supplied 55 different size, unit:mm

0.118	0.260	0.572	1.302	2.020	2.886	3.580	4.773
0.142	0.291	0.724	1.441	2.050	3.106	3.666	5.150
0.170	0.343	0.796	1.553	2.071	3.177	4.091	5.176
0.185	0.402	0.866	1.591	2.217	3.287	4.120	5.493
0.201	0.433	1.008	1.732	2.311	3.310	4.141	6.212
0.232	0.461	1.047	1.833	2.595	3.468	4.211	6.585
0.250	0.511	1.157	1.883	2.866	3.550	4.400	

SERIES 531

SETTING RING

CUSTOM-MADE

other sizes are available
upon request

- ◆ For inside micrometer and bore gage setting
- ◆ The size marked on the setting ring is checked at the direction of the marking line
- ◆ Size difference (difference between the ordered size and the size marked on the setting ring when supplied): For example, the ordered size is 20mm, the real size marked on the setting ring when supplied may be 20.003mm
- ◆ Range: Ø2-300mm



531-040-01

Application



Diameter d	Size difference	Roundness and cylindricity	Accuracy
Ø2~≤10	±3.0µm	0.4µm	±1.5µm
Ø10~≤20		0.5µm	±3.0µm
Ø20~≤30		0.6µm	
Ø30~≤50		0.7µm	
Ø50~≤80		0.8µm	±4.0µm
Ø80~≤100		1.0µm	
Ø100~≤130	±5.0µm	1.0µm	±5µm
Ø130~≤150		1.2µm	
Ø150~≤210		1.5µm	
Ø210~≤250		2.5µm	
Ø250~≤300		3.0µm	

Code	Size(mm)
531-002-01	Ø2
531-003-01	Ø3
531-004-01	Ø4
531-005-01	Ø5
531-006-01	Ø6
531-007-01	Ø7
531-008-01	Ø8
531-009-01	Ø9
531-010-01	Ø10
531-011-01	Ø11
531-012-01	Ø12
531-013-01	Ø13
531-014-01	Ø14
531-015-01	Ø15
531-016-01	Ø16
531-017-01	Ø17
531-018-01	Ø18
531-019-01	Ø19

Code	Size(mm)
531-020-01	Ø20
531-021-01	Ø21
531-022-01	Ø22
531-023-01	Ø23
531-024-01	Ø24
531-025-01	Ø25
531-026-01	Ø26
531-027-01	Ø27
531-028-01	Ø28
531-029-01	Ø29
531-030-01	Ø30
531-031-01	Ø31
531-032-01	Ø32
531-033-01	Ø33
531-034-01	Ø34
531-035-01	Ø35
531-036-01	Ø36
531-037-01	Ø37

Code	Size(mm)
531-038-01	Ø38
531-039-01	Ø39
531-040-01	Ø40
531-041-01	Ø41
531-042-01	Ø42
531-043-01	Ø43
531-044-01	Ø44
531-045-01	Ø45
531-046-01	Ø46
531-047-01	Ø47
531-048-01	Ø48
531-049-01	Ø49
531-050-01	Ø50
531-055-01	Ø55
531-060-01	Ø60
531-062-01	Ø62
531-065-01	Ø65
531-070-01	Ø70

Code	Size(mm)
531-075-01	Ø75
531-080-01	Ø80
531-085-01	Ø85
531-087-01	Ø87
531-090-01	Ø90
531-095-01	Ø95
531-100-01	Ø100
531-125-01	Ø125
531-150-01	Ø150
531-175-01	Ø175
531-200-01	Ø200
531-225-01	Ø225
531-250-01	Ø250
531-275-01	Ø275
531-300-01	Ø300

GAUGE



- ◆ Grade H7
- ◆ Hardness HRC 60±2
- ◆ Confirms to standard GB/T 1957-2006
- ◆ Supplied range from 1mm to 100mm

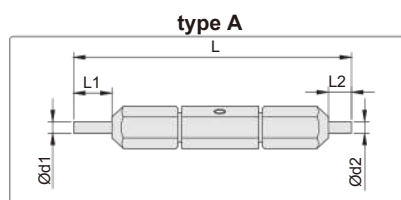


541-020-17

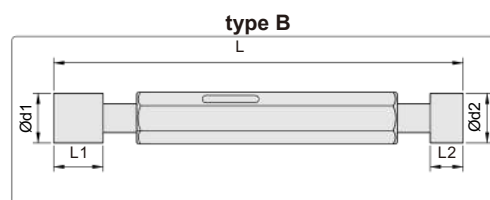


541-006-17

unit: mm

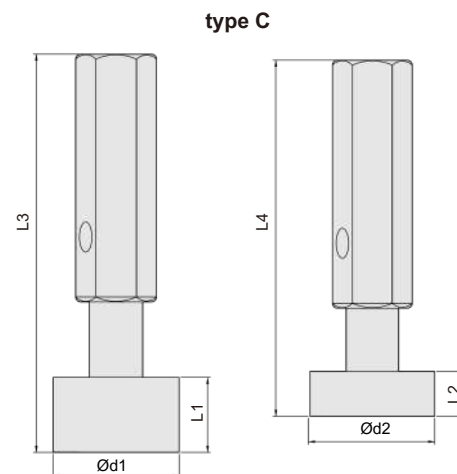


type A



type B

Diameter Ød (mm)	Ød1 size tolerance of Go gage (mm)	Ød2 size tolerance of Go gage (mm)	L1	L2	L	L3	L4
≥ 2 ≤ 3	+0.0010, +0.0022	+0.0088, +0.010	6.5	4.5	62		
> 3 ≤ 6	+0.0013, +0.0027	+0.0106, +0.012	8	6	74		
> 6, ≤ 10	+0.0015, +0.0033	+0.0132, +0.015	10	7	87		
> 10, ≤ 14	+0.0018, +0.0038	+0.0160, +0.018	12	8	99		
> 14, ≤ 18	+0.0018, +0.0038	+0.0160, +0.018	14	10	114		
> 18, ≤ 24	+0.0023, +0.0046	+0.0186, +0.021	16	12	132		
> 24, ≤ 30	+0.0023, +0.0046	+0.0186, +0.021	18	14	136		
> 30, ≤ 40	+0.0023, +0.0055	+0.0220, +0.025	20	15	155		
> 40, ≤ 50	+0.0023, +0.0055	+0.0220, +0.025	25	18	169		
> 50, ≤ 65	+0.0028, +0.0064	+0.0264, +0.030	30	18		164	165
> 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



type C

Code	Diameter Ød (mm)	Type
541-002-17	2	A
541-003-17	3	A
541-004-17	4	A
541-005-17	5	A
541-006-17	6	A
541-007-17	7	A
541-008-17	8	A
541-009-17	9	B
541-010-17	10	B
541-011-17	11	B
541-012-17	12	B
541-013-17	13	B
541-014-17	14	B
541-015-17	15	B
541-016-17	16	B

Code	Diameter Ød (mm)	Type
541-017-17	17	B
541-018-17	18	B
541-019-17	19	B
541-020-17	20	B
541-021-17	21	B
541-022-17	22	B
541-023-17	23	B
541-024-17	24	B
541-025-17	25	B
541-026-17	26	B
541-027-17	27	B
541-028-17	28	B
541-029-17	29	B
541-030-17	30	B
541-031-17	31	B

Code	Diameter Ød (mm)	Type
541-032-17	32	B
541-033-17	33	B
541-034-17	34	B
541-035-17	35	B
541-036-17	36	B
541-037-17	37	B
541-038-17	38	B
541-039-17	39	B
541-040-17	40	B
541-041-17	41	B
541-042-17	42	B
541-043-17	43	B
541-044-17	44	B
541-045-17	45	B
541-046-17	46	B

Code	Diameter Ød (mm)	Type
541-047-17	47	B
541-048-17	48	B
541-049-17	49	B
541-050-17	50	B
541-052-17	52	C
541-055-17	55	C
541-060-17	60	C
541-065-17	65	C
541-070-17	70	C
541-075-17	75	C
541-080-17	80	C
541-085-17	85	C
541-090-17	90	C
541-095-17	95	C
541-100-17	100	C



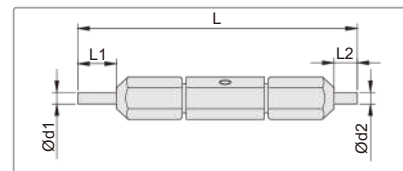
541-020-17T



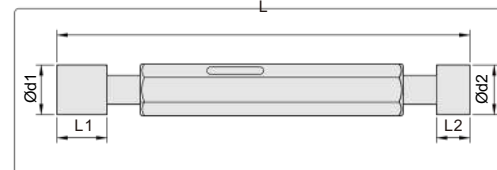
541-006-17T

unit: mm

type A



type B



- ◆ Grade H7
- ◆ Hardness HRC 85-89
- ◆ Supplied range from 1mm to 30mm

Diameter Ød (mm)	Ød1 size tolerance of Go gage (mm)	Ød2 size tolerance of Go gage (mm)	L1	L2	L
≥2 ≤3	+0.0010, +0.0022	+0.0088, +0.010	6.5	4.5	62
>3 ≤6	+0.0013, +0.0027	+0.0106, +0.012	8	6	74
>6, ≤10	+0.0015, +0.0033	+0.0132, +0.015	10	7	87
>10, ≤14	+0.0018, +0.0038	+0.0160, +0.018	12	8	99
>14, ≤18	+0.0018, +0.0038	+0.0160, +0.018	14	10	114
>18, ≤24	+0.0023, +0.0046	+0.0186, +0.021	16	12	132
>24, ≤30	+0.0023, +0.0046	+0.0186, +0.021	18	14	136

Code	Diameter Ød (mm)	Type
541-002-17T	2	A
541-003-17T	3	A
541-004-17T	4	A
541-005-17T	5	A
541-006-17T	6	A
541-007-17T	7	A
541-008-17T	8	A
541-009-17T	9	B
541-010-17T	10	B
541-011-17T	11	B
541-012-17T	12	B
541-013-17T	13	B
541-014-17T	14	B
541-015-17T	15	B
541-016-17T	16	B

Code	Diameter Ød (mm)	Type
541-017-17T	17	B
541-018-17T	18	B
541-019-17T	19	B
541-020-17T	20	B
541-021-17T	21	B
541-022-17T	22	B
541-023-17T	23	B
541-024-17T	24	B
541-025-17T	25	B
541-026-17T	26	B
541-027-17T	27	B
541-028-17T	28	B
541-029-17T	29	B
541-030-17T	30	B

SERIES 589

LIMIT SNAP GAUGE

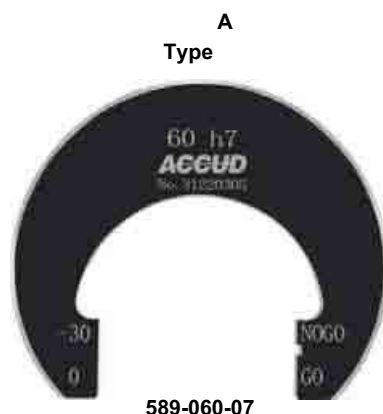
CUSTOM-MADE

Grade: h6, g7
Size: 1 to 250mm
are available upon request

- ♦ Grade H7
- ♦ Type A: size ≤ 80mm;
Type B: size > 80mm
- ♦ Code explanation:

589-□□-07

size ←



589-060-07



589-150-07

Example:

Code	Size(mm)	Type
589-060-07	60	A
589-070-07	70	A
589-080-07	80	A
589-100-07	100	B
589-120-07	120	B
589-150-07	150	B

SERIES 585

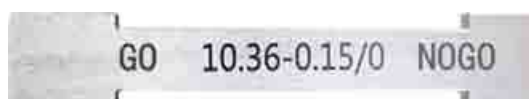
KEY SLOT LIMIT GAUGE

CUSTOM-MADE

Size between 3 to 50mm,
are available upon request



front side



reverse side

Code

585-xxxxx-xx

- ◆ Grade 6g
- ◆ Meet ISO1502
- ◆ Hardness HRC60-62



532-020-01



533-020-01

STANDARD THREAD

Code(GO)	Code(NOGO)	Size(mm)
532-002-01	533-002-01	M2x0.4
532-002-21	533-002-21	M2.2x0.45
532-002-51	533-002-51	M2.5x0.45
532-003-01	533-003-01	M3x0.5
532-003-51	533-003-51	M3.5x0.6
532-004-01	533-004-01	M4x0.7
532-005-01	533-005-01	M5x0.8
532-006-01	533-006-01	M6x1
532-008-01	533-008-01	M8x1.25

Code(GO)	Code(NOGO)	Size(mm)
532-010-01	533-010-01	M10x1.5
532-012-01	533-012-01	M12x1.75
532-014-01	533-014-01	M14x2
532-016-01	533-016-01	M16x2
532-018-01	533-018-01	M18x2.5
532-020-01	533-020-01	M20x2.5
532-022-01	533-022-01	M22x2.5
532-024-01	533-024-01	M24x3
532-027-01	533-027-01	M27x3

Code(GO)	Code(NOGO)	Size(mm)
532-030-01	533-030-01	M30x3.5
532-033-01	533-033-01	M33x3.5
532-036-01	533-036-01	M36x4
532-042-01	533-042-01	M42x4.5
532-048-01	533-048-01	M48x5
532-052-01	533-052-01	M52x5
532-060-01	533-060-01	M60x5.5

FINE THREAD

Code(GO)	Code(NOGO)	Size(mm)
534-002-01	535-002-01	M2x0.25
534-002-21	535-002-21	M2.2x0.25
534-002-51	535-002-51	M2.5x0.35
534-003-01	535-003-01	M3x0.35
534-003-51	535-003-51	M3.5x0.35
534-004-01	535-004-01	M4x0.5
534-005-01	535-005-01	M5x0.5
534-006-01	535-006-01	M6x0.5
534-006-02	535-006-02	M6x0.75
534-007-01	535-007-01	M7x0.5
534-007-02	535-007-02	M7x0.75
534-008-01	535-008-01	M8x0.5
534-008-02	535-008-02	M8x0.75
534-008-03	535-008-03	M8x1
534-009-01	535-009-01	M9x0.5
534-009-02	535-009-02	M9x0.75
534-009-03	535-009-03	M9x1
534-010-01	535-010-01	M10x0.5
534-010-02	535-010-02	M10x0.75
534-010-03	535-010-03	M10x1
534-010-04	535-010-04	M10x1.25
534-011-02	535-011-02	M11x0.75
534-011-03	535-011-03	M11x1
534-012-01	535-012-01	M12x0.5
534-012-02	535-012-02	M12x0.75
534-012-03	535-012-03	M12x1
534-012-04	535-012-04	M12x1.25
534-012-05	535-012-05	M12x1.5
534-014-01	535-014-01	M14x0.5
534-014-02	535-014-02	M14x0.75
534-014-03	535-014-03	M14x1
534-014-04	535-014-04	M14x1.25
534-014-05	535-014-05	M14x1.5
534-016-01	535-016-01	M16x0.5
534-016-02	535-016-02	M16x0.75
534-016-03	535-016-03	M16x1
534-016-04	535-016-04	M16x1.5

Code(GO)	Code(NOGO)	Size(mm)
534-018-01	535-018-01	M18x0.5
534-018-02	535-018-02	M18x0.75
534-018-03	535-018-03	M18x1
534-018-04	535-018-04	M18x1.5
534-018-05	535-018-05	M18x2
534-020-01	535-020-01	M20x0.5
534-020-02	535-020-02	M20x0.75
534-020-03	535-020-03	M20x1
534-020-04	535-020-04	M20x1.5
534-020-05	535-020-05	M20x2
534-022-01	535-022-01	M22x0.5
534-022-02	535-022-02	M22x0.75
534-022-03	535-022-03	M22x1
534-022-04	535-022-04	M22x1.5
534-022-05	535-022-05	M22x2
534-024-01	535-024-01	M24x0.75
534-024-02	535-024-02	M24x1
534-024-03	535-024-03	M24x1.5
534-024-04	535-024-04	M24x2
534-027-01	535-027-01	M27x0.75
534-027-02	535-027-02	M27x1
534-027-03	535-027-03	M27x1.5
534-027-04	535-027-04	M27x2
534-030-01	535-030-01	M30x0.75
534-030-02	535-030-02	M30x1
534-030-03	535-030-03	M30x1.5
534-030-04	535-030-04	M30x2
534-030-05	535-030-05	M30x3
534-033-01	535-033-01	M33x0.75
534-033-02	535-033-02	M33x1
534-033-03	535-033-03	M33x1.5
534-033-04	535-033-04	M33x2
534-033-05	535-033-05	M33x3
534-036-01	535-036-01	M36x1
534-036-02	535-036-02	M36x1.5
534-036-03	535-036-03	M36x2
534-036-04	535-036-04	M36x3

Code(GO)	Code(NOGO)	Size(mm)
534-039-01	535-039-01	M39x1
534-039-02	535-039-02	M39x1.5
534-039-03	535-039-03	M39x2
534-039-04	535-039-04	M39x3
534-042-01	535-042-01	M42x1
534-042-02	535-042-02	M42x1.5
534-042-03	535-042-03	M42x2
534-042-04	535-042-04	M42x3
534-042-05	535-042-05	M42x4
534-045-01	535-045-01	M45x1
534-045-02	535-045-02	M45x1.5
534-045-03	535-045-03	M45x2
534-045-04	535-045-04	M45x3
534-045-05	535-045-05	M45x4
534-048-01	535-048-01	M48x1
534-048-02	535-048-02	M48x1.5
534-048-03	535-048-03	M48x2
534-048-04	535-048-04	M48x3
534-048-05	535-048-05	M48x4
534-052-01	535-052-01	M52x1
534-052-02	535-052-02	M52x1.5
534-052-03	535-052-03	M52x2
534-052-04	535-052-04	M52x3
534-052-05	535-052-05	M52x4
534-056-01	535-056-01	M56x1
534-056-02	535-056-02	M56x1.5
534-056-03	535-056-03	M56x2
534-056-04	535-056-04	M56x3
534-056-05	535-056-05	M56x4
534-060-01	535-060-01	M60x1
534-060-02	535-060-02	M60x1.5
534-060-03	535-060-03	M60x2
534-060-04	535-060-04	M60x3
534-060-05	535-060-05	M60x4

SERIES 542

THREADPLUG GAUGE

CUSTOM-MADE

other sizes are available
upon request

- ◆ Grade 6H
- ◆ Meet ISO1502
- ◆ Hardness HRC60-62



542-024-01

Code	Size(mm)
542-002-01	M2x0.4
542-002-21	M2.2x0.45
542-002-51	M2.5x0.45
542-003-01	M3x0.5
542-003-02	M3.5x0.6
542-004-01	M4x0.7
542-005-01	M5x0.8
542-006-01	M6x1

Code	Size(mm)
542-007-01	M7x1
542-008-01	M8x1.25
542-009-01	M9x1.25
542-010-01	M10x1.5
542-011-01	M11x1.5
542-012-01	M12x1.75
542-014-01	M14x2
542-016-01	M16x2

Code	Size(mm)
542-018-01	M18x2.5
542-020-01	M20x2.5
542-022-01	M22x2.5
542-024-01	M24x3
542-027-01	M27x3
542-030-01	M30x3.5
542-033-01	M33x3.5
542-036-01	M36x4

Code	Size(mm)
542-039-01	M39x4
542-042-01	M42x4.5
542-045-01	M45x4.5
542-048-01	M48x5
542-052-01	M52x5
542-056-01	M56x5.5
542-060-01	M60x5.5

SERIES 543

FINETHREADPLUG GAUGE

CUSTOM-MADE

other sizes are available
upon request

- ◆ Grade 6H
- ◆ Meet ISO1502
- ◆ Hardness HRC60-62 , good wear resistance



543-020-01

Code	Size(mm)
543-002-01	M2x0.25
543-002-21	M2.2x0.25
543-002-31	M2.5x0.35
543-003-01	M3x0.35
543-003-02	M3.5x0.35
543-004-01	M4x0.5
543-005-01	M5x0.5
543-006-01	M6x0.5
543-006-02	M6x0.75
543-007-01	M7x0.5
543-007-02	M7x0.75
543-008-01	M8x0.5
543-008-02	M8x0.75
543-008-03	M8x1
543-009-01	M9x0.5
543-009-02	M9x0.75
543-009-03	M9x1
543-010-01	M10x0.5
543-010-02	M10x0.75
543-010-03	M10x1
543-010-04	M10x1.25
543-011-01	M11x0.5

Code	Size(mm)
543-011-02	M11x0.75
543-011-03	M11x1
543-012-01	M12x0.5
543-012-02	M12x0.75
543-012-03	M12x1
543-012-04	M12x1.25
543-012-05	M12x1.5
543-014-01	M14x0.5
543-014-02	M14x0.75
543-014-03	M14x1
543-014-04	M14x1.25
543-014-05	M14x1.5
543-016-01	M16x0.5
543-016-02	M16x0.75
543-016-03	M16x1
543-016-04	M16x1.5
543-018-01	M18x0.5
543-018-02	M18x0.75
543-018-03	M18x1
543-018-04	M18x1.5
543-018-05	M18x2
543-020-01	M20x0.5

Code	Size(mm)
543-020-02	M20x0.75
543-020-03	M20x1
543-020-04	M20x1.5
543-020-05	M20x2
543-022-01	M22x0.5
543-022-02	M22x0.75
543-022-03	M22x1
543-022-04	M22x1.5
543-022-05	M22x2
543-024-01	M24x0.75
543-024-02	M24x1
543-024-03	M24x1.5
543-024-04	M24x2
543-027-01	M27x0.75
543-027-02	M27x1
543-027-03	M27x1.5
543-027-04	M27x2
543-030-01	M30x0.75
543-030-02	M30x1
543-030-03	M30x1.5
543-030-04	M30x2
543-030-05	M30x3

Code	Size(mm)
543-033-01	M33x0.75
543-033-02	M33x1
543-033-03	M33x1.5
543-033-04	M33x2
543-033-05	M33x3
543-036-01	M36x1
543-036-02	M36x1.5
543-036-03	M36x2
543-036-04	M36x3
543-039-01	M39x1
543-039-02	M39x1.5
543-039-03	M39x2
543-039-04	M39x3
543-042-01	M42x1
543-042-02	M42x1.5
543-042-03	M42x2
543-042-04	M42x3
543-042-05	M42x4
543-045-01	M45x1
543-045-02	M45x1.5
543-045-03	M45x2
543-045-04	M45x3

Code	Size(mm)
543-045-05	M45x4
543-048-01	M48x1
543-048-02	M48x1.5
543-048-03	M48x2
543-048-04	M48x3
543-048-05	M48x4
543-052-01	M52x1
543-052-02	M52x1.5
543-052-03	M52x2
543-052-04	M52x3
543-052-05	M52x4
543-056-01	M56x1
543-056-02	M56x1.5
543-056-03	M56x2
543-056-04	M56x3
543-056-05	M56x4
543-060-01	M60x1
543-060-02	M60x1.5
543-060-03	M60x2
543-060-04	M60x3
543-060-05	M60x4

SERIES 537/538

AMERICAN STANDARD THREAD RING GAUGE

CUSTOM-MADE
other sizes are available
upon request

- ◆ Class 2A
- ◆ Conforms to standard ANSI B1.2
- ◆ Made of Oil Hardened Non-shrinking steel
- ◆ Hardness HRC60-62



537-71620-UNF

Code(GO)	Code(NOGO)	Size
537-00440-UNC	538-00440-UNC	4-40UNC
537-04048-UNF	538-04048-UNF	4-48UNF
537-00632-UNC	538-00632-UNC	6-32UNC
537-06040-UNF	538-06040-UNF	6-40UNF
537-00832-UNC	538-00832-UNC	8-32UNC
537-08036-UNF	538-08036-UNF	8-36UNF
537-01024-UNC	538-01024-UNC	10-24UNC
537-01032-UNF	538-01032-UNF	10-32UNF
537-01420-UNC	538-01420-UNC	1/4-20UNC
537-01428-UNF	538-01428-UNF	1/4-28UNF
537-51618-UNC	538-51618-UNC	5/16-18UNC
537-51624-UNF	538-51624-UNF	5/16-24UNF
537-03816-UNC	538-03816-UNC	3/8-16UNC
537-03824-UNF	538-03824-UNF	3/8-24UNF

Code(GO)	Code(NOGO)	Size
537-71614-UNC	538-71614-UNC	7/16-14UNC
537-71620-UNF	538-71620-UNF	7/16-20 UNF
537-01213-UNC	538-01213-UNC	1/2-13 UNC
537-01220-UNF	538-01220-UNF	1/2-20 UNF
537-91612-UNC	538-91612-UNC	9/16-12UNC
537-91618-UNF	538-91618-UNF	9/16-18UNF
537-05811-UNC	538-05811-UNC	5/8-11UNC
537-05818-UNF	538-05818-UNF	5/8-18UNF
537-03410-UNC	538-03410-UNC	3/4-10UNC
537-03416-UNF	538-03416-UNF	3/4-16UNF
537-07809-UNC	538-07809-UNC	7/8-9UNC
537-07814-UNF	538-07814-UNF	7/8-14UNF
537-01080-UNC	538-01080-UNC	1-8 UNC
537-01012-UNF	538-01012-UNF	1-12UNF

SERIES 547

AMERICAN STANDARD THREAD PLUG GAUGE

CUSTOM-MADE
other sizes are available
upon request

- ◆ Class 2B
- ◆ Conforms to standard ANSI B1.2
- ◆ Made of Oil Hardened Non-shrinking steel
- ◆ Hardness HRC60-62



547-71620-UNF

Code(GO)	Size
547-00440-UNC	4-40UNC
547-04048-UNF	4-48UNF
547-00632-UNC	6-32UNC
547-06040-UNF	6-40UNF
547-00832-UNC	8-32UNC
547-08036-UNF	8-36UNF
547-01024-UNC	10-24UNC
547-01032-UNF	10-32UNF
547-01420-UNC	1/4-20UNC
547-01428-UNF	1/4-28UNF

Code(GO)	Size
547-51618-UNC	5/16-18UNC
547-51624-UNF	5/16-24UNF
547-03816-UNC	3/8-16UNC
547-03824-UNF	3/8-24UNF
547-71614-UNC	7/16-14UNC
547-71620-UNF	7/16-20 UNF
547-01213-UNC	1/2-13 UNC
547-01220-UNF	1/2-20 UNF
547-91612-UNC	9/16-12UNC
547-91618-UNF	9/16-18UNF

Code(GO)	Size
547-05811-UNC	5/8-11UNC
547-05818-UNF	5/8-18UNF
547-03410-UNC	3/4-10UNC
547-03416-UNF	3/4-16UNF
547-07809-UNC	7/8-9UNC
547-07814-UNF	7/8-14UNF
547-01080-UNC	1-8 UNC
547-01012-UNF	1-12UNF

GAUGE



SERIES 544

NPT THREADGAUGE

- ◆ Conforms to standard ANSI/ASME B1.20.1
- ◆ Taper: 1:16
- ◆ Made of Oil Hardened Non-shrinking steel

PLUG GAUGE



544-014-01

Code	Size	Code	Size
544-027-04	NPT 1/16" x 27	544-11D5-12	NPT1-1/4"x11.5
544-027-03	NPT 1/8" x 27	544-11D5-11	NPT1-1/2"x11.5
544-018-02	NPT1/4" x 18	544-11D5-20	NPT2"x11.5
544-018-33	NPT3/8"x18	544-008-21	NPT2-1/2"x8
544-014-01	NPT1/2" x 14	544-008-30	NPT3"x8
544-014-32	NPT3/4"x14	544-008-32	NPT3-1/2"x8
544-11D5-10	NPT1"x11.5	544-008-40	NPT4"x8

SERIES 544

NPT THREADGAUGE

- ◆ Conforms to standard ANSI/ASME B1.20.1
- ◆ Taper: 1:16
- ◆ Made of Oil Hardened Non-shrinking steel

RING GAUGE



Front

Back

544-014-01R

Code	Size	Code	Size
544-027-04R	NPT 1/16" x 27	544-11D5-12R	NPT1-1/4"x11.5
544-027-03R	NPT 1/8" x 27	544-11D5-11R	NPT1-1/2"x11.5
544-018-02R	NPT1/4" x 18	544-11D5-20R	NPT2"x11.5
544-018-33R	NPT3/8"x18	544-008-21R	NPT2-1/2"x8
544-014-01R	NPT1/2" x 14	544-008-30R	NPT3"x8
544-014-32R	NPT3/4"x14	544-008-32R	NPT3-1/2"x8
544-11D5-10R	NPT1"x11.5	544-008-40R	NPT4"x8

SERIES 545

WITHWORTH PIPE THREAD GAUGE (G SERIES)

◆ Conforms to standard ISO228

PLUG GAUGE



545-0500-01

Code	Size
545-0125-01	G1/8-28
545-0250-01	G1/4-19
545-0375-01	G3/8-19
545-0500-01	G1/2-14
545-0625-01	G5/8-14
545-0750-01	G3/4-14

Code	Size
545-0875-01	G7/8-14
545-1000-01	G1-11
545-1125-01	G1-1/8-11
545-1250-01	G1-1/4-11
545-1500-01	G1-1/2-11
545-1750-01	G1-3/4-11

Code	Size
545-2000-01	G2-11
545-2500-01	G2-1/2-11
545-3000-01	G3-11
545-4000-01	G4-11

SERIES 535/536

WITHWORTH PIPE THREAD GAUGE (G SERIES)

◆ Conforms to standard ISO228

◆ Class B

RING GAUGE



535-0250-01



536-0250-01

Code(GO)	Code(NOGO)	Size
535-0125-01	536-0125-01	G1/8-28
535-0250-01	536-0250-01	G1/4-19
535-0375-01	536-0375-01	G3/8-19
535-0500-01	536-0500-01	G1/2-14
535-0625-01	536-0625-01	G5/8-14
535-0750-01	536-0750-01	G3/4-14
535-0875-01	536-0875-01	G7/8-14
535-1000-01	536-1000-01	G1-11

Code(GO)	Code(NOGO)	Size
535-1125-01	536-1125-01	G1-1/8-11
535-1250-01	536-1250-01	G1-1/4-11
535-1500-01	536-1500-01	G1-1/2-11
535-1750-01	536-1750-01	G1-3/4-11
535-2000-01	536-2000-01	G2-11
535-2500-01	536-2500-01	G2-1/2-11
535-3000-01	536-3000-01	G3-11
535-4000-01	536-4000-01	G4-11

SERIES 594

AIR GAUGE

CUSTOM-MADE

Inside air plug gauge and standard ring



594-xxxxx-01

Outside air snap gauge and standard column gauge



594-xxxxx-05

Code	Range	Remark
594-XXXXX-01	Ø2-150mm	measure diameter of hole

Code	Range	Remark
594-XXXXX-05	Ø4-120mm	measure diameter of shaft





VIDEO

- ◆ Can store 10 measuring programs, and the program can be switched quickly
- ◆ Data storage function, support manual and automatic storing, 1000 groups data can be stored
- ◆ Automatically detect internal or external dimension measurement
- ◆ Automatic grouping function for workpiece sorting

LED column

zero point

Back of display

RS232 port

I/O interface

USB

on/off

power socket

air inlet

display

key panel

air outlet

rate regulating valve

Air filter and pressure regulating valve

Application



Work in groups



SPECIFICATION

Code		595-101-01			
LED quantity		101 pcs			
LED color		red, orange, green			
LED height		254mm			
Range		10μm	20μm	50μm	100μm
Resolution	LED column	0.1μm	0.2μm	0.5μm	1μm
	Display	0.1μm			
Accuracy		0.2μm	0.4μm	0.5μm	1μm
Air supply		dir and clean, 0.4~0.8MPa			
Output		RS232/USB, I/O interface			
Operation temperature		0~45°C			
Power		100-240V, 50/60Hz			
Power consumption		<20W			
Max. current		2A			
Dimension(LxWxH)		170x65x475mm			
Weight		3kg			

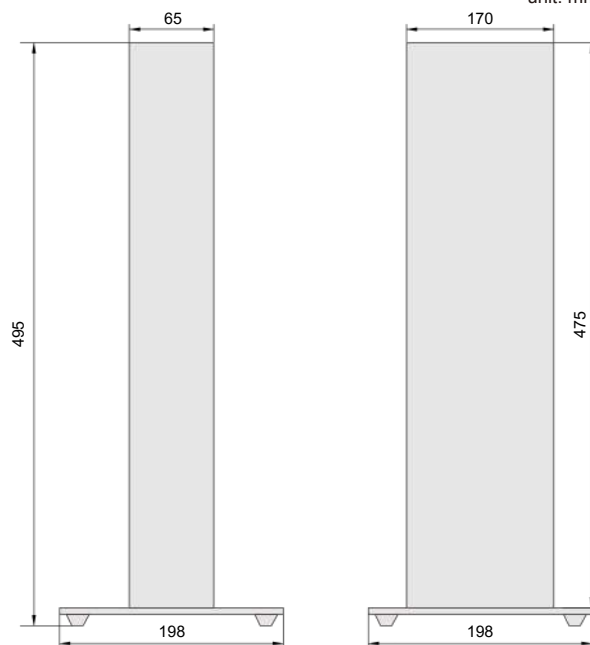
OPTIONAL ACCESSORIES

Air filter

Pressure regulating valve

RS232 cable

unit: mm



822

DIGITAL PROTRACTOR

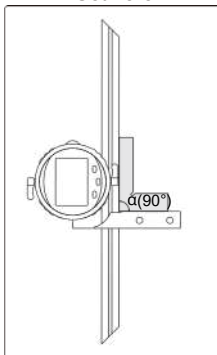


- ◆ Button function:
 - SET: preset the reading and change the measuring direction
 - MODE: choose range 90°, 180°, 360°
 - ZERO/ON/OFF: set zero and power on/off
- ◆ Data output
- ◆ With a 150mm blade and a 90° square
- ◆ Made of stainless steel

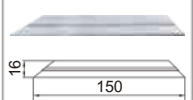


unit: mm

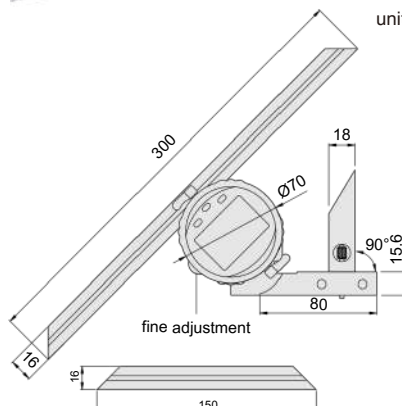
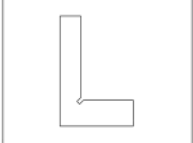
Set zero



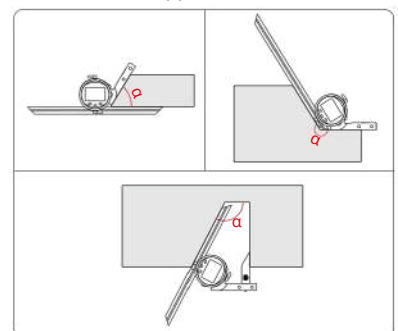
150mm blade (included)



90° square (included)



Application



PROTRACTOR

GAUGE

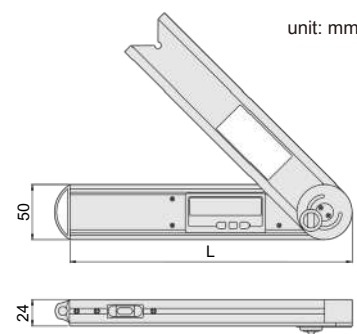
Code	Range	Resolution	Accuracy
822-360-01	0 - 360°	10"/0.005°	±5'

726

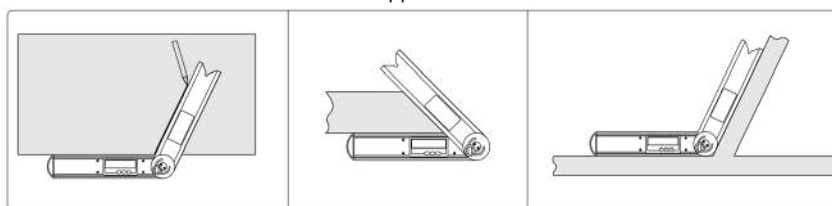
DIGITAL PROTRACTOR



- ◆ Buttons: ON/OFF, HOLD, ZERO, ABS
- ◆ Measuring ranges can be set 0°~225°, -225°~0°, -45°~180°, -180°~45°
- ◆ Remove the locking screw for 360° range
- ◆ With level vial
- ◆ Automatic power off



Application



Code	Range	Resolution	Accuracy	Size(L)
726-360-01	0 - 360°	0.05°	±0.15°	250mm

PROTRACTOR

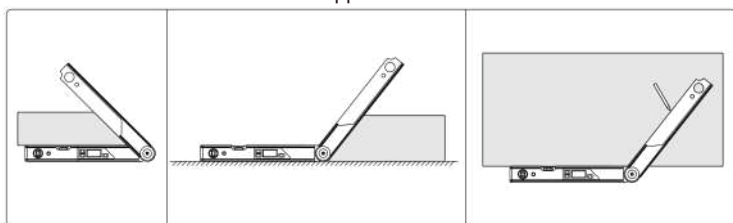




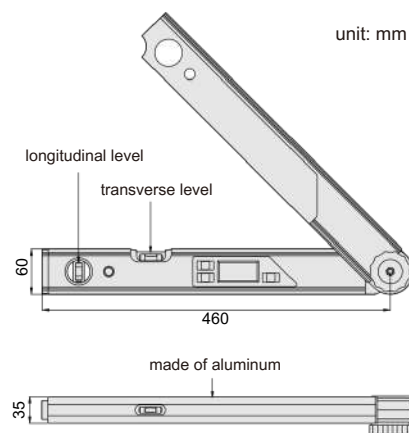
- ◆ Suitable for setting horizontal and vertical mitre angles of cutting machines
- ◆ Buttons: on/off, HOLD/SUP, SPR/CNR/MTR/BVL
- ◆ IP54 dust/waterproof
- ◆ With transverse and longitudinal level
- ◆ Absolute level, zero setting is not needed when batteries are replaced
- ◆ Backlight turns off in one minute after reading is stable, automatic power off in 5 minutes



Application



Code	Range	Resolution	Accuracy
823-225-01	0 - 225°	0.05°	±0.10°



SERIES 824

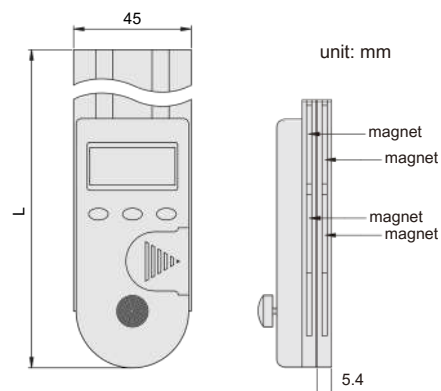
DIGITAL PROTRACTOR



- ◆ Button function:
Hold/Rev: hold/flip
ZERO: set zero
ON/OFF: power on/off
- ◆ With locking screw
- ◆ Side with magnetic force
- ◆ Resolution: 0.05°



824-004-11



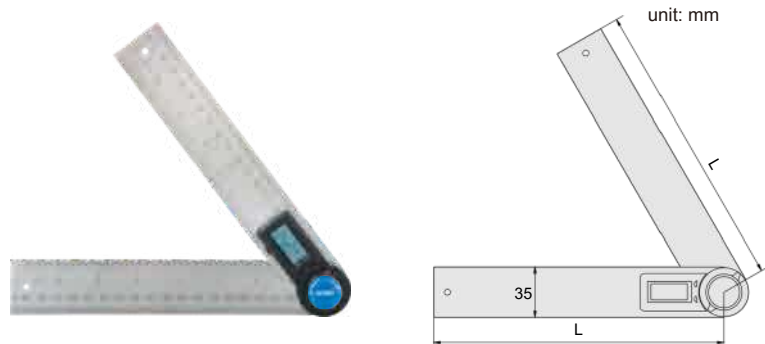
Code	Size	Range	Accuracy	L
824-004-11	100mm	0-360°	±0.2°	103
824-008-11	200mm	0-360°	±0.2°	205
824-012-11	300mm	0-360°	±0.2°	306

SERIES 821

DIGITAL PROTRACTOR

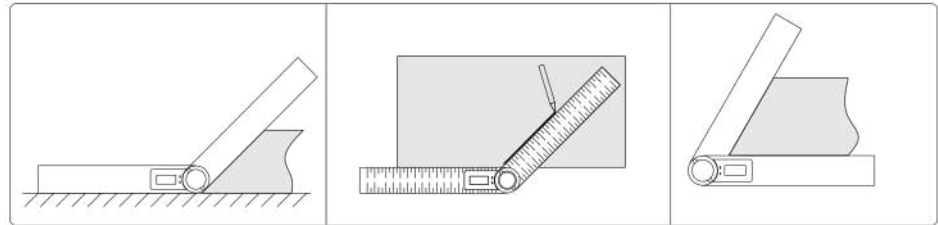


- ◆ Resolution: 0.1°
- ◆ Buttons: on/off, zero
- ◆ With locking attachment
- ◆ Rule graduation: 1mm and 1/32"
- ◆ Automatic power off



821-008-01

Application



Code	Size(L)	Range	Accuracy
821-008-01	200mm	0 - 360°	±0.3°
821-012-01	300mm	0 - 360°	±0.3°

SERIES 821

DIGITAL PROTRACTOR

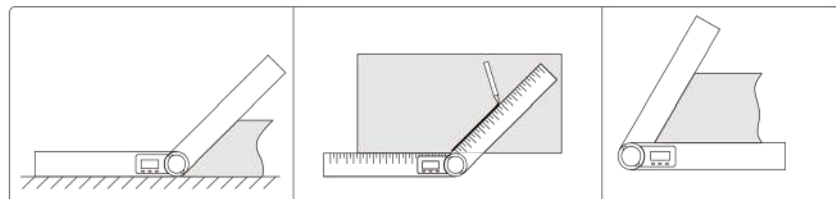


- ◆ Economic type
- ◆ Resolution: 0.1°
- ◆ Buttons: on/off, zero
- ◆ With locking attachment
- ◆ Rule graduation: 1mm and 1/32"
- ◆ Automatic power off



821-008-01N

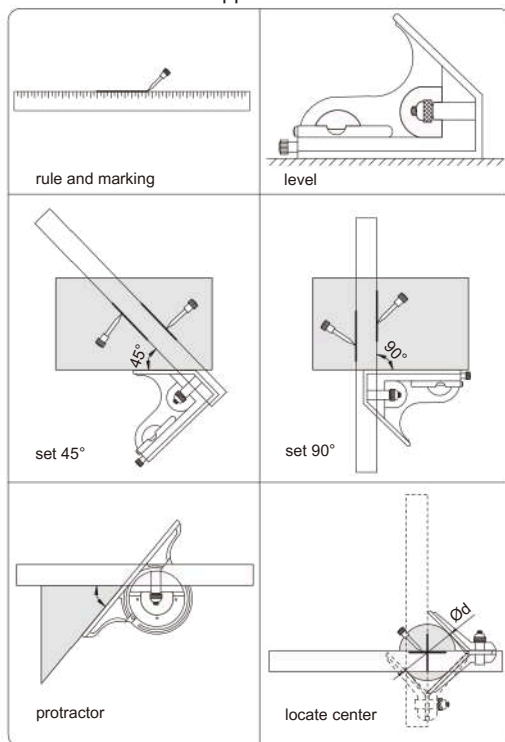
Application



Code	Size(L)	Range	Accuracy
821-008-01N	200mm	0 - 360°	±0.3°
821-012-01N	300mm	0 - 360°	±0.3°

- ◆ Protractor (made of cast iron), only for **817-180-02**:
Used to set an angle or angle measurement,
measuring range: 0-180°, accuracy: $\pm 20'$
- ◆ Square (made of cast iron):
Used as 90° square or 45° square
accuracy of 90° square: $\pm 8'$,
accuracy of 45° square: $\pm 10'$
- ◆ Blade (made of stainless steel):
Used as rule, measuring range: 300mm/12"
front side graduation: 0.5mm and 1/32"
reverse side graduation: 1mm and 1/64"
Used as rule, measuring range: 600mm/24"
front side graduation: 0.5mm and 1/32"
reverse side graduation: 1mm and 1/64"
- ◆ Center finder (made of cast iron), only for **817-090-13**
and **817-180-02**:
To locate center of cylinders with diameter
($\varnothing d$): 30-100mm, accuracy: ± 0.15 mm

Application



Code	L	Remark
817-090-12	305	2-piece set
817-090-13	305	3-piece set
817-180-02	305	4-piece set

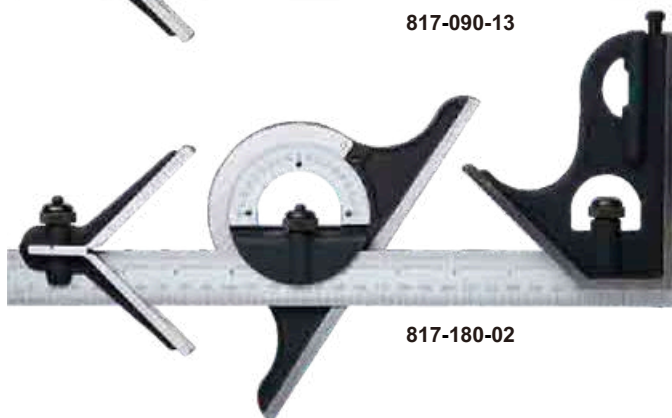
Code	L
817-000-24	610



817-090-12



817-090-13

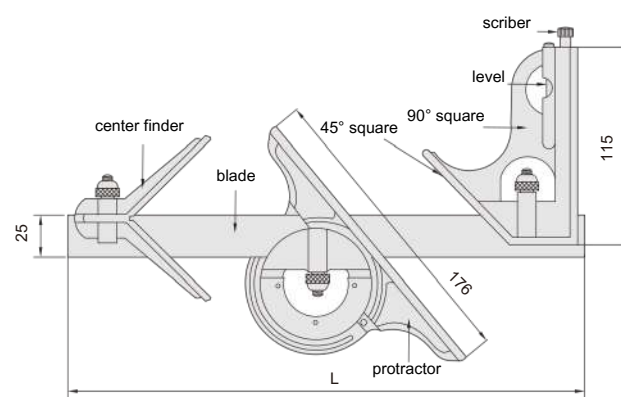


817-180-02

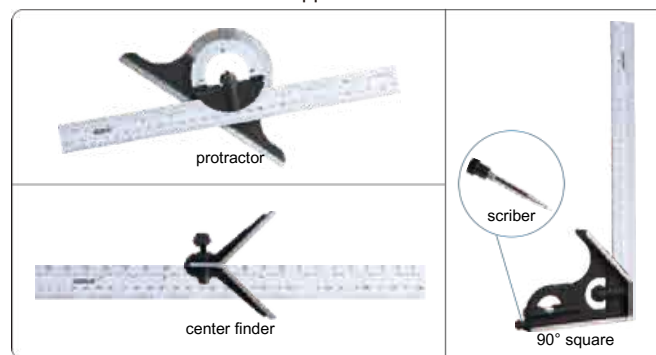


817-000-24

unit: mm



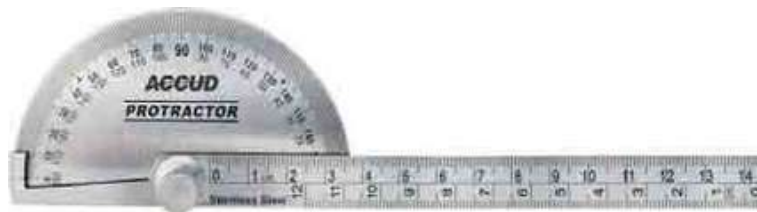
Application



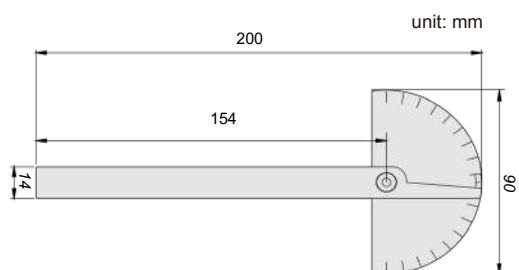
811

PROTRACTOR

- ◆ Economic type
- ◆ Made of stainless steel
- ◆ With locking screw



Package



Code	Size	Range	Graduation	Accuracy
811-180-11	90x52mm	0 - 180°	1°	±0.5°

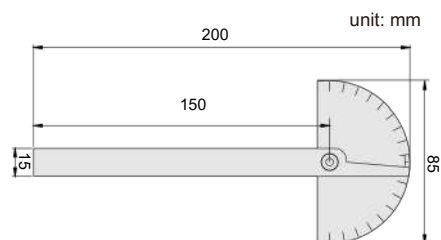
SERIES 811

PROTRACTOR

- ◆ Graduation: 1°
- ◆ Made of stainless steel
- ◆ Satin chrome plated scale
- ◆ With locking screw



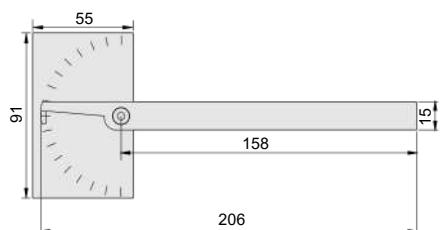
811-180-01



Package



811-180-02



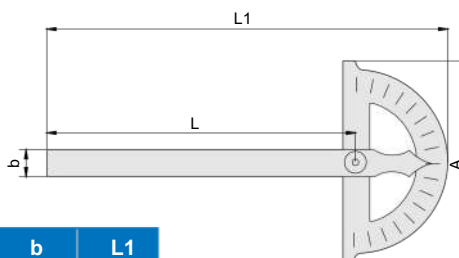
Code	Size	Range	Accuracy
811-180-01	85x150mm	0 - 180°	±0.3°
811-180-02	91x158mm	0 - 180°	±0.3°

- ◆ Graduation: 1°
- ◆ Made of stainless steel
- ◆ Satin chrome plated scale
- ◆ With locking screw



812-005-01

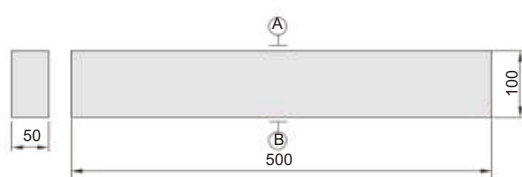
unit: mm



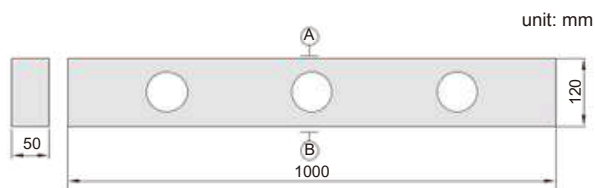
Code	Size(AxL)	Range	Accuracy	b	L1
812-003-01	80x120mm	0 - 180°	±0.3°	11	165
812-005-01	120x150mm	0 - 180°	±0.3°	13	215
812-006-01	150x200mm	0 - 180°	±0.3°	16	280
812-008-01	200x300mm	0 - 180°	±0.3°	20	410
812-012-01	300x500mm	0 - 180°	±0.3°	30	675



642-020-01



642-020-01



642-040-01

unit: mm

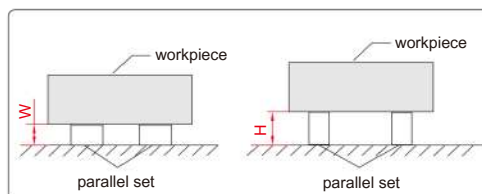
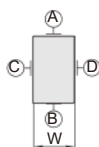
Code	Length(L)	Flatness of A and B	Parallelism between A and B	W	H
642-020-01	500mm	2.1 μ m	3.2 μ m	50	100
642-040-01	1000mm	3 μ m	4.5 μ m	50	120

With manufacturer inspection certificate

- ◆ Made of granite
- ◆ Two parallels per set



unit: mm



Code	Size(LxWxH)	Parallelism between A and B	Parallelism between C and D	Height difference of a matched pair
648-250-01	250x25x40mm	3 μ m	3 μ m	3 μ m

With manufacturer inspection certificate

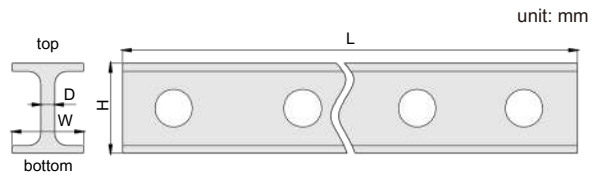
SERIES 647

MAGNALIUM STRAIGHT EDGES

- ◆ Made of magnalium, light weight, non-deform, no rusty



647-040-01



Code	Length(L)	Flatness of top and bottom	Parallelism between top and bottom	H	W	D
647-020-01	500mm	3μm	4μm	60	30	5
647-040-01	1000mm	5μm	8μm	60	30	5
647-060-01	1500mm	15μm	22μm	100	40	7
647-080-01	2000mm	18μm	27μm	100	40	7
647-100-01	2500mm	22μm	33μm	100	40	7
647-120-01	3000mm	48μm	72μm	150	80	8
647-140-01	3500mm	56μm	84μm	150	80	8
647-160-01	4000mm	64μm	110μm	150	80	10
647-200-01	5000mm	80μm	130μm	175	80	10
647-240-01	6000mm	100μm	150μm	175	80	10

SERIES 994

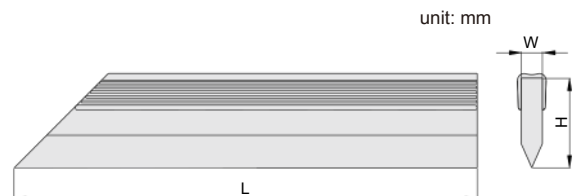
STRAIGHT EDGE

- ◆ Beveled edge to check the flatness
- ◆ DIN874
- ◆ Made of stainless steel
- ◆ Stain chrome plating



994-004-01

Code	Size (L)	Straightness	W	H
994-002-01	50mm	1.0μm	5	20
994-003-01	75mm	1.0μm	5	25
994-004-01	100mm	1.0μm	5	25
994-005-01	125mm	1.0μm	5	25
994-006-01	150mm	1.0μm	6	30
994-008-01	200mm	2.0μm	6	30
994-010-01	250mm	2.0μm	8	40
994-012-01	300mm	3.0μm	8	40
994-016-01	400mm	3.0μm	10	50
994-020-01	500mm	4.0μm	10	50



PARALLEL



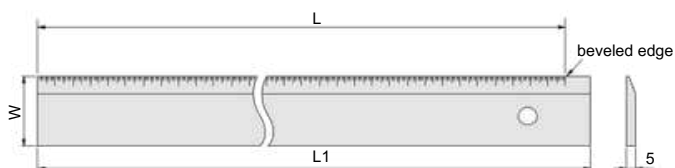
SERIES 991

STRAIGHT EDGE RULE



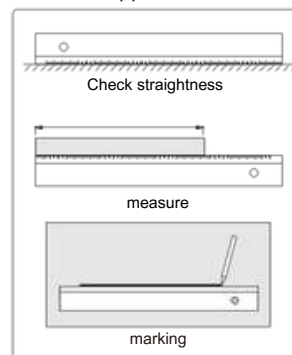
991-012-01

unit: mm



- ◆ Check straightness, as well as for measurement
- ◆ Made of hardened tool steel, chrome plated
- ◆ Graduation: 1mm

Application



Code	Range(L)	Straightness	W	L1
991-012-01	300mm	0.02mm	40	310
991-020-01	500mm	0.03mm	40	510
991-040-01	1000mm	0.04mm	50	1010

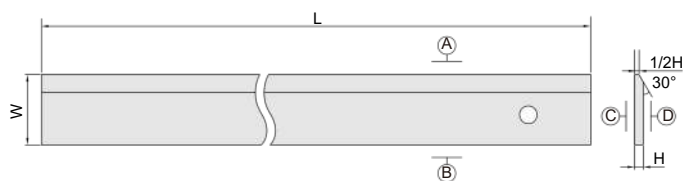
SERIES 907

PRECISION STRAIGHT EDGE WITH BEVELED EDGE



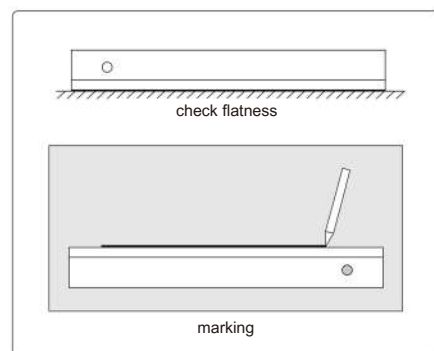
907-012-11

unit: mm



- ◆ Check flatness and for marking
- ◆ Made of tool steel

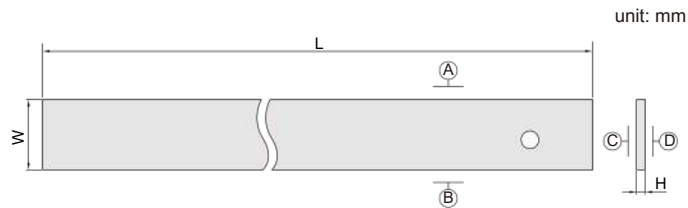
Application



Code	Range(L)	Flatness of A and B	Flatness of C and D	W	H
907-012-11	305mm	0.005mm	0.05mm	41	6.3
907-024-11	610mm	0.006mm	0.06mm	51	7.9
907-036-11	914mm	0.007mm	0.06mm	64	9.5

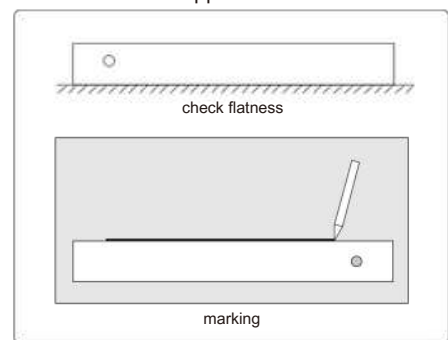


906-012-11



- ◆ Check flatness and for marking
- ◆ Made of tool steel

Application



Code	Range(L)	Flatness of A and B	Flatness of C and D	W	H
906-012-11	305mm	0.005mm	0.05mm	41	6.3
906-024-11	610mm	0.006mm	0.06mm	51	7.9
906-036-11	914mm	0.007mm	0.06mm	64	9.5

- ◆ For use in setting machined surfaces precisely horizontal
- ◆ Sensibility: 0.02mm/m per division
- ◆ Vee angle : 140°



713-006-02



Code	Size (L)	H	W
713-006-02	150mm	42	47
713-008-02	200mm	45	47
713-012-02	300mm	45	49

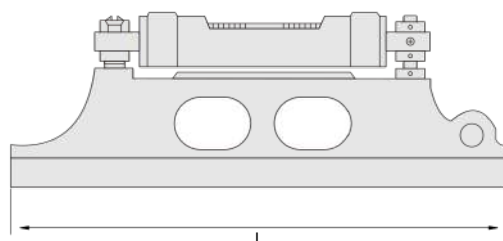
SERIES 715

BLOCK LEVEL

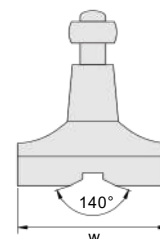
- ◆ For use in setting machined surfaces precisely horizontal
- ◆ Vee angle : 140°



715-008-05



unit: mm



Sensibility 0.05mm/m

Code	Size (L)	W
715-006-05	150mm	38
715-008-05	200mm	44
715-012-05	300mm	44

Sensibility 0.1mm/m

Code	Size (L)	W
715-006-10	150mm	38
715-008-10	200mm	44
715-012-10	300mm	44

SERIES 711

FRAME LEVEL

- ◆ For using setting machined surfaces precisely horizontal and vertical
- ◆ Sensibility: 0.02mm/m per division
- ◆ V-groove on the bottom and left for shafts (711-004-02 only has v-groove on the bottom)

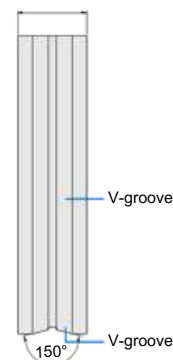
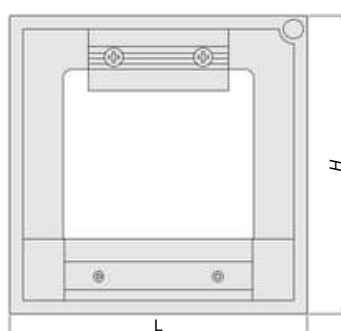


711-006-02



711-004-02

unit: mm



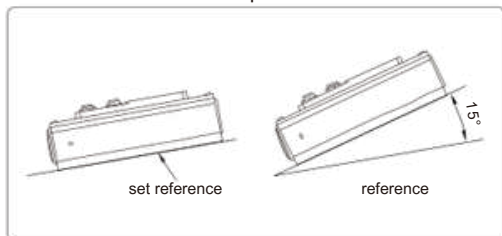
Code	Size (LxHxW)
711-004-02	100x100x32mm
711-006-02	150x150x38mm
711-008-02	200x200x40mm
711-012-02	300x300x45mm



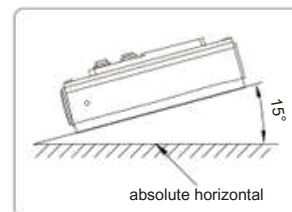
- ◆ Sensibility: 0.01mm/m(0.001°)
- ◆ Accuracy: 10mm range $\leq \pm 0.01$ mm/m
10mm-50mm range $\leq \pm 0.02$ mm/m
- ◆ For use in setting machined surfaces precisely horizontal
- ◆ With longitudinal level
- ◆ Buttons: on/off, zero, mm/inch, save/mode, ABS
- ◆ 3.6V li-ion battery for 15 hours working
- ◆ Memory: 6



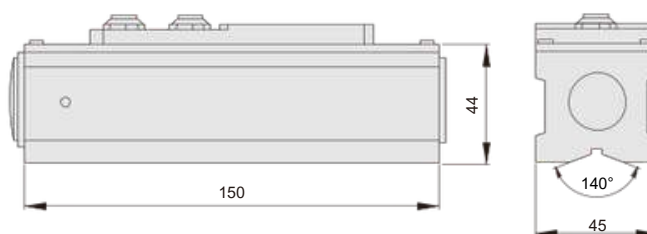
Use as protractor



Use as level



unit: mm

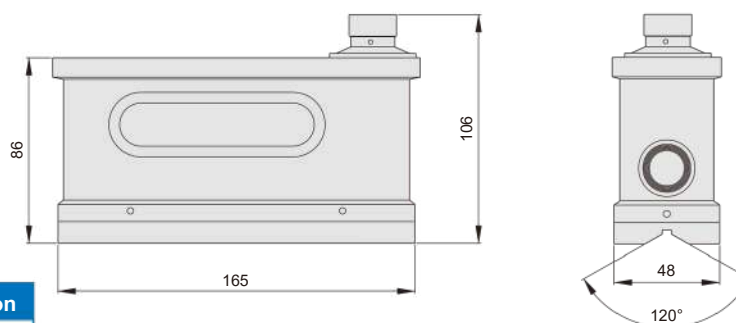


Code	Range	Graduation
712-006-01	± 50 mm/m	0.01mm/m

- ◆ Sensibility: 0.01mm/m(0.001°)
- ◆ Accuracy: ± 0.01 mm/m(range: ± 1 mm)
 ± 0.02 mm/m(other)
- ◆ For use in setting machined surfaces precisely horizontal



unit: mm



Code	Range	Graduation
714-006-01	0-10mm/m(± 5 mm/m)	0.01mm/m

- ◆ Measures flatness, parallelism and straightness
- ◆ Built-in bluetooth, can be connected to computers, transmission distance is 50m
- ◆ The LCD can be rotated for easy observation in different directions
- ◆ V-groove on bottom for shafts
- ◆ Supplied with measuring software



Rechargeable battery



Lithium battery socket



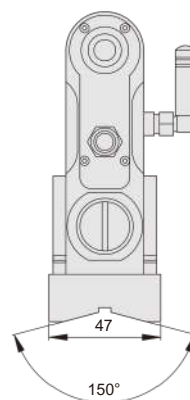
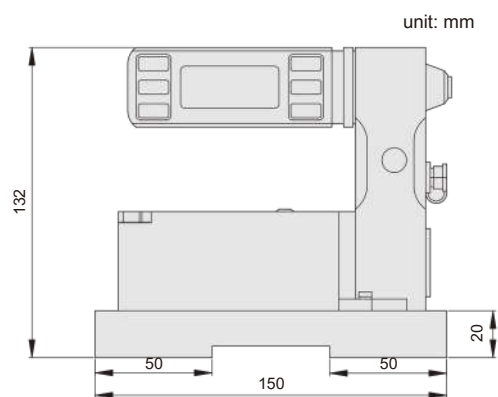
Charging cable



Control box



Wireless transmitter



SPECIFICATION

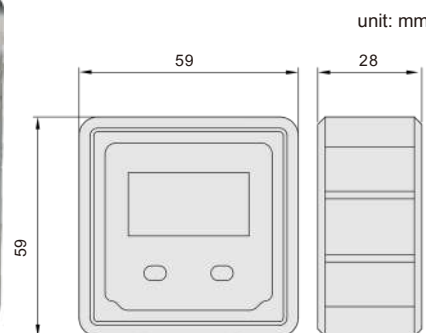
Code	720-250-01	
Resolution(adjustable)	10 μ m/m	1 μ m/m
Range	$\pm 5000\mu$ m/m	$\pm 500\mu$ m/m
Display range	0- ± 500 (numbers)	0- ± 2500 (numbers)
Accuracy	$\pm(1+A \times 2\%)$ note: A is the absolute value of the nominal value of the identification location	
Response time	<3 sec	
Data output	433	
Repeatability	≤ 1 number	
Working temperature	20°C $\pm$ 2°C	
Working humidity	<75%	
Power supply	rechargeable battery	
Size	150x47x170mm	
Weight	1.8kg	

INCLUDED ACCESSORIES

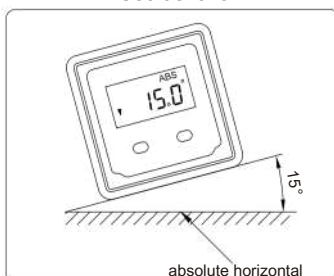
Charging cable	1pc
Control box	1pc
Rechargeable battery	2pcs
Wireless transmitter	1pc
Lithium battery socket	1pc
Measuring software	1pc



- ◆ Use as level or protractor
- ◆ Accuracy : $\pm 0.1^\circ$ (vertical and horizontal), $\pm 0.2^\circ$ (other direction)
- ◆ Absolute horizontal reference can save in memory for ever
- ◆ Button: on/off, zero
- ◆ Magnetic base
- ◆ Use in 4 directions
- ◆ Automatic power off

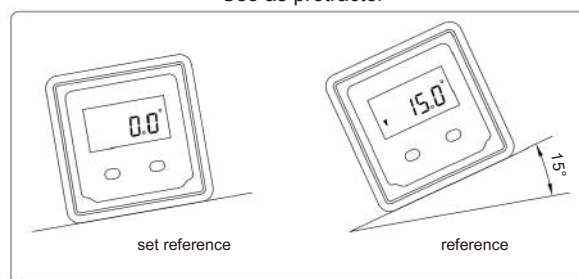


Use as level



use as magnet

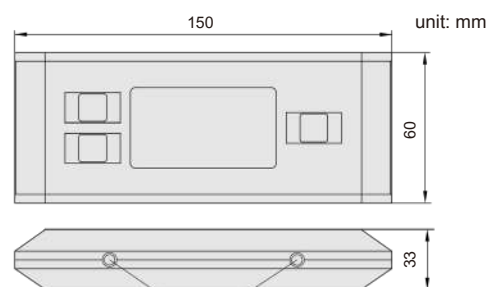
Use as protractor



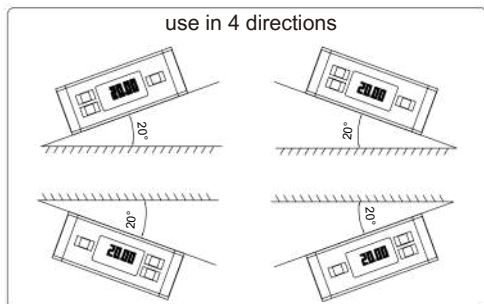
Code	Range	Resolution
721-180-01	0 - 360° (90°x4)	0.05°



- ◆ Use as level or protractor
- ◆ Resolution: 0.05°
- ◆ Accuracy : $\pm 0.1^\circ$ (vertical and horizontal), $\pm 0.2^\circ$ (other direction)
- ◆ Magnetic base, with groove
- ◆ Aluminum frame provides with high rigidity and low weight
- ◆ Absolute horizonation reference can save in memory for ever



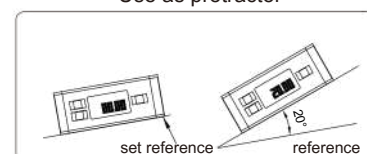
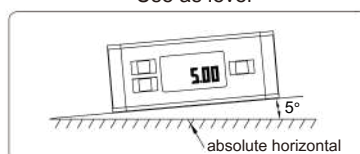
use in 4 directions



Magnetic base

Use as level

Use as protractor



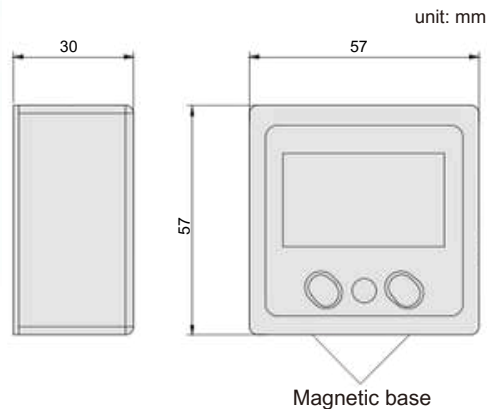
Code	Range	Dimension(LxWx H)
722-360-01	0 - 360° (90°x4)	150x60x33mm

723

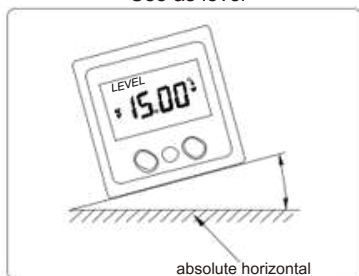
DIGITAL LEVEL



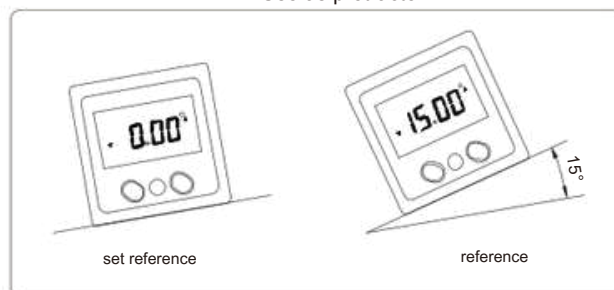
- ◆ Use as level or protractor
- ◆ Use in 4 directions
- ◆ Magnetic base
- ◆ Accuracy : $\pm 0.1^\circ$ (vertical and horizontal), $\pm 0.2^\circ$ (other direction)
- ◆ Metal cover
- ◆ Adjust the display direction automatically



Use as level



Use as protractor



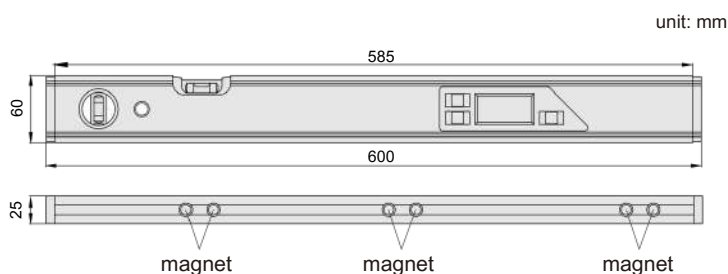
Code	Range	Resolution
723-360-01	0 - 360° (4x90°)	0.05°

725

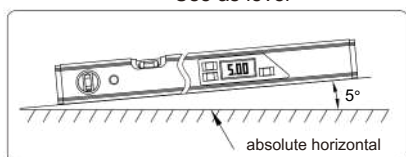
DIGITAL LEVEL



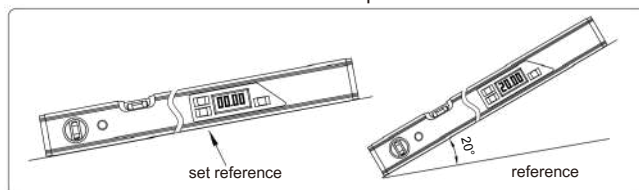
- ◆ Use as level or protractor
- ◆ Accuracy : $\pm 0.1^\circ$ (vertical and horizontal), $\pm 0.2^\circ$ (other direction)
- ◆ Buttons: on/off, ABS, hold, alarm unit, backlight
- ◆ With vertical and horizontal vials
- ◆ Absolute horizon reference can save in memory for ever
- ◆ Magnetic base
- ◆ Adjust the display direction automatically



Use as level



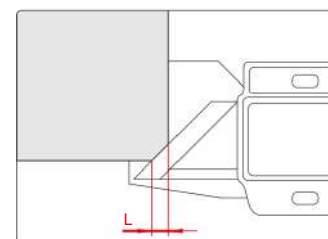
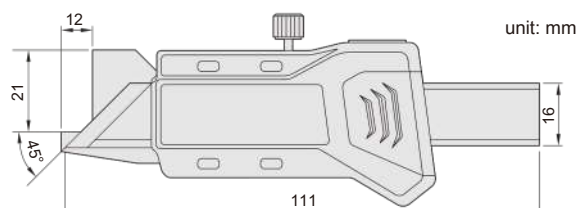
Use as protractor



Code	Range	Resolution
725-360-01	0 - 360° (4x90°)	0.05°



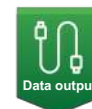
- ◆ Measure 45° chamfer dimension
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/in, INC
- ◆ Automatic power on/off
- ◆ Data output(cable code :100-03 or 100-04)
- ◆ Made of stainless steel



Code	Range	Accuracy
163-006-11	0-6mm/0-0.24"	±0.06mm

SERIES 163

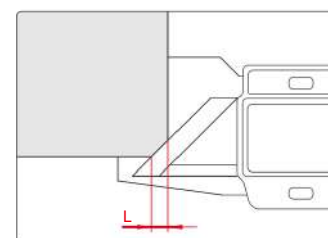
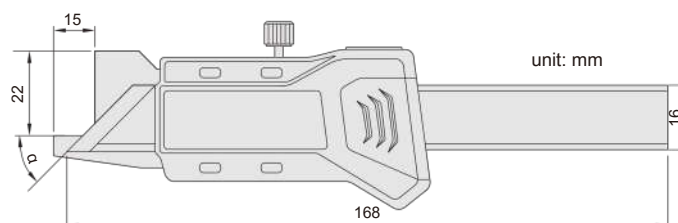
DIGITAL CHAMFER GAUGE



- ◆ Measure α chamfer dimension
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/in, INC
- ◆ Automatic power on/off
- ◆ Data output(cable code :100-03 or 100-04)
- ◆ Made of stainless steel



163-010-12



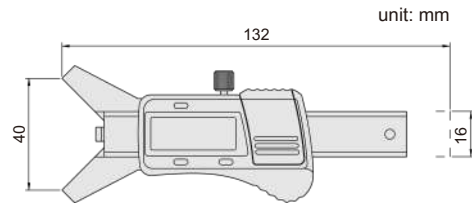
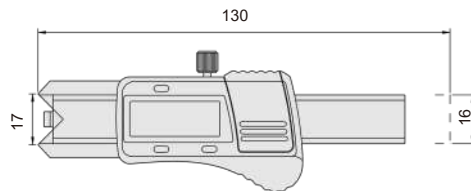
Code	Range	Accuracy	Chamfer(α)
163-010-11	0-10mm/0-0.39"	±0.06mm	30°
163-010-12	0-10mm/0-0.39"	±0.06mm	45°
163-010-13	0-10mm/0-0.39"	±0.06mm	60°



164-001-11



164-002-11

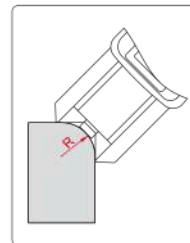


Set zero

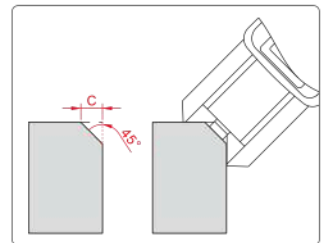


- ◆ Resolution: 0.01mm
- ◆ Made of stainless steel

Measure chamfer radius



Measure leg length of 45° chamfer

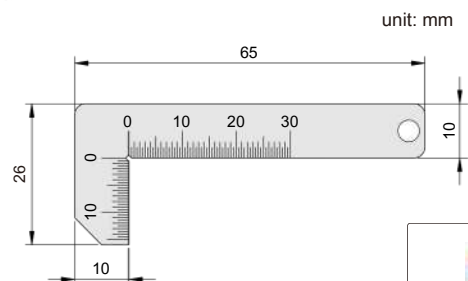
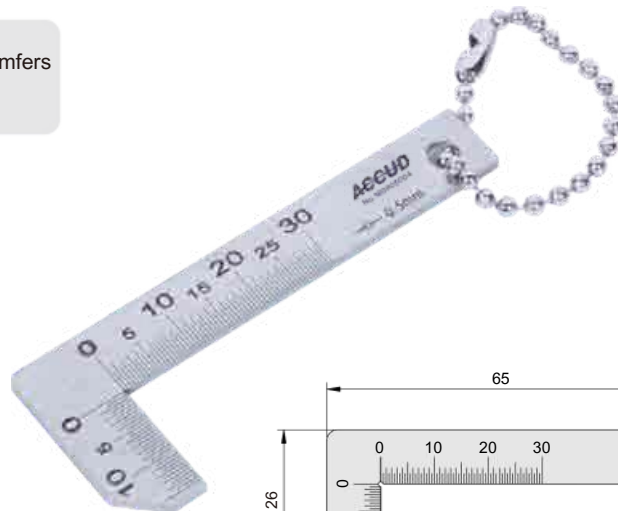
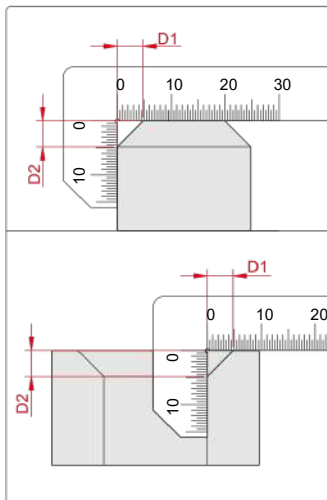


Code	Range of radius (R)	Range of leg length (C)	Accuracy
164-001-11	0-15mm	0-6mm	±0.05mm
164-002-11	0-30mm	0-18mm	±0.05mm

967

CHAMFER GAUGE

- ◆ To measure internal and external chamfers
- ◆ Made of stainless steel



Package



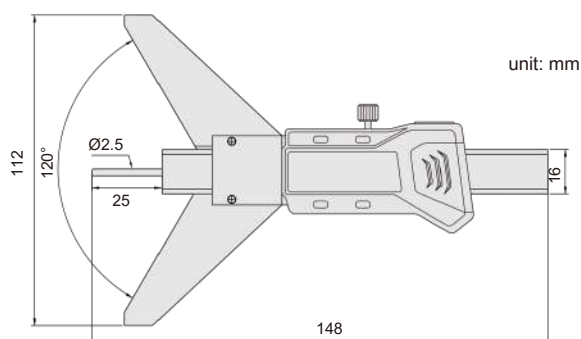
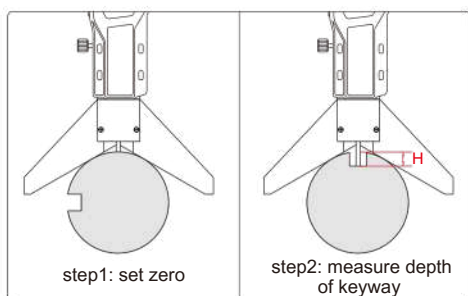
Code	Graduation	Accuracy
967-001-11	0.5mm	±0.25mm



- ◆ Measure the depth of keyway
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/in, INC
- ◆ Automatic power on/off
- ◆ Data output(cable code :100-03 or 100-04)
- ◆ Made of stainless steel



Measure

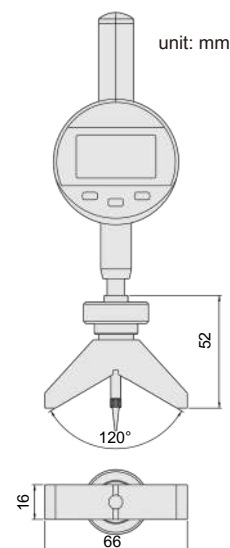
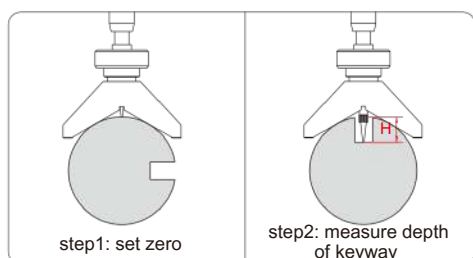


Code	Range	Accuracy
195-002-11	0-50mm/0-2"	±0.03mm



- ◆ Measure the keyway depth of cylindrical workpieces with a diameter of Ø0-100mm
- ◆ Button: on/off, zero, mm/inch, ABS, data preset, change measuring direction
- ◆ Automatic power off
- ◆ Data output(cable code:200-03 or 200-04)
- ◆ Stainless steel base
- ◆ Pointed tip (Code: 270-006-21)

Measure



Code	Range	Resolution	Accuracy
196-001-11	0-25.4mm/0-1"	0.01mm/0.0005"	±0.02mm

999

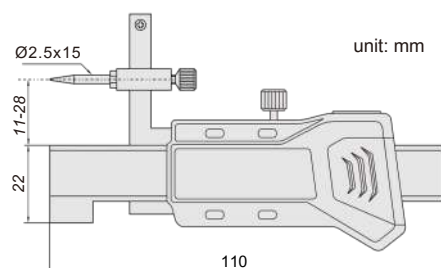
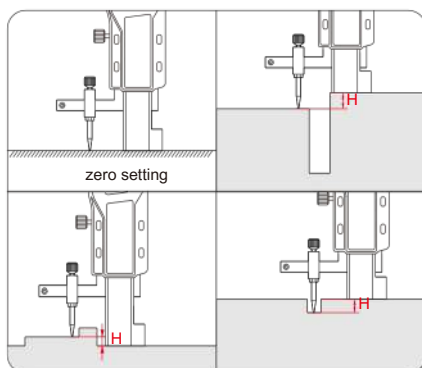
DIGITAL STEP GAUGE



- ◆ Measure the height difference of two surface
- ◆ Resolution: 0.01mm
- ◆ Buttons: on/off, zero, mm/in, INC
- ◆ Data output(cable code :100-03 or 100-04)
- ◆ Automatic power off
- ◆ Stainless steel base



STEP
GAUGE

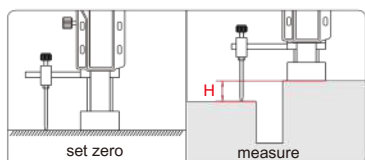


Code	Range	Accuracy
999-010-11	-10~ +10mm	±0.05mm

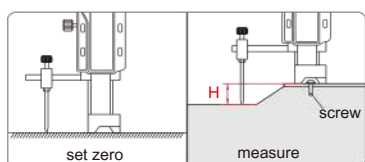




- ◆ Measure height difference of two surfaces
(999-020-12 suitable for surfaces with barrier, such as screw)
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/in, INC
- ◆ Data output(cable code :100-03 or 100-04)
- ◆ Automatic power off
- ◆ Made of stainless steel

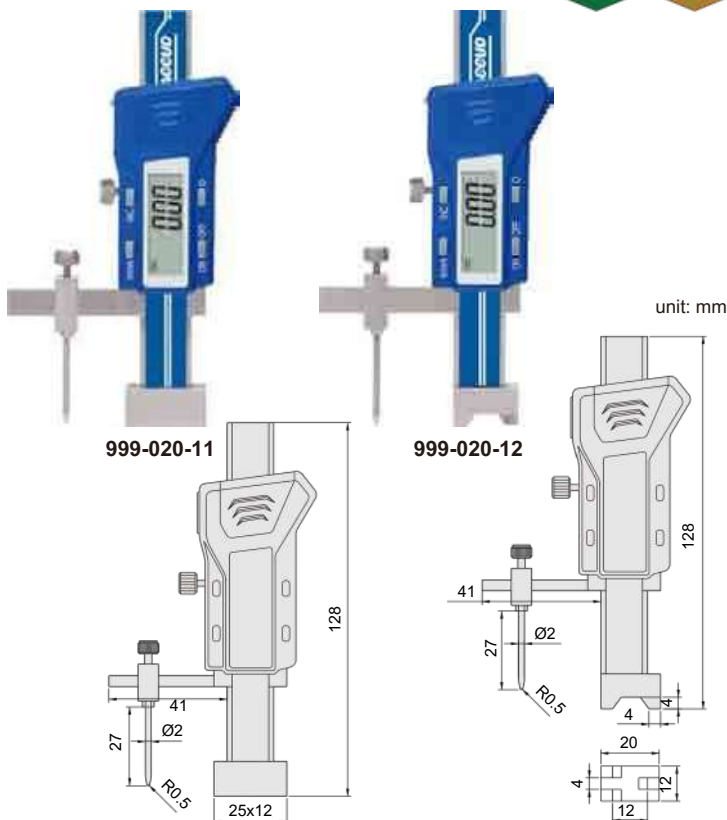


999-020-11

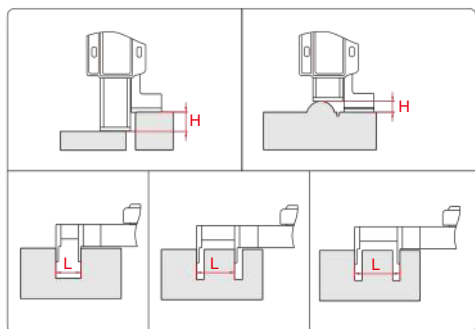


999-020-12

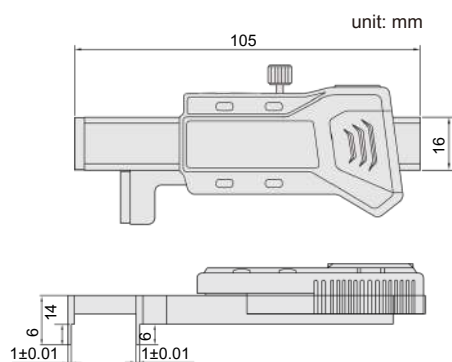
Code	Range	Accuracy
999-020-11	0-±20mm/0-±0.8"	±0.02mm
999-020-12	0-±20mm/0-±0.8"	±0.02mm



- ◆ Measure step height and gap width
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/in, INC
- ◆ Automatic power on/off
- ◆ Data output(cable code :100-03 or 100-04)
- ◆ Made of stainless steel
- ◆ Supplied with zero setting block



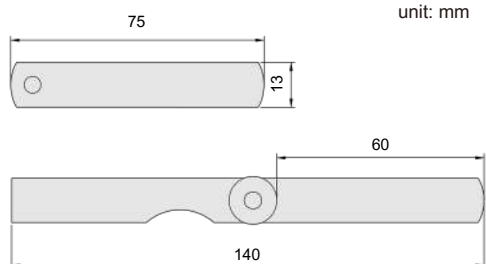
Code	Range	Accuracy
437-001-11	0-12.7mm/0-0.5"	±0.03mm



Zero setting block (included)



- ◆ Meets DIN2275
- ◆ Accuracy: $\pm(3+T/80)\mu\text{m}$, T is the thickness of leaves, unit: μm
- ◆ Made of hardened spring steel



unit: mm

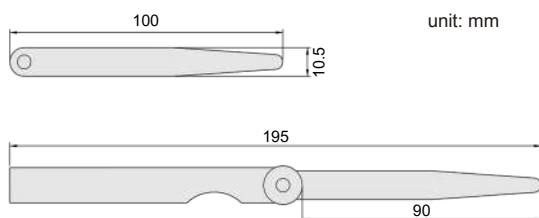


Code	Range	Quantity	Leaves thickness (mm)
911-100-25	0.04 - 1.00mm	25	0.04, 0.05, 0.06, 0.07, 0.08, 0.09, 0.10, 0.15, 0.20, 0.25, 0.30, 0.35, 0.40, 0.45, 0.50, 0.55, 0.60, 0.65, 0.70, 0.75, 0.80, 0.85, 0.90, 0.95, 1.00

SERIES 912

FEELER

- ◆ Meets DIN2275
- ◆ Accuracy: $\pm(3+T/80)\mu\text{m}$, T is the thickness of leaves, unit: μm
- ◆ Made of hardened spring steel



unit: mm



912-100-20

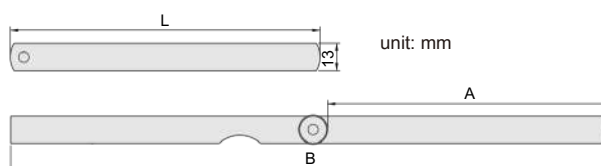
Code	Range	Quantity	Leaves thickness (mm)
912-050-13	0.03 - 0.50mm	13	0.03, 0.04, 0.05, 0.06, 0.07, 0.08, 0.09, 0.10, 0.15, 0.20, 0.30, 0.40, 0.50
912-100-13	0.05 - 1.00mm	13	0.05, 0.10, 0.15, 0.20, 0.25, 0.30, 0.40, 0.50, 0.60, 0.70, 0.80, 0.90, 1.00
912-100-17	0.02 - 1.00mm	17	0.02, 0.03, 0.04, 0.05, 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
912-100-20	0.05 - 1.00mm	20	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
912-100-32	0.03 - 1.00mm	32	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

SERIES 913/914/915

FEELER

- ◆ Meets DIN2275
- ◆ Accuracy: $\pm(3+T/80)\mu\text{m}$, T is the thickness of leaves, unit: μm
- ◆ Made of hardened spring steel

L	A	B
150	135	295
200	185	395
300	285	590



913-100-20



Code	Range	Quantity	Leaves thickness (mm)	L
913-100-13	0.05 - 1.00mm	13	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	150
914-100-13	0.05 - 1.00mm	13		200
915-100-13	0.05 - 1.00mm	13		300
913-100-17	0.02 - 1.00mm	17	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	150
914-100-17	0.02 - 1.00mm	17		200
915-100-17	0.02 - 1.00mm	17		300
913-100-20	0.05 - 1.00mm	20	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	150
914-100-20	0.05 - 1.00mm	20		200
915-100-20	0.05 - 1.00mm	20		300

SERIES 916

FEELER TAPE

- ◆ Used to check the spacing thickness
- ◆ Made of hardened alloy steel
- ◆ Length 5m
- ◆ Width 13mm



916-010-01

Code	Thickness	Accuracy	Code	Thickness	Accuracy	Code	Thickness	Accuracy
916-001-01	0.01mm	$\pm 3\mu\text{m}$	916-015-01	0.15mm	$\pm 5\mu\text{m}$	916-060-01	0.60mm	$\pm 14\mu\text{m}$
916-002-01	0.02mm	$\pm 4\mu\text{m}$	916-018-01	0.18mm	$\pm 7\mu\text{m}$	916-065-01	0.65mm	$\pm 14\mu\text{m}$
916-003-01	0.03mm	$\pm 4\mu\text{m}$	916-020-01	0.20mm	$\pm 8\mu\text{m}$	916-070-01	0.70mm	$\pm 17\mu\text{m}$
916-004-01	0.04mm	$\pm 4\mu\text{m}$	916-025-01	0.25mm	$\pm 9\mu\text{m}$	916-075-01	0.75mm	$\pm 17\mu\text{m}$
916-005-01	0.05mm	$\pm 4\mu\text{m}$	916-030-01	0.30mm	$\pm 9\mu\text{m}$	916-080-01	0.80mm	$\pm 19\mu\text{m}$
916-006-01	0.06mm	$\pm 4\mu\text{m}$	916-035-01	0.35mm	$\pm 11\mu\text{m}$	916-085-01	0.85mm	$\pm 19\mu\text{m}$
916-007-01	0.07mm	$\pm 5\mu\text{m}$	916-040-01	0.40mm	$\pm 12\mu\text{m}$	916-090-01	0.90mm	$\pm 22\mu\text{m}$
916-008-01	0.08mm	$\pm 5\mu\text{m}$	916-045-01	0.45mm	$\pm 12\mu\text{m}$	916-095-01	0.95mm	$\pm 22\mu\text{m}$
916-009-01	0.09mm	$\pm 5\mu\text{m}$	916-050-01	0.50mm	$\pm 14\mu\text{m}$	916-100-01	1.00mm	$\pm 24\mu\text{m}$
916-010-01	0.10mm	$\pm 5\mu\text{m}$	916-055-01	0.55mm	$\pm 14\mu\text{m}$			

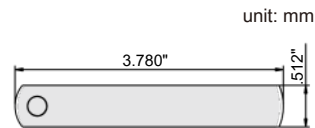
917

INCH FEELER GAUGE

- ◆ .010" is made of brass, others are made of hardened alloy steel
- ◆ Each blade is marked with inch/metric size

Code	Range	Quantity of leaves
917-035-31	.0015" ~ .035"	32

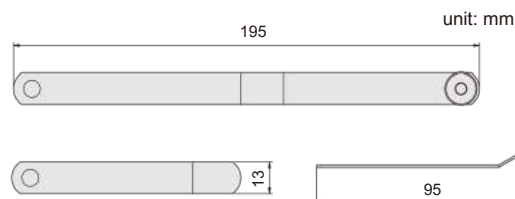
Thickness of leaves included	Accuracy
.010" (brass)	±.00039"
.0015", .002"	±.0002"
.0025"~.007"	±.00028"
.008", .009"	±.00035"
.010", .011"	±.00039"
.012", .013"	±.00047"
.014", .015"	±.00051"
.016", .017"	±.00055"
.018", .019"	±.00059"
.020", .021"	±.00067"
.022", .023"	±.00071"
.024", .025", .026"	±.00075"
.028"	±.00091"
.030"	±.00094"
.032", .035"	±.00102"



919

OFFSET DUAL SCALE FEELER GAUGE

- ◆ Bend end
- ◆ Blade: length 4"
- ◆ Each blade is marked with imperial/metric size
- ◆ Made of hardened spring steel

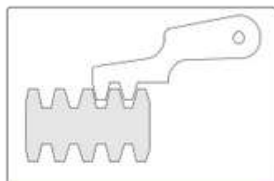


Code	Range	Quantity	Leaves thickness
919-030-26	0.005-0.020"	26	.005(.127mm), .006(.152mm), .007(.178mm), .008(.203mm), .009(.229mm), .010(.254mm), .011(.279mm), .012(.305mm), .013(.330mm), .014(.356mm), .015(.381mm), .016(.406mm), .017(.432mm), .018(.457mm), .019(.483mm), .020(.508mm), .021(.533mm), .022(.559mm), .023(.584mm), .024(.610mm), .025(.635mm), .026(.660mm), .027(.686mm), .028(.711mm), .029(.737mm), .030(.762mm)

SERIES 921

PITCH GAUGE

- ◆ Measure the pitch of thread
- ◆ Accuracy: $\pm 0.07\text{mm}$
- ◆ Made of medium carbon steel



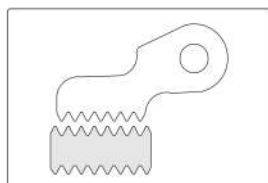
921-012-16

Code	Range	Thread	Quantity	Leaves pitch(mm)
921-020-12	2 - 20mm	Tr30°	12	2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 16, 20mm
921-012-16	1 - 12TPI	ACME29°	16	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

SERIES 922/923/924/925

PITCH GAUGE

- ◆ Measure the pitch of thread
- ◆ Accuracy: $\pm 0.07\text{mm}$
- ◆ Made of medium carbon steel



922-007-22

METRIC 60° SCREW

Code	Range	Quantity	Leaves pitch
922-007-22	0.4 - 7.0mm	22	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
922-007-24	0.25 - 7.0mm	24	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, 7mm
922-006-24	0.25 - 6.0mm	24	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
922-025-28	0.25 - 2.5mm	28	0.25, 0.3, 0.35, 0.4, 0.45, 0.5, 0.55, 0.6, 0.65, 0.7, 0.75, 0.8, 0.85, 0.9, 1.0, 1.1, 1.2, 1.25, 1.3, 1.4, 1.5, 1.6, 1.7, 1.75, 1.8, 1.9, 2.0, 2.5mm

UNIFIED 60° SCREW

Code	Range	Quantity	Leaves pitch
923-042-30	4 - 42TPI	30	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

WHITWORTH 55° SCREW

Code	Range	Quantity	Leaves pitch
924-042-30	4 - 42TPI	30	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
924-062-28	4 - 62TPI	28	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 WHITWORTH 55° SCREW

Code	Range	Quantity	Leaves pitch
925-062-52	0.25 - 6.0mm and 4 - 62TPI	52	pitch of 922-006-24 and 924-062-28

SERIES 926

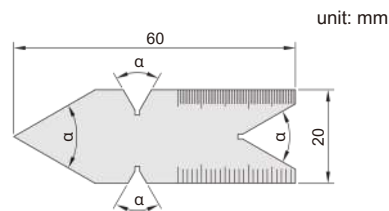
CENTER GAUGE

- ◆ Check the screw angle and pitch
- ◆ Accuracy: $\pm 30'$
- ◆ Made of stainless steel

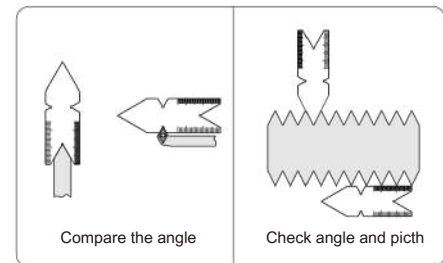
Package



926-060-02



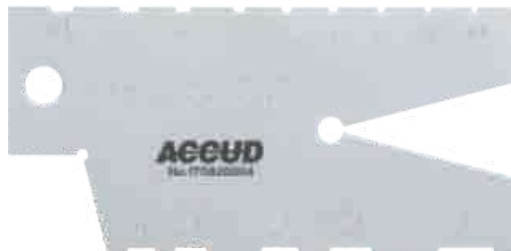
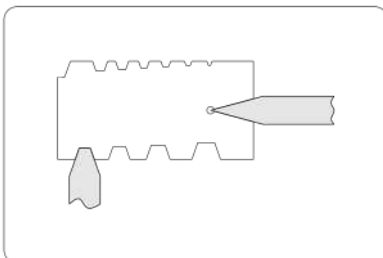
Code	Screw type	Angle(α)	Graduation
926-060-01	metric 60°	60°	0.5mm and 1mm
926-060-02	unified 60°	60°	front side : 1/14 " and 1/20", reverse side: 1/24" and 1/32"
926-055-01	whitworth 55°	55°	front side: 1/14" and 1/20", reverse side: 1/24" and 1/32"



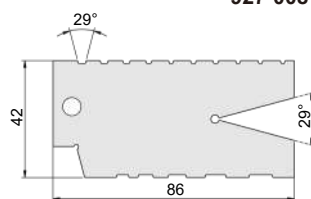
SERIES 927

THREAD GAUGE

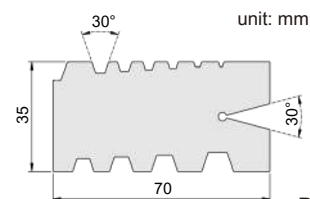
- ◆ To check and set screw cutting tools
- ◆ Angle accuracy: $\pm 10\text{min}$.
- ◆ Made of medium carbon steel



927-008-01



927-008-01



927-012-01

Package

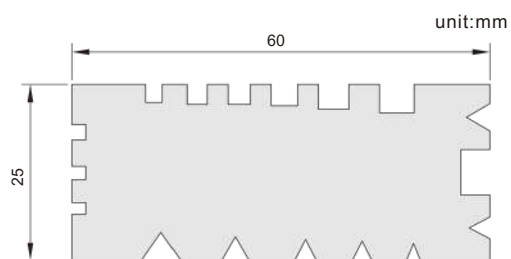
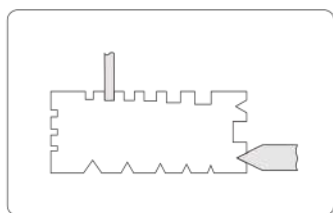


Code	Range	Thread type	Pitch
927-008-01	1 - 10TPI	ACME 29°	1, 1-1/3, 1-1/2, 1-3/4, 2, 2-1/2, 3, 4, 5, 6, 7, 8, 9, 10TPI
927-012-01	2 - 12mm	Tr 30°	2, 3, 4, 5, 6, 7, 8, 9, 10, 12mm

933

ANGLE GAUGE

- ◆ To check and set screw cutting tools
- ◆ Angle accuracy: $\pm 10\text{min}$.
- ◆ Made of medium carbon steel



Package



Code	Pitch	Angle(α)
933-008-11	2, 2.5, 3, 3.5, 4, 4.5, 5, 6, 7, 8TPI	45°, 53.8°, 55°, 60°, 70°

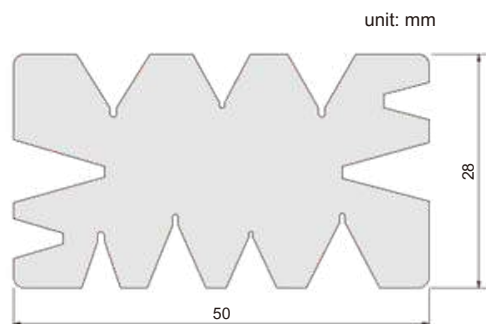
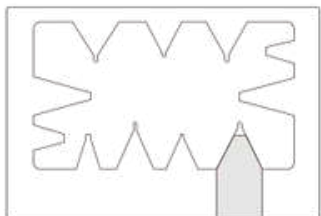
930

ANGLE GAUGE

- ◆ Made of stainless steel



Check the angle of screw cutting tools



Code	Range	Accuracy
930-001-01	29°, 30°, 40°, 45°, 50°, 55°, 60°, 65°	$\pm 10'$

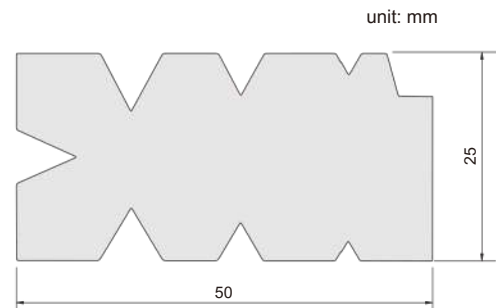
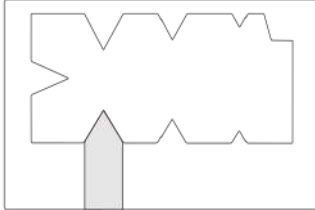
934

ANGLE GAUGE

- ◆ Made of stainless steel



Check the angle of screw cutting tools

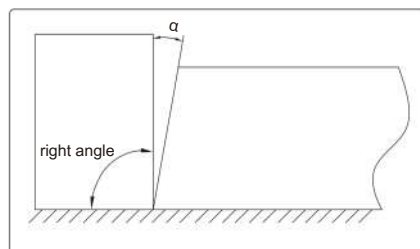


Code	Range	Accuracy
934-001-11	55°, 60°, 47 1/2°BA, 14 1/2°ACME	±10'

931

ANGLE GAUGE

- ◆ Check the coangle
- ◆ Accuracy: ±30'

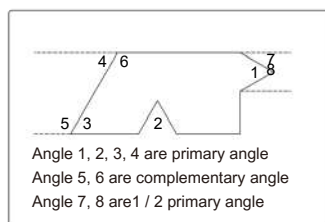
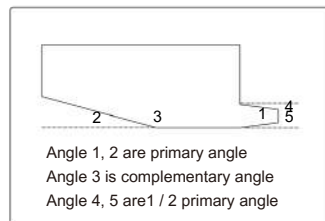


Code	Range	Quantity	Leaves angle(α)
931-045-20	1° - 45°	20	1°, 2°, 3°, 4°, 5°, 6°, 7°, 8°, 9°, 10°, 12°, 14°, 16°, 18°, 20°, 25°, 30°, 35°, 40°, 45°

- ◆ Each blade checks primary, 1/2 primary and complementary angles

Code	Quantity of leaves	Accuracy
932-018-01	18	±10'

Primary angle	½ primary angle	Complementary angle
5°	2°30'	175°
10°	5°	170°
15°	7°30'	165°
20°	10°	160°
25°	12°30'	155°
30°	15°	150°
35°	17°30'	145°
40°	20°	140°
45°	22°30'	135°
50°	25°	130°
55°	27°30'	125°
60°	30°	120°
65°	32°30'	115°
70°	35°	110°
75°	37°30'	105°
80°	40°	100°
85°	42°30'	95°
90°	45°	90°



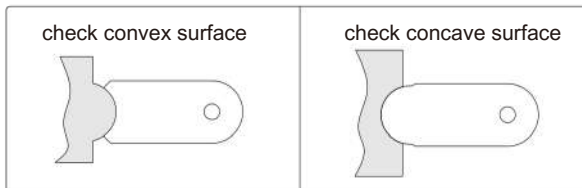
SERIES 941

RADIUS GAUGE



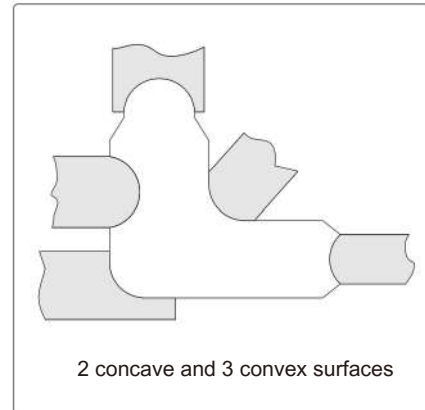
941-015-32

- ◆ Check the radius
- ◆ With concave and convex surface in each size



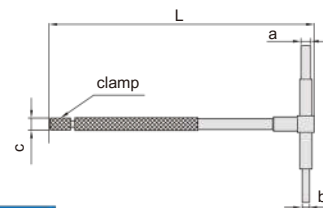
Code	Range	Quantity	Accuracy	Leaves radius (mm)
941-007-34	1 - 7mm	17x2	±0.03mm	1, 1.25, 1.5, 1.75, 2, 2.25, 2.5, 2.75, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7
941-015-32	7.5 - 15mm	16x2	±0.035mm	7.5, 8, 8.5, 9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13, 13.5, 14, 14.5, 15
941-025-30	15.5 - 25mm	15x2	±0.042mm	15.5, 16, 16.5, 17, 17.5, 18, 18.5, 19, 19.5, 20, 21, 22, 23, 24, 25

- ◆ Each piece has 2 concave and 3 convex surfaces
- ◆ With handle
- ◆ Accuracy: $\pm 0.05\text{mm}$

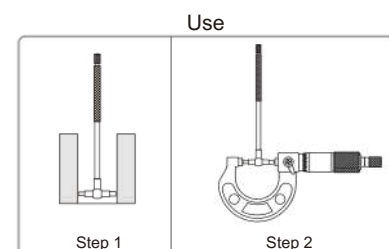


Code	Range	Quantity	Included radius(mm)
942-013-26	0.5 - 13mm	26	0.5, 1, 1.5, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7, 7.5, 8, 8.5, 9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13

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



Code	Each gauge range	L	a	b	c
951-006-01	8-12.7mm	115mm	Ø3.9mm	Ø2.9mm	Ø6.2mm
	12.7-19mm	115mm	Ø5.3mm	Ø3.8mm	Ø6.2mm
	19-32mm	115mm	Ø5.3mm	Ø3.8mm	Ø6.2mm
	32-54mm	137mm	Ø7.6mm	Ø6.1mm	Ø7.2mm
	54-90mm	137mm	Ø7.6mm	Ø6.1mm	Ø7.2mm
	90-150mm	137mm	Ø7.6mm	Ø6.1mm	Ø7.2mm



952

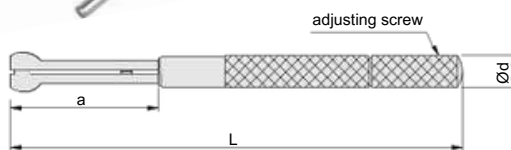
SMALL HOLE GAUGE SET

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



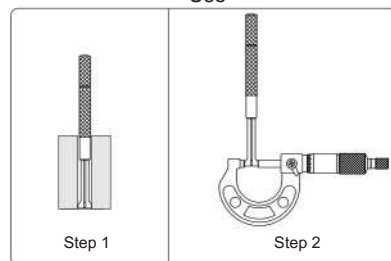
unit: mm

Ball type



Code	Range	L	a	Ød
952-004-01	3-5mm	77	24	6
	5-7.5mm	77	25	6
	7.5-10mm	87	28.5	7
	10-13mm	92	32	7

Use



952

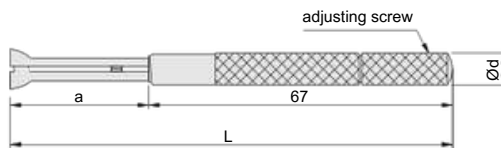
SMALL HOLE GAUGE SET

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



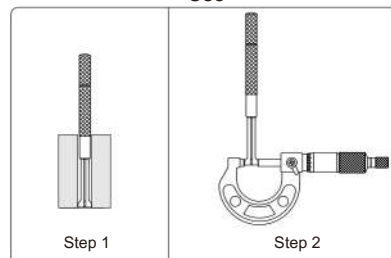
unit: mm

Flat type



Code	Range	L	a	Ød
952-004-02	3-5mm 5-	91	24	6
	7.5mm	98	31	6
	7.5-10mm	108	41	7
	10-13mm	109	42	7

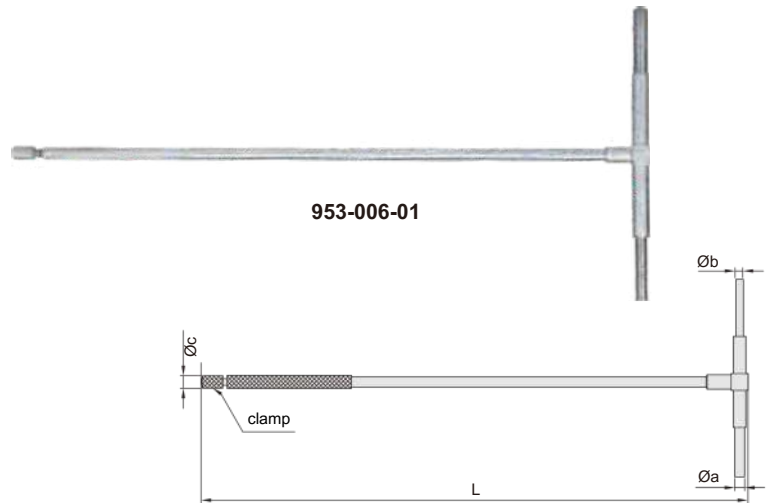
Use



SERIES 953

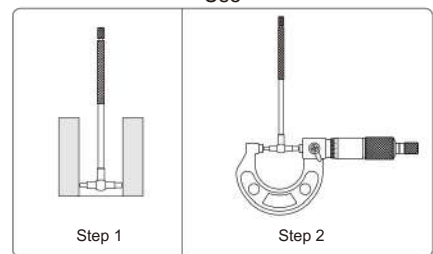
LONG HANDLE TELESCOPING GAUGE

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



Code	Range	L	Øa	Øb	Øc
953-001-01	8-12.7mm	250mm	3.9mm	2.9mm	6.2mm
953-002-01	12.7-19mm	250mm	5.3mm	3.8mm	6.2mm
953-003-01	19-32mm	250mm	5.3mm	3.8mm	6.2mm
953-004-01	32-54mm	300mm	7.6mm	6.1mm	7.2mm
953-005-01	54-90mm	300mm	7.6mm	6.1mm	7.2mm
953-006-01	90-150mm	300mm	7.6mm	6.1mm	7.2mm

Use



SERIES 963

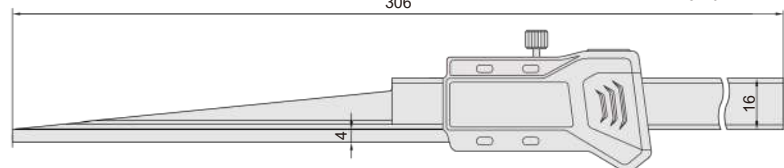
DIGITAL TAPER GAUGE



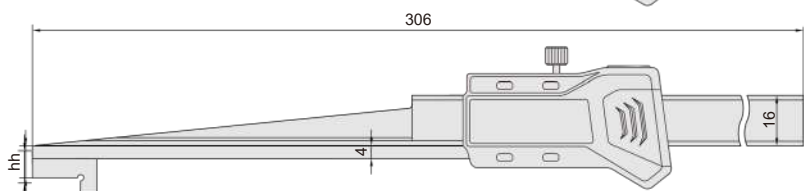
963-010-11

306

unit: mm



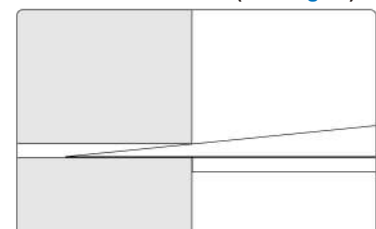
- ♦ Measuring opening, slot width
- ♦ Resolution: 0.01mm/0.0005"
- ♦ Buttons: on/off, zero, mm/in, INC
- ♦ Dataoutput(cable code:100-03 or 100-04)
- ♦ Automatic power on/off
- ♦ Made of stainless steel



963-020-11, 963-030-11 and 963-040-11

Measure slot width(reading/10)

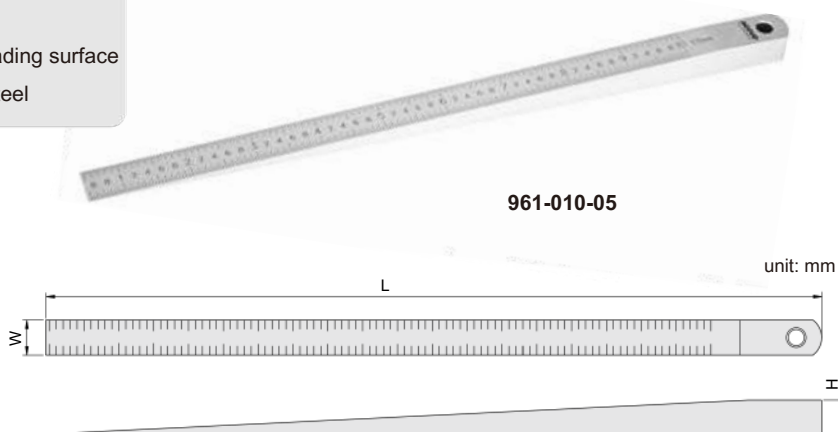
Code	Range	Accuracy	h
963-010-11	0.2-10mm/0.01-0.39"	±0.03mm	-
963-020-11	10-20mm/0.39-0.79"	±0.05mm	10
963-030-11	20-30mm/0.79-1.18"	±0.05mm	20
963-040-11	30-40mm/1.18-1.58"	±0.05mm	30



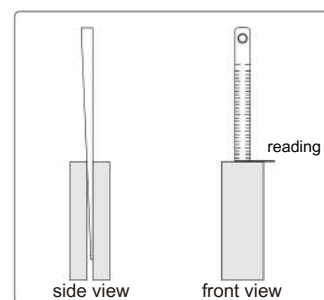
SERIES 961

TAPER GAUGE

- ◆ Measure the gap width
- ◆ Stain chrome plated reading surface
- ◆ Made of the stainless steel



Code	Range	Graduation	Accuracy	L	W	H
961-004-05	0.2 - 4mm	0.05mm	±0.05mm	120	12	4.3
961-006-05	0.4 - 6mm	0.05mm	±0.05mm	166	11.5	6.5
961-010-05	0.5 - 10mm	0.05mm	±0.05mm	225	12.5	10.5
961-015-05	0.5 - 15mm	0.1mm	±0.05mm	184	11	16



SERIES 962

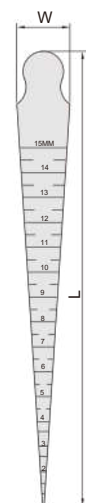
TAPER GAUGE

- ◆ Measure the groove width and hole size
- ◆ Made of the stainless steel

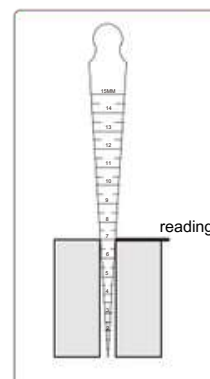
Package



unit: mm



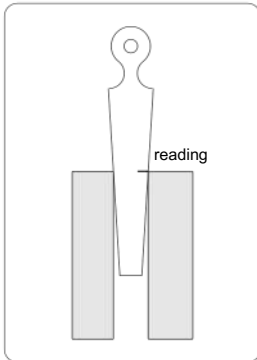
Code	Range	Graduation	Accuracy	L	W
962-015-05	0.8-15mm	0.1mm	±0.1mm	146	17
962-030-05	15-30mm	0.1mm	±0.1mm	159	30.4
962-045-05	30-45mm	0.1mm	±0.1mm	166	45.4
962-060-05	45-60mm	0.1mm	±0.1mm	170	60.5



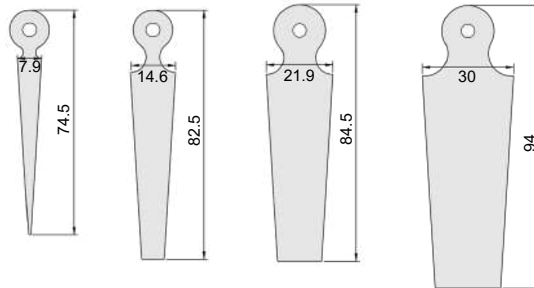
962

TAPER GAUGE SET

- ◆ Include 4 pcs (1-7.5mm, 7.5-14.5mm, 14.5-21.5mm, 21.5-29mm)
- ◆ Measure opening slot width
- ◆ Made of stainless steel



unit: mm



Code	Range	Graduation	Accuracy
962-029-41	1-29mm	0.1mm	±0.05mm

962

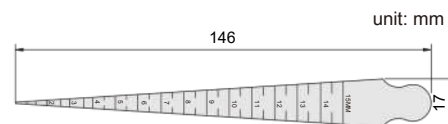
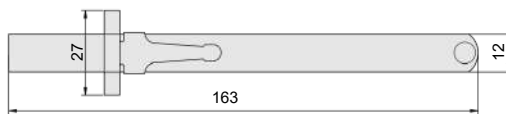
TAPER GAUGE SET



front side



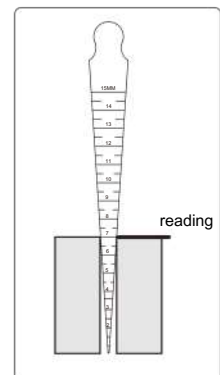
reverse side



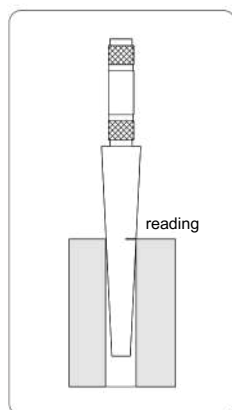
unit: mm

- ◆ Made of stainless steel

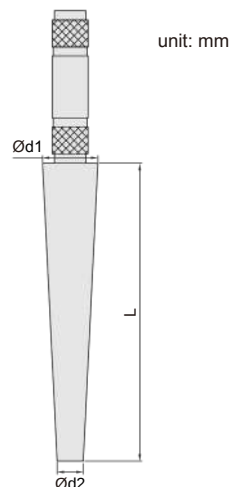
Code	Tool	Range	Graduation	Accuracy
962-909-02	taper gage	0.8-15mm	0.1mm	±0.1mm
	steel ruler	150mm/6"	1mm/1/64"	±0.15mm

SIMPLE
MEASURING
TOOL

- ◆ Quick measuring diameter of the bore
- ◆ Graduation: 0.1mm
- ◆ Hardened steel, HRC50-58
- ◆ Satin chrome plated surface
- ◆ Aluminium oxidized handle

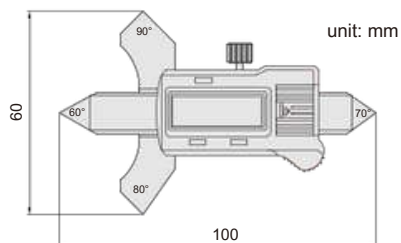
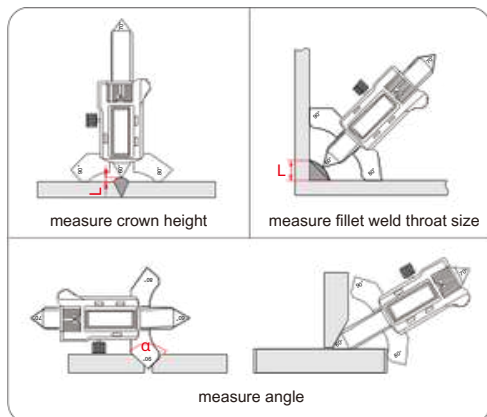


964-015-11



Code	Range	Accuracy	L	Ød1	Ød2
964-006-11	1-6.5mm	±0.05mm	62.5	7	0.8
964-015-11	3-15mm	±0.05mm	143	17	2.8
964-030-11	15-30mm	±0.05mm	165	31	14.7
964-045-11	30-45mm	±0.05mm	165	46	29.6
964-060-11	45-60mm	±0.05mm	167	61	44

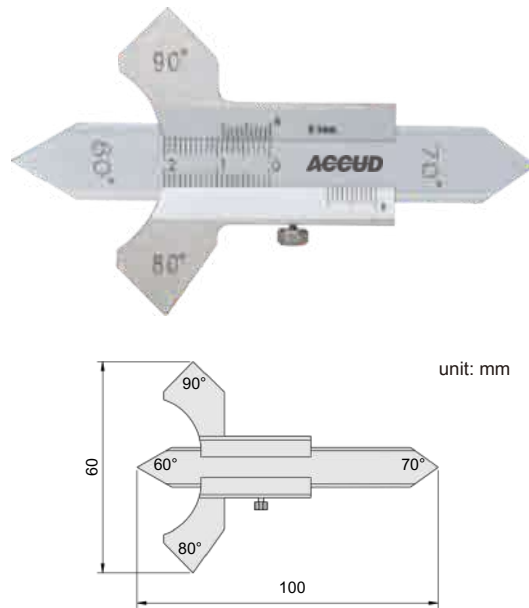
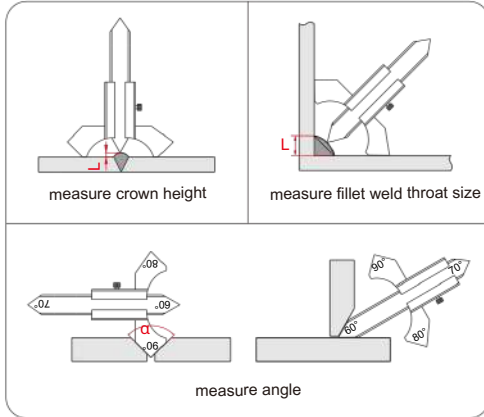
- ◆ Buttons: zero, mm/inch, on/off
- ◆ Made of stainless steel



Code	Range	Accuracy	Resolution	Application
970-010-11	0 - 10mm	±0.03mm	0.01mm/0.0005"	measure crown height
	0 - 20mm	±0.1mm	0.01mm/0.0005"	measure fillet weld throat size
	60°, 70°, 80°, 90°	±1°	—	measure angle

WELDING GAUGE

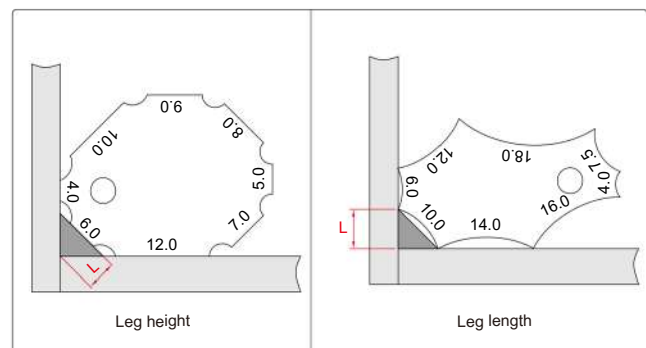
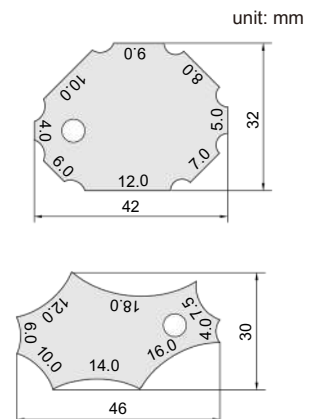
- ◆ Made of stainless steel
- ◆ Stain chrome plated reading surface



Code	Range	Graduation	Accuracy	Application
971-008-01	0 - 8mm	0.1mm	±0.1mm	measure crown height
	0 - 20mm	0.1mm	±0.3mm	measure fillet weld throat size
	60°, 70°, 80°, 90°	—	±1°	measure angle

WELDING GAUGE

- ◆ Double printing in front and reverse side
- ◆ Made of the stainless steel



Code	Leg height	Leg length	Accuracy
972-012-01	4, 5, 6, 7, 8, 9, 10, 12mm	4, 6, 7.5, 10, 12, 14, 16, 18mm	±0.5mm

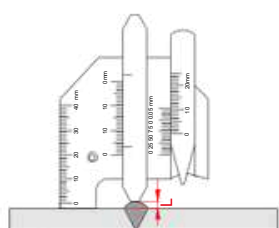
◆ Made of stainless steel



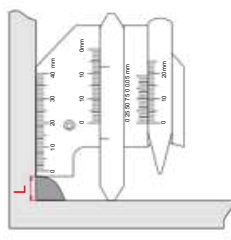
front side



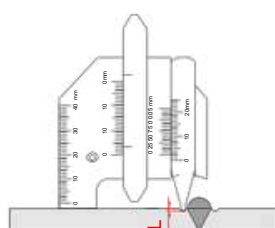
reverse side



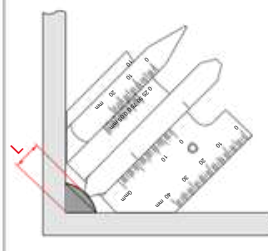
measure crown height



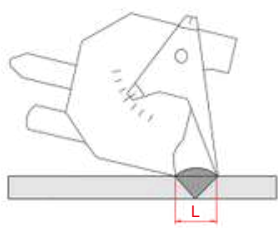
measure leg height



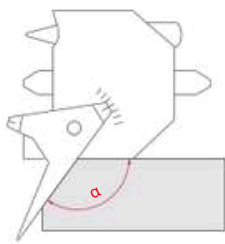
measure undercut depth



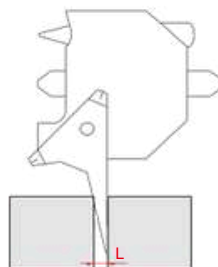
measure throat size



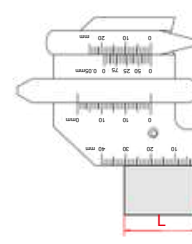
measure weld length



measure angle

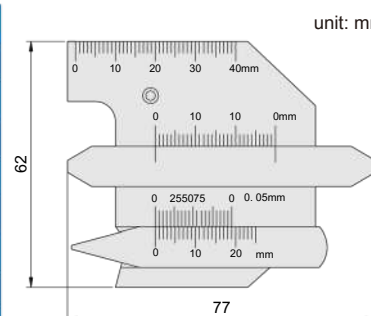


measure gap



measure length

Code	Application	Range	Graduation	Accuracy
973-014-01	measure crown height	0 - 10mm	1mm	±0.5mm
	measure leg height	0 - 14mm	1mm	±0.5mm
	measure undercut depth	0 - 5mm	0.05mm	±0.05mm
	measure throat size	0 - 13mm	1mm	±0.5mm
	measure weld length	0 - 40mm	1mm	±1mm
	measure angle	90° - 150°	5°	±1°
	measure gap	0.5 - 5mm	1mm	±0.5mm
	measure length	0 - 40mm	1mm	±0.5mm



unit: mm

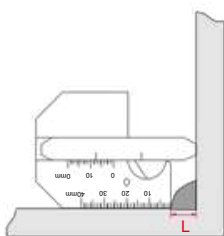
- ◆ Made of stainless steel
- ◆ Stain chrome plated surface



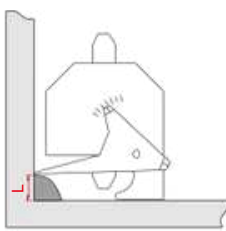
reverse side



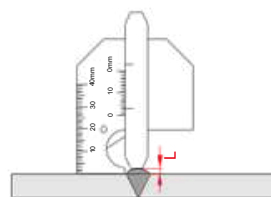
front side



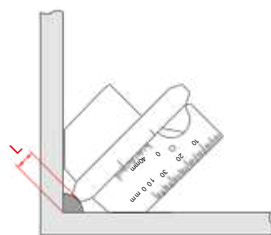
measure leg length



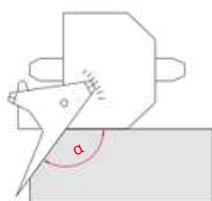
measure leg height



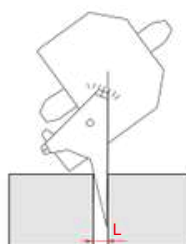
measure crown height



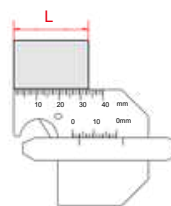
measure throat size



measure angle

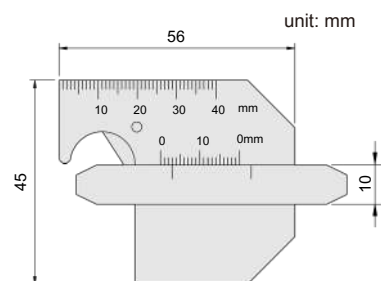


measure gap



measure length

Code	Application	Range	Graduation	Accuracy
974-013-01	measure leg length	0 - 10mm	0.1mm	±0.1mm
	measure leg height	0 - 20mm	1mm	±0.5mm
	measure crown height	0 - 10mm	0.1mm	±0.1mm
	measure throat size	0 - 10mm	0.1mm	±0.1mm
	measure angle	0° - 60°	5°	±1°
	measure gap	1 - 3.5mm	0.5mm	±0.5mm
	measure length	0 - 40mm	1mm	±0.5mm

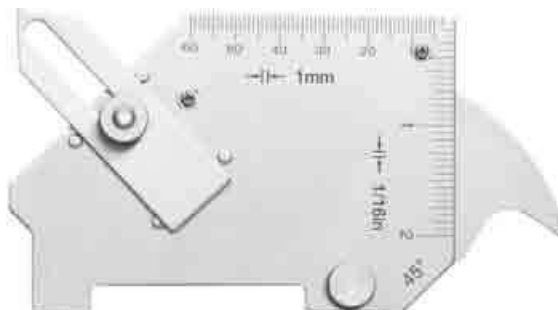


unit: mm

- ♦ Adjustable scale to compensate pointer wear
- ♦ Made of stainless steel



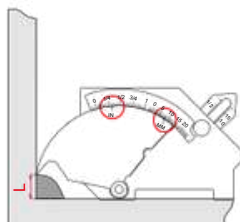
front side



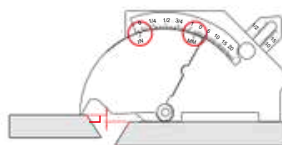
reverse side



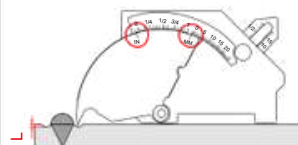
measure crown height



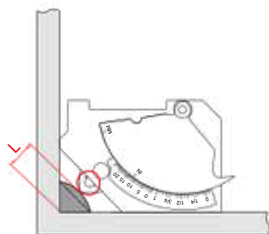
measure fillet weld leg height



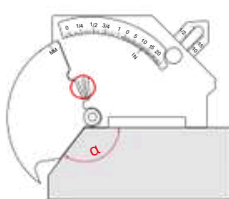
measure misalignment



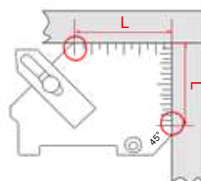
measure undercut depth



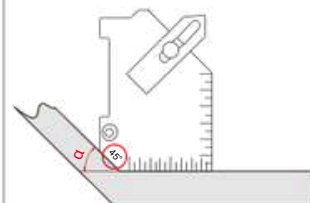
measure fillet weld throat size



measure angle of preparation

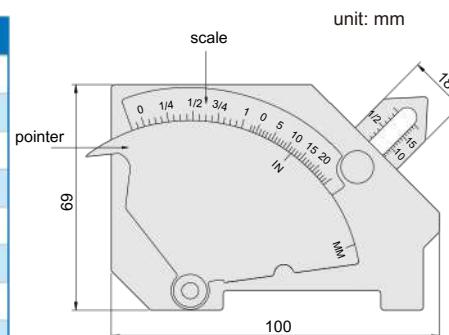


measure length



measure 45° angle

Code	Application	Range	Graduation	Accuracy
975-025-01	measure crown height	0 - 25mm (0 - 1")	1mm (1/16")	±0.5mm
	measure fillet weld leg height	0 - 25mm (0 - 1")	1mm (1/16")	±0.5mm
	measure misalignment	0 - 25mm (0 - 1")	1mm (1/16")	±0.5mm
	measure undercut depth	0 - 2mm (0 - 1/8")	1mm (1/16")	±0.5mm
	measure fillet weld throat size	0 - 20mm (0-3/4")	1mm (1/16")	±0.5mm
	measure angle of preparation	0 - 60°	5°	±1°
	measure length	0 - 60mm (0-2")	1mm (1/16")	±0.5mm
	measure 45° angle	—	—	±1°



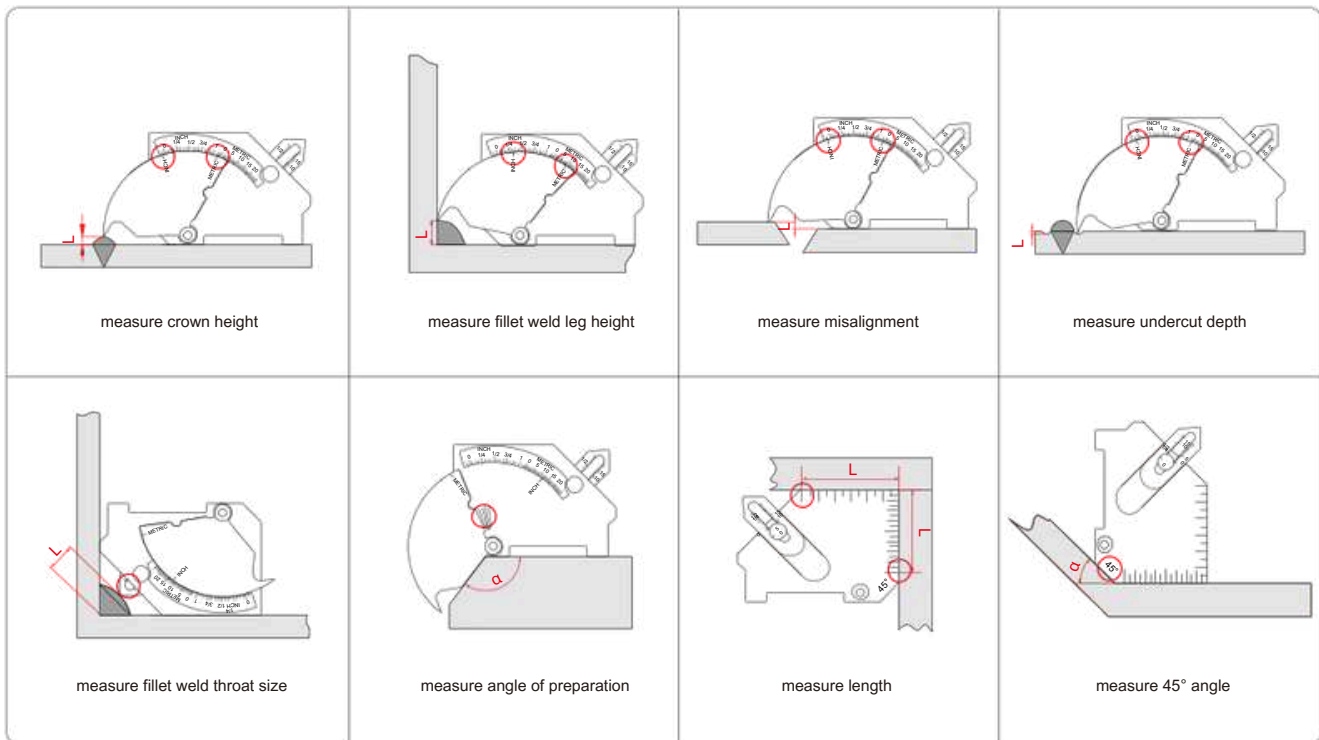
- ♦ Adjustable scale to compensate pointer wear
- ♦ Made of stainless steel



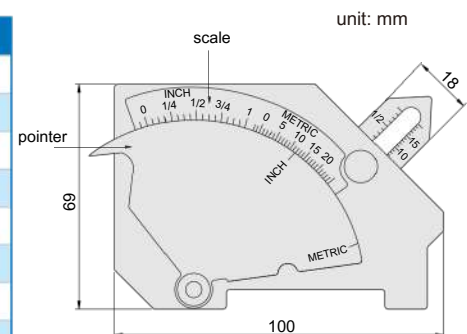
front side



reverse side



Code	Application	Range	Graduation	Accuracy
975-025-02	measure crown height	0 - 25mm (0 - 1")	1mm (1/16")	±0.5mm
	measure fillet weld leg height	0 - 25mm (0 - 1")	1mm (1/16")	±0.5mm
	measure misalignment	0 - 25mm (0 - 1")	1mm (1/16")	±0.5mm
	measure undercut depth	0 - 2mm (0 - 1/8")	1mm (1/16")	±0.5mm
	measure fillet weld throat size	0 - 20mm (0-3/4")	1mm (1/16")	±0.5mm
	measure angle of preparation	0 - 60°	5°	±1°
	measure length	0 - 60mm (0-2")	1mm (1/16")	±0.5mm
	measure 45° angle	—	—	±1°



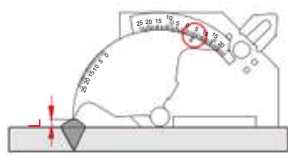
- ♦ Adjustable scale to compensate pointer wear
- ♦ Made of stainless steel



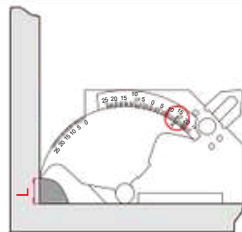
front side



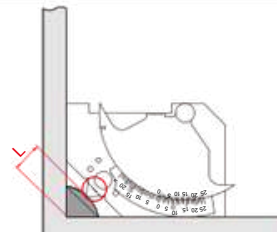
reverse side



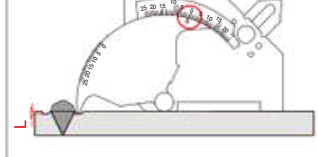
measure crown height



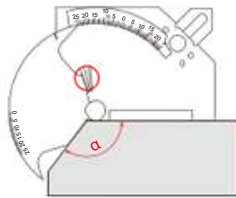
measure fillet weld leg height



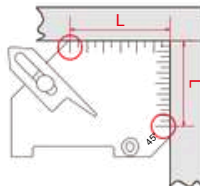
measure fillet weld throat size



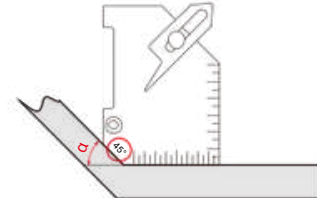
measure undercut depth



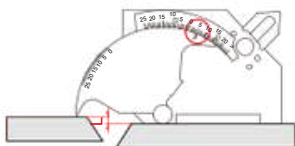
measure angle of preparation



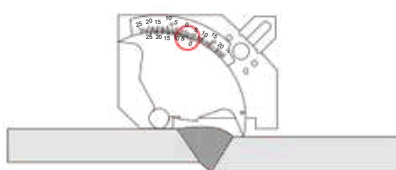
measure length



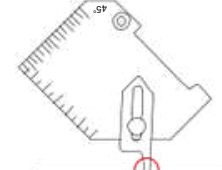
measure 45° angle



measure misalignment

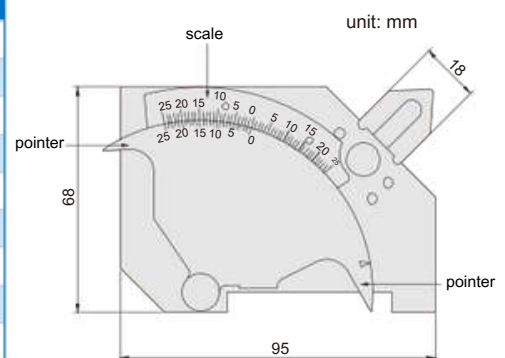


measure misalignment

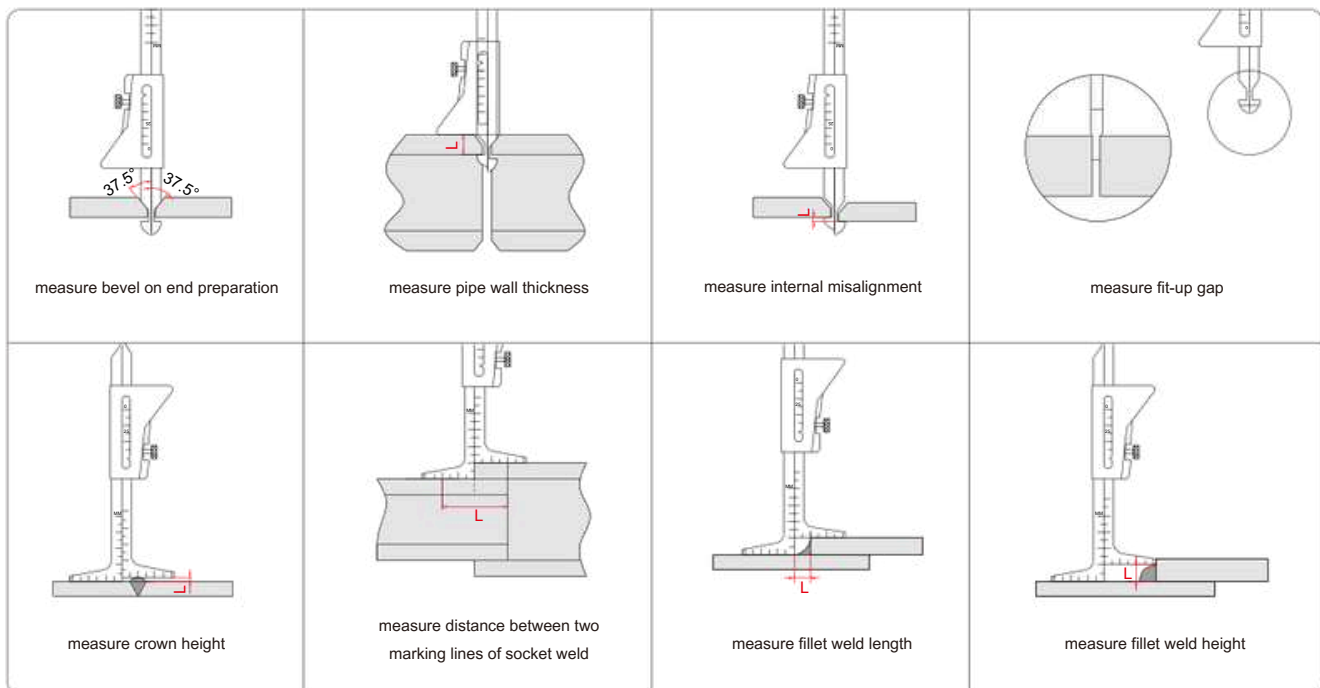


measure gap

Code	Application	Range	Graduation	Accuracy
975-025-21	measure crown height	0 - 25mm	1mm	±0.5mm
	measure fillet weld leg height	0 - 25mm	1mm	±0.5mm
	measure fillet weld throat size	0 - 15mm	1mm	±0.5mm
	measure undercut depth	0 - 25mm	1mm	±0.5mm
	measure angle of preparation	0 - 60°	5°	±1°
	measure length	0 - 60mm	1mm	±0.5mm
	measure 45° angle	—	—	±1°
	measure misalignment	0 - 25mm	1mm	±0.5mm
	measure gap	2-5mm	1mm	±0.5mm



♦ Made of stainless steel

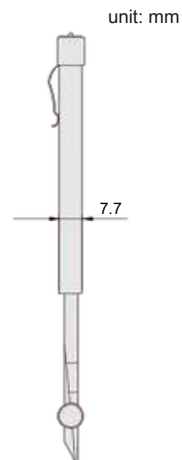
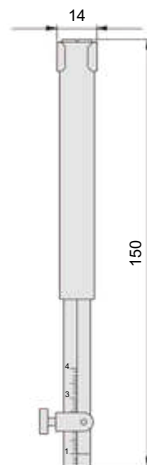
SIMPLE
MEASURING
TOOL

Code	Application	Range	Graduation	Accuracy
976-045-01	measure bevel on end preparation	37.5°	—	±1°
	measure pipe wall thickness	0 - 45mm (0 - 1-3/4")	1mm (1/16")	±0.5mm
	measure internal misalignment	0 - 35mm (0 - 1-3/8")	1mm (1/32")	±0.5mm
	measure fit-up gap	1.6mm, 2.2mm	—	±0.1mm
	measure crown height	0 - 35mm (0 - 1-3/8")	1mm (1/32")	±0.5mm
	measure distance between two marking lines of socket weld	0 - 60mm (0 - 2-3/8")	1mm (1/16")	±0.5mm
	measure fillet weld length	0 - 30mm (0 - 1-1/4")	1mm (1/16")	±0.5mm
	measure fillet weld height	0 - 35mm (0 - 1-3/8")	1mm (1/32")	±0.5mm

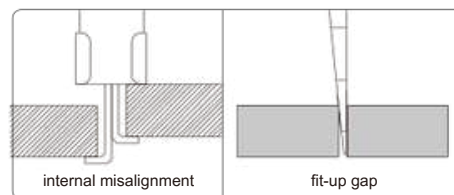
960

PIP WELDING GAUGE

- ◆ Made of stainless steel



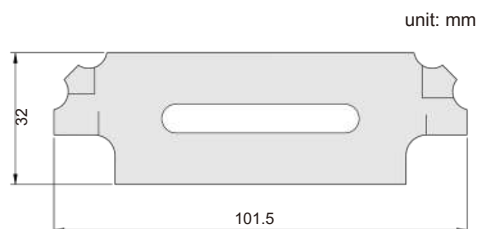
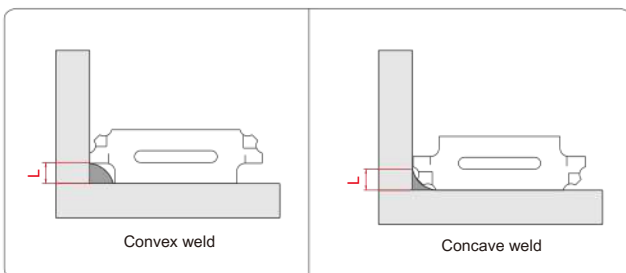
Code	Measurement	Range	Graduation	Accuracy
960-030-01	internal misalignment	0-30mm	1mm	±0.5mm
	fit-up gap	0.7-4mm	0.1mm	±0.1mm



SERIES 977

FILLET WELD GAUGE

- ◆ Measure concave and convex weld sizes
- ◆ 7 blades are included
- ◆ Each blade measures two sizes of concave and convex weld
- ◆ Made of stainless steel

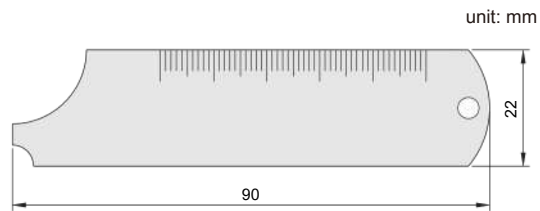
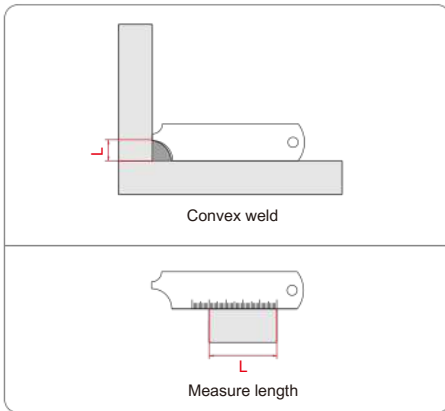


Code	Accuracy	Size
977-025-01	±0.5mm	3, 4, 5, 6, 8, 9, 10, 11, 12, 14, 16, 19, 22, 25
977-025-02	±0.02"	1/8", 3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 5/8", 3/4", 7/8", 1"

745

FILLET WELDING GAUGE

- ◆ Measure convex weld sizes
- ◆ 3 blades are included
- ◆ Made of stainless steel



Code	Measurement	Range	Graduation	Accuracy
745-050-03	convex weld size	4, 6, 8, 10, 12, 14mm	—	±0.5mm
	length	0-50mm	1mm	±0.5mm

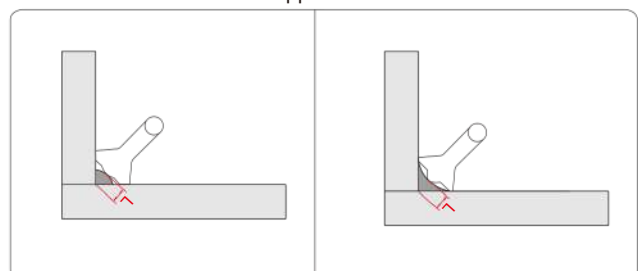
749

WELDING GAUGE

- ◆ Made of stainless steel



Application

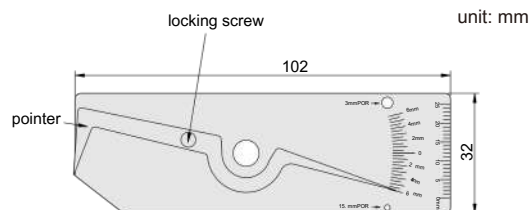
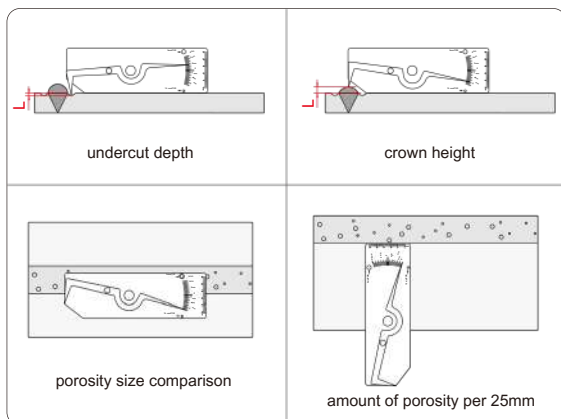


Code	Size
749-012-01	3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7, 8, 10, 12mm

978

WELDING GAUGE

- ◆ Pointer can be locked for later reference
- ◆ Made of stainless steel

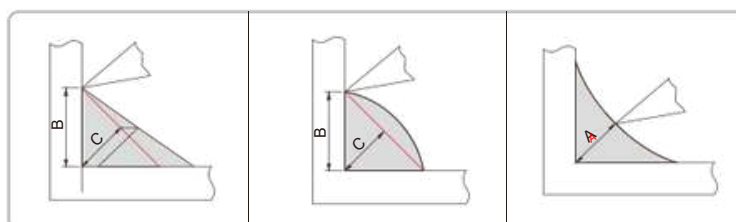
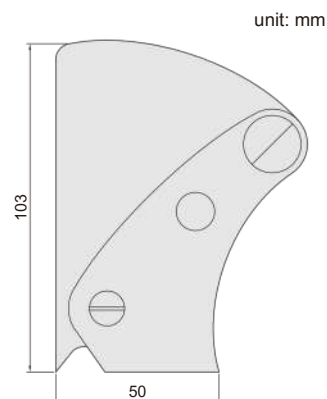
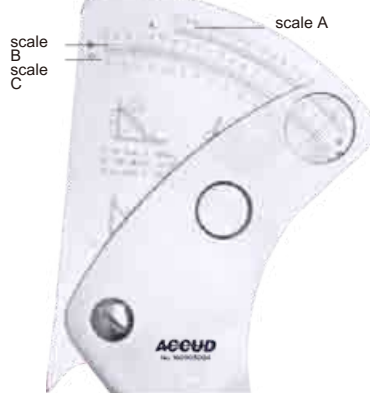


Code	Measurement	Range	Graduation	Accuracy
978-006-01	undercut depth	0 - 6mm	0.5mm	±0.5mm
	crown height	0 - 6mm	0.5mm	±0.5mm
	porosity size comparison	1.5mm, 3mm	—	±0.2mm
	amount of porosity per 25mm	25mm	1mm	—

966

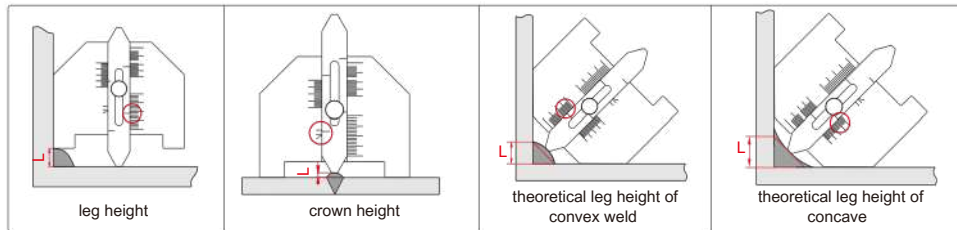
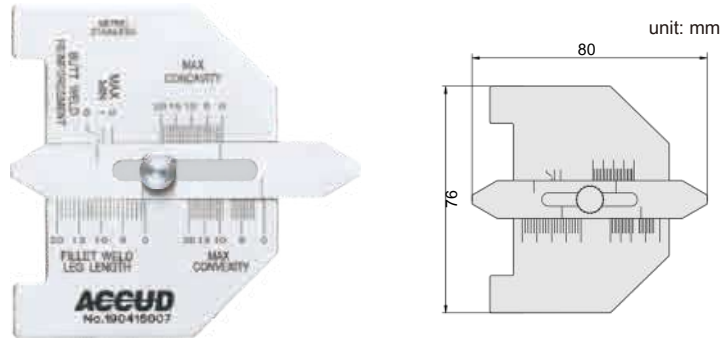
WELDING GAUGE

- ◆ Made of stainless steel



Code	Graduation	Accuracy
966-001-01	0.2mm	±0.3mm

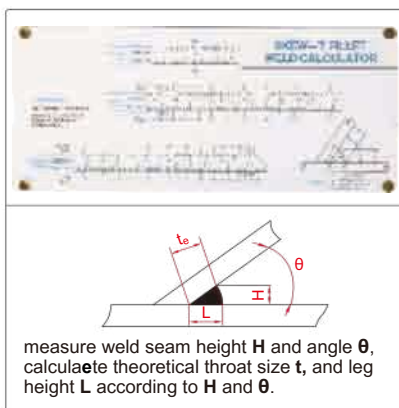
- ◆ Made of stainless steel



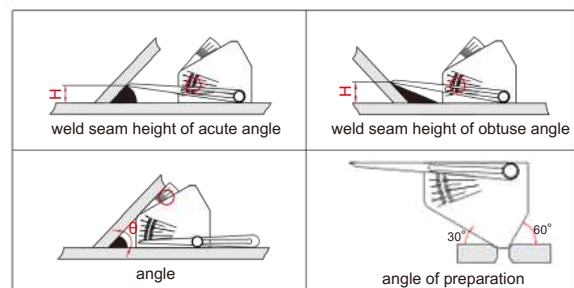
Code	Range	Graduation	Accuracy	Measurement
979-020-01	0-20mm	1mm	±0.5mm	leg height
	0-3mm	—	±0.5mm	crown height
	0-20mm	1mm	±0.5mm	theoretical leg height of convex weld
	0-20mm	1mm	±0.5mm	theoretical leg height of concave

- ◆ Calculating card is included
- ◆ Made of stainless steel

Calculating card (included)



Code	Measurement	Range	Graduation	Accuracy
969-050-01	weld seam height H	0 - 50mm / 0-2"	2mm/.050"	±1mm
	angle θ	30° - 90°	2.5°	±1°
	90° angle	—	—	±0.5°



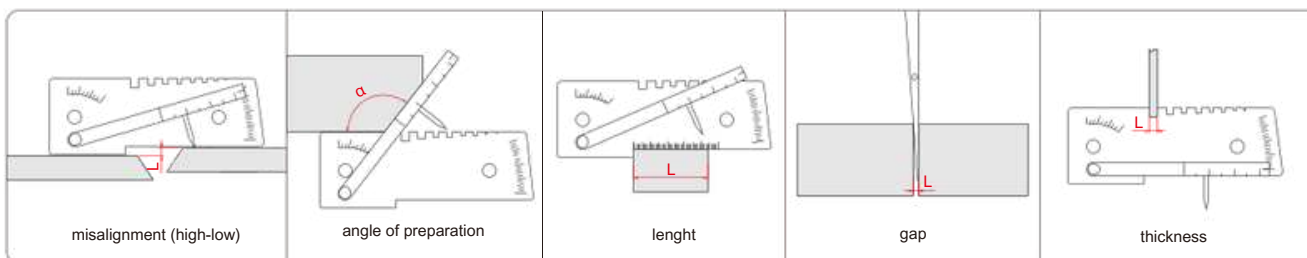
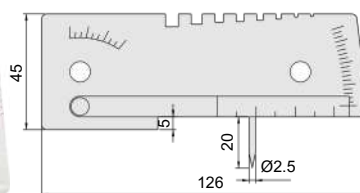
746

WELDING GAUGE

- ◆ Made of stainless steel



unit: mm



Code	Measurement	Range	Graduation	Accuracy
746-050-01	misalignment (high-low)	-5mm-15mm	1mm	±0.5mm
	angle of preparation	0°- 45°	5°	±2.5°
	length	0-50mm	1mm	±0.5mm
	gap	1-4mm	0.5mm	±0.25mm
	thickness	1, 1.2 , 2.0 , 2.5 , 3.0, 3.25, 4.0, 5.0mm	—	±0.1mm

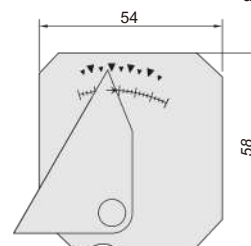
747

WELDING GAUGE

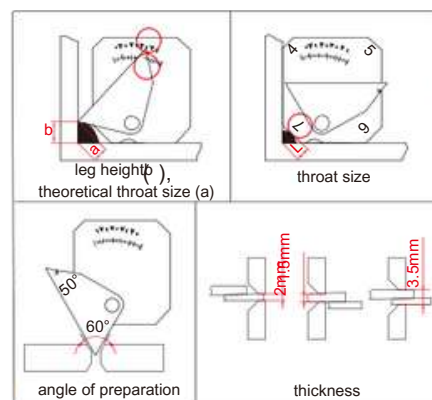
- ◆ Made of stainless steel



unit: mm



Code	Measurement	Range	Graduation	Accuracy
747-018-01	theoretical throat size (a)	2-12mm	1mm	±0.5mm
	leg height (b)	0-18mm	1mm	±0.5mm
	throat size	4, 5, 6, 7mm	—	±0.5mm
	angle of preparation	50°, 60°	—	±1°
	thickness	1.5, 2, 3.5mm	—	±0.2mm

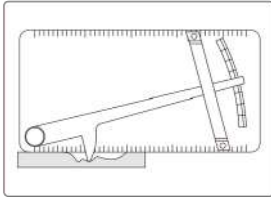


748

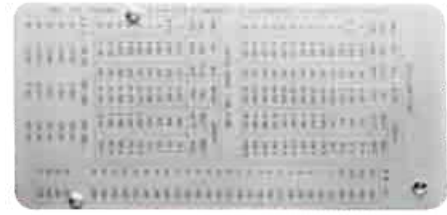
PIPE PIT GAUGE

- ◆ Made of stainless steel

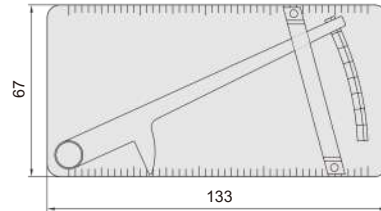
Application



front side



reverse side

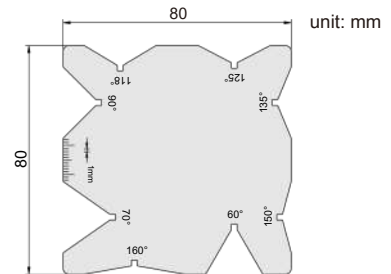
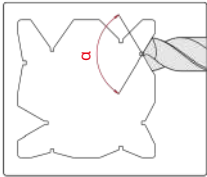


Code	Range	Graduation	Accuracy
748-012-01	0-0.5"(0-1/2")	0.01"(1/16")	±0.02"

968

DRILL ANGLE GAUGE

- ◆ Check drills with angle 60°, 70°, 90°, 118°, 125°, 135°, 150° or 160°
- ◆ Made of stainless steel



unit: mm

Code	Accuracy
968-001-01	±0.5°

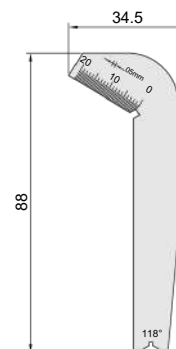
965

DRILL POINT GAUGE

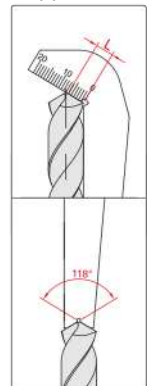
- ◆ For twist drills with 118° angle, to check if the center of tip is concentric with the drill body
- ◆ Made of stainless steel



unit: mm



Application



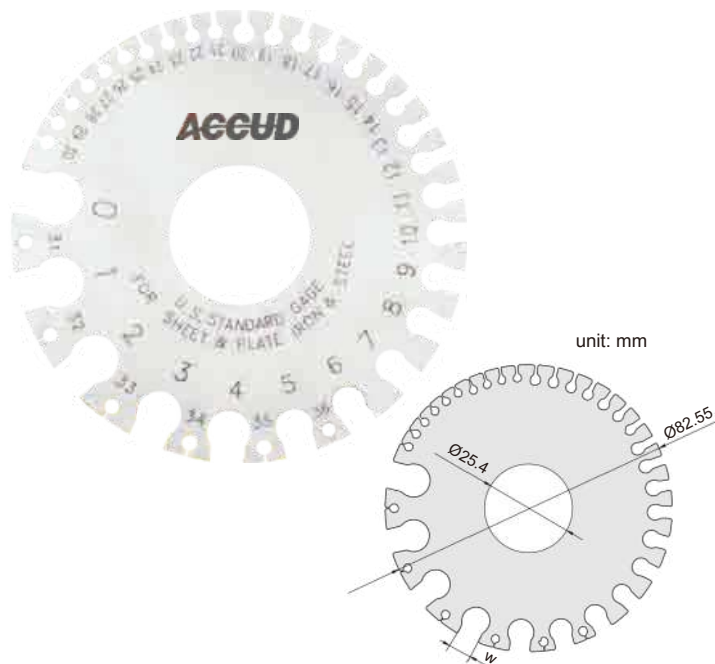
Code	Accuracy	
	Angle	Length
965-005-01	±0.5°	±0.5mm

SERIES 741

U.S. STANDARD SHEET METAL GAUGE

Code	Range
741-036-12	0-36(7.938-0.179mm/.3125-.0070")

NO.	W	NO.	W
0	7.938mm(.3125")	19	1.111mm(.0438")
1	7.144mm(.2813")	20	0.953mm(.0375")
2	6.747mm(.2656")	21	0.873mm(.0344")
3	6.350mm(.2500")	22	0.794mm(.0313")
4	5.953mm(.2344")	23	0.714mm(.0281")
5	5.556mm(.2188")	24	0.635mm(.0250")
6	5.159mm(.2031")	25	0.556mm(.0219")
7	4.763mm(.1875")	26	0.476mm(.0188")
8	4.366mm(.1719")	27	0.437mm(.0172")
9	3.969mm(.1563")	28	0.397mm(.0156")
10	3.572mm(.1406")	29	0.357mm(.0141")
11	3.175mm(.1250")	30	0.318mm(.0125")
12	2.778mm(.1094")	31	0.278mm(.0109")
13	2.381mm(.0938")	32	0.258mm(.0102")
14	1.984mm(.0781")	33	0.238mm(.0094")
15	1.786mm(.0703")	34	0.218mm(.0086")
16	1.588mm(.0625")	35	0.198mm(.0078")
17	1.429mm(.0563")	36	0.179mm(.0070")
18	1.270mm(.0500")		



unit: mm

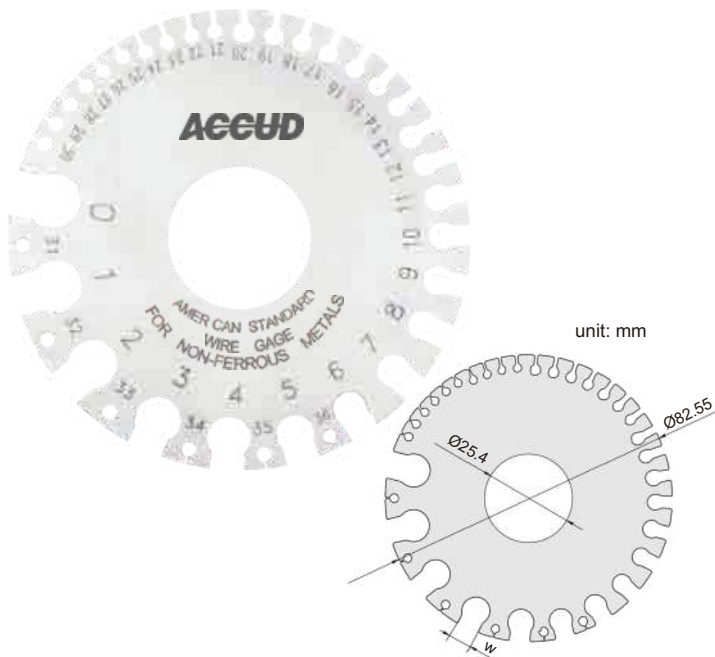
- ◆ For gaging sheet metal, plate iron and steel
- ◆ Hardened

SERIES 741

AMERICAN STANDARD WIRE GAUGE

Code	Range
741-036-11	0-36(8.250-0.127mm/.3249-.0050")

NO.	W	NO.	W
0	8.250mm(.3249")	19	0.912mm(.0359")
1	7.350mm(.2893")	20	0.813mm(.0320")
2	6.540mm(.2576")	21	0.724mm(.0285")
3	5.830mm(.2294")	22	0.643mm(.0253")
4	5.190mm(.2043")	23	0.574mm(.0226")
5	4.620mm(.1819")	24	0.511mm(.0201")
6	4.110mm(.1620")	25	0.440mm(.0179")
7	3.670mm(.1443")	26	0.404mm(.0159")
8	3.260mm(.1285")	27	0.361mm(.0142")
9	2.910mm(.1144")	28	0.320mm(.0126")
10	2.590mm(.1019")	29	0.287mm(.0113")
11	2.300mm(.0907")	30	0.254mm(.0100")
12	2.050mm(.0808")	31	0.226mm(.0089")
13	1.820mm(.0720")	32	0.203mm(.0080")
14	1.630mm(.0641")	33	0.180mm(.0071")
15	1.450mm(.0571")	34	0.160mm(.0063")
16	1.290mm(.0508")	35	0.142mm(.0056")
17	1.150mm(.0453")	36	0.127mm(.0050")
18	1.020mm(.0403")		



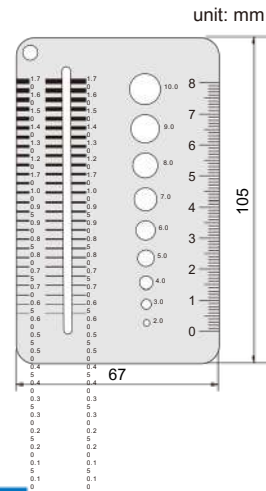
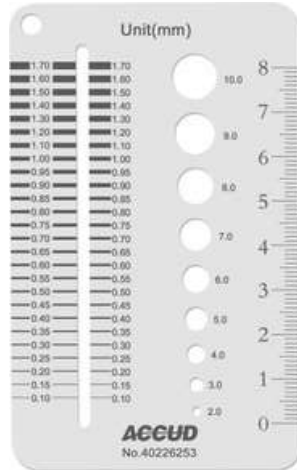
unit: mm

- ◆ For gaging non-ferrous wire and metals such as copper, brass and aluminum
- ◆ Hardened

940

GAP/DIAMETER GAUGE

◆ Made of stainless steel

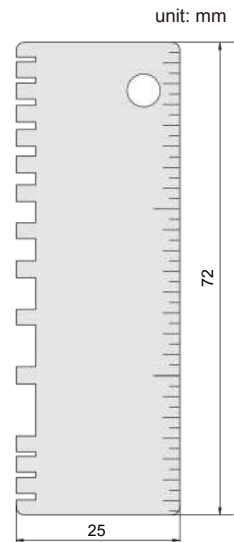
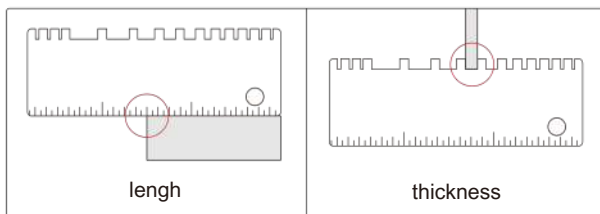


Code	Standard diameter	Gap
940-010-01	2, 3, 4, 5, 6, 7, 8, 9, 10mm	0.1-1.7mm

742

THICKNESS GAUGE

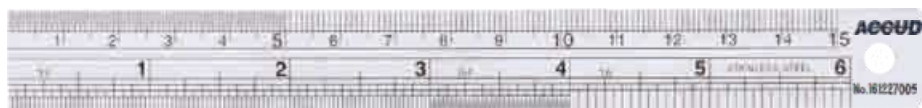
◆ Made of stainless steel



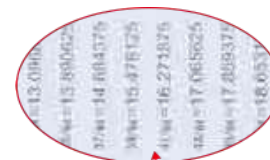
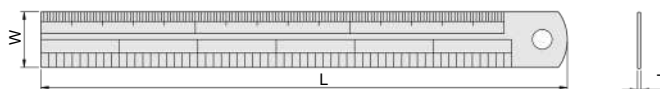
Code	Application	Range	Graduation	Accuracy
742-003-11	length	0 -2 3/4"	1/16"	1/32"
	thickness	24GA.(0.0239"), 22GA.(0.0299"), 20GA.(0.0359")	—	±0.002"
		18GA.(0.0478"), 16GA.(0.0598"), 14GA.(0.0747"), 1/8"(0.125"), 10GA.(0.1345"), 3/16"(0.1875"), 1/4"(0.250"), 5/16"(0.3125")	—	±0.004"
		0.024", 0.030", 0.035"	—	±0.002"

SERIES 990

STEEL RULE



990-006-11



Range >1000mm

- ◆ Graduation: 0.5mm, 1mm, 1/64", 1/32", 1/16"
- ◆ Made of stainless steel



Code	Range	Accuracy	T	L	W	Remark
990-006-11	150mm/6"	±0.18mm	1	170	18	graduation on front and back
990-008-11	200mm/8"	±0.18mm	1	220	18	graduation on front and back
990-012-11	300mm/12"	±0.27mm	1	330	25	graduation on front and back
990-020-11	500mm/20"	±0.27mm	1	530	30	graduation on front and back
990-040-11	1000mm/40"	±0.45mm	1.5	1040	32	graduation on front and back
990-060-11	1500mm/60"	±0.63mm	1.5	1550	38	graduation on front
990-080-11	2000mm/80"	±0.80mm	2	2065	38	graduation on front

SERIES 990

STEEL RULE

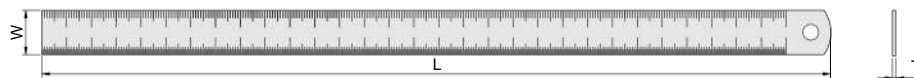
front side



reverse side



990-012-11H



- ◆ Graduation: 0.5mm, 1mm, 1/64", 1/50", 1/32", 1/20", 1/16", 1/10"
- ◆ Matt finished
- ◆ Made of stainless steel

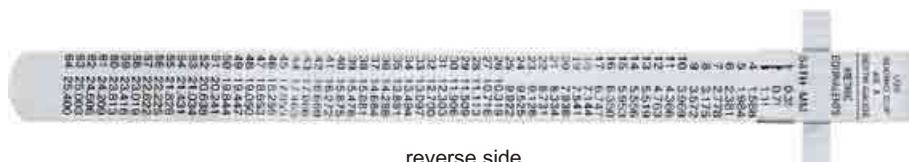
Code	Range	Accuracy	T	L	W
990-006-11H	150mm/6"	±0.08mm	1	170	14
990-012-11H	300mm/12"	±0.11mm	1	334	25
990-020-11H	500mm/20"	±0.14mm	1.2	534	28.5
990-024-11H	600mm/24"	±0.16mm	1.2	638	28.5
990-040-11H	1000mm/40"	±0.24mm	1.2	1043	35



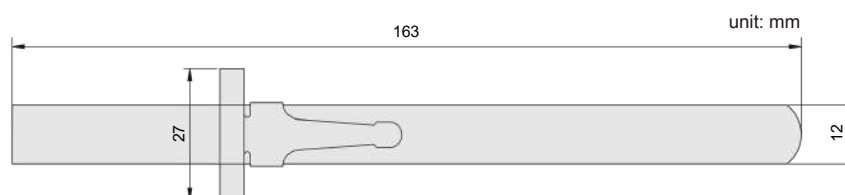
- ◆ With sliding clip, clip can be inserted in the pocket, also can be used as depth gage base
- ◆ Inch/metric conversion table on the back
- ◆ Made of stainless steel



front side

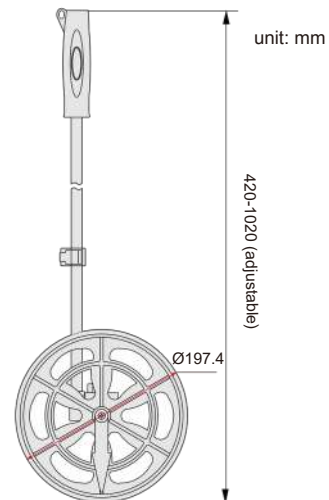


reverse side



Code	Range	Graduation	Accuracy
909-006-11	150mm/6"	1mm, 1/64"	±0.15mm

- ◆ ABS plastic frame, wear-resistant PU tire
- ◆ Three-section adjustable handle



Code	Range	Resolution
988-100-11	0.1-9999.9m	0.1m

SERIES 155

DIGITAL SCRIBING CALIPER

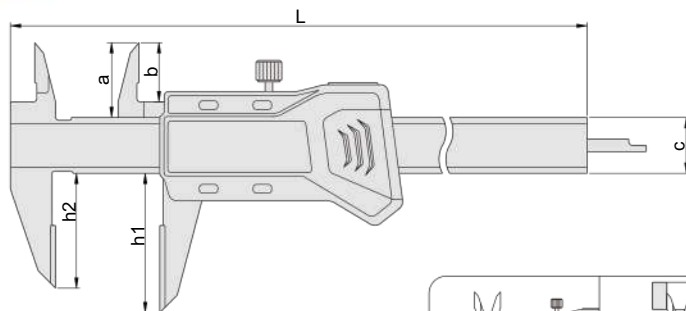
SIMPLE
MEASURING
TOOL

Carbide tipped jaws



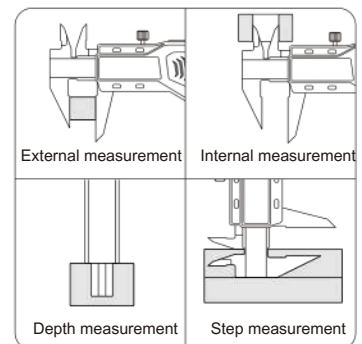
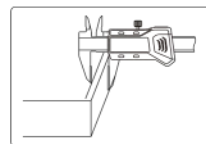
155-006-11

unit: mm



- ◆ Carbide -tipped jaws facilitate fine scribing on workpiece
- ◆ Resolution:0.01mm/0.0005"
- ◆ Automatic power on/off
- ◆ Buttons: on/off, zero, mm/in, INC
- ◆ Data output(cable code:100-03 or 100-04)
- ◆ Made of stainless steel

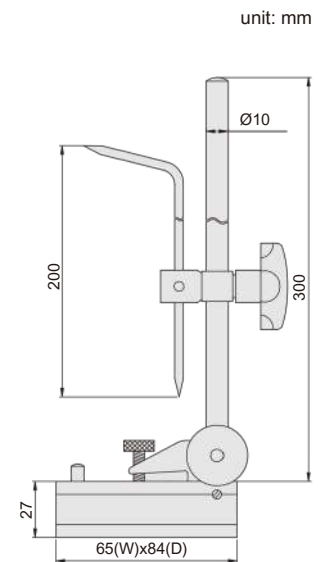
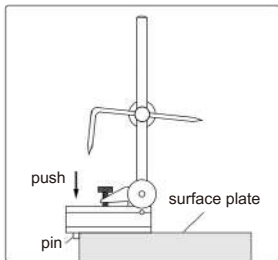
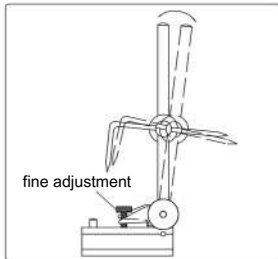
Code	Range	Accuracy	a	b	c	h1	h2	L
155-006-11	0-150mm/0-6"	±0.03mm	21	16.5	16	40	33	236
155-008-11	0-200mm/0-8"	±0.03mm	24	19.5	16	50	43	286
155-012-11	0-300mm/0-12"	±0.04mm	25	20.5	17	60	53	386



903

HEIGHT SCRIBER

- ◆ Grooved bottom for cylinder
- ◆ Two pins to be set against the edge of surface plate



Code

903-012-11

SERIES 992

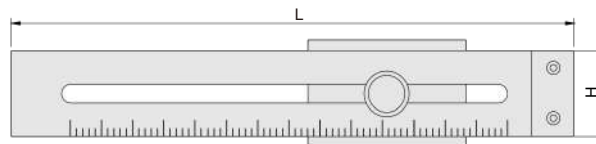
MARKING GAUGE

- ◆ Made of stainless steel
- ◆ Stain chrome finish

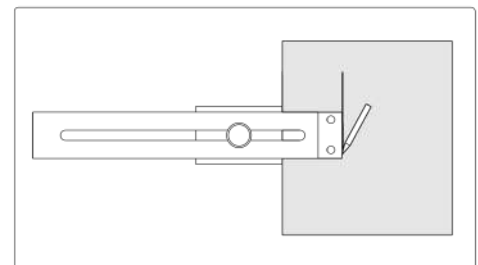


992-008-01

unit: mm



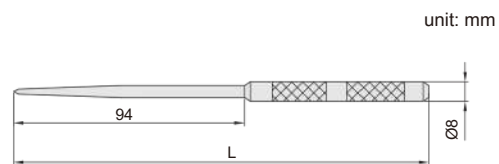
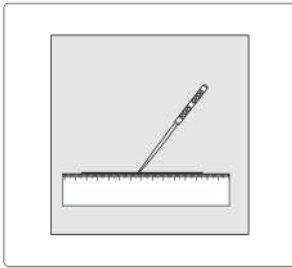
Code	Range	Accuracy	Graduation	H	L
992-008-01	0 - 200mm	±0.1mm	0.1mm	40	250
992-010-01	0 - 250mm	±0.1mm	0.1mm	40	300
992-012-01	0 - 300mm	±0.1mm	0.1mm	40	350



995

SCRIBER

◆ Nickel plated



Package



Code	Tips	L
995-007-01	hardened tips	167

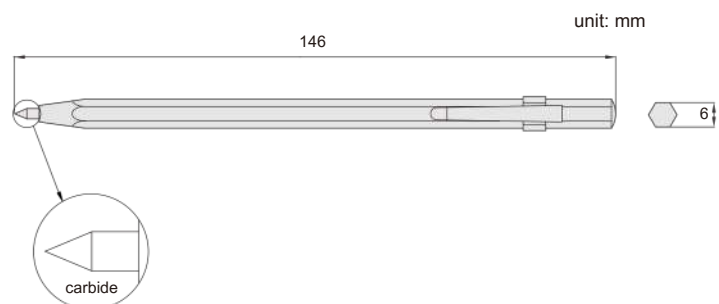
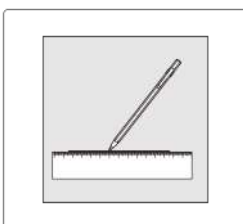
995

SCRIBER

◆ Nickel plated



clip



Code	Tips
995-006-11	carbide

Type A

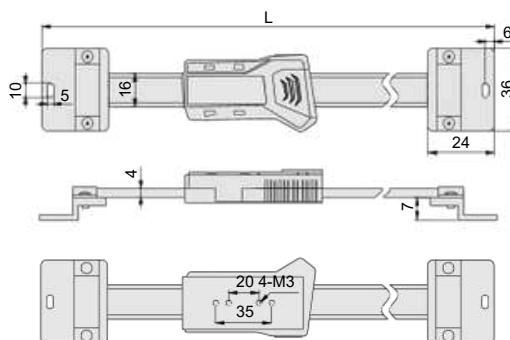
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Automatic power off
- ◆ Data output(cable code:100-03 or 100-04)
- ◆ Made of stainless steel
- ◆ Supplied with bracket
- ◆ Optional accessory: SPC cable

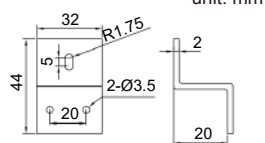
Type B

- ◆ Resolution: 0.01mm/0.0005"
- ◆ Absolute and incremental measurement
- ◆ Data output
- ◆ Made of stainless steel
- ◆ Supplied with bracket

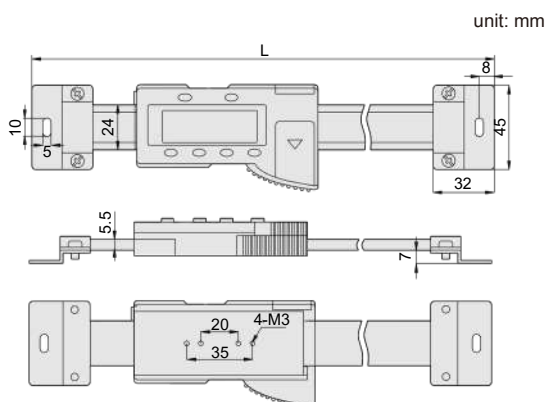

996-006-11

unit: mm


Type A

996-020-11
Bracket(included)


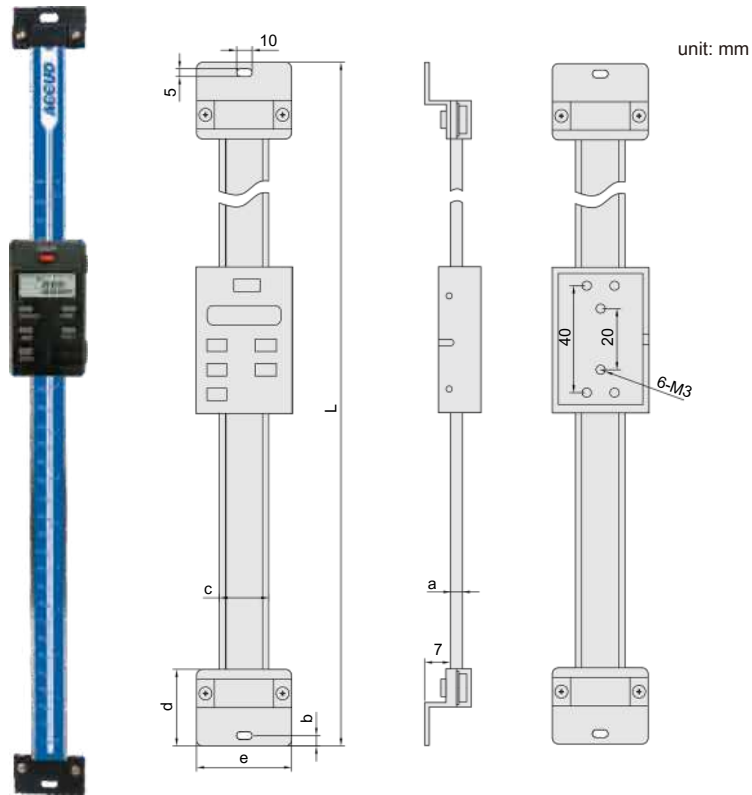
unit: mm



unit: mm

Type B

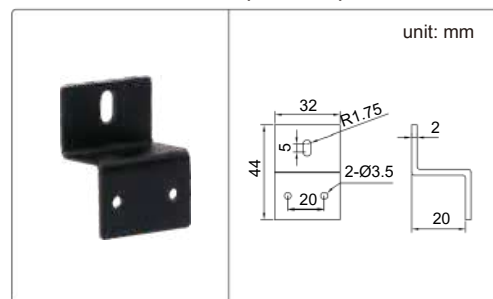
Code	Range	Accuracy	Type	L
996-004-11	100mm	±0.03mm	A	209
996-006-11	150mm	±0.03mm	A	259
996-008-11	200mm	±0.03mm	A	310
996-012-11	300mm	±0.04mm	A	444
996-020-11	500mm	±0.05mm	B	682
996-024-11	600mm	±0.08mm	B	790
996-032-11	800mm	±0.10mm	B	990
996-040-11	1000mm	±0.10mm	B	1240



997-012-11

- ◆ Resolution: 0.01mm/0.0005"
- ◆ Data output
- ◆ Button: on/off, zero, mm/inch, ABS, data preset
- ◆ Made of stainless steel
- ◆ Supplied with bracket

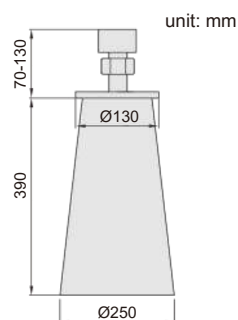
Bracket(included)



Code	Range	Accuracy	a	b	c	d	e	L
997-004-11	100mm	±0.03mm	4	6	20	24	40	245
997-006-11	150mm	±0.03mm	4	6	20	24	40	296
997-008-11	200mm	±0.03mm	4	6	20	24	40	345
997-012-11	300mm	±0.04mm	4	6	20	24	40	444
997-020-11	500mm	±0.05mm	5.5	8	24	32	45	682
997-024-11	600mm	±0.08mm	5.5	8	24	32	45	790
997-032-11	800mm	±0.10mm	10.5	9.5	31	32	60	990
997-040-11	1000mm	±0.10mm	10.5	9.5	31	40	60	1240



- ◆ 5 jacks per set
- ◆ Adjustable height
- ◆ For large granite surface plates:
2000x1000mm
2000x1500mm
2500x1500mm
3000x2000mm

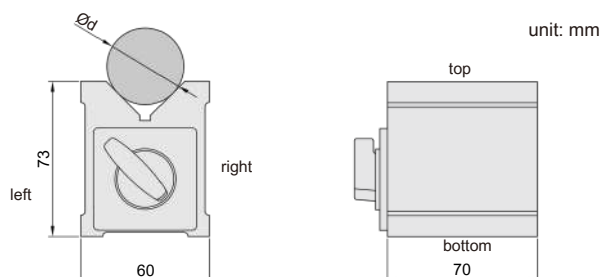
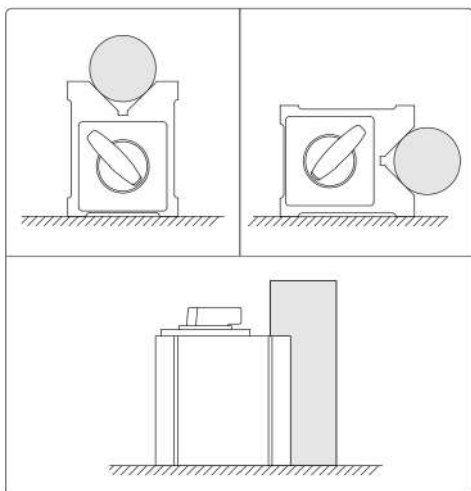


Code

625-000-00

ATTENTION: NOT
HARDENED

- ◆ Hold cylindrical workpiece for inspection and machining



Code	For shaft range(Ød)	Magnetic force	Top and bottom, left and right parallelism	V-grooves and back side squareness
633-044-01	6 - 44mm	56kgf	10µm	10µm



SERIES 634

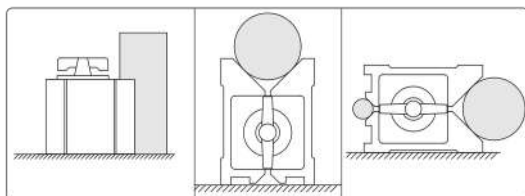
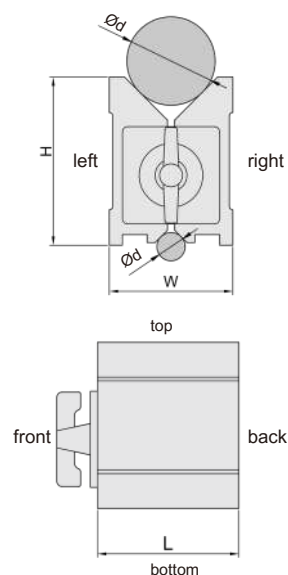
MAGNETIC V-BLOCK

ATTENTION: NOT
HARDENED

- ◆ Hold cylindrical workpiece for inspection and machining
- ◆ Top groove for large shafts
- ◆ Bottom grooves for small shafts



634-067-01



Code	Size(LxWxH)	For shaft range(Ød)	Magnetic force	V-grooves and back side squareness	Top and bottom, left and right parallelism
634-067-01	80x70x95mm	6 - 67mm	64kgf	10µm	10µm
634-067-02	100x70x95mm	6 - 67mm	80kgf	10µm	10µm
634-067-03	120x70x95mm	6 - 67mm	96kgf	10µm	10µm

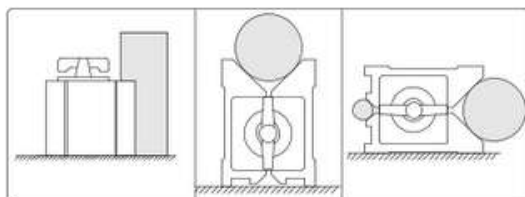
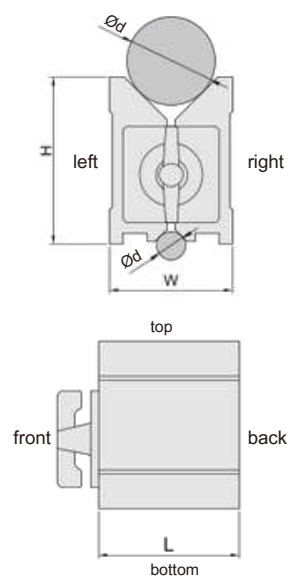
SERIES 634

MAGNETIC V-BLOCK (PROFESSIONAL TYPE)

- ◆ Hardened, high accuracy, for grinding, milling, drilling and inspection of round and square workpieces
- ◆ All working surfaces are hardened to HRC55-60°
- ◆ Hold cylindrical workpiece for inspection and machining
- ◆ Top groove for large shafts
- ◆ Bottom grooves for small shafts



634-067-01H



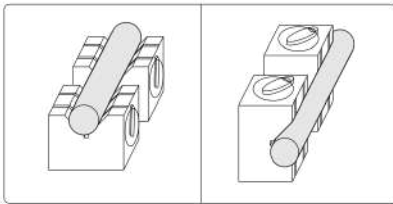
Code	Size(LxWxH)	For shaft range(Ød)	Magnetic force	V-grooves and back side squareness	Top and bottom, left and right parallelism
634-067-01H	80x70x95mm	6 - 67mm	64kgf	5µm	5µm
634-067-02H	100x70x95mm	6 - 67mm	80kgf	5µm	5µm
634-067-03H	120x70x95mm	6 - 67mm	96kgf	6µm	6µm

SERIES 635

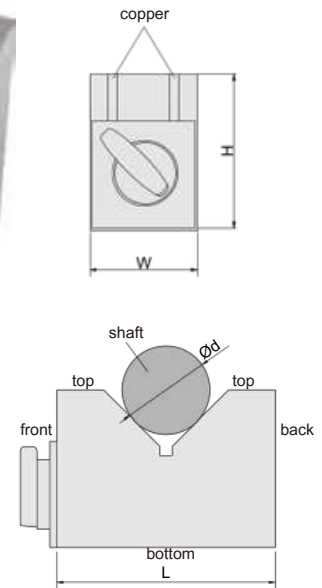
MAGNETIC V-BLOCK SET

ATTENTION: NOT
HARDENED

- ◆ Hold cylindrical workpieces for inspection, not suitable for machining due to weak magnetic force
- ◆ Two V-blocks per set
- ◆ Hardness HRB 70



635-150-01

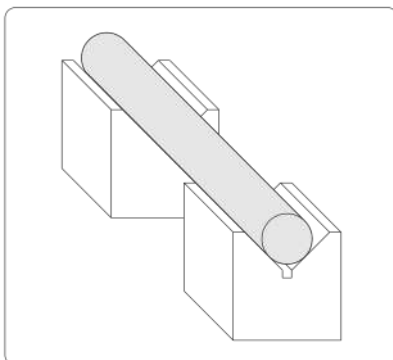


Code	Size(LxWxH)	Range of shafts (Ød)	Magnetic force	Parallelism of V groove to bottom and back sides	Height difference of a matched pair
635-070-01	70x40x50mm	6 - 46mm	8kgf	10µm	10µm
635-150-01	150x50x100mm	6 - 125mm	14kgf	10µm	10µm

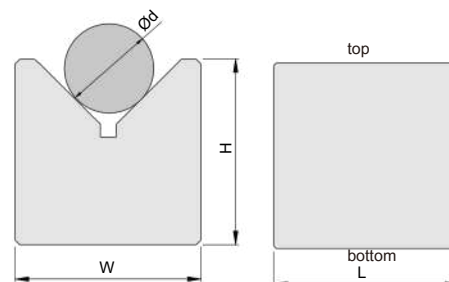
SERIES 631

GRANITE V-BLOCK SET

- ◆ Supplied a pair, for holding long cylindrical workpiece



631-075-01



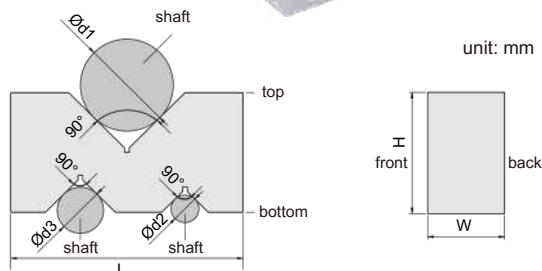
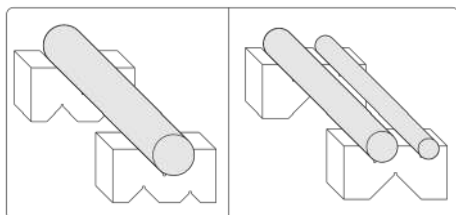
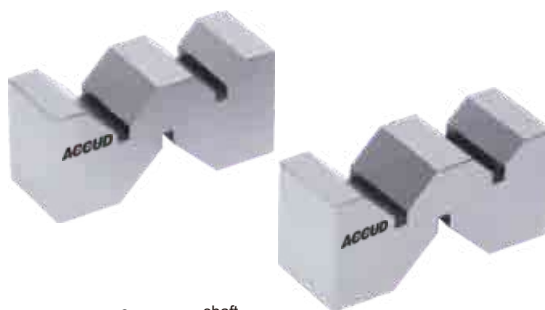
Code	Size(LxWxH)	For shaft range(Ød)	Parallelism between top and bottom, left and right	Height difference between a pair
631-075-01	50x70x70mm	6 - 70mm	5µm	5µm
631-099-01	50x100x70mm	6 - 84mm	5µm	5µm

With manufacturer inspection certificate

SERIES 632

V-BLOCK SET

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

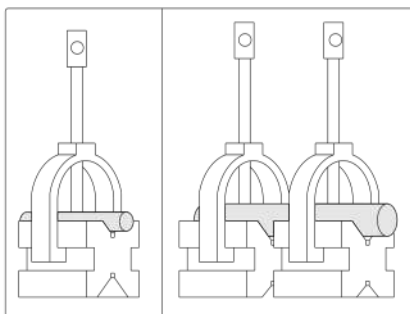


Code	Size (LxWxH)	Range of shafts(Ød1)	Range of shafts(Ød2)	Range of shafts(Ød3)	Parallelism of V grooves to top and bottom sides	Squareness of V grooves to front and back sides	Height difference of a matched pair
632-002-01	50x19x24mm	3 - 32mm	3 - 16mm	3 - 22mm	5µm	5µm	5µm
632-003-01	75x24x35mm	3 - 50mm	3 - 20mm	3 - 32mm	5µm	5µm	5µm
632-004-01	100x33x52mm	6 - 68mm	5 - 26mm	5 - 40mm	5µm	5µm	5µm
632-006-01	150x50x80mm	6 - 100mm	5 - 40mm	5 - 60mm	5µm	5µm	5µm

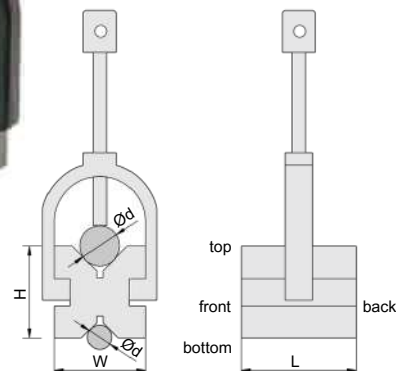
SERIES 636

V-BLOCK SET

- ◆ Hold cylindrical workpieces for inspection and machining
- ◆ Two V-blocks per set
- ◆ V groove on the top for large shafts
- ◆ V groove on the bottom for small shafts



636-045-01



Code	Size(LxWxH)	For shaft range(Ød)	V grooves to top and bottom sides parallelism	V grooves to front and back sides squareness	Height difference of a matched pair
636-045-01	45x41x35mm	5 - 40mm	5µm	5µm	5µm
636-070-01	70x63x44mm	7 - 60mm	5µm	5µm	5µm
636-125-01	125x90x70mm	7 - 80mm	5µm	5µm	5µm

SERIES 637

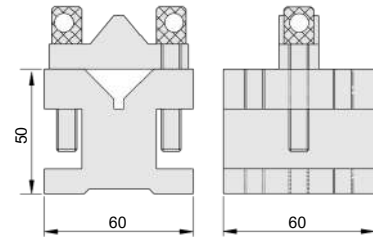
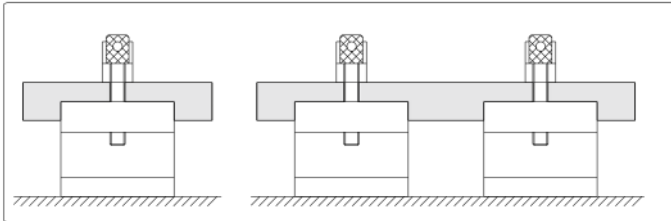
V-BLOCK SET

- ◆ Hold cylindrical workpieces for inspection and machining
- ◆ Two V-blocks per set
- ◆ V groove on the top for large shafts



637-035-01

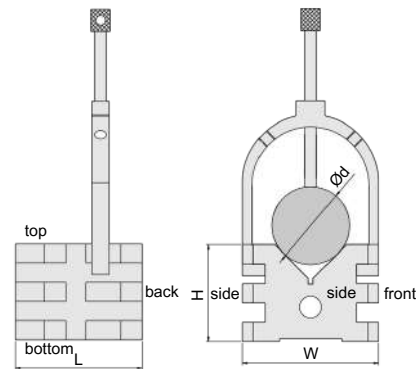
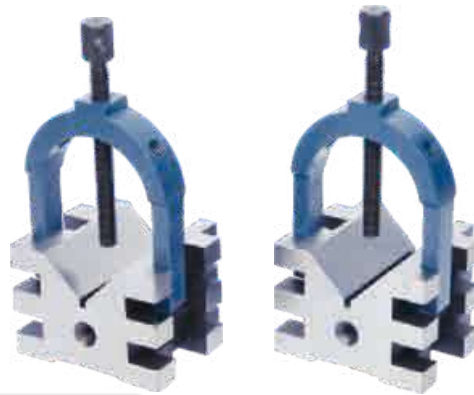
unit: mm



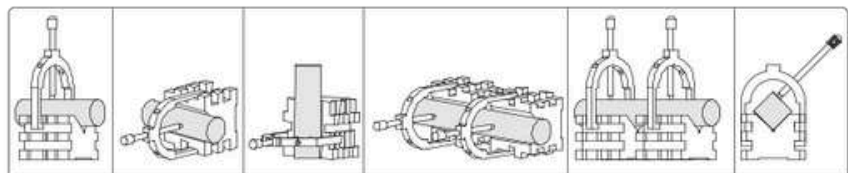
Code	Size(LxWxH)	For shaft range($\varnothing d$)	V grooves to top and bottom sides parallelism	V grooves to front and back sides squareness	Height difference of a matched pair
637-035-01	35x35x30mm	3 - 16mm	5 μ m	5 μ m	5 μ m
637-060-01	60x60x50mm	5 - 34mm	5 μ m	5 μ m	5 μ m
637-105-01	105x105x78mm	8 - 66mm	5 μ m	5 μ m	5 μ m

638

V-BLOCK SET



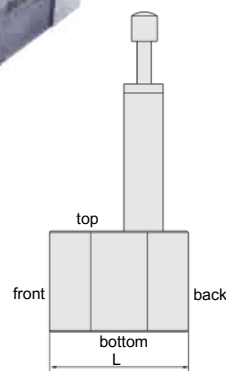
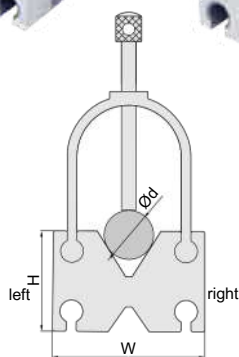
- ◆ Hold cylindrical or rectangular workpieces for inspection and machining
- ◆ Two V-blocks per set
- ◆ Hardened to HRC60 $\pm$ 2
- ◆ Applicable for cylinder with diameter ($\varnothing d$): 5 - 50mm
- ◆ Applicable for rectangular workpieces with thickness: $\leq$ 35mm



Code	Size (LxWxH)	Parallelism of V groove to top and bottom sides	Squareness of V groove to front and back sides	Height difference of a matched pair
638-070-01	60x70x50mm	8 μ m	8 μ m	8 μ m

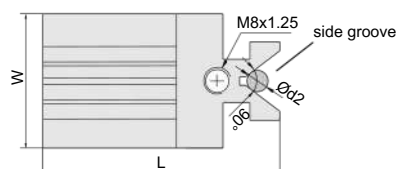
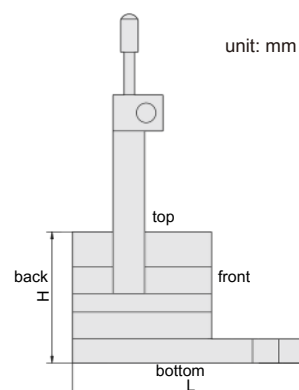
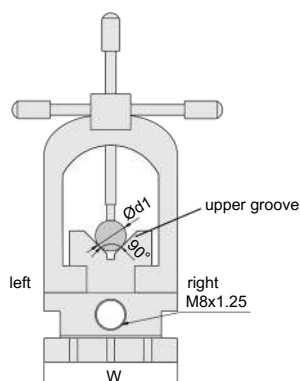


- ◆ Hold cylindrical workpieces for inspection and machining
- ◆ Two V-blocks per set
- ◆ Side lie-down use is possible
- ◆ Hardened to HRC60±2
- ◆ V groove on the top for large shafts
- ◆ V groove on the bottom for small shafts



Code	Size (LxWxH)	Range of shafts (Ød)	Parallelism of both V grooves to top, bottom, left, right sides	Squareness of both V grooves to front and back sides	Height difference of a matched pair
640-001-01	65x70x45mm	4 -35mm	5µm	5µm	5µm

- ◆ Hold cylindrical workpieces for inspection and machining
- ◆ Hardened to HRC60±2



Code	Size (LxWxH)	Range of shafts (Ød1 and Ød2)	Parallelism of upper groove to bottom, left and right sides	Squareness of upper groove to back side	Parallelism of side groove to back side
639-090-01	90x48x48mm	5 - 33mm	5µm	5µm	5µm

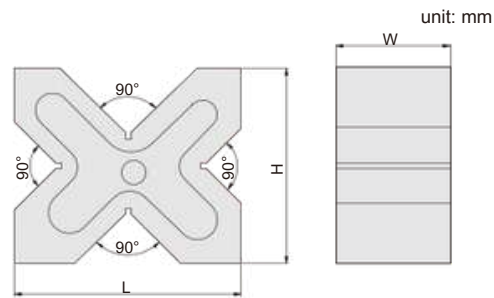
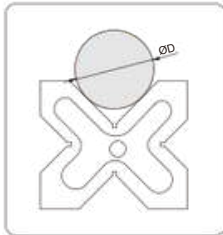
SERIES 630

V-BLOCK SET

- ◆ For positioning cylindrical workpieces
- ◆ Two V-blocks per set
- ◆ Each V-block has four 90° V-grooves
- ◆ Hardness HB 170-241



630-006-11

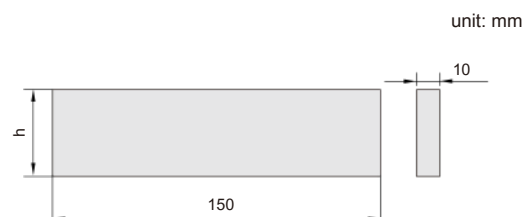


Code	Size(LxHxW)	Range of shafts(Ød)	Parallelism of four grooves to all sides	Height difference of a matched pair
630-006-11	150×130×75mm	8-120mm	15µm	20µm
630-008-11	200×170×90mm	12-180mm	15µm	20µm

641

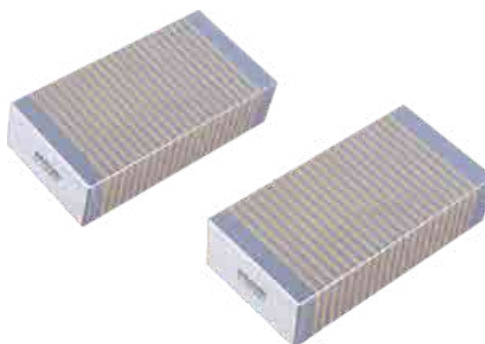
PARALLEL SET

- ◆ Parallelism between top and bottom: 5µm
- ◆ Height difference of a matched pair: 5µm
- ◆ Hardened to HRC55-60

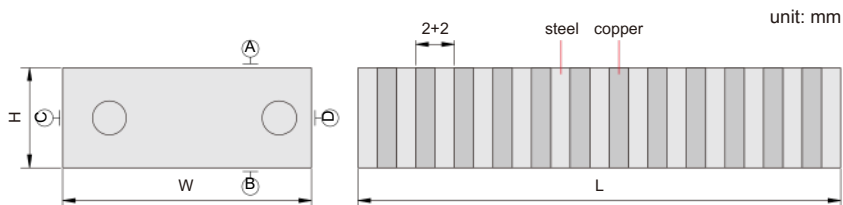
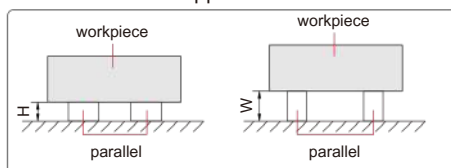


Code	Parallels per set	Length	Thickness	Height(h)
641-014-01	14pairs	150mm	10mm	14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 35, 40, 45, 50mm

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



Application



Code	Size(LxWxH)	Pole pitch	Parallelism between A and B	Parallelism between C and D	Height difference of a matched pair
615-004-02	100x50x25mm	2+2mm	10µm	10µm	10µm

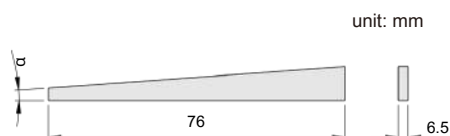
SERIES 571

ANGLE GAUGE BLOCK SET

- ◆ For angle set-up in tooling, production and inspection
- ◆ Hardness HRC55

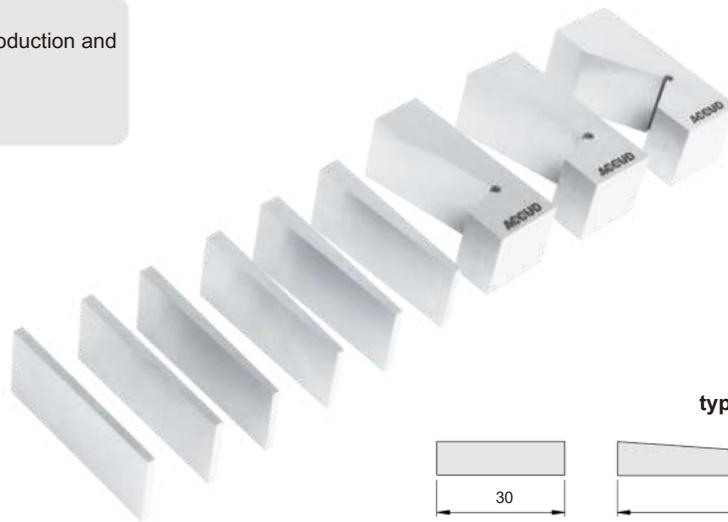


571-010-02



Code	Blocks per set	Accuracy	Sharp	Angle
571-010-02	10	±20"	triangle	1°, 2°, 3°, 4°, 5°, 10°, 15°, 20°, 25°, 30°
571-012-01	12	±20"	triangle	1/4°, 1/2°, 1°, 2°, 3°, 4°, 5°, 10°, 15°, 20°, 25°, 30°

- ◆ For angle set-up in tooling, production and inspection
- ◆ Hardness HRC55

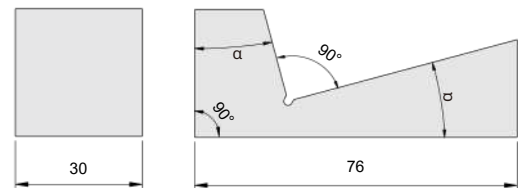


unit: mm

type A



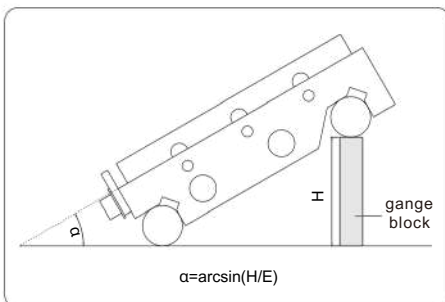
type B



Code	Quantity	Angle α	Type	Accuracy
646-009-01	9pcs	$\frac{1}{2}^\circ, 1^\circ, 2^\circ, 3^\circ, 4^\circ, 5^\circ$	type A	$\pm 1'$
		$10^\circ, 15^\circ, 30^\circ$	type B	

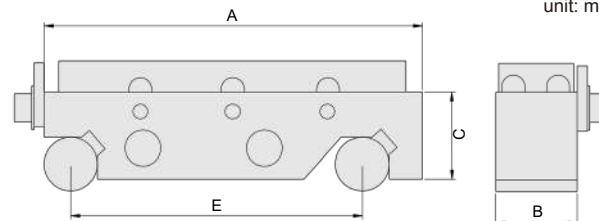
SERIES 651

SINE BAR



651-005-01

unit: mm



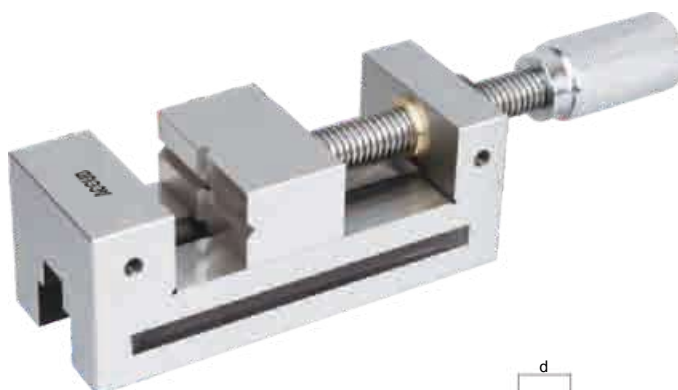
Code	Roller distance (E)	Table size(AxB)	Accuracy of α at 30°	C
651-005-01	100mm	130x25mm	$\pm 8''$	25
651-005-02	100mm	130x83mm	$\pm 16''$	30
651-010-01	200mm	250x40mm	$\pm 8''$	40
651-010-02	200mm	250x85mm	$\pm 16''$	40



SERIES 652

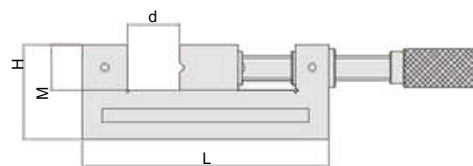
PRECISION VISE

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



652-120-01

unit: mm



Code	Jaw opening(d)	Jaw width(W)	L	H	M
652-073-01	73mm	63mm	176	63	30
652-076-01	76mm	73mm	190	73	35
652-120-01	120mm	98mm	255	82	40

SERIES 653

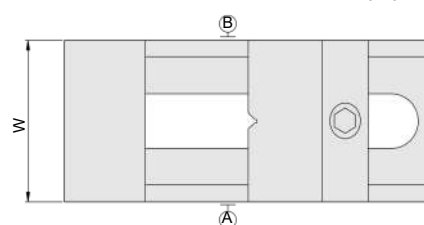
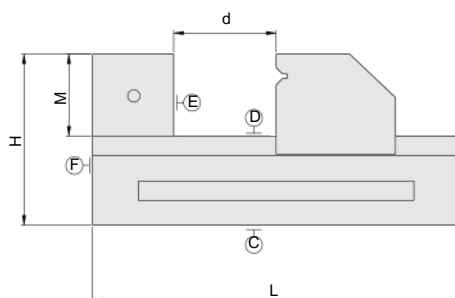
PRECISION VISE

- ◆ Made of hardened alloy steel
- ◆ Parallelism and squareness between A, B, C, D, E and F: 5μm /100mm
- ◆ Hardness HRC56-58



653-003-01

unit: mm

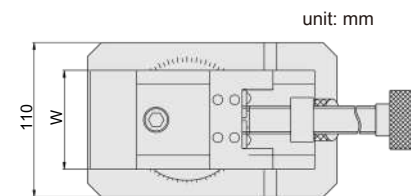
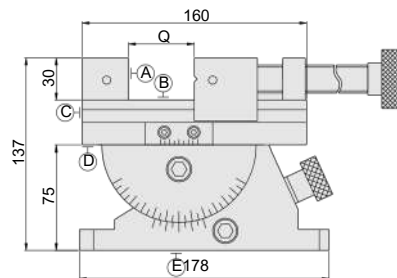


Code	Jaw opening(d)	Jaw width(W)	L	H	M
653-003-01	80mm	50mm	150	53	25
653-005-01	100mm	73mm	190	70	35

656

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: 5μm/100mm, parallelism between
D and E at 0°: 10μm/100mm
- ♦ Made of tool steel
- ♦ Hardness HRC56-58



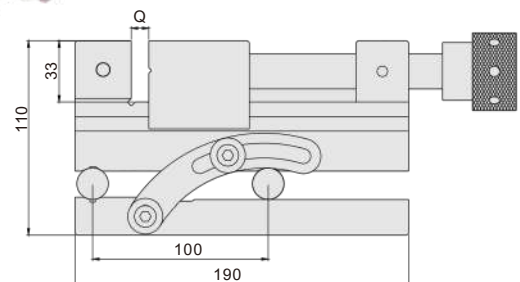
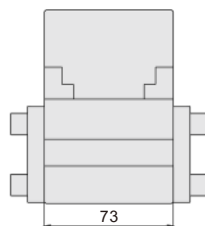
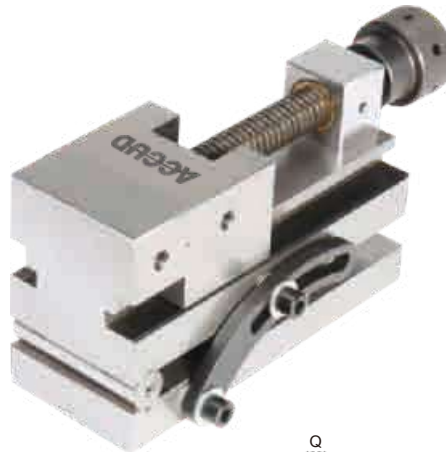
Code	Jaw opening(Q)	Jaw width(W)
656-080-01	0-80mm	70mm

V-BLOCK

657

PRECISION SINE VISE

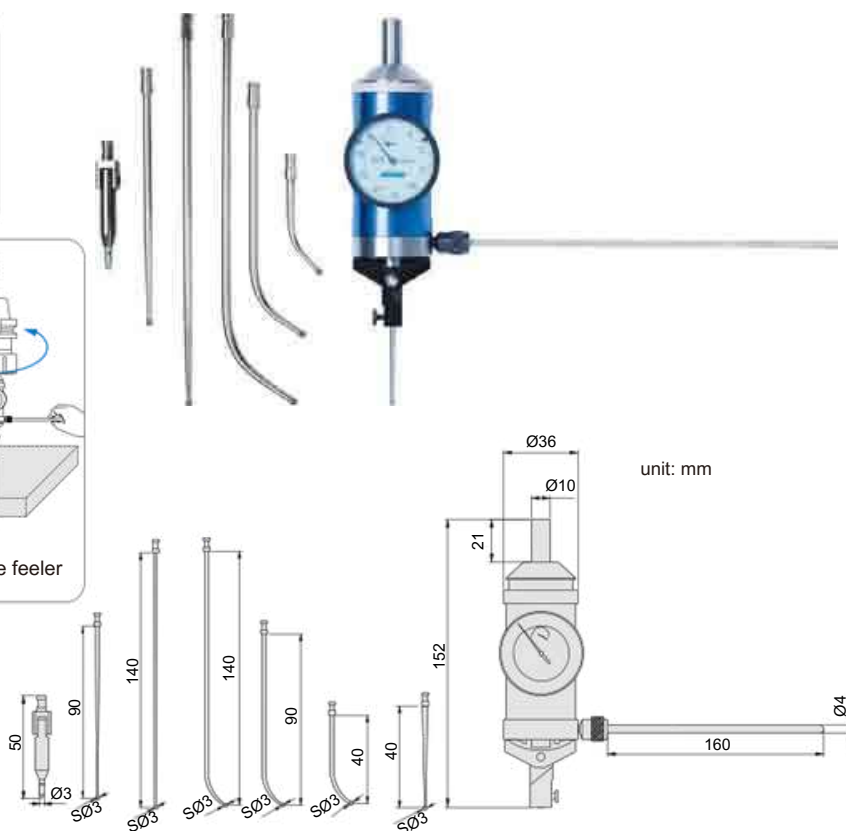
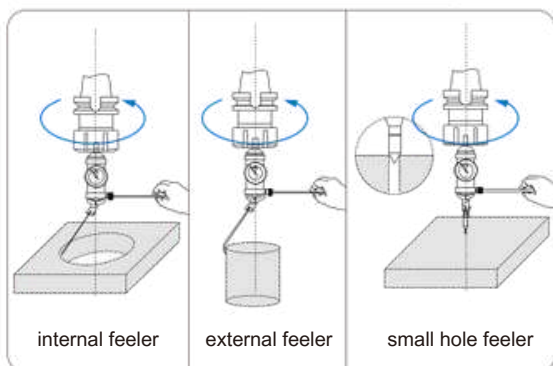
- ♦ Parallelism: 3μm/100mm
- ♦ Squareness: 5μm/100mm
- ♦ Accuracy of angle: ±20"
- ♦ Made of SKS tool steel, subzero treatment
- ♦ Hardness HRC58-60



Code	Jaw opening (Q)	Jaw width	Adjustable angle
657-090-01	0-90mm	73mm	0-45°



- ◆ For quick and accurate centering in boring and milling set-up
- ◆ Jeweled bearing
- ◆ Supplied with 7 type feelers

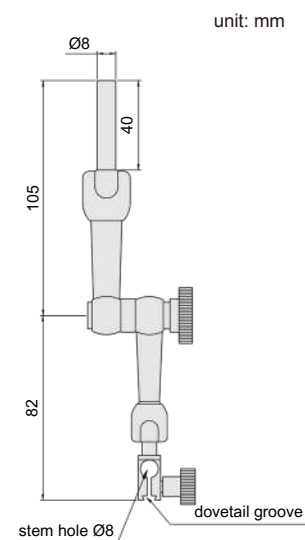


Code

297-003-11

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

Application

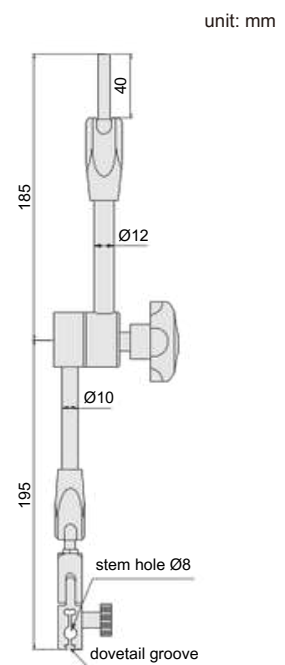


Code

685-040-01

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

Application



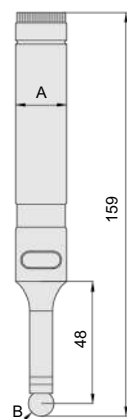
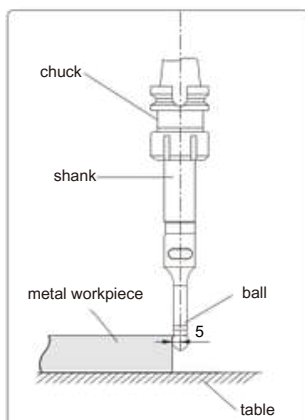
Code

686-080-01

SERIES 692

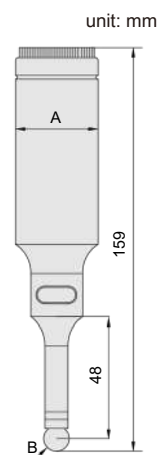
ELECTRONIC EDGE FINDER

- ◆ The LED will be light with alarm when the ball contacts the workpiece
- ◆ Not suitable for rotating use
- ◆ Hardened shank and contact point
- ◆ Battery: 23A, 12V



692-010-03N

692-010-32



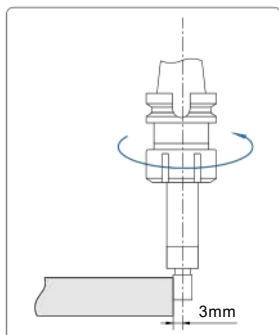
Code	Shank(A)	Contact point (B)	Accuracy
692-010-03N	Ø20mm	SØ10mm	5µm
692-010-32	Ø32mm	SØ10mm	5µm

SERIES 693

NON-MAGNETIC EDGE FINDER

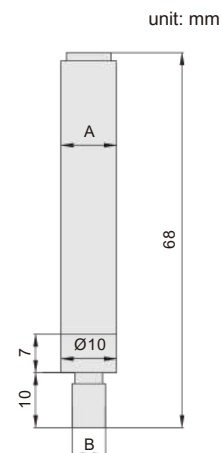


- ◆ Non-magnetic
- ◆ TIN coating, hardness HV2300, extremely wear resistance
- ◆ Suitable for machine speed 400~600rpm



693-010-01N

693-010-31

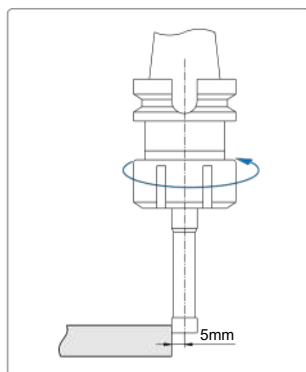


Code	Shank(A)	Contact surface(B)	Accuracy	Titanium plated
693-010-01N	Ø10mm	Ø6mm	5µm	without
693-010-31	Ø10mm	Ø6mm	5µm	with

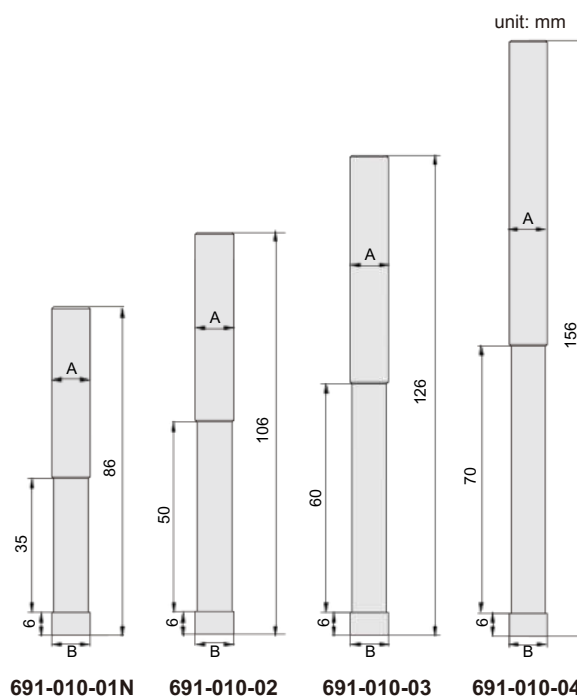
SERIES 691

CERAMIC EDGE FINDER

- ◆ Ceramic contact point, non magnetic
- ◆ Hardened shank
- ◆ Suitable for machine speed: 400-600rpm



691-010-01N



691-010-01N

691-010-02

691-010-03

691-010-04

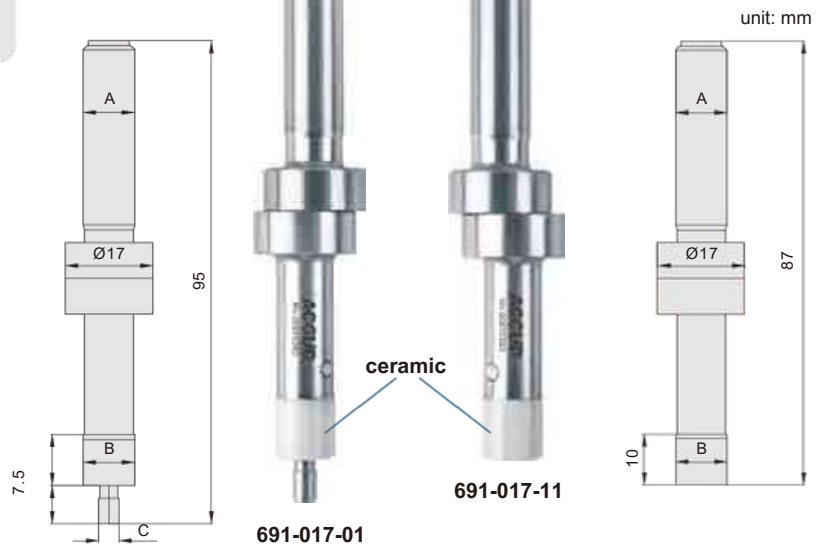
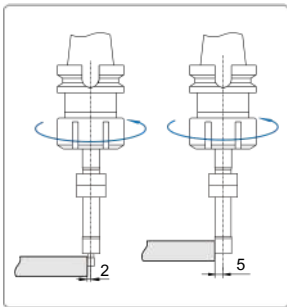
Code	Shank(A)	Contact point (B)	Accuracy
691-010-01N	Ø10mm	Ø10mm	5µm
691-010-02	Ø10mm	Ø10mm	5µm
691-010-03	Ø10mm	Ø10mm	5µm
691-010-04	Ø10mm	Ø10mm	5µm

SERIES 691

CERAMIC EDGE FINDER



- ◆ Non-magnetic
- ◆ CrN coating, hardness HV2000, extremely wear resistance
- ◆ Suitable for machine speed 400~600rpm



691-017-01

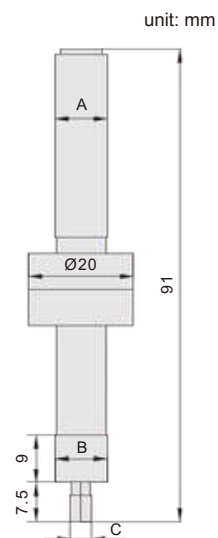
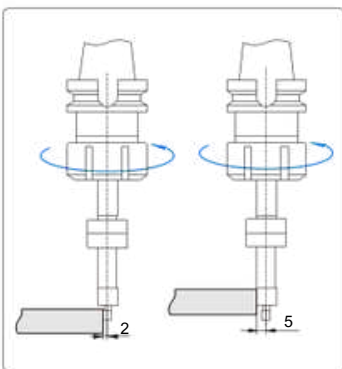
691-017-11

Code	Shank(A)	Contact point(B)	Contact point(C)	Accuracy
691-017-01	Ø10mm	Ø10mm	Ø4mm	5µm
691-017-11	Ø10mm	Ø10mm	-	5µm

694

EDGE FINDER

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

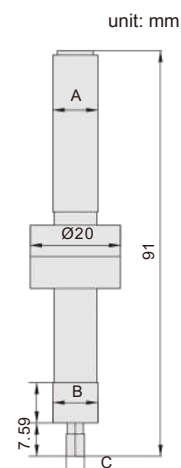
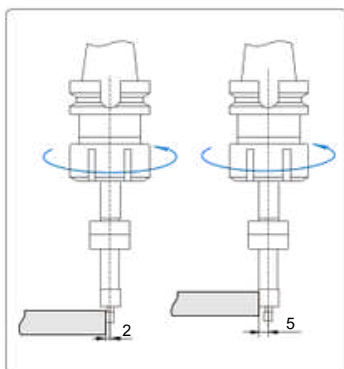


Code	Shank(A)	Contact point(B)	Contact point(C)	Accuracy
694-020-01N	Ø10mm	Ø10mm	Ø4mm	5µm

EDGE FINDER
ZERO SET

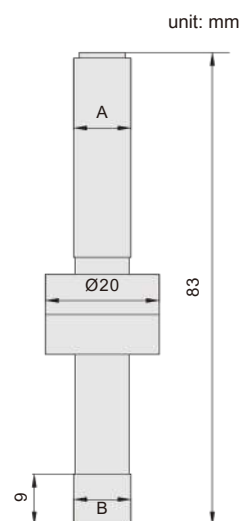
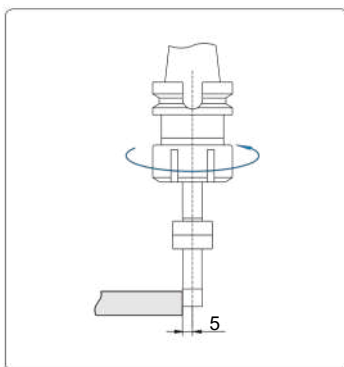


- ◆ Non-magnetic
- ◆ TiAlN coating, hardness HV3500;
TIN coating, hardness Hv2300,
extremely wear resistance
- ◆ Suitable for machine speed 400~600rpm



Code	Shank(A)	Contact point(B)	Contact point(C)	Accuracy
694-020-02	Ø10mm	Ø10mm	Ø4mm	5µm
694-020-03	Ø10mm	Ø10mm	Ø4mm	5µm

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



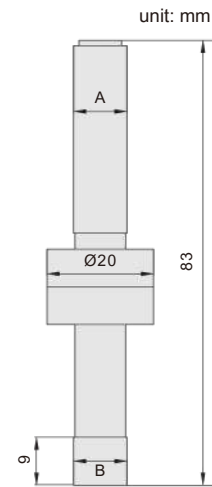
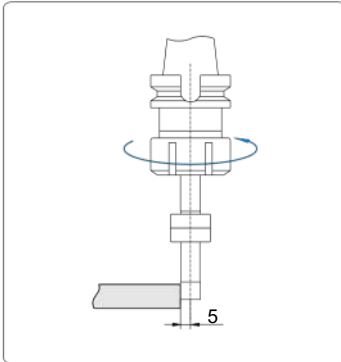
Code	Shank(A)	Contact point(B)	Accuracy
694-020-11	Ø10mm	Ø10mm	5µm

SERIES 694

NON-MAGNETIC EDGE FINDER



- ◆ Non-magnetic
- ◆ TIALN coating, hardness HV3500;
TIN coating, hardness HV2300,
extremely wear resistance
- ◆ Suitable for machine speed 400~600rpm



Code	Shank(A)	Contact point(B)	Accuracy
694-020-12	Ø10mm	Ø10mm	5µm
694-020-13	Ø10mm	Ø10mm	5µm

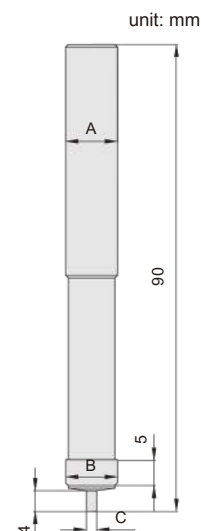
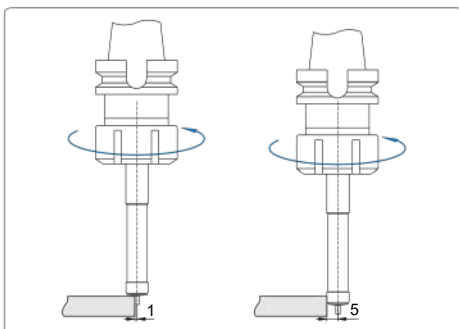
689

NON-MAGNETIC EDGE FINDER



EDGE FINDER
ZERO SET

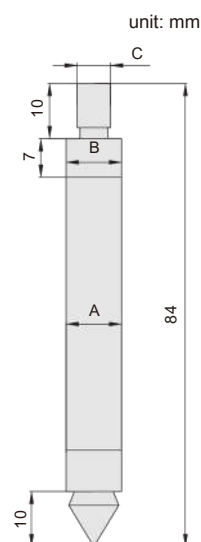
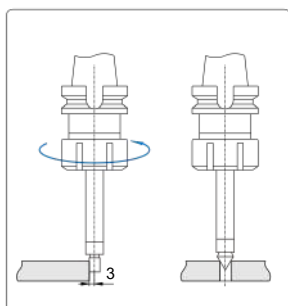
- ◆ Non-magnetic
- ◆ TIN coating, hardness HV2300,
extremely wear resistance
- ◆ Suitable for machine speed 400~600rpm



Code	Shank(A)	Contact point(B)	Contact point(C)	Accuracy
689-010-02	Ø10mm	Ø10mm	Ø2mm	5µm



- ◆ Non-magnetic
- ◆ TIN coating, hardness HV2300, extremely wear resistance
- ◆ Suitable for machine speed 400~600rpm
- ◆ Find edge or hole center

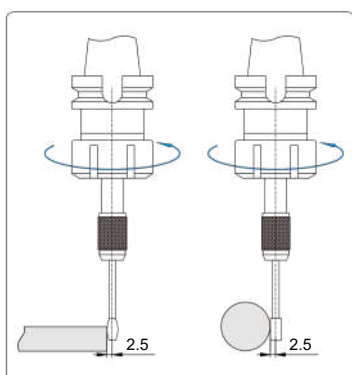


Code	Shank(A)	Contact point(B)	Contact point(C)	Accuracy
690-010-01	Ø10mm	Ø10mm	Ø6mm	5µm

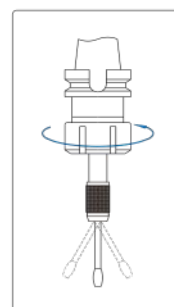
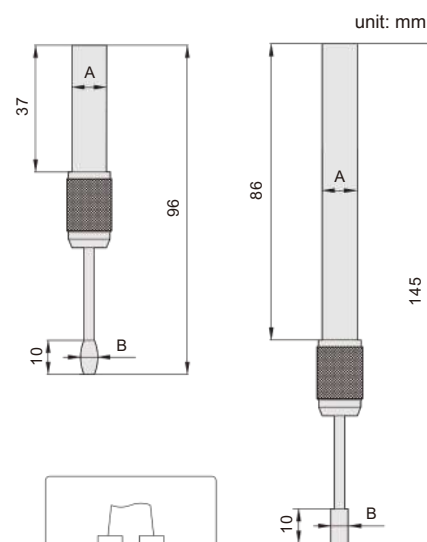
SERIES 688

EDGE FINDER (WITH ROTARY HEAD)

- ◆ Non-magnetic
- ◆ TIN coating, hardness HV2300, extremely wear resistance
- ◆ Suitable for machine speed 500~2000rpm



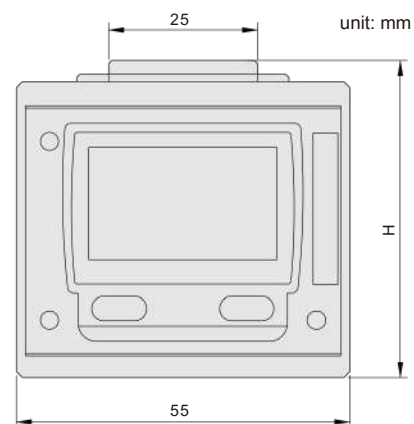
688-010-01



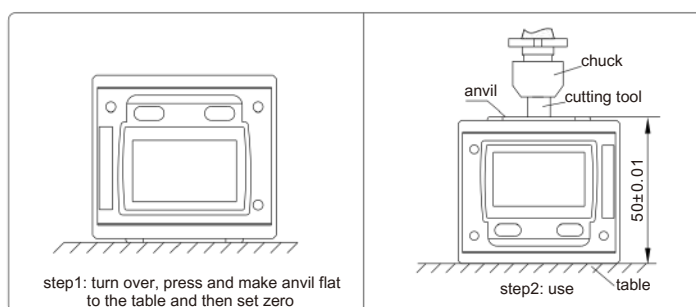
Code	Shank(A)	Contact point(B)	Accuracy	Application
688-010-01	Ø10mm	Ø5mm	5µm	flat surface
688-010-12	Ø10mm	Ø5mm	5µm	arc surface



- ◆ IP65 protection level
- ◆ Magnetic base
- ◆ With backlight, will turn on automatically when close to zero ($\pm 0.002\text{mm}$)
- ◆ Turn off automatically



Application



Code	Accuracy
697-050-01	$\pm 10\mu\text{m}$

MASUP



SERIES 280

2-PIECE MEASURING TOOLS SET



280-000-02

Package



Code	Include
280-000-02	10mm dial indicator (222-010-11) Magnetic stand (281-060-01)
280-001-02	1 inch dial indicator (225-025-11) Magnetic stand (281-060-01)

280

2-PIECE MEASURING TOOLS SET

♦ Include:

- 1) Digital caliper, range 0-150mm/0-6"
(code **111-006-12**)
- 2) Digital outside micrometer, range 0-25mm
(code **312-001-03**)



Code

280-123-02

MEASURING
TOOL SET

280

3-PIECE MEASURING TOOL SET

♦ Includes:

- 1) Vernier caliper, range 0-150mm/0-6",
(code **120-006-12**)
- 2) Outside micrometer, range 0-25mm
(code **321-001-01**)
- 3) 90° beveled edge square, 100x70mm
(code **832-004-10**)



Code

280-000-03



♦ Includes:

- 1) Digital caliper, range 0-150mm/0-6"
(code **111-006-12**)
- 2) Outside micrometer, range 0-25mm
(code **321-001-01**)
- 3) 90° beveled edge square, 100x70mm
(code **832-004-10**)



Code

280-000-13

SERIES 280

3-PIECE MEASURING TOOL SET



Digital indicator for
280-200-03



Inch dial indicator for
280-202-03

**280-201-03**

Code	Include
280-200-03	digital indicator, range 12.7mm/0.5" (code 212-010-13) flex arm locking pliers, adjustable jaw opening from 0 to 25mm
280-201-03	10mm dial indicator (code 222-010-11) flex arm locking pliers, adjustable jaw opening from 0 to 25mm
280-202-03	1" inch dial indicator (code 225-025-11) flex arm locking pliers, adjustable jaw opening from 0 to 25mm

280

5-PIECE MEASURING TOOL SET

◆ Includes:

- 1) Digital caliper, range 0-150mm/0-6"
(code **111-006-12**)
- 2) Outside micrometer, range 0-25mm
(code **321-001-01**)
- 3) Dial indicator, range 10mm
(code **222-010-11**)
- 4) Magnetic stand (code **281-060-01**)
- 5) Micrometer stand (code **383-000-00**)



Code

280-000-05

MEASURING
TOOL SET

280

5-PIECE MEASURING TOOL SET

◆ Includes:

- 1) Digital caliper, range 0-150mm/0-6"
(code **111-006-12**)
- 2) Outside micrometer, range 0-25mm
(code **321-001-01**)
- 3) Dial indicator, range 10mm
(code **222-010-11**)
- 4) 90° beveled edge square, 100x70mm
(code **832-004-10**)
- 5) Scriber, 250mm
(code **995-009-01**)



Code

280-000-15



280

8-PIECE MEASURING TOOL SET

◆ Includes:

- 1) Digital caliper, range 0-150mm/0-6" (code 111-006-12)
- 2) Outside micrometer, range 0-25mm (code 321-001-01)
- 3) Protractor (code 812-003-01)
- 4) Pitch gauge, range 0.25-7mm, 24pcs (code 922-007-24)
- 5) Radius gauge (code 941-007-34)
- 6) Feeler gauge, range 0.05-1.00mm, 20pcs (code 912-100-20)
- 7) 90° beveled edge square, 100x70mm (code 832-004-10)
- 8) Scriber (code 995-009-01)



Code

280-000-08

280

12-PIECE MEASURING TOOL SET

◆ Includes:

- 1) Digital caliper, range 0-150mm/0-6" (code 111-006-12)
- 2) Outside micrometer, range 0-25mm (code 321-001-01)
- 3) Dial indicator, range 10mm (code 222-010-11)
- 4) Magnetic stand (code 281-060-01)
- 5) Protractor (code 812-003-01)
- 6) Pitch gauge, range 0.25-7mm, 24pcs (code 922-007-24)
- 7) Radius gauge (code 941-007-34)
- 8) Feeler gauge, range 0.05-1.00mm, 20pcs (code 912-100-20)
- 9) 90° beveled edge square, 100x70mm (code 832-004-10)
- 10) Scriber (code 995-009-01)
- 11) Depth base (code 179-000-00)
- 12) Zero setting bar



Code

280-000-12

280

12-PIECE MEASURING TOOL SET

◆ Includes:

- 1) Digital caliper, range 0-150mm/0-6" (code **111-006-12**)
- 2) Digital outside micrometer, range 0-25mm/0-1" (code **313-001-01**)
- 3) Digital indicator, range 12.7mm/0.5" (code **212-010-13**)
- 4) Magnetic stand (code **281-060-01**)
- 5) Protractor (code **812-003-01**)
- 6) Pitch gauge, range 0.25-7mm, 24pcs (code **922-007-24**)
- 7) Radius gauge (code **941-007-34**)
- 8) Feeler gauge, range 0.05-1.00mm, 20pcs (code **912-100-20**)
- 9) 90° beveled edge square, 100x70mm (code **832-004-10**)
- 10) Scriber (code **995-009-01**)
- 11) Depth base (code **179-000-00**)
- 12) Zero setting bar



Code

280-001-12

280

6-PIECE WELDING GAUGE SET

◆ Includes:

- 1) Outside micrometer, range 0-25mm (code **321-001-01**)
- 2) Pipe welding gauge (code **976-045-01**)
- 3) Welding gauge (code **978-006-01**)
- 4) Welding gauge (code **979-020-01**)
- 5) Steel rule, range 150mm/6" (code **990-006-11**)
- 6) Magnifier



Code

280-000-56

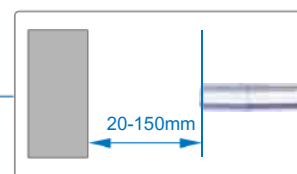
- ◆ The cable with lens can be rotated at 360°
- ◆ With adjustable LED light



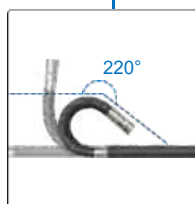
VIDEO

HDMI
Micro USB
TF

manual joystick to
control the cable



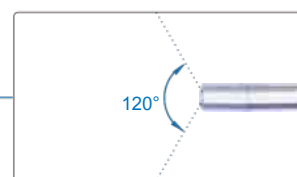
focus distance:20-150mm



Max.bend angle:220°



360° rotation



angle of view field:120°

SPECIFICATION

Probe diameter	6mm
Cable length	1.5m
Cable type	steel wired weaved cable
Dust/waterproof probe	IP65
Camera pixel	1M Pixel
Picture resolution	1280x720
Bend control	manual joystick
Frame rate	30fps
Illumination	6 steps adjustable LED
Display size	3.5inch LCD,Max.20000Lux
Max.magnification	5X
Video format	MP4/JPEG
Memory	16G TF card
Power supply	rechargeable battery(for 4 hours working)
Weight	550g

INCLUDED ACCESSORIES

Main unit	1pc
Cable with probe	1pc
16G TF card	1pc
AC/DC adapter	1pc
USB cable	1pc



VIDEO



Charge



- ◆ The cable length into the pipe can be shown the display
- ◆ With adjustable LED light
- ◆ Language: English, Japanese, Korean, Russian, German, French, Italian, Spanish, Portuguese, Thai, Finish, Swedish



46mm support guide



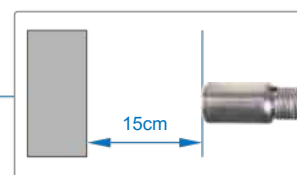
80mm support guide



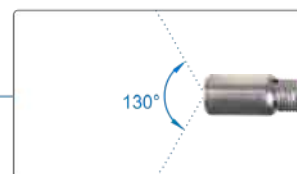
Remote control



23mm lens



focus distance:15cm



angle of view field:130°

SPECIFICATION

Probe diameter	23mm
Cable length	20m
Probe head material	304 stainless steel
Dust/waterproof probe	IP67
Camera pixel	2M Pixel
Picture resolution	1920x1080
Focus distance	15cm
Angle of view field	130°
Illumination	4 steps adjustable LED
Display size	7inch LCD
Max.magnification	3X
Video format	HD 1080P
Memory	16G SD card
Power supply	rechargeable battery(for 7 hours working)
Weight	10kg

INCLUDED ACCESSORIES

Main unit	1pc
16G SD card	1 pc
12V AC/DC adapter	1pc

USB cable	1 pc
Remote control	1 pc
Support guide	2 pcs





- ◆ 2-way directions
- ◆ With adjustable LED light
- ◆ Take pictures and record videos



VIDEO



SPECIFICATION

Code	ES5515	ES5530	ES4015
Probe diameter	6mm	6mm	4.0mm
Cable length *	1.5m	3m	1.5m
Dust/waterproof probe	IP65		
Camera	0.45M Pixel		
Picture resolution	640x480		
Frame rate	30fps		
Illumination	8pcs LEDs		4pcs LEDs
Video format	AVI or MPEG4		
Memory	8G SD card		
Power supply	rechargeable battery (for 4 hours working)		
Weight	550g	750g	500g

INCLUDED ACCESSORIES

Main unit	1pc
Cable with probe	1pc
SD card 8G	1pc
AC/DC adapter	1pc
Video output cable	1pc
USB cable	1pc

* The cable length are available upon request



- ◆ Economic type
- ◆ 2-way directions
- ◆ With adjustable LED light
- ◆ Take pictures and record videos



SPECIFICATION

Code	ESE80	ESE60	ESE40
Probe diameter	8.0mm	6.0mm	4.0mm
Cable length	1m		
Dust/waterproof probe	IP65		
Camera	1M Pixel		
Picture resolution	1280x720		
Frame rate	30fps		
Screen size	4.5 inch		
Illumination	8pcs LEDs		6pcs LEDs
Video format	AVI		
Memory	32G SD card		
Power supply	rechargeable battery (for 4 hours working)		
Weight	500g	450g	400g

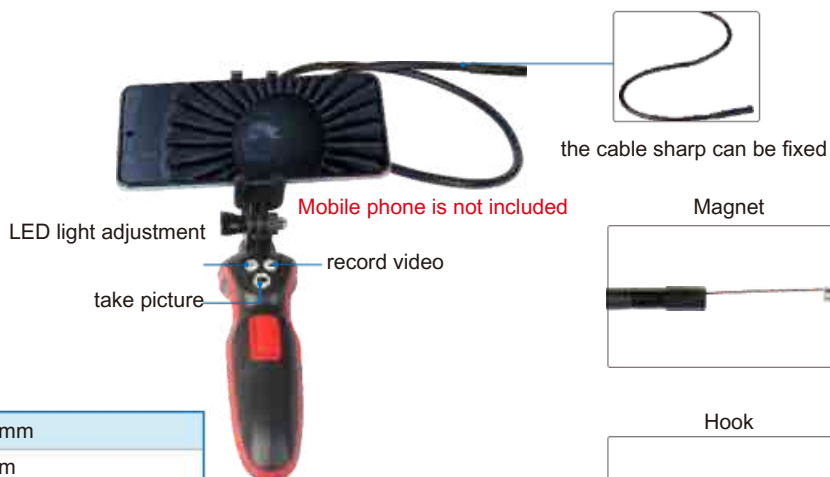
INCLUDED ACCESSORIES

Main unit	1pc
Cable with probe	1pc
SD card 32G	1pc
AC/DC adapter	1pc





- ◆ The cable can be fixed in any sharp
- ◆ With adjustable LED light



the cable sharp can be fixed

SPECIFICATION

Probe diameter	8.5mm
Cable length	1m
Cable type	steel wired cable (the sharp can be fixed)
Dust/waterproof probe	IP65
Camera pixel	2M Pixel
Picture resolution	1600x1200
Video format	JPEG/MP4
Illumination	6 steps adjustable LED
Power supply	rechargeable battery (for 4 hours working)
Weight	287g

INCLUDED ACCESSORIES

Main unit	1pc
Cable with probe	1pc
Hook	1pc
Mirror	1pc
Magnet	1pc
USB cable	1pc

Magnet



Hook



Mirror



- ◆ Lenses are made of resin
- ◆ Interchangeable lenses
- ◆ Powered: 3 pcs AAA batteries (included)

Adjustable holder angle



Adjustable lens position



Focus can be adjusted



Adjustable LED angle



2 pcs LED



Interchangeable lenses



Head band (included)



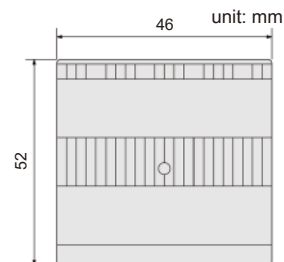
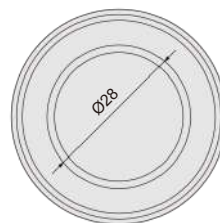
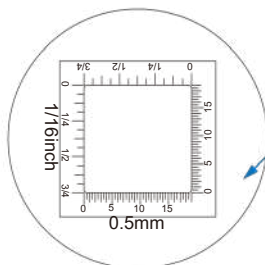
Magnification	1X, 1.5X, 2X, 2.5X, 3.5X
Lens number	5 pcs

MG30X

MEASURING MAGNIFIER (WITH ILLUMINATION)



- ◆ Base with scale
- ◆ With 3 white LED and 3 UV LED
- ◆ Magnification: 30X

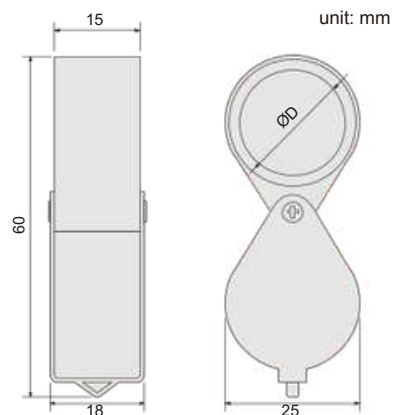


MG10

FOLDING MAGNIFIER

- ◆ Glass lens

folding



Magnification	10X
Lens diameter(ØD)	Ø21

DM200

DIGITAL MICROSCOPE



Magnification: 10X-200X



Pixel: 2M



Interface: USB2.0



Snap pictures and record videos



8 pcs adjustable LED lights



With measuring software and calibration rule



VIDEO



Optional Stand



Universal Stand (MS36B)

Magnification, View Field and Focus Relationship

Magnification	Focus	View field
50X	21mm	9.5x7.1mm
100X	13mm	4.8x3.6mm
150X	16mm	3.2x2.4mm
200X	19mm	2.4x1.8mm



WIFI200

DIGITAL WIFI MICROSCOPE



Magnification: 10X-200X



Pixel: 2M



Interface: USB2.0 or WiFi



Snap pictures and record videos



8 pcs adjustable LED lights



With measuring software and calibration rule



VIDEO

It can connected to smart phone ,
lpad or computer via WIFI

Optional Stand



Universal Stand (MS36B)

Magnification, View Field and Focus Relationship

Magnification	Focus	View field
50X	21mm	9.5x7.1mm
100X	13mm	4.8x3.6mm
150X	16mm	3.2x2.4mm
200X	19mm	2.4x1.8mm

PM100

PORTABLE MEASURING MICROSCOPE



10X eyepiece(scale graduation: 0.1mm)

focus adjustment

LED light

10X objective

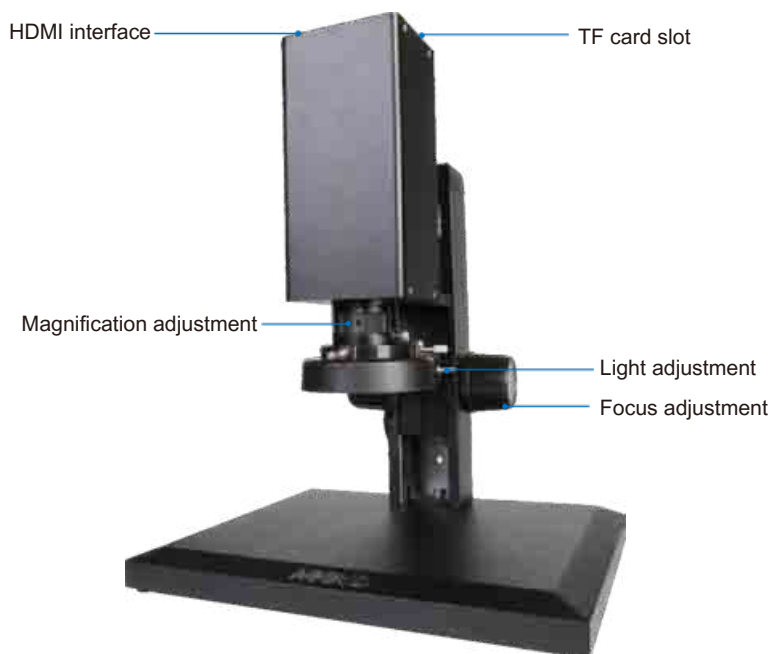
SPECIFICATION

Total magnification	100X
Eyepiece	10X
Objective(achromatic)	10X
Working distance	7mm
Focus range	30mm
Viewing field	Ø1.8mm
Graduation	0.01mm
Illumination	LED light
Diameter of base	Ø63mm
Height	210mm
Weight	650g

INCLUDED ACCESSORIES

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

- ◆ High resolution color camera
- ◆ With TF card, can save pictures and videos
- ◆ High frame rate, without any delay in quick movement
- ◆ With crosshair on the screen



SPECIFICATION

Objective		0.7X ~ 5X (zoom)
Total magnification(with 22 inch monitor)		25X-180X
View field		3.2mm-23mm
Working distance		105mm
Camera	Resolution	1920x1080
	Pixel size	2.75*2.75μm
	Frame rate	60fps
Illumination		adjustable light
Base size		320mmx285mm(LxW)
Weight		6kg

INCLUDED ACCESSORIES

Main unit	1pc
Wireless mouse	1pc
HDMI connection cable	1pc
Ø95mm black/white plastic plate	1pc
8G TF card	1pc
TF card reader	1pc
AC/DC adapter	1pc

- ◆ 12 inch wide screen HD LCD is included
- ◆ Can take pictures and record videos
- ◆ With USB interface, for transferring pictures or measuring data
- ◆ High frame rate, without any delay in quick movement
- ◆ With measuring function



VIDEO



SPECIFICATION

Objective		0.7X ~ 5X (zoom, fixed at 0.7X, 1X, 1.5X, 2X, 2.5X, 3X, 4X, 5X)
Total magnification		13X-97X
View field		3mm-22.7mm
Working distance		96mm
Camera	Pixel	2M HDMI
	Pixel size	2.75*2.75μm
	Frame rate	60fps
Illumination		144pcs LEDs adjustable light
LCD display		12 inch HD LCD display, 1080P
Base size		260mmx320mm(LxW)
Weight		5.5kg

INCLUDED ACCESSORIES

Main unit	1pc
12 inch HD LCD	1pc
Wireless mouse	1pc
HDMI connection cable	1pc
Calibration rule	1pc
AC/DC adapter	1pc

OPTIONAL ACCESSORIES

0.5X Objective	DVM2000-05-O
2X Objective	DVM2000-20-O

- ◆ 10.6 inch HD LCD is included
- ◆ Can take pictures and record videos
- ◆ High frame rate, without any delay in quick movement
- ◆ Automatic exposure, white balance



SPECIFICATION

Objective		0.7X ~ 4.5X
Total magnification		14X~100X
Max.view field		16.2mmx9.2mm
Working distance		88mm
	Pixel	1.2M
Camera Resolution		1366x768
	Frame rate	60fps
Illumination		top/side LED adjustable light
LCD display		10.6 inch HD LCD display, 1080P
Base size		260mmx320mm(LxW)
Weight		5.7kg

INCLUDED ACCESSORIES

Main unit		1pc
Stand		1pc
Glass rule		1pc
AC/DC adapter		1pc
SD card		1pc

- ◆ Auto focus
- ◆ High frame rate, without any delay in quick movement
- ◆ Automatic exposure, white balance
- ◆ With measuring functions



DVM4000S

SPECIFICATION

Code		DVM4000	DVM4000S
Display		without	with 21.5" HD monitor
Objective		0.7X ~ 4.5X	
Total magnification		26.5X~170X	
Max.view field		19mmx10.8mm	
Working distance		100mm	
Camera	Pixel	2M	
	Resolution	1920x1080	
	Frame rate	60fps	
Illumination		LED adjustable light	
Base size		380mmx260mm(LxW)	
Weight		5.7kg	

INCLUDED ACCESSORIES

Main unit	1pc
Stand	1pc
Calibration rule	1pc
AC/DC adapter	1pc
U-disk	1pc
Mouse	1pc

OPTIONAL ACCESSORIES

X-Y stage(range: 76x65mm)	DVM-STAGE
0.5X objective	DVM-05-O
2X objective	DVM- 20-O

- ◆ 1080P HD image
- ◆ High frame rate, without any delay in quick movement
- ◆ Automatic exposure, white balance
- ◆ With taking photos functions


DVM3DS
SPECIFICATION

Code		DVM3D	DVM3DS
Display		without	with 21.5" HD monitor
Total magnification		25X~150X	
Direction/rotation adjustment		by controller	
Max.view field		16mmx9mm	
Working distance		20mm	
Camera	Pixel	2M	
	Resolution	1920x1080	
	Frame rate	60fps	
Frame rate		LED adjustable light (adjusted by controller)	
Base size		380mmx260mm(LxW)	
Weight		5.7kg	

INCLUDED ACCESSORIES

Main unit	1pc
Stand	1pc
Controller	1pc
AC/DC adapter	1pc
USB flash disk	1pc

OPTIONAL ACCESSORIES

X-Y stage(range: 76x65mm)	DVM-STAGE
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- ◆ Trinocular head is used to connect to camera



ZS1045

SPECIFICATION

Code	ZS1045	ZS1045T
Optical	binocular	trinocular
Magnification	10X ~ 45X	
Eyepiece	10X (view field: Ø20mm)	
Objective	1X ~ 4.5X (zoom)	
Pupil distance	55 ~ 75mm	
Diopter adjustment	±5 diopter	
Working distance	97mm	
Illumination	selectable incident and transmitted LED light	
Dimension(L×W×H)	310×250×420mm	
Weight	6kg	

INCLUDED ACCESSORIES

Main unit	1pc
10X eyepiece	1pair
Eyepiece patch	1pair
Ø95mm frosted glass plate	1pc
Ø42mm frosted glass plate	1pc
Ø95mm black/white plastic plate	1pc
Dustproof cover	1pc

OPTIONAL ACCESSORIES

0.5X Eyepiece	ZS1045-05-O
0.75X Eyepiece	ZS1045-75-O
2X Eyepiece	ZS1045-02-O
10X Eyepiece with scale	ZS1045-10-FE
WF15X Eyepiece	ZS1045-15-E
WF20X Eyepiece	ZS1045-20-E
Camera	1300KPA

- ◆ For high magnification observation and metallurgical image analysis
- ◆ Infinite optical system, can add accessories like polarizer, analyzer into optical path without image quality influence



Filter



SPECIFICATION

Eyepiece(wide field)	10X(view field: Ø22mm)			
Objective(plan achromatic)	10X	20X	50X	100X(dry type)
Numerical aperture	0.25	0.40	0.70	0.85
Working distance	5mm	8.8mm	3.68mm	0.4mm
Stage	double layer			
	size: 242×200mm			
	travel: 30×30mm			
Pupil distance	53-75mm(adjustable)			
Diopter adjustment	±5 diopter(one eyepiece)			
Illumination	6V/30W halogen lamp, brightness is adjustable with polarizer and analyzer, built-in green, yellow, blue filters and frosted glass			
Weight	11kg			

INCLUDED ACCESSORIES

Main unit	1pc
Anti-dust cover	1pc
Filter	1set
Camera adapter(1X)	1pc

OPTIONAL ACCESSORIES

10X dividing eyepiece(0.1mm/div.)	MM-EP10D
Digital camera	1300KPA
5X Objective	MM-OB5

40X Objective	MM-OB40
60X Objective	MM-OB60
80X Objective	MM-OB80

- ◆ Large screen of the read out
- ◆ With manufacturer inspection certificate



VIDEO

VISION



PP3015

OPTIONAL ACCESSORIES

20X, 50X, 100X lens with
half-reflection mirrorrotary table
(glass diameter 100mm,
graduation 2°)

5X magnifier



Series 552 glass scale



holder with clamp



swivel center support



V-block with clamp



Overlay chart

SPECIFICATION

Code	PP3015	PP3020
X-Y stage travel	150×50mm	200×100mm
Metal stage size	340×152mm	400×225mm
Glass stage size	195×95mm	245×145mm
Screen diameter	diameter: Ø300mm	
Image	inverted	
Linear scale resolution	1μm	
Accuracy	(4+L/25)μm L is the measuring length in mm	
Z(focus) travel range	80mm	
Max. load capacity	4kg	
Rotation scale	range: 0°~360°, resolution: 1' or 0.01°, accuracy: 6'	
Magnification accuracy	±0.1%	
Illumination	contour illumination: 12V/100W halogen lamp, 2-step(high/low) brightness adjustment	
	surface illumination: 24V/150W halogen lamp	
Readout display	X-Y stage travel, screen rotation	
Output	RS232 and USB	
Readout functions	 measure coordinate of point  measure coordinate of line  measure center coordinate, radius of circle with three points  measure distance between two objects  measure angle with four points or two lines  coordinate transform	
Dimension (L×W×H)	480×780×1150mm	
Weight	135kg	

INCLUDED ACCESSORIES

Main unit	1pc
10X lens with half-reflection mirror	1pc
Overlay chart clip	4pcs
Level	1pc
Anti-dust cover	1pc

OPTIONAL ACCESSORIES

20X lens with half-reflection mirror	PP3000-LENS20X
50X lens with half-reflection mirror	PP3000-LENS50X
100X lens with half-reflection mirror	PP3000-LENS100X
Rotary table	PP3000-TABLE
5X magnifier	PP3000-MAGNIFIER
Holder with clamp	PP3000-HOLDER
Swivel center support	PP3000-SUPPORT
V-block with clamp	PP3000-VBLOCK
Calibration scale	Series 552
Overlay chart	PP3015-CHART





PP3020W

HORIZONTAL PROFILE PROJECTOR



◆ With manufacturer inspection certificate



OPTIONAL ACCESSORIES



20X, 50X, 100X lens



Rotary table



Series 552 glass scale



Series 636 V-block



Series 652 Vise



Overlay chart





SPECIFICATION

X-Y stage travel	200×100mm
Metal stage size	400×150mm
Screen diameter	Ø300 mm
Linear scale resolution	1μm
Accuracy	$(4+L/25)\mu\text{m}$ L is the measuring length in mm
Focus travel range	75mm
Focus	77.7mm(10X lens)
Max. load capacity	50kg
Workpiece rotation range	$\pm 15^\circ$
Rotation scale	range: $0^\circ \sim 360^\circ$, resolution: $1'$ or 0.01° , accuracy: $6'$
Magnification accuracy	$\pm 0.08\%$
Illumination	contour illumination: 24V/150W halogen lamp, brightness is adjustable surface illumination: 12V/150W halogen lamp, brightness is adjustable
Readout display	X-Y stage travel, screen rotation
Output	RS232 and USB
Data processing unit	 measure coordinate of point  measure coordinate of line  measure center coordinate, radius of circle with three points  measure distance between two objects  measure angle with four points or two lines  coordinate transform
Dimension(L×W×H)	1090×830×1010mm
Weight	160kg

INCLUDED ACCESSORIES

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

OPTIONAL ACCESSORIES

20X lens	PP3020W-LENS20X
50X lens	PP3020W-LENS50X
100X lens	PP3020W-LENS100X
Rotary table	PP3020W-TABLE
Overlay chart	PP3015-CHART
Vise	Series 652
V-block	Series 636
Glass scale	Series 552





PP6020

PROFILE PROJECTOR



◆ With manufacturer inspection certificate



VISION



OPTIONAL ACCESSORIES



5X, 20X, 50X, 100X lens



Rotary table



Series 552 glass scale



SPECIFICATION

X-Y stage travel		200×100mm				
Metal stage size		404×265mm				
Screen diameter		Ø600mm				
Linear scale resolution		1μm				
Accuracy		(4+L/25)μm L is the measuring length in mm				
Focus travel range		75mm				
Lens	Magnification	5X (Optional)	10X (Standard)	20X (Optional)	50X (Optional)	100X (Optional)
	View field	Ø120mm	Ø60mm	Ø30mm	Ø12mm	Ø6mm
	Focus	242.8mm	143.2mm	85.5mm	92mm	48.5mm
	Magnification accuracy	0.08%				
Max. load capacity		5kg				
Rotation scale		range: 0°~360°, resolution: 1' or 0.01°				
Illumination		contour illumination: 24V/150W halogen lamp, brightness is adjustable				
		surface illumination: 12V/150W halogen lamp, brightness is adjustable				
Readout display		X-Y stage travel, screen rotation				
Output		RS232 and USB				
Data processing unit		 measure coordinate of point  measure coordinate of line  measure center coordinate, radius of circle with three points  measure distance between two objects  measure angle with four points or two lines  coordinate transform				
Dimension(L×W×H)		1200×1140×1940mm				
Weight		360kg				

INCLUDED ACCESSORIES

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

OPTIONAL ACCESSORIES

5X lens	PP6020-LENS5X
20X lens	PP6020-LENS20X
50X lens	PP6020-LENS50X
100X lens	PP6020-LENS100X
Rotary table	PP6020-TABLE
Glass scale	Series 552



- ◆ Put the workpieces in view filed, and press one button, the measuring results will be shown immediately
- ◆ Can measure Max. 99 pieces workpieces at a time
- ◆ Workpiece can be put at any position
- ◆ Auto focus

SPECIFICATION

Code	QVM120	QVM80B
Lens	single field telecentric	double field telecentric
Measuring range	120x80mm	82x55mm(wide view field) 20x13mm(small view field)
Accuracy	$\pm(2.5+L/50)\mu\text{m}$	$\pm(2.5+L/50)\mu\text{m}$ (wide view field) $\pm(1.5+L/50)\mu\text{m}$ (small view field)
Repeatability	$\pm 1.5\mu\text{m}$	$\pm 1.5\mu\text{m}/\pm 1\mu\text{m}$ (small view field)
Resolution	0.01 μm	
Focus method	auto	
Focus (mm)	145mm	
Moving range (Z axis)	45mm(motorized)	
Measuring time	<1s (less than 100 measuring dimensions)	
Illumination system	1000 steps programmable light contour light: telecentric parallel light surface light: LED	
Camera pixel	20M	
Image processing	256 gray scale, 20:1 sub-pixel processing technology	
Dimension	540x260x650mm	
Weight	50kg	

QVM120



INCLUDED ACCESSORIES

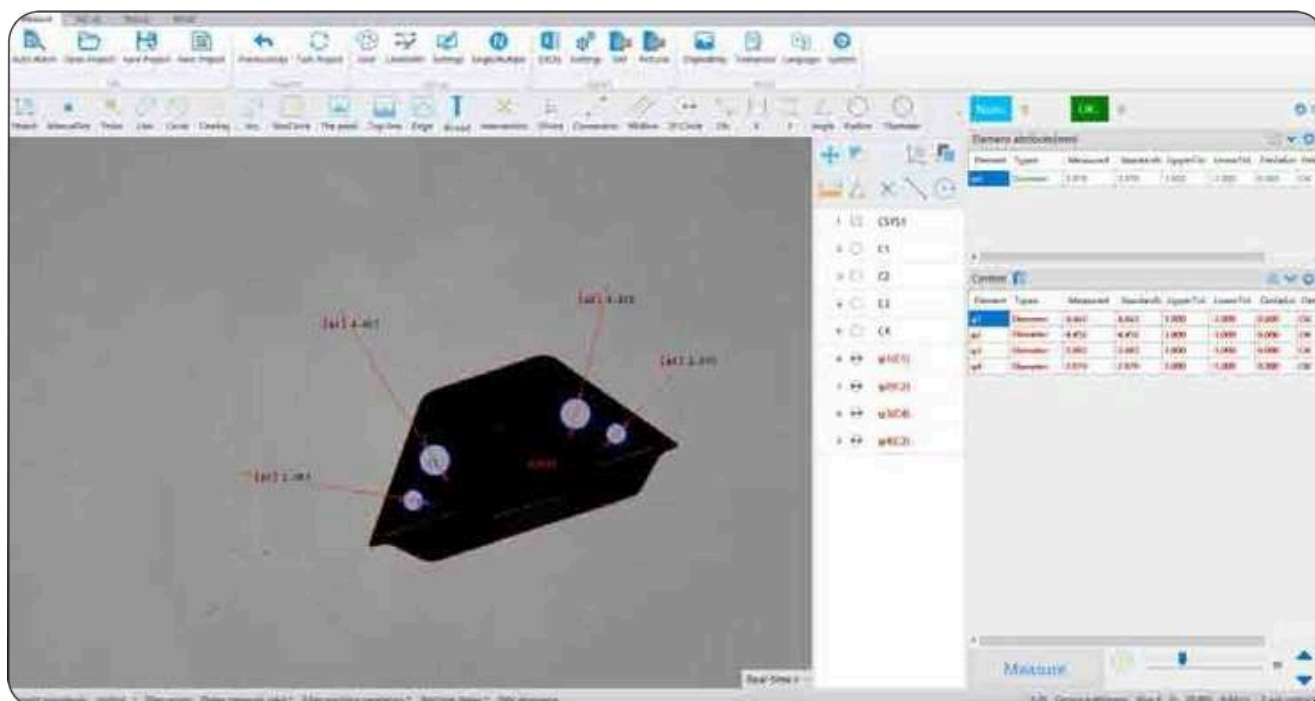
Main unit	1pc
Computer	1pc
USB dongle	1pc

OPTIONAL ACCESSORIES

Coaxial light*	QVM-LG
Special angle surface light*	QVM-SL

* The light should be bought with main unit if needed

Software interface



- ◆ Put the workpieces in view filed, and press one button, the measuring results will be shown immediately
- ◆ Can measure Max. 99 pieces workpieces at a time
- ◆ Workpiece can be put at any position
- ◆ Auto focus

SPECIFICATION

Lens	double field telecentric
Measuring range	100x80mm $\pm(3+L/50)\mu\text{m}$
Accuracy	$\pm 2\mu\text{m}$
Repeatability	0.01 μm
Resolution	auto
Focus method	80
Focus (mm)	45mm(motorized)
Moving range (Z axis)	<1s (less than 100 measuring dimensions)
Measuring time	1000 steps programmable light
Illumination system	contour light: telecentric parallel light surface light: LED
Camera pixel	20M
Image processing	256 gray scale, 20:1 sub-pixel processing technology
Dimension	260x450x660mm
Weight	28kg



INCLUDED ACCESSORIES

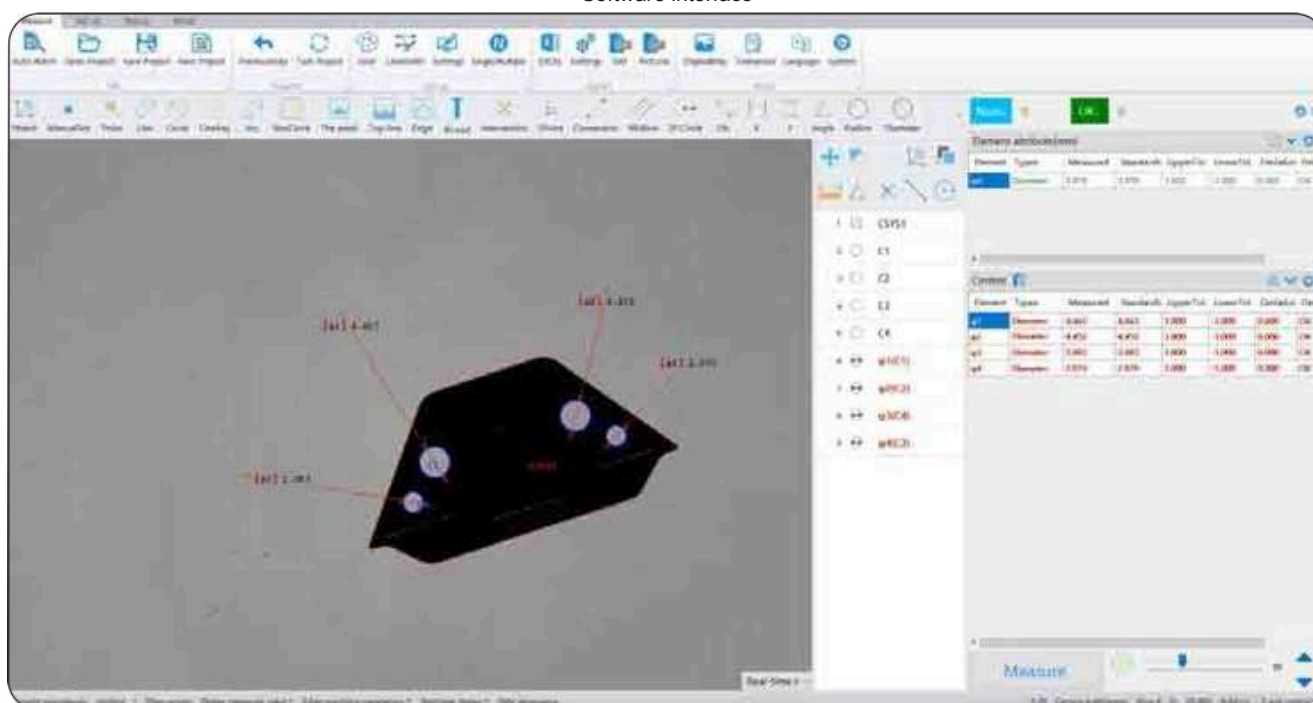
Main unit	1pc
Computer	1pc
USB dongle	1pc

OPTIONAL ACCESSORIES

Coaxial light*	QVM-LG
Special angle surface light*	QVM-SL

*The light should be bought with main unit if needed

Software interface



- ◆ With counter and measuring software
- ◆ With manufacturer inspection certificate



MTM300

SPECIFICATION

Code	MTM200	MTM300	MTM400
Measuring range(X/Y axis)	200×100mm	300×200mm	400×300mm
Z axis travel with scale	150mm, with fine adjustment		
Stage moving method	manual		
Linear scale resolution (X/Y/Z axis)	0.5μm		
Accuracy (X/Y axis)	(3+L/150)μm L is measuring length , unit:mm		
Repeatability	1μm		
Objective magnification	5X/10X/20X/50X		
Eyepiece magnification	10X		
Focus	5X:10.8mm/10X:12.2mm/20X:4mm/50X:7.8mm Color		
Camera	CCD, 1.3M pixel		
Illumination	contour illumination: LED, brightness adjustment		
	surface illumination: coaxial LED, brightness adjustment		
Max. glass stage loading	20kg	20kg	20kg
Dimension (L×W×H)	900×1000×1050mm	1000×1100×1050mm	1200×1300×1200mm
Weight	140kg	175kg	210kg

INCLUDED ACCESSORIES

Main unit	1pc
Calibration block	1pc
Software with USB dongle	1pc (Same as series VM)
Controller	1pc
Objective	4pcs
Eyepiece	1pair

OPTIONAL ACCESSORIES

Computer	VM-PC
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- ♦ Granite base and column
- ♦ With manufacturer inspection certificate



VIDEO



VM5040



VISION

SPECIFICATION

Code	VM2010	VM3020	VM4030	VM5040
Measuring range(X/Y axis)	200×100mm	300×200mm	400×300mm	500×400mm
Z axis travel with scale	200 mm*			
Stage moving method	manual			
Linear scale resolution (X/Y/Z axis)	1μm			
Accuracy (X/Y axis)	(3+L/200)μm L is the measuring length in mm			
Repeatability	2μm			
Focus	90mm			
Lens magnification	0.7X-4.5X			
Total magnification	30-220X			
Camera	Color CCD, 1.3M pixel			
Illumination	contour illumination: LED, brightness adjustment			
	surface illumination: LED, brightness adjustment			
Max. glass stage loading	20kg	20kg	20kg	30kg
Dimension (L×W×H)	580×680×880mm	770×650×1080mm	960×750×1080mm	1250×860×1690mm
Weight	140kg	188kg	230kg	450kg

*The Z axis travel are available upon request

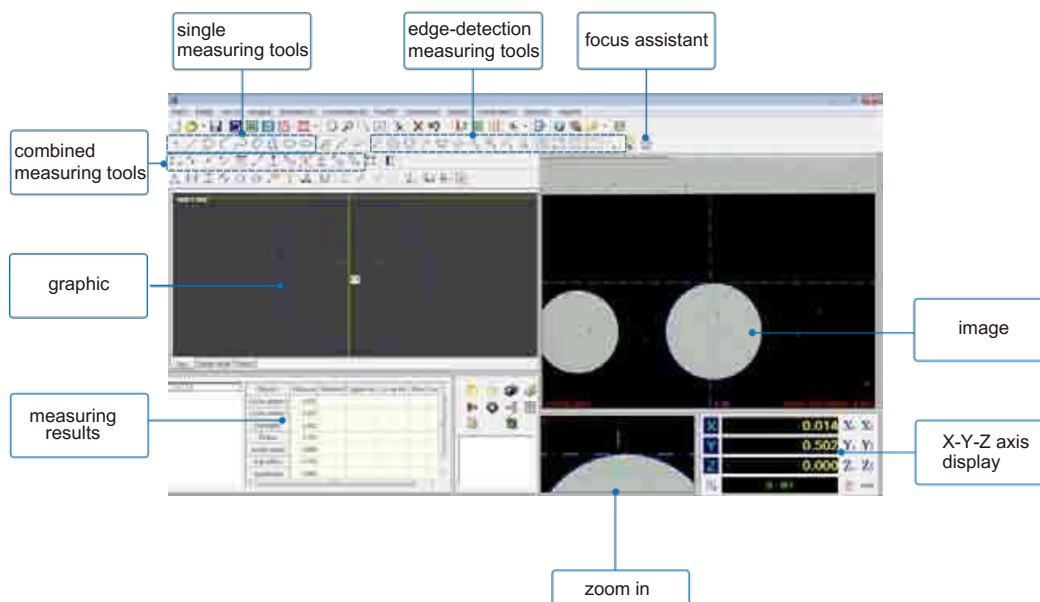
INCLUDED ACCESSORIES

Main unit	1pc
Calibration block	1pc
Software with USB dongle	1pc
Controller	1pc
Operating table(only VM5040 included)	1pc

OPTIONAL ACCESSORIES

0.5X auxiliary objective	VM-OB05X
2X auxiliary objective	VM-OB2X
Computer	VM-PC
Operating table (except for VM5040)	VM-Table
Calibration scale	Series 552

SOFTWARE FOR ALL MANUAL VISION MACHINES



◆ Single measuring tools:

-  measure coordinate of point
-  measure length of line
-  measure center coordinate, radius, diameter and area of circle
-  measure length and diameter of arc

-  measure length of curve
-  measure width, length and area of rectangle
-  measure length and area of polygon
-  measure center coordinate, axis length and area of ellipse

◆ Combined measuring tools:

-  measure distance between two objects like, two points, two lines, a point to a line, a point to a circle and so on.
-  create a intersection point
-  find midpoint of a line
-  create a line
-  create a line, a circle and a arc based on points
-  measure distance between two points

-  measure distance from point to line
-  create tangent lines between point and circle
-  create angular bisector between two lines
-  measure distance from circle to line
-  measure distance between two circles
-  find tangent lines between two circles



VIDEO



Certificate



- ◆ The stage can move automatically by programming
- ◆ The light can be changed automatically by programming
- ◆ Automatic focus
- ◆ Granite stage and column
- ◆ With manufacturer inspection certificate



VM400CNC

MCP probe **(optional)**



0.5X auxiliary objective **(optional)**



2X auxiliary objective **(optional)**



SPECIFICATION

Code	VM300CNC	VM400CNC	VM500CNC
Measuring range(X/Y axis)	300×200mm	400×300mm	500×400mm
Z axis travel with scale	200mm* (automatic)		
Stage moving method	automatic		
Linear scale resolution (X/Y/Z axis)	1μm		
Accuracy (X/Y axis)	(2.2+L/200)μm L is the measuring length in mm		
Repeatability	2μ		
Focus	90mm		
Lens magnification	0.7X - 4.5X		
Total magnification	30-220X		
Camera	Color CCD, 2M pixel		
Illumination	contour illumination: LED, brightness adjustment		
	surface illumination: LED(8 sections), brightness adjustment		
Max. glass stage loading	20kg	20kg	25kg
Glass stage size	358mm×258mm	458×358mm	558×458mm
Weight	320kg	400kg	500kg

* The Z axis travel are available upon request

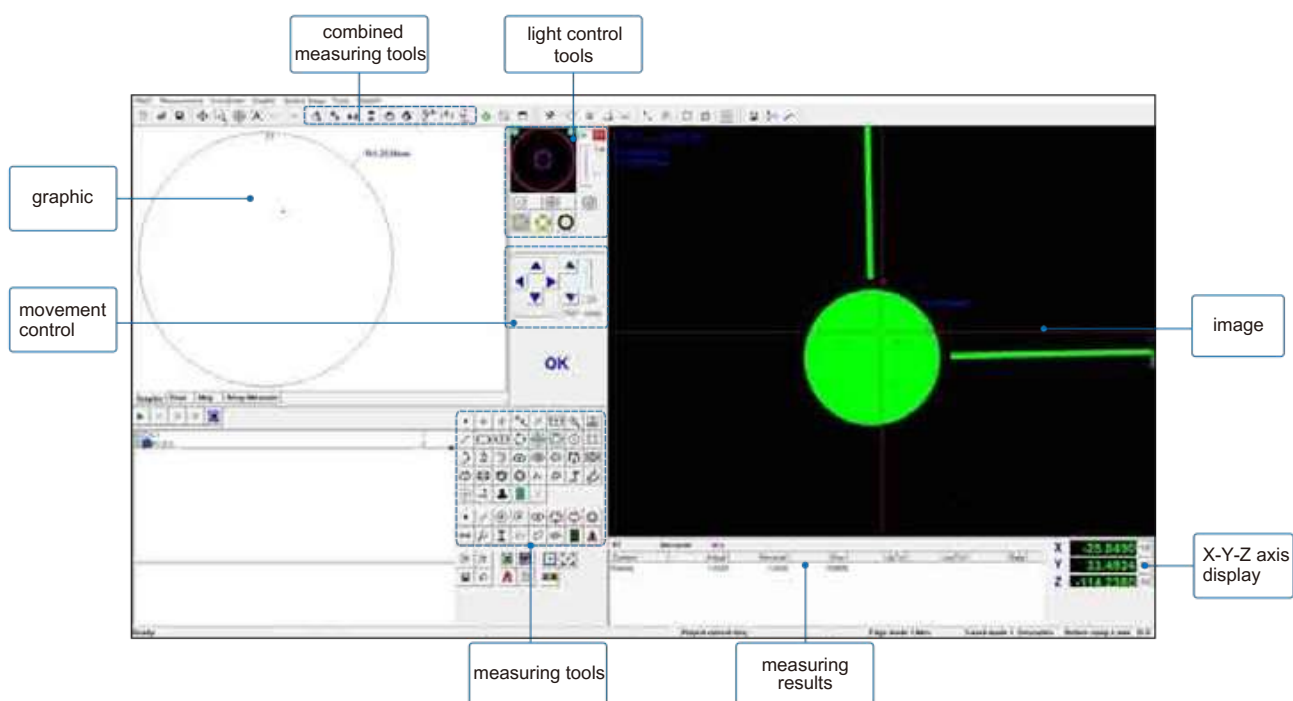
INCLUDED ACCESSORIES

Main unit	1pc
Calibration block	1pc
Software with USB dongle	1pc
Computer	1pc
Count card	1pc
Video card	1pc

OPTIONAL ACCESSORIES

0.5X auxiliary objective	VM-OB05X
2X auxiliary objective	VM-OB2X
Calibration scale	Series 552
MCP probe*	VM-MCP

* Should be bought with vision machine

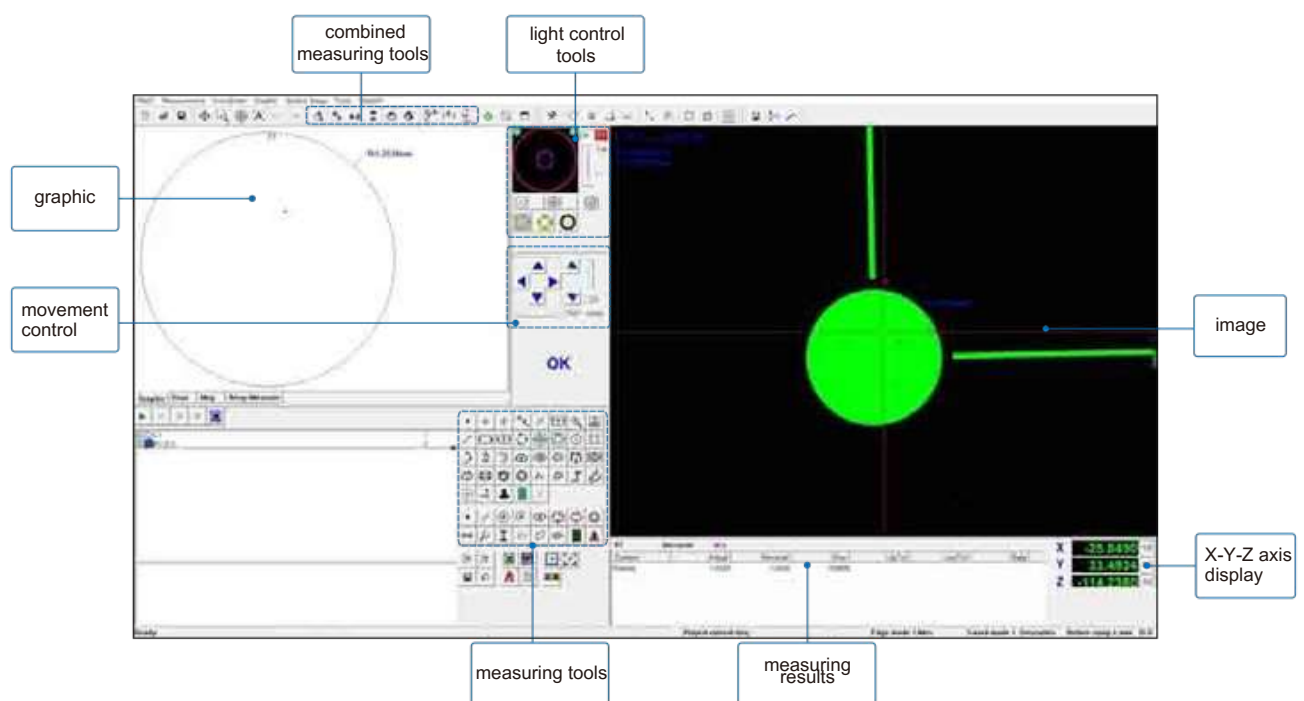




- ♦ The stage is fixed, X/Y/Z Axis can move automatically by programming
- ♦ The light can be changed automatically by programming
- ♦ Automatic focus
- ♦ Granite stage and column with good stability
- ♦ With manufacturer inspection certificate



VM1000CNC



SPECIFICATION

Code	VM600CNC	VM800CNC	VM1000CNC	VM1200CNC	VM1500CNC
Measuring range(Y/X axis)	600×500mm	840×620mm	1000×800mm	1200×1000mm	1500×1200mm
Z axis travel with scale	200mm(automatic)				
Stage moving method	autom atic				
Linear scale resolution (X/Y/Z axis)	0.5μm				
Accuracy (X/Y axis)	(2+L/200)μm		(2.5+L/200)μm		(3.5+L/200)μm
	L is the measuring length in mm				
Repeatability	2μ m				
Focus	90m m				
Lens magnification	0.7X- 4.5X				
Total magnification	23-1 90X				
Camera	Color CCD, 2M pixel				
Illumination	contour illumination: coaxial light, brightness adjustment				
	surface illumination: LED(8 sections), brightness adjustment				
Max. glass stage loading	45kg	50kg	50kg	60kg	60kg
Glass stage size	755×678mm	995×798mm	1155×978mm	1218×1395mm	1378×1655mm
Weight	1050kg	1400kg	1600kg	1800kg	2100kg

INCLUDED ACCESSORIES

Main unit	1pc
Calibration block	1pc
Software with USB dongle	1pc
Computer	1pc
Count card	1pc
Video card	1pc

OPTIONAL ACCESSORIES 0.5X

auxiliary objective	VM-OB05X
2X auxiliary objective	VM-OB2X
Calibration scale	Series 552
MCP probe*	VM-MCP

* Should be bought with vision machine

SERIES WE6800

DIGITAL READOUT

- ◆ Recalls the last position after power failure without power
- ◆ Can be connected with linear scale or encoder to carry out processing and measuring for various kinds of machines.



WE6800-3

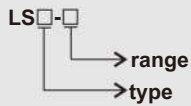
SPECIFICATION

Code	WE6800-2	WE6800-3
Axis	2	3
RS232 output	Yes	No
Functions	set zero, numerical analysis, pre-sets value, absolute coordinate/relative coordinate, filters numerical value, metric units/imperial units conversion, diameter/semi-diameter conversion, shrinkage rate, find mechanical original point (RI), calculator, circular point hole, oblique line hole, arc processing, bevel processing, lathe	
Resolution	0.1, 0.2, 0.5, 1, 2, 5, 10μm	
Input signal	Orthogonality TTL square wave; frequency<2MHZ; electric current>1mA	
Input voltage	AC 90V~240V	
Dimension	296 x 184 x 45 mm	
Weight	1.5kg	

INCLUDED ACCESSORIES

Main unit	1pc
Mounting bracket	1pc
Ground cable	1pc

◆ Code explanation:

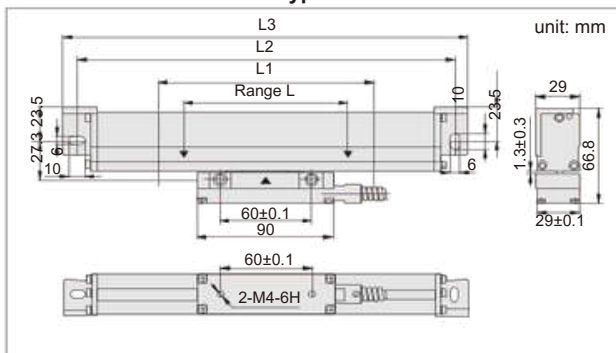


Example:

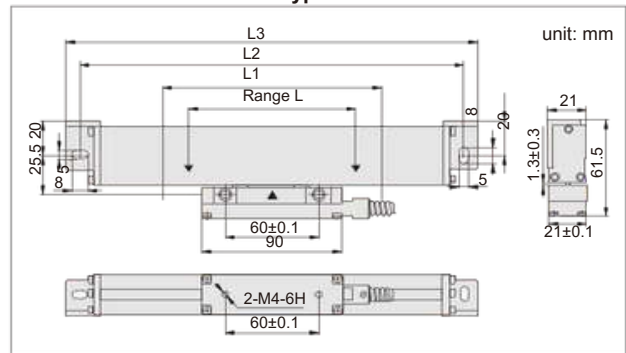
Code	Type	Range
LSA1-50	A1	50mm
LSB5-1000	B5	1000mm



Type A1



Type B5



SPECIFICATION

Code	Series LSA1		Series LSB5	
Type	A1		B5	
Range	50-1000mm (step 50mm)		50-1000mm (step 50mm), 1000-3000mm(step 100mm)	
Max. travel length (L1)	L+ 30(L<950)	L+50(L≥950)	L+ 30(L<950)	L+50(L≥950)
Mounting hole pitch (L2)	L+ 132(L<950)	L+152(L≥950)	L+ 136(L<950)	L+156(L≥950)
Total length (L3)	L+ 149(L<950)	L+169(L≥950)	L+ 154(L<950)	L+174(L≥950)
Resolution	1μm		5μm	
Max. response speed	50m/min		60m/min	
Scale grating pitch	20μm			
Scale reference point pitch	50mm			
Accuracy	(5+5L/1000)μm L is the range in mm			
Cable length	3.5m (L: 50-950mm), 5m (L: 1000-1500mm), 10m (L: 1 600-3000mm)			

INCLUDED ACCESSORIES

Main unit	1pc
Shape support	1pc
Anti-dust cover	1pc
Plain base (for range >1500mm)	1pc
Mounting accessories	one package

1300KPA

CAMERA

- ◆ Easy to connect computer by
- ◆ USB Supplied with measuring software



SPECIFICATION

Camera sensor	1/3" CMOS
Pixel	1.3 Mega
Interface	USB
Dimension (L×W×H)	65 × 48 × 43(mm)
Weight	400g



Connect with Vickers hardness tester



Connect with microscope

OPTIONAL ACCESSORIES

INCLUDED ACCESSORIES

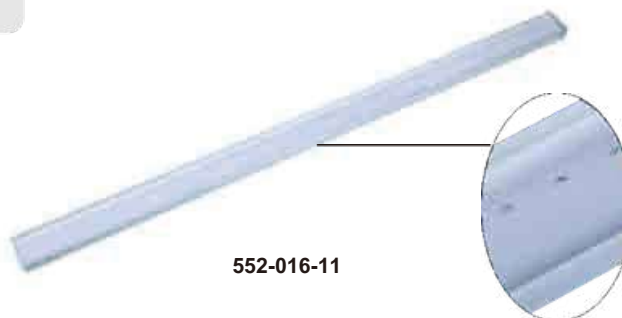
Main unit	1pc
USB cable	1pc
Software	1pc

C-mount	1300KPA-CM
Calibration rule (graduation: 0.1mm)	RU01
Ø30mm eyepiece adaptor	AD30
Ø30.5mm eyepiece adaptor	AD305

SERIES 552

GLASS SCALE

- ◆ For calibrating the accuracy of vision machine or profile projector
- ◆ Graduation:1mm
- ◆ With manufacturer inspection certificate



552-016-11



Code	Range (mm)	Accuracy (μm)
552-008-11	200	1.5
552-012-11	300	2
552-016-11	400	2
552-024-11	600	2.5

- ◆ One key type graphic function for easy understanding.
- ◆ Edge detection is convenient and error-free.



TP340

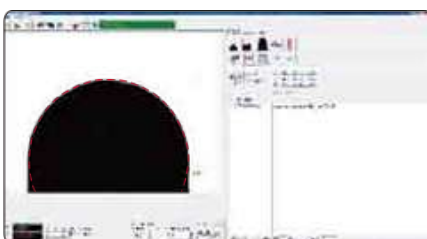


Standard rod

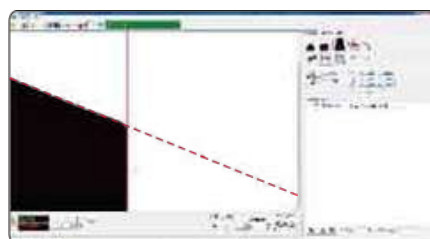
(Optional)



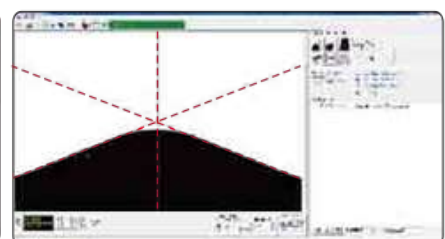
Sleeve (BT50, 40, 30 /
HSK63, 50, 40)



Radius Inspection



Automatic Angle Inspection



Automatic Angle Inspection

SPECIFICATION

Code		TP340	TP560
Axis travel	X axis	D: 130mm	D: 230mm
	Z axis	L: 60-400mm	L: 60-600mm
	Snape	20mm	20mm
Drive mode	X/Z Axis move	manual	manual
	Fine adjustment	with	with
	C axis spindle auto drive	manual	
Accuracy		5µm	
Spindle		ISO50	
Spindle rotation concentricity		2µm	
Resolution		1µm	
Magnification		50X	
Camera		CMOS	
Light		surface light	
Computer		with	
Screen		24"	
Edge finder		with	
Power supply		110V or 220V	
Ampere		2A	
Weight		300 kg	320 kg
Dimension	Length	1 200 mm	1 200 mm
	Width	750 mm	750 mm
	Height	1 700 mm	1 900 mm

INCLUDED ACCESSORIES

Main unit	1pc
BT50 spindle	1pc
Computer with 24" monitor	1pc
Stand	1pc
Measuring software	1pc

OPTIONAL ACCESSORIES

BT50/BT40 sleeve	BT50-40
BT50/BT30 sleeve	BT50-30
BT50-HSK100 sleeve	BT50-HSK100
BT50-HSK63 sleeve	BT50-HSK63
BT50-HSK50 sleeve	BT50-HSK50
BT50-HSK40 sleeve	BT50-HSK40
40mm standard rod	BT40
30mm standard rod	BT30
Label printer	TP340-PR
Vacuum tool clamping	TP340-VTC



VIDEO



- ◆ Manual loading control
- ◆ Economic type
- ◆ With manufacturer inspection certificate



Small flat anvil



Large flat anvil



V-type anvil



HARDNESS

SPECIFICATION

Load force	10kgf (98N)
Total load force	60kgf (588N), 100kgf (980N), 150kgf (1471N)
Stage elevation	manual
Loading control	manual
Graduation	0.5HR
Max. test height	155mm
Max. throat	130mm
Dimension	460×180×620mm
Weight	65kg

INCLUDED ACCESSORIES

Main unit	1pc
Ø1.5875mm ball carbide indenter	1pc
Diamond indenter	1pc
Flat anvil	2pcs
V-type anvil	1pc
Rockwell test block	5pcs
Screw driver	2pcs



- ♦ Manual loading control
- ♦ With manufacturer inspection certificate



Small flat anvil



Large flat anvil



V-type anvil



SPECIFICATION

Load force	10kgf (98N)
Total load force	60kgf (588N), 100kgf (980N), 150kgf (1471N)
Stage elevation	manual
Loading control	manual
Graduation	1HR
Max. test height	170mm
Max. throat	160mm
Dimension	487×265×726mm
Weight	73kg

INCLUDED ACCESSORIES

Main unit	1pc
Ø1.5875mm ball carbide indenter	1pc
Diamond indenter	1pc
Flat anvil	2pcs
V-type anvil	1pc
Rockwell test block	3pcs
Dustproof cover	1pc



- ◆ Manual loading control
- ◆ The hardness scale can be converted to HV and HB
- ◆ With USB interface, for transferring data
- ◆ With manufacturer inspection certificate



VIDEO



Small flat anvil



Large flat anvil



V-type anvil



PR100 printer (optional)



HARDNESS

SPECIFICATION

Load force Total	10kgf (98N)
load force Stage	60kgf (588N), 100kgf (980N), 150kgf (1471N)
elevation	manual
Loading control	manual
Resolution	0.1HR
Max. test height	170mm
Max. throat	160mm
Dimension	487×265×726mm
Weight	73kg

INCLUDED ACCESSORIES

Main unit	1pc
Ø1.5875mm ball carbide indenter	1pc
Diamond indenter	1pc
Flat anvil	2pcs
V-type anvil	1pc
Rockwell test block	3pcs
Dustproof cover	1pc

OPTIONAL ACCESSORIES

Wireless printer	PR100
------------------	-------



- ◆ Motorized loading control
- ◆ The hardness scale can be converted to HV and HB
- ◆ With USB interface, for transferring data
- ◆ With manufacturer inspection certificate



Small flat anvil



Large flat anvil



V-type anvil



PR100 printer (optional)

SPECIFICATION

Load force	10kgf (98N)
Total load force	60kgf (588N), 100kgf (980N), 150kgf (1471N)
Stage elevation	manual
Loading control	auto
Loading time	1-99s
Resolution	0.1HR
Max. test height	170mm
Max. throat	160mm
Dimension	487×265×726mm
Weight	73kg

INCLUDED ACCESSORIES

Main unit	1pc
Ø1.5875mm ball carbide indenter	1pc
Diamond indenter	1pc
Flat anvil	2pcs
V-type anvil	1pc
Rockwell test block	3pcs
Dustproof cover	1pc

OPTIONAL ACCESSORIES

Wireless printer	PR100
------------------	-------

- ◆ Motorized loading control
- ◆ Economic type
- ◆ With manufacturer inspection certificate



Small flat anvil



Large flat anvil



V-type anvil



SPECIFICATION

Load force	10kgf (98N)
Total load force	60kgf (588N), 100kgf (980N), 150kgf (1471N)
Stage elevation	manual
Loading control	auto
Loading time	1-99s
Resolution	0.5HR
Max. test height	200mm
Max. throat	130mm
Dimension	470×230×680mm
Weight	75kg

INCLUDED ACCESSORIES

Main unit	1pc
Ø1.5875mm ball carbide indenter	1pc
Diamond indenter	1pc
Flat anvil	2pcs
V-type anvil	1pc
Rockwell test block	5pcs

- ◆ The stage is fixed, and indenter moves up and down
- ◆ Motorized loading control
- ◆ High-precision closed loop force loading system
- ◆ The hardness scale can be converted to HV and HB
- ◆ With touch screen, easy to operate
- ◆ With wireless printer
- ◆ With manufacturer inspection certificate



SPECIFICATION

Type	Rockwell	Superficial Rockwell
Load force	10kgf (98N)	3kgf (29.4N)
Total load force	60kgf (588N), 100kgf (980N), 150kgf (1471N)	15kgf (147.1N), 30kgf (294.2N), 45kgf (441.3N)
Hardness scale	HRA, HRB, HRC, HRD, HRF, HRG	HR15N, HR30N, HR45N, HR15T, HR30T, HR45T,
Indenter elevation	auto	
Loading control	auto	
Loading time	1-60s	
Resolution Max.	0.1HR	
test height Max.	280mm	
throat	170mm	
Dimension	400×855×620mm	
Weight	80kg	

INCLUDED ACCESSORIES

Main unit	1pc
Ø1.5875mm ball carbide indenter	1pc
Diamond indenter	1pc
Small flat anvil	1pc
V-type anvil	1pc
HRA test block	1pc
HRB test block	1pc

HRC test block	3pcs
HR15N test block	1pc
HR30N test block	2pcs
HR45N test block	1pc
Ø1.5875mm ball	5pcs
Wireless printer	1pc

- ◆ Motorized loading control
- ◆ High-precision closed loop force loading system
- ◆ The hardness scale can be converted to HV and HB
- ◆ With touch screen, easy to operate
- ◆ With printer
- ◆ With manufacturer inspection certificate



SPECIFICATION

Type	Rockwell	Superficial Rockwell
Load force	10kgf (98N)	3kgf (29.4N)
Total load force	60kgf (588N), 100kgf (980N), 150kgf (1471N)	15kgf (147.1N), 30kgf (294.2N), 45kgf (441.3N)
Hardness scale	HRA, HRB, HRC, HRD, HRF, HRG	HR15N, HR30N, HR45N, HR15T, HR30T, HR45T,
Stage elevation	manual	
Loading control	auto	
Loading time	1-60s	
Resolution	0.1HR	
Max. test height	200mm	
Max. throat	160mm	
Dimension	510×290×730mm	
Weight	95kg	

INCLUDED ACCESSORIES

Main unit	1pc
Ø1.5875mm ball carbide indenter	1pc
Diamond indenter	1pc
Small flat anvil	1pc
Large flat anvil	1pc
V-type anvil	1pc

HRA test block	1pc
HRB test block	1pc
HRC test block	3pcs
HR15N test block	1pc
HR30N test block	2pcs
HR45N test block	1pc



VIDEO



Certificate

- ◆ Electronic close-loop load control system
- ◆ Can converted to HV, HK, HRA, HRB, HRC, HRD, HRE, HRF, HRG, HRK, HR15N, HR30N, HR45N, HR15T, HR30T, HR45T, HS
- ◆ Touch screen
- ◆ With manufacturer inspection certificate



Small flat anvil



Large flat anvil



V-type anvil



SPECIFICATION

Measuring range	8-650HBW
Loading force	62.5, 100, 125, 187.5, 250, 500, 750, 1000, 1500, 3000kgf
Measuring result	read from LCD
Stage elevation	manual
Load control	automatic
Load dwell time	5-60 seconds
Max. test height	225mm
Max. throat	135mm
Dimension	545×235×79mm
Weight	130kg

INCLUDED ACCESSORIES

Main unit	1pc
20X measuring microscope	1pc
Ø10mm carbide ball indenter	1pc
Ø5mm carbide ball indenter	1pc
Ø2.5mm carbide ball indenter	1pc
Small flat anvil	1pc

Large flat anvil	1pc
V-type anvil	1pc
Hardness test block 150-250HBW10/3000	1pc
Hardness test block 150-250HBW5/700	1pc
Anti-dust cover	1pc

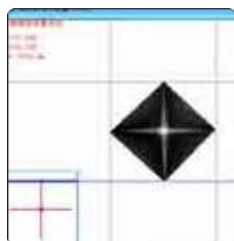


VIDEO



Certificate

- ◆ For measuring the hardness of the thin, small workpiece or coating
- ◆ Automatic turret
- ◆ The hardness scale can be changed to Rockwell and Brinell scales
- ◆ Touch screen
- ◆ With manufacturer inspection certificate



Measuring system (optional)



SPECIFICATION

Measuring range	8-2900HV
Test load	0.01, 0.025, 0.05, 0.1, 0.2, 0.3, 0.5, 1kgf
Unit	HV0.01, HV0.025, HV0.05, HV0.1, HV0.2, HV0.3, HV0.5, HV1
Stage elevation	manual
Loading control	automatic (loading/dwell/unloading)
Loading time	1 ~ 99s
Objective	10X (observation), 40X (measurement)
Eyepiece	10X
Total magnification	100X (observation), 400X (measurement)
Max. test height	100mm
Max. throat	130mm
X-Y stage	size: 100×100mm
	travel range: 25×25mm
	graduation: 0.01mm
Dimension	540×260×650mm
Weight	50kg

INCLUDED ACCESSORIES

Main unit	1pc
10X eyepiece	1pc
X-Y stage	1pc
Test block	1pc
Touch screen pen	1pc
Level	1pc
Dustproof cover	1pc
Slice holder	1pc
Cylinder holder	1pc
Vice	1pc

OPTIONAL ACCESSORIES

Measuring system	HVS-MS
------------------	--------

- ◆ Basic type
- ◆ For measuring the hardness of the thin, small workpiece or coating
- ◆ Automatic turret
- ◆ The hardness scale can be changed to Rockwell and Brinell scales
- ◆ With manufacturer inspection certificate



Measuring system (optional)



SPECIFICATION

Measuring range	8-2900HV
Test load	0.01, 0.025, 0.05, 0.1, 0.2, 0.3, 0.5, 1kgf
Unit	HV0.01, HV0.025, HV0.05, HV0.1, HV0.2, HV0.3, HV0.5, HV1
Stage elevation	manual
Loading control	automatic (loading/dwell/unloading)
Loading time	1 ~ 60s
Objective	10X (observation), 40X (measurement)
Eyepiece	10X
Total magnification	100X (observation), 400X (measurement)
Max. test height	100mm
Max. throat	110mm
X-Y stage	size: 100×100mm
	travel range: 25×25mm
	graduation: 0.01mm
Dimension	530×290×490mm
Weight	40kg

INCLUDED ACCESSORIES

Main unit	1pc
10X eyepiece	1pc
X-Y stage	1pc
Test block	1pc
Level	1pc
Dustproof cover	1pc
Slice holder	1pc
Cylinder holder	1pc
Vice	1pc

OPTIONAL ACCESSORIES

Measuring system	HVS-MS
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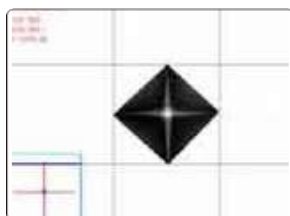
- ◆ Automatic turret
- ◆ Touch screen
- ◆ The hardness scale can be changed to Rockwell and Brinell scales
- ◆ With manufacturer inspection certificate



HVS50M



X-Y Stage(Optional)



Measuring System(Optional)

SPECIFICATION

Code	HVS10M	HVS50M
Test load	0.3, 0.5, 1, 3, 5, 10kgf	1, 5, 10, 20, 30, 50kgf
Stage elevation	manual	
Loading control	automatic (loading/dwell/unloading)	
Loading time	1-99s (adjustable)	
Objective	10X (observation), 20X (measurement)	
Eyepiece	10X	
Total magnification	100X (observation), 200X (measurement)	
Max. test height	160mm	
Max. throat	135mm	
X-Y stage (optional)	size: 100×100mm	
	travel range: 25×25mm	
	graduation: 0.01mm	
Dimension	530×280×630mm	
Weight	35kg	

INCLUDED ACCESSORIES

Main unit	1pc
10X, 20X Objective	1pc. each
Indenter	1pc
Test block	2pcs
V- avail	1pc
Flat avail	2pcs
Level	1pc
Dustproof cover	1pc

OPTIONAL ACCESSORIES

Measuring system	HVS-MS
X-Y stage	HVS-STAGE

- ◆ Mainly used for various metal parts and parts after thermal treatment Vickers hardness measurement. It is also suitable for the determination of effective hardening depth, coating and heat affected parts of welding parts.
- ◆ It can also be used to observe the metallographic structure of various metal parts and collect, display and print the image
- ◆ Automatic turret
- ◆ The hardness scale can be changed to Rockwell and Brinell scales
- ◆ With manufacturer inspection certificate



HVS1000MCNC



SPECIFICATION

Code	HVS1000MS	HVS1000MCNC
Measuring range	8-2900HV	
Test load	0.01, 0.025, 0.05, 0.1, 0.2, 0.3, 0.5, 1kgf	
Unit	HV0.01, HV0.025, HV0.05, HV0.1, HV0.2, HV0.3, HV0.5, HV1	
Stage elevation	Manual	Automatic
Focus	Manual	Automatic
Repeatability	±1.0%	
Loading control	automatic (loading/dwell/unloading)	
Loading time	1 ~ 99s	
Objective	10X (observation), 40X (measurement)	
Eyepiece	10X	
Total magnification	10X (observation), 40X (measurement)	
Camera pixel	5M	
Max. test height	160mm	
Max. throat	160mm	
X-Y stage	size: 150×150mm	
	travel range: 50×50mm	
	movement graduation: 0.001mm	
	movement speed: 1-10mm/s, adjustable	
	movement position repeatability: 1-3μm	
	control: the software system can control the X-Y stage movement automatically by programming, click any point to set the random moving position	
Dimension	540×260×650mm	
Weight	50kg	

INCLUDED ACCESSORIES

Main unit	1pc
10X eyepiece	1pc
Camera	1pc
C-mount	1pc
Computer(with software)	1pc
USB dongle	1pc
Level	1pc
Test block	2pcs
X-Y stage	1pc
Controller	1pc
Vice	1pc
Slice holder	1pc
Cylinder holder	1pc
Touch screen pen	1pc
Dustproof cover	1pc



- ◆ For Rockwell, Brinell and Vickers testing
- ◆ Rockwell testing value gets from screen, and the Brinell and Vickers hardness gets from table in the operation manual
- ◆ With manufacturer inspection certificate



VIDEO



Small flat anvil



Large flat anvil



V-type anvil



HARDNESS

SPECIFICATION

Load force for Rockwell	Preload force:98N, Total force: 588 , 980 , 1471 N
Rockwell resolution	0.1HR
Load force for Brinell	306, 613, 1839N
Load force for Vickers	294N
Stage elevation	manual
Loading control	motorized
Max. test height	175mm(Rockwell), 100mm(Brinell), 115mm(Vickers)
Max. throat	165mm
Dimension	520×240×700mm
Weight	105kg

INCLUDED ACCESSORIES

Main unit	1pc
Ø1.5875mm ball carbide indenter	1pc
Diamond indenter for Rockwell	1pc
Ø5mm ball indenter for Brinell	1pc
Ø2.5mm ball indenter for Brinell	1pc
Indenter for Vickers	1pc
Small flat anvil for Rockwell	1pc

Large flat anvil for Rockwell	1pc
V-type anvil	1pc
HRC hardness test block	2pcs
HRB hardness test block	1pc
Brinell hardness test block	1pc
Vickers hardness test block	1pc
Dustproof cover	1pc





- ◆ Large LCD display with backlight
- ◆ Based on HL scale, converted to other hardness scales (HV, HB, HRC, HRB, HS) and tensile strength MPa
- ◆ With wireless printer
- ◆ Can set impact direction
- ◆ With average value calculation function
- ◆ Automatic power off
- ◆ Conforms to the standard ASTM A956-02
- ◆ With manufacturer inspection certificate



Wireless printer (included)



Support ring (12pcs /set optional)

HARDNESS

SPECIFICATION

Resolution	1HLD, 1HV, 1HB, 0.1HRC, 0.1HRB, 1HS, 1MPa
Accuracy	±6HLD/0.6HRC(HLD=800)
Min. workpiece weight	5kg (directly)
	2kg (on solid support)
	0.1kg (coupled on large plate)
Min. workpiece thickness	5mm
Min. workpiece diameter	22mm
Max. workpiece surface roughness	1.6μm(Ra)
Power	3 x AAA batteries
Dimension	150 × 80 × 24mm

INCLUDED ACCESSORIES

Main unit	1pc
Wireless printer	1pc
Test block	1pc
Small support ring	1pc
Brush	1pc
Charger for printer	1pc

OPTIONAL ACCESSORIES

Support ring (12pcs /set)	HL-SP
---------------------------	-------



- ◆ Touch screen, with backlight
- ◆ Based on HL scale, converted to other hardness scales (HV, HB, HRC, HRB, HS) and tensile strength Mpa
- ◆ With wireless printer
- ◆ Can set impact direction
- ◆ Memory:500
- ◆ Low and high limits with judgement
- ◆ Automatic power off
- ◆ Conforms to the standard ASTM A956-02
- ◆ With manufacturer inspection certificate



VIDEO



HARDNESS



Wireless printer (included)



Support ring (12pcs /set, optional)



DC(optional)

C(optional)

D(included)

D+15(optional)

DL(optional)

G(optional)

SPECIFICATION

Resolution	1HLD, 1HV, 1HB, 0.1HRC, 0.1HRB, 1HS, 1MPa
Accuracy	±6HLD/0.6HRC(HLD=800)
Min. workpiece weight	5kg (directly)
	2kg (on solid support)
	0.1kg (coupled on large plate)
Min. workpiece thickness	5mm
Min. workpiece diameter	22mm
Max. workpiece surface roughness	1.6μm(Ra)
Power	Rechargeable battery
Dimension	135×83×24mm

INCLUDED ACCESSORIES

Main unit	1pc
Wireless printer	1pc
Test block	1pc
Small support ring and brush	1pc.each
USB cable and software	1pc
Charger	2pcs

OPTIONAL ACCESSORIES

Impact device DC	HL200-DC
Impact device C	HL200-C
Impact device D+15	HL200-D15
Impact device DL	HL200-DL
Impact device G	HL200-G
Support ring (12pcs /set)	HL-SP



HL350

PORTABLE HARDNESS TESTER



VIDEO



AAA

- ◆ Economic type
- ◆ Based on HL scale, converted to other hardness scales (HV, HB, HRC, HRB, HS) and tensile strength MPa
- ◆ Impact direction can be set
- ◆ With average value calculation function
- ◆ Conforms to the standard ASTM A956-02



Support ring (12pcs /set optional)

SPECIFICATION

Resolution	1HLD, 1HV, 1HB, 0.1HRC, 0.1HRB, 1HS, 1MPa
Accuracy	$\pm 8\text{HLD}/0.8\text{HRC}(\text{HLD}=800)$
Min. workpiece weight	5kg (directly)
	2kg (on solid support)
	0.1kg (coupled on large plate)
Min. workpiece thickness	5mm
Min. workpiece diameter	22mm
Max. workpiece surface roughness	1.6 μm (Ra)
Power	3 x AAA batteries
Dimension	121×68×30mm

INCLUDED ACCESSORIES

Main unit	1pc
Test block	1pc
Small support ring	1pc
Brush	1pc
Batteries	3pcs

OPTIONAL ACCESSORIES

Support ring (12pcs /set)	HL-SP
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HL400

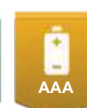
PORTABLE HARDNESS TESTER



Certificate



Data output



AAA

- ◆ Based on HL scale, converted to other hardness scales (HV, HB, HRC, HRB, HS) and tensile strength MPa
- ◆ Impact direction can be set
- ◆ With average value calculation function
- ◆ Automatic power off
- ◆ Conforms to the standard ASTM A956-02
- ◆ With manufacturer inspection certificate



VIDEO



SPECIFICATION

Resolution	1HLD, 1HV, 1HB, 0.1HRC, 0.1HRB, 1HS, 1MPa
Accuracy	$\pm 6\text{HLD}/0.6\text{HRC}(\text{HLD}=800)$
Min. workpiece weight	5kg (directly)
	2kg (on solid support)
	0.1kg (coupled on large plate)
Min. workpiece thickness	5mm
Min. workpiece diameter	22mm
Max. workpiece surface roughness	1.6 μm (Ra)
Power	3 x AAA batteries
Dimension	150 × 80 × 24mm

INCLUDED ACCESSORIES

Main unit	1pc
Test block	1pc
Small support ring	1pc
Brush	1pc
USB cable	1pc
Batteries	3pcs

HL450/HL450W

PORTABLE HARDNESS TESTER

- ◆ Pocket size, easy to carry
- ◆ Based on HL scale, converted to other hardness scales (HV, HB, HRC, HRB, HS) and tensile strength MPa
- ◆ Impact direction can be set
- ◆ With average value calculation function
- ◆ Conforms to the standard ASTM A956-02
- ◆ With manufacturer inspection certificate



Support ring (12pcs /set, optional)



VIDEO



Certificate



Charge



HARDNESS

SPECIFICATION

Code	HL450	HL450W
Printer	with	without
Resolution	1HLD, 1HV, 1HB, 0.1HRC, 0.1HRB, 1HS, 1MPa	
Accuracy	±6HLD/0.6HRC(HLD=800)	
Min. workpiece weight	5kg (directly)	
	2kg (on solid support)	
	0.1kg (coupled on large plate)	
Min. workpiece thickness	5mm	
Min. workpiece diameter	30mm	
Max. workpiece surface roughness	1.6μm(Ra)	
roughness Output	USB and wireless	
Power supply	rechargeable battery	
Dimension	147×35×22mm	
Weight	65g	



HL450

INCLUDED ACCESSORIES

Main unit	1pc	Brush	1pc
Test block	1pc	Charger	1pc
Small support ring	1pc		

OPTIONAL ACCESSORIES

Support ring (12pcs /set)	HL-SP
---------------------------	-------

GY-2

FRUIT HARDNESS TESTER

- ◆ Used to measure the hardness of some fruit like apples, pears
- ◆ Hardness can judge ripeness of the fruit



SPECIFICATION

Range	0.5-4kg/cm ² (0.5-4×10 ⁵ pa)
Graduation	0.02kg/cm ² (0.02×10 ⁵ pa)
Accuracy	±2%
Probe diameter	Ø3.5mm
Probe depth	10mm
Dimension	151x55x30mm
Weight	220g

INCLUDED ACCESSORIES

Main unit	1pc
Probe	1pc

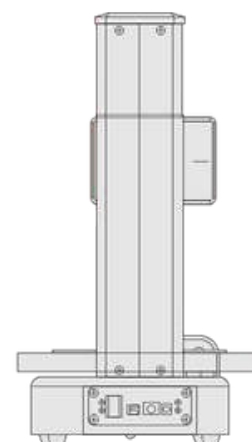
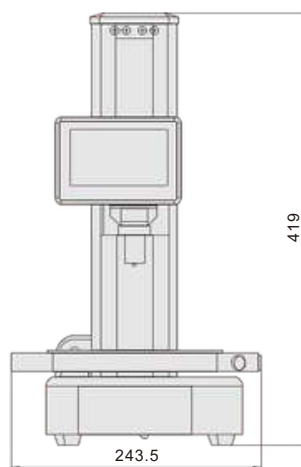
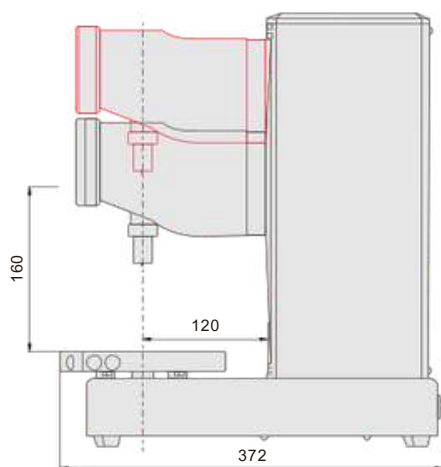




- ◆ Put the workpiece under the indenter, and press one button, the measuring results will be shown soon
- ◆ Can measure plastic, rubber, sponge with different hardness
- ◆ Include three indenters (type A, D, OO)
- ◆ Touch screen
- ◆ With data output
- ◆ With manufacturer inspection certificate



unit: mm



SPECIFICATION

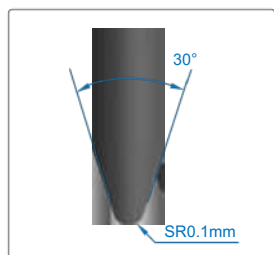
Probe moving range	160mm
Stage moving	80mm
range(X) Loading	Stepping motor
control Loading force	Spring force
Max. workpiece height	120mm
Accuracy	±1
Resolution	0.1
Output	USB
Power supply	DC24V/5A

INCLUDED ACCESSORIES

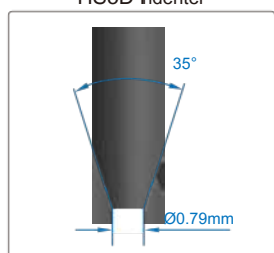
Main unit	1pc
AD/DC adapter	1pc
Software and USB cable	1pc.each
A/D/OO indenter	1pc.each
Calibration block	2pcs



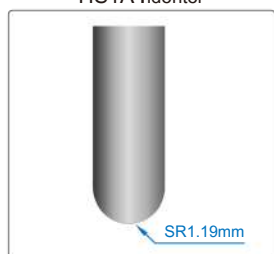
- ◆ Conforms to ISO868, ISO7619, ASTM D 2240
- ◆ Testing time is adjustable
- ◆ With average calculation function
- ◆ With manufacturer inspection certificate



HS5D indenter



HS1A indenter



HSOO indenter



HS1A



Standard block (included)



PR100 printer (optional)



Standard (optional)



SPECIFICATION

Code	HS1A	HS5D	HSOO
Scale	HA(Shore A)	HD(Shore D)	HOO(Shore OO)
For material	soft plastic, rubber, leather, etc.	hard plastic, hard rubber, etc.	soft sponge, soft rubber, etc.
Measuring range	20 ~ 90HA	20 ~ 90HD	20 ~ 90HOO
Resolution	0.1HA	0.1HD	0.1HOO
Accuracy	±1HA	±1HD	±1HOO
Indenter protrusion	2.5mm		
Power	rechargeable battery		
Weight	180g		

INCLUDED ACCESSORIES

Main unit	1pc
Standard block	1pc
Charger	1pc
Software	1pc

OPTIONAL ACCESSORIES

Printer	PR100
Stand for HS1A	HS-1A-STD
Stand for HS5D	HS-5D-STD
Stand for HSOO	HS-OO-STD

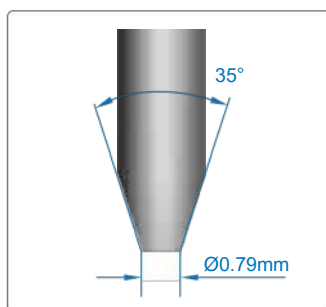
- ◆ Conforms to ISO868, ISO7619, ASTM D 2240
- ◆ With peak value indicator



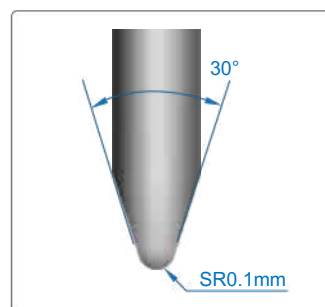
HSM-1A-ST stand (optional)



HSM1A



HSM1A indenter



HSM5D indenter

SPECIFICATION

Code	HSM1A	HSM5D
Scale	HA(Shore A)	HD(Shore D)
For material	soft plastic, rubber, leather, etc.	hard plastic, hard rubber, etc.
Measuring range	20 ~ 90HA	20 ~ 90HD
Graduation	1HA	1HD
Accuracy	±1HA	±1HD
Indenter protrusion	2.5mm	
Weight	500g	

OPTIONAL ACCESSORIES

Stand for HSM1A	HSM-1A-ST
Stand for HSM5D	HSM-5D-ST

- ◆ For digital shore hardness tester
- ◆ Perform repeatable hardness measurement due to fewer possibilities of human error or measurement variations
- ◆ Special structure for stable loading

SPECIFICATION

Code	HS-1A-STD	HS-5D-STD	HS-00-STD
For hardness tester	HS1A	HS5D	HS00
Test force (weight block)	1kg	5kg	0kg
Stage diameter	Ø115mm		
Max. workpiece height	45mm		
Max. testing width	63mm(from test point to the column)		
Dimension	Ø195x370mm		
Weight	5.6kg	11kg	4.5kg



HS-1A-STD

- ◆ For shore hardness tester
- ◆ Perform repeatable hardness measurement due to fewer possibilities of human error or measurement variations

SPECIFICATION

Code	HSM-1A-ST	HSM-5D-ST
For hardness tester	HSM1A	HSM5D
Test force (weight block)	1kg	5kg
Stage diameter	Ø100mm	
Max. workpiece height	75mm	
Max. testing width	65mm (from test point to the column)	
Weight	2kg	7kg



HSM-1A-ST



- ◆ Mainly used for small or thin-walled products as well as parts of complex shape or with areas that need to be tested in hard-to-reach places
- ◆ With a shockproof silicone case that prevents the device from malfunctioning
- ◆ Hardness scales: HV, HB, HRC and tensile strength Mpa
- ◆ Memory: 256
- ◆ Automatic power off
- ◆ With special software for data processing
- ◆ With manufacturer inspection certificate



Measure gear teeth



Measure small part



SPECIFICATION

Measuring range	HRC	20-70
	HB	90-650
	HV	230-940
	Mpa	370-1740
Accuracy	HRC	±1.5
	HB	±3%
	HV	±3%
Min. workpiece thickness		1mm
Min. workpiece diameter		5mm
Max. workpiece surface roughness		Ra:2.5μm
Min. thickness of surface hardening layer		0.1mm
Min. test area		Ø1mm
Power supply		Rechargeable battery
Dimension		122×65×24mm

INCLUDED ACCESSORIES

Main unit	1pc
Probe (50N)	1pc
Rechargeable battery	2pcs
USB cable and software	1pc.each
Charger	1pc

HB937-1**BARCOL HARDNESS TESTER**

- ◆ To measure the hardness of thick workpieces made of pure aluminum, aluminum alloy, fiber reinforced plastic, hard plastic, etc.
- ◆ Comforms to ASTM B648-2000
- ◆ With manufacturer inspection certificate

**SPECIFICATION**

Hardness range	0 ~ 100HBa (25 ~ 150HBW)
Graduation	1HBa
Accuracy	±2HBa (42 ~ 52HBa) ±1HBa (84 ~ 88HBa)
Min. workpiece thickness	0.8mm
Dimension	142×65×90mm
Weight	500g

INCLUDED ACCESSORIES

Main unit	1pc
Spare indenter	2pcs
Hardness test block	2pcs
Wrench	1pc

HARDNESS

SERIES DHB937**DIGITAL BARCOL HARDNESS TESTER**

- ◆ To measure the hardness of thick workpieces made of pure aluminum, aluminum alloy, fiber reinforced plastic, hard plastic, etc.
- ◆ Comforms to ASTM B648-2000
- ◆ The scale of DHB937-2 can converted to HW, HV HBW and HRE

**DHB937-1****SPECIFICATION**

Code	DHB937-1	DHB937-2
Scale conversion	No	Yes
Hardness range	0 ~ 100HBa (25 ~ 150HBW)	
Graduation	0.1HBa	
Accuracy	±2HBa (42 ~ 48HBa) ±1HBa (84 ~ 88HBa)	
Min. workpiece thickness	0.8mm	
Power supply	3×AAA batteries	
Dimension	180×70×90mm	
Weight	800g	

INCLUDED ACCESSORIES

Main unit	1pc
Spare indenter	2pcs
Calibration block	1pc
Battery	3pcs
Hardness test block	2pcs
Wrench	1pc

- ◆ To measure the hardness of soft metal such as aluminum alloy, copper, brass, soft steel
- ◆ Conforms to the standard ASTM B647



HW-L20

SPECIFICATION

Code	HW-L20	HW-L20A	HW-L20B	HW-B75	HW-C75	HW-B92
Application	aluminum alloy			hard aluminum alloy and brass	soft brass and copper	soft steel and cold-rolled steel
Measuring hardness range	58-131HV			63-105HRF	18-100HRE	50-92HRB
Thickness range to be measured of flat workpiece	0.4 ~ 6mm	0.4 ~ 13mm	0.4 ~ 8mm	0.4 ~ 6mm	0.4 ~ 6mm	0.4 ~ 6mm
Min. Internal diameter of tube workpiece	Ø10mm	Ø10mm	Ø6mm	Ø10mm	Ø10mm	Ø10mm
Hardness range	0 ~ 20HW					
Min. reading	1HW					
Accuracy	±0.5HW (at 5 ~ 17HW)					
Dimension	205×30×85mm					
Weight	500g					

INCLUDED ACCESSORIES

Main unit	1pc	Hardness test block	1pc
Spare indenter	1pc	Wrench	1pc

STE70

DIGITAL REBOUND TESTER



- ◆ Measure the strength of general building components, bridges and various concrete components (slabs, beams, columns, bridges and so on.)
- ◆ Built in national unified curve (JGJ/T23-2011)
- ◆ Small size, modular design, easy to use
- ◆ Built in large capacity memory, can store 999 standard components, and a single component can set up 99 measuring areas and 159840 measuring point data

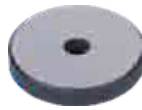


SPECIFICATION

Measuring range	10-60Mpa
Impact energy	2.207J
Accuracy	±1
Stiffness of spring	785±30N.m
Working length of spring	61.5±0.3mm
Tensile length of spring	75±0.3mm
Rated value of steel anvil	80±2
Operating temperature	-4°C-40°C
Display	2.08 inch OLED display
Power supply	rechargeable battery
Weight	1.1kg

INCLUDED ACCESSORIES

Main unit	1pc
Sander	1pc
Spare spring	1set
Screwdriver	3pcs
Software and cable	1set
AD/DC adapter	1pc



Rockwell/Vickers/Brinell



Shore A



Leeb

SPECIFICATION

Code	Type	Hardness
BLK-HRC1	Rockwell C	60-70HRC
BLK-HRC2		20-30HRC
BLK-HRC3		30-35HRC
BLK-HRC4		40-50HRC
BLK-HRC5		50-55HRC
BLK-HRB1	Rockwell B	85-95HRB
BLK-HRB2		60-70HRB
BLK-HV1	Vickers	700-800HV5
BLK-HV2		700-800HV10
BLK-HV3		400-600HV5
BLK-HV4		400-600HV10
BLK-HB1	Brinell	150-250HBW 10/3000
BLK-HB2		150-250HBW 5/750
BLK-HLD	Leeb	750-830HLD
BLK-HSA	Shore A	7pcs/set: 30-39HA, 40-49HA, 50-59HA, 60-69HA, 70-79HA, 80-89HA, 90-99HA



- ♦ For checking, identifying and specifying the roughness by symbol
- ♦ Accuracy: -17% ~ +12%



Machining method	Quantity	Roughness (Ra)
Flat lapping	2	0.1, 0.05µm
External grinding	4	0.2, 0.4, 0.8, 1.6µm
Plain grinding	6	0.05, 0.1, 0.2, 0.4, 0.8, 1.6µm
Horizontal milling	6	0.4, 0.8, 1.6, 3.2, 6.3, 12.5µm
Vertical milling	6	0.4, 0.8, 1.6, 3.2, 6.3, 12.5µm
Turning	6	0.4, 0.8, 1.6, 3.2, 6.3, 12.5µm

- ◆ Measure the surface profile and roughness with same probe at same time(for **RP100RS**)
- ◆ With high precision and good linearity digital probe(for **RP100RS** and **RP100TS**)
- ◆ Easy to install and replace without calibration
- ◆ Stylus can contact, lift and return automatically
- ◆ CAD file can be exported and imported(for **RP100RS** and **RP100JS**)
- ◆ With manufacturer inspection certificate



RP100RS



stage



vice

profile calibration block
(for **RP100RS** and **RP100JS**)roughness calibration block
(for **RP100RS** and **RP100TS**) $\Phi 3 \times 20$ mm point stylus $\Phi 3 \times 21$ mm knife stylus

SPECIFICATION

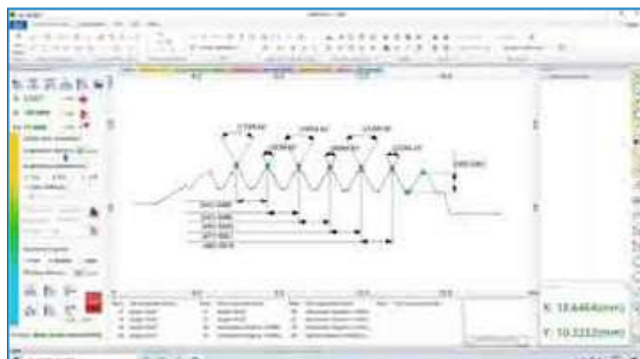
Code		RP100RS	RP100TS	RP100JS
Measuring object		profile and roughness	roughness	profile
Roughness parameter		Ra, Rq, Rz(Ry), R3z, Rz(DIN), Rz(JIS), Rz(ISO), Rp, Rv, Rt, Rsk, Rsm, Rc, Rpm, Rku, Rdq, Roc, Mr1, Mr2, Rpk, Rvk, Rk, Rdc, A1, A2, R, Rx, AR, Rcp, Rmax		\
Wave parameter		wt, wa, wp, wv, wq, wc, wku, wsk, w, wx, wz, wsm, wdc, wte, wmr, Aw, c(wmr), wmr(c), wdq		\
Profile parameter		Pt, Pa, Pp, Pv, Pq, Pc, Pku, Psk, Pdq/p△q, Psm, Pdc, Pmr(c), Pz, pmr, C(pmr)		\
Profile	X axis range	100mm 0.8μm/100mm	\	100mm
	X axis straightness	650mm	\	0.8μm/100mm
	Z axis range	40mm	\	650mm
	Z1 axis range (probe)		\	40mm
	Accuracy	±(1+0.12H)μm, H is measuring height in mm	\	±(1+0.12H)μm, H is measuring height in mm
	Measuring arc accuracy	±(1.5+R/8)μm, R is measuring radius in mm	\	±(1.5+R/8)μm, R is measuring radius in mm
	Measuring angle accuracy	±2'	\	±2'
Roughness	Z1 axis range (probe)	40mm	20mm	\
	Accuracy	±5%		\
	Repeatability	±3%		\
	Resolution	0.0001μm		\
	Number of cut-offs	3-7		\
	Cut off	0.025, 0.08, 0.25, 0.8, 2.5, 8mm		\
Climbing ability		77°(up), 88°(down)		
Measuring speed		0.02mm- 4.0mm/s		
Measuring mode		probe movement		
Movement control		joystick		
Power supply		220V		
Size		985x710x1450mm		

INCLUDED ACCESSORIES

Main unit	1pc
Profile calibration block(for RP100RS and RP100JS)	1pc
Roughness calibration block(for RP100RS and RP100TS)	1pc
Stage	1pc
Vise	1pc
Φ3x21mm R0.025mm knife stylus	2pcs

Φ3x20mm R5μm point stylus	1pc
Φ8x150mm measuring rod	1pc
Computer	1pc
Printer	1pc
Anti-dust cover	1pc

Measuring profile



Measuring roughness





VIDEO



Certificate



Data output



Charge

- ◆ 13 roughness parameters
- ◆ With probe position indicator
- ◆ Roughness values, profile, and curve can be shown on the display
- ◆ Memory of maximum 100 results
- ◆ With a mini SD card slot, can save the result into SD card
- ◆ Automatic power off
- ◆ With manufacturer inspection certificate



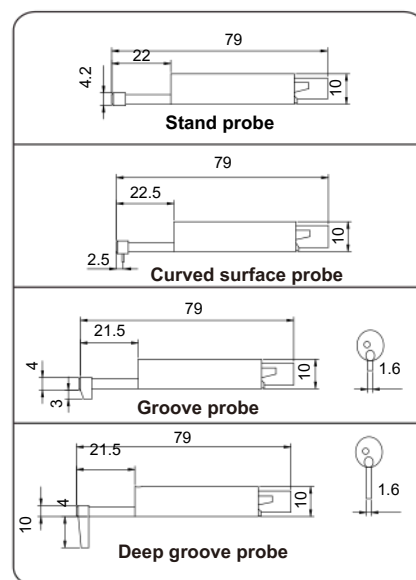
unit: mm



SR200-STD Stand(optional)



Measuring software



SPECIFICATION

Parameters		Ra, Rz, Ry, Rq, Rp, Rm, Rt, R3z, Rmax, Sk, S, Sm, tp
Range		160μm(±80μm)
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 -5
Traverse speed		0.5mm/s, 1mm/s
Memory		100 measurement results
Output		USB
Power		built-in rechargeable battery
Dimension(L×W×H)		140×52×48mm
Weight		440g

INCLUDED ACCESSORIES

Main unit	1pc
Standard probe	1pc
Calibration block	1pc
Calibration support	1pc
Adjustable stand	1pc
Probe cover	1pc
USB cable and software	1pc
AC/DC adapter	1pc
Software	1pc

OPTIONAL ACCESSORIES

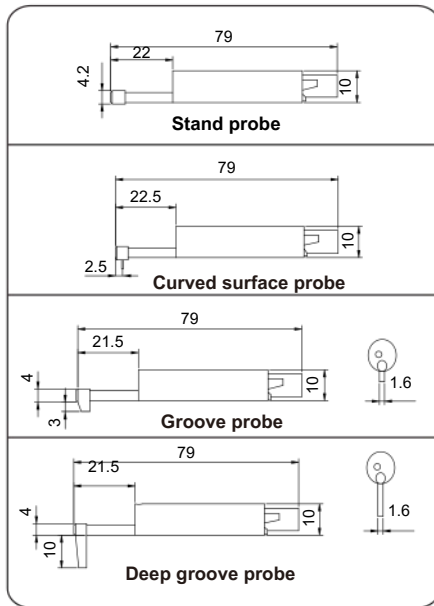
Extension rod	SR200-ER
Curved surface probe	SR200-02
Groove probe	SR200-03
Deep groove probe	SR200-04
Test stand	SR200-STD
Printer	SR200-PR



- ◆ Pocket size
- ◆ With a tablet, can set the parameter quickly
- ◆ Connected with tablet via bluetooth
- ◆ Roughness values, profile, and curve can be shown on the display
- ◆ With manufacturer inspection certificate



unit: mm



Measuring software



SR200-STD Stand(optional)

ROUGHNESS

SPECIFICATION

Parameters		Ra, Rz, Ry, Rq, Rp, Rm, Rt R3z, Rmax, Sk, S, Sm, tp
Range(Ra)		0.025-12.5μm
Accuracy		±10%
Resolution (Ra)		0.001μm
Probe	type	inductive
	s tylus 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		1-5
Traverse speed		0.5mm/s, 1mm/s
Output file format		Word, Excel
Power		built-in rechargeable battery
Dimension(L×W×H)		130×40×44mm
Weight		340g

INCLUDED ACCESSORIES

Main unit	1pc
Standard probe	1pc
Tablet	1pc
Calibration block	1pc
Calibration support	1pc
USB cable	1pc
AC/DC adapter	1pc

OPTIONAL ACCESSORIES

Extension rod	SR200-ER
Curved surface probe	SR200-02
Groove probe	SR200-03
Deep groove probe	SR200-04
Test stand	SR200-STD
Printer	SR200-PR



- ◆ The probe can be working with the main unit separately
- ◆ 22 roughness parameters
- ◆ With probe position indicator
- ◆ Roughness values, profile, and curve can be shown on the display
- ◆ Memory of maximum 100 results
- ◆ Automatic power off
- ◆ With manufacturer inspection certificate



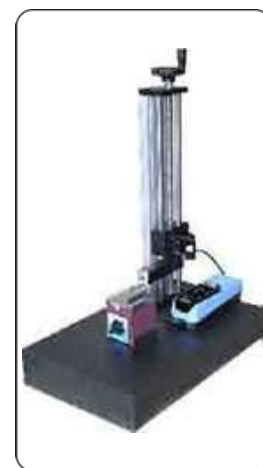
unit: mm

Stand probe	
Curved surface probe 	
Groove probe (groove height < 10mm)	
Small hole probe (hole dia. > 2mm)	
Extension rod	

Working with height gauge



Work together



SR200-STD Stand(optional)

SPECIFICATION

Parameters		Ra, Rz, Rq, Rp, Ry, Rv, Rs, R3z, R3y, Rc, Rt, Rmax, Rk, Rku, Rsm, Rpc, Rpk, Rvk, Rsk, Mr1, Mr2, Rz(JIS)
Range		±160μm
Accuracy		±10%
Resolution(Ra)		0.001μm
Probe	type	inductive
	stylus radius/angle	5μm/90°
	stylus material	diamond
Measuring force		4mN
Measuring unit		μm/μin
Cut off		0.25/0.8/2.5mm
Number of cut-offs		1- 5
Traverse speed		0.5mm/s, 1mm/s
Memory		100 measurement results
Output		USB
Power		built-in rechargeble battery
Dimension(L×W×H)		158×64×52mm
Weight		400g

INCLUDED ACCESSORIES

Main unit	1pc
Standard probe	1pc
Calibration block	1pc
Calibration support	1pc
Adjustable stand	1pc
Cable(long and short)	2pcs
USB cable and software	1pc
AC/DC adapter	1pc

OPTIONAL ACCESSORIES

50mm extension rod	SR400-ER
Curved surface probe	SR400-02
Deep groove probe	SR400-03
Small hole probe	SR400-04
Test stand	SR200-STD
Printer	SR400-PR
Connector for height gage	SR400-SP1



- ◆ Pocket size
- ◆ Automatic power off
- ◆ With manufacturer inspection certificate

SPECIFICATION

Parameters		Ra, Rz, Rq, Rt
Range (Ra)		±10μm
Accuracy		±15%
Resolution (Ra)		0.001μm
Probe	type	piezoelectric
	stylus radius/angle	10μm/90°
	stylus material	diamond
Measuring force		0.5N
Measuring unit		μm/μin
Cut off		0.25/0.8/2.5mm
Evaluation length		1.25/4/5mm
Power		built-in rechargeble battery
Dimension(L×W×H)		114×82×33mm
Weight		160g



INCLUDED ACCESSORIES

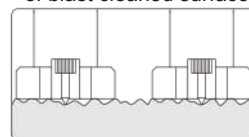
Main unit	1pc
Calibration block	1pc
Calibration support	1pc
USB cable	1pc
AC/DC adapter	1pc



- ◆ Measure peak-to-valley height of blast cleaned surface.
If the profile is too low, the adhesion of the coating to the surface will be reduced.
If the profile is too high, it is dangerous that the profile peaks will remain non-coating, rust spots maybe occur.
- ◆ Meet ASTM D 4417-B
- ◆ Zero set block is included, set zero before measurement
- ◆ Buttons: tolerance Go and No-Go display, data preset, measuring direction change, max./min./TIR measurement, inch/metric conversion, ABS/INC measurement
- ◆ Automatically power off (time is adjustable)
- ◆ Data output (cable code:200-03 or 200-04)
- ◆ Stainless steel base



measure peak-to-valley height
of blast cleaned surface

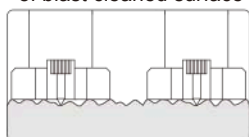


Code	Range	Digital indicator stroke	Digital indicator resolution	Accuracy
489-010-01	0-12.7mm/0-0.5"	12.7mm/0.5"	0.001mm/0.00005"	±0.005mm

- ◆ Measure peak-to-valley height of blast cleaned surface.
If the profile is too low, the adhesion of the coating to the surface will be reduced.
If the profile is too high, it is dangerous that the profile peaks will remain non-coating, rust spots maybe occur.
- ◆ Meet ASTM D 4417-B
- ◆ Zero set block is included, set zero before measurement
- ◆ Buttons: on/off, zero, mm/inch, ABS/INC measurement
- ◆ Automatically power off (time is adjustable)
- ◆ Data output (cable code:200-03 or 200-04)
- ◆ Stainless steel base



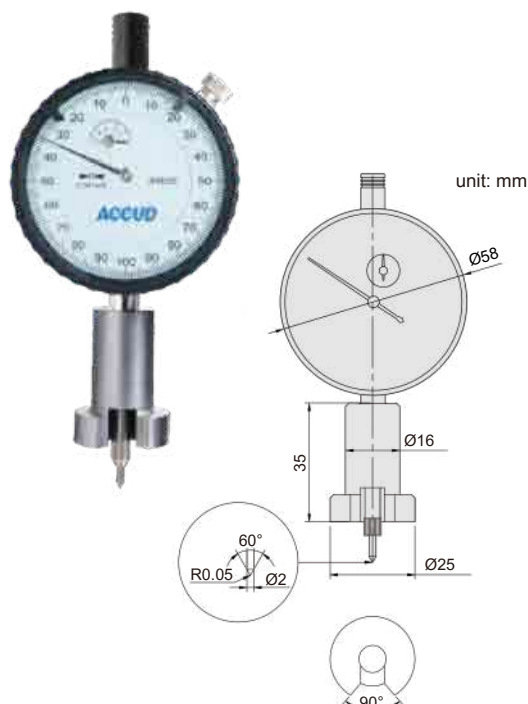
measure peak-to-valley height
of blast cleaned surface



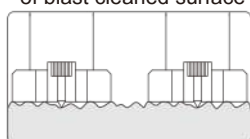
Code	Range	Digital indicator stroke	Digital indicator resolution	Accuracy
489-010-02	0-12.7mm/0-0.5"	12.7mm/0.5"	0.001mm/0.00005"	±0.005mm



- ◆ Measure peak-to-valley height of blast cleaned surface.
If the profile is too low, the adhesion of the coating to the surface will be reduced.
If the profile is too high, it is dangerous that the profile peaks will remain non-coating, rust spots maybe occur.
- ◆ Meet ASTM D 4417-B
- ◆ Zero set block is included, set zero before measurement
- ◆ Stainless steel base



measure peak-to-valley height
of blast cleaned surface



Code	Range	Dial indicator stroke	Dial indicator graduation	Accuracy
489-001-01	0-1mm	1mm	0.001mm	±0.005mm



- ◆ High precision air-floating spindle, never wear, can keep high accuracy for long time
- ◆ High accuracy and good stability
- ◆ Large arc can be measured
- ◆ Automatic identification of contour discontinuities, can eliminate automatically or manually



SPECIFICATION

Measuring range	Max. dia.	Ø180mm
	Min. inner dia.	Ø5mm
	Max. height	420mm
Spindle accuracy	Radial error	$\pm(0.025+5H/10000)\mu\text{m}$
	Axial error	$\pm(0.02+6X/10000)\mu\text{m}$
Stage	Stage dia.	Ø180mm
	Rotation dia.	Ø300mm
	Max. load weight	25kg
	Adjustment range	adjust the eccentricity: $\pm 2\text{mm}$; adjust the level: $\pm 1^\circ$
	Rotation speed	0-12 rpm(adjustable)
Horizontal arm	Horizontal moving distance	150mm
	Probe moving speed	0.5-6mm/s (adjustable)
Sensor	Range	500 μm
	Resolution	0.005 μm
	Stylus	Ø2mm ruby ball
	Measuring force	1-12g
Air source		0.45-0.80Mpa
Air consumption		0.2m ³ /min
Power supply		110~220V
Dimension		920x530x1600mm

INCLUDED ACCESSORIES

Main unit	1pc
Stage	1pc
Precision chuck	1pc
Standard ball	1pc
Standard elliptical part	1pc
Probe	1pc

OPTIONAL ACCESSORIES

Computer	1pc
Printer	1pc
Anti-dust cover	1pc





- ◆ Measure the thickness of tank, pipe and big workpiece
- ◆ LCD with backlight
- ◆ With manufacturer inspection certificate



VIDEO



Transducer PT-06 (optional)



Transducer ZT-12 (optional)



Transducer GT-12 (optional)



SPECIFICATION

Graduation	0.01mm(<100mm)
	0.1mm(≥100mm)
Repeatability	0.03mm(<100mm)
	0.1mm(≥100mm)
Accuracy	±0.04mm (<10mm)
	±(0.04+H/1000)mm (10~100mm)
	±H/333mm (≥100mm)
	H is the thickness in mm
Velocity	1000-9999m/s
Power	3×AAA batteries
Dimension	69×150×29mm
Weight	220g

INCLUDED ACCESSORIES

Main unit	1pc
Transducer PT-08	1pc
AAA battery	3pcs
Couplant	1bottle
USB cable	1pc

OPTIONAL ACCESSORIES

Transducer	PT-06, ZT-12, GT-12
------------	---------------------

SPECIFICATION OF TRANSDUCERS

Code	Application	Range	Frequency	Min. dimension pipe diameter×thickness	Working temperature
PT-08	general use	0.8-300mm	5.0MHz	20×1.2mm	<60°C
PT-06	thin workpiece	0.75-40mm	7.5MHz	15×1.2mm	<60°C
ZT-12	casting steel	2-400mm	2.0MHz	30×4mm	<60°C
GT-12	high temperature	3-100mm	5.0MHz	25×3mm	<310°C



- ◆ Measure the thickness of tank, pipe and big workpiece
- ◆ Can measure thickness of workpiece with coating
- ◆ Wide measuring range with optional transducer
- ◆ LCD with backlight
- ◆ With manufacturer inspection certificate

Transducer **ST300-P6** (optional)Transducer **ST300-ZT12** (optional)Transducer **ST300-GT12** (optional)

SPECIFICATION

Graduation	0.01mm(<100mm)
	0.1mm(≥100mm)
Repeatability	0.03mm(<100mm)
	0.1mm(≥100mm)
Accuracy	±0.05mm (<10mm)
	±(0.05+H/100)mm (≥100mm) H is the thickness in mm
Max. coating thickness	1000um
Velocity	1000-9999m/s
Power	2×AA batteries
Dimension	71×150×33mm
Weight	160g

INCLUDED ACCESSORIES

Main unit	1pc
Transducer PT-10	1pc
AA battery	2pcs
Couplant	1bottle

OPTIONAL ACCESSORIES

Transducer	ST300-P6
Transducer	ST300-ZT12
Transducer	ST300-GT12
Couplant (high temperature)	ST300-CP

SPECIFICATION OF TRANSDUCERS

Code	Application	Range	Frequency	Min. pipe dimension diameter×thickness	Working temperature
PT-10	general use	1-300mm	5.0MHz	20×1.2mm	<70°C
ST300-P6	thin workpiece	0.75-35mm	7.0MHz	15×1.2mm	<70°C
ST300-ZT12	casting steel	4-500mm	2.0MHz	30×5mm	<70°C
ST300-GT12	high temperature	4-80mm	5.0MHz	25×5mm	<480°C

ST100A

ULTRASONIC THICKNESS GAUGE

- ◆ Measure the thickness of tank, pipe and big workpiece
- ◆ LCD with backlight
- ◆ With manufacturer inspection certificate



VIDEO



SPECIFICATION

Measuring range	1.2-225mm(steel)
Graduation	0.01mm(<100mm)
	0.1mm(≥100mm)
Repeatability	0.05mm(<100mm)
	0.1mm (≥100mm)
Accuracy	±0.5%L+0.04mm L is the thickness inmm
Velocity	1000-9999m/s
Min.measured tube	Ø20×3mm
Power	rechargeable battery
Dimension	64×116×27mm
Weight	220g

INCLUDED ACCESSORIES

Main unit	1pc
Transducer	1pc
Battery	1 set
Couplant	1 bottle
Brush	1pc

CFN1500B

COATING THICKNESS GAUGE

- ◆ Integrated F and N type probe
- ◆ F type probe is used to measure the thickness of non-magnetic coatings (zinc, copper, enamel, plastic and so on) on magnetic substrates (iron, steel)
- ◆ N type probe is used to measure the thickness of non-conductive coatings (varnish, enamel, plastic and so on) on conductive substrates (zinc, copper, aluminum)
- ◆ Large display screen
- ◆ V-type probe to make the cylinder measurement easier
- ◆ With um/mil unit conversion
- ◆ Automatic power on/ off
- ◆ With back light
- ◆ With manufacturer inspection certificate

SPECIFICATION

Range	0 ~ 1500µm
Accuracy	2µm(0 ~ 100µm)
	3%(100 ~ 1500µm)
	0.1µm (0 ~ 99.9µm)
Resolution	1µm (100 ~ 1500µm)
Min. measuring area	25×25mm
Min. curvature	convexity: 5mm; concave: 30mm
Min substrate thickness	magnetic material: 0.2mm; non magnetic material: 0.05mm
Memory	30 sets
Power supply	AAA batteries
Dimension(L×W×H)	120×52×26mm
Weight	170g



VIDEO



INCLUDED ACCESSORIES

Main unit	1pc
Calibration foil	1set
Calibration base	1set
AAA battery	2pcs

◆ F type probe is used to measure the thickness of non-magnetic coatings (zinc, copper, enamel, plastic and so on) on magnetic substrates (iron, steel)

N type probe is used to measure the thickness of non-conductive coatings (varnish, enamel, plastic and so on) on conductive substrates (zinc, copper, aluminum)

- ◆ External interchangeable probe
- ◆ Low and high limits setting with judgement
- ◆ With average/Max/Min. calculation
- ◆ Turn off automatically
- ◆ With manufacturer inspection certificate



CF1000S



probe for bores and grooves
(Code:CF1000S-F90)



probe for large range
(Code:CF1000S-F10)

SPECIFICATION

Code	CF1000S	CN1000S	CFN1000S
Probe type	F	N	F and N
Range	0 ~ 1250μm		
Accuracy	3μm (0 ~ 50μm)		
	3%+1μm (50 ~ 1250μm)		
Resolution	0.1μm (0 ~ 999μm)		
	1μm (1000 ~ 1250μm)		
Memory	500		
Power	2xAA batteries		
Dimension(LxWxH)	128x68x32mm		
Weight	340g		

INCLUDED ACCESSORIES

Main unit	1pc
Calibration foil	1set
Calibration base	1set
USB cable	1pc
AA battery	2pcs

OPTIONAL ACCESSORIES

Magnetic induction probe for bores and grooves	CF1000S-F90
Magnetic induction probe for large range (500μm-10mm)	CF1000S-F10

SERIES 740

WET FILM GAUGE

- ◆ Made of stainless steel

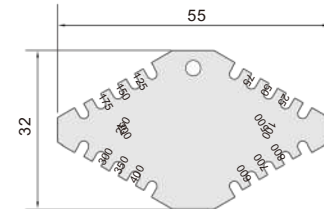
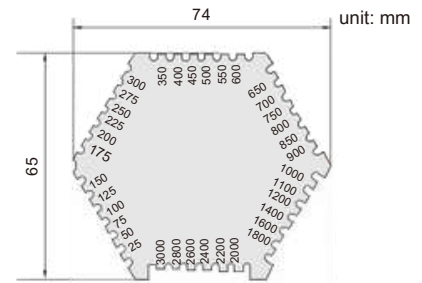
package



740-300-01



740-800-11

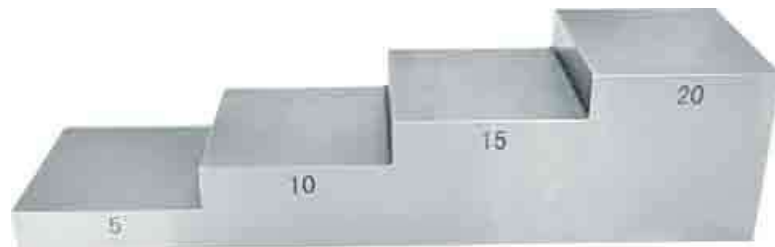


Code	Range	Accuracy	Thickness
740-800-11	25-800μm	±5μm	1.8mm
740-300-01	25-3000μm	25μm-100μm:±5μm 100μm-3000μm:±5%	1mm

SERIES STB

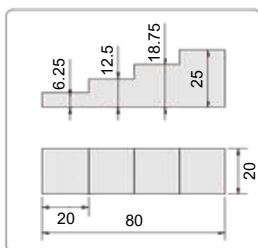
STANDARD TEST BLOCK FOR ULTRASONIC THICKNESS GAUGE

- ◆ Material of step wedge blocks can be customized
- ◆ Accuracy: ±0.02mm
- ◆ Stainless steel material: 45#

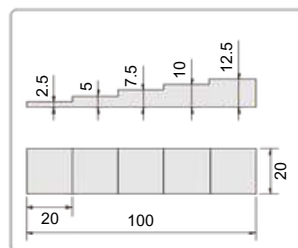


STB-4B

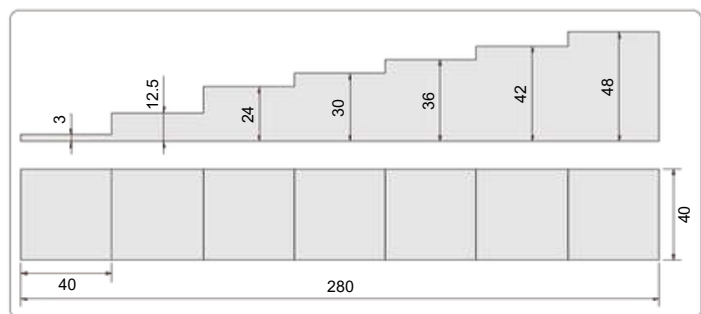
unit:mm



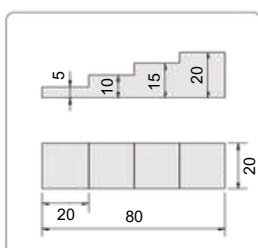
STB-4A



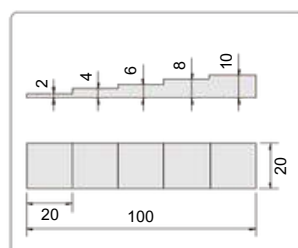
STB-5A



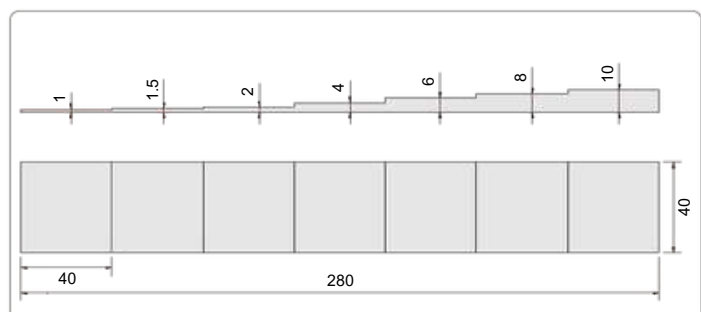
STB-7A



STB-4B



STB-5B



STB-7B

THICKNESS



- ◆ Fast and non-destructive test to identify alloy grade and composition
- ◆ For all kinds of high and low temperature alloy steel, stainless steel, tool steel, chromium/molybdenum steel, nickel alloy, cobalt alloy, nickel/cobalt heat resistant alloy, titanium alloy
- ◆ Can measure the coating thickness like PCB, range: 0.01-30μm
- ◆ IP54 dust/waterproof



Iron-based alloy	
957A C1	
104	
Steady 20 s	
Element	%
Fe	71.51
Cr	18.45
Ni	3.43
Mn	1.18
Cu	0.23
V	0.09
Mo	0.05
Sn	0.02
Ti	0.02
Nb	0.00

SPECIFICATION

Excitation source	50KV/200μA; Ag target, integrated end window, micro X-ray tube and high voltage power supply, matching power ≥4W
Detector	Si-PIN, window area 25mm ²
Elemental analysis range	Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, Se, Zr, Nb, Mo, Rh, Pd, Ag, Cd, Sn, Sb, Hf, Ta, W, Re, Pb, Bi
Alloy analysis mode	automatically identify alloy grade/alloy material qualified test mode
Collimator filter	7 groups
Display	5-inch LCD touch screen
Analysis	3-60 sec (adjustable)
Memory	built-in 64G, storage data, >500000 groups
Data transmission	built-in WIFI, U disk, blue-tooth (support blue-tooth printer)
Data export format	EXCEL, BMP, PDF, CSV
Battery	6800mAh lithium battery, for 8 hours working time
Air pressure compensation	built-in pressure measurement module for system compensation and correction
System	Win-IOT operation system
Work environment	temperature: 0~40°C, relative humidity: 10%~90%
Dimension	250×320×80mm
Weight	1900g

INCLUDED ACCESSORIES

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

HTC-1

TEMPERATURE METER



VIDEO



SPECIFICATION

Temperature range	-20°C-60°C
Temperature accuracy	1%
Temperature resolution	0.1 °C
Humidity range	10%RH-99%RH
Humidity accuracy	5%
Humidity resolution	1%
Power supply	AAA battery
Dimension	98×106×20 mm
Weight	50g

INCLUDED ACCESSORIES

Main unit	1pc
Battery	1pc

HTC-70

TEMPERATURE METER



TEMPERATURE

- ◆ External probe
- ◆ Probe is IP67 protection level, can measure the water temperature in fish tank



SPECIFICATION

Temperature range	-5°C-70°C
Temperature accuracy	±1 °C
Temperature resolution	0.1 °C
Humidity range	10%RH-99%RH
Humidity accuracy	5%
Humidity resolution	1%
Power supply	AAA battery
Dimension	98×120×21 mm
Weight	60g

INCLUDED ACCESSORIES

Main unit	1pc
Battery	1pc



HTC-300

TEMPERATURE METER FOR FOOD



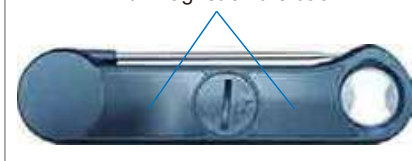
- ◆ Used to measure the temperature inside of food
- ◆ With magnet on the back
- ◆ Automatic power on/off
- ◆ With calibration function



SPECIFICATION

Temperature range	-50°C-300°C(-58°F-572°F)
Temperature accuracy	0.8°C(0-150°C)
Temperature resolution	0.1 °C/ 0.1°F
Max. protrusion depth	110mm
Power supply	CR2032
Dimension	164×42×20 mm
Weight	100g

With magnet on the back



INCLUDED ACCESSORIES

Main unit	1pc
CR2032 Battery	1pc

IT700/IT1650S

INFRARED THERMOMETER



- ◆ For quick measuring remote temperature
- ◆ Easy to operate



VIDEO

SPECIFICATION

Code	IT700	IT1650S
Measuring temperature range	-50°C-950°C	-50°C-1650°C
Accuracy	1.5°C(<75°C) /2%(75-500°C) /3% (>500°C)	
Repeatability	0.5 °C or 1%	
Distance spot ratio	12:1	50:1
Response time	500ms	
Resolution	0.1 °C	
Power supply	9V battery	
Emissivity	0.1-1.00 (adjustable)	
Dimension	186×119×50 mm	225×160×66 mm
Weight	185g	320g



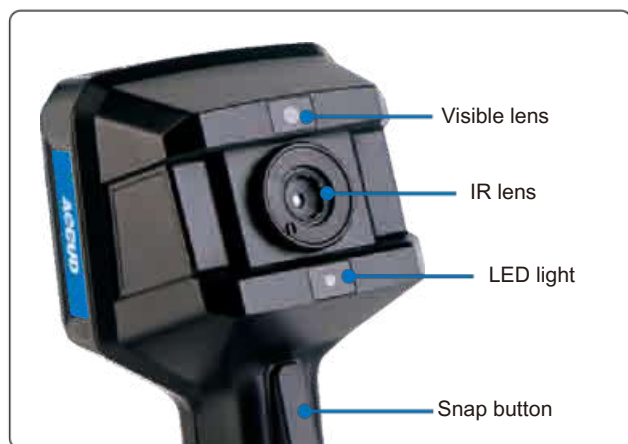
IT700

INCLUDED ACCESSORIES

Main unit	1pc
Battery	1pc



- ◆ Trigger button for taking pictures
- ◆ The IR image can be mixed with visible image
- ◆ Built-in 5000mA rechargeable battery
- ◆ With USB/ WIFI data output interface
- ◆ With measuring software
- ◆ Menu in Chinese, English, Spanish, French, Japanese, Korean, Russian, Arabian



SPECIFICATION

IR image	Resolution	220x160
	Measuring range	-10°C - 450°C
	Accuracy	±2°C(<100°C), 2%(≥ 100°C)
	Detector	8-14um
	Frame rate	9Hz
	Field of view	Horizontal :56°,vertical:42°
	Lens	Ø4mm
	Measuring method	Max, Min, center spot and average
	Emissivity	0.1-1(adjustable)
	Color palettes	8 types
Visible camera	Resolution	640x480
	Frame rate	25Hz
	Illumination	LED
Screen size		3.5 inch
Image		outline fusion, overlay fusion, picture in picture, IR image, visible
Data output		USB/WIFI
Image storage		8G, can save 20,000 pictures
Image format		TIFF
Working temperature		-10°C-50°C
Protection level		IP54
Power supply		Rechargeable battery, for 5 hours working
Size		230×100×90mm
Weight		420g

INCLUDED ACCESSORIES

Main unit	1pc
USB cable and software	1pc

DMT600

DIGITAL MULTIMETER

- ◆ With protective case
- ◆ With backlight
- ◆ With low battery indicator
- ◆ Safety rating: CAT III 600V



test leads (included)

SPECIFICATION

Function	Range	Resolution(d)	Accuracy
DC Voltage	200mV/2V/20V/200V	0.1mV/1mV/10mV/100mV	$\pm(0.5\%+4d)$
	600V	1V	$\pm(1\%+5d)$
AC Voltage	200V/600V	100mV/1V	$\pm(1.2\%+10d)$
DC Current	2mA/20mA/200mA	1μA/10μA/100μA	$\pm(1.5\%+3d)$
	10A	100mA	$\pm(2\%+5d)$
Resistance	200Ω	0.1Ω	$\pm(1\%+5d)$
	2kΩ/20kΩ/200kΩ	1Ω/10Ω/100Ω	$\pm(0.8\%+3d)$
	2MkΩ	1kΩ	$\pm(1\%+15d)$
Diode test	open circuit voltage 2.8V DC		
Continuity check	<50Ω		
Power supply	9V battery		
Dimension	150×75×50 mm		
Weight	325g		



INCLUDED ACCESSORIES

Main unit	1pc
9V battery	1pc
Test lead	2pcs

DCM600

DIGITAL AC/DC CLAMP METER

- ◆ 35mm open size
- ◆ With data hold function
- ◆ With low battery indicator
- ◆ Safety rating: CAT III 600V



test leads (included)

SPECIFICATION

Function	Range	Resolution(d)	Accuracy
AC Current	2A	1mA	$\pm(2.5\%+20d)$
	20A	10mA	$\pm(2.5\%+5d)$
	200A	100mA	$\pm(2.5\%+8d)$
	400A	1A	$\pm(2.5\%+8d)$
	600A	1A	for reference
DC Voltage	600V	1V	$\pm(1.5\%+5d)$
AC Voltage	600V	1V	$\pm(1.5\%+5d)$
Resistance	2000K Ω	10K Ω	$\pm(1.2\%+3d)$
Continuity check	<30Ω		
Power supply	2× AAA batteries		
Dimension	195×48×30 mm		
Weight	380g		



INCLUDED ACCESSORIES

Main unit	1pc
AAA battery	2pcs
Test lead	2pcs

WMM700

WOOD MOISTURE METER



- ◆ For quick measuring wood moisture
- ◆ Easy to operate



Extension probe (Optional)

SPECIFICATION

Moisture	Measuring range	2-40%/50%/60%/70%(for different wood)
	Accuracy	±1%+0.5
	Resolution	0.5 %
Temperature	Measuring range	-10 °C-60°C
	Accuracy	±1%
	Resolution	0.1 °C
Humidity	Measuring range	20%RH-95%RH
	Accuracy	±5% RH
	Resolution	0.1% RH
Power supply		2 ×AAA
Dimension		136×55×60mm
Weight		107g



INCLUDED ACCESSORIES

Main unit	1pc
Battery	2pcs

OPTIONAL ACCESSORIES

Extension probe	WMM700-EP
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WMM900

CONCRETE MOISTURE METER



- ◆ Use high frequency electromagnetic wave method to measure wall or concrete moisture
- ◆ Different density can be selected according to different building materials, increase the accuracy

Measure wall moisture



Measure concrete moisture



SPECIFICATION

Measuring range	0-40%
Accuracy	±2%
Resolution	0.5 %
Working temperature	0 °C-40°C
Power supply	3 ×AAA
Dimension	132×67×26mm95g
Weight	95g



INCLUDED ACCESSORIES

Main unit	1pc
Battery	3pcs

PORTABLE

- ◆ With back light
- ◆ Real-time/ Max/Min/average measurement
- ◆ Can review the last measuring value



VIDEO



SPECIFICATION

Measuring range	2.5-99999rpm	
Resolution	<1000rpm	0.1rpm
	≥1000rpm	1rpm
Accuracy	<1000rpm	± (0.1%+5d)rpm, d is resolution
	≥1000rpm	± (1%+5d)rpm, d is resolution
Measuring distance	50-500mm	
Power supply	2x1.5V AAA batteries	
Dimension	56×30×127 mm	
Weight	106g	

- ◆ Measure rotary speed, line speed
- ◆ With back light
- ◆ Real-time/ Max/Min/average measurement
- ◆ Can review the last measuring value



wheel



clamping sleeve



small cone



cone



cone cavity



SPECIFICATION

Range	rotary speed	0.5-19999rpm 0.05-1999.9m/min
	line speed	0.1rpm (<1000rpm), 1rpm (≥1000rpm)
Resolution(d)	rotary speed	0.01m/min (<100m/min), 0.1m/min (≥100m/min)
	line speed	±(0.5%+d)rpm(<300rpm)
Accuracy	rotary speed	±(0.05%+d)rpm(≥300rpm)
	line speed	±(0.1%+d)m/min
Sampling time	0.8s (above 60rpm)	
Power supply	2x1.5V AAA battery	
Dimension	55×33×158 mm	
Weight	106g	

OPTIONAL ACCESSORIES

Main unit	1pc
Accessories (5 types)	1pc.each
AAA battery	2pcs

DS40K

DIGITAL TACHOMETER/STROBPSCOPE



- ◆ Used to measure the rotation and vibration speed
- ◆ With back light
- ◆ With fine and coarse adjustment



SPECIFICATION

Measuring range	60 ~ 40000rpm	
Resolution	<400rpm	0.01rpm
	400-4000rpm	0.1rpm
Accuracy	≥4000rpm	1rpm
	≥1000rpm	±0.05%rpm
Memory	10	
Power supply	Lithium ion rechargeable batteries	
Dimension	195×73×38 mm	
Weight	220g	

VT63

PEN TYPE VIBRATION TESTER

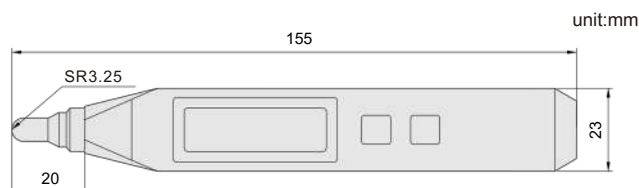


PORTABLE

- ◆ Measure the motor, fan, compressor and measuring tools vibration
- ◆ Power off automatically
- ◆ Pocket size



VIDEO



SPECIFICATION

Range	Speed	0.1-199.9m/s (frequency range:10-1KHz)
	Accelerated speed	0.1-199.9m/s 2 (frequency range: 10-15KHz)
	Displacement	0.001-1.999mm (frequency range:10-500Hz)
Accuracy	±5%+2 digit	
Power supply	rechargeable battery	
Operation temperature	0-40°C	
Operation humidity	0-90%	
Dimension	152x23x12mm	
Weight	75g	

INCLUDED ACCESSORIES

Main unit	1pc
Charger	1pc



masup.com.mx



2227108117

TM100

LASER DISTANCE METER



- ◆ IP54 protection
- ◆ With a level in the body
- ◆ With distance, area, volume and height measurement function
- ◆ With Max, Min measuring function
- ◆ With back light
- ◆ Power off automatically



VIDEO



SPECIFICATION

Measuring range	0.1m-100m
Accuracy (at the prefect reflection surface)	1.5mm
Resolution	1mm
Unit	m/inch/ft
Light spot	Φ8mm@40m
Memory	20
Power supply	2x1.5V AAA batteries
Laser	635nm<1mW
Dimension	120×54×30 mm
Weight	110g

INCLUDED ACCESSORIES

Main unit	1pc
Battery	2pcs

TM40/100B

LASER DISTANCE METER



- ◆ Economic type
- ◆ With a level in the body
- ◆ With distance, area, volume and height measurement function
- ◆ With Max, Min measuring function
- ◆ With backlight
- ◆ Power off automatically



VIDEO



TM100B

SPECIFICATION

Code	TM40	TM100B
Measuring range	0.1m-40m	0.1m-100m
Accuracy (at the prefect reflection surface)	2mm	
Resolution	1mm	
Unit	m/inch/ft	
Light spot	Φ8mm@40m	
Memory	20	
Power supply	2x1.5V AAA batteries	
Laser	635nm<1mW	
Dimension	120×54×30 mm	
Weight	110g	

INCLUDED ACCESSORIES

Main unit	1pc
Battery	2pcs

TM1200

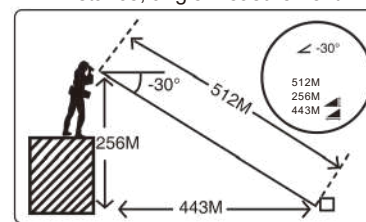
LASER DISTANCE METER



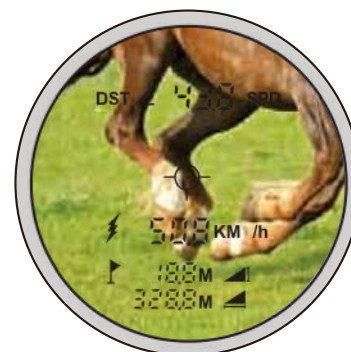
- ◆ IP54 protection
- ◆ Can measure distance, angle and speed
- ◆ Power off automatically



Distance, angle measurement



Speed measurement



SPECIFICATION

Measuring range	3m-1500m
Magnification	8X
View field	7°
Distance measuring accuracy	±1m
Speed measuring accuracy	±5km/h
Power supply	Rechargeable battery(for 30000 times)
Laser	635nm<1mW
Dimension	104×77×41 mm
Weight	197g

INCLUDED ACCESSORIES

Main unit	1pc
USB cable	1pc

LM100

LIGHT METER



- ◆ Unit: LUX/FC
- ◆ Max/Min/average measurement
- ◆ With data hold function
- ◆ Power off automatically

SPECIFICATION

Range	0.1-200000LUX/0.01-20000FC
Accuracy	±(6%+d) d is resolution
Resolution	0.1LUX (<1000), 1LUX (≥1000)
Temperature range	0-60°C
Temperature accuracy	2°C
Sampling time	8 times/s
Repeatability	±2%
Light wavelength range	400-700nm
Power supply	-10-50°C
Dimension	152×55×33 mm
Weight	136g



INCLUDED ACCESSORIES

Main unit	1pc
AAA battery	3pcs

PORTABLE



masup.com.mx



2227108117



- ◆ 2 lines(cross line)
- ◆ With auto-level mode



SPECIFICATION

Laser beam	green
Leveling range	4°±1°
Leveling accuracy	±3mm/10m
Horizontal/vertical accuracy	±3mm/10m
Laser class	Class II
Laser wavelength	510-530nm
Working distance(Line)	30m
Protection level	IP54
Power supply	2×AA
Operation temperature	-10°C- 50°C
Dimension	66x75x76mm
Weight	255g

STANDARD DELIVERY

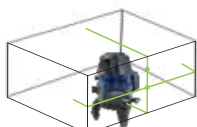
Main unit	1pc
Stand	1pc
Battery	2pcs



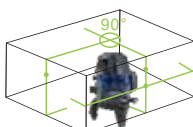
Stand



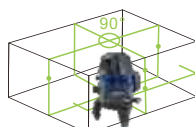
- ◆ With auto-level mode



cross line



3 lines



5 lines

SPECIFICATION

Code	LL025	LL325	LL525
Laser beam	cross line	3 lines	5 lines
Laser beam color	green		
Leveling range	<3°		
Leveling accuracy	±1mm/7m		
Horizontal/vertical accuracy	±1mm/7m		
Laser class	Class II		
Laser wavelength	635-650nm		
Max.working distance(Line)	30m		
Line width	3mm@10m		
Power supply	rechargeable battery		
Operation temperature	-10°C- 50°C		
Dimension	115x115x200mm		
Weight	1kg		



LL025

STANDARD DELIVERY

Main unit	1pc
Battery	2pcs
AC/DC adapter	1pc

OPTIONAL ACCESSORIES

Stainless steel stand	LL025-ST
-----------------------	----------

Stand(optional)



SLM130

DIGITAL SOUND LEVEL METER



- ♦ Fast(2 time/sec) /slow(1 time/sec) display
- ♦ With back light
- ♦ Real-time and Max/Min measurement
- ♦ High limits setting with judgement and alarm



VIDEO



SPECIFICATION

Measuring sound range	30-130db
Accuracy	1.5db
Resolution	0.1db
Power supply	9V battery
Dimension	143×56×35 mm
Weight	64g

AM30

DIGITAL ANEMOMETER



PORTABLE

- ♦ With temperature display
- ♦ With back light
- ♦ Real-time/ Max/Average measurement
- ♦ Unit: m/s, km/h, ft/min, Knots, mph



VIDEO



SPECIFICATION

Measuring range	0.3-30m/s
Accuracy	±5%
Resolution	0.1m/s
Power supply	9Vbattery
Dimension	155×56×35 mm
Weight	154g





- ◆ Measure PH value and temperature
- ◆ Automatic temperature compensation
- ◆ Temperature unit conversion function
- ◆ Used for PH measurements like water or paper
- ◆ Waterproof button, more than 20,000 press times working life
- ◆ Calibration method can be selected for multi-point calibration or single-point calibration
- ◆ Electrode loss can be viewed for timely replacement of the electrode head
- ◆ ASTM and European standard are available
- ◆ Automatic power off

SPECIFICATION

PH range	-2.00~+16.00PH
PH accuracy	±0.01PH
Temperature measuring range	0-100.0°C/32-212°F
Type of electrode	Bubble electrodes
Display	LCD screen with backlight
Power supply	2×AAA batteries
Working temperature	0-60.0°C/32-140°F
Dimension	Ø39×180
Weight	108g



INCLUDED ACCESSORIES

Main unit	1pc
Battery	2pcs
PH buffer powder	3pcs

- ◆ It can be used to measure the diameter of wires, cables and steel bars, as well as the width or thickness of steel strips and copper strips
- ◆ Can be accurately measured whether the product shakes or not
- ◆ Non contact and precision measurement

SPECIFICATION

Code	LSM25	LSM50
Range	0.1-20mm	0.4-50mm
Accuracy (d is diameter in mm)	±(0.2d+2)μm	±(0.3d+2)μm
Resolution	1μm	
Laser wavelength	650nm	
Sampling time	600 times/s	
Output	RS485/MODBUS	
Alarm output	DC24V/1A	
Working temperature	5-45°C	
Power supply	AC100-240V	
Dimension	298×72×167 mm	400×76×164 mm
Weight	8kg	10kg

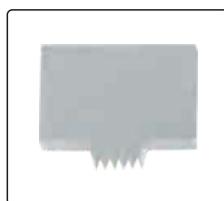


LSM25

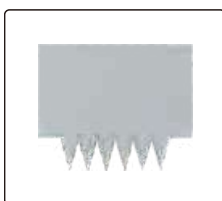
OPTIONAL ACCESSORIES

Main unit	1pc
Display	1pc
Power cable	1pc

- ♦ Used to test the adhesion of paint on metal, plastic and so on
- ♦ Conforms to ISO 2409, ASTM D3359, BS00E6
- ♦ Blade hardness: 58-62HRC



blade(1mm pitch)



blade(2mm pitch)



blade(3mm pitch)



3M tape



Magnifier

step 1: make grid
cutting on surfacestep 2: paste and
remove the tape

0	5B	0	
1	4B	0-5%	
2	3B	5-15%	
3	2B	15-35%	
4	1B	35-65%	
5	0B	>65%	

step 3: according to the
shedding status, judge
the adhesion grade

SPECIFICATION

Blade pitch		1mm	2mm	3mm
Applied paint thickness	on hard substrate (like metal)	0-60μm	61-120μm	121-250μm
	on soft substrate (like wood, plaster)	—	0-120μm	121-250μm
Minimum substrate thickness	hard substrate (like metal)	0.25mm	0.25mm	0.25mm
	soft substrate (like wood, plaster)	—	10mm	10mm
Minimum size of test sample		150x100mm		
Dimension		130x25x30mm		
Weight		130g		

INCLUDED ACCESSORIES

Main unit	1pc
1mm pitch blade	1pc
2mm pitch blade	1pc
3mm pitch blade	1pc
Test tape	1pc
Magnifier	1pc
Small brush	1pc



- ♦ Used to measure the concentration of coolant, honey water and salt water
- ♦ Power off automatically

Pipette (included)



SPECIFICATION

Measuring range	0-50%
Graduation	0.1%
Accuracy	±0.2%
Battery	rechargeable battery
Dimension	143x42x22mm
Weight	115g

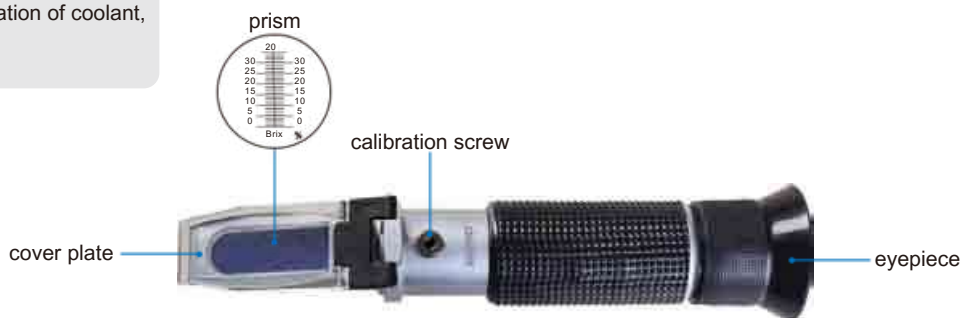
INCLUDED ACCESSORIES

Main unit	1pc
Pipette	1pc
Cable for recharging	1pc

SERIES RM

PORTABLE REFRACTOMETER

- ♦ Used to measure the concentration of coolant, honey water and salt water



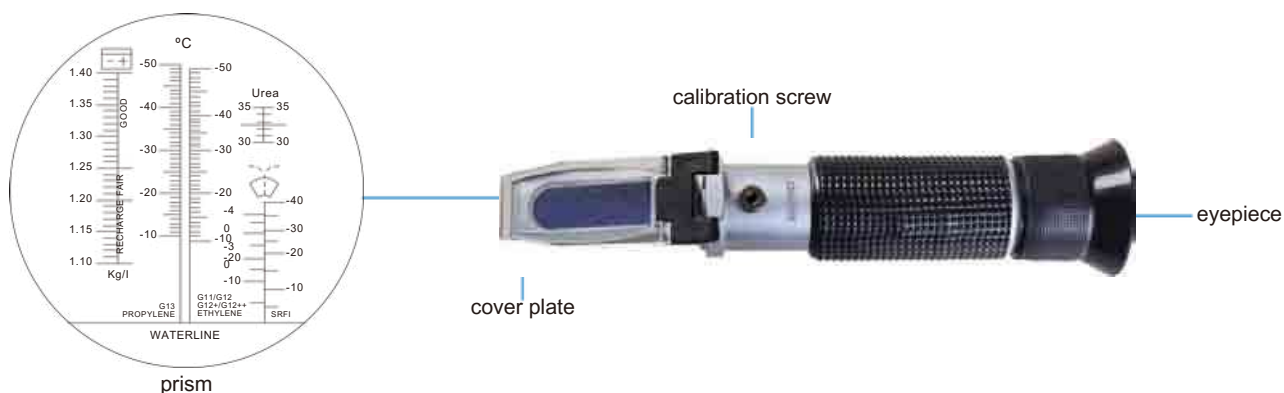
RM32

SPECIFICATION

Code	RM10	RM20	RM32
Measuring range	0-10%	0-20%	0-32%
Graduation	0.2%		
Accuracy	±0.1%	±0.1%	±0.2%
Dimension	160x27x40mm		
Weight	175g		

INCLUDED ACCESSORIES

Main unit	1pc
Pipette	1pc
Screwdriver	1pc


SPECIFICATION

Range (ethylene)	Glycol	0-50°C
	Propylene Glycol	0-50°C
	Battery fluid	1.10-1.40kg/L
	Cleaning liquid	0-40°C
	Adblue(Urea)	30-35%
Accuracy (ethylene)	Glycol Propylene	5°C
	Glycol	5°C
	Battery fluid	0.01kg/L
	Cleaning liquid	10°C
	Adblue(Urea)	0.2%

INCLUDED ACCESSORIES

Main unit	1pc
Pipette	1pc
Screwdriver	1pc



- ◆ To test the gloss of painting, printing ink, surfaces of future metal, granite, ceramic, plastic, paper, etc.
- ◆ Conforms to ISO 2813, ASTM D 2457, ASTM D 523
- ◆ Large display screen


SPECIFICATION

Incidence angle	20°	60°	85°
Measuring range	0 ~ 2000GU	0 ~ 1000GU	0 ~ 160GU
Resolution	0.1GU (range<119.9GU)		
Accuracy	±1.5GU (range<100GU)		
	±1.5% (range>100GU)		
Repeatability	±0.1GU (range<10GU)		
	±0.2GU (range: 10~100GU)		
	±0.2% (range>100GU)		
Measuring speed	1s		
Measuring area	10×10mm	15×9mm	36×5mm
Power supply	Rechargeable battery		
Dimension	160×75×90mm		
Weight	350g		

INCLUDED ACCESSORIES

Main unit	1pc
Calibration block	1pc
USB cable and software	1pc



- ◆ Basic type
- ◆ To test the gloss of painting, printing ink, surfaces of future metal, granite, ceramic, plastic, paper, etc.
- ◆ Conforms to ISO 2813, ASTM D 2457, ASTM D 523
- ◆ With manufacturer inspection certificate



SPECIFICATION

Incidence angle	60°
Measuring range	0 ~ 200GU
Measuring area	9x15mm
Resolution	1GU
Repeatability	±1GU (0-100GU), ±1%GU (100-200GU)
Measuring speed	0.5S
Power supply	AA battery
Dimension	160x52x84mm
Weight	300g

INCLUDED ACCESSORIES

Main unit	1pc
Calibration block	1pc
AA battery	1pc



- ◆ Conform to the standards: ASTM D1003/1044, GB/T 2410, JJF 1303-2011, CIE 15.2, JIS K7105, JIS K7361, JIS K 7136
- ◆ The instrument can easily achieve ASTM D1003 non-compensation method
- ◆ With quality control software

SPECIFICATION

Measuring range	0~100%
Accuracy	<0.4
Repeatability	0.1
Resolution	0.1
Integrating sphere size	Φ154mm
Light source	400nm to 700nm, combined LED light
Sensor	The PD array detector, satisfies CIE V(λ)2 degree visual response
Measuring aperture	Φ20mm
Sample size	Thickness<170mm
Observer angle	2°
Illumination	D65, A, C
Measuring time	about 1.5s
Data output	USB
Illumination life span	5 years, more than 3 million times measurements 7-inch TFT color
Display	LCD, capacitive touch screen
Size	290×211×511mm
Weight	7.6kg



INCLUDED ACCESSORIES

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

CM100

COLOR METER



- ◆ Pocket size, easy to carry
- ◆ Press one button to get the measure result in one second
- ◆ With software

SPECIFICATION

illuminating/viewing geometry	8/d
Measuring aperture	Ø8mm
Measuring wave length	400~700nm
Wave length step	10nm
View angle	2°/10°
Light source device	LED light
Memeory	10pcs standards
Measuring time	1s
Power supply	rechargeable lithium-ion battery
Lamp Life	5 years, more than 3 million measurements
Charging Time	12 thousand measurements(full electricity)
Output	USB/ bluetooth
Dimension	Ø30×100 mm
Weight	88g



INCLUDED ACCESSORIES

Main unit	1pc
White calibration block	1pc
Charger	1pc
USB cable and software	1pc

CM200

COLOR METER



PORTABLE

- ◆ Convenient and fast locating
- ◆ Portable structure design which is more conducive to keep the instrument stable



SPECIFICATION

illuminating/Viewing Geometry	8/d
Measuring Aperture	Φ8mm
Light Source	D65
Light Source Device	LED blue light excitation
Memeory	5000pcs standards
Repeatability	<0.08ΔE*ab
Power supply	rechargeable lithium-ion battery
Lamp Life	3 years, more than 1 million measurements
Charging Time	2 hours (first time 8 hours~100% electricity)
Dimension	205×70×100 mm
Weight	500g

INCLUDED ACCESSORIES

Main unit	1pc
White calibration block	1pc
Charger	1pc
USB cable and software	1pc





VIDEO



Data output



Charge

- ◆ Concave grating spectrophotometric
- ◆ 3.5-inch TFT color LCD
- ◆ D/8 geometrical optics, conforms with CIE No.15, ISO7724/1, ASTM E1164, DIN5033
- ◆ Use long life and low power consumption combined LED light source
- ◆ Switchable 8mm/4mm aperture, support both SCI and SCE at the same time
- ◆ Large storage capacity, over 20,000 measurement data
- ◆ USB port and Bluetooth 4.0
- ◆ With software



SPECIFICATION

Optical geometry	reflect: di:8°, de:8°(diffused illumination, 8-degree viewing angle)
Integrating sphere size	Ø48mm
Light source	combined LED light
Spectrophotometric mode	concave grating
Sensor	256 image element double array CMOS image sensor
Wavelength range	400~700nm
Wavelength interval	10nm
Semiband width	10nm
Measured reflectance range	0~200%
Measuring aperture	dual aperture: MAV: Ø8mm; SAV: Ø4mm
Specular component	SCI&SCE
Color space	CIE LAB, XYZ, Yxy, LCh, CIE LUV, HunterLAB
Color difference formula	ΔE^*_{ab} , ΔE^*_{uv} , ΔE^*_{94} , $\Delta E^*_{cmc}(2:1)$, $\Delta E^*_{cmc}(1:1)$, ΔE^*_{00v} , ΔE (Hunter)
Other colorimetric index	WI(ASTM E313, CIE/ISO, AATCC, Hunter), YI(ASTM D1925, ASTM 313), Metamerism index MI, Staining fastness, Color fastness, Color strength, Opacity
Observer angle	2°/10°
Illuminant	A, C, D50, D55, D65, D75, F1, F2, F3, F4, F5, F6, F7, F8, F9, F10, F11, F12, CWF, U30, T183, T184, U35
Displayed data	spectrogram/values, samples chromaticity values, color difference values/graph, PASS/FAIL result, color offset
Measuring time	2.6s
Repeatability	Spectral reflectance Colorimetric values
	MAV/SCI, within 0.1% of standard deviation(400~700nm: 0.2%)
	MAV/SCI: $\Delta E^* \leq 0.04$
Inter-instrument error	MAV/SCI: $\Delta E^* \leq 0.2$
Measurement mode	single measurement, average measurement
Data port	USB, Bluetooth 4.0
Data storage	standard 1000 pcs, sample 20000 pcs
Illuminant life span	5 years, more than 3 million times measurements
Battery	Li-ion battery, 5000 measurements within 8 hours
Dimension	184×77×105mm
Weight	600g

INCLUDED ACCESSORIES

Main unit	1pc
White and black calibration cavity	1pc
USB cable and software	1pc
AC/DC adapter	1pc

OPTIONAL ACCESSORIES

Printer	CM3010-PT
Powder test box	CM3010-PB



- ◆ For pull and push measurement
- ◆ Adjusting the display direction automatically
- ◆ With overload protection
- ◆ Peak and real-time working mode
- ◆ Unit: mN, N, gf, kgf, ozf, lbf
- ◆ Memory: 1000
- ◆ Power off automatically
- ◆ Low and high limits setting with judgement
- ◆ With software, can show the force graph
- ◆ With manufacturer inspection certificate



VIDEO



DF200



Stand(Code: **FS1000**, **Optional**)



PR100 printer (**Optional**)



flat



v-type



knife-edge



point



pull clamp



extension rod

SPECIFICATION

Code	DF10	DF20	DF50	DF100	DF200	DF500	DF1000
Range	10N	20N	50N	100N	200N	500N	1000N
Resolution	0.001N	0.005N	0.005N	0.005N	0.005N	0.01N	0.1N
Accuracy	$\pm 0.2\% \times FS$ (full scale)						
Power	rechargeable battery						
Dimension	153x73x34mm						
Weight	700g						

INCLUDED ACCESSORIES

Main unit	1pc
Charger	1pc
Software	1pc
Push/pull clamps	6pcs (flat, V type, knife-edge, point, pull clamp, extension rod)

OPTIONAL ACCESSORIES

Wireless printer	PR100
Stand	FS1000



- ◆ For pull and push measurement
- ◆ Adjusting the display direction automatically
- ◆ With overload protection
- ◆ Peak and real-time working mode
- ◆ Unit: mN, N, gf, kgf, ozf, lbf
- ◆ Memory: 1000
- ◆ Power off automatically
- ◆ Low and high limits setting with judgement
- ◆ With software, can show the force graph
- ◆ With manufacturer inspection certificate



VIDEO



DF5K



PR100 printer (Optional)



flat clamp (Optional)



extension (Optional)



pull clamp (Optional)

SPECIFICATION

Code	DF2K	DF5K	DF10K	DF20K
Range	2000N	5000N	10000N	20000N
Resolution	0.5N	1N	1N	1N
Accuracy	$\pm 0.2\% \times \text{FS (full scale)}$			
Power	rechargeable battery			
Dimension	153x73x34mm			
Weight	700g			

INCLUDED ACCESSORIES

Main unit	1pc
Sensor	1pc
Charger	1pc
Software	1pc

OPTIONAL ACCESSORIES

M12 Flat clamp(for DF2K, DF5K and DF10K)	DF2K-FC
M12 Extension (for DF2K, DF5K and DF10K)	DF2K-ER
M12 Pull clamp (for DF2K, DF5K and DF10K)	DF2K-PC
M18 Flat clamp (for DF20K)	DF20K-FC
M18 Extension (for DF20K)	DF20K-ER
M18 Pull clamp (for DF20K)	DF20K-PC
Wireless printer	PR100

- ◆ For force gauges
- ◆ To be used in vertical and horizontal orientation



Force gauge is
not included



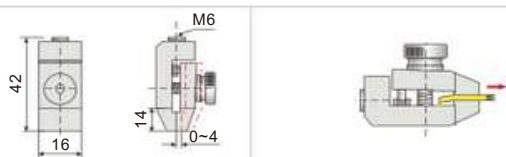
FS1000

SPECIFICATION

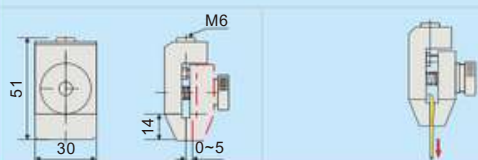
Code	FS1000S	FS1000
Scale	with	without
Load capacity	1000N	
Travel	200mm (3mm vertical movement per revolution of handwheel)	
Dimension	96x 250 x 446mm	
Weight	13kg	

unit:mm

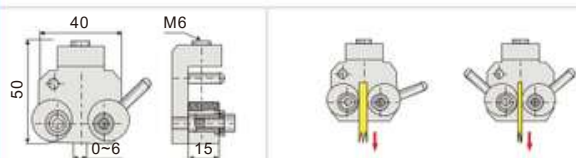
FLAT CHUCK (Code: DF-FC1)



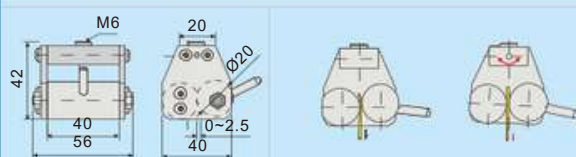
FLAT CHUCK (Code: DF-FC2)



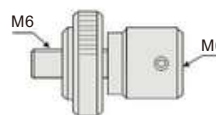
CAM GRIP (Code: DF-CG1)



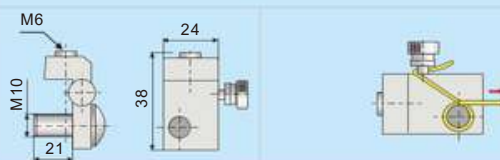
CAM GRIP (Code: DF-CG2)



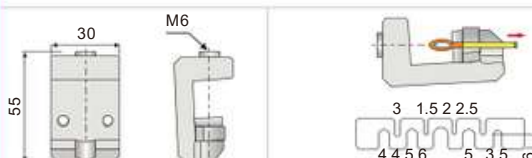
LOCK THREAD ADAPTER (Code: DF-TA)



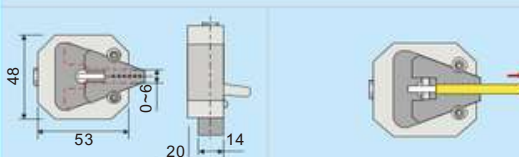
WIRE GRIP (Code: DF-WG1)



WIRE TERMINAL GRIP (Code: DF-TWG1)



WEDGE GRIP (Code: DF-WT1)



DFS500**MOTORIZED VERTICAL TEST STAND**

- ◆ Used to measure the force of pull or push with series DF force gauge
- ◆ Programmable, can do automatic testing cycle
- ◆ Can set three working modes: displacement cycle, force cycle, user-defined cycle
- ◆ With alarm: position, force and motor block

SPECIFICATION

Max. capacity	650N
Max. travel	220mm
Moving speed	30-720mm/min(adjustable)
Resolution of speed	1mm/min
Moving speed accuracy	2%
Displacement resolution	0.01mm
Displacement accuracy	±0.3mm
Output	USB, RS232
Working temperature	10-40°C
Power supply	AC100-240V
Dimension	340×180×630 mm
Weight	15kg

**INCLUDED ACCESSORIES**

Main unit	1pc
Software and USB cable	1pc
Power cable	1pc

DFS500H**MOTORIZED HORIZONTAL TEST STAND**

- ◆ Used to measure the force of pull or push with series DF force gauge
- ◆ Programmable, can do automatic testing cycle
- ◆ Can set three working modes: displacement cycle, force cycle, user-defined cycle
- ◆ With alarm: position, force and motor block

**SPECIFICATION**

Max. capacity	650N
Max. travel	220mm
Moving speed	30-720mm/min(adjustable)
Resolution of speed	1mm/min
Moving speed accuracy	2%
Displacement resolution	0.01mm
Displacement accuracy	±0.3mm
Output	USB, RS232
Working temperature	10-40°C
Power supply	AC100-240V
Dimension	671×120×278 mm
Weight	13kg

INCLUDED ACCESSORIES

Main unit	1pc
Software and USB cable	1set
Power cable	1pc

**FORCE**

- ◆ For spring force testing
- ◆ Peak and real-time working mode
- ◆ Unit: N, kgf, lbf
- ◆ Power off automatically
- ◆ Low and high limits setting with judgement
- ◆ With digital scale, resolution:0.01mm



DST50

SPECIFICATION

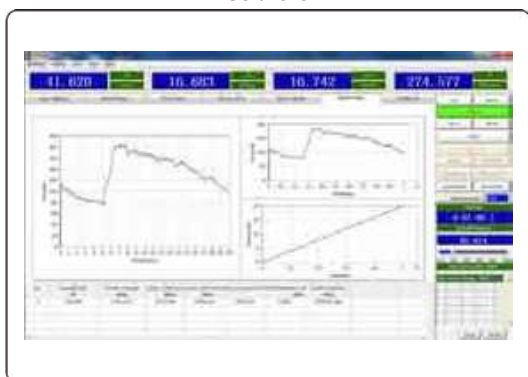
Code	DST10	DST20	DST30	DST50	DST100	DST200	DST300	DST500
Capacity	10N	20N	30N	50N	100N	200N	300N	500N
Resolution	0.001N	0.002N	0.01N	0.01N	0.02N	0.05N	0.1N	0.1N
Test range	5%-100% capacity							
Accuracy	±1% x FS (full scale)							
Max. spring length(free status)	65mm			95mm				
Range of digital scale	65mm			95mm				
Disk diameter	Ø30mm			Ø49mm				
Power	220V/110V							
Dimension	300x235x600mm			300x235x620mm				
Weight	13.2kg	13.2kg	13.2kg	17.3kg	19.1kg	19.1kg	19.1kg	20.8kg

INCLUDED ACCESSORIES

Main unit	1pc
Power cable	1pc
Foot screw	4pcs

- ◆ For tensile, tear testing of different kinds of materials
- ◆ With testing analysis software
- ◆ Unit: N, kN, Kg, Lbf, Mpa, Lbf/in², Kg/mm²

Software



UTT100



UTT1000

SPECIFICATION

Code	UTT50	UTT100	UTT200	UTT500	UTT1000	UTT2000	UTT10000	UTT20000
Type	single column				double column			
Max.capacity	50kg	100kg	200kg	500kg	1000kg	2000kg	10000kg	20000kg
Accuracy	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Resolution	1/1000000xFS (Max. capacity)				1/500000xFS(Max. capacity)			
Max. travel	600mm				800mm			
Width	180mm				450mm			
Test speed	0.1-500mm/min							
Moving speed accuracy	±0.3%							
Movement controller	servo motor							
Power supply	100-240AC							
Dimension	500×420×1250mm				750×500×1850mm		1100×760×2100mm	
Weight	50kg				260kg		750kg	

INCLUDED ACCESSORIES

Main unit	1pc
Computer	1pc
USB dongle	1pc
Fixture	1set



SERIES TWM

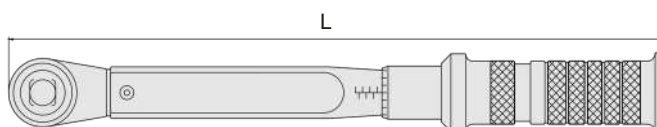
TORQUE WRENCH



- ◆ Easy to set the torque value
- ◆ Accuracy: $\pm 4\%$ *
- ◆ According to ISO6789, ASMEB107.14
- ◆ With manufacturer inspection certificate



TWM25



SPECIFICATION

Code	TWM25	TWM50	TWM100	TWM200	TWM340
Range	5 ~ 25N.m	10 ~ 50N.m	20 ~ 100N.m	40 ~ 200N.m	70 ~ 340N.m
Size of square drive	3/8"	3/8"	3/8"	1/2"	1/2"
Length(L)	275mm	275mm	380mm	505mm	695mm
Weight	420g	420g	580g	1.3kg	1.9kg

* Accuracy is available upon request

SERIES TWM-B

TORQUE WRENCH



- ◆ Economic type
- ◆ Easy to set the torque value
- ◆ Accuracy: $\pm 4\%$ (clockwise)
- ◆ According to ISO6789, ASMEB107.14
- ◆ With manufacturer inspection certificate



TWM25B

SPECIFICATION

Code	TWM25B	TWM60B	TWM60D	TWM110B	TWM110C	TWM210B	TWM330B
Range(N.m)	5 ~ 25	12 ~ 60	12 ~ 60	22 ~ 110	22 ~ 110	42 ~ 210	66 ~ 330
Size of square drive	1/4"	3/8"	1/2"	3/8"	1/2"	1/2"	1/2"
Length	250mm	415mm	425mm	460mm	470mm	490mm	565mm
Weight	350g	920g	980g	1.06kg	1.17kg	1.26kg	1.34kg

Code	TWM550B	TWM800B	TWM1000B	TWM1500B	TWM2000B	TWM3000B
Range(N.m)	110 ~ 550	160 ~ 800	200 ~ 1000	300 ~ 1500	400 ~ 2000	600 ~ 3000
Size of square drive	3/4"	3/4"	3/4"	1"	1"	1"
Length	900mm	1200mm	1200mm	1260mm	1260mm	1260mm
Weight	4.3kg	5.6kg	5.6kg	9.2kg	9.2kg	10.5kg

SERIES STWM

TORQUE WRENCH WITH BIT SET



- ◆ Accuracy: $\pm 4\%$ (clockwise)



STWM25



STWM110

SPECIFICATION

Code	STWM25	STWM110	STWM210
Torque wrench code	TWM25B	TWM110C	TWM210B
Range	5 ~ 25N.m	22 ~ 110N.m	42 ~ 210N.m
Size of square drive	1/4"	1/2"	1/2"
Bit size	Hexagon type: H2-H2.5-H3-H4-H5-H6-H8 Torx type: T10-T15-T20-T25-T27-T30 Extension rod: 100mm	Hexagon type: 17-19-21-22-23mm Extension rod: 125mm	
Main application	bicycle industry	automotive industry	
Torque wrench length	250mm	460mm	490mm
Weight	790g	2200g	2300g

SERIES TW

DIGITAL TORQUE WRENCH



- ◆ Clockwise or anti-clockwise operation
- ◆ Unit: N.m, in.lb, ft.lb, kg.cm
- ◆ Peak or real-time working mode
- ◆ Automatic power off
- ◆ With calibration certificate

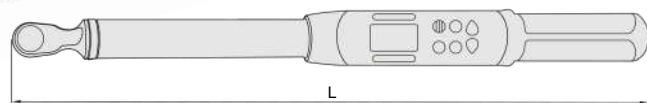


VIDEO



TW200

unit: mm



SPECIFICATION

Code	TW12	TW20	TW30	TW135	TW200	TW340	TW550	TW850	TW1500	TW2000
Range(N.m)	2.4 ~ 12	4 ~ 20	6 ~ 30	27 ~ 135	40 ~ 200	68 ~ 340	110 ~ 550	170 ~ 850	300 ~ 1500	400 ~ 2000
Resolution	0.01N.m	0.01N.m	0.1N.m	0.1N.m	1N.m	1N.m	1N.m	1N.m	1N.m	1N.m
Accuracy	Clockwise	$\pm 3\%$	$\pm 3\%$	$\pm 2\%$	$\pm 2\%$	$\pm 2\%$	$\pm 2.5\%$	$\pm 2.5\%$	$\pm 2.5\%$	$\pm 2.5\%$
	Anti-clockwise	$\pm 4\%$	$\pm 4\%$	$\pm 3\%$	$\pm 3\%$	$\pm 3\%$	$\pm 3.5\%$	$\pm 3.5\%$	$\pm 3.5\%$	$\pm 3.5\%$
Size of square drive	1/4"	1/4"	1/4"	3/8"	1/2"	1/2"	3/4"	3/4"	1"	1"
Length(L)	390mm	390mm	390mm	415mm	530mm	650mm	950mm	1220mm	1800mm	1800mm
Weight	900g	900g	900g	950g	1400g	1800g	3400g	4400g	13kg	14kg
Power	2xAA batteries									

TORQUE



SERIES TWD

DIAL TORQUE WRENCH



- ◆ Clockwise and counter-clockwise operation
- ◆ Comforms to DIN ISO 6789, ASME B107.300
- ◆ With manufacturer inspection certificate



TWD70

SPECIFICATION

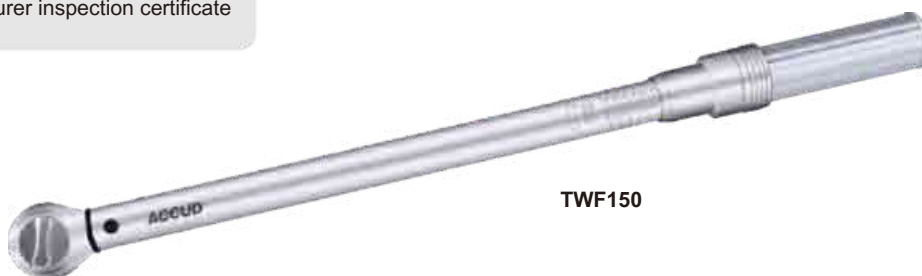
Code	TWD3	TWD9	TWD18	TWD35	TWD70	TWD140	TWD240	TWD350
Range	0.7~3.5N.m 6~30in.lb	1.8~9N.m 15~75in.lb	3.6~18N.m 30~150in.lb	7~35N.m 60~300in.lb	14~70N.m 120~600in.lb	28~140N.m 20~100ft.lb	48~240N.m 35~175ft.lb	70~350N.m 50~250ft.lb
Accuracy	±3%	±3%	±3%	±3%	±3%	±3%	±3%	±3%
Graduation	0.05N.m 0.5in.lb	0.1N.m 1in.lb	0.2N.m 2in.lb	0.5N.m 5in.lb	1N.m 10in.lb	2N.m 1ft.lb	3N.m 2.5ft.lb	2.5N.m 2.5ft.lb
Square drive	1/4"	1/4"	3/8"	3/8"	3/8"	1/2"	1/2"	1/2"
Length	254mm	254mm	254mm	254mm	378mm	546mm	546mm	546mm
Weight	480g	480g	480g	480g	820g	1300g	1300g	1300g

SERIES TW//TWF

TORQUE WRENCH



- ◆ Easy to set the torque value
- ◆ According to ISO6789, ASMEB107.300
- ◆ Metal construction
- ◆ With manufacturer inspection certificate



TWF150

SPECIFICATION

Code	TWI200	TWI250	TWF100	TWF150	TWF250	TWF600
Range	40 ~ 200lb.in	50 ~ 250lb.in	20 ~ 100lb.ft	30 ~ 150lb.ft	50 ~ 250lb.ft	100 ~ 600lb.ft
Graduation	1lb.in	1lb.in	0.5lb.ft	0.5lb.ft	1lb.ft	2.5lb.ft
Accuracy	±3%	±3%	±3%	±3%	±3%	±4%
Size of square drive	1/4"	3/8"	3/8"	1/2"	1/2"	3/4"
Length	11"	12.4"	16.7"	20"	26.7"	41.5"
Weight	1.5lb	1.8lb	2.3lb	2.6lb	2.9lb	13lb

SERIES TWS

WINDOWS TORQUE WRENCH



- ◆ Accuracy: $\pm 4\%$ (clockwise)
- ◆ According to ISO6789
- ◆ Unit: N.m; Lbf.ft
- ◆ With manufacturer inspection certificate



TWS60

SPECIFICATION

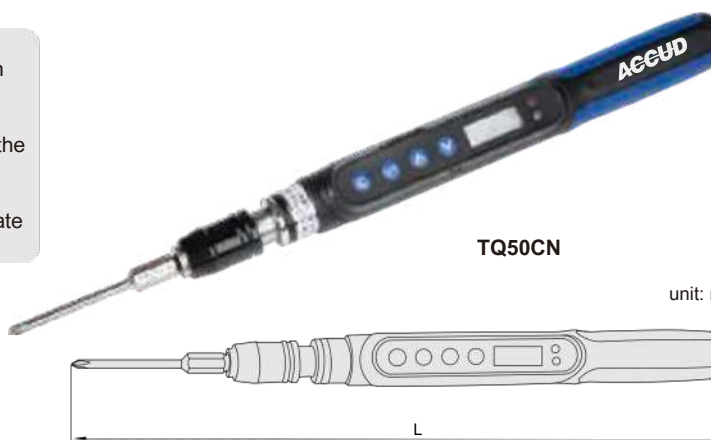
Code	Range (N.m)	Size of square drive	Length	Weight	Code	Range (N.m)	Size of square drive	Length	Weight
TWS12	2.4~12	1/4"	300mm	0.58kg	TWS330	66~330	1/2"	555mm	1.28kg
TWS20	4~20	1/4"	300mm	0.58kg	TWS400	80~400	1/2"	725mm	1.90kg
TWS20B	4~20	3/8"	300mm	0.60kg	TWS400B	80~400	3/4"	825mm	3.05kg
TWS30	6~30	3/8"	315mm	0.68kg	TWS550	110~550	3/4"	825mm	3.93kg
TWS60	12~60	3/8"	400mm	0.86kg	TWS1000	200~1000	3/4"	1115mm	5.28kg
TWS60B	12~60	1/2"	415mm	0.90kg	TWS1500	300~1500	1"	1250mm	8.20kg
TWS100B	20~100	1/2"	470mm	1.12kg	TWS2000	400~2000	1"	1250mm	8.20kg
TWS200	40~200	1/2"	495mm	1.18kg	TWS3000	600~3000	1"	1250mm	9.50kg

SERIES TQ

DIGITAL TORQUE SCREWDRIVER



- ◆ Clockwise or anti-clockwise operation
- ◆ Peak and track working mode
- ◆ With audible and visible alarm when the value is closed to setting target
- ◆ With manufacturer inspection certificate



TQ50CN

unit: mm

SPECIFICATION

Code	TQ50CN	TQ200CN	TQ400CN
Range	10 ~ 50cN.m	40 ~ 200cN.m	80 ~ 400cN.m
Clockwise operation accuracy	$\pm 3\%$	$\pm 2.5\%$	$\pm 2.5\%$
Anti-clockwise operation accuracy	$\pm 4\%$	$\pm 3.5\%$	$\pm 3.5\%$
Resolution	0.1cN.m	0.1cN.m	0.1cN.m
Size of shank	1/4"	1/4"	1/4"
Length (L)	258mm	268mm	268mm
Weight	200g	200g	200g
Power	1xAAA battery		

TORQUE



SERIES DT

DIGITAL TORQUE INDICATOR



- ◆ Peak, preset and real-time working mode
- ◆ Unit: N.m, N.cm, kgf.cm, lbf.ft, lbf.in
- ◆ Memory: 999
- ◆ Power off automatically
- ◆ With backlight
- ◆ With manufacturer inspection certificate

SPECIFICATION

Code	DT30	DT135	DT200
Range	5-30N.m	13.5-135N.m	20-200N.m
Drive size	1/2"	1/2"	1/2"
Resolution	0.01N.m	0.1N.m	0.1N.m
Accuracy	±2%(clockwise)/±2.5%(anti-clockwise)		
Memory	999		
Power	2x AAA batteries		
Weight	200g		



DT135

Application



INCLUDED ACCESSORIES

Main unit	1pc
AAA battery	2pcs
Wrench	1pc

SERIES TWQ

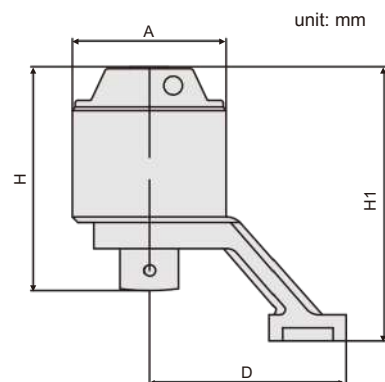
TORQUE MULTIPLIERS

- ◆ Accuracy: ±5%

Application



TWQ-5500



SPECIFICATION

Code	TWQ-1000	TWQ-2000	TWQ-3500	TWQ-5500	TWQ-7500	TWQ-10000
Capacity	1000N.m	2000N.m	3500N.m	5500N.m	7500N.m	10000N.m
Torque ratio	1:4.5	1:12	1:15	1:18.5	1:20	1:26.5
Square socket	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
Square driver	1"	1"	1"	1 1/2"	1 1/2"	1 1/2"
For bolt	M20-30	M22-35	M30-45	M38-52	M42-60	M52-72
For nut	S30-46	S32-55	S46-70	S55-80	S65-90	S80-105
Dimension(AxHxDxH1)	82x98.5x97x122.4	82x120x105x147	98x131x120x163	115x163.5x137x199	127x173x146x215	141x170x164x238
Weight	2.1kg	3.15kg	4.9kg	8.1kg	10.6kg	14kg

SERIES TQM

TORQUE SCREWDRIVER

- ◆ Clockwise operation
- ◆ When achieving the setting target, there is "chatter"



TQM300

SPECIFICATION

Code	TQM60	TQM120	TQM300	TQM600
Range	0.12 ~ 0.6N.m	0.24 ~ 1.2N.m	0.6 ~ 3N.m	1.2 ~ 6N.m
Clockwise operation accuracy	±6%	±6%	±6%	±6%
Graduation	0.01N.m	0.02N.m	0.05N.m	0.1N.m
Size of shank	1/4"	1/4"	1/4"	1/4"
Length (L)	161mm	161mm	186mm	186mm
Weight	300g	300g	400g	400g

SERIES TTM

DIGITAL BOTTLE CAP TORQUE METER

- ◆ Test the open and tighten torque of bottle cap
- Peak, preset and real-time working mode
- ◆ Unit: N.m, N.cm, kgf.cm, lbf.cm, lbf.in
- ◆ Memory: 1000
- ◆ Power off automatically
- ◆ With software, can show the torque graph
- ◆ With manufacturer inspection certificate



TTM10



VIDEO



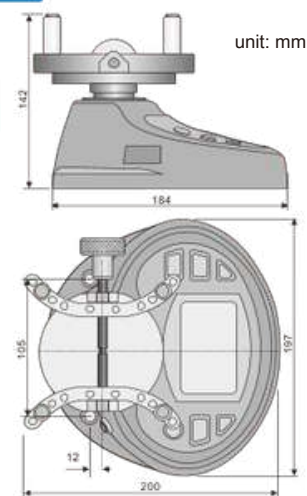
Certificate



Data output



Charge



unit: mm

SPECIFICATION

Code	TTM2	TTM5	TTM10	TTM20
Range	0.1-2N.m	0.25-5N.m	0.5-10N.m	1-20N.m
Accuracy	±0.5%			
Resolution	0.0002N.m	0.0005N.m	0.001N.m	0.002N.m
Open size	Ø19.5-190mm			
Output	USB and RS232			
Power	rechargeable battery			
Weight	2.5kg			

INCLUDED ACCESSORIES

Main unit	1pc
Charger	1pc
Software with cable	1pc

OPTIONAL ACCESSORIES

Wireless printer	PR100
------------------	-------

FORCE





- ◆ For torque wrench and torque screwdriver calibration
- ◆ Peak, preset and real-time working mode
- ◆ Unit: N.m, N.cm, kgf.cm, lbf.cm, lbf.in
- ◆ Memory: 1000
- ◆ Power off automatically
- ◆ With software, can show the torque graph
- ◆ With manufacturer inspection certificate

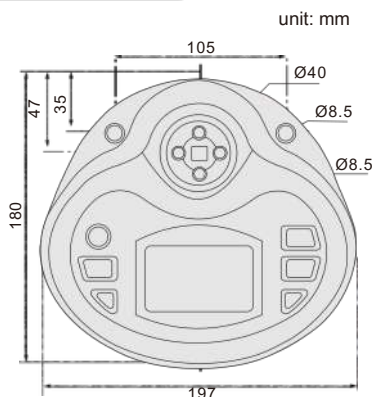


VIDEO



TTB10

run down adapter for torque meter (optional)



Stand (optional)



TTB500

SPECIFICATION

Code	TTB5	TTB10	TTB50	TTB100	TTB500	TTB1000
Range	0.25-5N.m	0.5-10N.m	2.5-50N.m	5-100N.m	25-500N.m	100-1000N.m
Accuracy	±0.3%					
Resolution	0.0005N.m	0.001N.m	0.005N.m	0.01N.m	0.05N.m	0.1N.m
Size of square drive	1/2"				3/4"	1"
Output	USB and RS232					
Power	rechargeable battery					
Weight	1.5kg				3kg	

INCLUDED ACCESSORIES

Main unit	1pc
Charger	1pc
Software with cable	1pc
Convertor (TTB500 and TTB1000 doesn' include)	1pc

OPTIONAL ACCESSORIES

Wireless printer	PR100	RUN DOWN ADAPTER FOR TORQUE METER(2N.m)	TTB-RDF2
Stand(Arm length:150-600mm)	TTB-ST1	RUN DOWN ADAPTER FOR TORQUE METER(6N.m)	TTB-RDF6
Stand(Arm length:150-1000mm)	TTB-ST2	RUN DOWN ADAPTER FOR TORQUE METER(40N.m)	TTB-RDF40
Stand(Arm length:150-1500mm)	TTB-ST4	RUN DOWN ADAPTER FOR TORQUE METER(100N.m)	TTB-RDF100

TTB-ST1/ST2/ST4

STAND FOR TORQUE WRENCH TESTING

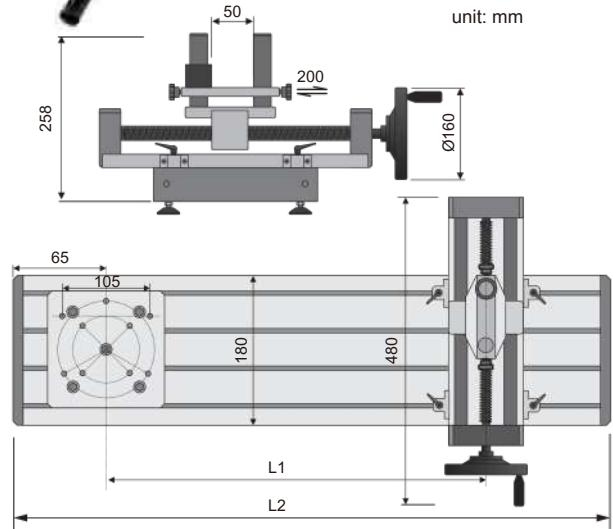
- ◆ For calibrating torque wrench with TTB series torque meter

(Torque meter is not included)



TTB-ST1

unit: mm



SPECIFICATION

Code	TTB-ST1	TTB-ST2	TTB-ST4
Arm length(L1)	150-600mm	150-1000mm	150-1500mm
Max. travel	200mm		
Max. force	1000N		2000N
Length(L2)	770mm	1270mm	1800mm
Weight	12kg	16kg	30kg

SERIES TTS

DIGITAL TORQUE METER

- ◆ Adjustable open size for fixing
- ◆ Peak, preset and real-time working mode
- ◆ Unit: N.m, N.cm, kgf.cm, lbf.cm, lbf.in
- ◆ Memory: 1000
- ◆ Power off automatically
- ◆ With software, can show the torque graph
- ◆ With manufacturer inspection certificate



VIDEO

SPECIFICATION

Code	TTS1	TTS5	TTS10
Range	0.05-1N.m	0.25-5N.m	0.5-10N.m
Open size	Ø10mm	Ø10mm	Ø13mm
Resolution	0.0001N.m	0.0005N.m	0.001N.m
Accuracy	±0.3%		
Memory	1000		
Output	USB and RS232		
Power	rechargeable battery		
Weight	0.7kg		

INCLUDED ACCESSORIES

Main unit	1pc
Charger	1pc
Software with cable	1pc
Wrench	1pc

OPTIONAL ACCESSORIES

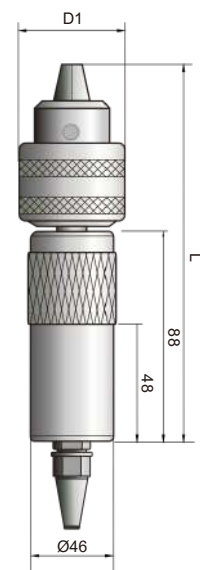
Wireless printer PR100



TTS5



unit: mm



Code	L	D1
TTS1	156mm	Ø43
TTS5	156mm	Ø43
TTS10	178mm	Ø53

FORCE



SERIES TWT

TORQUE WRENCH TESTER

- ◆ Used to test or calibrate torque wrench
- ◆ Contains two torque sensors, with same touch screen LCD



TWT200

SPECIFICATION

Code		TWT200	TWT500
Range	Sensor 1	1-20N.m	2.5-50N.m
	Sensor 2	10-200N.m	25-500N.m
Resolution	Sensor 1	0.002N.m	0.005N.m
	Sensor 2	0.02N.m	0.05N.m
Accuracy		0.3%	
Max. wrench length		830mm	
Driver size		½", 3/8", 1/4"	¾", ½", 3/8"
Memory		1000	
Data output		USB	
Dimension		780×688×433 mm	
Weight		45kg	

OPTIONAL ACCESSORIES

Main unit	1set
Charger	1pc
Driver adapter	2pcs
USB cable and software	1set

SERIES TWT

MOTORIZED TORQUE WRENCH TESTER

- ◆ Used to test or calibrate torque wrench
- ◆ Loading force: motorized
- ◆ Contains two torque sensors, with same touch screen LCD



TWT200M

SPECIFICATION

Code		TWT200M	TWT500M	TWT1000M
Range	Sensor 1	1-20N.m	2.5-50N.m	10-100N.m
	Sensor 2	10-200N.m	25-500N.m	100-1000N.m
Resolution	Sensor 1	0.002N.m	0.005N.m	0.01N.m
	Sensor 2	0.02N.m	0.05N.m	0.1N.m
Accuracy		0.3%		
Max. wrench length		830mm		
Driver size		½", 3/8", 1/4"	¾", ½", 3/8"	1", ¾", ½", 3/8"
Memory		1000		
Data output		USB		
Dimension		780×635×443 mm		
Weight		55kg		

OPTIONAL ACCESSORIES

Main unit	1set
Driver adapter	1set
Software and USB cable	1set
Power cable	1pc



- ◆ Pocket size, easy to carry
- ◆ It can also measure the dimension
- ◆ With back light
- ◆ Power off automatically
- ◆ Can show temperature



SPECIFICATION

Range	0-75kg
Resolution	0.01kg
Accuracy	0.05kg (Weight≤50kg), 0.2kg (Weight>50kg)
Unit	kg, lb, JIN, oz
Power supply	2xAAA battery
Dimension	70x135x30mm
Weight	185g

STANDARD DELIVERY

Main unit	1pc
AAA battery	2pcs

MASUP *INNOVA*



CODE INDEX

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103	DIAL CALIPER	14	155	DIGITAL SCRIBING CALIPER 319
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107	DIGITAL CALIPER WITH LONG UPPER JAWS	45	157	DIGITAL DISK BRAKE CALIPER 47
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