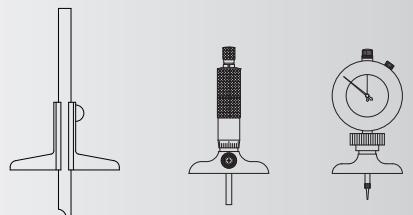
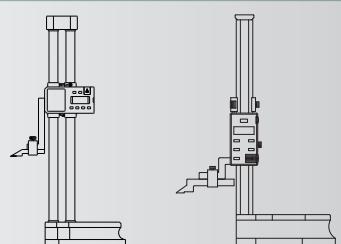
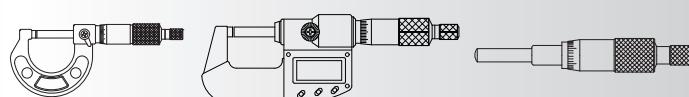


Search products:

1. According to the product code, search in the code index (in the end of this catalogue)
2. According to the product functions, search following index.

VIDEO

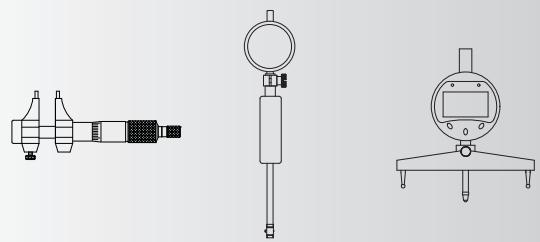
Please scan QR code to watch the basic operation video of the products.

P1-2**OUTPUT INTERFACE
WIRELESS DATA TRANSFER SYSTEM****P3-43****DIGITAL CALIPER
VERNIER CALIPER
DIAL CALIPER****P44-57****DEPTH CALIPER
DEPTH MICROMETER
DEPTH INDICATOR****P58-65****HEIGHT GAGE****P66-99****OUTSIDE MICROMETER
MICROMETER HEAD
MICROMETER STAND**

INDEX

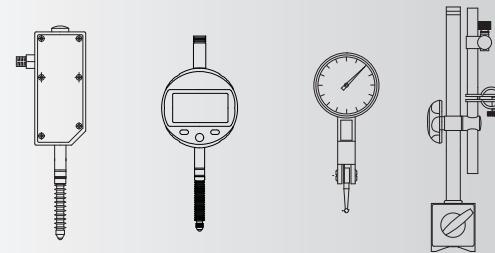
P100-120

INSIDE MICROMETER
BORE GAUGE
RADIUS GAUGE
CIRCUMFERENCE TAPE



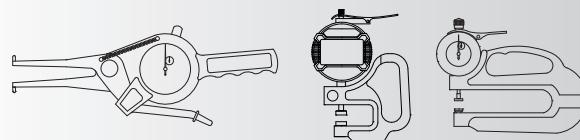
P121-155

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



P156-172

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



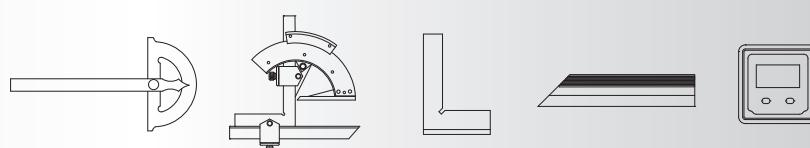
P172-193

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



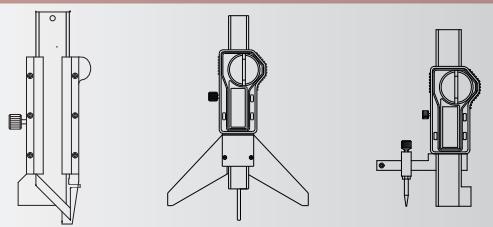
P194-218

PROTRACTOR
SQUARE
STRAIGHT EDGE
LEVEL



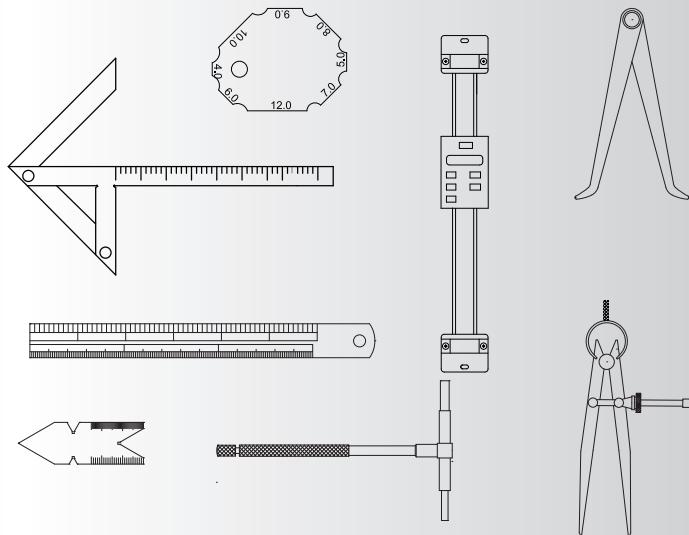
P219-224

CHAMFER GAUGE
DIGITAL KEYWAY GAUGE
DIGITAL STEP GAUGE



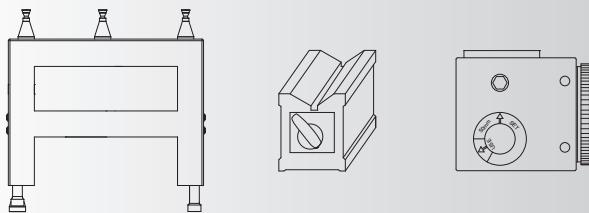
P225-257

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



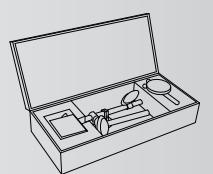
P258-273

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



P274-278

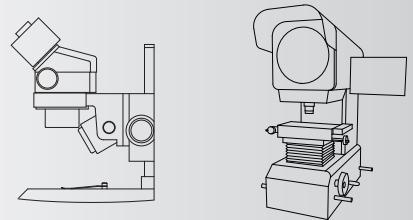
MEASURING TOOLS SET



INDEX

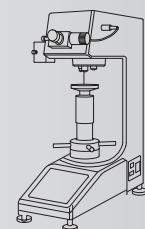
P279-295

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



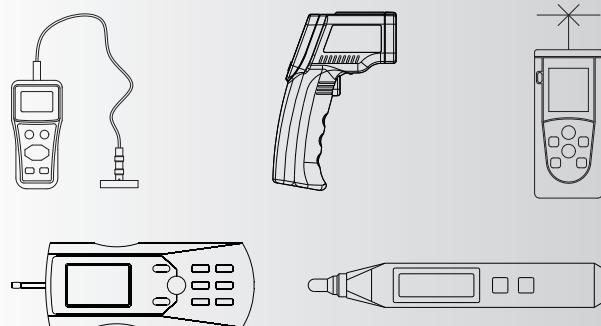
P296-308

HARDNESS TESTER



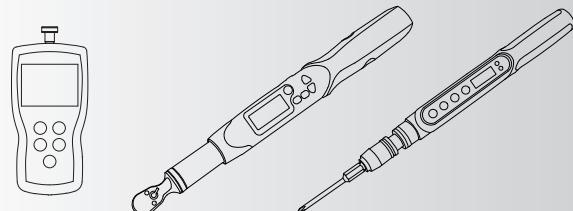
P309-327

COATING THICKNESS GAUGE
ULTRASONIC THICKNESS GAUGE
ROUGHNESS TESTER
ROUGHNESS SPECIMEN
TEMPERATURE METER
INFRARED THERMOMETER
LASER DISTANCE METER
LASER TACHOMETER
LASER LEVEL
GLOSS METER
COLOR METER



P328-338

FORCE GAUGE
TORQUE WRENCH
TORQUE SCREWDRIVER
TORQUE METER
WEIGHT



SERIES 800

WIRELESS DATA TRANSFER SYSTEM



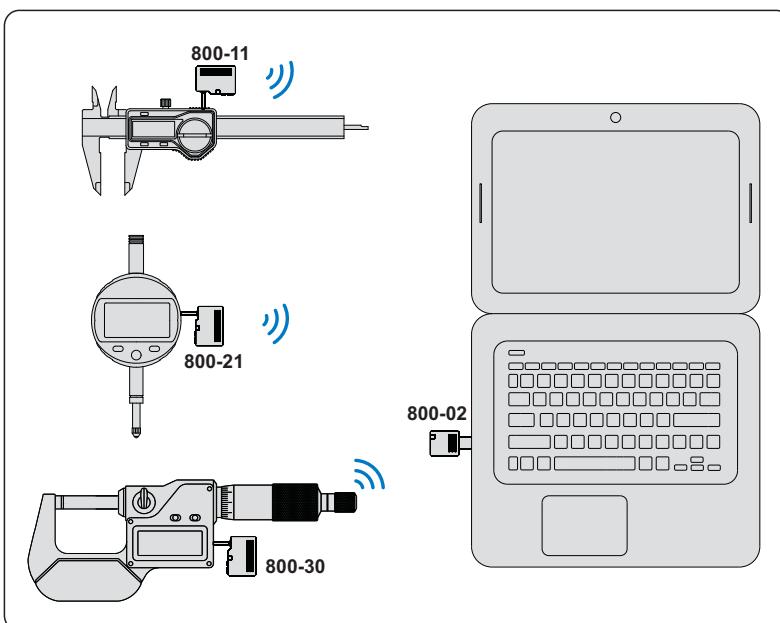
VIDEO



800-11

800-02

- Max. transmission distance: 15m
- For single channel receiver (**code: 800-01**), it can be 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.



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
800-11	transmitter		for digital calipers with following electronics
800-15	transmitter		for digital calipers with following electronics

Code	Name	Plug to product	Products
800-16	transmitter		for digital 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

100/200/300/400/500 ➤ USB OUTPUT INTERFACE



VIDEO



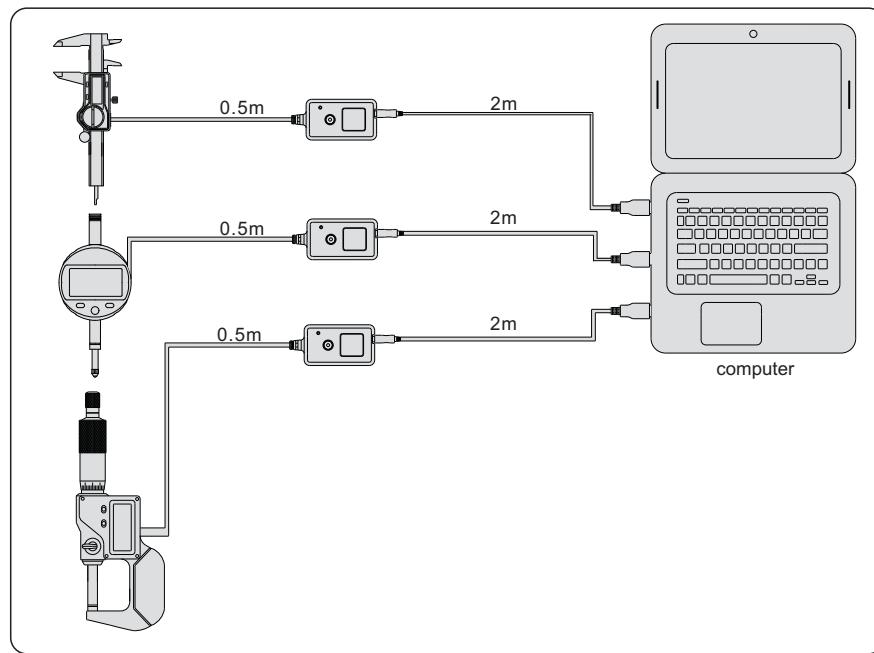
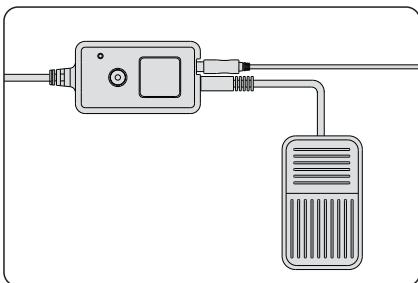
100-11



CABLE

- 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 footswitch to transfer the data
(code: 400-01)



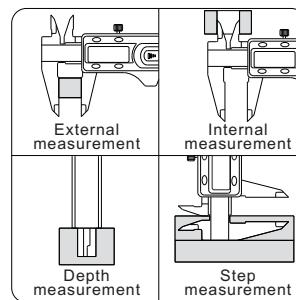
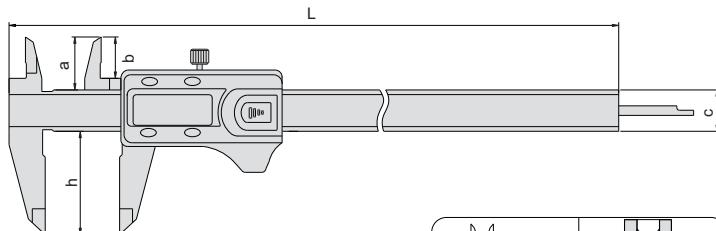
Code	Software	Plug to product	Products
100-03	Without		for digital calipers with following electronics
100-04	With		
100-11	Without		for digital calipers with following electronics
100-12	With		
100-13	Without		for micrometers with following electronics
100-15	Without		for digital calipers with following electronics
200-03	Without		for digital indicators with following electronics
200-04	With		

Code	Software	Plug to product	Products
200-01	Without		for digital indicators with following electronics
200-02	With		
300-01	Without		for digital micrometers with following electronics
300-03	Without		for digital micrometers with data output with following electronics
500-01	Without		for digital height gage with following electronics

SERIES 111**DIGITAL CALIPER**

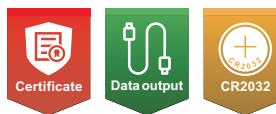
111-006-11N

unit: mm



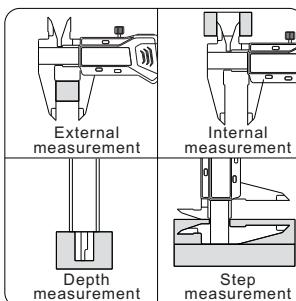
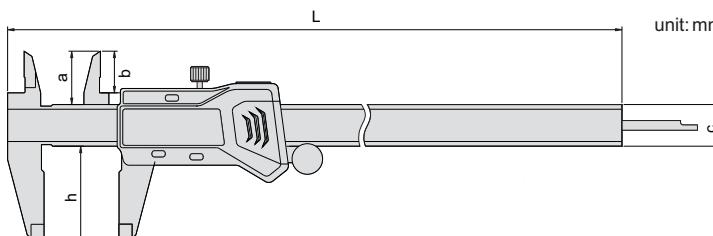
CALIPER

Code	Range	Accuracy	a	b	c	h	L
111-006-11N	0-150mm/0-6"	±0.03mm	21	16	16	40	236
111-008-11N	0-200mm/0-8"	±0.03mm	24	19	16	50	286
111-012-11N	0-300mm/0-12"	±0.03mm	25	20.5	16	60	400

SERIES 111**DIGITAL CALIPER**

111-006-10

unit: mm

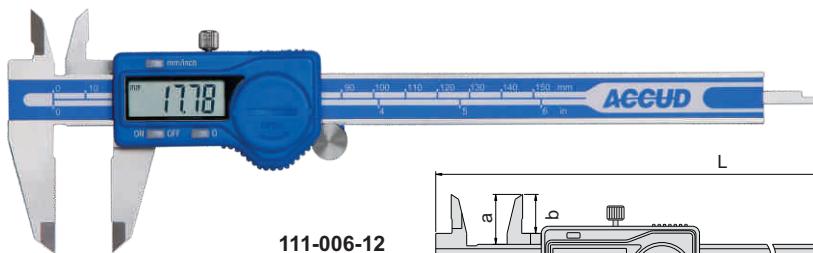


3

Code	Range	Accuracy	a	b	c	h	L
111-006-10	0-150mm/0-6"	±0.03mm	21	16	16	40	236
111-008-10	0-200mm/0-8"	±0.03mm	24	19	16	50	286
111-012-10	0-300mm/0-12"	±0.03mm	25	20.5	16	60	400

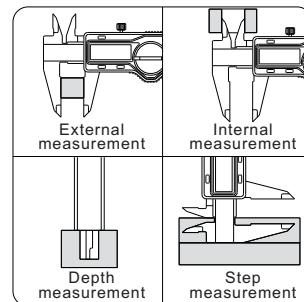
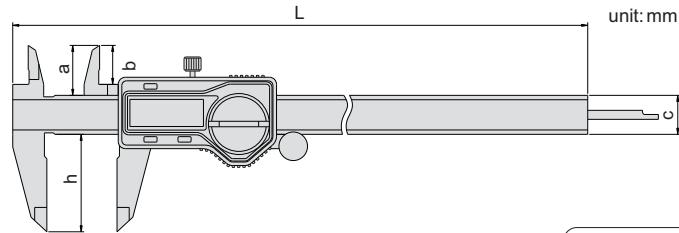
SERIES 111

DIGITAL CALIPER



111-006-12

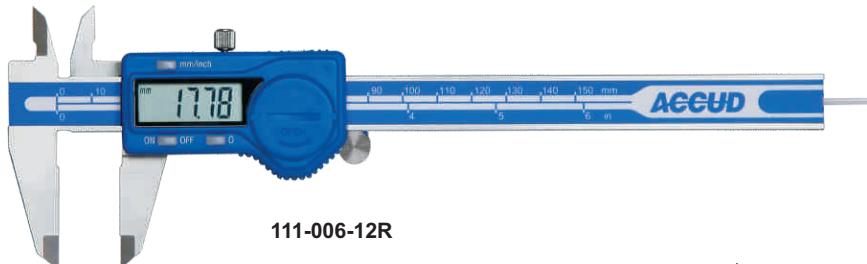
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Data output(cable code:100-11 or 100-12)
- Automatic power on/off
- Meet DIN862
- Made of stainless steel



Code	Range	Accuracy	a	b	c	h	L
111-006-12	0-150mm/0-6"	±0.03mm	21	16	16	40	236
111-008-12	0-200mm/0-8"	±0.03mm	24	19	16	50	286
111-012-12	0-300mm/0-12"	±0.03mm	25	20.5	16	60	400
111-006-12W	0-150mm/0-6"	±0.03mm	21	16	16	40	236
111-008-12W	0-200mm/0-8"	±0.03mm	24	19	16	50	286
111-012-12W	0-300mm/0-12"	±0.03mm	25	20.5	16	60	400

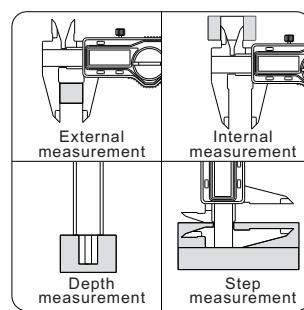
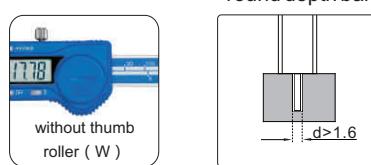
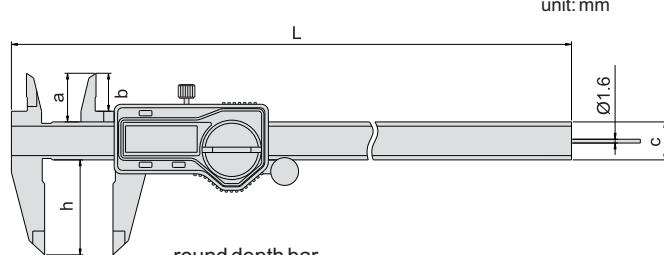
SERIES 111

DIGITAL CALIPER WITH ROUND DEPTH BAR



111-006-12R

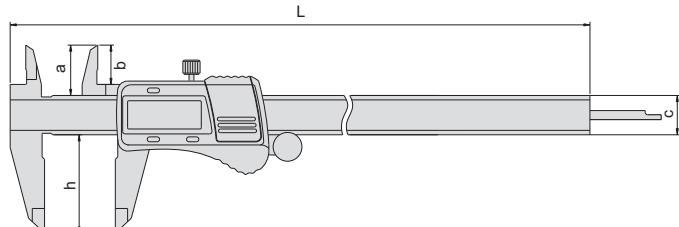
- With round depth bar, for small hole depth measurement
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Data output(cable code:100-11 or 100-12)
- Automatic power on/off
- Meet DIN862
- Made of stainless steel



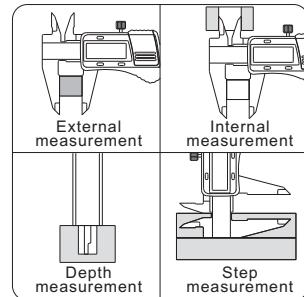
Code	Range	Accuracy	Thumb roller	a	b	c	h	L
111-006-12R	0-150mm/0-6"	±0.03mm	with	21	16	16	40	236
111-006-12RW	0-150mm/0-6"	±0.03mm	without	21	16	16	40	236

SERIES 111**DIGITAL CALIPER WITH METAL COVER**

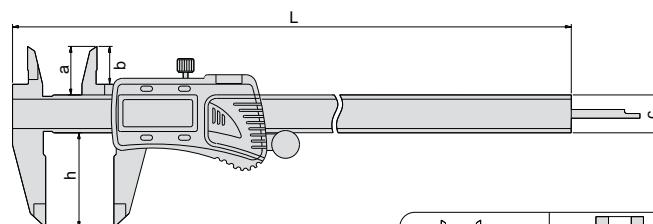
- ♦ Resolution: 0.01mm/0.0005"
- ♦ Buttons: on/off, zero, mm/inch
- ♦ Made of stainless steel



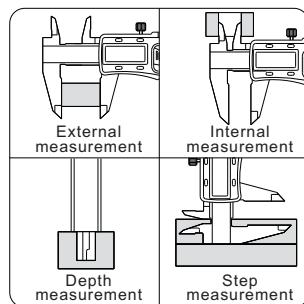
Code	Range	Accuracy	a	b	c	h	L
111-006-16	0-150mm/0-6"	±0.03mm	21	16	16	40	236
111-008-16	0-200mm/0-8"	±0.03mm	24	19	16	50	286
111-012-16	0-300mm/0-12"	±0.03mm	25	20.5	16	60	400

**SERIES 111****DIGITAL CALIPER**

- ♦ High accuracy
- ♦ Absolute system
- ♦ Resolution: 0.01mm/0.0005"
- ♦ Buttons: on/off, ABS/ZERO, inch/mm, ORIGIN
- ♦ Data output
- ♦ 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

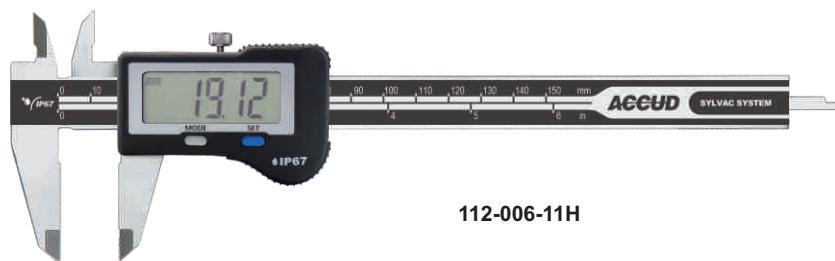


CALIPER



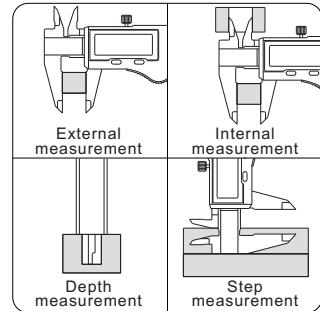
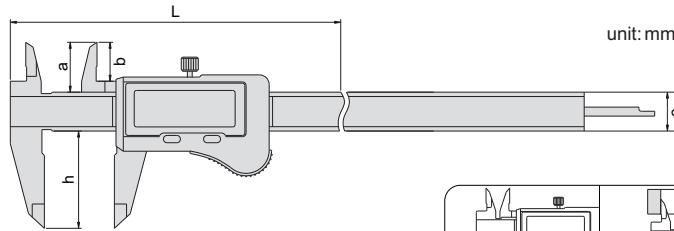
SERIES 112

IP67 DIGITAL CALIPER



112-006-11H

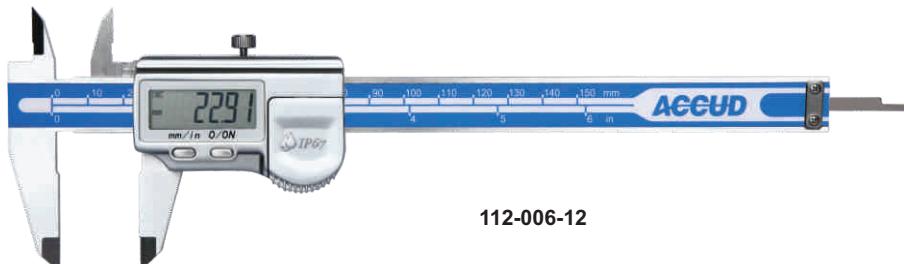
- ◆ IP67 protection level
- ◆ Absolute measuring system
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Automatic power off
- ◆ Buttons: zero, mm/inch, data preset
- ◆ Made of stainless steel



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	20	16	50	286
112-012-11H	0-300mm/0-12"	±0.03mm	25	20.5	16	60	400

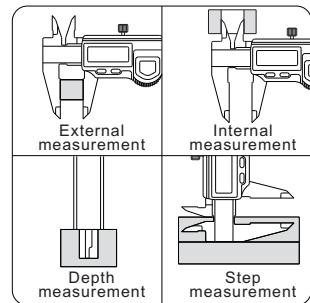
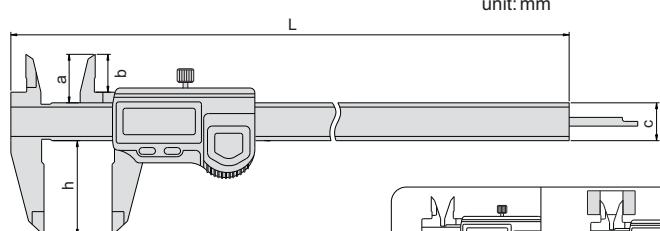
SERIES 112

IP67 DIGITAL CALIPER

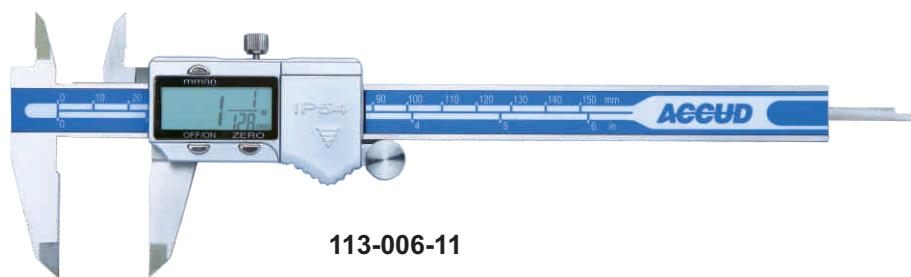


112-006-12

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

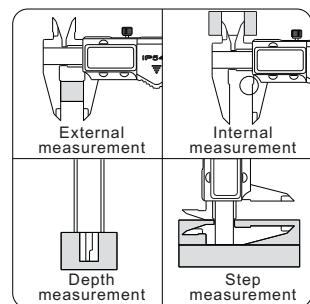
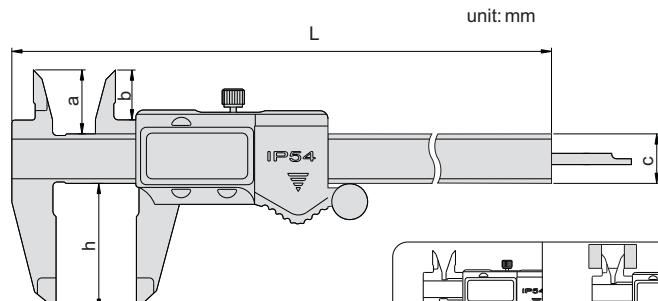


Code	Range	Accuracy	a	b	c	h	L
112-006-12	0-150mm/0-6"	±0.03mm	21	16.5	16	40	236
112-008-12	0-200mm/0-8"	±0.03mm	24	20	16	50	286
112-012-12	0-300mm/0-12"	±0.03mm	25	20.5	16	60	400

SERIES 113**FRACTIONAL DIGITAL CALIPER**

113-006-11

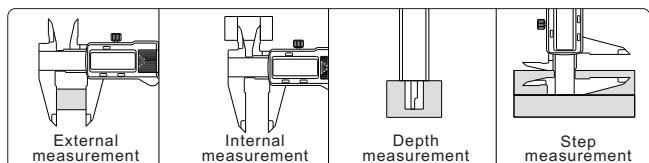
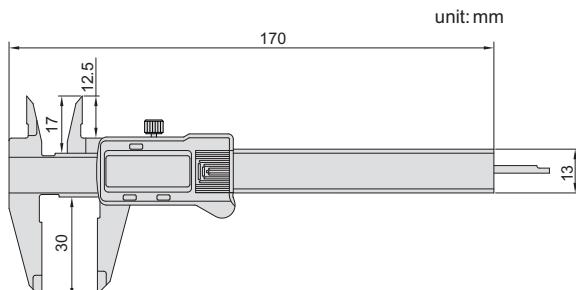
- ◆ With fraction reading
- ◆ Resolution: 0.01mm, 0.0005", 1/128"
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Made of stainless steel



Code	Range	Accuracy	a	b	c	h	L
113-006-11	0-150mm/0-6"	±0.03mm	21	16	16	40	236
113-008-11	0-200mm/0-8"	±0.03mm	24	19	16	50	286
113-012-11	0-300mm/0-12"	±0.03mm	25	20.5	16	60	400

114**MINI DIGITAL CALIPER**

- ◆ 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



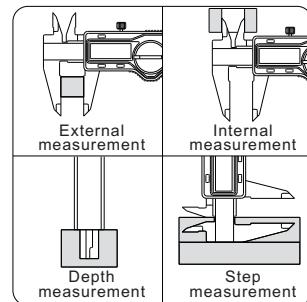
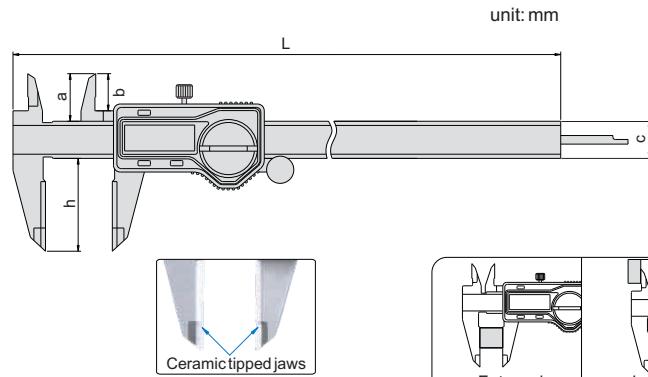
SERIES 115

DIGITAL CALIPER



115-006-11

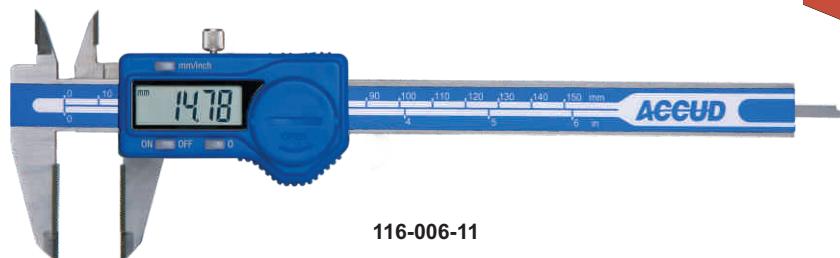
- ◆ Ceramic tipped jaws for outside measurements, good wear-resistance, non-magnetic, non-conductive
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Data output(cable code:100-11 or 100-12)
- ◆ Automatic power on/off
- ◆ Made of stainless steel



Code	Range	Accuracy	a	b	c	h	L
115-006-11	0-150mm/0-6"	±0.03mm	21	16.5	16	40	236
115-008-11	0-200mm/0-8"	±0.03mm	24	19	16	50	286
115-012-11	0-300mm/0-12"	±0.03mm	26	20.5	16	60	400

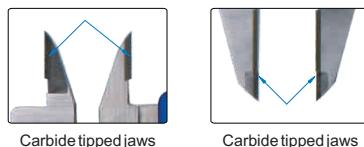
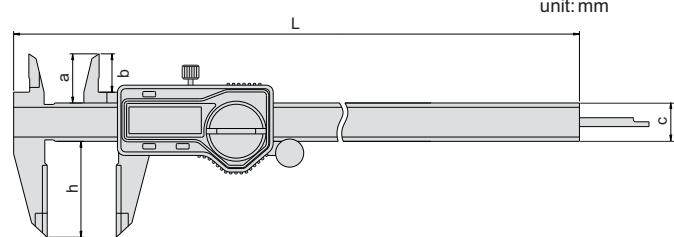
SERIES 116

DIGITAL CALIPER WITH CARBIDE TIPPED JAWS

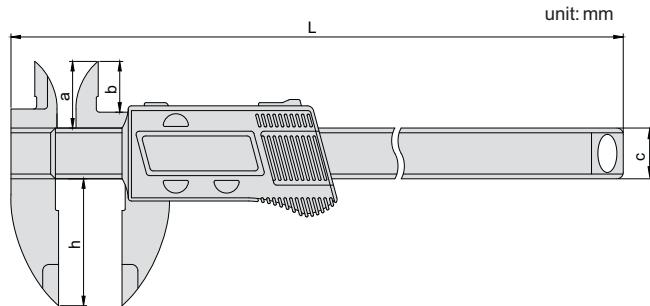


116-006-11

- ◆ Carbide tipped jaws for inside and outside measurements, good wear-resistance
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Data output(cable code:100-11 or 100-12)
- ◆ Automatic power on/off
- ◆ Made of stainless steel

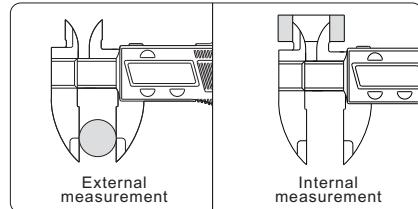


Code	Range	Accuracy	a	b	c	h	L
116-006-11	0-150mm/0-6"	±0.03mm	21	16	16	40	236
116-008-11	0-200mm/0-8"	±0.03mm	24	19	16	50	286
116-012-11	0-300mm/0-12"	±0.03mm	25	20.5	16	60	400



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

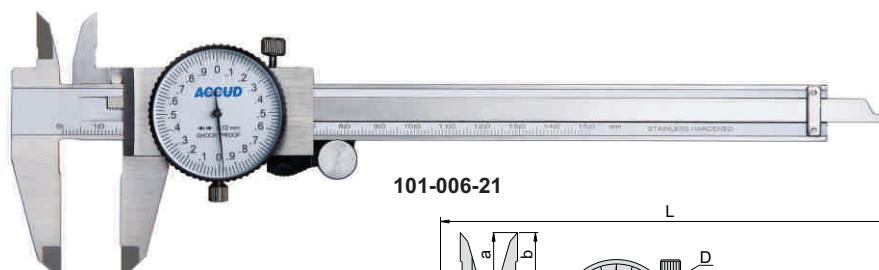
Code	Range	Accuracy	a	b	c	h	L
117-006-11	0-150mm/0-6"	±0.1mm	21	16	16	40	243



CALIPER

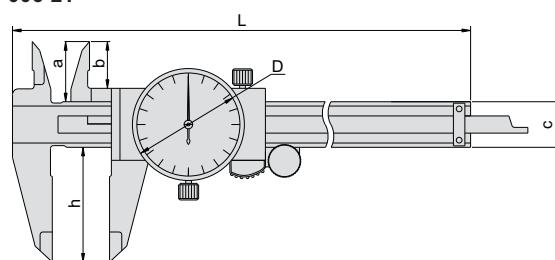
SERIES 101

DIAL CALIPER



101-006-21

unit: mm



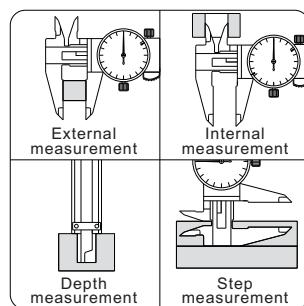
- ◆ Shockproof dial indicator
- ◆ Made of stainless steel

Graduation 0.01mm

Code	Range	Accuracy	a	b	c	h	D	L
101-006-11	0-150mm	±0.03mm	21	16.5	16	40	Ø39	233
101-008-11	0-200mm	±0.03mm	24	19	16	50	Ø39	288
101-012-11	0-300mm	±0.04mm	30	25	20	64	Ø44	390

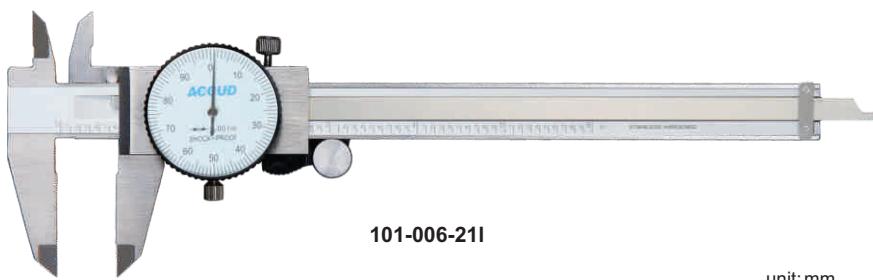
Graduation 0.02mm

Code	Range	Accuracy	a	b	c	h	D	L
101-006-21	0-150mm	±0.03mm	21	16.5	16	40	Ø39	233
101-008-21	0-200mm	±0.03mm	24	19	16	50	Ø39	288
101-012-21	0-300mm	±0.04mm	30	25	20	64	Ø44	390



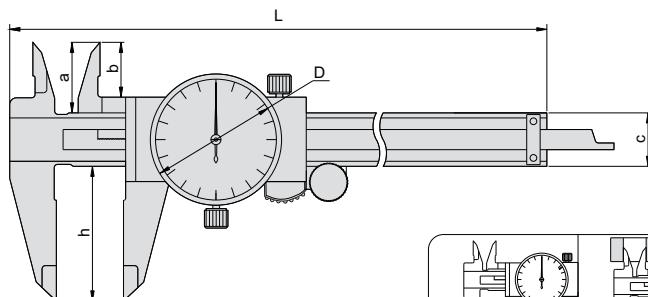
SERIES 101

INCH DIAL CALIPER



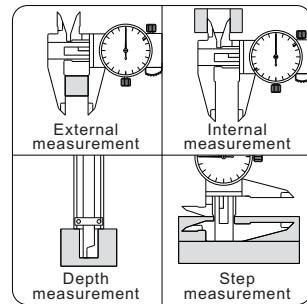
101-006-21I

unit: mm



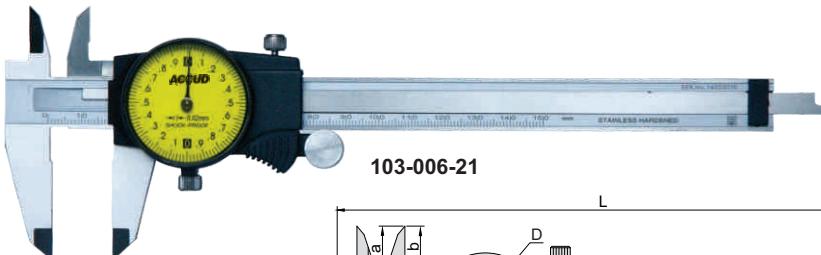
- ◆ Shockproof dial indicator
- ◆ Made of stainless steel

Code	Range	Graduation	Accuracy	a	b	c	h	D	L
101-006-21I	0-6"	0.001in	±0.0015in	21	16.5	16	40	Ø39	233
101-008-21I	0-8"	0.001in	±0.0020in	24	19	16	50	Ø39	288
101-012-21I	0-12"	0.001in	±0.0020in	30	25	20	64	Ø44	390



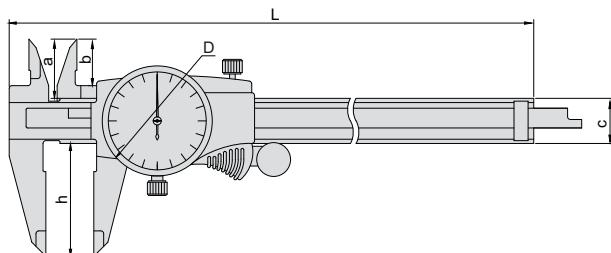
SERIES 103

DIAL CALIPER



103-006-21

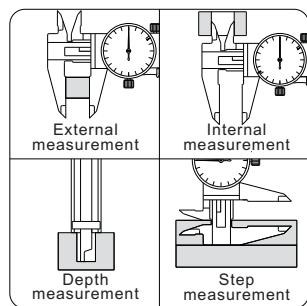
unit: mm



- ◆ Shockproof dial indicator
- ◆ Made of stainless steel

Graduation 0.01mm

Code	Range	Accuracy	a	b	c	h	D	L
103-006-11	0-150mm	±0.03mm	21	16.5	16	40	Ø39	233
103-008-11	0-200mm	±0.03mm	24	19	16	50	Ø39	288
103-012-11	0-300mm	±0.04mm	30	25	20	64	Ø44	390

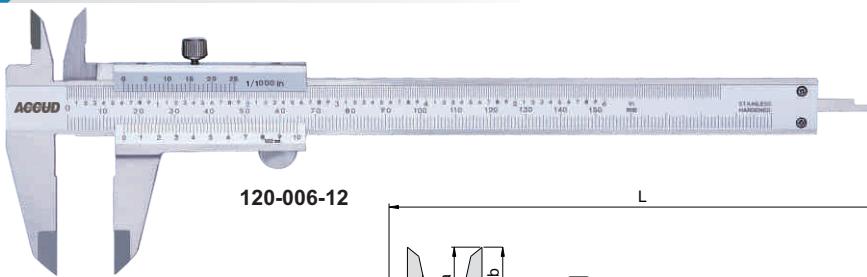


Graduation 0.02mm

Code	Range	Accuracy	a	b	c	h	D	L
103-006-21	0-150mm	±0.03mm	21	16.5	16	40	Ø39	233
103-008-21	0-200mm	±0.03mm	24	19	16	50	Ø39	288
103-012-21	0-300mm	±0.04mm	30	25	20	64	Ø44	390

SERIES 120

VERNIER CALIPER

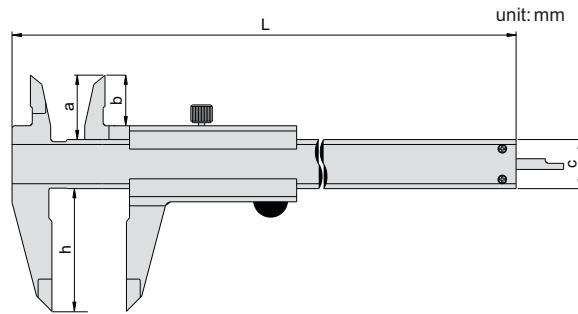


120-006-12

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

Graduation 0.02mm/0.001"

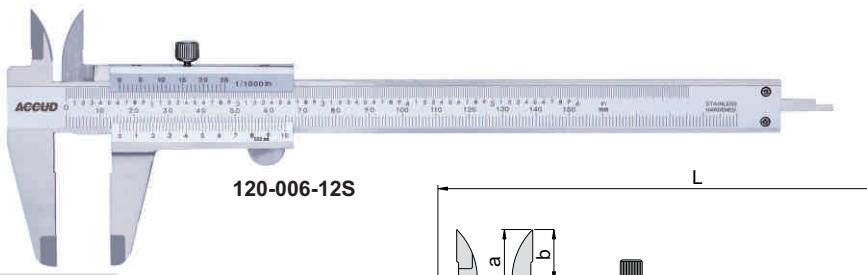
Code	Range	Accuracy	a	b	c	h	L
120-006-12	0-150mm/0-6"	±0.03mm	20.5	15.5	16	40	235
120-008-12	0-200mm/0-8"	±0.03mm	23.5	19	16	50	290
120-012-12	0-300mm/0-12"	±0.03mm	27.5	22	20	64	414



CALIPER

SERIES 120

VERNIER CALIPER

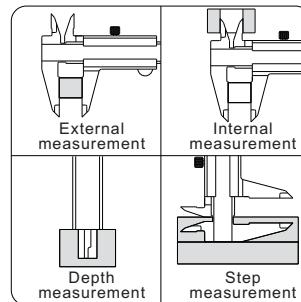
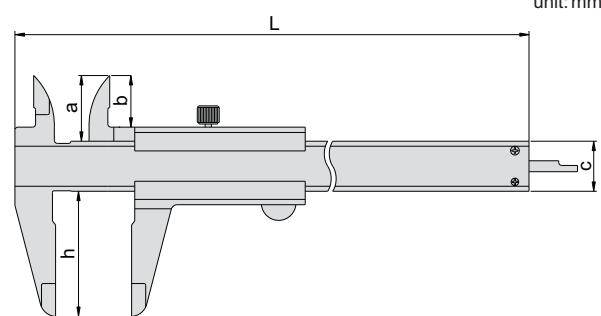


120-006-12S

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

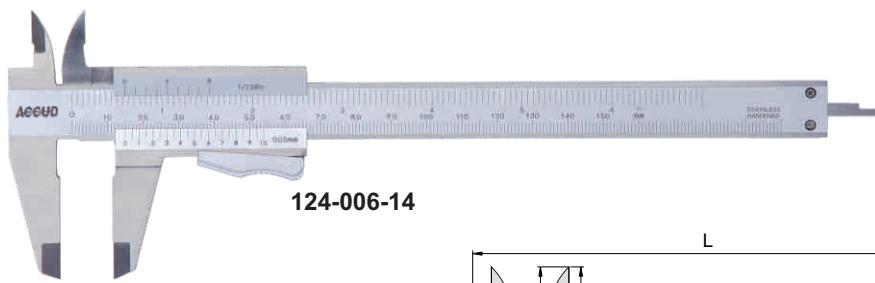
Graduation 0.02mm/0.001"

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





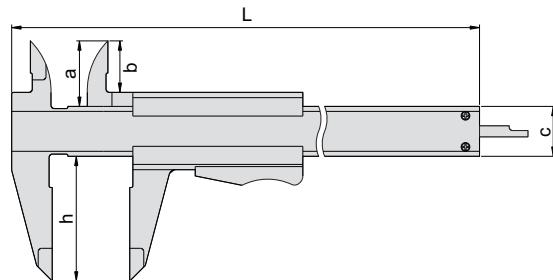
SERIES 124 VERNIER CALIPER



124-006-14

unit: mm

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

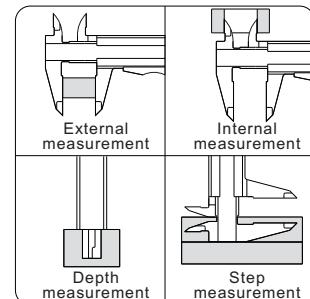


Graduation 0.02mm/0.001"

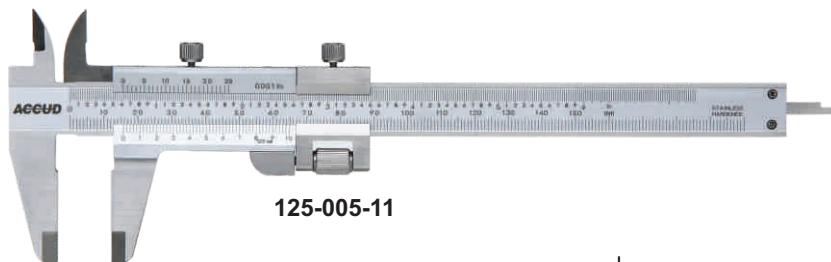
Code	Range	Accuracy	a	b	c	h	L
124-006-12	0-150mm/0-6"	±0.03mm	20.5	15.5	16	40	235
124-008-12	0-200mm/0-8"	±0.03mm	23.5	19	16	50	290

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

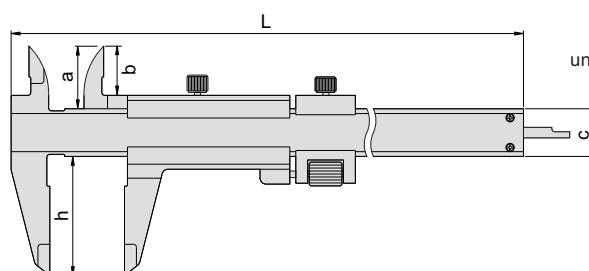


SERIES 125 VERNIER CALIPER



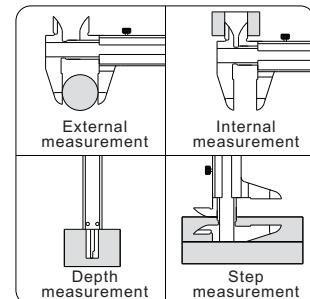
125-005-11

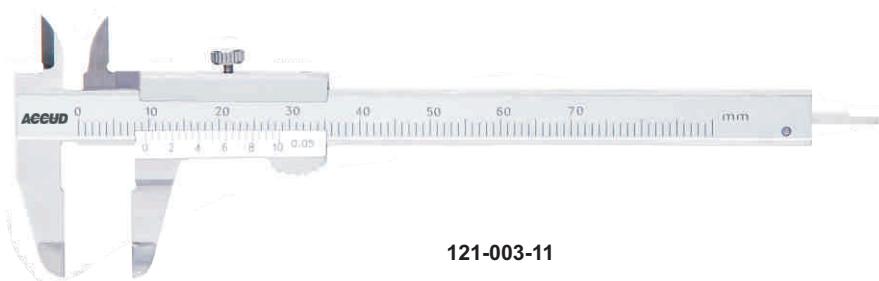
unit: mm



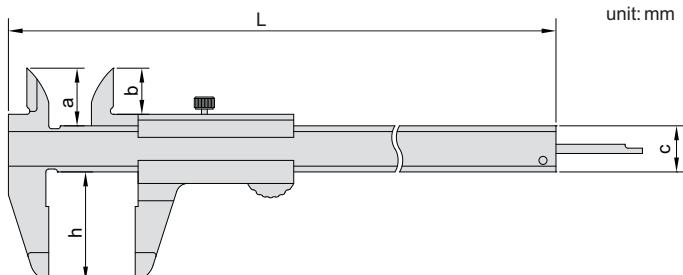
- ◆ With fine adjustment
- ◆ Graduation: 0.02mm/0.001"
- ◆ Meet DIN862
- ◆ Satin chrome plated reading surface
- ◆ Made of stainless steel

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



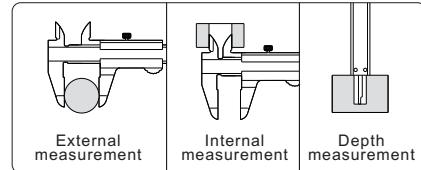
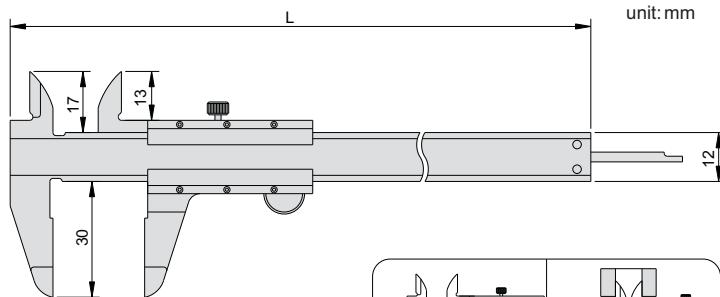
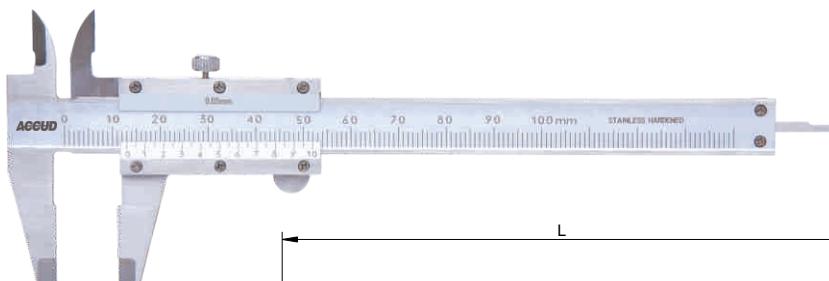
SERIES 121**MINI VERNIER CALIPER**

121-003-11



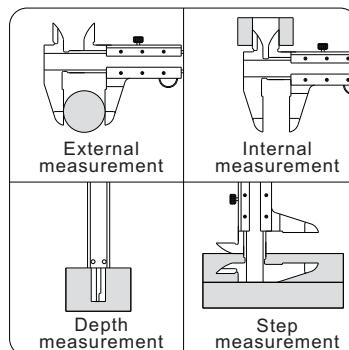
- ◆ Meet DIN862
- ◆ Satin chrome plated reading surface
- ◆ Made of stainless steel

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

**121****MINI VERNIER CALIPER**

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

Code	Range	Graduation	Accuracy	L
121-004-11B	0-100mm	0.05mm	±0.05mm	160

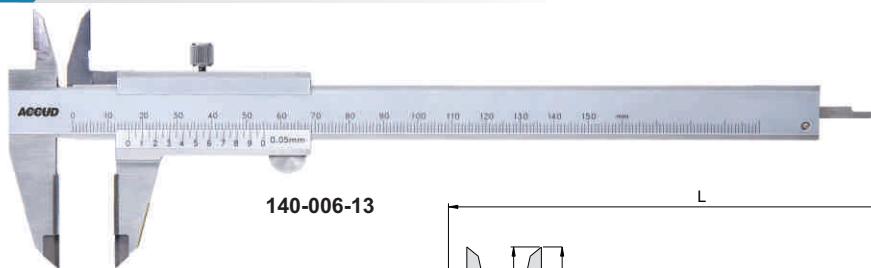


CALIPER

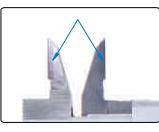


SERIES 140

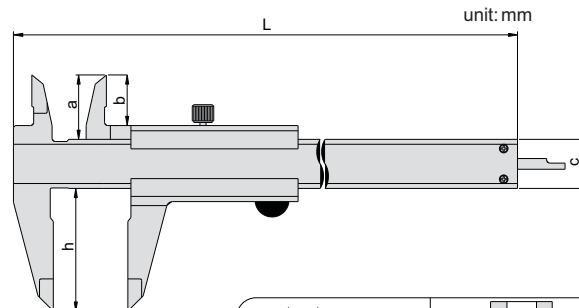
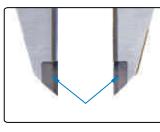
VERNIER CALIPER WITH CARBIDE TIPPED JAWS



- ◆ Carbide tipped jaws
- ◆ Meet DIN862
- ◆ Satin chrome reading surface
- ◆ Made of stainless steel



140-006-13

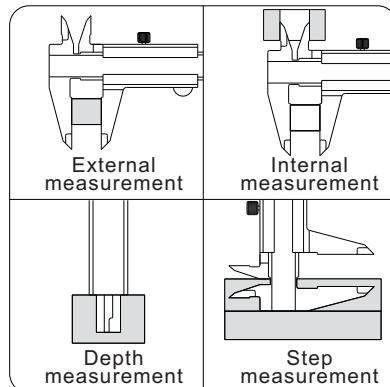


Graduation 0.02mm

Code	Range	Accuracy	a	b	c	h	L
140-006-11	0-150mm	±0.03mm	21	16.5	16	40	235
140-008-11	0-200mm	±0.03mm	24	19	16	50	295
140-012-11	0-300mm	±0.03mm	25	20	17	60	410

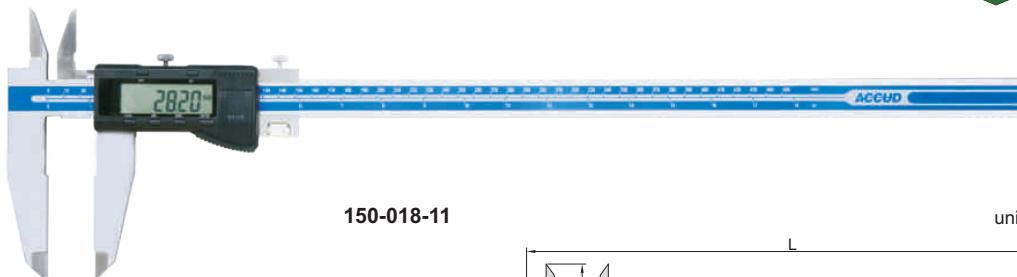
Graduation 0.05mm

Code	Range	Accuracy	a	b	c	h	L
140-006-13	0-150mm	±0.03mm	21	16.5	16	40	235
140-008-13	0-200mm	±0.03mm	24	19	16	50	295
140-012-13	0-300mm	±0.03mm	25	20	17	60	410

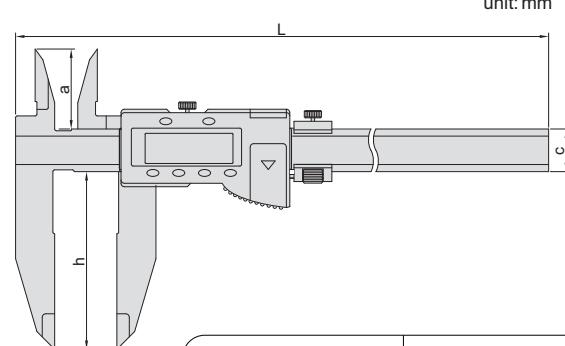


SERIES 150

DIGITAL CALIPER

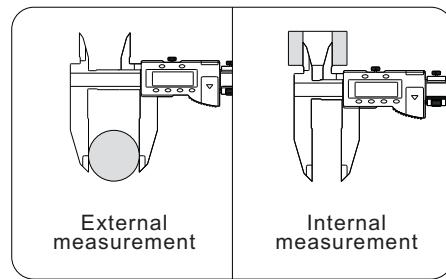


150-018-11



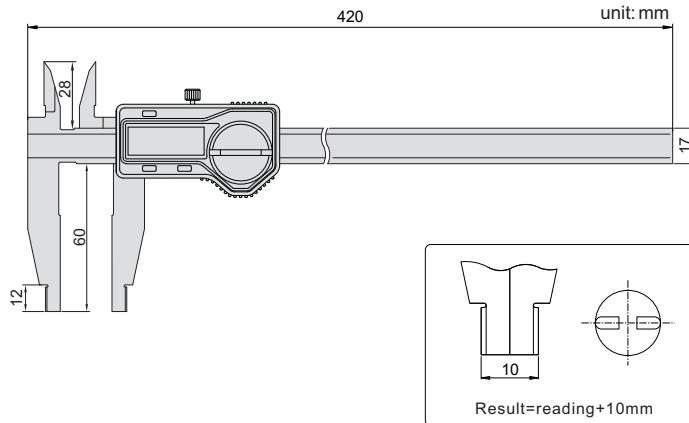
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Button function: on/off, zero, mm/inch, ABS, data preset
- ◆ Data output(cable code:100-15)
- ◆ Made of stainless steel

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



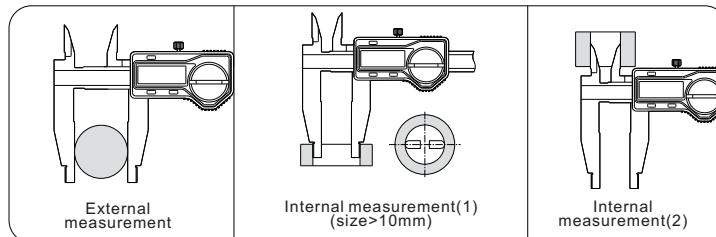
119

DIGITAL CALIPER



- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power on/off
- Data output(cable code:100-11 or 100-12)
- Made of stainless steel

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

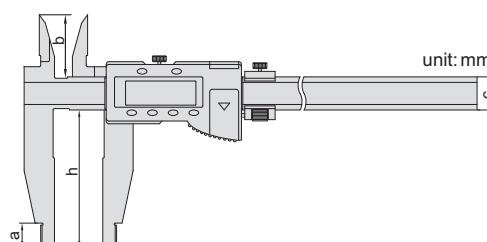
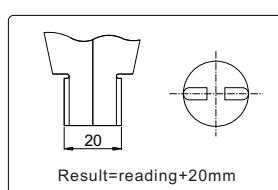


SERIES 119

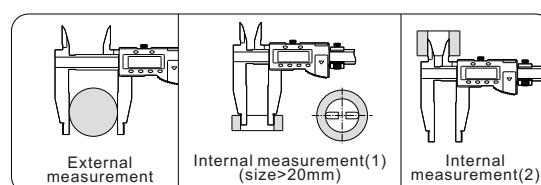
DIGITAL CALIPER



119-020-11



Code	Range	Accuracy	a	b	c	h
119-012-12	0-300mm/0-12"	±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	45	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	45	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

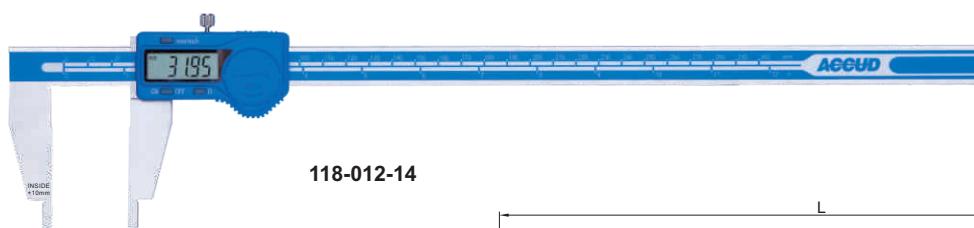


- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch, ABS, data preset
- Data output(cable code:100-15)
- Made of stainless steel



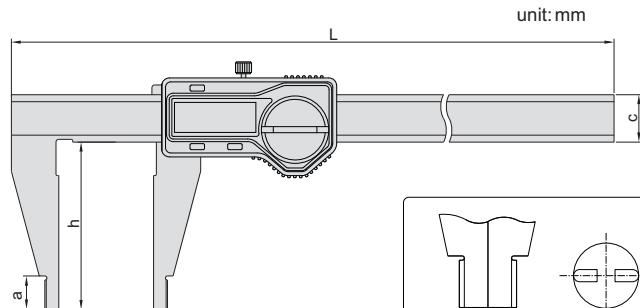
SERIES 118

DIGITAL CALIPER



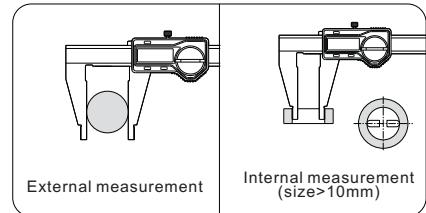
118-012-14

- ♦ Resolution: 0.01mm/0.0005"
- ♦ Buttons: on/off, zero, mm/inch
- ♦ Automatic power on/off
- ♦ Data output(cable code:100-11 or 100-12)
- ♦ Made of stainless steel



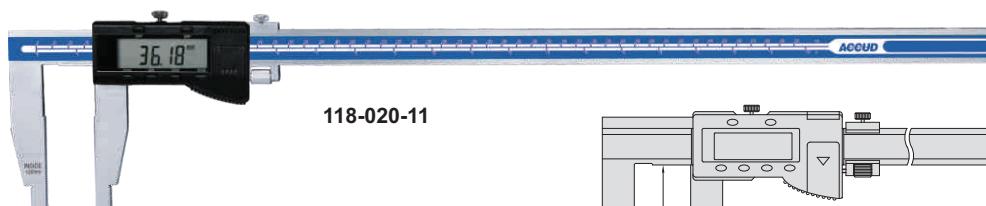
Result=reading+10mm

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"	±0.04mm	12	17	90	420

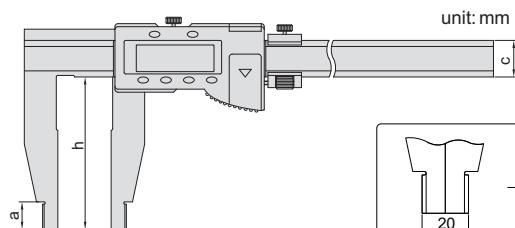


SERIES 118

DIGITAL CALIPER

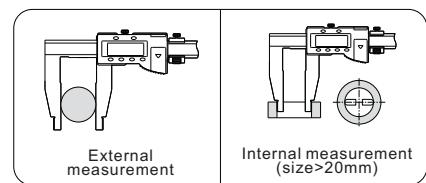


118-020-11



Result=reading+20mm

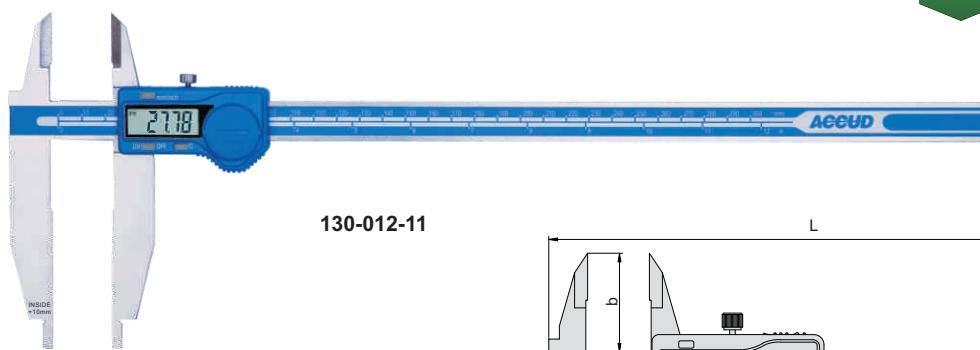
Code	Range	Accuracy	a	c	h
118-012-11	0-300mm/0-12"	±0.04mm	18	24	100
118-012-12	0-300mm/0-12"	±0.05mm	18	24	150
118-012-13	0-300mm/0-12"	±0.05mm	18	24	200
118-020-11	0-500mm/0-20"	±0.05mm	18	24	100
118-020-12	0-500mm/0-20"	±0.06mm	18	24	150
118-020-13	0-500mm/0-20"	±0.06mm	18	32	200
118-020-14	0-500mm/0-20"	±0.08mm	18	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	18	32	200
118-024-15	0-600mm/0-24"	±0.08mm	18	42	300
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
- ♦ Data output(cable code:100-15)
- ♦ Made of stainless steel

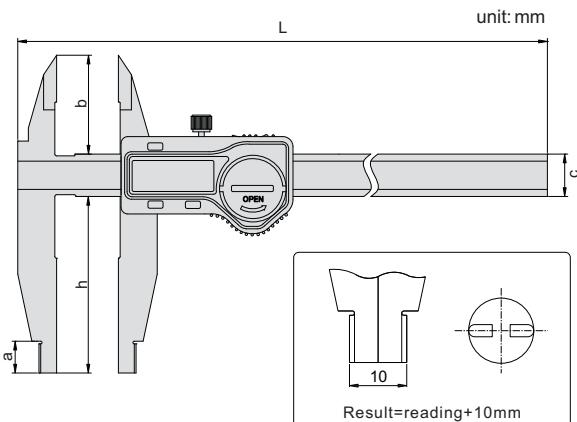
SERIES 130

DIGITAL CALIPER

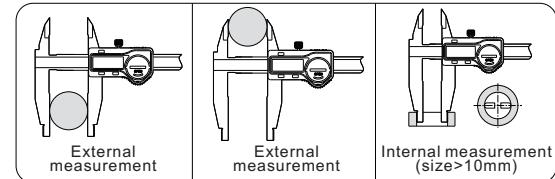


- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Automatic power on/off
- ◆ Data output(cable code:100-11 or 100-12)
- ◆ Made of stainless steel

130-012-11

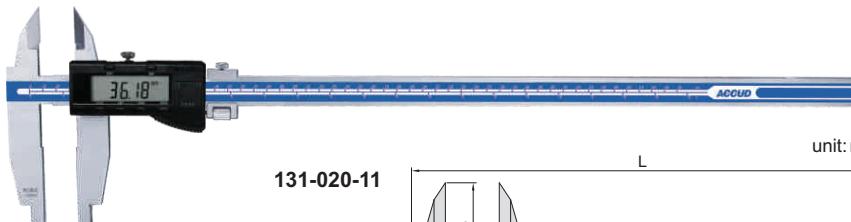


Code	Range	Accuracy	a	b	c	h	L
130-008-11	0-200mm/0-8"	±0.03mm	12	38	17	60	320
130-012-11	0-300mm/0-12"	±0.04mm	12	38	17	60	420
130-012-12	0-300mm/0-12"	±0.04mm	12	38	17	90	420



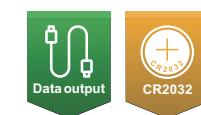
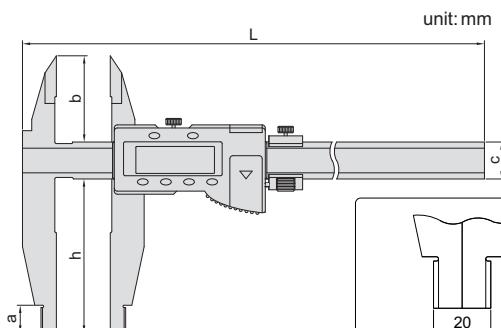
SERIES 131

DIGITAL CALIPER

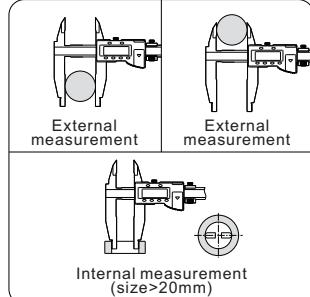


- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/inch, ABS, data preset
- ◆ Data output(cable code:100-15)
- ◆ Made of stainless steel

131-020-11



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

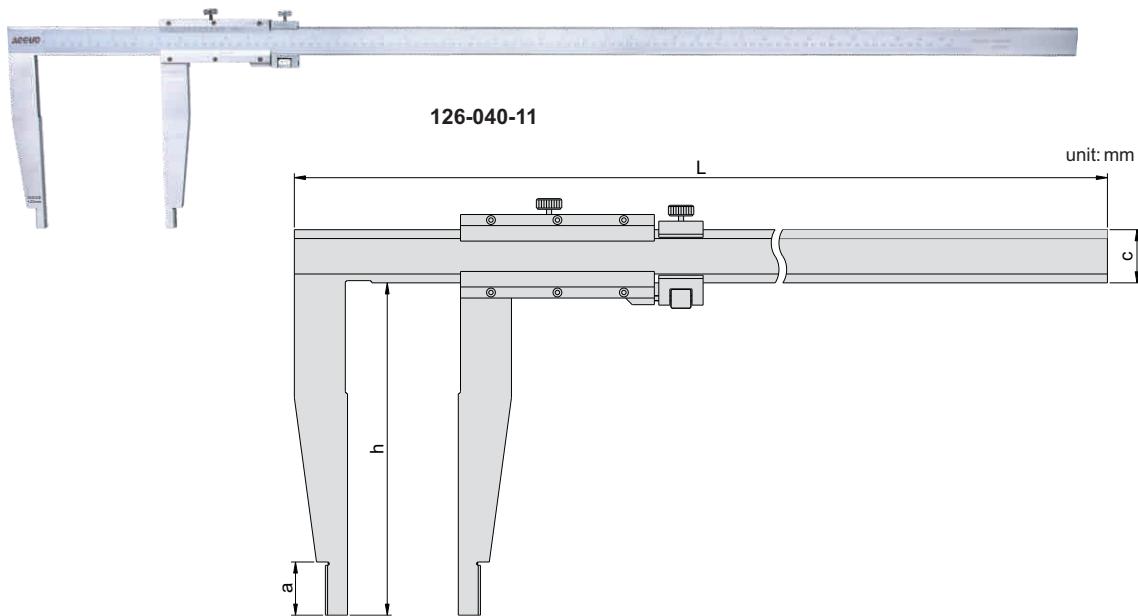


CALIPER

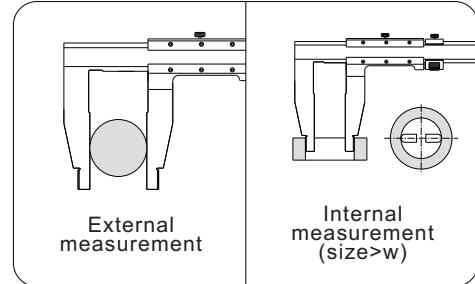
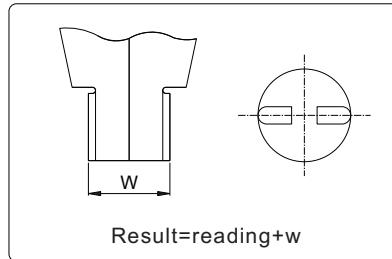


SERIES 126

VERNIER CALIPER



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



Graduation 0.02mm/0.001"

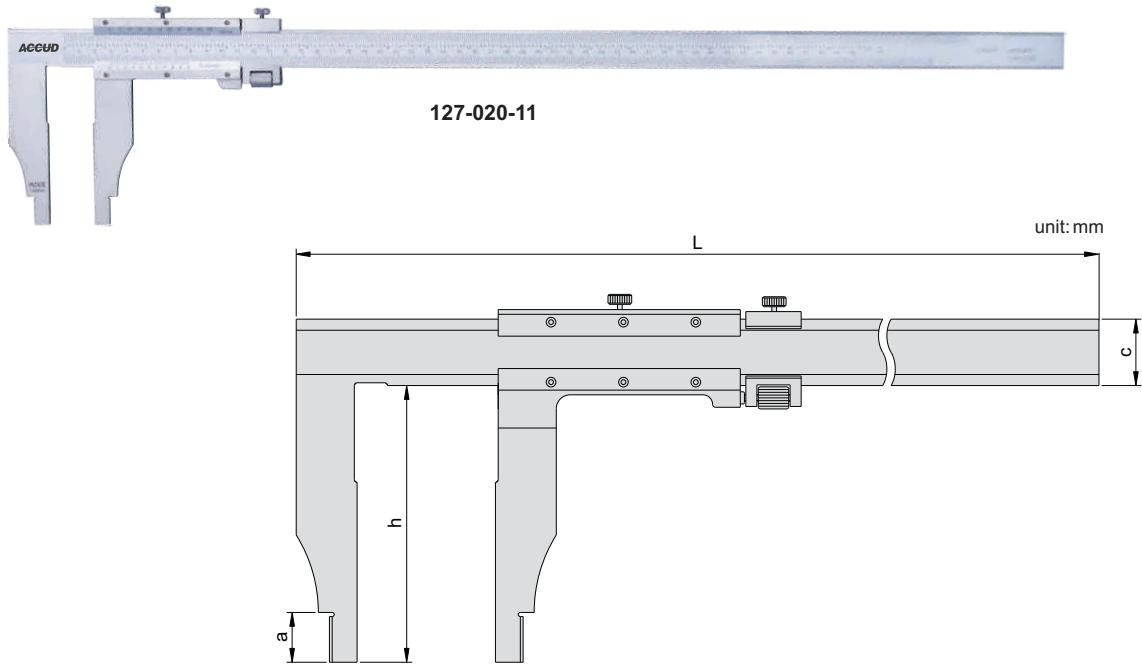
Code	Range	Accuracy	a	c	h	w	L
126-012-11	0-300mm/0-12"	±0.05mm	12	17	90	10	410
126-012-12	0-300mm/0-12"	±0.05mm	18	24	150	20	470
126-020-11	0-500mm/0-20"	±0.06mm	18	24	150	20	670
126-020-12	0-500mm/0-20"	±0.06mm	18	24	200	20	670
126-024-11	0-600mm/0-24"	±0.06mm	18	24	150	20	770
126-024-12	0-600mm/0-24"	±0.08mm	24	32	250	20	770
126-040-11	0-1000mm/0-40"	±0.08mm	24	32	200	20	1220
126-040-12	0-1000mm/0-40"	±0.11mm	24	32	300	20	1330
126-120-12	0-3000mm/0-120"	±0.26mm	24	50	300	20	3360

Graduation 0.05mm/1/128"

Code	Range	Accuracy	a	c	h	w	L
126-012-51	0-300mm/0-12"	±0.07mm	12	17	90	10	410
126-012-52	0-300mm/0-12"	±0.07mm	18	24	150	20	470
126-020-51	0-500mm/0-20"	±0.08mm	18	24	150	20	670
126-020-52	0-500mm/0-20"	±0.08mm	18	24	200	20	670
126-024-51	0-600mm/0-24"	±0.08mm	18	24	150	20	770
126-024-52	0-600mm/0-24"	±0.08mm	24	32	250	20	770
126-040-51	0-1000mm/0-40"	±0.12mm	24	50	200	20	1220
126-040-52	0-1000mm/0-40"	±0.12mm	24	32	300	20	1330
126-120-52	0-3000mm/0-120"	±0.37mm	24	50	300	20	3360

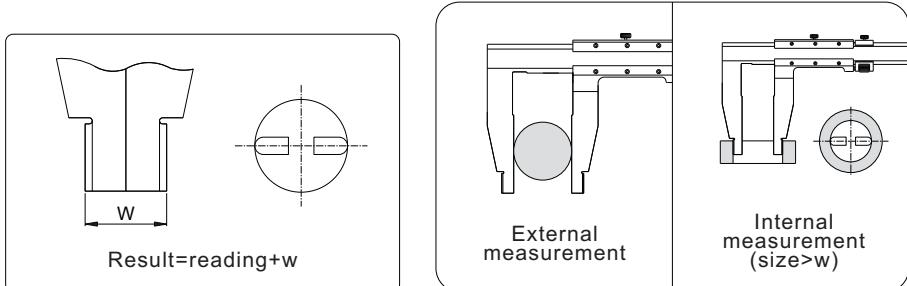
SERIES 127

VERNIER CALIPER



CALIPER

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



Graduation 0.02mm/0.001"

Code	Range	Accuracy	a	c	h	w	L
127-012-11	0-300mm/0-12"	±0.05mm	10	20	75	10	410
127-020-11	0-500mm/0-20"	±0.05mm	18	24	100	20	670
127-024-11	0-600mm/0-24"	±0.05mm	18	24	100	20	770
127-032-11	0-800mm/0-32"	±0.08mm	24	32	150	20	1020
127-040-11	0-1000mm/0-40"	±0.08mm	24	32	140	20	1216
127-060-11	0-1500mm/0-60"	±0.11mm	24	42	180	20	1830
127-080-11	0-2000mm/0-80"	±0.14mm	24	42	200	20	2320

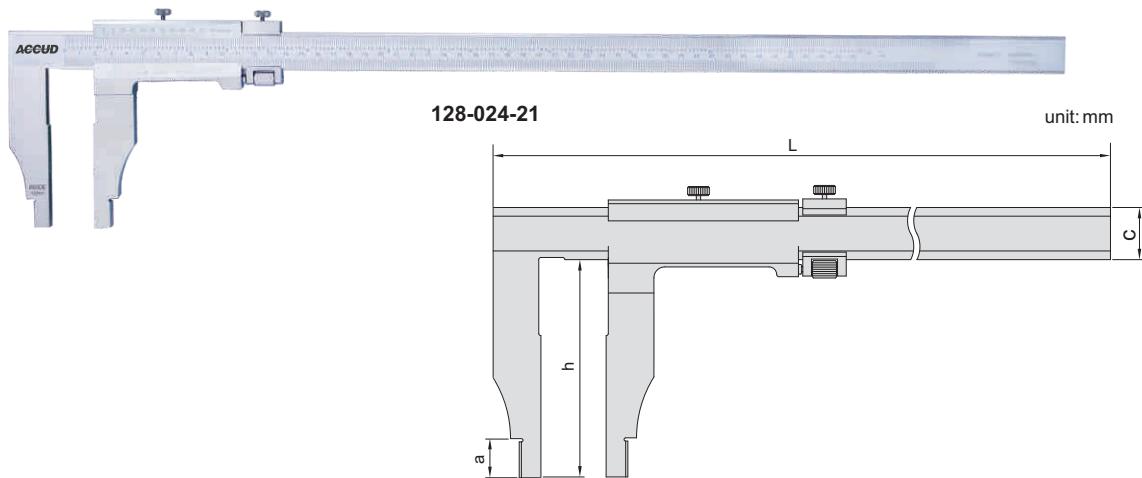
Graduation 0.05mm/1/128"

Code	Range	Accuracy	a	c	h	w	L
127-012-51	0-300mm/0-12"	±0.05mm	10	20	75	10	410
127-020-51	0-500mm/0-20"	±0.08mm	18	24	100	20	670
127-024-51	0-600mm/0-24"	±0.08mm	18	24	100	20	770
127-040-51	0-1000mm/0-40"	±0.10mm	24	32	140	20	1216
127-060-51	0-1500mm/0-60"	±0.15mm	24	42	180	20	1830
127-080-51	0-2000mm/0-80"	±0.20mm	24	42	200	20	2320

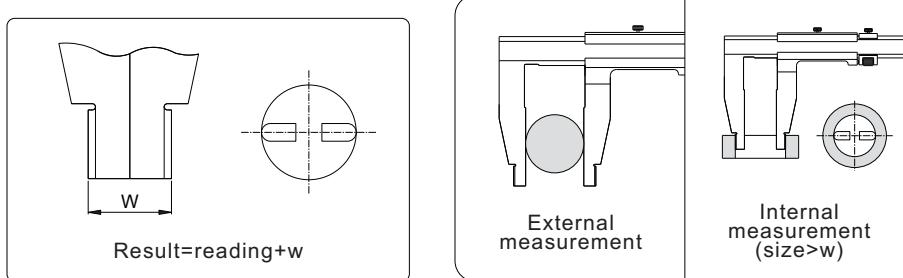


SERIES 128

VERNIER CALIPER



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



Graduation 0.02mm/0.001"

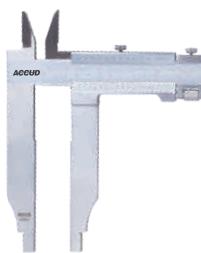
Code	Range	Accuracy	a	c	h	w	L
128-008-21	0-200mm/0-8"	±0.05mm	12	20	100	10	330
128-012-21	0-300mm/0-12"	±0.05mm	18	24	90	20	410
128-012-22	0-300mm/0-12"	±0.07mm	18	24	150	20	410
128-020-21	0-500mm/0-20"	±0.05mm	18	24	100	20	670
128-020-22	0-500mm/0-20"	±0.06mm	18	24	150	20	670
128-024-21	0-600mm/0-24"	±0.06mm	18	24	100	20	770
128-024-22	0-600mm/0-24"	±0.08mm	18	24	150	20	770
128-040-21	0-1000mm/0-40"	±0.08mm	24	32	150	20	1230
128-060-21	0-1500mm/0-60"	±0.11mm	24	42	150	20	1820
128-080-21	0-2000mm/0-80"	±0.14mm	24	42	150	20	2230

Graduation 0.05mm/1/128"

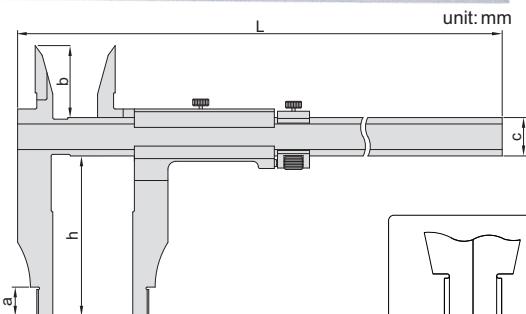
Code	Range	Accuracy	a	c	h	w	L
128-008-51	0-200mm/0-8"	±0.06mm	12	20	100	20	330
128-012-51	0-300mm/0-12"	±0.07mm	18	24	90	20	410
128-012-52	0-300mm/0-12"	±0.07mm	18	24	150	20	410
128-020-51	0-500mm/0-20"	±0.08mm	18	24	100	20	670
128-020-52	0-500mm/0-20"	±0.08mm	18	24	150	20	670
128-024-51	0-600mm/0-24"	±0.08mm	18	24	100	20	770
128-024-52	0-600mm/0-24"	±0.09mm	18	24	150	20	770
128-032-51	0-800mm/0-32"	±0.09mm	24	31	150	20	1030
128-040-51	0-1000mm/0-40"	±0.12mm	24	32	150	20	1230
128-060-51	0-1500mm/0-60"	±0.16mm	24	42	150	20	1820
128-080-51	0-2000mm/0-80"	±0.20mm	24	42	150	20	2230

SERIES 129**VERNIER CALIPER**

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



129-020-12

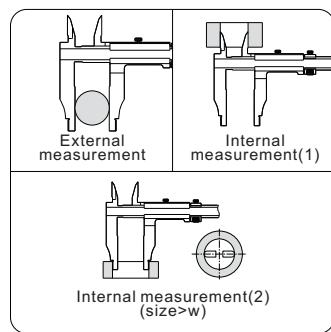
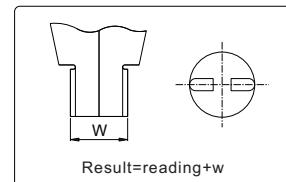
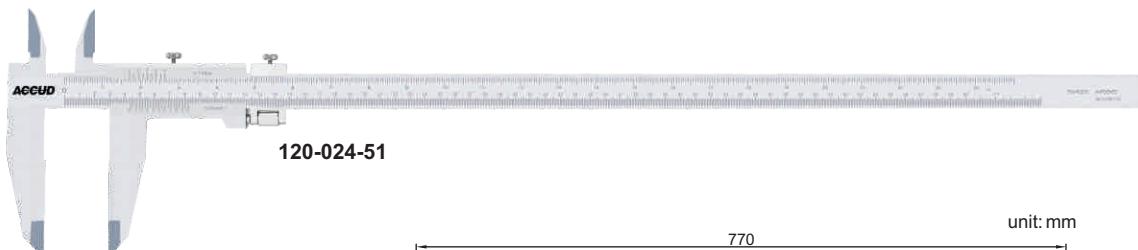


Graduation 0.02mm/0.001"

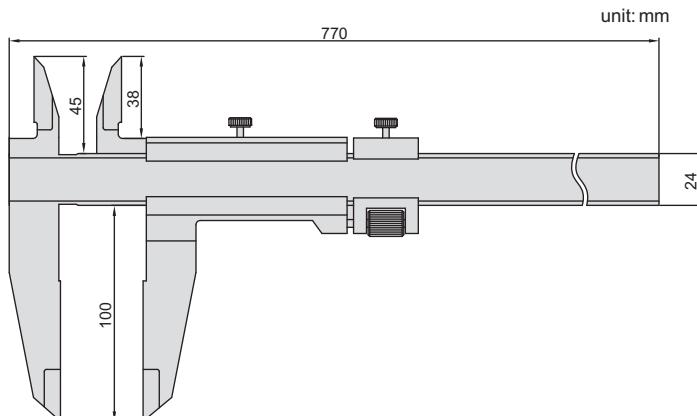
Code	Range	Accuracy	a	b	c	h	w	L
129-020-11	0-500mm/0-20"	±0.05mm	18	45	24	100	20	670
129-020-12	0-500mm/0-20"	±0.06mm	18	45	24	150	20	670
129-024-11	0-600mm/0-24"	±0.06mm	18	45	24	100	20	770
129-040-11	0-1000mm/0-40"	±0.08mm	24	60	31	150	20	1230

Graduation 0.05mm/1/128"

Code	Range	Accuracy	a	b	c	h	w	L
129-020-51	0-500mm/0-20"	±0.07mm	18	45	24	100	20	670
129-020-52	0-500mm/0-20"	±0.08mm	18	45	24	150	20	670
129-024-51	0-600mm/0-24"	±0.08mm	18	45	24	100	20	770
129-040-51	0-1000mm/0-40"	±0.12mm	24	60	31	150	20	1230

**SERIES 120****VERNIER CALIPER (SOLID TYPE)**

120-024-51



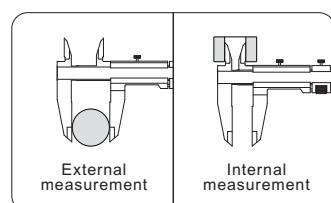
- ◆ Made of stainless steel
- ◆ Satin chrome plated reading surface

Graduation 0.02mm/0.001"

code	Range	Accuracy
120-024-11	0-600mm/0-24"	±0.06mm

Graduation 0.05mm/1/128"

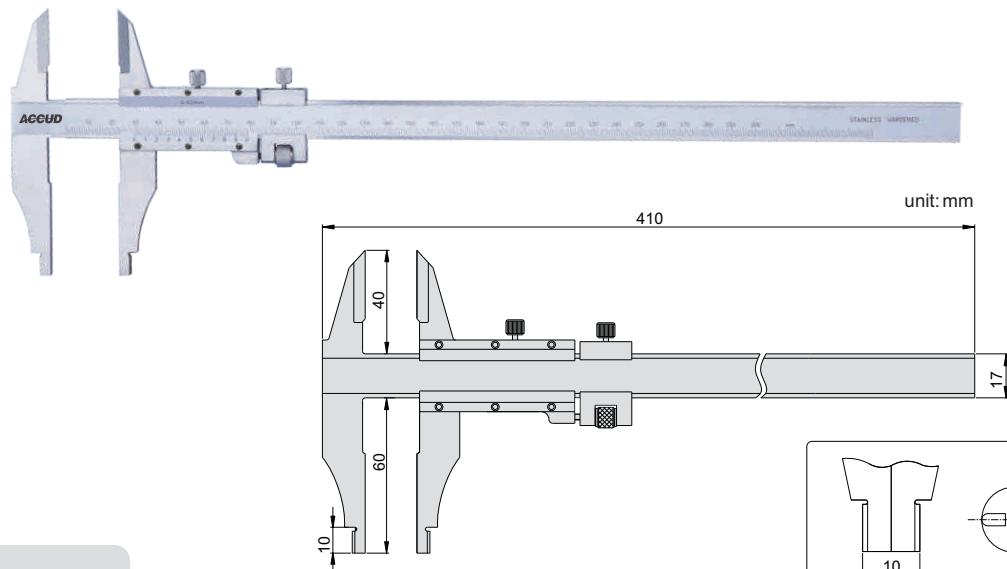
code	Range	Accuracy
120-024-51	0-600mm/0-24"	±0.08mm



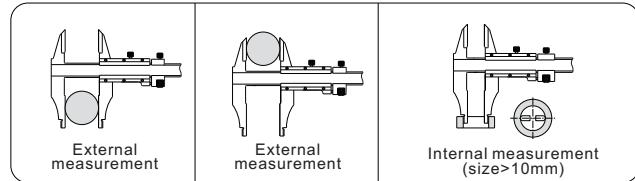


122

VERNIER CALIPER

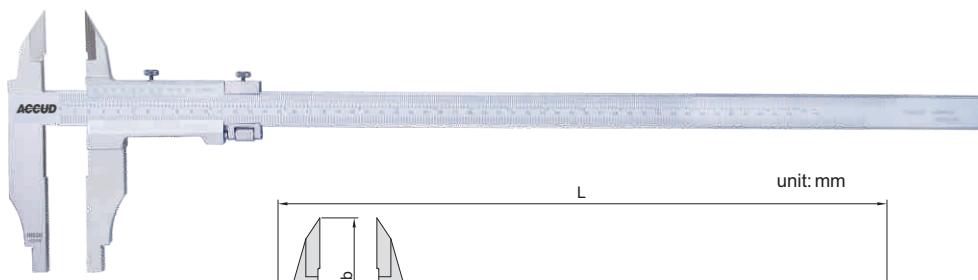


Code	Range	Accuracy
122-012-11	0-300mm	±0.03mm



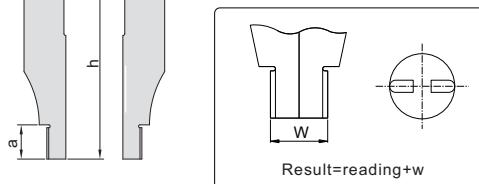
SERIES 122

VERNIER CALIPER

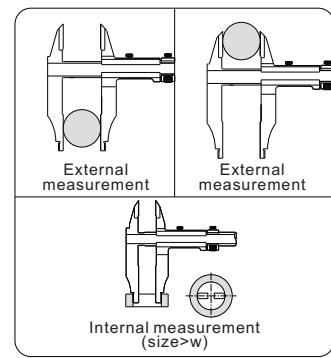


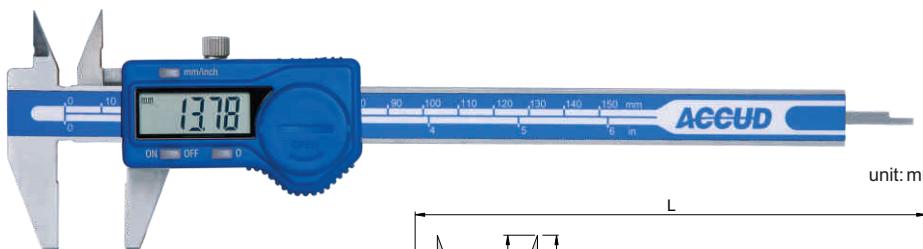
122-020-21

Code	Range	Accuracy
122-012-21	0-300mm/0-12"	±0.05mm
122-020-21	0-500mm/0-20"	±0.05mm
122-020-22	0-500mm/0-20"	±0.06mm
122-032-21	0-800mm/0-32"	±0.07mm
122-040-21	0-1000mm/0-40"	±0.08mm



Code	Range	Accuracy	h	a	b	c	w	L
122-012-21	0-300mm/0-12"	±0.05mm	90	12	40	20	10	410
122-020-21	0-500mm/0-20"	±0.05mm	100	18	56	24	20	670
122-020-22	0-500mm/0-20"	±0.06mm	150	18	56	24	20	670
122-032-21	0-800mm/0-32"	±0.07mm	150	24	67	31	20	1020
122-040-21	0-1000mm/0-40"	±0.08mm	150	24	67	31	20	1220

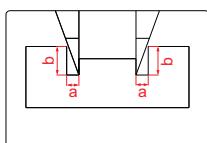
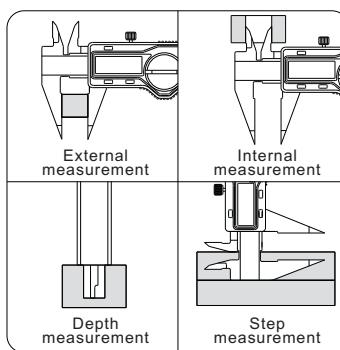
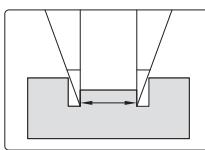
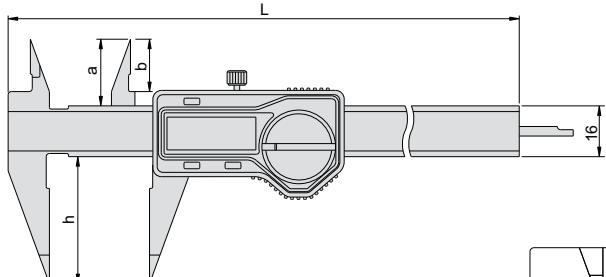


SERIES 138**DIGITAL POINT CALIPER**

138-006-11

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

unit: mm

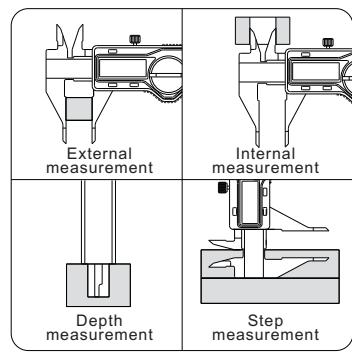
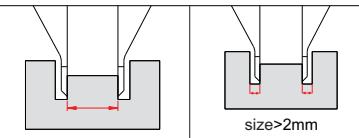
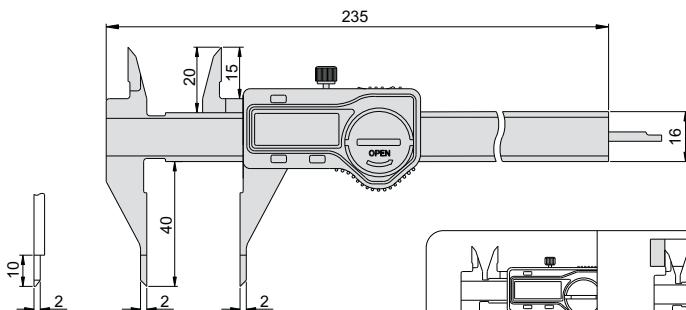


a	b
1	2.5
2	5
3	7.5
4	10
5	12.5
6	15

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

168**DIGITAL SMALL POINT CALIPER**

unit: mm



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

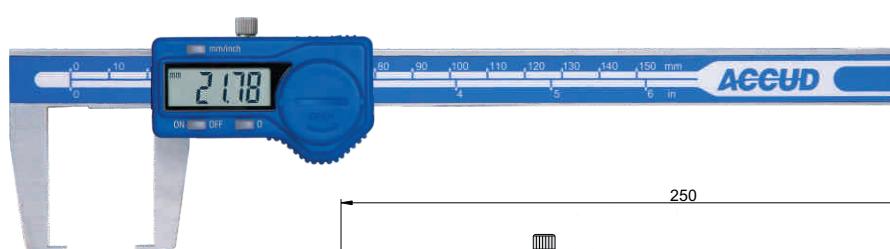


133

DIGITAL OUTSIDE NECK CALIPER



VIDEO



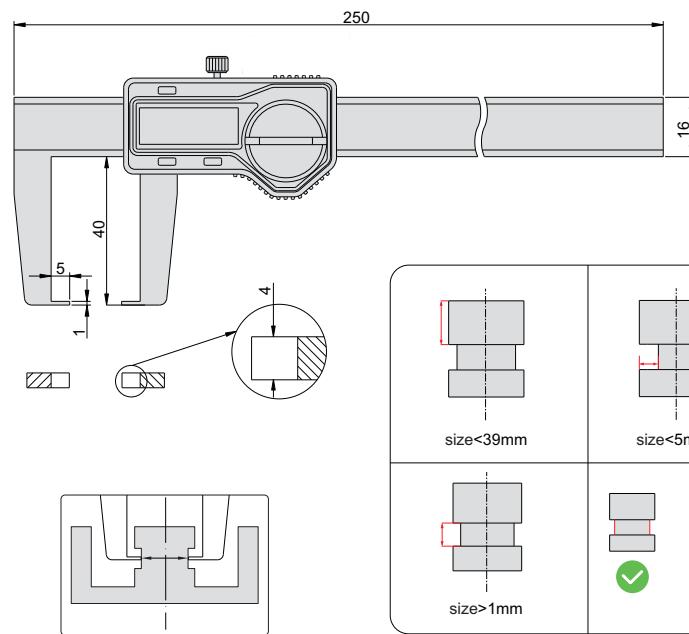
Data output



CR2032

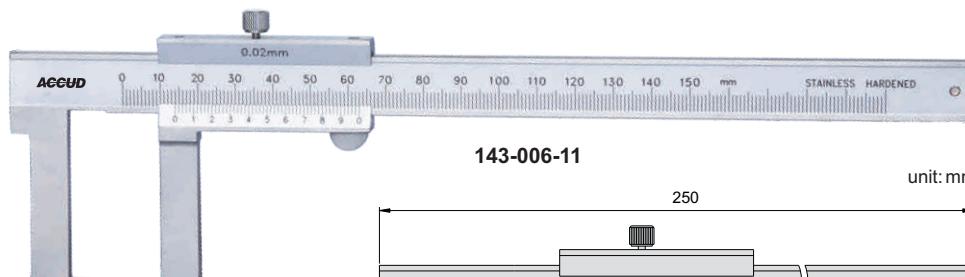
- ◆ Measure wall thickness and recesses
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Automatic power on/off
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Data output(cable code:100-11 or 100-12)
- ◆ Made of stainless steel

Code	Range	Accuracy
133-006-11	0-150mm/0-6"	±0.04mm



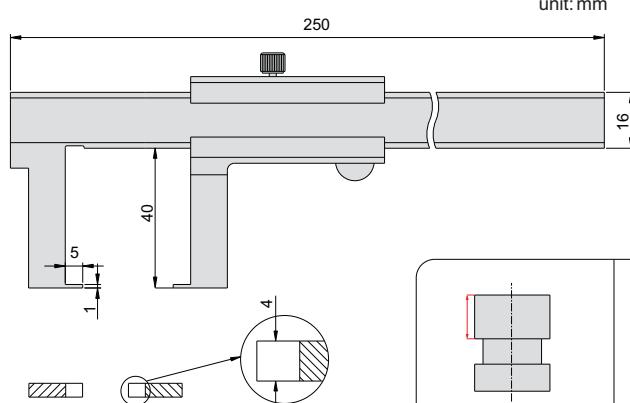
SERIES 143

OUTSIDE NECK VERNIER CALIPER



143-006-11

unit: mm



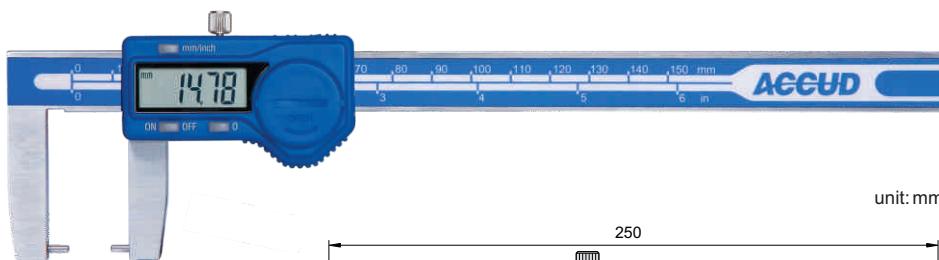
- ◆ Measure wall thickness and recesses
- ◆ Made of stainless steel
- ◆ Satin chrome plated reading surface

Graduation 0.02mm

Code	Range	Accuracy
143-006-11	0-150mm	±0.04mm

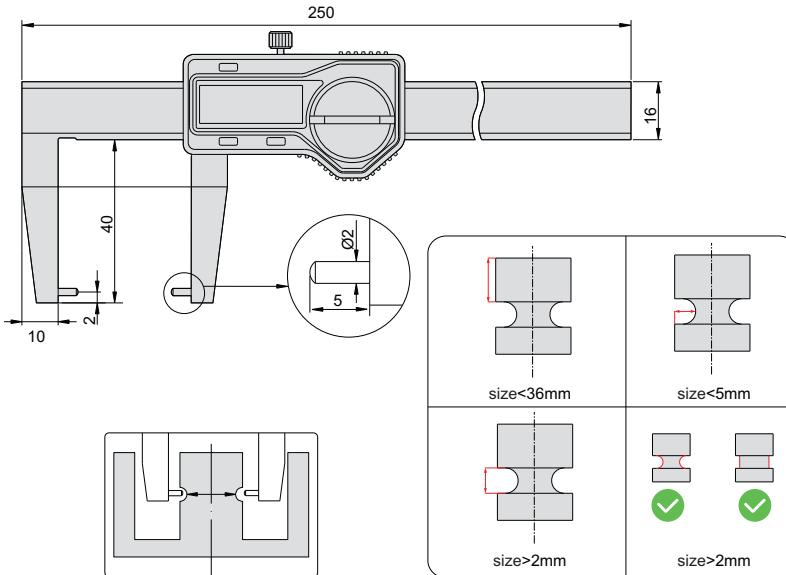
Graduation 0.05mm

Code	Range	Accuracy
143-006-13	0-150mm	±0.05mm



- ◆ Measure wall thickness of inside bores and recesses
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Automatic power on/off
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Data output(cable code:100-11 or 100-12)
- ◆ Made of stainless steel

Code	Range	Accuracy
134-006-11	0-150mm/0-6"	±0.04mm



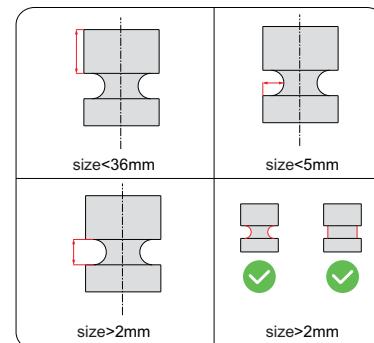
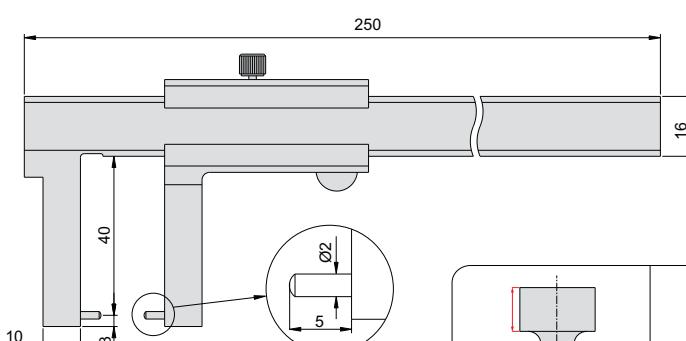
- ◆ Measure wall thickness of inside bores and recesses
- ◆ Made of stainless steel
- ◆ Satin chrome plated reading surface

Graduation 0.02mm

Code	Range	Accuracy
144-006-11	0-150mm	±0.04mm

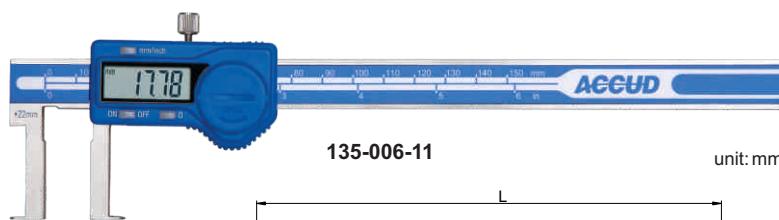
Graduation 0.05mm

Code	Range	Accuracy
144-006-13	0-150mm	±0.05mm

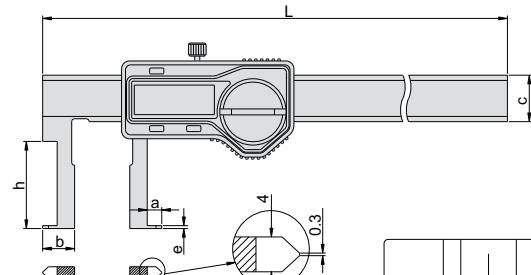


SERIES 135

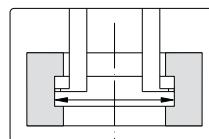
DIGITAL INSIDE NECK CALIPER



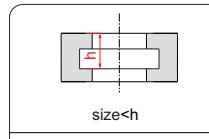
- ◆ Measure the grooves
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Automatic power on/off
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Data output
- ◆ Made of stainless steel



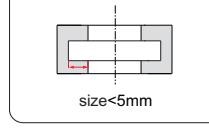
For range 500mm



Result=reading+2b



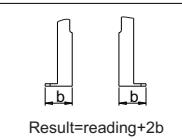
size<h



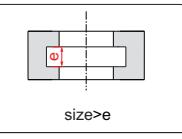
size>e



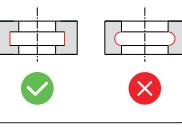
size<5mm



Result=reading+2b



size>e

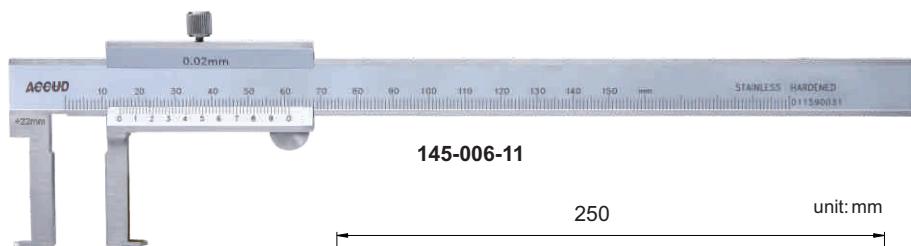


size<5mm

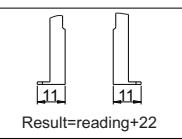
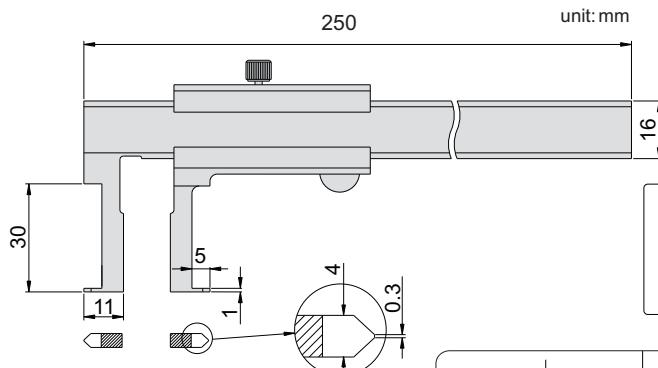
Code	Range	Accuracy	a	b	c	e	h	L
135-006-11	22-150mm	±0.04mm	5	11	16	1	30	250
135-008-11	25-200mm	±0.04mm	5	12.5	16	1	40	310
135-012-11	30-300mm	±0.05mm	5	15	17	1.5	50	410
135-006-12	35-150mm	±0.06mm	6	17.5	16	1.5	60	250
135-008-12	40-200mm	±0.06mm	7	20	16	2.5	70	310
135-012-12	50-300mm	±0.07mm	8	25	16	2.5	80	410
135-020-12	80-500mm	±0.08mm	16	40	24	5.2	150	680

SERIES 145

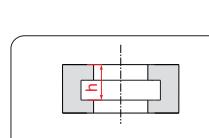
INSIDE NECK VERNIER CALIPER



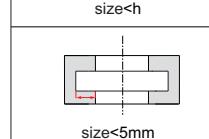
- ◆ Measure the grooves
- ◆ Made of stainless steel
- ◆ Satin chrome plated reading surface



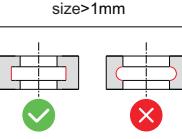
Result=reading+22



size<h



size>1mm



size<5mm

Graduation 0.02mm

Code	Range	Accuracy
145-006-11	22-150mm	±0.04mm

Graduation 0.05mm

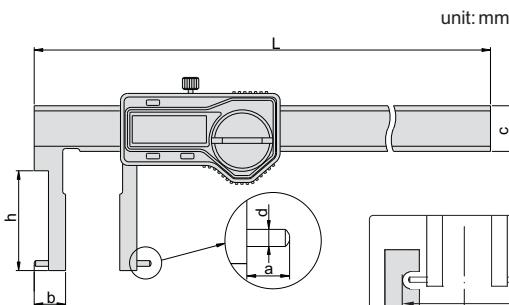
Code	Range	Accuracy
145-006-13	22-150mm	±0.05mm

SERIES 136

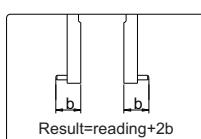
DIGITAL INSIDE POINT CALIPER



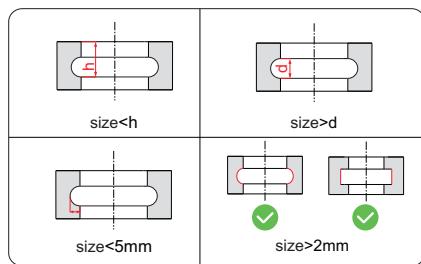
- ◆ Measure the grooves
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Automatic power on/off
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Data output
- ◆ Made of stainless steel



For range 500mm

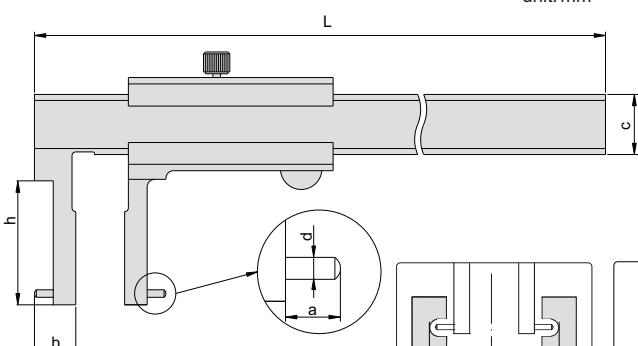
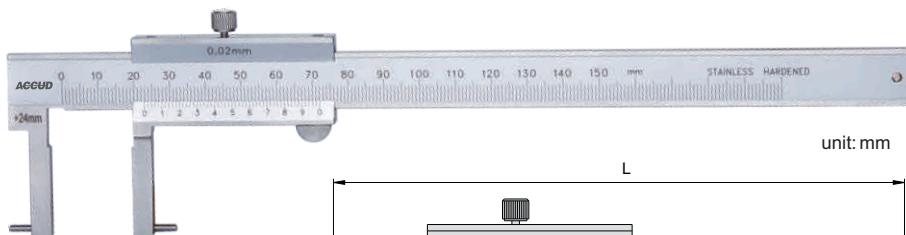


Code	Range	Accuracy	a	b	c	d	h	L
136-006-11	24-150mm	±0.04mm	5	12	16	Ø2	30	250
136-008-11	25-200mm	±0.04mm	5	12.5	16	Ø2	40	310
136-012-11	50-300mm	±0.06mm	8	25	17	Ø3	80	410
136-006-12	35-150mm	±0.05mm	6	17.5	16	Ø2	60	250
136-008-12	40-200mm	±0.05mm	7	20	16	Ø3	70	310
136-012-12	30-300mm	±0.07mm	5	15	16	Ø2	50	410
136-020-12	80-500mm	±0.08mm	16	40	16	Ø3	150	680



SERIES 146

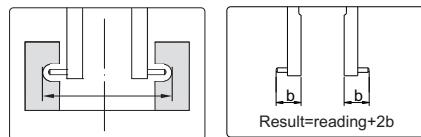
INSIDE POINT VERNIER CALIPER



- ◆ Measure the grooves
- ◆ Made of stainless steel
- ◆ Satin chrome plated reading surface

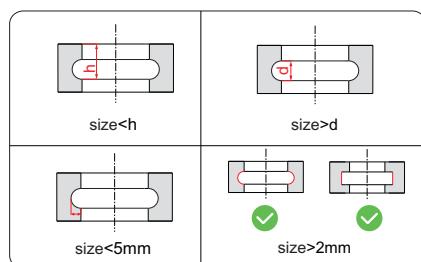
Graduation 0.02mm

Code	Range	Accuracy	a	b	c	d	h	L
146-006-11	24-150mm	±0.04mm	5	12	16	Ø2	30	250
146-012-11	50-300mm	±0.06mm	8	25	17	Ø3	80	410



Graduation 0.05mm

Code	Range	Accuracy	a	b	c	d	h	L
146-006-13	24-150mm	±0.05mm	5	12	16	Ø2	30	250
146-012-13	50-300mm	±0.08mm	8	25	17	Ø3	80	410



CALIPER

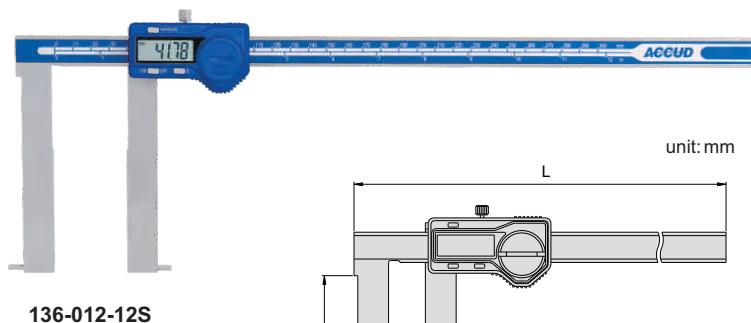


SERIES 136

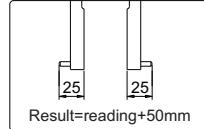
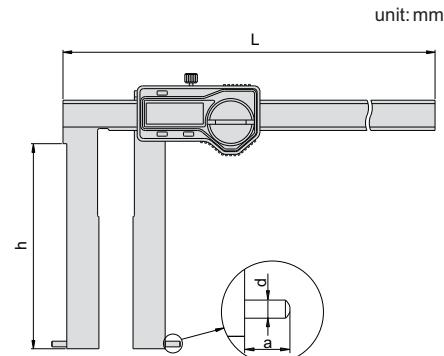
DIGITAL INSIDE POINT CALIPER



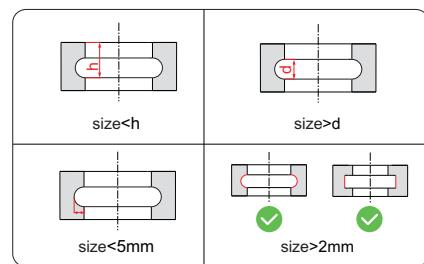
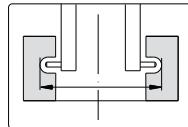
VIDEO



- ◆ Measure the grooves
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Automatic power on/off
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Data output (cable code: 100-11 or 100-12)
- ◆ Made of stainless steel

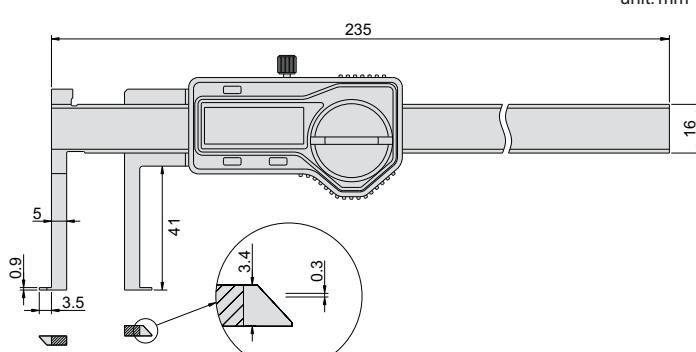
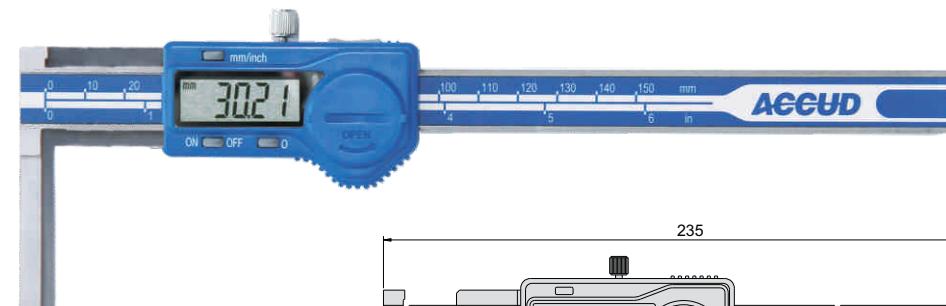


Code	Range	Accuracy	a	d	h	L
136-012-12S	50-300mm	$\pm 0.06\text{mm}$	8	3	90	410
136-012-13S	50-300mm	$\pm 0.06\text{mm}$	8	3	110	410

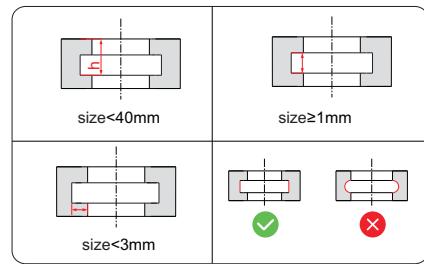
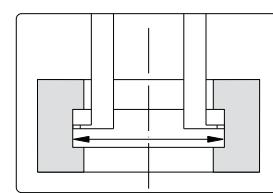


132

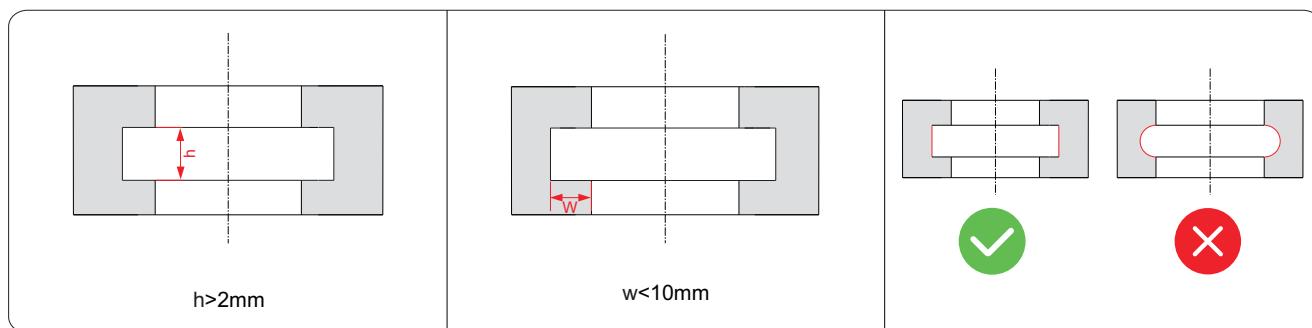
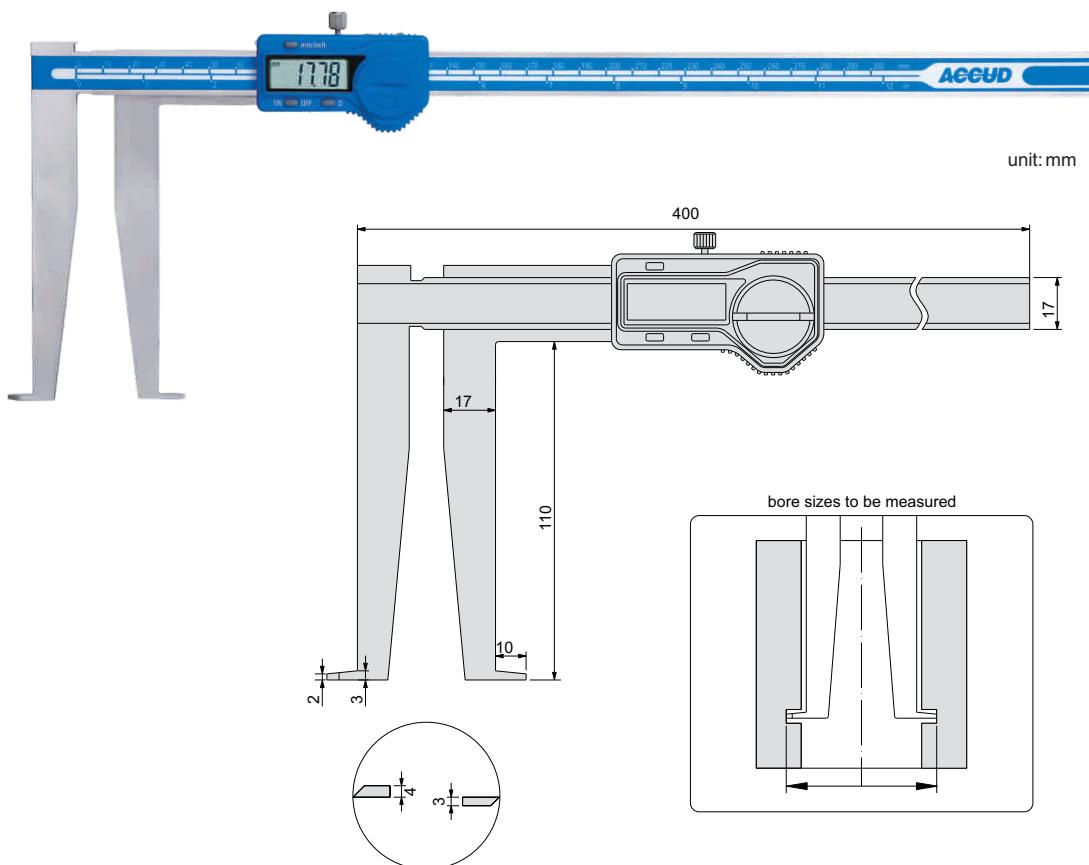
DIGITAL INSIDE GROOVE CALIPER



- ◆ Measure diameter of grooves inside small bores
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Automatic power on/off
- ◆ Data output(cable code: 100-11 or 100-12)
- ◆ Made of stainless steel

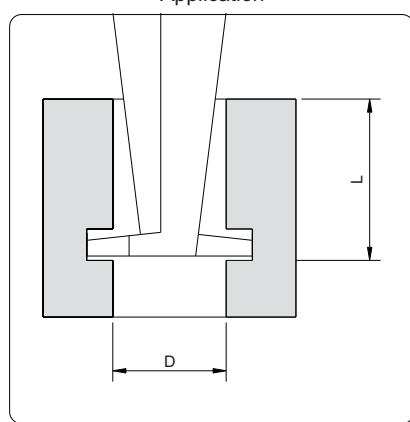


Code	Range	Accuracy
132-006-21	10-150mm/0.39-6"	$\pm 0.04\text{mm}$



- ◆ Measure diameter of grooves inside bores
 - ◆ Resolution: 0.01mm/0.0005"
 - ◆ Automatic power on/off
 - ◆ Buttons: on/off, zero, mm/inch
 - ◆ Data output(cable code: 100-11 or 100-12)
 - ◆ Made of stainless steel

Application



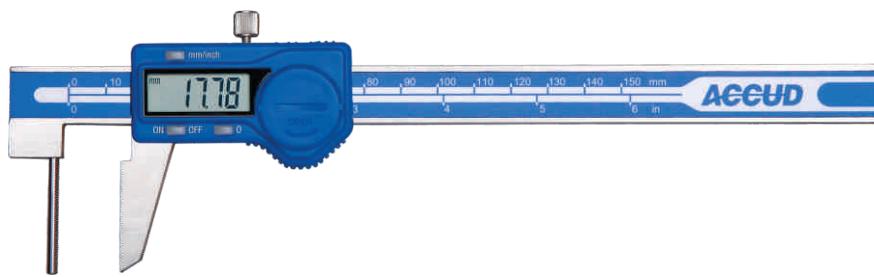
D	L
Ø25	<50mm
Ø26	<60mm
Ø27~300	<110mm

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



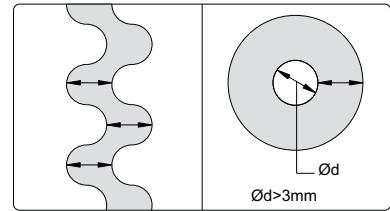
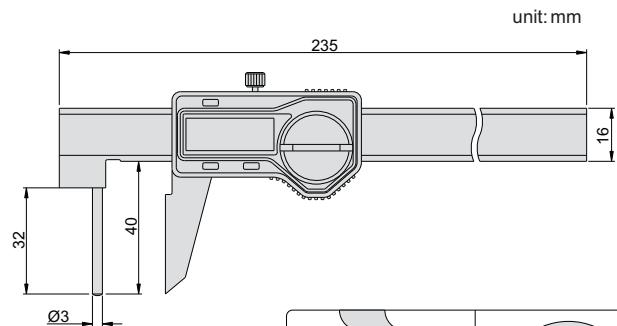
137

DIGITAL TUBE THICKNESS CALIPER



- ◆ Measure the wall thickness
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Automatic power on/off
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Data output(cable code:100-11 or 100-12)
- ◆ Made of stainless steel

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

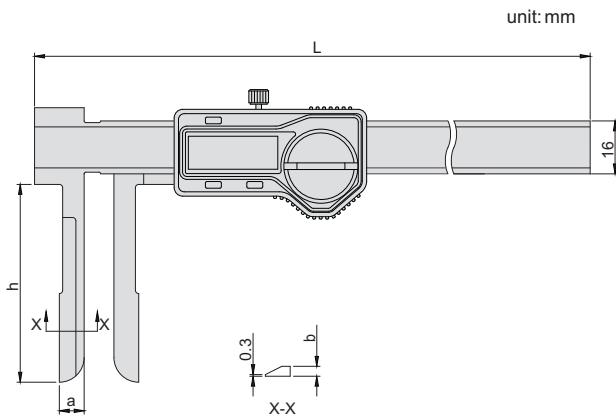


SERIES 139

DIGITAL INSIDE KNIFE-EDGE CALIPER

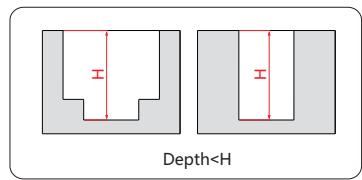
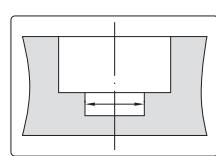


139-006-11



- ◆ Measure the diameter of deep holes or grooves
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Automatic power on/off
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Data output(cable code: 100-11 or 100-12)
- ◆ Made of stainless steel

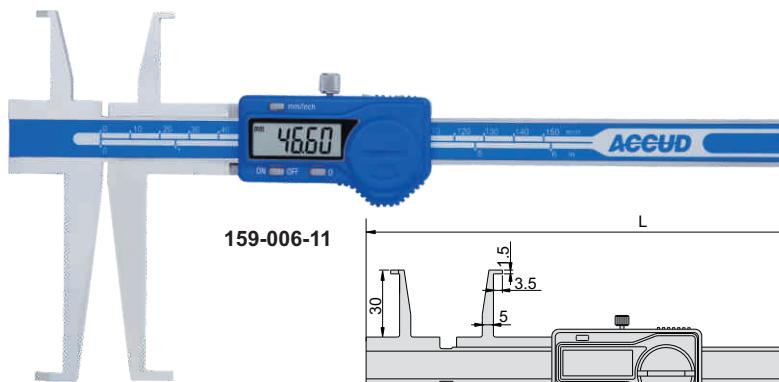
Code	Range	Accuracy	L	h	a	b
139-006-11	15-150mm	±0.05mm	250	60	12	3
139-008-11	20-200mm	±0.05mm	310	90	15	4



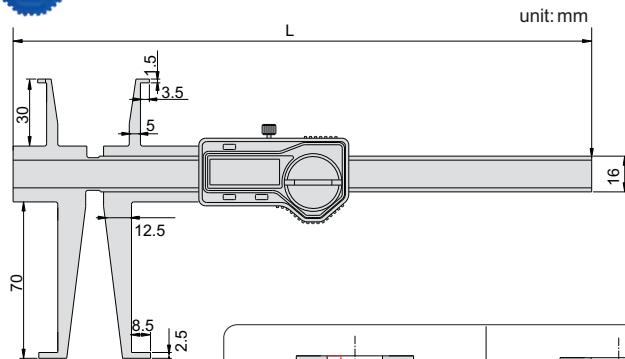
Depth<H

SERIES 159

DIGITAL INSIDE GROOVE CALIPER

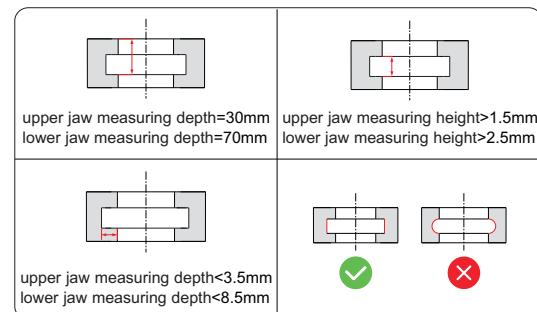


159-006-11



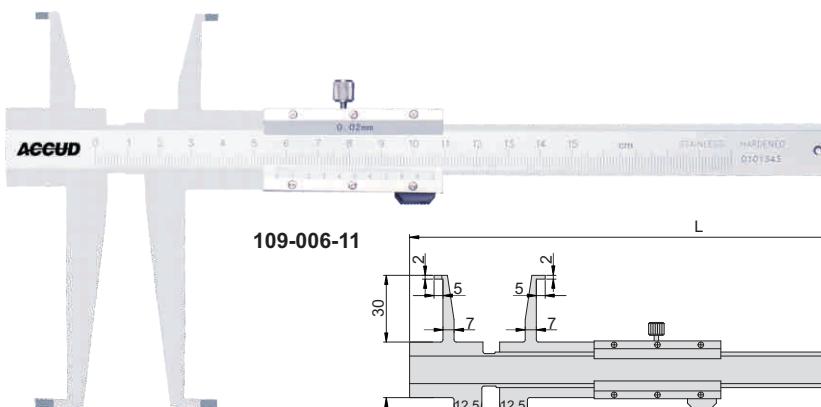
- ◆ Measure diameter of grooves inside bores
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Automatic power on/off
- ◆ Data output(cable code: 100-11 or 100-12)
- ◆ Made of stainless steel

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

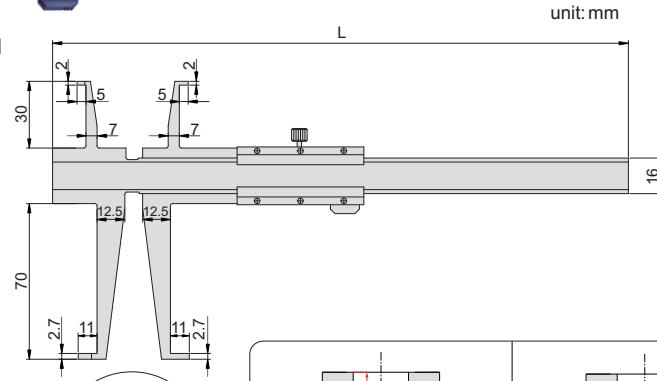


SERIES 109

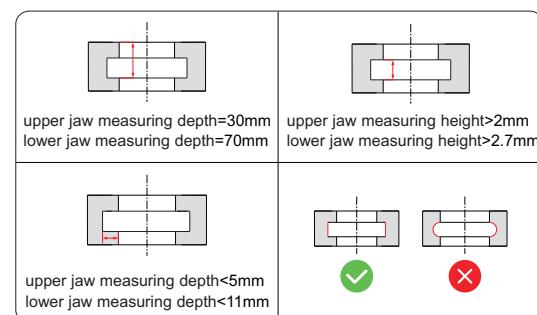
INSIDE GROOVE CALIPER



109-006-11



- ◆ Measure diameter of grooves inside bores
- ◆ Graduation: 0.02mm
- ◆ Made of stainless steel
- ◆ Satin chrome plated reading surface

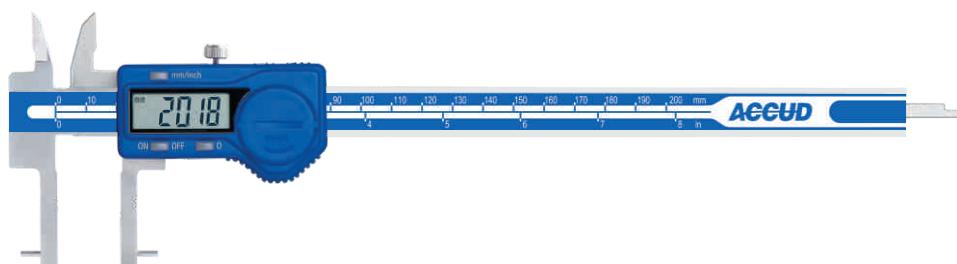


Code	Range of upperjaw	Range of lowerjaw	Accuracy	L
109-006-11	9-150mm	15-150mm	±0.04mm	260
109-008-11	9-200mm	15-200mm	±0.06mm	310

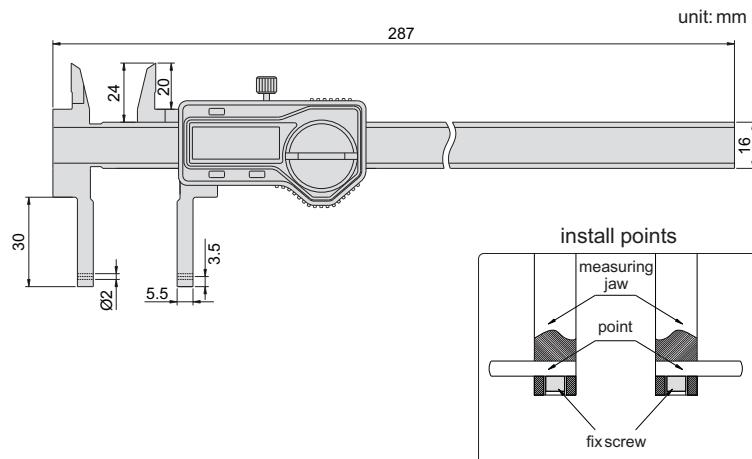


149

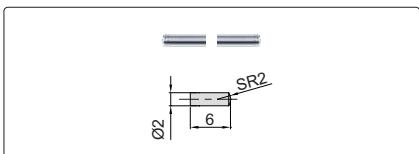
DIGITAL CALIPER WITH INTERCHANGEABLE POINTS



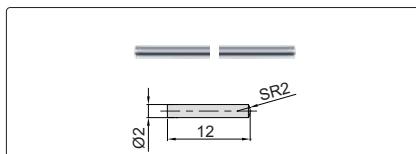
- ◆ Supplied with 3 pairs of points and one zero setting block for external measurement
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Automatic power on/off
- ◆ Data output (cable code: 100-11 or 100-12)
- ◆ Made of stainless steel



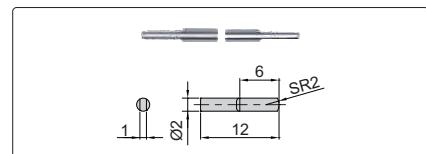
short spherical points (included)



long spherical/flat points (included)



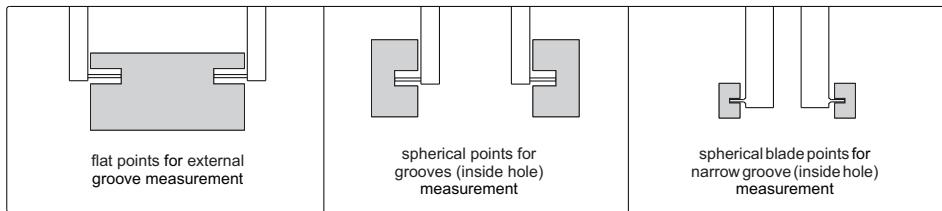
short spherical blade points (included)



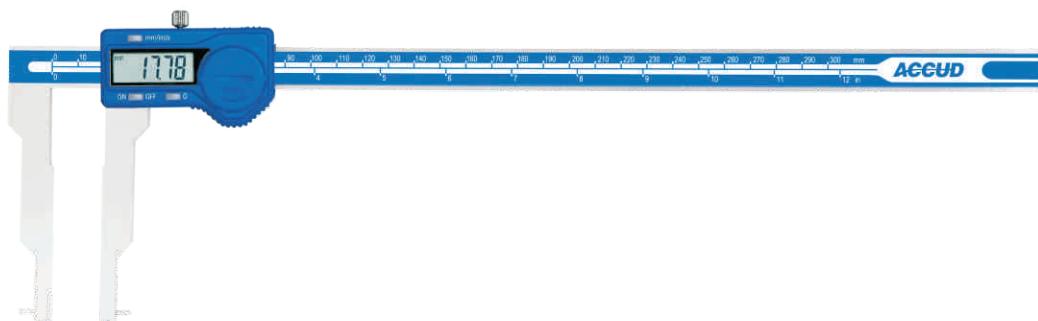
zero setting block for external measurement (included)



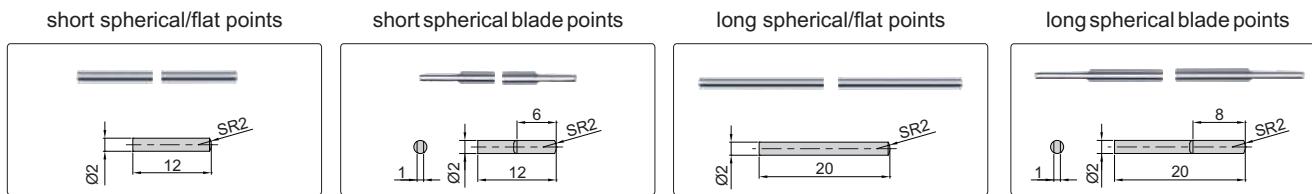
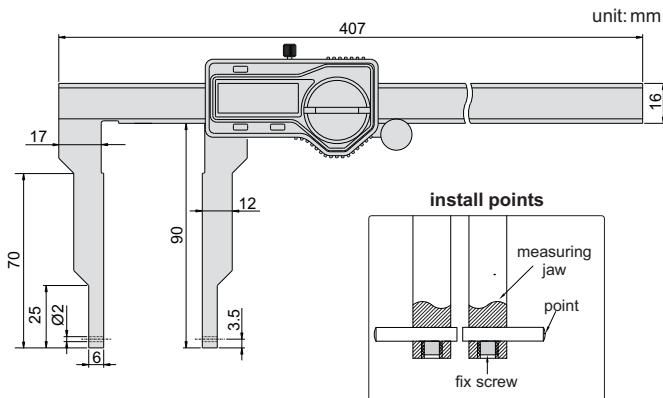
Measure internal and external grooves



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



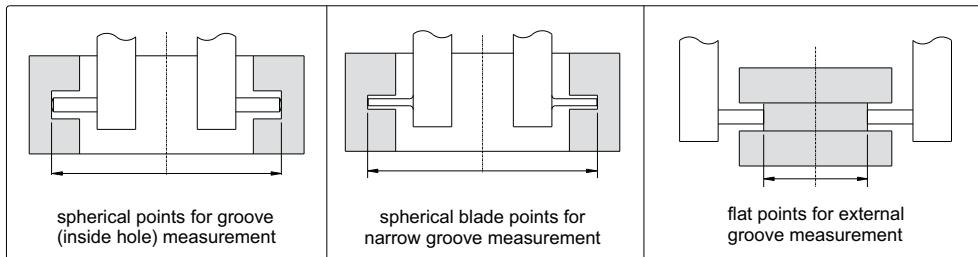
- ◆ Supplied with 4 pairs of points and one zero setting block for external measurement
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Automatic power on/off
- ◆ Data output(cable code: 100-11 or 100-12)
- ◆ Made of stainless steel



zero setting block for external measurement (included)



Measure internal and external grooves



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)



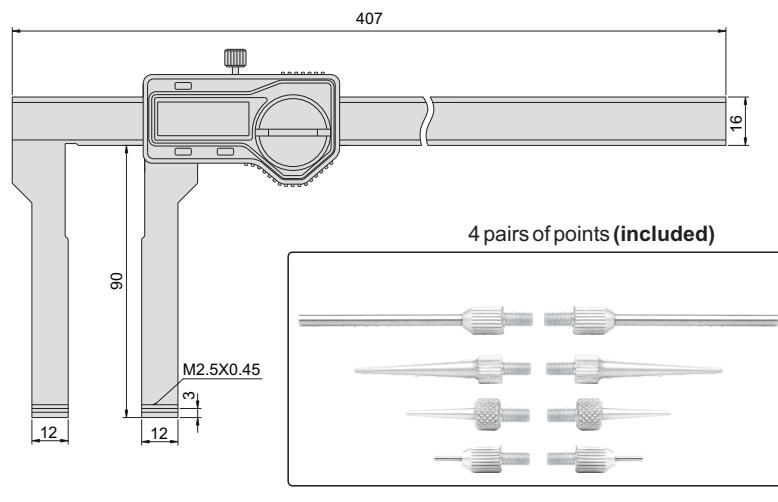
149

DIGITAL CALIPER WITH INTERCHANGEABLE POINTS



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: on/off, mm/inch, ZERO
- ◆ Automatic power on/off
- ◆ Data output (cable code: 100-11 or 100-12)
- ◆ Made of stainless steel



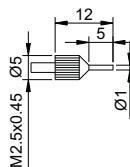
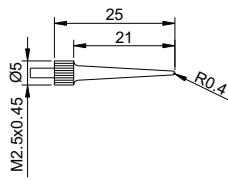
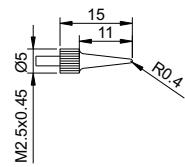
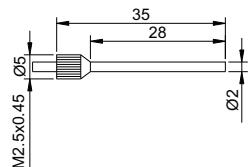
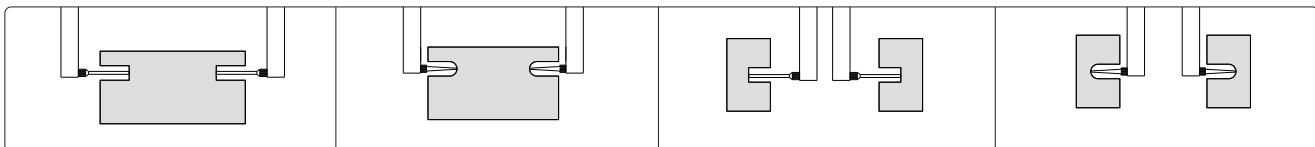
points (optional)



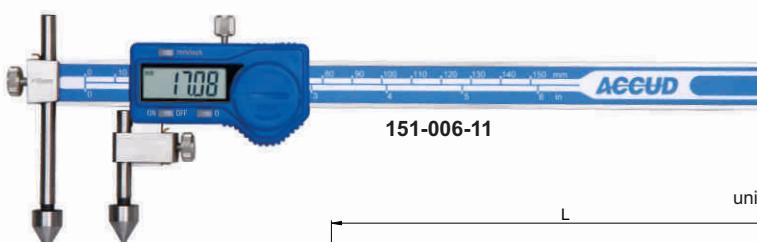
zero setting block for external measurement (included)



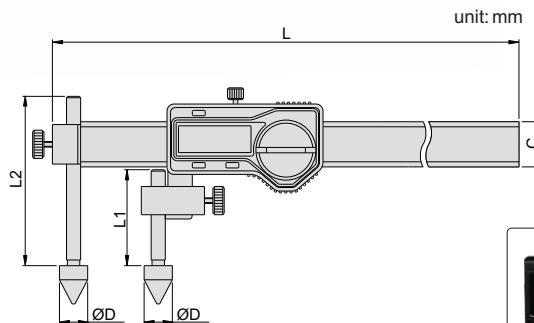
Measure internal and external grooves



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

SERIES 151**DIGITAL OFFSET CENTERLINE CALIPER**

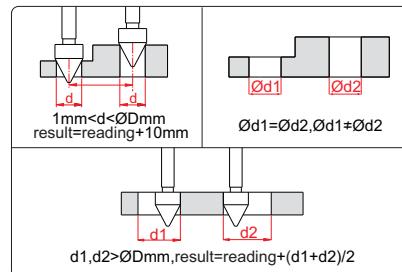
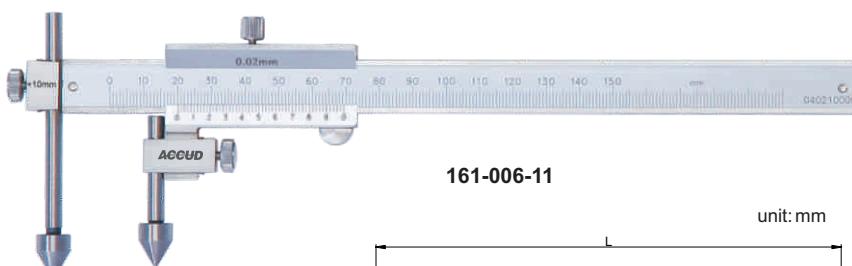
- ◆ Measure the hole center-to-center distance in same plane, or between offset planes
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Automatic power on/off
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Data output
- ◆ Made of stainless steel



For range 500mm

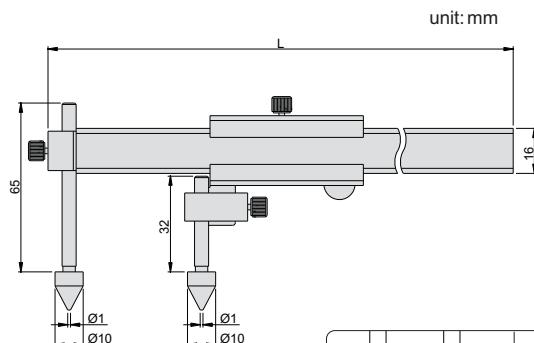


Code	Range	Accuracy	c	ØD	L1	L2	L
151-006-11	10-150mm/0.4-6"	±0.05mm	16	10	32	65	236
151-008-11	10-200mm/0.4-8"	±0.07mm	16	10	32	65	306
151-012-11	10-300mm/0.4-12"	±0.09mm	16	10	32	65	396
151-020-11	20-500mm/0.8-20"	±0.09mm	24	20	48	88	686
151-040-11	30-1000mm/1.2-40"	±0.12mm	31	30	42	88	1242

**SERIES 161****OFFSET CENTERLINE VERNIER CALIPER**

Graduation 0.02mm

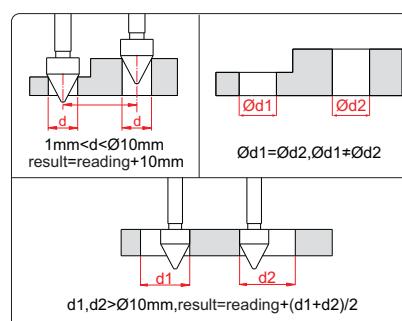
Code	Range	Accuracy	L
161-006-11	10-150mm	±0.05mm	236
161-008-11	10-200mm	±0.07mm	306
161-012-11	10-300mm	±0.09mm	396



Graduation 0.05mm

Code	Range	Accuracy	L
161-006-13	10-150mm	±0.05mm	236
161-008-13	10-200mm	±0.07mm	306
161-012-13	10-300mm	±0.09mm	396

- ◆ Measure the hole center-to-center distance in same plane, or between offset planes
- ◆ Made of stainless steel
- ◆ Satin chrome plated reading surface



SERIES 141

DIGITAL BACK-JAW CENTERLINE CALIPER



VIDEO



141-008-11

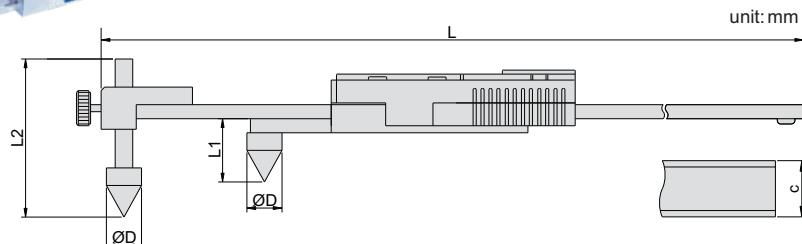


Data output



CR2032

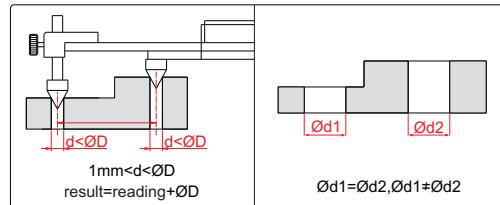
- ◆ Measure hole center distance in the same or offset planes
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Data output
- ◆ Automatic power on/off
- ◆ Made of stainless steel



For range 500mm



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

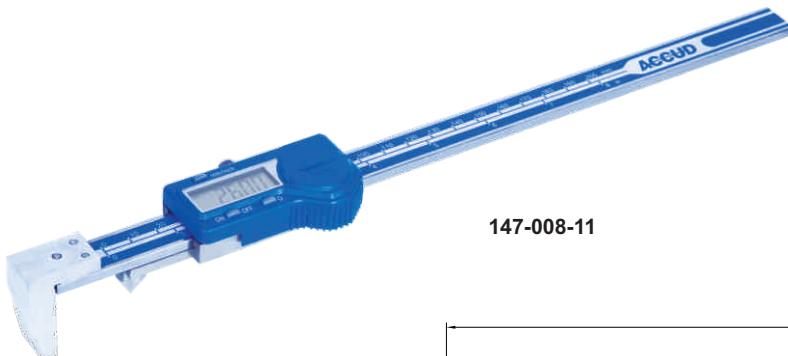


SERIES 147

BACK-JAW DIGITAL EDGE TO CENTER CALIPER



VIDEO



147-008-11

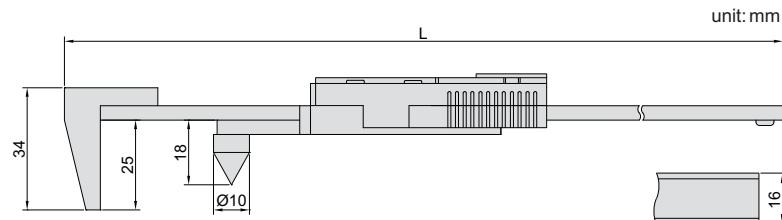


Data output

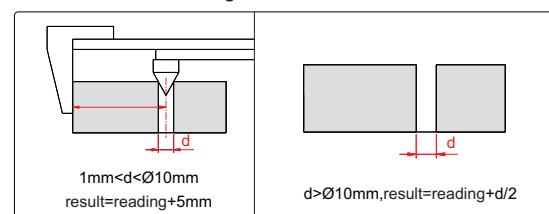


CR2032

- ◆ Measure edge to hole center distance
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Data output(cable code: 100-11 or 100-12)
- ◆ Automatic power on/off
- ◆ Made of stainless steel

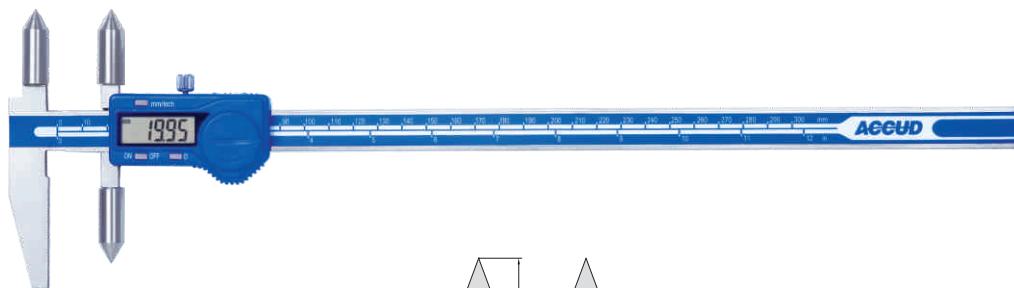


Measure edge to hole center distance

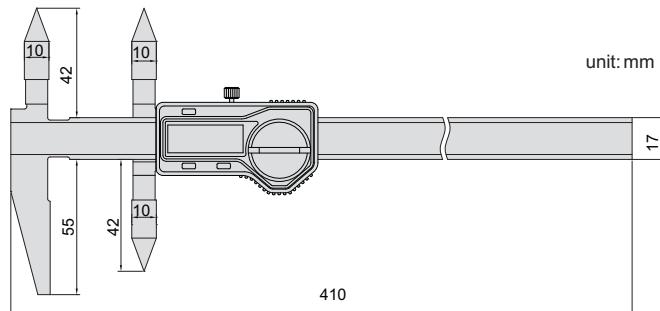


Code	Range	Accuracy	L
147-008-11	5-200mm/0.2-8"	$\pm 0.1\text{mm}$	310mm
147-012-11	5-300mm/0.2-12"	$\pm 0.1\text{mm}$	410mm

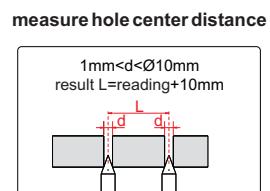
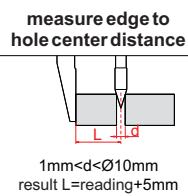
DIGITAL CENTERLINE/EDGE TO CENTER CALIPER



- ◆ Measure hole center distance or edge to hole center distance
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Data output(cable code: 100-11 or 100-12)
- ◆ Automatic power on/off
- ◆ Made of stainless steel

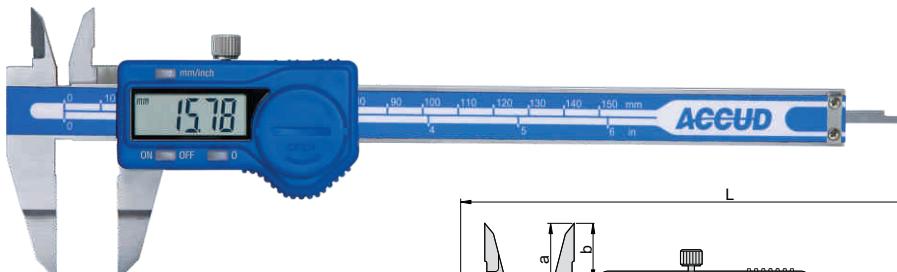


Code	Range of upper jaw (center to center)	Range of lower jaw (edge to center)	Accuracy
148-012-11	10-300mm/0.4-12"	5-300mm/0.2-12"	±0.08mm

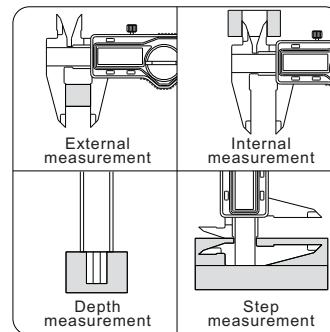
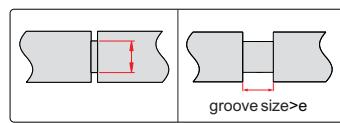
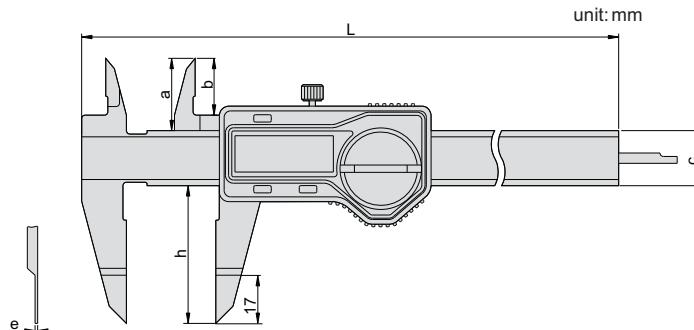


SERIES 153

DIGITAL BLADE CALIPER



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

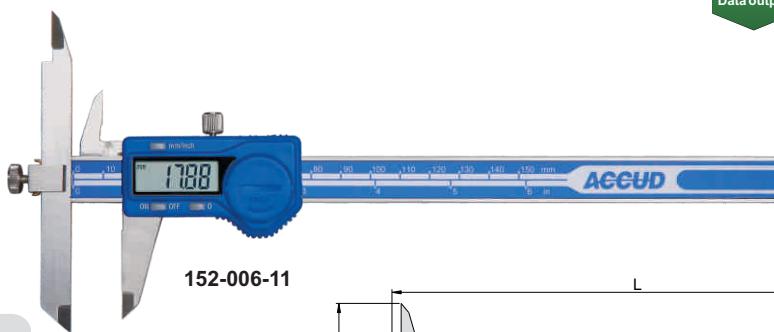


Code	Range	Accuracy	a	b	c	h	e	L
153-006-11	0-150mm/0-6"	±0.03mm	21	16	16	40	0.75	235
153-008-11	0-200mm/0-8"	±0.03mm	24	19	16	50	0.75	297
153-012-11	0-300mm/0-12"	±0.04mm	26	20.5	16	60	1.00	390



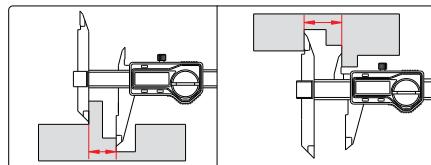
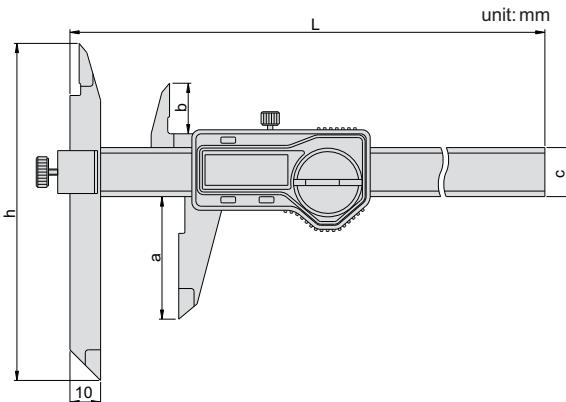
SERIES 152

DIGITAL OFFSET CALIPER



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/inch
- ◆ Data output(cable code: 100-11 or 100-12)
- ◆ Made of stainless steel

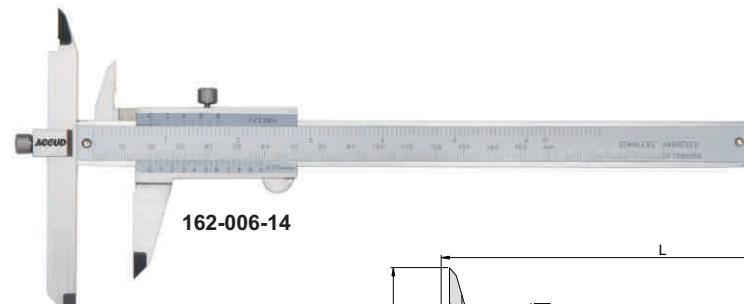


Code	Range	Accuracy	a	b	c	h	L
152-006-11	0-150mm/0-6"	±0.04mm	40	16.5	16	110	239
152-008-11	0-200mm/0-8"	±0.04mm	50	19.5	16	120	289
152-012-11	0-300mm/0-12"	±0.05mm	60	20.5	17	130	389

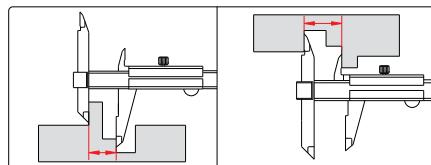
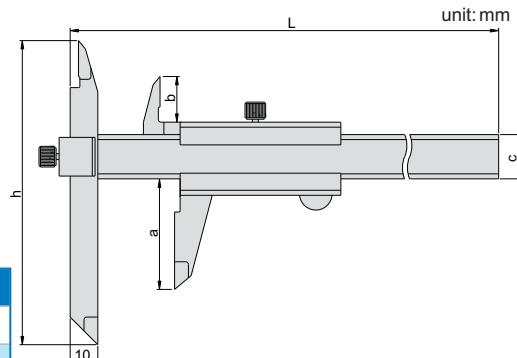
SERIES 162

OFFSET VERNIER CALIPER

- ◆ Adjust the beam-mounted jaw to facilitate measurement of stepped sections and hard-to-reach workpiece
- ◆ Made of stainless steel
- ◆ Satin chrome plated reading surface



162-006-14



Graduation 0.02mm/0.001"

Code	Range	Accuracy	a	b	c	h	L
162-006-12	0-150mm/0-6"	±0.04mm	40	16.5	16	110	239
162-008-12	0-200mm/0-8"	±0.04mm	50	19.5	16	120	289
162-012-12	0-300mm/0-12"	±0.05mm	60	20.5	17	130	389

Graduation 0.05mm/1/128"

Code	Range	Accuracy	a	b	c	h	L
162-006-14	0-150mm/0-6"	±0.04mm	40	16.5	16	110	239
162-008-14	0-200mm/0-8"	±0.04mm	50	19.5	16	120	289
162-012-14	0-300mm/0-12"	±0.05mm	60	20.5	17	130	389

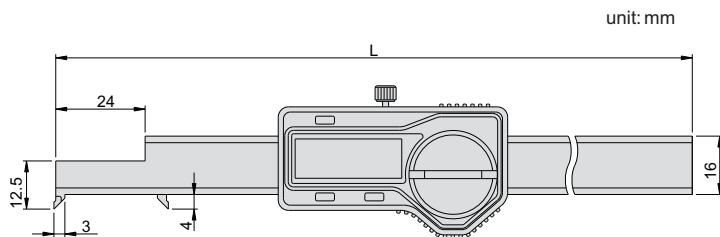
SERIES 154

DIGITAL HOOK CALIPER

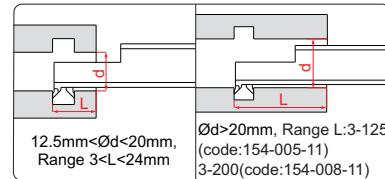
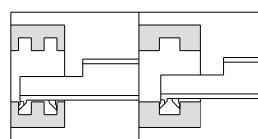


154-005-11

- ◆ Measure width of groove inside bores
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Automatic power on/off
- ◆ Data output(cable code: 100-11 or 100-12)
- ◆ Made of stainless steel



Code	Range	Accuracy	L
154-005-11	3-125mm	±0.04mm	250mm
154-008-11	3-200mm	±0.04mm	310mm



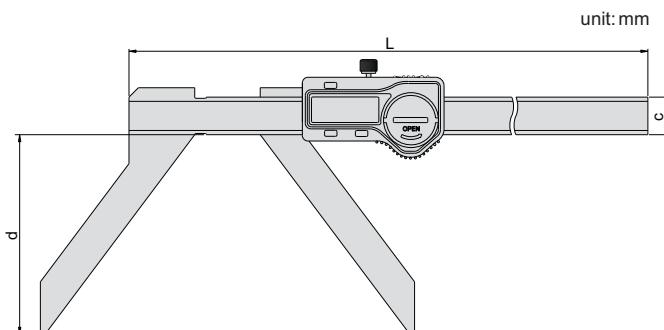
SERIES 169

DIGITAL ARC RADIUS CALIPER

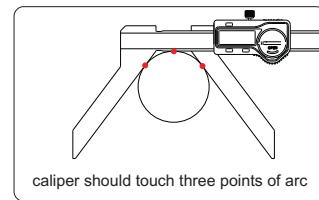
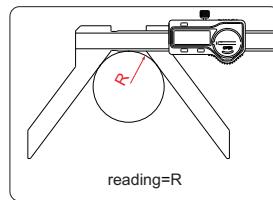


169-006-11

- ◆ Measure the radius of arcless than halfround
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Automatic power on/off
- ◆ Data output(cable code: 100-11 or 100-12)
- ◆ 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

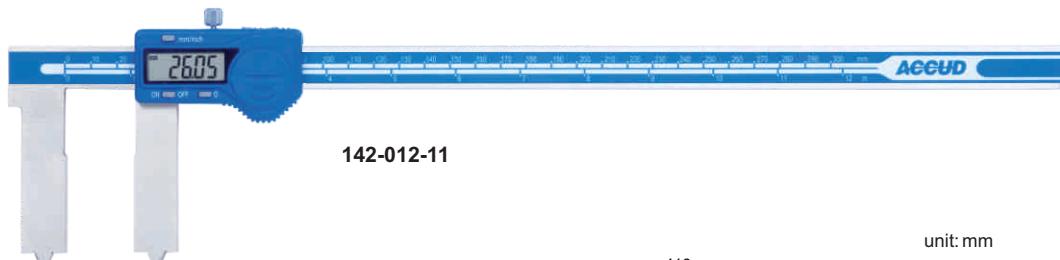


CALIPER

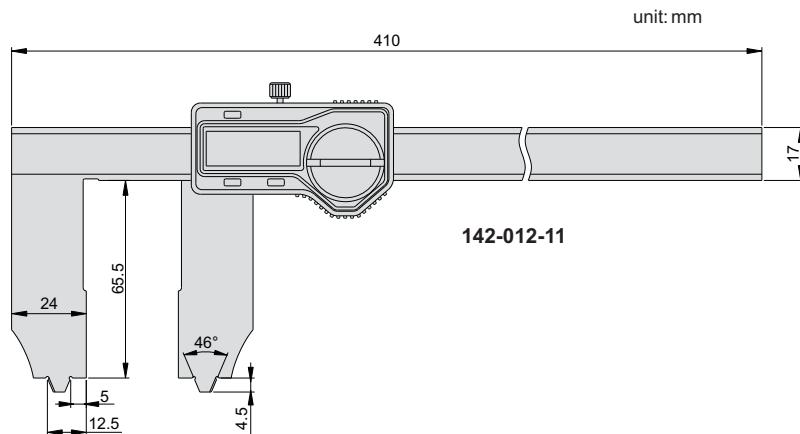


SERIES 142

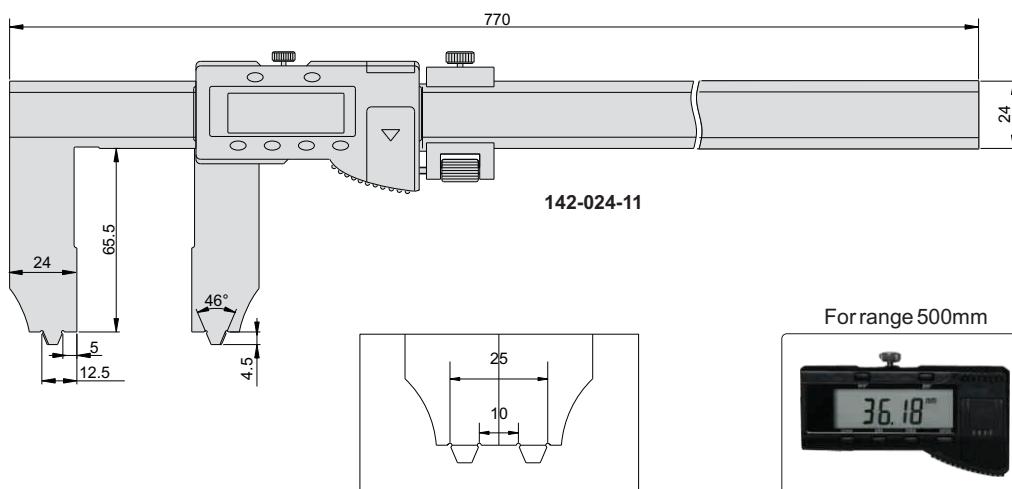
DIGITAL RTJ RING GROOVE CALIPER



142-012-11



142-012-11



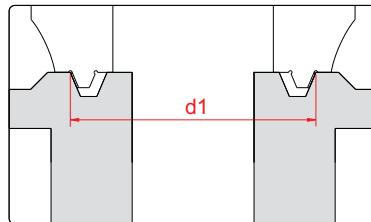
142-024-11

For range 500mm

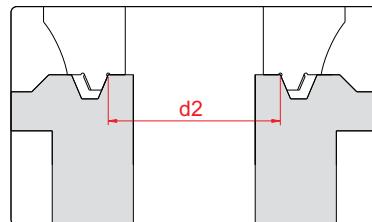


- ◆ Measure ring grooves of flange
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Automatic power on/off
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Data output(cable code: 100-11 or 100-12 for 142-012-11,100-15 for 142-024-11)
- ◆ Made of stainless steel

Measure outside diameter of RTJ ring groove



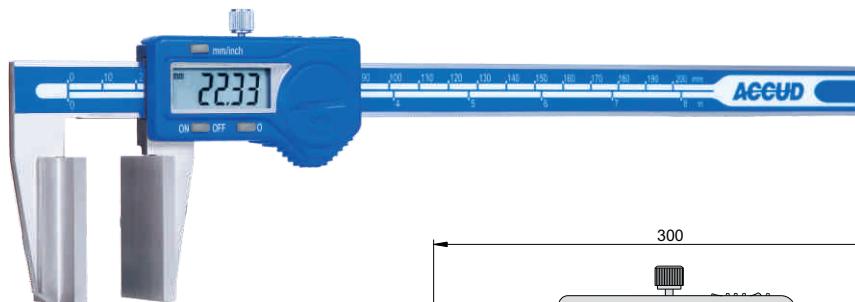
Measure inside diameter of RTJ ring groove



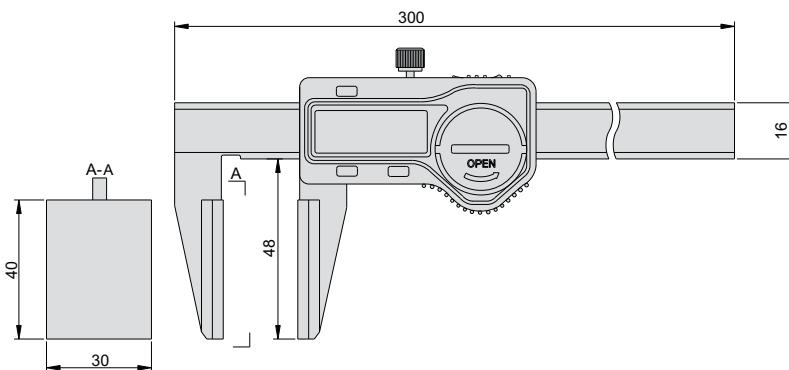
Code	Range (inside diameter of RTJ ring groove)	Range (outside diameter of RTJ ring groove)	Angle of RTJ ring groove	Accuracy
142-012-11	10-300mm/0.4-12"	25-300mm/1-12"	23°	±0.06mm
142-024-11	10-600mm/0.4-24"	25-600mm/1-24"	23°	±0.07mm

167

DIGITAL CALIPER WITH LARGE MEASURING FACES



unit: mm



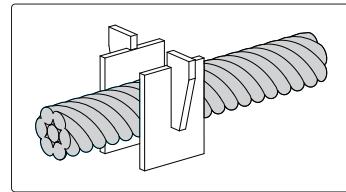
- ◆ Measure diameter of wire ropes, and thickness of soft materials like rubber, etc.
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Automatic power on/off
- ◆ Data output(cable code: 100-11 or 100-12)
- ◆ Made of stainless steel

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

Measure thickness of rubber



Measure diameter of wire ropes



CALIPER

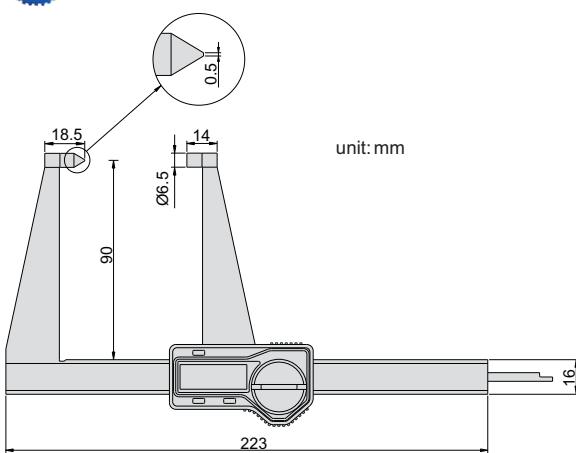
157

DIGITAL DISK BRAKE CALIPER



- ◆ Measure thickness of disk brakes
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Automatic power on/off
- ◆ Data output(cable code: 100-11 or 100-12)
- ◆ Made of stainless steel

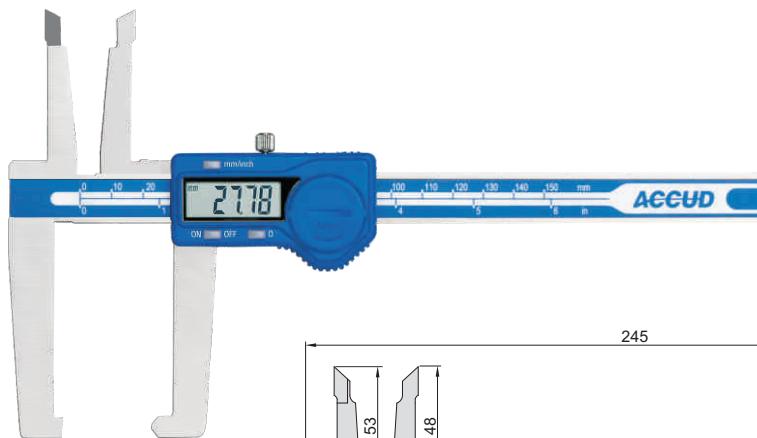
Code	Range	Accuracy
157-005-11	0-125mm/0-5"	±0.05mm



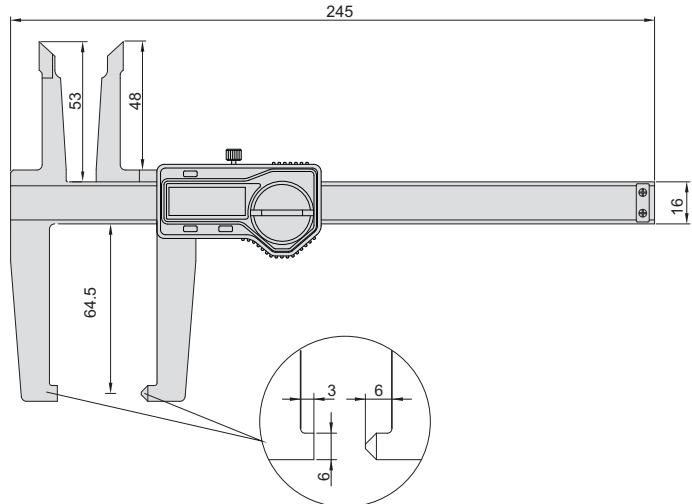
unit: mm

165

DIGITAL DISK BRAKE AND PAD CALIPER



unit: mm



- ◆ Measure thickness of disk brakes and pad wear
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Automatic power on/off
- ◆ Data output(cable code: 100-11 or 100-12)
- ◆ Made of stainless steel

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

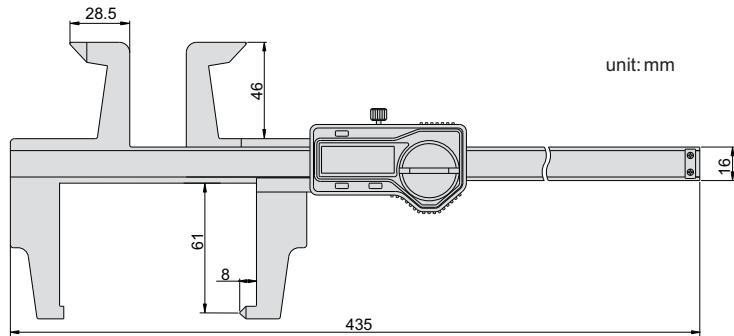
158

DIGITAL DRUM BRAKE CALIPER



- ◆ Measure internal and external diameter of drum brakes
- ◆ Resolution 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Automatic power on/off
- ◆ Data output(cable code: 100-11 or 100-12)
- ◆ Made of stainless steel

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



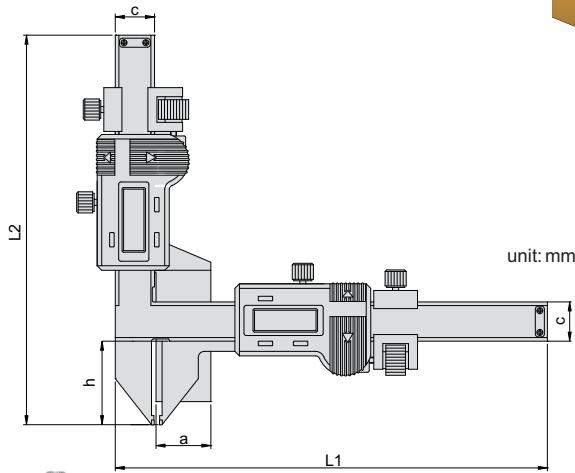
unit: mm

SERIES 156**DIGITAL GEAR TOOTH CALIPER**

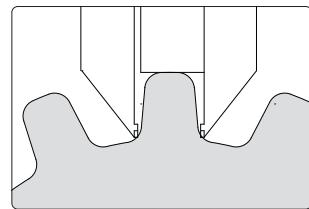
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Made of stainless steel



156-001-11



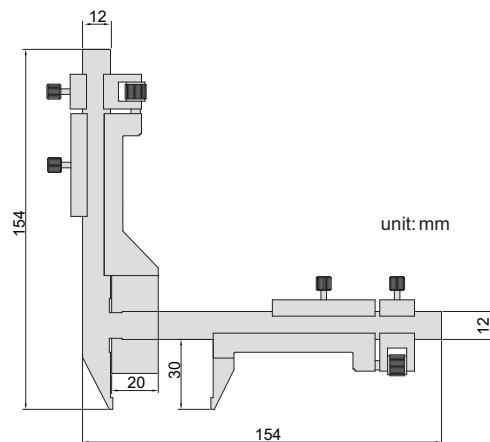
CALIPER



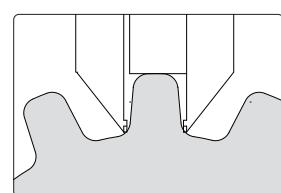
Code	Range	Accuracy	L1	L2	a	c	h
156-001-11	M1-25mm	±0.04mm	156	156	12.5	13	32
156-002-11	M5-50mm	±0.04mm	220	190	50.5	16	55

166**VERNIER GEAR TOOTH CALIPER**

- ◆ Graduation: 0.02mm
- ◆ Made of stainless steel



Code	Range	Accuracy
166-001-11	M1-26mm	±0.04mm



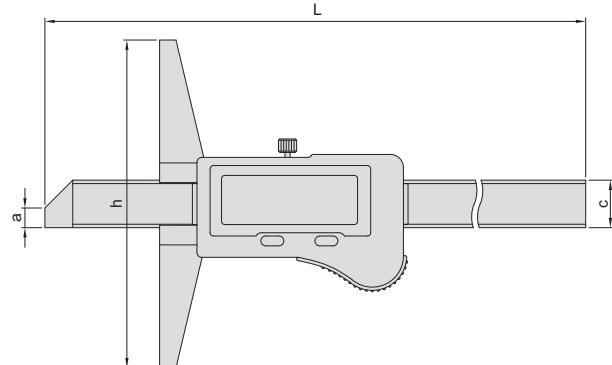
SERIES 197

IP67 WATERPROOF DIGITAL DEPTH CALIPER



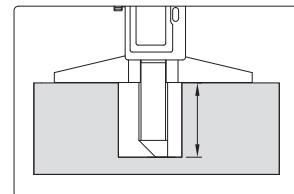
197-008-11

unit: mm



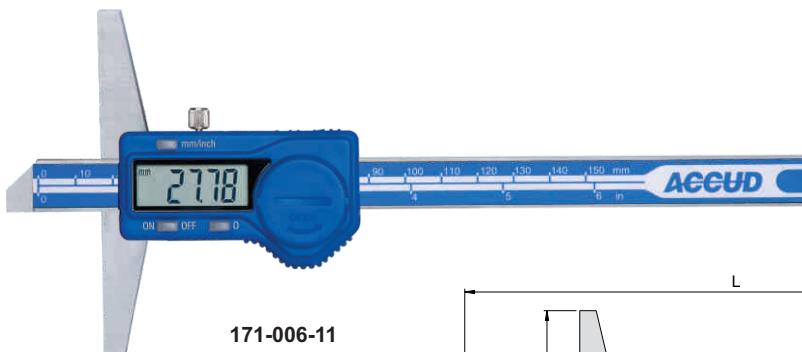
- ◆ IP67 protection level
- ◆ Absolute measuring system
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Automatic power off
- ◆ Buttons: zero, mm/inch, data preset
- ◆ Made of stainless steel

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



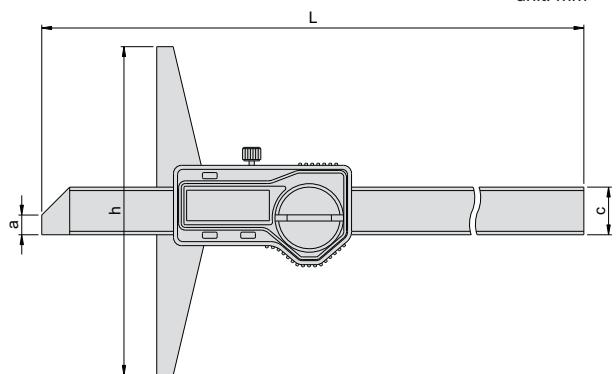
SERIES 171

DIGITAL DEPTH CALIPER



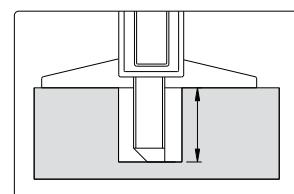
171-006-11

unit: mm



- ◆ Resolution: 0.01mm/0.0005"
- ◆ Automatic power on/off
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Data output(cable code:100-11 or 100-12)
- ◆ Made of stainless steel

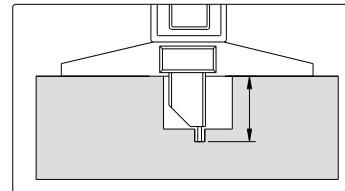
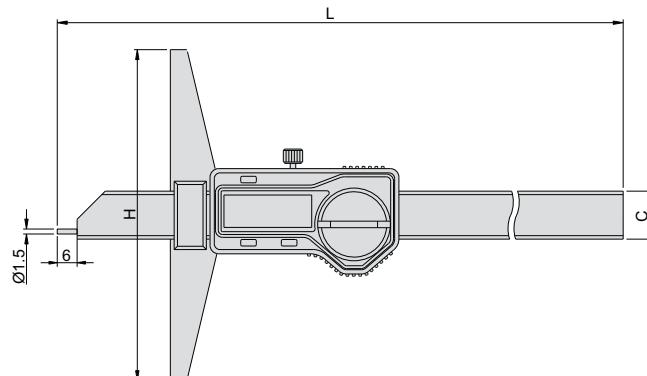
Code	Range	Accuracy	a	c	h	L
171-006-11	0-150mm/0-6"	±0.03mm	6	14.5	100	230
171-008-11	0-200mm/0-8"	±0.03mm	6	14.5	100	280
171-012-11	0-300mm/0-12"	±0.04mm	6	14.5	150	380
171-020-11	0-500mm/0-20"	±0.05mm	7	15	150	585



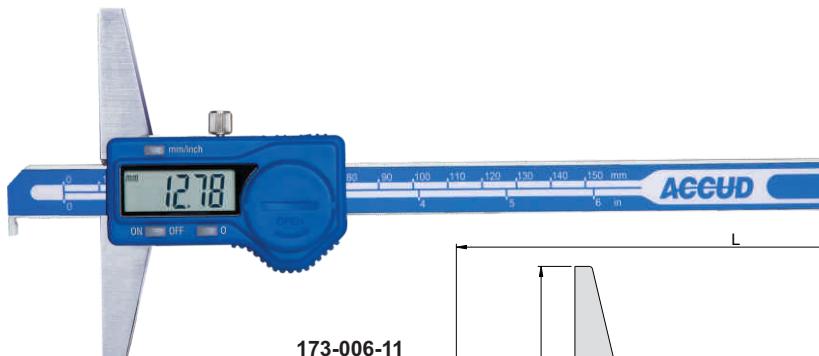
SERIES 172**DIGITAL PIN DEPTH CALIPER**

unit: mm

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

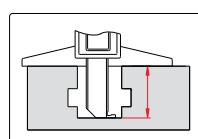
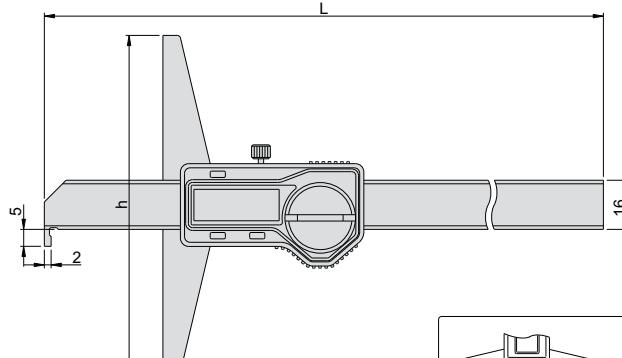


Code	Range	Accuracy	H	L	C
172-008-11	0-200mm/0-8"	±0.03mm	100	291	14.5
172-012-11	0-300mm/0-12"	±0.04mm	150	395	15

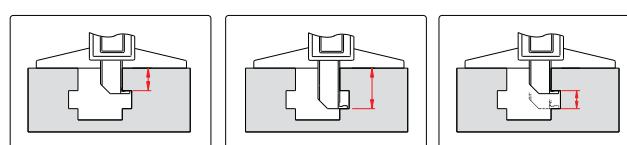
SERIES 173**DIGITAL HOOK DEPTH CALIPER**

unit: mm

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



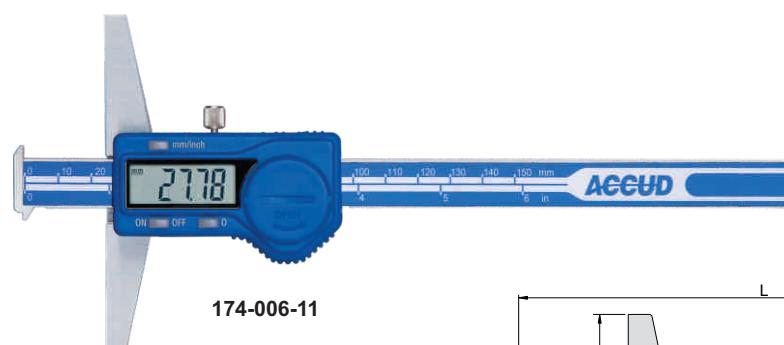
Code	Range	Accuracy	h	L
173-006-11	0-150mm/0-6"	±0.04mm	100	230
173-008-11	0-200mm/0-8"	±0.04mm	100	280
173-012-11	0-300mm/0-12"	±0.05mm	150	380



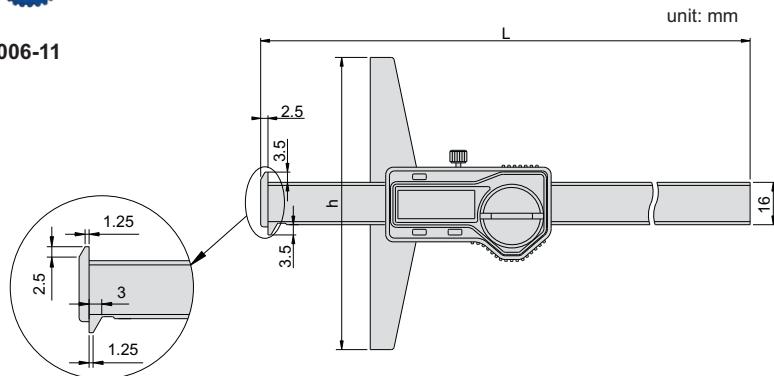
DEPTH

SERIES 174

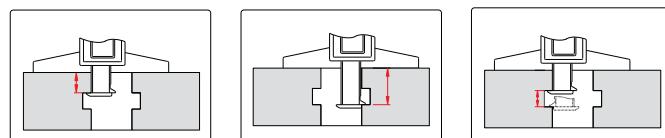
DIGITAL DOUBLE HOOK DEPTH CALIPER



- ◆ Measure the depth of grooves
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Automatic power on/off
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Data output(cable code:100-11 or 100-12)
- ◆ 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

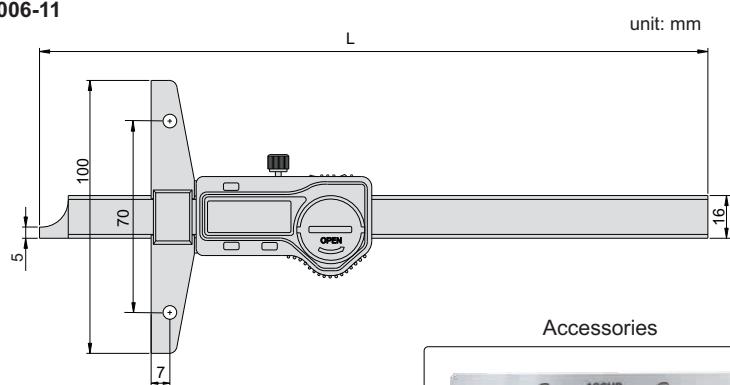


SERIES 191

DIGITAL DEPTH CALIPER WITH HOLES

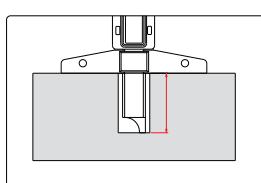


- ◆ With hole, for mounting the extension base
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Automatic power on/off
- ◆ Data output(cable code:100-11 or 100-12)
- ◆ Made of stainless steel
- ◆ Optional accessory: series 170 extension base



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 193

DIGITAL DEPTH CALIPER WITH ROUND DEPTH BAR



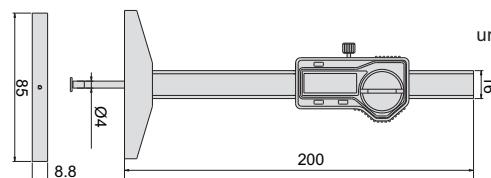
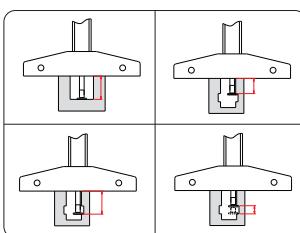
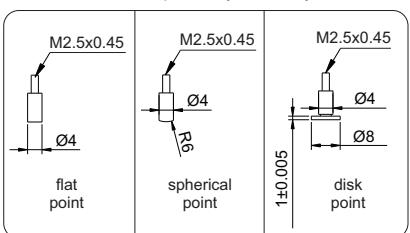
- ♦ Resolution: 0.01mm/0.0005"
- ♦ Supplied with three interchangeable points (flat, spherical, disk)
- ♦ Buttons: on/off, set, mm/inch
- ♦ Automatic power off
- ♦ Data output (cable code: 100-11 or 100-12)
- ♦ Made of stainless steel



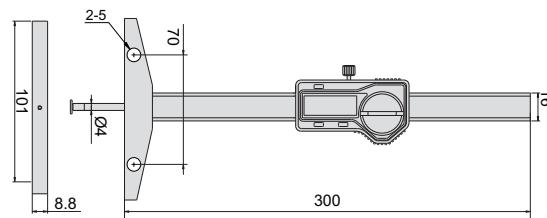
193-004-11

unit: mm

points (include)



200



300

193-006-11 and 193-008-11

Code	Range	Accuracy
193-004-11	0-100mm/0-4"	±0.02mm
193-006-11	0-150mm/0-6"	±0.03mm
193-008-11	0-200mm/0-8"	±0.03mm

Accessory application

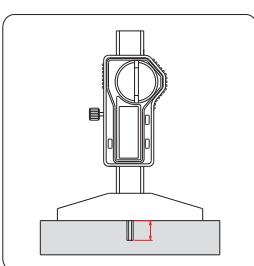
170 series (optional)

SERIES 194

DIGITAL DEPTH CALIPER WITH ROUND DEPTH BAR

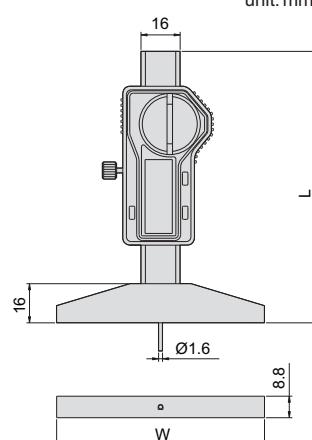


- ♦ Measure depth of small groove and hole
- ♦ Resolution: 0.01mm/0.0005"
- ♦ Buttons: on/off, set, mm/inch
- ♦ Automatic power off
- ♦ Data output (cable code: 100-11 or 100-12)
- ♦ Made of stainless steel



194-002-11

unit: mm



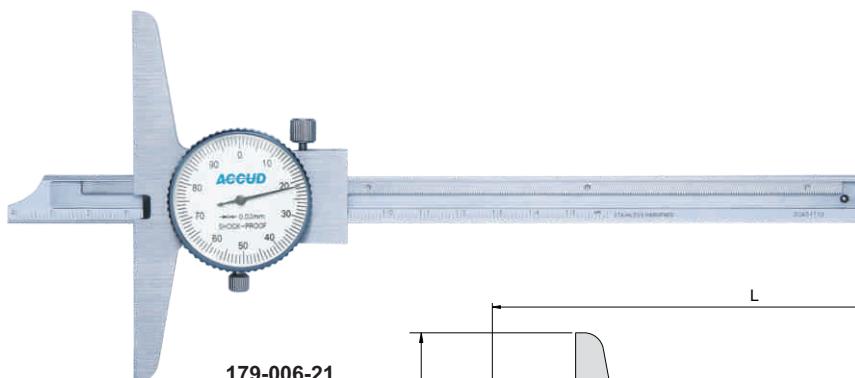
Code	Range	Accuracy	L	W
194-001-11	0-25mm/0-1"	±0.02mm	110	85
194-002-11	0-50mm/0-2"	±0.02mm	135	85
194-006-11	0-150mm/0-6"	±0.03mm	235	100

DEPTH



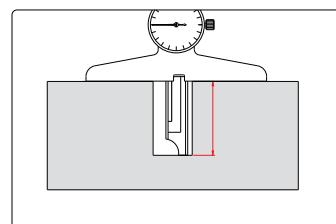
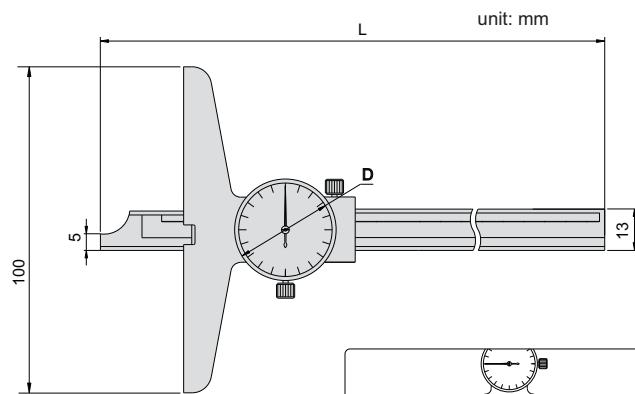
SERIES 179

DIAL DEPTH CALIPER



179-006-21

- ◆ Shockproof dial indicator
- ◆ Graduation: 0.02mm
- ◆ Made of stainless steel



Code	Range	Accuracy	D	L
179-006-21	0-150mm	$\pm 0.03\text{mm}$	Ø39	235
179-008-21	0-200mm	$\pm 0.03\text{mm}$	Ø39	285
179-012-21	0-300mm	$\pm 0.04\text{mm}$	Ø39	308

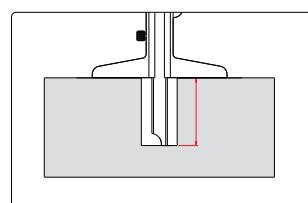
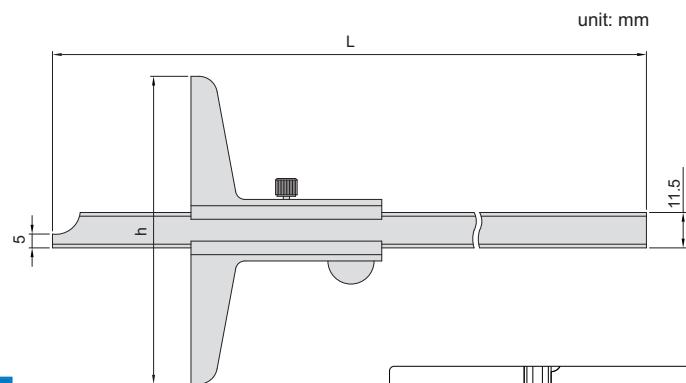
SERIES 177

VERNIER DEPTH CALIPER

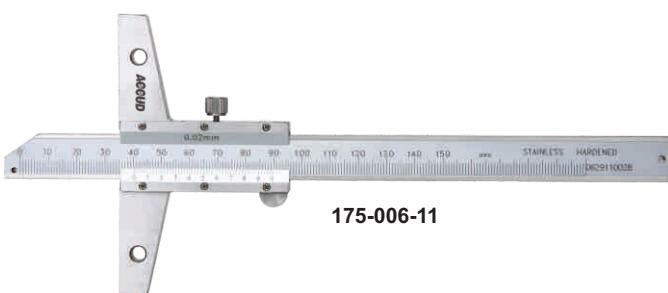


177-008-11

- ◆ Graduation: 0.02mm
- ◆ Made of stainless steel
- ◆ Satin chrome plated reading surface



Code	Range	Accuracy	h	L
177-006-11	0-150mm	$\pm 0.03\text{mm}$	100	245
177-008-11	0-200mm	$\pm 0.03\text{mm}$	100	282
177-012-11	0-300mm	$\pm 0.04\text{mm}$	100	382
177-020-11	0-500mm	$\pm 0.05\text{mm}$	150	585

SERIES 175**VERNIER DEPTH CALIPER**

175-006-11

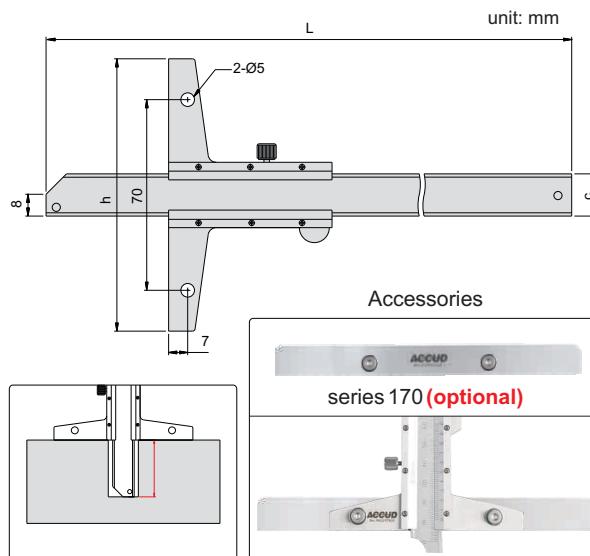
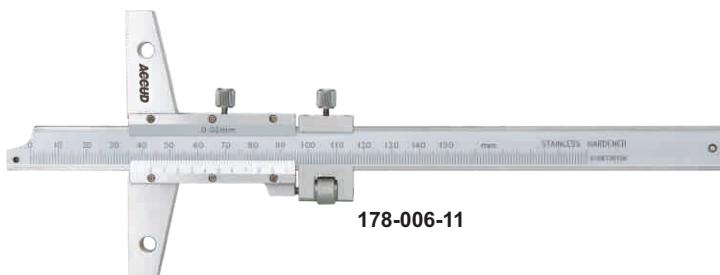
- ◆ Made of stainless steel
- ◆ Satin chrome plating finish on reading surface
- ◆ Optional accessory: series 170 extension base

Graduation 0.02mm

Code	Range	Accuracy	c	h	L
175-006-11	0-150mm	±0.03mm	16	100	240
175-008-11	0-200mm	±0.03mm	16	100	290
175-012-11	0-300mm	±0.04mm	16	100	390
175-024-11	0-600mm	±0.05mm	16	150	704
175-040-11	0-1000mm	±0.07mm	18	200	1124

Graduation 0.05mm

Code	Range	Accuracy	c	h	L
175-006-13	0-150mm	±0.05mm	16	100	240
175-008-13	0-200mm	±0.05mm	16	100	290
175-012-13	0-300mm	±0.08mm	16	100	390
175-024-13	0-600mm	±0.10mm	16	150	704
175-040-13	0-1000mm	±0.15mm	18	200	1124

**SERIES 178****VERNIER DEPTH CALIPER**

178-006-11

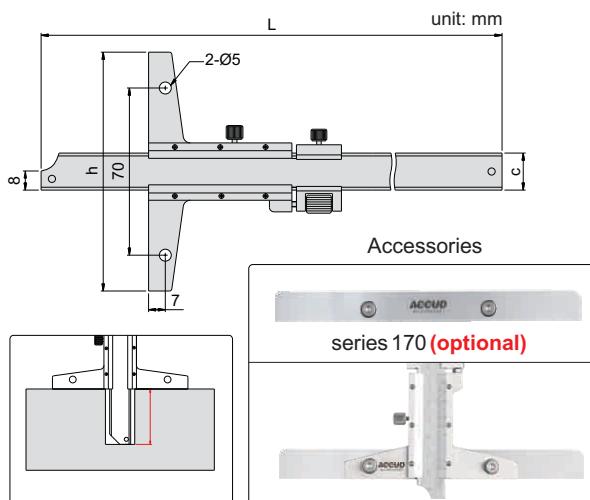
- ◆ With fine adjustment
- ◆ Made of stainless steel
- ◆ Satin chrome plating finish on reading surface
- ◆ Optional accessory: series 170 extension base

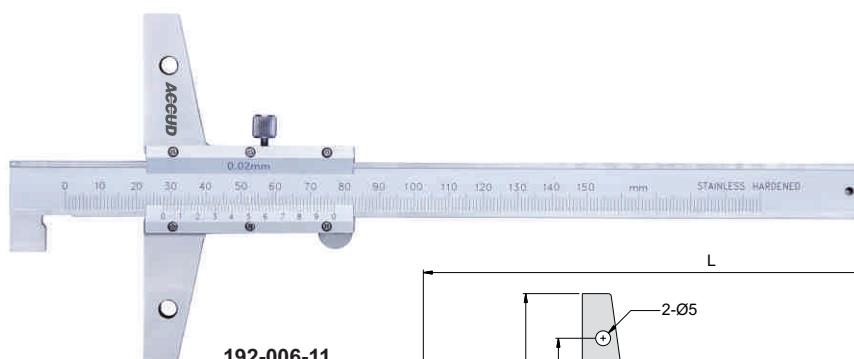
Graduation 0.02mm

Code	Range	Accuracy	c	h	L
178-006-11	0-150mm	±0.03mm	16	100	256
178-008-11	0-200mm	±0.03mm	16	100	306
178-012-11	0-300mm	±0.04mm	16	100	406
178-024-11	0-600mm	±0.05mm	16	150	720
178-040-11	0-1000mm	±0.07mm	18	200	1140

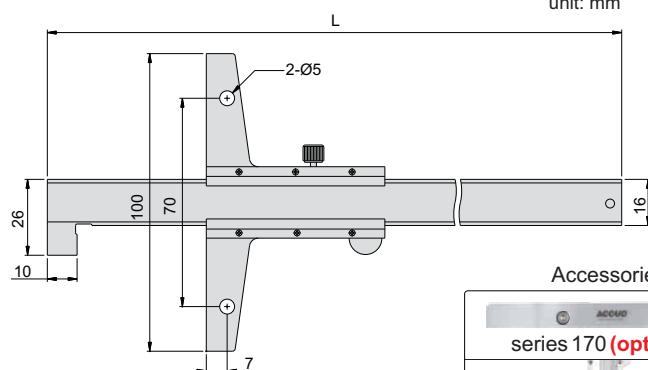
Graduation 0.05mm

Code	Range	Accuracy	c	h	L
178-006-13	0-150mm	±0.05mm	16	100	256
178-008-13	0-200mm	±0.05mm	16	100	306
178-012-13	0-300mm	±0.08mm	16	100	406
178-024-13	0-600mm	±0.10mm	16	150	720
178-040-13	0-1000mm	±0.15mm	18	200	1140





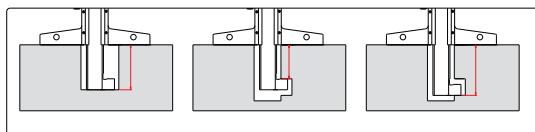
- ◆ Graduation: 0.02mm
 - ◆ Made of stainless steel
 - ◆ Satin chrome plating finish on reading surface
 - ◆ Optional accessory: series 170 extension base



Accessories



Code	Range	Accuracy	L
192-006-11	0-150mm	±0.03mm	245
192-008-11	0-200mm	±0.03mm	295
192-012-11	0-300mm	±0.04mm	395



SERIES 179

ACCESSORY FOR CALIPER

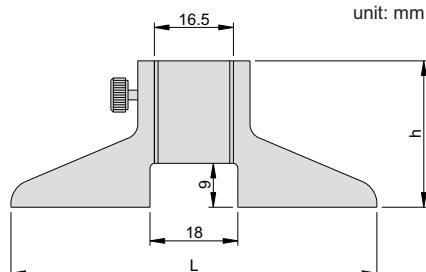


179-000-00



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	30mm	75mm
179-000-01	32mm	100mm

SERIES 170

EXTENSION BASE FOR DEPTH CALIPER

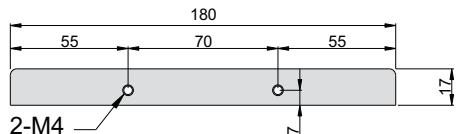


VIDEO

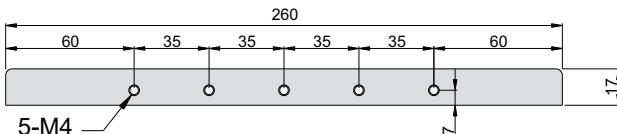


170-260-01

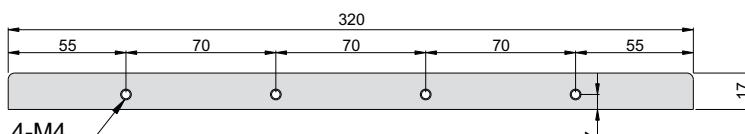
unit: mm



170-180-01



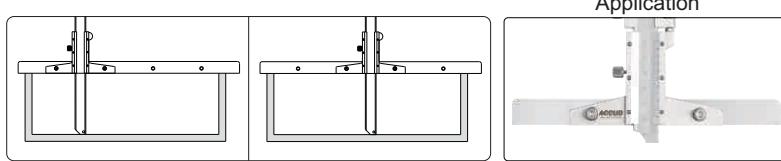
170-260-01



170-320-01

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

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



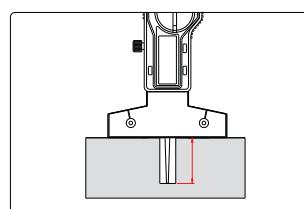
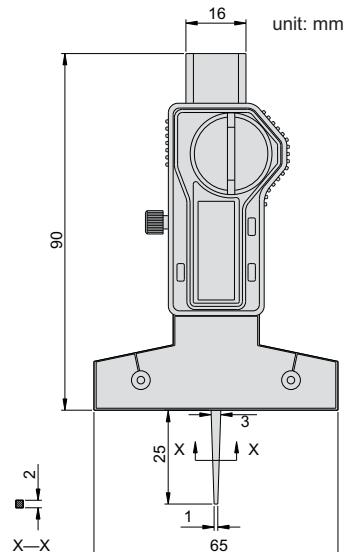
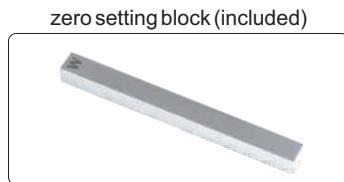
Application

176

DIGITAL DEPTH CALIPER



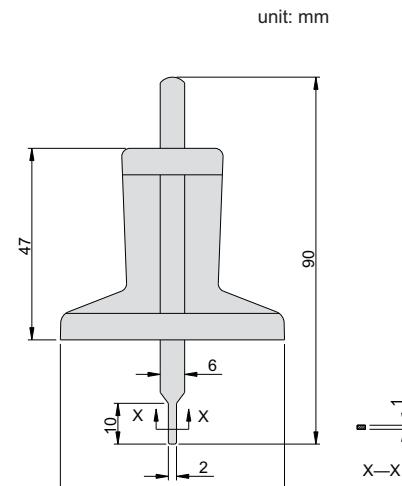
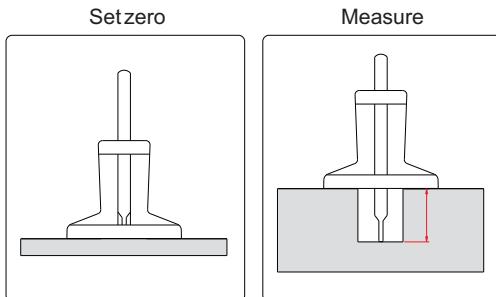
- ◆ Measure the depth of grooves, small holes and tire thread
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Automatic power on/off
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Data output(cable code:100-11 or 100-12)
- ◆ Made of stainless steel



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

DEPTH

- ◆ Measure the depth of grooves, small holes and tire thread
- ◆ Graduation: 0.1mm
- ◆ Made of stainless steel



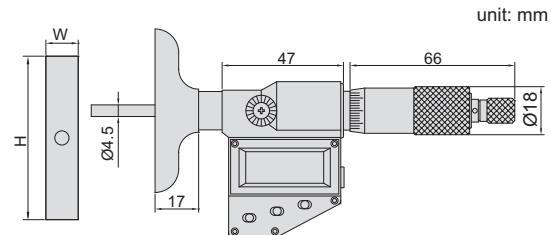
Code	Range	Accuracy
176-030-12	0-30mm	±0.10mm

SERIES 395

DIGITAL DEPTH MICROMETER



- ◆ Resolution: 0.001mm/0.00005"
- ◆ Micrometer head accuracy: +/-3µm
- ◆ Rod accuracy: +/--(2+L/75)µm, L is the measuring range in mm
- ◆ Button: on/off, set, mm/inch, ABS/INC, data output
- ◆ IP54 protection leve
- ◆ Data output
- ◆ Automatic power off
- ◆ Rods with flat end
- ◆ Ratchet stop



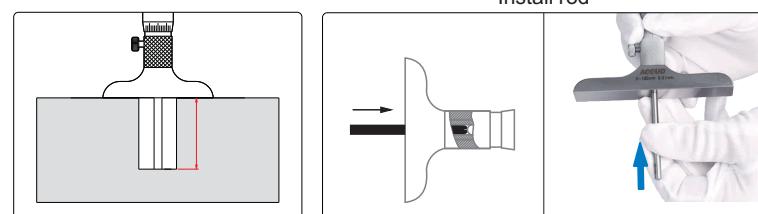
Rod (included)



395-002-01

Code	Range	Base(HxW)	Rod
395-002-01	0-50mm/0-2"	101x17mm	2pcs
395-006-01	0-150mm/0-6"	101x17mm	6pcs
395-012-01	0-300mm/0-12"	101x17mm	12pcs
395-002-02	0-50mm/0-2"	63x17mm	2pcs
395-006-02	0-150mm/0-6"	63x17mm	6pcs
395-012-02	0-300mm/0-12"	63x17mm	12pcs

Install rod



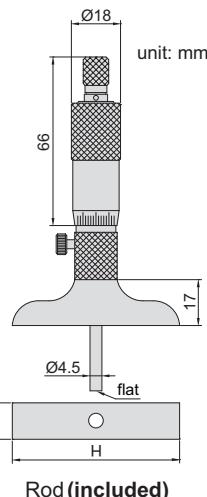
SERIES 391**DEPTH MICROMETER**

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

Code	Range	Base (HxW)	Rod
391-001-01	0-25mm	101.5x17mm	1pc
391-002-01	0-50mm	101.5x17mm	2pcs
391-003-01	0-75mm	101.5x17mm	3pcs
391-004-01	0-100mm	101.5x17mm	4pcs
391-006-01	0-150mm	101.5x17mm	6pcs
391-008-01	0-200mm	101.5x17mm	8pcs
391-012-01	0-300mm	101.5x17mm	12pcs
391-001-02	0-25mm	63x17mm	1pc
391-002-02	0-50mm	63x17mm	2pcs
391-003-02	0-75mm	63x17mm	3pcs
391-004-02	0-100mm	63x17mm	4pcs
391-006-02	0-150mm	63x17mm	6pcs
391-008-02	0-200mm	63x17mm	8pcs
391-012-02	0-300mm	63x17mm	12pcs



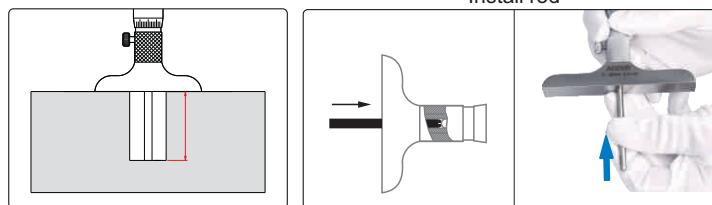
391-001-01



Rod (included)



Install rod

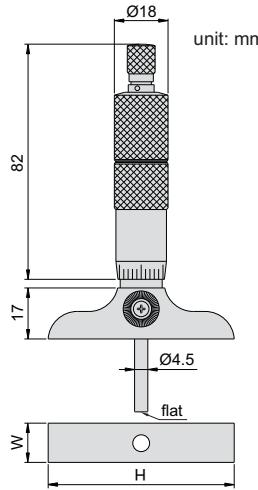
**SERIES 392****DEPTH MICROMETER**

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

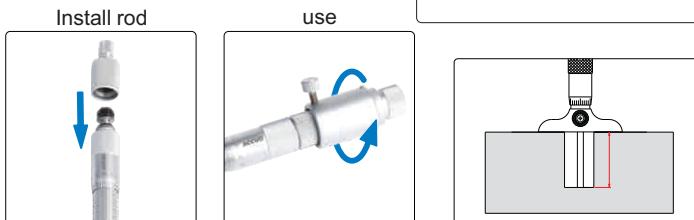
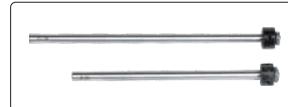
Code	Range	Base (HxW)	Rod
392-001-01	0-25mm	101.5x17mm	1pc
392-002-01	0-50mm	101.5x17mm	2pcs
392-003-01	0-75mm	101.5x17mm	3pcs
392-004-01	0-100mm	101.5x17mm	4pcs
392-006-01	0-150mm	101.5x17mm	6pcs
392-008-01	0-200mm	101.5x17mm	8pcs
392-012-01	0-300mm	101.5x17mm	12pcs
392-001-02	0-25mm	63x17mm	1pc
392-002-02	0-50mm	63x17mm	2pcs
392-003-02	0-75mm	63x17mm	3pcs
392-004-02	0-100mm	63x17mm	4pcs
392-006-02	0-150mm	63x17mm	6pcs
392-008-02	0-200mm	63x17mm	8pcs
392-012-02	0-300mm	63x17mm	12pcs



392-001-01



Rod (included)



SERIES 293

DIGITAL DEPTH INDICATOR



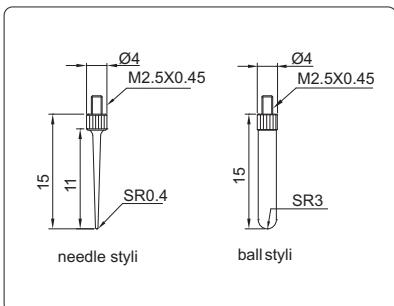
VIDEO

- ◆ Resolution: 0.01mm/0.0005"
- ◆ 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

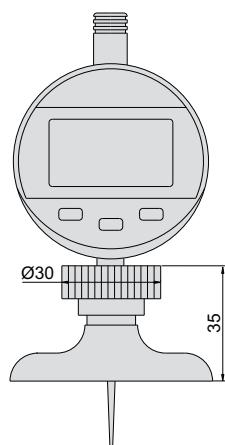


DEPTH

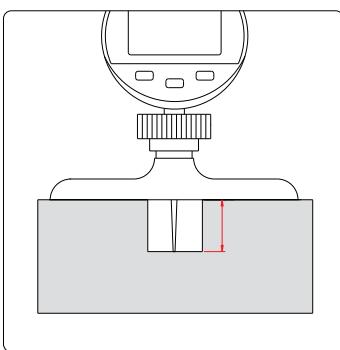
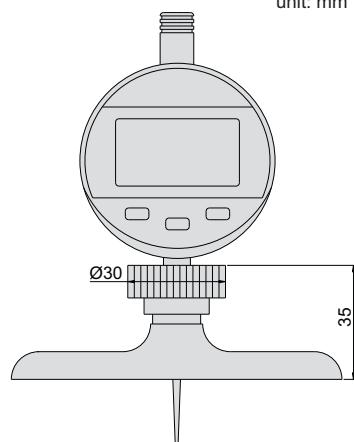
stylus (included)



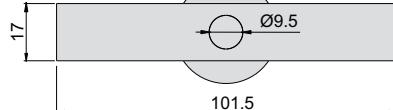
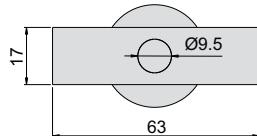
293-010-12



unit: mm



293-010-11



293-010-12

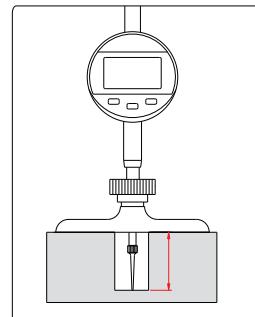
Code	Range	Accuracy	Digital indicator stroke	Base
293-010-11	0-10mm/0-0.4"	±0.03mm	12.7mm/0.5"	63x17mm
293-010-12	0-10mm/0-0.4"	±0.03mm	12.7mm/0.5"	101.5x17mm

SERIES 293**DIGITAL DEPTH INDICATOR**

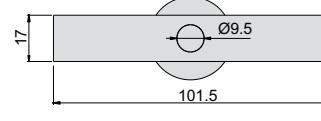
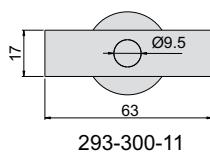
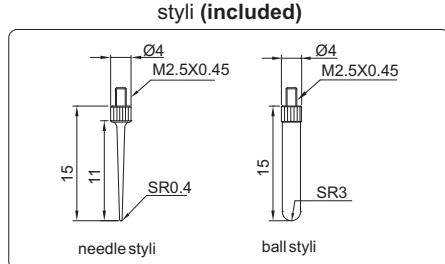
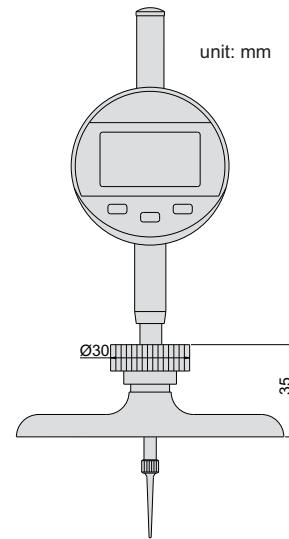
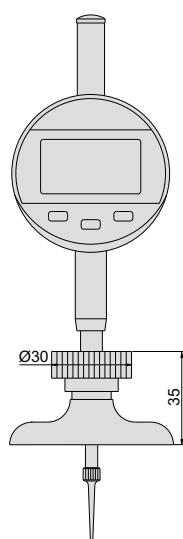
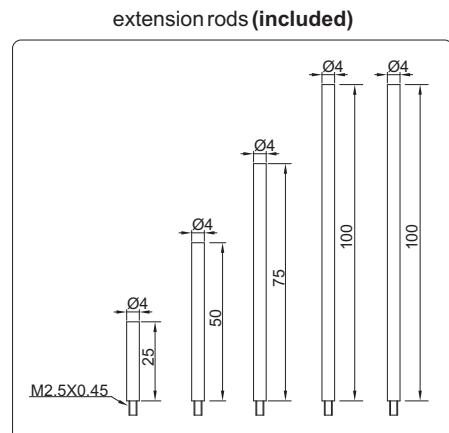
VIDEO



- ◆ Resolution: 0.01mm/0.0005"
- ◆ 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



293-300-12



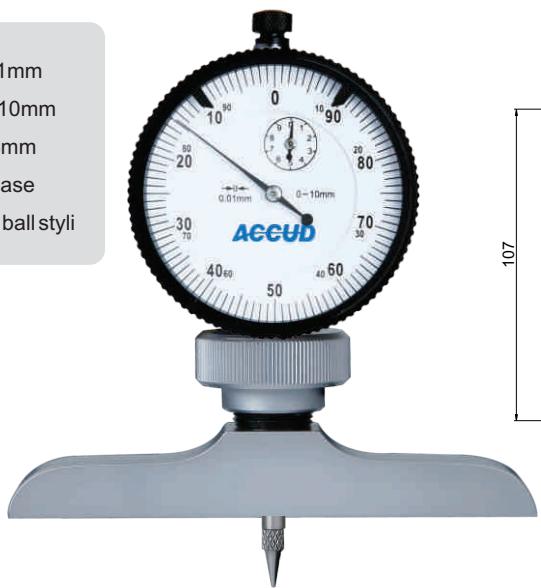
Code	Range	Accuracy	Digital indicator stroke	Base
293-300-11	0-300mm/0-12"	±0.03mm	25.4mm/1"	63x17mm
293-300-12	0-300mm/0-12"	±0.03mm	25.4mm/1"	101.5x17mm

DEPTH

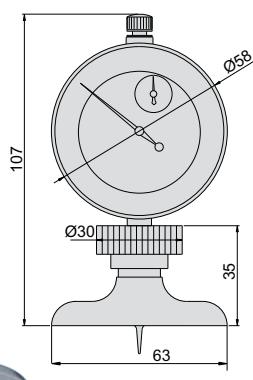
SERIES 291

DIAL DEPTH INDICATOR

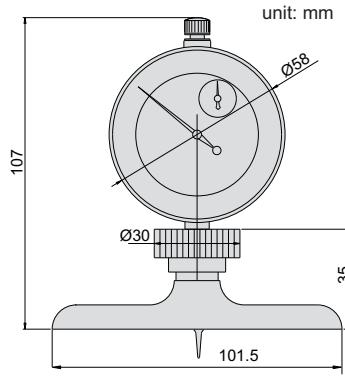
- ◆ Graduation: 0.01mm
- ◆ Indicator travel: 10mm
- ◆ Accuracy: ± 0.03 mm
- ◆ Stainless steel base
- ◆ With needle and ball styli



291-010-12

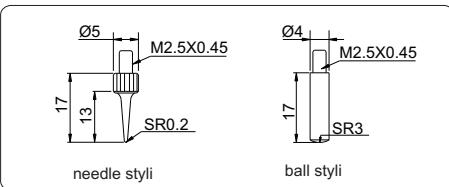
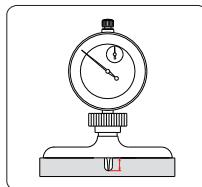


291-010-11



291-010-12

styli (included)

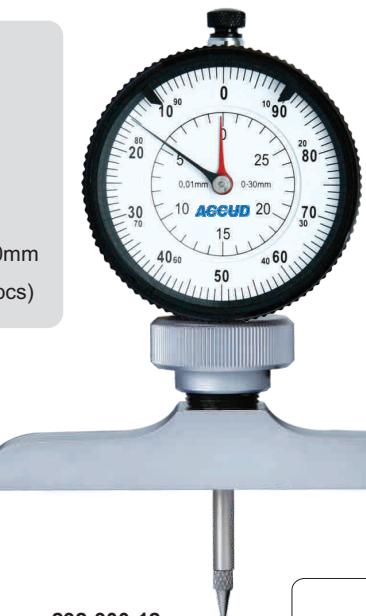


Code	Range	Base
291-010-11	0-10mm	63x17mm
291-010-12	0-10mm	101.5x17mm

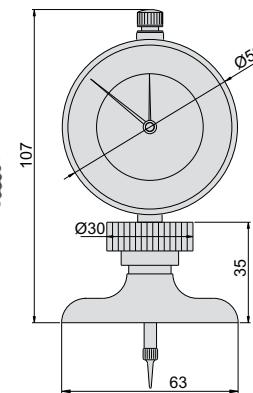
SERIES 292

DIAL DEPTH INDICATOR

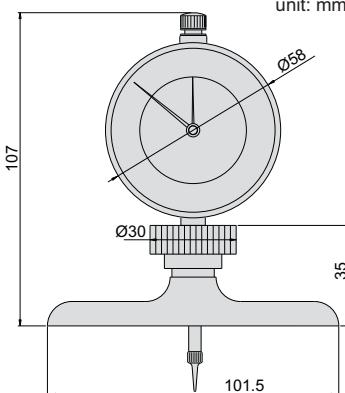
- ◆ Graduation: 0.01mm
- ◆ Indicator travel: 30mm
- ◆ Accuracy: ± 0.03 mm
- ◆ Stainless steel base
- ◆ With needle and ball styli
- ◆ Extension rod: 25mm (1pc), 50mm (1pc), 75mm (1pc), 100mm (2pcs)



292-300-12

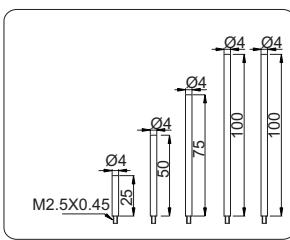


292-300-11

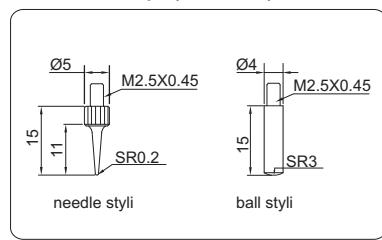


292-300-12

extension rods



styli (included)



Code	Range	Base
292-300-11	0-300mm	63x17mm
292-300-12	0-300mm	101.5x17mm

SERIES 295

DIAL DEPTH INDICATOR

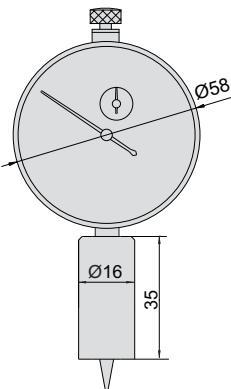
- ◆ Stainless steel base
- ◆ Pointed tip



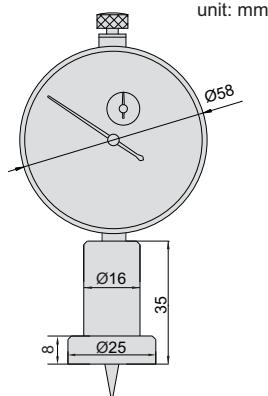
295-010-12



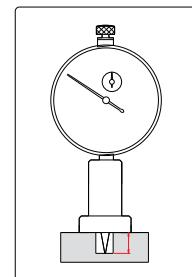
295-010-11



295-010-11



295-010-12



Code	Range	Accuracy	Dial indicator stroke	Dial indicator graduation	Base
295-010-11	0-10mm	17μm	10mm	0.01mm	Ø16mm
295-010-12	0-10mm	17μm	10mm	0.01mm	Ø25mm

SERIES 299

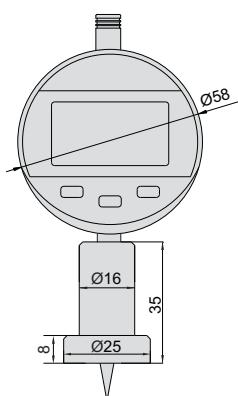
DIGITAL DEPTH INDICATOR



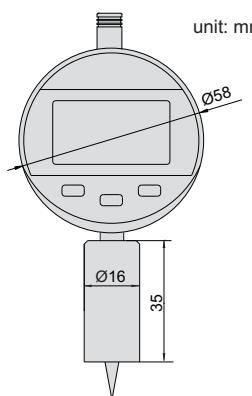
- ◆ Button: on/off, zero, mm/inch, ABS, data preset, change measuring direction
- ◆ Data output(cable code:200-03 or 200-04)
- ◆ Automatic power off
- ◆ Stainless steel base
- ◆ Pointed tip



299-010-02



Type B



Type A

Resolution 0.01mm/0.0005"

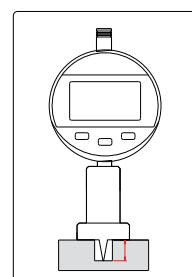
Code	Range	Accuracy	Digital indicator stroke	Base	Type
299-010-11	0-12.7mm/0-0.5"	±20μm	12.7mm/0.5"	Ø16mm	A
299-010-12	0-12.7mm/0-0.5"	±20μm	12.7mm/0.5"	Ø25mm	B

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



DEPTH



AccuGage 700/1000

2D HEIGHT GAGE



- ◆ 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



VIDEO



AccuGage 700

Ø6x48mm ruby ball probe (included)

Optional Accessories		unit: mm
Ø2mm ruby ball probe	(code:R2H)	
Ø4mm carbide ball probe	(code:SR4H)	
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)



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

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

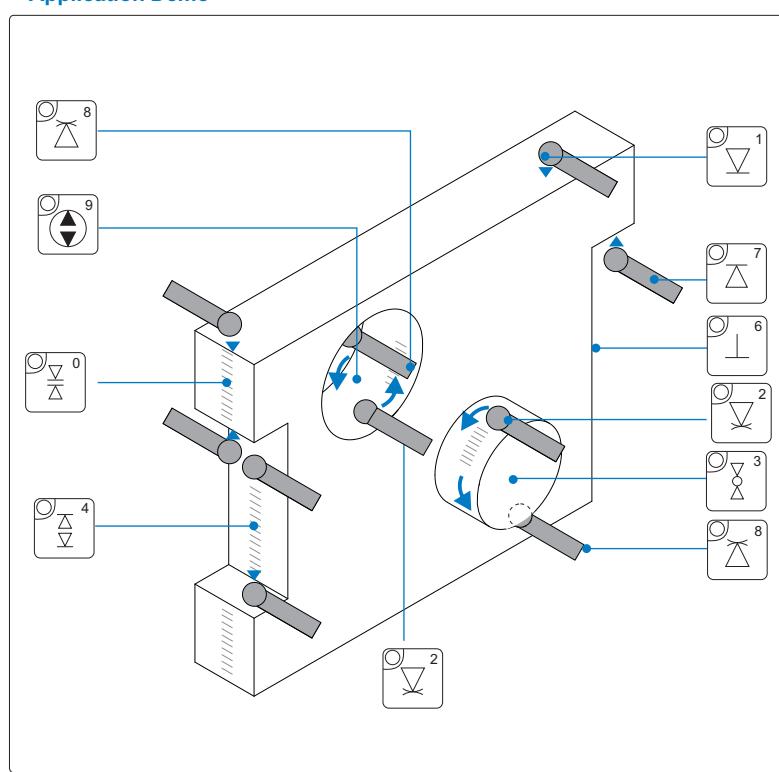
SPECIFICATION

Code	AccuGage700	AccuGage1000
Range	0-700mm	0-1000mm
Expandable range	1015mm	1315mm
Squareness	6µm	10µm
Resolutions	0.5µm, 1µm	
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
Ø6x48mm ruby ball probe	1pc
Calibration block	1pc
Software and USB cable	1pc each
Allen key	1set
AC/DC Adapter	1pc

Application Demo





AccuHite 700/1000

1D HEIGHT GAGE



- 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

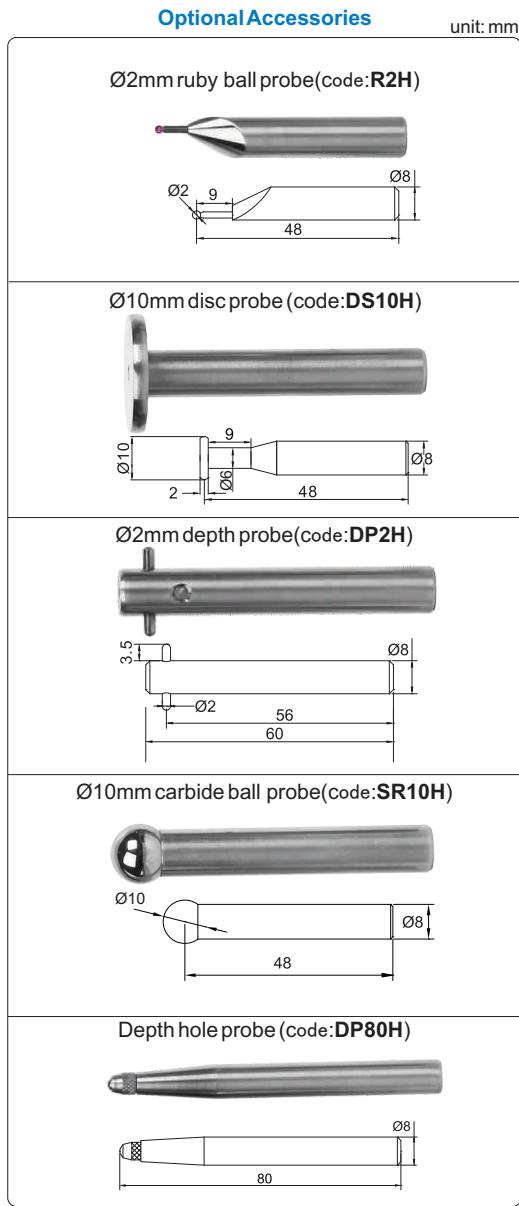


VIDEO



AccuHite 700

Ø4mm carbide ball probe

Squareness probe
(Optional, Code: SQ10)

**Basic Measurement**

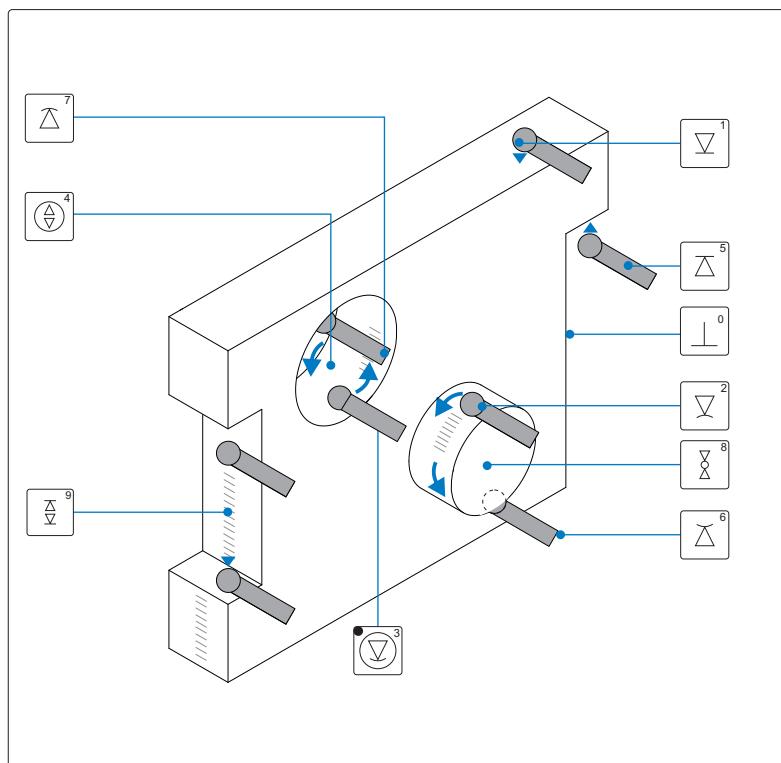
- 1** Contacting a plane from above
- 2** Contacting a shaft from above/bore below
- 3** Measuring a shaft diameter and center
- 4** Measuring groove width and center
- 5** Contacting a plane from below
- 6** Contacting a shaft from below/ bore above
- 7** Measuring bore diameter and center
- 8** Measuring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

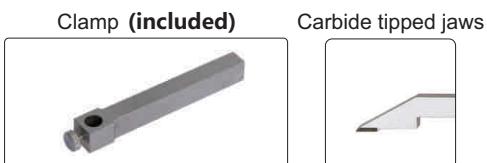
Demo Application



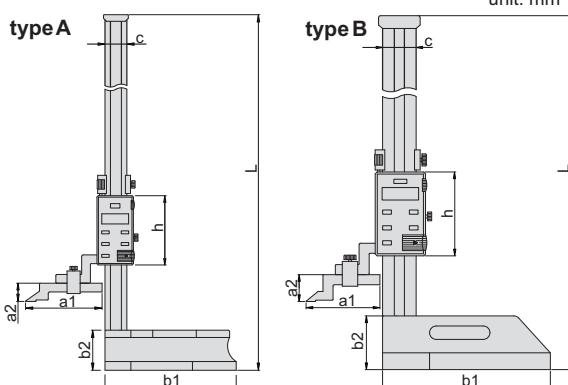
SERIES 181

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:500-01)
- With clamps ($\varnothing 8\text{mm}$ holder)



181-024-11



Application with clamps(optional)



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

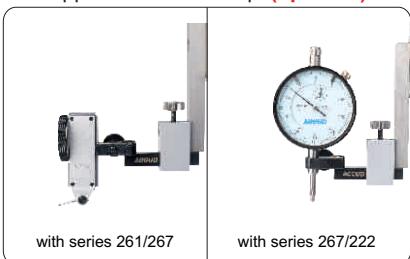
SERIES 182

DIGITAL HEIGHT GAGE

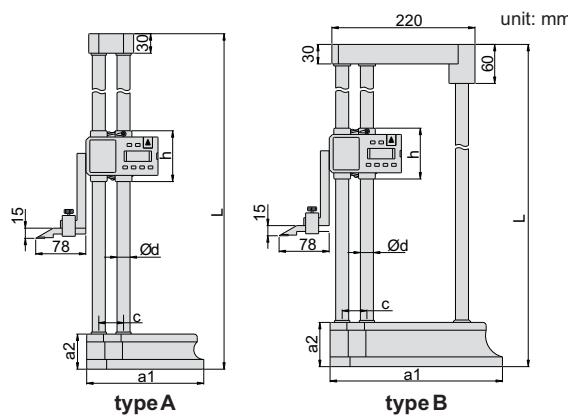


- Resolution: 0.01mm/0.001"
- Buttons: on/off, inch/mm, ABS/INC , data preset, set data
- Carbide tipped scriber
- Made of stainless steel beam
- With driving wheel
- Optional accessory: 267 series clamps

Application with clamps(optional)



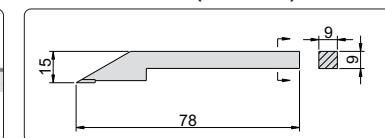
182-012-11



Carbide tipped jaws



Scriber (included)



driving wheel



Code	Range	Type	Accuracy	a1	a2	c	$\varnothing d$	h	L
182-012-11	0-300mm/0-12"	A	$\pm 0.04\text{mm}$	135	43	33	15	84	475
182-024-11	0-600mm/0-24"	A	$\pm 0.05\text{mm}$	180	54	38	20	88	810
182-040-11	0-1000mm/0-40"	B	$\pm 0.05\text{mm}$	265	68	38	20	88	1230

SERIES 184

DIGITAL HEIGHT GAGE WITH DRIVING WHEEL

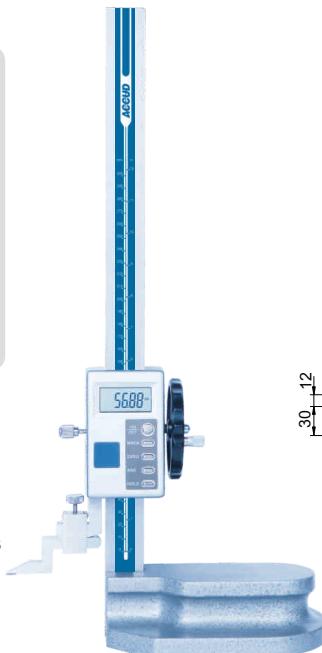


- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/inch, ABS/INC, hold
- ◆ Automatic power off, move the digital unit to turn on power
- ◆ Carbide tipped scribe
- ◆ Made of stainless steel
- ◆ Data output(cable code:500-03)
- ◆ Optional accessories: dial test indicator holder (267-050-01)

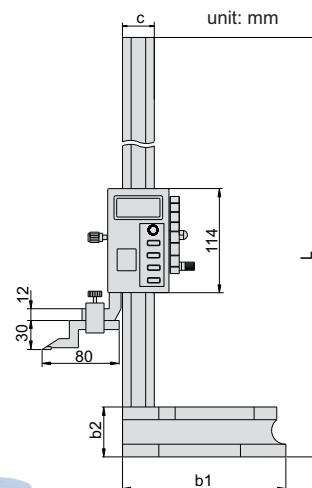
Application with clamps(optional)



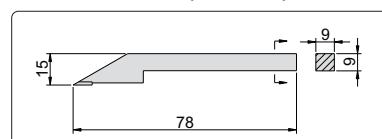
Carbide tipped jaws



184-012-11



Scriber (included)



Code	Range	Accuracy	b1	b2	c	L
184-012-11	0-300mm/0-12"	±0.03mm	180	55	32	515
184-024-11	0-600mm/0-24"	±0.05mm	180	55	32	815

SERIES 185

DIAL HEIGHT GAGE

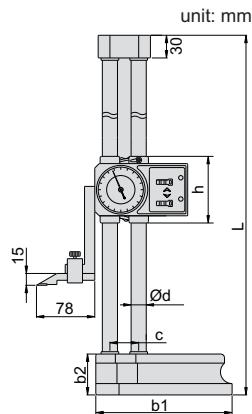
HEIGHT

- ◆ Indicator graduation: 0.01mm
- ◆ Carbide tipped scribe
- ◆ Made of stainless steel (except the base)
- ◆ With driving wheel
- ◆ Optional accessory: 267 series clamps

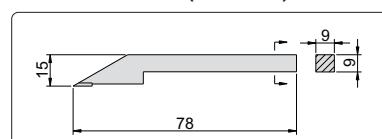
Application with clamps(optional)



185-012-11



Scriber (included)



Carbide tipped jaws driving wheel



Code	Range	Accuracy	b1	b2	c	Ød	h	L
185-012-11	0-300mm	±0.04mm	135	43	33	15	84	475
185-024-11	0-600mm	±0.05mm	180	54	38	20	88	810



SERIES 186

VERNIER HEIGHT GAGE

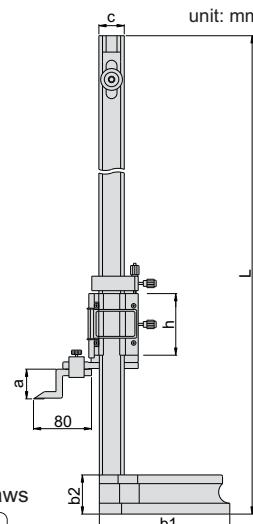
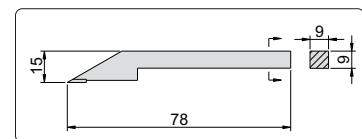
- ◆ Graduation: 0.02mm/0.001"
- ◆ Move main scale to set zero
- ◆ Carbide tipped scriber
- ◆ Made of stainless steel (except the base)
- ◆ Satin chrome plated scale
- ◆ With magnifier
- ◆ Optional accessory: 267 series clamps

Application with clamps(**optional**)

186-012-11



Carbide tipped jaws

Scriber (**included**)

Code	Range	Accuracy	a	b1	b2	c	h	L
186-012-11	0-300mm/0-12"	$\pm 0.04\text{mm}$	30	135	43	28	75	545
186-024-11	0-600mm/0-24"	$\pm 0.05\text{mm}$	41	180	54	35	85	870

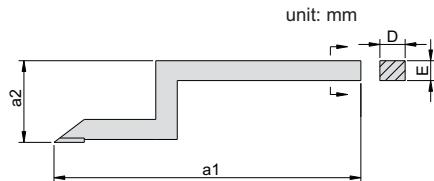
SERIES 180

SCRIBER FOR HEIGHT GAGE

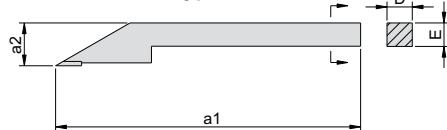


180-000-SC1

- ◆ Carbide tipped



type A



type B

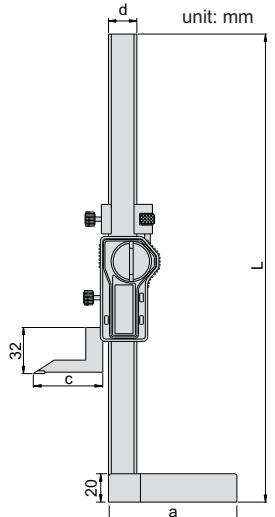
Code	For height gage	Type	a1	a2	D	E
180-000-SC1	181-012-11	A	76	25	6	8
180-000-SC2	181-024-11	A	103	25	10	12
180-000-SC3	181-040-11	A	110	39	10	15
180-000-SC4	185-012-11, 185-024-11, 182-012-11, 182-024-11	B	78	15	9	9
180-000-SC6	186-012-11	A	80	30	9	9
180-000-SC7	186-024-11	A	80	41	9	9

Carbide tipped jaws



SERIES 183**MINI DIGITAL HEIGHT GAGE**

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



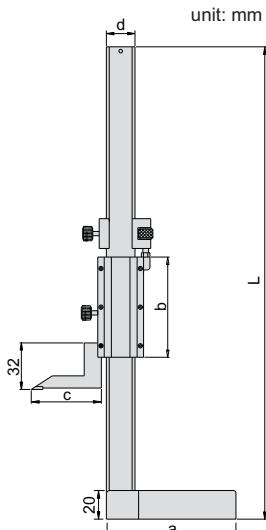
Carbide tipped jaws



Code	Range	Accuracy	a	c	d	L
183-006-11	0-150mm/0-6"	±0.03mm	75	43	16	475
183-008-11	0-200mm/0-8"	±0.03mm	90	49	16	660
183-010-11	0-250mm/0-10"	±0.03mm	90	49	16	710

SERIES 187**MINI VERNIER HEIGHT GAGE**

- ◆ Graduation 0.02mm/0.001"
- ◆ Carbide tipped scriber
- ◆ Made of stainless steel (except the base)
- ◆ Satin chrome plated scale



Carbide tipped jaws



Code	Range	Accuracy	a	b	c	d	L
187-006-11	0-150mm/0-6"	±0.03mm	75	57	43	16	475
187-008-11	0-200mm/0-8"	±0.03mm	90	70	49	20	660
187-010-11	0-250mm/0-10"	±0.03mm	90	70	49	20	710

HEIGHT



SERIES 313

DIGITAL OUTSIDE MICROMETER WITH DATA OUTPUT



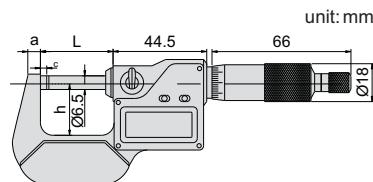
- Resolution: 0.001mm/0.00005"
- IP65 protection level
- Button: on/off, mm/inch,set, zero
- Automatic power off
- Data output
- Carbide measuring faces, ratchet stop
- Setting standards are included(except 313-001-01S)

*with calibration certificate

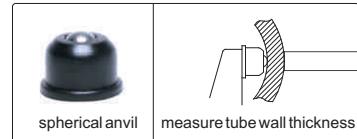
Code	Range	Accuracy	a	c	h	L	Setting standards (included)
313-001-01S*	0-25mm/0-1"	±2µm	6	3	25	34.5	-
313-002-01S*	25-50mm/1-2"	±2µm	8	3	32	59.5	25mm
313-003-01S*	50-75mm/2-3"	±3µm	8	3	44.5	84.5	50mm
313-004-01S*	75-100mm/3-4"	±3µm	8	3	57	109.5	75mm
313-005-01S	100-125mm/4-5"	±3µm	10	3	70	135	100mm
313-006-01S	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



313-001-01S



Setting standards (included) data output interface



SERIES 313

DIGITAL OUTSIDE MICROMETER



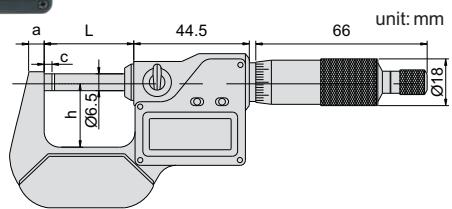
- Resolution: 0.001mm/0.00005"
- IP65 protection level
- Button: on/off, mm/inch,set, zero
- Automatic power off
- Carbide measuring faces, ratchet stop
- Setting standards are included (except 313-001-01)

*with calibration certificate

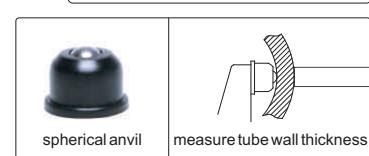
Code	Range	Accuracy	a	c	h	L	Setting standards (included)
313-001-01*	0-25mm/0-1"	±2µm	6	3	25	34.5	-
313-002-01*	25-50mm/1-2"	±2µm	8	3	32	59.5	25mm
313-003-01*	50-75mm/2-3"	±3µm	8	3	44.5	84.5	50mm
313-004-01*	75-100mm/3-4"	±3µm	8	3	57	109.5	75mm
313-005-01	100-125mm/4-5"	±3µm	10	3	70	135	100mm
313-006-01	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



313-001-01



Setting standards(included)

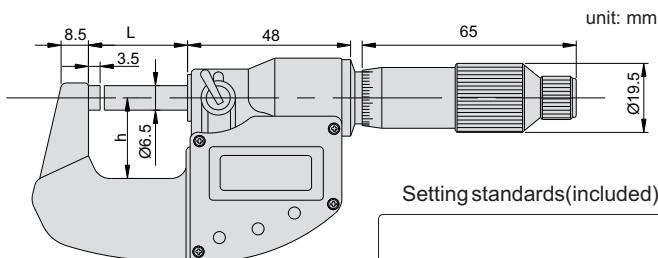


SERIES 313**IP65 DIGITAL OUTSIDE MICROMETER**

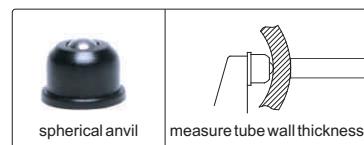
- ◆ Resolution: 0.001mm/0.00005"
- ◆ IP65 protection level
- ◆ Button: on/off, mm/inch, zero
- ◆ Automatic power off
- ◆ Data output
- ◆ Carbide measuring faces
- ◆ Ratchet stop
- ◆ Setting standards are included
(except 313-001-02)



313-001-02



Setting standards(included)



* with calibration certificate

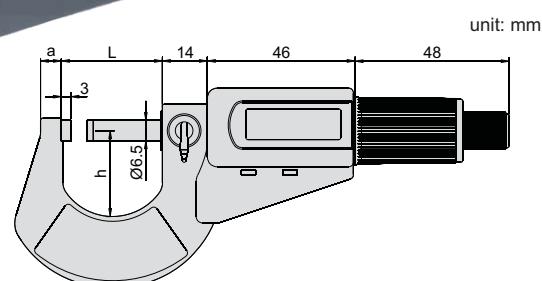
Code	Range	Accuracy	h	L	Setting standards(included)
313-001-02*	0-25mm/0-1"	3µm	25	31.5	-
313-002-02*	25-50mm/1-2"	3µm	32	57	25mm
313-003-02*	50-75mm/2-3"	4µm	44.5	82.5	50mm
313-004-02*	75-100mm/3-4"	4µm	57	107	75mm
313-005-02	100-125mm/4-5"	5µm	70	133	100mm
313-006-02	125-150mm/5-6"	5µm	82	158	125mm

SERIES 312**DIGITAL OUTSIDE MICROMETER**

- ◆ 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)



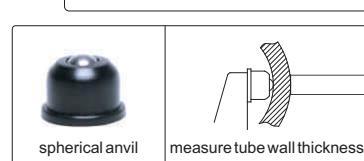
312-001-03



* with calibration certificate

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

Setting standards(included)



MICROMETER



SERIES 314

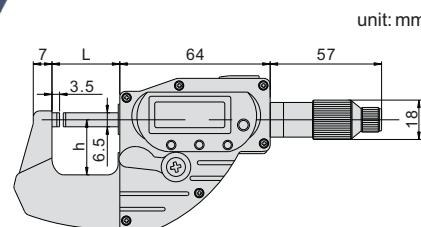
DIGITAL SNAP MICROMETER



- ◆ Quick measurement with lever
 - ◆ Resolution: 0.001mm/0.00005"
 - ◆ IP65 protection level
 - ◆ Button: on/off, mm/inch, origin, ABS/zero
 - ◆ Automatic power off
 - ◆ Data output(cable code:100-13)
 - ◆ 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



SERIES 322

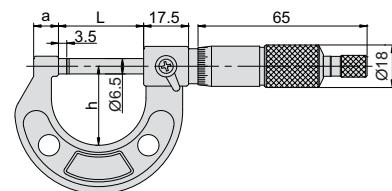
MICRO GRADUATION OUTSIDE MICROMETER



- ◆ Graduation: 0.001mm
 - ◆ Carbide measuring faces
 - ◆ Ratchet stop
 - ◆ Setting standards are included
(except 322-001-01)



322-001-01



Setting standards(included)

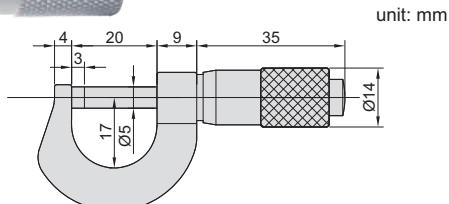
Code	Range	Accuracy	a	h	L	Setting standards(included)
322-001-01	0-25mm	4µm	9	29	32	-
322-002-01	25-50mm	4µm	9	39	58	25mm
322-003-01	50-75mm	5µm	10	53	83	50mm
322-004-01	75-100mm	5µm	10	65	109	75mm



320

MINI OUTSIDE MICROMETER

- ◆ Chrome plated frame
 - ◆ Pocket size, easy to carry



Code	Range	Graduation
320-015-01	0-15mm	0.01mm

SERIES 321**OUTSIDE MICROMETER**

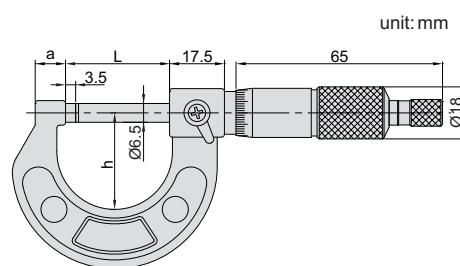
- ◆ Graduation: 0.01mm
- ◆ Carbide measuring faces
- ◆ Ratchet stop
- ◆ Setting standards are included
(except 321-001-01)



321-001-01

*with calibration certificate

Code	Range	Accuracy	a	h	L	Setting standards (included)
321-001-01 *	0-25mm	4µm	9	29	32	-
321-002-01 *	25-50mm	4µm	9	39	58	25mm
321-003-01 *	50-75mm	5µm	10	53	83	50mm
321-004-01 *	75-100mm	5µm	10	65	109	75mm
321-005-01	100-125mm	6µm	11.5	76	133	100mm
321-006-01	125-150mm	6µm	11.5	88	159	125mm
321-007-01	150-175mm	7µm	11.5	101	185	150mm
321-008-01	175-200mm	7µm	11.5	114	210	175mm
321-009-01	200-225mm	8µm	11.5	126	235	200mm
321-010-01	225-250mm	8µm	12	139	260	225mm
321-011-01	250-275mm	9µm	12.5	151	286	250mm
321-012-01	275-300mm	9µm	12.5	164	311	275mm



Setting standards(included)

**SERIES 321****OUTSIDE MICROMETER SET**

- ◆ Consist of series 321 outside micrometer

Setting standards(included)



321-006-06

*with calibration certificate

Code	Range	Total QTY.	Included micrometers	Setting standards(included)
321-003-03 *	0-75mm	3pcs	0-25, 25-50, 50-75mm	25, 50mm
321-004-04 *	0-100mm	4pcs	0-25, 25-50, 50-75, 75-100mm	25, 50, 75mm
321-006-06	0-150mm	6pcs	0-25, 25-50, 50-75, 75-100, 100-125, 125-150mm	25, 50, 75, 100, 125mm
321-012-06	150-300mm	6pcs	150-175, 175-200, 200-225, 225-250, 250-275, 275-300mm	150, 175, 200, 225, 250, 275mm
321-012-12	0-300mm	12pcs	0-25, 25-50, 50-75, 75-100, 100-125, 125-150, 150-175, 175-200, 200-225, 225-250, 250-275, 275-300mm	25, 50, 75, 100, 125, 150, 175, 200, 225, 250, 275mm

MICROMETER



SERIES 321

OUTSIDE MICROMETER



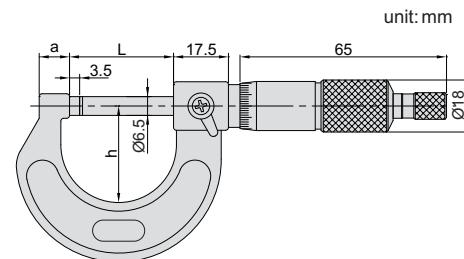
- ◆ Graduation: 0.01mm
- ◆ Carbide measuring faces
- ◆ Ratchet stop
- ◆ Setting standards are included
(except 321-001-01H)



321-001-01H

*with calibration certificate

Code	Range	Accuracy	a	h	L	Setting standards (included)
321-001-01H*	0-25mm	4µm	9	29	32	-
321-002-01H*	25-50mm	4µm	9	39	58	25mm
321-003-01H*	50-75mm	5µm	10	53	83	50mm
321-004-01H*	75-100mm	5µm	10	65	109	75mm
321-005-01H	100-125mm	6µm	11.5	76	133	100mm
321-006-01H	125-150mm	6µm	11.5	88	159	125mm
321-007-01H	150-175mm	7µm	11.5	101	185	150mm
321-008-01H	175-200mm	7µm	11.5	114	210	175mm
321-009-01H	200-225mm	8µm	11.5	126	235	200mm
321-010-01H	225-250mm	8µm	12	139	260	225mm
321-011-01H	250-275mm	9µm	12.5	151	286	250mm
321-012-01H	275-300mm	9µm	12.5	164	311	275mm



Setting standards(included)



SERIES 321

OUTSIDE MICROMETER SET



- ◆ Consist of series 321 outside micrometer

Setting standards(included)



321-006-06H

*with calibration certificate

Code	Range	Total QTY.	Included micrometers	Setting standards(included)
321-003-03H*	0-75mm	3pcs	0-25, 25-50, 50-75mm	25, 50mm
321-004-04H*	0-100mm	4pcs	0-25, 25-50, 50-75, 75-100mm	25, 50, 75mm
321-006-06H	0-150mm	6pcs	0-25, 25-50, 50-75, 75-100, 100-125, 125-150mm	25, 50, 75, 100, 125mm
321-012-06H	150-300mm	6pcs	150-175, 175-200, 200-225, 225-250, 250-275, 275-300mm	150, 175, 200, 225, 250, 275mm
321-012-12H	0-300mm	12pcs	0-25, 25-50, 50-75, 75-100, 100-125, 125-150, 150-175, 175-200, 200-225, 225-250, 250-275, 275-300mm	25, 50, 75, 100, 125, 150, 175, 200, 225, 250, 275mm

SERIES 324

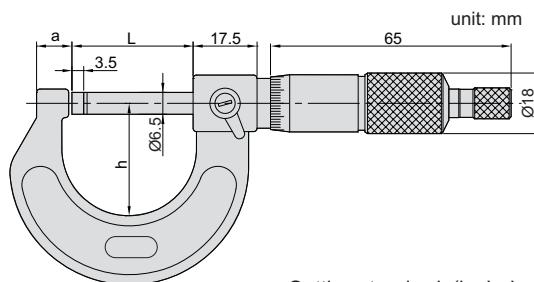
OUTSIDE MICROMETER

- ◆ Graduation: 0.0001in
- ◆ Carbide measuring faces
- ◆ Ratchet stop
- ◆ Setting standards are included
(except 324-001-01)



324-001-01

Code	Range	Accuracy	a	h	L	Setting standards (included)
324-001-01	0-1"	±0.00016"	9	29	32	-
324-002-01	1-2"	±0.00016"	14	39	58	1"
324-003-01	2-3"	±0.0002"	15	53	83	2"
324-004-01	3-4"	±0.0002"	15	65	109	3"
324-005-01	4-5"	±0.00024"	16.5	76	133	4"
324-006-01	5-6"	±0.00024"	16.5	88	159	5"
324-007-01	6-7"	±0.00028"	19.4	29	32	6"
324-008-01	7-8"	±0.00028"	19.4	39	58	7"
324-009-01	8-9"	±0.00031"	19.4	53	83	8"
324-010-01	9-10"	±0.00031"	19.4	65	109	9"
324-011-01	10-11"	±0.00035"	19.4	76	133	10"
324-012-01	11-12"	±0.00035"	19.4	88	159	11"



Setting standards(included)



SERIES 324

OUTSIDE MICROMETER SET



324-006-06

Setting standards(included)



MICROMETER SET

Code	Range	Total quantity	Included micrometers	Setting standards(included)
324-003-03	0-3"	3pcs	0-1", 1-2", 2-3"	1", 2"
324-004-04	0-4"	4pcs	0-1", 1-2", 2-3", 3-4"	1", 2", 3"
324-006-06	0-6"	6pcs	0-1", 1-2", 2-3", 3-4", 4-5", 5-6"	1", 2", 3", 4", 5"
324-012-06	6-12"	6pcs	6-7", 7-8", 8-9", 9-10", 10-11", 11-12"	6", 7", 8", 9", 10", 11"
324-012-12	0-12"	12pcs	0-1", 1-2", 2-3", 3-4", 4-5", 5-6", 6-7", 7-8", 8-9", 9-10", 10-11", 11-12"	1", 2", 3", 4", 5", 6", 7", 8", 9", 10", 11"



SERIES 315

DIGITAL MICROMETER WITH
INTERCHANGEABLE ANVILS

- ♦ Resolution 0.001mm/0.0001"
- (resolution of 315-004-01 and 315-006-01 is 0.001mm/0.00005")
- ♦ IP54 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)

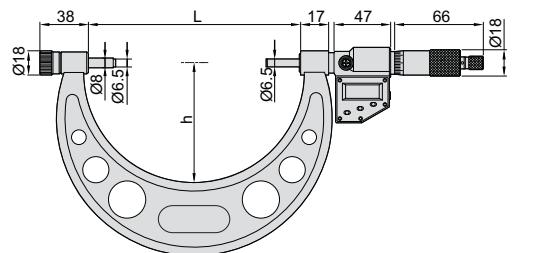
interchangeable anvils
for different measuring ranges

315-004-01

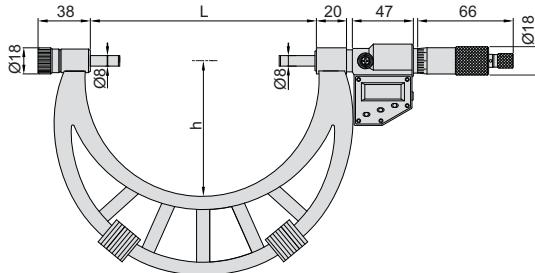


315-020-01

unit: mm



type A



type B

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

SERIES 325

OUTSIDE MICROMETER WITH INTERCHANGEABLE ANVILS

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



Setting standards (included)



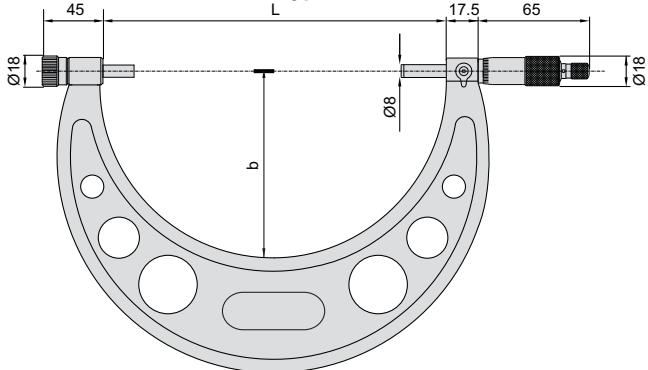
interchangeable anvils (included)



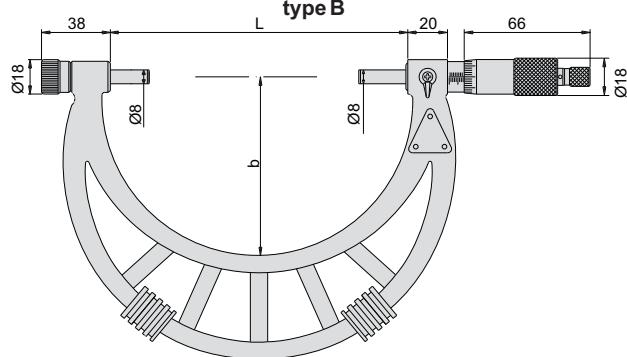
325-006-01

type A

unit: mm



type B



MICROMETER

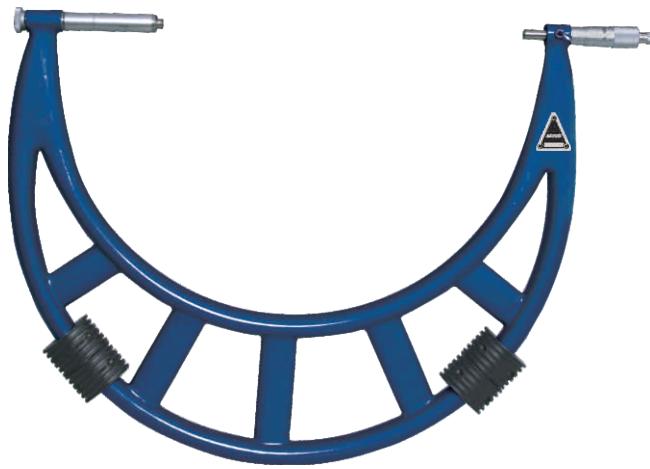
Code	Range	Type	Accuracy	L	b	Setting standards (included)
325-002-01	0-50mm	A	4µm	58	35	25mm
325-004-01	0-100mm	A	5µm	108	57	25,50,75mm
325-006-01	0-150mm	A	6µm	158	82	25,50,75,100,125mm
325-008-01	100-200mm	A	7µm	208	114	100,125,150,175mm
325-012-01	150-300mm	A	9µm	308	165	150,175,200,225,250,275mm
325-006-02	50-150mm	A	6µm	158	82	50,75,100,125mm
325-012-02	200-300mm	A	9µm	308	165	200,225,250,275mm
325-016-02	300-400mm	B	11µm	409	224	325,375mm
325-020-02	400-500mm	B	13µm	509	275	425,475mm
325-024-02	500-600mm	B	14µm	609	321	525,575mm
325-028-02	600-700mm	B	16µm	709	371	625,675mm
325-032-02	700-800mm	B	18µm	809	426	725,775mm
325-036-02	800-900mm	B	20µm	909	476	825,875mm
325-040-02	900-1000mm	B	22µm	1009	576	925,975mm



SERIES 329

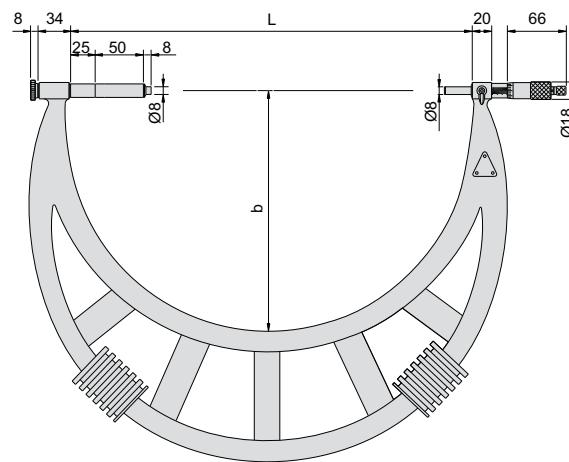
OUTSIDE MICROMETER WITH EXTENSION ANVIL

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

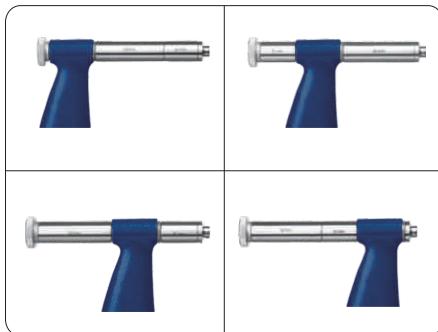


329-016-01

unit: mm



Adjust collars for different measuring ranges



Setting standards(included)



Code	Range	Accuracy	L	h	Setting standards(included)
329-016-01	300-400mm	11µm	410	250	325,375mm
329-020-01	400-500mm	13µm	510	275	425,475mm
329-024-01	500-600mm	14µm	610	320	525,575mm
329-028-01	600-700mm	16µm	710	370	625,675mm
329-032-01	700-800mm	18µm	810	425	725,775mm
329-036-01	800-900mm	20µm	910	475	825,875mm
329-040-01	900-1000mm	22µm	1010	575	925,975mm
329-048-01	1000-1200mm	22µm	1210	645	1050,1150mm
329-056-01	1200-1400mm	24µm	1410	745	1250,1350mm
329-064-01	1400-1600mm	28µm	1610	845	1450,1550mm
329-072-01	1600-1800mm	31µm	1810	945	1650,1750mm
329-080-01	1800-2000mm	34µm	2010	1045	1850,1950mm

SERIES 316

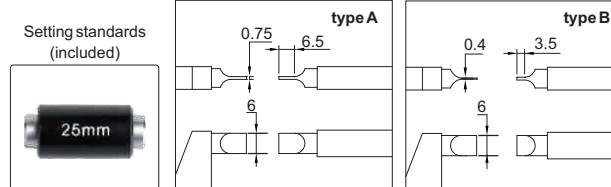
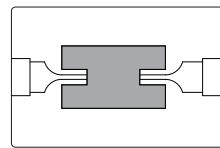
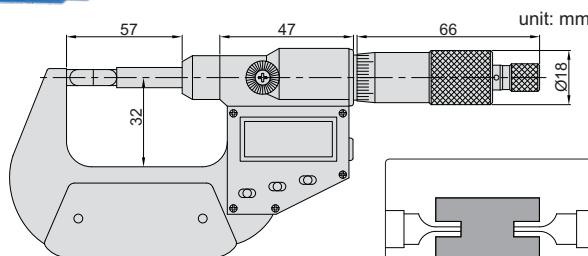
DIGITAL BLADE MICROMETER



- ◆ Measure the groove diameter of shafts and keyways
- ◆ 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 0-25mm/0-1")



316-001-01



Code	Range	Accuracy	Type	Setting standards (included)
316-001-01	0-25mm/0-1"	±4µm	A	-
316-002-01	25-50mm/1-2"	±4µm	A	25mm
316-003-01	50-75mm/2-3"	±5µm	A	50mm
316-004-01	75-100mm/3-4"	±5µm	A	75mm
316-001-02	0-25mm/0-1"	±4µm	B	-
316-002-02	25-50mm/1-2"	±4µm	B	25mm

SERIES 326

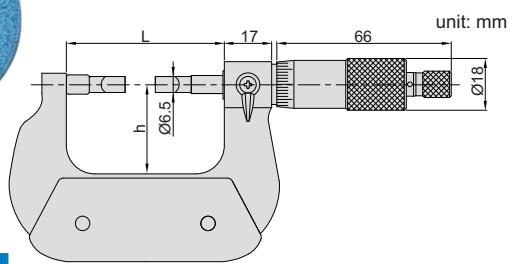
BLADE MICROMETER

MICROMETER

- ◆ Measure the small groove diameter
- ◆ Graduation: 0.01mm
- ◆ Non-rotating spindle
- ◆ Ratchet stop
- ◆ Setting standards are included (except 0-25mm)



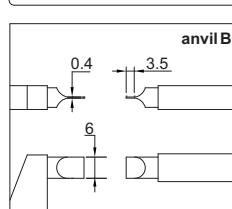
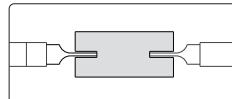
326-001-03



Setting standards (included)

Code	Range	Anvil	Accuracy	h	L	Setting standards (included)
326-001-03	0-25mm	A	4µm	35	57	-
326-002-03	25-50mm	A	4µm	46	82	25mm
326-003-03	50-75mm	A	5µm	58	107	50mm
326-004-03	75-100mm	A	5µm	70	133	75mm
326-005-03	100-125mm	A	6µm	83	158	100mm
326-006-03	125-150mm	A	6µm	96	183	125mm
326-007-03	150-175mm	A	7µm	109	209	150mm
326-001-04	0-25mm	B	4µm	35	57	-
326-002-04	25-50mm	B	4µm	46	82	25mm

Application



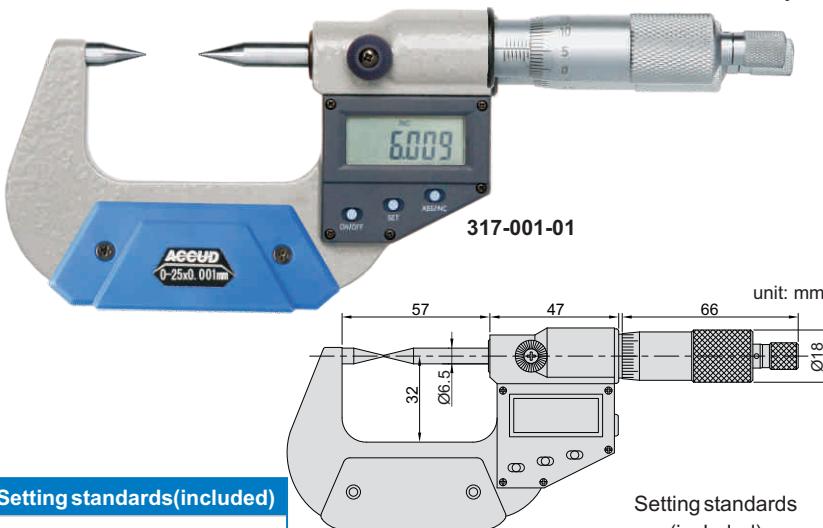


SERIES 317

DIGITAL POINT MICROMETER

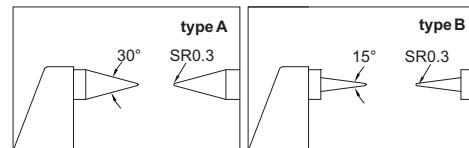


- ◆ Measure the web thickness of drills, small grooves and keyways
- ◆ Resolution 0.001mm/0.00005"
- ◆ IP54 protection level
- ◆ Button: on/off, set, mm/inch, ABS/INC, data output
- ◆ Automatic power off
- ◆ Data output
- ◆ Ratchet stop
- ◆ Carbide tips
- ◆ Supplied with setting standards (except 0-25mm/0-1")



Code	Range	Accuracy	Type	Setting standards(included)
317-001-01	0-25mm/0-1"	±4µm	A	-
317-002-01	25-50mm/1-2"	±4µm	A	25mm
317-003-01	50-75mm/2-3"	±5µm	A	50mm
317-004-01	75-100mm/3-4"	±5µm	A	75mm
317-001-02	0-25mm/0-1"	±4µm	B	-
317-002-02	25-50mm/1-2"	±4µm	B	25mm
317-003-02	50-75mm/2-3"	±5µm	B	50mm
317-004-02	75-100mm/3-4"	±5µm	B	75mm

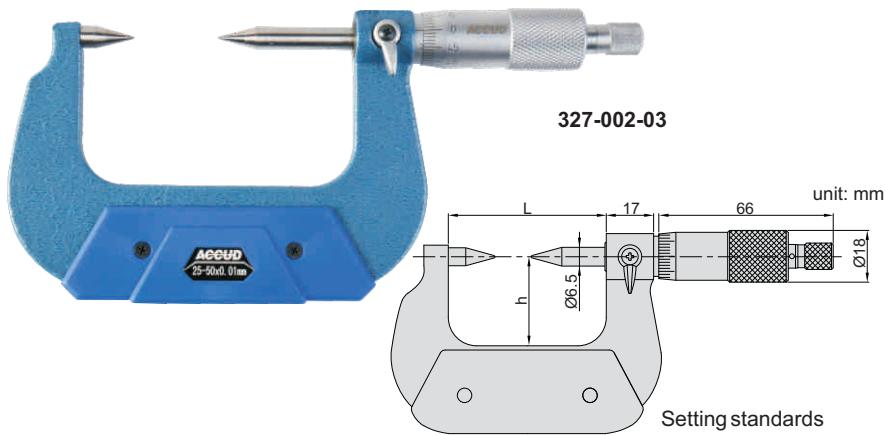
Setting standards
(included)



SERIES 327

POINT MICROMETER

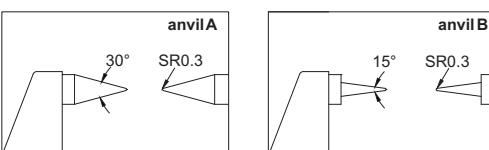
- ◆ Measure the thickness of drills, small grooves and keyways
- ◆ Graduation: 0.01mm
- ◆ Ratchet stop
- ◆ Carbide measuring faces
- ◆ Setting standards are included (except 0-25mm)



Setting standards
(included)



Code	Range	Anvil	Accuracy	h	L	Setting standards (included)
327-001-03	0-25mm	A	4µm	39	58	-
327-002-03	25-50mm	A	4µm	53	83	25mm
327-003-03	50-75mm	A	5µm	65	109	50mm
327-004-03	75-100mm	A	5µm	76	133	75mm
327-001-04	0-25mm	B	4µm	39	58	-
327-002-04	25-50mm	B	4µm	53	83	25mm
327-003-04	50-75mm	B	5µm	65	109	50mm
327-004-04	75-100mm	B	5µm	76	133	75mm





SERIES 318

DIGITAL SPLINE MICROMETER



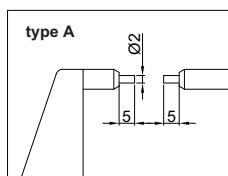
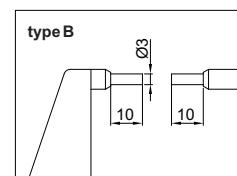
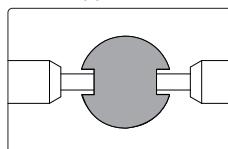
- ◆ Measure splined shafts, slots and keyways
- ◆ Resolution 0.001mm/0.00005"
- ◆ IP54 protection level
- ◆ Button: on/off, set, mm/inch, ABS/INC, data output
- ◆ Automatic power off
- ◆ Data output
- ◆ Ratchet stop
- ◆ Carbide measuring faces
- ◆ Supplied with setting standards (except 0-25mm/0-1")



Application

Code	Range	Accuracy	Type	Setting standards(included)
318-001-01	0-25mm/0-1"	$\pm 4\mu\text{m}$	A	-
318-002-01	25-50mm/1-2"	$\pm 4\mu\text{m}$	A	25mm
318-003-01	50-75mm/2-3"	$\pm 5\mu\text{m}$	A	50mm
318-004-01	75-100mm/3-4"	$\pm 5\mu\text{m}$	A	75mm
318-001-02	0-25mm/0-1"	$\pm 4\mu\text{m}$	B	-
318-002-02	25-50mm/1-2"	$\pm 4\mu\text{m}$	B	25mm
318-003-02	50-75mm/2-3"	$\pm 5\mu\text{m}$	B	50mm
318-004-02	75-100mm/3-4"	$\pm 5\mu\text{m}$	B	75mm

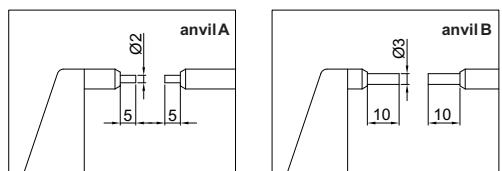
Setting standards(included)



SERIES 328

SPLINE MICROMETER

- ◆ Measure grooves and sharped parts
- ◆ Graduation: 0.01mm
- ◆ Carbide measuring faces
- ◆ Ratchet stop
- ◆ Setting standards are included (except 0-25mm)



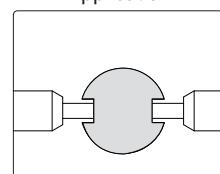
328-001-03

Setting standards (included)



Code	Range	Anvil	Accuracy	h	L	Setting standards(included)
328-001-03	0-25mm	B	$4\mu\text{m}$	39	58	-
328-002-03	25-50mm	B	$4\mu\text{m}$	53	83	25mm
328-003-03	50-75mm	B	$5\mu\text{m}$	65	109	50mm
328-004-03	75-100mm	B	$5\mu\text{m}$	76	133	75mm
328-005-03	100-125mm	B	$6\mu\text{m}$	82	158	100mm
328-006-03	125-150mm	B	$6\mu\text{m}$	94.5	183.4	125mm
328-007-03	150-175mm	B	$7\mu\text{m}$	107	208.8	150mm
328-001-04	0-25mm	A	$4\mu\text{m}$	39	58	-

Application



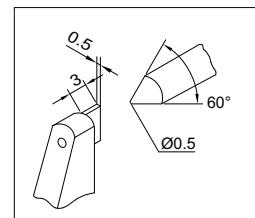
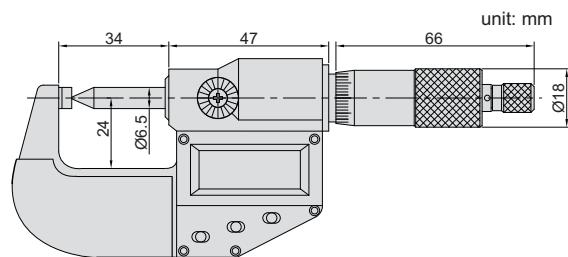


319

DIGITAL CRIMP HEIGHT MICROMETER



- ◆ Measure the height of crimp contact
- ◆ Resolution 0.001mm/0.00005"
- ◆ IP54 protection level
- ◆ Button: on/off, set, mm/inch, ABS/INC, data output
- ◆ Automatic power off
- ◆ Data output
- ◆ Ratchet stop

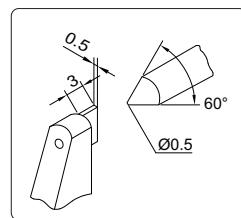
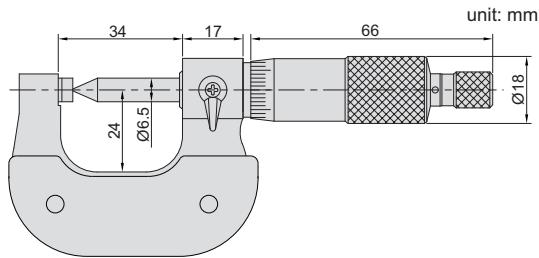


Code	Range	Accuracy
319-001-01	0-25mm/0-1"	±4µm

346

CRIMP HEIGHT MICROMETER

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



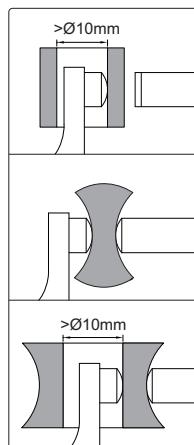
Code	Range	Accuracy
346-001-01	0-25mm	4µm

SERIES 331

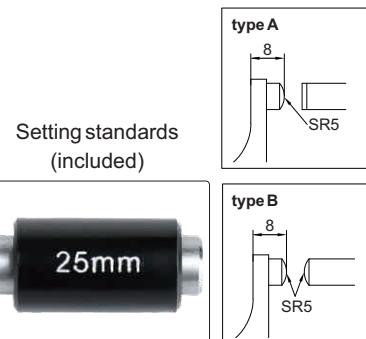
DIGITAL SPHERICAL ANVIL TUBE MICROMETER



- ◆ Measure wall thickness of tubes
- ◆ Resolution 0.001mm/0.00005"
- ◆ IP54 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")



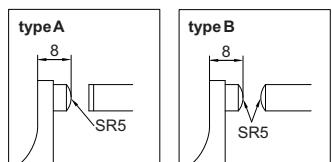
Code	Range	Accuracy	Type	L	h	Setting standards(included)
331-001-01	0-25mm/0-1"	4µm	A	32	24	-
331-002-01	25-50mm/1-2"	4µm	A	57	32	25mm
331-003-01	50-75mm/2-3"	5µm	A	82	44.5	50mm
331-004-01	75-100mm/3-4"	5µm	A	107	57	75mm
331-001-02	0-25mm/0-1"	4µm	B	32	24	100mm
331-002-02	25-50mm/1-2"	4µm	B	57	32	125mm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



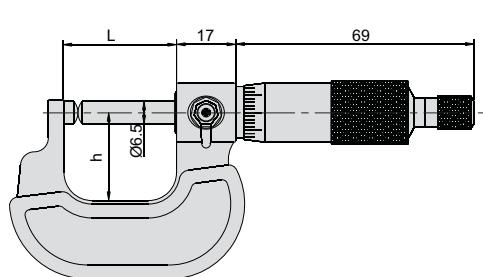
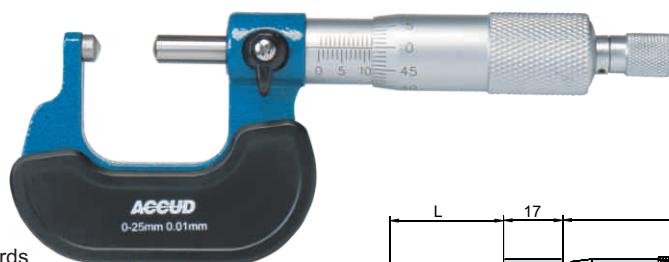
SERIES 340

SPHERICAL ANVIL TUBE MICROMETER

- ◆ Measure wall thickness of tubes
- ◆ Graduation: 0.01mm
- ◆ Carbide measuring faces
- ◆ Ratchet stop
- ◆ Setting standards are included (except 0-25mm)

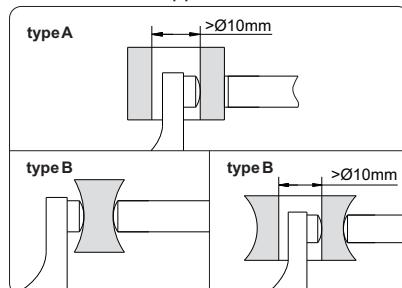


Setting standards
(included)



Code	Range	Type	Accuracy	L	h	Setting standards (included)
340-001-01	0-25mm	A	4µm	57	24	-
340-002-01	25-50mm	A	4µm	82	32	25mm
340-003-01	50-75mm	A	5µm	107	44.5	50mm
340-004-01	75-100mm	A	5µm	133	57	75mm
340-001-02	0-25mm	B	4µm	57	24	-
340-002-02	25-50mm	B	4µm	82	32	25mm
340-003-02	50-75mm	B	5µm	107	44.5	50mm
340-004-02	75-100mm	B	5µm	133	57	75mm

Application



MICROMETER



SERIES 380

DIGITAL CYLINDRICAL ANVIL TUBE MICROMETER

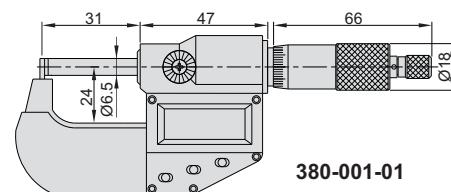


- ◆ Measure wall thickness of tubes
- ◆ Resolution 0.001mm/0.00005"
- ◆ IP54 protection level
- ◆ Button: on/off, set, mm/inch, ABS/INC, data output
- ◆ Automatic power off
- ◆ Data output
- ◆ Ratchet stop
- ◆ Carbide spindle tip



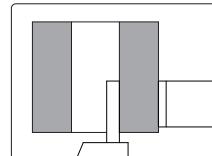
380-001-04

unit: mm

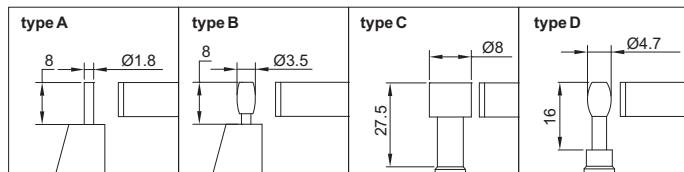


380-001-01

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



SERIES 341

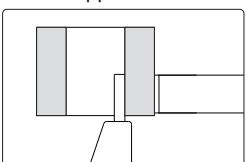
TUBE MICROMETER

- ◆ Measure the wall thickness of tube, bearing and rings
- ◆ Graduation: 0.01mm
- ◆ Carbide measuring faces
- ◆ Ratchet stop
- ◆ Setting standards are included (except 0-25mm)

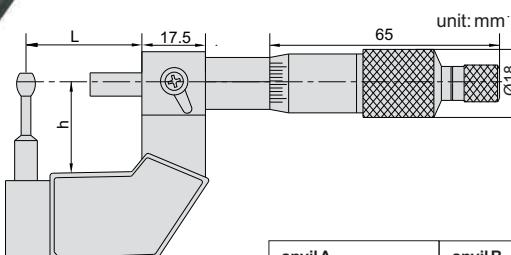
Setting standards(included)



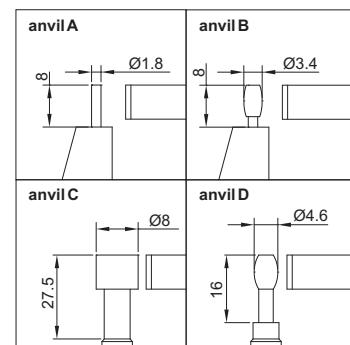
Application



341-001-04



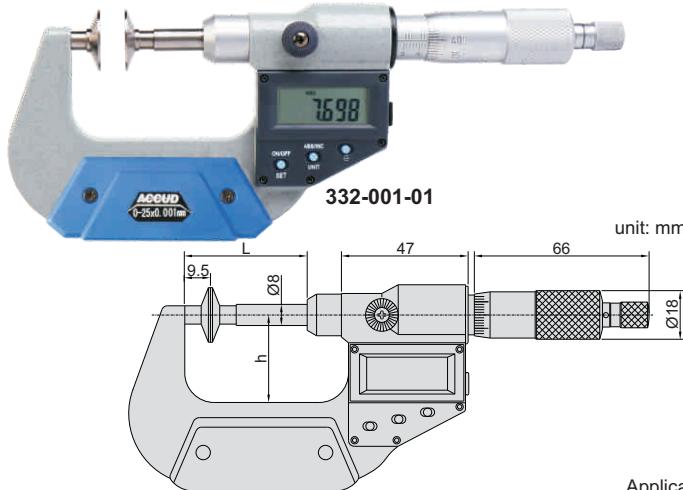
Code	Range	Anvil	Accuracy	h	L	Setting standards (included)
341-001-01	0-25mm	A	6µm	24	31	-
341-002-01	25-50mm	A	6µm	32	57	25mm
341-001-02	0-25mm	B	6µm	24	31	-
341-002-02	25-50mm	B	6µm	32	57	25mm
341-001-03	0-25mm	C	6µm	24	31	-
341-001-04	0-25mm	D	6µm	24	31	-



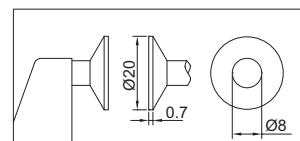
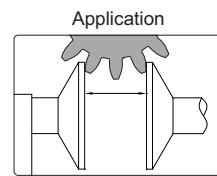
332**DIGITAL NON ROTATING SPINDLE DISK MICROMETER**

- ◆ 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)

Setting standards(included)

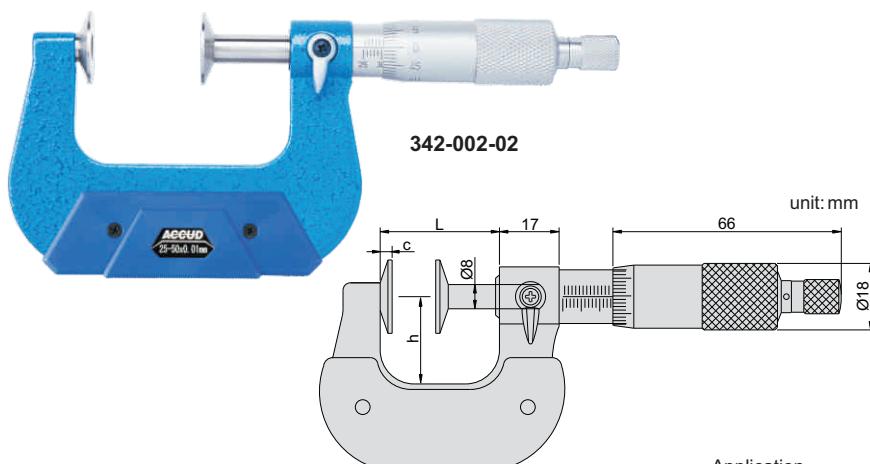


Code	Range	Accuracy	L	h	Setting standards (included)
332-001-01	0-25mm/0-1"	±4µm	43	32	-
332-002-01	25-50mm/1-2"	±4µm	68	44.5	25mm
332-003-01	50-75mm/2-3"	±5µm	93	57	50mm
332-004-01	75-100mm/3-4"	±5µm	118.5	70	75mm
332-005-01	100-125mm/4-5"	±6µm	144	82	100mm
332-006-01	125-150mm/5-6"	±6µm	169.5	94.5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

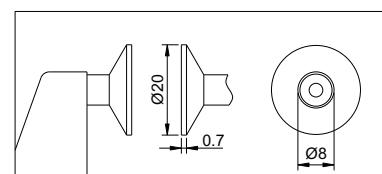
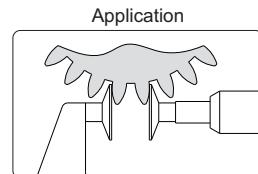
**SERIES 342****DISK MICROMETER****MICROMETER**

- ◆ Measure root tangent length of gear
- ◆ Graduation 0.01mm
- ◆ Ratchet stop
- ◆ Supplied with setting standards (except 0-25mm)

Setting standards(included)



Code	Range	Accuracy	L	h	c	Setting standards (included)
342-001-02	0-25mm	4µm	34	24	3.3	-
342-002-02	25-50mm	4µm	59	32	3.3	25mm
342-003-02	50-75mm	5µm	85	45	3.3	50mm
342-004-02	75-100mm	5µm	110	57	3.3	75mm
342-005-02	100-125mm	6µm	138	70	4.3	100mm
342-006-02	125-150mm	6µm	163	82	4.3	125mm
342-007-02	150-175mm	7µm	188	95	4.3	150mm
342-008-02	175-200mm	7µm	214	107	4.3	175mm





SERIES 334

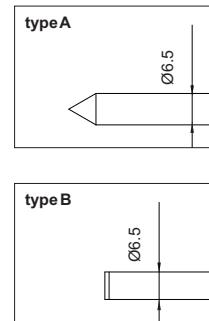
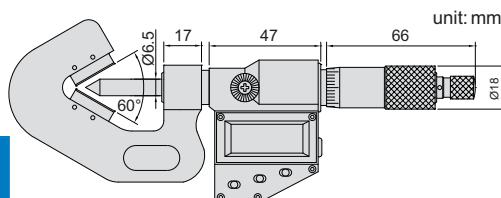
DIGITAL V-ANVIL MICROMETER



- ◆ Measure the outside diameter of cutting tools (such as taps, reamers, end mills) with 3 or 5 flutes
- ◆ 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



334-015-01

Setting standards
(included)

Code	Range	Accuracy	Flutes	Type	Setting standards (included)
334-015-01	1-15mm/0.04-0.6"	$\pm 4\mu\text{m}$	3	A	5mm
334-020-01	5-20mm/0.2-0.8"	$\pm 4\mu\text{m}$	3	B	5mm
334-035-01	20-35mm/0.8-1.4"	$\pm 5\mu\text{m}$	3	B	20mm
334-050-01	35-50mm/1.4-2.0"	$\pm 5\mu\text{m}$	3	B	35mm
334-025-55	5-25mm/0.2-1.0"	$\pm 4\mu\text{m}$	5	B	5mm
334-045-55	25-45mm/1.0-1.8"	$\pm 5\mu\text{m}$	5	B	25mm
334-065-55	45-65mm/1.8-2.6"	$\pm 6\mu\text{m}$	5	B	50mm
334-085-55	65-85mm/2.6-3.4"	$\pm 6\mu\text{m}$	5	B	65mm
334-105-55	85-105mm/3.3-4.2"	$\pm 6\mu\text{m}$	5	B	85mm

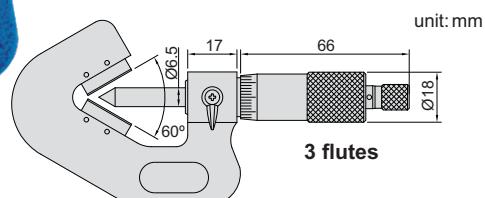
SERIES 334

V-ANVIL MICROMETER

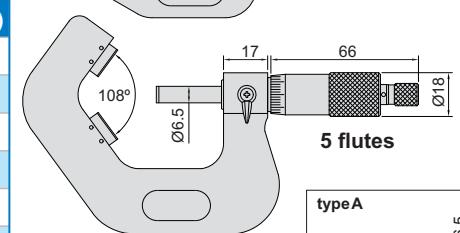
- ◆ Measure the outside diameter of cutting tools (such as taps, reamers, end mills) with 3 or 5 flutes
- ◆ Graduation 0.01mm
- ◆ Ratchet stop
- ◆ Carbide measuring faces
- ◆ Supplied with setting standards



334-006-01



3 flutes



5 flutes

Setting standards (included)

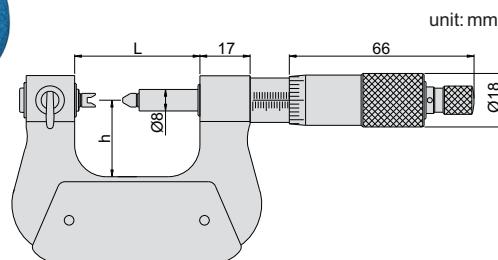
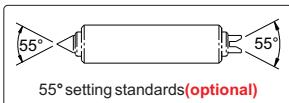
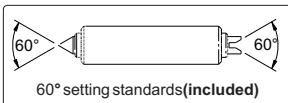
Code	Range	Accuracy	Flutes	Type	Setting standards (included)
334-006-01	1-15mm	4 μm	3	A	5mm
334-008-01	5-20mm	4 μm	3	B	5mm
334-012-01	20-35mm	5 μm	3	B	20mm
334-019-01	35-50mm	5 μm	3	B	35mm
334-024-01	50-65mm	6 μm	3	B	50mm
334-032-01	65-80mm	6 μm	3	B	65mm
334-036-01	80-95mm	7 μm	3	B	80mm
334-025-05	5-25mm	4 μm	5	B	5mm
334-045-05	25-45mm	5 μm	5	B	25mm
334-065-05	45-65mm	6 μm	5	B	50mm
334-085-05	65-85mm	7 μm	5	B	65mm

SERIES 343**SCREW THREAD MICROMETER**

- ◆ Measure pitch diameter of screw threads
- ◆ Graduation 0.01mm
- ◆ Non-rotating spindle
- ◆ Ratchet stop
- ◆ Supplied with 60° setting standards (except 0-25mm)
- ◆ Optional accessory: 55° setting standards, measuring tips

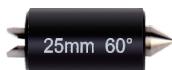


343-002-02

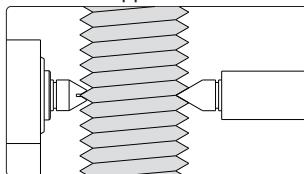


Code	Range	Micrometer head accuracy	Measuring tips accuracy	L	h	Setting standards (included)
343-001-02	0-25mm	4µm	8µm	42	26	-
343-002-02	25-50mm	4µm	8µm	67	38	25mm
343-003-02	50-75mm	5µm	10µm	92	50	50mm
343-004-02	75-100mm	5µm	10µm	118	62	75mm
343-005-02	100-125mm	6µm	15µm	143	70	100mm
343-006-02	125-150mm	6µm	15µm	168	82	125mm
343-007-02	150-175mm	7µm	15µm	192	94.5	150mm
343-008-02	175-200mm	7µm	15µm	217	107	175mm

Setting standards



Application

**SERIES 343****MEASURING TIPS FOR SCREW THREAD MICROMETER**

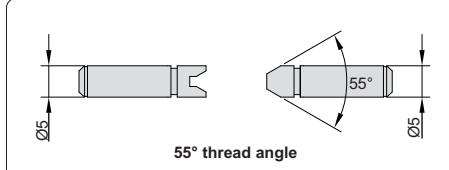
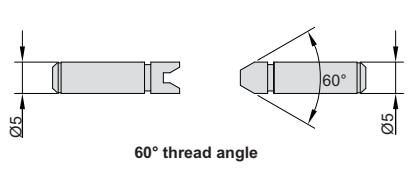
- ◆ For series 343 screw thread micrometer



343-000-01

Whitworth thread (55° thread angle)

Code	Pitch
343-000-11	60-48TPI
343-000-12	48-40TPI
343-000-13	40-32TPI
343-000-14	32-24TPI
343-000-15	24-18TPI
343-000-16	18-14TPI
343-000-17	14-10TPI
343-000-18	10-7TPI
343-000-19	7-4.5TPI
343-000-20	4.5-3.5TPI
343-000-2TS	10 pairs/set, including all above tips



Metric and unified thread (60° thread angle)

Code	Pitch
343-000-01	0.4-0.5mm/64-48TPI
343-000-02	0.6-0.9mm/44-28TPI
343-000-03	1-1.75mm/24-14TPI
343-000-04	2-3mm/13-9TPI
343-000-05	3.5-5mm/8-5TPI
343-000-06	5.5-7mm/4.5-3.5TPI
343-000-TS	6 pairs/set, including all above tips

Install tips





SERIES 333

DIGITAL SCREW THREAD MICROMETER

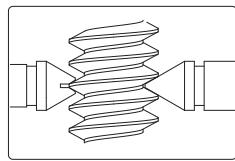
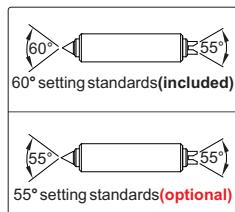
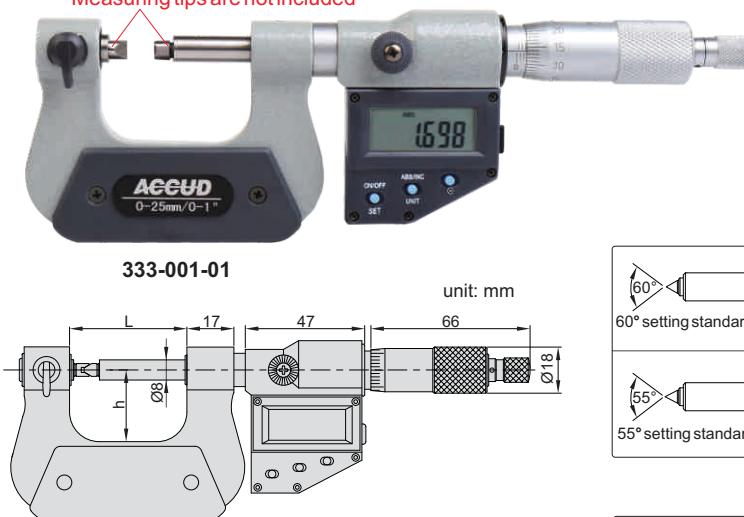


- ◆ Measure pitch diameter of screw threads
- ◆ Resolution 0.001mm/0.00005"
- ◆ Button: on/off, set, mm/inch, ABS/INC, data output
- ◆ Automatic power off
- ◆ Data output
- ◆ Non-rotating spindle
- ◆ Ratchet stop
- ◆ Supplied with 60° setting standards (except 333-001-01)
- ◆ Optional accessory: 55°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

Setting standards



Measuring tips are not included



Accuracy of micrometers with tips

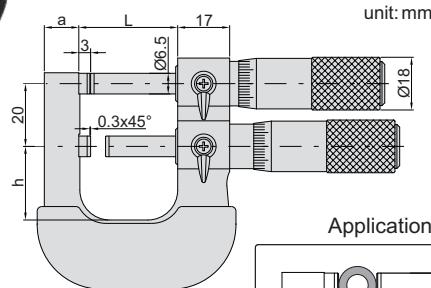
Pitch	Range (mm)					
	0-25	25-50	50-75	75-100	100-125	125-200
0.4-0.5	±0.01	-	-	-	-	-
0.6-0.8	±0.01	±0.013	-	-	-	-
1-1.25	±0.012	±0.015	±0.017	±0.017	-	-
1.5-2.0	±0.014	±0.017	±0.019	±0.019	±0.020	±0.023
2.5-3.5	±0.016	±0.019	±0.021	±0.021	±0.023	±0.025
4.0-7.0	-	±0.021	±0.023	±0.023	±0.025	±0.028

SERIES 335

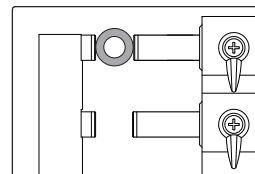
LIMIT MICROMETER

- ◆ Used as Go/No-Go gauge by setting upper and lower limits
- ◆ Graduation 0.002mm
- ◆ Carbide measuring faces
- ◆ Supplied with setting standard (except 335-001-01)

Setting standards(included)



Application



Code	Range	Accuracy	L	a	h	Setting standards(included)
335-001-01	0-25mm	4μm	32	12	24	-
335-002-01	25-50mm	4μm	57	15	32	25mm

SERIES 350

DIGITAL SHEET METAL MICROMETER

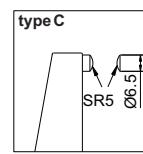
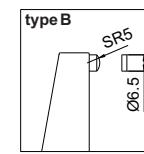
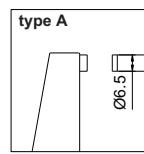
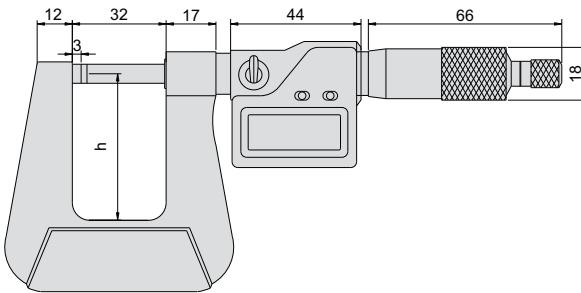


- Deep frame suitable for sheet metal, paper and plastic
- Resolution: 0.001mm/0.00005"
- IP65 protection level
- Button: on/off, mm/inch, set, zero, ABS/INC, date output
- Automatic power off
- Data output
- Carbide measuring faces, ratchet stop



350-001-11

unit: mm



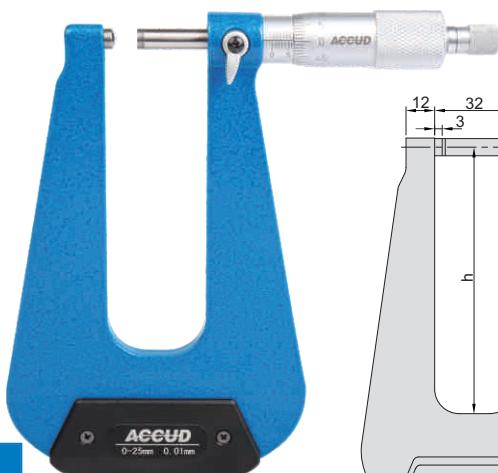
Code	Range	Accuracy	Type	h
350-001-11	0-25mm/0-1"	±3µm	A	50
350-001-12	0-25mm/0-1"	±5µm	A	100
350-001-13	0-25mm/0-1"	±7µm	A	150
350-001-21	0-25mm/0-1"	±3µm	B	50
350-001-22	0-25mm/0-1"	±5µm	B	100
350-001-23	0-25mm/0-1"	±7µm	B	150
350-001-31	0-25mm/0-1"	±3µm	C	50
350-001-32	0-25mm/0-1"	±5µm	C	100
350-001-33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

SERIES 336

SHEET METAL MICROMETER

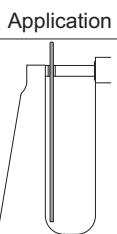
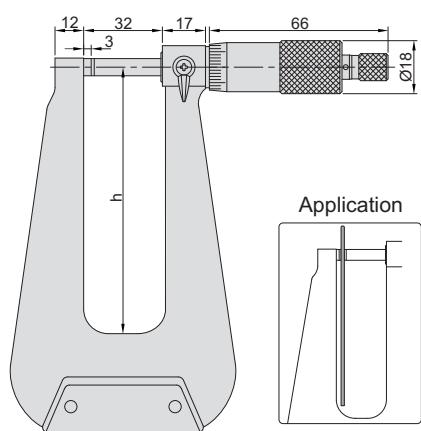
MICROMETER

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

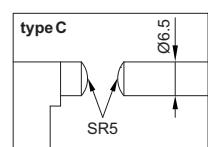
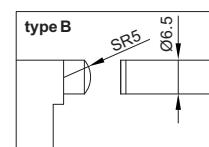
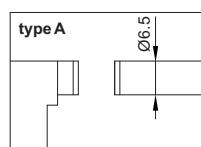


336-001-01

unit: mm



Code	Range	Accuracy	Type	h
336-001-11	0-25mm	4µm	A	50
336-001-21	0-25mm	4µm	B	50
336-001-31	0-25mm	4µm	C	50
336-001-01	0-25mm	7µm	B	100
336-001-02	0-25mm	7µm	A	155
336-001-03	0-25mm	7µm	B	155
336-001-04	0-25mm	7µm	C	155
336-001-05	0-25mm	10µm	B	310



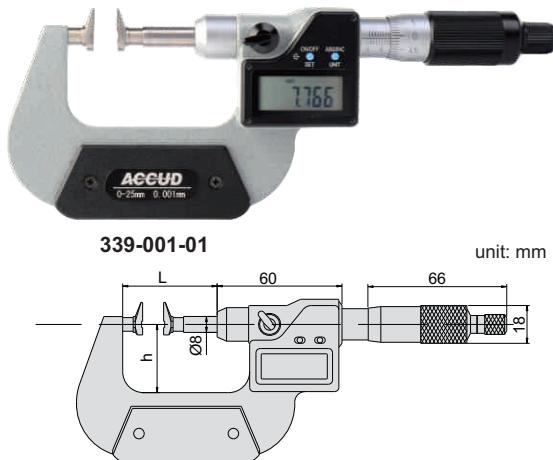


SERIES 339

DIGITAL JAW TYPE MICROMETER



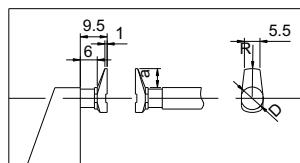
- ◆ Resolution: 0.001mm/0.00005"
- ◆ Buttons: on/off, set, mm/inch, ABS/INC data output
- ◆ Automatic power off
- ◆ Data output
- ◆ Non-rotating spindle
- ◆ Supplied with setting standards (except 339-001-01)



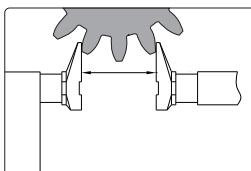
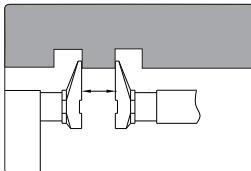
339-001-01

unit: mm

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

SERIES 330

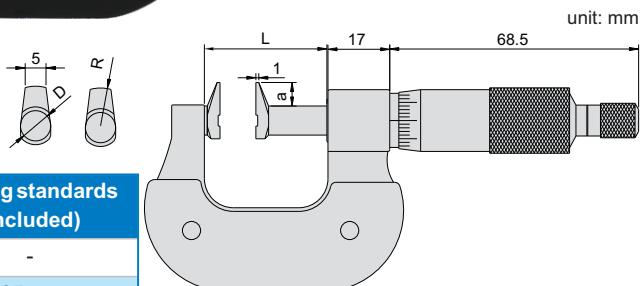
JAW TYPE MICROMETER

- ◆ Graduation: 0.01mm
- ◆ Non-rotating spindle, painted frame,
- ◆ Ratchet stop
- ◆ Supplied with setting standards (except 330-001-01)

Setting standards(included)

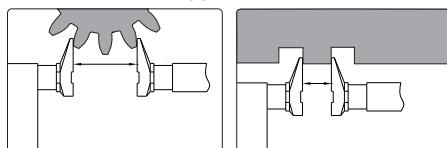


330-001-01



Code	Range	Accuracy	L	a	R	D	Setting standards (included)
330-001-01	0-25mm	4μm	34	6	10	8	-
330-002-01	25-50mm	4μm	59	6	10	8	25mm
330-003-01	50-75mm	5μm	85	6	10	8	50mm
330-004-01	75-100mm	5μm	110	6	10	8	75mm
330-005-01	100-125mm	6μm	138	9	15	12	100mm
330-006-01	125-150mm	6μm	163	9	15	12	125mm
330-007-01	150-175mm	7μm	188	9	15	12	150mm
330-008-01	175-200mm	7μm	214	9	15	12	175mm

Application

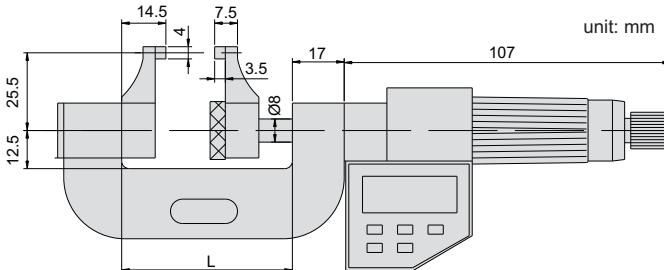


SERIES 338

DIGITAL CALIPER TYPE MICROMETER



- ◆ 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)



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)



SERIES 337

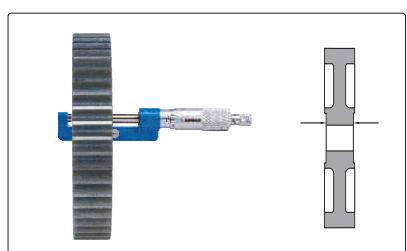
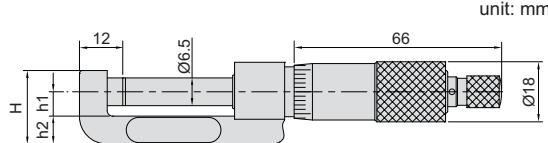
HUB MICROMETER

MICROMETER

- ◆ Measure hub thickness and shoulder inside a bore
- ◆ Graduation 0.01mm
- ◆ Ratchet stop
- ◆ Carbide measuring faces
- ◆ Supplied with setting standards (except 337-001-01)



337-002-01



Code	Range	Accuracy	h1	h2	H	Setting standards(included)
337-001-01	0-25mm	4µm	6	9	18.7	-
337-002-01	25-50mm	4µm	6.5	11	21.2	25mm
337-003-01	50-75mm	5µm	6.5	11	21.2	50mm
337-004-01	75-100mm	5µm	6.5	11	21.2	75mm

Setting standards(included)





SERIES 301

NON ROTATING SPINDLE UNIVERSAL MICROMETER

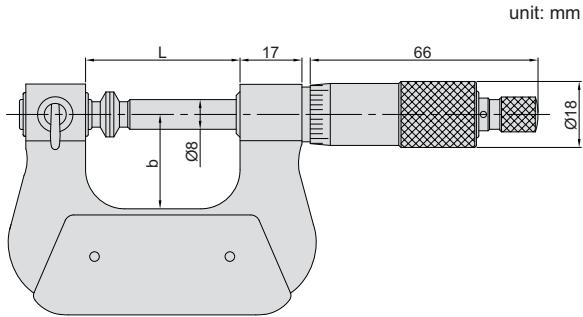
- ◆ Graduation 0.01mm
- ◆ Non-rotating spindle
- ◆ Ratchet stop
- ◆ Supplied with 7 pairs of anvil/spindle tips
- ◆ Setting standards are included (except 0-25mm)
- ◆ Optional accessory: 55° anvil/spindle tip



301-001-01

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)
301-001-01	0-25mm	4µm	42	26	-
301-002-01	25-50mm	4µm	67	38	25mm
301-003-01	50-75mm	5µm	92	50	50mm
301-004-01	75-100mm	5µm	118	62	75mm
301-005-01	100-125mm	6µm	143	70	100mm
301-006-01	125-150mm	6µm	168	82	125mm
301-007-01	150-175mm	7µm	192	95	150mm
301-008-01	175-200mm	7µm	217	107	175mm

Setting standards(included)



SERIES 302

DIGITAL UNIVERSAL MICROMETER



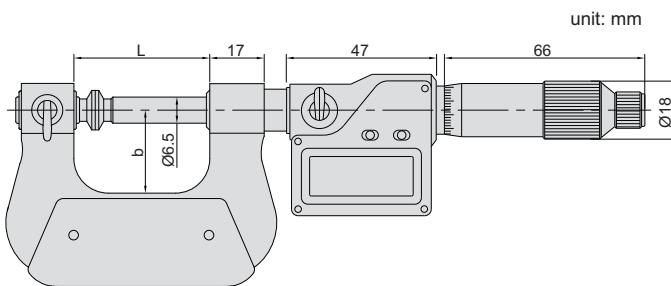
- ♦ Resolution 0.001mm/0.00005"
- ♦ IP54 protection level
- ♦ Button: on/off, set, mm/inch, ABS/INC, data output
- ♦ Automatic power off
- ♦ Data output
- ♦ Ratchet stop
- ♦ Supplied with 7 pairs of anvil/spindle tips
- ♦ Setting standards are included (except 0-25mm/0-1")
- ♦ Optional accessory: 55° 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)



MICROMETER



SERIES 345

GEAR TOOTH MICROMETER

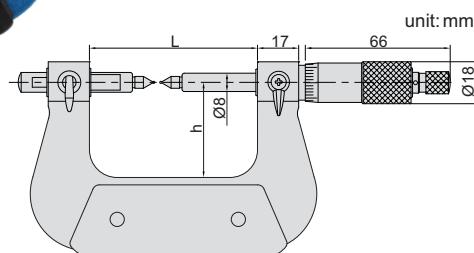
- ◆ Measure over-pin diameter of gears
- ◆ Graduation 0.01mm
- ◆ Ratchet stop
- ◆ Supplied with setting standards (except 345-001-01)
- ◆ Optional accessory: ball tips

Setting standards (included)

25mm

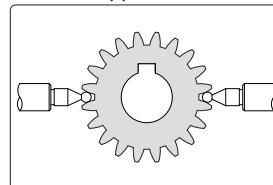


345-001-01



Code	Range	Accuracy	L	h	Setting standards(included)
345-001-01	0-25mm	4μm	67	38	-
345-002-01	25-50mm	4μm	92.4	50	25mm
345-003-01	50-75mm	5μm	117.6	62	50mm
345-004-01	75-100mm	5μm	143	70	75mm
345-005-01	100-125mm	6μm	168.2	82	100mm
345-006-01	125-150mm	6μm	192	94.5	125mm
345-007-01	150-175mm	7μm	217	107	150mm

Application



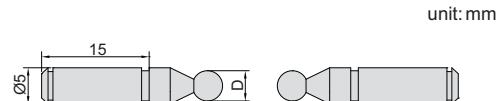
SERIES 345

BALL TIPS FOR GEAR TOOTH MICROMETER

- ◆ Supplied in pair



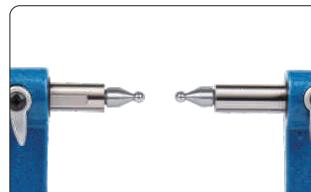
345-000-01



Code	Ball dia.(D)
345-000-01	SØ1mm
345-000-02	SØ1.5mm
345-000-03	SØ2.0mm
345-000-04	SØ2.5mm
345-000-05	SØ3.0mm
345-000-06	SØ3.5mm

Code	Ball dia.(D)
345-000-07	SØ4.0mm
345-000-08	SØ4.5mm
345-000-09	SØ5.0mm
345-000-10	SØ6.0mm
345-000-TS	10 pairs/set, including all above tips

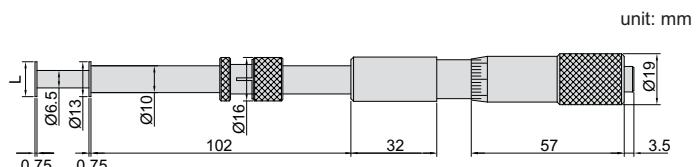
Install points



SERIES 344**GROOVE MICROMETER**

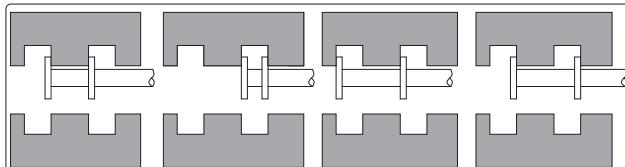
344-004-01

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

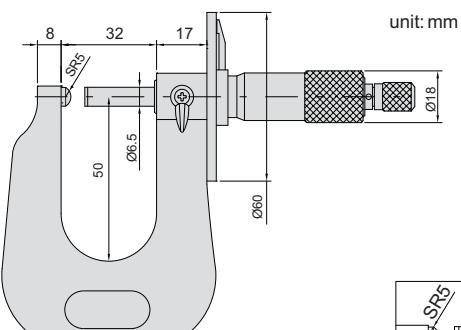


Code	Range(outside)	Range(inside)	Accuracy	L
344-001-01	0-25mm	1.6-26.5mm	10µm	13
344-002-01	25-50mm	26.5-51.5mm	10µm	13
344-003-01	50-75mm	51.5-76.5mm	10µm	13
344-004-01	75-100mm	76.5-101.5mm	10µm	13
344-001-02	0-25mm	1.6-26.5mm	10µm	6.5

Application

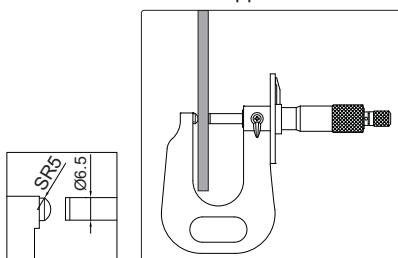
**347****SHEET METAL MICROMETER**

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



Code	Range	Accuracy
347-001-01	0-25mm	4µm

Application





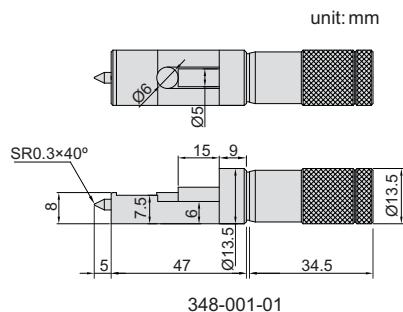
SERIES 348

CAN SEAM MICROMETER

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



348-001-01



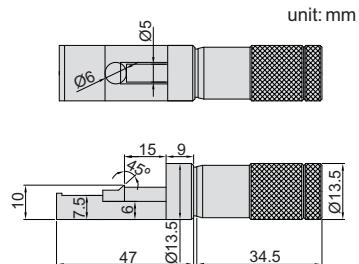
Application

for steel cans

348-001-01



348-001-02



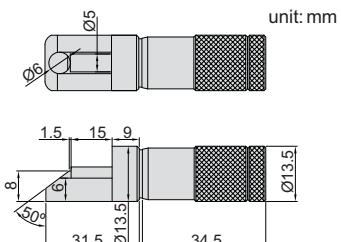
Application

for aluminum cans

348-001-02



348-001-03



Application

for sprayer cans

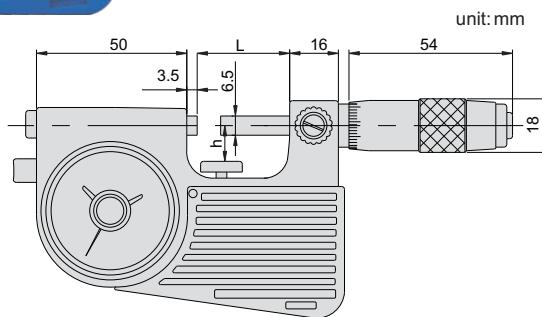
348-001-03

Code	Range	Accuracy
348-001-01	0-13mm	4µm
348-001-02	0-13mm	4µm
348-001-03	0-13mm	4µm

SERIES 349**INDICATING MICROMETER**

349-001-01

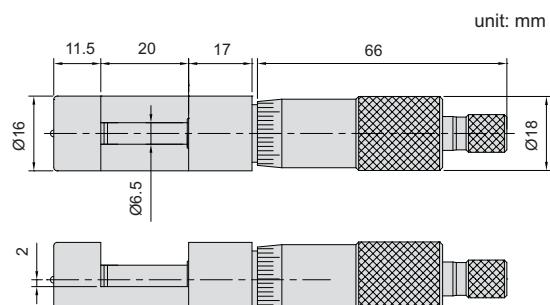
- ◆ Micrometer head graduation: 0.01mm
- ◆ Dial indicator: graduation 0.001mm, accuracy 0.001mm
- ◆ Carbide measuring faces
- ◆ Supplied with setting standards (except 0-25mm)



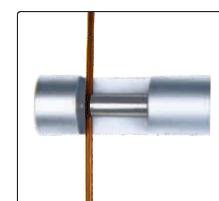
Setting standards(included)

**370****WIRE MICROMETER**

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



Code	Range	Accuracy
370-010-01	0-10mm	4µm



MICROMETER



SERIES 376

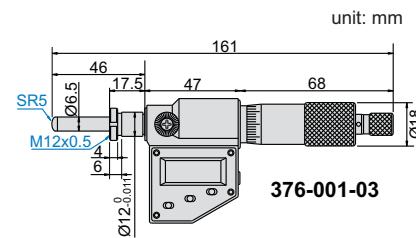
DIGITAL MICROMETER HEAD



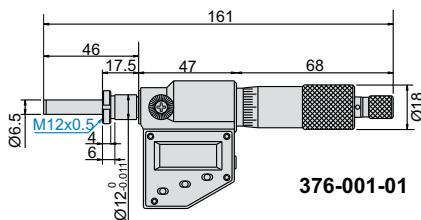
- ♦ Resolution 0.001mm/0.00005"
- ♦ IP54 protection level
- ♦ Button: on/off, set, mm/inch, ABS/INC, data output
- ♦ Automatic power off
- ♦ Data output
- ♦ Ratchet stop



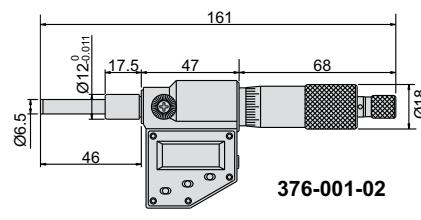
376-001-01



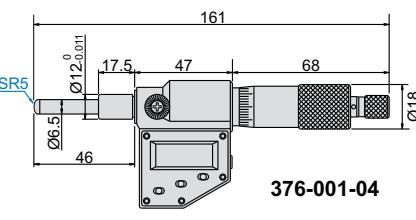
376-001-03



376-001-01



376-001-02



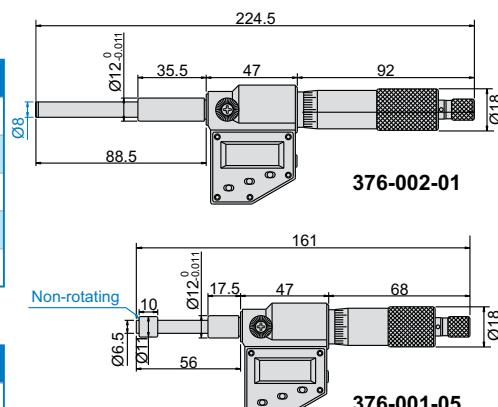
376-001-04

Rotating spindle

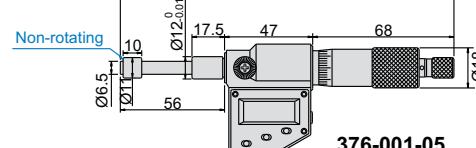
Code	Range	Accuracy	Stem	Spindle tip
376-001-01	0-25mm/0-1"	±2µm	with clamp nut	flat (carbide)
376-001-02	0-25mm/0-1"	±2µm	plain	flat (carbide)
376-001-03	0-25mm/0-1"	±2µm	with clamp nut	spherical(SR5)
376-001-04	0-25mm/0-1"	±2µm	plain	spherical(SR5)
376-002-01	0-50mm/0-2"	±4µm	plain	flat (carbide)

Non-rotating spindle

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



376-002-01



376-001-05

SERIES 376

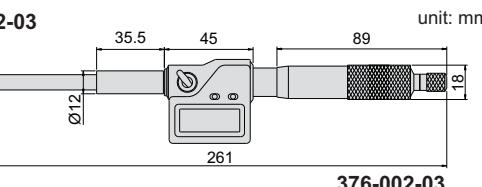
DIGITAL MICROMETER HEAD



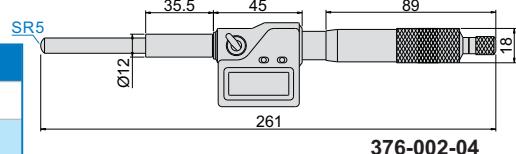
- ♦ Resolution 0.001mm/0.00005"
- ♦ IP65 protection level
- ♦ Button: on/off, set, mm/inch, ABS/INC, data output
- ♦ Automatic power off
- ♦ Data output
- ♦ Ratchet stop



376-002-03



376-002-03



376-002-04

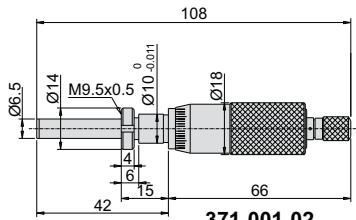
Code	Range	Accuracy	Stem	Spindle tip
376-002-03	0-50mm/0-2"	4µm	plain	flat (carbide)
376-002-04	0-50mm/0-2"	4µm	plain	spherical(SR5)

**SERIES 371****MICROMETER HEAD**

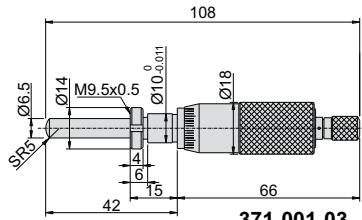
- ◆ Graduation: 0.01mm
- ◆ Carbide measuring faces
- ◆ Ratchet stop



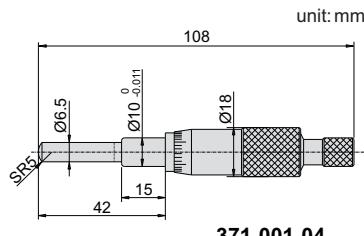
371-001-02



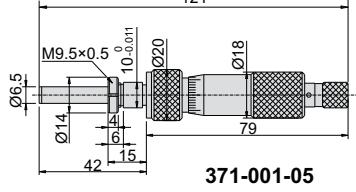
371-001-02



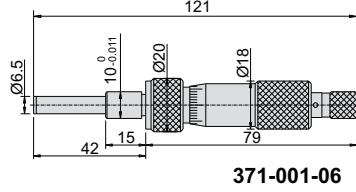
371-001-03



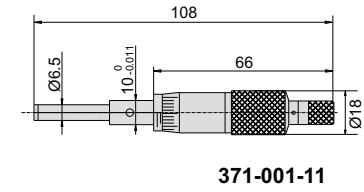
371-001-04



371-001-05



371-001-06

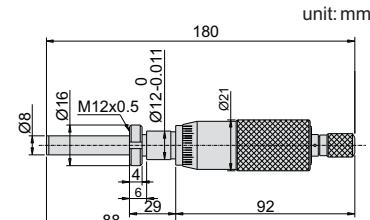


371-001-11

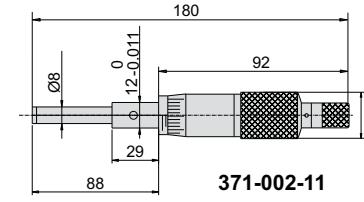


371-002-11

Code	Range	Accuracy	Stem	Spindle tip	Remark
371-001-02	0-25mm	0.003mm	with clamp nut	flat (carbide)	
371-001-03	0-25mm	0.003mm	with clamp nut	spherical (SR5)	
371-001-04	0-25mm	0.003mm	plain	spherical (SR5)	
371-001-05	0-25mm	0.003mm	with clamp nut	flat (carbide)	with spindle lock
371-001-06	0-25mm	0.003mm	plain	flat (carbide)	with spindle lock
371-001-11	0-25mm	0.003mm	plain	flat (carbide)	
371-002-02	0-50mm	5µm	with clamp nut	flat (carbide)	
371-002-11	0-50mm	5µm	plain	flat (carbide)	



371-002-02



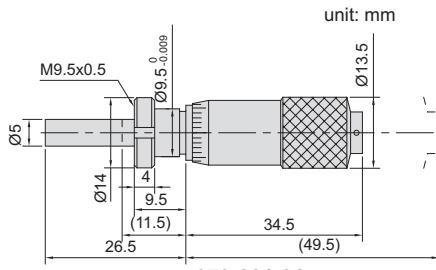
371-002-11

SERIES 373**MICROMETER HEAD**

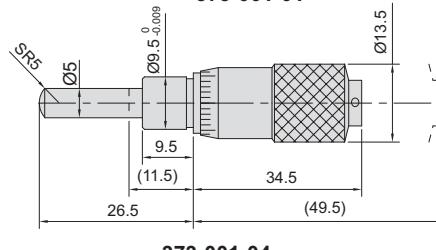
- ◆ Graduation 0.01mm



373-001-01



373-001-01



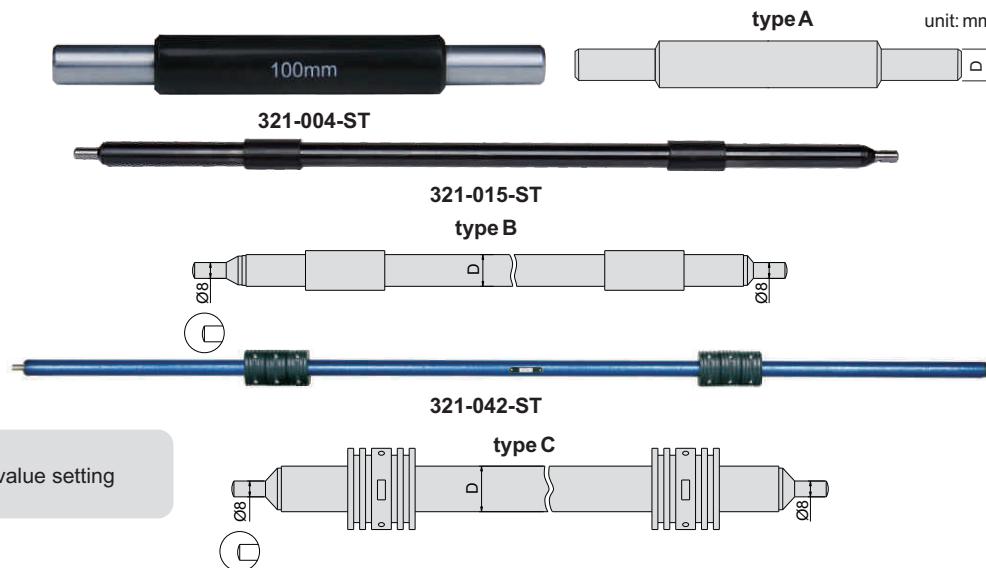
373-001-04

Code	Range	Accuracy	Stem	Spindle tip
373-001-01	0-15mm	3µm	with clamp nut	flat (carbide)
373-001-02	0-15mm	3µm	plain	flat (carbide)
373-001-03	0-15mm	3µm	with clamp nut	spherical (SR5)
373-001-04	0-15mm	3µm	plain	spherical (SR5)



SERIES 321

MICROMETER SETTING STANDARD



Code	Length	Accuracy	D	Type
321-001-ST	25mm	$\pm 1.5\mu m$	$\varnothing 7mm$	A
321-002-ST	50mm	$\pm 2\mu m$	$\varnothing 7mm$	A
321-003-ST	75mm	$\pm 2.5\mu m$	$\varnothing 7mm$	A
321-004-ST	100mm	$\pm 3\mu m$	$\varnothing 8mm$	A
321-005-ST	125mm	$\pm 3.5\mu m$	$\varnothing 8mm$	A
321-006-ST	150mm	$\pm 4\mu m$	$\varnothing 8mm$	A
321-007-ST	175mm	$\pm 4.5\mu m$	$\varnothing 8mm$	A
321-008-ST	200mm	$\pm 5\mu m$	$\varnothing 8mm$	A
321-009-ST	225mm	$\pm 5.5\mu m$	$\varnothing 8mm$	A
321-010-ST	250mm	$\pm 6\mu m$	$\varnothing 8mm$	A
321-011-ST	275mm	$\pm 6.5\mu m$	$\varnothing 8mm$	A
321-012-ST	300mm	$\pm 7\mu m$	$\varnothing 16mm$	B
321-013-ST	325mm	$\pm 7.5\mu m$	$\varnothing 16mm$	B
321-014-ST	350mm	$\pm 8\mu m$	$\varnothing 16mm$	B
321-015-ST	375mm	$\pm 8.5\mu m$	$\varnothing 16mm$	B
321-016-ST	400mm	$\pm 9\mu m$	$\varnothing 16mm$	B
321-017-ST	425mm	$\pm 9.5\mu m$	$\varnothing 16mm$	B
321-018-ST	450mm	$\pm 10\mu m$	$\varnothing 16mm$	B
321-019-ST	475mm	$\pm 10.5\mu m$	$\varnothing 16mm$	B
321-020-ST	500mm	$\pm 11\mu m$	$\varnothing 16mm$	B

Code	Length	Accuracy	D	Type
321-021-ST	525mm	$\pm 11.5\mu m$	$\varnothing 16mm$	B
321-023-ST	575mm	$\pm 12.5\mu m$	$\varnothing 16mm$	B
321-025-ST	625mm	$\pm 13.5\mu m$	$\varnothing 16mm$	B
321-027-ST	675mm	$\pm 14.5\mu m$	$\varnothing 16mm$	B
321-029-ST	725mm	$\pm 15.5\mu m$	$\varnothing 16mm$	B
321-031-ST	775mm	$\pm 16.5\mu m$	$\varnothing 16mm$	B
321-033-ST	825mm	$\pm 17.5\mu m$	$\varnothing 16mm$	B
321-035-ST	875mm	$\pm 18.5\mu m$	$\varnothing 16mm$	B
321-037-ST	925mm	$\pm 19.5\mu m$	$\varnothing 16mm$	B
321-039-ST	975mm	$\pm 20.5\mu m$	$\varnothing 16mm$	B
321-042-ST	1050mm	$\pm 22\mu m$	$\varnothing 23mm$	C
321-046-ST	1150mm	$\pm 24\mu m$	$\varnothing 23mm$	C
321-050-ST	1250mm	$\pm 26\mu m$	$\varnothing 23mm$	C
321-054-ST	1350mm	$\pm 28\mu m$	$\varnothing 23mm$	C
321-058-ST	1450mm	$\pm 30\mu m$	$\varnothing 23mm$	C
321-062-ST	1550mm	$\pm 32\mu m$	$\varnothing 23mm$	C
321-066-ST	1650mm	$\pm 34\mu m$	$\varnothing 23mm$	C
321-070-ST	1750mm	$\pm 36\mu m$	$\varnothing 23mm$	C
321-074-ST	1850mm	$\pm 38\mu m$	$\varnothing 23mm$	C
321-078-ST	1950mm	$\pm 40\mu m$	$\varnothing 23mm$	C

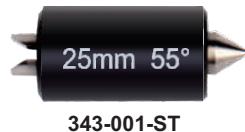
SERIES 343

55° STANDARD FOR SCREW THREAD MICROMETER

◆ For screw thread micrometer (series 343)

Code	Length	Accuracy
343-001-ST	25mm	$\pm 3\mu m$
343-002-ST	50mm	$\pm 3.5\mu m$
343-003-ST	75mm	$\pm 4\mu m$
343-004-ST	100mm	$\pm 4.5\mu m$

Code	Length	Accuracy
343-005-ST	125mm	$\pm 5\mu m$
343-006-ST	150mm	$\pm 5.5\mu m$
343-007-ST	175mm	$\pm 6\mu m$
343-008-ST	200mm	$\pm 6\mu m$



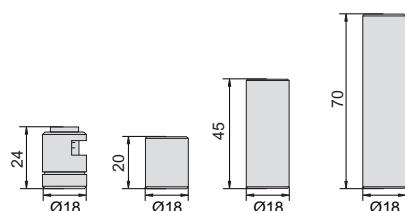
343-001-ST



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



unit: mm



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

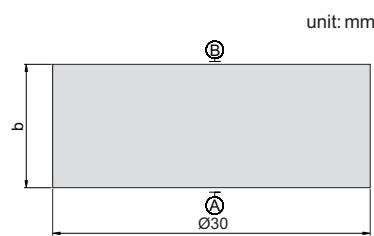
SERIES 551

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



unit: mm

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

Application





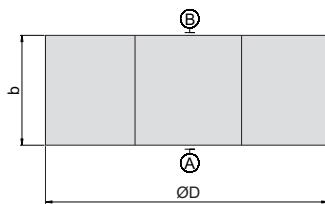
SERIES 551

OPTICAL PARALLELS



551-001-01

unit: mm



- ◆ Check the flatness and parallelism of measuring faces of micrometer
- ◆ Flatness of A and B: 0.03μm
- ◆ Parallelism between A and B: 0.6μm

Application



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

SERIES 553

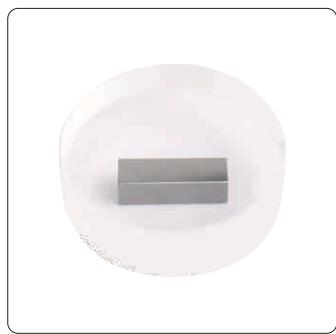
OPTICAL FLATS

- ◆ Check the flatness of measuring faces



553-045-01

unit: mm



Code	Flatness	Parallels included(h)	ØD
553-045-01	0.1μm	15mm	45mm
553-060-01	0.1μm	15mm	60mm

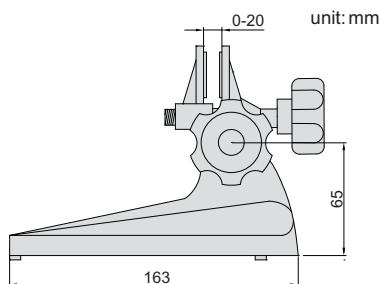
381**MICROMETER STAND**

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

Application



micrometer is optional

**Code**

381-000-00

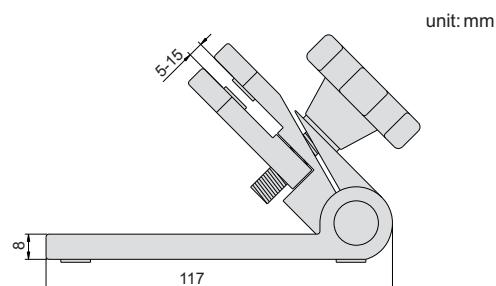
383**MICROMETER STAND**

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

Application

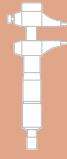


micrometer is optional

**Code**

383-000-00

MICROMETER

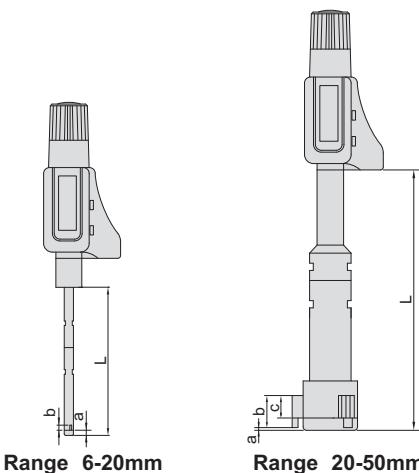


SERIES 361

DIGITAL THREE POINTS INSIDE MICROMETER

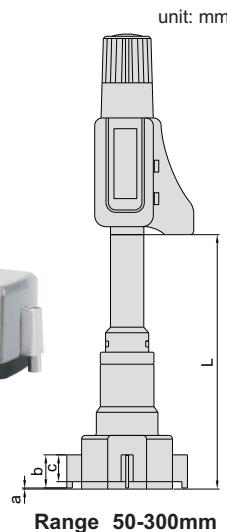


- ◆ Resolution: 0.001mm/0.00005"
- ◆ IP54 protection level
- ◆ Button: on/off, set, mm/inch, ABS/INC, data output
- ◆ Automatic power off
- ◆ Data output
- ◆ Ratchet stop
- ◆ Carbide measuring faces (over 12mm series)
- ◆ Extension rod are included
- ◆ Setting rings are included (Range<100mm)



Range 6-20mm

Range 20-50mm



Range 50-300mm

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	/	54.5
361-002-01	8-10mm/0.31-0.4"	4µm	Ø8mm(included)	100mm	1.5	2.5	/	63
361-003-01	10-12mm/0.4-0.47"	4µm	Ø10mm(included)	100mm	1.5	2.5	/	63
361-004-01	12-16mm/0.47-0.63"	4µm	Ø16mm(included)	150mm	0.5	6	4.5	80
361-005-01	16-20mm/0.63-0.8"	4µm	Ø16mm(included)	150mm	0.5	6	4.5	80
361-006-01	20-25mm/0.8-1"	4µm	Ø25mm(included)	150mm	0.5	8	6	105
361-007-01	25-30mm/1-1.2"	4µm	Ø25mm(included)	150mm	0.5	8	6	105
361-008-01	30-40mm/1.2-1.6"	4µm	Ø40mm(included)	150mm	0.5	14	12	110
361-009-01	40-50mm/1.6-2"	5µm	Ø40mm(included)	150mm	0.5	14	12	110
361-010-01	50-63mm/2-2.5"	5µm	Ø62mm(included)	150mm	0.5	17.5	14.5	114
361-011-01	62-75mm/2.5-3"	5µm	Ø62mm(included)	150mm	0.5	17.5	14.5	114
361-012-01	75-88mm/3-3.5"	5µm	Ø87mm(included)	150mm	0.5	17.5	14.5	114
361-013-01	87-100mm/3.5-4"	5µm	Ø87mm(included)	150mm	0.5	17.5	14.5	114
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

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

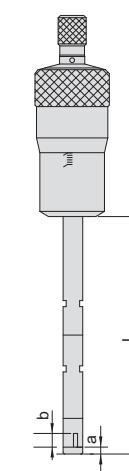
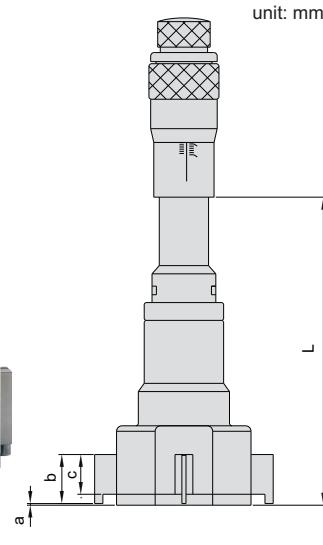
extension rod(included)

SERIES 362

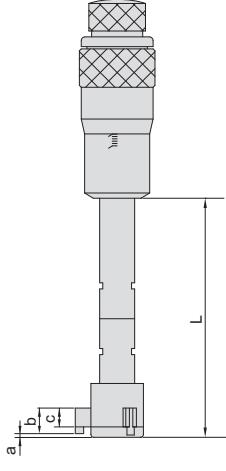
THREE POINTS INSIDE MICROMETER

ACCUD

- ◆ 6-12mm graduation: 0.001mm
Steel measuring faces
- 12-300mm graduation: 0.005mm
Carbide measuring faces
- ◆ Ratchet stop
- ◆ Extension rod are included
- ◆ Setting rings are included (Range<100mm)



Range 6-12mm



Range 12-50mm

362-009-01

362-014-01

Range 50-300mm

Code	Range	Accuracy	Setting ring	Extension rod	a	b	c	L
362-001-01	6-8mm	4µm	Ø6mm(included)	100mm	1.5	2.5	/	54.5
362-002-01	8-10mm	4µm	Ø8mm(included)	100mm	1.5	2.5	/	54.5
362-003-01	10-12mm	4µm	Ø10mm(included)	100mm	1.5	2.5	/	54.5
362-004-01	12-16mm	4µm	Ø16mm(included)	150mm	0.5	6	4.5	80
362-005-01	16-20mm	4µm	Ø16mm(included)	150mm	0.5	6	4.5	80
362-006-01	20-25mm	4µm	Ø25mm(included)	150mm	0.5	8	6	90
362-007-01	25-30mm	4µm	Ø25mm(included)	150mm	0.5	8	6	90
362-008-01	30-40mm	4µm	Ø40mm(included)	150mm	0.5	14	12	97
362-009-01	40-50mm	5µm	Ø40mm(included)	150mm	0.5	14	12	97
362-010-01	50-63mm	5µm	Ø62mm(included)	150mm	0.5	17.5	14.5	114
362-011-01	62-75mm	5µm	Ø62mm(included)	150mm	0.5	17.5	14.5	114
362-012-01	75-88mm	5µm	Ø87mm(included)	150mm	0.5	17.5	14.5	114
362-013-01	87-100mm	5µm	Ø87mm(included)	150mm	0.5	17.5	14.5	114
362-014-01	100-125mm	6µm	optional	150mm	0.9	29	25	140
362-015-01	125-150mm	6µm	optional	150mm	0.9	29	25	140
362-016-01	150-175mm	7µm	optional	150mm	0.9	29	25	140
362-017-01	175-200mm	7µm	optional	150mm	0.9	29	25	140
362-018-01	200-225mm	8µm	optional	150mm	0.9	29	25	140
362-019-01	225-250mm	8µm	optional	150mm	0.9	29	25	140
362-020-01	250-275mm	9µm	optional	150mm	0.9	29	25	140
362-024-01	275-300mm	9µm	optional	150mm	0.9	29	25	140

setting ring



extension rod(included)



INSIDE/OUTSIDE
MEASUREMENT



SERIES 361

DIGITAL TWO POINTS INSIDE MICROMETER

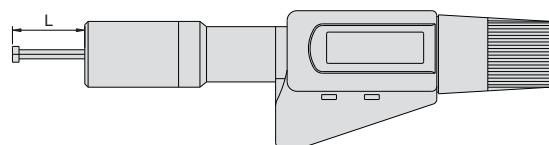


- ◆ Resolution: 0.001mm/0.00005"
- ◆ IP54 protection level
- ◆ Button: on/off, set, mm/inch, ABS/INC, data output
- ◆ Automatic power off
- ◆ Data output
- ◆ Ratchet stop
- ◆ Carbide measuring faces
- ◆ Setting rings are included



361-000-60

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 362

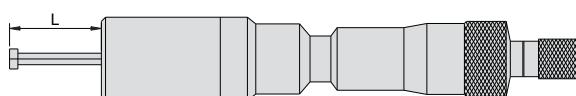
TWO POINTS INSIDE MICROMETER

- ◆ Graduation: 0.001mm
- ◆ Carbide measuring faces
- ◆ Ratchet stop
- ◆ Setting rings are included



362-000-25

unit: mm



Code	Range	Accuracy	Setting ring	L
362-000-25	2-2.5mm	6µm	Ø2.5mm	12
362-000-30	2.5-3mm	6µm	Ø2.5mm	12
362-000-40	3-4mm	6µm	Ø4mm	22
362-000-50	4-5mm	6µm	Ø5mm	22
362-000-60	5-6mm	6µm	Ø6mm	22

setting ring(included)



SERIES 361**DIGITAL POINTS INSIDE MICROMETER SET**

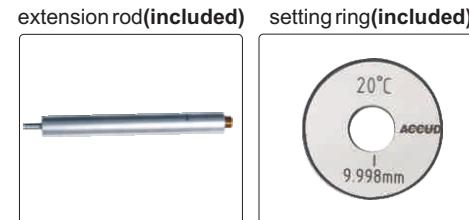
361-305-03

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

**SERIES 362****POINTS INSIDE MICROMETER SET**

362-913-05

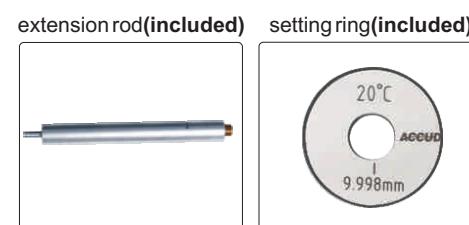
Two points inside micrometer set

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

INSIDE/OUTSIDE
MEASUREMENT

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





SERIES 363

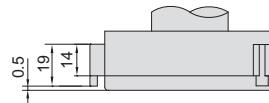
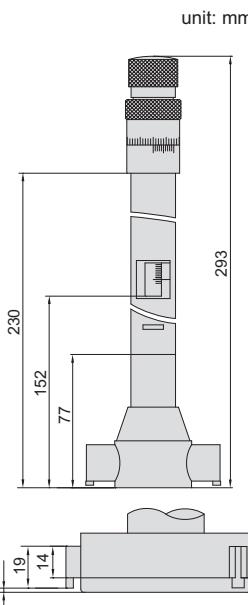
WIDE RANGE THREE POINTS INTERNAL MICROMETER

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

setting ring



363-003-01



Code	Range	Accuracy	Setting ring
363-003-01	50-70mm	5µm	Ø50mm(included)
363-004-01	70-100mm	5µm	Ø70mm(included)
363-006-01	100-150mm	6µm	Ø100mm(included)
363-010-01	150-250mm	8µm	Ø150mm(included)
363-012-01	200-300mm	9µm	Ø200mm(optional)

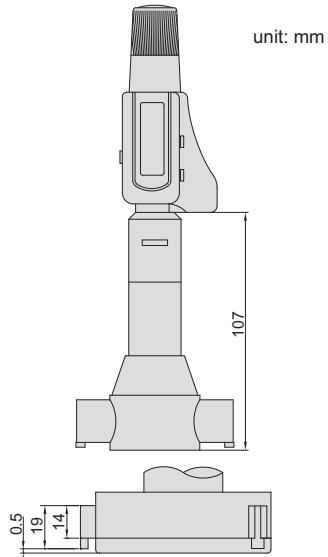
SERIES 364

DIGITAL WIDE RANGE THREE POINTS INTERNAL MICROMETER

- ◆ 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)



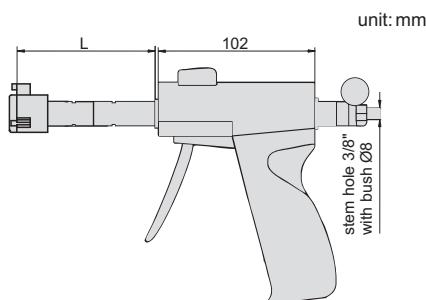
364-003-01



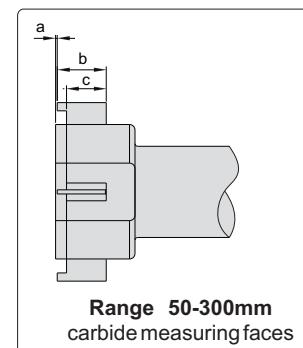
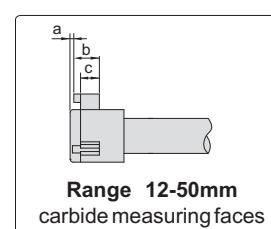
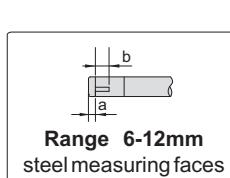
Code	Range	Accuracy	Setting ring	Extension rod
364-003-01	50-70mm/1.97-2.76"	5µm	Ø50mm(included)	150mm
364-004-01	70-100mm/2.76-3.94"	5µm	Ø70mm(included)	150mm
364-006-01	100-150mm/3.94-5.91"	6µm	Ø100mm(included)	150mm
364-010-01	150-250mm/5.91-9.84"	8µm	Ø150mm(included)	150mm
364-012-01	200-300mm/7.87-11.81"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

SERIES 365

PISTOL GRIP THREE POINTS BORE GAUGE



365-007-01



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

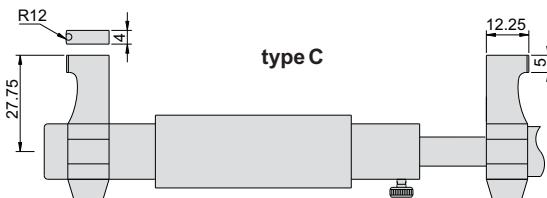
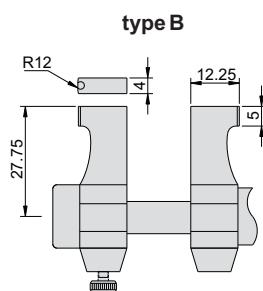
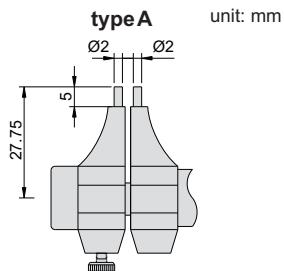
INSIDE/OUTSIDE
MEASUREMENT



SERIES 351

INSIDE MICROMETER

- ◆ Graduation: 0.01mm
- ◆ Carbide measuring faces
- ◆ Ratchet stop



Code	Range	Accuracy	Type	Setting ring
351-001-01	5-30mm	5µm	A	5mm
351-002-01	25-50mm	6µm	B	25mm
351-003-01	50-75mm	7µm	C	optional
351-004-01	75-100mm	8µm	C	optional
351-005-01	100-125mm	9µm	C	optional
351-006-01	125-150mm	9µm	C	optional
351-007-01	150-175mm	10µm	C	optional
351-008-01	175-200mm	10µm	C	optional
351-009-01	200-225mm	11µm	C	optional
351-010-01	225-250mm	11µm	C	optional
351-011-01	250-275mm	12µm	C	optional
351-012-01	275-300mm	14µm	C	optional

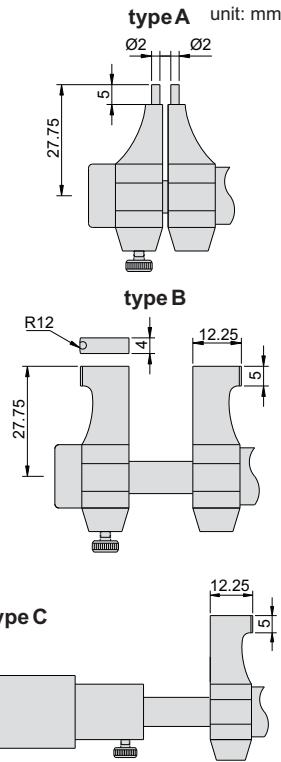
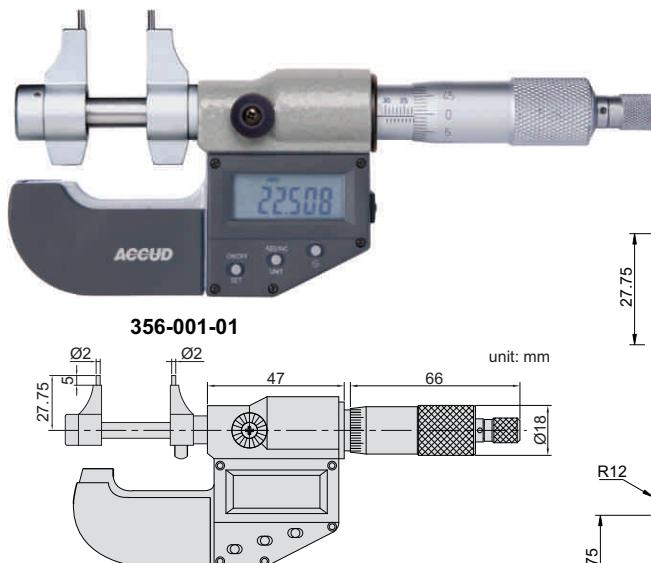


SERIES 356

DIGITAL INSIDE MICROMETER



- ◆ 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

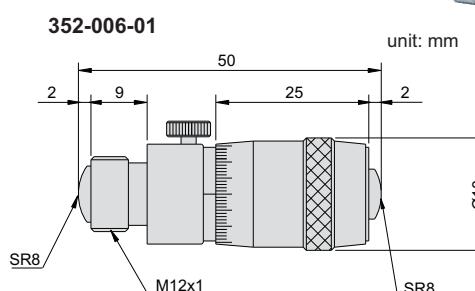


Code	Range	Accuracy	Type	Setting ring
356-001-01	5-30mm/0.2-1.2"	±5µm	A	5mm
356-002-01	25-50mm/1-2"	±6µm	B	25mm
356-003-01	50-75mm/2-3"	±7µm	C	optional
356-004-01	75-100mm/3-4"	±8µm	C	optional
356-005-01	100-125mm/4-5"	±9µm	C	optional
356-006-01	125-150mm/5-6"	±9µm	C	optional
356-007-01	150-175mm/6-7"	±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: $(3+nL/50)\mu\text{m}$, n is number of rods, L is max. measuring length in mm
- ◆ Supplied with setting standards
- ◆ Carbide measuring faces



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 359

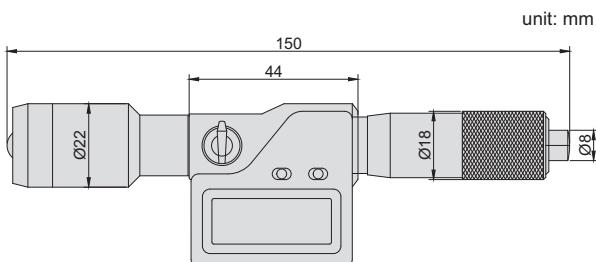
DIGITAL TUBULAR INSIDE MICROMETERS



- ♦ Micrometer head: 150-175mm
- ♦ Graduation: 0.001mm/0.00005"
- ♦ Accuracy: $(3+n+L/50)\mu\text{m}$
 $n = \text{number of rods}$
 $L = \text{maximum measuring length (mm)}$
- ♦ 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



unit: mm

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



SERIES 353

TUBULAR INSIDE MICROMETER

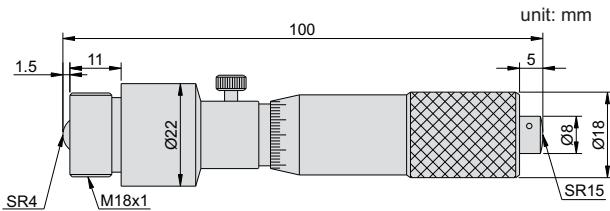
- ♦ Graduation 0.01mm
- ♦ Accuracy: $(3+n+L/50)\mu\text{m}$
 $n = \text{number of rods}, L = \text{maximum measuring length in mm}$
- ♦ Travel of micrometer head: 25mm
- ♦ Supplied with setting standards
- ♦ Carbide measuring faces

Set zero



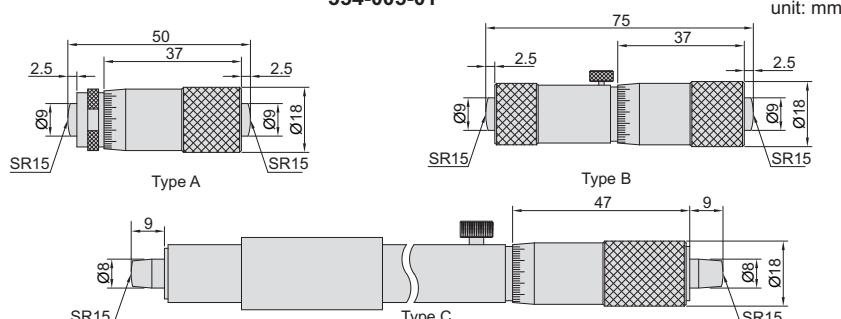
353-020-01

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)



SERIES 354**TUBULAR INSIDE MICROMETER**

354-005-01



- ◆ Graduation 0.01mm
- ◆ Carbide measuring faces

Code	Range	Type	Accuracy
354-003-01	50-75mm	A	5µm
354-004-01	75-100mm	B	5µm
354-005-01	100-125mm	C	6µm
354-006-01	125-150mm	C	6µm
354-007-01	150-175mm	C	7µm
354-008-01	175-200mm	C	7µm
354-009-01	200-225mm	C	8µm
354-010-01	225-250mm	C	8µm
354-011-01	250-275mm	C	9µm

Code	Range	Type	Accuracy
354-012-01	275-300mm	C	9µm
354-013-01	300-325mm	C	9µm
354-014-01	325-350mm	C	9µm
354-015-01	350-375mm	C	10µm
354-016-01	375-400mm	C	10µm
354-017-01	400-425mm	C	10µm
354-018-01	425-450mm	C	10µm
354-019-01	450-475mm	C	11µm
354-020-01	475-500mm	C	11µm

SERIES 355**TUBULAR INSIDE MICROMETER**

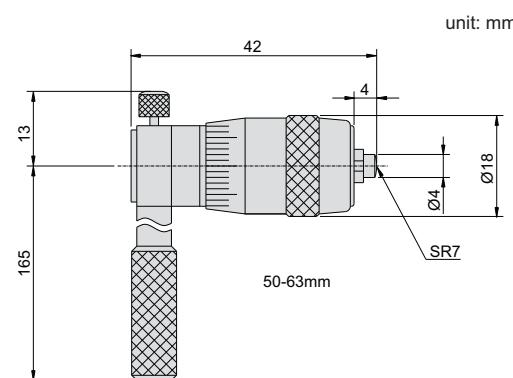
- ◆ Graduation 0.01mm
- ◆ Accuracy: $(6+L/50)\mu\text{m}$
- L=maximum measuring length(mm)
- ◆ Optional accessory: setting ring(code 531)

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
355-012-01	50-300mm	10pcs	13mm
355-009-01	200-225mm	—	25mm
355-020-01	200-500mm	3pcs	25mm
355-040-01	200-1000mm	8pcs	25mm



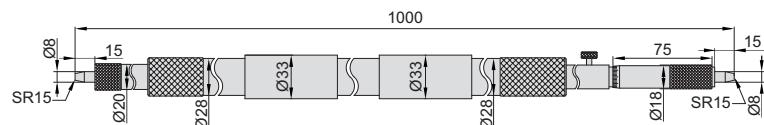
**SERIES 357****TUBULAR INSIDE MICROMETER**

- ◆ 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

unit: mm



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**INTERNAL SCREW THREAD MICROMETERS**

- ◆ Graduation: 0.01mm



358-004-01

measuring tips for screw
thread (optional)

Code	Range
358-004-01	75-100mm
358-005-01	100-125mm
358-006-01	125-150mm

Code	Range
358-007-01	150-175mm
358-008-01	175-200mm

Code	Range
358-010-01	225-250mm
358-011-01	250-275mm
358-012-01	275-300mm

Measuring tips for internal screw
thread micrometer (optional)**SERIES 358****MEASURING TIPS FOR INTERNAL SCREW THREAD MICROMETER**

- ◆ Supplied in pair
- ◆ For 358 series micrometers



358-000-19

Metric and unified thread (60° thread angle)

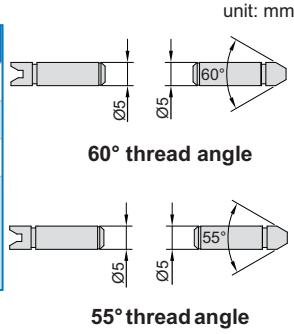
Code	Pitch
358-000-01	0.4-0.5mm/64-48TPI
358-000-02	0.6-0.9mm/44-28TPI
358-000-03	1-1.75mm/24-14TPI
358-000-04	2-3mm/13-9TPI
358-000-05	3.5-5mm/8-5TPI
358-000-06	5.5-7mm/4.5-3.5TPI
358-000-TS	6 pairs/set, including all above tips

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

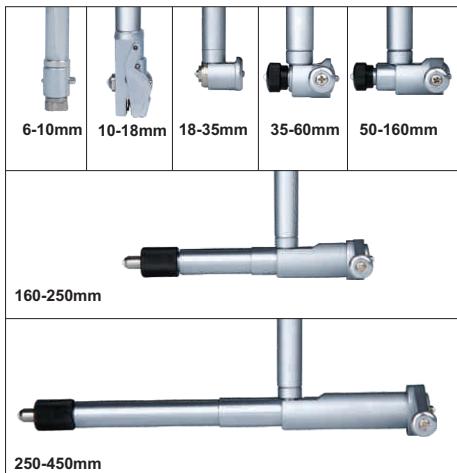
358-000-20s, including all above tips



SERIES 241

DIGITAL PRECISION BORE GAUGE

- Wooden handle isolate heat conduction
- With min. value tracking function, get the diameter automatically
- Optional accessory: series 531 setting rings



Bore gauge setter for setting zero (optional)



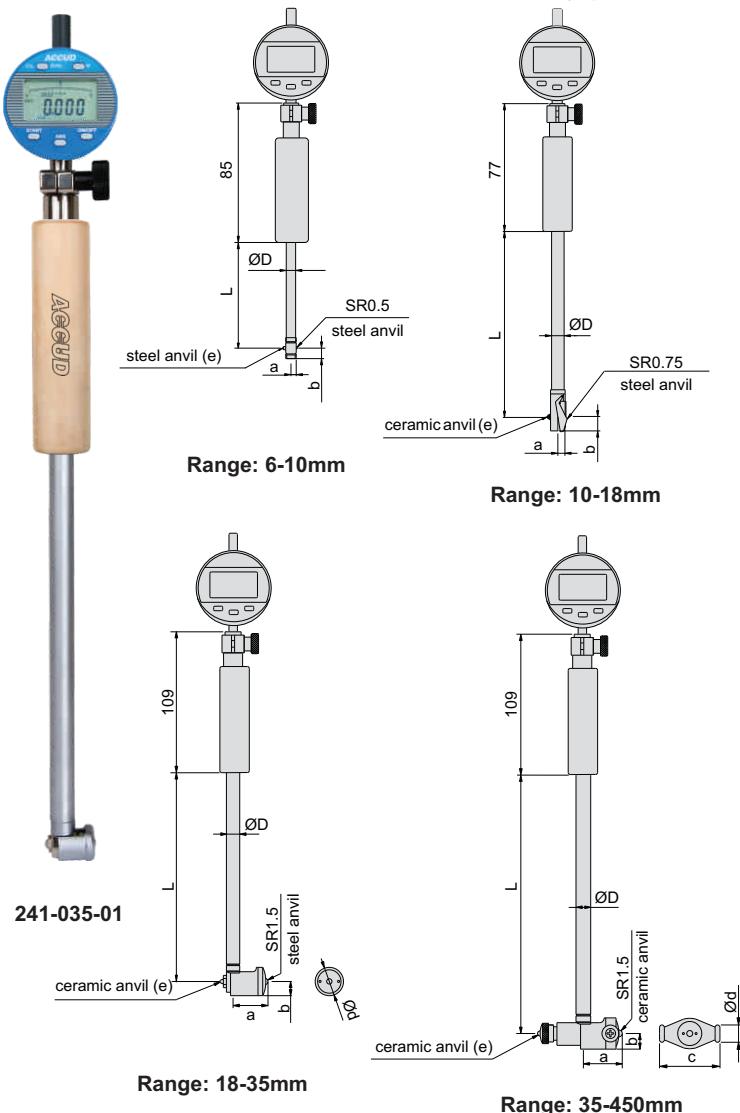
Setting ring (optional)



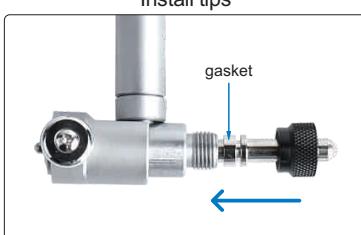
Measuring tips (included)



Gasket (included)



Install tips



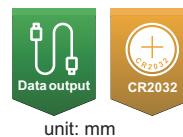
Code	Range	Digital indicator	Tips	Gasket	Accuracy	Repeatability	a	b	c	Ød	ØD	e	L
241-010-01	6-10mm	Range: 12.7mm resolution: 0.001mm	9pcs	2pcs	±0.005mm	2µm	3.6	5.7	/	/	4.5	SR1	48
241-018-01	10-18mm		9pcs	2pcs	±0.005mm	2µm	5.6	7.8	/	/	6	SR1	105
241-035-01	18-35mm		9pcs	2pcs	±0.006mm	2µm	12.2	6.4	/	12.7	9	SR1	141
241-060-01	35-60mm		6pcs	4pcs	±0.007mm	2µm	26	9	27	13	12.8	SR2	141
241-160-01	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

INSIDE/OUTSIDE
MEASUREMENT

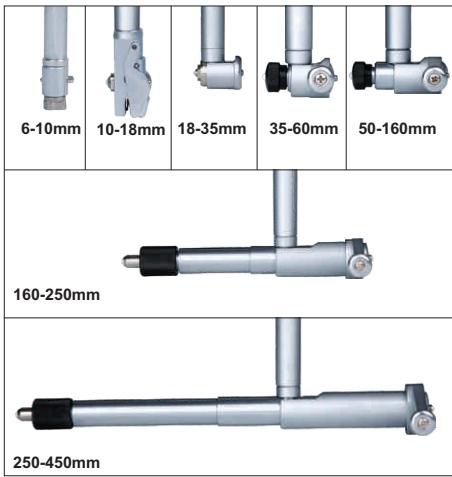


SERIES 241

DIGITAL BORE GAUGE



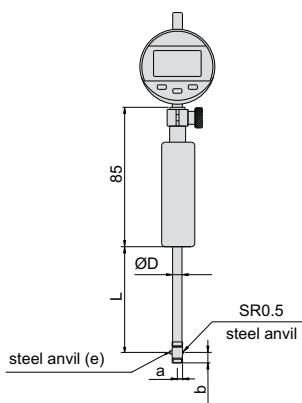
- Wooden handle isolate heat conduction
- With min. value tracking function, get the diameter automatically
- Optional accessory: series 531 setting rings



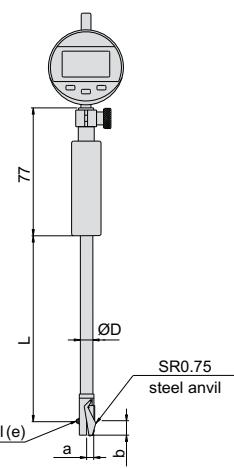
Bore gauge setter for setting zero (optional)



Setting ring (optional)



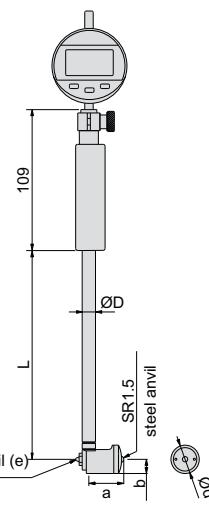
Range: 6-10mm



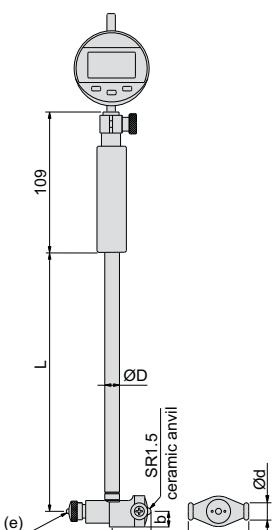
Range: 10-18mm



241-160-11



Range: 18-35mm



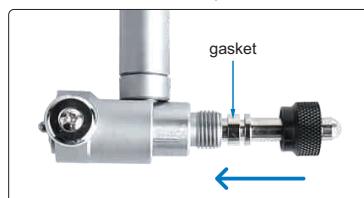
Range: 35-450mm

Measuring tips (included)



gasket (included)

Install tips

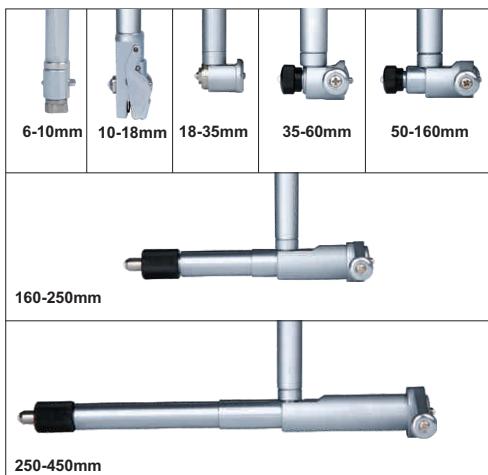


Code	Range	Digital indicator	Tips	Gasket	Accuracy	Repeatability	a	b	c	Ød	ØD	e	L
241-010-11	6-10mm	Range: 12.7mm resolution: 0.002mm	9pcs	2pcs	±0.012mm	3µm	3.6	5.7	/	/	4.5	SR1	48
241-018-11	10-18mm		9pcs	2pcs	±0.012mm	3µm	5.6	7.8	/	/	6	SR1	105
241-035-11	18-35mm		9pcs	2pcs	±0.015mm	3µm	12.2	6.4	/	12.7	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

SERIES 251

PRECISION DIAL BORE GAUGE

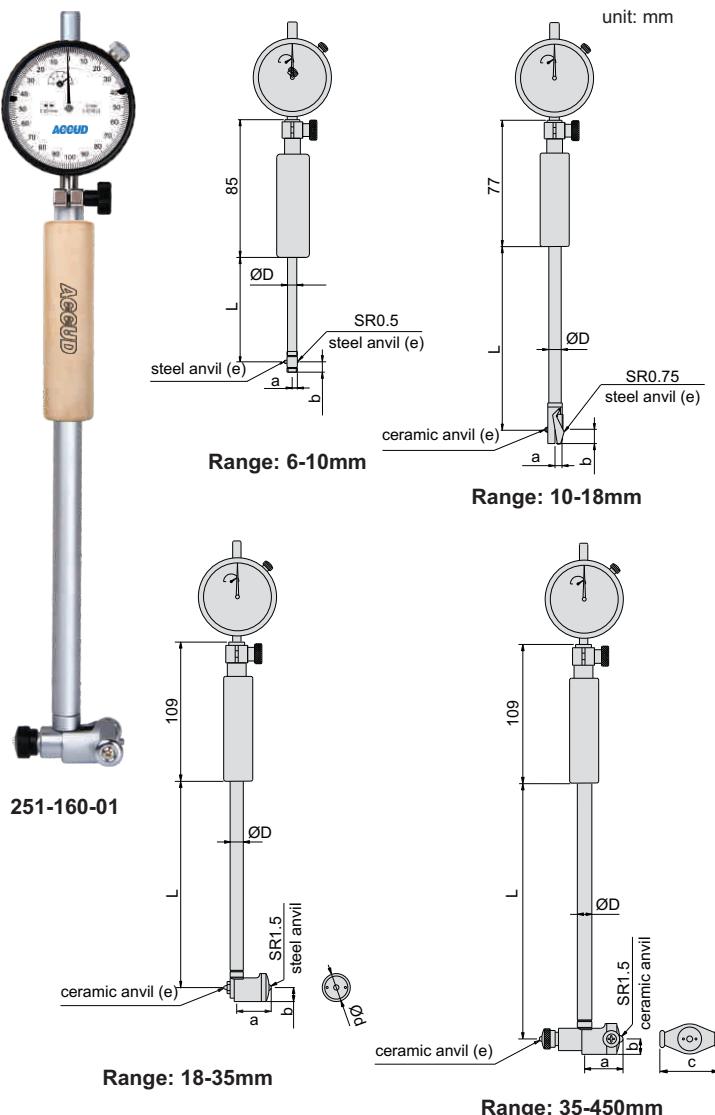
- Wooden handle isolate heat conduction
- Optional accessory: series 531 setting rings and long handle series 250.



Bore gauge setter for setting zero (optional)



Setting ring (optional)



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
251-160-01	50-160mm		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

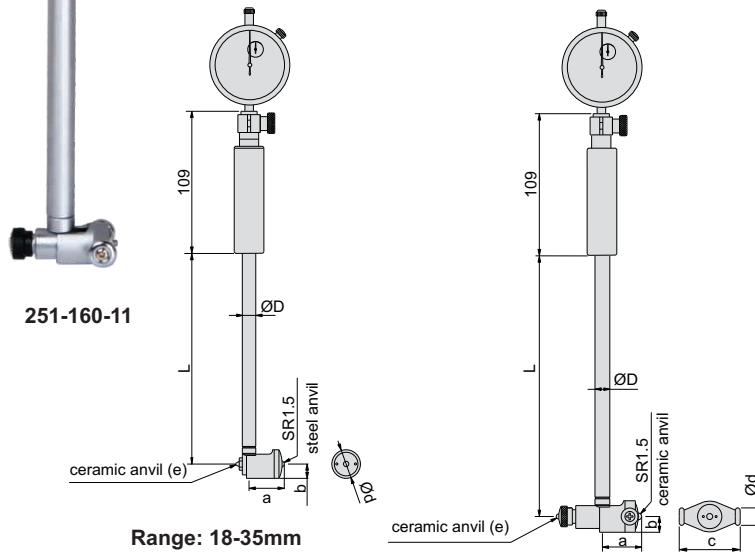
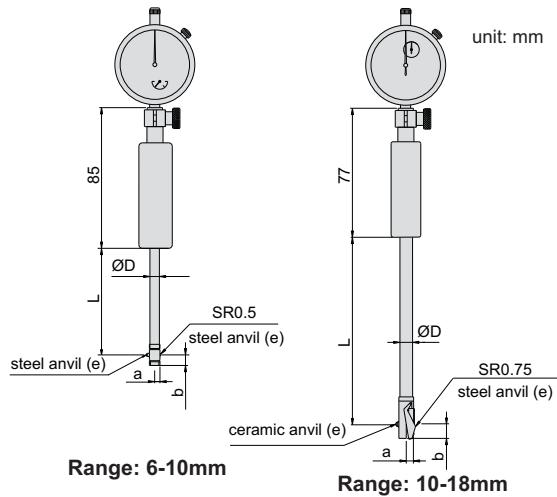
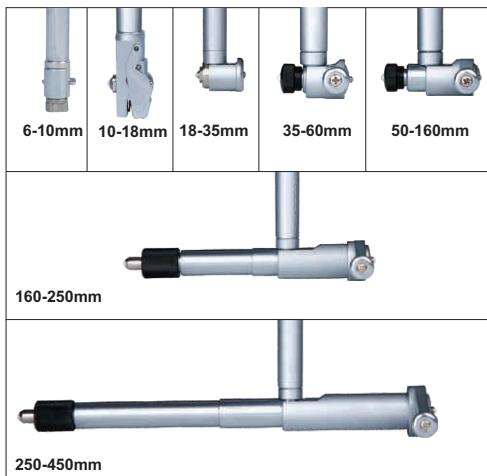
INSIDE/OUTSIDE
MEASUREMENT



SERIES 251

DIAL BORE GAUGE

- ◆ Wooden handle isolate heat conduction
- ◆ Optional accessory: series 531 setting rings



series 215 (optional)



Range: 35-450mm

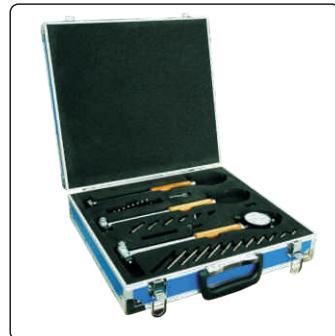
Install tips



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 Range: 10mm 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		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

**SERIES 251****DIAL BORE GAUGE SET**

- ◆ Wooden handle isolate heat conduction
- ◆ 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)

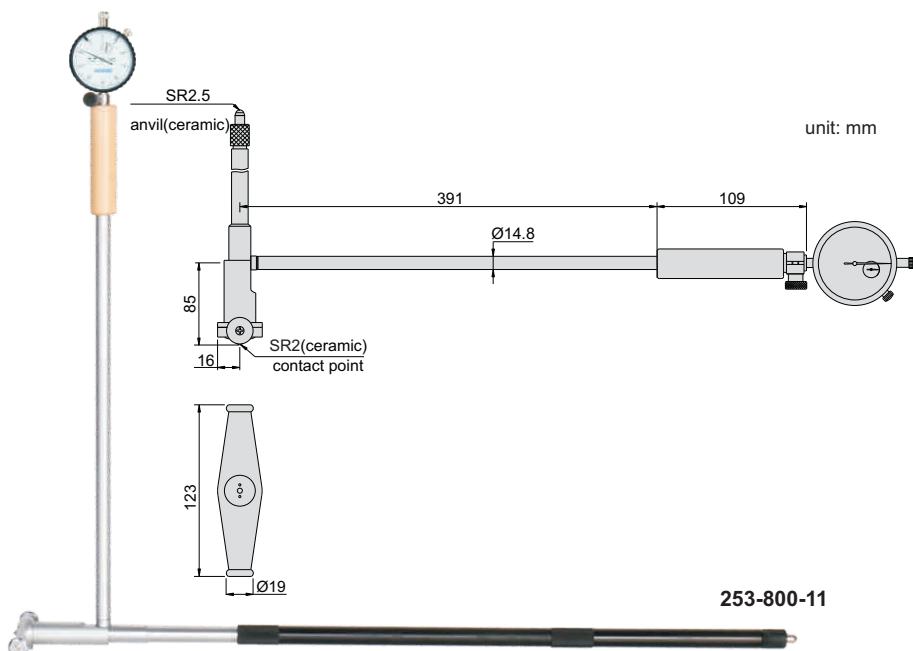
INSIDE/OUTSIDE
MEASUREMENT



243/253

BORE GAUGE

Digital indicator for
243-800-11



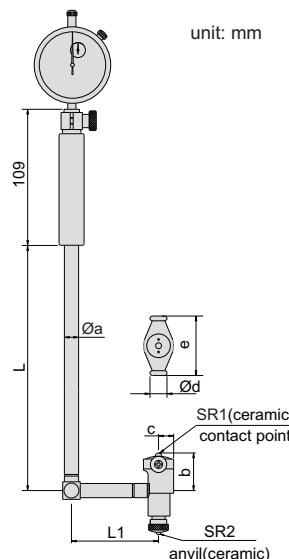
Code	Range	Accuracy	Repeatability	Indicator
253-800-11	400-800mm	±0.025mm	0.003mm	dial indicator (Code: 222-010-12) range 10mm, graduation 0.01mm
243-800-11	400-800mm	±0.025mm	0.003mm	digital indicator (Code: 215-010-12) range 12.7mm, resolution 0.002mm/0.0001"

SERIES 244/254

BORE GAUGE

- ♦ Accuracy: 0.018mm
- ♦ Repeatability: 0.003mm

Digital indicator for
series 244



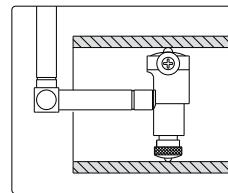
Dial type

Code	Range	Indicator
254-060-11	35-60mm	dial indicator:
254-160-11	50-160mm	(Code: 222-010-12)
254-250-11	160-250mm	range 10mm, graduation 0.01mm
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", graduation:
244-450-11	250-450mm	0.002mm/0.0001"

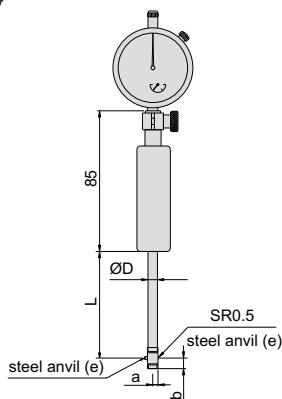
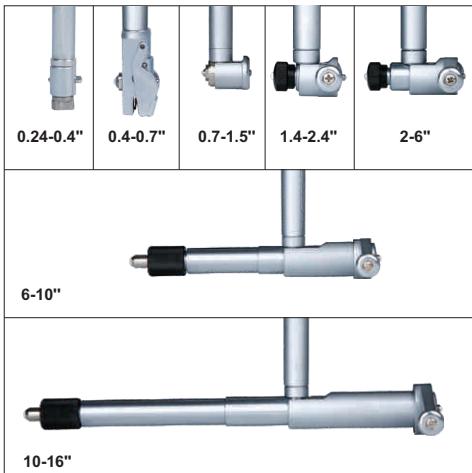
Range	Øa	b	c	Ød	e	L	L1
35-60mm	12.8	22	9	13	27	141	75
50-160mm	12.8	28.5	9.2	13	35	141	76.2
160-250mm	14.5	62.0	12.7	15	74.5	391	100
250-450mm	14.5	91.5	15.0	15	101.5	391	100



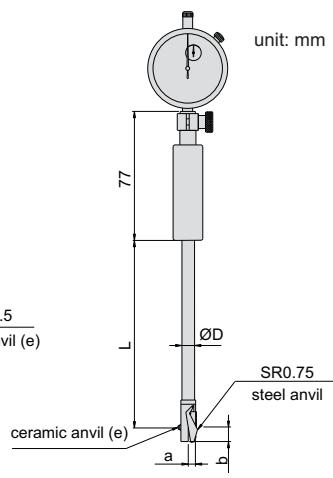
SERIES 252

INCH DIAL BORE GAUGE

- ◆ Wooden handle isolate heat conduction
- ◆ Optional accessory: Long handle series 250

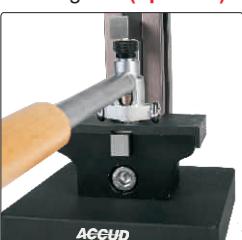


Range: 0.24-0.4"



Range: 0.4-0.7"

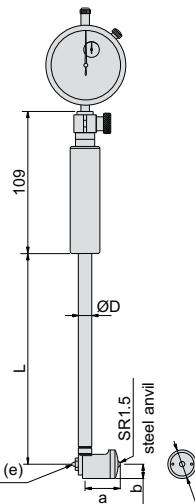
Bore gauge setter for setting zero (optional)



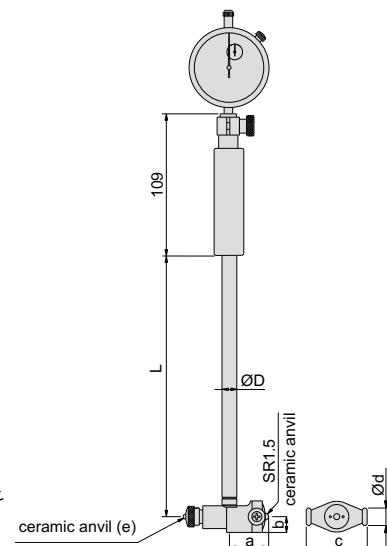
Setting ring (optional)



252-015-11



Range: 0.7-1.5"



Range: 1.4-16"

Measuring tips (included)



gasket (included)

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
252-160-01	10-16"		±0.0009"	0.00015"	86.5	15	101.5	15	14.5	SR3.5	400

INSIDE/OUTSIDE
MEASUREMENT



SERIES 250

ANVIL FOR BORE GAUGES

- Measuring face is made of ceramic



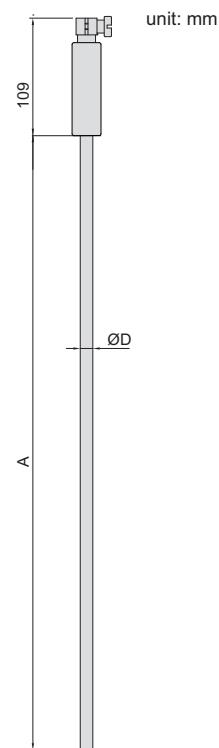
250-060-11

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
250-160-11	50-160mm	12pcs	ceramic	50, 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, 105
250-250-11	160-250mm	5pcs	ceramic	160, 170, 180, 190, 200
250-450-11	250-450mm	5pcs	ceramic	250, 260, 270, 280, 290

SERIES 250

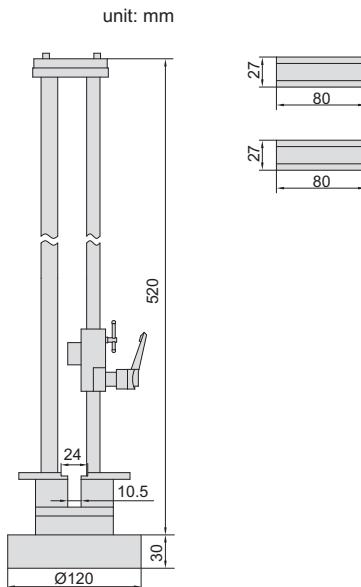
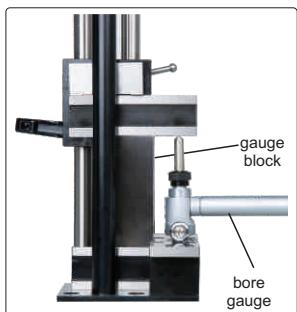
LONG HANDLE

- To assist deep-hole measurement



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

- Used together with gauge blocks to set bore gauges



Code	Range
255-016-11	18-400mm

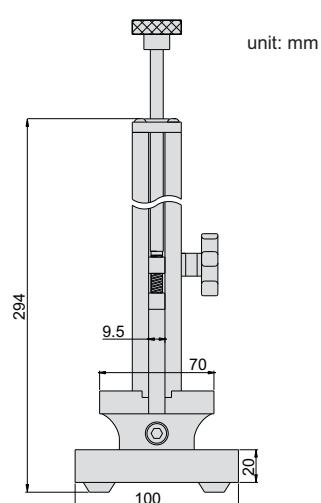
SERIES 256

BORE GAUGE SETTER

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

Gage 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
	1-9	1	9
	10-30	10	3
	50	—	1
	100	—	1



Application



Gage block set for 256-160-11



*with calibration certificate

Code	Range	Repeatability	Gage block set
256-160-11*	0-160mm	1.2µm	with
256-160-10	0-160mm	1.2µm	without

INSIDE/OUTSIDE
MEASUREMENT



296

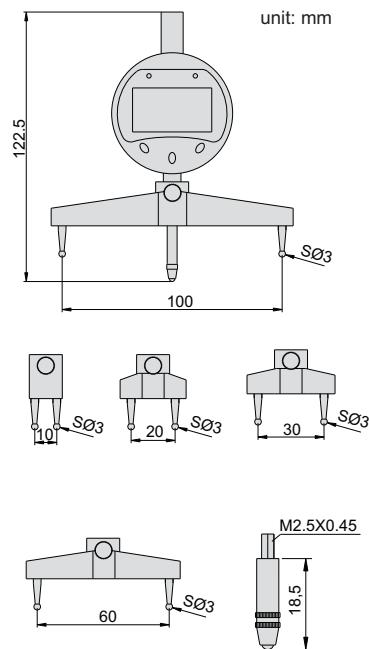
DIGITAL RADIUS GAUGE

- ◆ 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)
- ◆ 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"

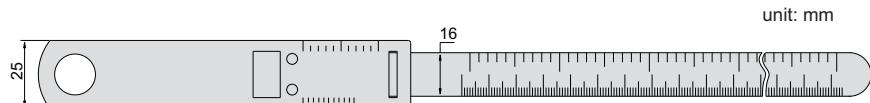
SERIES 956

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 201**LINEAR GAUGE**

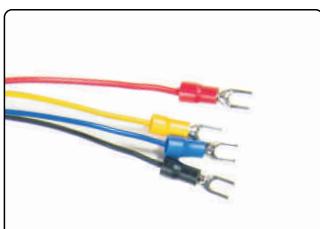
- ◆ Suitable for measuring the height, thickness, squareness, coaxiality and so on.
- ◆ IP65 protection level
- ◆ High frequency: 100 times/s, can measure high speed workpiece
- ◆ Output signal: 90° phase difference wave
- ◆ Standard cable length: 2m
- ◆ Long working life due to the special bearing



Interface(RS232)



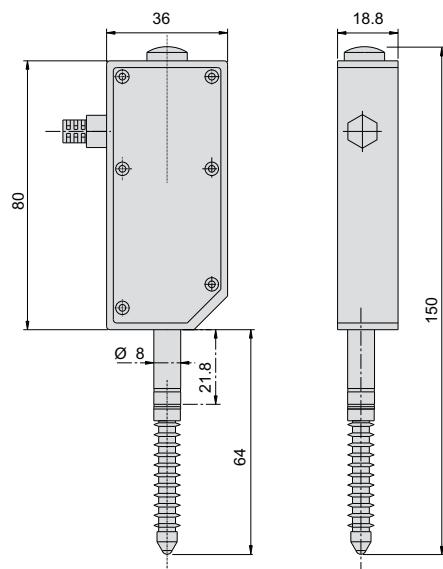
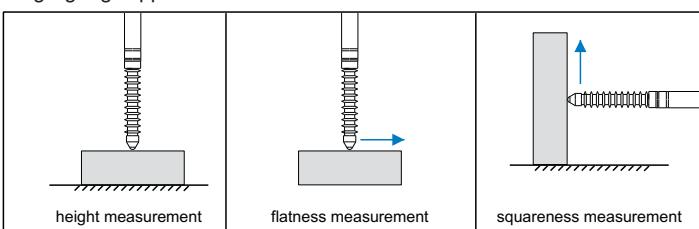
Interface(Pin4)



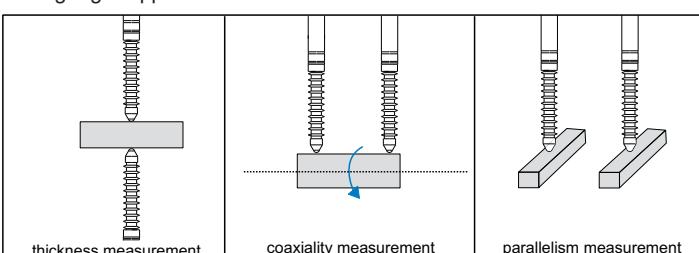
201-010-11

unit: mm

Single gauge application



Multi-gauges application



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

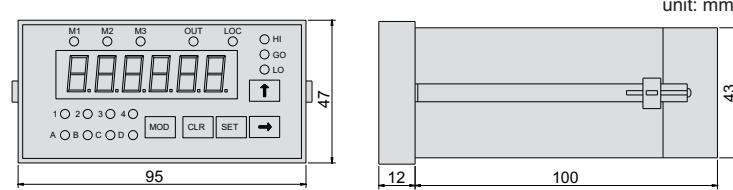
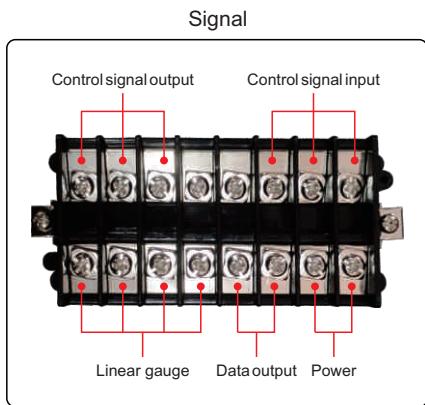
INDICATOR



206

DISPLAY UNIT FOR LINEAR GAUGE

- ♦ High and low limits with judgement
- ♦ With external control
- ♦ With output I/O
- ♦ Power: DC9-24V

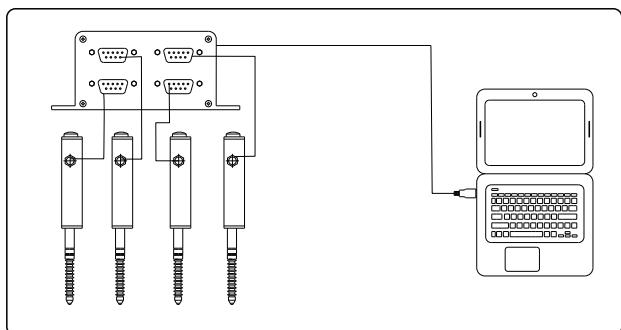


Code	Gage input	Interface
206-010-01	1	Pin4

SERIES 208

COUNTER FOR LINEAR GAUGE

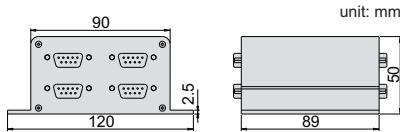
- ♦ With data recording software, can transfer the data into Excel



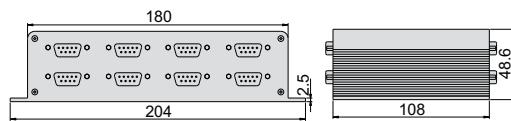
208-004-01



208-008-01



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



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



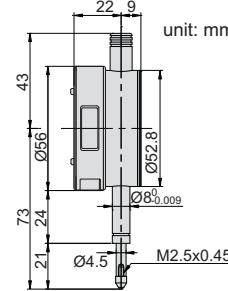
210-010-03



Certificate

Data output

CR2032



Range: 0-12.7mm

Resolution 0.001mm/0.00005"

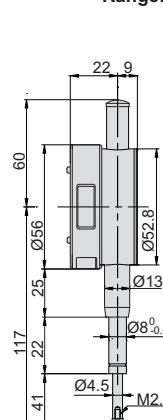
Code	Range	Accuracy	Hysteresis
210-010-03	12.7mm/0.5"	5µm	2µm
210-025-03	25.4mm/1"	5µm	3µm
210-050-03	50.8mm/2"	6µm	3µm

Resolution 0.01mm/0.0005"

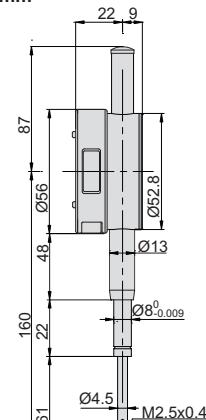
Code	Range	Accuracy	Hysteresis
210-010-13	12.7mm/0.5"	20µm	10µm
210-025-13	25.4mm/1"	20µm	10µm
210-050-13	50.8mm/2"	30µm	10µm



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



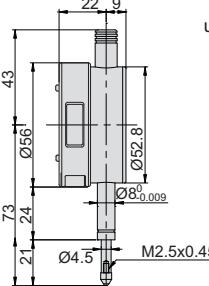
211-010-13



Certificate

Data output

CR2032



Range: 0-12.7mm

Resolution 0.001mm/0.00005"

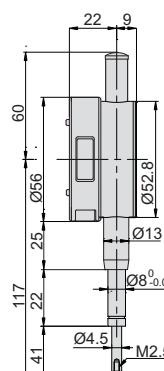
Code	Range	Accuracy	Hysteresis
211-010-03	12.7mm/0.5"	5µm	2µm
211-025-03	25.4mm/1"	5µm	3µm
211-050-03	50.8mm/2"	6µm	3µm

Resolution 0.01mm/0.0005"

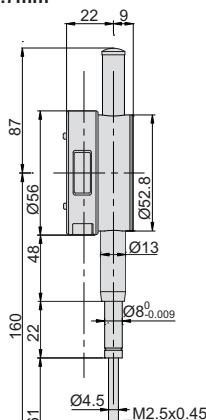
Code	Range	Accuracy	Hysteresis
211-010-13	12.7mm/0.5"	20µm	10µm
211-025-13	25.4mm/1"	20µm	10µm
211-050-13	50.8mm/2"	30µm	10µm



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



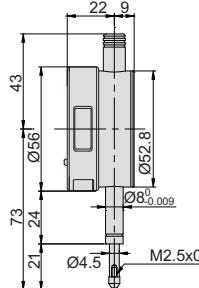
VIDEO



212-010-13



unit: mm



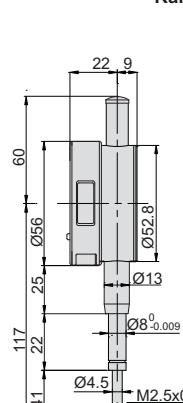
Range: 0-12.7mm

Resolution 0.001mm/0.00005"

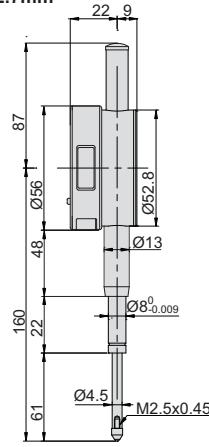
Code	Range	Accuracy	Hysteresis
212-010-03	12.7mm/0.5"	5μm	2μm
212-025-03	25.4mm/1"	5μm	3μm
212-050-03	50.8mm/2"	6μm	3μm

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



Range: 0-25.4mm



Range: 0-50.8mm

SERIES 215

DIGITAL INDICATOR FOR BORE GAUGE



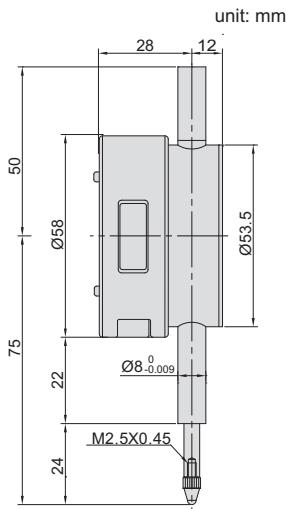
- ◆ Specially designed for bore gauges
- ◆ The minimum value tracking function can find the diameter automatically
- ◆ Read the diameter directly, after inputting the size of setting ring
- ◆ Reading in digit and analog
- ◆ Button: minimum value tracking, calibration, data preset, inch/metric conversion, absolute/incremental measurement
- ◆ Automatic power off
- ◆ Data output(cable code:200-03 or 200-04)



VIDEO



215-010-12



Application

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



Series 251(optional)

SERIES 216

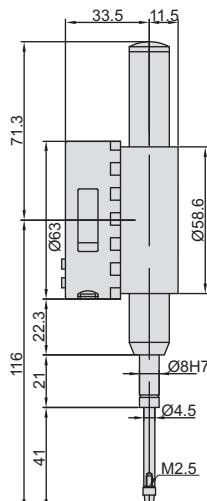
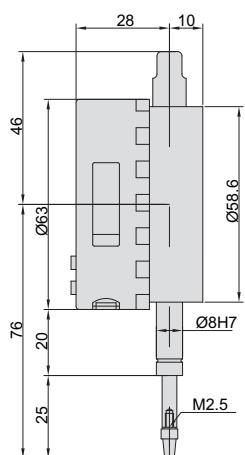
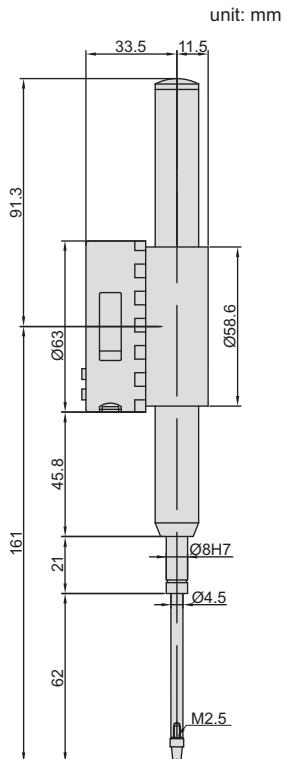
DIGITAL INDICATOR



- ◆ 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



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 0.01mm/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

Contact points (optional)



Application



INDICATOR



SERIES 213

WATERPROOF DIGITAL INDICATOR

- 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

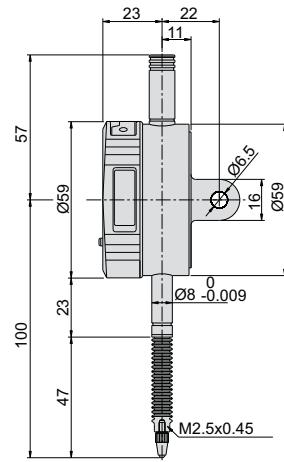


unit: mm

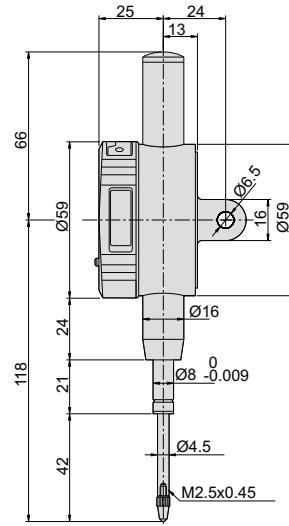
Stylus(optional)



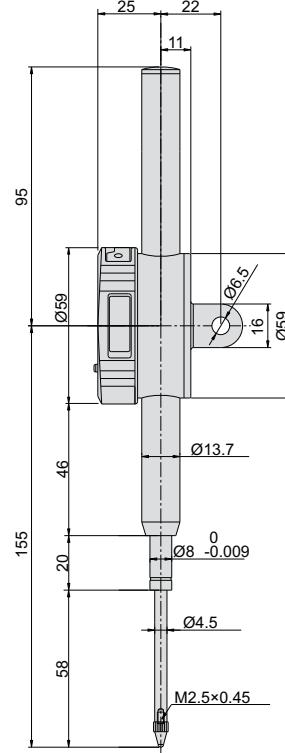
Application



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

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

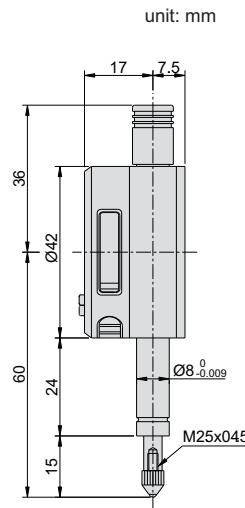


214-005-12

Styli(optional)



Application



AECUD



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

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



214-100-11

Styli(optional)



Application

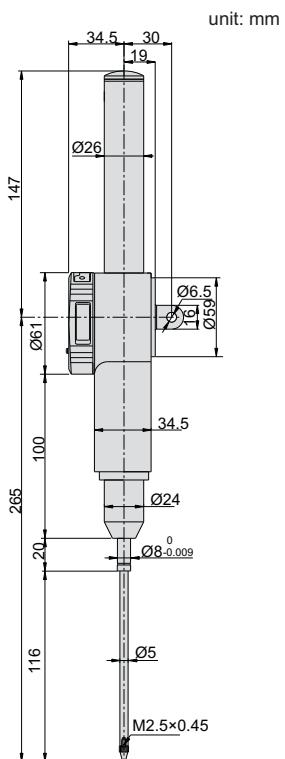


Resolution 0.001mm/0.00005"

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



SERIES 218

HIGH PRECISION DIGITAL INDICATOR



- 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)



VIDEO



Included



218-010-01



218-025-01

unit: mm

Lifting lever (Included)



Application



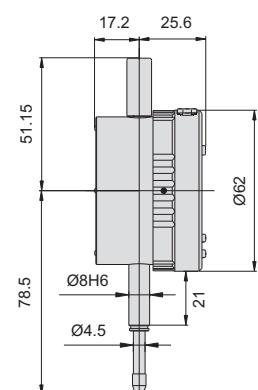
Contact points (optional)



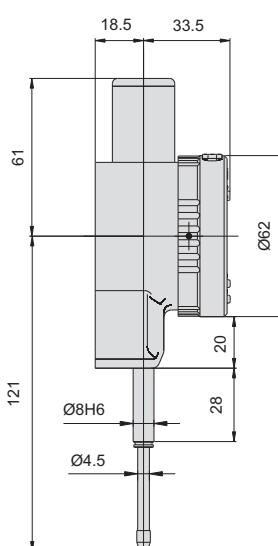
Series 270



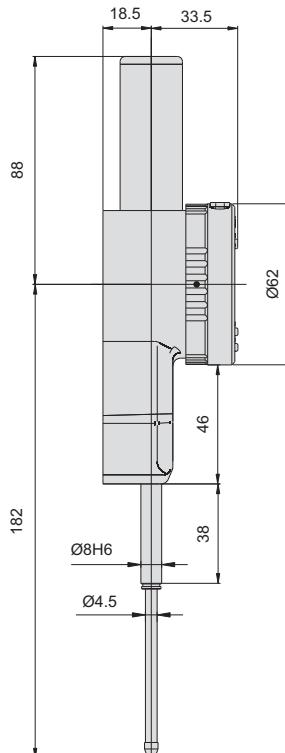
display can be rotated by 320°



Range:0-12.7mm



Range:0-25.4mm



Range:0-50.8mm

Code	Range	Adjustable resolution	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" 0.01mm/0.0005"	1.8µm	1µm	Ruby	flat

Code	Range	Adjustable resolution	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

SERIES 218

WIRELESS HIGH PRECISION DIGITAL INDICATOR



ACCUD



- ◆ Built-in wireless transmission, Zigbee signal
- ◆ 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

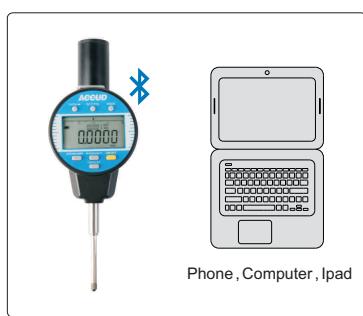


218-025-01W

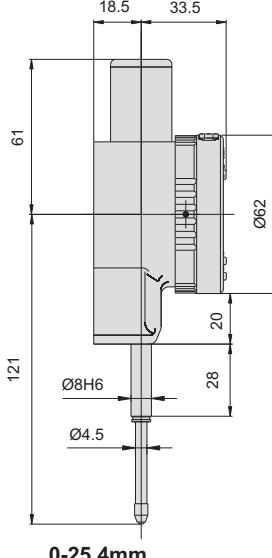
unit: mm



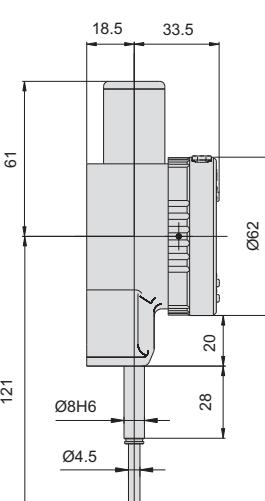
display can be rotated by 320°



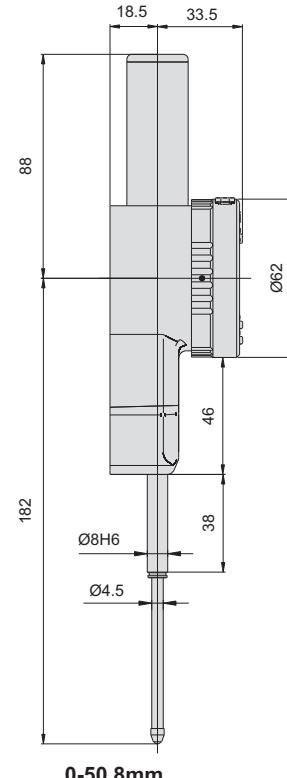
Included



0-12.7mm



0-25.4mm



0-50.8mm

Contact points (optional)



Series 270



Application

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

Code	Range	Adjustable resolution	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

INDICATOR



SERIES 227

DIGITAL INDICATOR WITH LIFTING LEVER

- ◆ 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



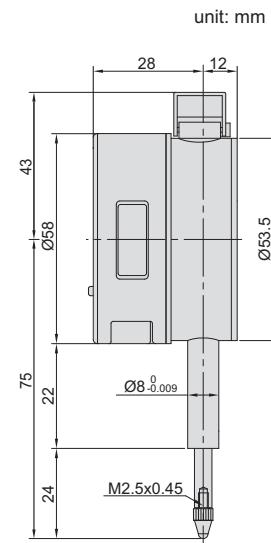
VIDEO



Stylus(optional)



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

SERIES 222

DIAL INDICATOR

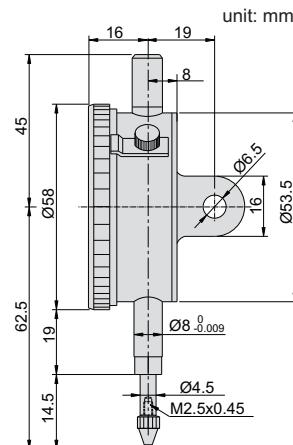
- ◆ Graduation: 0.001mm
- ◆ With limit hands
- ◆ Jeweled bearing
- ◆ Range per revolution: 0.2mm
- ◆ With lock screw



Stylus(optional)



Application



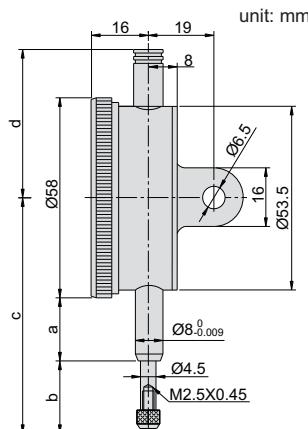
222-001-01

Code	Range	Back	Scale	Accuracy	Hysteresis
222-001-01	1mm	lug	0-100-0	5μm	2μm
222-001-02	1mm	flat	0-100-0	5μm	2μm

SERIES 221

DIAL INDICATOR

- ◆ Graduation: 0.001mm
- ◆ With limit hands
- ◆ Jeweled bearing
- ◆ Range per revolution: 0.2mm
- ◆ Supplied with lug and flat back



221-001-01

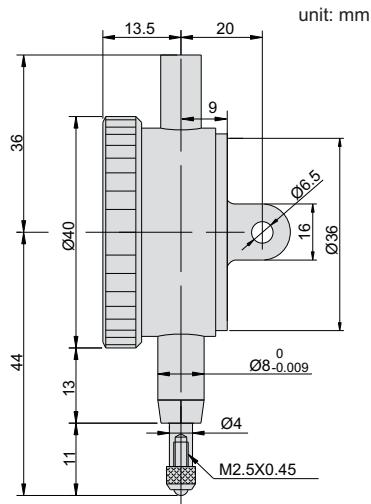
Code	Range	Scale	Accuracy	Hysteresis	a	b	c	d
221-001-01	1mm	0-200	5µm	2µm	15	19.5	62.5	45
221-003-01	3mm	0-200	10µm	4µm	10	21.5	59.5	41.5
221-005-01	5mm	0-200	10µm	4µm	10	21.5	59.5	41.5

228

DIAL INDICATOR



- ◆ Bezel: Ø40mm
- ◆ Graduation: 0.001mm
- ◆ With limit hands
- ◆ Jeweled bearing
- ◆ Supplied with lug and flat back



INDICATOR

Contact points (optional)



Code	Range	Accuracy	Hysteresis	Range/rev	Scale
228-001-01	1mm	3µm	1.5µm	0.1mm	0-100



SERIES 222

DIAL INDICATOR



- ◆ Graduation: 0.01mm
- ◆ With limit hands
- ◆ Jeweled bearing
- ◆ Range per revolution: 1mm
- ◆ With lock screw

Styli(optional)

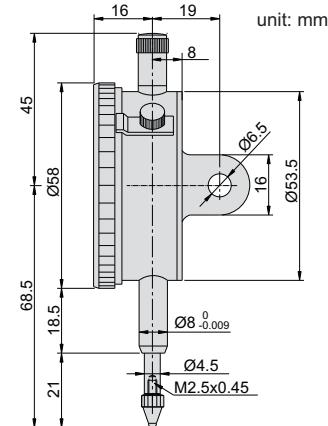


Series 270

Application



222-010-11



Code	Range	Back	Accuracy	Hysteresis	Scale
222-003-11	3mm	lug	14µm	3µm	0-100
222-005-11	5mm	lug	16µm	3µm	0-100
222-010-11	10mm	lug	17µm	3µm	0-100
222-003-12	3mm	flat	14µm	3µm	0-100
222-005-12	5mm	flat	16µm	3µm	0-100
222-010-12	10mm	flat	17µm	3µm	0-100

SERIES 223

DIAL INDICATOR



- ◆ Graduation: 0.01mm
- ◆ With limit hands
- ◆ Range per revolution: 1mm
- ◆ With lock screw

Styli(optional)

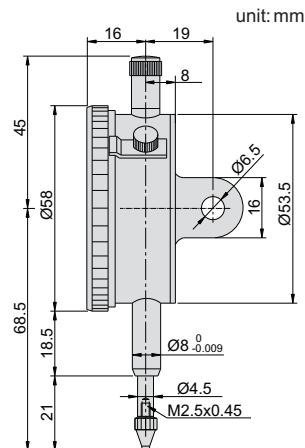


Series 270

Application



223-010-11



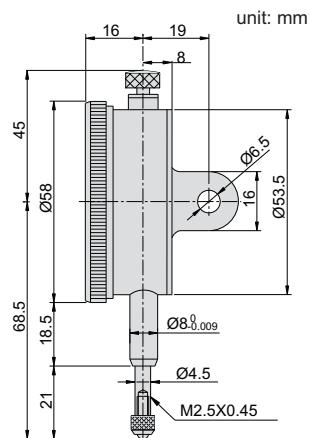
Code	Range	Back	Accuracy	Hysteresis	Scale
223-010-11	10mm	lug	20µm	3µm	0-100
223-010-12	10mm	flat	20µm	3µm	0-100

SERIES 226

SHOCKPROOF DIAL INDICATOR



- ◆ Shockproof
- ◆ Graduation: 0.01mm
- ◆ With limit hands
- ◆ Jeweled bearing
- ◆ Rang per revolution: 1mm
- ◆ Supplied with lug and flat back

**Styli(optional)****Application**

226-010-11

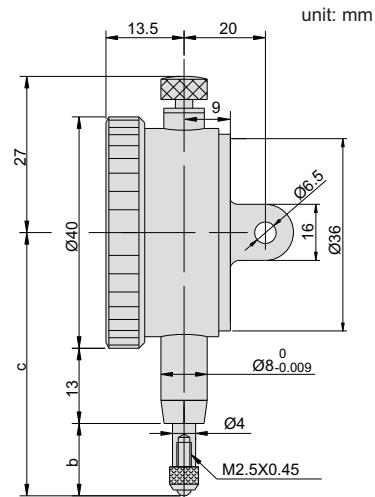
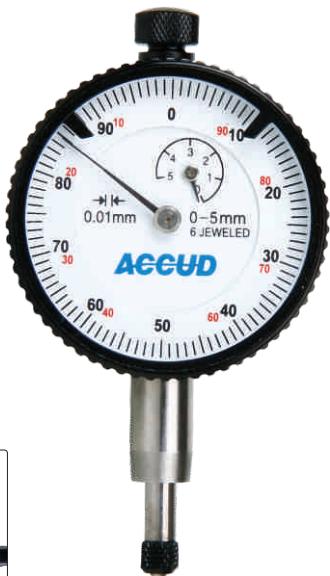
Code	Range	Accuracy	Hysteresis	Scale
226-005-11	5mm	16µm	3µm	0-100
226-010-11	10mm	17µm	3µm	0-100

SERIES 228

DIAL INDICATOR



- ◆ Bezel: Ø40mm
- ◆ Graduation: 0.01mm
- ◆ With limit hands
- ◆ Jeweled bearing
- ◆ Rang per revolution: 1mm
- ◆ Supplied with lug and flat back

**Styli(optional)****Application**

228-005-11

Code	Range	Accuracy	Hysteresis	Scale	b	c
228-003-11	3mm	14µm	3µm	0-100	11mm	44mm
228-005-11	5mm	16µm	3µm	0-100	12.5mm	45.5mm

INDICATOR



SERIES 229

DIAL INDICATOR



- ◆ Graduation: 0.01mm
- ◆ With limit hands
- ◆ Range per revolution: 1mm
- ◆ Supplied with lug and flat back

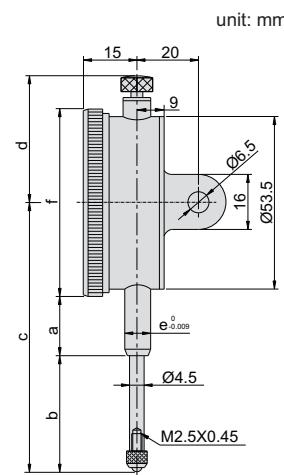


229-030-11

Stylus(optional)



Application



Code	Range	Accuracy	Hysteresis	Scale	a	b	c	d	e	f
229-020-11	20mm	25µm	5µm	0-100	20mm	35mm	83mm	37.5mm	Ø8mm	Ø58mm
229-030-11	30mm	35µm	7µm	0-100	20mm	40mm	88mm	37.5mm	Ø8mm	Ø58mm

229

DIAL INDICATOR



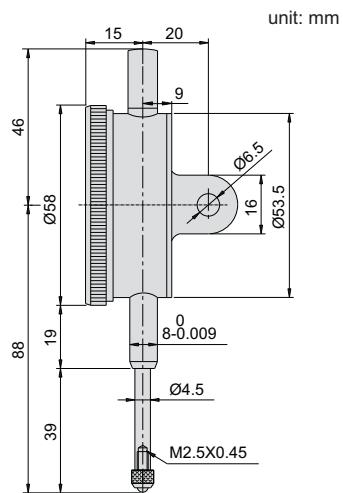
- ◆ Graduation: 0.01mm
- ◆ With limit hands
- ◆ Range per revolution: 1mm
- ◆ Supplied with lug and flat back



Stylus(optional)



Application



Code	Range	Accuracy	Hysteresis	Scale
229-025-11	25mm	35µm	7µm	0-100

SERIES 229

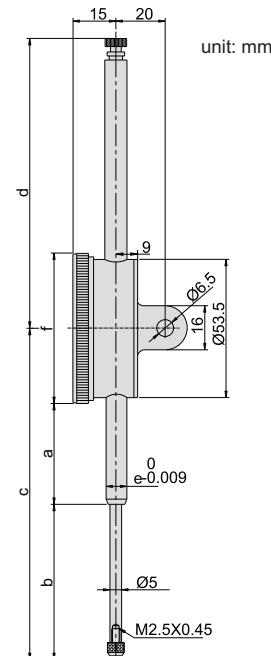
DIAL INDICATOR



- ◆ Graduation: 0.01mm
- ◆ With limit hands
- ◆ Range per revolution: 1mm
- ◆ Supplied with lug and flat back



229-050-21



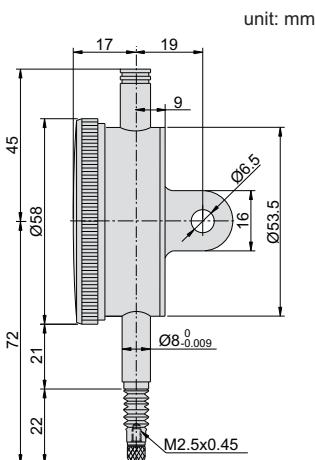
Code	Range	Accuracy	Hysteresis	Scale	a	b	c	d	e	f
229-050-21	50mm	40µm	8µm	0-100	40mm	58mm	127mm	108mm	Ø8mm	Ø58mm
229-100-21	100mm	50µm	9µm	0-100	60mm	108mm	207mm	168mm	Ø10mm	Ø78mm

231

WATERPROOF DIAL INDICATOR



- ◆ IP54 dust/waterproof
- ◆ Graduation: 0.01mm
- ◆ Jeweled bearing



INDICATOR

Code	Range	Accuracy(f _{ges})	Hysteresis(f _u)	Range/rev	Dial reading
231-010-11	10mm	17µm	3µm	1mm	0-100

**SERIES 232****ONE REVOLUTION DIAL INDICATOR**

- ◆ Shock proof
- ◆ Supplied with lug and flat back

Styli(optional)

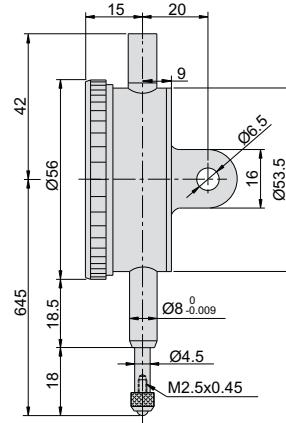


Series 270

Application



unit: mm



232-001-11

Code	Range	Graduation	Accuracy	Hysteresis	Dial reading
232-0005-11	0.5mm	0.01mm	9μm	3μm	25-0-25
232-001-11	1mm	0.01mm	9μm	3μm	50-0-50

SERIES 230**DIAL INDICATOR**

- ◆ Supplied with limit pointers and bezel clamp

Styli(optional)

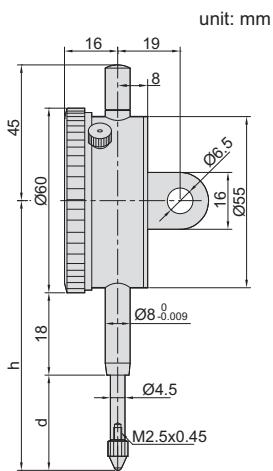


Series 270

Application



unit: mm

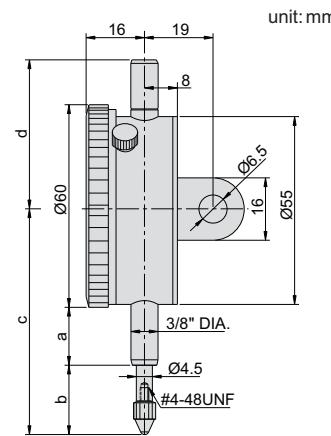


230-030-11

Code	Range	Graduation	Accuracy(fges)	Hysteresis(fu)	Range/rev	Dial reading	Remark	h	d
230-010-11	10mm	0.1mm	40μm	20μm	10mm	0-10mm	lug back	70mm	20mm
230-030-11	30mm	0.1mm	60μm	20μm	10mm	0-10mm	lug back	90mm	40mm

**SERIES 225****INCH DIAL INDICATOR**

- Supplied with limit hands and bezel clamp
- Lug back



225-025-11

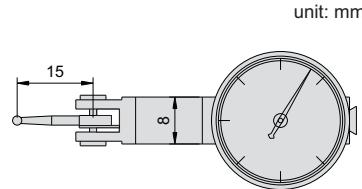
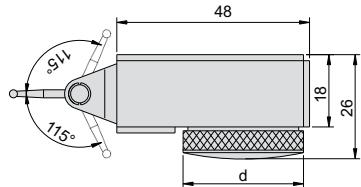
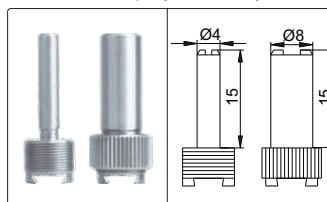
Code	Range	Graduation	Dial reading	Range/rev	Accuracy(fges)	a	b	c	d
225-006-11	0.25"	0.001"	0-100	0.1"	0.004"	20	25	75	46
225-012-11	0.5"	0.001"	0-100	0.1"	0.004"	20	25	75	46
225-025-11	1"	0.001"	0-100	0.1"	0.004"	20	35	85	46
225-050-11	2"	0.001"	0-100	0.1"	0.008"	50	59	139	111

SERIES 261**DIAL TEST INDICATOR**

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



261-002-01

Clamps (included)

INDICATOR

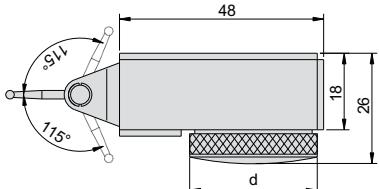
Code	Range	Bezel(d)	Graduation	Styli	Accuracy	Hysteresis	Scale
261-002-01	0.2mm	Ø33mm	0.002mm	carbide	6µm	2µm	0-100-0
261-002-02	0.2mm	Ø37.5mm	0.002mm	carbide	6µm	2µm	0-100-0



SERIES 261

DIAL TEST INDICATOR

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

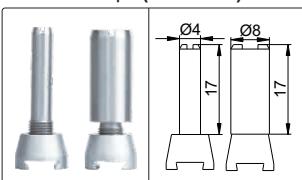


261-008-12 unit: mm

Application



Clamps (included)

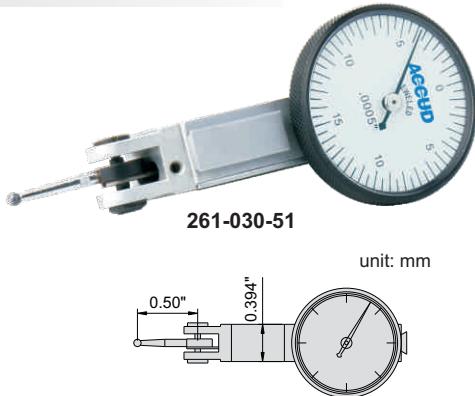
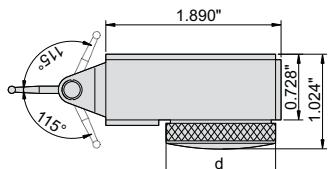


Code	Range	Bezel(d)	Graduation	Styli	Accuracy	Hysteresis	Scale
261-008-11	0.8mm	Ø30mm	0.01mm	carbide	13µm	3µm	0-40-0
261-008-12	0.8mm	Ø37.5mm	0.01mm	carbide	13µm	3µm	0-40-0

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 unit: mm

Application



Clamp (included)

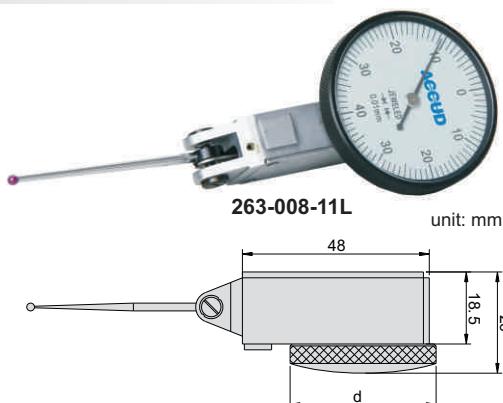
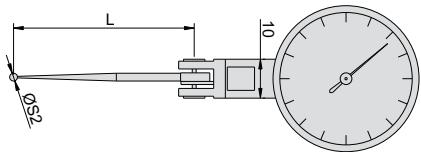


Code	Range	Graduation	Accuracy	Dial reading	d
261-030-51	0.03"	0.0005"	±0.0005"	0-15-0	1.181"DIA
261-030-52	0.03"	0.0005"	±0.0005"	0-15-0	1.457"DIA

SERIES 263

LONG STYLI DIAL TEST INDICATOR

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

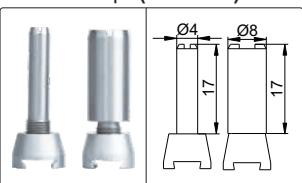


263-008-11L unit: mm

Application



Clamps (included)



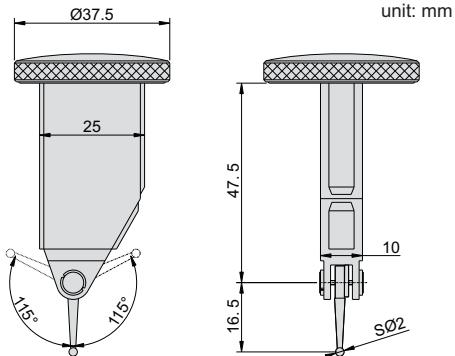
Code	Range	Bezel(d)	Graduation	Styli	Accuracy	Hysteresis	Scale	L
263-008-11	0.8mm	Ø37.5mm	0.01mm	carbide	13µm	3µm	0-40-0	30.5
263-008-11L	0.8mm	Ø37.5mm	0.01mm	ruby	13µm	9µm	0-40-0	46.4

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: stylus

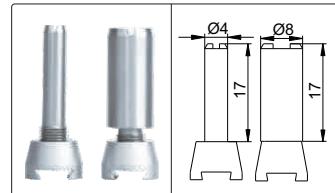


Application



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

Clamps (included)



265

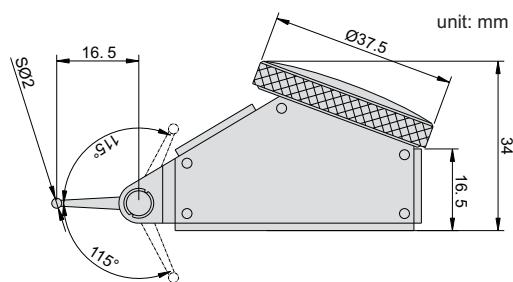
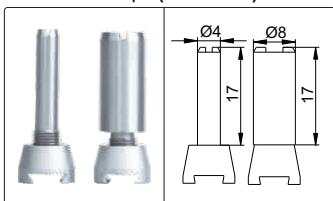
DIAL TEST INDICATOR



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



Clamps (included)



INDICATOR

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



266

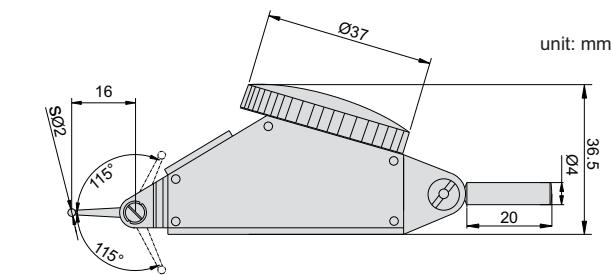
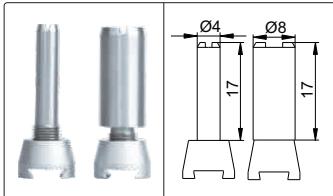
LARGE RANGE DIAL TEST INDICATOR



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



Clamps (included)



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

SERIES 260

STYLI FOR DIALTEST INDICATOR



260-002-02



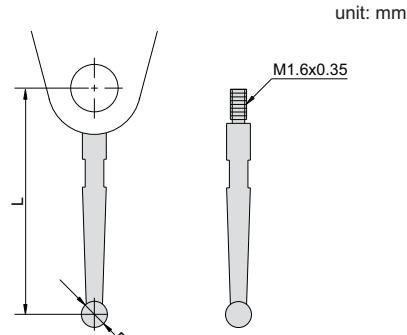
(For 261-008-11 and 261-008-12)



260-009-01

(For 261-002-01 and 261-002-02)

Code	For products	Tip material	D(mm)	L(mm)
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	264-008-11 265-008-11	ruby	SØ2	16.5
260-009-01	261-002-01 261-002-02	ruby	SØ2	15
260-010-02	263-008-11	carbide	SØ2	30.5
260-010-03	263-008-11L	ruby	SØ2	46.4



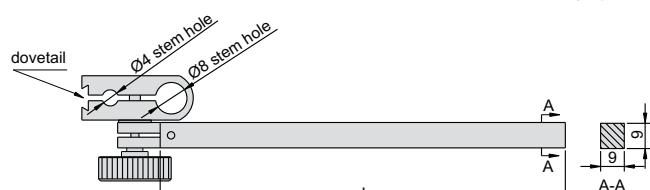
SERIES 267**HOLDER FOR INDICATOR**

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

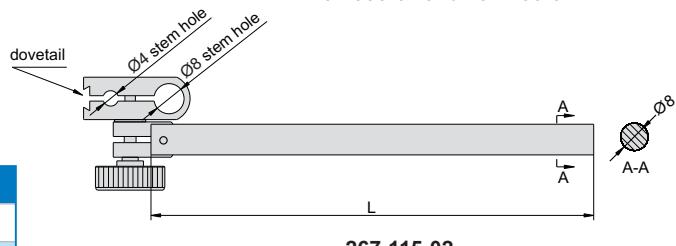


267-100-01

unit: mm

Application(optional)

267-050-01 and 267-100-01

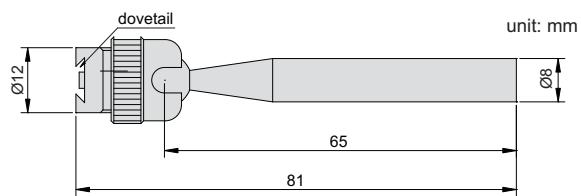


267-115-02

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

268**UNIVERSAL HOLDER FOR DIAL TEST INDICATOR**

- ◆ Universal head

**Application**

Code	Section size
268-055-01	Ø8mm

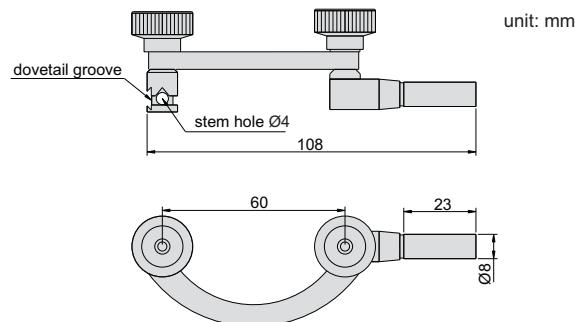


269

DIAL TEST INDICATOR CENTERING HOLDER

- Center cylinders or holes on a machine tool

Application



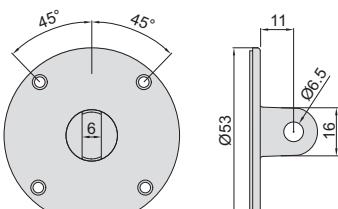
Code
269-060-01

SERIES 272

LUG AND FLAT BACK

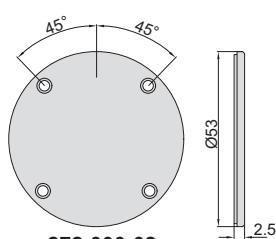


272-000-01

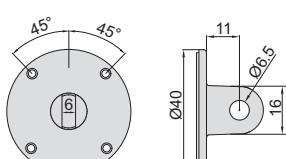


272-000-01

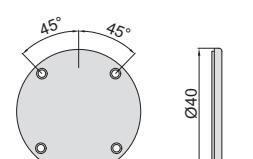
unit: mm



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

SERIES 270

CONTACT POINTS

NEEDLE



INDICATOR

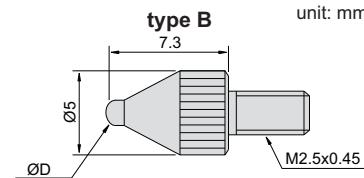
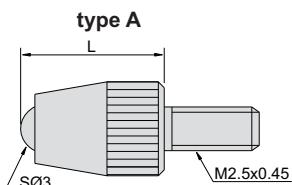
type A

Code	Material	L(mm)
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

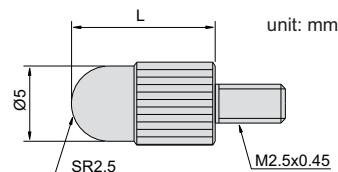
type B

Code	Material	ØD(mm)
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



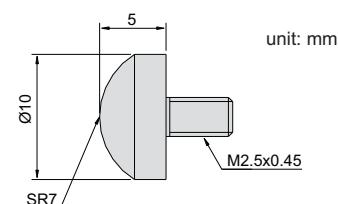
270-002-02



unit: mm

Code	Material	L(mm)
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

Spherical Point



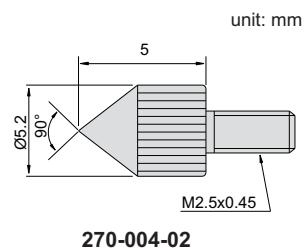
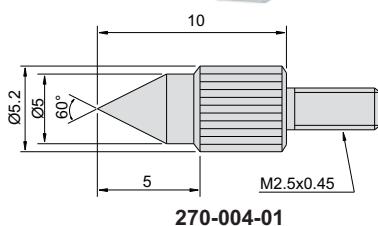
unit: mm

Code	Material
270-003-01	steel

Conical Point



270-004-02



unit: mm

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



SERIES 270

CONTACT POINTS

type A

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

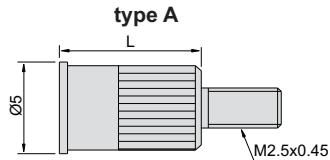
Flat Point



270-005-12



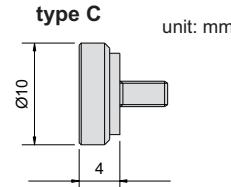
270-010-16



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

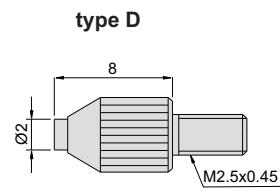
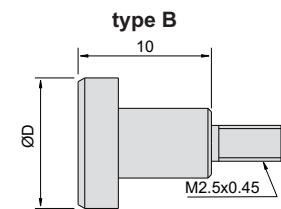


type C

Code	Material	ØD
270-010-16	ceramic	10

type D

Code	Material
270-005-21	carbide



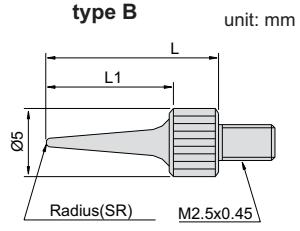
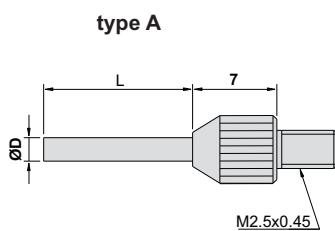
Needle Point



270-006-16



270-006-22



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

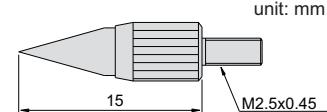
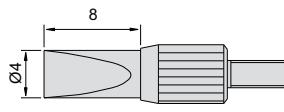
type B

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

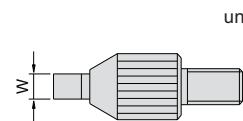
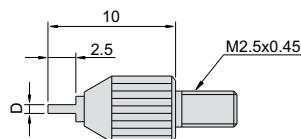


Code	Material
270-007-01	steel



SERIES 270**CONTACT POINTS****Blade Point**

270-008-03

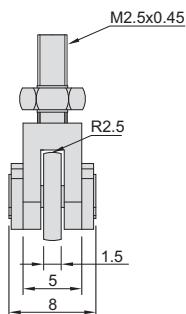
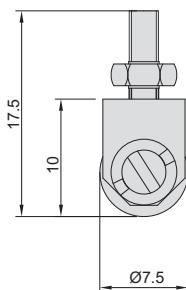


unit: mm

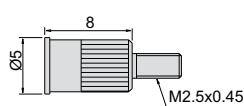
Code	Material	D	W
270-008-01	steel	0.4	2
270-008-02	steel	0.6	2
270-008-03	steel	1	4

270**ROLLER POINT**

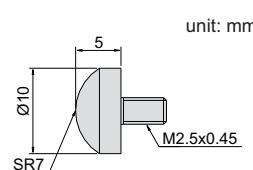
unit: mm



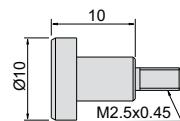
Code	Material of measuring face
270-009-01	steel

270**POINT SET**

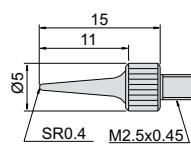
Flat Point



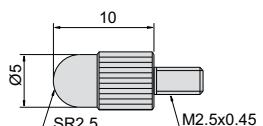
Spherical Point



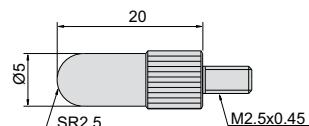
Flat Point



Needle Point



Shell Type Point



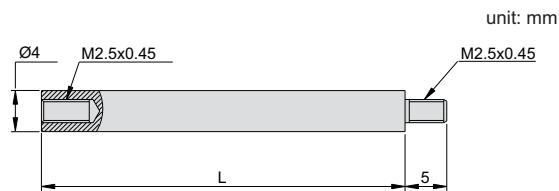
Shell Type Point

Code	Material of measuring face
270-100-06	steel

INDICATOR

**SERIES 270****EXTENSION ROD FOR CONTACT POINTS**

270-000-15



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
270-000-07	steel	40
270-000-08	steel	45
270-000-09	steel	50

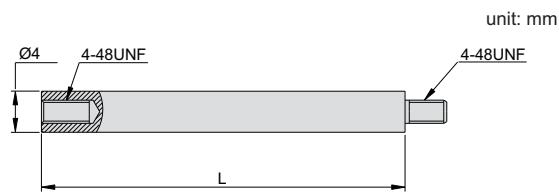
Code	Material	L
270-000-10	steel	55
270-000-11	steel	60
270-000-12	steel	65
270-000-13	steel	70
270-000-14	steel	75
270-000-15	steel	80
270-000-16	steel	90
270-000-17	steel	100

SERIES 270**EXTENSION ROD FOR CONTACT POINTS**

- ◆ For series 225 Inch indicator



270-000-04I

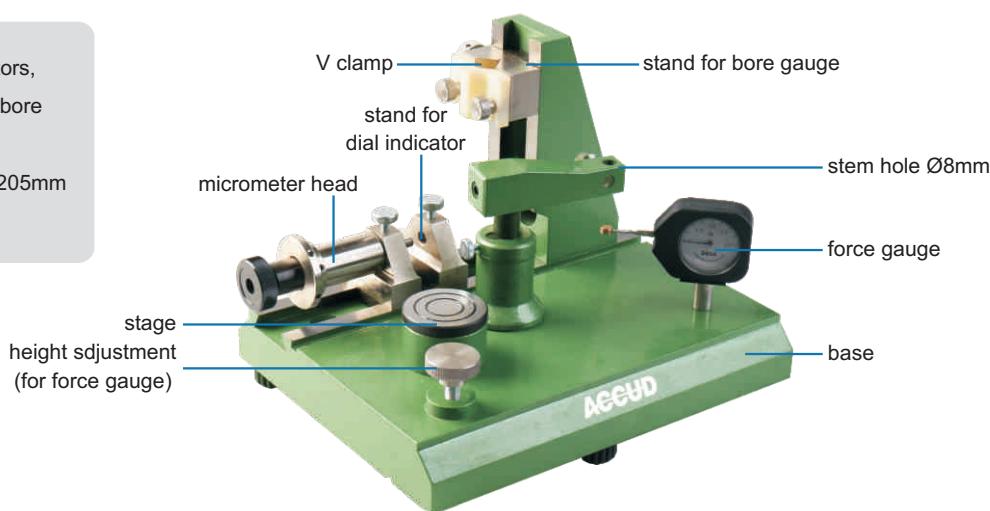


Code	Material	L
270-000-01I	steel	1"
270-000-02I	steel	2"
270-000-03I	steel	3"
270-000-04I	steel	4"

499

DIAL INDICATOR TESTER

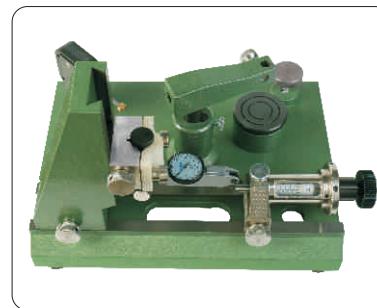
- ◆ To calibrate dial indicators, test indicators and dial bore gauges
- ◆ Dimension: 270x210x205mm
- ◆ Weight: 11kg



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

Micrometer head

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

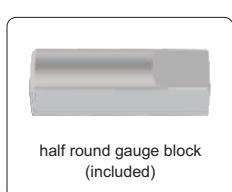
Force gauge

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

Stage

Diameter	Flatness	Roughness
0-1.6N	1µm	0.05µm

Half round gauge block (included)



half round gauge block
(included)

Dimension	Parallelism
10mm	1µm

Code
499-025-01

STAND

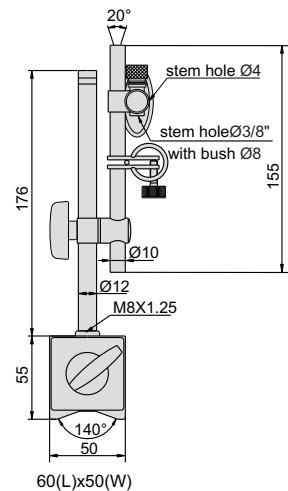


SERIES 281

MAGNETIC STAND

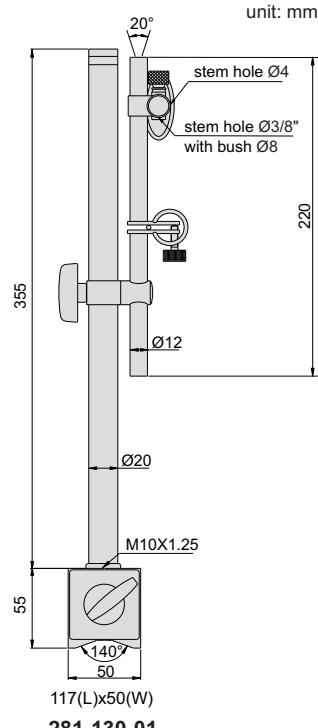
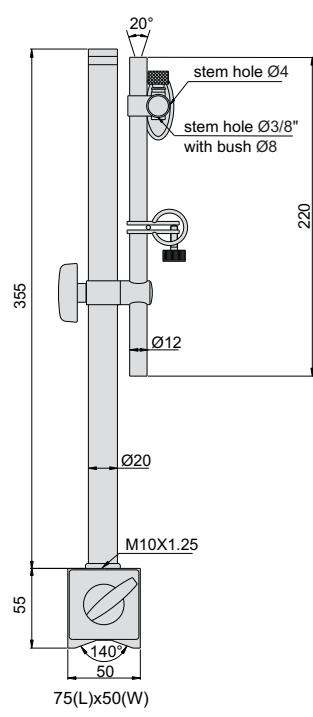
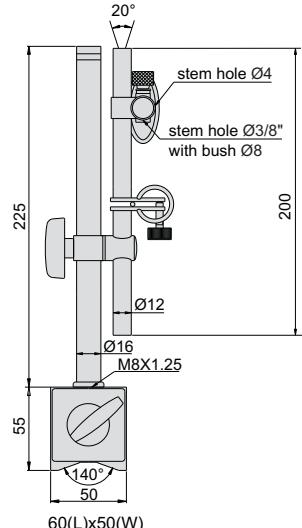
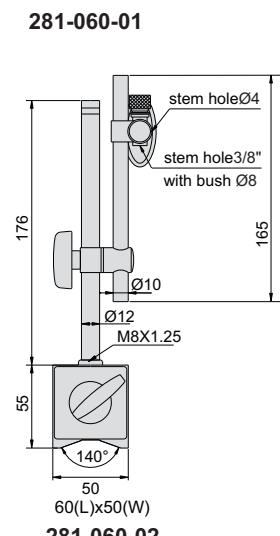
- For dial/digital indicators and dial test indicators
- V-block base

Application



281-060-02

281-060-01



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 fine adjustment and dovetail
- ◆ V-block base

Application

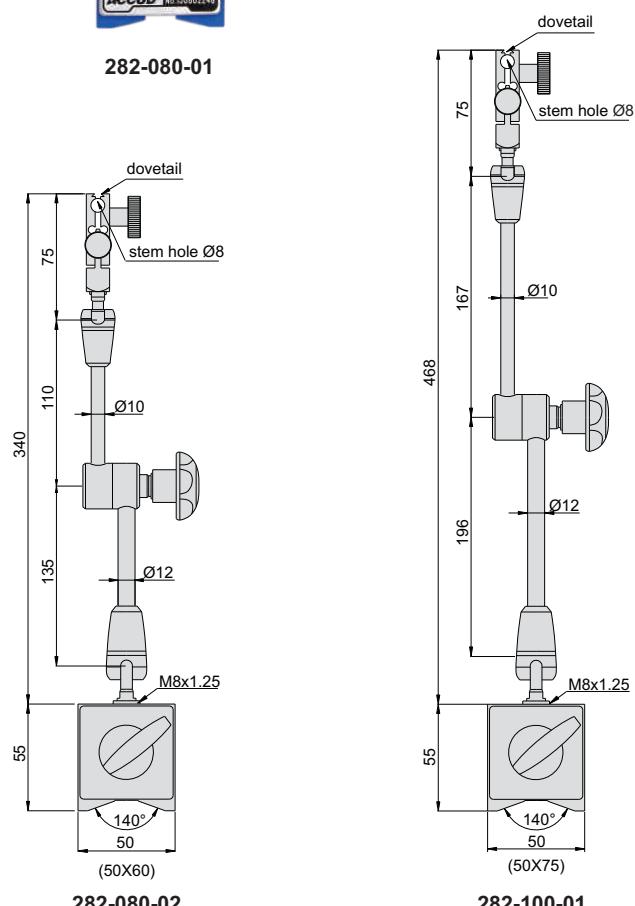


ACCUD



282-080-01

unit: mm



282-080-01

282-080-02

282-100-01

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

STAND

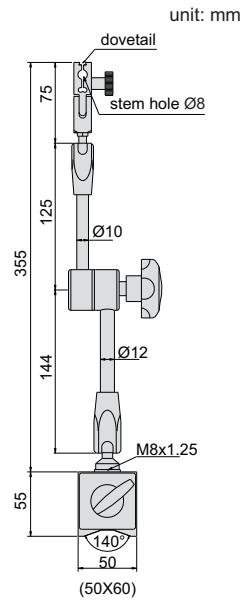


283

UNIVERSAL MAGNETIC STAND

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

Application



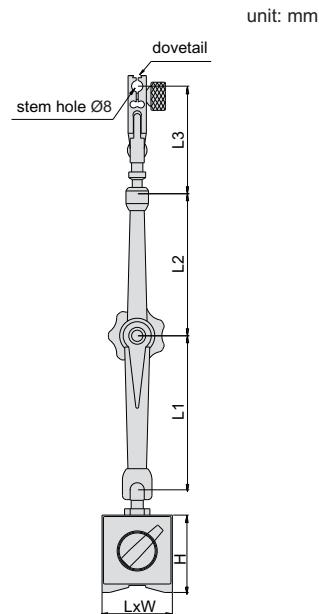
Code	Magnetic force
283-080-01	80kgf

SERIES 279

UNIVERSAL MAGNETIC STAND

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

Application

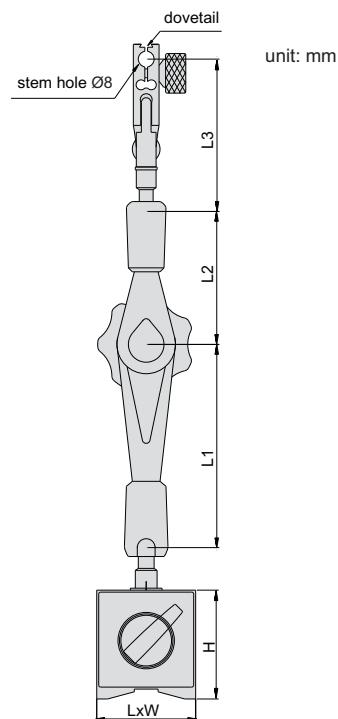


Code	Magnetic force	Base (LxWxH)	L1	L2	L3
279-030-01	30kgf	35x30x35	56	51	73
279-080-01	80kgf	60x50x55	110	101	76
279-100-01	100kgf	73x50x55	147	130	76

SERIES 278**UNIVERSAL MAGNETIC STAND**

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

Application



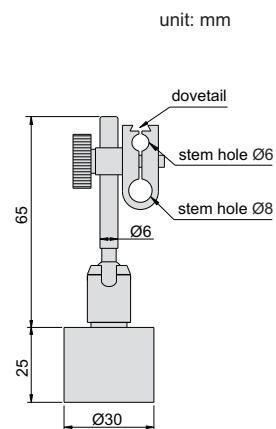
278-080-01

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

STAND

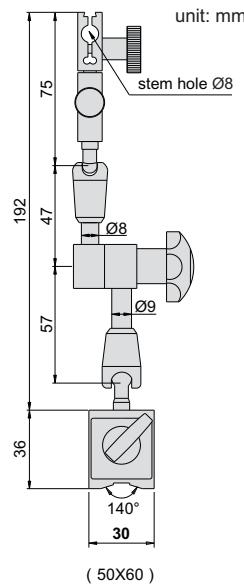


286

MINI MAGNETIC STAND

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

Application



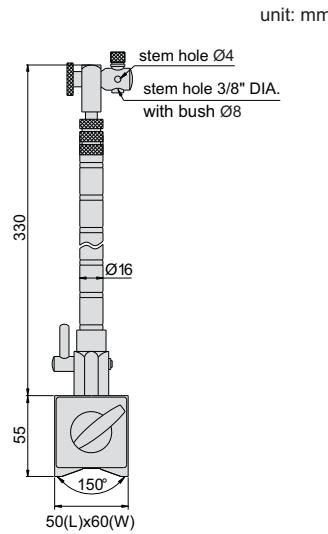
Code	Magnetic force	Stem hole
286-040-01	40kgf	Ø8mm

285

FLEX ARM MAGNETIC STAND

- ◆ For dial test indicators

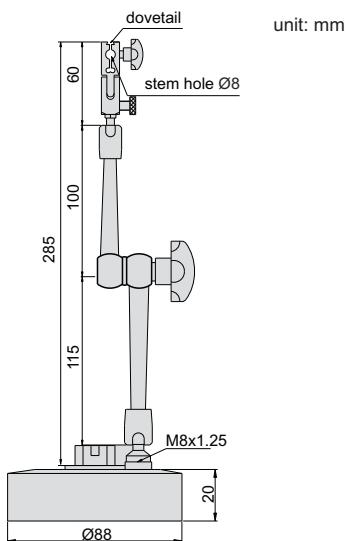
Application



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

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

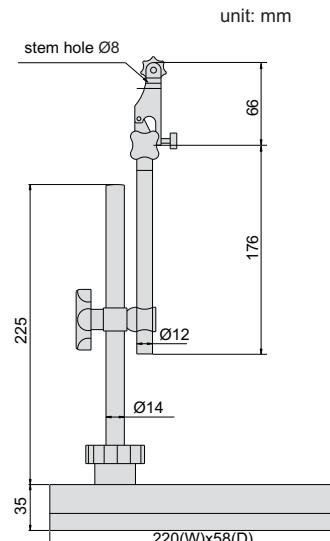
Application



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

- ◆ For dial/digital indicators and dial test indicators

Application



STAND

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

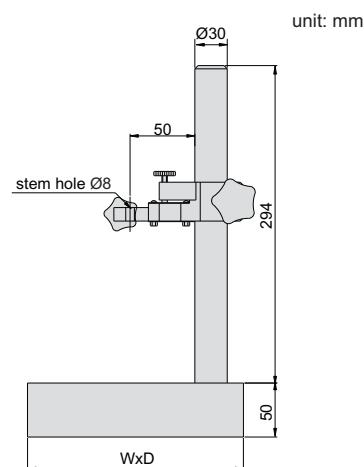
**SERIES 289****INDICATOR STAND WITH GRANITE BASE**

- 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**

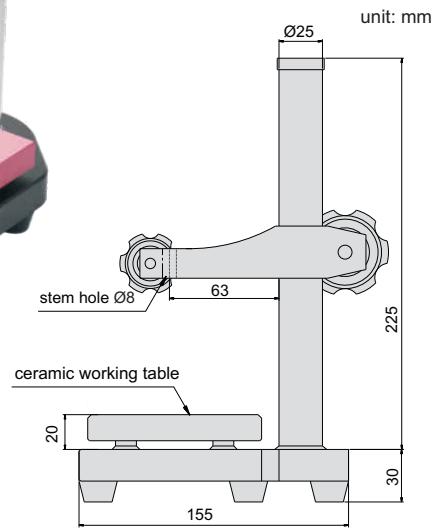
- Working table is made of ceramic
- Holder vertical travel: 150mm



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

**SERIES 294****INDICATOR STAND**

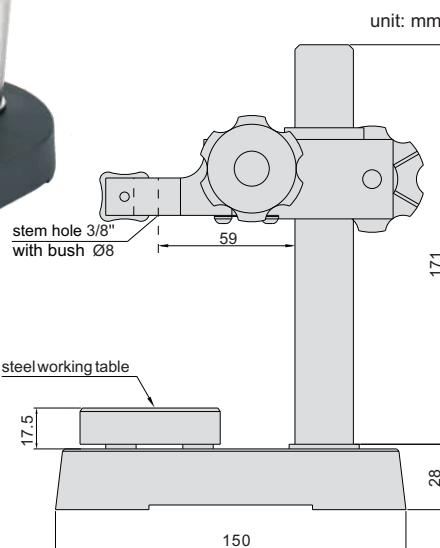
- Working table is made of steel
- Holder vertical travel: 100mm
- With fine adjustment: $\pm 1.5\text{mm}$
- Working table surface hardness is $60 \pm 2\text{HRC}$



294-080-12



294-060-11

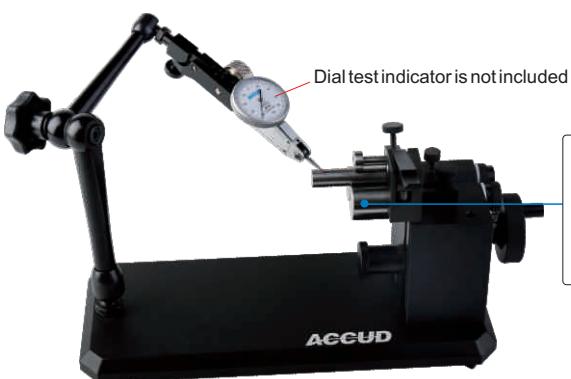


Code	Working table flatness	Working table size
294-060-11	$1.5\mu\text{m}$	$\varnothing 60\text{mm}$

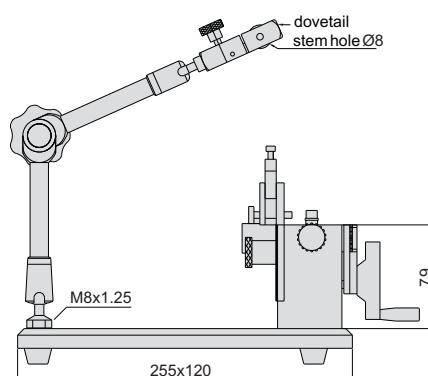
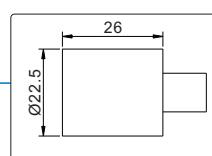
Code	Working table flatness	Working table size
294-080-12	$1.5\mu\text{m}$	$80 \times 80\text{mm}$

660**CONCENTRICITY GAUGE**

- 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



SERIES 410

DIGITAL INTERNAL CALIPER GAUGE

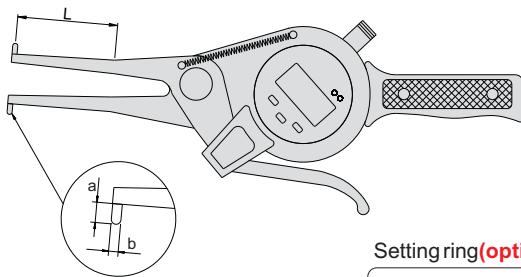


- ◆ Measure the internal dimension
- ◆ Resolution: 0.01mm/0.0005"



410-035-11

unit: mm



Setting ring(optional)



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"	±0.04mm	8	Ø3	90
410-075-11L	55-75mm/2.2-3"	±0.04mm	8	Ø3	250
410-095-11	75-95mm/3-3.8"	±0.04mm	8	Ø3	100
410-095-11L	75-95mm/3-3.8"	±0.04mm	8	Ø3	250
410-115-11	95-115mm/3.8-4.6"	±0.04mm	10	Ø3.2	120
410-115-11L	95-115mm/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

SERIES 411

INTERNAL DIAL CALIPER GAUGE

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



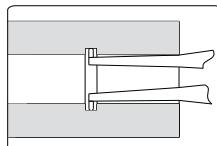
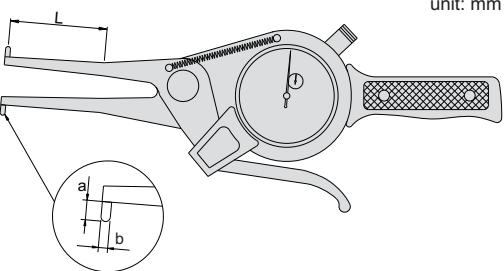
411-035-11

unit: mm

Setting ring(optional)



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



SERIES 420

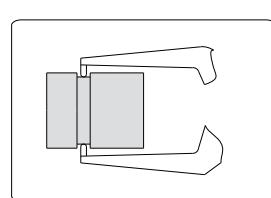
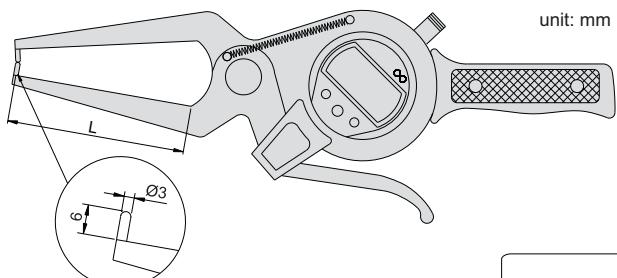
DIGITAL EXTERNAL CALIPER GAUGE



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



420-020-11



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

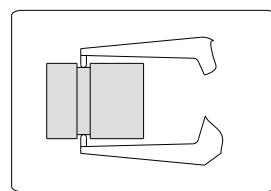
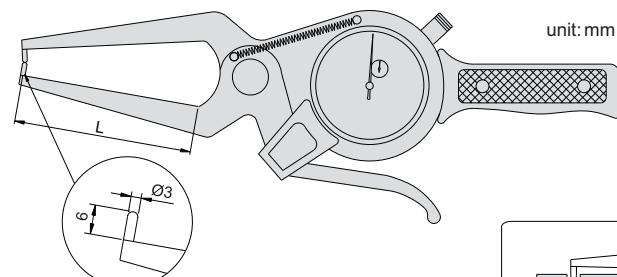
SERIES 421

EXTERNAL DIAL CALIPER GAUGE

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



421-020-11

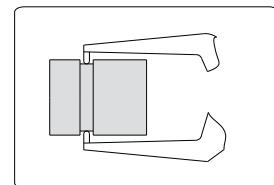
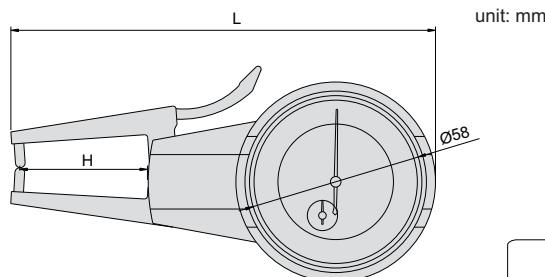


Code	Range	Accuracy	L
421-020-11	0-20mm	±0.04mm	60
421-040-11	20-40mm	±0.04mm	60
421-060-11	40-60mm	±0.04mm	55
421-080-11	60-80mm	±0.04mm	55
421-100-11	80-100mm	±0.04mm	55

THICKNESS

**SERIES 425****EXTERNAL DIAL CALIPER GAUGE**

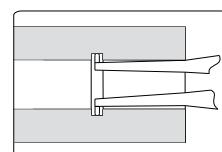
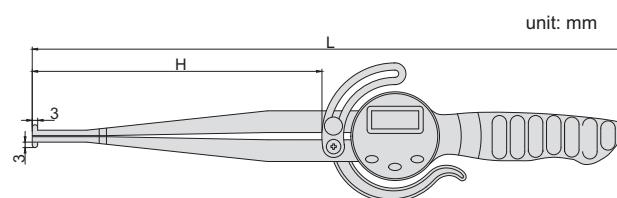
- ◆ Measure the external dimension



Code	Range	Graduation	Accuracy	L	H
425-010-11	0-10mm	0.01mm	±0.03mm	140mm	41mm
425-020-11	0-20mm	0.01mm	±0.03mm	192mm	92mm

SERIES 419**DIGITAL INTERNAL CALIPER GAUGE**

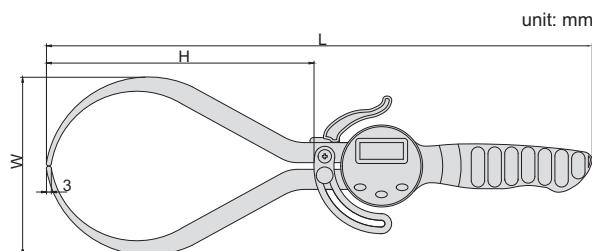
- ◆ For measuring the internal dimension
- ◆ Buttons: on/off, zero, data preset, mm/inch,data hold
- ◆ With fraction reading
- ◆ Automatic power off



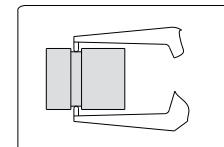
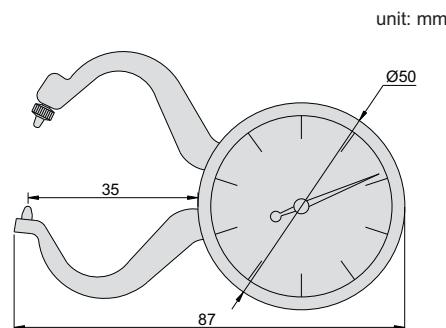
Code	Range	Resolution	Accuracy	L	H
419-006-11	12.7-165mm/0.5-6.5"	0.1mm/0.005"/1/64"	0.2mm/0.01"	252	85
419-008-11	12.7-216mm/0.5-8.5"	0.1mm/0.005"/1/64"	0.3mm/0.02"	327	160

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



Code	Range	Resolution	Accuracy	L	H	W
429-006-11	0-150mm/0-6"	0.1mm/0.005"1/64"	0.2mm/0.01"	273	105	75
429-008-11	0-200mm/0-8"	0.1mm/0.005"1/64"	0.3mm/0.02"	328	160	106

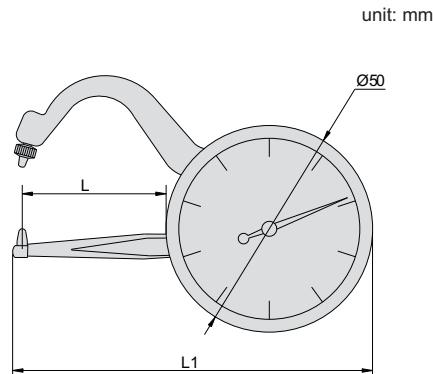
**451****THICKNESS GAUGE**

Code	Range	Graduation	Accuracy
451-010-11	0-10mm	0.05mm	±0.1mm

THICKNESS

SERIES 452 → **THICKNESS GAUGE**

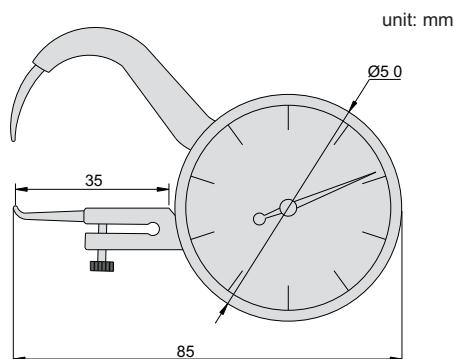

452-010-11



Code	Range	Graduation	Accuracy	L	L1
452-010-11	0-10mm	0.05mm	±0.1mm	35	85
452-010-12	0-10mm	0.05mm	±0.1mm	60	110

453 → **THICKNESS GAUGE WITH POINTED TIPS**

- Pointed tips can be used for small grooves and recesses

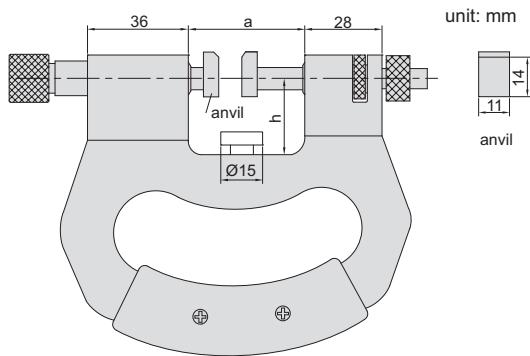


Code	Range	Graduation	Accuracy
453-010-11	0-10mm	0.05mm	±0.1mm



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/0.00005"
(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	42	20
431-050-11	25-50mm	69	32.5
431-075-11	50-75mm	94	45
431-100-11	75-100mm	119	57.5
431-125-11	100-125mm	144	70
431-150-11	125-150mm	169	82.5
431-175-11	150-175mm	194	95
431-200-11	175-200mm	219	107
431-225-11	200-225mm	244	120
431-250-11	225-250mm	269	132
431-275-11	250-275mm	294	145
431-300-11	275-300mm	319	157





SERIES 441

THICKNESS GAUGE

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



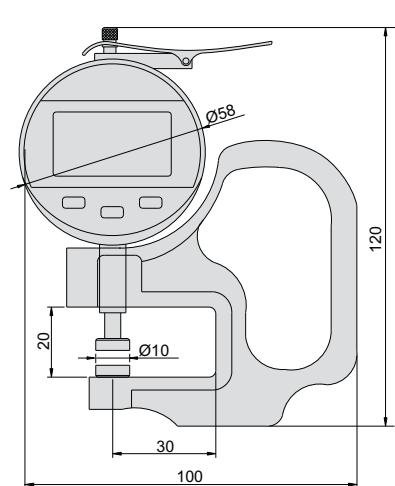
Resolution 0.001mm/0.00005"

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

441-010-11

Resolution 0.01mm/0.0005"

Code	Range	Accuracy
441-010-11	0-10mm/0-0.4"	±0.02mm



441

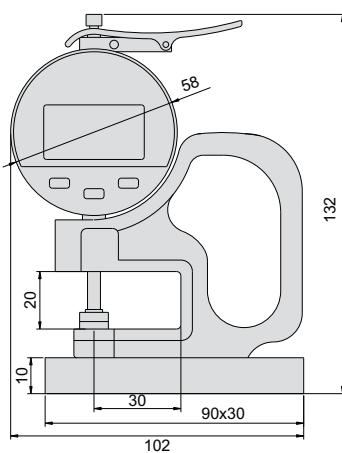
THICKNESS GAUGE



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



unit: mm



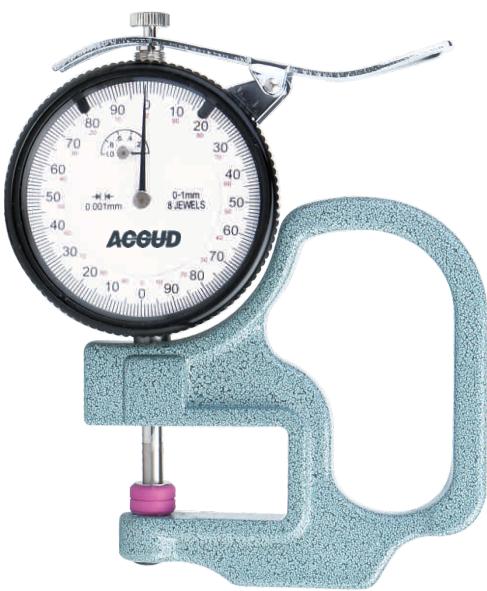
Code	Range	Resolution	Accuracy
441-010-11B	0-10mm/0-0.4"	0.01mm/0.0005"	±0.02mm

443

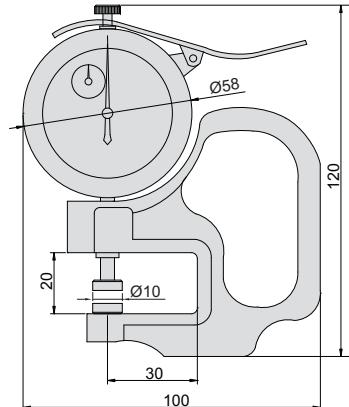
THICKNESS GAUGE



- ◆ Ceramic spindle tip and anvil



unit: mm



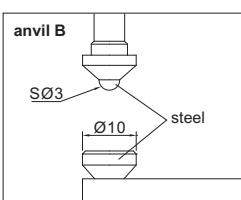
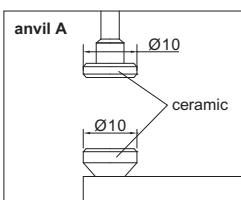
Code	Range	Graduation	Accuracy
443-001-01	0-1mm	0.001mm	±0.005mm

SERIES 443

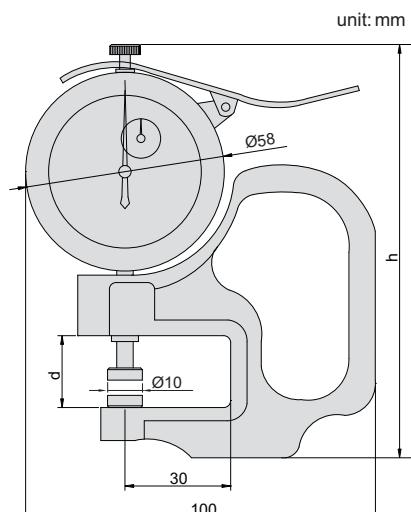
THICKNESS GAUGE



- ◆ Graduation: 0.01mm



443-010-11



Code	Range	Accuracy	Anvil	d	h
443-010-11	0-10mm	±0.02mm	A	20	120
443-010-12	0-10mm	±0.02mm	B	20	120
443-030-11	0-30mm	±0.02mm	A	38	140

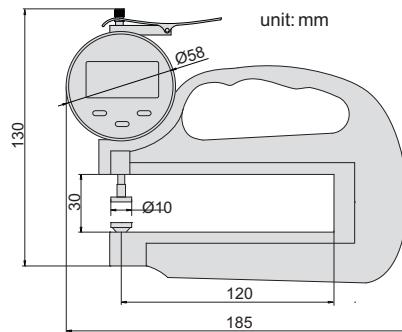
THICKNESS

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)



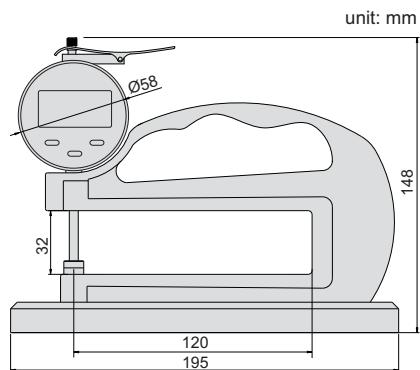
Code	Range	Resolution	Accuracy
460-010-11	0-10mm/0-0.4"	0.01mm/0.0005"	±0.02mm

460

DIGITAL THICKNESS GAUGE



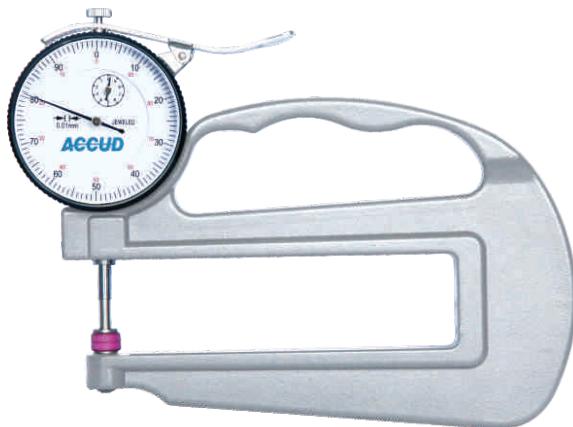
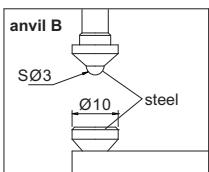
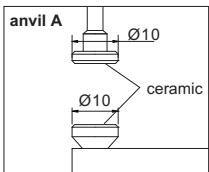
- ◆ Ceramic spindle tip and anvil
- ◆ Buttons: on/off, zero, mm/inch, ABS
- ◆ Automatic power off
- ◆ Data output(cable code:200-03 or 200-04)
- ◆ With metal base



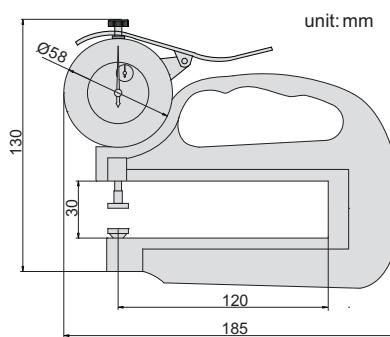
Code	Range	Resolution	Accuracy
460-010-11B	0-10mm/0-0.4"	0.01mm/0.0005"	±0.02mm

**SERIES 444****THICKNESS GAUGE**

- ◆ Large throat depth, for large workpiece measurement
- ◆ Graduation: 0.01mm



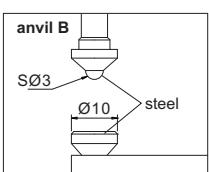
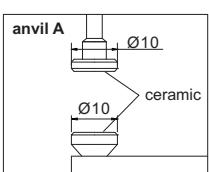
444-010-11



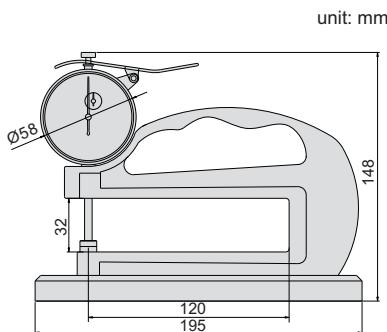
Code	Range	Accuracy	Anvil
444-010-11	0-10mm	±0.02mm	A
444-020-11	0-20mm	±0.03mm	A
444-010-12	0-10mm	±0.02mm	B
444-020-12	0-20mm	±0.03mm	B

SERIES 444**THICKNESS GAUGE**

- ◆ Large throat depth, for large workpiece measurement
- ◆ Graduation: 0.01mm



444-010-11B



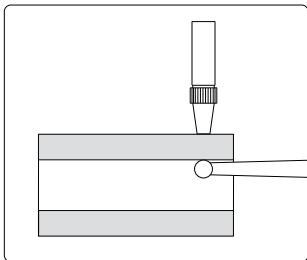
Code	Range	Accuracy	Anvil
444-010-11B	0-10mm	±0.02mm	A
444-020-11B	0-20mm	±0.03mm	A
444-010-12B	0-10mm	±0.02mm	B
444-020-12B	0-20mm	±0.03mm	B



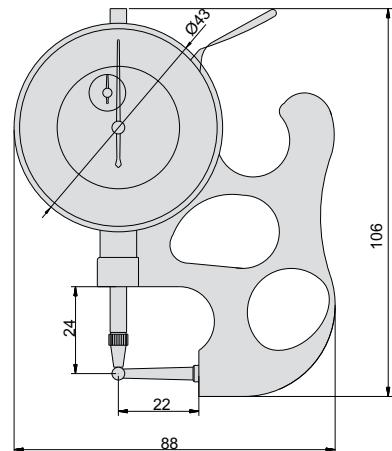
448

THICKNESS GAUGE

- ◆ Measure the wall thickness of tube



unit: mm



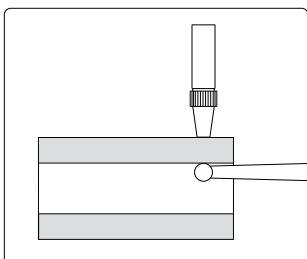
Code	Range	Accuracy	Graduation
448-010-11	0-10mm	±0.02mm	0.01mm

461

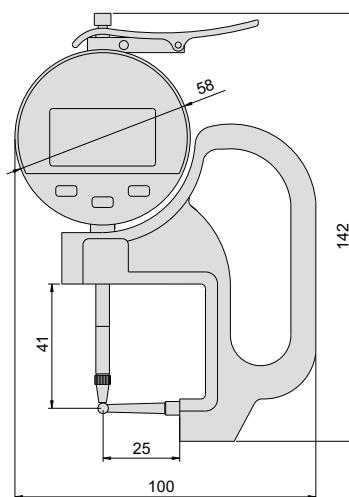
DIGITAL TUBE THICKNESS GAUGE



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



unit: mm



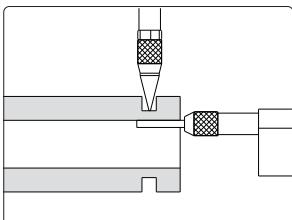
Code	Range	Resolution	Accuracy
461-010-11	0-10mm/0-0.4"	0.01mm/0.0005"	±0.02mm

462

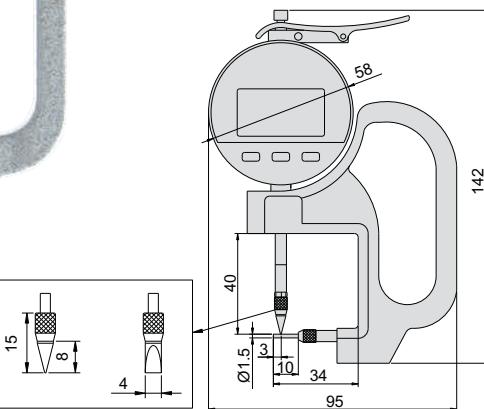
DIGITAL TUBE THICKNESS GAUGE



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



unit: mm



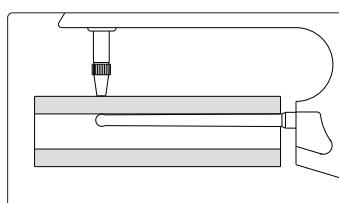
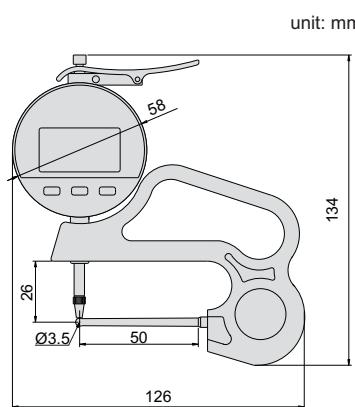
Code	Range	Resolution	Accuracy
462-010-11	0-10mm/0-0.4"	0.01mm/0.0005"	±0.02mm

463

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
463-010-11	0-10mm/0-0.4"	0.01mm/0.0005"	±0.02mm

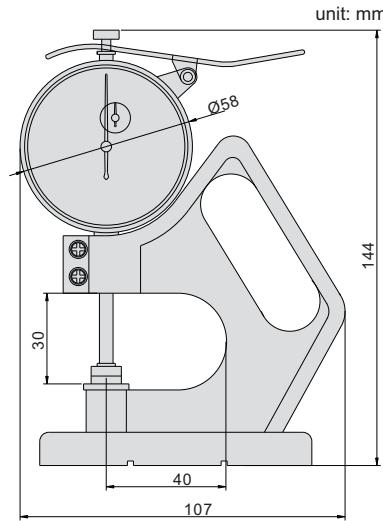
THICKNESS



449

THICKNESS GAUGE

- ◆ Graduation: 0.01mm
- ◆ Ceramic anvil, diameter: Ø10mm



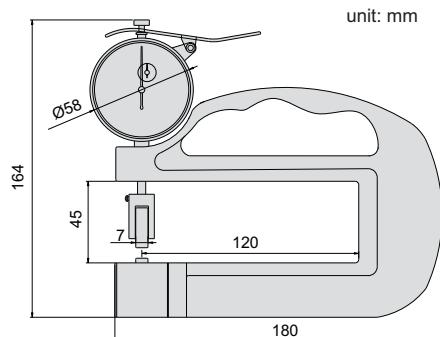
Code	Range	Accuracy
449-010-11	0-10mm	±0.02mm

445

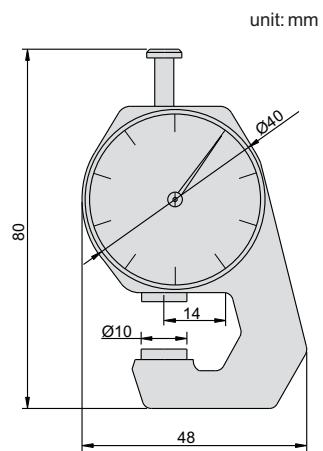
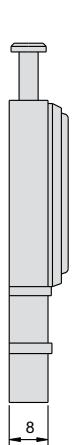
THICKNESS GAUGE WITH ROLLING WHEEL



- ◆ For continuous measurement

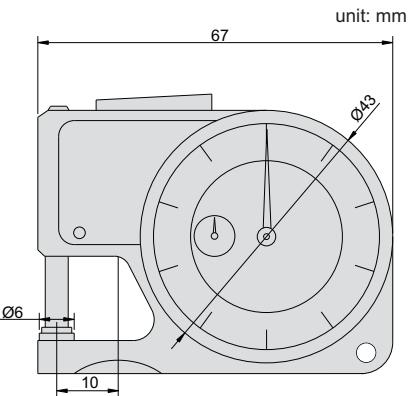


Code	Range	Graduation	Accuracy
445-010-11	0-10mm	0.01mm	±0.02mm



Code	Range	Graduation	Accuracy
446-010-11	0-10mm	0.1mm	±0.05mm

- ◆ Stainless steel spindle tip and anvil



Code	Range	Graduation	Accuracy
447-010-11	0-10mm	0.01mm	±0.02mm

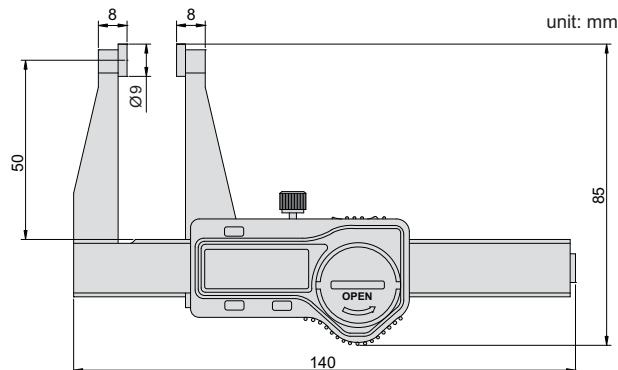


433

DIGITAL SNAP GAUGE



- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Automatic power on/off
- ◆ Data output(cable code:100-11 or 100-12)
- ◆ Made of stainless steel



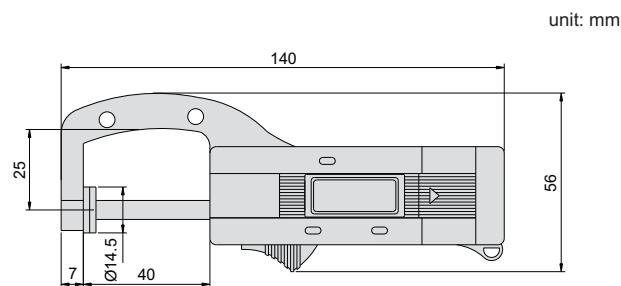
Code	Range	Accuracy
433-002-11	0-50mm/0-2"	±0.03mm

434

DIGITAL SNAP GAUGE



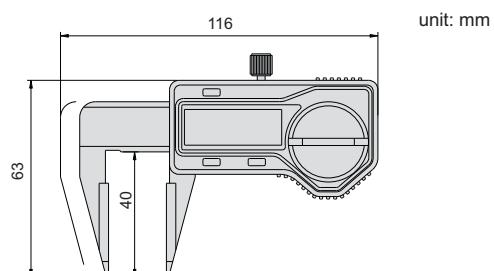
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Automatic power on/off



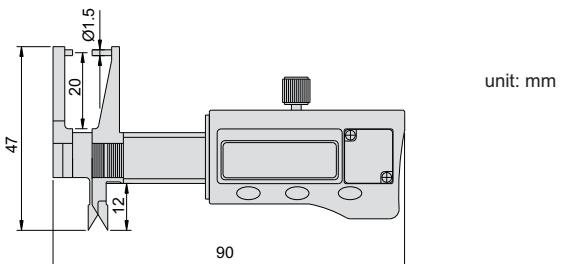
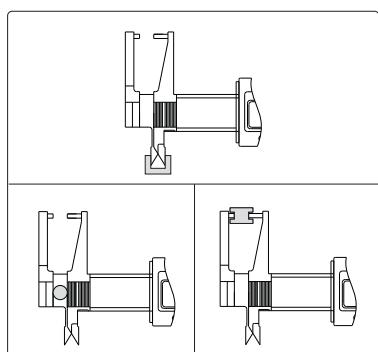
Code	Range	Resolution	Accuracy
434-001-11	0-25mm/0-1"	0.01mm/0.0005"	±0.03mm

435**DIGITAL SNAP GAUGE**

- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Automatic power on/off
- ◆ Data output(cable code:100-11 or 100-12)
- ◆ Made of stainless steel

**436****DIGITAL 3-PURPOSE SNAP GAUGE**

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



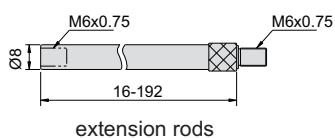
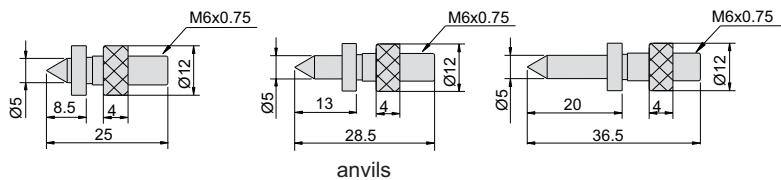
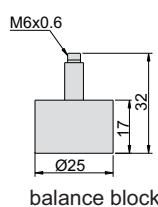
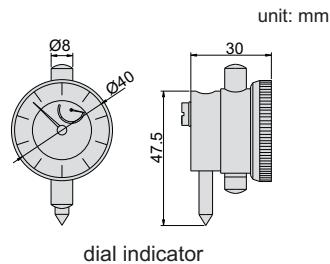
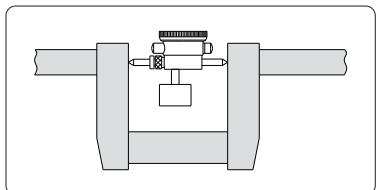
Code	Range	Accuracy
436-001-11	0-25mm/0-1"	±0.03mm

THICKNESS

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



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

SERIES 512

STEEL GAUGE BLOCK SET

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

512-□□□-□XI

- >0: grade 0
- >1: grade 1
- >2: grade 2

Example:

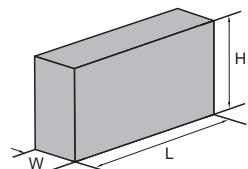
Code	Quantity	Grade
512-036-00I	36	0
512-036-01I	36	1
512-036-02I	36	2



512-081-00I

Size:

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



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

Code	Blocks per set	Block allocation		
		Size(inch)	Step(inch)	Quantity
512-081-0XII	81	0.1001-0.1009	0.0001	9
		0.101-0.149	0.001	49
		0.05-0.95	0.05	19
		1-4		4

SERIES 512

CARBIDE GAUGE BLOCK SET



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

512-□□□-□XT
 →0: grade0
 →1: grade1

Example:

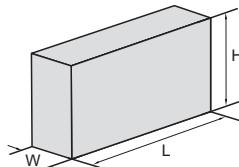
Code	Grade	Quantity
512-112-00T	0	112
512-112-01T	1	112



512-087-01T

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
512-122-0XT	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
		25-75	50	2
		1.0005		1
		1.001-1.009	0.001	9
		1.01-1.49	0.01	49
512-112-0XT	112	0.5-24.5	0.5	49
		25-100	25	4
		1.005		1
		1.01-1.49	0.01	49
		0.5-24.5	0.5	49
512-103-0XT	103	25-100	25	4
		1.0005		1
		1.001-1.009	0.001	9
		1.01-1.49	0.01	49
512-087-0XT	87	0.5-9.5	0.5	19
		10-100	10	10
		1.001-1.009	0.001	9
		1.01-1.49	0.01	49
		0.5-9.5	0.5	19
512-083-0XT	83	10-100	10	10
		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

Code	Blocks per set	Block allocation		
		Size(mm)	Step(mm)	Quantity
512-076-0XT	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
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
512-032-0XT	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

GAUGE



SERIES 512

STEEL GAUGE BLOCK SET



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

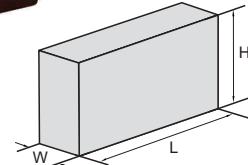
512-□□□-□X
 →0: grade0
 →1: grade1
 →2: grade2

Example:

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



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
		25-75	50	2
		1.0005		1
512-112-0X	112	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
		1.005		1
512-103-0X	103	1.01-1.49	0.01	49
		0.5-24.5	0.5	49
		25-100	25	4
		1.005		1
		1.01-1.49	0.01	49
512-088-0X	88	0.5-9.5	0.5	19
		10-100	10	10
		1.0005		1
		1.001-1.009	0.001	9
		1.01-1.49	0.01	49
512-087-0X	87	1.01-1.49	0.01	49
		0.5-9.5	0.5	19
		10-100	10	10
		1.001-1.009	0.001	9
		1.01-1.49	0.01	49

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	4
		1.5-1.9	0.1	49
		2-9.5	0.5	5
		10-100	10	16
		1.005		1
512-076-0X	76	1.01-1.49	0.01	49
		0.5-9.5	0.5	19
		10-40	10	4
		50-100	25	3
		0.5		1
512-056-0X	56	1.001-1.009	0.001	9
		1.01-1.09	0.01	9
		1.1-1.9	0.1	9
		1-24	1	24
		25-100	25	4
512-047-0X	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
512-047-1X	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

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
		10-100	10	10
		1.005		1
		1.01-1.09	0.01	9
		1.1-1.9	0.1	9
512-038-0X	38	1-9	1	9
		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
		1.01-1.09	0.01	9
512-032-0X	32	1.1-1.9	0.1	9
		1-9	1	9
		10-30	10	3
		50		1
		125-175	25	3
512-008-0X	8	200-250	50	2
		300-500	100	3

SERIES 511

CERAMIC GAUGE BLOCK SET



- Made of ceramic
- Meet ISO 3650
- With calibration certificate
- Code explanation

511-□□□-□X

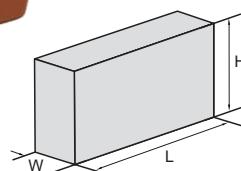
→0: grade0
→1: grade1

Example:

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



511-087-00



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
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
		1.0005		1
511-088-0X	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
		1.001-1.009	0.001	9
511-087-0X	87	1.01-1.49	0.01	49
		0.5-9.5	0.5	19
		10-100	10	10
		1.005		1
		1.01-1.49	0.01	49
511-076-0X	76	0.5-9.5	0.5	19
		10-40	10	4
		50-100	25	3
		1.005		1
		1.01-1.49	0.01	49
511-056-0X	56	1.001-1.009	0.001	9
		1.01-1.09	0.01	9
		1.1-1.9	0.1	9
		1-24	1	24
		25-100	25	4
		0.5		1
		1.001-1.009	0.001	9

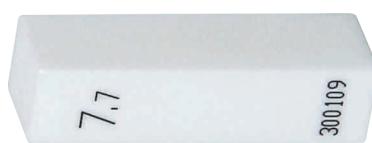
Code	Blocks per set	Block allocation		
		Size(mm)	Step(mm)	Quantity
511-047-0X	47	1.005		1
		1.01-1.09	0.01	9
		1.1-1.9	0.1	9
		1-24	1	24
		25-100	25	4
511-047-1X	47	1.005		1
		1.01-1.19	0.01	19
		1.2-1.9	0.1	8
		1-9	1	9
		10-100	10	10
511-046-0X	46	1.001-1.009	0.001	9
		1.01-1.09	0.01	9
		1.1-1.9	0.1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

GAUGE

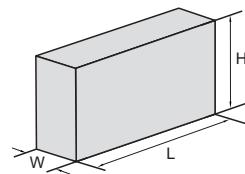
SERIES 515**CERAMIC INDIVIDUAL GAUGE BLOCK (<10MM)**

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

515-□□□-□X
 decimal ← integer
 →0: grade0
 →1: grade1



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

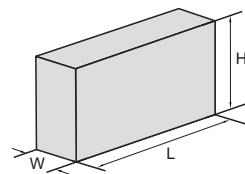
SERIES 516**CERAMIC INDIVIDUAL GAUGE BLOCK (≥10MM)**

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

516-□□□-□X
 →0: grade0
 →1: grade1



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)
516-100-0X	10
516-103-0X	10.3
516-105-0X	10.5
516-110-0X	11
516-115-0X	11.5
516-120-0X	12
516-125-0X	12.5
516-129-0X	12.9
516-130-0X	13
516-135-0X	13.5

Code	Size(mm)
516-140-0X	14
516-145-0X	14.5
516-150-0X	15
516-155-0X	15.5
516-160-0X	16
516-165-0X	16.5
516-170-0X	17
516-175-0X	17.5
516-176-0X	17.6
516-180-0X	18

Code	Size(mm)
516-185-0X	18.5
516-190-0X	19
516-195-0X	19.5
516-200-0X	20
516-202-0X	20.2
516-205-0X	20.5
516-210-0X	21
516-215-0X	21.5
516-220-0X	22
516-225-0X	22.5

Code	Size(mm)
516-228-0X	22.8
516-230-0X	23
516-235-0X	23.5
516-240-0X	24
516-245-0X	24.5
516-250-0X	25
516-300-0X	30
516-400-0X	40
516-413-0X	41.3
516-500-0X	50

Code	Size(mm)
516-600-0X	60
516-700-0X	70
516-750-0X	75
516-800-0X	80
516-900-0X	90
516-004-1X	100
516-005-1X	125
516-006-1X	150

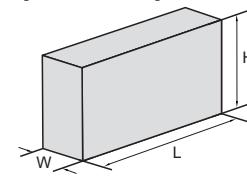
SERIES 513

STEEL INDIVIDUAL GAUGE BLOCK(<10MM)



- Made of steel
- Meet ISO 3650
- With calibration certificate
- Code explanation

513-□□□-□X
 decimal ← integer
 → 0: grade0
 → 1: grade1
 → 2: grade2



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	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	

Example:

Code	Size(mm)	Grade
513-500-00	0.5	0
513-500-01	0.5	1
513-500-02	0.5	2
513-000-10	1	0
513-0005-11	1.0005	1
513-400-12	1.4	2
513-480-11	1.48	1

SERIES 514

STEEL INDIVIDUAL GAUGE BLOCK (>10MM)

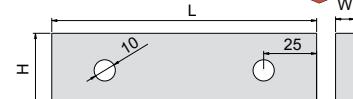


- Made of steel
- Meet ISO 3650
- With calibration certificate
- Code explanation

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

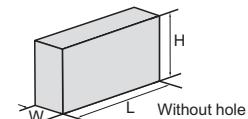


514-004-1X



Size:

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

GAUGE



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 inspection certificate



517-005-01

Code	Guage block allocation	Quantity	Grade	Ring gauge
517-005-01	30, 41.3, 131.4mm	5pcs	1	Ø4, Ø25mm
517-006-01	30, 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 inspection certificate



517-012-01

Code	Guage 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 inspection certificate

Measure



518-001-03



Code	Quantity	Form 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 inspection certificate



518-001-01

GAUGE

Code	Quantity	Form 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

MICROMETER INSPECTION GAUGE BLOCK SET



- ♦ Meet ISO3650
- ♦ Grade 0



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

519

GAUGE BLOCK ACCESSORY

- ♦ To expand gage block applications

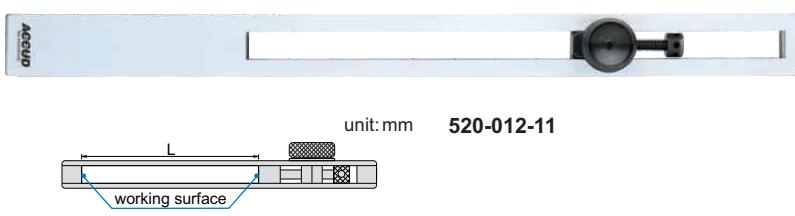


Code	Total quantity	Accessory allocation
519-016-01	17pcs	3pcs holder (50mm, 100mm, 200mm) 6pcs halfround jaw (2mm, 5mm, 10mm, 2pcs each) 1pc holder base, 2pcs 100mm plain jaws, 1pc scriber point, 1pc center point, 2pcs triangular straight edge jaw 60mm 1pc 100mm straight edge

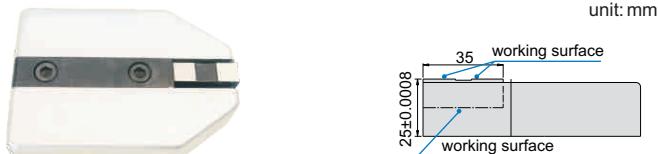
SERIES 520

GAUGE BLOCK ACCESSORIES

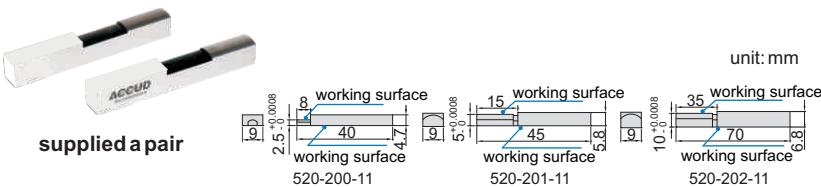
Code	Name	Clamping range (L)
520-002-11	holder	0-50mm
520-004-11	holder	50-100mm
520-008-11	holder	100-200mm
520-012-11	holder	200-300mm
520-016-11	holder	300-400mm
520-020-11	holder	400-500mm



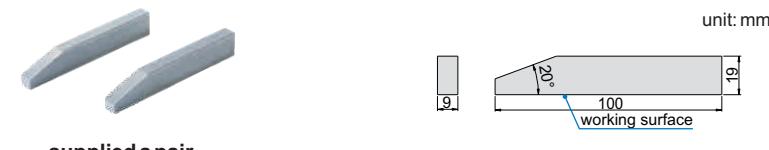
Code	Name
520-100-11	base



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



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

(plain jaw+holder) set zero	(half round jaw+holder) set a standard inside length L	(halfround jaw+holder) measure inside diameter
	(base+holder+scriber) measure height or scribe	(scriber+centre point+holder) scribe circle

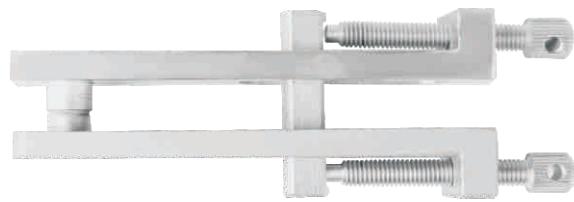
GAUGE

510

GAUGE BLOCK HOLDER

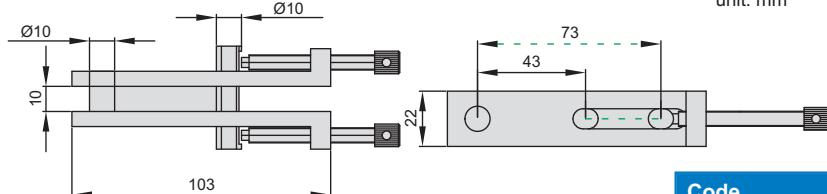
- For gauge blocks over 100mm with clamping holes
- Optional accessory: gauge block holder accessory, gauge block accessory

Application

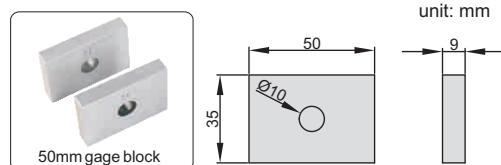
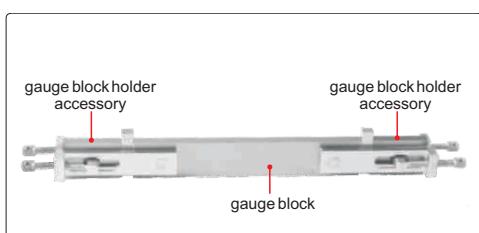


510-000-01

unit: mm



Code
510-000-01



Code
510-000-02

Code	Include
510-302-01	510-000-01 (3set) 510-000-02 (1pairs)

SERIES 561

CHECK MASTER

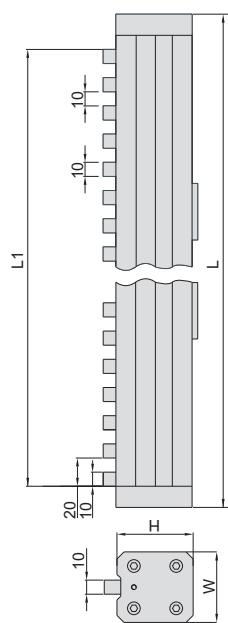


- For checking the accuracy of measuring tools like calipers, height gage and so on
- Can be used in vertical and horizontal orientation
- Supplied with inspection certificate



561-024-01

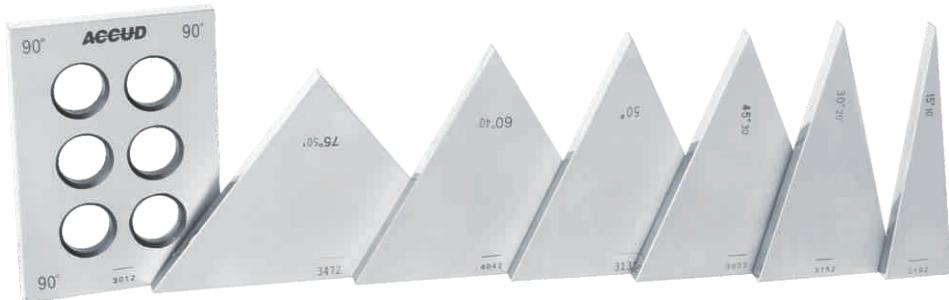
unit: mm



Code	Range	Parallelism of blocks	Accuracy	W	H	L1	L
561-012-01	300mm	1.2µm	±2.5µm	45	49	310	350
561-018-01	450mm	1.5µm	±3.5µm	50	54	470	510
561-024-01	600mm	1.5µm	±3.5µm	50	54	610	650

571

ANGLE GAUGE BLOCK SET



571-007-01

- ◆ For angle comparison
- ◆ One angle can be used in triangle blocks
four angles can be used in rectangle blocks

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

SERIES 522

PIN GAUGE

CUSTOM-MADE

Standard size above 40mm
are available upon request

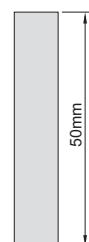
- ◆ Accuracy:
±1µm (range:0.1-13mm)
±2µm (range:13-40mm)
- ◆ Made of alloy steel
- ◆ Hardness HRC62-65
- ◆ Code explanation:

522-□□□□□-2

diameter



unit: mm



522-06933-2

Package



Example:

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

GAUGE



522

PIN GAUGE

CUSTOM-MADE

Size between 13 to 30mm,
are available upon request

- ◆ Supplied diameter from 0.3 to 13mm,
- ◆ Accuracy:
 $\pm 1\mu\text{m}$ (range:0.3-13mm)
 $\pm 2\mu\text{m}$ (range:<30mm)
- ◆ Carbide material
- ◆ Hardness HRC85-89
- ◆ Length 50mm
- ◆ Code explanation:

522- - - -2T

diameter



unit: mm



Package

522-06000-2T



Example:

Code	Size(mm)	Accuracy
522-10000-2T	10	$\pm 1\mu\text{m}$

SERIES 521

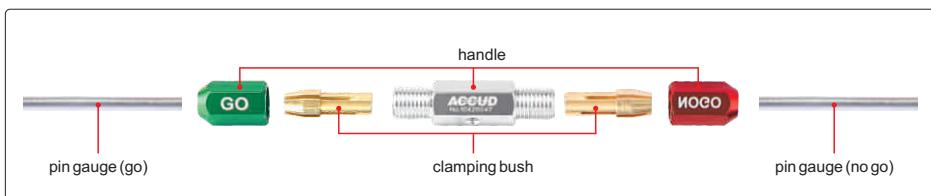
PIN GAUGE HANDLES

- ◆ 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

SERIES 523

PIN GAUGE SET

- ◆ Made of alloy steel
- ◆ Hardness HRC62-65
- ◆ Accuracy:
±1µm (range:0.1-13mm)
±2µm (range:13-40mm)



523-650-51

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

Code	Diameter(mm)	Step	Quantity
523-700-51	7.00-7.50	0.01mm	41
523-750-51	7.50-8.00	0.01mm	31
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
523-500-41	1.0-5.0	0.1mm	51
523-500-51	5.0-10.0	0.1mm	51
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
523-1150-01	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

Code	Diameter(mm)	Step	Quantity
523-1350-51	13.50-14.00	0.01mm	41
523-1400-51	14.00-14.50	0.01mm	31
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
523-1650-41	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
523-1900-01	19.00-19.50	0.01mm	51
523-1950-51	19.50-20.00	0.01mm	51
523-1000-01	10.0-15.0	0.1mm	51
523-1500-01	15.0-20.0	0.1mm	51

SERIES 524

BOX FOR PIN GAUGE SET

- ◆ For containing pin gauges



524-001-01

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

GAUGE

526

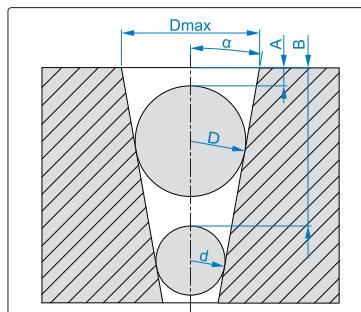
STEEL BALL SET



- ◆ 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	$\pm 0.8\mu\text{m}$	$0.5\mu\text{m}$
21-30mm	$\pm 0.8\mu\text{m}$	$0.7\mu\text{m}$
30-40mm	$\pm 1.1\mu\text{m}$	$0.7\mu\text{m}$
40-65mm	$\pm 1.5\mu\text{m}$	$1.0\mu\text{m}$

Diameter	Supplied difference	Roundness and conicity
65-110mm	$\pm 1.9\mu\text{m}$	$1.2\mu\text{m}$
110-120mm	$\pm 1.9\mu\text{m}$	$1.6\mu\text{m}$
120-130mm	$\pm 2.4\mu\text{m}$	$1.6\mu\text{m}$

Code	Size(mm)
525-003-01	$\varnothing 3$
525-004-01	$\varnothing 4$
525-005-01	$\varnothing 5$
525-006-01	$\varnothing 6$
525-007-01	$\varnothing 7$
525-008-01	$\varnothing 8$
525-009-01	$\varnothing 9$
525-010-01	$\varnothing 10$
525-011-01	$\varnothing 11$
525-012-01	$\varnothing 12$
525-013-01	$\varnothing 13$
525-014-01	$\varnothing 14$
525-015-01	$\varnothing 15$

Code	Size(mm)
525-016-01	$\varnothing 16$
525-017-01	$\varnothing 17$
525-018-01	$\varnothing 18$
525-019-01	$\varnothing 19$
525-020-01	$\varnothing 20$
525-021-01	$\varnothing 21$
525-022-01	$\varnothing 22$
525-023-01	$\varnothing 23$
525-024-01	$\varnothing 24$
525-025-01	$\varnothing 25$
525-026-01	$\varnothing 26$
525-027-01	$\varnothing 27$
525-028-01	$\varnothing 28$

Code	Size(mm)
525-029-01	$\varnothing 29$
525-030-01	$\varnothing 30$
525-031-01	$\varnothing 31$
525-032-01	$\varnothing 32$
525-033-01	$\varnothing 33$
525-034-01	$\varnothing 34$
525-035-01	$\varnothing 35$
525-036-01	$\varnothing 36$
525-037-01	$\varnothing 37$
525-038-01	$\varnothing 38$
525-039-01	$\varnothing 39$
525-040-01	$\varnothing 40$
525-041-01	$\varnothing 41$

Code	Size(mm)
525-042-01	$\varnothing 42$
525-043-01	$\varnothing 43$
525-044-01	$\varnothing 44$
525-045-01	$\varnothing 45$
525-046-01	$\varnothing 46$
525-047-01	$\varnothing 47$
525-048-01	$\varnothing 48$
525-049-01	$\varnothing 49$
525-050-01	$\varnothing 50$
525-055-01	$\varnothing 55$
525-060-01	$\varnothing 60$
525-065-01	$\varnothing 65$
525-070-01	$\varnothing 70$

Code	Size(mm)
525-075-01	$\varnothing 75$
525-080-01	$\varnothing 80$
525-085-01	$\varnothing 85$
525-090-01	$\varnothing 90$
525-095-01	$\varnothing 95$
525-100-01	$\varnothing 100$
525-105-01	$\varnothing 105$
525-110-01	$\varnothing 110$
525-115-01	$\varnothing 115$
525-120-01	$\varnothing 120$
525-125-01	$\varnothing 125$
525-130-01	$\varnothing 130$

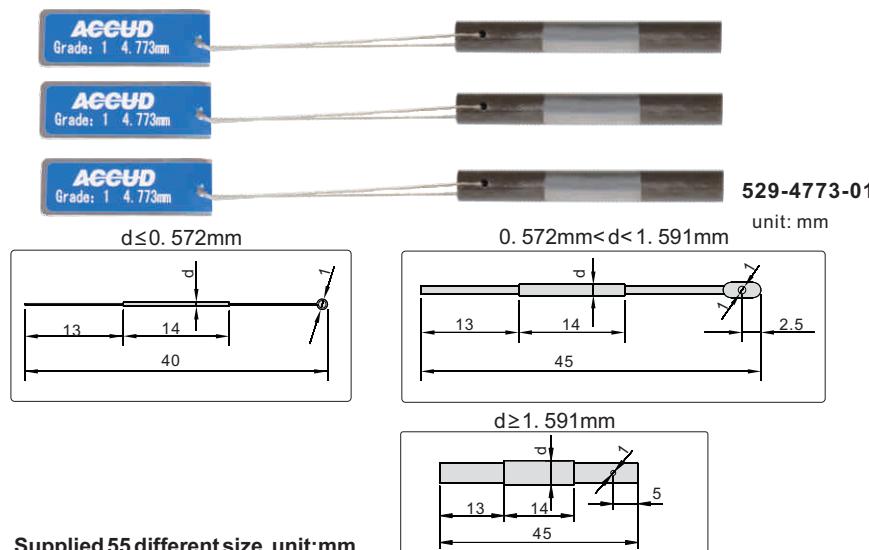
SERIES 529

THREE WIRE MEASURING UNITS

- Made of alloy steel
- One unit includes 3pcs same size
- Hardness HRC60-62
- Accuracy:
 $\pm 0.25\mu\text{m}$ (grade 0), $\pm 0.5\mu\text{m}$ (grade 1)
- Roundness:
 $0.25\mu\text{m}$ (grade 0), $0.5\mu\text{m}$ (grade 1)
- Code explanation

529-□□□□-0X

→0: grade0
→1: grade1



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
- Deviation (difference between the order size and the size marked on supplied setting ring)
 $\varnothing 3-100: \pm 3.0\mu\text{m}$ $\varnothing 100-300: \pm 5.0\mu\text{m}$
- Accuracy: $\varnothing 3-100: \pm 1.0\mu\text{m}$
 $\varnothing 100-250: \pm 2.0\mu\text{m}$ $\varnothing 250-300: \pm 2.5\mu\text{m}$
- Range: $\varnothing 3-300\text{mm}$



531-040-01



Code	Size(mm)
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

Code	Size(mm)
531-017-01	Ø17
531-018-01	Ø18
531-019-01	Ø19
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

Code	Size(mm)
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
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

Code	Size(mm)
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
531-075-01	Ø75
531-080-01	Ø80
531-085-01	Ø85

GAUGE



SERIES 541

PLAIN PLUG GAUGE

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



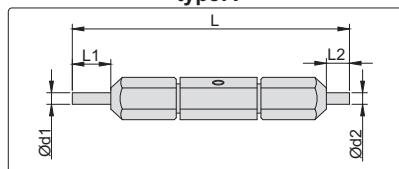
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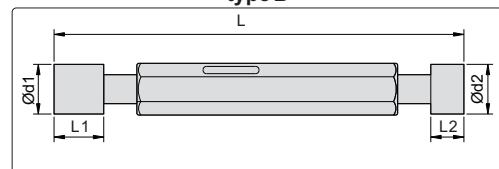
541-006-17

unit: mm

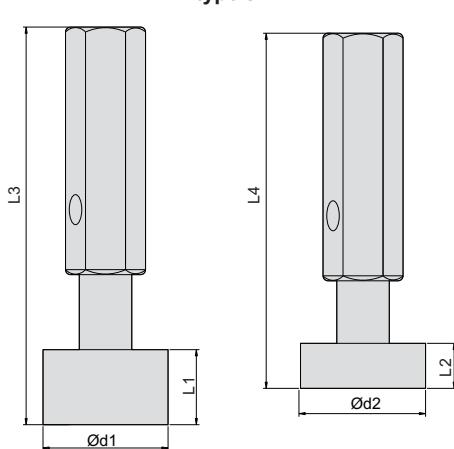
type A



type B



type C



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

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

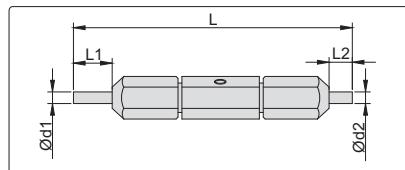
SERIES 541**CARBIDE PLAIN PLUG GAUGE**

CUSTOM-MADE

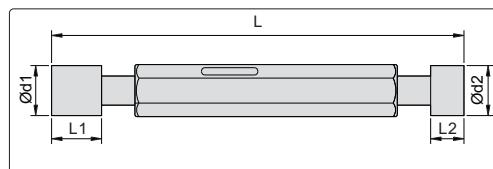
Size between 1 to 30mm,
are available upon request**541-020-17T****541-006-17T**

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

GAUGE

532/533/534/535

THREAD RING GAUGE

CUSTOM-MADE
other sizes are available
upon request

- ◆ 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**THREAD PLUG 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**FINE THREAD PLUG 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
543-039-01	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

GAUGE

**SERIES 537/538****AMERICAN STANDARD THREAD RING GAUGE**

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



537-71620-UNF

CUSTOM-MADE
other sizes are available upon request

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**

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



CUSTOM-MADE
other sizes are available upon request

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

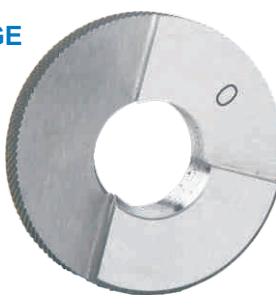
Code(GO)	Size
547-51618-UNC	5/16-18UNC
547-51624-UNF	5/16-24UNF
547-03816-UNC	3/8-16UNC
547-03824-UNF	3/8-24UNF
547-71614-UNC	7/16-14UNC
547-71620-UNF	7/16-20 UNF
547-01213-UNC	1/2-13 UNC
547-01220-UNF	1/2-20 UNF
547-91612-UNC	9/16-12UNC
547-91618-UNF	9/16-18UNF

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

**SERIES 544****NPT THREAD GAUGE**

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

Code	Size	Code	Size
544-027-04R	NPT 1/16" x 27	544-11D5-12R	NPT 1-1/4" x 11.5
544-027-03R	NPT 1/8" x 27	544-11D5-11R	NPT 1-1/2" x 11.5
544-018-02R	NPT 1/4" x 18	544-11D5-20R	NPT 2" x 11.5
544-018-33R	NPT 3/8" x 18	544-008-21R	NPT 2-1/2" x 8
544-014-01R	NPT 1/2" x 14	544-008-30R	NPT 3" x 8
544-014-32R	NPT 3/4" x 14	544-008-32R	NPT 3-1/2" x 8
544-11D5-10R	NPT 1" x 11.5	544-008-40R	NPT 4" x 8

RING GAUGE

Back



544-014-01R

Front

- ◆ 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	NPT 1-1/4" x 11.5
544-027-03	NPT 1/8" x 27	544-11D5-11	NPT 1-1/2" x 11.5
544-018-02	NPT 1/4" x 18	544-11D5-20	NPT 2" x 11.5
544-018-33	NPT 3/8" x 18	544-008-21	NPT 2-1/2" x 8
544-014-01	NPT 1/2" x 14	544-008-30	NPT 3" x 8
544-014-32	NPT 3/4" x 14	544-008-32	NPT 3-1/2" x 8
544-11D5-10	NPT 1" x 11.5	544-008-40	NPT 4" x 8

SERIES 535/536/545**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	Code(GO)	Code(NOGO)	Size
535-0125-01	536-0125-01	G1/8-28	535-1125-01	536-1125-01	G1-1/8-11
535-0250-01	536-0250-01	G1/4-19	535-1250-01	536-1250-01	G1-1/4-11
535-0375-01	536-0375-01	G3/8-19	535-1500-01	536-1500-01	G1-1/2-11
535-0500-01	536-0500-01	G1/2-14	535-1750-01	536-1750-01	G1-3/4-11
535-0625-01	536-0625-01	G5/8-14	535-2000-01	536-2000-01	G2-11
535-0750-01	536-0750-01	G3/4-14	535-2500-01	536-2500-01	G2-1/2-11
535-0875-01	536-0875-01	G7/8-14	535-3000-01	536-3000-01	G3-11
535-1000-01	536-1000-01	G1-11	535-4000-01	536-4000-01	G4-11

- ◆ Conforms to standard ISO228

PLUG GAUGE

545-0500-01

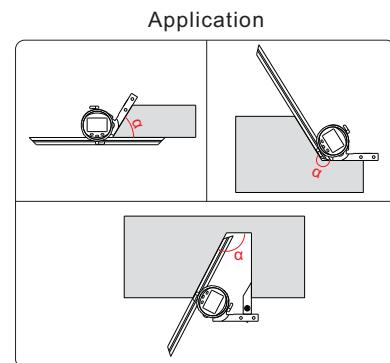
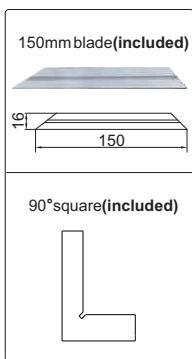
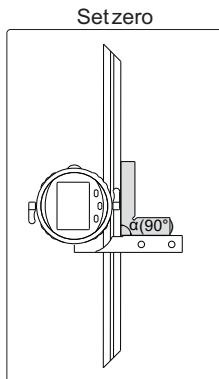
Code	Size	Code	Size
545-0125-01	G1/8-28	545-1125-01	G1-1/8-11
545-0250-01	G1/4-19	545-1250-01	G1-1/4-11
545-0375-01	G3/8-19	545-1500-01	G1-1/2-11
545-0500-01	G1/2-14	545-1750-01	G1-3/4-11
545-0625-01	G5/8-14	545-2000-01	G2-11
545-0750-01	G3/4-14	545-2500-01	G2-1/2-11
545-0875-01	G7/8-14	545-3000-01	G3-11
545-1000-01	G1-11	545-4000-01	G4-11

822

DIGITAL PROTRACTOR



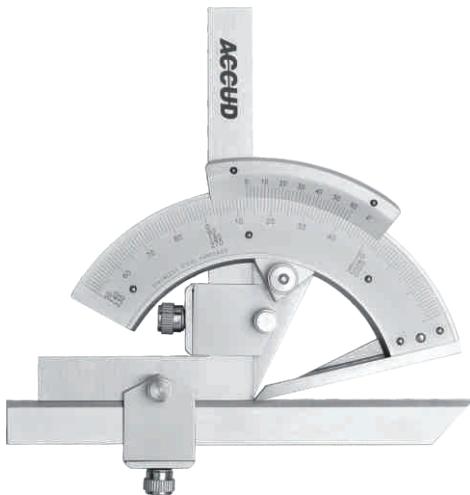
- ◆ Button function:
SET: preset the reading and change the measuring direction
MODE: choose range 90°, 180°, 360°
ZERO/ON/OFF: set zero and power on/off
- ◆ Data output
- ◆ With a 150mm blade and a 90° square
- ◆ Made of stainless steel



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

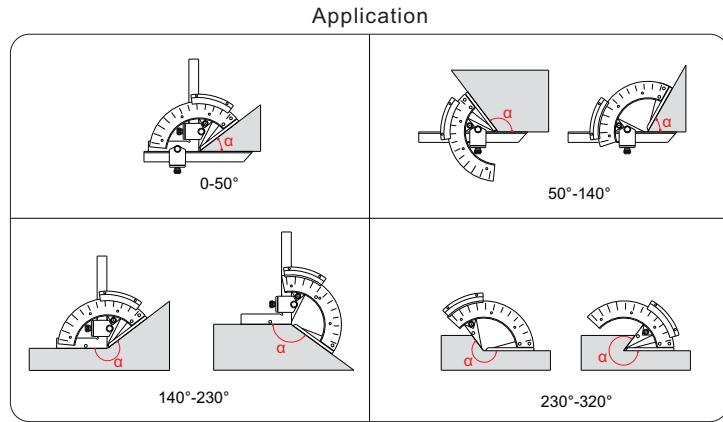
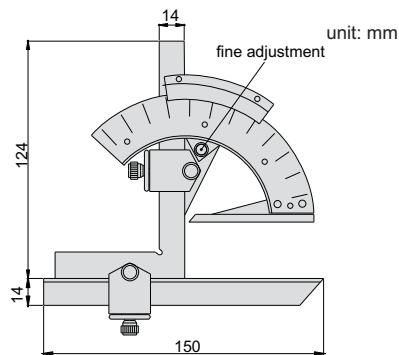
814

UNIVERSAL PROTRACTOR



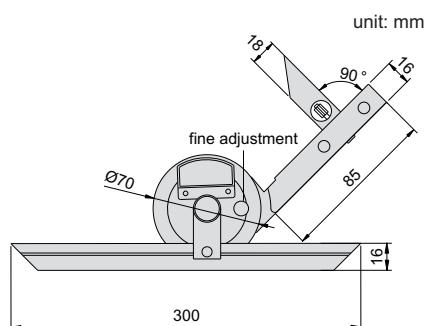
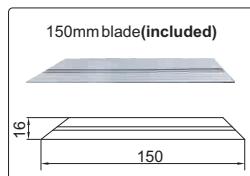
- ◆ Graduation: 2'
- ◆ Made of stainless steel
- ◆ Satin chrome plated scale

Code	Range	Accuracy
814-320-01	0 - 320°	±2'

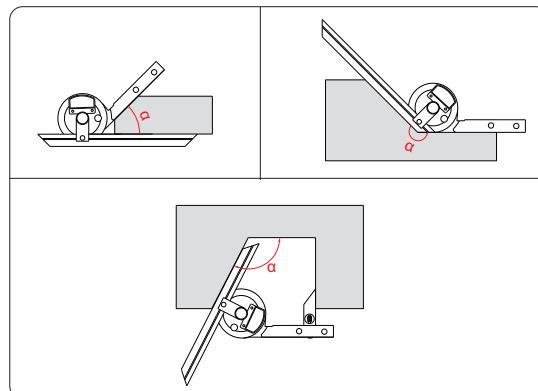


815**UNIVERSAL PROTRACTOR**

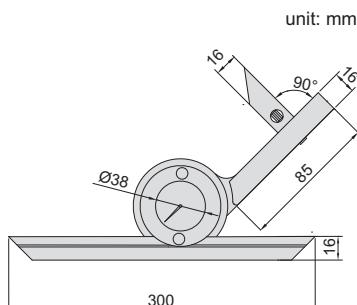
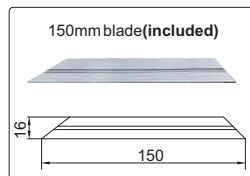
- ◆ Graduation: 5'
- ◆ Parallax-free reading
- ◆ With one blade: 150mm
- ◆ Made of stainless steel
- ◆ Optional accessory: clamp for height gages



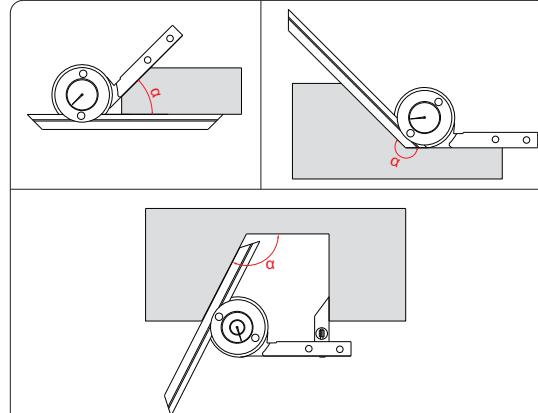
Code	Range	Accuracy
815-360-01	0 - 360°	±5'

Application**816****UNIVERSAL PROTRACTOR**

- ◆ Graduation: 5'
- ◆ With one blade: 150mm
- ◆ Made of carbon steel
- ◆ Optional accessory: clamp for height gages



Code	Range	Accuracy
816-360-01	0 - 360°	±5'

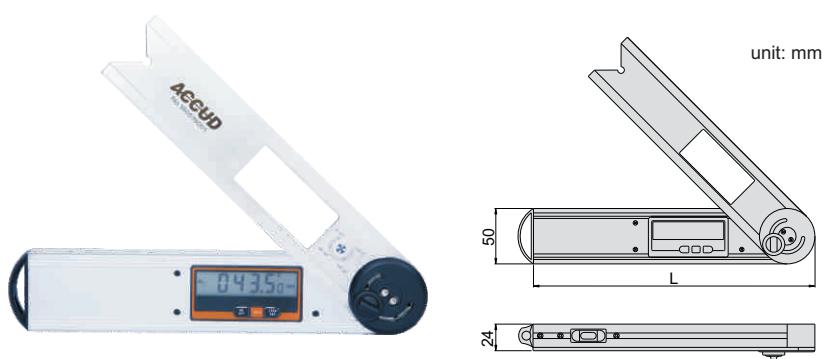
Application

726

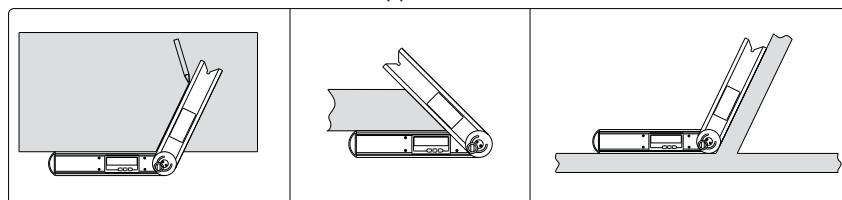
DIGITAL PROTRACTOR



- Buttons: ON/OFF, HOLD, ZERO, ABS
- Measuring ranges can be set $0^\circ \sim 225^\circ$, $-225^\circ \sim 0^\circ$, $-45^\circ \sim 180^\circ$, $-180^\circ \sim 45^\circ$
- 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°	$\pm 0.15^\circ$	250mm

823

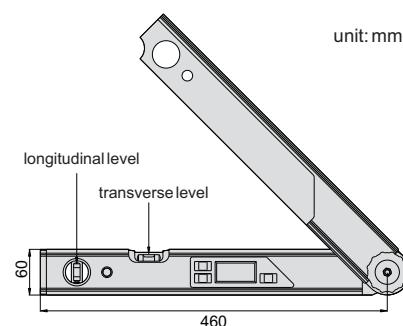
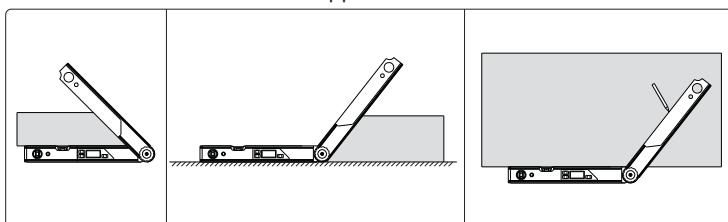
DIGITAL PROTRACTOR



- 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



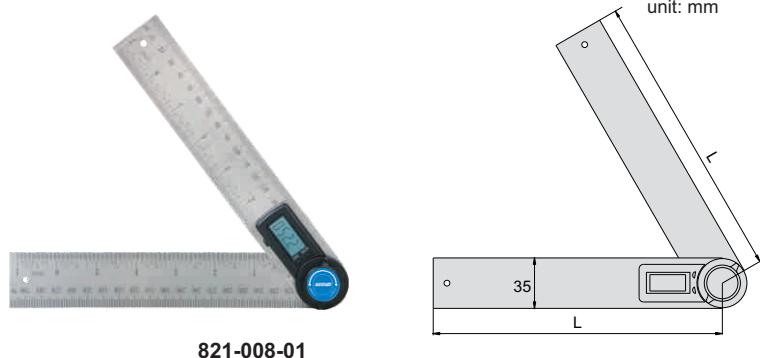
Code	Range	Resolution	Accuracy
823-225-01	0 - 225°	0.05°	$\pm 0.10^\circ$

SERIES 821

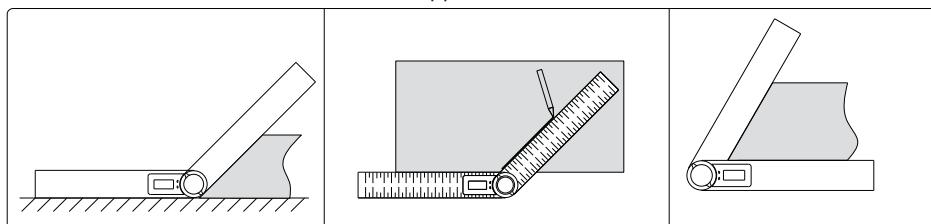
DIGITAL PROTRACTOR



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



Application



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

SERIES 821

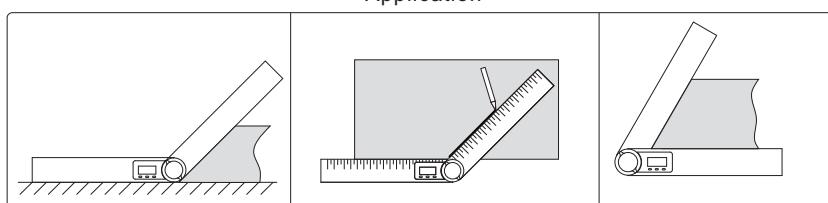
DIGITAL PROTRACTOR



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

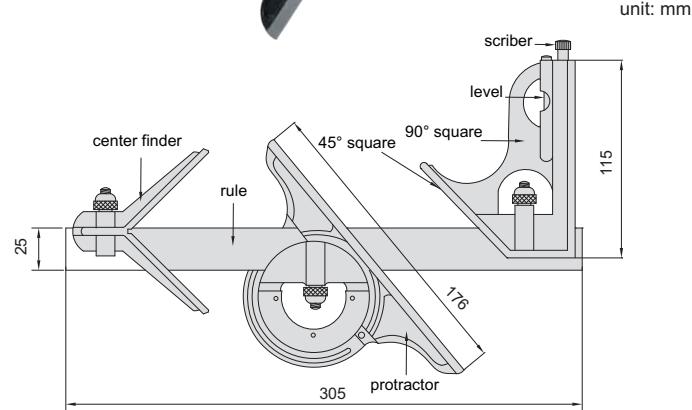
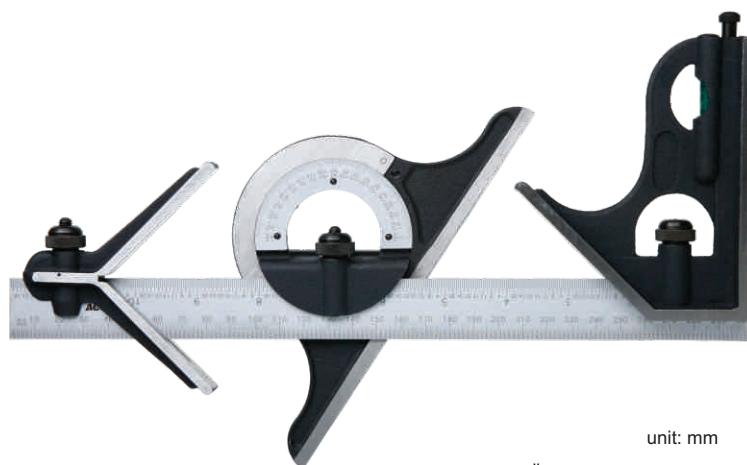


Application



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

- ◆ Protractor:
Used to set an angle or angle measurement,
measuring range: 0-180°, accuracy: $\pm 7'$
- ◆ Square:
Used as 90° square or 45° square
accuracy of 90° square: $\pm 8'$,
accuracy of 45° square: $\pm 10'$
- ◆ Rule:
Used as rule, measuring range: 300mm/12"
front side graduation: 0.5mm and 1/32"
reverse side graduation: 1mm and 1/64"
- ◆ Center finder:
Used to find the cylinder center,
accuracy: $\pm 0.15\text{mm}$



Application

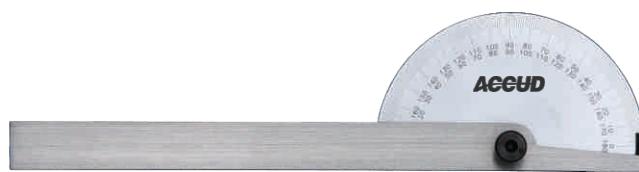


Code

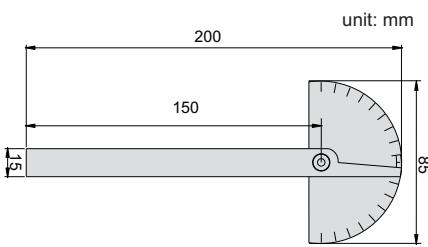
817-180-02

SERIES 811**PROTRACTOR**

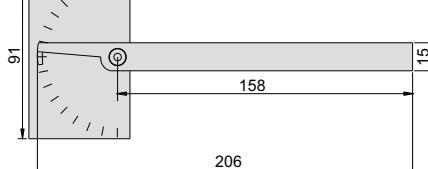
- ◆ Graduation: 1°
- ◆ Made of stainless steel
- ◆ Satin chrome plated scale
- ◆ With locking screw



811-180-01



811-180-02



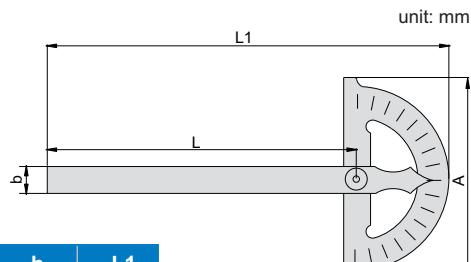
Code	Size	Range	Accuracy
811-180-01	85x150mm	0 - 180°	±0.3°
811-180-02	91x158mm	0 - 180°	±0.3°

SERIES 812**PROTRACTOR**

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



812-003-01



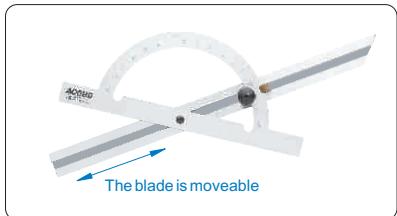
Code	Size(AxL)	Range	Accuracy	b	L1
812-003-01	80x120mm	0 - 180°	±0.3°	11	165
812-005-01	120x150mm	0 - 180°	±0.3°	13	215
812-006-01	150x200mm	0 - 180°	±0.3°	16	280
812-008-01	200x300mm	0 - 180°	±0.3°	20	410
812-012-01	300x500mm	0 - 180°	±0.3°	30	675

SERIES 813**PROTRACTOR**

- ◆ Graduation: 1°
- ◆ Made of stainless steel
- ◆ Satin chrome plated scale
- ◆ The blade is moveable

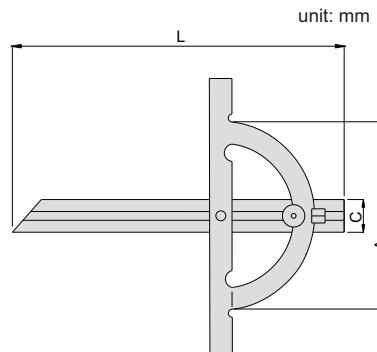


813-012-01



The blade is moveable

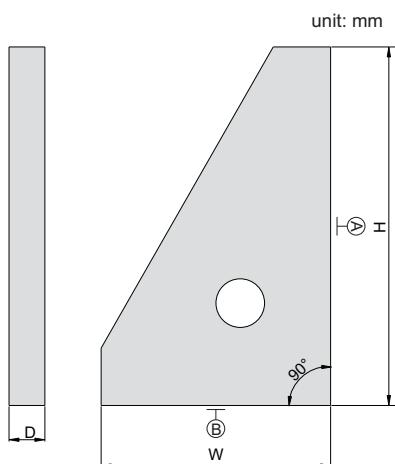
Code	Size(AxL)	Range	Accuracy	C
813-006-01	100x150mm	10 - 170°	±0.3°	18
813-012-01	150x300mm	10 - 170°	±0.3°	18
813-016-01	200x400mm	10 - 170°	±0.3°	20
813-020-01	250x500mm	10 - 170°	±0.3°	20
813-024-01	300x600mm	10 - 170°	±0.3°	20

**SERIES 643****GRANITE SQUARE****CUSTOM-MADE**

other sizes are available upon request



643-010-01



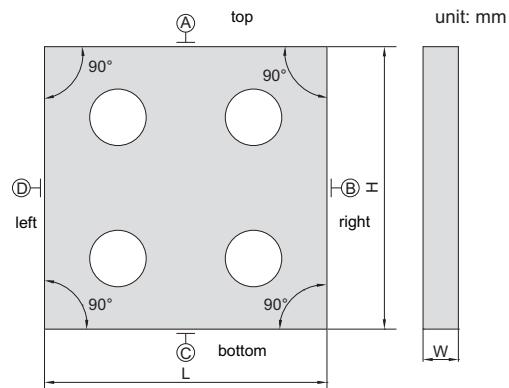
Code	Size(HxW)	Flatness (A)	Flatness (B)	Squareness(A and B)	D
643-010-01	250x160mm	1µm	1mm	2µm	50mm
643-016-01	450x250mm	1.5µm	1mm	3µm	50mm
643-024-01	630x400mm	2µm	1.5mm	4µm	60mm

SERIES 644**GRANITE SQUARE**

CUSTOM-MADE
other sizes are available
upon request



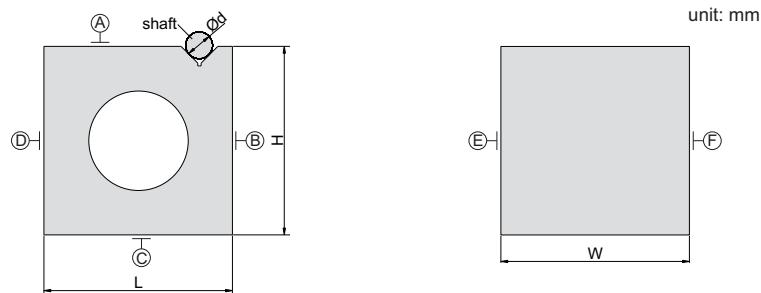
644-012-01



Code	Size(LxH)	Flatness (A, B, C and D)	Parallelism or squareness (A, B, C and D)	W
644-012-01	315x315mm	1.1µm	2.6µm	40
644-020-01	500x500mm	1.5µm	3.5µm	60

645**GRANITE SQUARE AND V-BLOCK**

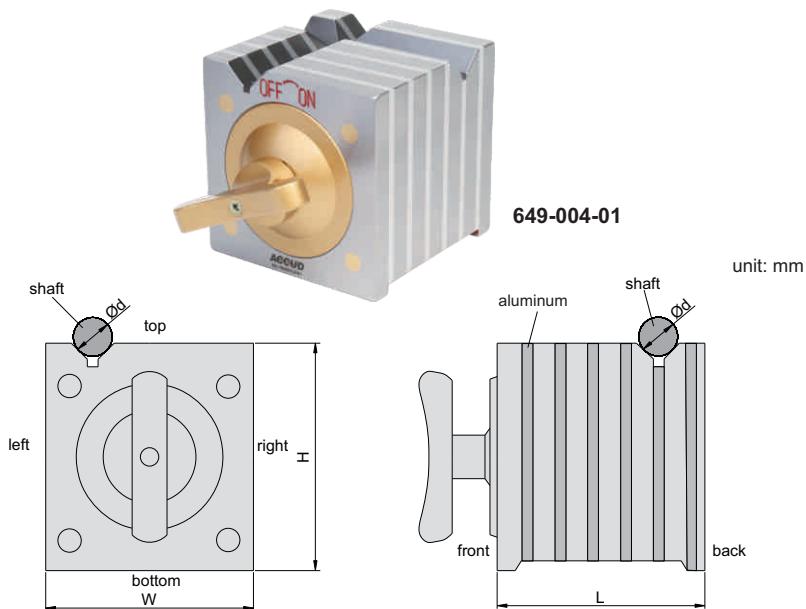
- Thread holes: M8



Code	Size(LxWxH)	Range of shafts ($\varnothing d$)	Parallelism or squareness A, B, C, D, E and F	Parallelism or squareness of V grooves to A, B, C, D, E and F
645-006-01	160x160x160mm	6 - 42mm	6µm	6µm

SERIES 649

MAGNETIC SQUARE AND V-BLOCK



Code	Size(LxWxH)	Magnetic force	Range of shafts ($\varnothing d$)	Parallelism or squareness between top, bottom, left, right and back sides	Parallelism or squareness of both V grooves to top, bottom, left, right and back sides
649-004-01	100x100x100mm	30kgf	6-36mm	10µm	10µm
649-006-01	150x150x150mm	40kgf	6-44mm	15µm	15µm

SERIES 832

90° BEVELED EDGE SQUARE

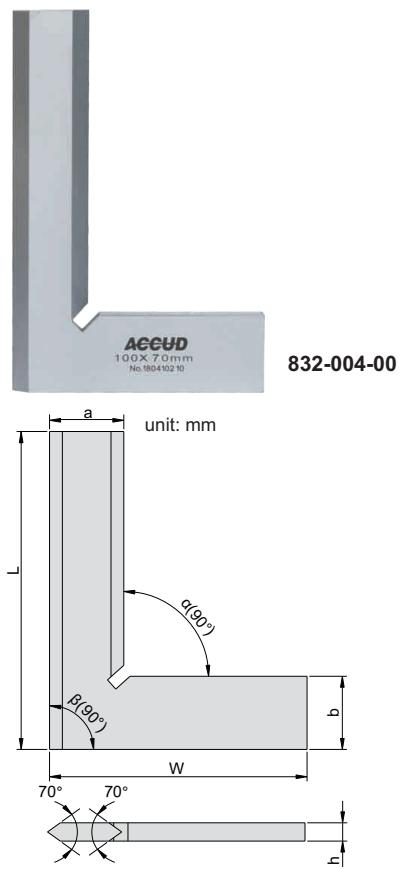
- Two beveled measuring faces
- Made of hardened stainless steel
- Satin chrome plating

Grade 0

Code	Size(LxW)	Squareness(α)	Squareness(β)	a	b	h
832-002-10	50x40mm	6µm	6µm	13	13	4
832-003-10	75x50mm	6µm	7µm	15	15	4
832-004-10	100x70mm	7µm	7µm	20	20	5
832-006-10	150x100mm	7µm	8µm	30	30	6
832-008-10	200x130mm	8µm	9µm	34	34	7
832-010-10	250x165mm	9µm	10µm	35	35	7
832-012-10	300x200mm	10µm	11µm	40	40	8

Grade 00

Code	Size(LxW)	Squareness(α)	Squareness(β)	a	b	h
832-002-00	50x40mm	2.4µm	2.5µm	13	13	4
832-003-00	75x50mm	2.6µm	2.8µm	15	15	4
832-004-00	100x70mm	2.8µm	3.0µm	20	20	5
832-006-00	150x100mm	3.2µm	3.5µm	30	30	6
832-008-00	200x130mm	3.7µm	4.0µm	34	34	7
832-010-00	250x165mm	4.2µm	4.5µm	35	35	7
832-012-00	300x200mm	4.6µm	5.0µm	40	40	8

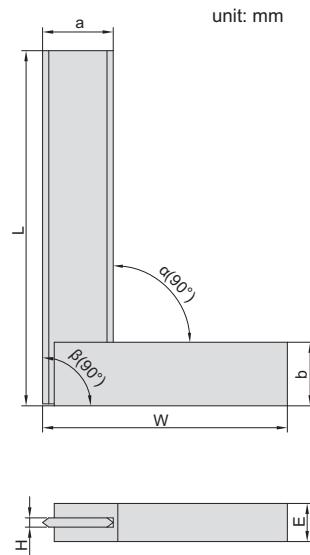


SERIES 840**90° BEVELED EDGE SQUARE WITH WIDE BASE**

- ◆ DIN875 grade 0
- ◆ Beveled edges for inside and outside measurement
- ◆ Made of hardened stainless steel



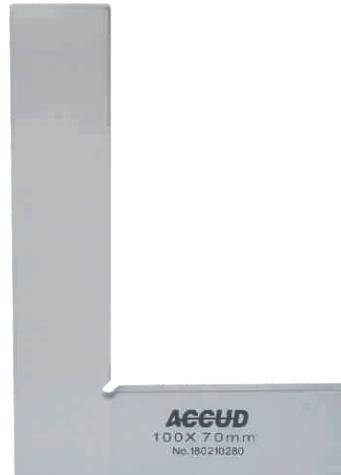
840-006-10



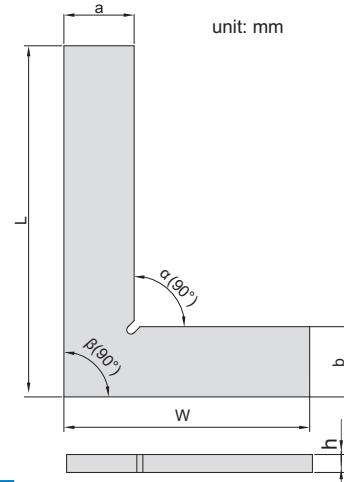
Code	Size(LxW)	Squareness		a	b	H	E
		Inside(α)	Outside(β)				
840-002-10	50x40mm	6 μ m	6 μ m	12	12	3	10
840-003-10	75x50mm	6 μ m	7 μ m	14	14	3	10
840-004-10	100x70mm	7 μ m	7 μ m	18	18	3	10
840-006-10	150x100mm	8 μ m	8 μ m	22	22	4	12
840-008-10	200x130mm	9 μ m	9 μ m	25	25	4	12

SERIES 841**90° FLAT EDGE SQUARE**

- ◆ DIN875 grade 0
- ◆ Made of hardened stainless steel



841-004-10

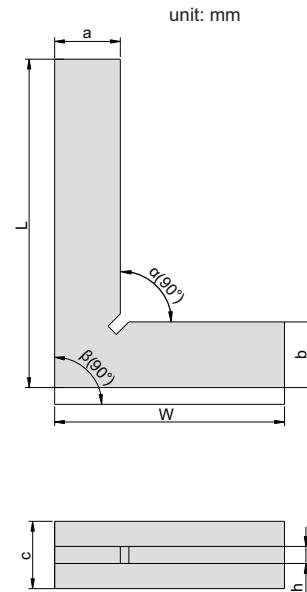


Code	Size(LxW)	Squareness(α)	Squareness(β)	a	b	h
841-002-10	50x40mm	6 μ m	6 μ m	15	15	4
841-003-10	75x50mm	6 μ m	7 μ m	15	15	4
841-004-10	100x70mm	7 μ m	7 μ m	20	20	5
841-006-10	150x100mm	7 μ m	8 μ m	30	30	6
841-008-10	200x130mm	8 μ m	9 μ m	34	34	7
841-010-10	250x165mm	9 μ m	10 μ m	35	35	7
841-012-10	300x200mm	10 μ m	11 μ m	40	40	8

PROTRACTOR

SERIES 842**90° FLAT EDGE SQUARE WITH WIDE BASE**

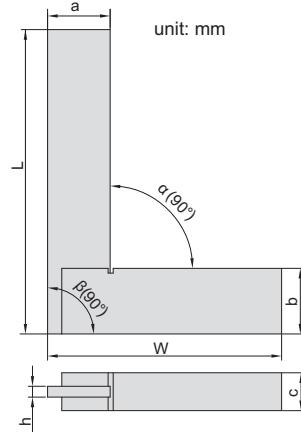
- ◆ DIN875 grade 0
- ◆ Made of hardened stainless steel



Code	Size(LxW)	Squareness(α)	Squareness(β)	a	b	c	h
842-002-10	50x40mm	6 μ m	6 μ m	13	13	13	4
842-003-10	75x50mm	6 μ m	6 μ m	15	15	15	4
842-004-10	100x70mm	7 μ m	7 μ m	20	20	20	5
842-006-10	150x100mm	7 μ m	7 μ m	30	30	30	6
842-008-10	200x130mm	8 μ m	8 μ m	34	34	30	7
842-010-10	250x165mm	9 μ m	9 μ m	35	35	35	7
842-012-10	300x200mm	10 μ m	10 μ m	40	40	40	8

SERIES 843**90° FLAT EDGE SQUARE WITH WIDE BASE**

- ◆ DIN875 grade 0
- ◆ Made of hardened stainless steel

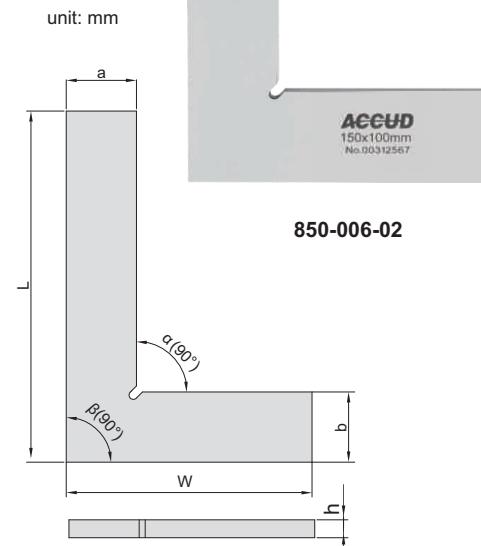


Code	Size(LxW)	Squareness(α)	Squareness(β)	a	b	c	h
843-002-10	50x40mm	6 μ m	6 μ m	12	12	10	3
843-003-10	75x50mm	6 μ m	6 μ m	14	14	10	3
843-004-10	100x70mm	7 μ m	7 μ m	18	18	10	3
843-006-10	150x100mm	7 μ m	7 μ m	22	22	12	4
843-008-10	200x130mm	8 μ m	8 μ m	25	25	12	4

SERIES 850**MACHINIST SQUARE**

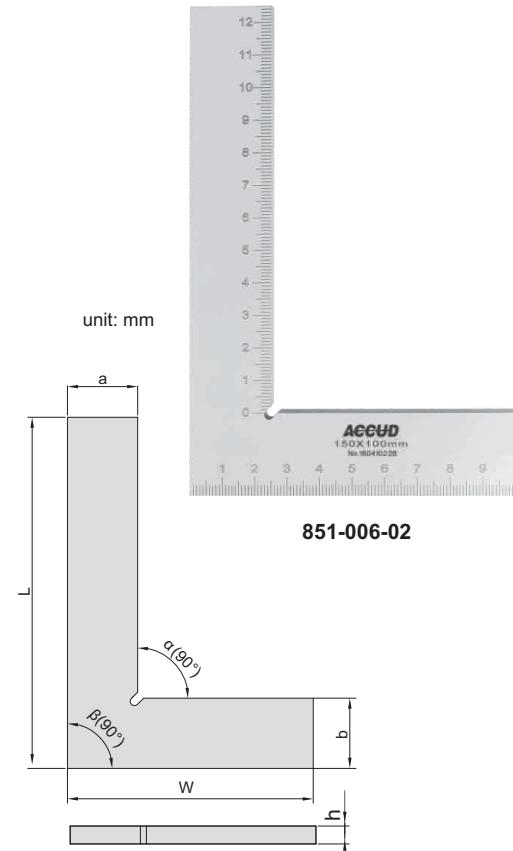
- ◆ Made of carbon steel, no anti-rust treatment, not hardened

Code	Size(LxW)	Squareness		a	b	h
		Inside(α)	Outside(β)			
850-002-02	50x30mm	24 μm	25 μm	12	12	3
850-003-02	75x50mm	26 μm	28 μm	16	16	3
850-004-02	100x70mm	28 μm	30 μm	19	19	5
850-005-02	125x80mm	30 μm	33 μm	22	22	5
850-006-02	150x100mm	33 μm	35 μm	25	25	6
850-008-02	200x130mm	38 μm	40 μm	25	25	6
850-010-02	250x165mm	43 μm	45 μm	25	25	6
850-012-02	300x200mm	47 μm	50 μm	30	30	6
850-014-02	350x200mm	51 μm	55 μm	38	38	6
850-016-02	400x200mm	56 μm	60 μm	38	38	9
850-018-02	450x250mm	58 μm	65 μm	38	38	9
850-020-02	500x300mm	69 μm	70 μm	38	38	9

**SERIES 851****MACHINIST SQUARE WITH SCALE**

- ◆ Made of carbon steel, no anti-rust treatment, not hardened

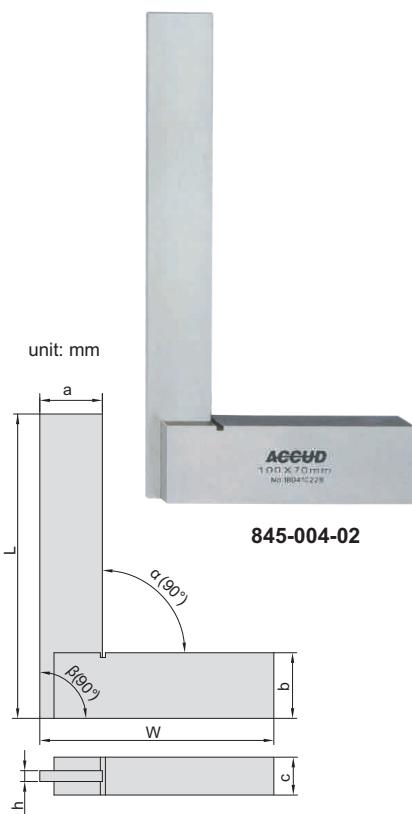
Code	Size(LxW)	Squareness		a	b	h
		Inside(α)	Outside(β)			
851-002-02	50x30mm	24 μm	25 μm	12	12	3
851-003-02	75x50mm	26 μm	28 μm	16	16	3
851-004-02	100x70mm	28 μm	30 μm	19	19	5
851-005-02	125x80mm	30 μm	33 μm	22	22	5
851-006-02	150x100mm	33 μm	35 μm	25	25	6
851-008-02	200x130mm	38 μm	40 μm	25	25	6
851-010-02	250x165mm	43 μm	45 μm	25	25	6
851-012-02	300x200mm	47 μm	50 μm	30	30	6
851-014-02	350x200mm	51 μm	55 μm	38	38	6
851-016-02	400x200mm	56 μm	60 μm	38	38	9
851-018-02	450x250mm	58 μm	65 μm	38	38	9
851-020-02	500x300mm	69 μm	70 μm	38	38	9

**PROTRACTOR**

SERIES 845**MACHINIST SQUARE WITH WIDE BASE**

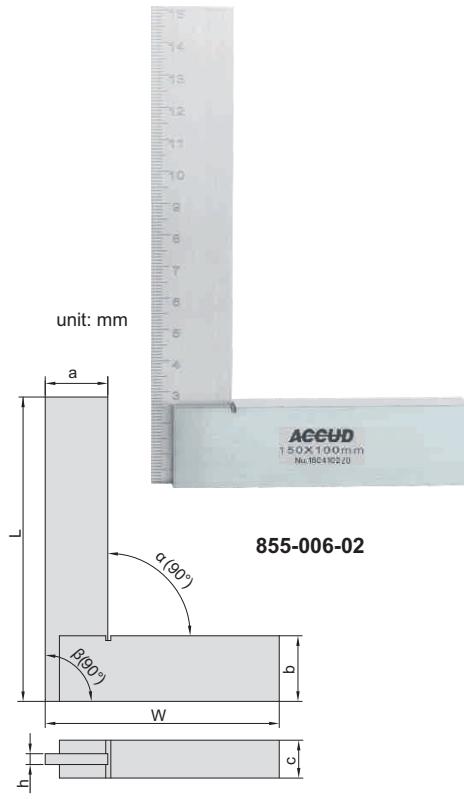
- ◆ DIN875 grade 2
- ◆ Made of carbon steel

Code	Size(LxW)	Squareness(α)	Squareness(β)	a	b	c	h
845-002-02	50x40mm	24 μ m	25 μ m	16	12	9	3
845-003-02	75x50mm	26 μ m	28 μ m	16	16	9	3
845-004-02	100x70mm	28 μ m	30 μ m	19	19	12	3
845-006-02	150x100mm	33 μ m	35 μ m	25	25	16	3
845-008-02	200x130mm	37 μ m	40 μ m	30	32	16	4
845-010-02	250x165mm	42 μ m	45 μ m	30	32	19	4
845-012-02	300x200mm	47 μ m	50 μ m	32	32	19	4
845-016-02	400x250mm	56 μ m	60 μ m	38	38	22	5
845-020-02	500x300mm	65 μ m	70 μ m	45	50	25	6
845-024-02	600x350mm	75 μ m	80 μ m	50	50	30	6
845-030-02	750x400mm	90 μ m	95 μ m	55	55	50	6
845-036-02	900x500mm	103 μ m	110 μ m	65	75	50	9
845-040-02	1000x550mm	113 μ m	120 μ m	65	75	50	9

**SERIES 855****MACHINIST SQUARE WITH WIDE BASE AND SCALE**

- ◆ Made of carbon steel, no anti-rust treatment, not hardened

Code	Size(LxW)	Squareness		a	b	h	c
		Inside(α)	Outside(β)				
855-002-02	50x30mm	24 μ m	25 μ m	16	12	2.5	9
855-003-02	75x50mm	26 μ m	28 μ m	16	16	2.5	9
855-004-02	100x70mm	28 μ m	30 μ m	19	19	3	12
855-005-02	125x80mm	31 μ m	33 μ m	22	19	3	12
855-006-02	150x100mm	33 μ m	35 μ m	25	25	3	16
855-008-02	200x130mm	37 μ m	40 μ m	30	32	3	16
855-010-02	250x165mm	42 μ m	45 μ m	30	32	3	19
855-012-02	300x200mm	47 μ m	50 μ m	32	32	3	19
855-014-02	350x200mm	51 μ m	55 μ m	38	38	4.5	22
855-016-02	400x200mm	56 μ m	60 μ m	38	38	4.5	22
855-018-02	450x250mm	61 μ m	65 μ m	44	38	4.5	22
855-020-02	500x300mm	65 μ m	70 μ m	44	50	6	25
855-024-02	600x350mm	75 μ m	80 μ m	50	50	6	30
855-030-02	750x400mm	90 μ m	95 μ m	55	55	6	50
855-036-02	900x500mm	103 μ m	110 μ m	65	75	9	50
855-040-02	1000x550mm	113 μ m	120 μ m	65	75	9	50

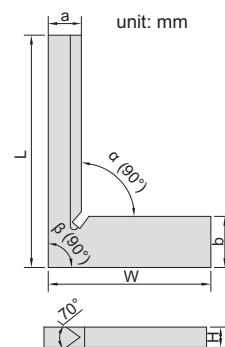


SERIES 833

90° TOOL MAKER SQUARE

- DIN875 grade 00
- Beveled edge for inside measurement
- Made of hardened stainless steel

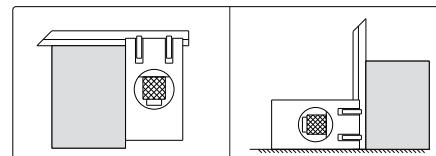
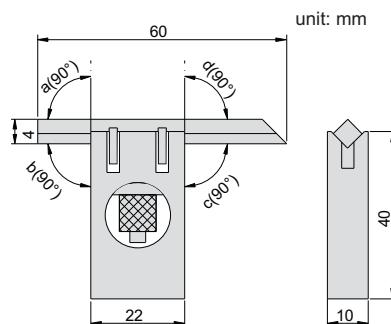
Code	Size(LxW)	Squareness		a	b	H
		Inside(α)	Outside(β)			
833-025-00	25x20mm	2.2 μ m	2.3 μ m	4	6.5	3.5
833-040-00	40x28mm	2.3 μ m	2.4 μ m	5.5	8.5	3.5



831

ADJUSTABLE SQUARE

- The straight edge can move and can be locked by the screw
- Made of hardened stainless steel



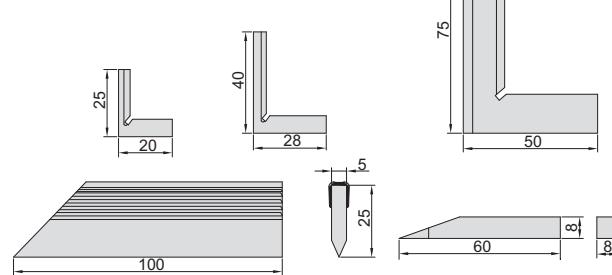
Code	Squareness (a, b, c, d)
831-002-10	7 μ m

839

SQUARE SET

- Includes:
 - 90° tool maker square 25x20mm DIN875 grade 00 (code 833-025-00)
 - 90° tool maker square 40x28mm DIN875 grade 00 (code 833-040-00)
 - 90° beveled edge square 75x50mm DIN875 grade 00 (code 832-003-00)
 - straightedge 100mm DIN874 (code 994-004-01)
 - scriber
- Made of hardened stainless steel

Code
839-000-05

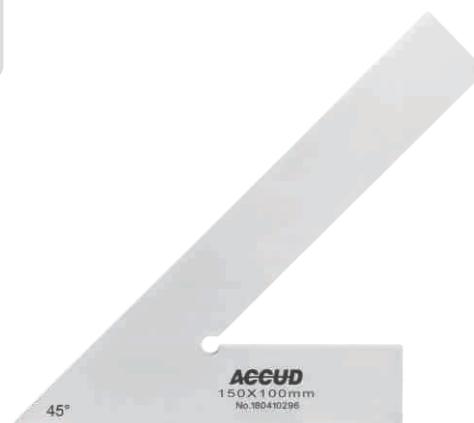


PROTRACTOR

SERIES 846

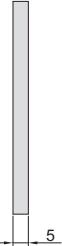
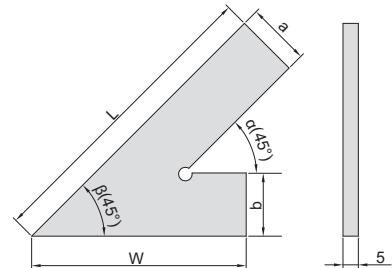
45° SQUARE

- Made of hardened stainless steel



846-006-02

unit: mm



Code	Size(LxW)	Accuracy		a	b
		Inside(α)	Outside(β)		
846-004-02	100x70mm	27μm	30μm	20	20
846-005-02	120x80mm	29μm	32μm	20	20
846-006-02	150x100mm	32μm	35μm	20	20
846-008-02	200x130mm	36μm	40μm	25	25

SERIES 856

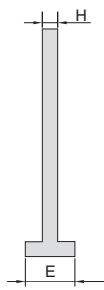
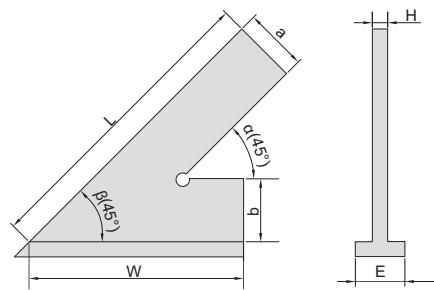
45° SQUARE WITH WIDE BASE

- Made of hardened stainless steel



856-006-02

unit: mm



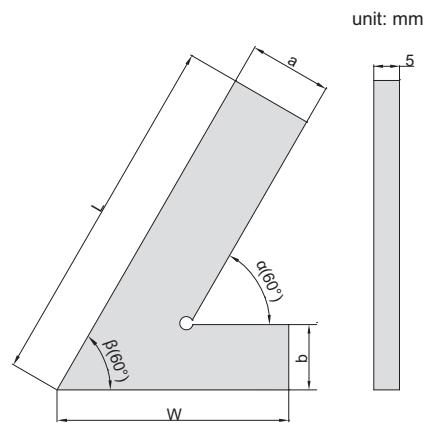
Code	Size(LxW)	Accuracy		a	b	H	E
		Inside(α)	Outside(β)				
856-005-02	120x80mm	29μm	33μm	20	20	5	20
856-006-02	150x100mm	32μm	36μm	20	20	5	20
856-008-02	200x130mm	36μm	41μm	25	25	5	25

SERIES 847**60° SQUARE**

- Made of hardened stainless steel



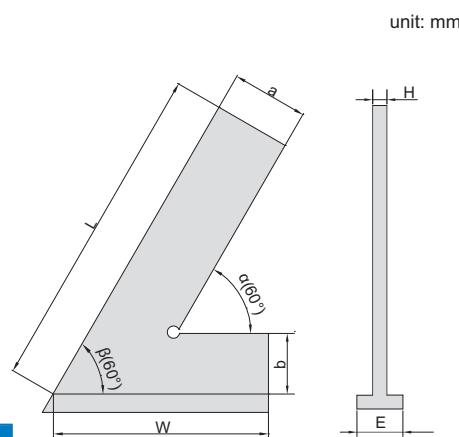
847-006-02

**PROTRACTOR****SERIES 857****60° SQUARE WITH WIDE BASE**

- Made of hardened stainless steel



857-006-02



Code	Size(LxW)	Accuracy		a	b	H	E
		Inside(α)	Outside(β)				
857-005-02	120x80mm	30μm	33μm	20	20	5	20
857-006-02	150x100mm	33μm	36μm	20	20	5	20
857-008-02	200x130mm	37μm	41μm	25	25	5	25

SERIES 848

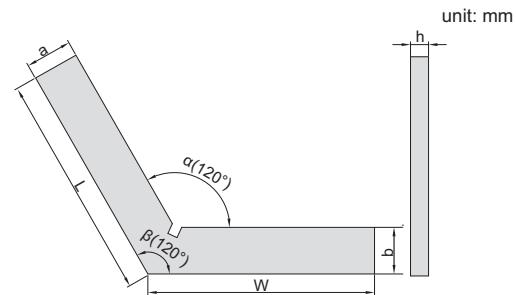
120° SQUARE

- Made of hardened stainless steel



848-004-02

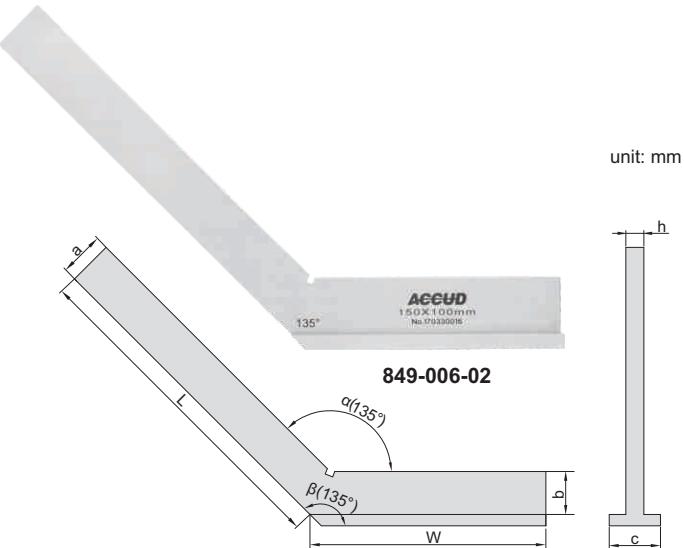
Code	Size(LxW)	Accuracy		a	b	h
		Inside(α)	Outside(β)			
848-002-02	50x50mm	24 μ m	25 μ m	15	15	5
848-003-02	75x75mm	26 μ m	28 μ m	20	20	5
848-004-02	100x100mm	29 μ m	30 μ m	20	20	5
848-006-02	150x150mm	34 μ m	35 μ m	25	25	5
848-008-02	200x200mm	38 μ m	40 μ m	30	30	7



SERIES 849

135° SQUARE WITH WIDE BASE

- Made of hardened stainless steel

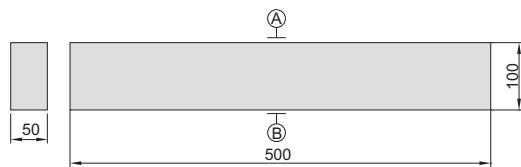


849-006-02

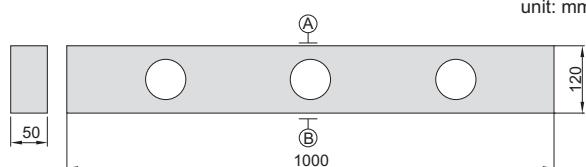
Code	Size(LxW)	Accuracy		a	b	c	h
		Inside(α)	Outside(β)				
849-004-02	100x70mm	29 μ m	31 μ m	20	20	20	5
849-005-02	120x80mm	31 μ m	33 μ m	20	20	20	5
849-006-02	150x100mm	34 μ m	36 μ m	20	20	20	5
849-008-02	200x130mm	39 μ m	41 μ m	30	30	30	7

SERIES 642**GRANITE STRAIGHT EDGE**

642-020-01



642-020-01



642-040-01

unit: mm

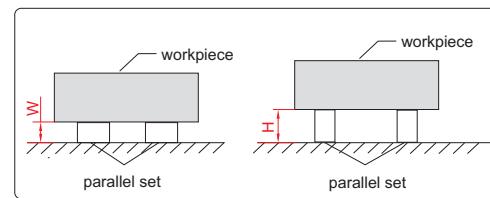
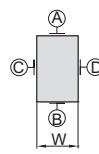
Code	Length(L)	Flatness of A and B	Parallelism between A and B	W	H
642-020-01	500mm	2.1μm	3.2μm	50	100
642-040-01	1000mm	3μm	4.5μm	50	120

SERIES 648**GRANITE PARALLEL SET**

- ◆ Made of granite
- ◆ Two parallels per set



unit: mm



PARALLEL

Code	Size(LxWxH)	Parallelism between A and B	Parallelism between C and D	Height difference of a matched pair
648-250-01	250x25x40mm	5μm	5μm	5μm

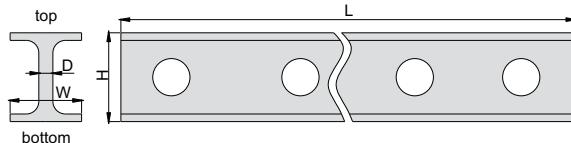
SERIES 647**MAGNALIUM STRAIGHT EDGES**

- ◆ Made of magnalium, lightweight, non-deform, no rusty



647-020-01

unit: mm

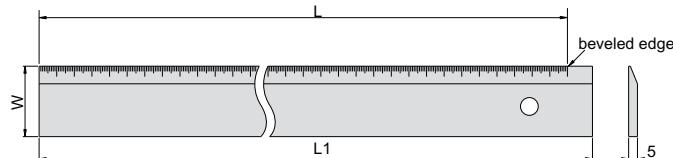


Code	Length(L)	Flatness of top and bottom	Parallelism between top and bottom	H	W	D
647-020-01	500mm	3µm	4µm	60	30	5
647-040-01	1000mm	5µm	8µm	60	30	5
647-060-01	1500mm	15µm	22µm	100	40	7
647-080-01	2000mm	18µm	27µm	100	40	7
647-100-01	2500mm	22µm	33µm	100	40	7
647-120-01	3000mm	48µm	72µm	150	80	8
647-140-01	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 991**STRAIGHT EDGE RULE**

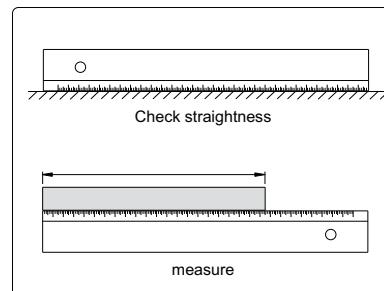
991-012-01

unit: mm



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

Application

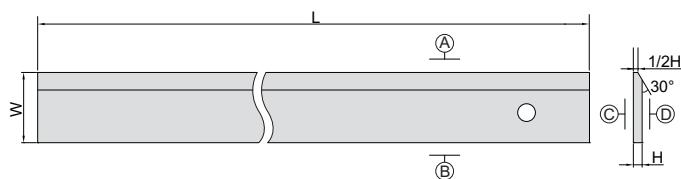


Code	Range(L)	Straightness	W	L1
991-012-01	300mm	0.02mm	40mm	320mm
991-020-01	500mm	0.03mm	40mm	520mm
991-040-01	1000mm	0.04mm	50mm	1020mm

SERIES 907**PRECISION STRAIGHT EDGE WITH BEVELED EDGE**

907-012-11

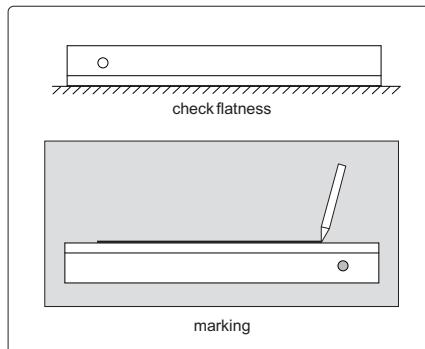
unit: mm



Application

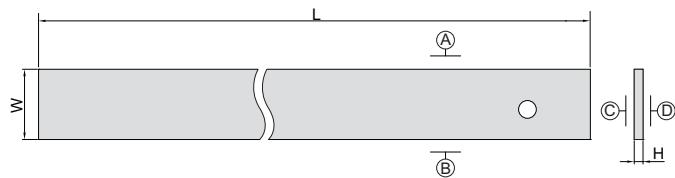
- ◆ Check flatness and for marking
- ◆ Made of tool steel

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

**SERIES 906****PRECISION STRAIGHT EDGE**

906-012-11

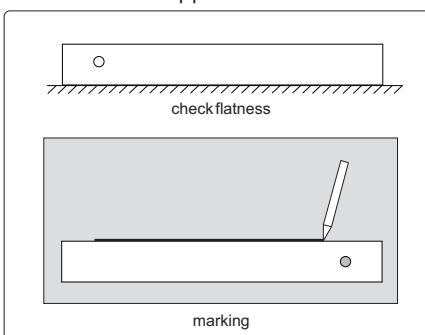
unit: mm



Application

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

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



PARALLEL

ACCUUD

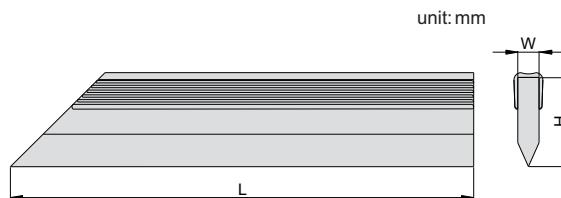
SERIES 994 STRAIGHT EDGE

- ◆ 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	2.2μm	5	20
994-003-01	75mm	2.3μm	5	25
994-004-01	100mm	2.4μm	5	25
994-005-01	125mm	2.5μm	5	25
994-006-01	150mm	2.6μm	6	30
994-008-01	200mm	2.8μm	6	30
994-010-01	250mm	3.0μm	8	40
994-012-01	300mm	3.2μm	8	40
994-016-01	400mm	3.6μm	10	50
994-020-01	500mm	4.0μm	10	50



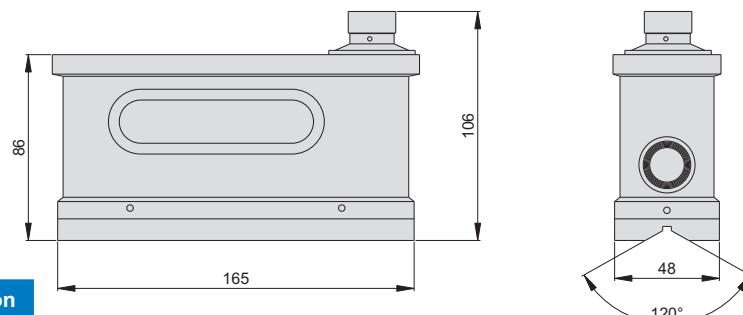
714

OPTICAL IMAGE LEVEL

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



unit: mm

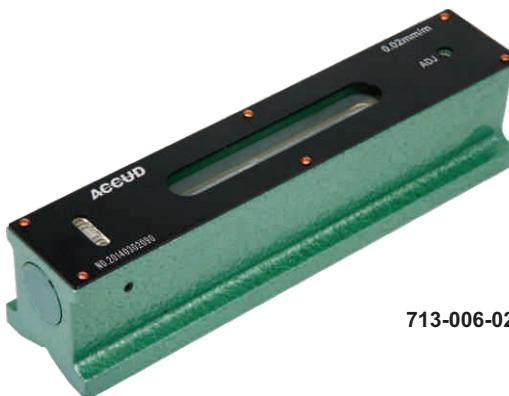


Code	Range	Graduation
714-006-01	0-10mm/m(±5mm/m)	0.01mm/m

SERIES 713

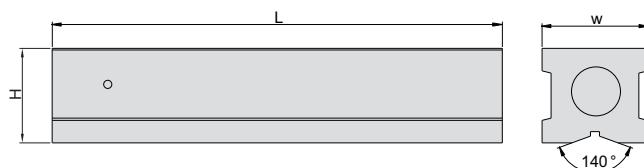
BLOCK LEVEL

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



713-006-02

unit: mm



Code	Size (L)	H	W
713-006-02	150mm	40	45
713-008-02	200mm	42	47
713-012-02	300mm	45	50

SERIES 711

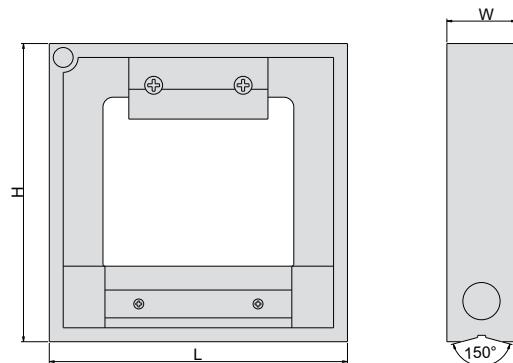
FRAME LEVEL

- ◆ For using setting machined surfaces precisely horizontal and vertical
- ◆ Sensibility: 0.02mm/m per division
- ◆ With two vee and two flat reference faces



711-004-02

unit: mm



Code	Size (LxHxW)
711-004-02	100x100x32mm
711-006-02	150x150x35mm
711-008-02	200x200x42mm
711-012-02	300x300x42mm

LEVEL

712

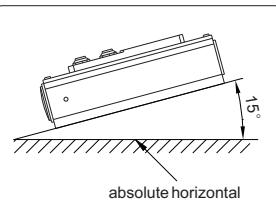
DIGITAL LEVEL



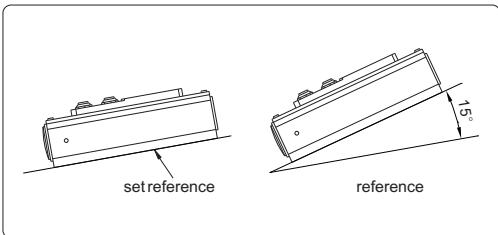
- ◆ Sensibility: 0.01mm/m(0.001°)
- ◆ Accuracy: 10mm range $\leq \pm 0.01\text{mm/m}$
10mm-50mm range $\leq \pm 0.02\text{mm/m}$
- ◆ For use in setting machined surfaces precisely horizontal
- ◆ With longitudinal level
- ◆ Buttons: on/off, zero, mm/inch, save mode, ABS
- ◆ 3.6V li-ion battery for 15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



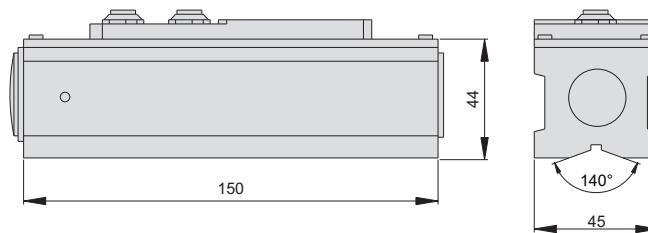
use as level



use as protractor



unit: mm



Code	Range	Graduation
712-006-01	$\pm 50\text{mm/m}$	0.01mm/m

721

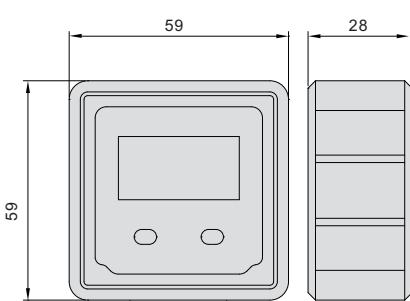
DIGITAL LEVEL



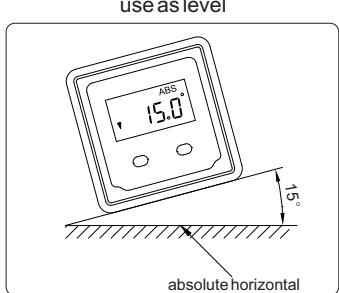
- ◆ Use as level or protractor
- ◆ Accuracy: $\pm 0.1^\circ$ (vertical and horizontal), $\pm 0.2^\circ$ (other direction)
- ◆ Absolute horizontal reference can save in memory for ever
- ◆ Button: on/off, zero
- ◆ Magnetic base
- ◆ Use in 4 directions
- ◆ Automatic power off



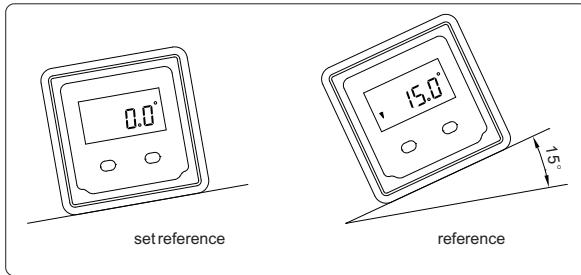
unit: mm



use as magnet



use as protractor



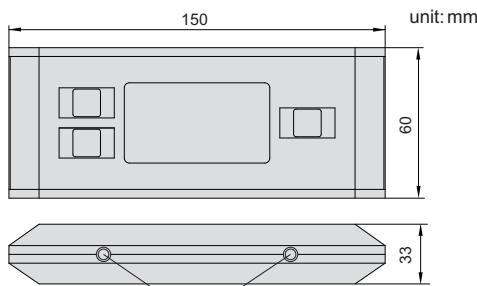
Code	Range	Resolution
721-180-01	0 - 360°(90°x4)	0.05°

722

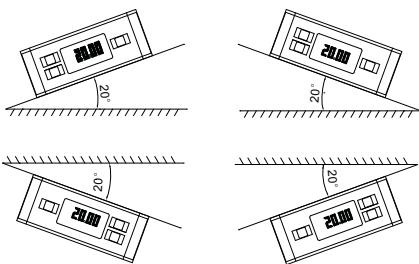
DIGITAL LEVEL



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

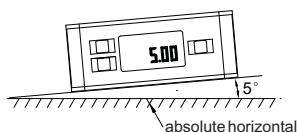


use in 4 directions



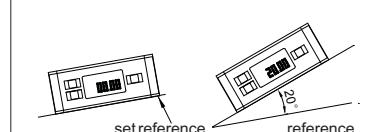
Code	Range	Dimension(LxWxH)
722-360-01	0 - 360° (90°x4)	150x60x33mm

use as level



Magnetic base

use as protractor

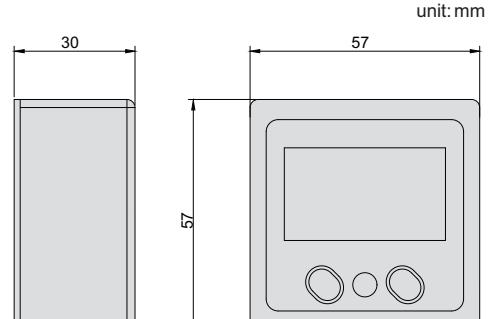


723

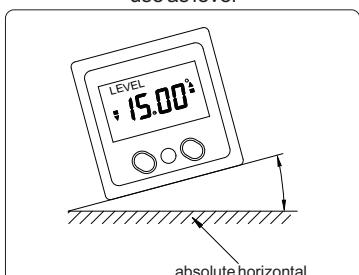
DIGITAL LEVEL



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

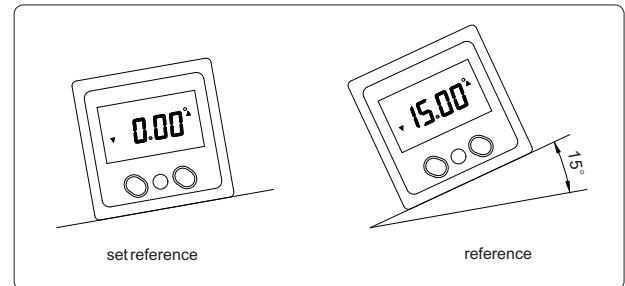


use as level



Magnetic base

use as protractor



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

LEVEL

217

724

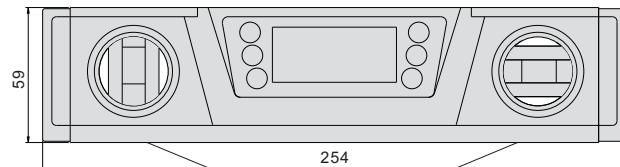
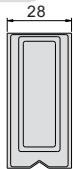
DIGITAL LEVEL



- ◆ Use as level or protractor
- ◆ Accuracy : $\pm 0.1^\circ$ (vertical and horizontal),
 $\pm 0.2^\circ$ (other direction)
- ◆ Buttons: on/off, CAL, hold, alarm, Mode, Ref
- ◆ With vertical and horizontal vials
- ◆ Magnetic base
- ◆ Adjust the display direction automatically

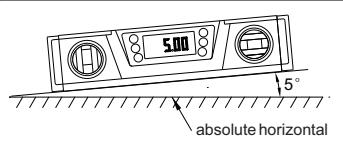


unit: mm

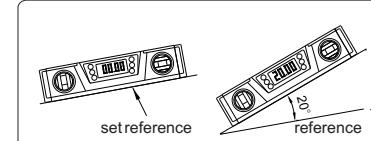


Magnetic base

use as level



use as protractor



Code	Range	Resolution
724-360-01	0 - 360° (4x90°)	0.05°

725

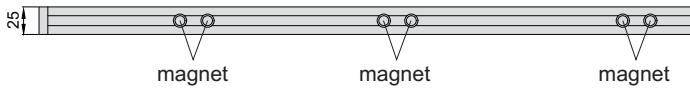
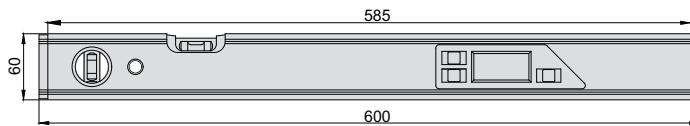
DIGITAL LEVEL



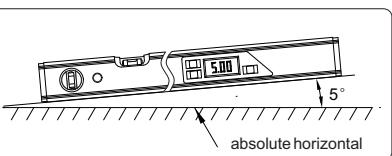
- ◆ Use as level or protractor
- ◆ Accuracy : $\pm 0.1^\circ$ (vertical and horizontal),
 $\pm 0.2^\circ$ (other direction)
- ◆ Buttons: on/off, ABS, hold, alarm unit, backlight
- ◆ With vertical and horizontal vials
- ◆ Absolute horizontion reference can save in memory for ever
- ◆ Magnetic base
- ◆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



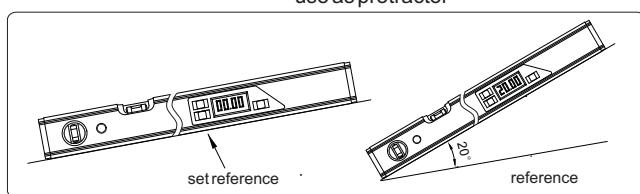
unit: mm



use as level

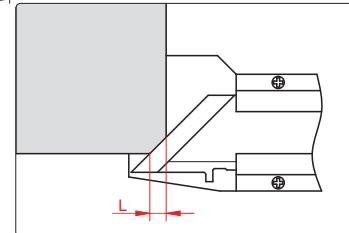
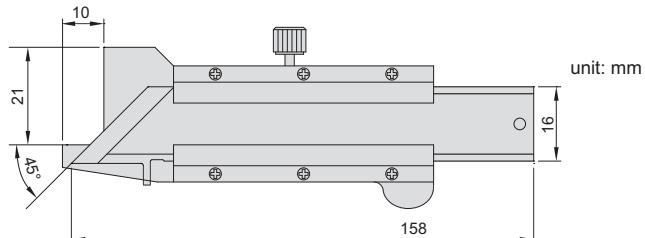


use as protractor



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

- ◆ Measure 45° chamfer dimension
- ◆ Graduation 0.02mm
- ◆ Made of stainless steel
- ◆ Satin chrome plated reading surface



Code	Range	Accuracy
160-001-11	0-6mm	±0.06mm

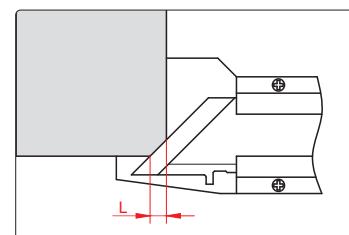
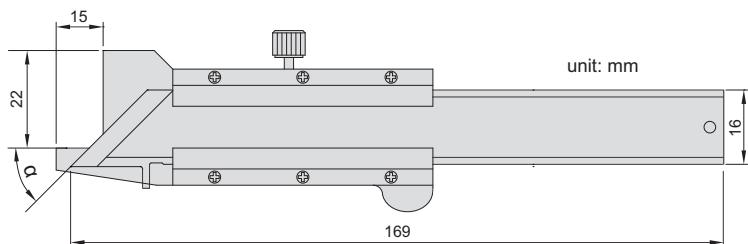
SERIES 160

CHAMFER GAUGE

- ◆ Measure α chamfer dimension
- ◆ Graduation 0.02mm
- ◆ Made of stainless steel
- ◆ Satin chrome plated reading surface



160-010-12



Code	Range	Accuracy	Chamfer(α)
160-010-11	0-10mm	±0.06mm	30°
160-010-12	0-10mm	±0.06mm	45°
160-010-13	0-10mm	±0.06mm	60°

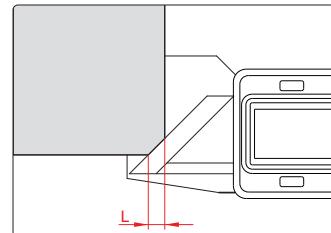
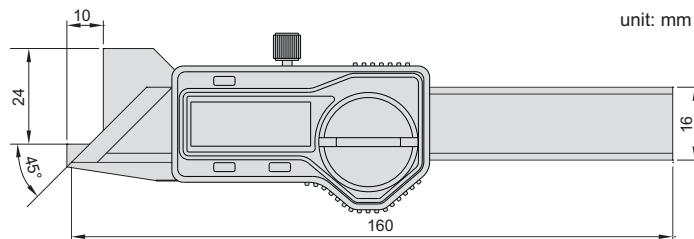


163

DIGITAL CHAMFER GAUGE



- ◆ Measure 45° chamfer dimension
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Automatic power on/off
- ◆ Data output(cable code :100-11 or 100-12)
- ◆ Made of stainless steel



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

SERIES 163

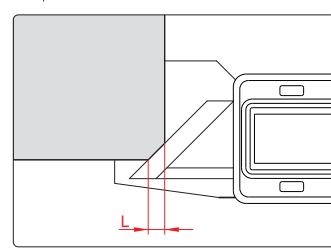
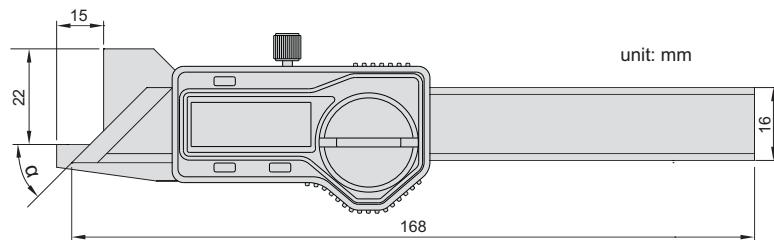
DIGITAL CHAMFER GAUGE



- ◆ Measure α chamfer dimension
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Automatic power on/off
- ◆ Data output(cable code :100-11 or 100-12)
- ◆ Made of stainless steel



163-010-12



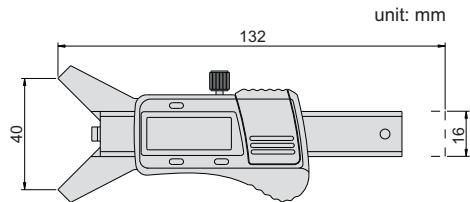
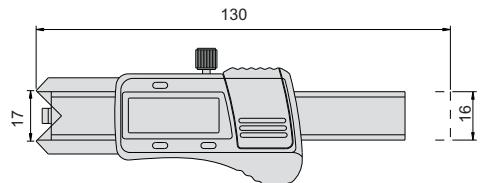
Code	Range	Accuracy	Chamfer(α)
163-010-11	0-10mm/0-0.39"	±0.06mm	30°
163-010-12	0-10mm/0-0.39"	±0.06mm	45°
163-010-13	0-10mm/0-0.39"	±0.06mm	60°

SERIES 164**DIGITAL CHAMFER GAUGE**

164-001-11



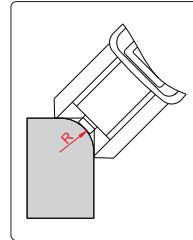
164-002-11



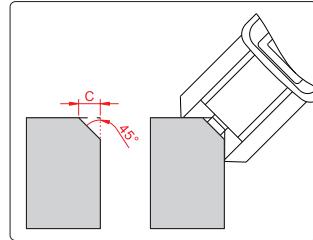
- ◆ Resolution: 0.01mm
- ◆ Made of stainless steel

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

Measure chamfer radius

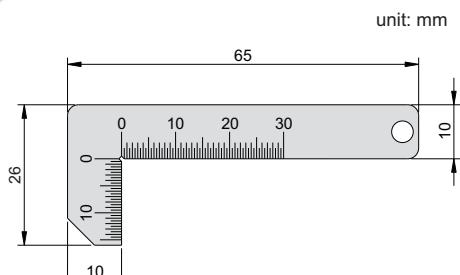
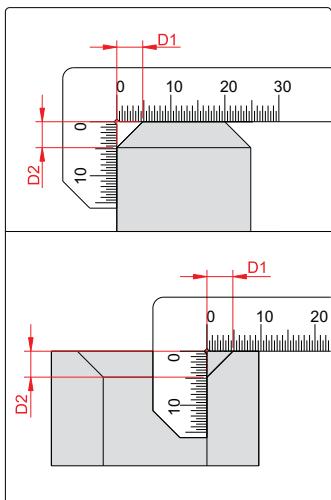


Measure leg length of 45° chamfer

**967****CHAMFER GAUGE**

KEYWEY

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



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



195

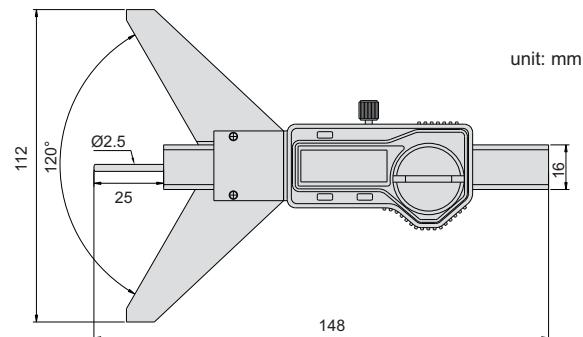
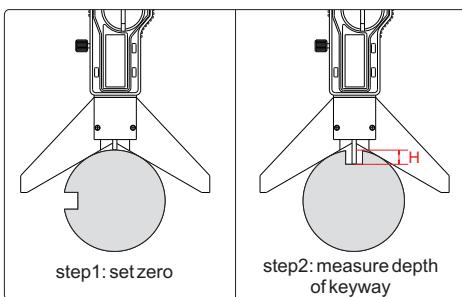
DIGITAL KEYWAY GAUGE



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



Measure



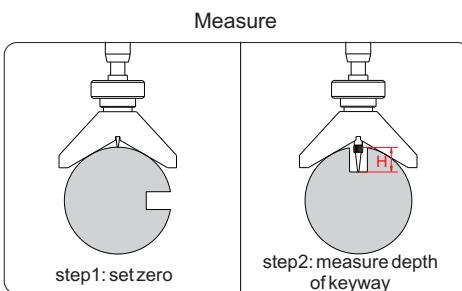
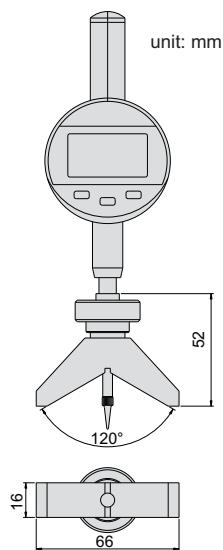
Code	Range	Accuracy
195-002-11	0-50mm/0-2"	±0.03mm

196

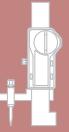
DIGITAL KEYWAY GAUGE



- ◆ 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)



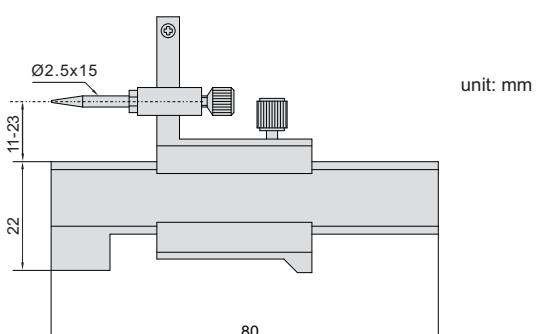
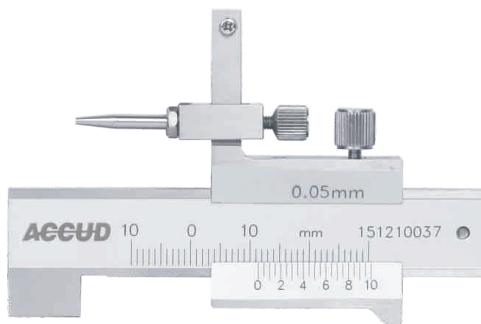
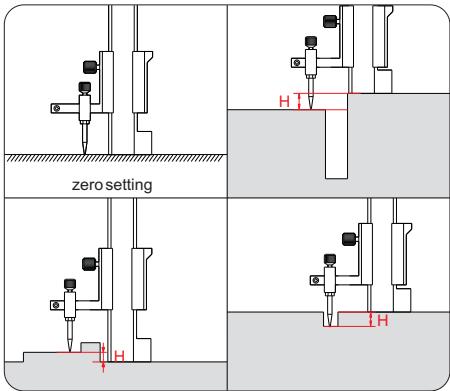
Code	Range	Resolution	Accuracy
196-001-11	0-25.4mm/0-1"	0.01mm/0.0005"	±0.02mm



998

VERNIER STEP GAUGE

- ◆ Measure the height difference of two surface
- ◆ Resolution: 0.05mm



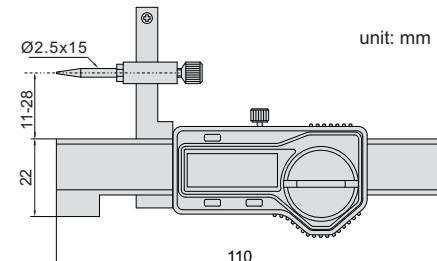
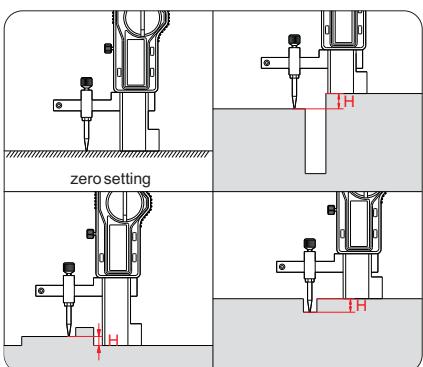
Code	Range	Accuracy
998-010-11	-10~+10mm	±0.05mm

999

DIGITAL STEP GAUGE



- ◆ Measure the height difference of two surface
- ◆ Resolution: 0.01mm
- ◆ Button: on/off, zero, mm/inch
- ◆ Data output(cable code :100-11 or 100-12)
- ◆ Automatic power off
- ◆ Stainless steel base



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

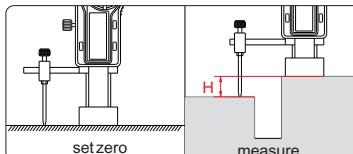


SERIES 999

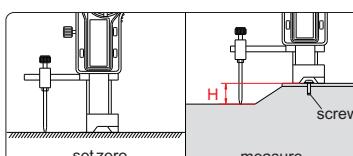
MINI DIGITAL HEIGHT GAUGE



- ◆ 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/inch
- ◆ Data output(cable code :100-11 or 100-12)
- ◆ Automatic power off
- ◆ Made of stainless steel

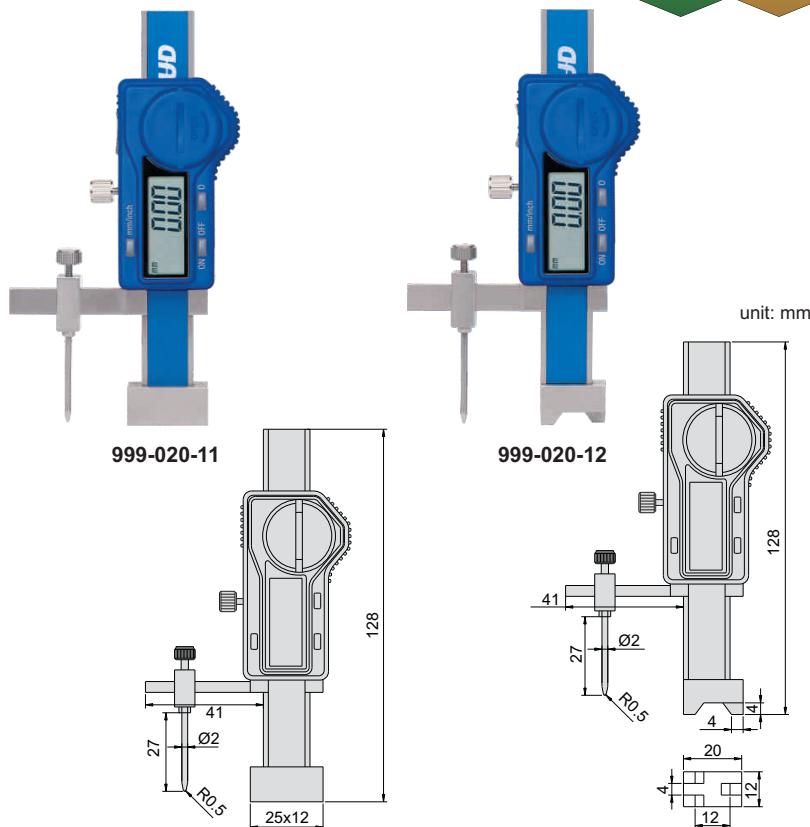


999-020-11



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

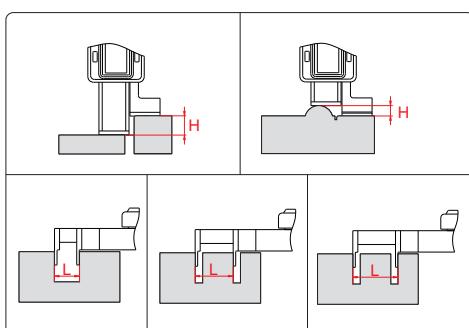


437

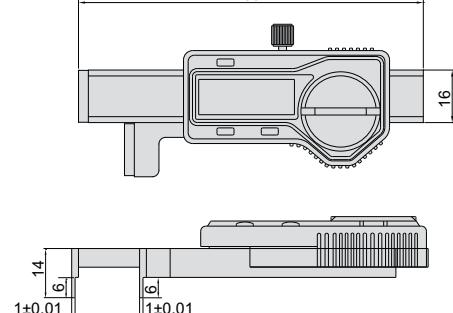
STEP AND GAP GAUGE



- ◆ Measure step height and gap width
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Automatic power on/off
- ◆ Data output(cable code :100-11 or 100-12)
- ◆ Made of stainless steel
- ◆ Supplied with zero setting block



unit: mm

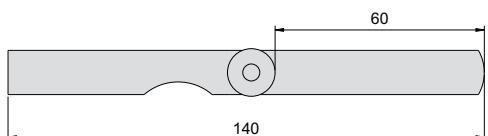
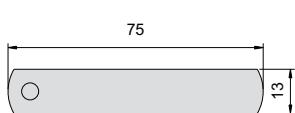


zero setting block(included)

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

911**FEELER**

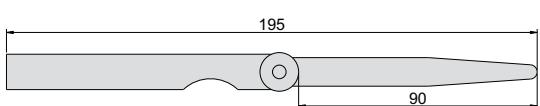
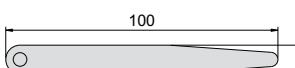
- ◆ Meets DIN2275
- ◆ Accuracy: $\pm(3+T/80)\mu\text{m}$, T is the thickness of leaves, unit: μm



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



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

SIMPLE
MEASURING TOOL

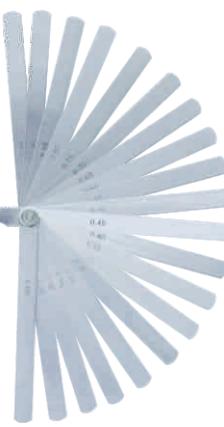
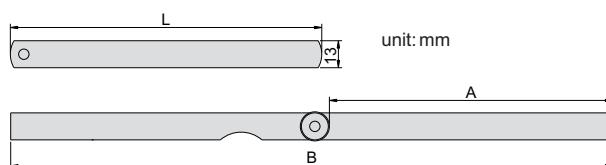


SERIES 913/914/915 ➤ FEELER

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

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,	150
914-100-13	0.05 - 1.00mm	13	0.50, 0.60, 0.70, 0.80, 0.90, 1.00	200
915-100-13	0.02 - 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,	150
914-100-17	0.02 - 1.00mm	17	0.09, 0.10, 0.15, 0.20, 0.25, 0.30, 0.40,	200
915-100-17	0.02 - 1.00mm	17	0.50, 0.75, 1.00	300
913-100-20	0.05 - 1.00mm	20	0.05, 0.10, 0.15, 0.20, 0.25, 0.30, 0.35,	150
914-100-20	0.05 - 1.00mm	20	0.40, 0.45, 0.50, 0.55, 0.60, 0.65, 0.70,	200
915-100-20	0.05 - 1.00mm	20	0.75, 0.80, 0.85, 0.90, 0.95, 1.00	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
916-001-01	0.01mm	$\pm 3\mu\text{m}$
916-002-01	0.02mm	$\pm 4\mu\text{m}$
916-003-01	0.03mm	$\pm 4\mu\text{m}$
916-004-01	0.04mm	$\pm 4\mu\text{m}$
916-005-01	0.05mm	$\pm 4\mu\text{m}$
916-006-01	0.06mm	$\pm 4\mu\text{m}$
916-007-01	0.07mm	$\pm 5\mu\text{m}$
916-008-01	0.08mm	$\pm 5\mu\text{m}$
916-009-01	0.09mm	$\pm 5\mu\text{m}$
916-010-01	0.10mm	$\pm 5\mu\text{m}$

Code	Thickness	Accuracy
916-015-01	0.15mm	$\pm 5\mu\text{m}$
916-020-01	0.20mm	$\pm 8\mu\text{m}$
916-025-01	0.25mm	$\pm 9\mu\text{m}$
916-030-01	0.30mm	$\pm 9\mu\text{m}$
916-035-01	0.35mm	$\pm 11\mu\text{m}$
916-040-01	0.40mm	$\pm 12\mu\text{m}$
916-045-01	0.45mm	$\pm 12\mu\text{m}$
916-050-01	0.50mm	$\pm 14\mu\text{m}$
916-055-01	0.55mm	$\pm 14\mu\text{m}$
916-060-01	0.60mm	$\pm 14\mu\text{m}$

Code	Thickness	Accuracy
916-065-01	0.65mm	$\pm 14\mu\text{m}$
916-070-01	0.70mm	$\pm 17\mu\text{m}$
916-075-01	0.75mm	$\pm 17\mu\text{m}$
916-080-01	0.80mm	$\pm 19\mu\text{m}$
916-085-01	0.85mm	$\pm 19\mu\text{m}$
916-090-01	0.90mm	$\pm 22\mu\text{m}$
916-095-01	0.95mm	$\pm 22\mu\text{m}$
916-100-01	1.00mm	$\pm 24\mu\text{m}$

917**INCH FEELER GAUGE**

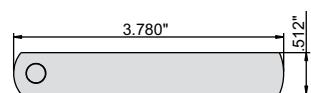
- ◆ .010" is made of brass, others are made of hardened alloy steel
- ◆ Each blade is marked with inch/metric size

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

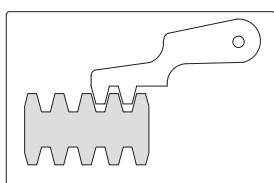
Thickness of leaves included	Accuracy
.010" (brass)	±.00039"
.0015", .002"	±.0002"
.0025"~.007"	±.00028"
.008", .009"	±.00035"
.010", .011"	±.00039"
.012", .013"	±.00047"
.014", .015"	±.00051"
.016", .017"	±.00055"
.018", .019"	±.00059"
.020", .021"	±.00067"
.022", .023"	±.00071"
.024", .025", .026"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



unit: mm

**SERIES 921****PITCH GAUGE**

- ◆ Measure the pitch of thread
- ◆ Accuracy: ±0.07mm



921-012-16

 SIMPLE
MEASURING TOOL

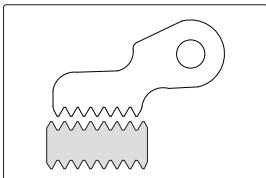
Code	Range	Thread	Quantity	Leaves pitch(mm)
921-020-12	2-20mm	Tr30°	12	2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 16, 20mm
921-012-16	1-12TPI	ACME29°	16	1, 1-1/3, 1-1/2, 1-3/4, 2, 2-1/2, 3, 3-1/2, 4, 5, 6, 7, 8, 9, 10, 12TPI



SERIES 922/923/924/925

PITCH GAUGE

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



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

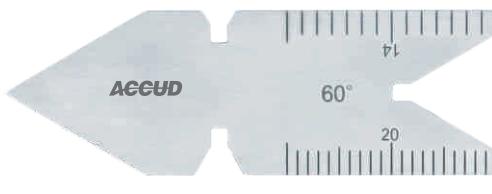
METRIC 60° AND WHITWORTH 55° SCREW

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

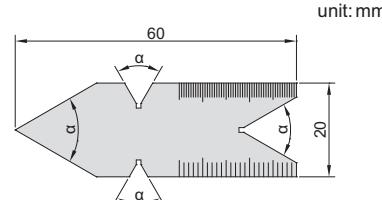
SERIES 926

CENTER GAUGE

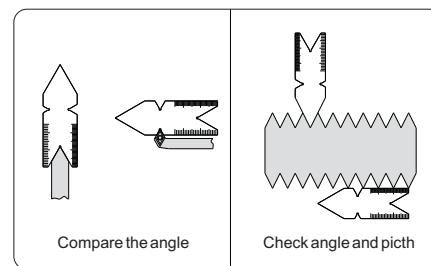
- ◆ Check the screw angle and pitch
- ◆ Accuracy: $\pm 30'$



926-060-02

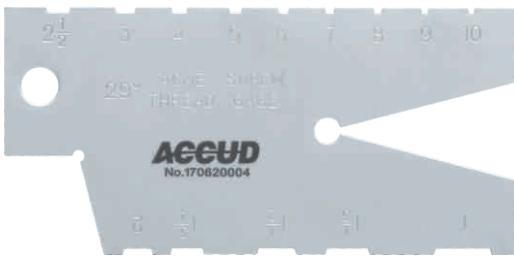


Code	Screwtype	Angle(α)	Graduation
926-060-01	metric 60°	60°	0.5mm and 1mm
926-060-02	unified 60°	60°	front side: 1/14" and 1/20", reverse side: 1/24" and 1/32"
926-055-01	whitworth 55°	55°	front side: 1/14" and 1/20", reverse side: 1/24" and 1/32"

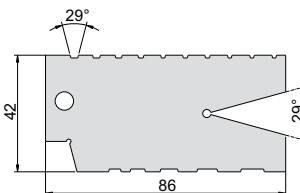
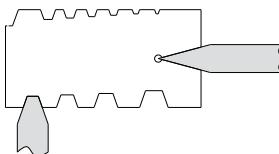


SERIES 927**THREAD GAUGE**

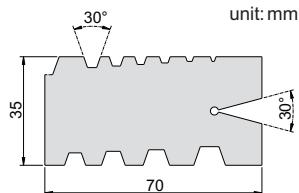
- ◆ To check and set screw cutting tools
- ◆ Angle accuracy: $\pm 10\text{min}$.



927-008-01



927-008-01

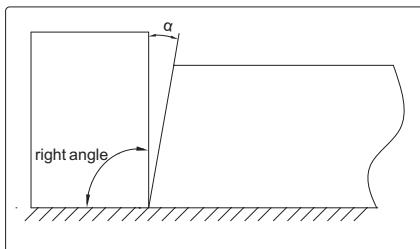


927-012-01

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	Tr30°	2, 3, 4, 5, 6, 7, 8, 9, 10, 12mm

931**ANGLE GAUGE**

- ◆ Check the coangle
- ◆ Accuracy: $\pm 30'$



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°

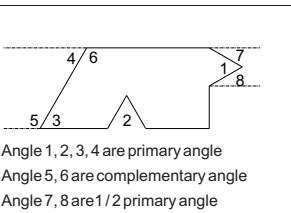
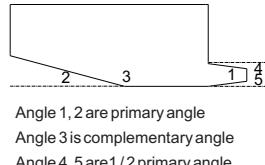


932

ANGLE GAUGE SET

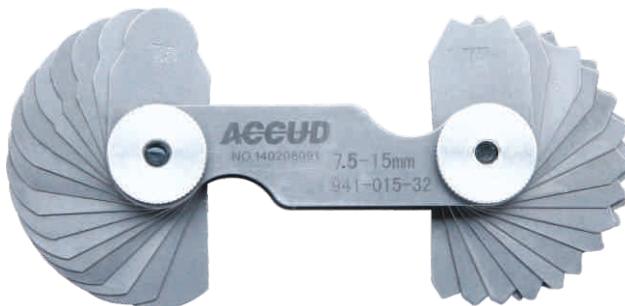
- Each blade checks primary, 1/2 primary and complementary angles

Code	Quantity of leaves	Accuracy
932-018-01	18	$\pm 10'$
Primary angle	1/2 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

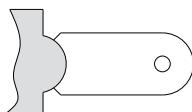
RADIUS GAUGE



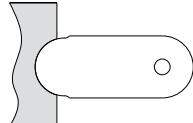
941-015-32

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

check convex surface



check concave surface

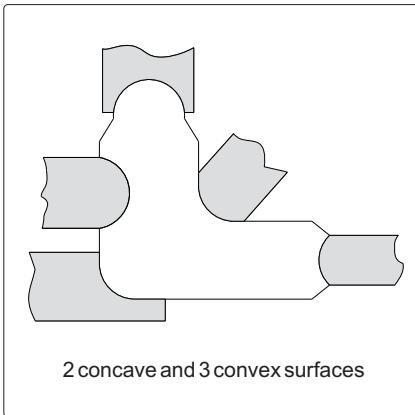


Code	Range	Quantity	Accuracy	Leaves radius (mm)
941-007-34	1-7mm	17x2	$\pm 0.03\text{mm}$	1, 1.25, 1.5, 1.75, 2, 2.25, 2.5, 2.75, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7
941-015-32	7.5-15mm	16x2	$\pm 0.035\text{mm}$	7.5, 8, 8.5, 9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13, 13.5, 14, 14.5, 15
941-025-30	15.5-25mm	15x2	$\pm 0.042\text{mm}$	15.5, 16, 16.5, 17, 17.5, 18, 18.5, 19, 19.5, 20, 21, 22, 23, 24, 25

942

RADIUS GAUGE

- ◆ Each piece has 2 concave and 3 convex surfaces
- ◆ With handle
- ◆ Accuracy: $\pm 0.05\text{mm}$



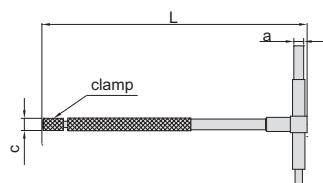
Code	Range	Quantity	Included radius(mm)
942-013-26	0.5 - 13mm	26	0.5, 1, 1.5, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7, 7.5, 8, 8.5, 9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13

951

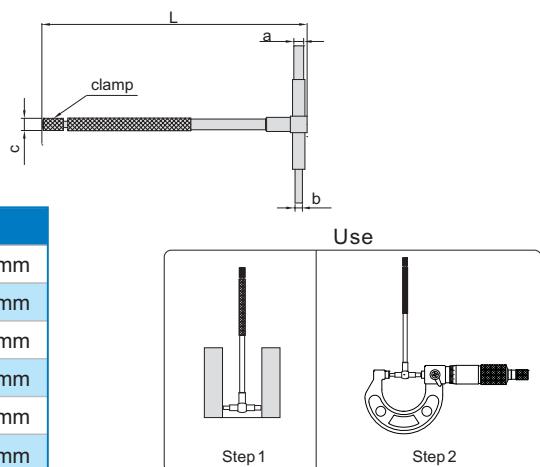
TELESCOPING GAUGE SET

SIMPLE
MEASURING TOOL

- ◆ 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



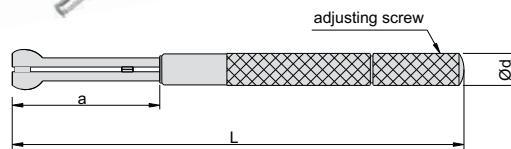


952

SMALL HOLE GAUGE SET

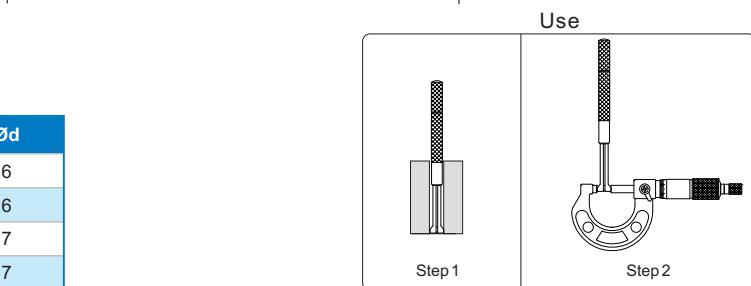


unit:mm



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

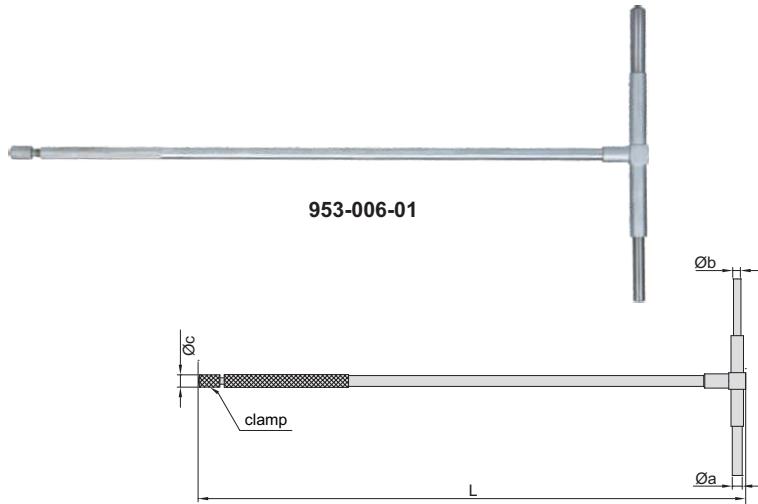
Code	Range	L	a	$\varnothing d$
952-004-01	3-5mm	77	24	6
	5-7.5mm	77	25	6
	7.5-10mm	87	28.5	7
	10-13mm	92	32	7



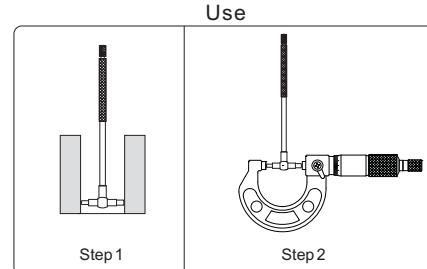
SERIES 953

LONG HANDLE TELESCOPING GAUGE

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

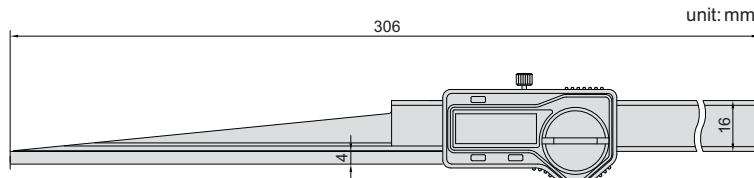


Code	Range	L	$\varnothing a$	$\varnothing b$	$\varnothing c$
953-001-01	8-12.7mm	250mm	3.9mm	2.9mm	6.2mm
953-002-01	12.7-19mm	250mm	5.3mm	3.8mm	6.2mm
953-003-01	19-32mm	250mm	5.3mm	3.8mm	6.2mm
953-004-01	32-54mm	300mm	7.6mm	6.1mm	7.2mm
953-005-01	54-90mm	300mm	7.6mm	6.1mm	7.2mm
953-006-01	90-150mm	300mm	7.6mm	6.1mm	7.2mm



963

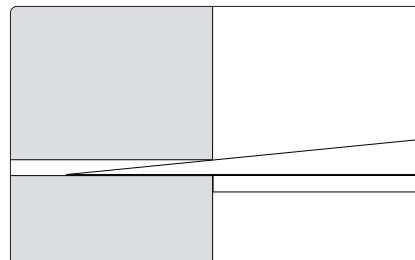
DIGITAL TAPER GAUGE



- ◆ Measuring opening, slot width
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Data output(cabie code:100-11 or 100-12)
- ◆ Automatic power on/off
- ◆ Made of stainless steel

Code	Range	Accuracy
963-010-11	0.2-10mm/0.008-0.394"	±0.03mm

Measure slot width(reading/10)

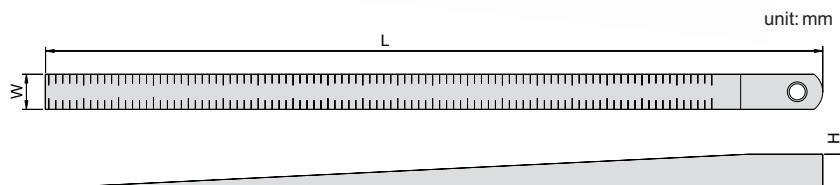


SERIES 961 TAPER GAUGE

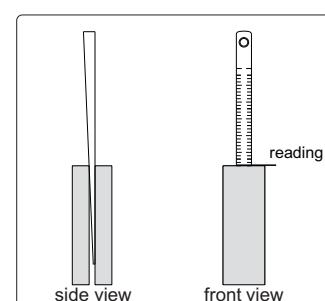
- ◆ Measure the gap width
- ◆ Stain chrome plated reading surface
- ◆ Made of the stainless steel



961-010-05



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

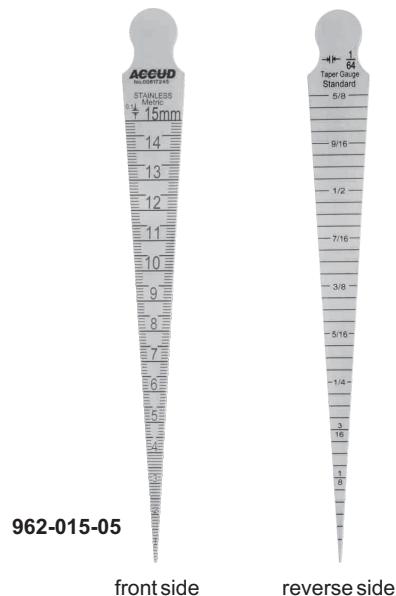
SIMPLE
MEASURING TOOL



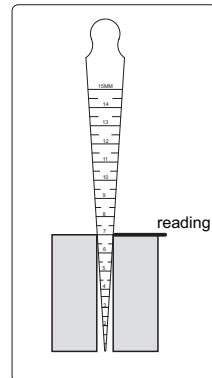
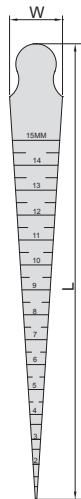
SERIES 962

TAPER GAUGE

- ◆ Measure the groove width and hole size
- ◆ Made of the stainless steel



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

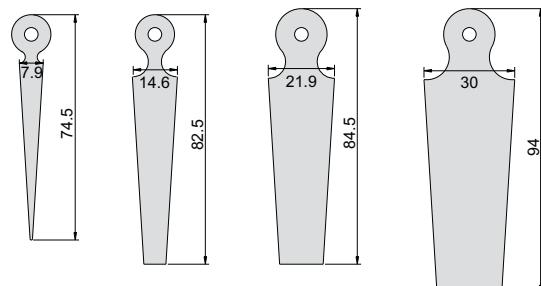
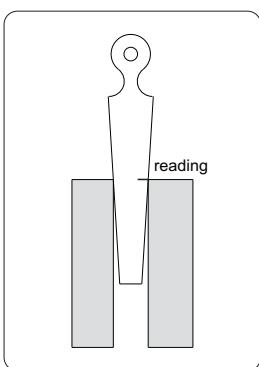
962

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



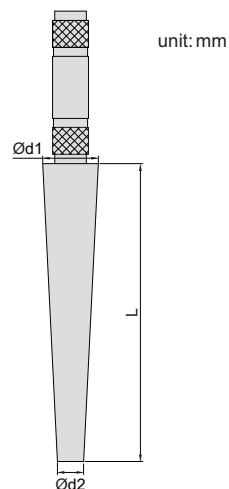
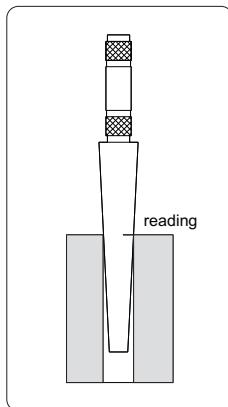
unit: mm



Code	Range	Graduation	Accuracy
962-029-41	1-29mm	0.1mm	±0.05mm

SERIES 964**TAPER BORE GAUGE**

- ◆ Quick measuring diameter of the bore
- ◆ Graduation: 0.1mm
- ◆ Hardened steel, HRC50-58
- ◆ Satin chrome plated surface
- ◆ Aluminium oxidized handle



964-015-11

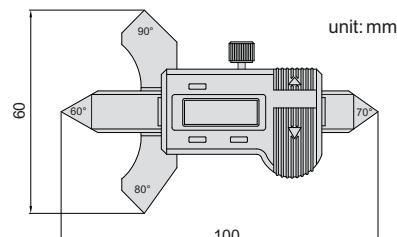
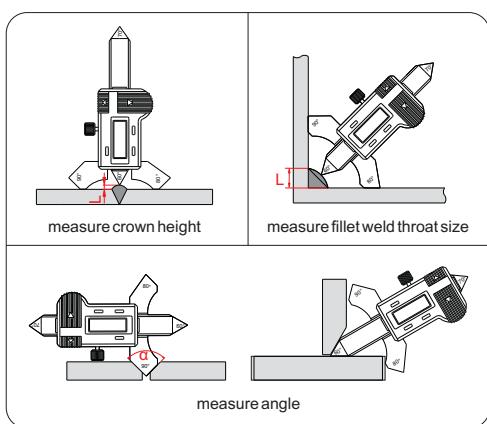


Code	Range	Accuracy	L	Ød1	Ød2
964-006-11	1-6.5mm	±0.05mm	62.5	7	0.8
964-015-11	3-15mm	±0.05mm	143	17	2.8
964-030-11	15-30mm	±0.05mm	165	31	14.7
964-045-11	30-45mm	±0.05mm	165	46	29.6

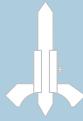
970**DIGITAL WELDING GAUGE**

SIMPLE
MEASURING TOOL

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



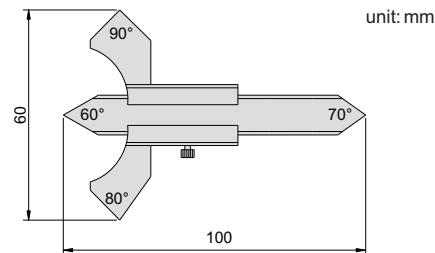
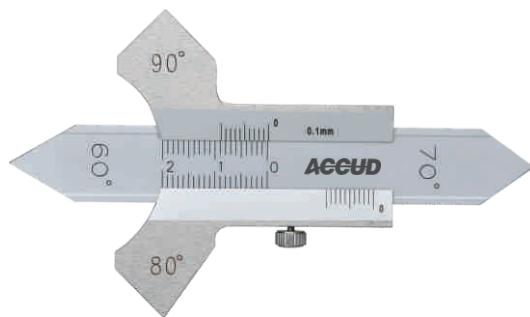
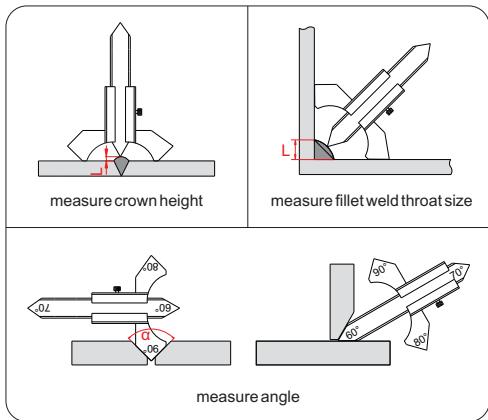
Code	Range	Accuracy	Resolution	Application
970-010-11	0 - 10mm	±0.03mm	0.01mm/0.0005"	measure crown height
	0-20mm	±0.1mm	0.01mm/0.0005"	measure fillet weld throat size
	60°, 70°, 80°, 90°	±1°	—	measure angle



971

WELDING GAUGE

- Made of stainless steel
- Stain chrome plated reading surface

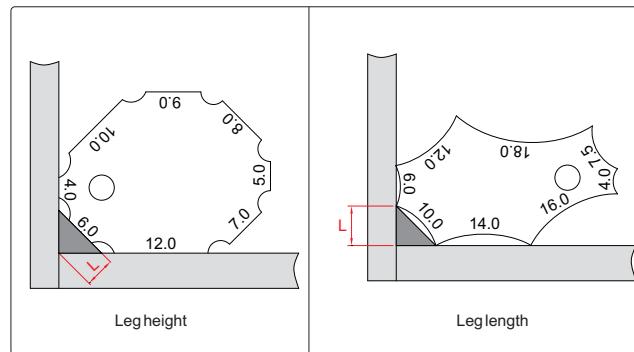
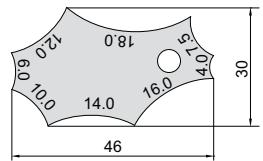
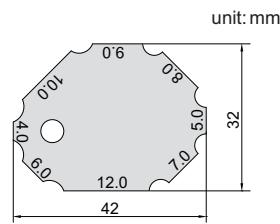


Code	Range	Graduation	Accuracy	Application
971-008-01	0-8mm	0.1mm	±0.1mm	measure crown height
	0-20mm	0.1mm	±0.3mm	measure fillet weld throat size
	60°, 70°, 80°, 90°	—	±1°	measure angle

972

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

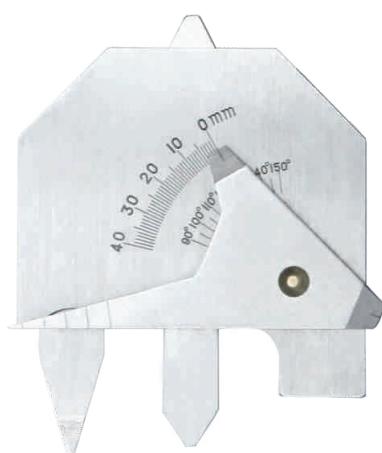
973

WELDING GAUGE

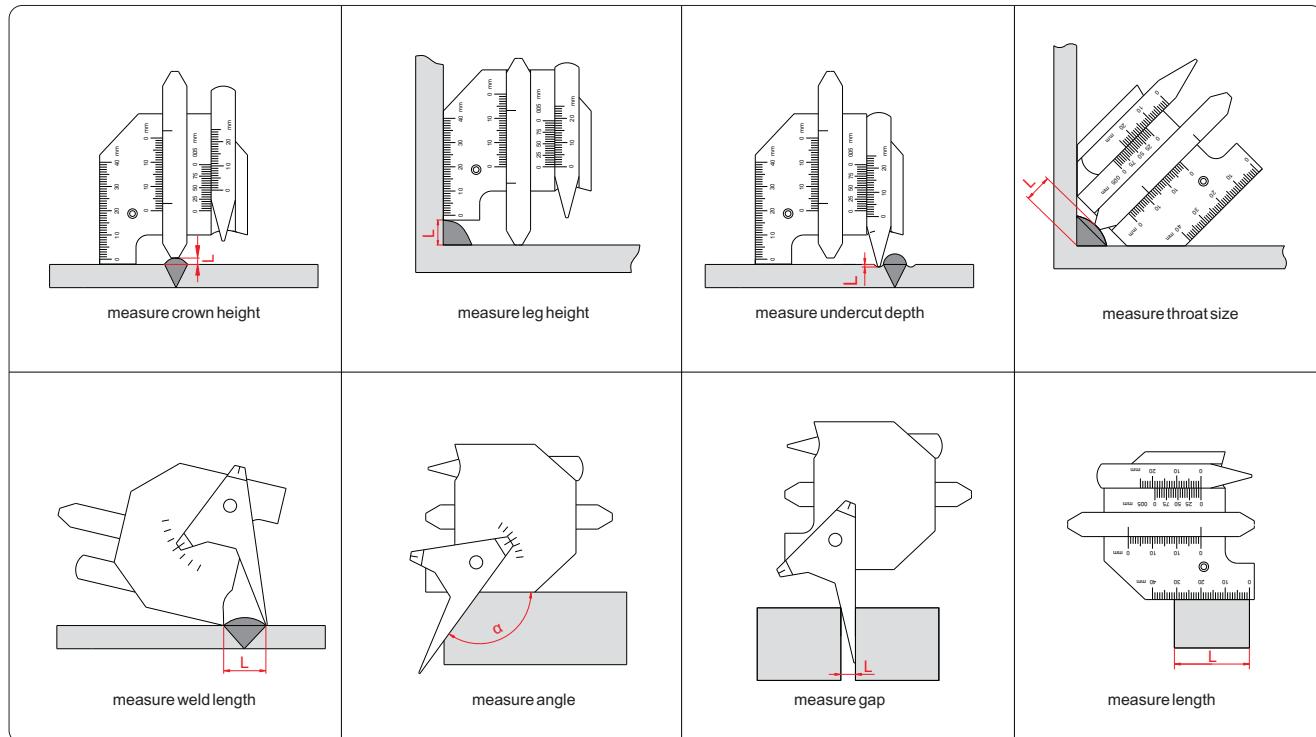
- Made of stainless steel



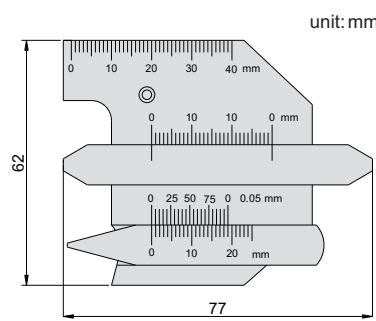
front side



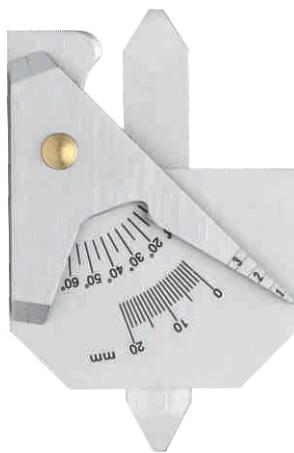
reverse side



Code	Application	Range	Graduation	Accuracy
973-014-01	measure crown height	0 - 10mm	1mm	$\pm 0.5\text{mm}$
	measure leg height	0 - 14mm	1mm	$\pm 0.5\text{mm}$
	measure undercut depth	0 - 5mm	0.05mm	$\pm 0.05\text{mm}$
	measure throat size	0 - 13mm	1mm	$\pm 0.5\text{mm}$
	measure weld length	0 - 40mm	1mm	$\pm 1\text{mm}$
	measure angle	90° - 150°	5°	$\pm 1^\circ$
	measure gap	0.5 - 5mm	1mm	$\pm 0.5\text{mm}$
	measure length	0 - 40mm	1mm	$\pm 0.5\text{mm}$

SIMPLE
MEASURING TOOL

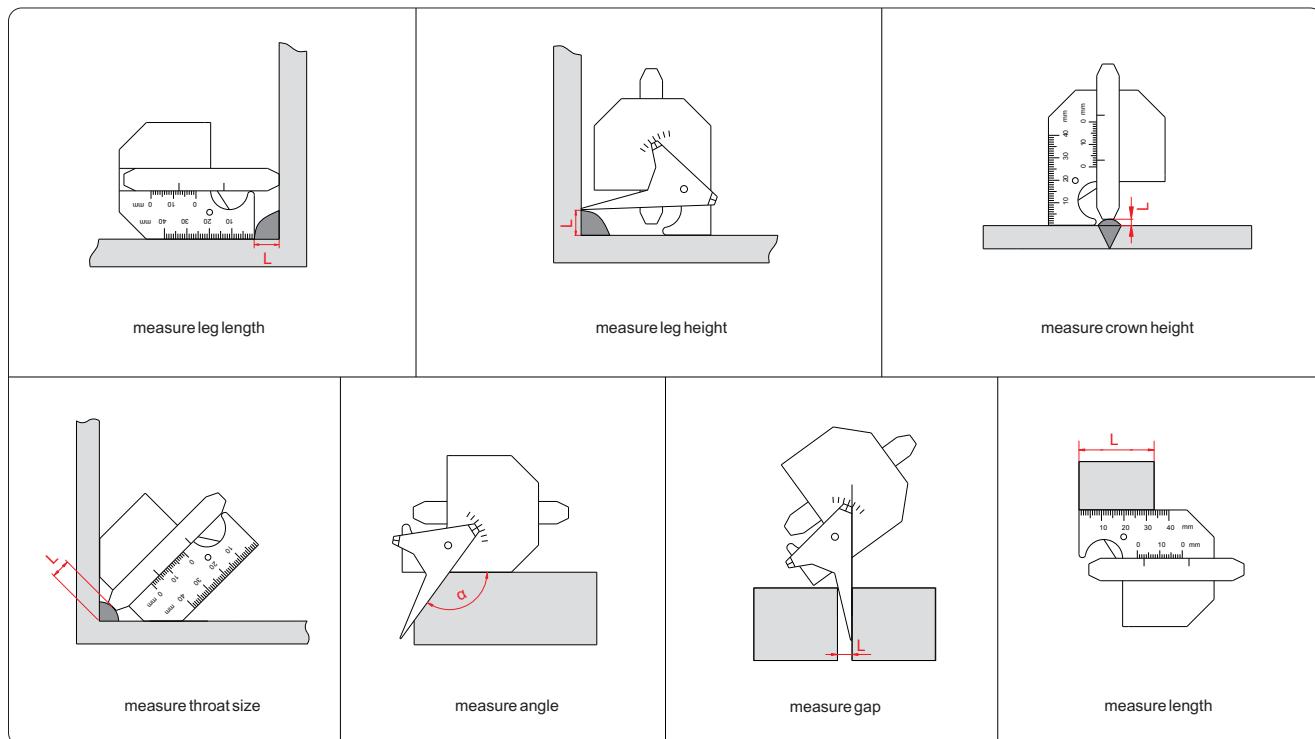
- Made of stainless steel
- Stain chrome plated surface



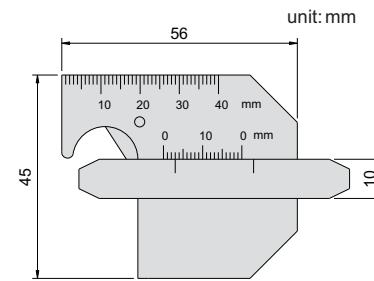
reverse side



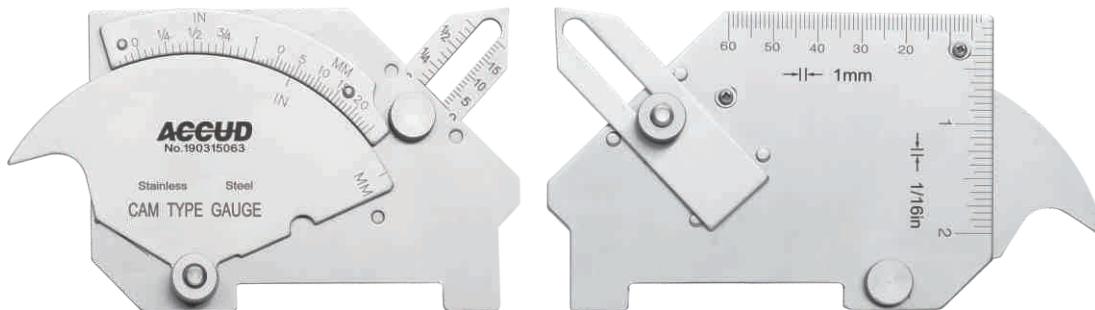
front side



Code	Application	Range	Graduation	Accuracy
974-013-01	measure leg length	0 - 10mm	0.1mm	$\pm 0.1\text{mm}$
	measure leg height	0 - 20mm	1mm	$\pm 0.5\text{mm}$
	measure crown height	0 - 10mm	0.1mm	$\pm 0.1\text{mm}$
	measure throat size	0 - 10mm	0.1mm	$\pm 0.1\text{mm}$
	measure angle	$0^\circ - 60^\circ$	5°	$\pm 1^\circ$
	measure gap	1 - 3.5mm	0.5mm	$\pm 0.5\text{mm}$
	measure length	0 - 40mm	1mm	$\pm 0.5\text{mm}$

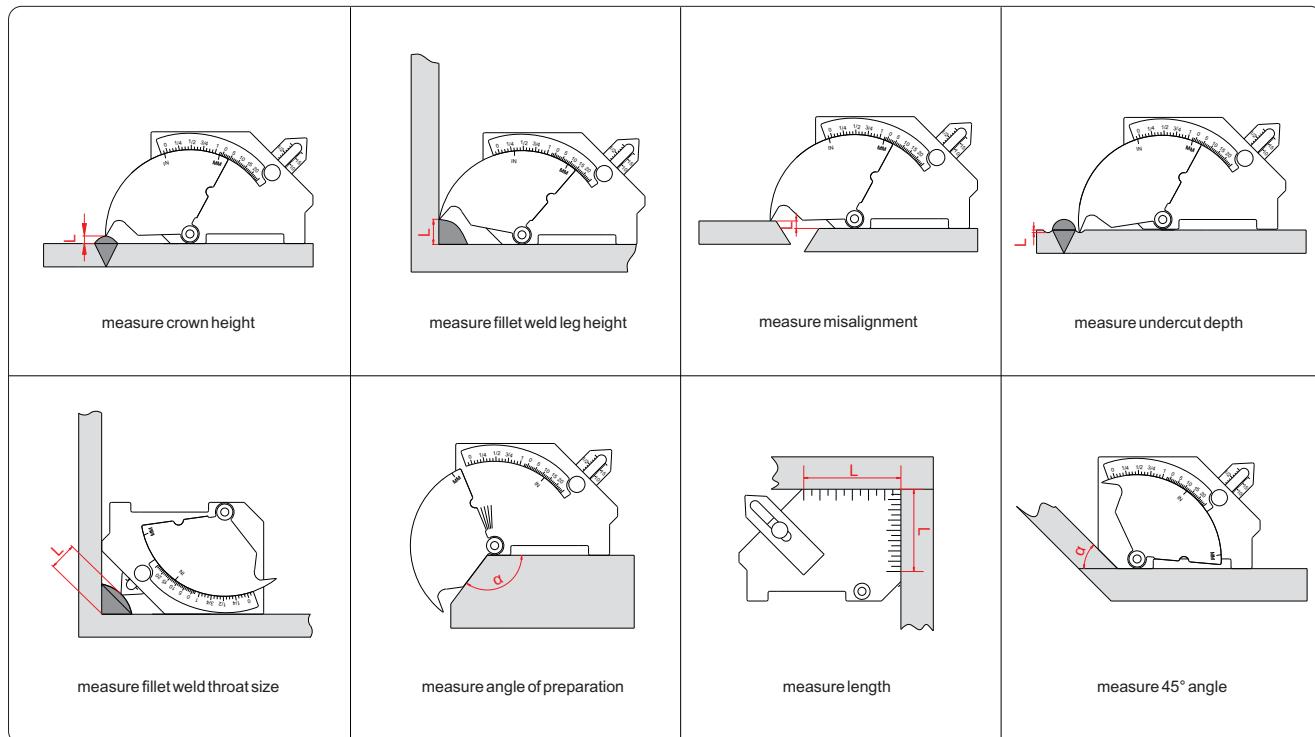


- ◆ Adjustable scale to compensate pointer wear
- ◆ Made of stainless steel

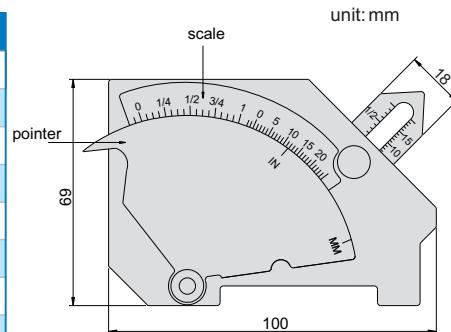


front side

reverse side



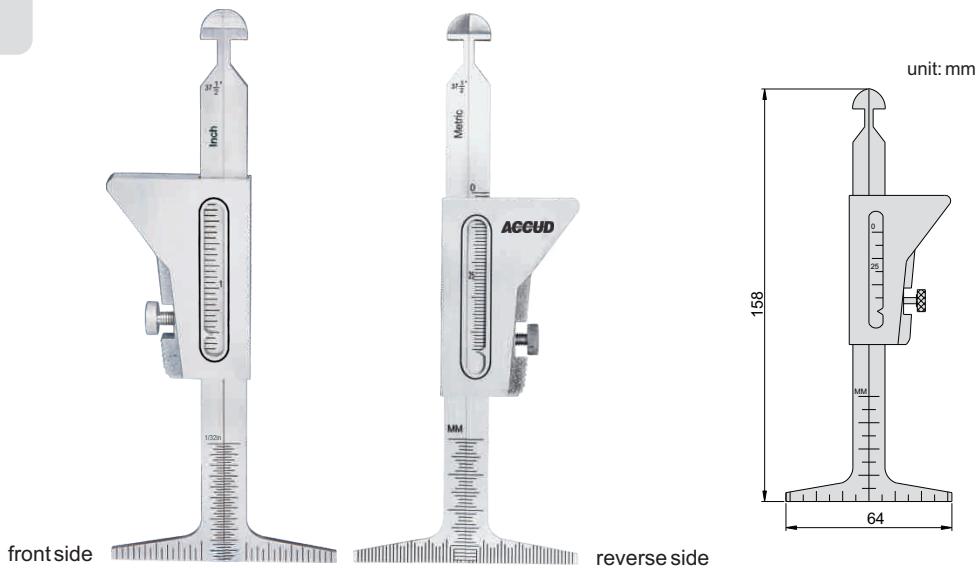
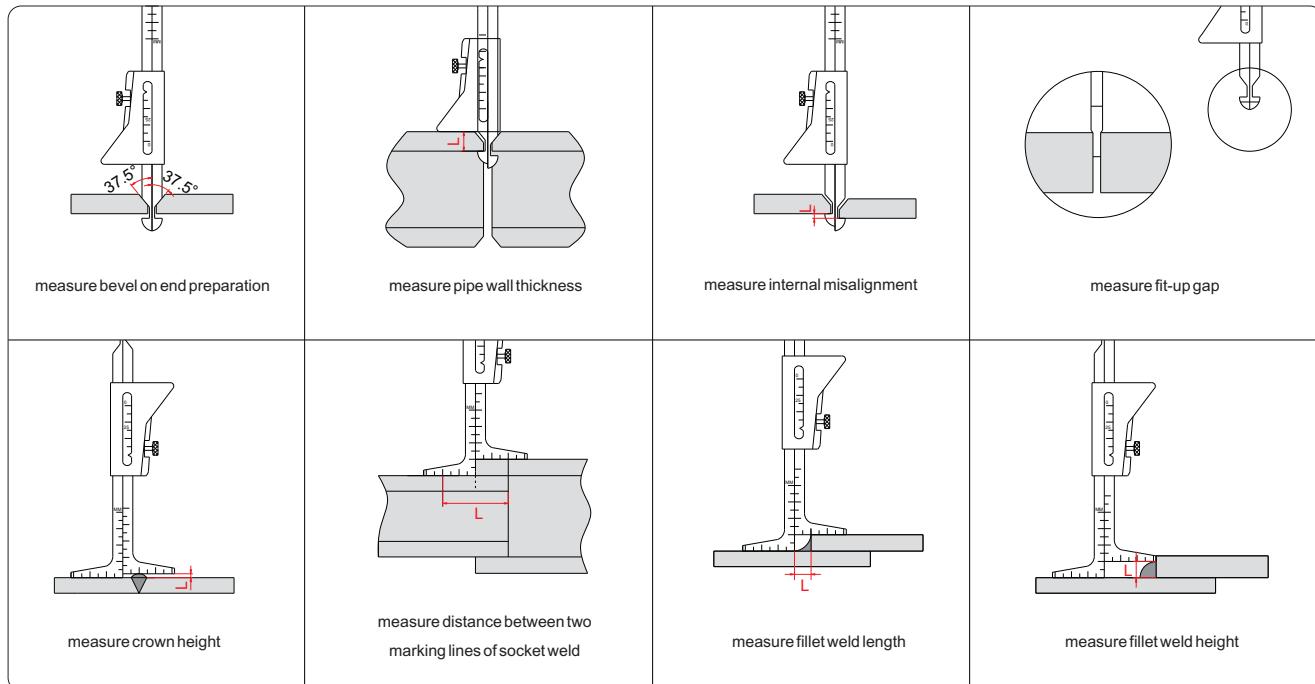
Code	Application	Range	Graduation	Accuracy
975-025-01	measure crown height	0-25mm (0-1")	1mm (1/16")	±0.5mm
	measure fillet weld leg height	0-25mm (0-1")	1mm (1/16")	±0.5mm
	measure misalignment	0-25mm (0-1")	1mm (1/16")	±0.5mm
	measure undercut depth	0-2mm (0-1/8")	1mm (1/16")	±0.5mm
	measure fillet 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°



976

PIPE WELDING GAUGE

- Made of stainless steel

SIMPLE
MEASURING
TOOL

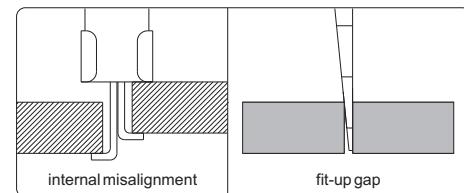
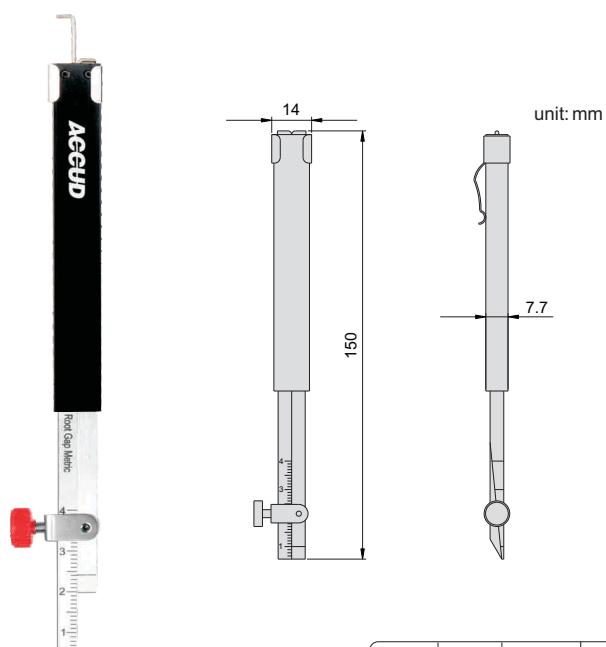
Code	Application	Range	Graduation	Accuracy
976-045-01	measure bevel on end preparation	37.5°	—	±1°
	measure pipe wall thickness	0 - 45mm (0 - 1-3/4")	1mm (1/16")	±0.5mm
	measure internal misalignment	0 - 35mm (0 - 1-3/8")	1mm (1/32")	±0.5mm
	measure fit-up gap	1.6mm, 2.2mm	—	±0.1mm
	measure crown height	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



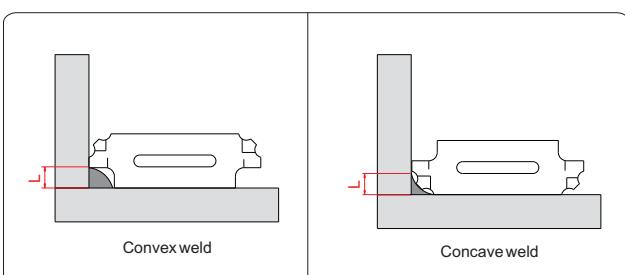
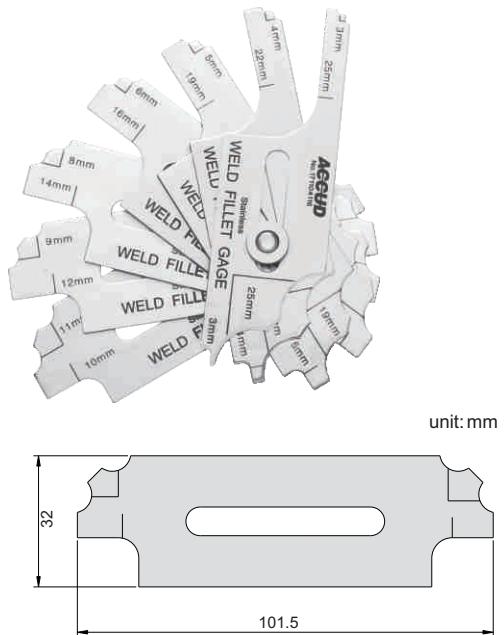
Code	Measurement	Range	Graduation	Accuracy
960-030-01	internal misalignment	0-30mm	1mm	$\pm 0.5\text{mm}$
	fit-up gap	0.7-4mm	0.1mm	$\pm 0.1\text{mm}$

SERIES 977

FILLET WELD GAUGE

SIMPLE
MEASURING TOOL

- Measure concave and convex weld sizes
- 7 blades are included
- Each blade measures two sizes of concave and convex weld
- Made of stainless steel



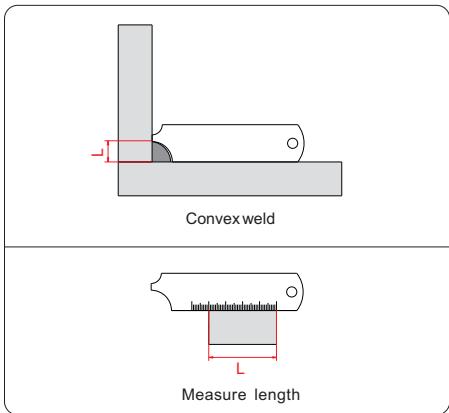
Code	Accuracy	Size
977-025-01	$\pm 0.5\text{mm}$	3, 4, 5, 6, 8, 9, 10, 11, 12, 14, 16, 19, 22, 25
977-025-02	$\pm 0.02"$	1/8", 3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 5/8", 3/4", 7/8", 1"



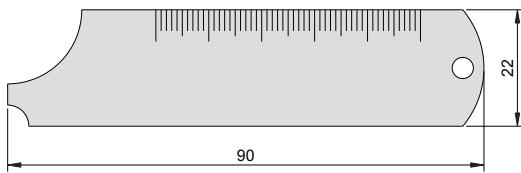
745

FILLET WELDING GAUGE

- ◆ Measure convex weld sizes
- ◆ 3 blades are included
- ◆ Made of stainless steel



unit: mm

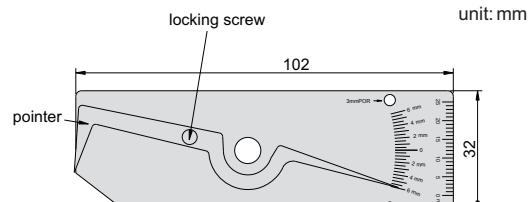
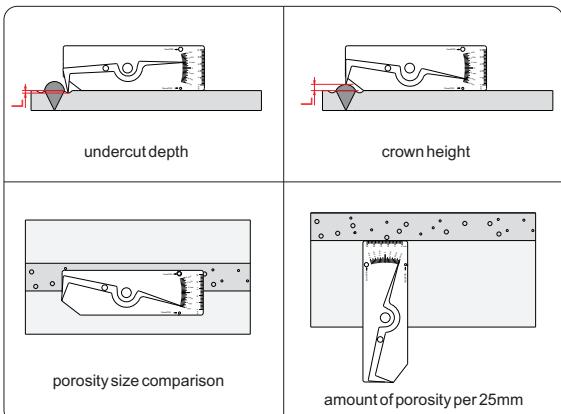


Code	Measurement	Range	Graduation	Accuracy
745-050-03	convex weld size	4, 6, 8, 10, 12, 14mm	—	±0.5mm
	length	0-50mm	1mm	±0.5mm

978

WELDING GAUGE

- ◆ Pointer can be locked for later reference
- ◆ Made of stainless steel

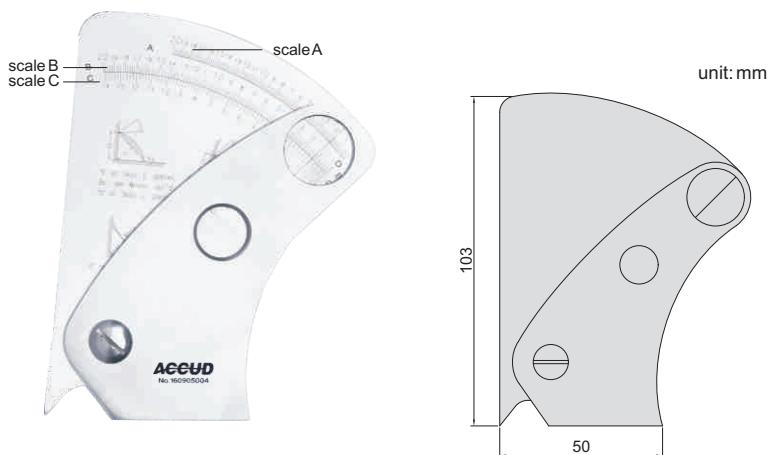


Code	Measurement	Range	Graduation	Accuracy
978-006-01	undercut depth	0-6mm	0.5mm	±0.5mm
	crown height	0-6mm	0.5mm	±0.5mm
	porosity size comparison	1.5mm, 3mm	—	±0.2mm
	amount of porosity per 25mm	25mm	1mm	—

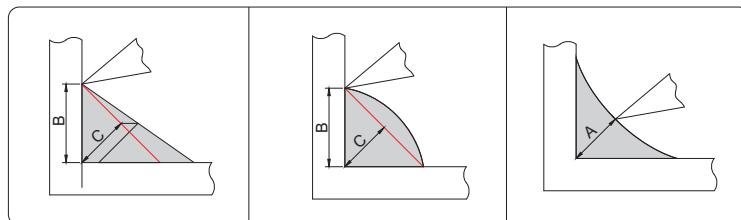
966

WELDING GAUGE

- Made of stainless steel



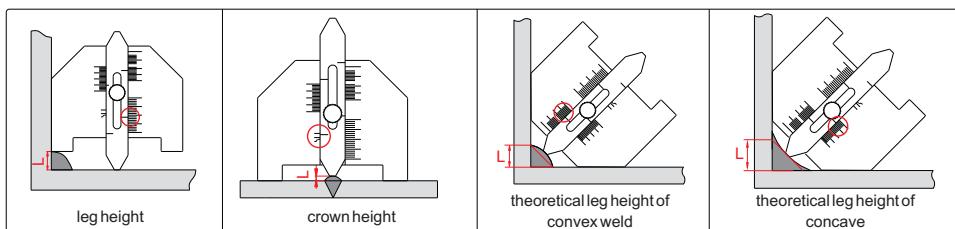
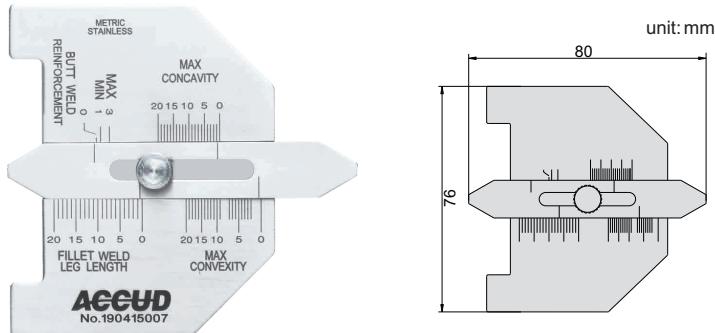
Code	Graduation	Accuracy
966-001-01	0.2mm	±0.3mm



979

WELDING GAUGE

- 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



969

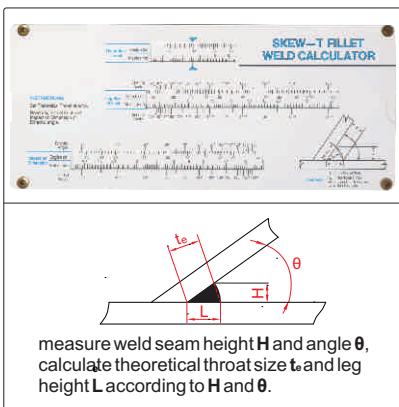
FILLET WELDING GAUGE

- Calculating card is included
- Made of stainless steel

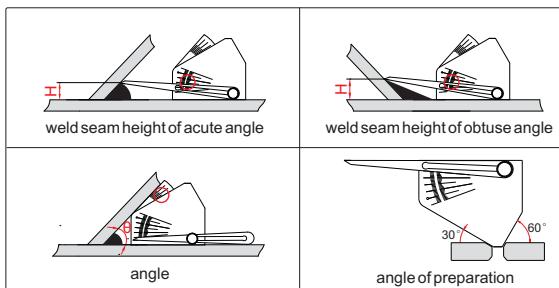
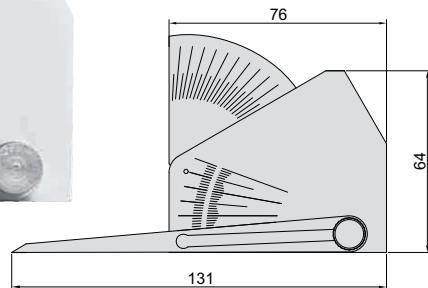


unit: mm

Calculating card (included)



measure weld seam height H and angle θ , calculate theoretical throat size t_s and leg height L according to H and θ .

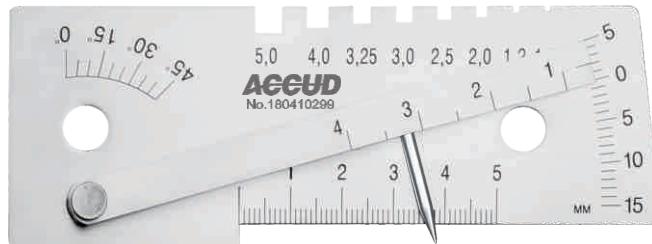


Code	Measurement	Range	Graduation	Accuracy
969-050-01	weld seam height H	0-50mm / 0-2"	2mm/.050"	$\pm 1\text{mm}$
	angle θ	30° - 90°	2.5°	$\pm 1^\circ$
	90° angle	—	—	$\pm 0.5^\circ$

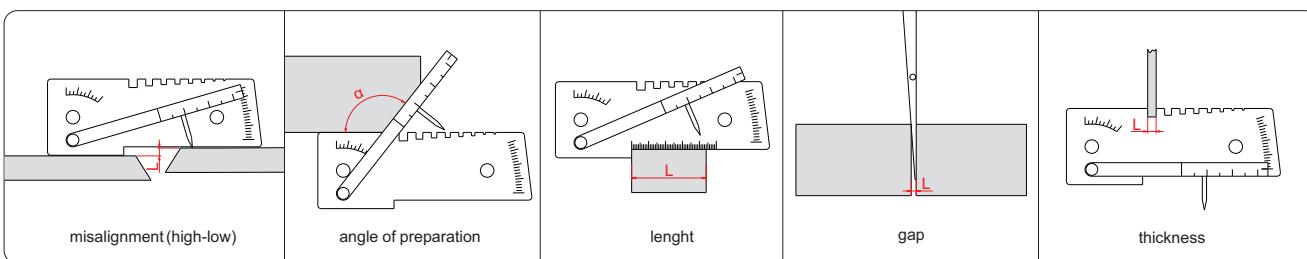
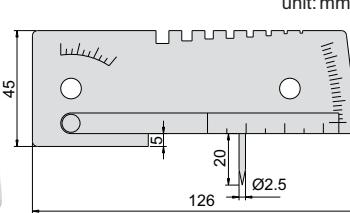
746

WELDING GAUGE

- Made of stainless steel



unit: mm

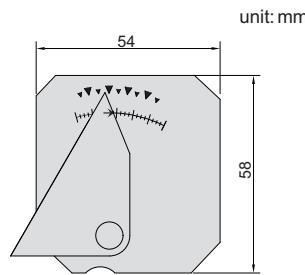


Code	Measurement	Range	Graduation	Accuracy
746-050-01	misalignment (high-low)	-5mm-15mm	1mm	$\pm 0.5\text{mm}$
	angle of preparation	0°-45°	5°	$\pm 2.5^\circ$
	length	0-50mm	1mm	$\pm 0.5\text{mm}$
	gap	1-4mm	0.5mm	$\pm 0.25\text{mm}$
	thickness	1, 1.2, 2.0, 2.5, 3.0, 3.25, 4.0, 5.0mm	—	$\pm 0.1\text{mm}$

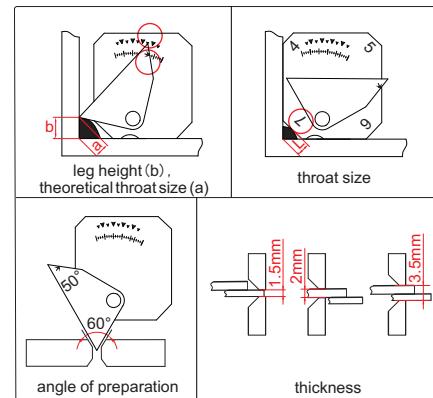
747

WELDING GAUGE

- Made of stainless steel



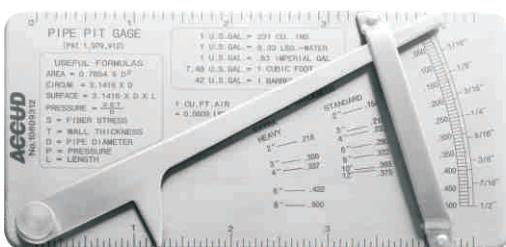
Code	Measurement	Range	Graduation	Accuracy
747-018-01	theoretical throat size (a)	2-12mm	1mm	$\pm 0.5\text{mm}$
	leg height (b)	0-18mm	1mm	$\pm 0.5\text{mm}$
	throat size	4, 5, 6, 7mm	—	$\pm 0.5\text{mm}$
	angle of preparation	50°, 60°	—	$\pm 1^\circ$
	thickness	1.5, 2, 3.5mm	—	$\pm 0.2\text{mm}$



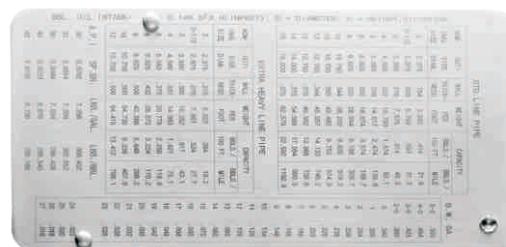
748

PIPE PIT GAUGE

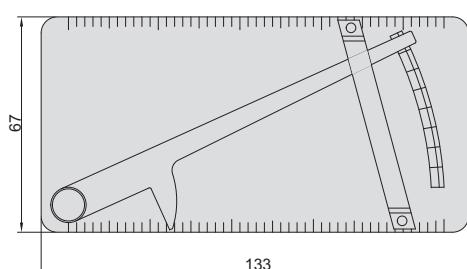
- Made of stainless steel



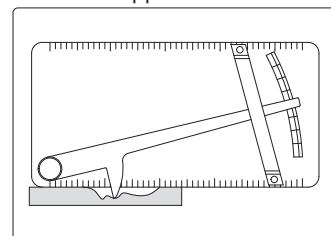
front side



reverse side



Application



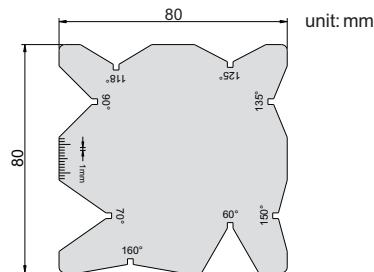
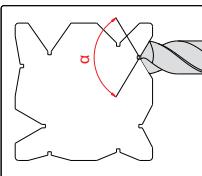
Code	Range	Graduation	Accuracy
748-012-01	0-0.5"(0-1/2")	0.01"(1/16")	$\pm 0.02"$

SIMPLE
MEASURING TOOL

968

DRILL ANGLE GAUGE

- ◆ Check drills with angle 60°, 70°, 90°, 118°, 125°, 135°, 150° or 160°
- ◆ Made of stainless steel



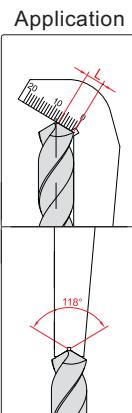
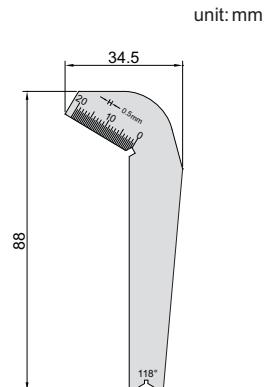
Code	Accuracy
968-001-01	±0.5°

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

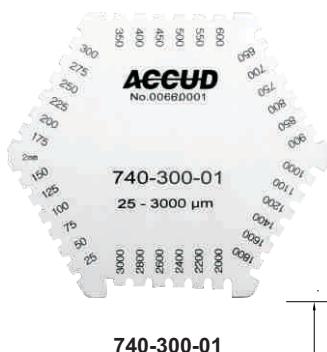
Code	Accuracy	
	Angle	Length
965-005-01	±0.5°	±0.5mm



SERIES 740

WET FILM GAUGE

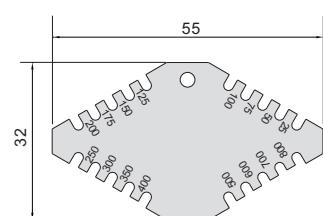
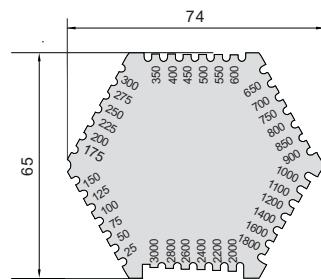
- ◆ Made of stainless steel



740-300-01



740-800-11



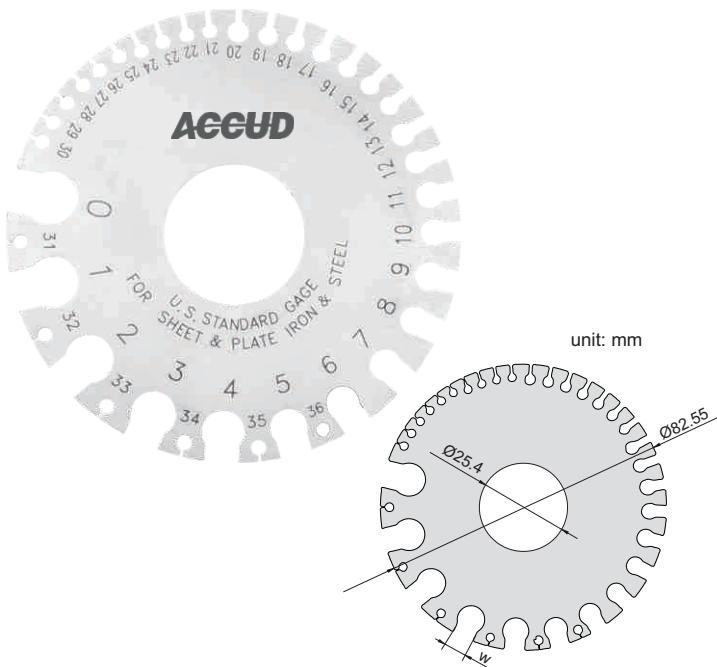
Code	Range	Accuracy	Thickness
740-800-11	25-800µm	±5µm	1.8mm
740-300-01	25-3000µm	25µm-100µm:±5µm 100µm-3000µm:±5%	1mm

**SERIES 741****U.S. STANDARD SHEET METAL GAUGE**

Code	Range
741-036-12	0-36(7.938-0.179mm/.3125-.0070")

NO.	W
0	7.938mm(.3125")
1	7.144mm(.2813")
2	6.747mm(.2656")
3	6.350mm(.2500")
4	5.953mm(.2344")
5	5.556mm(.2188")
6	5.159mm(.2031")
7	4.763mm(.1875")
8	4.366mm(.1719")
9	3.969mm(.1563")
10	3.572mm(.1406")
11	3.175mm(.1250")
12	2.778mm(.1094")
13	2.381mm(.0938")
14	1.984mm(.0781")
15	1.786mm(.0703")
16	1.588mm(.0625")
17	1.429mm(.0563")
18	1.270mm(.0500")

NO.	W
19	1.111mm(.0438")
20	0.953mm(.0375")
21	0.873mm(.0344")
22	0.794mm(.0313")
23	0.714mm(.0281")
24	0.635mm(.0250")
25	0.556mm(.0219")
26	0.476mm(.0188")
27	0.437mm(.0172")
28	0.397mm(.0156")
29	0.357mm(.0141")
30	0.318mm(.0125")
31	0.278mm(.0109")
32	0.258mm(.0102")
33	0.238mm(.0094")
34	0.218mm(.0086")
35	0.198mm(.0078")
36	0.179mm(.0070")



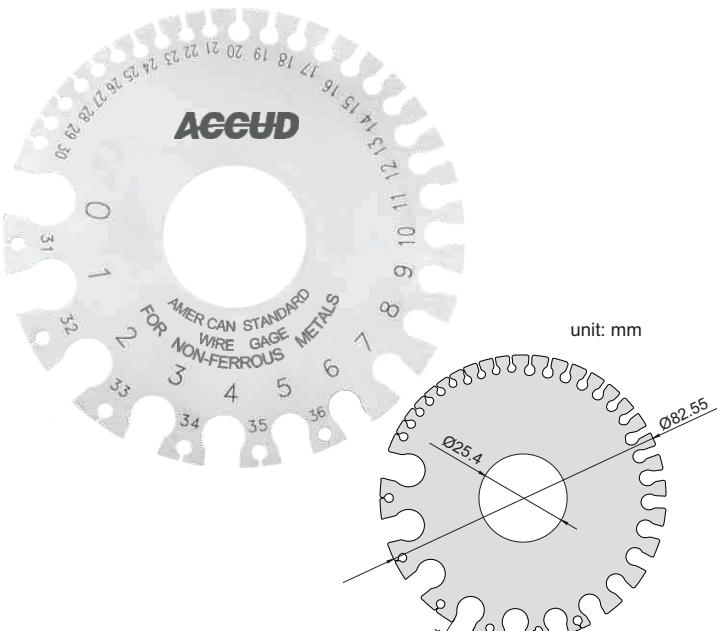
- ◆ For gaging sheet metal, plate iron and steel
- ◆ Hardened and satin chrome finish

SERIES 741**AMERICAN STANDARD WIRE GAUGE**

Code	Range
741-036-11	0-36(8.250-0.127mm/.3249-.0050")

NO.	W
0	8.250mm(.3249")
1	7.350mm(.2893")
2	6.540mm(.2576")
3	5.830mm(.2294")
4	5.190mm(.2043")
5	4.620mm(.1819")
6	4.110mm(.1620")
7	3.670mm(.1443")
8	3.260mm(.1285")
9	2.910mm(.1144")
10	2.590mm(.1019")
11	2.300mm(.0907")
12	2.050mm(.0808")
13	1.820mm(.0720")
14	1.630mm(.0641")
15	1.450mm(.0571")
16	1.290mm(.0508")
17	1.150mm(.0453")
18	1.020mm(.0403")

NO.	W
19	0.912mm(.0359")
20	0.813mm(.0320")
21	0.724mm(.0285")
22	0.643mm(.0253")
23	0.574mm(.0226")
24	0.511mm(.0201")
25	0.440mm(.0179")
26	0.404mm(.0159")
27	0.361mm(.0142")
28	0.320mm(.0126")
29	0.287mm(.0113")
30	0.254mm(.0100")
31	0.226mm(.0089")
32	0.203mm(.0080")
33	0.180mm(.0071")
34	0.160mm(.0063")
35	0.142mm(.0056")
36	0.127mm(.0050")



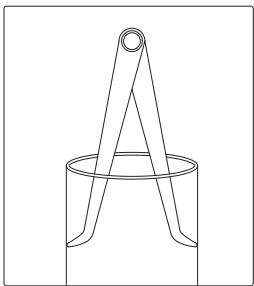
- ◆ For gaging non-ferrous wire and metals such as copper, brass and aluminum
- ◆ Hardened and satin chrome finish



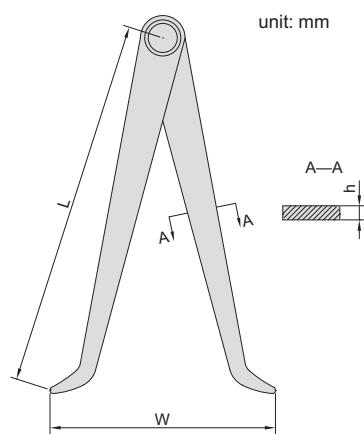
SERIES 981

INSIDE CALIPER

◆ Made of carbon steel



981-006-01

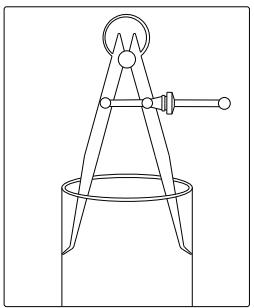


Code	Size(L)	Range(W)	h
981-006-01	150mm	15-150mm	2mm
981-008-01	200mm	15-200mm	2mm
981-010-01	250mm	15-250mm	3mm
981-012-01	300mm	15-300mm	3mm

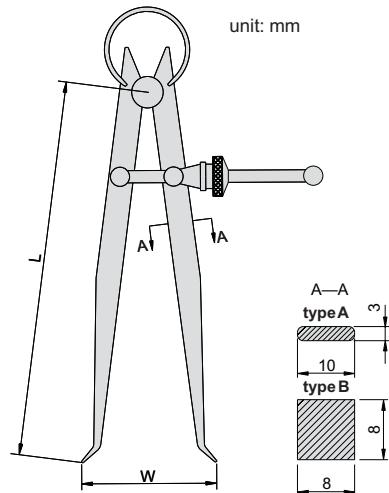
SERIES 982

INSIDE SPRING CALIPER

◆ Made of carbon steel



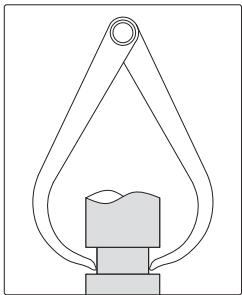
982-006-01



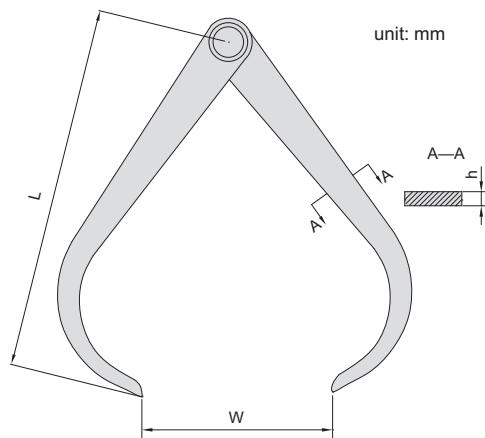
Code	Size(L)	Range(W)	Type
982-005-01	125mm	15-115mm	A
982-006-01	150mm	15-140mm	A
982-008-01	200mm	18-190mm	A
982-010-01	250mm	20-240mm	A
982-012-01	300mm	20-290mm	A
982-016-01	400mm	20-390mm	B
982-020-01	500mm	25-490mm	B
982-024-01	600mm	25-590mm	B

SERIES 983**OUTSIDE CALIPER**

- ◆ Made of carbon steel



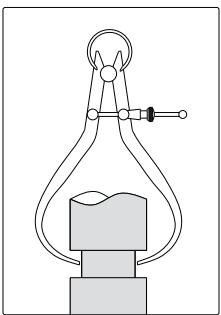
983-006-01



Code	Size(L)	Range(W)	h
983-006-01	150mm	0-150mm	2mm
983-008-01	200mm	0-200mm	2mm
983-010-01	250mm	0-250mm	3mm
983-012-01	300mm	0-300mm	3mm

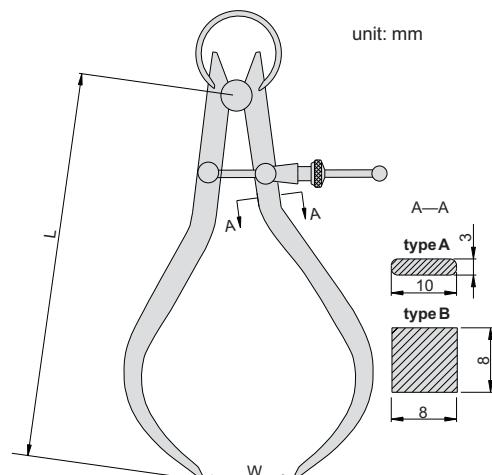
SERIES 984**OUTSIDE SPRING CALIPER**

- ◆ Made of carbon steel



984-005-01

Code	Size(L)	Range(W)	Type
984-005-01	125mm	0-115mm	A
984-006-01	150mm	0-140mm	A
984-008-01	200mm	0-190mm	A
984-010-01	250mm	0-240mm	A
984-012-01	300mm	0-290mm	A
984-016-01	400mm	0-390mm	B
984-020-01	500mm	0-490mm	B
984-024-01	600mm	0-590mm	B

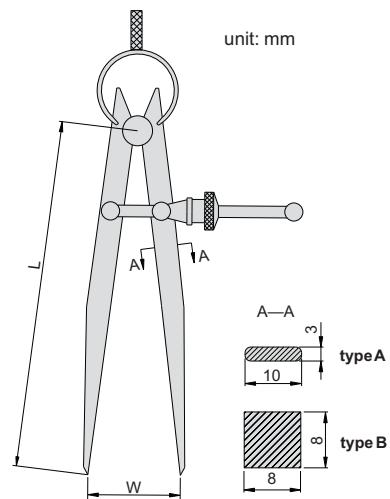




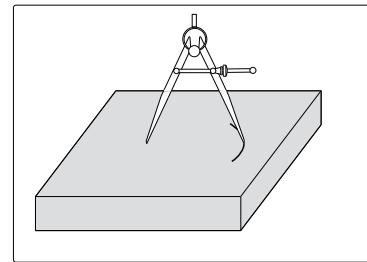
SERIES 985

SPRING DIVIDER

- ◆ Made of carbon steel
- ◆ Hardened points



985-005-01

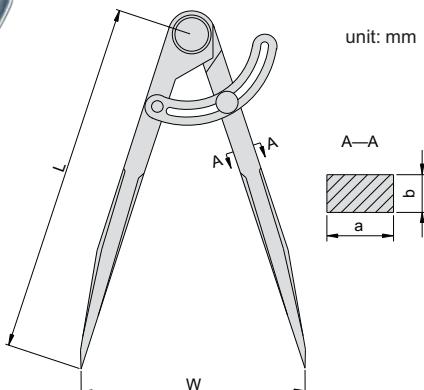


Code	Size(L)	Range(W)	Type
985-005-01	125mm	0-115mm	A
985-006-01	150mm	0-140mm	A
985-008-01	200mm	0-190mm	A
985-010-01	250mm	0-240mm	A
985-012-01	300mm	0-290mm	B
985-016-01	400mm	0-390mm	B
985-020-01	500mm	0-490mm	B
985-024-01	600mm	0-590mm	B

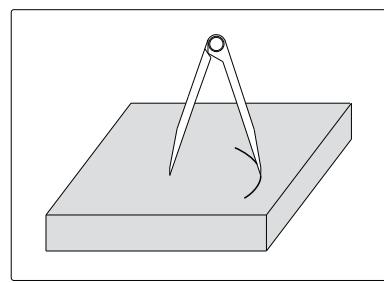
SERIES 986

DIVIDER

- ◆ Made of carbon steel
- ◆ Hardened points



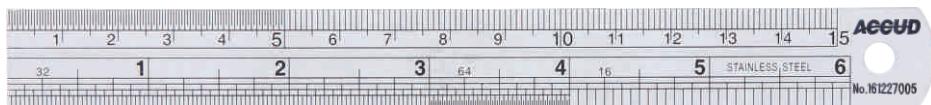
986-005-01



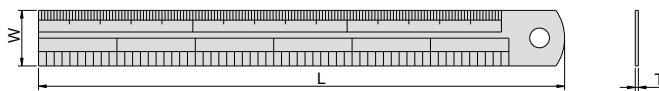
Code	Size(L)	Range(W)	a	b
986-005-01	125mm	0-115mm	8.5	7
986-006-01	150mm	0-140mm	8.5	7
986-008-01	200mm	0-190mm	10	7
986-010-01	250mm	0-240mm	11	7
986-012-01	300mm	0-290mm	12	7
986-016-01	400mm	0-390mm	12	7
986-020-01	500mm	0-490mm	12	7
986-024-01	600mm	0-590mm	12	7
986-032-01	800mm	0-790mm	16	11
986-040-01	1000mm	0-990mm	16	11

SERIES 990

STEEL RULE



990-006-11



- ◆ Graduation: 0.5mm, 1mm, 1/64", 1/32", 1/16"
- ◆ Semi-flexible rules
- ◆ Made of stainless steel

Code	Range	Accuracy	T	L	W
990-006-11	150mm/6"	±0.08mm	1mm	170mm	18mm
990-008-11	200mm/8"	±0.08mm	1mm	220mm	18mm
990-012-11	300mm/12"	±0.11mm	1mm	330mm	25mm
990-020-11	500mm/20"	±0.14mm	1mm	530mm	30mm
990-040-11	1000mm/40"	±0.24mm	1.5mm	1040mm	32mm

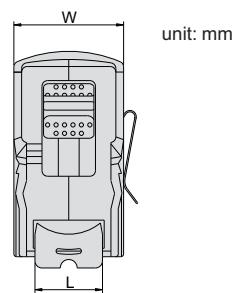
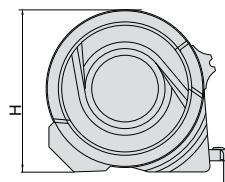
SERIES 989

MEASURING TAPE

SIMPLE
MEASURING TOOL

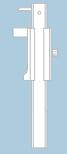


989-005-01



- ◆ Matt Nylon coating tape, wear resistance

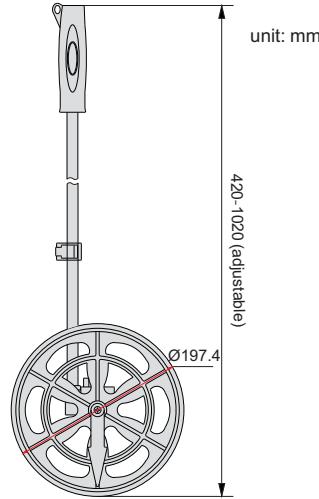
Code	Range	Graduation	Width of tape L	W	H
989-003-01	0-3m	1mm	16mm	33mm	60mm
989-005-01	0-5m	1mm	19mm	33mm	68mm



988

MEASURING WHEEL

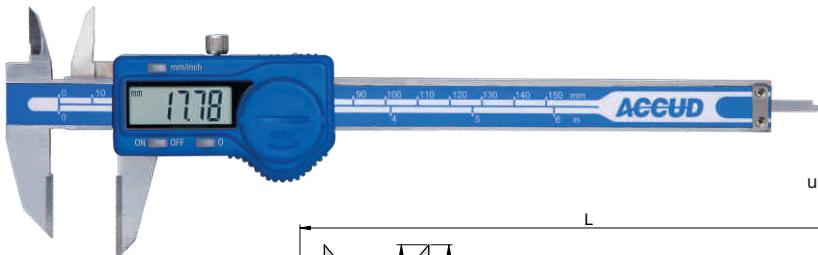
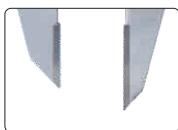
- ◆ ABS plastic frame, wear-resistant PU tire
- ◆ Three-section adjustable handle



Code	Range	Resolution
988-100-11	0.1-9999.9m	0.1m

SERIES 155

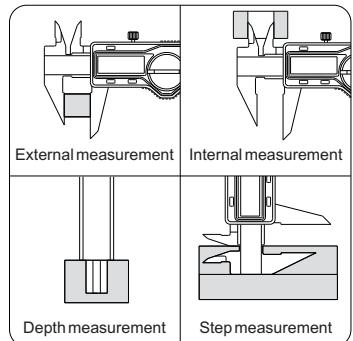
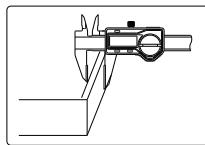
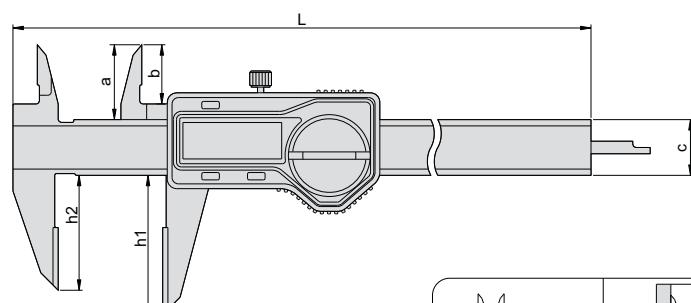
DIGITAL SCRIBING CALIPER



Carbide tipped jaws

155-006-11

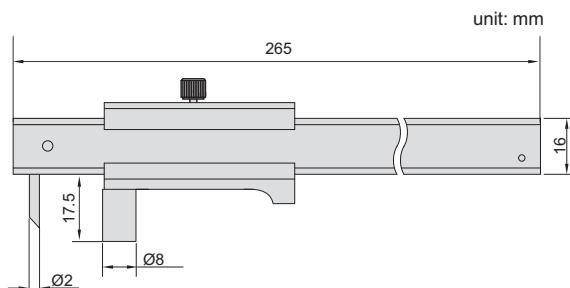
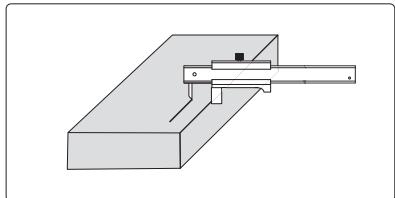
- ◆ Carbide -tipped jaws facilitate fine scribing on workpiece
- ◆ Resolution:0.01mm/0.0005"
- ◆ Automatic power on/off
- ◆ Buttons:on/off, zero,mm/inch
- ◆ Data output(cable code:100-11 or 100-12)
- ◆ Made of stainless steel



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

900**SCRIBING CALIPER**

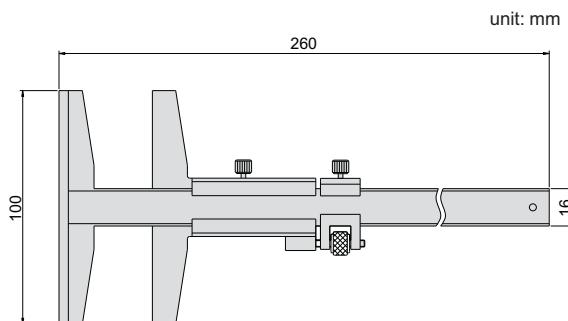
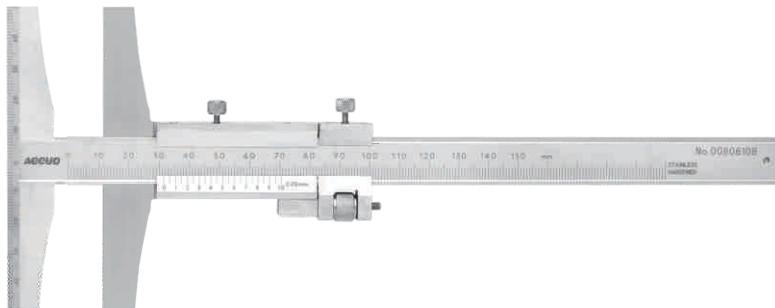
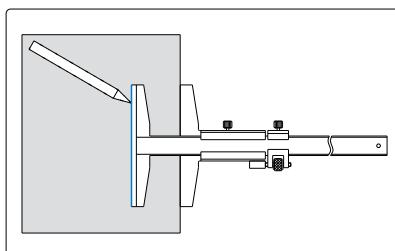
- ◆ Made of stainless steel
- ◆ Satin chrome plated reading surface
- ◆ Carbide scribe tip
- ◆ With accessory: carbide scribe tip



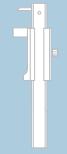
Code	Range	Graduation	Accuracy
900-008-11	0-200mm/0-8"	0.1mm, 1/128"	±0.1mm

902**T-SHAPE MARKING GAUGE**

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



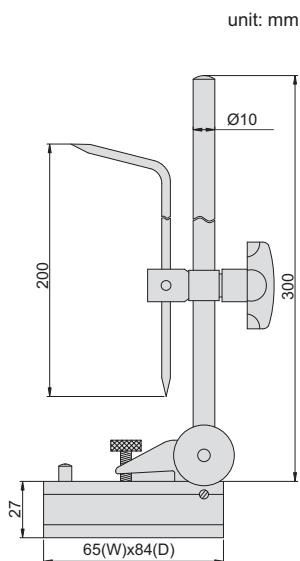
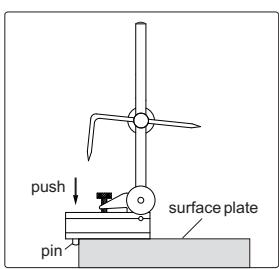
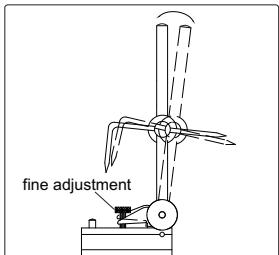
Code	Range	Graduation	Accuracy
902-006-51	0-150mm	0.05mm	±0.05mm



903

HEIGHT SCRIBER

- ◆ Grooved bottom for cylinder
- ◆ Two pins to be set against the edge of surface plate



Code
903-012-11

SERIES 992

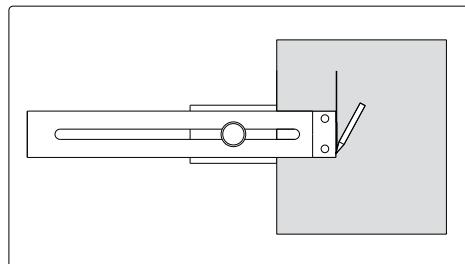
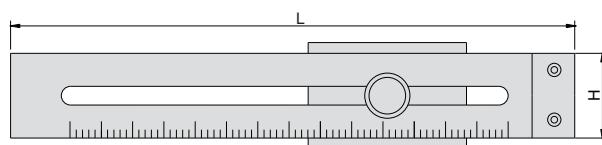
MARKING GAUGE

- ◆ Made of stainless steel
- ◆ Stain chrome finish

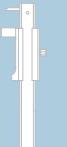


992-008-01

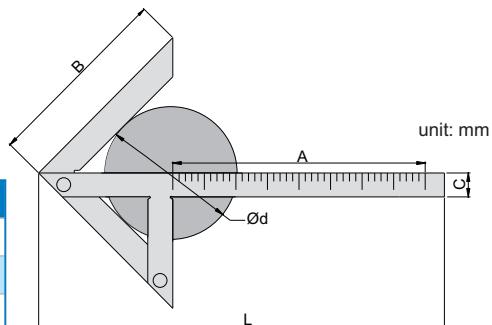
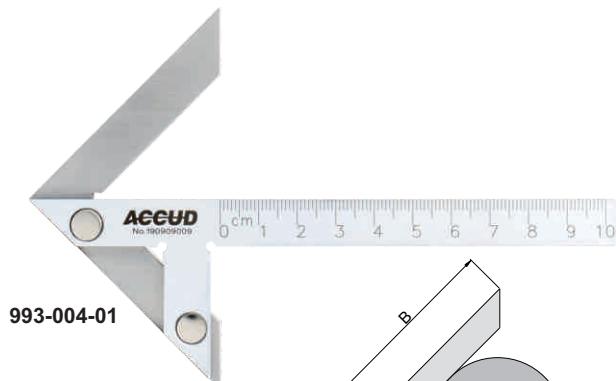
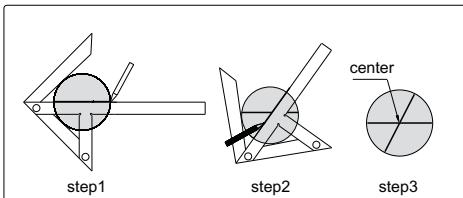
unit: mm



Code	Range	Accuracy	Graduation	H	L
992-008-01	0 - 200mm	$\pm 0.1\text{mm}$	0.1mm	40mm	250mm
992-010-01	0 - 250mm	$\pm 0.1\text{mm}$	0.1mm	40mm	300mm
992-012-01	0 - 300mm	$\pm 0.1\text{mm}$	0.1mm	40mm	350mm

**SERIES 993****CENTER MARKING GAUGE**

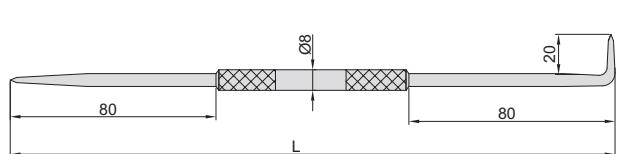
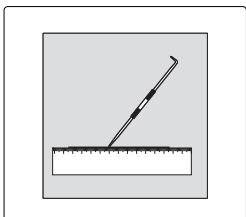
- ◆ Find the center of round plates and shafts
- ◆ Made of stainless steel
- ◆ Stain chrome plated



Code	Size (AxB)	Diameter(Ød)	Accuracy	C	L
993-004-01	100x70mm	4 - 90mm	$\pm 0.15\text{mm}$	12	153
993-006-01	150x130mm	4 - 190mm	$\pm 0.15\text{mm}$	15	245
993-008-01	200x150mm	6 - 220mm	$\pm 0.15\text{mm}$	15	310

995**SCRIBER**

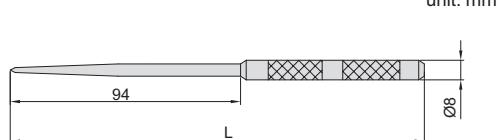
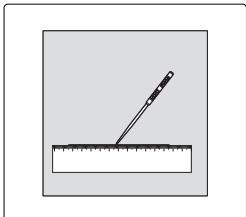
- ◆ Nickel plated



Code	Tips	L
995-009-01	hardened tips	235mm

995**SCRIBER**

- ◆ Nickel plated



Code	Tips	L
995-007-01	hardened tips	167mm

SERIES 996

DIGITAL HORIZONTAL SCALE

**Type A**

- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Automatic power off
- ◆ Data output(cable code:100-11 or 100-12)
- ◆ Made of stainless steel
- ◆ Supplied with bracket
- ◆ Optional accessory: SPC cable

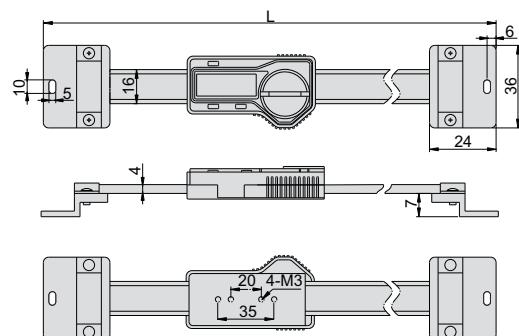
Type B

- ◆ Resolution: 0.01mm/0.0005"
- ◆ Absolute and incremental measurement
- ◆ Data output
- ◆ Made of stainless steel
- ◆ Supplied with bracket



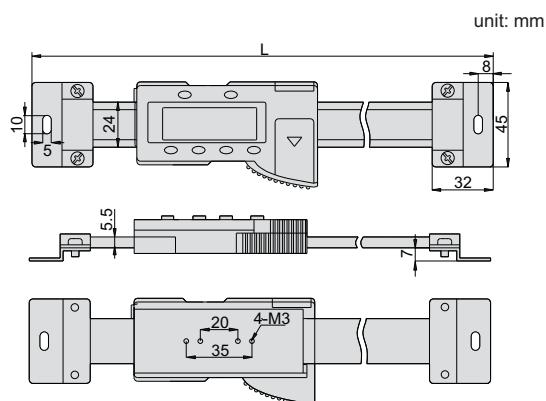
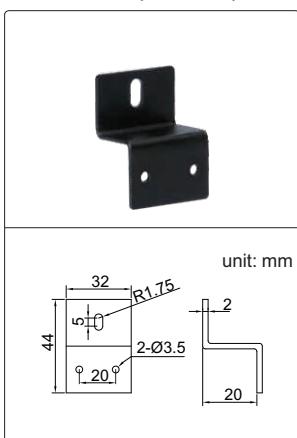
996-006-11

unit: mm



996-020-11

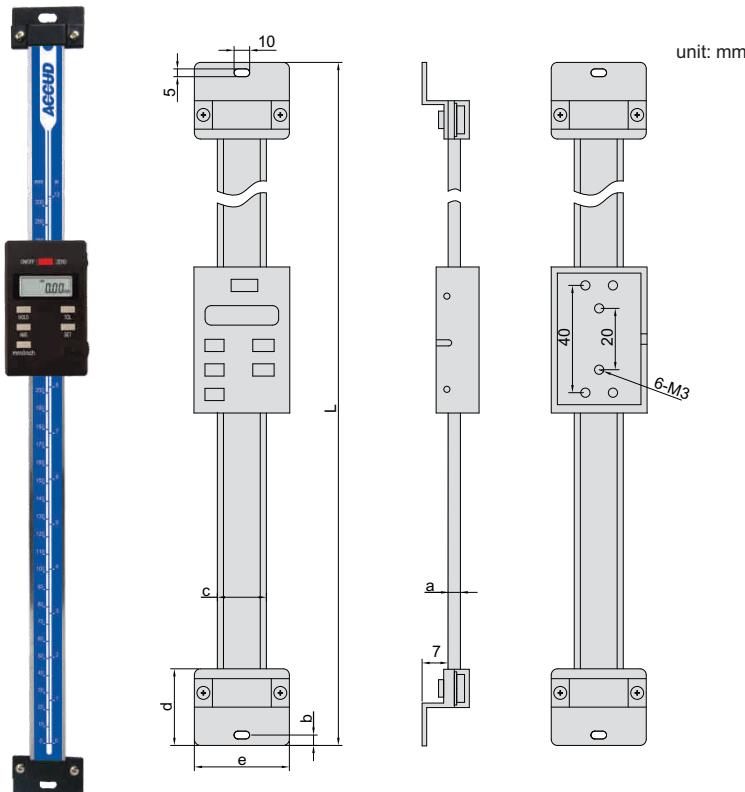
bracket(included)



Code	Range	Accuracy	Type	L
996-004-11	100mm	±0.03mm	A	209mm
996-006-11	150mm	±0.03mm	A	259mm
996-008-11	200mm	±0.03mm	A	310mm
996-012-11	300mm	±0.04mm	A	444mm
996-020-11	500mm	±0.05mm	B	682mm
996-024-11	600mm	±0.08mm	B	790mm
996-032-11	800mm	±0.10mm	B	990mm
996-040-11	1000mm	±0.10mm	B	1240mm

SERIES 997

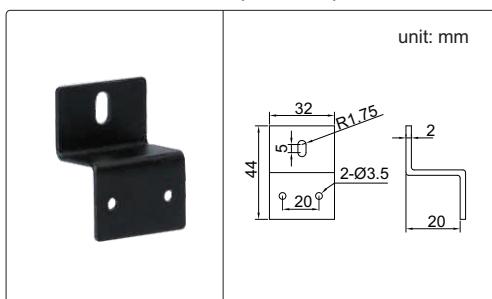
DIGITAL VERTICAL SCALE



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	40	24	209mm
997-006-11	150mm	±0.03mm	4	6	20	40	24	259mm
997-008-11	200mm	±0.03mm	4	6	20	40	24	310mm
997-012-11	300mm	±0.04mm	4	6	20	40	24	444mm
997-020-11	500mm	±0.05mm	5.5	8	24	40	32	682mm
997-024-11	600mm	±0.08mm	5.5	8	24	51	32	790mm
997-032-11	800mm	±0.10mm	5.5	8	24	51	32	990mm
997-040-11	1000mm	±0.10mm	5.5	8	24	51	40	1240mm

SERIES 611**GRANITE SURFACE PLATE**

- ◆ Made of fine-grained granite
- ◆ With calibration certificate
- ◆ Customized size can be ordered



611-032-00

Grade 00

Code	Size(LxWxH)	Flatness	Weight(Kg)
611-032-00	300x200x60mm	2.7µm	11
611-042-00	400x250x60mm	2.9µm	18
611-044-00	400x400x60mm	3.1µm	29
611-053-00	500x315x70mm	3.2µm	33
611-064-00	630x400x80mm	3.5µm	60
611-066-00	630x630x100mm	3.8µm	119
611-085-00	800x500x100mm	3.9µm	120
611-106-00	1000x630x140mm	4.4µm	265
611-101-00	1000x1000x150mm	4.8µm	450
611-121-00	1200x800x160mm	4.9µm	461
611-161-00	1600x1000x180mm	5.8µm	864
611-201-00	2000x1000x220mm	6.5µm	1320
611-215-00	2000x1500x250mm	7.0µm	2250

Grade 0

Code	Size(LxWxH)	Flatness	Weight(Kg)
611-032-10	300x200x60mm	5.4µm	11
611-042-10	400x250x60mm	5.9µm	18
611-044-10	400x400x60mm	6.3µm	29
611-053-10	500x315x70mm	6.4µm	33
611-064-10	630x400x80mm	7.0µm	60
611-066-10	630x630x100mm	7.6µm	119
611-085-10	800x500x100mm	7.8µm	120
611-106-10	1000x630x140mm	8.7µm	265
611-101-10	1000x1000x150mm	9.7µm	450
611-121-10	1200x800x160mm	9.8µm	461
611-161-10	1600x1000x180mm	11.5µm	864
611-201-10	2000x1000x220mm	12.9µm	1320
611-215-10	2000x1500x250mm	14.0µm	2250

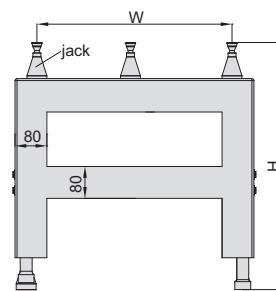
SERIES 621**STAND FOR GRANITE SURFACE PLATE**

- ◆ For medium size granite surface plates
- ◆ Adjusting range of jacks: 25mm
- ◆ One foot on the bottom is adjustable
- ◆ The height can be made under customer requirement

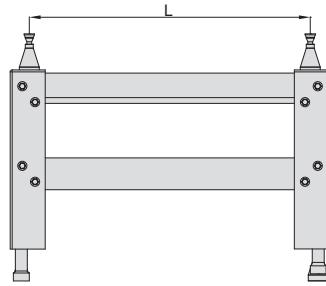


621-064-01

unit: mm



Code	L	W	H	For granite surface plate
621-064-01	352	224	695-710	630x400x80mm
621-066-01	352	352	675-695	630x630x100mm
621-085-01	448	280	675-695	800x500x100mm
621-106-01	560	352	630-650	1000x630x140mm
621-101-01	560	560	630-650	1000x1000x150mm
621-121-01	672	448	630-650	1200x800x160mm
621-161-01	896	560	585-605	1600x1000x180mm



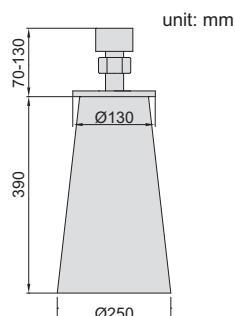
625

JACK SET FOR GRANITE SURFACE PLATE



- ◆ 5 jacks per set
- ◆ Adjustable height
- ◆ For large granite surface plates:
2000x1000mm
2000x1500mm
2500x1500mm
3000x2000mm

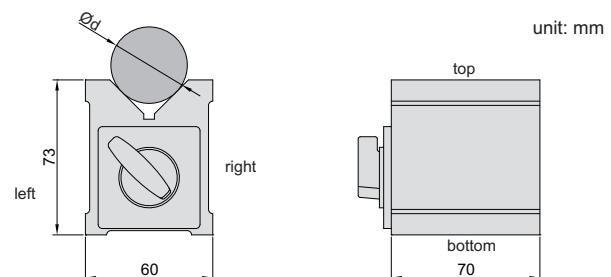
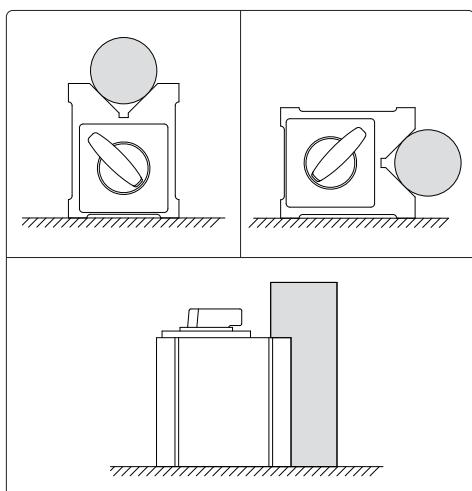
Code
625-000-00



633

MAGNETIC V-BLOCK

- ◆ 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

PLATE



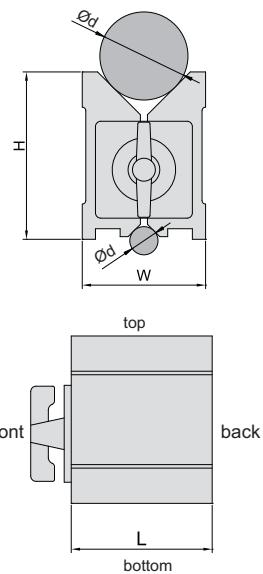
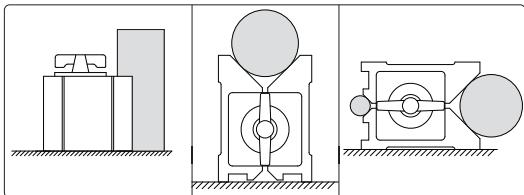
SERIES 634

MAGNETIC V-BLOCK

- ♦ 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 side and bottom side 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

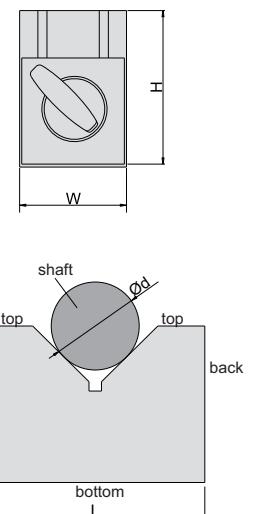
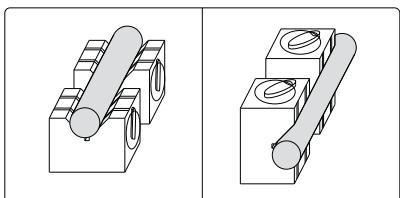
SERIES 635

MAGNETIC V-BLOCK SET

- ♦ Hold cylindrical workpieces for inspection, not suitable for machining due to weak magnetic force
- ♦ Two V-blocks per set



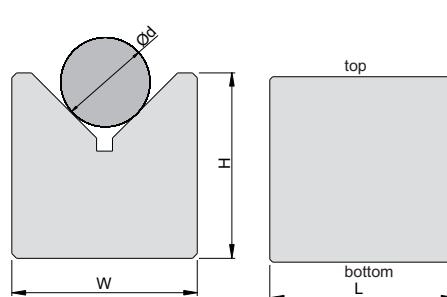
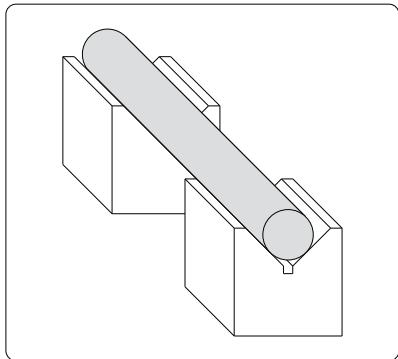
635-150-01



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

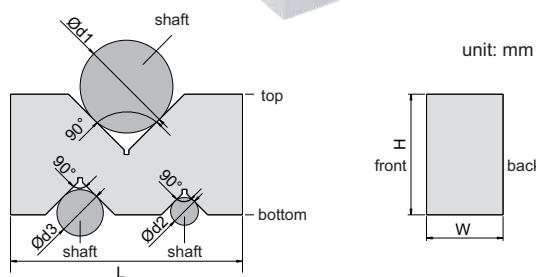
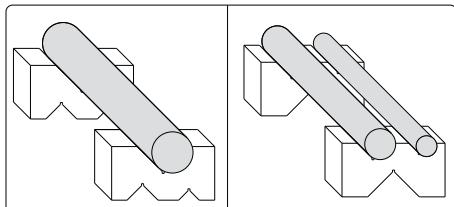
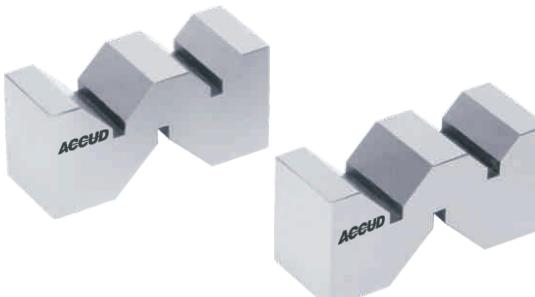


Code	Size(LxWxH)	For shaft range(Ød)	Parallelism between top and bottom, left and right	Height difference between a pair
631-075-01	50x70x70mm	6 - 75mm	5µm	5µm
631-099-01	50x100x70mm	6 - 99mm	5µm	5µm

SERIES 632**V-BLOCK SET**

V-BLOCK

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

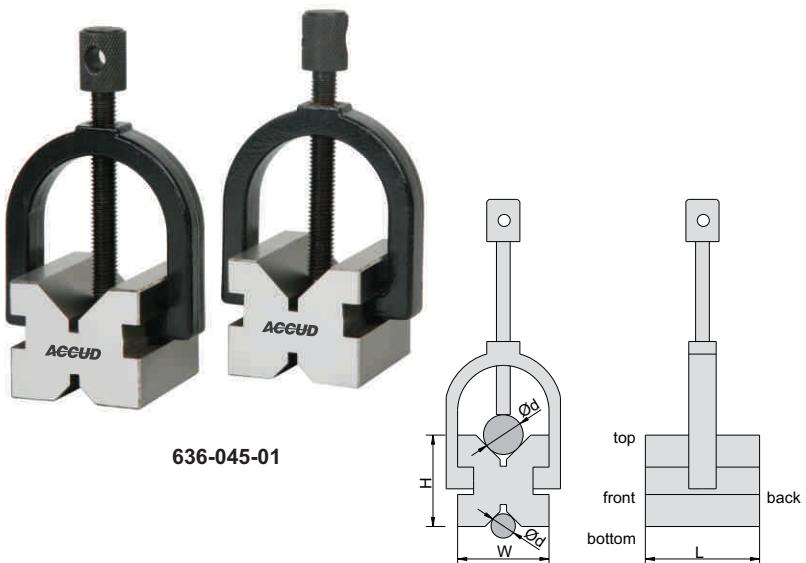
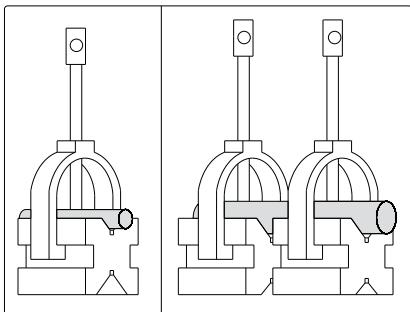


Code	Size (LxWxH)	Range of shafts(Ød1)	Range of shafts(Ød2)	Range of shafts(Ød3)	Parallelism of V grooves to top and bottom sides	Squareness of V grooves to front and back sides	Height difference of a matched pair
632-002-01	50x19x24mm	3 - 32mm	3 - 16mm	3 - 22mm	5µm	5µm	5µm
632-003-01	75x24x35mm	3 - 50mm	3 - 20mm	3 - 32mm	5µm	5µm	5µm
632-004-01	100x33x52mm	3 - 68mm	3 - 26mm	3 - 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



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	7-90mm	5µm	5µm	5µm

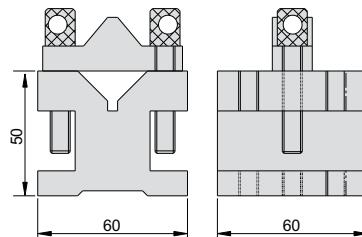
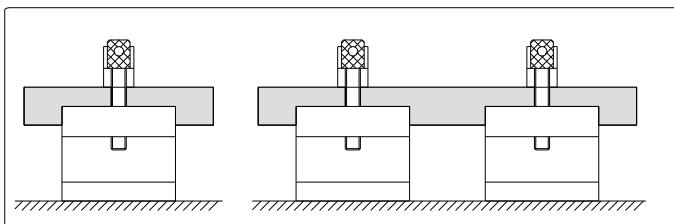
SERIES 637 V-BLOCK SET

- Hold cylindrical workpieces for inspection and machining
- Two V-blocks per set
- V groove on the top for large shafts

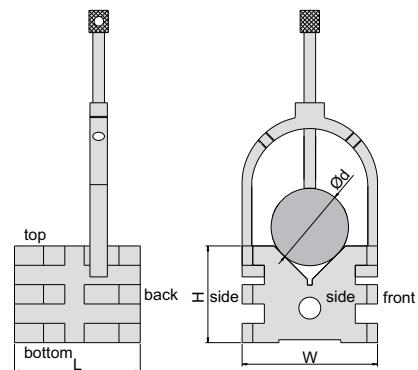
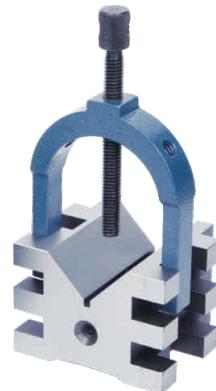


637-035-01

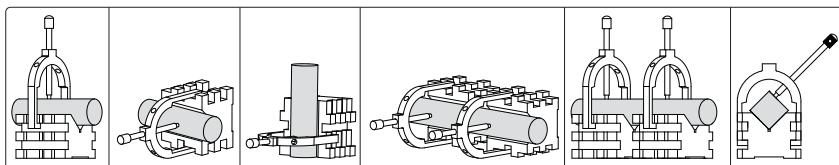
unit: mm



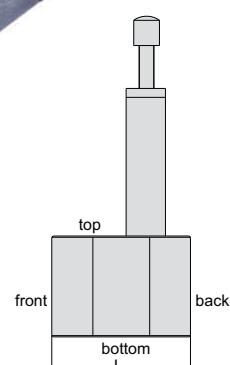
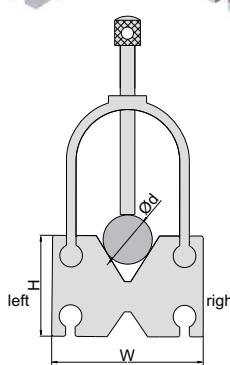
Code	Size(LxWxH)	For shaft range(Ød)	V grooves to top and bottom sides parallelism	V grooves to front and back sides squareness	Height difference of a matched pair
637-035-01	35x35x30mm	3-16mm	5µm	5µm	5µm
637-060-01	60x60x50mm	5-34mm	5µm	5µm	5µm
637-105-01	105x105x78mm	8-66mm	5µm	5µm	5µm



- ◆ Hold cylindrical or rectangular workpieces for inspection and machining
- ◆ Two V-blocks per set
- ◆ Hardened to HRC60±2
- ◆ Applicable for cylinder with diameter ($\varnothing d$): 5 - 50mm
- ◆ Applicable for rectangular workpieces with thickness: $\leq 35\text{mm}$



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	8µm	8µm	8µm



- ◆ 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

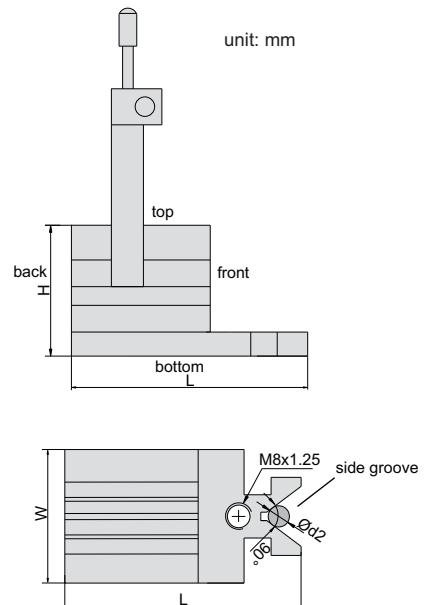
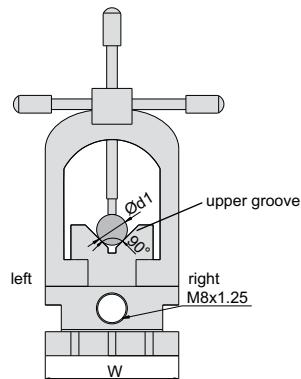
Code	Size (LxWxH)	Range of shafts ($\varnothing d$)	Parallelism of both V grooves to top, bottom, left, right sides	Squareness of both V grooves to front and back sides	Height difference of a matched pair
640-001-01	65x70x45mm	4-35mm	5µm	5µm	5µm



639

V-BLOCK

- ♦ Hold cylindrical workpieces for inspection and machining
- ♦ Hardened to HRC60±2

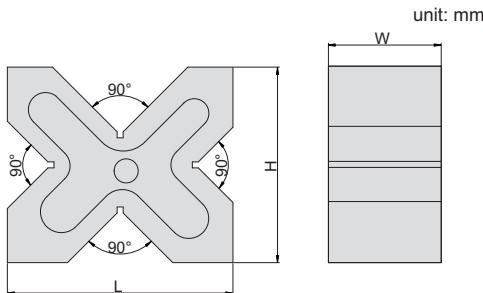
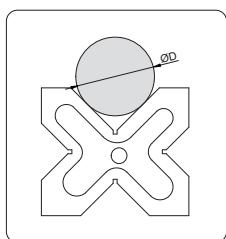
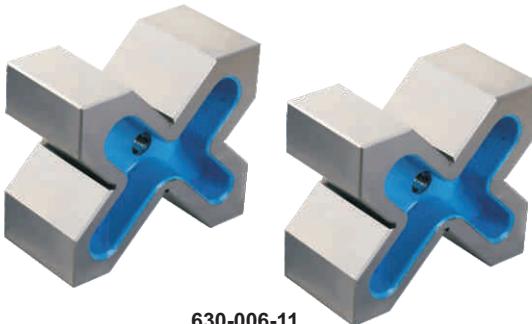


Code	Size (LxWxH)	Range of shafts (Ød1 and Ød2)	Parallelism of upper groove to bottom, left and right sides	Squareness of upper groove to back side	Parallelism of side groove to back side
639-090-01	90x48x48mm	5 - 33mm	5µm	5µm	5µm

SERIES 630

V-BLOCK SETS

- ♦ For positioning cylindrical workpieces
- ♦ Two V-blocks per set
- ♦ Each V-block has four 90° V-grooves
- ♦ Hardness HB 170-241



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



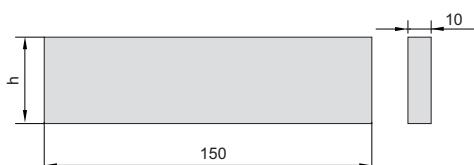
641

PARALLEL SET

- ◆ Parallelism between top and bottom: 5µm
- ◆ Height difference of a matched pair: 5µm
- ◆ Hardened to HRC55-60



unit: mm



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

SERIES 571

ANGLE GAUGE BLOCK SET

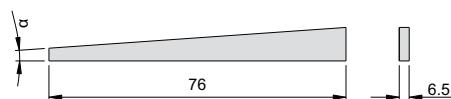
ACCESSORIES

- ◆ For angle set-up in tooling, production and inspection
- ◆ Hardness HRC55



571-010-02

unit: mm



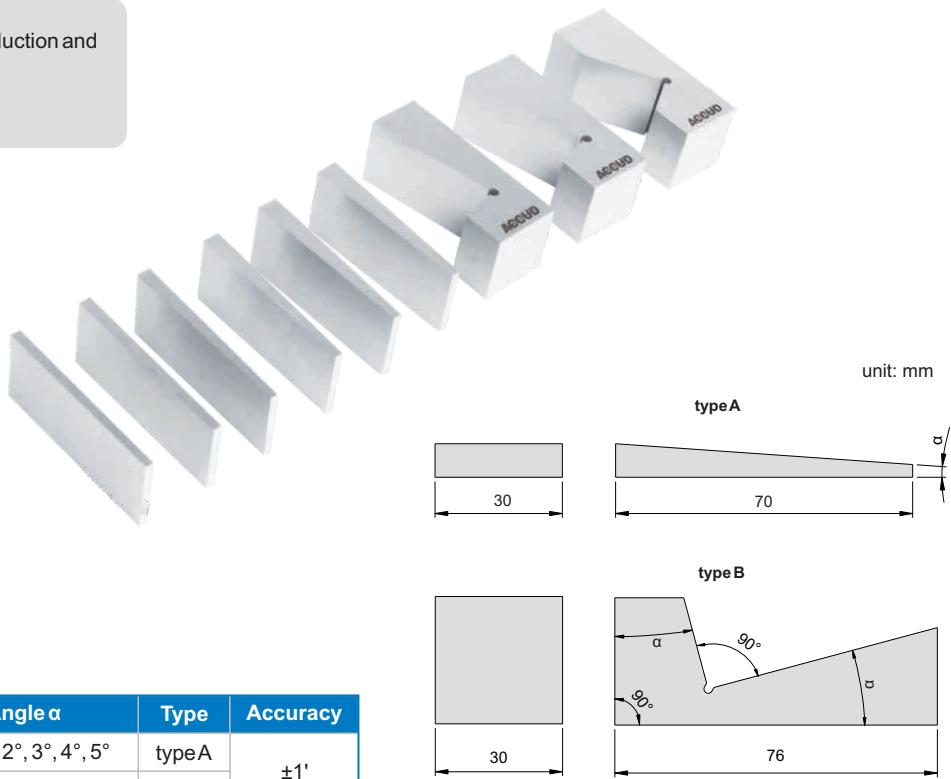
Code	Blocks per set	Accuracy	Sharp	Angle
571-010-02	10	±20"	triangle	1°, 2°, 3°, 4°, 5°, 10°, 15°, 20°, 25°, 30°
571-012-01	12	±20"	triangle	1/4°, 1/2°, 1°, 2°, 3°, 4°, 5°, 10°, 15°, 20°, 25°, 30°



646

UNIVERSAL ANGLE PLATE SET

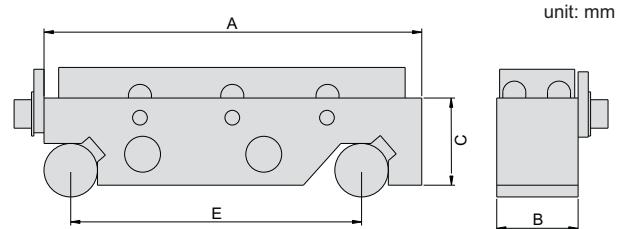
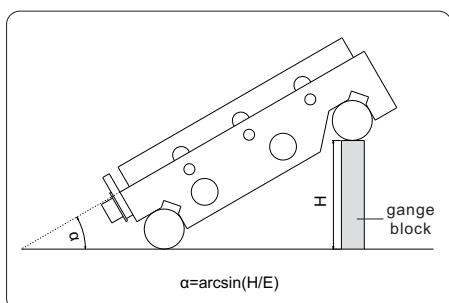
- For angle set-up in tooling, production and inspection
- Hardness HRC55



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

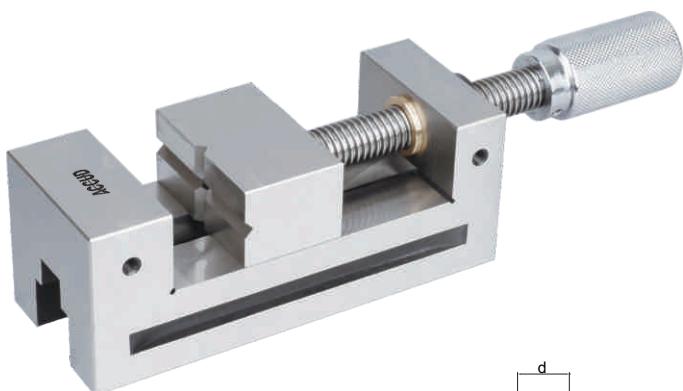
SINE BAR



Code	Roller distance (E)	Table size(AxB)	Accuracy of α at 30°	C
651-005-01	100mm	130x25mm	$\pm 8''$	25mm
651-005-02	100mm	130x83mm	$\pm 16''$	30mm
651-010-01	200mm	250x40mm	$\pm 8''$	40mm
651-010-02	200mm	250x85mm	$\pm 16''$	40mm

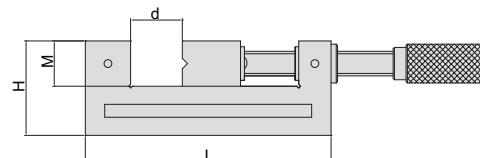
**SERIES 652****PRECISION VISE**

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



unit: mm

652-120-01



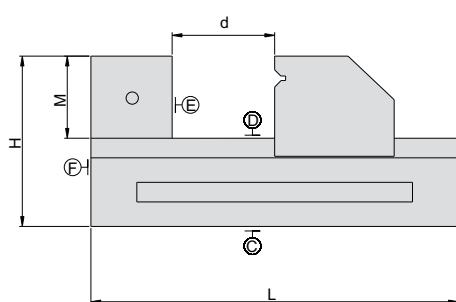
Code	Jaw opening(d)	Jaw width(W)	L	H	M
652-073-01	73mm	63mm	176mm	63mm	30mm
652-076-01	76mm	73mm	190mm	73mm	35mm
652-120-01	120mm	88mm	255mm	82mm	40mm

ACCESSORIES**SERIES 653****PRECISION VISE**

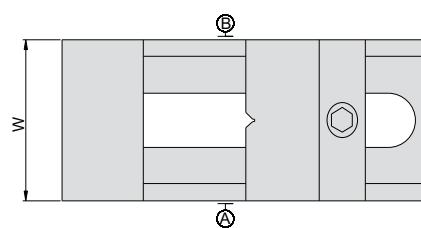
- ◆ Made of hardened alloy steel
- ◆ Parallelism and squareness between A, B, C, D, E and F: 5µm/100mm
- ◆ Hardness HRC56-58



653-003-01



unit: mm



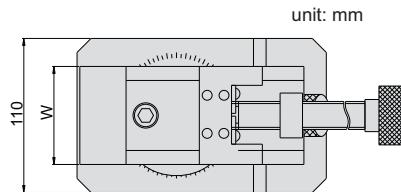
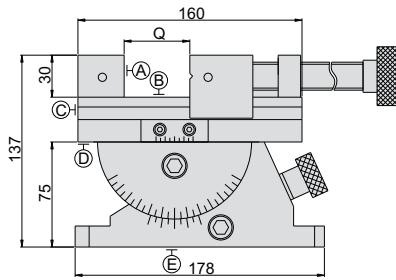
Code	Jaw opening(d)	Jaw width(W)	L	H	M
653-003-01	80mm	50mm	150mm	53mm	25mm
653-005-01	100mm	70mm	190mm	70mm	35mm



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

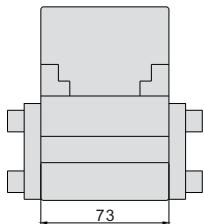
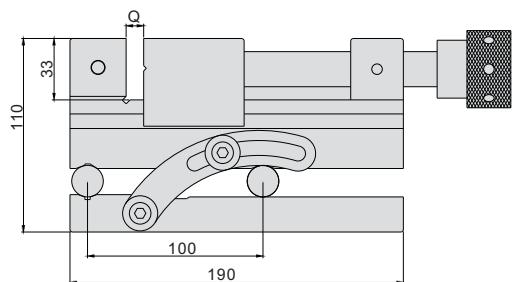


Code	Jaw opening(Q)	Jaw width(W)
656-080-01	0-80mm	70mm

657

PRECISION SINE VISE

- ◆ Parallelism: 3μm/100mm
- ◆ Squareness: 5μm/100mm
- ◆ Accuracy of angle: ±20"
- ◆ Made of SKS tool steel, subzero treatment
- ◆ Hardness HRC58-60

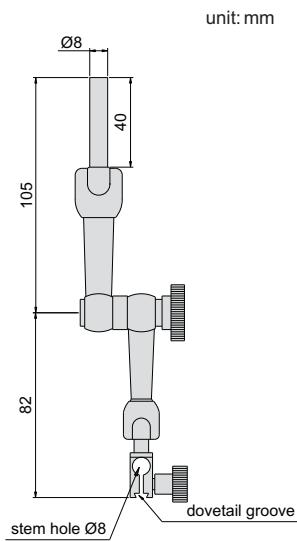


Code	Jaw opening (Q)	Jaw width	Adjustable angle
657-090-01	0-90mm	73mm	0-45°

685**DIAL TEST INDICATOR CENTERING HOLDER**

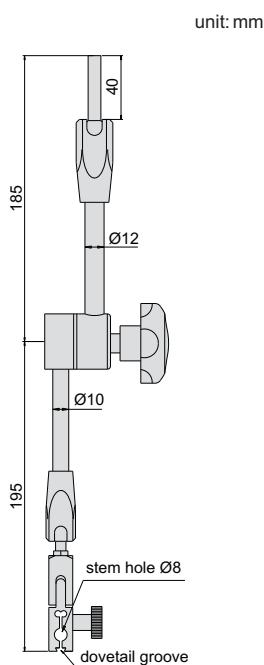
- ◆ Center cylinders or holes on machine tools
- ◆ Can be used with dial test indicators

Application

**ACCU****EDGE FINDER
ZERO SET****Code****685-040-01****686****INDICATOR CENTERING HOLDER**

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

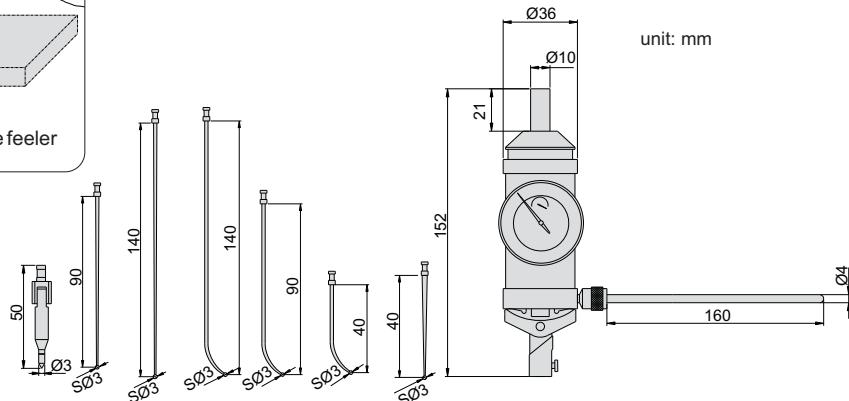
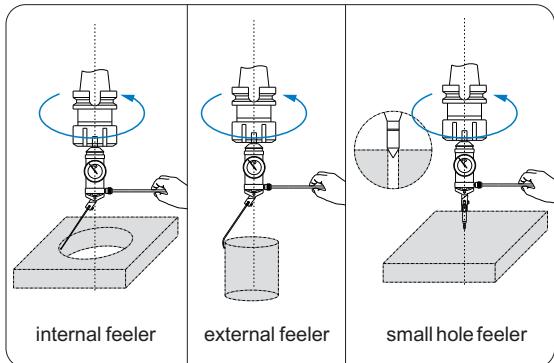
Application

**Code****686-080-01**

297

CENTERING INDICATOR

- ◆ For quick and accurate centering in boring and milling set-up
- ◆ Jeweled bearing
- ◆ Supplied with 7 type feelers

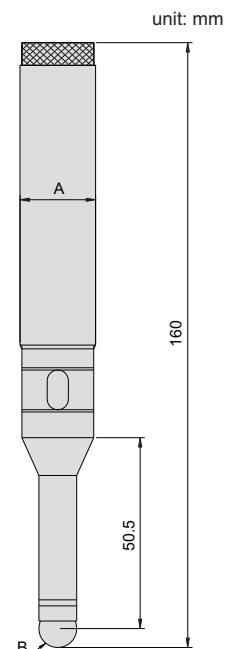
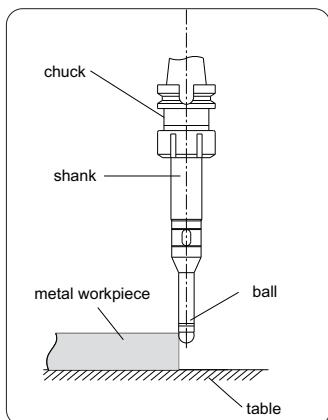


Code
297-003-11

692

ELECTRONIC EDGE FINDER

- ◆ The LED will be light when the ball contacts the workpiece
- ◆ Not suitable for rotating use



Code	Contact ball(B)	Shank(A)	Accuracy	Beeper
692-010-03	SØ10mm	Ø20mm	5µm	with

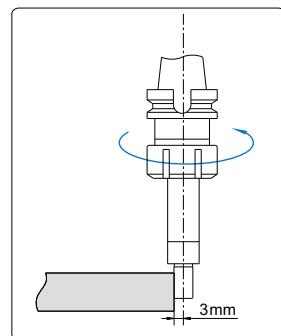
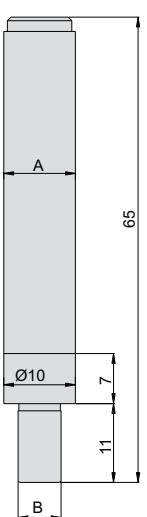
693

EDGE FINDER

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



unit: mm



Code	Contact surface (B)	Shank(A)	Accuracy
693-010-01	Ø6mm	Ø10mm	8µm

EDGE FINDER
ZERO SET

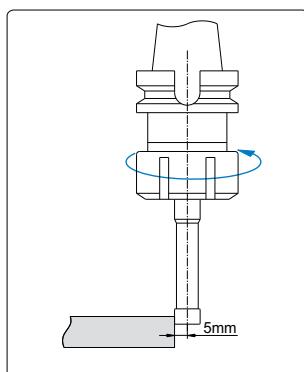
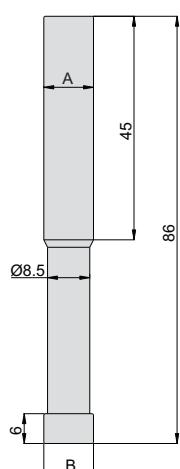
691

CERAMIC EDGE FINDER

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



unit: mm



Code	Shank(A)	Contact point(B)	Accuracy
691-010-01	Ø10mm	Ø10mm	8µm



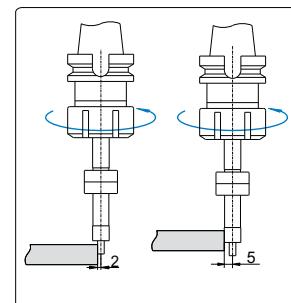
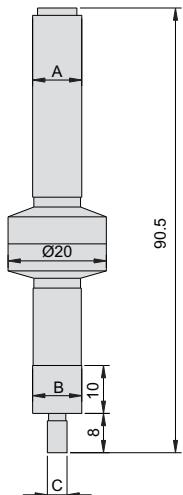
694

EDGE FINDER

- ◆ Hardened shank and contact point



unit: mm



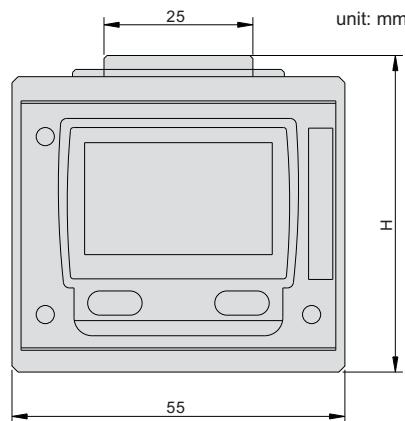
Code	Shank (A)	Contact point(B)	Contact point(C)	Accuracy
694-020-01	Ø10mm	Ø10mm	Ø4mm	5µm

EDGE FINDER
ZEROSET

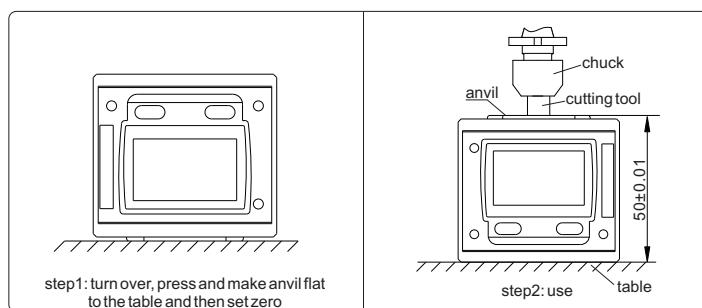
697

DIGITAL ZERO SETTER

- ◆ IP65 protection level
- ◆ Magnetic base
- ◆ With backlight, will turn on automatically when close to zero (± 0.002 mm)
- ◆ Turn off automatically



Application



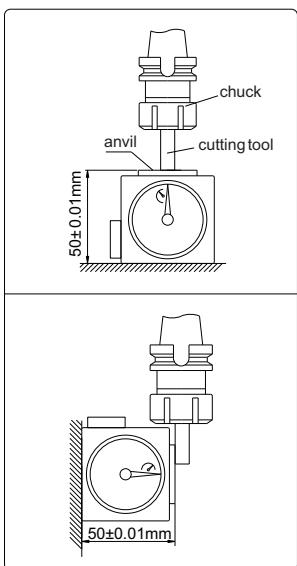
Code	Accuracy
697-050-01	±10µm



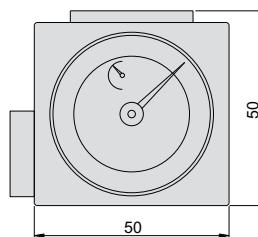
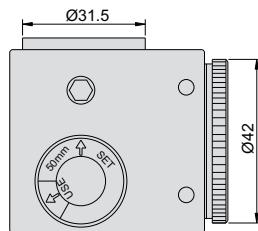
695

ZERO SET

- ◆ Magnetic base



unit: mm



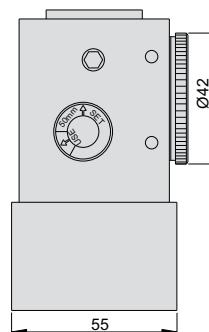
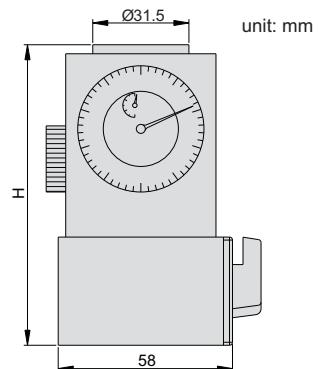
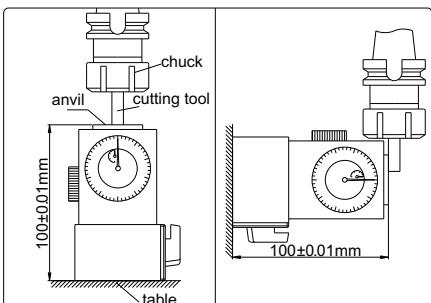
Code	Accuracy
695-050-01	$\pm 10\mu\text{m}$

EDGE FINDER
ZERO SET

696

ZERO SET

- ◆ Magnetic base with on/off switch



Code	Height(H)	Accuracy	Force
696-100-01	100mm	$\pm 10\mu\text{m}$	9N

SERIES 280

2-PIECE MEASURING TOOLS SET



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



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

280

3-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) 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



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

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

DM600**DIGITAL HIGH MAGNIFICATION MICROSCOPE**

Magnification: 450X-600X



Pixel: 2M



Interface: USB2.0



Snap pictures and record videos



8 pcs adjustable LED lights



With measuring software and calibration rule



Optional Stand



Universal Stand (MS36B)

Magnification, View Field and Focus Relationship

Magnification	Focus	View field
450X	1.4mm	1.05x0.79mm
500X	5.5mm	0.95x0.71mm
550X	8.6mm	0.86x0.64mm
600X	11.5mm	0.79x0.59mm



WIFI200

DIGITAL WIFI MICROSCOPE



Magnification: 10X-200X



VIDEO

Pixel: 2M

Interface: USB2.0 or WiFi

Snap pictures and record videos

8 pcs adjustable LED lights

With measuring software and calibration rule



It can connected to smart phone , Ipad or computer via WIFI



Optional Stand



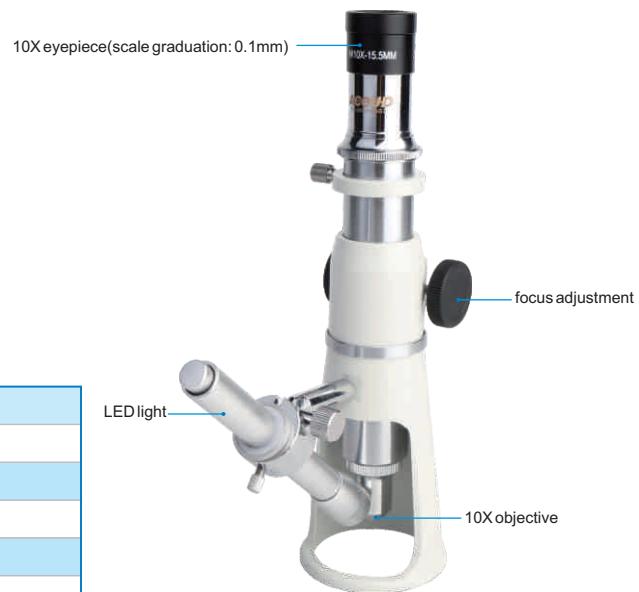
Universal Stand (MS36B)

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



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

DVM2000

HD VIDEO MICROSCOPE

- ◆ 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



VISION

SPECIFICATION

Objective	0.7X ~ 4.5X (zoom, fixed at 0.7X, 1X, 2X, 3X, 4X, 4.5X)
Total magnification	9.3X-114.3X
View field	4mm-25.8mm
Working distance	96mm
Pixel	2M HDMI
Camera	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
Ø95mm black/white plastic plate	1pc
Calibration rule	1pc
AC/DC adapter	1pc

OPTIONAL ACCESSORIES

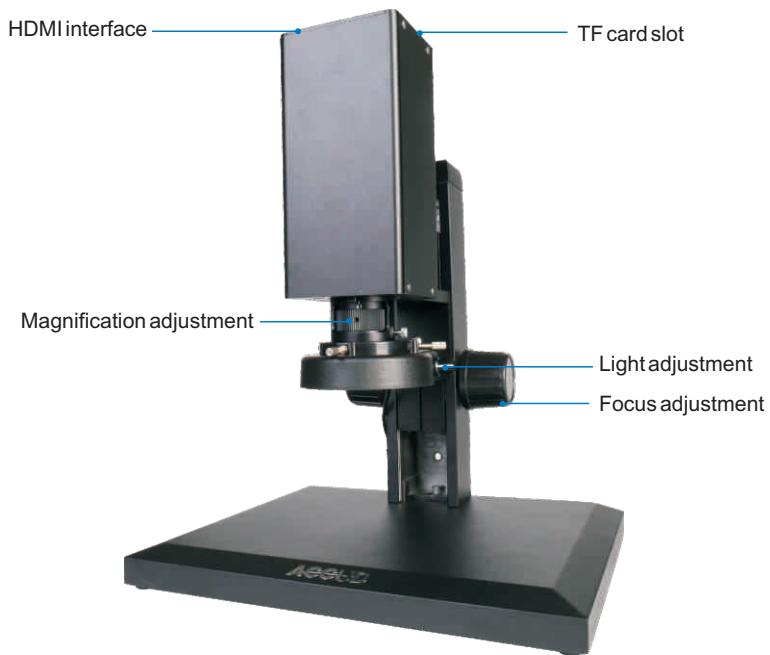
0.5X Objective	DVM2000-05-O
2X Objective	DVM2000-20-O



DVM1000

VIDEO MICROSCOPE

- ◆ 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
Resolution	1920x1080
Camera	Pixel size Frame rate
	2.75*2.75μm 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

SERIES ZS1045 ZOOM STEREO MICROSCOPE

- ◆ Trinocular head is used to connect to camera



ZS1045

VISION



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



MM1000A

METALLURGICAL MICROSCOPE

- ◆ For high magnification observation and metallurgical image analysis
- ◆ Infinite optical system, can add accessories like polarizer, analyzer into optical path without image quality influence



(camera is optional)

SPECIFICATION

Eyepiece(wide field)	10X(view field: Ø18mm)			
Objective(plan achromatic)	10X	20X	50X	100X(dry type)
Numerical aperture	0.25	0.40	0.70	0.85
Working distance	8.8mm	8.6mm	3mm	0.33mm
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(blue/green/yellow)	1pc of each

OPTIONAL ACCESSORIES

10X dividing eyepiece(0.1mm/div.)	MM-EP10D	40X Objective	MM-OB40
Camera adapter(1X)	MM-ADAPTER	60X Objective	MM-OB60
Digital camera	1300KPA	80X Objective	MM-OB80
5X Objective	MM-OB5		

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

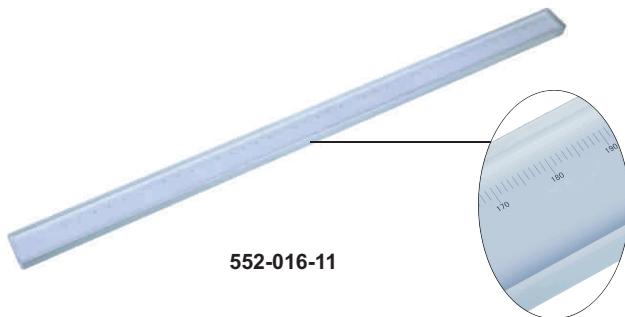
OPTIONAL ACCESSORIES**INCLUDED ACCESSORIES**

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



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

SERIES PP

PROFILE PROJECTOR



- ◆ Large screen of the read out



VIDEO



PP3015

OPTIONAL ACCESSORIES



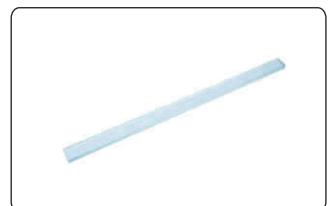
20X, 50X, 100X
lens with half-reflection mirror (glass diameter 100mm, graduation 2°)



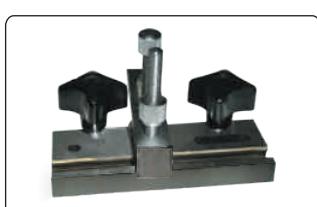
rotary table



5X magnifier



Series 552 glass scale



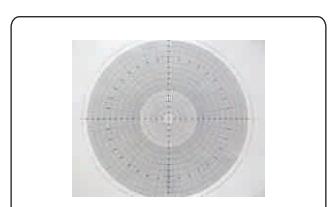
holder with clamp



swivel center support



V-block with clamp



Overlay chart

SERIES PP

PROFILE PROJECTOR

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(refer to page 285)
Overlay chart	PP3015-CHART



PP3020W

HORIZONTAL PROFILE PROJECTOR



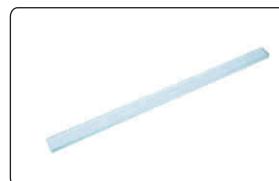
OPTIONAL ACCESSORIES



20X, 50X, 100X lens



Rotary table



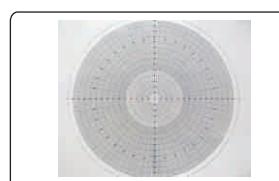
Series 552 glass scale



Series 636 V-block



Series 652 Vise



Overlay chart



SPECIFICATION

X-Y stage travel	200×100mm
Metal stage size	400×150mm
Screen diameter	Ø300mm
Linear scale resolution	1μm
Accuracy	(4+L/25)μm L is the measuring length in mm
Focus travel range	75mm
Focus	77.7mm(10Xlens)
Max. load capacity	50kg
Workpiece rotation range	±15°
Rotation scale	range: 0°~360°, resolution: 1' or 0.01°, accuracy: 6'
Magnification accuracy	±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
10Xlens	1pc
Overlay chart clip	4pcs
Foot-switch	1pc
Anti-dust cover	1pc

OPTIONAL ACCESSORIES

20Xlens	PP3020W-LENS20X
50Xlens	PP3020W-LENS50X
100Xlens	PP3020W-LENS100X
Rotary table	PP3020W-TABLE
Overlay chart	PP3015-CHART
Vise	Series 652
V-block	Series 636
Glass scale	Series 552



VM1010

VISION MACHINE



SPECIFICATION

Code	VM1010
Measuring range	100×100mm
Stage moving method	Manual
Linear scale resolution	1μm
Accuracy	(3+L/200)μm L is the measuring length in mm
Repeatability	2μm
Focus	92mm
Lens magnification	0.7X-4.5X
Total magnification	30-220X
Illumination	contour illumination: LED light brightness, can be adjusted by software surface illumination: LED light brightness, can be adjusted by software
Dimension (L×W×H)	400×300×600mm
Weight	30kg

INCLUDED ACCESSORIES

Main unit	1pc
Calibration block	1pc
Software (see page 292)	1pc

OPTIONAL ACCESSORIES

Computer	VM-PC
Operating table	VM-Table
Calibration scale	Series 552(refer to page 285)

SERIES VM**VISION MACHINE**

- ◆ Granite base and column



(computer and operating table is optional)

SPECIFICATION

Code	VM2010	VM3020	VM4030
Measuring range(X/Y axis)	200×100mm	300×200mm	400×300mm
Z axis travel with scale		200mm	
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	92mm		
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	30kg	30kg
Dimension (L×W×H)	580×680×880mm	700×800×1060mm	790×910×1060mm
Weight	120kg	140kg	160kg

VISION

Aeerd



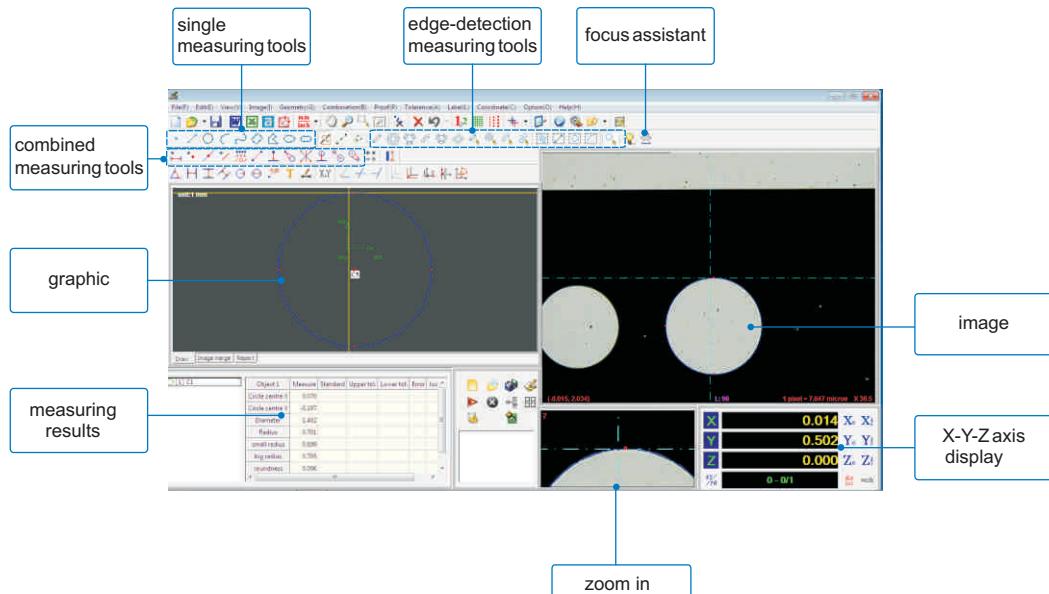
INCLUDED ACCESSORIES

Main unit	1pc
Calibration block	1pc
Software with USB dongle	1pc
Controller	1pc
Anti-dust cover	1pc

OPTIONAL ACCESSORIES

0.5X auxiliary objective	VM-OB05X
2X auxiliary objective	VM-OB2X
Computer	VM-PC
Operating table	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



- The cable with lens can be rotated at 360°
- With adjustable LED light



INCLUDED ACCESSORIES

Probe diameter	5.5mm
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



SERIES ES

ENDOSCOPE

- ◆ 2-way directions
- ◆ With adjustable LED light
- ◆ Take pictures and record videos



VIDEO



SPECIFICATION

Code	ES5515	ES5530	ES4015
Probe diameter	5.5mm	5.5mm	4.0mm
Cable length*	1.5m	3m	1.5mm
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

EST0810**WIFI ENDOSCOPE**

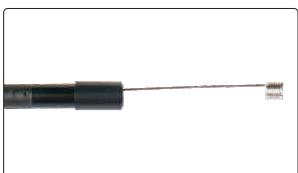
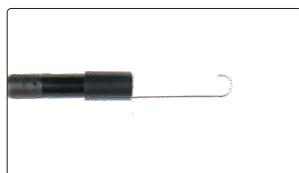
- ◆ The cable can be fixed in any sharp
- ◆ With adjustable LED light



the cable sharp can be fixed

LED light adjustment
take picture

record video

Magnet**Hook****Mirror****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
Powersupply	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

VISION**EEED**



HR150B

MANUAL ROCKWELL HARDNESS TESTER



- ◆ Manual loading control



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

HR150A**DIGITAL ROCKWELL HARDNESS TESTER**

- ◆ Manual loading control
- ◆ The hardness scale can be converted to HV and HB
- ◆ With USB interface, for transferring data



VIDEO



Small flat anvil



Large flat anvil



V-type anvil



PR100 printer (optional)

HARDNESS

**SPECIFICATION**

Load force	10kgf(98N)
Total load force	60kgf(588N), 100kgf(980N), 150kgf(1471N)
Stage 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
-------------------------	-------



HR150C

DIGITAL ROCKWELL HARDNESS TESTER



- ◆ Motorized loading control
- ◆ The hardness scale can be converted to HV and HB
- ◆ With USB interface, for transferring data



VIDEO



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

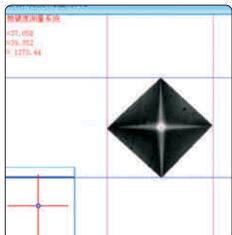
INCLUDED ACCESSORIES

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
------------------	-------

- ◆ 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



Measuring system (optional)



HARDNESS

**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
10Xeyepiece	1pc
X-Y stage	1pc
Test block	1pc
Touch screen pen	1pc
Level	1pc
Dustproof cover	1pc

OPTIONAL ACCESSORIES

Measuring system	HVS-MS
Slice holder	HVS-SH
Cylinder holder	HVS-CH
Vice	HVS-VI



HVS10M/50M

VICKERS HARDNESS TESTER



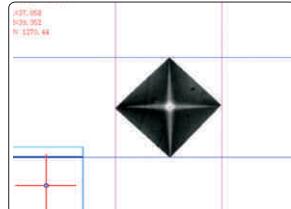
- ◆ Automatic turret
- ◆ Touch screen
- ◆ The hardness scale can be changed to Rockwell and Brinell scales



HVS10M



X-Y Stage(Optional)



Measuring System(Optional)

SPECIFICATION

Code	HVS10M	HVS50M
Test load	0.3, 0.5, 1, 2, 2.5, 3, 5, 10kgf	0.5, 1, 2, 2.5, 3, 5, 10, 20, 30, 50kgf
Stage elevation	manual	
Loading control	automatic(loader/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

HB3000**DIGITAL BRINELL HARDNESS TESTER**

- ◆ 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



Small flat anvil



Large flat anvil



V-type anvil

**HARDNESS****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

RBV150C**ROCKWELL/BRINELL/VICKERS HARDNESS TESTER**

- ◆ 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



VIDEO



Small flat anvil



Large flat anvil



V-type anvil



Medium flat anvil

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
Medium flat anvil for Brinell and Vickers	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 ASTMA956-02



VIDEO



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) >5kg (directly)
Min. workpiece weight	>2kg (on solid support)
	>0.1kg (coupled on large plate)
	>5mm
Min. workpiece thickness	>22mm
Max. workpiece surface roughness	Ra<1.6µm
Power	3xAAA 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
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HL200

PORTABLE HARDNESS TESTER



- ◆ 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 ASTMA956-02



Wireless printer (included)



Support ring (12pcs/set, optional)



SPECIFICATION

Resolution	1HLD, 1HV, 1HB, 0.1HRC, 0.1HRB, 1HS, 1MPa
Accuracy	±6HLD/0.6HRC(HLD=800)
	>5kg (directly)
Min. workpiece weight	>2kg (on solid support)
	>0.1kg (coupled on large plate)
Min. workpiece thickness	>5mm
Min. workpiece diameter	>22mm
Max. workpiece surface roughness	Ra<1.6μm
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

HL400**PORTABLE HARDNESS TESTER**

- ◆ 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 ASTMA956-02



VIDEO

**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	Ra<1.6μm
Power	3xAAA batteries
Dimension	150×80×24mm

INCLUDED ACCESSORIES

Main unit	1pc
Test block	1pc
Small support ring	1pc
Brush	1pc
USB cable	1pc
Batteries	2pcs

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

**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



SER ESHSM

SHORE HARDNESS TESTER

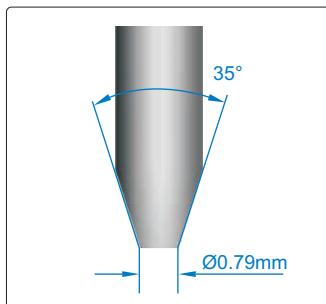
- Conforms to ISO868, ISO7619, ASTM D 2240
- With peak value indicator



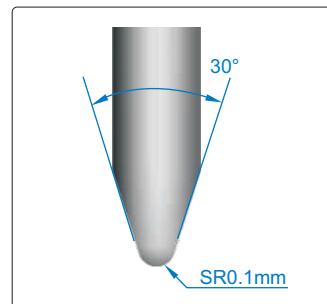
HSM-1A-ST stand (optional)



HSM1A



HSM1A indenter



HSM5D indenter

SPECIFICATION

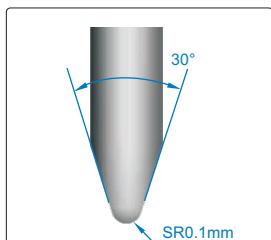
Code	HSM1A	HSM5D
Scale	HA(Shore A)	HD(Shore D)
For material	soft plastic, rubber, leather, etc.	hard plastic, hard rubber, etc.
Measuring range	20 ~ 90HA	20 ~ 90HD
Graduation	1HA	1HD
Accuracy	±1HA	±1HD
Indenter protrusion	2.5mm	
Weight	500g	

OPTIONAL ACCESSORIES

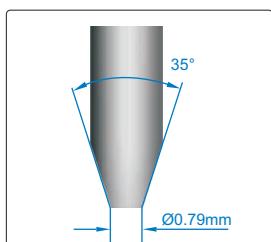
Stand for HSM1A	HSM-1A-ST
Stand for HSM5D	HSM-5D-ST

SERIES HS**DIGITAL SHORE HARDNESS TESTER**

- ◆ Conforms to ISO868, ISO7619, ASTM D 2240
- ◆ Testing time is adjustable
- ◆ With average calculation function



HS5D indenter



HS1A indenter



HS1A



Standard block (included)



Standard (optional)

HARDNESS

SPECIFICATION

Code	HS1A	HS5D
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
Resolution	1HA	1HD
Accuracy	±0.5HA	±0.5HD
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



SERIES HW

WEBSTER HARDNESS TESTER

- ◆ To measure the hardness of soft metal such as aluminum alloy, copper, brass, soft steel
- ◆ Conforms to the standard ASTM B647



HW-L20

SPECIFICATION

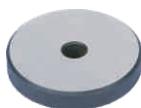
Code	HW-L20	HW-L20A	HW-L20B	HW-B75	HW-C75	HW-B92
Application	aluminum alloy			hard aluminum alloy and brass	soft brass and copper	soft steel and cold-rolled steel
Measuring hardness range	58-131HV			63-105HRF	18-100HRE	50-92HRB
Thickness range to be measured of flat workpiece	0.4 ~ 6mm	0.4 ~ 13mm	0.4 ~ 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

SERIES BLK

STANDARD HARDNESS BLOCK



Rockwell/Vickers/Brinell



Shore A



Leeb

SPECIFICATION

Code	Type	Hardness
BLK-HRC1	Rockwell C	60-70HRC
BLK-HRC2		20-30HRC
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

CN/CF/CFN1500**COATING THICKNESS GAUGE**

- ◆ 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
- ◆ Single and continuous working mode
- ◆ Low and high limits setting with judgement
- ◆ With average calculation
- ◆ With comparison measurement function
- ◆ With temperature compensation
- ◆ Turn off automatically

**CN1500****THICKNESS****SPECIFICATION**

Code	CF1500	CN1500	CFN1500
Probe type	F	N	F and N
Range	0 ~ 1500μm		
Accuracy		2μm (0 ~ 100μm) 2%(100 ~ 1500μm)	
Resolution		0.1μm (0 ~ 999μm) 1μm (1000 ~ 1250μm)	
Memory		500	
Power		3×AAA batteries	
Dimension(L×W×H)		150×50×29mm	
Weight		170g	

INCLUDED ACCESSORIES

Main unit	1pc
Calibration foil	1set
Calibration base	1set
USB cable	1pc
AAA battery	3pcs



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



VIDEO



SPECIFICATION

Range	0 ~ 1500μm
Accuracy	2μm(0~100μm)
	3%(100~1500μm)
Resolution	0.1μm (0~99.9μm)
	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

INCLUDED ACCESSORIES

Main unit	1pc
Calibration foil	1set
Calibration base	1set
AAA battery	2pcs

CF/CN1250

COATING THICKNESS GAUGE

- ◆ F type probe: measure the thickness of non-magnetic coatings (zinc, copper, enamel, plastic and so on) on magnetic substrates (iron, steel)
- ◆ N type probe: measure the thickness of non-conductive coatings (varnish, enamel, plastic and so on) on conductive substrates (zinc, copper, aluminum)
- ◆ V-type probe to measure the cylinder easier
- ◆ Single and continuous working mode
- ◆ Low and high limits setting with judgement
- ◆ With average calculation function



CF1250

SPECIFICATION

Code	CF1250	CN1250
Probe type	F	N
Range	0 ~ 1250μm	
Accuracy	2μm(0~100μm) 2%(100~1250μm)	
Resolution	0.1μm (0~999μm) 1μm (1000~1250μm)	
Memory	500	
Powersupply	3xAAA batteries	
Dimension(L×W×H)	150×50×29mm	
Weight	170g	

INCLUDED ACCESSORIES

Main unit	1pc
Calibration foil	1set
Calibration base	1pc
AAA battery	3pcs

ST100A

ULTRASONIC THICKNESS GAUGE

- ◆ Measure the thickness of tank, pipe and big workpiece
- ◆ LCD with backlight



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 in mm
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

THICKNESS

ST200

ULTRASONIC THICKNESS GAUGE



- Measure the thickness of tank, pipe and big workpiece
- LCD with backlight



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	64×116×27mm
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. pipe dimension 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

SR200**ROUGHNESS TESTER**

VIDEO

- ◆ 13 roughness parameters
- ◆ With probe position indicator
- ◆ Connected with printer via bluetooth
- ◆ 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



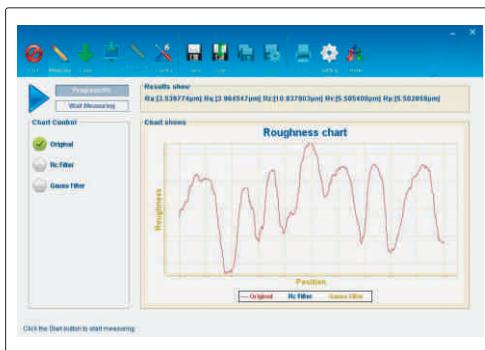
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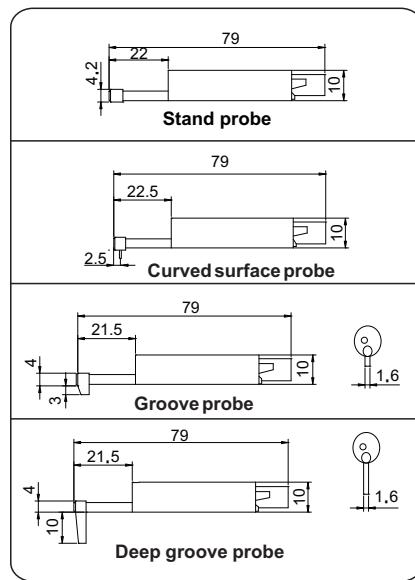
unit: mm



SR200-STD Stand(optional)



Measuring software



ROUGHNESS

SPECIFICATION

Parameters		Ra, Rz, Ry, Rq, Rp, Rm, Rt, R3z, Rmax, Sk, S, Sm, tp
Range		160μm
Accuracy		±10%
Resolution (Ra)		0.001μm
Probe	type	inductive
	stylus radius/angle	5μm/90°
	stylus material	diamond
Measuring force		0.4mN
Measuring unit		μm/μin
Cut off		0.25/0.8/2.5mm
Number of cut-offs		1-5
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

SR300

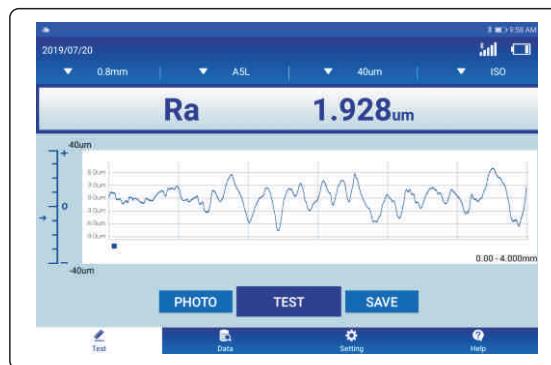
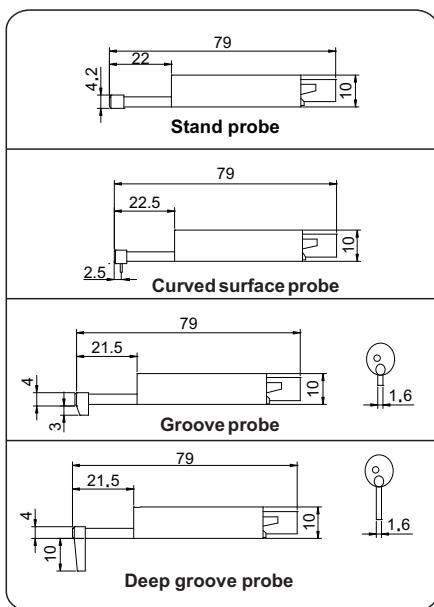
ROUGHNESS TESTER



- ◆ 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



unit: mm



Measuring software

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
	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
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

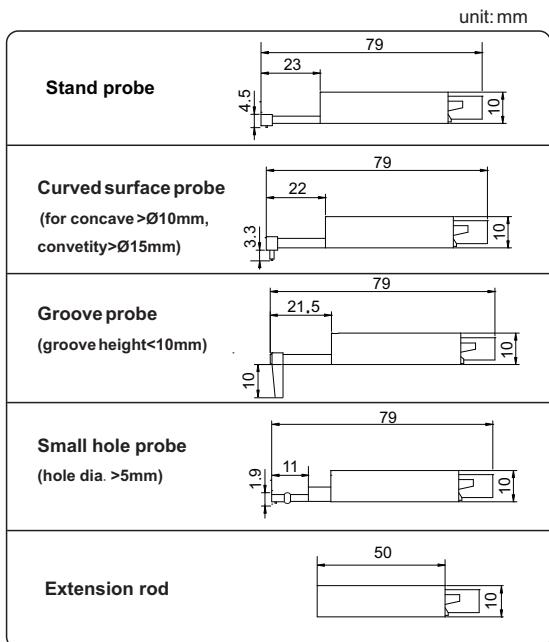
Extension rod	SR200-ER
Curved surface probe	SR200-02
Groove probe	SR200-03
Deep groove probe	SR200-04
Test stand	SR200-STD
Printer	SR200-PR

SR400**ROUGHNESS TESTER**

- 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



VIDEO

**ACEUD****ROUGHNESS****INCLUDED ACCESSORIES**

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		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)		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)	3pcs
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
Printer	SR400-PR
Connector for height gage	SR400-SP1
Connector for magnetic stand	SR400-SP2

SR110**ROUGHNESS TESTER**

- ◆ Pocket size
- ◆ Automatic power off

**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 rechargeable 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

RC30**SURFACE ROUGHNESS SPECIMEN**

- ◆ 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

IT700**INFRARED THERMOMETER**

- ◆ For quick measuring remote temperature
- ◆ Easy to operate



VIDEO



ACCUD

**SPECIFICATION**

Measuring temperature range	-50°C-950°C
Accuracy	1.5 °C or 2%
Repeatability	0.5 °C or 1%
Distance spot ratio	12:1
Response time	500ms
Resolution	0.1 °C
Power supply	9Vbattery
Emissivity	0.1-1.00 (adjustable)
Weight	185g
Dimension	186×119×50 mm

INCLUDED ACCESSORIES

Main unit	1pc
Battery	1pc

HTC-1**TEMPERATURE METER**

TEMPERATURE

**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	AAAbattery
Weight	50g
Dimension	98×106×20 mm

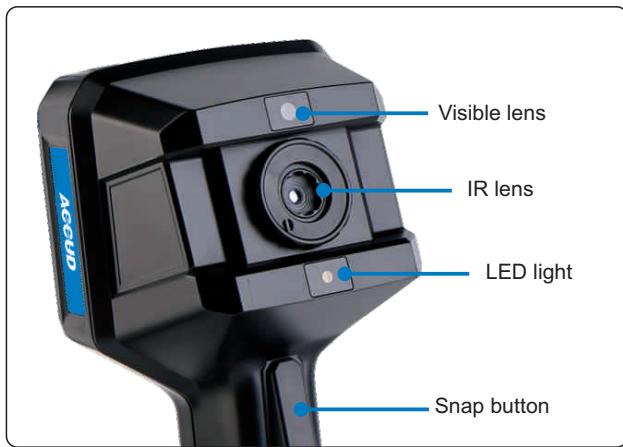
INCLUDED ACCESSORIES

Main unit	1pc
Battery	1pc

ITC450

INFRARED THERMAL IMAGING
CAMERA

- ◆ 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

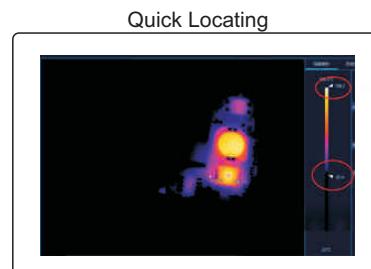
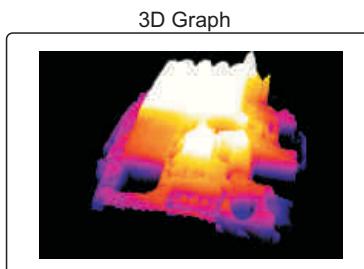
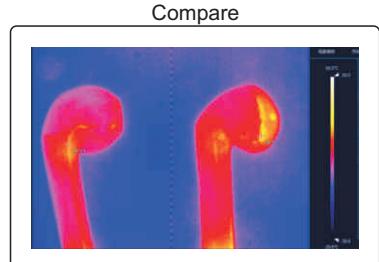
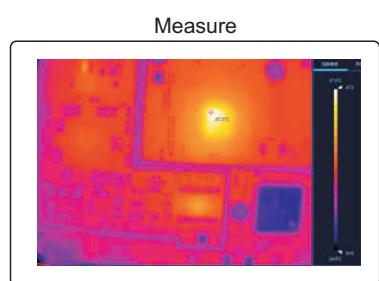
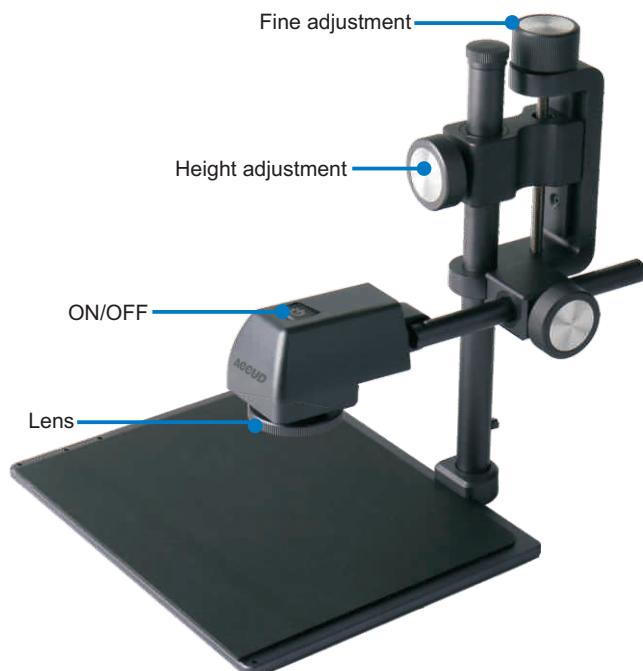
IR image	Resolution	220x160
	Measuring range	-10°C - 450°C
	Accuracy	±2°C(<100°C), 2%(>100°C)
	Detector	8-14um
	Frame rate	9Hz
	Field of view	Horizontal :56°, vertical:42°
	Lens	Ø4mm
	Measuring method	Max, Min, center spot and average
	Emissivity	0.1-1(adjustable)
	Color palettes	8 types
Visible camera	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



- ◆ For quick finding the current leakage or short circuit position when repairing PCBA
- ◆ For simulating the heating condition of the PCBA in a closed environment when designing
- ◆ With high limit alarm
- ◆ With software, data can be exported to Excel
- ◆ Flexible stand



TEMPERATURE

SPECIFICATION

IR image	Resolution	260x200
	Measuring range	-10°C-120°C
	Accuracy	±3°
	Frame rate	25Hz
	Field of view	Horizontal:34.4°, vertical: 25.8°
	Lens	Ø4mm
	Emissivity	0.1-1(adjustable)
Data output	USB (Type C)	
Working temperature	-10°C-55°C	
Protection level	IP54	
Power supply	DC 5V	
Size	220×172×241mm	
Weight	1.6kg	

INCLUDED ACCESSORIES

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



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
Weight		107g
Dimension		136×55×60mm



INCLUDED ACCESSORIES

Main unit	1pc
Battery	2pcs

OPTIONAL ACCESSORIES

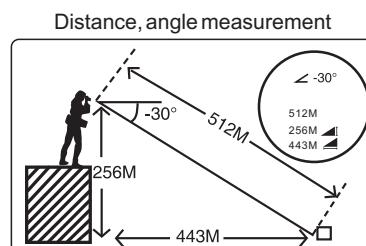
Extension probe	WMM700-EP
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TM1200

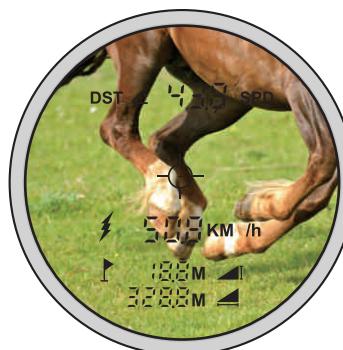
LASER DISTANCE METER



- ◆ IP54 protection
- ◆ Can measure distance, angle and speed
- ◆ Power off automatically



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
Weight	197g
Dimension	104×77×41 mm

INCLUDED ACCESSORIES

Main unit	1pc
USB cable	1pc

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

**ACCUD****SPECIFICATION**

Measuring range	0.1m-100m
Accuracy (at the perfect reflection surface)	1.5mm
Resolution	1mm
Unit	m/inch/ft
Light spot	Φ8mm@40m
Memory	20
Powersupply	2x1.5VAAA batteries
Laser	635nm<1mW
Weight	110g
Dimension	120×54×30 mm

INCLUDED ACCESSORIES

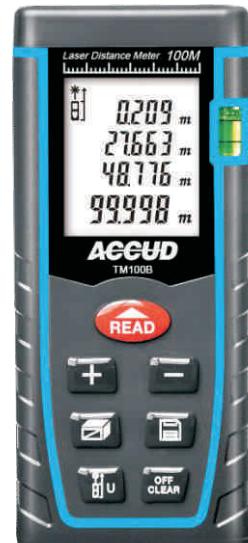
Main unit	1pc
Battery	2pcs

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

**PORTABLE****SPECIFICATION**

Code	TM40	TM100B
Measuring range	0.1m-40m	0.1m-100m
Accuracy (at the perfect reflection surface)	2mm	
Resolution	1mm	
Unit	m/inch/ft	
Light spot	Φ8mm@40m	
Memory	20	
Powersupply	2x1.5VAAA batteries	
Laser	635nm<1mW	
Weight	110g	
Dimension	120×54×30 mm	

INCLUDED ACCESSORIES

Main unit	1pc
Battery	2pcs

VT63

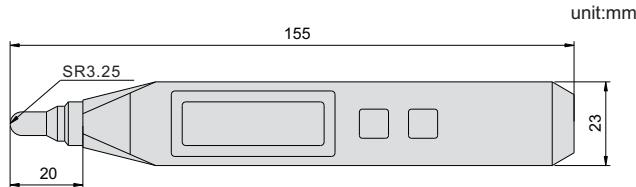
PEN TYPE VIBRATION TESTER



- ◆ 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

LT900

LASER TACHOMETER



- ◆ With back light
- ◆ Real-time/ Max/Min/avarage measurement
- ◆ Can review the last measuring value



VIDEO

SPECIFICATION

Measuring range		2.5-99999rpm
Resolution	<1000rpm	0.1rpm
	≥1000rpm	1rpm
Accuracy	<1000rpm	(±1%+5d)rpm
	≥1000rpm	(1%+5d)rpm
Measuring distance(d)		50-500mm
Power supply		2x1.5VAAA battery
Weight		106g
Dimension		56×30×127 mm



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

**PORTABLE****SPECIFICATION**

Measuring sound range	30-130db
Accuracy	1.5db
Resolution	0.1db
Powersupply	9V battery
Weight	64g
Dimension	143×56×35 mm

AM30**DIGITAL ANEMOMETER**

- ◆ 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
Powersupply	9Vbattery
Weight	154g
Dimension	155×56×35 mm



HG50/100

PRECISION HEIGHT GAGE



- ◆ High accuracy
- ◆ Response speed: max. 500mm/sec
- ◆ Working table is made of ceramic
- ◆ With spindle lift knob
- ◆ Optional accessories series 270

SPECIFICATION

Code	HG50	HG100
Measuring range	0-50mm	0-100mm
Accuracy	1.5µm*	3µm*
Resolution	0.1µm/1µm	
Repeatability	0.5µm	
Tip force	1-1.5N	
Dimension of working table	110x110mm	
Flatness of working table	1µm	
Power supply	100-240V adapter	
Working temperature	0°C - 40°C	
Weight	4kg	

*working temperture is 20±1°C



contact point (included)



INCLUDED ACCESSORIES

Main unit	1pc
Working table	1pc
Needle contact point	3pcs
Flat contact point	2pcs
AD/DC adapter	1pc
Spindle lift knob	1pc

LL030

LASER LEVEL



- ◆ 2 lines (cross line)
- ◆ With auto-level mode
- ◆ Power off automatically



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

GM268**20°/60°/85°GLOSS METER**

- ◆ 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



AegeaD

**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)		
	±0.1GU (range<10GU)		
Repeatability	±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

CM200**COLOR METER**

- ◆ Convenient and fast locating
- ◆ Portable structure design which is more conducive to keeping the instrument stable



PORTABLE

SPECIFICATION

Illuminating/Viewing Geometry	8/d
Measuring Aperture	Φ8mm
Light Source	D65
Light Source Device	LED blue light excitation
Memory	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)
Weight	500g
Dimension	205×70×100 mm

INCLUDED ACCESSORIES

Main unit	1pc
White calibration block	1pc
Charger	1pc
USB cable and software	1pc



CM3010

SPECTROPHOTO METER



- 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, ΔE*cmc(2:1), ΔE*cmc(1:1), ΔE*00v, ΔE(Hunter)				
Other colorimetric index	WI(ASTM E313, CIE/ISO, AATCC, Hunter), YI(ASTM D1925, ASTM 313), Metamerism index MI, Staining fastness, Colorfastness, Colorstrength, 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, TI83, TI84, U35				
Displayed data	spectrogram/values, samples chromaticity values, color difference values/graph, PASS/FAIL result, color offset				
Measuring time	2.6s				
Repeatability	<table border="0"> <tr> <td>Spectral reflectance</td> <td>MAV/SCI, within 0.1% of standard deviation(400~700nm: 0.2%)</td> </tr> <tr> <td>Colorimetric values</td> <td>MAV/SCI: ΔE*≤0.04</td> </tr> </table>	Spectral reflectance	MAV/SCI, within 0.1% of standard deviation(400~700nm: 0.2%)	Colorimetric values	MAV/SCI: ΔE*≤0.04
Spectral reflectance	MAV/SCI, within 0.1% of standard deviation(400~700nm: 0.2%)				
Colorimetric values	MAV/SCI: ΔE*≤0.04				
Inter-instrument error	MAV/SCI: ΔE*≤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



- ◆ Conform to the standards: ASTM D1003/1044, GB/T 2410, JJF 1303-2011, CIE 15.2, JIS K7105, JIS K7361, JIS K7136
- ◆ The instrument can easily achieve ASTM D1003 non-compensation method
- ◆ With quality control software



PORTABLE

**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
Display	7-inch TFT color 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



SERIES DF

DIGITAL FORCE GAUGE



- 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



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

SERIES DFXXE**DIGITAL FORCE GAUGE**

- ◆ For pull and push measurement
- ◆ Adjusting the display direction automatically
- ◆ With overload protection
- ◆ Peak and real-time mode
- ◆ Unit: N, gf, kgf, ozf, lbf
- ◆ Memory: 500
- ◆ Power off automatically



VIDEO



DF1000E

Stand (Code: FS1000, **Optional**)PR100 printer (**Optional**)

flat



v-type



knife-edge



point



pull clamp



extension rod

FORCE

SPECIFICATION

Code	DF10E	DF50E	DF100E	DF500E	DF1000E
Range	10N	50N	100N	500N	1000N
Resolution	0.01N	0.01N	0.1N	0.1N	1N
Accuracy	±0.3% x FS (full scale)				
Power	rechargeable battery				
Dimension	150x72x33mm				
Weight	450g				

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



SERIES DF

DIGITAL FORCE GAUGE



- ◆ 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



VIDEO



DF2K



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	±0.2% x 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

SERIES NK

FORCE GAUGE



- ◆ Push and pull test
- ◆ Peak(max.) or tracking work mode



Stand(Code: FS1000, **Optional**)



NK-500



flat



v-type



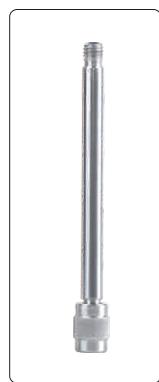
knife-edge



point



pull clamp



extension rod

FORCE

SPECIFICATION

Code	NK-20	NK-30	NK-50	NK-100	NK-200	NK-300	NK-500
Range(N)	20	30	50	100	200	300	500
Range(Kg)	2	3	5	10	20	30	50
Resolution(N)	0.1	0.2	0.25	0.5	1	2	2.5
Accuracy	±2% xFS (full scale)						

INCLUDED ACCESSORIES

Main unit	1pc
Push tip	4pcs (flat, V type, knife-edge, point)
Pull clamp	1pc
Extension rod	1pc

OPTIONAL ACCESSORIES

Stand	FS1000
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SERIES TWM

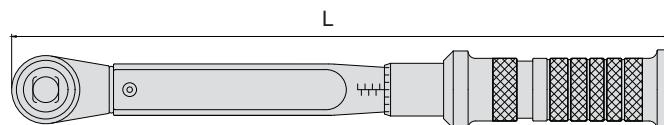
TORQUE WRENCH



- ◆ Easy to set the torque value
- ◆ Accuracy: ±4%
- ◆ According to ISO6789, ASMEB107. 14



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

SERIES TWM-B

TORQUE WRENCH



- ◆ Economic type
- ◆ Easy to set the torque value
- ◆ Accuracy: ±4%(clockwise)
- ◆ According to ISO6789, ASMEB107. 14



TWM25B

SPECIFICATION

Code	TWM25B	TWM60B	TWM60D	TWM110B	TWM110C	TWM210B	TWM330B	TWM550B	TWM800B	TWM1000B
Range(N.m)	5~25	12~60	12~60	22~110	22~110	42~210	66~330	110~550	160~800	200~1000
Size of square drive	1/4"	3/8"	1/2"	3/8"	1/2"	1/2"	1/2"	3/4"	3/4"	3/4"
Length	250mm	415mm	425mm	460mm	470mm	490mm	565mm	900mm	1200mm	1200mm
Weight	350g	920g	980g	1.06kg	1.17kg	1.26kg	1.34kg	4.3kg	5.6kg	1.34kg

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

**SPECIFICATION**

Code	TW12	TW20	TW30	TW135	TW200	TW340	TW500	TW850	TW1500	TW2000
Range(N.m)	2.4~12	4~20	6~30	27~135	40~200	68~340	100~500	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	±3%	±3%	±2%	±2%	±2%	±2.5%	±2.5%	±2.5%	±2.5%
	Anti-clockwise	±4%	±4%	±3%	±3%	±3%	±3.5%	±3.5%	±3.5%	±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									

SERIES TWD**DIAL TORQUE WRENCH**

- ◆ Clockwise and counter-clockwise operation
- ◆ Comforms to DIN ISO 6789, ASME B107.300



TORQUE

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

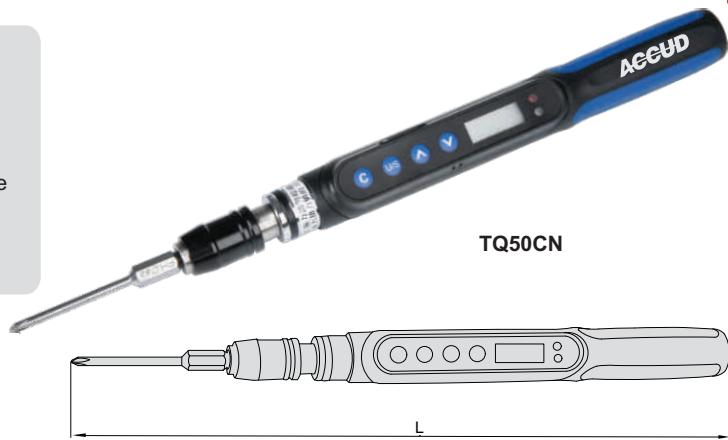


SERIES TQ

DIGITAL TORQUE SCREWDRIVER



- Unit: cN.m, in.lb, kg.cm
- Clockwise or anti-clockwise operation
- Peak and track working mode
- With audible and visible alarm when the value is closed to setting target
- Supplied with calibration certificate



SPECIFICATION

Code	TQ50CN	TQ200CN	TQ400CN
Range	10~50cN.m	40~200cN.m	80~400cN.m
Clockwise operation accuracy	±3%	±2.5%	±2.5%
Anti-clockwise operation accuracy	±4%	±3.5%	±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	7xAAA battery		

SERIES TQM

TORQUE SCREWDRIVER

- Clockwise operation
- When achieving the setting target, there is "chatter"



SPECIFICATION

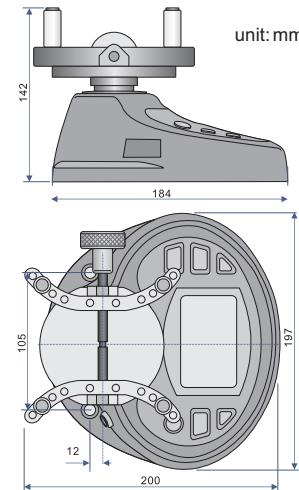
Code	TQM60	TQM120	TQM300	TQM600
Range	0.12~0.6N.m	0.24~1.2N.m	0.6~3N.m	1.2~6N.m
Clockwise operation accuracy	±6%	±6%	±6%	±6%
Graduation	0.01N.m	0.02N.m	0.05N.m	0.1N.m
Size of shank	1/4"	1/4"	1/4"	1/4"
Length (L)	161mm	161mm	186mm	186mm
Weight	300g	300g	400g	400g

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



ACCUUD



SPECIFICATION

Code	TTM2	TTM5	TTM10	TTM20
Range	0.1-2N.m	0.25-5N.m	0.5-10N.m	1-20N.m
Accuracy	$\pm 0.5\%$			
Resolution	0.0002N.m	0.0005N.m	0.001N.m	0.002N.m
Open size	$\varnothing 19.5-190mm$			
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
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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



SPECIFICATION

Code	TTS1	TTS5	TTS10
Range	0.05-1N.m	0.25-5N.m	0.5-10N.m
Open size	$\varnothing 10mm$	$\varnothing 10mm$	$\varnothing 13mm$
Resolution	0.0001N.m	0.0005N.m	0.001N.m
Accuracy	$\pm 0.3\%$		
Memory	1000		
Output	USB and RS232		
Power	rechargeable battery		
Weight	0.7kg		

INCLUDED ACCESSORIES

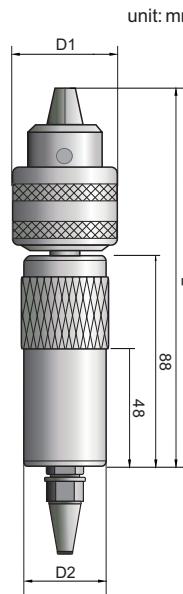
Main unit	1pc
Charger	1pc
Software with cable	1pc
Wrench	1pc

OPTIONAL ACCESSORIES

Wireless printer	PR100
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TTS5



Code	L	D1	D2
TTS1	156mm	$\varnothing 43$	$\varnothing 40$
TTS5	156mm	$\varnothing 43$	$\varnothing 46$
TTS10	178mm	$\varnothing 53$	$\varnothing 46$

TORQUE



SERIES TTB

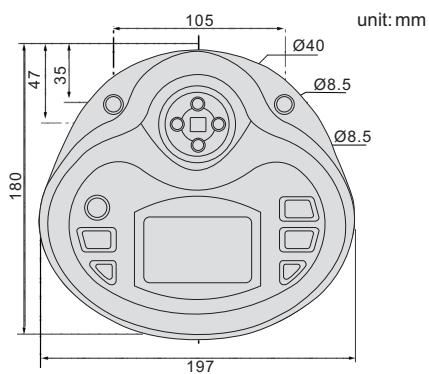
DIGITAL TORQUE METER



- 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



TTB10



TTB500

Stand (optional)



SPECIFICATION

Code	TTB5	TTB10	TTB50	TTB100	TTB500
Range	5N.m	10N.m	50N.m	100N.m	500N.m
Accuracy			±0.3%		
Resolution	0.0005N.m	0.001N.m	0.005N.m	0.01N.m	0.05N.m
Size of square drive			1/2"		3/4"
Output			USB and RS232		
Power			rechargeable battery		
Weight			1.5kg		

INCLUDED ACCESSORIES

Main unit	1pc
Charger	1pc
Software with cable	1pc
Convertor	1pc

OPTIONAL ACCESSORIES

Wireless printer	PR100
Stand(Arm length:150-600mm)	TTB-ST1
Stand(Arm length:150-1000mm)	TTB-ST2

SERIES TT**DIGITAL TORQUE METER**

- ◆ For torque wrench and torque screw driver calibration
- ◆ For clockwise and anti-clockwise operation
- ◆ Unit: N.m, N.cm, kgf.cm, lbf.cm, lbf.in
- ◆ Peak, preset and real-time working mode
- ◆ Power off automatically
- ◆ High and low limit with judgement



square drive

TT550

SPECIFICATION

Code	TT05	TT5	TT50	TT220	TT550	TT1000	TT2200
Range	0.1-5N.m	0.5-10N.m	5-50N.m	22-220N.m	55-550N.m	100-1000N.m	220-2200N.m
Accuracy					±1%		
Resolution	0.0001N.m	0.0001N.m	0.001N.m	0.01N.m	0.01N.m	0.1N.m	0.1N.m
Size of square drive	1/4"	1/4"	3/8"	1/2"	3/4"	1"	1"
Conventor	without	without	3/8" to 1/4"	1/2" to 3/8", 3/8" to 1/4"	3/4" to 1/2", 1/2" to 3/8"	1" to 3/4", 3/4" to 1/2", 1/2" to 3/8"	1" to 3/4", 3/4" to 1/2"
Power				AC/DC adapter			
Weight	3.1kg	3.1kg	3.4kg	3.6kg	4.9kg	6.4kg	6.4kg

INCLUDED ACCESSORIES

Main unit	1pc
Sensor(cable lenght 1.5m)	1pc
1.2m sensor extension cable	1pc
AC/DC adapter	1pc

PS075**PORTABLE SCALE**

- ◆ 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



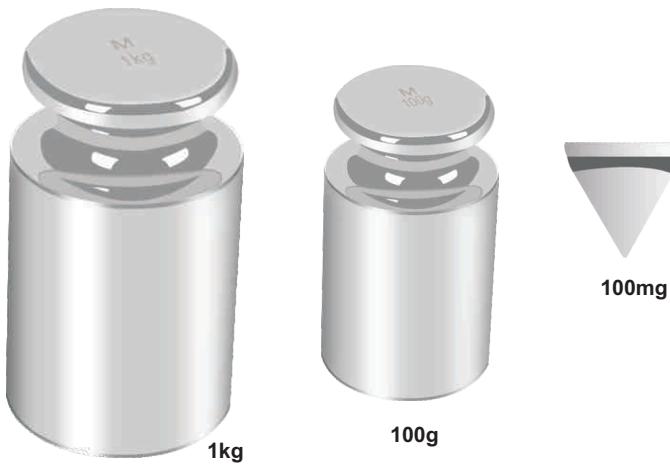
SERIES WT/WTS

WEIGHT



TOLERANCE

Weight	M1	F2	F1	E2
1mg	0.2mg	0.06mg	0.02mg	0.006mg
2mg	0.2mg	0.06mg	0.02mg	0.006mg
5mg	0.2mg	0.06mg	0.02mg	0.006mg
10mg	0.25mg	0.08mg	0.025mg	0.008mg
20mg	0.3mg	0.1mg	0.03mg	0.01mg
50mg	0.4mg	0.12mg	0.04mg	0.012mg
100mg	0.5mg	0.16mg	0.05mg	0.016mg
200mg	0.6mg	0.2mg	0.06mg	0.02mg
500mg	0.8mg	0.25mg	0.08mg	0.025mg
1g	1mg	0.3mg	0.1mg	0.03mg
2g	1.2mg	0.4mg	0.12mg	0.04mg
5g	1.6mg	0.5mg	0.16mg	0.05mg
10g	2mg	0.6mg	0.2mg	0.06mg
20g	2.5mg	0.8mg	0.25mg	0.08mg
50g	3mg	1mg	0.3mg	0.1mg
100g	5mg	1.6mg	0.5mg	0.16mg
200g	10mg	3mg	1mg	0.3mg
500g	25mg	8mg	2.5mg	0.8mg
1kg	50mg	16mg	5mg	1.6mg
2kg	100mg	30mg	10mg	3mg
5kg	250mg	80mg	25mg	8mg
10kg	500mg	160mg	50mg	16mg
20kg	1000mg	300mg	100mg	30mg



GRADE SELECTION

Weighing instrument resolution	Grade selection
0.001mg	E1
0.01mg	E2
0.1mg	E2 or F1
1mg	F2
0.01g/0.1g	M1

INDIVIDUAL WEIGHT

Code Weight	Grade and stainless steel type					Sharp
	M1(304)	F2(304)	F1(304)	F1(non-magnetic)	E2(non-magnetic)	
1mg	WT-M001M1	WT-M001F2	WT-M001F1	WT-M001F1B	WT-M001E2	sheet
2mg	WT-M002M1	WT-M002F2	WT-M002F1	WT-M002F1B	WT-M002E2	
5mg	WT-M005M1	WT-M005F2	WT-M005F1	WT-M005F1B	WT-M005E2	
10mg	WT-M010M1	WT-M010F2	WT-M010F1	WT-M010F1B	WT-M010E2	
20mg	WT-M020M1	WT-M020F2	WT-M020F1	WT-M020F1B	WT-M020E2	
50mg	WT-M050M1	WT-M050F2	WT-M050F1	WT-M050F1B	WT-M050E2	
100mg	WT-M100M1	WT-M100F2	WT-M100F1	WT-M100F1B	WT-M100E2	
200mg	WT-M200M1	WT-M200F2	WT-M200F1	WT-M200F1B	WT-M200E2	
500mg	WT-M500M1	WT-M500F2	WT-M500F1	WT-M500F1B	WT-M500E2	
1g	WT-001M1	WT-001F2	WT-001F1	WT-001F1B	WT-001E2	
2g	WT-002M1	WT-002F2	WT-002F1	WT-002F1B	WT-002E2	
5g	WT-005M1	WT-005F2	WT-005F1	WT-005F1B	WT-005E2	
10g	WT-010M1	WT-010F2	WT-010F1	WT-010F1B	WT-010E2	
20g	WT-020M1	WT-020F2	WT-020F1	WT-020F1B	WT-020E2	
50g	WT-050M1	WT-050F2	WT-050F1	WT-050F1B	WT-050E2	cylinder
100g	WT-100M1	WT-100F2	WT-100F1	WT-100F1B	WT-100E2	
200g	WT-200M1	WT-200F2	WT-200F1	WT-200F1B	WT-200E2	
500g	WT-500M1	WT-500F2	WT-500F1	WT-500F1B	WT-500E2	
1kg	WT-1000M1	WT-1000F2	WT-1000F1	WT-1000F1B	WT-1000E2	
2kg	WT-2000M1	WT-2000F2	WT-2000F1	WT-2000F1B	WT-2000E2	
5kg	WT-5000M1	WT-5000F2	WT-5000F1	WT-5000F1B	WT-5000E2	
10kg	WT-10000M1	WT-10000F2	WT-10000F1	WT-10000F1B	WT-10000E2	
20kg	WT-20000M1	WT-20000F2	WT-20000F1	WT-20000F1B	WT-20000E2	

WEIGHT SET

Code Weight	Grade and stainless steel type					Quantity
	M1(304)	F2(304)	F1(304)	F1(non-magnetic)	E2(non-magnetic)	
1mg-200g	WTS-200M1	WTS-200F2	WTS-200F1	WTS-200F1B	WTS-200E2	23pcs
1mg-500g	WTS-500M1	WTS-500F2	WTS-500F1	WTS-500F1B	WTS-500E2	24pcs

Each set includes two pieces 2mg/20mg/200mg/2g/20g/200g and one piece each other sizes

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