

ACCUD



CATALOGUE 2018/2019EN

About ACCUD:

ACCUD is a dedicated supplier of measuring instruments.

ACCUD products line not only covers traditional gauges such as calipers, micrometers, dial indicators, height gauges, gauge blocks, but also covers high-technology measuring instruments like hardness tester, vision measuring machine.

ACCUD products are mainly manufactured in Asia, and further selected according to strict quality criteria.

Our key aims are:

Quality: conforms to international standards with full guarantee.

Service: ensure user have trouble-free use of ACCUD products.

Professional: supply the user the best measuring solution.

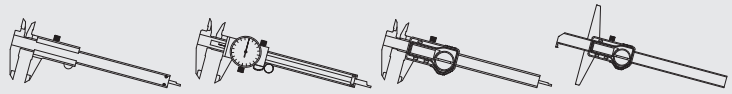
Value: supply the product with high cost performance.

Brand: establish good brand impression.



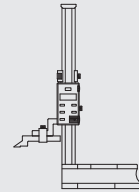
P1-38

OUTPUT INTERFACE
CALIPER
DEPTH CALIPER



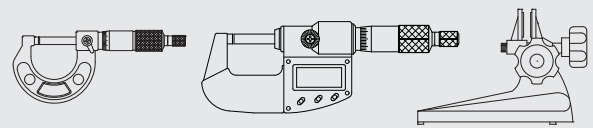
P39-42

HEIGHT GAGE



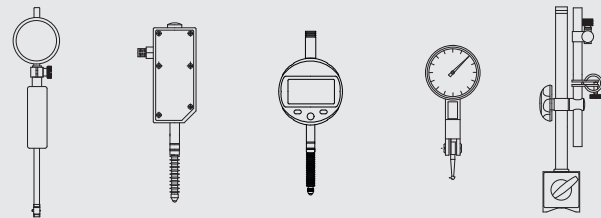
P43-60

OUTSIDE MICROMETER
INSIDE MICROMETER
MICROMETER STAND
DEPTH MICROMETER



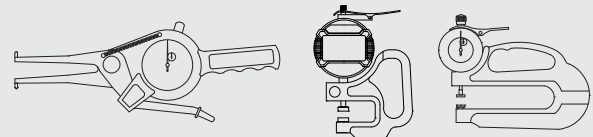
P61-89

DEPTH INDICATOR
BORE GAUGE
LINEAR GAUGE
DIAL/DIGITAL INDICATOR
DIAL TEST INDICATOR
MAGNETIC STAND



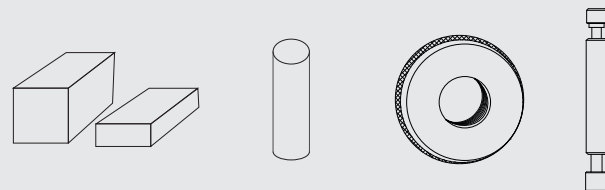
P90-95

DIAL CALIPER GAUGE
THICKNESS GAUGE
SNAP GAUGE



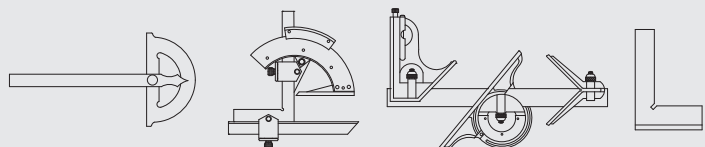
P95-111

GAUGE BLOCK
PIN GAUGE
RING GAUGE
PLUG GAUGE



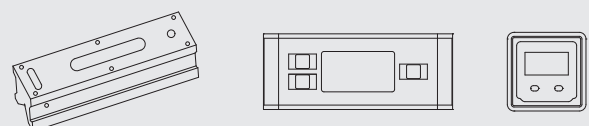
P112-120

PROTRACTOR
SQUARE



P121-124

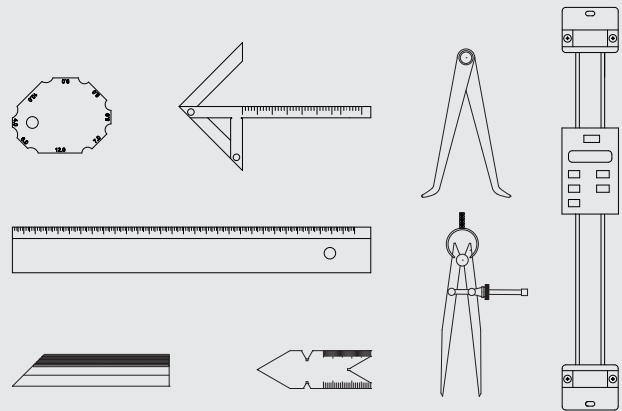
LEVEL



INDEX

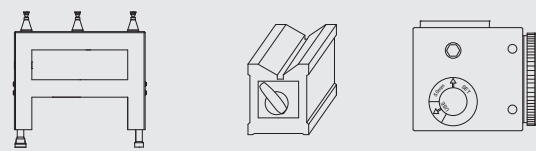
P124-150

FEELER
PITCH GAUGE
ANGLE GAUGE
RADIUS GAUGE
TELESCOPING GAUGE
TAPER GAUGE
WELDING GAUGE
INSIDE/OUTSIDE CALIPER
DIVIDER
MARKING GAUGE
STRAIGHT EDGE
DIGITAL SCALE



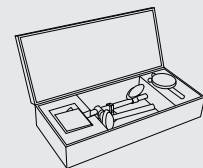
P151-164

GRANITE SURFACE PLATE
V-BLOCK
GRANITE SQUARE
CENTERING HOLDER
ZERO SET



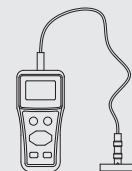
P165-168

MEASURING TOOLS SET



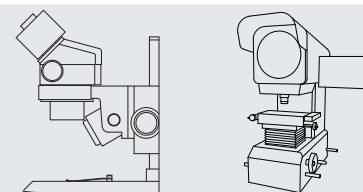
P169-171

COATING THICKNESS GAUGE
ULTRASONIC THICKNESS GAUGE



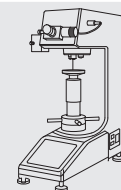
P172-182

DIGITAL MICROSCOPE
STEREO MICROSCOPE
CAMERA
PROFILE PROJECTOR
VISION MACHINE



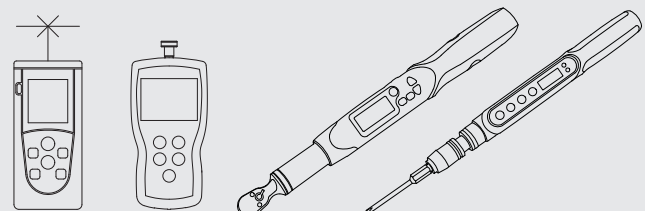
P183-193

HARDNESS TESTER



P194-202

ROUGHNESS TESTER
INFRARED THERMOMETER
LASER DISTANCE METER
FORCE GAUGE
TORQUE WRENCH
TORQUE SCREWDRIVER
TORQUE METER



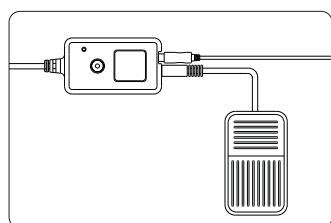
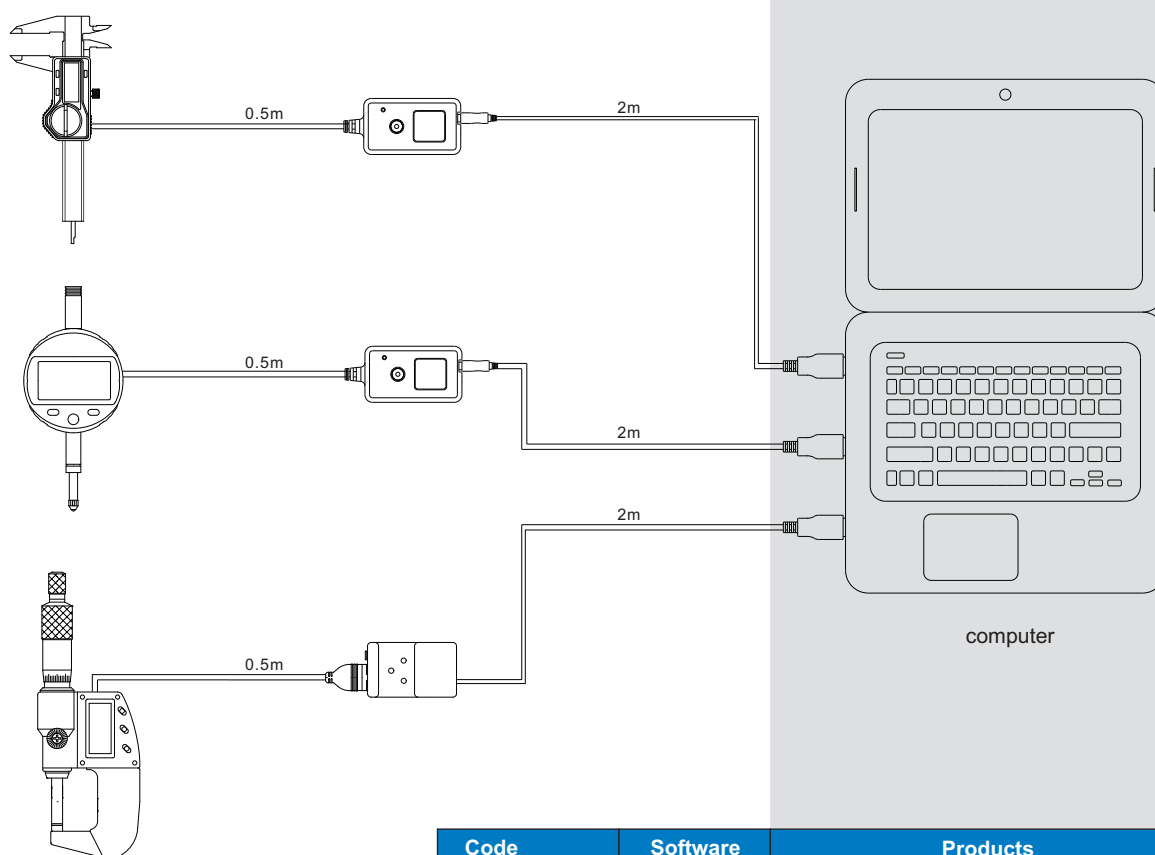
USB OUTPUT INTERFACE

100/200/300/400



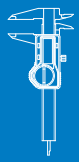
100-11

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



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

Code	Software	Products
100-11	Without	for digital calipers (refer to each product description)
100-12	With	
100-13	Without	
100-15	Without	
100-03	Without	
100-04	With	for digital indicators(refer to each product description)
200-01	Without	
200-02	With	
200-03	Without	
200-04	With	for digital micrometers(refer to each product description)
300-01	Without	
300-03	Without	



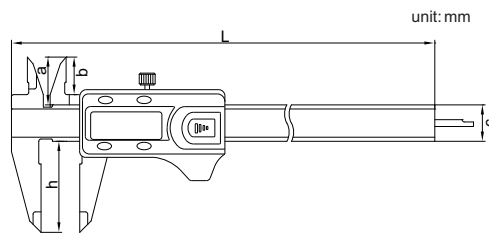
SERIES 111

DIGITAL CALIPER

- ◆ High accuracy due to using the glass scale
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/in, ABS
- ◆ Data output (cable code: 100-11 or 100-12)
- ◆ Automatic power on/off
- ◆ Meet DIN862
- ◆ Made of stainless steel



111-006-11N



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	17	60	400

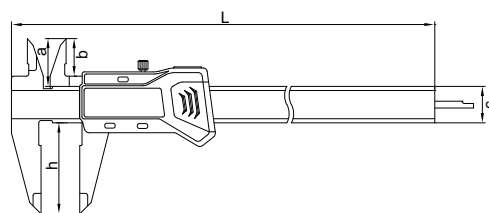
SERIES 111

DIGITAL CALIPER

- ◆ High accuracy due to using the glass scale
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/in, ABS
- ◆ Data output (cable code: 100-03 or 100-04)
- ◆ Automatic power on/off
- ◆ Meet DIN862
- ◆ Made of stainless steel



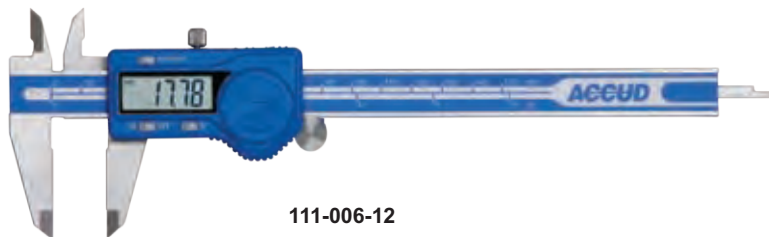
111-006-10



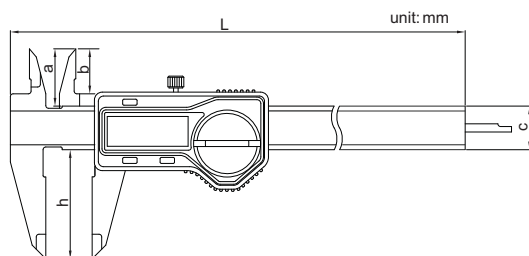
Code	Range	Accuracy	a	b	c	h	L
111-006-10	0-150mm/0-6"	±0.03mm	21	16	16	40	236
111-008-10	0-200mm/0-8"	±0.03mm	24	19	16	50	286
111-012-10	0-300mm/0-12"	±0.03mm	25	20.5	17	60	400

DIGITAL CALIPER

SERIES 111



111-006-12

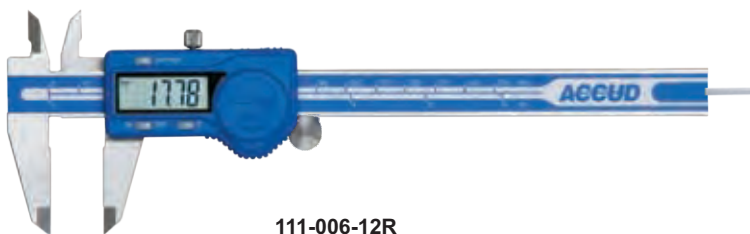


- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Data output (cable code: 100-11 or 100-12)
- ◆ Automatic power on/off
- ◆ Meet DIN862
- ◆ Made of stainless steel

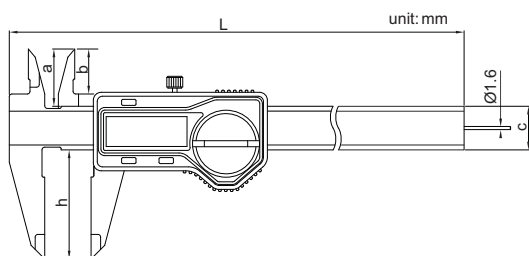
Code	Range	Accuracy	a	b	c	h	L
111-006-12	0-150mm/0-6"	±0.03mm	21	16	16	40	236
111-008-12	0-200mm/0-8"	±0.03mm	24	19	16	50	286
111-012-12	0-300mm/0-12"	±0.03mm	25	20.5	17	60	400

DIGITAL CALIPER WITH ROUND DEPTH BAR

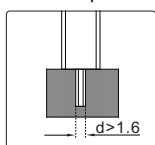
SERIES 111



111-006-12R

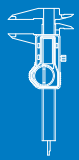


round depth bar



- ◆ 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



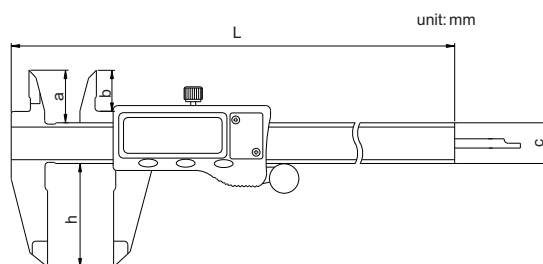
SERIES 111

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

DIGITAL CALIPER WITH METAL COVER



111-006-16



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	17	60	400

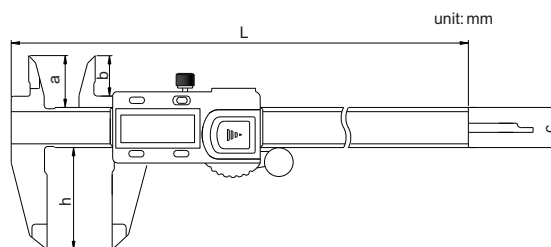
SERIES 111

- ◆ High accuracy
- ◆ Absolute system
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, ABS/REL, inch/mm, origin
- ◆ Data output (cable code:100-13)
- ◆ Meet DIN862
- ◆ Made of stainless steel

DIGITAL CALIPER



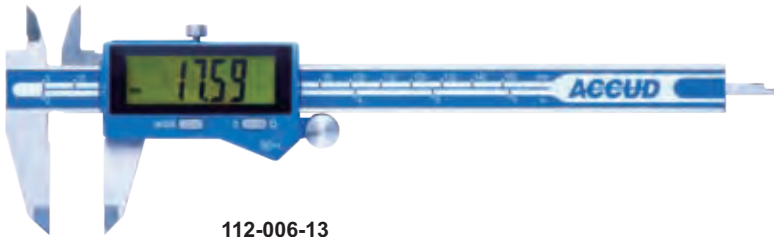
111-006-17



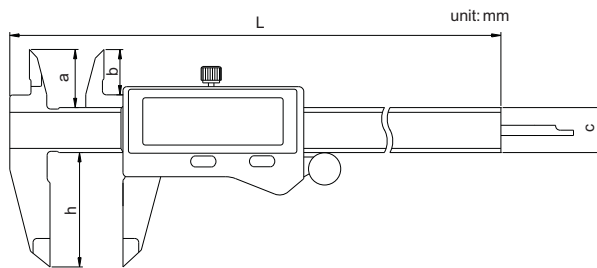
Code	Range	Accuracy	a	b	c	h	L
111-006-17	0-150mm/0-6"	±0.02mm	21	16.5	16	40	236
111-008-17	0-200mm/0-8"	±0.02mm	24	19	16	50	286
111-012-17	0-300mm/0-12"	±0.03mm	26	20.5	16	60	400

IP67 DIGITAL CALIPER

SERIES 112



112-006-13



- ◆ IP67 protection level
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Automatic power off
- ◆ Buttons: on/off, mode
- ◆ Made of stainless steel

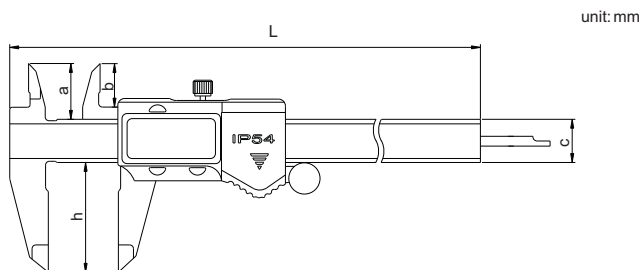
Code	Range	Accuracy	a	b	c	h	L
112-006-13	0-150mm/0-6"	±0.03mm	21	16	16	40	236
112-008-13	0-200mm/0-8"	±0.03mm	24	19	16	50	286
112-012-13	0-300mm/0-12"	±0.04mm	25	20.5	17	60	400

FRACTIONAL DIGITAL CALIPER

SERIES 113

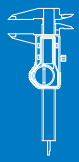


113-006-11



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

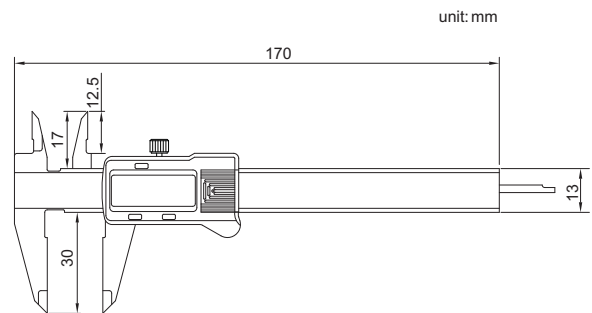
Code	Range	Accuracy	a	b	c	h	L
113-006-11	0-150mm/0-6"	±0.03mm	21	16	16	40	236
113-008-11	0-200mm/0-8"	±0.03mm	24	19	16	50	286
113-012-11	0-300mm/0-12"	±0.03mm	25	20.5	17	60	400



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

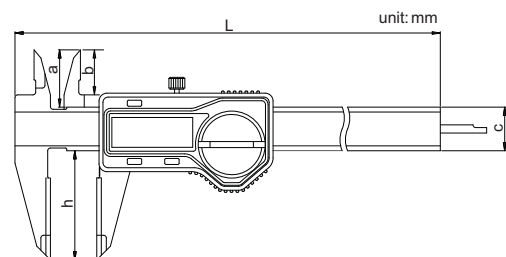
SERIES 115

DIGITAL CALIPER

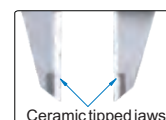
- ◆ Ceramic tipped jaws for outside measurements, good wear-resistance,
- ◆ non-magnetic, non-conductive
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Data output (cable code: 100-11 or 100-12)
- ◆ Automatic power on/off
- ◆ Made of stainless steel



115-006-11



Code	Range	Accuracy	a	b	c	h	L
115-006-11	0-150mm/0-6"	0.02mm	21	16.5	16	40	236
115-008-11	0-200mm/0-8"	0.02mm	24	19	16	50	286
115-012-11	0-300mm/0-12"	0.03mm	26	20.5	16	60	400



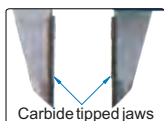
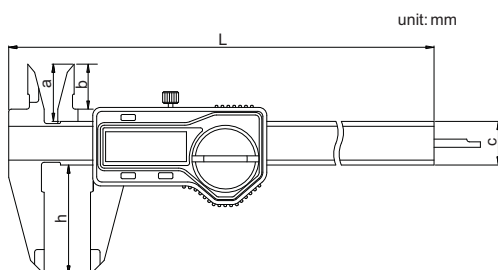
Ceramic tipped jaws

DIGITAL CALIPER WITH CARBIDE TIPPED JAWS

SERIES 116



116-006-11



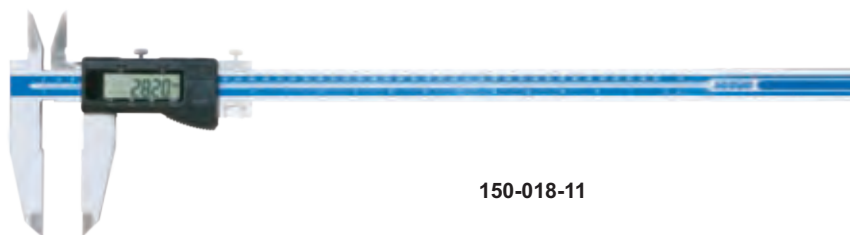
Carbide tipped jaws

- ◆ 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

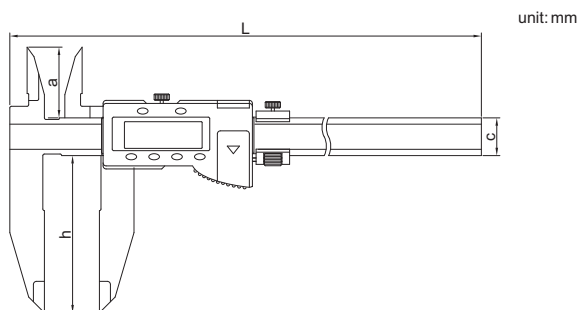
Code	Range	Accuracy	a	b	c	h	L
116-006-11	0-150mm/0-6"	±0.03mm	21	16	16	40	236
116-008-11	0-200mm/0-8"	±0.03mm	24	19	16	50	286
116-012-11	0-300mm/0-12"	±0.03mm	25	20.5	17	60	400

DIGITAL CALIPER

SERIES 150

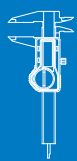


150-018-11



- ◆ 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

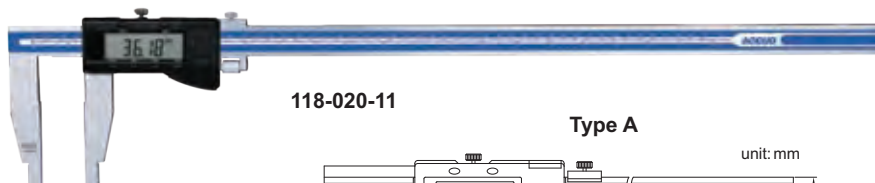
Code	Range	Accuracy	a	c	h	L
150-018-11	0-450mm/0-18"	±0.05mm	45	24	100	625
150-024-11	0-600mm/0-24"	±0.05mm	45	24	100	770
150-040-11	0-1000mm/0-40"	±0.08mm	60	31	150	1220



SERIES 118

DIGITAL CALIPER

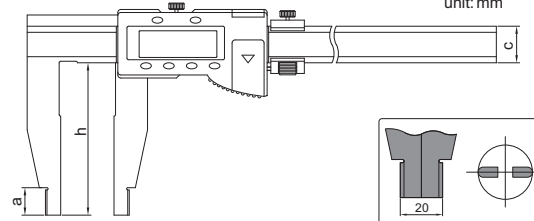
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Data output (Type A: cable code:100-15)
(Type B: 100-11or 100-12)
- ◆ Made of stainless steel



118-020-11

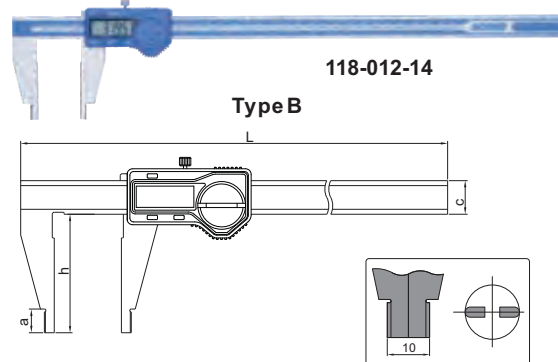
Type A

unit: mm



118-012-14

Type B



Code	Range	Accuracy	Type	a	c	h
118-008-11	0-200mm/0-8"	±0.03mm	B	12	17	60
118-012-11	0-300mm/0-12"	±0.04mm	A	18	24	100
118-012-12	0-300mm/0-12"	±0.05mm	A	18	24	150
118-012-13	0-300mm/0-12"	±0.05mm	A	18	24	200
118-012-14	0-300mm/0-12"	±0.04mm	B	12	17	60
118-012-15	0-300mm/0-12"	±0.04mm	B	12	17	90
118-020-11	0-500mm/0-20"	±0.05mm	A	18	24	100
118-020-12	0-500mm/0-20"	±0.06mm	A	18	24	150
118-020-13	0-500mm/0-20"	±0.06mm	A	18	32	200
118-020-14	0-500mm/0-20"	±0.08mm	A	18	42	300
118-024-11	0-600mm/0-24"	±0.05mm	A	18	24	100
118-024-12	0-600mm/0-24"	±0.06mm	A	18	24	150
118-024-13	0-600mm/0-24"	±0.06mm	A	18	32	200
118-024-15	0-600mm/0-24"	±0.08mm	A	18	32	300
118-040-11	0-1000mm/0-40"	±0.08mm	A	24	32	150
118-040-12	0-1000mm/0-40"	±0.08mm	A	24	32	200
118-040-13	0-1000mm/0-40"	±0.10mm	A	24	42	300
118-060-11	0-1500mm/0-60"	±0.11mm	A	24	42	150
118-080-11	0-2000mm/0-80"	±0.14mm	A	24	42	150

SERIES 119

DIGITAL CALIPER

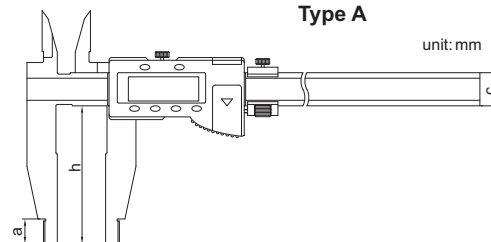
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/inch, ABS, data preset
- ◆ Data output (Type A: cable code:100-15)
(Type B: 100-11or 100-12)
- ◆ Made of stainless steel



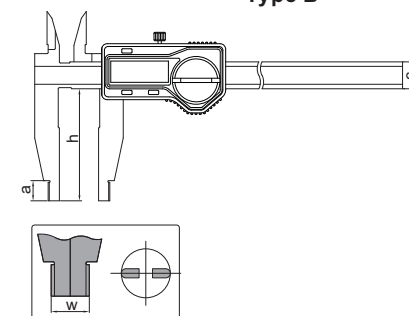
119-020-11

Type A

unit: mm



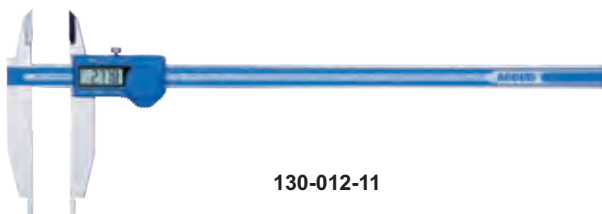
Type B



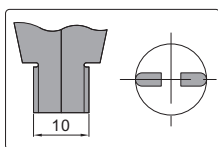
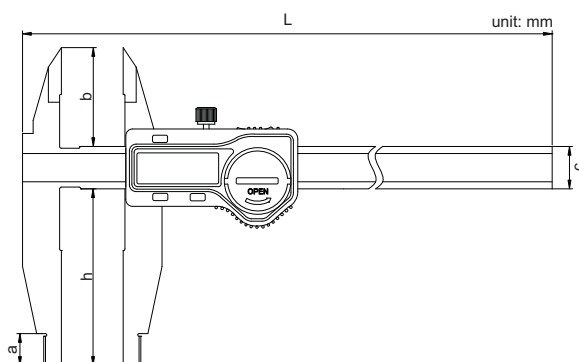
Code	Range	Accuracy	Type	a	c	h	w
119-012-11	0-300mm/0-12"	±0.04mm	B	12	17	60	10
119-012-12	0-300mm/0-12"	±0.05mm	A	18	24	100	20
119-020-11	0-500mm/0-20"	±0.05mm	A	18	24	100	20
119-020-12	0-500mm/0-20"	±0.06mm	A	18	24	150	20
119-020-13	0-500mm/0-20"	±0.06mm	A	18	24	200	20
119-024-11	0-600mm/0-24"	±0.05mm	A	18	24	100	20
119-024-12	0-600mm/0-24"	±0.06mm	A	18	24	150	20
119-024-14	0-600mm/0-24"	±0.06mm	A	18	32	200	20
119-040-11	0-1000mm/0-40"	±0.08mm	A	24	32	150	20
119-040-12	0-1000mm/0-40"	±0.08mm	A	24	32	200	20
119-060-11	0-1500mm/0-60"	±0.11mm	A	24	42	150	20
119-060-12	0-1500mm/0-60"	±0.12mm	A	24	42	200	20

DIGITAL CALIPER

SERIES 130



130-012-11



- ◆ 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

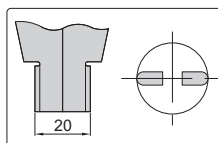
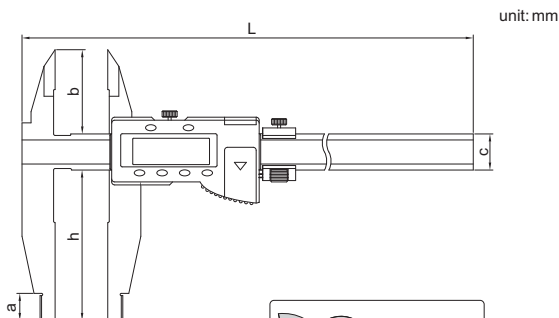
Code	Range	Accuracy	a	b	c	h	L
130-008-11	0-200mm/0-8"	±0.03mm	12	38	17	60	320
130-012-11	0-300mm/0-12"	±0.04mm	12	38	17	60	420
130-012-12	0-300mm/0-12"	±0.04mm	12	38	17	90	420

DIGITAL CALIPER

SERIES 131

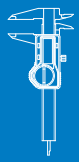


131-020-11



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

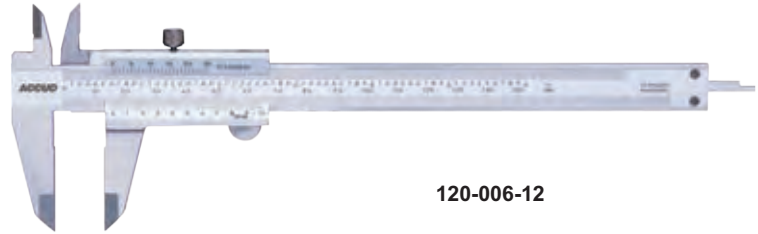
Code	Range	Accuracy	a	b	c	h	L
131-012-11	0-300mm/0-12"	±0.05mm	18	56	24	100	420
131-020-11	0-500mm/0-20"	±0.05mm	18	56	24	100	675
131-020-12	0-500mm/0-20"	±0.06mm	18	56	24	150	675
131-024-11	0-600mm/0-24"	±0.05mm	18	56	24	100	770
131-028-11	0-800mm/0-32"	±0.07mm	24	67	31	150	1025
131-040-11	0-1000mm/0-40"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



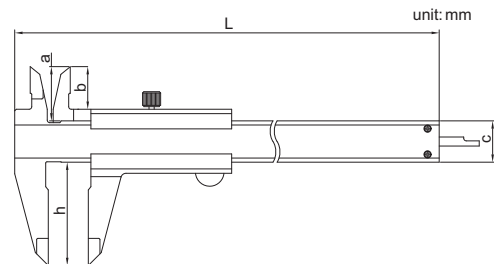
SERIES 120

VERNIER CALIPER

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



120-006-12

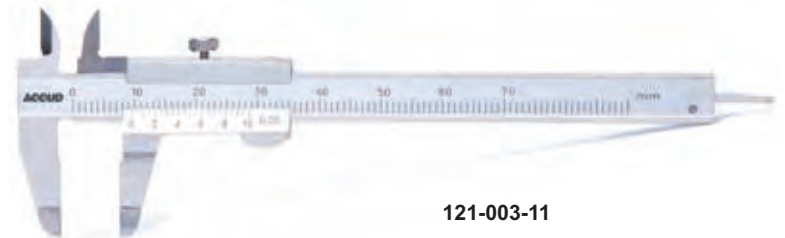


Code	Range	Graduation	Accuracy	a	b	c	h	L
120-006-12	0-150mm/0-6"	0.02mm/0.001"	±0.03mm	20.5	15.5	16	40	235
120-008-12	0-200mm/0-8"	0.02mm/0.001"	±0.03mm	23.5	19	16	50	290
120-012-12	0-300mm/0-12"	0.02mm/0.001"	±0.03mm	27.5	22	20	64	414
120-006-14	0-150mm/0-6"	0.05mm/1/128"	±0.05mm	20.5	15.5	16	40	235
120-008-14	0-200mm/0-8"	0.05mm/1/128"	±0.05mm	23.5	19	16	50	290
120-012-14	0-300mm/0-12"	0.05mm/1/128"	±0.05mm	27.5	22	20	64	414

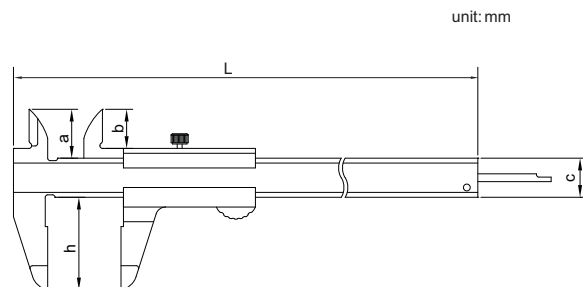
SERIES 121

MINI VERNIER CALIPER

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



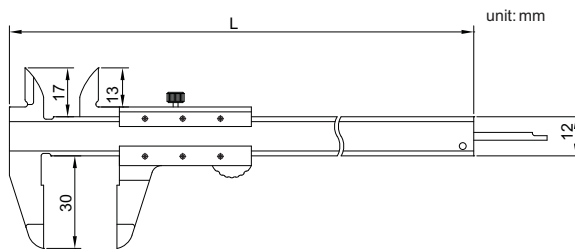
121-003-11



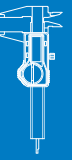
Code	Range	Graduation	Accuracy	a	b	h	L	C
121-003-11	0-70mm	0.05mm	±0.05mm	10	8	19	113	8
121-004-11	0-100mm	0.05mm	±0.05mm	17	13	30	160	12

MINI VERNIER CALIPER

SERIES 121



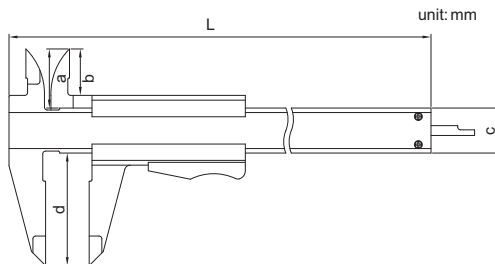
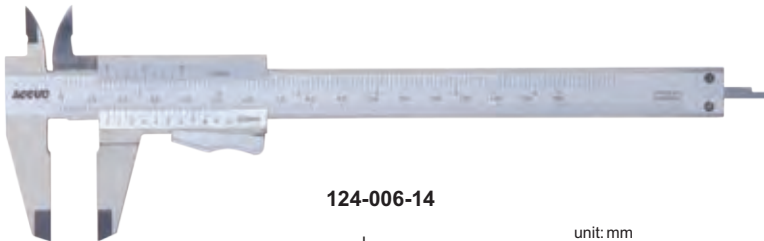
- ◆ Meet DIN862
- ◆ Made of stainless steel
- ◆ Satin chrome plated reading surface



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

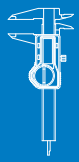
VERNIER CALIPER

SERIES 124



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

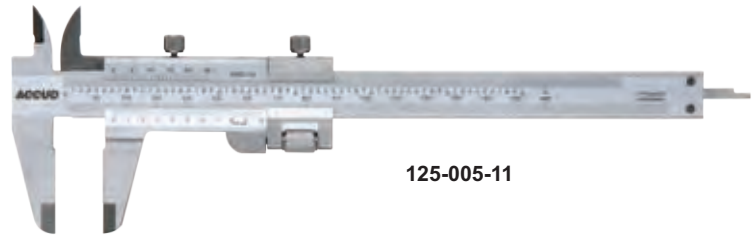
Code	Range	Graduation	Accuracy	a	b	c	h	L
124-006-12	0-150mm/0-6"	0.02mm/0.001"	±0.03mm	20.5	15.5	16	40	235
124-008-12	0-200mm/0-8"	0.02mm/0.001"	±0.03mm	23.5	19	16	50	290
124-012-12	0-300mm/0-12"	0.02mm/0.001"	±0.03mm	27.5	22	20	64	414
124-006-14	0-150mm/0-6"	0.05mm/1/128"	±0.05mm	20.5	15.5	16	40	235
124-008-14	0-200mm/0-8"	0.05mm/1/128"	±0.05mm	23.5	19	16	50	290
124-012-14	0-300mm/0-12"	0.05mm/1/128"	±0.05mm	27.5	22	20	64	414



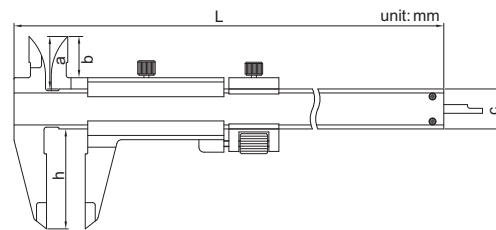
SERIES 125

VERNIER CALIPER

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



125-005-11

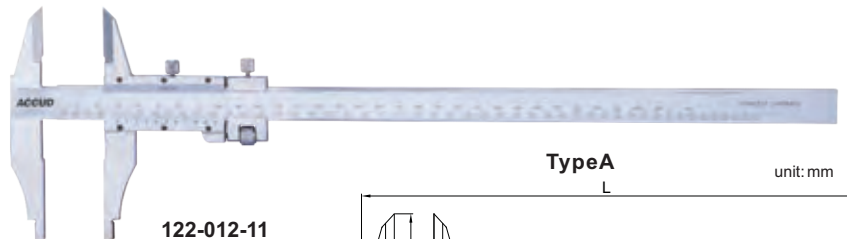


Code	Range	Accuracy	a	b	c	h	L
125-005-11	0-130mm/0-5"	±0.03mm	20.5	16.5	16	40	230
125-007-11	0-180mm/0-7"	±0.03mm	23.5	19	16	50	295
125-011-11	0-280mm/0-11"	±0.03mm	36	20	20	60	410

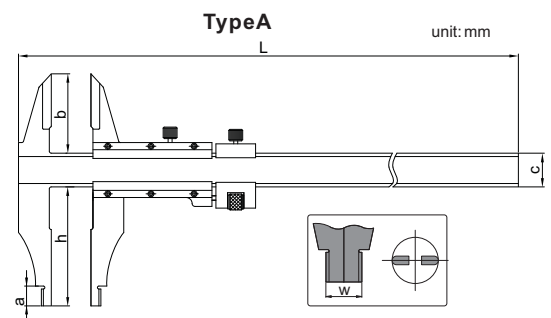
SERIES 122

VERNIER CALIPER

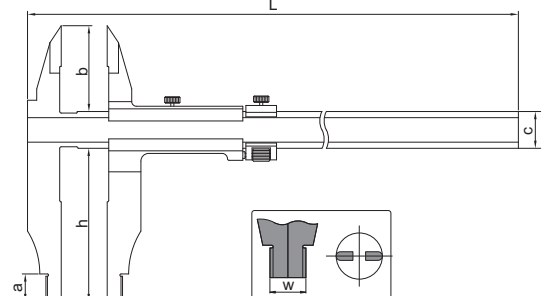
- ◆ With fine adjustment
- ◆ Made of stainless steel
- ◆ Stain chrome reading surface



122-012-11



TypeB



Code	Range	Graduation	Accuracy	Type	h	a	b	c	w	L
122-012-11	300mm	0.02mm	±0.03mm	A	60	10	40	17	10	410
122-012-21	300mm	0.02mm/0.001"	±0.05mm	B	90	12	40	20	10	410
122-020-21	500mm	0.02mm/0.001"	±0.05mm	B	100	18	56	24	20	670
122-020-22	500mm	0.02mm/0.001"	±0.06mm	B	150	18	56	24	20	670
122-032-21	800mm	0.02mm/0.001"	±0.07mm	B	150	24	67	31	20	1020
122-040-21	1000mm	0.02mm/0.001"	±0.08mm	B	150	24	67	31	20	1220
122-012-51	300mm	0.05mm/1/128"	±0.07mm	B	90	12	40	20	10	410
122-020-51	500mm	0.05mm/1/128"	±0.07mm	B	100	18	56	24	20	670
122-020-52	500mm	0.05mm/1/128"	±0.08mm	B	150	18	56	24	20	670
122-032-51	800mm	0.05mm/1/128"	±0.09mm	B	150	24	67	31	20	1020
122-040-51	1000mm	0.05mm/1/128"	±0.12mm	B	150	24	67	31	20	1220

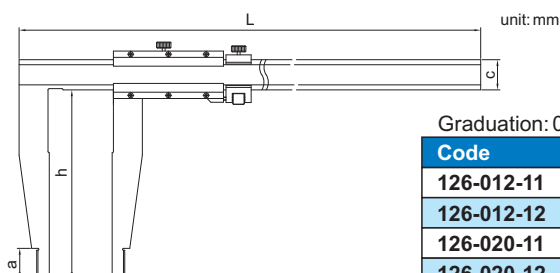
VERNIER CALIPER

SERIES 126

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



126-040-11

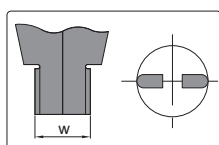


Graduation: 0.02mm/0.001"

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	1220
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
126-020-51	0-500mm/0-20"	±0.08mm	18	24	150	20	670
126-040-51	0-1000mm/0-24"	±0.12mm	24	50	200	20	1330



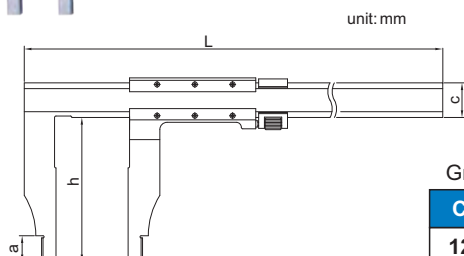
VERNIER CALIPER

SERIES 127

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



127-020-11

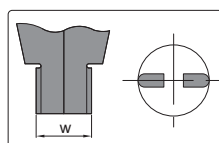


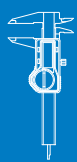
Graduation: 0.02mm/0.001"

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
127-040-11	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
127-024-51	0-600mm/0-24"	±0.08mm	18	24	100	20	770
127-040-51	0-1000mm/0-40"	±0.12mm	24	32	140	20	1216





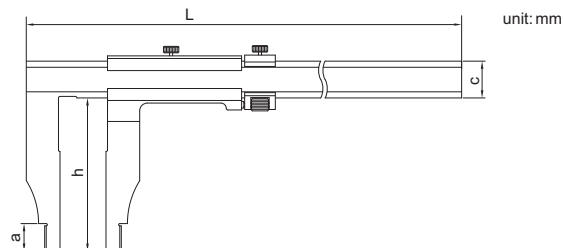
SERIES 128

VERNIER CALIPER

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



128-020-21

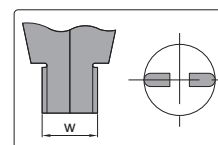


Graduation: 0.02mm/0.001"

Code	Range	Accuracy	a	c	h	w	L
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
128-060-21	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"

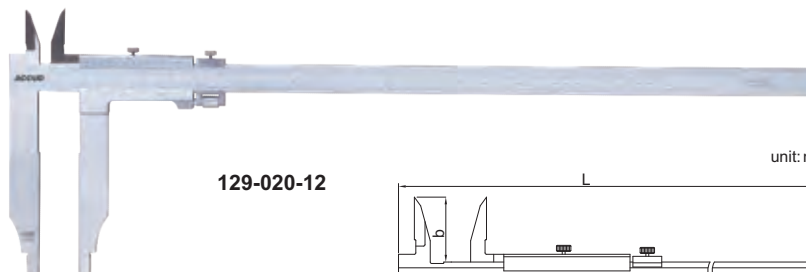
Code	Range	Accuracy	a	c	h	w	L
128-012-52	0-300mm/0-12"	±0.07mm	18	24	150	20	410
128-024-51	0-600mm/0-24"	±0.08mm	18	24	100	20	770
128-024-52	0-600mm/0-24"	±0.09mm	18	24	150	20	770
128-032-51	0-800mm/0-32"	±0.09mm	24	31	150	20	1030
128-060-51	0-1500mm/0-60"	±0.16mm	24	42	150	20	1820
128-080-51	0-2000mm/0-80"	±0.20mm	24	42	150	20	2230



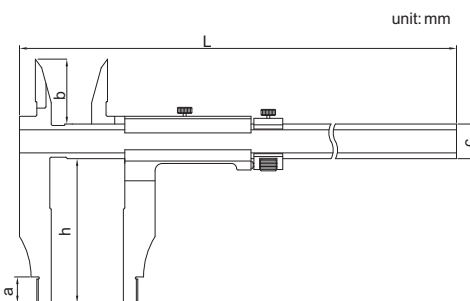
SERIES 129

VERNIER CALIPER

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



129-020-12

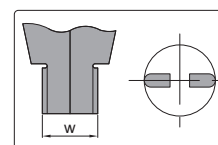


Graduation: 0.02mm/0.001"

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/0-20"	±0.06mm	18	45	24	100	20	770
129-040-11	0-1000mm/0-40"	±0.08mm	24	60	31	150	20	1230

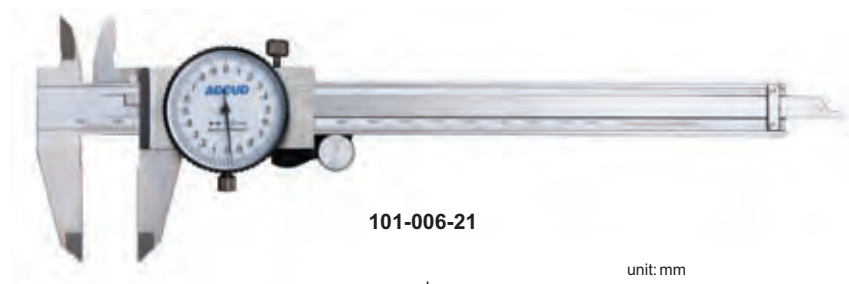
Graduation: 0.05mm/1/128"

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/0-20"	±0.08mm	18	45	24	100	20	770
129-040-51	0-1000mm/0-40"	±0.12mm	24	60	31	150	20	1230

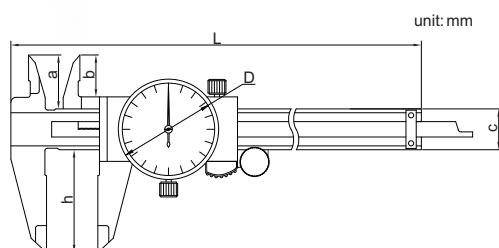


DIAL CALIPER

SERIES 101



101-006-21

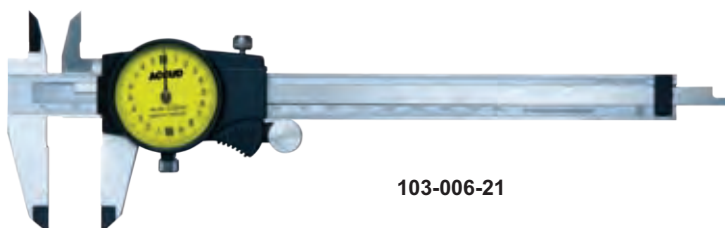


- ♦ Shockproof dial indicator
- ♦ Made of stainless steel

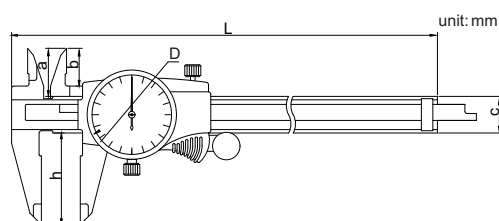
Code	Range	Graduation	Accuracy	a	b	c	h	D	L
101-006-11	0-150mm	0.01mm	±0.03mm	21	16.5	16	40	Ø39	233
101-008-11	0-200mm	0.01mm	±0.03mm	24	19	16	50	Ø39	288
101-012-11	0-300mm	0.01mm	±0.04mm	30	25	20	64	Ø44	390
101-006-21	0-150mm	0.02mm	±0.03mm	21	16.5	16	40	Ø39	233
101-008-21	0-200mm	0.02mm	±0.03mm	24	19	16	50	Ø39	288
101-012-21	0-300mm	0.02mm	±0.04mm	30	25	20	64	Ø44	390

DIAL CALIPER

SERIES 103



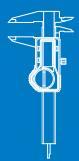
103-006-21



- ♦ Shockproof dial indicator
- ♦ Made of stainless steel

Code	Range	Graduation	Accuracy	a	b	c	h	D	L
103-006-11	0-150mm	0.01mm	±0.03mm	21	16.5	16	40	Ø39	233
103-008-11	0-200mm	0.01mm	±0.03mm	24	19	16	50	Ø39	288
103-006-21	0-150mm	0.02mm	±0.03mm	21	16.5	16	40	Ø39	233
103-008-21	0-200mm	0.02mm	±0.03mm	24	19	16	50	Ø39	288
103-012-21	0-300mm	0.02mm	±0.04mm	30	25	20	64	Ø44	390

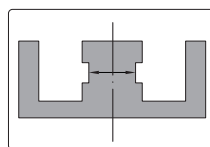
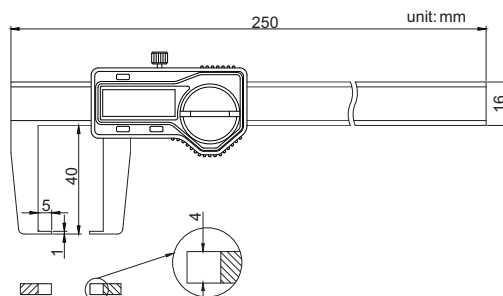




133

DIGITAL OUTSIDE NECK CALIPER

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



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

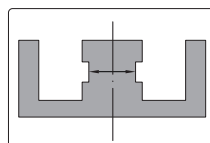
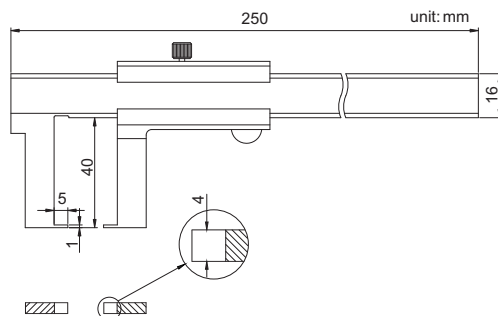
SERIES 143

OUTSIDE NECK VERNIER CALIPER

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



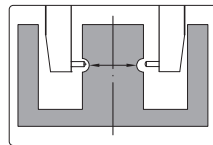
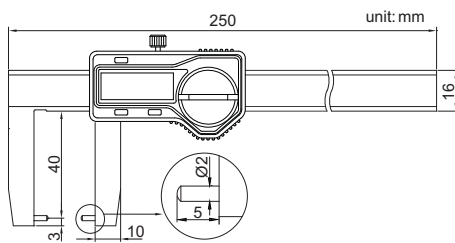
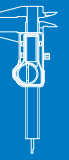
143-006-11



Code	Range	Graduation	Accuracy
143-006-11	0-150mm	0.02mm	±0.04mm
143-006-13	0-150mm	0.05mm	±0.05mm

DIGITAL OUTSIDE POINT CALIPER

134



- ◆ 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

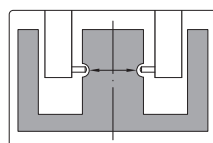
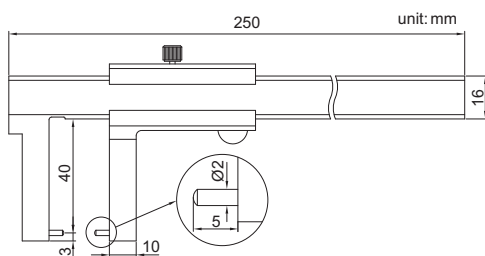
Code	Range	Accuracy
134-006-11	0-150mm/0-6"	±0.04mm

OUTSIDE POINT VERNIER CALIPER

SERIES 144

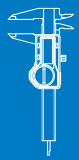


144-006-11



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

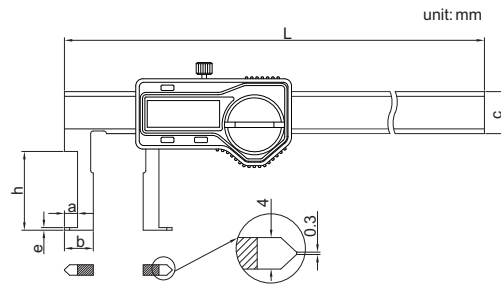
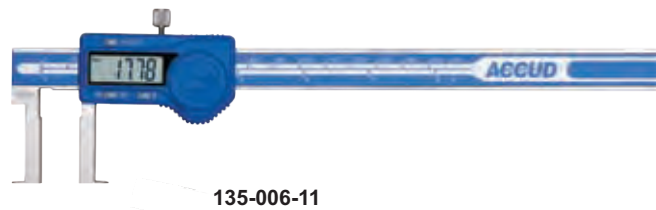
Code	Range	Graduation	Accuracy
144-006-11	0-150mm	0.02mm	±0.04mm
144-006-13	0-150mm	0.05mm	±0.05mm



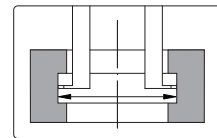
SERIES 135

DIGITAL INSIDE NECK CALIPER

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



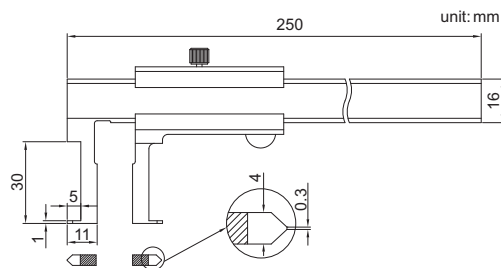
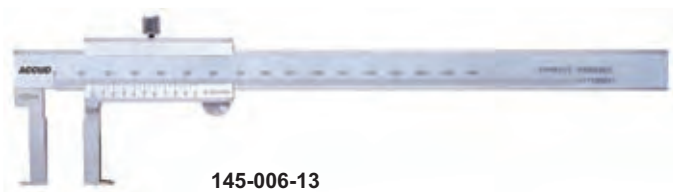
Code	Range	Accuracy	a	b	c	e	h	L
135-006-11	22-150mm	±0.04mm	5	11	16	1	30	250
135-008-11	25-200mm	±0.04mm	5	12.5	16	1	40	310
135-012-11	30-300mm	±0.05mm	5	15	17	1.5	50	410



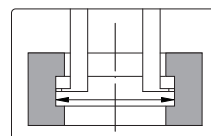
SERIES 145

INSIDE NECK VERNIER CALIPER

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



Code	Range	Graduation	Accuracy
145-006-11	22-150mm	0.02mm	±0.04mm
145-006-13	22-150mm	0.05mm	±0.05mm

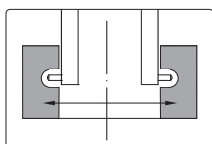
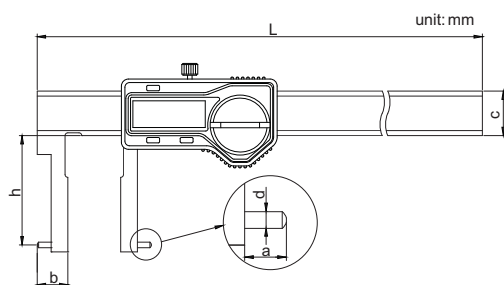


DIGITAL INSIDE POINT CALIPER

SERIES 136



136-006-11



- ◆ 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

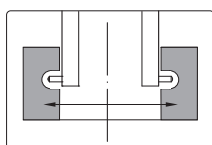
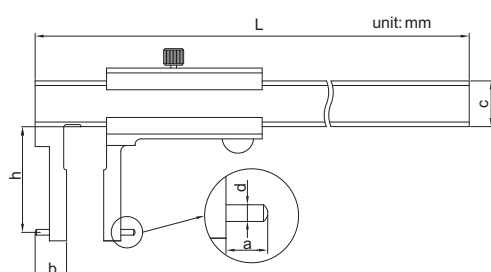
Code	Range	Accuracy	a	b	c	d	h	L
136-006-11	24-150mm	±0.04mm	5	12	16	Ø2	30	250
136-008-11	25-200mm	±0.04mm	5	12.5	16	Ø2	40	310
136-012-11	50-300mm	±0.06mm	8	25	17	Ø3	80	410

INSIDE POINT VERNIER CALIPER

SERIES 146

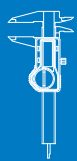


146-006-11



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

Code	Range	Graduation	Accuracy	a	b	c	d	h	L
146-006-11	24-150mm	0.02mm	±0.04mm	5	12	16	Ø2	30	250
146-012-11	50-300mm	0.02mm	±0.06mm	8	25	17	Ø3	80	410
146-006-13	24-150mm	0.05mm	±0.05mm	5	12	16	Ø2	30	250
146-012-13	50-300mm	0.05mm	±0.08mm	8	25	17	Ø3	80	410



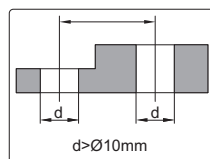
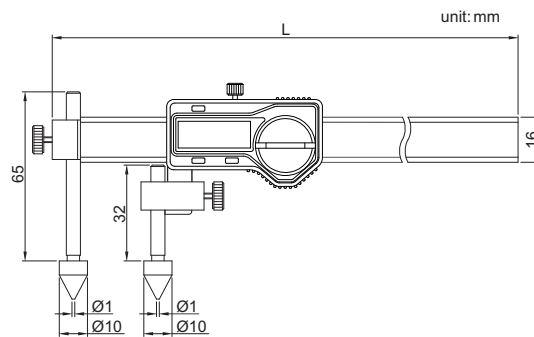
SERIES 151

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 (cable code: 100-11 or 100-12)
- ◆ Made of stainless steel



151-006-11



Code	Range	Accuracy	L
151-006-11	10-150mm	±0.05mm	236
151-008-11	10-200mm	±0.07mm	246
151-012-11	10-300mm	±0.09mm	396

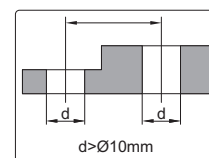
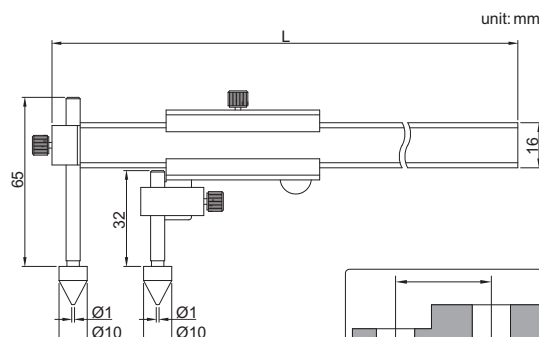
SERIES 161

OFFSET CENTERLINE VERNIER CALIPER

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



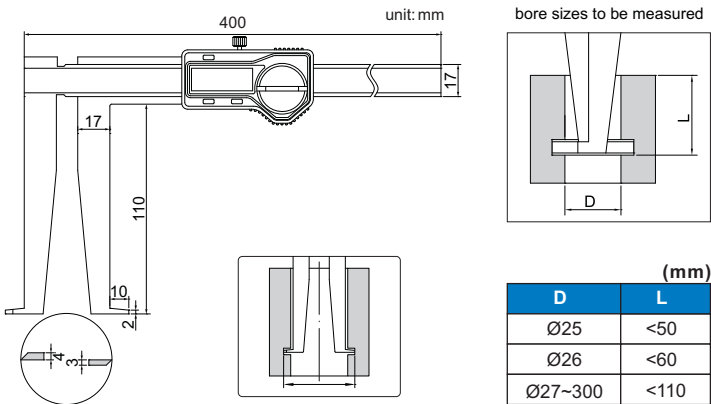
161-006-13



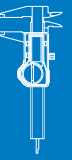
Code	Range	Graduation	Accuracy	L
161-006-11	10-150mm	0.02mm	±0.05mm	236
161-008-11	10-200mm	0.02mm	±0.07mm	246
161-012-11	10-300mm	0.02mm	±0.09mm	396
161-006-13	10-150mm	0.05mm	±0.05mm	236
161-008-13	10-200mm	0.05mm	±0.07mm	246
161-012-13	10-300mm	0.05mm	±0.09mm	396

DIGITAL INSIDE GROOVE CALIPER

132



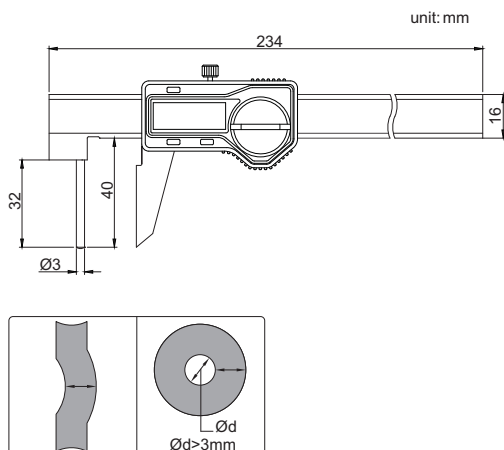
- ◆ Measure diameter of grooves inside bores
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Automatic power on/off
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Data output (cable code:100-11or 100-12)
- ◆ Made of stainless steel



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

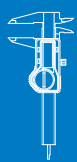
DIGITAL TUBE THICKNESS CALIPER

137



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

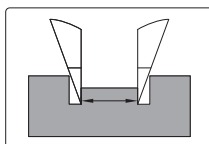
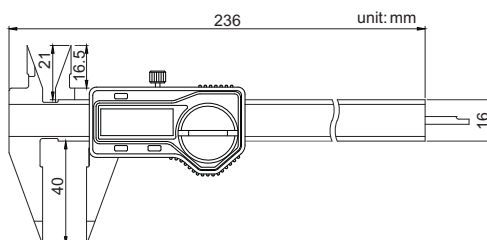
Code	Range	Accuracy
137-006-11	0-150mm/0-6"	±0.05mm



138

DIGITAL POINT CALIPER

- ◆ 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

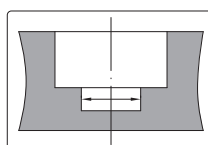
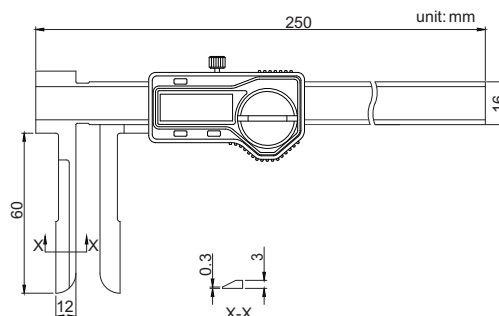


Code	Range	Accuracy
138-006-11	0-150mm/0-6"	±0.03mm

139

DIGITAL INSIDE KNIFE-EDGE CALIPER

- ◆ 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



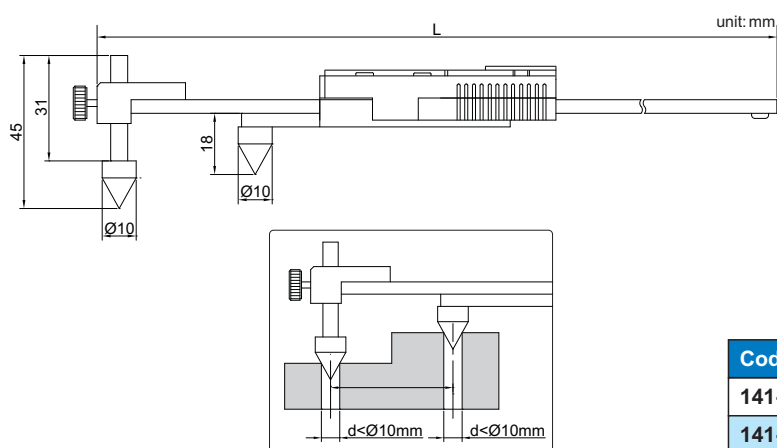
Code	Range	Accuracy
139-006-11	15-150mm	±0.05mm

DIGITAL BACK-JAW CENTERLINE CALIPER

SERIES 141



141-008-11

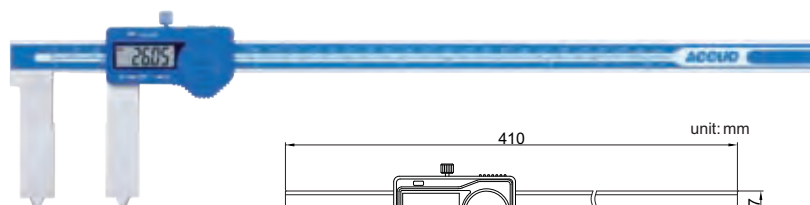


- ◆ Measure hole center distance in the same or offset planes
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Data output (cable code: 100-11 or 100-12)
- ◆ Automatic power on/off
- ◆ Made of stainless steel

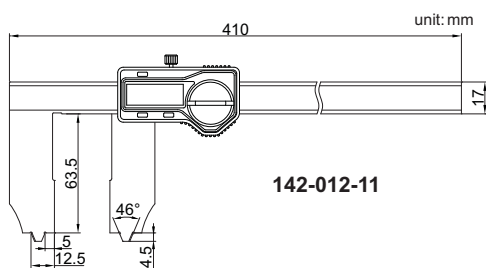
Code	Range	Accuracy	L
141-008-11	10-200mm/0.4-8"	±0.1mm	310
141-012-11	10-300mm/0.4-12"	±0.1mm	410

DIGITAL RTJ RING GROOVE CALIPER

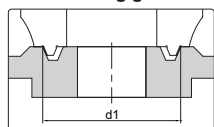
SERIES 142



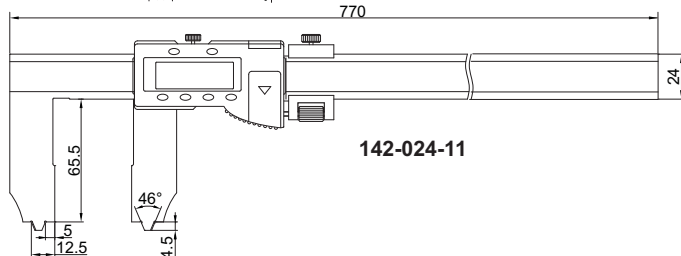
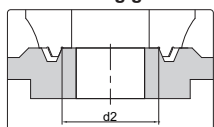
142-012-11



measure outside diameter of RTJ ring groove



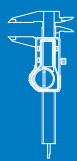
measure inside diameter of RTJ ring groove



142-024-11

- ◆ 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
cable code: 100-15 for 142-024-11
- ◆ Made of stainless steel

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



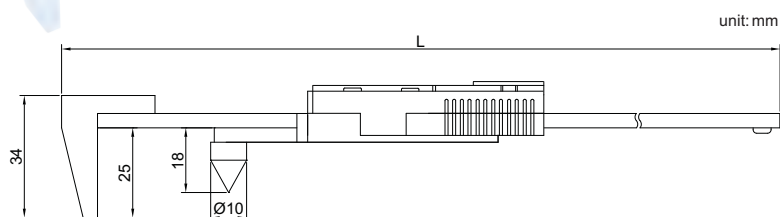
SERIES 147

BACK-JAW DIGITAL EDGE TO CENTER CALIPER

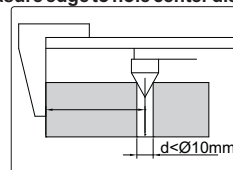
- ◆ Measure edge to hole center distance
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Data output (cable code:100-11 or 100-12)
- ◆ Automatic power on/off
- ◆ Made of stainless steel



147-008-11



measure edge to hole center distance

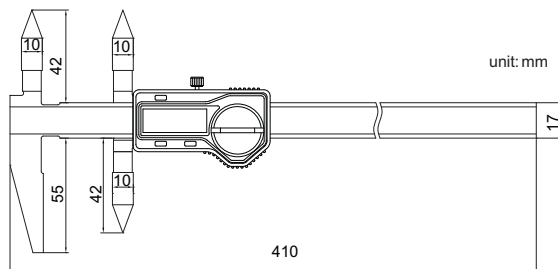


Code	Range	Accuracy	L
147-008-11	5-200mm/0.2-8"	±0.1mm	310mm
147-012-11	5-300mm/0.2-12"	±0.1mm	410mm

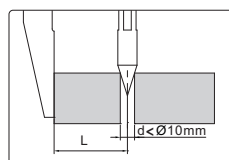
SERIES 148

DIGITAL CENTERLINE/EDGE TO CENTER CALIPER

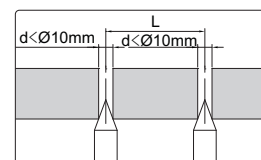
- ◆ Measure hole center distance or edge to hole center distance
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Data output (cable code:100-11 or 100-12)
- ◆ Automatic power on/off
- ◆ Made of stainless steel



measure edge to hole center distance



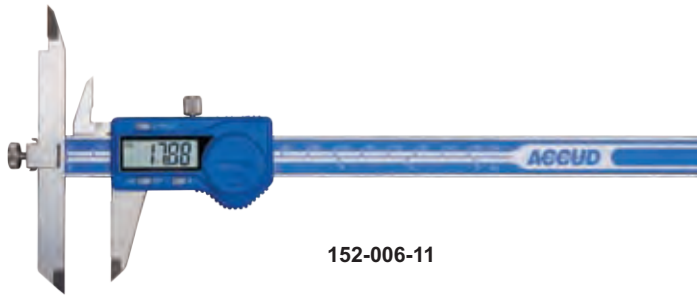
measure hole center distance



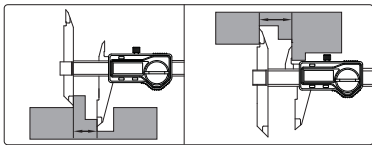
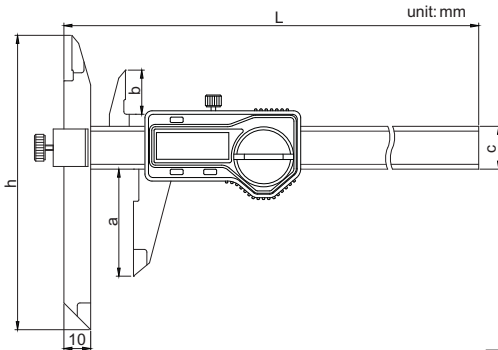
Code	Range of upper jaw (edge to center)	Range of lower jaw (center to center)	Accuracy
148-012-11	5-300mm/0.2-12"	10-300mm/0.4-12"	±0.08mm

DIGITAL OFFSET CALIPER

SERIES 152



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

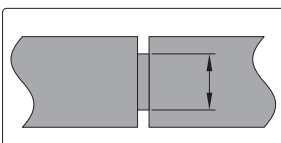
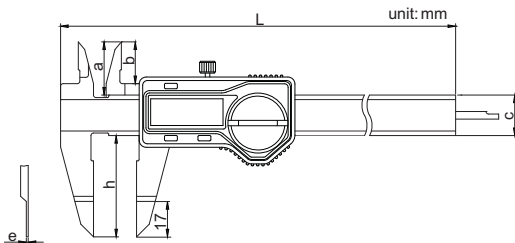
Code	Range	Accuracy	a	b	c	h	L
152-006-11	0-150mm/0-6"	±0.04mm	40	16.5	16	110	239
152-008-11	0-200mm/0-8"	±0.04mm	50	19.5	16	120	289
152-012-11	0-300mm/0-12"	±0.05mm	60	20.5	17	130	389

DIGITAL BLADE CALIPER

SERIES 153

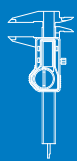


153-006-11



- ◆ 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



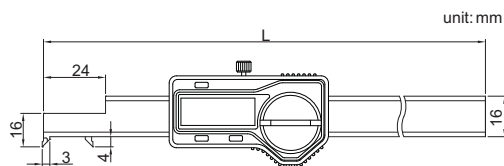
SERIES 154

DIGITAL HOOK CALIPER

- ◆ 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:100-11or 100-12)
- ◆ Made of stainless steel



154-005-11



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

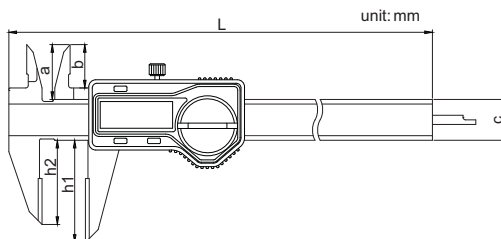
SERIES 155

DIGITAL SCRIBING CALIPER

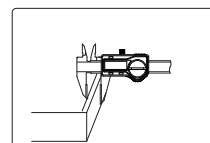
- ◆ Carbide -tipped jaws facilitate fine scribing on workpiece
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Automatic power on/off
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Data output (cable code:100-11or 100-12)
- ◆ Made of stainless steel



155-006-11

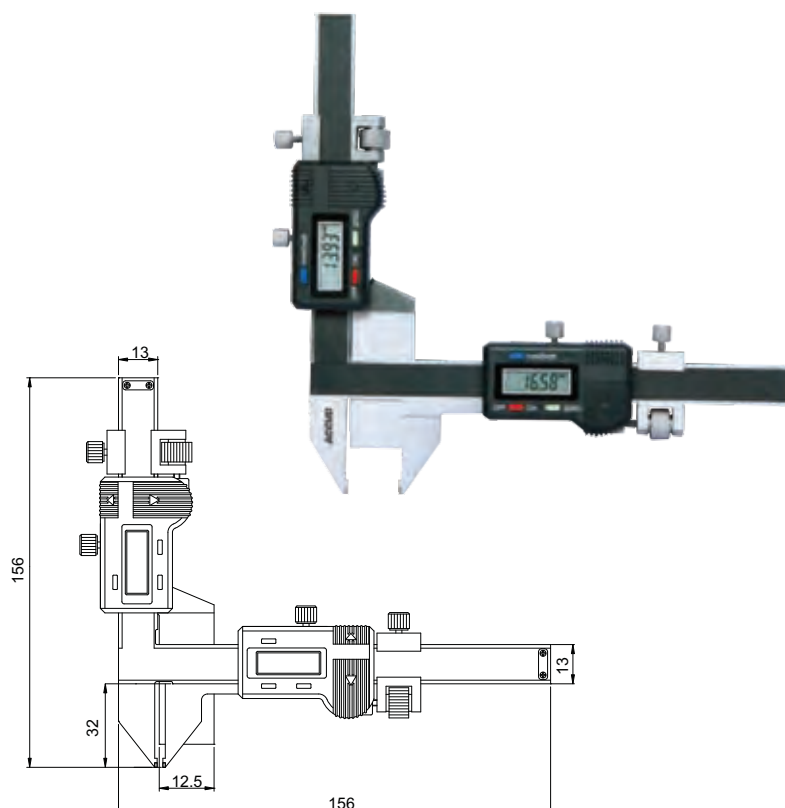


Code	Range	Accuracy	a	b	c	h1	h2	L
155-006-11	0-150mm/0-6"	±0.03mm	21	16.5	16	40	33	236
155-008-11	0-200mm/0-8"	±0.03mm	24	19.5	16	50	43	286
155-012-11	0-300mm/0-12"	±0.04mm	25	20.5	17	60	53	386



DIGITAL GEAR TOOTH CALIPER

156

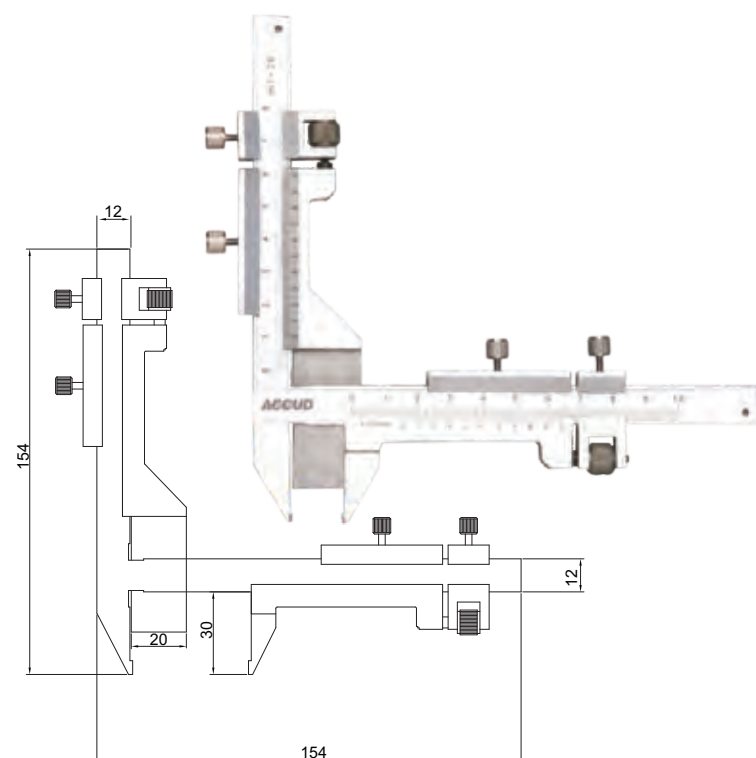


- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Made of stainless steel

Code	Range	Accuracy
156-001-11	M1-25mm	±0.04mm

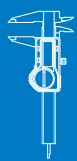
VERNIER GEAR TOOTH CALIPER

166



- ◆ Graduation: 0.02mm

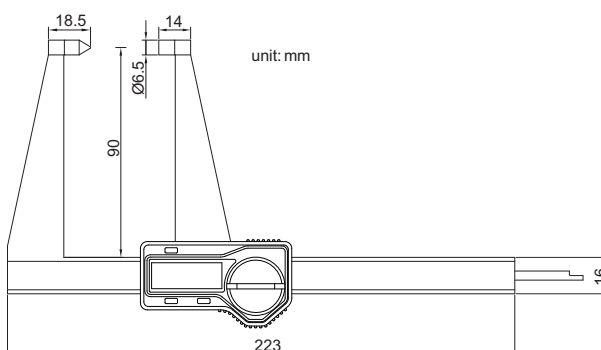
Code	Range	Accuracy
166-001-11	M1-26mm	±0.04mm



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:100-11or 100-12)
- ◆ Made of stainless steel

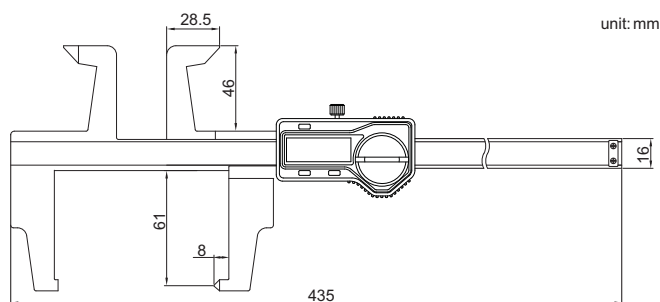


Code	Range	Accuracy
157-005-11	0-125mm/0-5"	±0.05mm

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:100-11or 100-12)
- ◆ Made of stainless steel



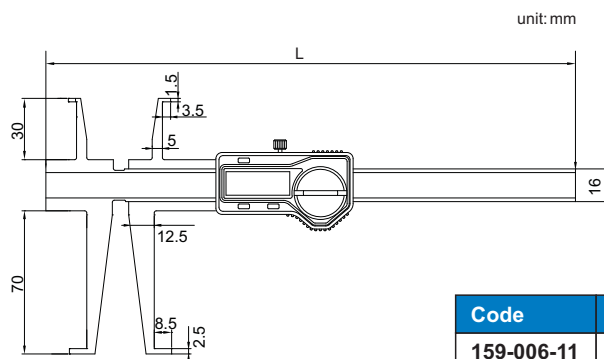
Code	Range	Accuracy
158-012-11	0-300mm/0-12"	±0.07mm

DIGITAL INSIDE GROOVE CALIPER

SERIES 159



159-006-11

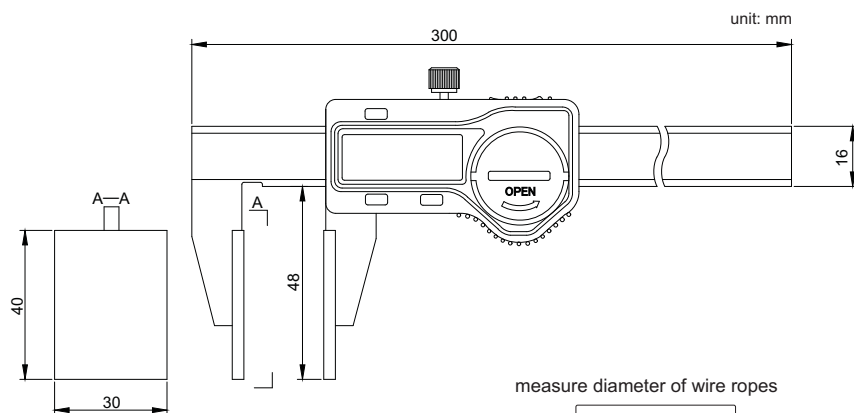


Code	Accuracy	Range of upper Jaw	Range of lower Jaw	L
159-006-11	±0.04mm	9-150mm	15-150mm	260
159-008-11	±0.06mm	9-200mm	15-200mm	310

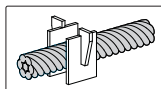
- ◆ Measure diameter of grooves inside bores
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Automatic power on/off
- ◆ Data output (cable code: 100-11 or 100-12)
- ◆ Made of stainless steel

DIGITAL CALIPER WITH LARGE MEASURING FACES

167

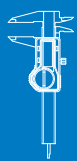


measure diameter of wire ropes



- ◆ 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

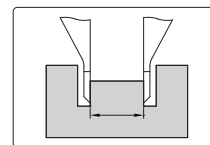
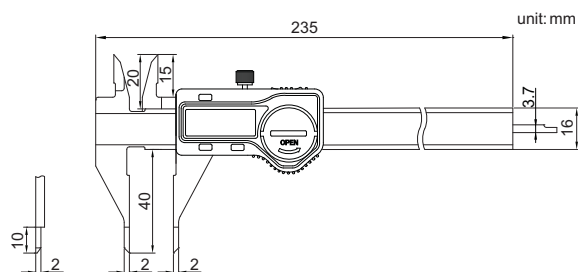
Code	Range	Accuracy
167-008-11	0-200mm/0-8"	±0.07mm



168

DIGITAL SMALL POINT CALIPER

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



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

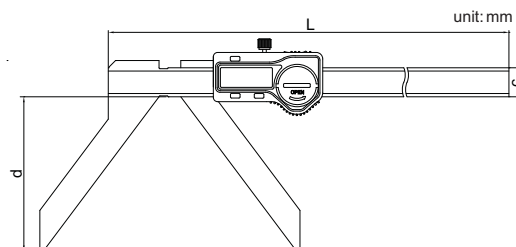
SERIES 169

DIGITAL ARC RADIUS CALIPER

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



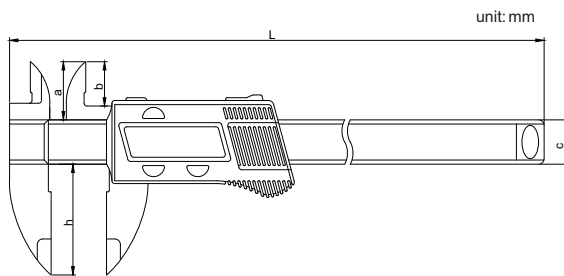
169-006-11



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

PLASTIC DIGITAL CALIPER

117



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

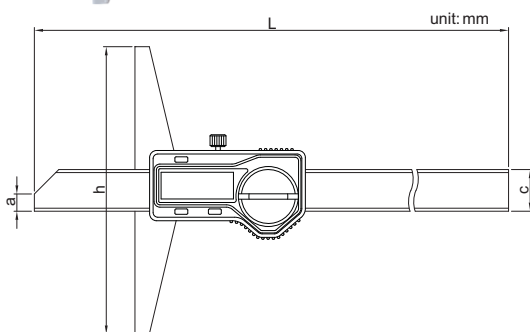
Code	Range	Accuracy	a	b	c	h	L
117-006-11	0-150mm/0-6"	±0.1mm	21	16	16	40	243

DIGITAL DEPTH CALIPER

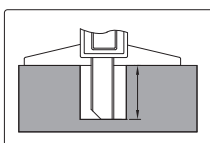
SERIES 171



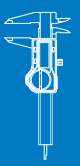
171-006-11

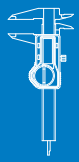


- ◆ Resolution: 0.01mm/0.0005"
- ◆ Automatic power on/off
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Data output (cable code: 100-11 or 100-12)
- ◆ Made of stainless steel



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

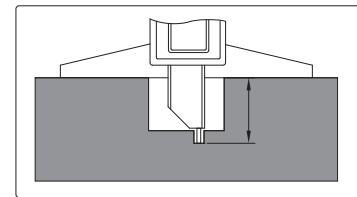
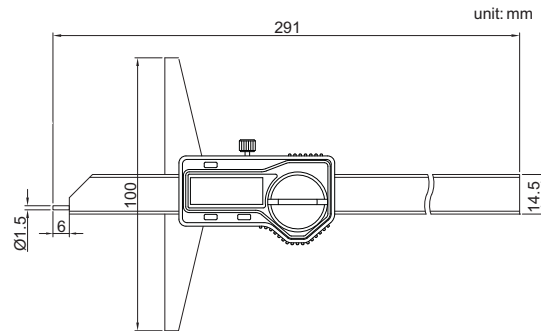
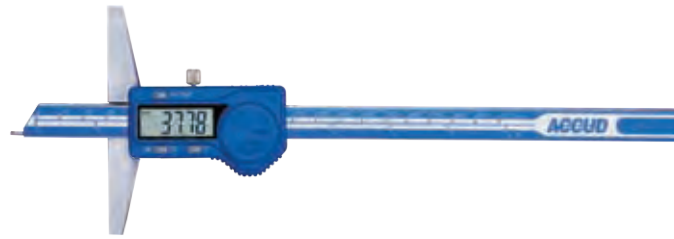




172

DIGITAL PIN DEPTH CALIPER

- ◆ 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:100-11or 100-12)
- ◆ Made of stainless steel



Code	Range	Accuracy
172-008-11	0-200mm/0-8"	±0.03mm

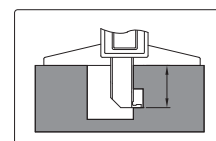
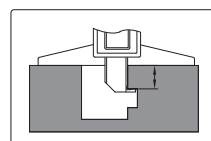
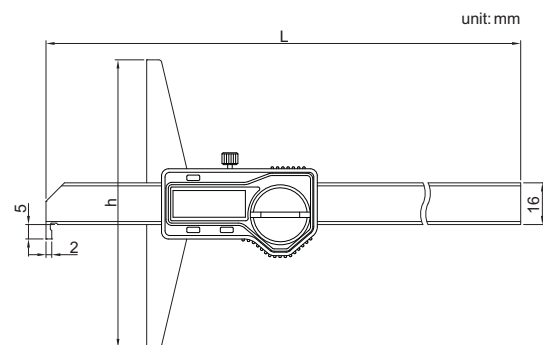
SERIES 173

DIGITAL 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:100-11or 100-12)
- ◆ Made of stainless steel



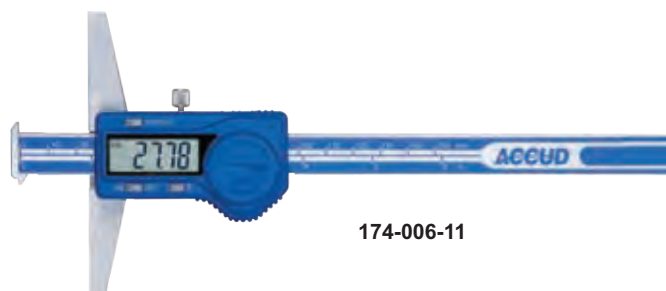
173-006-11



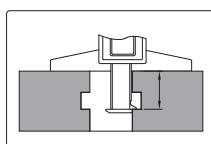
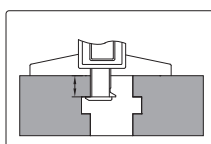
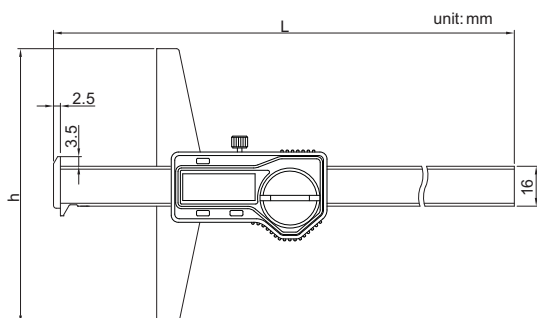
Code	Range	Accuracy	h	L
173-006-11	0-150mm/0-6"	±0.04mm	100	230
173-008-11	0-200mm/0-8"	±0.04mm	100	280
173-012-11	0-300mm/0-12"	±0.05mm	150	380

DIGITAL DOUBLE HOOK DEPTH CALIPER

SERIES 174



174-006-11



- ◆ 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

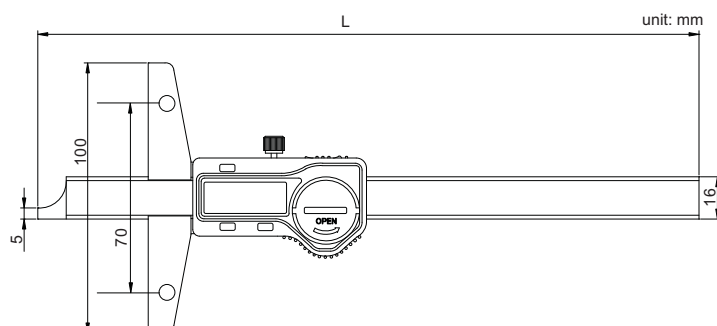
Code	Range	Accuracy	h	L
174-006-11	0-150mm/0-6"	±0.03mm	100	233
174-008-11	0-200mm/0-8"	±0.03mm	100	283
174-012-11	0-300mm/0-12"	±0.04mm	150	383

DIGITAL DEPTH CALIPER WITH HOLES

SERIES 191

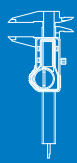


191-006-11



- ◆ 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

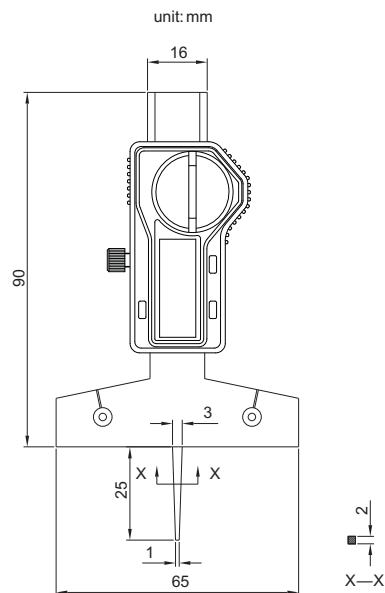
Code	Range	Accuracy	L
191-006-11	0-150mm/0-6"	±0.03mm	237
191-008-11	0-200mm/0-8"	±0.03mm	287
191-012-11	0-300mm/0-12"	±0.04mm	403



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

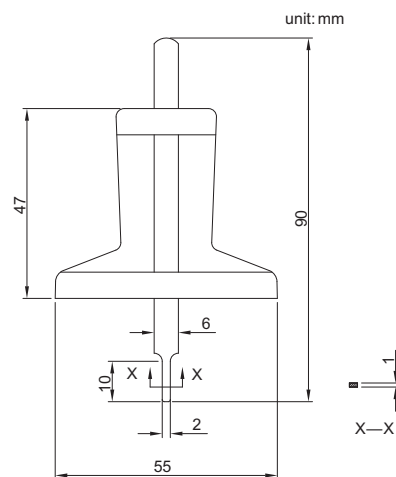


Code	Range	Accuracy
176-001-11	0-25mm/0-1"	±0.03mm

176

VERNIER DEPTH CALIPER

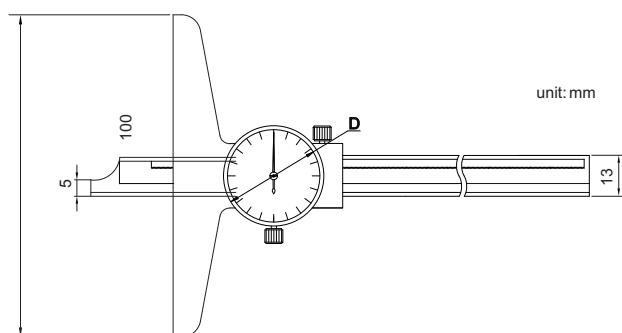
- ◆ Measure the depth of grooves, small holes and tire thread
- ◆ Graduation: 0.1mm
- ◆ Made of stainless steel



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

DIAL DEPTH CALIPER

SERIES 179

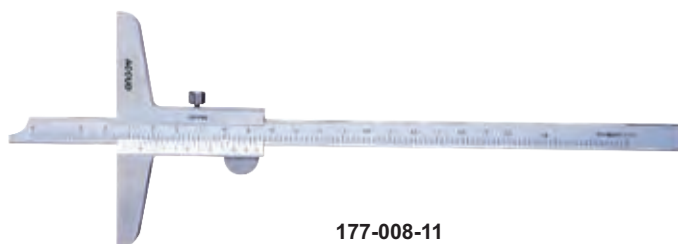


- ◆ Shockproof dial indicator
- ◆ Graduation: 0.02mm
- ◆ Made of stainless steel

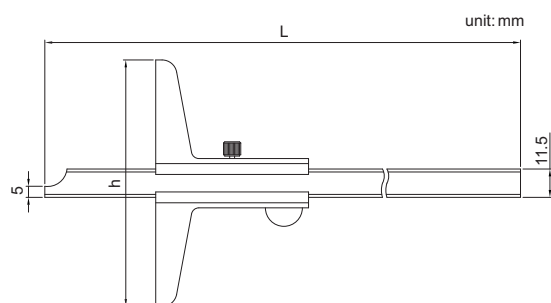
Code	Range	Accuracy	D
179-006-21	0-150mm	±0.03mm	Ø39
179-008-21	0-200mm	±0.03mm	Ø39
179-012-21	0-300mm	±0.04mm	Ø44

VERNIER DEPTH CALIPER

SERIES 177



177-008-11



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

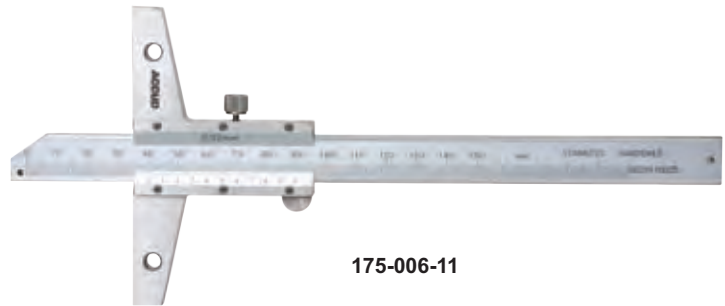
Code	Range	Accuracy	h	L
177-006-11	0-150mm	±0.03mm	100	245
177-008-11	0-200mm	±0.03mm	100	282
177-012-11	0-300mm	±0.04mm	100	382
177-020-11	0-500mm	±0.05mm	150	585



SERIES 175

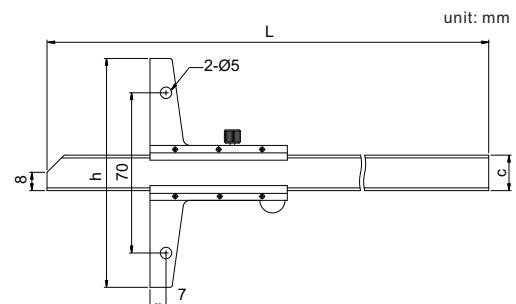
VERNIER DEPTH CALIPER

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



175-006-11

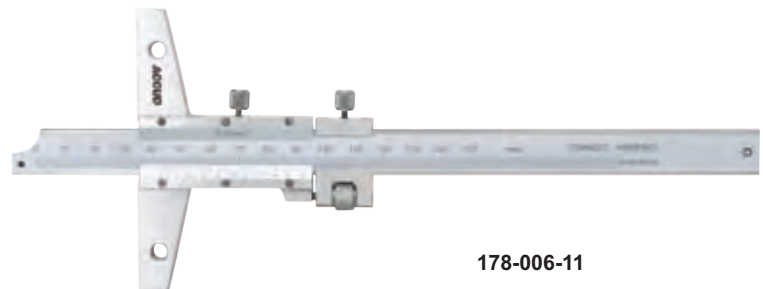
Code	Range	Graduation	Accuracy	c	h	L
175-006-11	0-150mm	0.02mm	±0.03mm	16	100	240
175-008-11	0-200mm	0.02mm	±0.03mm	16	100	290
175-012-11	0-300mm	0.02mm	±0.04mm	16	100	390
175-024-11	0-600mm	0.02mm	±0.05mm	16	150	704
175-040-11	0-1000mm	0.02mm	±0.07mm	18	200	1124
175-006-13	0-150mm	0.05mm	±0.05mm	16	100	240
175-008-13	0-200mm	0.05mm	±0.05mm	16	100	290
175-012-13	0-300mm	0.05mm	±0.08mm	16	100	390
175-024-13	0-600mm	0.05mm	±0.10mm	16	150	704
175-040-13	0-1000mm	0.05mm	±0.15mm	18	200	1124



SERIES 178

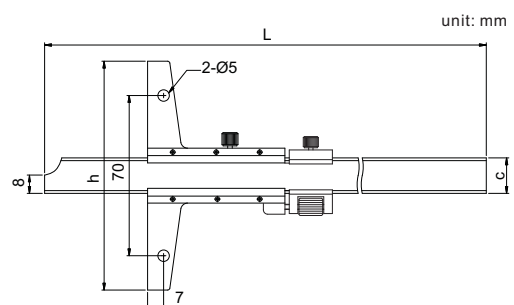
VERNIER DEPTH CALIPER

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



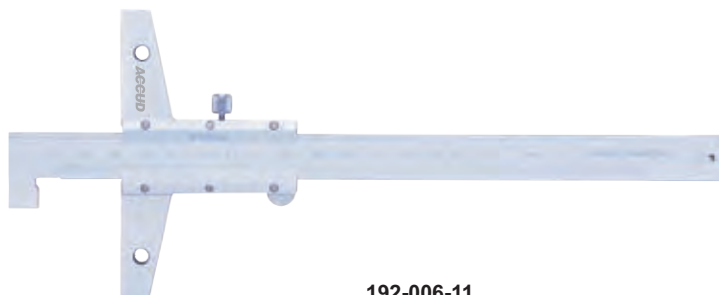
178-006-11

Code	Range	Graduation	Accuracy	c	h	L
178-006-11	0-150mm	0.02mm	±0.03mm	16	100	256
178-008-11	0-200mm	0.02mm	±0.03mm	16	100	306
178-012-11	0-300mm	0.02mm	±0.04mm	16	100	406
178-024-11	0-600mm	0.02mm	±0.05mm	16	150	720
178-040-11	0-1000mm	0.02mm	±0.07mm	18	200	1140
178-006-13	0-150mm	0.05mm	±0.05mm	16	100	256
178-008-13	0-200mm	0.05mm	±0.05mm	16	100	306
178-012-13	0-300mm	0.05mm	±0.08mm	16	100	406
178-024-13	0-600mm	0.05mm	±0.10mm	16	150	720
178-040-13	0-1000mm	0.05mm	±0.15mm	18	200	1140

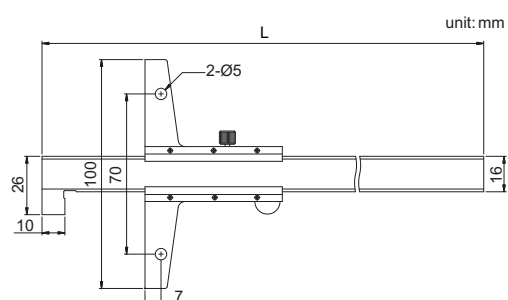


VERNIER HOOK DEPTH GAGE

SERIES 192



192-006-11

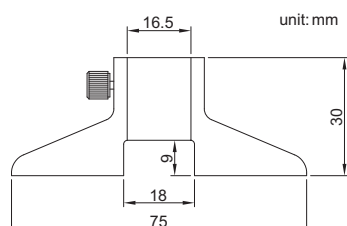
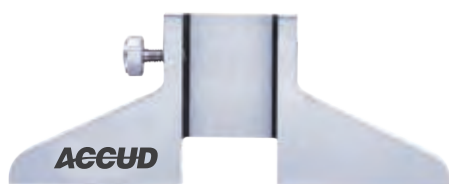


- ◆ Graduation: 0.02mm
- ◆ Made of stainless steel
- ◆ Satin chrome plating finish on reading surface

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

ACCESSORY FOR CALIPER

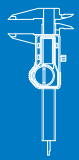
179



- ◆ 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

Code

179-000-00



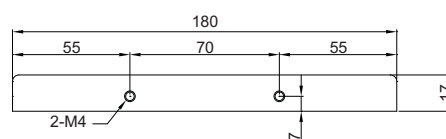
SERIES 170

EXTENSION BASE FOR DEPTH CALIPER

- ◆ Add extension base to measure large hole or gap
- ◆ For depth caliper 175, 178, 191 and 192 series

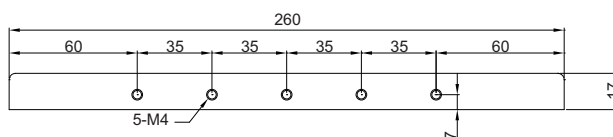


170-260-01

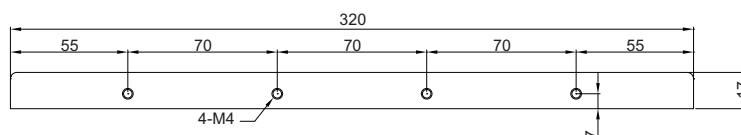


unit: mm

170-180-01



170-260-01

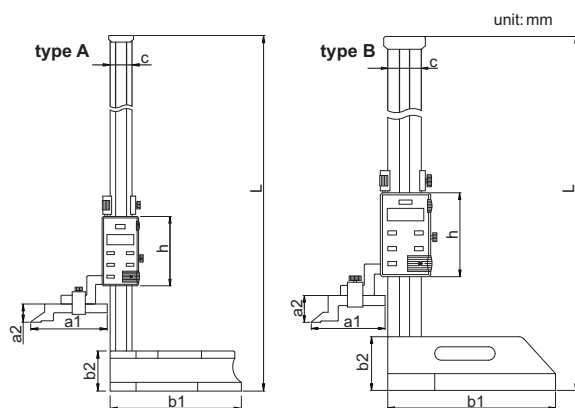


170-320-01

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

DIGITAL HEIGHT GAGE

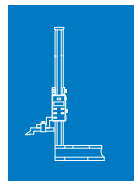
SERIES 181



181-024-11



- ◆ 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 (Ø8mm holder)



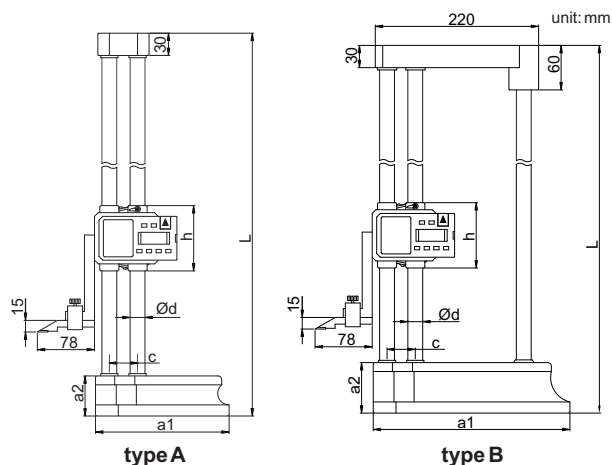
clamp



Code	Range	Type	Accuracy	a1	a2	b1	b2	c	h	L
181-012-11	0-300mm/0-12"	A	±0.04mm	76	25	135	45	23	80	470
181-024-11	0-600mm/0-24"	A	±0.05mm	103	25	180	55	30	95	820
181-040-11	0-1000mm/0-40"	B	±0.07mm	110	39	250	80	50	125	1275

DIGITAL HEIGHT GAGE

SERIES 182

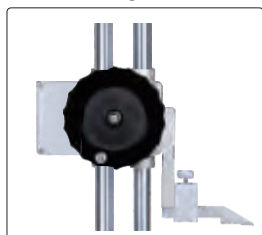


182-012-11



- ◆ 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

driving wheel



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

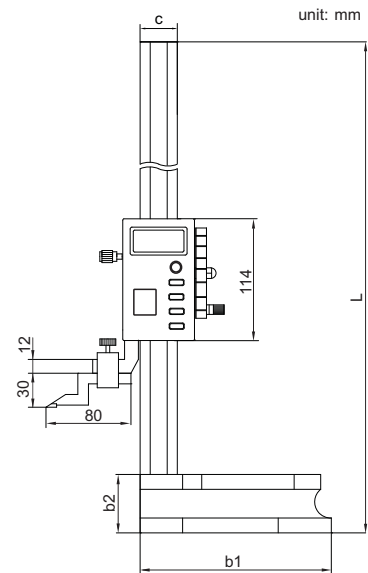
SERIES 184

DIGITAL HEIGHT GAGE WITH DRIVING WHEEL

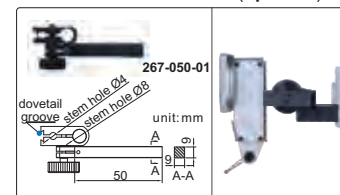
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/inch, ABS/INC, hold
- ◆ Automatic power off, move the digital unit to turn on power
- ◆ Carbide tipped scriber
- ◆ Made of stainless steel
- ◆ Data output (cable code: 500-03)
- ◆ Optional accessories:
dial test indicator holder (**267-050-01**)



184-012-11



Dial test indicator holder (optional)



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

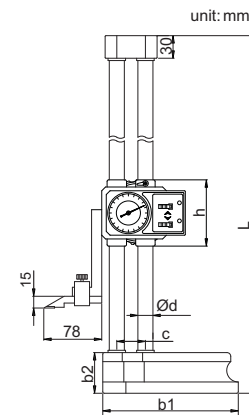
SERIES 185

DIAL HEIGHT GAGE

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



185-012-11



driving wheel



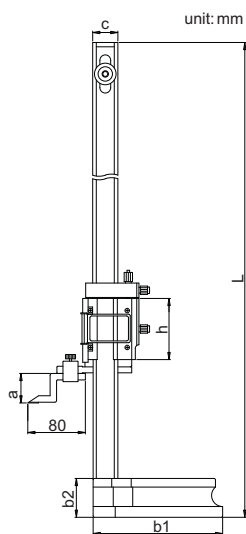
Code	Range	Accuracy	b1	b2	c	Ød	h	L
185-012-11	0-300mm	±0.04mm	135	43	33	15	84	475
185-024-11	0-600mm	±0.05mm	180	54	38	20	88	810

VERNIER HEIGHT GAGE

SERIES 186



186-012-11



- ◆ 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

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

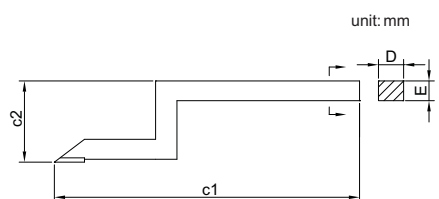
SCRIBER FOR HEIGHT GAUGES

SERIES 180

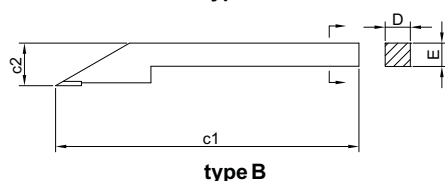


180-000-SC1

- ◆ Carbide tipped



type A



type B

Code	For height gauges	Type	c1	c2	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, 186-012-11, 186-024-11	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

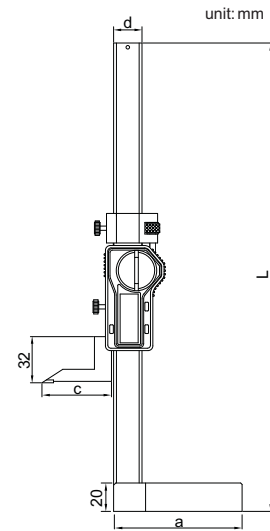
SERIES 183

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



183-006-11



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

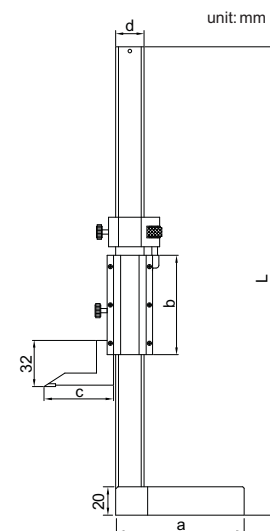
SERIES 187

MINI VERNIER HEIGHT GAGE

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



187-006-11



Code	Range	Accuracy	a	b	c	d	L
187-006-11	0-150mm/0-6"	±0.03mm	75	57	43	16	265
187-008-11	0-200mm/0-8"	±0.03mm	90	70	49	20	325
187-010-11	0-250mm/0-10"	±0.03mm	90	70	49	20	380

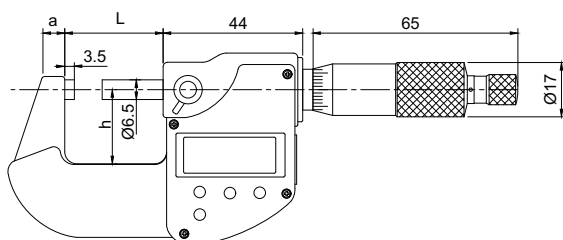
DIGITAL OUTSIDE MICROMETER

SERIES 311



311-001-03

unit: mm



- ◆ Resolution: 0.001mm/0.00005"
- ◆ Button: on/off/zero, mm/inch, ABS/INC, hold
- ◆ Carbide measuring faces
- ◆ Ratchet stop
- ◆ Setting standards are included (except 311-001-03)

Code	Range	Accuracy	a	h	L
311-001-03	0-25mm/0-1"	±2μm	8	24	31.5
311-002-03	25-50mm/1-2"	±2μm	12	31	57.5
311-003-03	50-75mm/2-3"	±3μm	12	43	82.5
311-004-03	75-100mm/3-4"	±3μm	12	56	107.5

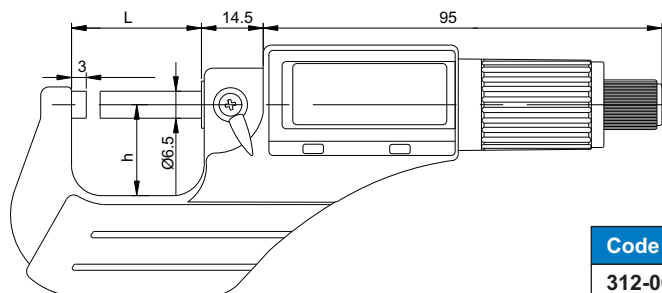
DIGITAL OUTSIDE MICROMETER

SERIES 312



312-001-02

unit: mm



- ◆ Resolution: 0.001mm/0.00005"
- ◆ Button: on/off/set, mm/inch/ABS
- ◆ Carbide measuring faces
- ◆ Ratchet stop
- ◆ Setting standards are included (except 312-001-02)

Code	Range	Accuracy	h	L
312-001-02	0-25mm/0-1"	3μm	20	32
312-002-02	25-50mm/1-2"	3μm	30	57
312-003-02	50-75mm/2-3"	4μm	43	82
312-004-02	75-100mm/3-4"	4μm	54	107

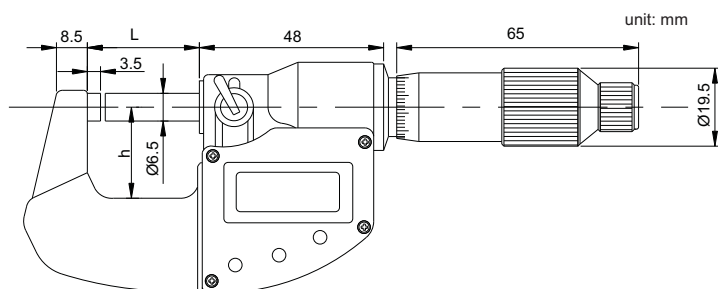
SERIES 313

IP65 DIGITAL OUTSIDE MICROMETER

- ◆ Resolution: 0.001mm/0.00005"
- ◆ IP65 protection level
- ◆ Button: on/off, mm/inch, zero
- ◆ Automatic power off
- ◆ Data output (cable code: 300-01)
- ◆ Carbide measuring faces
- ◆ Ratchet stop
- ◆ Setting standards are included (except 313-001-02)



313-001-02



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

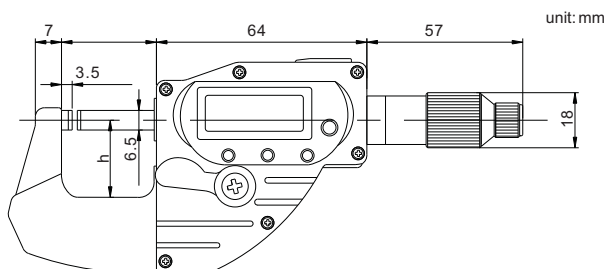
SERIES 314

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
314-001-02	0-25mm/0-1"	3μm	25	31
314-002-02	25-50mm/1-2"	3μm	32	57
314-003-02	50-75mm/2-3"	4μm	44.5	82
314-004-02	75-100mm/3-4"	4μm	57	107

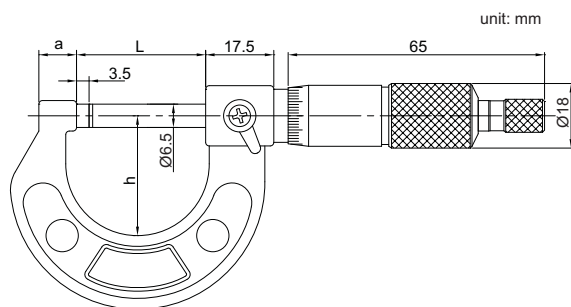
OUTSIDE MICROMETER

SERIES 321



321-001-01

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



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

OUTSIDE MICROMETER SET

SERIES 321



321-006-06

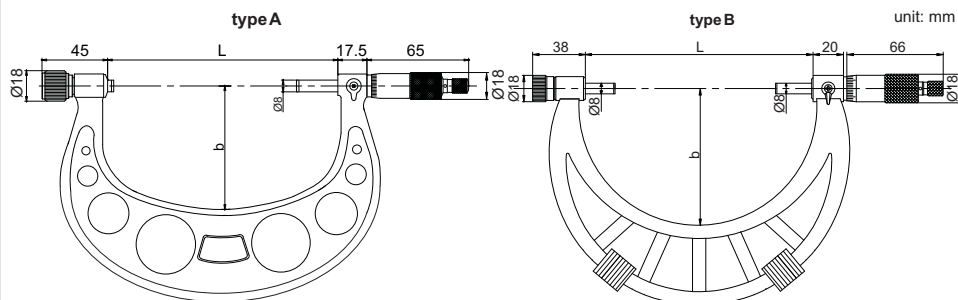
- ◆ Consist of series 321 individual micrometer

Code	Range	Total quantity	Included micrometers
321-003-03	0-75mm	3pcs	0-25, 25-50, 50-75mm
321-004-04	0-100mm	4pcs	0-25, 25-50, 50-75, 75-100mm
321-006-06	0-150mm	6pcs	0-25, 25-50, 50-75, 75-100, 100-125, 125-150mm
321-012-06	150-300mm	6pcs	150-175, 175-200, 200-225, 225-250, 250-275, 275-300mm
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

SERIES 325

OUTSIDE MICROMETER WITH INTERCHANGEABLE ANVILS

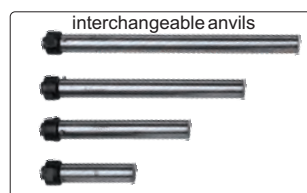
- ◆ Graduation: 0.01mm
- ◆ Ratchet stop
- ◆ Carbide measuring faces
- ◆ Supplied with setting standards



Code	Range	Type	Accuracy	L	b
325-002-01	0-50mm	A	4μm	58	35
325-004-01	0-100mm	A	5μm	108	57
325-006-01	0-150mm	A	6μm	158	82
325-008-01	100-200mm	A	7μm	208	114
325-012-01	150-300mm	A	9μm	308	165
325-016-02	300-400mm	B	11μm	409	224
325-020-02	400-500mm	B	13μm	509	275
325-024-02	500-600mm	B	14μm	609	321
325-028-02	600-700mm	B	16μm	709	371
325-032-02	700-800mm	B	18μm	809	426
325-036-02	800-900mm	B	20μm	909	476
325-040-02	900-1000mm	B	22μm	1009	576



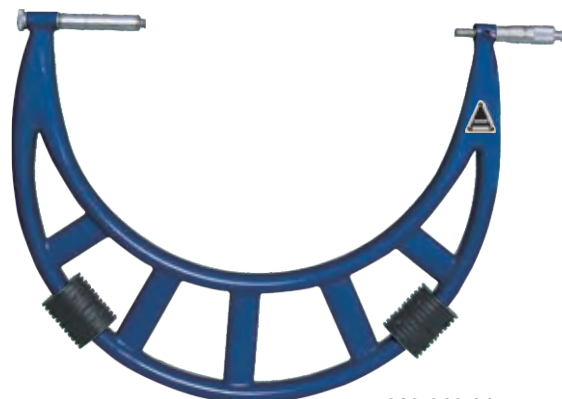
325-006-01



SERIES 329

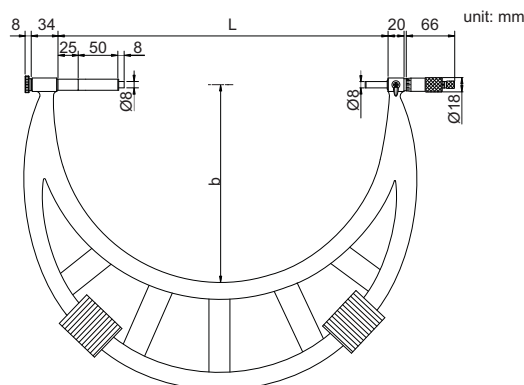
OUTSIDE MICROMETER WITH EXTENSION ANVIL

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



329-016-01

Code	Range	Accuracy	L	b
329-016-01	300-400mm	11μm	410	250
329-020-01	400-500mm	13μm	510	295
329-024-01	500-600mm	14μm	610	345
329-028-01	600-700mm	16μm	710	395
329-032-01	700-800mm	18μm	810	445
329-036-01	800-900mm	20μm	910	495
329-040-01	900-1000mm	22μm	1010	545

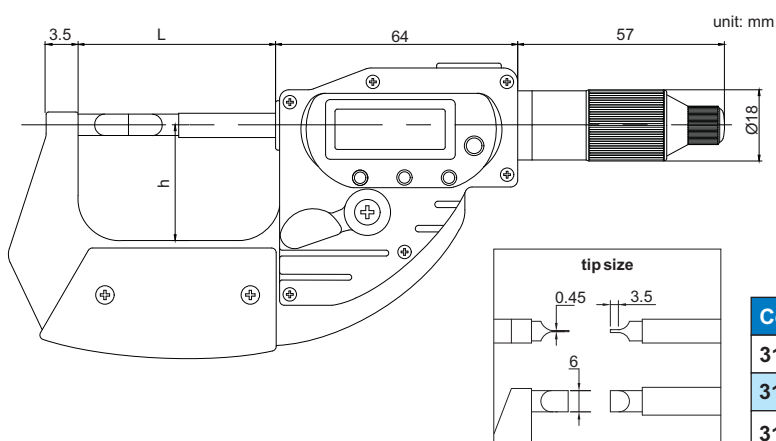


DIGITAL BLADE MICROMETER

SERIES 316



316-001-03



- ◆ Measure the groove diameter of shafts and keyways
- ◆ 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 316-001-03)

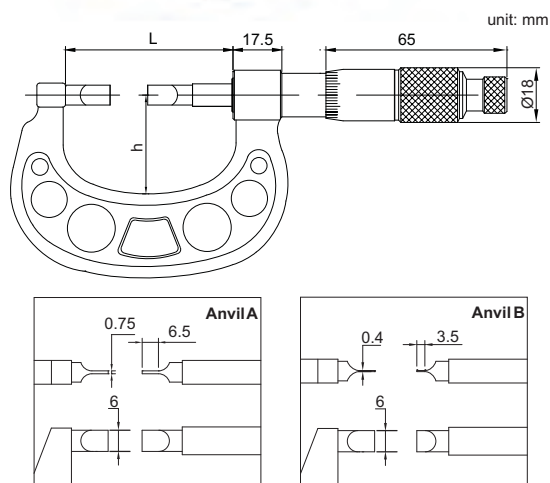
Code	Range	Accuracy	h	L
316-001-03	0-25mm/0-1"	3μm	31	55
316-002-03	25-50mm/1-2"	3μm	44	80
316-003-03	50-75mm/2-3"	4μm	58	115

BLADE MICROMETER

SERIES 326



326-001-03



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

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

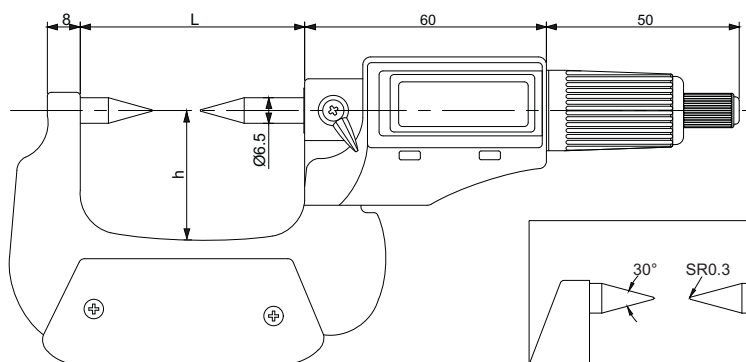
SERIES 317

DIGITAL POINT MICROMETER

- ◆ Measure the web thickness of drills, small grooves and keyways
- ◆ Resolution: 0.001mm/0.00005"
- ◆ Button: on/off/set, mm/inch/ABS
- ◆ Automatic power off
- ◆ Setting standards are included (except 317-001-03)



317-001-03



Code	Range	Accuracy	h	L
317-001-03	0-25mm/0-1"	3μm	31	55
317-002-03	25-50mm/1-2"	3μm	44	80
317-003-03	50-75mm/2-3"	4μm	58	115
317-004-03	75-100mm/3-4"	4μm	72	130

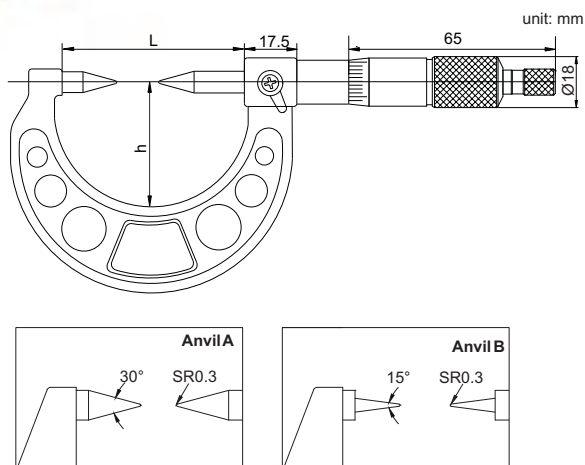
SERIES 327

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)



327-001-03



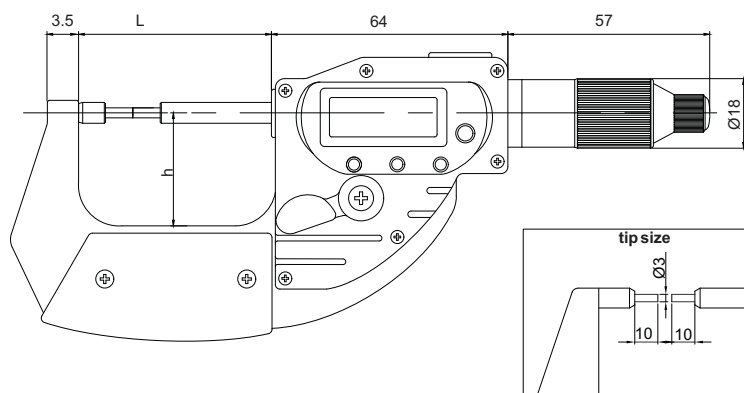
Code	Range	Anvil	Accuracy	h	L
327-001-03	0-25mm	A	4μm	39	58
327-002-03	25-50mm	A	4μm	53	83
327-003-03	50-75mm	A	5μm	65	109
327-004-03	75-100mm	A	5μm	76	133
327-001-04	0-25mm	B	4μm	39	58
327-002-04	25-50mm	B	4μm	53	83
327-003-04	50-75mm	B	5μm	65	109
327-004-04	75-100mm	B	5μm	76	133

DIGITAL SPLINE MICROMETER

SERIES 318



318-002-03



- ◆ Measure splined shafts, slots and keyways
- ◆ 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 318-001-03)

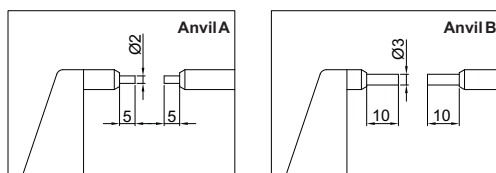
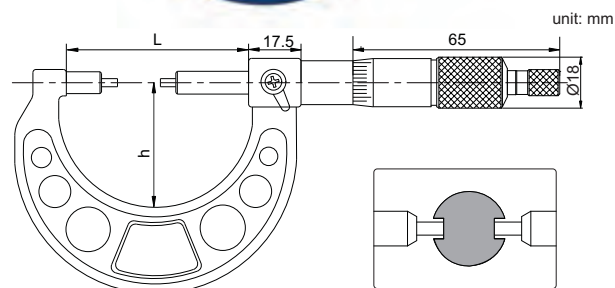
Code	Range	Accuracy	h	L
318-001-03	0-25mm/0-1"	3µm	31	55
318-002-03	25-50mm/1-2"	3µm	44	80

SPLINE MICROMETER

SERIES 328



328-001-03



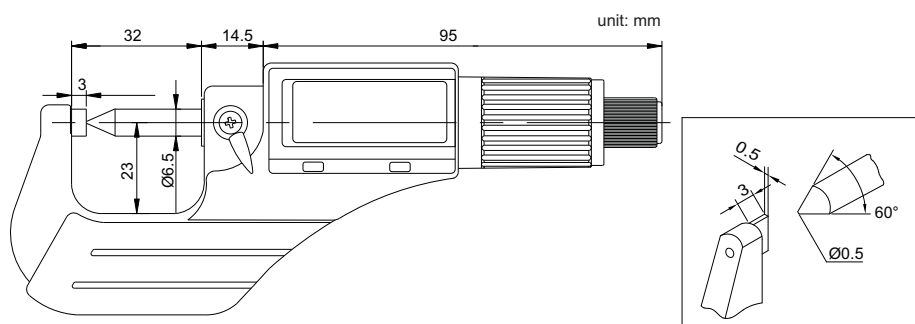
- ◆ Measure grooves and sharpened parts
- ◆ Graduation: 0.01mm
- ◆ Carbide measuring faces
- ◆ Ratchet stop
- ◆ Setting standards are included (except 0-25mm)

Code	Range	Accuracy	Anvil	h	L
328-001-04	0-25mm	4µm	A	39	58
328-001-03	0-25mm	4µm	B	39	58
328-002-03	25-50mm	4µm	B	53	83
328-003-03	50-75mm	5µm	B	65	109
328-004-03	75-100mm	5µm	B	76	133

319

DIGITAL CRIMP HEIGHT MICROMETER

- ◆ Measure the height of crimp contact
- ◆ Button: on/off/set, mm/inch/ABS
- ◆ Automatic power off
- ◆ Carbide measuring faces



Code	Range	Accuracy
319-001-03	0-20mm/0-0.8"	3μm

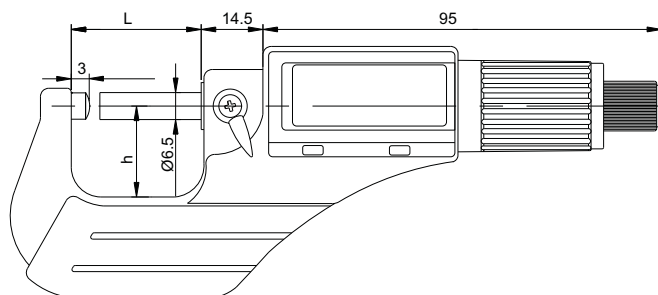
SERIES 331

DIGITAL SPHERICAL ANVIL TUBE MICROMETER

- ◆ Resolution: 0.001mm/0.00005"
- ◆ Button: on/off/set, mm/inch/ABS
- ◆ Carbide measuring faces
- ◆ Ratchet stop
- ◆ Setting standards are included (except 331-001-03)



331-001-03



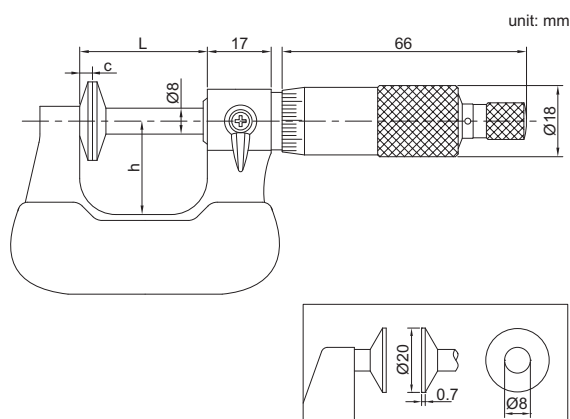
Code	Range	Accuracy	h	L
331-001-03	0-25mm/0-1"	3μm	25	31
331-002-03	25-50mm/1-2"	3μm	32	57
331-003-03	50-75mm/2-3"	4μm	44.5	82
331-004-03	75-100mm/3-4"	4μm	57	107

DISK MICROMETER

SERIES 342



342-002-02



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

Code	Range	Accuracy	L	h	c
342-001-02	0-25mm	4μm	34	24	3.3
342-002-02	25-50mm	4μm	59	32	3.3
342-003-02	50-75mm	5μm	85	45	3.3
342-004-02	75-100mm	5μm	110	57	3.3

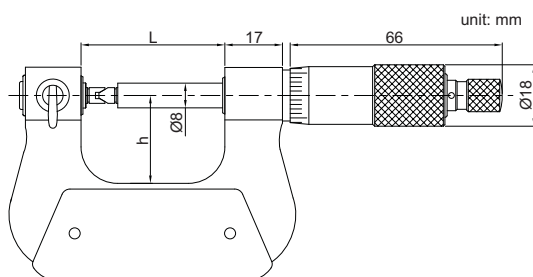
SCREW THREAD MICROMETER

SERIES 343



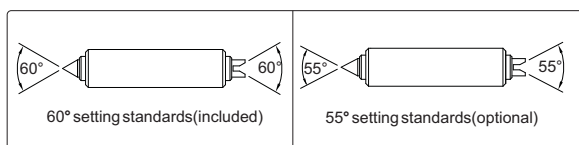
343-001-02

measuring tips are not included



- ◆ 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

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

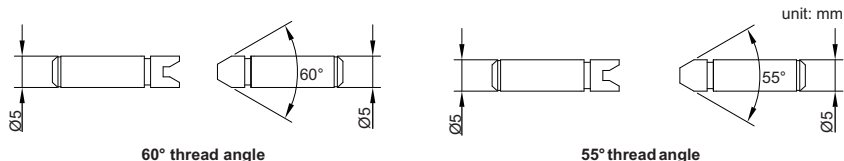


SERIES 343

MEASURING TIPS FOR SCREW THREAD MICROMETER



343-000-01



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

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

SERIES 349

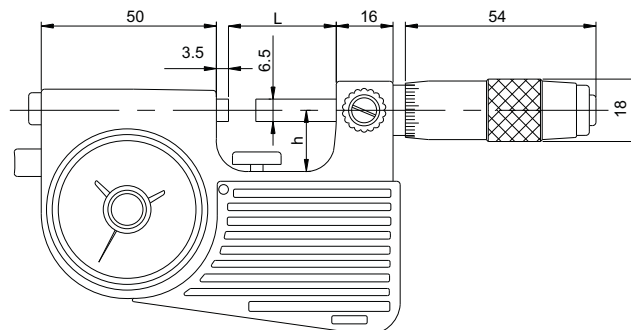
INDICATING MICROMETER

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



349-001-01

unit: mm



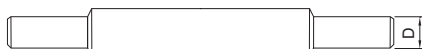
Code	Micrometer head range	Accuracy	Indicator range	L	h
349-001-01	0-25mm	±3μm	60μm	28.5	19
349-002-01	25-50mm	±3μm	60μm	53.5	30
349-003-01	50-75mm	±4μm	60μm	78.5	45
349-004-01	75-100mm	±4μm	60μm	103.5	57
349-001-02	0-25mm	±4μm	40μm	28.5	19

MICROMETER SETTING STANDARD

SERIES 321



321-004-ST



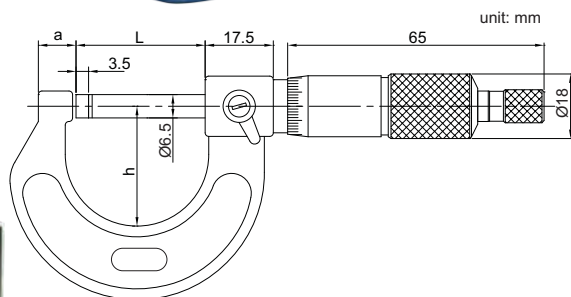
Code	Length	Accuracy	D
321-001-ST	25mm	$\pm 1.5\mu\text{m}$	$\varnothing 7\text{mm}$
321-002-ST	50mm	$\pm 2\mu\text{m}$	$\varnothing 7\text{mm}$
321-003-ST	75mm	$\pm 2.5\mu\text{m}$	$\varnothing 7\text{mm}$
321-004-ST	100mm	$\pm 3\mu\text{m}$	$\varnothing 8\text{mm}$
321-005-ST	125mm	$\pm 3.5\mu\text{m}$	$\varnothing 8\text{mm}$
321-006-ST	150mm	$\pm 4\mu\text{m}$	$\varnothing 8\text{mm}$
321-007-ST	175mm	$\pm 4.5\mu\text{m}$	$\varnothing 8\text{mm}$
321-008-ST	200mm	$\pm 5\mu\text{m}$	$\varnothing 8\text{mm}$
321-009-ST	225mm	$\pm 5.5\mu\text{m}$	$\varnothing 8\text{mm}$
321-010-ST	250mm	$\pm 6\mu\text{m}$	$\varnothing 8\text{mm}$
321-011-ST	275mm	$\pm 6.5\mu\text{m}$	$\varnothing 8\text{mm}$

OUTSIDE MICROMETER

SERIES 324



324-001-01



unit: mm



324-006-06

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

Individual Micrometer

Code	Range	Accuracy	a	h	L
324-001-01	0-1"	$\pm 0.00015"$	9	29	32
324-002-01	1-2"	$\pm 0.00015"$	9	39	58
324-003-01	2-3"	$\pm 0.0002"$	10	53	83
324-004-01	3-4"	$\pm 0.0002"$	10	65	109
324-005-01	4-5"	$\pm 0.00025"$	11.5	76	133
324-006-01	5-6"	$\pm 0.00025"$	11.5	88	159

Micrometer Set

Code	Range	Total quantity	Included micrometers
324-003-03	0-3"	3pcs	0-1", 1-2", 2-3"
324-004-04	0-4"	4pcs	0-1", 1-2", 2-3", 3-4"
324-006-06	0-6"	6pcs	0-1", 1-2", 2-3", 3-4", 4-5", 5-6"

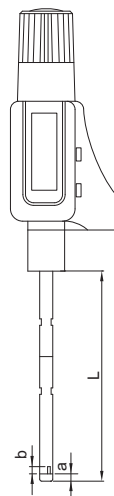
SERIES 361

DIGITAL THREE POINTS INSIDE MICROMETER

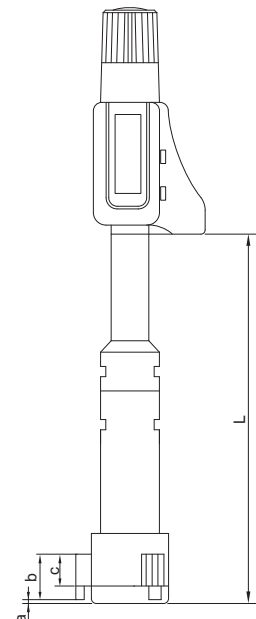
- ◆ Resolution: 0.001mm/0.00005"
- ◆ IP54 protection level
- ◆ Automatic power off
- ◆ Data output (cable code: 300-03)
- ◆ Ratchet stop
- ◆ Carbide measuring faces (over 12mm series)
- ◆ Setting rings and extension rod are included



361-003-01

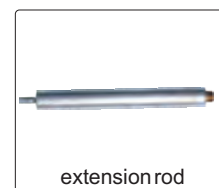


Range 6-12mm



Range 12-100mm

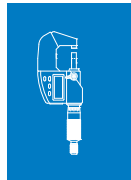
Code	Range	Accuracy	Setting ring	Extension rod	a	b	c	L
361-001-01	6-8mm/0.24-0.31"	4μm	Ø6mm	100mm	1.5	2.5	/	54.5
361-002-01	8-10mm/0.31-0.4"	4μm	Ø8mm	100mm	1.5	2.5	/	54.5
361-003-01	10-12mm/0.4-0.47"	4μm	Ø10mm	100mm	1.5	2.5	/	54.5
361-004-01	12-16mm/0.47-0.63"	4μm	Ø16mm	150mm	0.5	6	4.5	80
361-005-01	16-20mm/0.63-0.8"	4μm	Ø16mm	150mm	0.5	6	4.5	80
361-006-01	20-25mm/0.8-1"	4μm	Ø25mm	150mm	0.5	8	6	90
361-007-01	25-30mm/1-1.2"	4μm	Ø25mm	150mm	0.5	8	6	90
361-008-01	30-40mm/1.2-1.6"	4μm	Ø40mm	150mm	0.5	14	12	97
361-009-01	40-50mm/1.6-8"	5μm	Ø40mm	150mm	0.5	14	12	97
361-010-01	50-63mm/2-2.5"	5μm	Ø62mm	150mm	0.5	17.5	14.5	114
361-011-01	62-75mm/2.5-3"	5μm	Ø62mm	150mm	0.5	17.5	14.5	114
361-012-01	75-88mm/3-3.5"	5μm	Ø87mm	150mm	0.5	17.5	14.5	114
361-013-01	87-100mm/3.5-4"	5μm	Ø87mm	150mm	0.5	17.5	14.5	114



THREE POINTS INSIDE MICROMETER

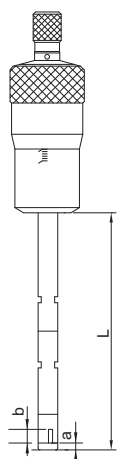
SERIES 362

- ◆ **6-12mm** graduation: 0.001mm
Steel measuring faces
- 12-100mm** graduation: 0.005mm
Carbide measuring faces
- ◆ Ratchet stop
- ◆ Setting rings and extension rod are included

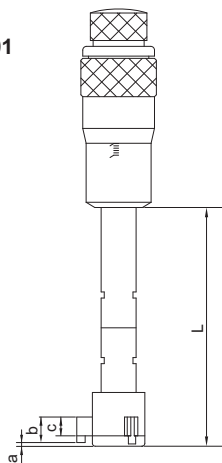


362-004-01

unit: mm



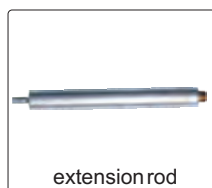
Range 6-12mm



Range 12-100mm



setting ring



extension rod

Code	Range	Accuracy	Setting ring	Extension rod	a	b	c	L
362-001-01	6-8mm	4μm	Ø6mm	100mm	1.5	2.5	/	54.5
362-002-01	8-10mm	4μm	Ø8mm	100mm	1.5	2.5	/	54.5
362-003-01	10-12mm	4μm	Ø10mm	100mm	1.5	2.5	/	54.5
362-004-01	12-16mm	4μm	Ø16mm	150mm	0.5	6	4.5	80
362-005-01	16-20mm	4μm	Ø16mm	150mm	0.5	6	4.5	80
362-006-01	20-25mm	4μm	Ø25mm	150mm	0.5	8	6	90
362-007-01	25-30mm	4μm	Ø25mm	150mm	0.5	8	6	90
362-008-01	30-40mm	4μm	Ø40mm	150mm	0.5	14	12	97
362-009-01	40-50mm	5μm	Ø40mm	150mm	0.5	14	12	97
362-010-01	50-63mm	5μm	Ø62mm	150mm	0.5	17.5	14.5	114
362-011-01	62-75mm	5μm	Ø62mm	150mm	0.5	17.5	14.5	114
362-012-01	75-88mm	5μm	Ø87mm	150mm	0.5	17.5	14.5	114
362-013-01	87-100mm	5μm	Ø87mm	150mm	0.5	17.5	14.5	114

SERIES 361/362

THREE POINTS INSIDE MICROMETER SET



DIGITAL TYPE

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

MECHANICAL TYPE

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



362-913-05

SERIES 351

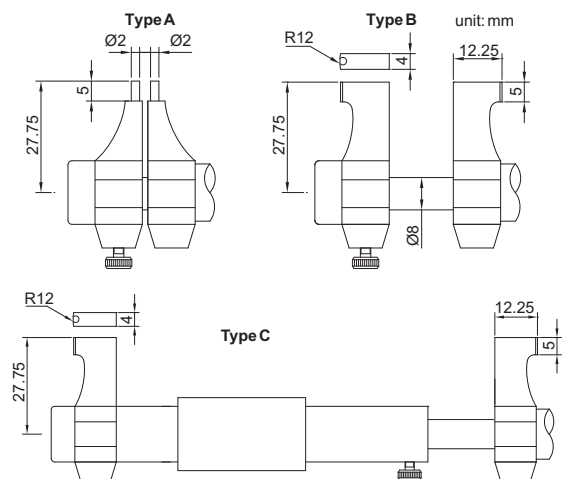
INSIDE MICROMETER

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



351-001-01

Code	Range	Type	Setting ring	Accuracy
351-001-01	5-30mm	A	included	7μm
351-002-01	25-50mm	B	included	8μm
351-003-01	50-75mm	B	optional	9μm
351-004-01	75-100mm	C	optional	10μm
351-005-01	100-125mm	C	optional	10μm
351-006-01	125-150mm	C	optional	11μm
351-007-01	150-175mm	C	optional	11μm
351-008-01	175-200mm	C	optional	12μm

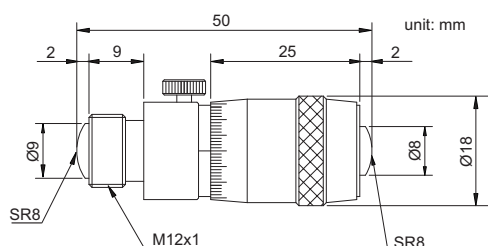


TUBULAR INSIDE MICROMETER

SERIES 352



352-006-01



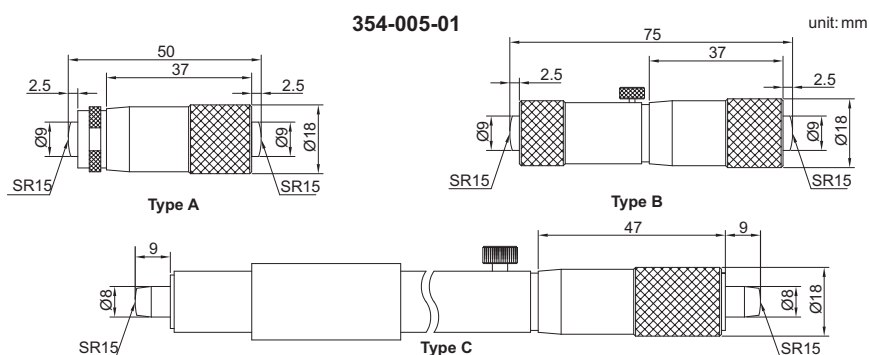
Code	Range	Extension rods (mm)
352-002-01	50-63mm	—
352-006-01	50-150mm	13, 25, 50
352-012-01	50-300mm	13, 25, 50(2pcs), 100
352-020-01	50-500mm	13, 25, 50(2pcs), 100, 200
352-024-01	50-600mm	13, 25, 50, 100, 150, 200
352-040-01	50-1000mm	13, 25, 50(2pcs), 100, 200(2pcs), 300
352-060-01	50-1500mm	13,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

TUBULAR INSIDE MICROMETER

SERIES 354



354-005-01



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

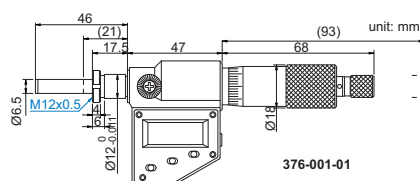
Code	Range	Type	Accuracy
354-012-01	275-300mm	C	9μm
354-013-01	300-325mm	C	9μm
354-014-01	325-350mm	C	9μm
354-015-01	350-375mm	C	10μm
354-016-01	375-400mm	C	10μm
354-017-01	400-425mm	C	10μm
354-018-01	425-450mm	C	10μm
354-019-01	450-475mm	C	11μm
354-020-01	475-500mm	C	11μm

DIGITAL MICROMETER HEAD

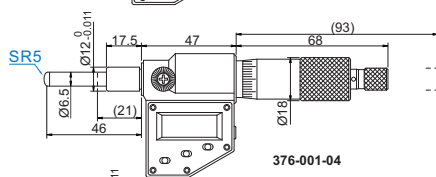
SERIES 376



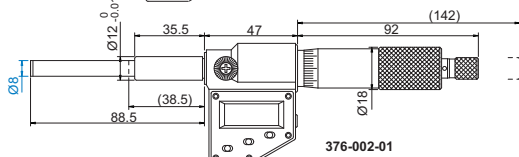
376-001-02



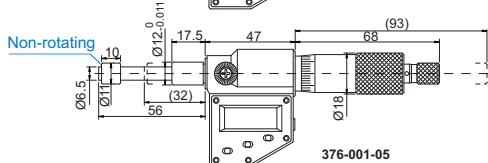
376-001-01



376-001-04



376-002-01



376-001-05

- ◆ Resolution 0.001mm/0.00005"
- ◆ IP54 dust/waterproof
- ◆ Button function: on/off, set, mm/inch, ABS/INC, data output
- ◆ Data output
- ◆ Automatic power off
- ◆ Ratchet stop

Rotating spindle

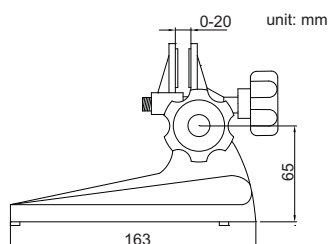
Code	Range	Stem	Spindle tip	Accuracy
376-001-01	0-25mm/0-1"	with clamp nut	flat (carbide)	±2μm
376-001-02	0-25mm/0-1"	plain	flat (carbide)	±2μm
376-001-03	0-25mm/0-1"	with clamp nut	spherical (SR5)	±2μm
376-001-04	0-25mm/0-1"	plain	spherical (SR5)	±2μm
376-002-01	0-50mm/0-2"	plain	flat (carbide)	±4μm

Non-rotating spindle

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

MICROMETER STAND

381



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

Code

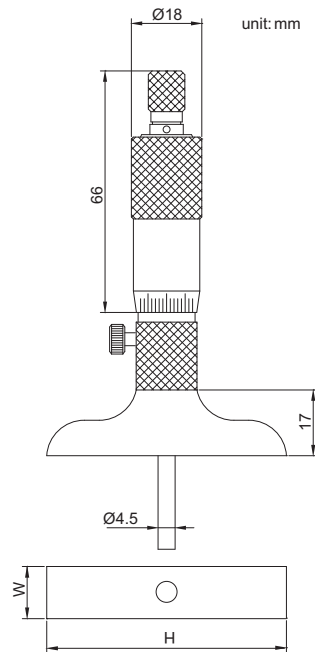
381-000-00

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)
391-001-01	0-25mm	101.5x17mm
391-002-01	0-50mm	101.5x17mm
391-003-01	0-75mm	101.5x17mm
391-004-01	0-100mm	101.5x17mm
391-006-01	0-150mm	101.5x17mm
391-008-01	0-200mm	101.5x17mm
391-012-01	0-300mm	101.5x17mm
391-001-02	0-25mm	63x17mm
391-002-02	0-50mm	63x17mm
391-003-02	0-75mm	63x17mm
391-004-02	0-100mm	63x17mm
391-006-02	0-150mm	63x17mm
391-008-02	0-200mm	63x17mm
391-012-02	0-300mm	63x17mm



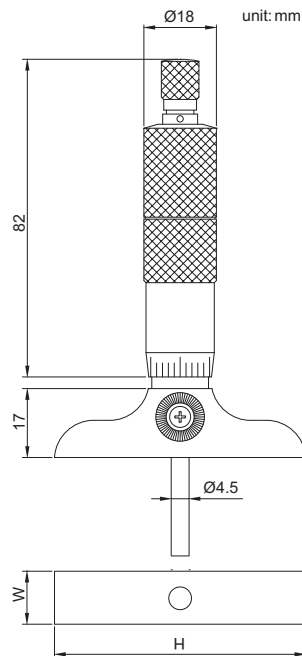
391-001-01

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)
392-001-01	0-25mm	101.5x17mm
392-002-01	0-50mm	101.5x17mm
392-003-01	0-75mm	101.5x17mm
392-004-01	0-100mm	101.5x17mm
392-006-01	0-150mm	101.5x17mm
392-008-01	0-200mm	101.5x17mm
392-012-01	0-300mm	101.5x17mm
392-001-02	0-25mm	63x17mm
392-002-02	0-50mm	63x17mm
392-003-02	0-75mm	63x17mm
392-004-02	0-100mm	63x17mm
392-006-02	0-150mm	63x17mm
392-008-02	0-200mm	63x17mm
392-012-02	0-300mm	63x17mm



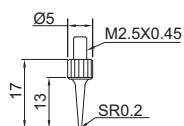
392-001-01

DIAL DEPTH INDICATOR

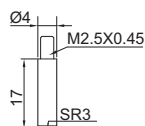
SERIES 291



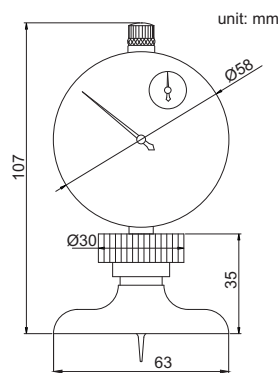
291-010-12



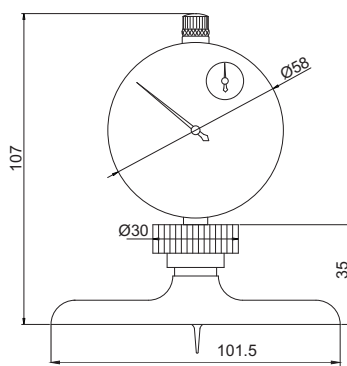
needle styli



ball styli



291-010-11



291-010-12

- ◆ Graduation: 0.01mm
- ◆ Indicator travel: 10mm
- ◆ Accuracy: $\pm 0.03\text{mm}$
- ◆ Stainless steel base
- ◆ With needle and ball styli

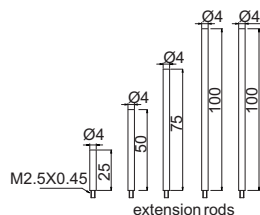
Code	Range	Base
291-010-11	0-10mm	63x17mm
291-010-12	0-10mm	101.5x17mm

DIAL DEPTH INDICATOR

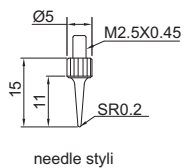
SERIES 292



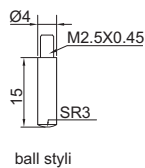
292-300-12



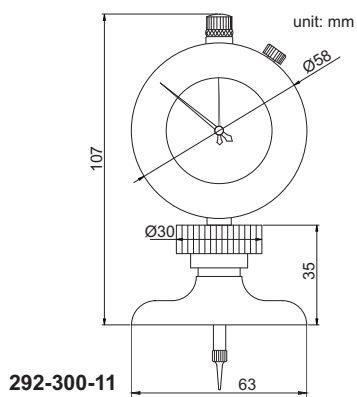
extension rods



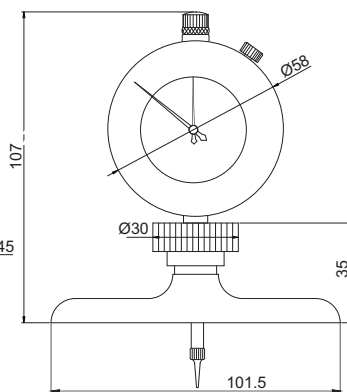
needle styli



ball styli



292-300-11



292-300-12

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

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

SERIES 293

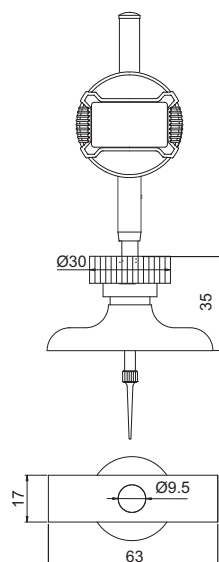
DIGITAL DEPTH INDICATOR

- ◆ 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 (200-01 or 200-02)
- ◆ Automatic power off
- ◆ Stainless steel base
- ◆ Extension rods: 25mm(1pc), 50mm(1pc), 75mm(1pc), 100mm(2pcs)
- ◆ Supplied with pointed tip and ball tip

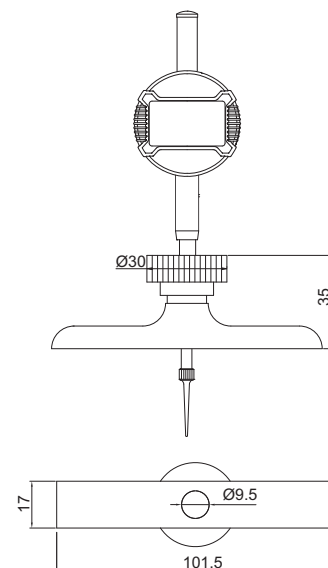


293-300-12

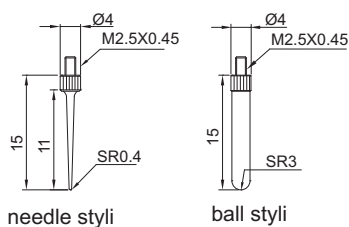
unit: mm



293-300-11

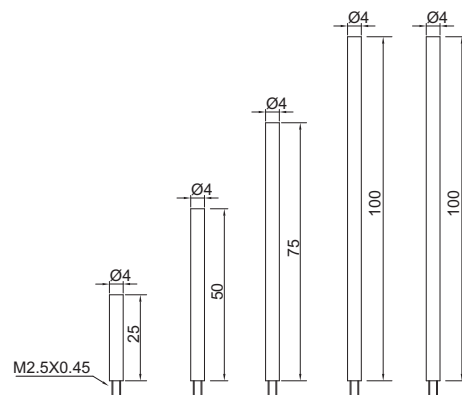


293-300-12



needle styli

ball styli

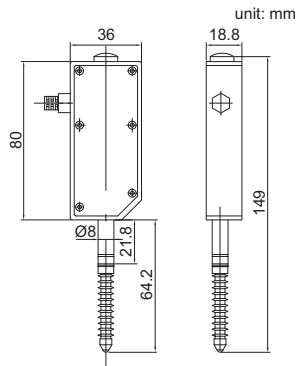


extension rods

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

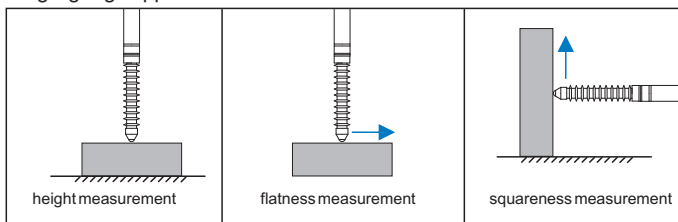
LINEAR GAUGE

SERIES 201

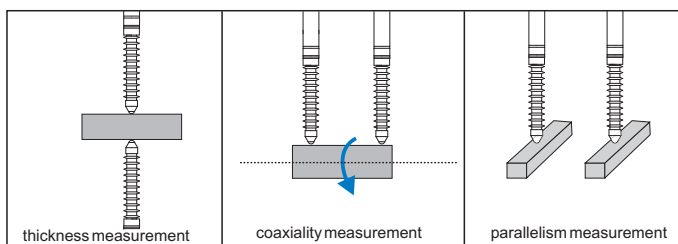


- ◆ Suitable for measuring the height, thickness, squareness, coaxiality and so on.
- ◆ IP65 protection level
- ◆ High frequency: 100 times/s, can measure high speed workpiece
- ◆ Output signal : 90° phase difference wave
- ◆ Standard cable length: 2m
- ◆ Long working life due to the special bearing

Single gauge application



Multi-gauges application



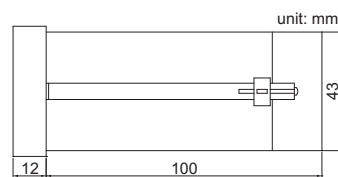
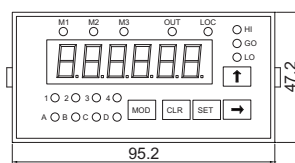
Code	Resolution	Interface	Range	Measuring force	Stem	Accuracy	Hysteresis
201-010-11	0.01mm	Pin4	0-12.7mm	1.5N	Ø8mm	20µm	10µm
201-010-12	0.01mm	RS232	0-12.7mm	1.5N	Ø8mm	20µm	10µm
201-010-01	0.001mm	Pin4	0-12.7mm	1.5N	Ø8mm	5µm	2µm
201-010-02	0.001mm	RS232	0-12.7mm	1.5N	Ø8mm	5µm	2µm



206

DISPLAY UNIT FOR LINEAR GAUGE

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



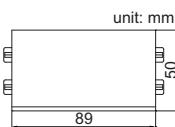
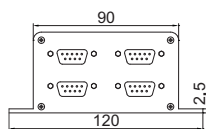
unit: mm

Code	Gage Input	Interface
206-010-01	1	Pin4

SERIES 208

COUNTER FOR LINEAR GAUGE

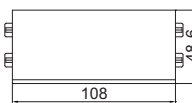
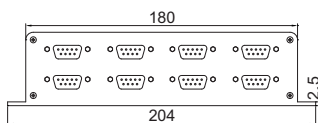
- ◆ With data recording software, can transfer the data into Excel



unit: mm

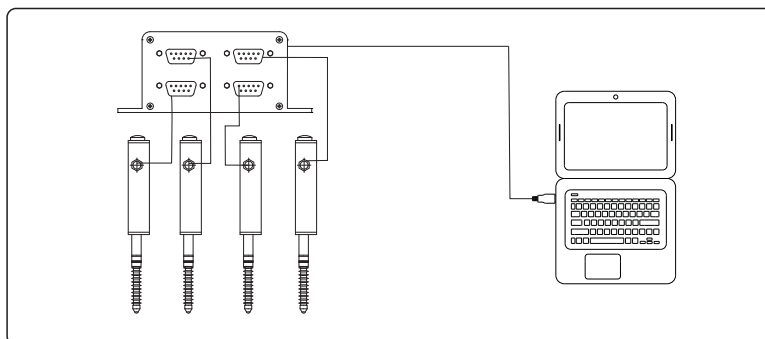


208-004-01



208-008-01

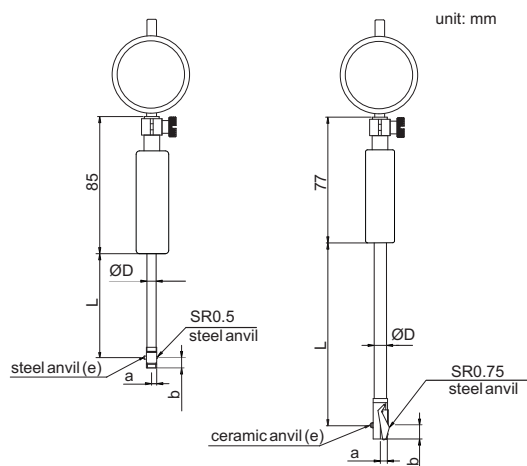
Code	Gages Input	Interface
208-004-01	4	RS232/485
208-008-01	8	RS232/485



PRECISION DIAL BORE GAUGE

SERIES 251

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

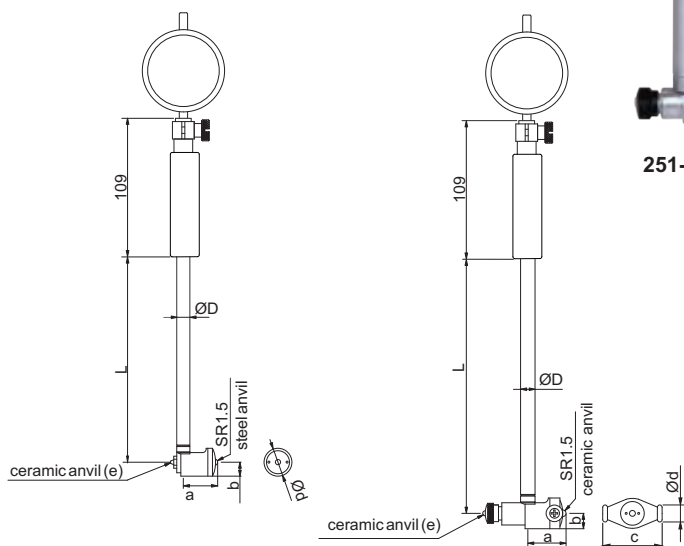


Range: 6-10mm

Range: 10-18mm

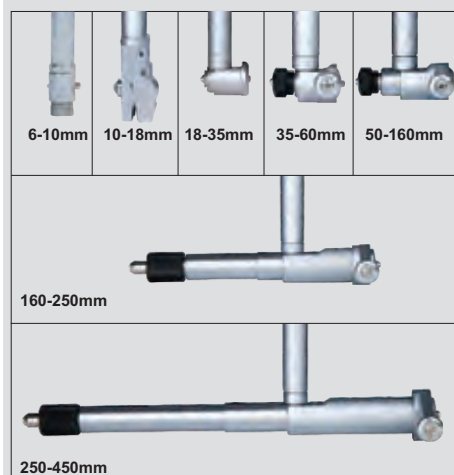


251-160-01

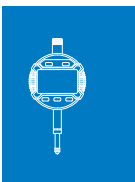


Range: 18-35mm

Range: 35mm - 450mm



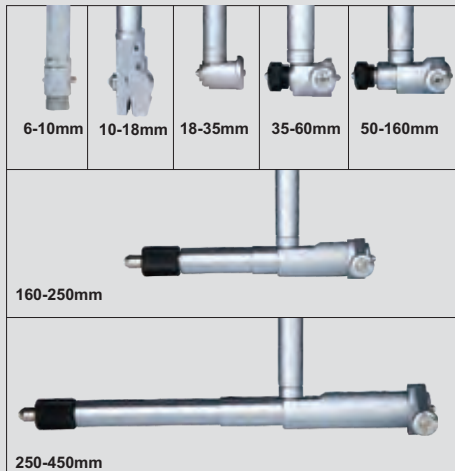
Code	Range	Dial indicator	Accuracy	Repeatability	a	b	c	Ød	ØD	e	L
251-010-01	6-10mm	Range: 1mm graduation: 0.001mm	±0.005mm	2µm	3.6	5.7	/	/	4.5	SR1	48
251-018-01	10-18mm		±0.005mm	2µm	5.6	7.8	/	/	6	SR1	105
251-035-01	18-35mm		±0.006mm	2µm	12.2	6.4	/	12.7	9	SR1	141
251-060-01	35-60mm		±0.007mm	2µm	12.2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



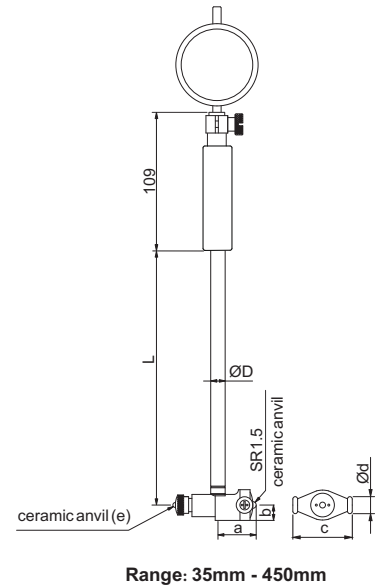
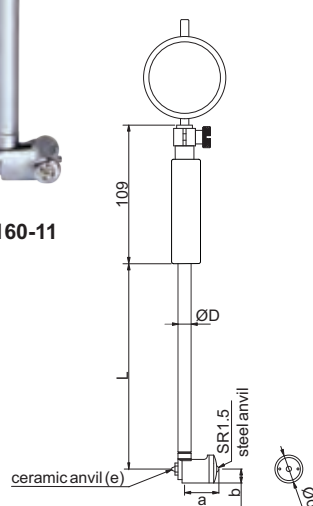
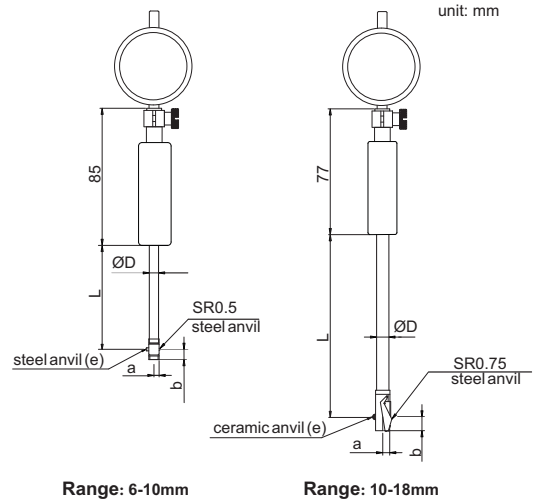
SERIES 251

DIAL BORE GAUGE

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



251-160-11



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

DIAL BORE GAUGE SET

SERIES 251

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

251-046-11



251-346-13

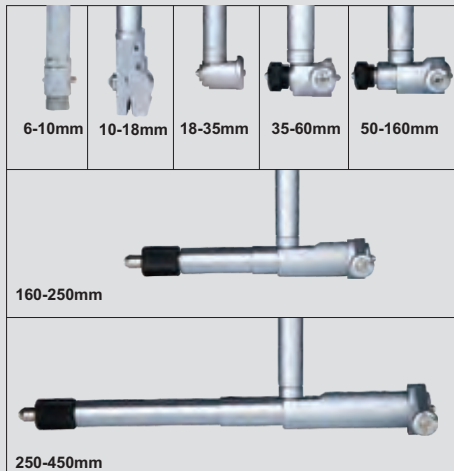


Code	Range	Indicator	Accuracy	Repeatability	Bore gages included
251-046-11	35-160mm	range 10mm, graduation 0.01mm	35-50mm $\pm 0.018\text{mm}$ 50-160mm $\pm 0.018\text{mm}$	0.003mm	35-50mm anvil (dial indicator and handle are not included) 50-160mm bore gage
251-346-13	18-160mm	range 10mm, graduation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

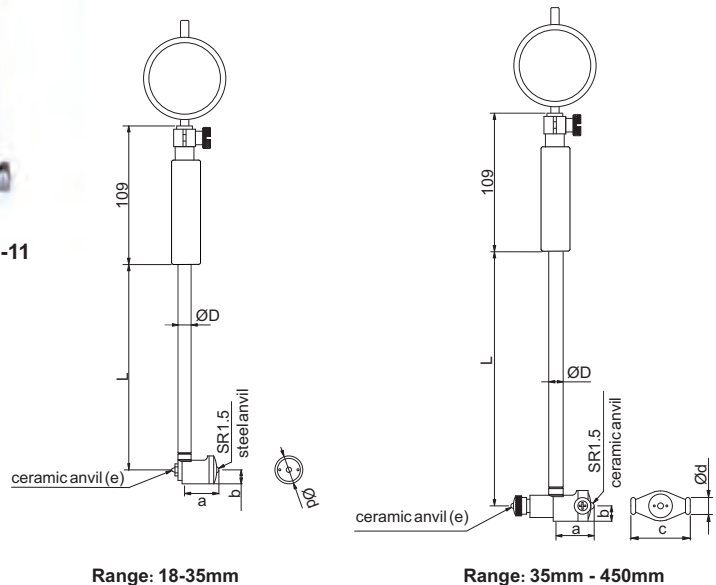
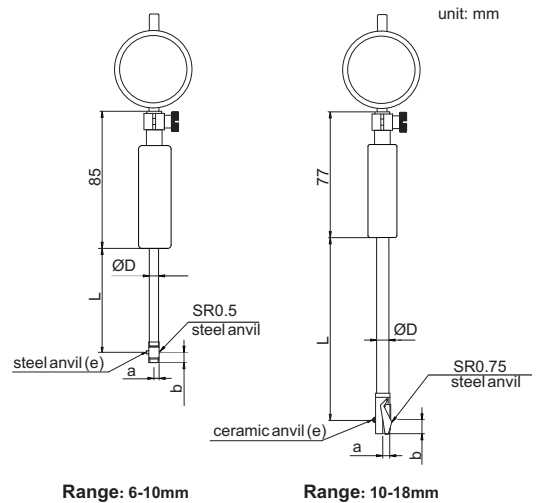
SERIES 241

DIGITAL BORE GAUGE

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



241-035-11

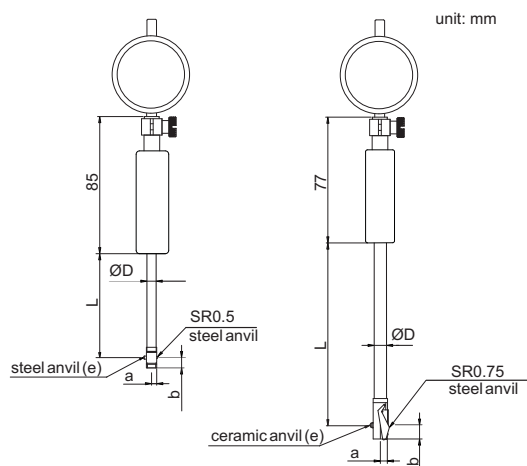


Code	Range	Digital indicator	Accuracy	Repeatability	a	b	c	Ød	ØD	e	L
241-010-11	6-10mm	Range: 12.7mm resolution: 0.002mm	±0.012mm	3µm	3.6	5.7	/	/	4.5	SR1	48
241-018-11	10-18mm		±0.012mm	3µm	5.6	7.8	/	/	6	SR1	105
241-035-11	18-35mm		±0.015mm	3µm	12.2	6.4	/	12.7	9	SR1	141
241-060-11	35-60mm		±0.018mm	3µm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

INCH DIAL BORE GAUGE

SERIES 252

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

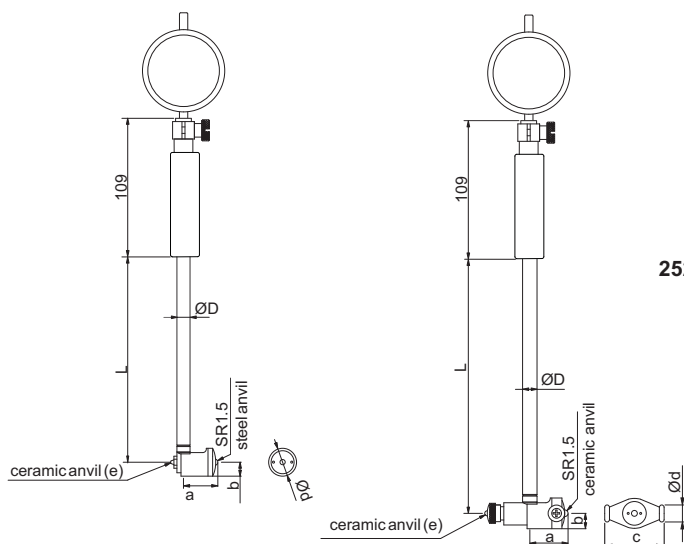


Range: 0.24-0.4"

Range: 0.4-0.7"

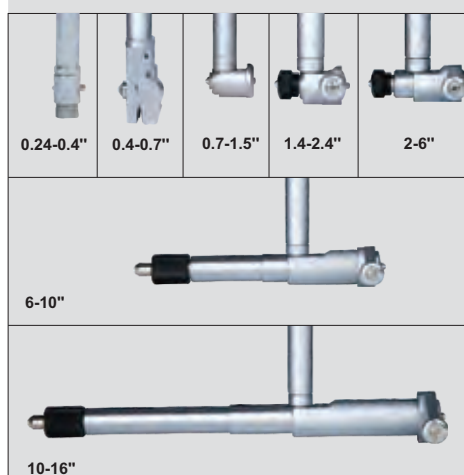


252-015-01



Range: 0.7-1.5"

Range: 1.4- 16"



Code	Range	Digital 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"	12.2	6.4	27	13	12.8	SR2	141
252-060-11	2-6"		±0.0009"	0.00015"	26	9	27	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



SERIES 250

ANVIL FOR BORE GAUGES

◆ Measuring face is made of ceramic



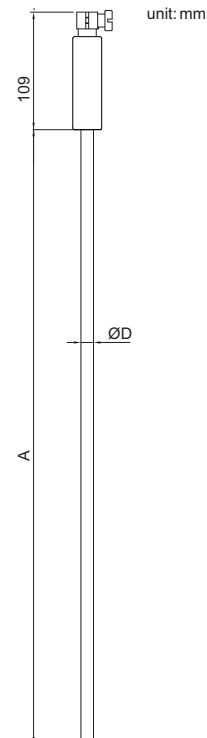
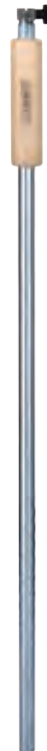
250-160-11

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

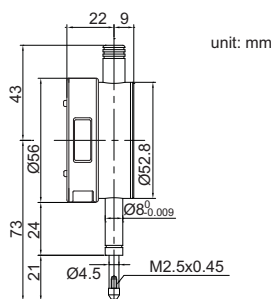
◆ To assist deep-hole measurement



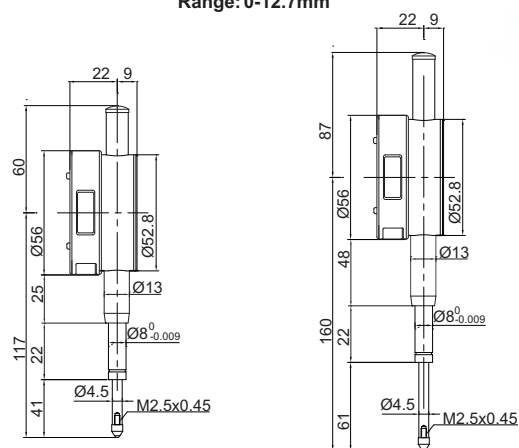
Code	For Bore Gauges	A	ØD
250-000-01	35-60mm, 50-100mm, 50-160mm, 100-160mm	473	13
250-000-02		980	13
250-000-03	160-250mm, 250-450mm	480	14.5
250-000-04		980	14.5

DIGITAL INDICATOR

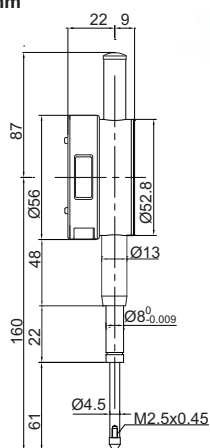
SERIES 210



Range: 0-12.7mm



Range: 0-25.4mm



Range: 0-50.8mm



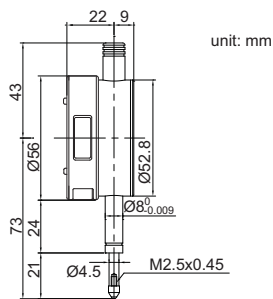
210-010-13

- ◆ 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

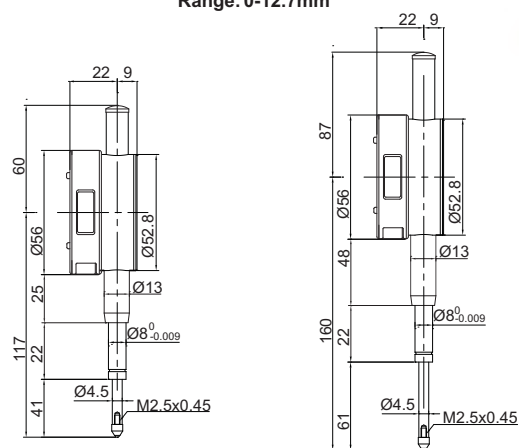
Code	Range	Resolution	Accuracy	Hysteresis
210-010-03	12.7mm/0.5"	0.001mm/0.00005"	5μm	2μm
210-025-03	25.4mm/1"	0.001mm/0.00005"	5μm	3μm
210-050-03	50.8mm/2"	0.001mm/0.00005"	6μm	3μm
210-010-13	12.7mm/0.5"	0.01mm/0.0005"	20μm	10μm
210-025-13	25.4mm/1"	0.01mm/0.0005"	20μm	10μm
210-050-13	50.8mm/2"	0.01mm/0.0005"	30μm	10μm

DIGITAL INDICATOR

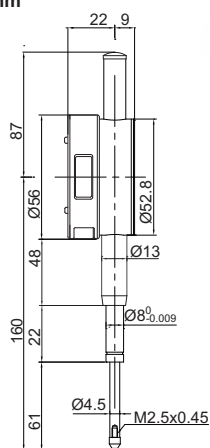
SERIES 211



Range: 0-12.7mm



Range: 0-25.4mm



Range: 0-50.8mm



211-010-03

- ◆ 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

Code	Range	Resolution	Accuracy	Hysteresis
211-010-03	12.7mm/0.5"	0.001mm/0.00005"	5μm	2μm
211-025-03	25.4mm/1"	0.001mm/0.00005"	5μm	3μm
211-050-03	50.8mm/2"	0.001mm/0.00005"	6μm	3μm
211-010-13	12.7mm/0.5"	0.01mm/0.0005"	20μm	10μm
211-025-13	25.4mm/1"	0.01mm/0.0005"	20μm	10μm
211-050-13	50.8mm/2"	0.01mm/0.0005"	30μm	10μm

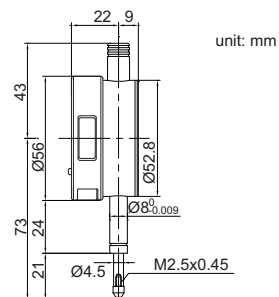
SERIES 212

DIGITAL INDICATOR

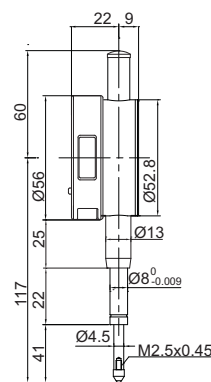
- ◆ Button: on/off, zero, inch/mm conversion, measuring direction set, data preset absolute/incremental measurement
- ◆ Data output (cable code: 200-03 or 200-04)
- ◆ Automatic power off
- ◆ Supplied with flat and lug back



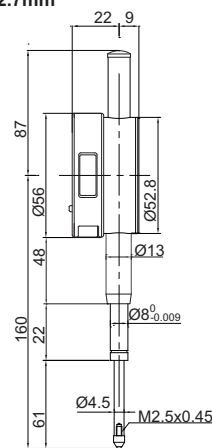
212-010-13



Range: 0-12.7mm



Range: 0-25.4mm



Range: 0-50.8mm

Code	Range	Resolution	Accuracy	Hysteresis
212-010-03	12.7mm/0.5"	0.001mm/0.00005"	5μm	2μm
212-025-03	25.4mm/1"	0.001mm/0.00005"	5μm	3μm
212-050-03	50.8mm/2"	0.001mm/0.00005"	6μm	3μm
212-010-13	12.7mm/0.5"	0.01mm/0.0005"	20μm	10μm
212-025-13	25.4mm/1"	0.01mm/0.0005"	20μm	10μm
212-050-13	50.8mm/2"	0.01mm/0.0005"	30μm	10μm

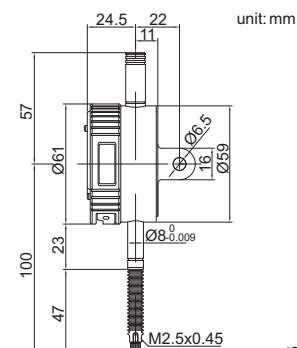
SERIES 213

WATERPROOF DIGITAL INDICATOR

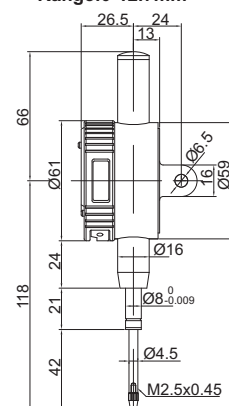
- ◆ Dust/waterproof
- ◆ Button: on/off, zero, inch/mm conversion, measuring direction set, data preset absolute/incremental measurement
- ◆ Automatic power off
- ◆ Data output (cable code: 200-01 or 200-02)
- ◆ Supplied with lug and flat back



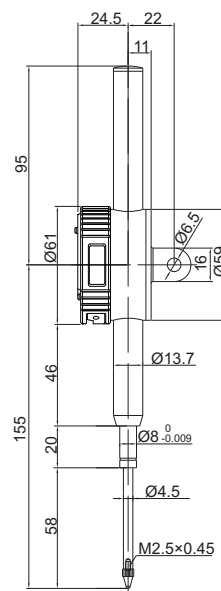
213-010-01



Range: 0-12.7mm



Range: 0-25.4mm

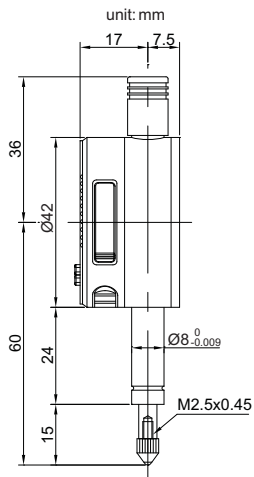


Range: 0-50.8mm

Code	Range	Resolution	Proof Level	Accuracy	Hysteresis
213-010-01	12.7mm/0.5"	0.001mm/0.00005"	IP65	5μm	2μm
213-025-01	25.4mm/1"	0.001mm/0.00005"	IP54	5μm	3μm
213-050-01	50.8mm/2"	0.001mm/0.00005"	IP54	6μm	3μm
213-010-11	12.7mm/0.5"	0.01mm/0.0005"	IP65	20μm	10μm
213-025-11	25.4mm/1"	0.01mm/0.0005"	IP54	20μm	10μm
213-050-11	50.8mm/2"	0.01mm/0.0005"	IP54	30μm	10μm

DIGITAL INDICATOR

SERIES 214



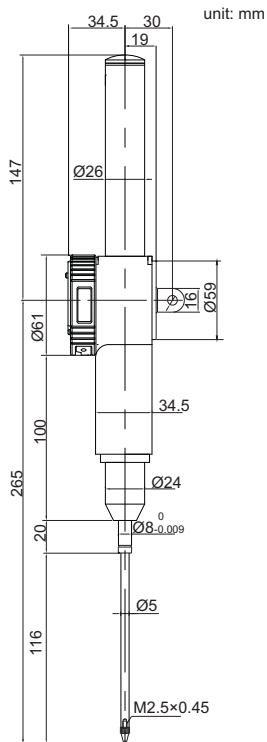
214-005-12

- ◆ 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

Code	Range	Resolution	Accuracy	Hysteresis
214-005-02	5mm/0.2"	0.001mm/0.00005"	9μm	3μm
214-005-12	5mm/0.2"	0.01mm/0.0005"	20μm	10μm

DIGITAL INDICATOR

SERIES 214



214-100-11

- ◆ 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

Code	Range	Resolution	Accuracy	Hysteresis
214-100-01	100mm/4"	0.001mm/0.00005"	9μm	3μm
214-100-11	100mm/4"	0.01mm/0.0005"	30μm	10μm

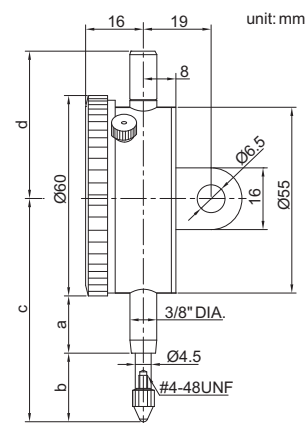


INCH DIAL INDICATOR

- ◆ Supplied with limit hands and bezel clamp
- ◆ Lug back



225-025-11



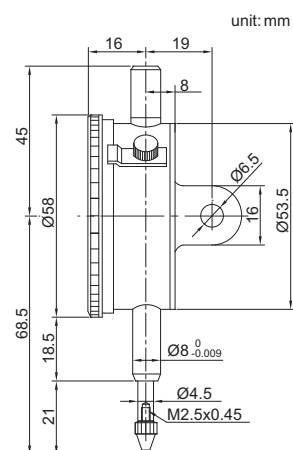
Code	Range	Graduation	Dial reading	Range/rev	Accuracy(f _{ges})	a	b	c	d
225-006-11	0.25"	0.001"	0-100	0.1"	0.004"	20	25	75	46
225-012-11	0.5"	0.001"	0-100	0.1"	0.004"	20	25	75	46
225-025-11	1"	0.001"	0-100	0.1"	0.004"	20	35	85	46
225-050-11	2"	0.001"	0-100	0.1"	0.008"	50	59	139	111

DIAL INDICATOR

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



223-010-11



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

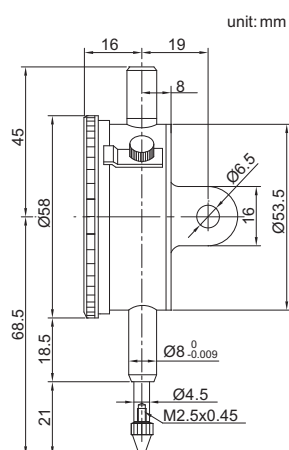
DIAL INDICATOR

SERIES 222



222-010-11

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



Code	Range	Back	Accuracy	Scale	Hysteresis
222-003-11	3mm	lug	14μm	0-100	3μm
222-005-11	5mm	lug	16μm	0-100	3μm
222-010-11	10mm	lug	20μm	0-100	3μm
222-003-12	3mm	flat	14μm	0-100	3μm
222-005-12	5mm	flat	16μm	0-100	3μm
222-010-12	10mm	flat	20μm	0-100	3μm

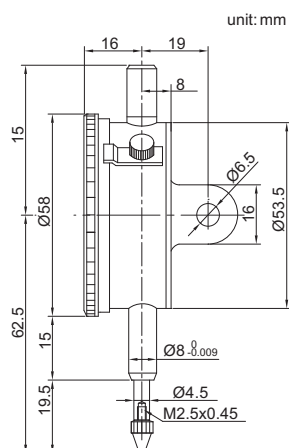
DIAL INDICATOR

SERIES 222



222-001-01

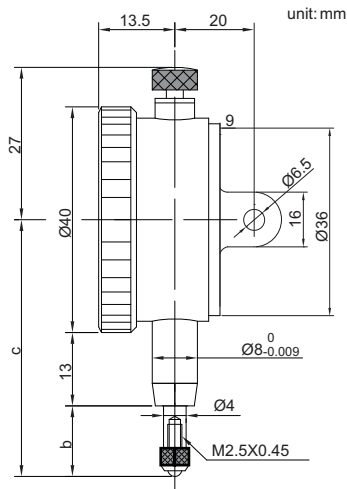
- ◆ Graduation: 0.001mm
- ◆ With limit hands
- ◆ Jeweled bearing
- ◆ Rang per revolution: 0.2mm
- ◆ With lock screw



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



DIAL INDICATOR

SERIES 228

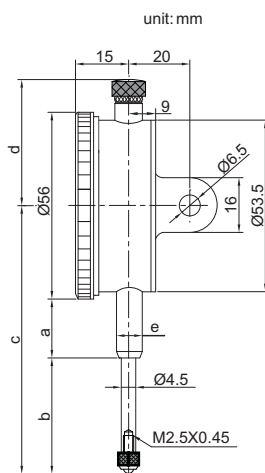
228-005-11

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

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



DIAL INDICATOR

SERIES 229

229-030-11

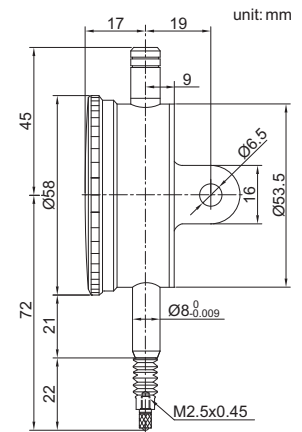
- ◆ Graduation: 0.01mm
- ◆ With limit hands
- ◆ Rang per revolution: 1mm
- ◆ Supplied with lug and flat back

Code	Range	Accuracy	Hysteresis	Scale	a	b	c	d	e
229-020-11	20mm	25µm	5µm	0-100	20mm	35mm	83mm	37.5mm	Ø8mm
229-025-11	25mm	35µm	7µm	0-100	20mm	40mm	88mm	37.5mm	Ø8mm
229-030-11	30mm	35µm	7µm	0-100	20mm	40mm	88mm	37.5mm	Ø8mm
229-050-21	50mm	40µm	8µm	0-100	40mm	58mm	127mm	108mm	Ø8mm
229-100-21	100mm	50µm	9µm	0-100	60mm	108mm	207mm	168mm	Ø10mm

231

WATERPROOF DIAL INDICATOR

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



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

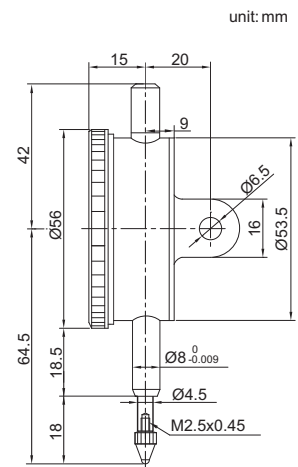
SERIES 232

ONE REVOLUTION DIAL INDICATOR

- ◆ Shock proof



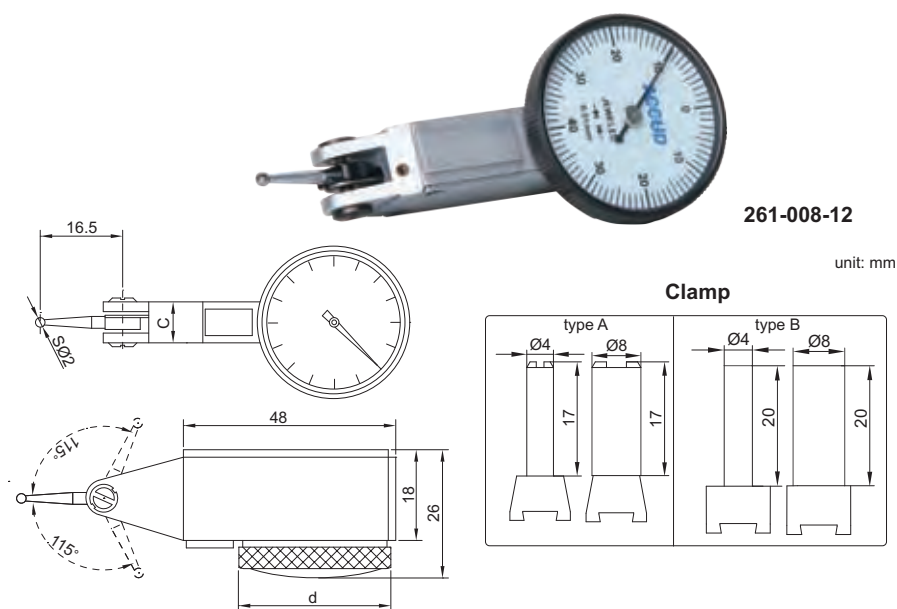
232-001-11



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

DIAL TEST INDICATOR

SERIES 261



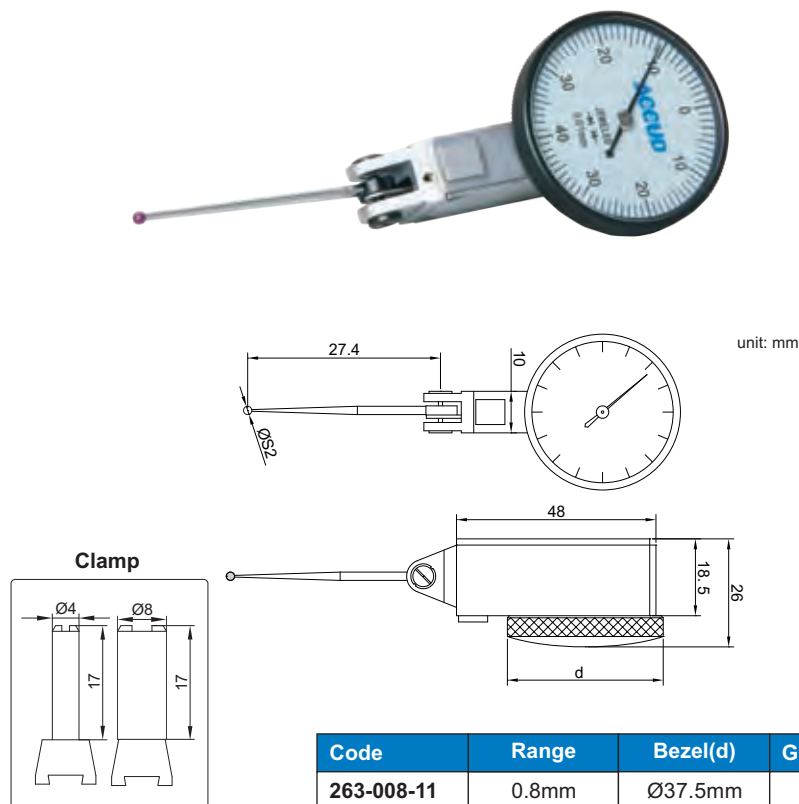
- ◆ Jeweled bearing
- ◆ Double scale spacing
- ◆ Anti-magnetic copper body
- ◆ With two clamps: Ø4mm and Ø8mm



Code	Range	Bezel(d)	Graduation	Styli	Clamp	Accuracy	Hysteresis	Scale	C
261-008-11	0.8mm	Ø30mm	0.01mm	carbide	type A	13µm	3µm	0-40-0	8.9mm
261-008-12	0.8mm	Ø37.5mm	0.01mm	carbide	type A	13µm	3µm	0-40-0	8.9mm
261-002-01	0.2mm	Ø30mm	0.002mm	ruby	type B	6µm	2µm	0-100-0	8mm
261-002-02	0.2mm	Ø37.5mm	0.002mm	ruby	type B	6µm	2µm	0-100-0	8mm

LONG STYLI DIAL TEST INDICATOR

SERIES 263



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

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

SERIES 260

STYLI FOR DIAL TEST INDICATOR

◆ For series 261



260-002-02



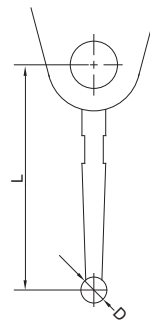
260-010-01

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



260-009-01

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



Code	Tip material	D(mm)	L(mm)
260-001-01	steel	SØ1	16.5
260-002-02	carbide	SØ2	16.5
260-003-02	carbide	SØ3	16.5
260-009-01	ruby	SØ2	17
260-010-01	ruby	SØ2	16.5

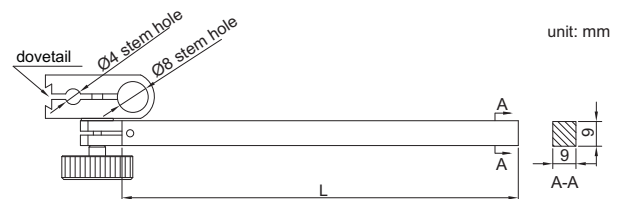
SERIES 267

HOLDER FOR INDICATOR

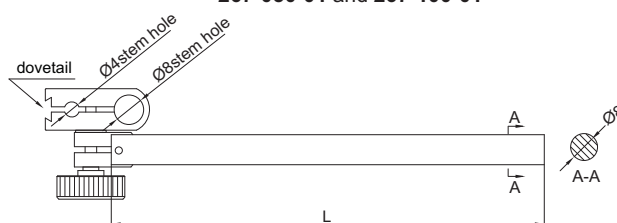
◆ Use as holder for dial/digital indicators, dial test indicators and height gages



267-115-02



267-050-01 and 267-100-01

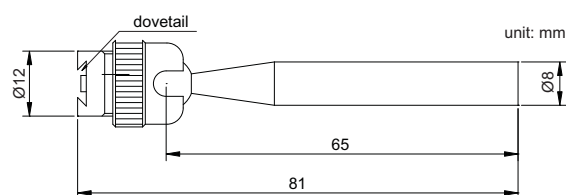


267-115-02

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

UNIVERSAL HOLDER FOR DIAL TEST INDICATOR

268

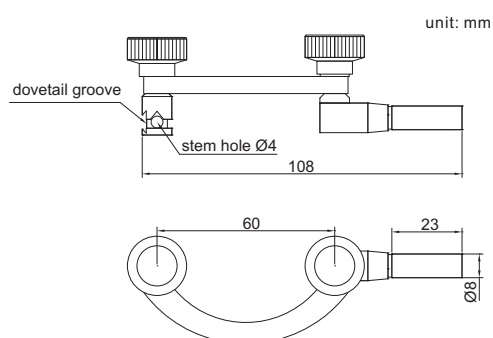


♦ universal head

Code	Section size	Size(L)
268-055-01	Ø8mm	55mm

DIAL TEST INDICATOR CENTERING HOLDER

269



♦ Center cylinders or holes on a machine tool

Code
269-060-01



SERIES 270

CONTACT POINTS

type A

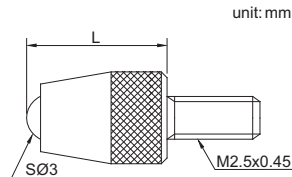
Code	Material	L(mm)
270-001-01	carbide	7.3
270-001-02	ceramic	7.3
270-001-03	carbide	8.3
270-001-04	carbide	12.1
270-001-05	carbide	14
270-001-06	carbide	15
270-001-07	ceramic	15
270-001-08	carbide	17
270-001-09	carbide	19.3
270-001-10	carbide	20
270-001-11	ceramic	20
270-001-12	carbide	22
270-001-13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

Ball Point



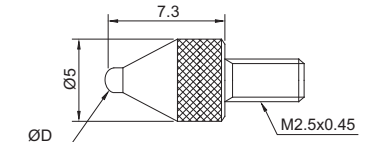
270-001-01

type A



unit: mm

type B



unit: mm

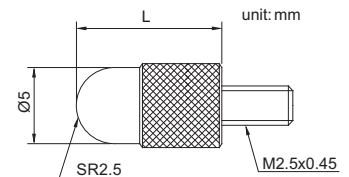
type B

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



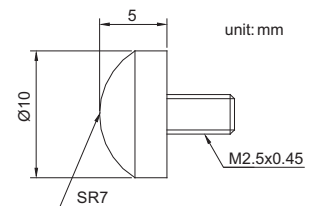
270-002-01



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



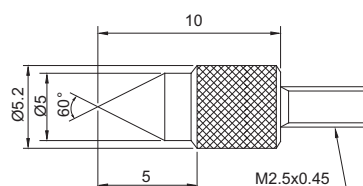
unit: mm

Code	Material
270-003-01	steel

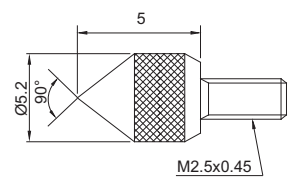
Conical Point



270-004-01



270-004-01



unit: mm

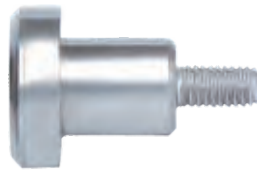
270-004-02

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

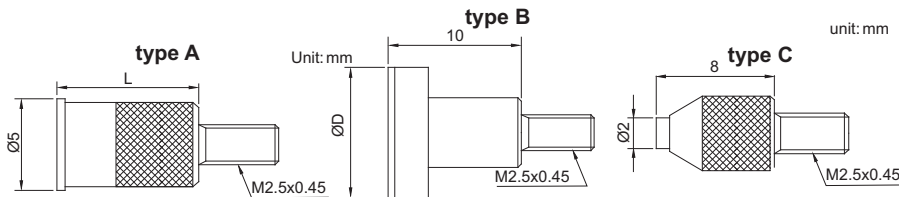
CONTACT POINTS

SERIES 270

Flat Point



270-005-11



type A

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

type B

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

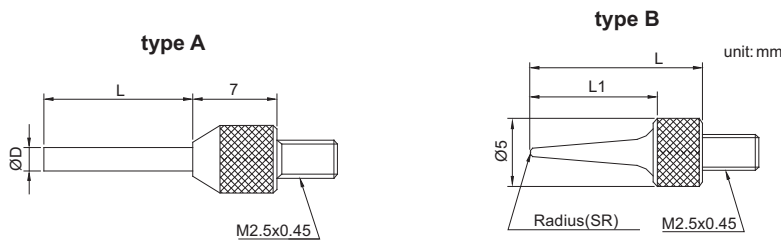
type C

Code	Material
270-005-21	carbide

Needle Point



270-006-21



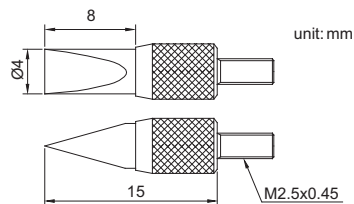
type B

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

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

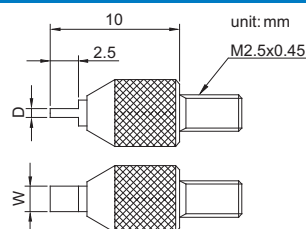
Knife Edge Point



Blade Point



270-008-01



Code	Material
270-007-01	steel

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

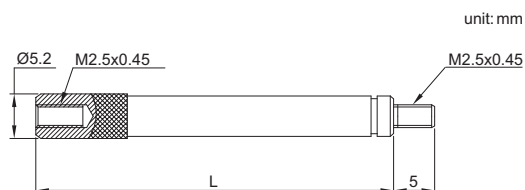


SERIES 270

EXTENSION ROD FOR CONTACT POINTS



270-000-13



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

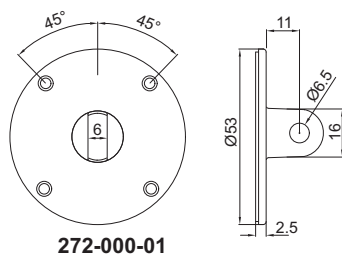
SERIES 272

LUG AND FLAT BACK

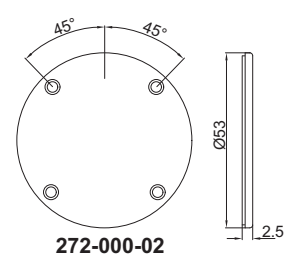


272-000-01

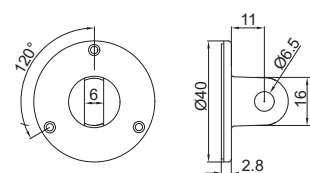
unit: mm



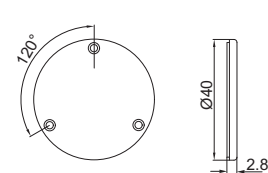
272-000-01



272-000-02



272-000-03



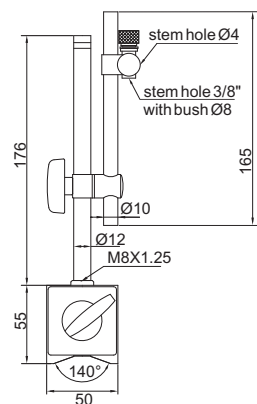
272-000-04

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

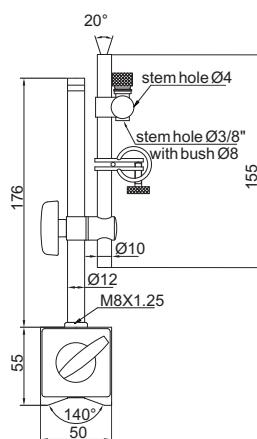
MAGNETIC STAND

SERIES 281

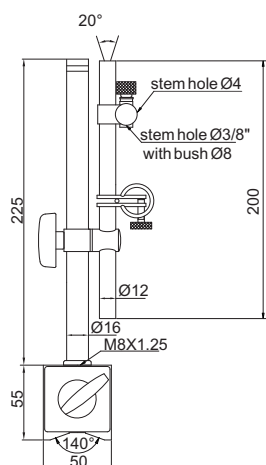
unit: mm



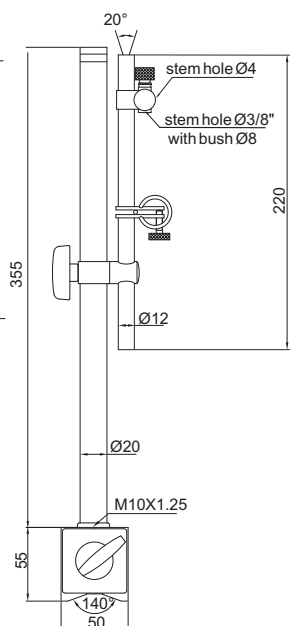
281-060-02



281-060-01



281-080-01



281-100-01



281-060-02



281-060-01

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

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



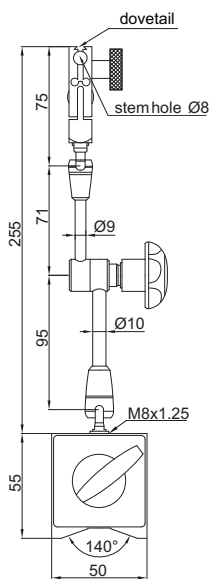
SERIES 282

UNIVERSAL MAGNETIC STAND

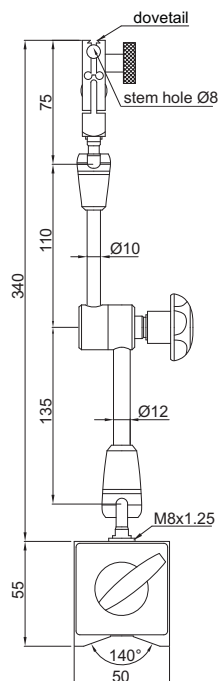
- ◆ For dial/digital indicators and dial test indicators
- ◆ Stem hole: Ø8mm
- ◆ With find adjustment and dovetail
- ◆ V-block base



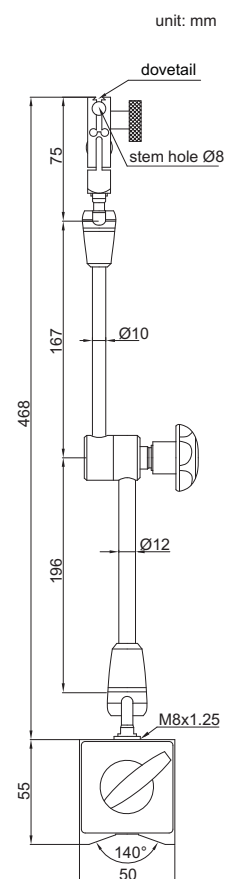
282-080-01



282-080-01



282-080-02



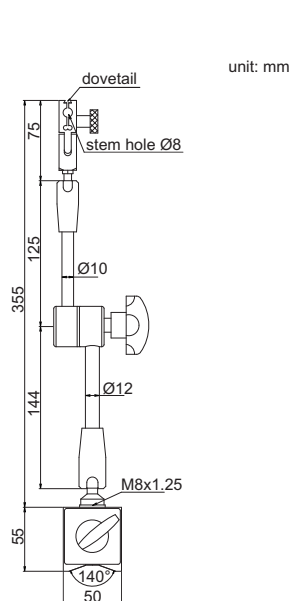
282-100-01

unit: mm

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

UNIVERSAL MAGNETIC STAND

283

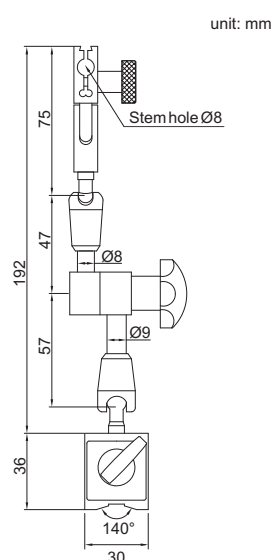


- ◆ Economic type
- ◆ For dial/digital indicators and dial test indicators
- ◆ Stem hole: Ø8mm
- ◆ With find adjustment and dovetail
- ◆ V-block base

Code	Magnetic force
283-080-01	80kgf

MINI MAGNETIC STAND

286



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

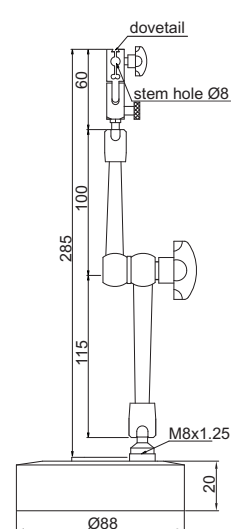
Code	Magnetic force	Stem hole
286-040-01	40kgf	Ø8mm



284

VACUUM STAND

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



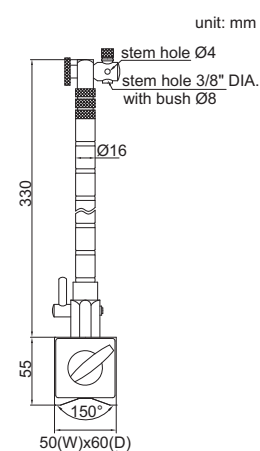
unit: mm

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

285

FLEX ARM MAGNETIC STAND

- ◆ For dial test indicators

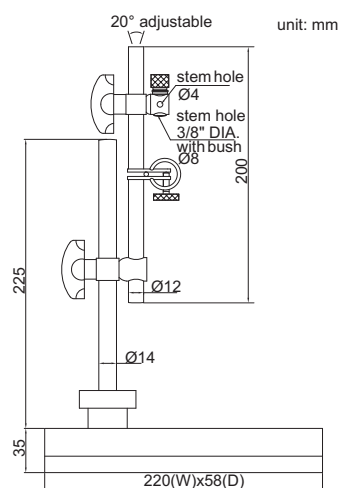


unit: mm

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

UNIVERSAL STAND

287

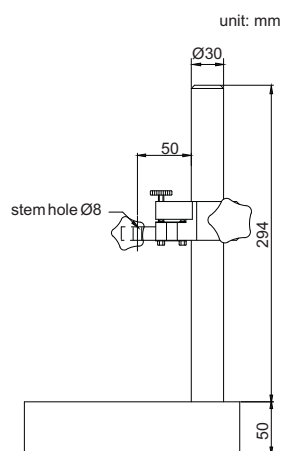


- ♦ For dial/digital indicators and dial test indicators
- ♦ indicators

Code	Applicable holding stem	Remark
287-001-01	Ø8mm, Ø4mm, 3/8" DIA.	with fine adjustment

INDICATOR STAND WITH GRANITE BASE

SERIES 289



289-008-01

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

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



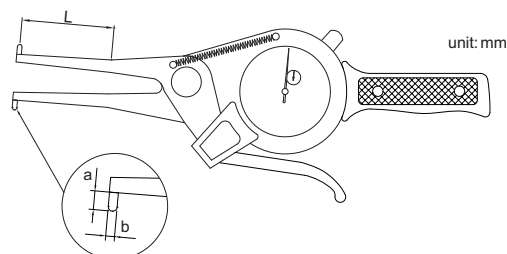
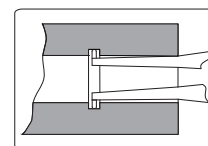
SERIES 411

INTERNAL DIAL CALIPER GAUGE

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



411-035-11



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

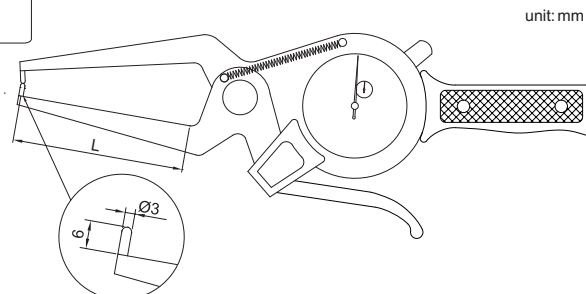
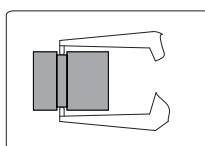
SERIES 421

EXTERNAL DIAL CALIPER GAUGE

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



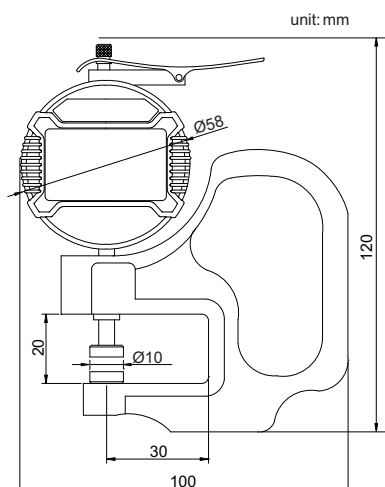
421-020-11



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 GAUGE

SERIES 441



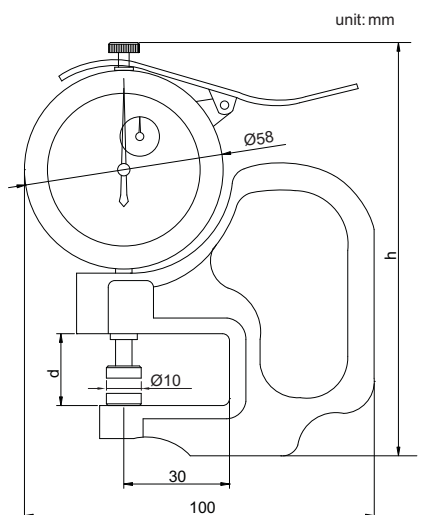
441-010-11

- ◆ Ceramic anvil
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Automatic power off
- ◆ Data output (cable code: 200-01 or 200-02)

Code	Range	Resolution	Accuracy
441-010-01	0-10mm/0-0.4"	0.001mm/0.00005"	±0.005mm
441-010-11	0-10mm/0-0.4"	0.01mm/0.0005"	±0.02mm

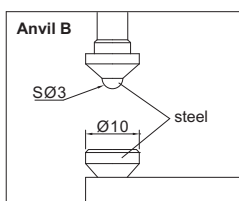
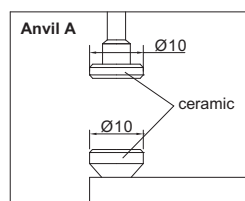
THICKNESS GAUGE

SERIES 443



443-010-11

- ◆ Graduation: 0.01mm

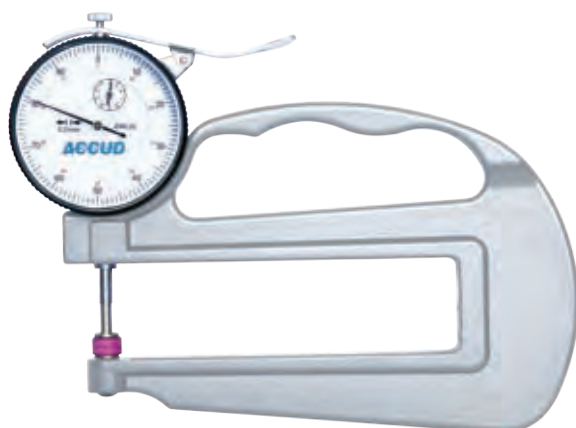


Code	Range	Accuracy	Anvil	d	h
443-010-11	0-10mm	±0.02mm	A	20	120
443-010-12	0-10mm	±0.02mm	B	20	120
443-030-11	0-30mm	±0.035mm	A	38	140

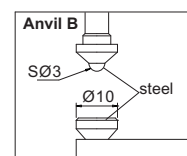
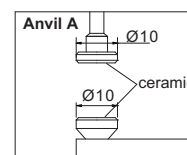
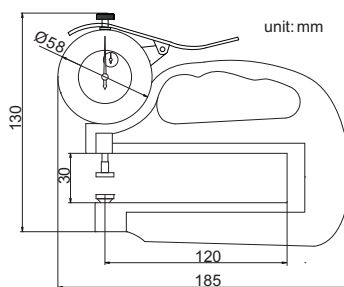
SERIES 444

THICKNESS GAUGE

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



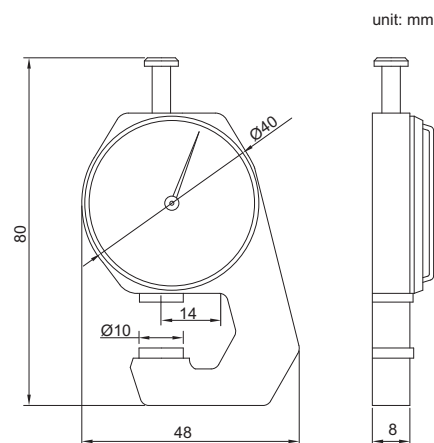
444-010-11



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

446

THICKNESS GAUGE



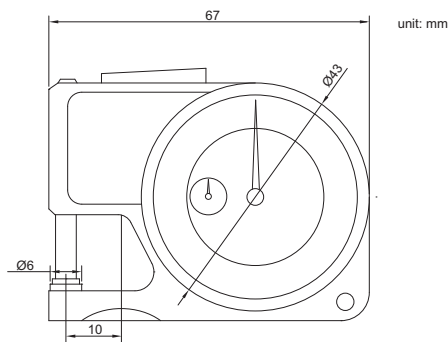
Code	Range	Graduation	Accuracy
446-010-11	0-10mm	0.1mm	±0.05mm

THICKNESS GAUGE

447



- ◆ Stainless steel spindle tip and anvil



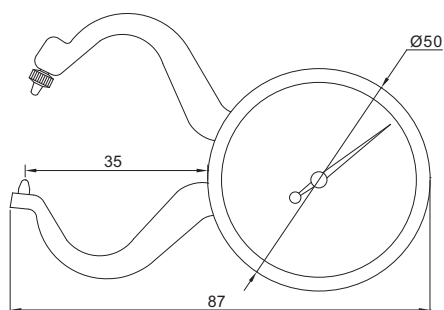
Code	Range	Graduation	Accuracy
447-010-11	0-10mm	0.01mm	±0.02mm

THICKNESS GAUGE

451



unit: mm



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

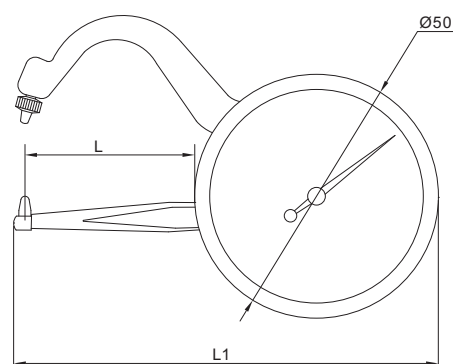


SERIES 452

THICKNESS GAUGE



452-010-11

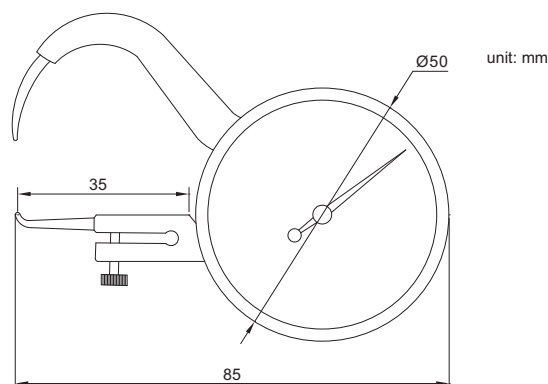


Code	Range	Graduation	Accuracy	L	L1
452-010-11	0-10mm	0.05mm	±0.1mm	35	85
452-010-12	0-10mm	0.05mm	±0.1mm	60	110

453

THICKNESS GAUGE WITH POINTED TIPS

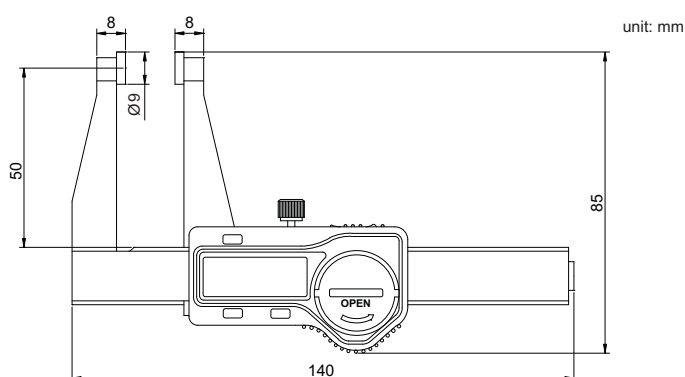
- ◆ Pointed tips can be used for small grooves and recesses



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

DIGITAL SNAP GAGE

433



- ◆ 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

STEEL INDIVIDUAL GAUGE BLOCK (≥ 10 MM)

SERIES 514



514-004-1X

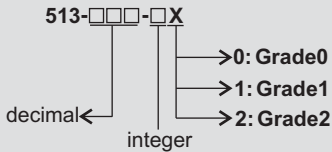
- ◆ Made of steel
- ◆ Meet ISO 3650
- ◆ With calibration certificate
- ◆ Code explanation
514-□□□-□X
 - 0: Grade0
 - 1: Grade1
 - 2: Grade2

Code	Size(mm)	Code	Size(mm)	Code	Size(mm)	Code	Size(mm)	Code	Size(mm)
514-100-0X	10	514-155-0X	15.5	514-210-0X	21	514-413-0X	41.3	514-010-1X	250
514-103-0X	10.3	514-160-0X	16	514-215-0X	21.5	514-450-0X	45	514-012-1X	300
514-105-0X	10.5	514-165-0X	16.5	514-220-0X	22	514-500-0X	50	514-016-1X	400
514-110-0X	11	514-170-0X	17	514-225-0X	22.5	514-600-0X	60	514-020-1X	500
514-115-0X	11.5	514-175-0X	17.5	514-228-0X	22.8	514-700-0X	70	514-024-1X	600
514-120-0X	12	514-176-0X	17.6	514-230-0X	23	514-750-0X	75	514-028-1X	700
514-125-0X	12.5	514-180-0X	18	514-235-0X	23.5	514-800-0X	80	514-030-1X	750
514-129-0X	12.9	514-185-0X	18.5	514-240-0X	24	514-900-0X	90	514-032-1X	800
514-130-0X	13	514-190-0X	19	514-245-0X	24.5	514-004-1X	100	514-036-1X	900
514-135-0X	13.5	514-195-0X	19.5	514-250-0X	25	514-005-1X	125	514-040-1X	1000
514-140-0X	14	514-200-0X	20	514-300-0X	30	514-006-1X	150		
514-145-0X	14.5	514-202-0X	20.2	514-350-0X	35	514-007-1X	175		
514-150-0X	15	514-205-0X	20.5	514-400-0X	40	514-008-1X	200		

SERIES 513

STEEL INDIVIDUAL GAUGE BLOCK(<10MM)

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



513-700-70

Supplied below size, unit:mm

0.5	0.85	1.01	1.36	2.06	2.38
0.51	0.86	1.02	1.37	2.07	2.39
0.52	0.87	1.03	1.38	2.08	2.4
0.53	0.88	1.04	1.39	2.09	2.41
0.54	0.89	1.05	1.4	2.1	2.42
0.55	0.9	1.06	1.41	2.11	2.43
0.56	0.91	1.07	1.42	2.12	2.44
0.57	0.92	1.08	1.43	2.13	2.45
0.58	0.93	1.09	1.44	2.14	2.46
0.59	0.94	1.1	1.45	2.15	2.47
0.6	0.95	1.11	1.46	2.16	2.48
0.61	0.96	1.12	1.47	2.17	2.49
0.62	0.97	1.13	1.48	2.19	2.5
0.63	0.98	1.14	1.49	2.2	2.6
0.64	0.99	1.15	1.5	2.21	2.7
0.65	0.991	1.16	1.6	2.22	2.8
0.66	0.992	1.17	1.7	2.23	2.9
0.67	0.993	1.18	1.8	2.24	3
0.68	0.994	1.19	1.9	2.25	3.5
0.69	0.995	1.2	2	2.26	4
0.7	0.996	1.21	2.0005	2.27	4.5
0.71	0.997	1.22	2.001	2.28	5
0.72	0.998	1.23	2.002	2.29	5.1
0.73	0.999	1.24	2.003	2.3	5.5
0.74	1	1.25	2.004	2.31	6
0.75	1.0005	1.26	2.005	2.32	6.5
0.76	1.001	1.27	2.006	2.33	7
0.77	1.002	1.28	2.007	2.34	7.5
0.78	1.003	1.29	2.008	2.35	7.7
0.79	1.004	1.3	2.009	2.36	8
0.8	1.005	1.31	2.01	2.37	8.5
0.81	1.006	1.32	2.02	2.38	9
0.82	1.007	1.33	2.03	2.39	9.5
0.83	1.008	1.34	2.04	2.4	
0.84	1.009	1.35	2.05	2.41	

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
513-500-51	5.5	1

CERAMIC INDIVIDUAL GAUGE BLOCK ($\geq 10\text{MM}$)

SERIES 516



516-800-01

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

516-□□□-□X
 → 0: grade0
 → 1: grade1

Example:

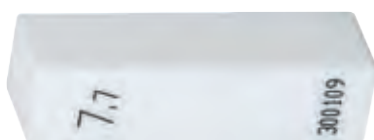
Code	Grade	Size(mm)
516-200-00	0	20
516-200-01	1	20

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



CERAMIC INDIVIDUAL GAUGE BLOCK ($<10\text{MM}$)

SERIES 515



515-700-70

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

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

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

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	

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

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
511-088-0X	88	1.0005		1
		1.001-1.009	0.001	9
		1.01-1.49	0.01	49
		0.5-9.5	0.5	19
		10-100	10	10
511-087-0X	87	1.001-1.009	0.001	9
		1.01-1.49	0.01	49
		0.5-9.5	0.5	19
		10-100	10	10
511-076-0X	76	1.005		1
		1.01-1.49	0.01	49
		0.5-9.5	0.5	19
		10-40	10	4
		50-100	25	3
511-056-0X	56	0.5		1
		1.001-1.009	0.001	9
		1.01-1.09	0.01	9
		1.1-1.9	0.1	9
		1-24	1	24
		25-100	25	4

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
		50	10	1

STEEL GAUGE BLOCK SET

SERIES 512



512-087-02

- ◆ 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

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
512-112-0X	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
512-103-0X	103	1.005		1
		1.01-1.49	0.01	49
		0.5-24.5	0.5	49
		25-100	25	4
512-088-0X	88	1.0005		1
		1.001-1.009	0.001	9
		1.01-1.49	0.01	49
		0.5-9.5	0.5	19
512-087-0X	87	1.001-1.009	0.001	9
		1.01-1.49	0.01	49
		0.5-9.5	0.5	19
		10-100	10	10
512-083-0X	83	0.5		1
		1		1
		1.005		1
		1.01-1.49	0.01	49
		1.5-1.9	0.1	5
		2-9.5	0.5	16
		10-100	10	10
512-076-0X	76	1.005		1
		1.01-1.49	0.01	49
		0.5-9.5	0.5	19
		10-40	10	4
		50-100	25	3

Code	Blocks per set	Block allocation		
		Size(mm)	Step(mm)	Quantity
512-056-0X	56	0.5		1
		1.001-1.009	0.001	9
		1.01-1.09	0.01	9
		1.1-1.9	0.1	9
		1-24	1	24
		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
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
512-034-0X	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
512-032-0X	32	10		1
		1.005		1
		1.01-1.09	0.01	9
		1.1-1.9	0.1	9
		1-9	1	9
512-008-0X	8	10-30	10	3
		50		1
		125-175	25	3
		200-250	50	2
		300-500	100	3



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

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
512-112-0XT	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
512-103-0XT	103	1.005		1
		1.01-1.49	0.01	49
		0.5-24.5	0.5	49
		25-100	25	4
512-087-0XT	87	1.001-1.009	0.001	9
		1.01-1.49	0.01	49
		0.5-9.5	0.5	19
		10-100	10	10
512-083-0XT	83	0.5		1
		1		1
		1.005		1
		1.01-1.49	0.01	49
		1.5-1.9	0.1	5
		2-9.5	0.5	16
		10-100	10	10

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
512-047-1XT	47	25-100	25	4
		1.005		1
		1.01-1.19	0.01	19
		1.2-1.9	0.1	8
512-046-0XT	46	1-9	1	9
		10-100	10	10
		1.001-1.009	0.001	9
		1.01-1.09	0.01	9
		1.1-1.9	0.1	9
512-032-0XT	32	1-9	1	9
		10-30	10	3
		50		1
		1.005		1
		1.01-1.09	0.01	9
		1.1-1.9	0.1	9
		1-9	1	9

GAUGE BLOCK SET FOR CALIPER INSPECTION

SERIES 517



517-012-01



517-005-01

- ◆ For checking calipers accuracy
- ◆ Gauge blocks are made of alloy steel

Code	Gauge 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	5pcs	1	Ø4, Ø25mm
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	—



GAUGE BLOCK SET FOR MICROMETER INSPECTION

SERIES 518



518-001-03

- ◆ For checking micrometers accuracy
- ◆ Grade 0

Code	For micrometers	Block allocation	Quantity	Optical parallel	Material
518-001-01	0-25	2.5, 5.1, 7.7, 10.3, 12.9, 15, 17.6, 20.2, 22.8, 25	10pcs	not included	alloy steel
518-002-01	25-50	27.5, 30.1, 32.7, 35.3, 37.9, 40, 42.6, 45.2, 47.8, 50	10pcs	not included	alloy steel
518-003-01	50-75	52.5, 55.1, 57.7, 60.3, 62.9, 65, 67.6, 70.2, 72.8, 75	10pcs	not included	alloy steel
518-004-01	75-100	77.5, 80.1, 82.7, 85.3, 87.9, 90, 92.6, 95.2, 97.8, 100	10pcs	not included	alloy steel
518-001-02	0-25	2.5, 5.1, 7.7, 10.3, 12.9, 15, 17.6, 20.2, 22.8, 25	11pcs	included	ceramic
518-001-03	0-25	2.5, 5.1, 7.7, 10.3, 12.9, 15, 17.6, 20.2, 22.8, 25	11pcs	included	alloy steel

(mm)

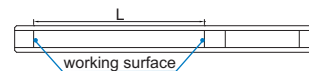
SERIES 520

GAUGE BLOCK ACCESSORIES

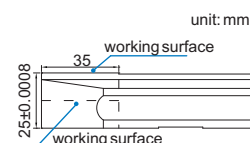
Code	Name	Clamping range (L)
520-002-11	holder	0-50mm
520-004-11	holder	50-100mm
520-008-11	holder	100-200mm
520-012-11	holder	200-300mm
520-016-11	holder	300-400mm
520-020-11	holder	400-500mm



520-004-11

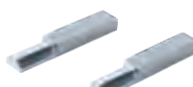


Code	Name
520-100-11	base

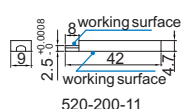


unit: mm

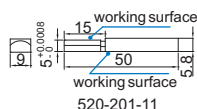
Code	Name	Size	Material
520-200-11	half round jaw	2mm	carbide
520-201-11	half round jaw	5mm	carbide
520-202-11	half round jaw	10mm	carbide



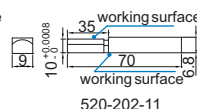
supplied a pair



520-200-11



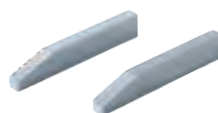
520-201-11



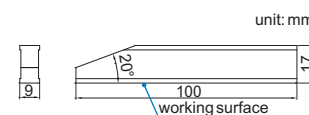
520-202-11

unit: mm

Code	Name	Material
520-300-11	plain jaw	carbide

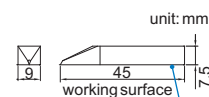


supplied a pair



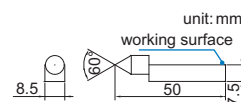
unit: mm

Code	Name	Material
520-400-11	scriber	carbide



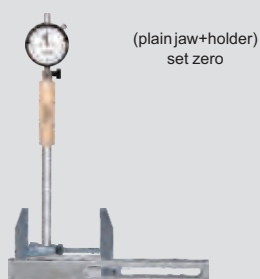
unit: mm

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



unit: mm

Application



(plain jaw+holder)
set zero



(half round jaw+holder) set a standard inside length L



(half round jaw+holder)
measure inside diameter



(base+holder+scriber)
measure height or scribe



(scriber+centre point+holder)
scribe circle

GAUGE BLOCK ACCESSORY

SERIES 519



- ◆ To expand gage block applications

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



OPTICAL PARALLEL

SERIES 551



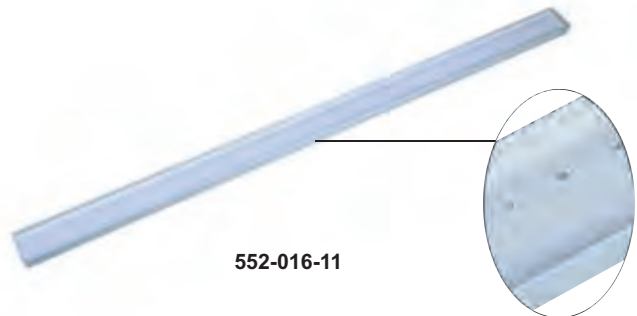
- ◆ Check the flatness and parallelism of measuring faces of micrometer

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

SERIES 552

GLASS SCALE

- ◆ For calibrating the accuracy of vision machine or profile projector
- ◆ Graduation: 1mm



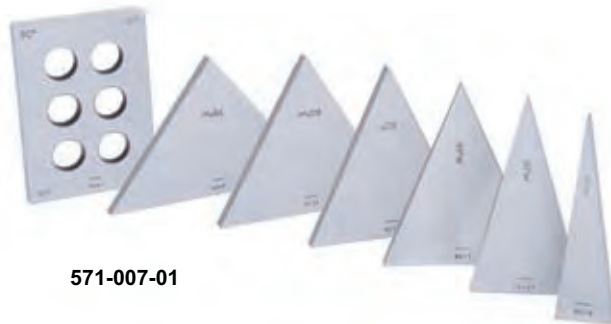
552-016-11

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 571

ANGLE GAUGE BLOCK SET

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

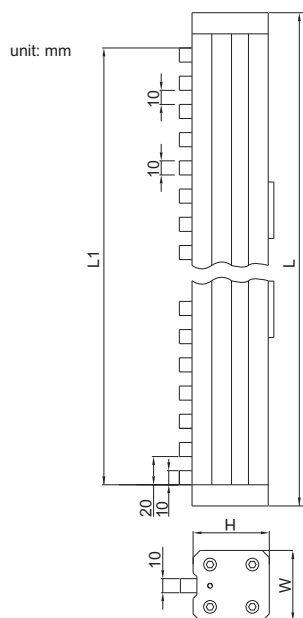


571-007-01

Code	Blocks per set	Accuracy	Sharp	Angle
571-007-01	7	±10"	triangle	15°10', 30°20', 45°30', 50°, 60°40', 75°50', 90°
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°
571-036-01	36	±10"	triangle	10°, 11°, 12°, 13°, 14°, 15°, 16°, 17°, 18°, 19°, 20°
				30°, 40°, 45°, 50°, 60°, 70°
				15°1', 15°2', 15°3', 15°4', 15°5', 15°6', 15°7', 15°8', 15°9'
				15°10', 15°20', 15°30', 15°40', 15°50', 10°00'30"
			rectangle	80°/81°/100°/99°
				89°10'/89°20'/90°50'/90°40'
				89°30'/89°40'/90°30'/90°20'
				90°/90°/90°/90°

CHECK MASTER

SERIES 561



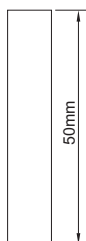
561-024-01

- ◆ 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

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

PIN GAUGE

SERIES 522



522-06933-2

- ◆ Supplied diameter from 0.10 to 40mm, 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

Example:

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

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	Code	Diameter(mm)	Step	Quantity	Code	Diameter(mm)	Step	Quantity
523-010-41	0.10-0.50	0.01mm	41	523-700-51	7.00-7.50	0.01mm	51	523-1350-51	13.50-14.00	0.01mm	51
523-020-31	0.20-0.50	0.01mm	31	523-750-51	7.50-8.00	0.01mm	51	523-1400-51	14.00-14.50	0.01mm	51
523-050-51	0.50-1.00	0.01mm	51	523-800-51	8.00-8.50	0.01mm	51	523-1450-51	14.50-15.00	0.01mm	51
523-100-51	1.00-1.50	0.01mm	51	523-850-51	8.50-9.00	0.01mm	51	523-1500-51	15.00-15.50	0.01mm	51
523-150-51	1.50-2.00	0.01mm	51	523-900-51	9.00-9.50	0.01mm	51	523-1550-51	15.50-16.00	0.01mm	51
523-200-51	2.00-2.50	0.01mm	51	523-950-51	9.50-10.00	0.01mm	51	523-1600-51	16.00-16.50	0.01mm	51
523-250-51	2.50-3.00	0.01mm	51	523-500-41	1.0-5.0	0.1mm	41	523-1650-51	16.50-17.00	0.01mm	51
523-300-51	3.00-3.50	0.01mm	51	523-500-51	5.0-10.0	0.1mm	51	523-1700-51	17.00-17.50	0.01mm	51
523-350-51	3.50-4.00	0.01mm	51	523-1000-51	10.00-10.50	0.01mm	51	523-1750-51	17.50-18.00	0.01mm	51
523-400-51	4.00-4.50	0.01mm	51	523-1050-51	10.50-11.00	0.01mm	51	523-1800-51	18.00-18.50	0.01mm	51
523-450-51	4.50-5.00	0.01mm	51	523-1100-51	11.00-11.50	0.01mm	51	523-1850-51	18.50-19.00	0.01mm	51
523-500-01	5.00-5.50	0.01mm	51	523-1150-51	11.50-12.00	0.01mm	51	523-1900-51	19.00-19.50	0.01mm	51
523-550-51	5.50-6.00	0.01mm	51	523-1200-51	12.00-12.50	0.01mm	51	523-1950-51	19.50-20.00	0.01mm	51
523-600-51	6.00-6.50	0.01mm	51	523-1250-51	12.50-13.00	0.01mm	51	523-1000-01	10.0-15.0mm	0.1mm	51
523-650-51	6.50-7.00	0.01mm	51	523-1300-51	13.00-13.50	0.01mm	51	523-1500-01	15.0-20.0mm	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	10-17.5mm	72
524-001-03	17.5-25mm	50
524-001-04	25-34mm	32

SETTING RING

SERIES 531



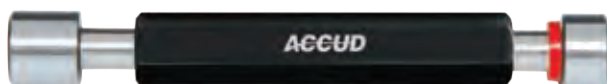
531-040-01

- ◆ 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: $\varnothing 3-300\text{mm}$
- ◆ Other sizes are available upon request

Code	Size(mm)	Code	Size(mm)	Code	Size(mm)	Code	Size(mm)	Code	Size(mm)
531-003-01	Ø3	531-017-01	Ø17	531-031-01	Ø31	531-045-01	Ø45	531-087-01	Ø87
531-004-01	Ø4	531-018-01	Ø18	531-032-01	Ø32	531-046-01	Ø46	531-090-01	Ø90
531-005-01	Ø5	531-019-01	Ø19	531-033-01	Ø33	531-047-01	Ø47	531-095-01	Ø95
531-006-01	Ø6	531-020-01	Ø20	531-034-01	Ø34	531-048-01	Ø48	531-100-01	Ø100
531-007-01	Ø7	531-021-01	Ø21	531-035-01	Ø35	531-049-01	Ø49	531-125-01	Ø125
531-008-01	Ø8	531-022-01	Ø22	531-036-01	Ø36	531-050-01	Ø50	531-150-01	Ø150
531-009-01	Ø9	531-023-01	Ø23	531-037-01	Ø37	531-055-01	Ø55	531-175-01	Ø175
531-010-01	Ø10	531-024-01	Ø24	531-038-01	Ø38	531-060-01	Ø60	531-200-01	Ø200
531-011-01	Ø11	531-025-01	Ø25	531-039-01	Ø39	531-062-01	Ø62	531-225-01	Ø225
531-012-01	Ø12	531-026-01	Ø26	531-040-01	Ø40	531-065-01	Ø65	531-250-01	Ø250
531-013-01	Ø13	531-027-01	Ø27	531-041-01	Ø41	531-070-01	Ø70	531-275-01	Ø275
531-014-01	Ø14	531-028-01	Ø28	531-042-01	Ø42	531-075-01	Ø75	531-300-01	Ø300
531-015-01	Ø15	531-029-01	Ø29	531-043-01	Ø43	531-080-01	Ø80		
531-016-01	Ø16	531-030-01	Ø30	531-044-01	Ø44	531-085-01	Ø85		

PLAIN PLUG GAUGE

SERIES 541



541-010-17

- ◆ Grade H7
- ◆ Hardness HRC 60±2
- ◆ Supplied range from 1mm to 100mm, step: 1mm, other sizes or grade are available upon request
- ◆ Code explanation

541-□□□-17

→: Range

Example:

Code	Size(mm)	Code	Size(mm)
541-002-17	2	541-050-17	50
541-010-17	10	541-100-17	100



532/533/534/535

THREAD RING GAUGE

- ◆ Grade 6g
- ◆ Meet ISO1502
- ◆ Hardness HRC60-62
- ◆ Other sizes are available upon request



532-020-01



533-020-01

STANDARD THREAD

Code(GO)	Code(NOGO)	Size(mm)	Code(GO)	Code(NOGO)	Size(mm)	Code(GO)	Code(NOGO)	Size(mm)
532-002-01	533-002-01	M2x0.4	532-010-01	533-010-01	M10x1.5	532-030-01	533-030-01	M30x3.5
532-002-21	533-002-21	M2.2x0.45	532-012-01	533-012-01	M12x1.75	532-033-01	533-033-01	M33x3.5
532-002-51	533-002-51	M2.5x0.45	532-014-01	533-014-01	M14x2	532-036-01	533-036-01	M36x4
532-003-01	533-003-01	M3x0.5	532-016-01	533-016-01	M16x2	532-042-01	533-042-01	M42x4.5
532-003-51	533-003-51	M3.5x0.6	532-018-01	533-018-01	M18x2.5	532-048-01	533-048-01	M48x5
532-004-01	533-004-01	M4x0.7	532-020-01	533-020-01	M20x2.5	532-052-01	533-052-01	M52x5
532-005-01	533-005-01	M5x0.8	532-022-01	533-022-01	M22x2.5	532-060-01	533-060-01	M60x5.5
532-006-01	533-006-01	M6x1	532-024-01	533-024-01	M24x3			
532-008-01	533-008-01	M8x1.25	532-027-01	533-027-01	M27x3			

FINE THREAD

Code(GO)	Code(NOGO)	Size(mm)	Code(GO)	Code(NOGO)	Size(mm)	Code(GO)	Code(NOGO)	Size(mm)
534-002-01	535-002-01	M2x0.25	534-018-01	535-018-01	M18x0.5	534-039-01	535-039-01	M39x1
534-002-21	535-002-21	M2.2x0.25	534-018-02	535-018-02	M18x0.75	534-039-02	535-039-02	M39x1.5
534-002-51	535-002-51	M2.5x0.35	534-018-03	535-018-03	M18x1	534-039-03	535-039-03	M39x2
534-003-01	535-003-01	M3x0.35	534-018-04	535-018-04	M18x1.5	534-039-04	535-039-04	M39x3
534-003-51	535-003-51	M3.5x0.35	534-018-05	535-018-05	M18x2	534-042-01	535-042-01	M42x1
534-004-01	535-004-01	M4x0.5	534-020-01	535-020-01	M20x0.5	534-042-02	535-042-02	M42x1.5
534-005-01	535-005-01	M5x0.5	534-020-02	535-020-02	M20x0.75	534-042-03	535-042-03	M42x2
534-006-01	535-006-01	M6x0.5	534-020-03	535-020-03	M20x1	534-042-04	535-042-04	M42x3
534-006-02	535-006-02	M6x0.75	534-020-04	535-020-04	M20x1.5	534-042-05	535-042-05	M42x4
534-007-01	535-007-01	M7x0.5	534-020-05	535-020-05	M20x2	534-045-01	535-045-01	M45x1
534-007-02	535-007-02	M7x0.75	534-022-01	535-022-01	M22x0.5	534-045-02	535-045-02	M45x1.5
534-008-01	535-008-01	M8x0.5	534-022-02	535-022-02	M22x0.75	534-045-03	535-045-03	M45x2
534-008-02	535-008-02	M8x0.75	534-022-03	535-022-03	M22x1	534-045-04	535-045-04	M45x3
534-008-03	535-008-03	M8x1	534-022-04	535-022-04	M22x1.5	534-045-05	535-045-05	M45x4
534-009-01	535-009-01	M9x0.5	534-022-05	535-022-05	M22x2	534-048-01	535-048-01	M48x1
534-009-02	535-009-02	M9x0.75	534-024-01	535-024-01	M24x0.75	534-048-02	535-048-02	M48x1.5
534-009-03	535-009-03	M9x1	534-024-02	535-024-02	M24x1	534-048-03	535-048-03	M48x2
534-010-01	535-010-01	M10x0.5	534-024-03	535-024-03	M24x1.5	534-048-04	535-048-04	M48x3
534-010-02	535-010-02	M10x0.75	534-024-04	535-024-04	M24x2	534-048-05	535-048-05	M48x4
534-010-03	535-010-03	M10x1	534-027-01	535-027-01	M27x0.75	534-052-01	535-052-01	M52x1
534-010-04	535-010-04	M10x1.25	534-027-02	535-027-02	M27x1	534-052-02	535-052-02	M52x1.5
534-011-02	535-011-02	M11x0.75	534-027-03	535-027-03	M27x1.5	534-052-03	535-052-03	M52x2
534-011-03	535-011-03	M11x1	534-027-04	535-027-04	M27x2	534-052-04	535-052-04	M52x3
534-012-01	535-012-01	M12x0.5	534-030-01	535-030-01	M30x0.75	534-052-05	535-052-05	M52x4
534-012-02	535-012-02	M12x0.75	534-030-02	535-030-02	M30x1	534-056-01	535-056-01	M56x1
534-012-03	535-012-03	M12x1	534-030-03	535-030-03	M30x1.5	534-056-02	535-056-02	M56x1.5
534-012-04	535-012-04	M12x1.25	534-030-04	535-030-04	M30x2	534-056-03	535-056-03	M56x2
534-012-05	535-012-05	M12x1.5	534-030-05	535-030-05	M30x3	534-056-04	535-056-04	M56x3
534-014-01	535-014-01	M14x0.5	534-033-01	535-033-01	M33x0.75	534-056-05	535-056-05	M56x4
534-014-02	535-014-02	M14x0.75	534-033-02	535-033-02	M33x1	534-060-01	535-060-01	M60x1
534-014-03	535-014-03	M14x1	534-033-03	535-033-03	M33x1.5	534-060-02	535-060-02	M60x1.5
534-014-04	535-014-04	M14x1.25	534-033-04	535-033-04	M33x2	534-060-03	535-060-03	M60x2
534-014-05	535-014-05	M14x1.5	534-033-05	535-033-05	M33x3	534-060-04	535-060-04	M60x3
534-016-01	535-016-01	M16x0.5	534-036-01	535-036-01	M36x1	534-060-05	535-060-05	M60x4
534-016-02	535-016-02	M16x0.75	534-036-02	535-036-02	M36x1.5			
534-016-03	535-016-03	M16x1	534-036-03	535-036-03	M36x2			
534-016-04	535-016-04	M16x1.5	534-036-04	535-036-04	M36x3			

THREAD PLUG GAUGE

SERIES 542



542-010-01

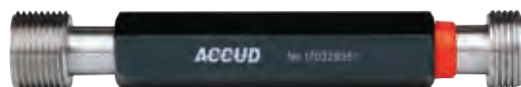
- ◆ Grade 6H
- ◆ Meet ISO1502
- ◆ Hardness HRC60-62
- ◆ Other sizes are available upon request

Code	Size(mm)	Code	Size(mm)	Code	Size(mm)	Code	Size(mm)
542-002-01	M2x0.4	542-007-01	M7x1	542-018-01	M18x2.5	542-039-01	M39x4
542-002-21	M2.2x0.45	542-008-01	M8x1.25	542-020-01	M20x2.5	542-042-01	M42x4.5
542-002-51	M2.5x0.45	542-009-01	M9x1.25	542-022-01	M22x2.5	542-045-01	M45x4.5
542-003-01	M3x0.5	542-010-01	M10x1.5	542-024-01	M24x3	542-048-01	M48x5
542-003-02	M3.5x0.6	542-011-01	M11x1.5	542-027-01	M27x3	542-052-01	M52x5
542-004-01	M4x0.7	542-012-01	M12x1.75	542-030-01	M30x3.5	542-056-01	M56x5.5
542-005-01	M5x0.8	542-014-01	M14x2	542-033-01	M33x3.5	542-060-01	M60x5.5
542-006-01	M6x1	542-016-01	M16x2	542-036-01	M36x4		



FINE THREAD PLUG GAUGE

SERIES 543



543-020-01

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

Code	Size(mm)	Code	Size(mm)	Code	Size(mm)	Code	Size(mm)	Code	Size(mm)
543-002-01	M2x0.25	543-011-02	M11x0.75	543-020-02	M20x0.75	543-033-01	M33x0.75	543-045-05	M45x4
543-002-21	M2.2x0.25	543-011-03	M11x1	543-020-03	M20x1	543-033-02	M33x1	543-048-01	M48x1
543-002-31	M2.5x0.35	543-012-01	M12x0.5	543-020-04	M20x1.5	543-033-03	M33x1.5	543-048-02	M48x1.5
543-003-01	M3x0.35	543-012-02	M12x0.75	543-020-05	M20x2	543-033-04	M33x2	543-048-03	M48x2
543-003-02	M3.5x0.35	543-012-03	M12x1	543-022-01	M22x0.5	543-033-05	M33x3	543-048-04	M48x3
543-004-01	M4x0.5	543-012-04	M12x1.25	543-022-02	M22x0.75	543-036-01	M36x1	543-048-05	M48x4
543-005-01	M5x0.5	543-012-05	M12x1.5	543-022-03	M22x1	543-036-02	M36x1.5	543-052-01	M52x1
543-006-01	M6x0.5	543-014-01	M14x0.5	543-022-04	M22x1.5	543-036-03	M36x2	543-052-02	M52x1.5
543-006-02	M6x0.75	543-014-02	M14x0.75	543-022-05	M22x2	543-036-04	M36x3	543-052-03	M52x2
543-007-01	M7x0.5	543-014-03	M14x1	543-024-01	M24x0.75	543-039-01	M39x1	543-052-04	M52x3
543-007-02	M7x0.75	543-014-04	M14x1.25	543-024-02	M24x1	543-039-02	M39x1.5	543-052-05	M52x4
543-008-01	M8x0.5	543-014-05	M14x1.5	543-024-03	M24x1.5	543-039-03	M39x2	543-056-01	M56x1
543-008-02	M8x0.75	543-016-01	M16x0.5	543-024-04	M24x2	543-039-04	M39x3	543-056-02	M56x1.5
543-008-03	M8x1	543-016-02	M16x0.75	543-027-01	M27x0.75	543-042-01	M42x1	543-056-03	M56x2
543-009-01	M9x0.5	543-016-03	M16x1	543-027-02	M27x1	543-042-02	M42x1.5	543-056-04	M56x3
543-009-02	M9x0.75	543-016-04	M16x1.5	543-027-03	M27x1.5	543-042-03	M42x2	543-056-05	M56x4
543-009-03	M9x1	543-018-01	M18x0.5	543-027-04	M27x2	543-042-04	M42x3	543-060-01	M60x1
543-010-01	M10x0.5	543-018-02	M18x0.75	543-030-01	M30x0.75	543-042-05	M42x4	543-060-02	M60x1.5
543-010-02	M10x0.75	543-018-03	M18x1	543-030-02	M30x1	543-045-01	M45x1	543-060-03	M60x2
543-010-03	M10x1	543-018-04	M18x1.5	543-030-03	M30x1.5	543-045-02	M45x1.5	543-060-04	M60x3
543-010-04	M10x1.25	543-018-05	M18x2	543-030-04	M30x2	543-045-03	M45x2	543-060-05	M60x4
543-011-01	M11x0.5	543-020-01	M20x0.5	543-030-05	M30x3	543-045-04	M45x3		

SERIES 537/538

AMERICAN STANDARD THREAD RING GAGE

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



537-71620-UNF

Code(GO)	Code(NOGO)	Size	Code(GO)	Code(NOGO)	Size	Code(GO)	Code(NOGO)	Size
537-00440-UNC	538-00440-UNC	4-40UNC	537-51618-UNC	538-51618-UNC	5/16-18UNC	537-05811-UNC	538-05811-UNC	5/8-11UNC
537-04048-UNF	538-04048-UNF	4-48UNF	537-51624-UNF	538-51624-UNF	5/16-24UNF	537-05818-UNF	538-05818-UNF	5/8-18UNF
537-00632-UNC	538-00632-UNC	6-32UNC	537-03816-UNC	538-03816-UNC	3/8-16UNC	537-03410-UNC	538-03410-UNC	3/4-10UNC
537-06040-UNF	538-06040-UNF	6-40UNF	537-03824-UNF	538-03824-UNF	3/8-24UNF	537-03416-UNF	538-03416-UNF	3/4-16UNF
537-00832-UNC	538-00832-UNC	8-32UNC	537-71614-UNC	538-71614-UNC	7/16-14UNC	537-07809-UNC	538-07809-UNC	7/8-9UNC
537-08036-UNF	538-08036-UNF	8-36UNF	537-71620-UNF	538-71620-UNF	7/16-20 UNF	537-07814-UNF	538-07814-UNF	7/8-14UNF
537-01024-UNC	538-01024-UNC	10-24UNC	537-01213-UNC	538-01213-UNC	1/2-13 UNC	537-01080-UNC	538-01080-UNC	1-8 UNC
537-01032-UNF	538-01032-UNF	10-32UNF	537-01220-UNF	538-01220-UNF	1/2-20 UNF	537-01012-UNF	538-01012-UNF	1-12UNF
537-01420-UNC	538-01420-UNC	1/4-20UNC	537-91612-UNC	538-91612-UNC	9/16-12UNC			
537-01428-UNF	538-01428-UNF	1/4-28UNF	537-91618-UNF	538-91618-UNF	9/16-18UNF			

SERIES 547

AMERICAN STANDARD THREAD PLUG GAGE

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



547-71620-UNF

Code(GO)	Size	Code(GO)	Size	Code(GO)	Size
547-00440-UNC	4-40UNC	547-51618-UNC	5/16-18UNC	547-05811-UNC	5/8-11UNC
547-04048-UNF	4-48UNF	547-51624-UNF	5/16-24UNF	547-05818-UNF	5/8-18UNF
547-00632-UNC	6-32UNC	547-03816-UNC	3/8-16UNC	547-03410-UNC	3/4-10UNC
547-06040-UNF	6-40UNF	547-03824-UNF	3/8-24UNF	547-03416-UNF	3/4-16UNF
547-00832-UNC	8-32UNC	547-71614-UNC	7/16-14UNC	547-07809-UNC	7/8-9UNC
547-08036-UNF	8-36UNF	547-71620-UNF	7/16-20 UNF	547-07814-UNF	7/8-14UNF
547-01024-UNC	10-24UNC	547-01213-UNC	1/2-13 UNC	547-01080-UNC	1-8 UNC
547-01032-UNF	10-32UNF	547-01220-UNF	1/2-20 UNF	547-01012-UNF	1-12UNF
547-01420-UNC	1/4-20UNC	547-91612-UNC	9/16-12UNC		
547-01428-UNF	1/4-28UNF	547-91618-UNF	9/16-18UNF		

NPT THREAD GAUGE

SERIES 544

RING GAUGE



Back



Front

544-014-01R

- ◆ Conforms to standard ANSI/ASME B1.20.1
- ◆ Taper: 1:16
- ◆ Made of Oil Hardened Non-shrinking steel
- ◆ Hardness HRC60-62

Code	Size	Code	Size
544-027-04R	NPT 1/16" x 27	544-11D5-12R	NPT1-1/4" x 11.5
544-027-03R	NPT 1/8" x 27	544-11D5-11R	NPT1-1/2" x 11.5
544-018-02R	NPT 1/4" x 18	544-11D5-20R	NPT2" x 11.5
544-018-33R	NPT 3/8" x 18	544-008-21R	NPT2-1/2" x 8
544-014-01R	NPT 1/2" x 14	544-008-30R	NPT3" x 8
544-014-32R	NPT 3/4" x 14	544-008-32R	NPT3-1/2" x 8
544-11D5-10R	NPT1" x 11.5	544-008-40R	NPT4" x 8

PLUG GAUGE



544-014-01

- ◆ Conforms to standard ANSI/ASME B1.20.1
- ◆ Taper: 1:16
- ◆ Made of Oil Hardened Non-shrinking steel
- ◆ Hardness HRC60-62

Code	Size	Code	Size
544-027-04	NPT 1/16" x 27	544-11D5-12	NPT1-1/4" x 11.5
544-027-03	NPT 1/8" x 27	544-11D5-11	NPT1-1/2" x 11.5
544-018-02	NPT 1/4" x 18	544-11D5-20	NPT2" x 11.5
544-018-33	NPT 3/8" x 18	544-008-21	NPT2-1/2" x 8
544-014-01	NPT 1/2" x 14	544-008-30	NPT3" x 8
544-014-32	NPT 3/4" x 14	544-008-32	NPT3-1/2" x 8
544-11D5-10	NPT1" x 11.5	544-008-40	NPT4" x 8

WITHWORTH PIPE THREAD GAUGE (G SERIES)

SERIES 535/536/545

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
- ◆ Class B

PLUG GAUGE



- ◆ Conforms to standard ISO228
- ◆ Class B

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

811

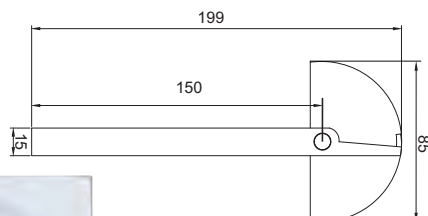
PROTRACTOR

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

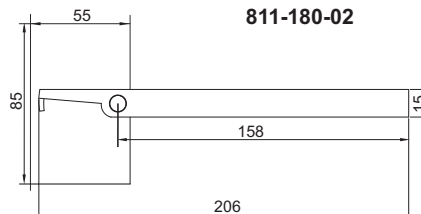


811-180-01

unit: mm



811-180-02



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

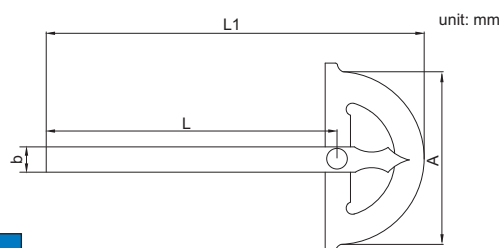
SERIES 812

PROTRACTOR

- ◆ Graduation : 1°
- ◆ Satin chrome plated scale
- ◆ With locking screw



812-003-01



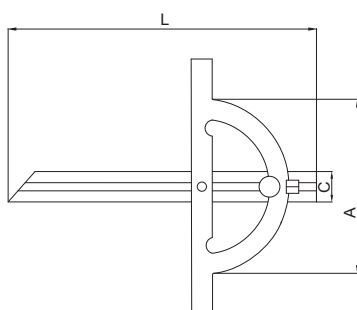
Code	Size(AxL)	Range	Accuracy	b	L1
812-003-01	80x120mm	0 - 180°	±0.3°	11	165
812-005-01	120x150mm	0 - 180°	±0.3°	14	220
812-006-01	150x200mm	0 - 180°	±0.3°	16	285
812-008-01	200x300mm	0 - 180°	±0.3°	20	413
812-012-01	300x500mm	0 - 180°	±0.3°	30	675

PROTRACTOR

SERIES 813



813-006-01

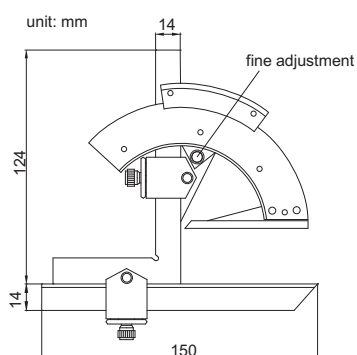
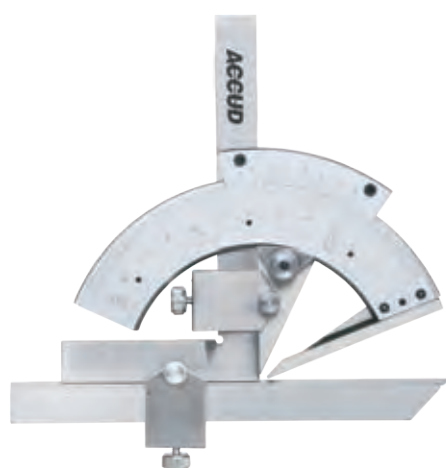


- ◆ Graduation : 1°
- ◆ Made of stainless steel
- ◆ Satin chrome plated scale
- ◆ The blade is moveable

Code	Size (A x L)	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

UNIVERSAL PROTRACTOR

814



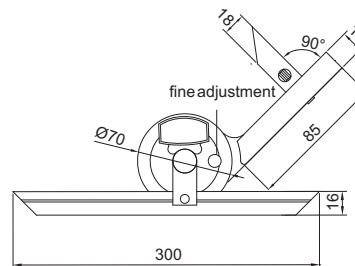
- ◆ Graduation : 2'
- ◆ Made of stainless steel
- ◆ Satin chrome plated scale

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

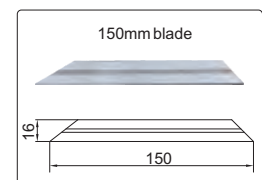
815

UNIVERSAL PROTRACTOR

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



unit: mm

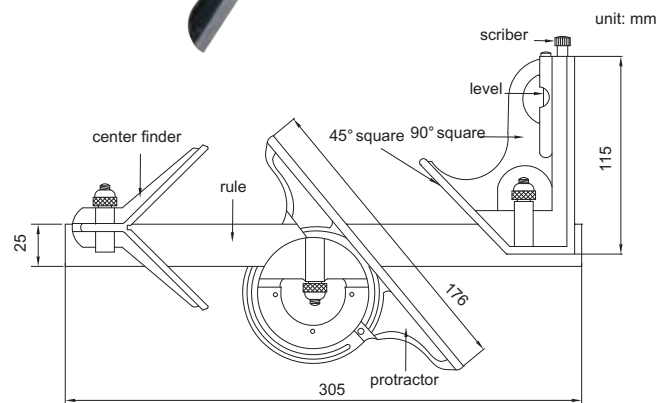
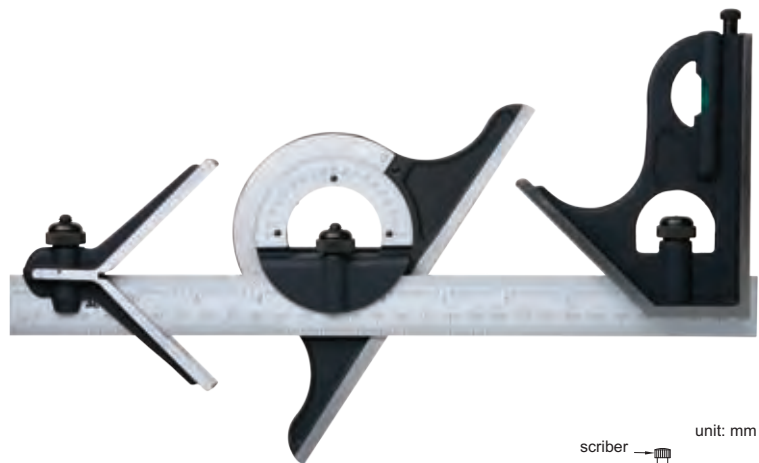


Code	Range	Accuracy
815-360-01	0 - 360°	±5'

817

COMBINATION SQUARE SET

- ◆ Protractor:
Used to set an angle or angle measurement,
measuring range: 0-180°, accuracy: ±7'
- ◆ Square:
Used as 90° square or 45° square
accuracy of 90° square: ±8',
accuracy of 45° square: ±10'
- ◆ Rule:
Used as rule, measuring range: 300mm/12"
- ◆ Center finder:
Used to find the cylinder center,
accuracy: ±0.15mm



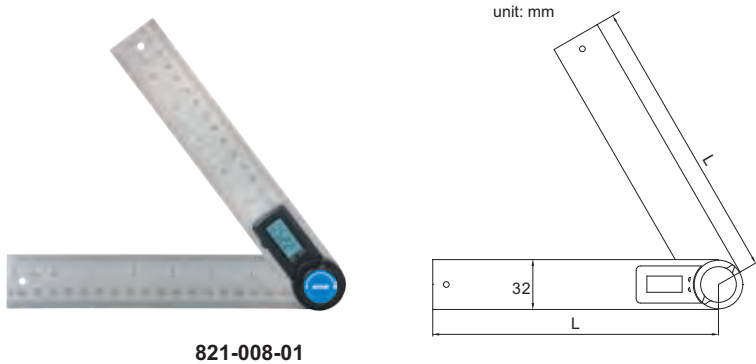
unit: mm

Code

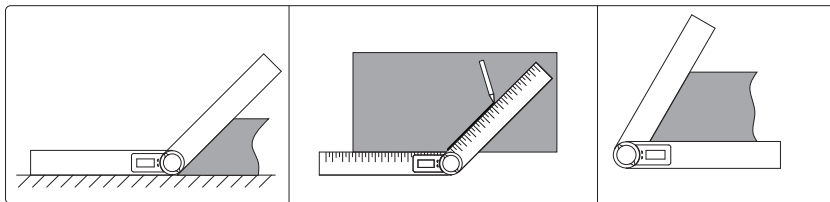
817-180-02

DIGITAL PROTRACTOR

SERIES 821



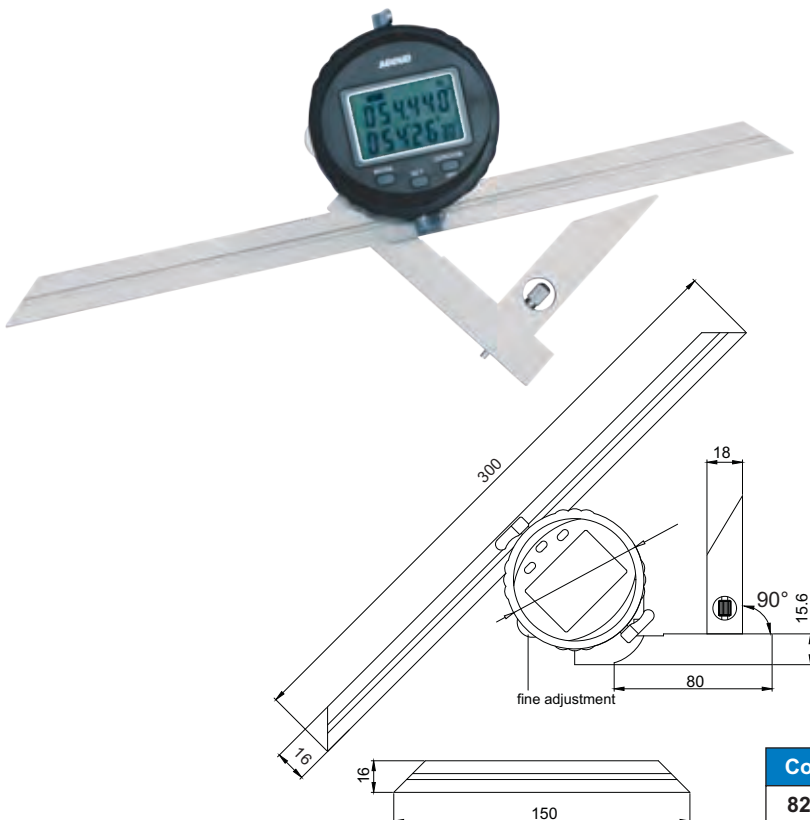
- ◆ Resolution: 0.1°
- ◆ Buttons: on/off, zero
- ◆ With locking attachment
- ◆ Rule graduation: 1mm and 1/32"
- ◆ Auto power off



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

DIGITAL PROTRACTOR

822



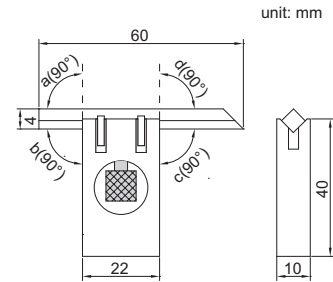
- ◆ Button function:
 - SET: preset the reading and change the measuring direction
 - MODE: choose range 90°, 180°, 360°
 - ZERO/ON/OFF: set zero and power on/off
- ◆ Data output (cable code: 200-01 or 200-02)
- ◆ With a 150mm blade and a 90° square
- ◆ Made of stainless steel

Code	Range	Resolution	Accuracy
822-360-01	0 - 360°	0.1°	±0.5'

831

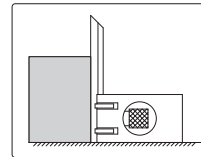
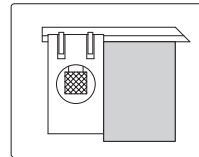
ADJUSTABLE SQUARE

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



unit: mm

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



SERIES 832

90° BEVELED EDGE SQUARE

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

Grade 0

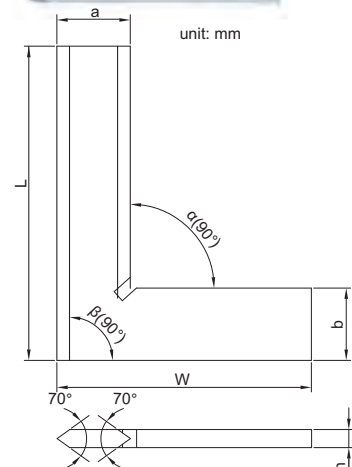
Code	Size(LxW)	Squareness(α)	Squareness(β)	a	b	h
832-002-10	50x40mm	6μm	6μm	13	13	4
832-003-10	75x50mm	6μm	7μm	15	15	4
832-004-10	100x70mm	7μm	7μm	20	20	5
832-006-10	150x100mm	7μm	8μm	30	30	6
832-008-10	200x130mm	8μm	9μm	34	34	7
832-010-10	250x165mm	9μm	10μm	35	35	7
832-012-10	300x200mm	10μm	11μm	40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



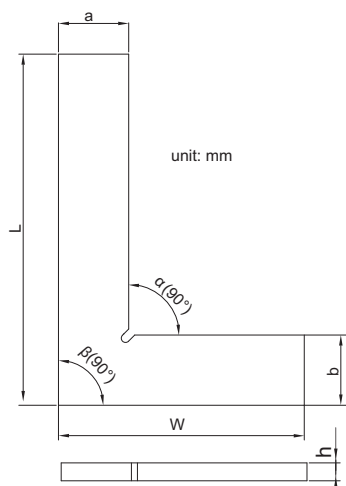
832-004-00



unit: mm

90° FLAT EDGE SQUARE

SERIES 841

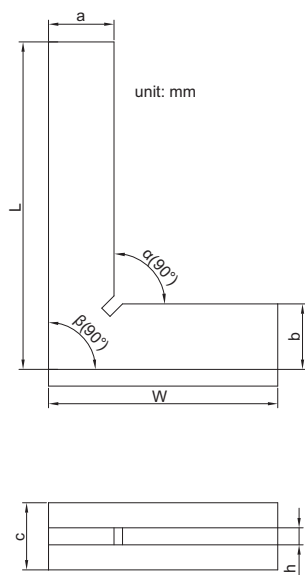


- ◆ DIN875 grade 0
- ◆ Made of hardened stainless steel

Code	Size(LxW)	Squareness(α)	Squareness(β)	a	b	h
841-002-10	50x40mm	6 μ m	6 μ m	13	13	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

90° FLAT EDGE SQUARE WITH WIDE BASE

SERIES 842



- ◆ 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

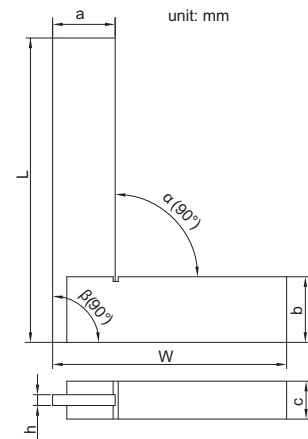
SERIES 843

90° FLAT EDGE SQUARE WITH WIDE BASE

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



843-004-10



unit: mm

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

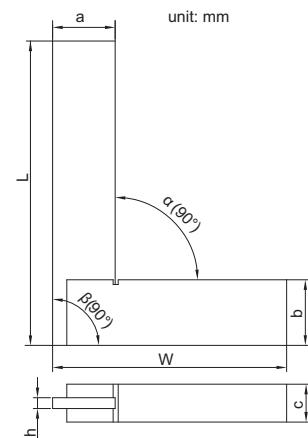
SERIES 845

MACHINIST SQUARE WITH WIDE BASE

- ◆ DIN875 grade 2
- ◆ Made of carbon steel



845-004-02



unit: mm

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

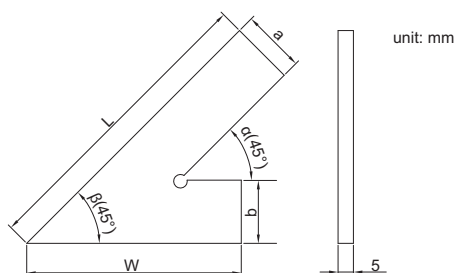
45° SQUARE

SERIES 846

◆ Made of hardened stainless steel



846-005-02



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

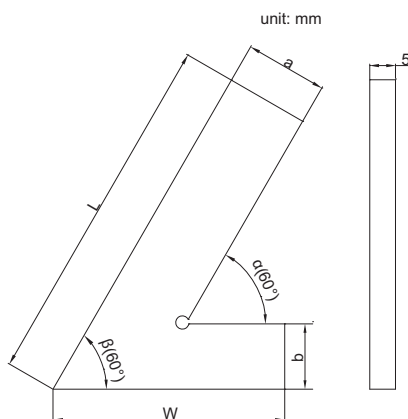
60° SQUARE

SERIES 847

◆ Made of hardened stainless steel



847-004-02

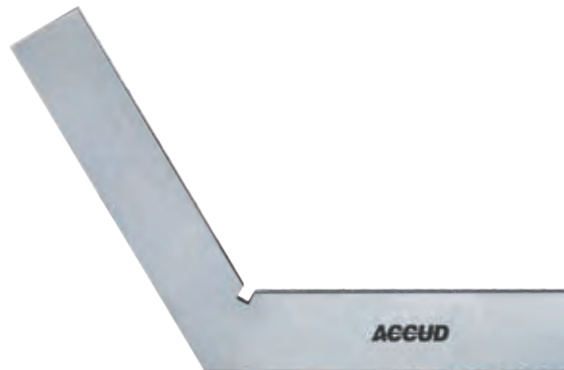


Code	Size(LxW)	Squareness(α)	Squareness(β)	a	b
847-004-02	100x70mm	28 μ m	30 μ m	20	20
847-005-02	120x80mm	30 μ m	32 μ m	20	20
847-006-02	150x100mm	32 μ m	35 μ m	20	20
847-008-02	200x130mm	37 μ m	40 μ m	25	25

SERIES 848

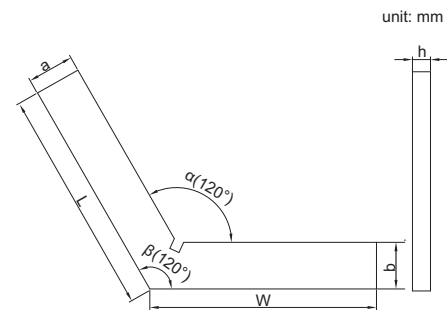
120° SQUARE

◆ Made of hardened stainless steel



848-004-02

Code	Size(LxW)	Squareness(α)	Squareness(β)	a	b	h
848-002-02	50x50mm	24 μ m	25 μ m	15	15	13
848-003-02	75x75mm	26 μ m	28 μ m	20	20	15
848-004-02	100x100mm	29 μ m	30 μ m	20	20	20
848-006-02	150x150mm	34 μ m	35 μ m	25	25	30
848-008-02	200x200mm	38 μ m	40 μ m	30	30	30



SERIES 849

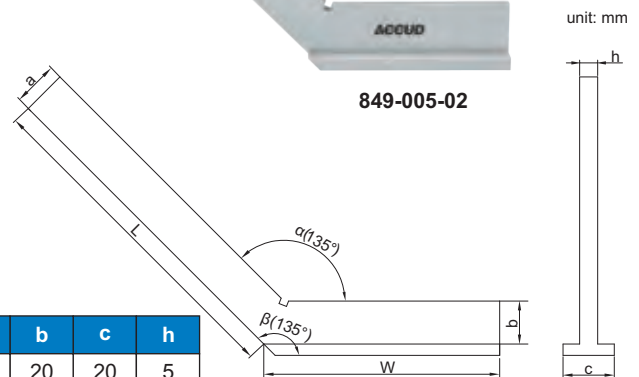
135° SQUARE WITH WIDE BASE

◆ Made of hardened stainless steel



849-005-02

Code	Size(LxW)	Squareness(α)	Squareness(β)	a	b	c	h
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
849-010-02	250x165mm	44 μ m	46 μ m	30	30	30	7
849-012-02	300x175mm	49 μ m	51 μ m	35	35	35	7

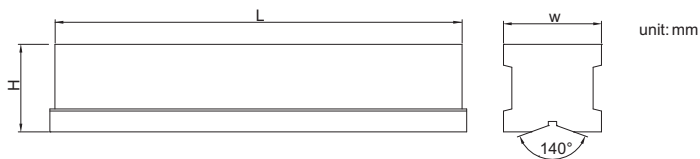


BLOCK LEVEL

SERIES 713



713-006-02



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

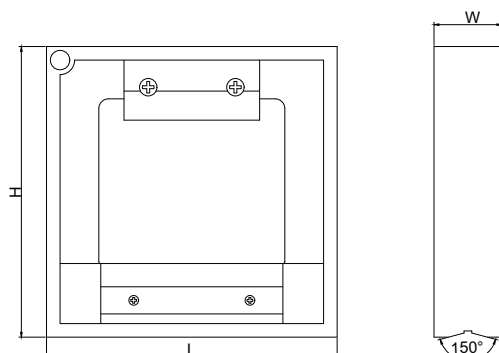
Code	Size(L)	H	W
713-006-02	150mm	40	45
713-008-02	200mm	42	47
713-012-02	300mm	45	50

FRAME LEVEL

SERIES 711



711-006-02



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

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

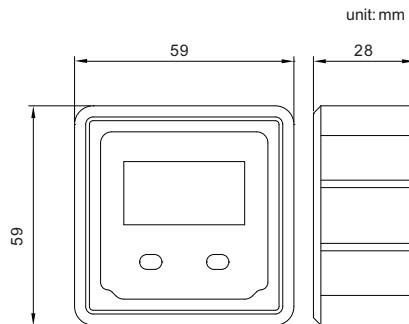
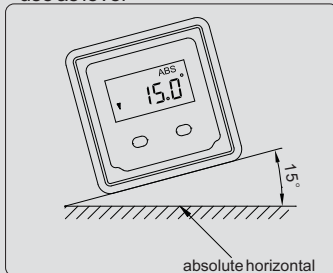


721

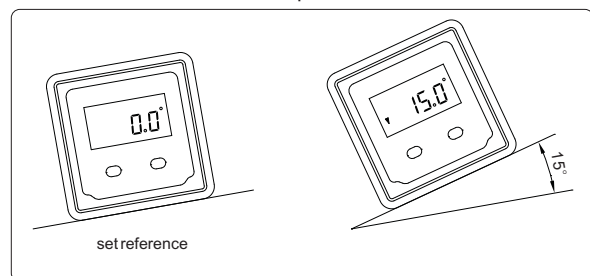
DIGITAL LEVEL

- ◆ 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

use as level



use as protractor



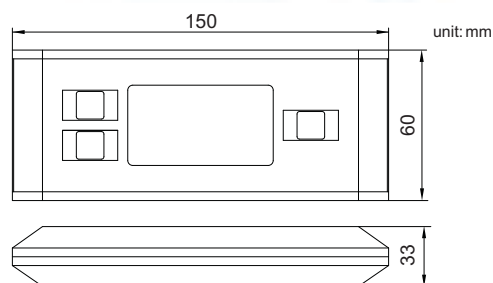
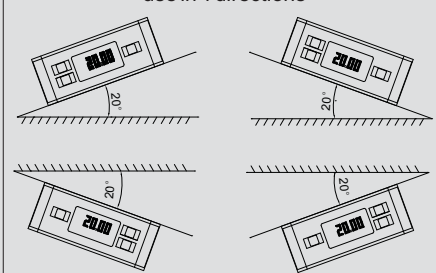
Code	Range	Resolution
721-180-01	0 - 360° (90°x4)	0.1°

722

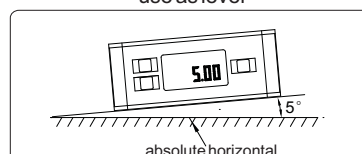
DIGITAL LEVEL

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

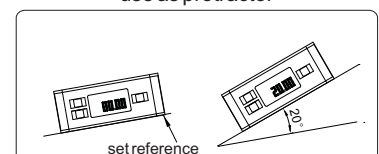
use in 4 directions



use as level



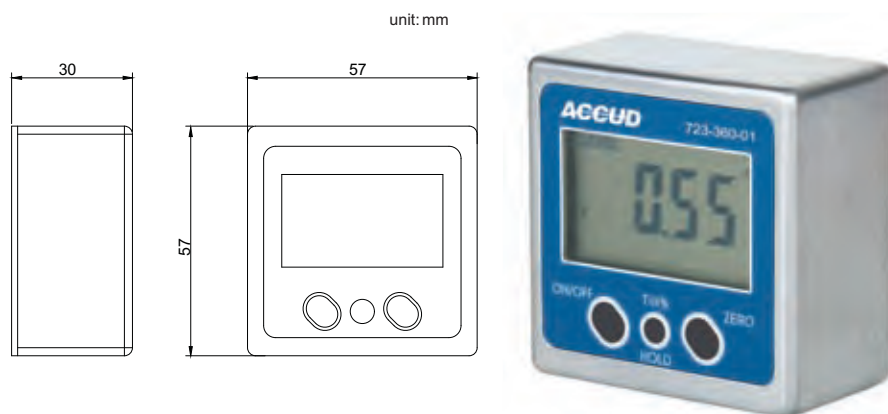
use as protractor



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

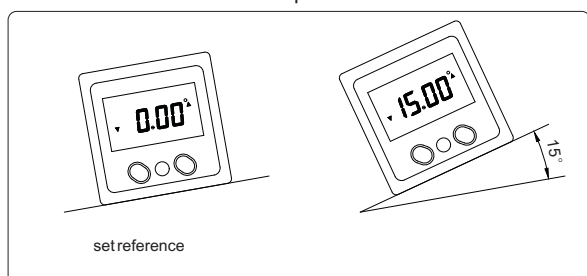
DIGITAL LEVEL

723



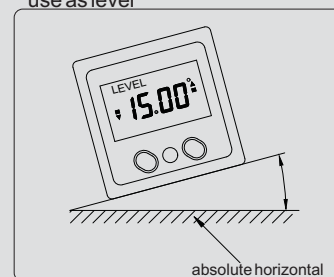
unit: mm

use as protractor



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

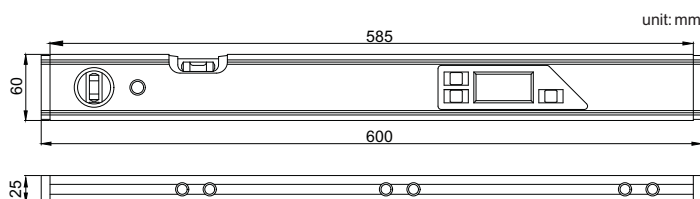
use as level



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

DIGITAL LEVEL

725



unit: mm

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

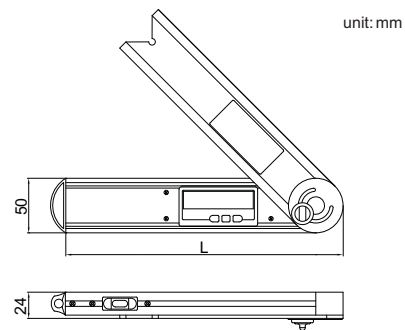
Code	Range	Resolution
725-360-01	0 - 360° (4x90°)	0.1°



726

DIGITAL PROTRACTOR

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

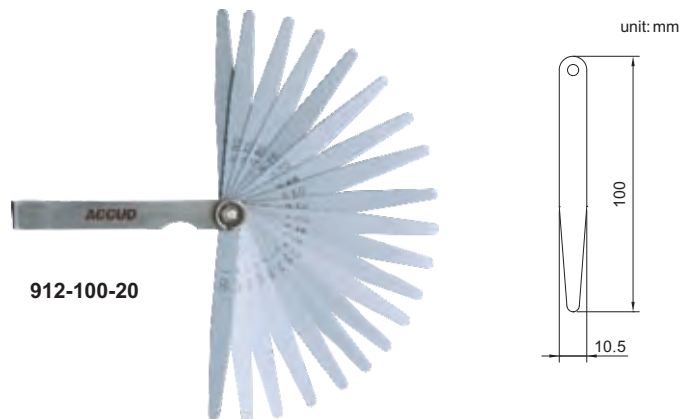


Code	Range	Resolution	Accuracy	Size (L)
726-360-01	0 - 360°	0.05°	±0.15°	250mm

SERIES 912

FEELER

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

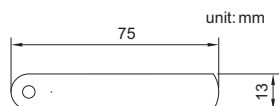


912-100-20

Code	Range	Quantity	Leaves thickness (mm)
912-050-13	0.03 - 0.50mm	13	0.03, 0.04, 0.05, 0.06, 0.07, 0.08, 0.09, 0.10, 0.15, 0.20, 0.30, 0.40, 0.50
912-100-13	0.05 - 1.00mm	13	0.05, 0.10, 0.15, 0.20, 0.25, 0.30, 0.40, 0.50, 0.60, 0.70, 0.80, 0.90, 1.00
912-100-17	0.02 - 1.00mm	17	0.02, 0.03, 0.04, 0.05, 0.06, 0.07, 0.08, 0.09, 0.10, 0.15, 0.20, 0.25, 0.30, 0.40, 0.50, 0.75, 1.00
912-100-20	0.05 - 1.00mm	20	0.05, 0.10, 0.15, 0.20, 0.25, 0.30, 0.35, 0.40, 0.45, 0.50, 0.55, 0.60, 0.65, 0.70, 0.75, 0.80, 0.85, 0.90, 0.95, 1.00
912-100-32	0.03 - 1.00mm	32	0.03, 0.04, 0.05, 0.06, 0.07, 0.08, 0.09, 0.10, 0.13, 0.15, 0.18, 0.20, 0.23, 0.25, 0.28, 0.30, 0.33, 0.35, 0.38, 0.40, 0.45, 0.50, 0.55, 0.60, 0.63, 0.65, 0.70, 0.75, 0.80, 0.85, 0.90, 1.00

FEELER

911



- ◆ 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

FEELER

SERIES 913/914/915

unit: mm



913-100-20

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

Code	Range	Quantity	Leaves thickness (mm)	L
913-100-13	0.05 - 1.00mm	13	0.05, 0.10, 0.15, 0.20, 0.25, 0.30, 0.40, 0.50, 0.60, 0.70, 0.80, 0.90, 1.00	150
914-100-13	0.05 - 1.00mm	13		200
915-100-13	0.05 - 1.00mm	13		300
913-100-20	0.05 - 1.00mm	20	0.05, 0.10, 0.15, 0.20, 0.25, 0.30, 0.35, 0.40, 0.45, 0.50, 0.55, 0.60, 0.65, 0.70, 0.75, 0.80, 0.85, 0.90, 0.95, 1.00	150
914-100-20	0.05 - 1.00mm	20		200
915-100-20	0.05 - 1.00mm	20		300

SERIES 916

FEELER TAPE

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



916-010-01

Code	Thickness	Accuracy
916-002-01	0.02mm	±4μm
916-003-01	0.03mm	±4μm
916-004-01	0.04mm	±4μm
916-005-01	0.05mm	±4μm
916-006-01	0.06mm	±4μm
916-007-01	0.07mm	±5μm
916-008-01	0.08mm	±5μm
916-009-01	0.09mm	±5μm
916-010-01	0.10mm	±5μm
916-020-01	0.20mm	±8μm

Code	Thickness	Accuracy
916-025-01	0.25mm	±9μm
916-030-01	0.30mm	±9μm
916-040-01	0.40mm	±12μm
916-050-01	0.50mm	±14μm
916-060-01	0.60mm	±14μm
916-070-01	0.70mm	±17μm
916-080-01	0.80mm	±19μm
916-090-01	0.90mm	±22μm
916-100-01	1.00mm	±24μm

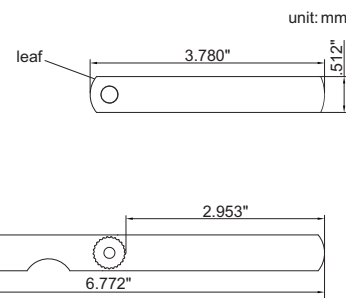
917

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"

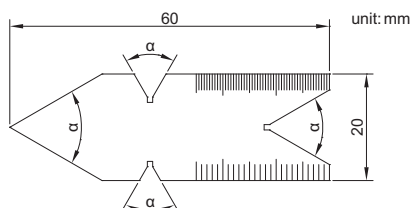


CENTER GAUGE

SERIES 926



926-060-02



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

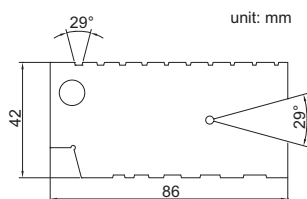
- ◆ Check the screw angle and pitch
- ◆ Accuracy: $\pm 30'$

THREAD GAUGE

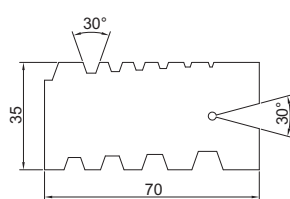
SERIES 927



927-008-01



927-008-01



927-012-01

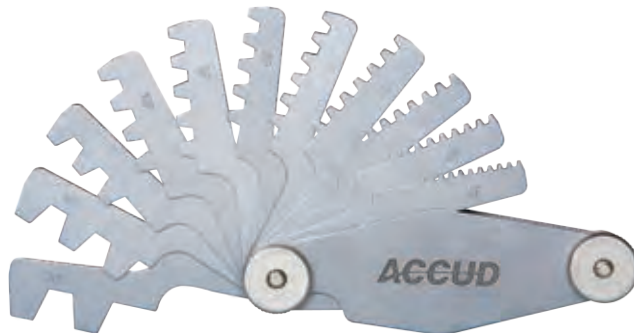
Code	Range	Thread type	Pitch
927-008-01	1 - 10TPI	ACME 29°	1, 1-1/3, 1-1/2, 1-3/4, 2, 2-1/2, 3, 4, 5, 6, 7, 8, 9, 10TPI
927-012-01	2 - 12mm	Tr30°	2, 3, 4, 5, 6, 7, 8, 9, 10, 12mm

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

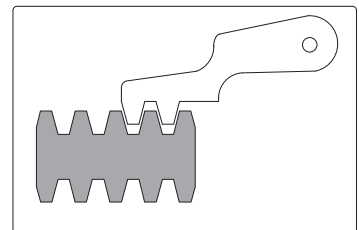
SERIES 921

PITCH GAUGE

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



921-020-12



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

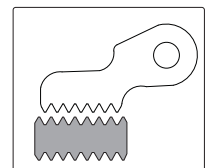
SERIES 922/923/924/925

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

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

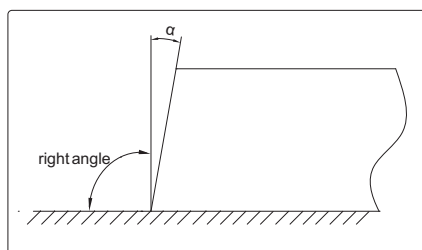
Code	Range	Quantity	Leaves pitch
924-042-30	4 - 42TPI	30	4, 4-1/2, 5, 5-1/2, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 18, 19, 20, 22, 24, 26, 27, 28, 30, 32, 34, 36, 38, 40, 42TPI
924-062-28	4 - 62TPI	28	4, 4-1/2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16, 18, 19, 20, 22, 24, 25, 26, 28, 30, 32, 36, 40, 48, 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

ANGLE GAUGE

931



- ◆ 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°

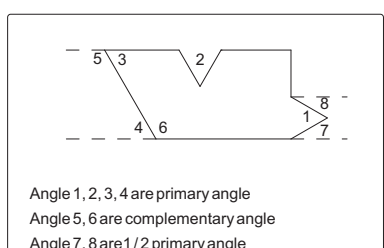
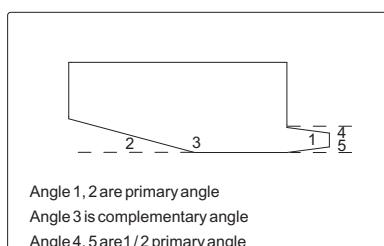
ANGLE GAUGE SET

932

- ◆ 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°



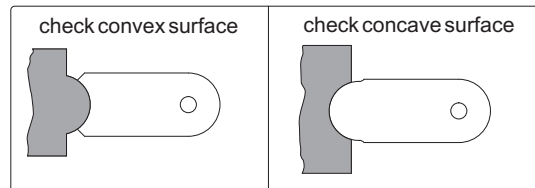
SERIES 941

RADIUS GAUGE

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



941-015-32

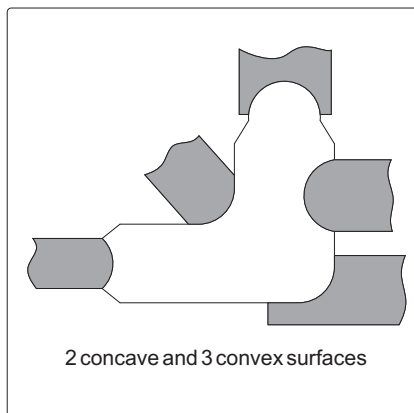


Code	Range	Quantity	Accuracy	Leaves radius (mm)
941-007-34	1 - 7mm	17x2	±0.03mm	1, 1.25, 1.5, 1.75, 2, 2.25, 2.5, 2.75, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7
941-015-32	7.5 - 15mm	16x2	±0.035mm	7.5, 8, 8.5, 9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13, 13.5, 14, 14.5, 15
941-025-30	15.5 - 25mm	15x2	±0.042mm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

942

RADIUS GAUGE

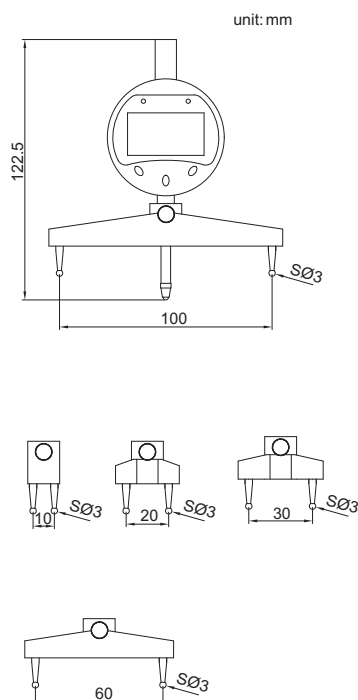
- ◆ Each piece has 2 concave and 3 convex surfaces
- ◆ With handle
- ◆ ±0.05mm



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

DIGITAL RADIUS GAUGE

296

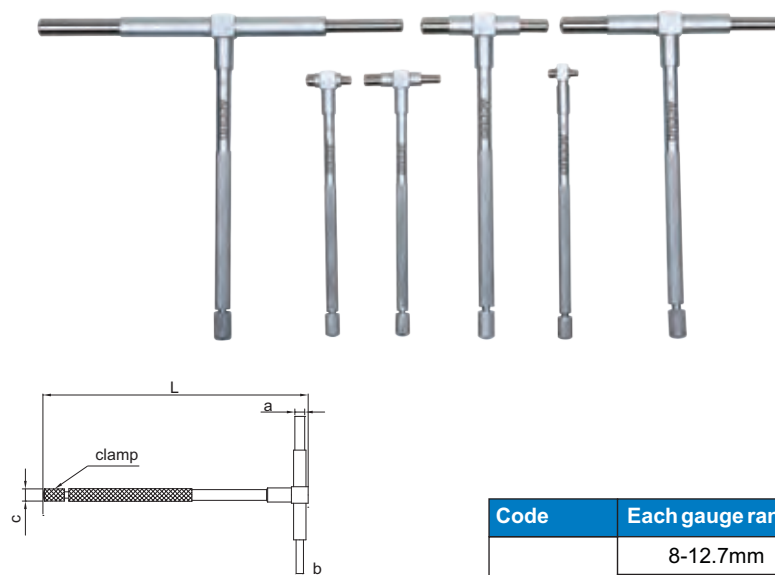


- ◆ Measure radius of internal and external arcs
- ◆ Accuracy: $\pm 0.01R$, R is the radius to be measured in mm
- ◆ Data output (cable code: 200-01 or 200-02)
- ◆ Supplied with 5 jaws for different sizes of arc

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

TELESCOPING GAUGE SET

951



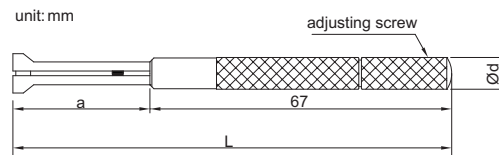
- ◆ 6 gauges per set
- ◆ For quick measurement of inside diameter of holes and width of slots
- ◆ Satin chrome finish

Code	Each gauge range	L	a	b	c
951-006-01	8-12.7mm	115mm	Ø3.9mm	Ø2.9mm	Ø6.2mm
	12.7-19mm	115mm	Ø5.3mm	Ø3.8mm	Ø6.2mm
	19-32mm	115mm	Ø5.3mm	Ø3.8mm	Ø6.2mm
	32-54mm	137mm	Ø7.6mm	Ø6.1mm	Ø7.2mm
	54-90mm	137mm	Ø7.6mm	Ø6.1mm	Ø7.2mm
	90-150mm	137mm	Ø7.6mm	Ø6.1mm	Ø7.2mm

952

SMALL HOLE GAUGE SET

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



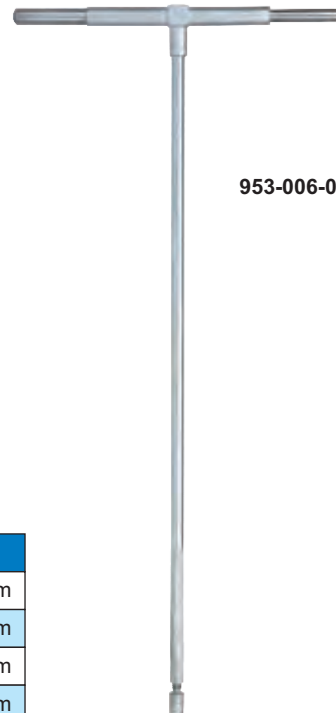
Code	Total Range	Set Included
952-004-01	3-13mm	3-5mm, 5-7.5mm 7.5-10mm, 10-13mm

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

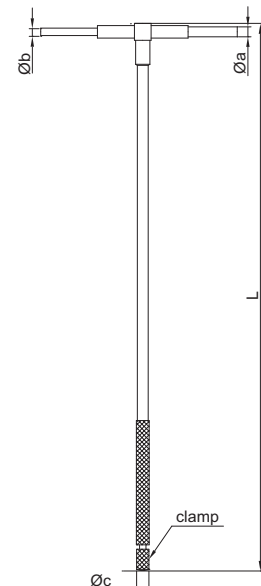
SERIES 953

LONG HANDLE TELESCOPING GAUGE

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



953-006-01



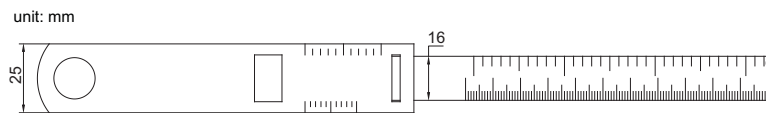
Code	Range	L	Øa	Øb	Øc
953-001-01	8-12.7mm	250mm	3.9mm	2.9mm	6.2mm
953-002-01	12.7-19mm	250mm	5.3mm	3.8mm	6.2mm
953-003-01	19-32mm	250mm	5.3mm	3.8mm	6.2mm
953-004-01	32-54mm	300mm	7.6mm	6.1mm	7.2mm
953-005-01	54-90mm	300mm	7.6mm	6.1mm	7.2mm
953-006-01	90-150mm	300mm	7.6mm	6.1mm	7.2mm

CIRCUMFERENCE TAPE

SERIES 956



956-012-11

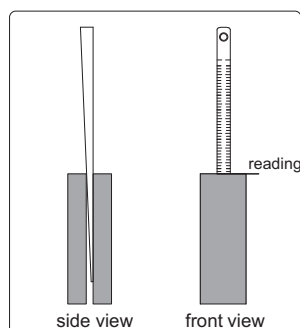
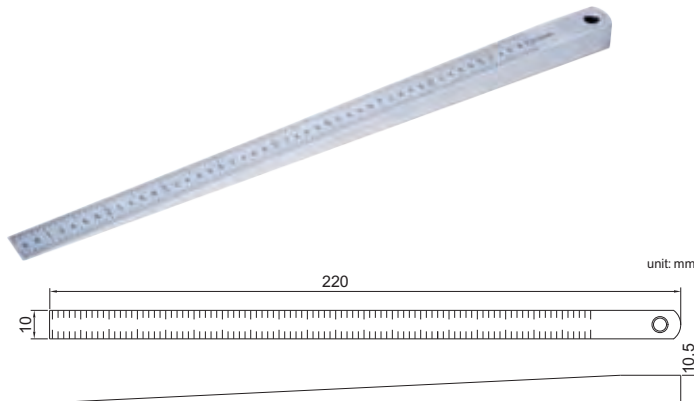


- ◆ Measure diameter and circumference of pipes, trees, etc.
- ◆ Graduation: 0.1mm
- ◆ Accuracy:
Circumference: $\pm 1.5\text{mm}$
Diameter: $\pm 0.5\text{mm}$
- ◆ Laser engraved scale
- ◆ Made of stainless steel

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

TAPER GAUGE

961



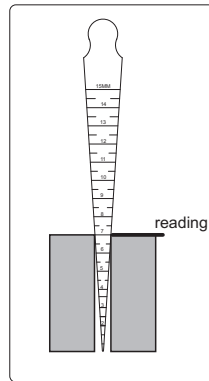
- ◆ Measure the gap width
- ◆ Stain chrome plated reading surface
- ◆ Made of the stainless steel

Code	Range	Graduation	Accuracy
961-010-05	0.5 - 10mm	0.05mm	$\pm 0.07\text{mm}$

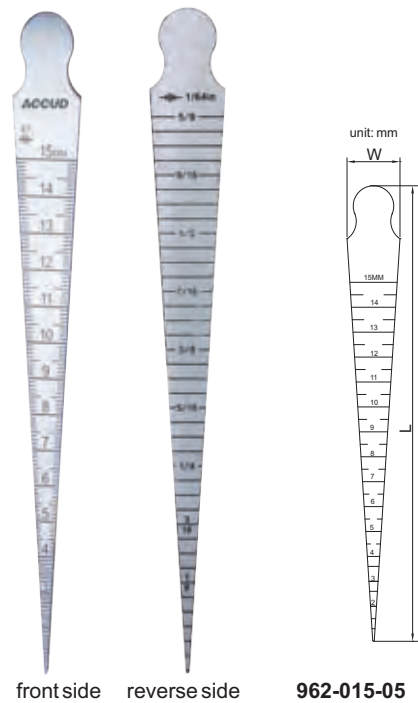
SERIES 962

TAPER GAUGE

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



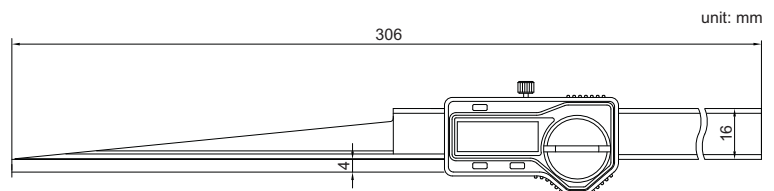
Code	Range	Graduation	Accuracy	L	W
962-015-05	0.8-15mm	0.1mm	±0.1mm	146	17
962-030-05	15-30mm	0.1mm	±0.1mm	159	30.4
962-045-05	30-45mm	0.1mm	±0.1mm	166	45.4
962-060-05	46-60mm	0.1mm	±0.1mm	170	60.5



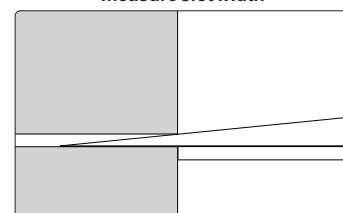
963

DIGITAL TAPER GAUGE

- ◆ Measuring opening, slot width
- ◆ 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



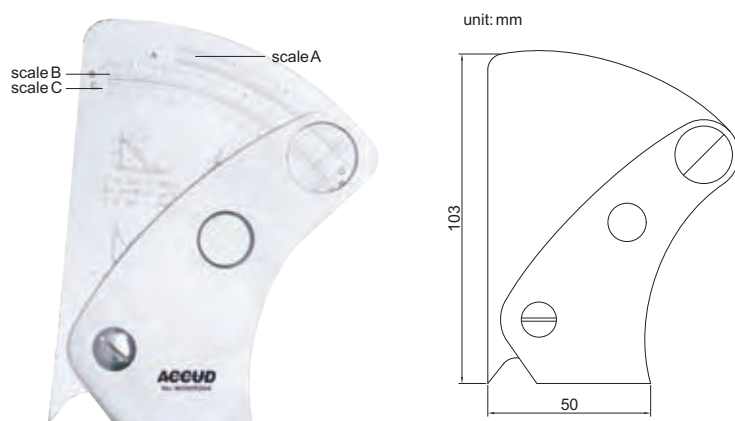
measure slot width



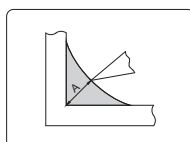
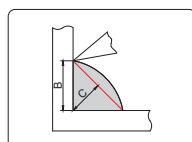
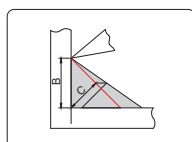
Code	Range	Accuracy
963-010-11	0.2-10mm/0.008-0.394"	±0.03mm

WELDING GAUGE

966



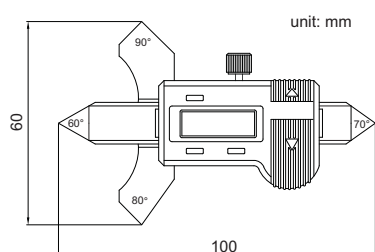
- ◆ Made of stainless steel



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

DIGITAL WELDING GAUGE

970



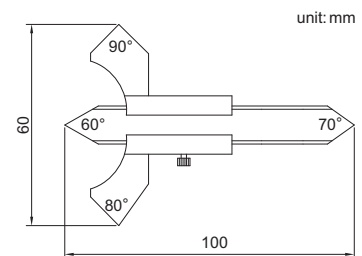
- ◆ Buttons: zero, mm/inch, on/off
- ◆ Made of stainless steel

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

971

WELDING GAUGE

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

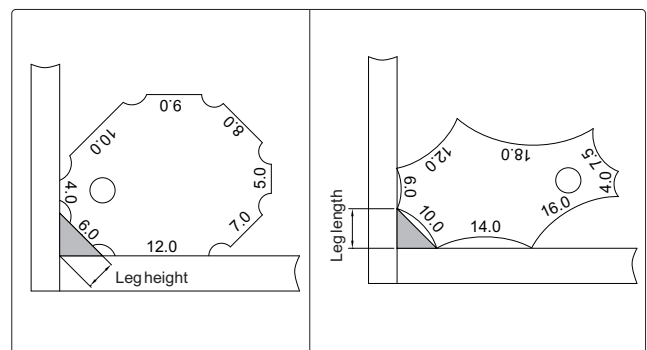
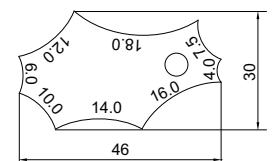
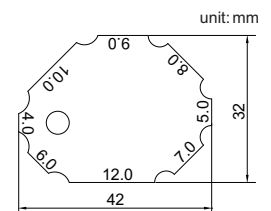


Code	Application	Range	Graduation	Accuracy
971-008-01	measure crown height	0 - 8mm	0.1mm	±0.1mm
	measure fillet weld throat size	0 - 20mm	0.1mm	±0.3mm
	measure angle	60°, 70°, 80°, 90°	—	±1°

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

WELDING GAUGE

973

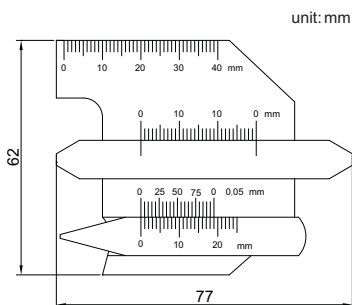


front side



reverse side

- ◆ Made of stainless steel



Code	Application	Range	Graduation	Accuracy
973-014-01	measure crown height	0 - 10mm	1mm	±0.5mm
	measure leg height	0 - 14mm	1mm	±0.5mm
	measure undercut depth	0 - 5mm	0.05mm	±0.05mm
	measure throat size	0 - 13mm	1mm	±0.5mm
	measure weld length	0 - 40mm	1mm	±1mm
	measure angle	90° - 150°	5°	±1°
	measure gap	0.5 - 5mm	1mm	±0.5mm
	measure length	0 - 40mm	1mm	±0.5mm

WELDING GAUGE

974

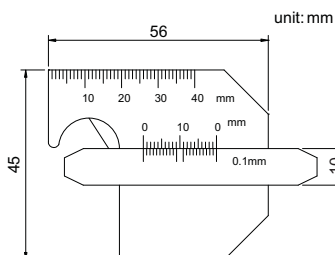


front side



reverse side

- ◆ Made of stainless steel
- ◆ Stain chrome plated surface

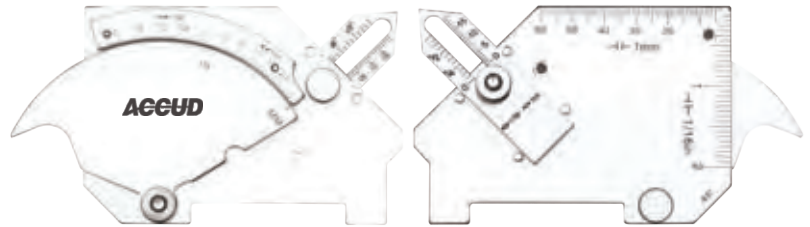


Code	Application	Range	Graduation	Accuracy
974-013-01	measure leg length	0 - 10mm	0.1mm	±0.1mm
	measure leg height	0 - 20mm	1mm	±0.5mm
	measure crown height	0 - 10mm	0.1mm	±0.1mm
	measure throat size	0 - 10mm	0.1mm	±0.1mm
	measure angle	0° - 60°	5°	±1°
	measure gap	1 - 3.5mm	0.5mm	±0.5mm
	measure length	0 - 40mm	1mm	±0.5mm

975

WELDING GAUGE

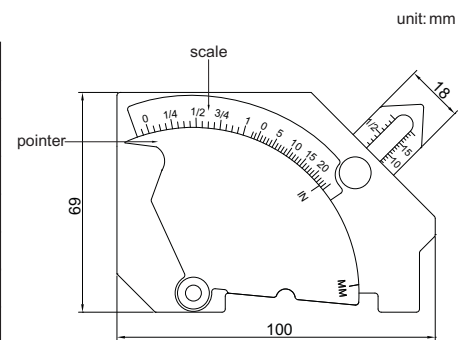
- ◆ Adjustable scale to compensate pointer wear
- ◆ Made of stainless steel



front side

reverse side

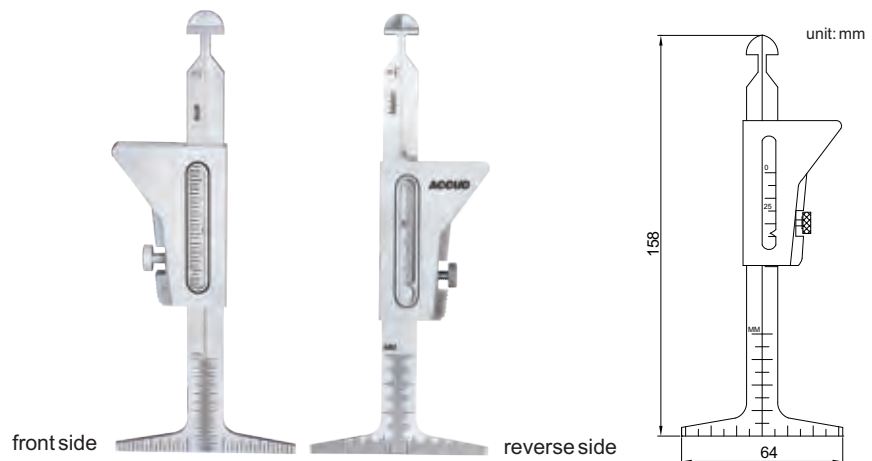
Code	Range	Graduation	Accuracy	Application
975-025-01	0 - 25mm (0 - 1")	1mm (1/16")	±0.5mm	measure crown height
	0 - 25mm (0 - 1")	1mm (1/16")	±0.5mm	measure fillet weld leg height
	0 - 25mm (0 - 1")	1mm (1/16")	±0.5mm	measure misalignment
	0 - 2mm (0 - 1/8")	1mm (1/16")	±0.5mm	measure undercut depth
	0 - 20mm (0 - 3/4")	1mm (1/16")	±0.5mm	measure fillet weld throat size
	0 - 60°	5°	±1°	measure angle of preparation
	0 - 60mm (0 - 2")	1mm (1/16")	±0.5mm	measure length
	—	—	±1°	measure 45° angle



976

PIPE WELDING GAUGE

- ◆ Made of stainless steel



front side

reverse side

Code	Range	Graduation	Accuracy	Application
976-045-01	37.5°	—	±1°	measure bevel on end preparation
	0 - 45mm (0 - 1-3/4")	1mm (1/16")	±0.5mm	measure pipe wall thickness
	0 - 35mm (0 - 1-3/8")	1mm (1/32")	±0.5mm	measure internal misalignment
	1.6mm, 2.4mm	—	±0.1mm	measure fit-up gap
	0 - 35mm (0 - 1-3/8")	1mm (1/32")	±0.5mm	measure crown height
	0 - 60mm (0 - 2-3/8")	1mm (1/16")	±0.5mm	measure distance between two marking lines of socket weld
	0 - 30mm (0 - 1-1/4")	1mm (1/16")	±0.5mm	measure fillet weld length
	0 - 35mm (0 - 1-3/8")	1mm (1/32")	±0.5mm	measure fillet weld height

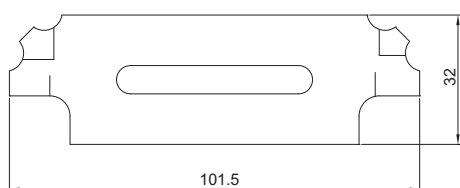
FILLET WELD GAUGE

SERIES 977



977-025-01

unit: mm



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

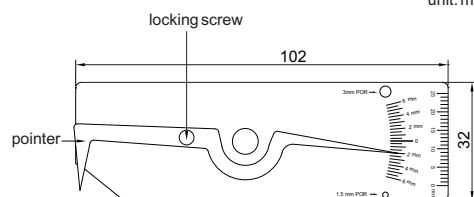
Code	Accuracy	Size
977-025-01	±0.5mm	3, 4, 5, 6, 8, 9, 10, 11, 12, 14, 16, 19, 22, 25mm
977-025-02	±0.02"	1/8", 3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 5/8", 3/4", 7/8", 1"

WELDING GAUGE

978



unit: mm



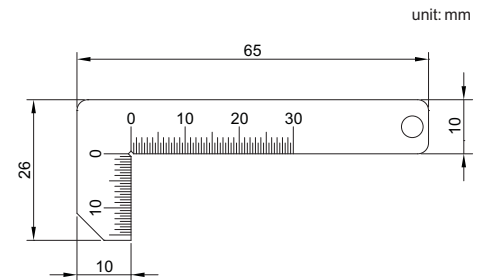
- ◆ Pointer can be locked for later reference
- ◆ Made of stainless steel

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

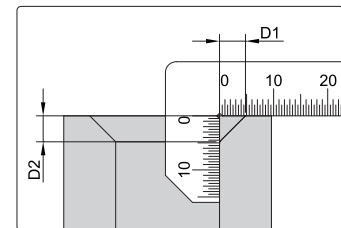
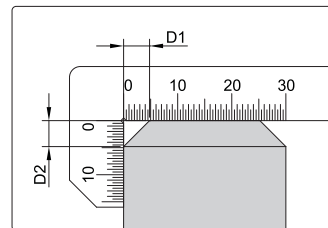
967

CHAMFER GAUGE

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



unit: mm

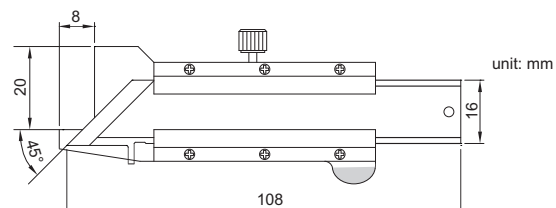
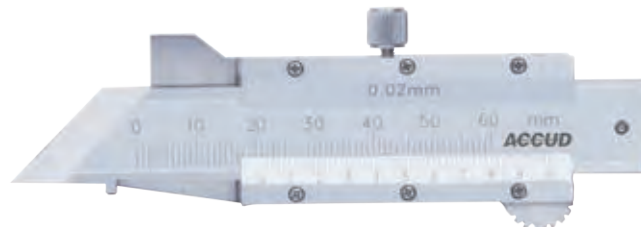


Code	Range	Accuracy
967-001-11	-10~+10mm	±0.05mm

160

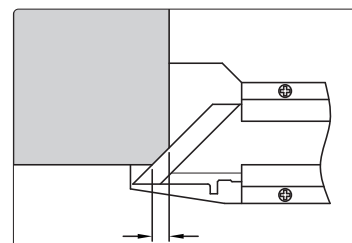
CHAMFER GAUGE

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



unit: mm

measure 45° chamfer dimension

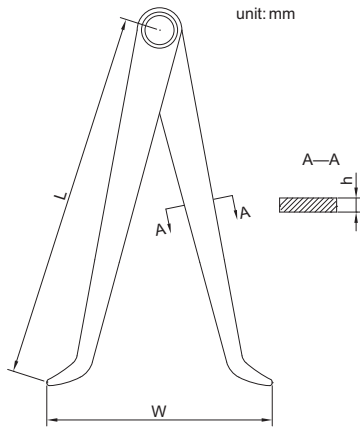


Code	Range	Accuracy
160-001-11	0-6mm	±0.06mm

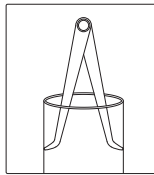
INSIDE CALIPER

SERIES 981

◆ Made of carbon steel



981-006-01

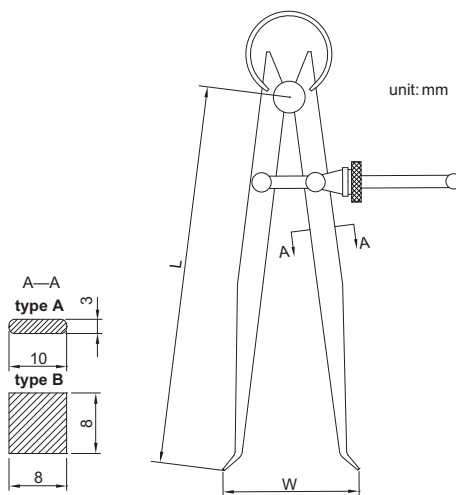


Code	Size(L)	Range(W)	h
981-006-01	150mm	15 - 150mm	2mm
981-008-01	200mm	15 - 200mm	2mm
981-010-01	250mm	15 - 250mm	3mm
981-012-01	300mm	15 - 300mm	3mm

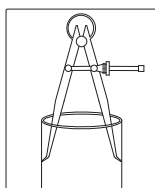
INSIDE SPRING CALIPER

SERIES 982

◆ 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

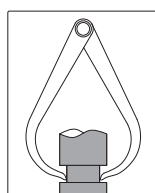
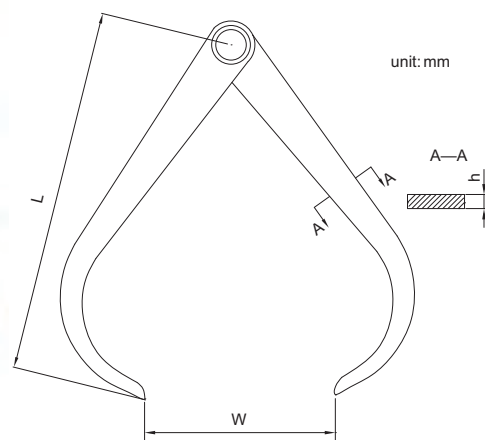
SERIES 983

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

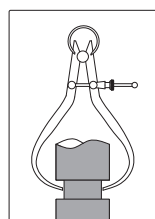
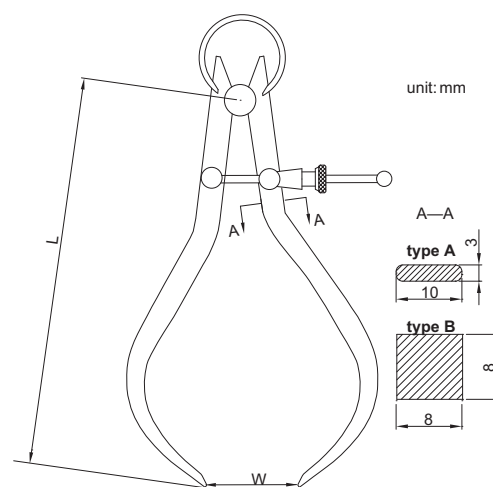
SERIES 984

OUTSIDE SPRING CALIPER

◆ Made of carbon steel



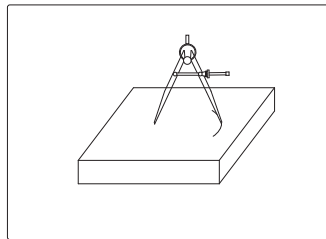
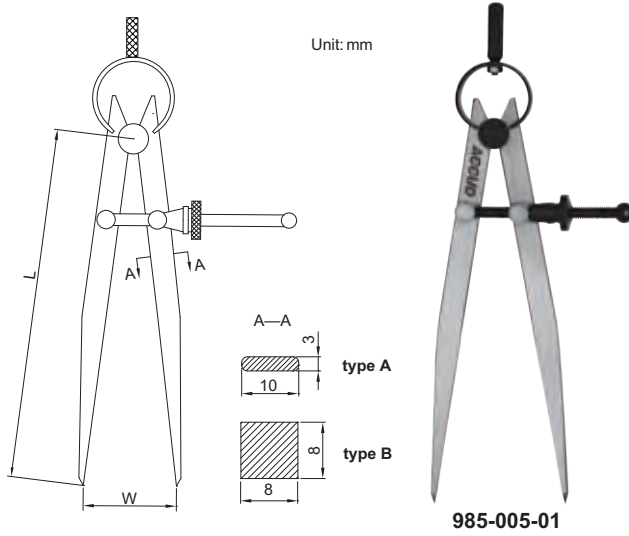
984-005-01



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

SPRING DIVIDER

SERIES 985

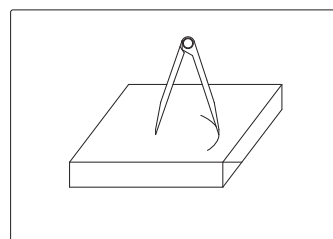
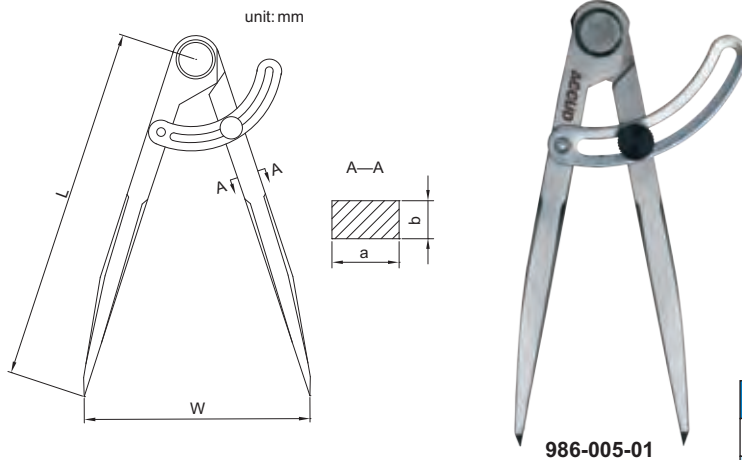


- ◆ Made of carbon steel
- ◆ Hardened points

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

DIVIDER

SERIES 986



- ◆ Made of carbon steel
- ◆ Hardened points

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

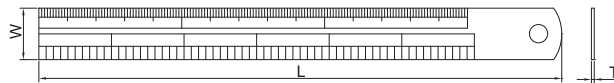
SERIES 990

STEEL RULE

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



990-006-11



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

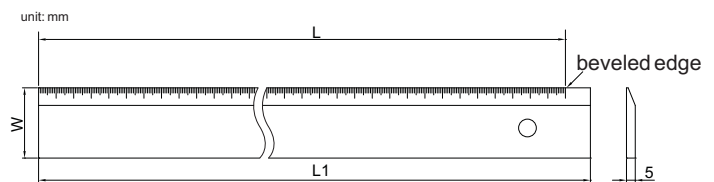
SERIES 991

STRAIGHT EDGE RULE

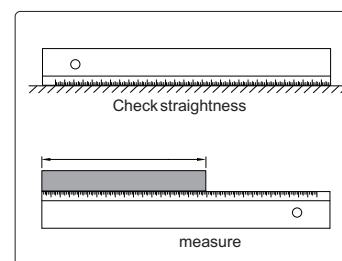
- ◆ Check straightness, as well as for measurement
- ◆ Made of hardened tool steel, chrome plated



991-012-01



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

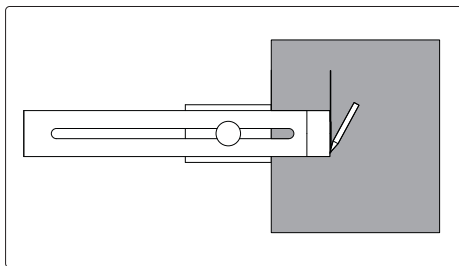
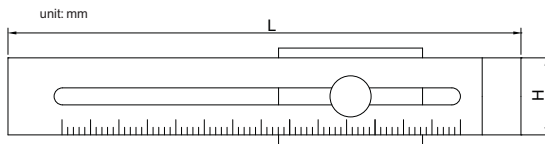


MARKING GAUGE

SERIES 992



992-010-01



- ◆ Made of stainless steel
- ◆ Stain chrome finish

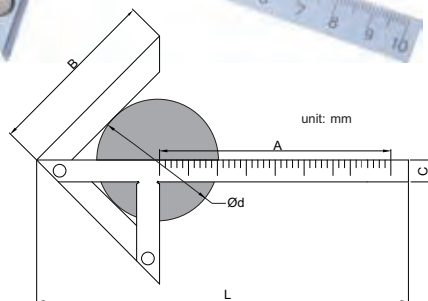
Code	Range	Graduation	Accuracy	H	L
992-008-01	0 - 200mm	0.1mm	±0.1mm	40mm	250mm
992-010-01	0 - 250mm	0.1mm	±0.1mm	40mm	300mm
992-012-01	0 - 300mm	0.1mm	±0.1mm	40mm	350mm

CENTER MARKING GAUGE

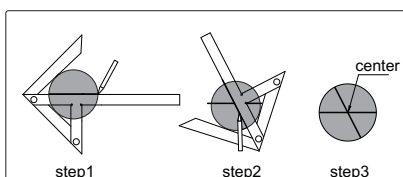
SERIES 993



993-004-01



- ◆ 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	±0.15mm	12	153
993-006-01	150x130mm	4 - 190mm	±0.15mm	15	245
993-008-01	200x150mm	6 - 220mm	±0.15mm	15	310

SERIES 994

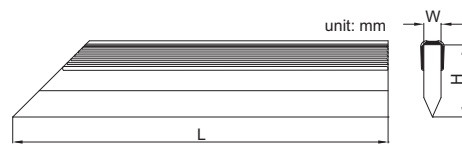
STRAIGHT EDGE

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



994-004-01

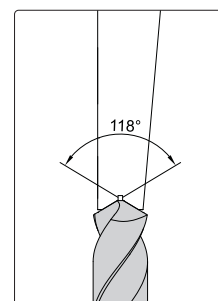
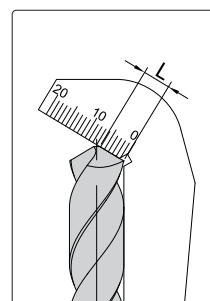
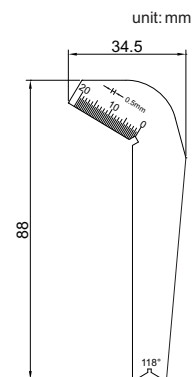
Code	Size (L)	Straightness	W	H
994-002-01	50mm	2.2μm	5	20
994-003-01	75mm	2.3μm	5	25
994-004-01	100mm	2.4μm	5	25
994-005-01	125mm	2.5μm	5	25
994-006-01	150mm	2.6μm	6	30
994-008-01	200mm	2.8μm	6	30
994-010-01	250mm	3.0μm	8	40
994-012-01	300mm	3.2μm	8	40
994-016-01	400mm	3.6μm	10	50
994-020-01	500mm	4.0μm	10	50



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

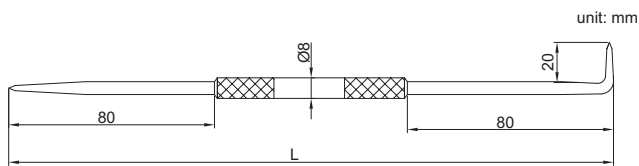


Code	Accuracy	
	Angle	Length
965-005-01	±0.5°	±0.05mm

SCRIBER

995

◆ Nickel plated

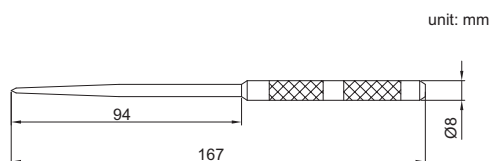


Code	Tips	L
995-009-01	hardened tips	250mm

SCRIBER

995

◆ Nickel plated



Code	Tips	L
995-007-01	hardened tips	167mm



SERIES 996

DIGITAL HORIZONTAL SCALE

Type A

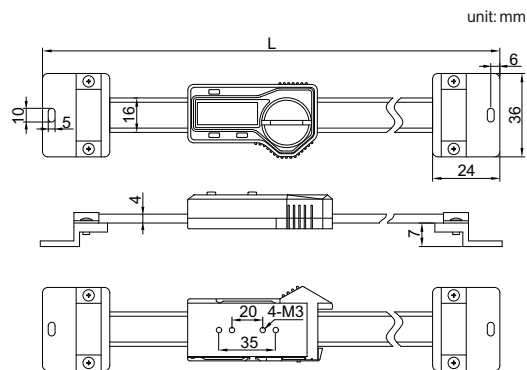
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Buttons: on/off, zero, mm/inch
- ◆ Automatic power off
- ◆ Data output
- ◆ Made of stainless steel
- ◆ Supplied with bracket
- ◆ Optional accessory: SPC cable

Type B

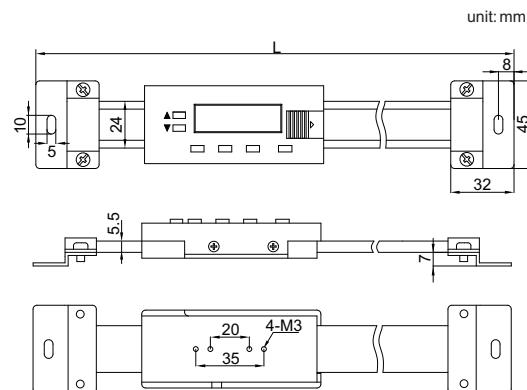
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Absolute and incremental measurement
- ◆ Data output
- ◆ Made of stainless steel
- ◆ Supplied with bracket



996-006-11

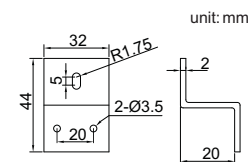


996-020-11



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

bracket



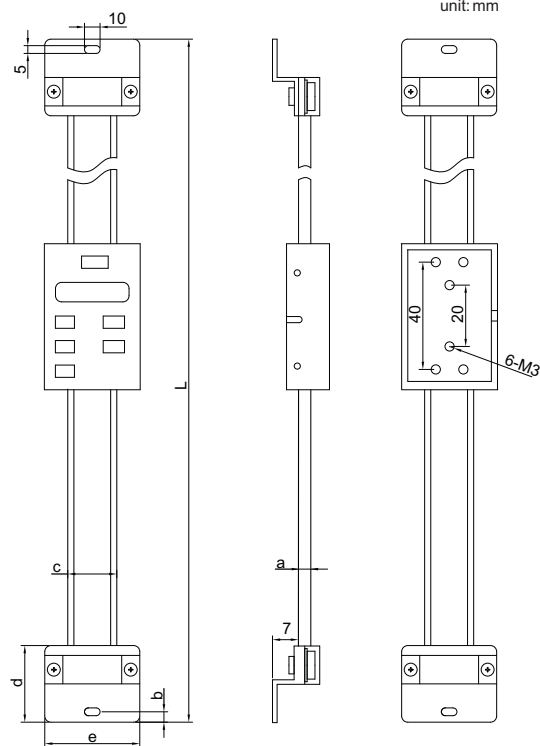
DIGITAL VERTICAL SCALE

SERIES 997

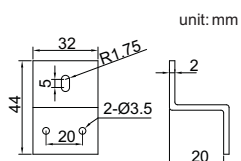
- ◆ Resolution: 0.01mm/0.0005"
- ◆ Data output
- ◆ Made of stainless steel
- ◆ Supplied with bracket



997-012-11



bracket

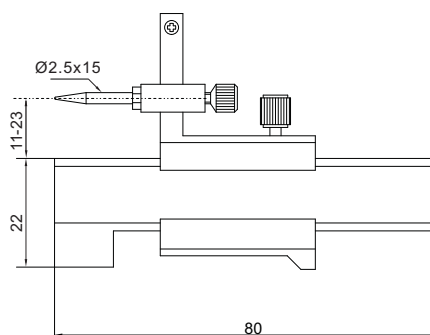
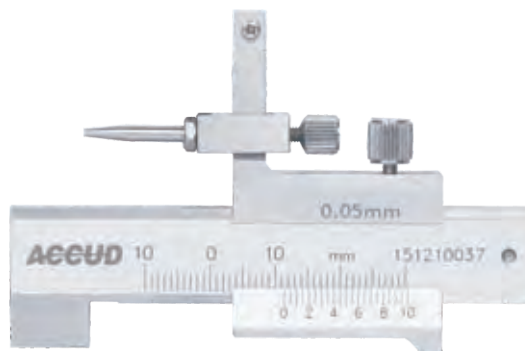


Code	Range	Accuracy	a	b	c	d	e	L
997-004-11	100mm	±0.03mm	4	6	20	40	24	209mm
997-006-11	150mm	±0.03mm	4	6	20	40	24	259mm
997-008-11	200mm	±0.03mm	4	6	20	40	24	310mm
997-012-11	300mm	±0.04mm	4	6	20	40	24	444mm
997-020-11	500mm	±0.05mm	5.5	8	24	40	32	682mm
997-024-11	600mm	±0.08mm	5.5	8	24	51	32	790mm
997-032-11	800mm	±0.10mm	5.5	8	24	51	32	990mm
997-040-11	1000mm	±0.10mm	5.5	8	24	51	40	1240mm

998

VERNIER STEP GAUGE

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

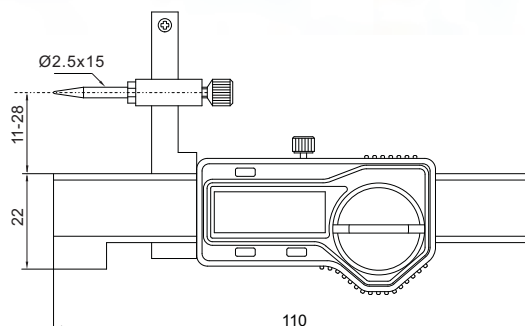


Code	Range	Accuracy
998-010-11	-10~+10mm	±0.05mm

999

DIGITAL STEP GAUGE

- ◆ Measure the height difference of two surface
- ◆ Resolution: 0.01mm



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

GRANITE SURFACE PLATE

SERIES 611



611-032-00

- ◆ Made of fine-grained granite
- ◆ With calibration certificate
- ◆ Customized size can be ordered

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

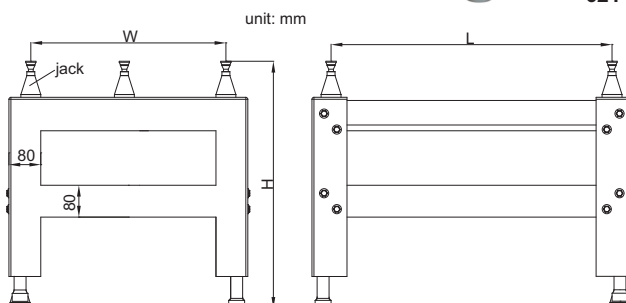
STAND FOR GRANITE SURFACE PLATE

SERIES 621



621-064-01

- ◆ 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



Code	L	W	H	For granite surface plate
621-064-01	352	224	640-660	630x400x80mm
621-066-01	352	352	675-695	630x630x100mm
621-085-01	448	280	665-685	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

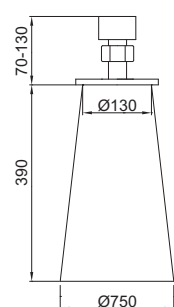
SERIES 625

JACK SET FOR GRANITE SURFACE PLATE

- ◆ 5 jacks per set
- ◆ Adjustable height
- ◆ For large granite surface plates:
2000x1000mm
2000x1500mm
2500x1500mm
3000x2000mm



unit: mm



Code

625-000-00

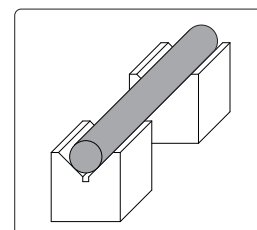
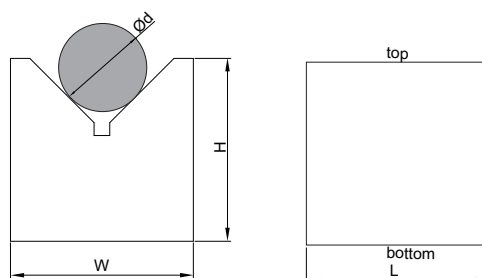
SERIES 631

GRANITE V-BLOCK SET

- ◆ Supplied a pair, for holding long cylindrical workpiece



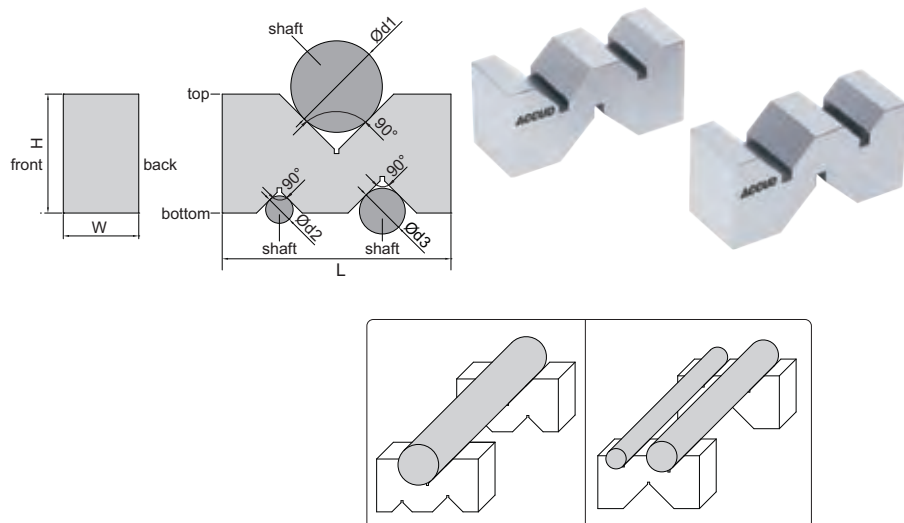
631-075-01



Code	Size(LxWxH)	For shaft range(Ød)	Parallelism between top and bottom, left and right	Height difference between a pair
631-075-01	50x70x70mm	6 - 75mm	5µm	5µm
631-099-01	50x100x70mm	6 - 99mm	5µm	5µm

V-BLOCK SET

SERIES 632

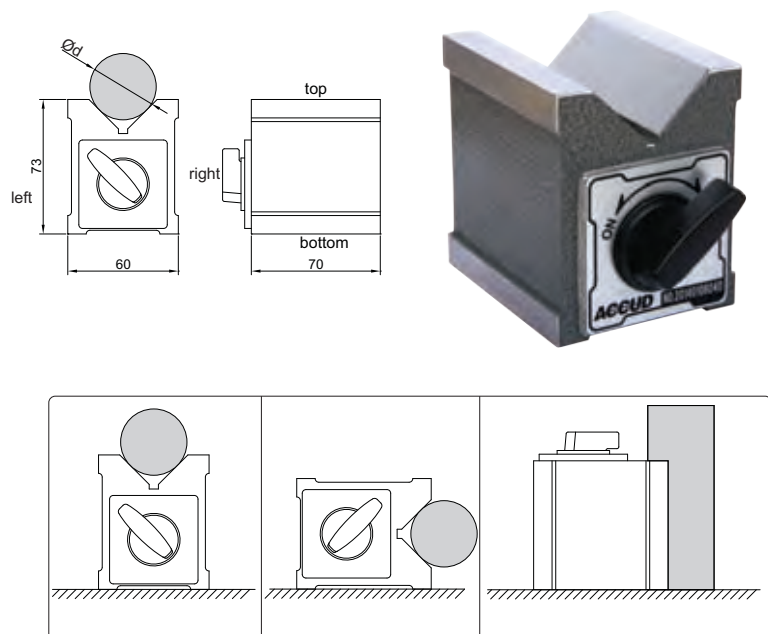


- ◆ Two V blocks per set
- ◆ Made of hardened tool steel

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	50x19x24	3 - 32	3 - 16	3 - 22	5µm	5µm	5µm
632-003-01	75x24x35	3 - 50	3 - 20	3 - 32	5µm	5µm	5µm
632-004-01	100x33x52	3 - 68	3 - 26	3 - 40	5µm	5µm	5µm
632-006-01	150x50x80	6 - 100	5 - 40	5 - 60	5µm	5µm	5µm

MAGNETIC V-BLOCK

SERIES 633



- ◆ Hold cylindrical workpiece for inspection and machining

Code	For shaft range(Ød)	Magnetic force	Top and bottom, left and right parallelism	V-grooves and back side squareness
633-044-01	6 - 44mm	56kgf	10µm	10µm



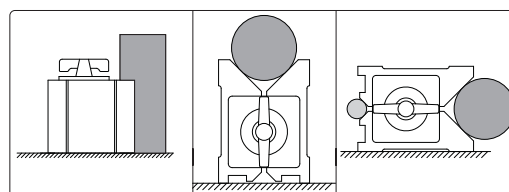
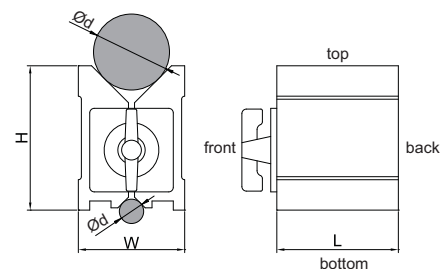
SERIES 634

MAGNETIC V-BLOCK

- ◆ 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 ($\varnothing d$)	Magnetic force	V-grooves and back side squareness	Top side and bottom side parallelism
634-067-01	80x70x95mm	6 - 67mm	64kgf	10 μ m	10 μ m
634-067-02	100x70x95mm	6 - 67mm	80kgf	10 μ m	10 μ m
634-067-03	120x70x95mm	6 - 67mm	96kgf	10 μ m	10 μ m

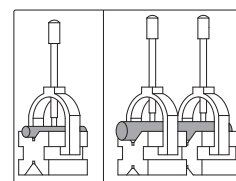
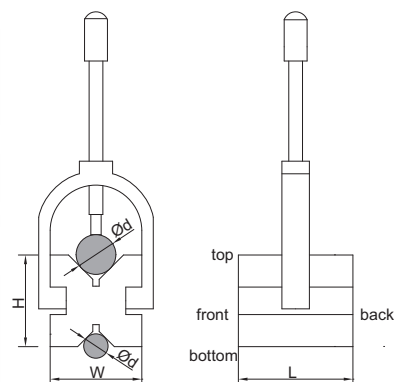
SERIES 636

V-BLOCK SET

- ◆ Hold cylindrical workpieces for inspection and machining
- ◆ Two V-blocks per set
- ◆ V groove on the top for large shafts
- ◆ V groove on the bottom for small shafts



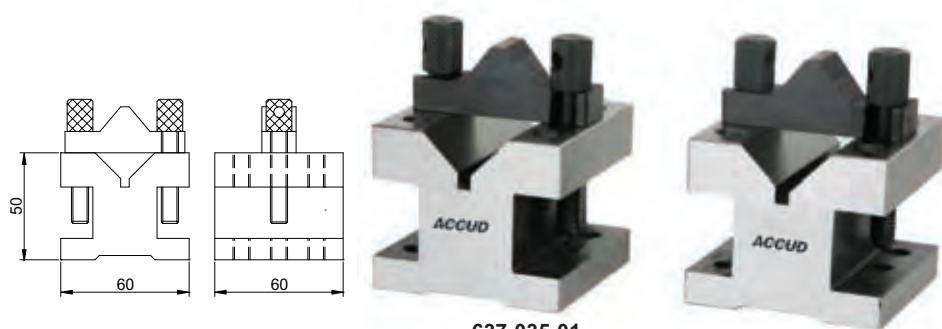
636-045-01



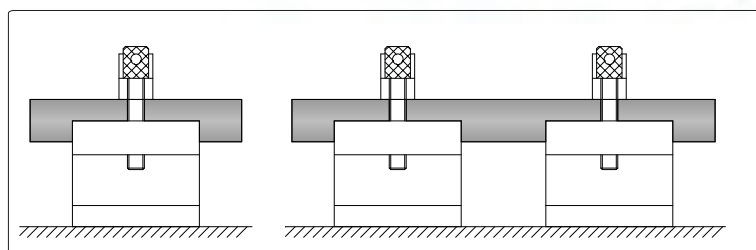
Code	Size(LxWxH)	For shaft range ($\varnothing d$)	Height difference of a matched pair	V grooves to top and bottom sides parallelism	V grooves to front and back sides squareness
636-045-01	45x41x35mm	5 - 40mm	5 μ m	5 μ m	5 μ m
636-070-01	70x63x44mm	7 - 60mm	5 μ m	5 μ m	5 μ m
636-125-01	125x90x70mm	7 - 90mm	5 μ m	5 μ m	5 μ m

V-BLOCK SET

SERIES 637



637-035-01

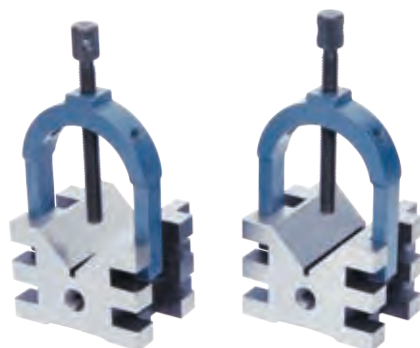
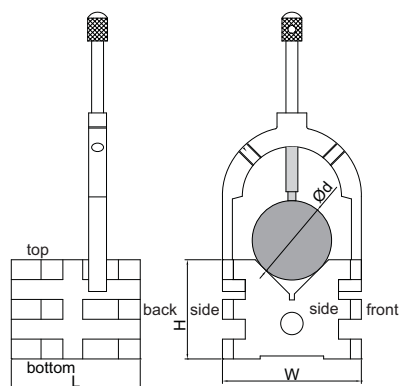


- ◆ Hold cylindrical workpieces for inspection and machining
- ◆ Two V-blocks per set
- ◆ V groove on the top for large shafts

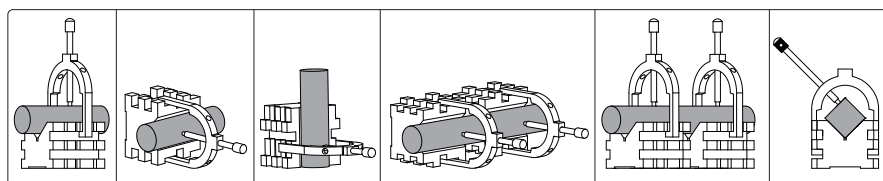
Code	Size(LxWxH)	For shaft range (Ød)	V grooves to top and bottom sides parallelism	V grooves to front and back sides squareness	Height difference of a matched pair
637-035-01	35x35x30mm	3 - 16mm	5µm	5µm	5µm
637-060-01	60x60x50mm	5 - 34mm	5µm	5µm	5µm
637-105-01	105x105x78mm	8 - 66mm	5µm	5µm	5µm

V-BLOCK SET

638



Application



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

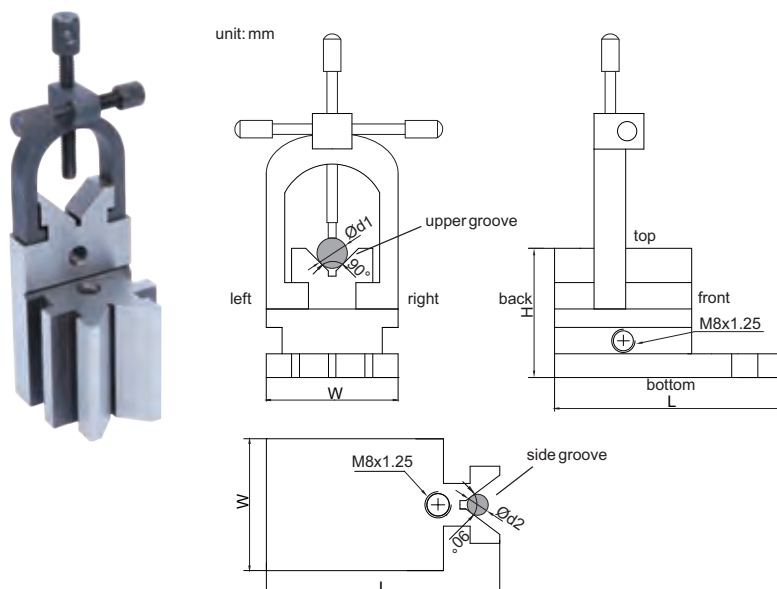
Code	Size (LxWxH)	Parallelism of V groove to top and bottom sides	Squareness of V groove to front and back sides	Height difference of a matched pair
638-070-01	60x70x50mm	8µm	8µm	8µm



639

V-BLOCK

- ◆ Hold cylindrical workpieces for inspection and machining
- ◆ Hardened to HRC60±2

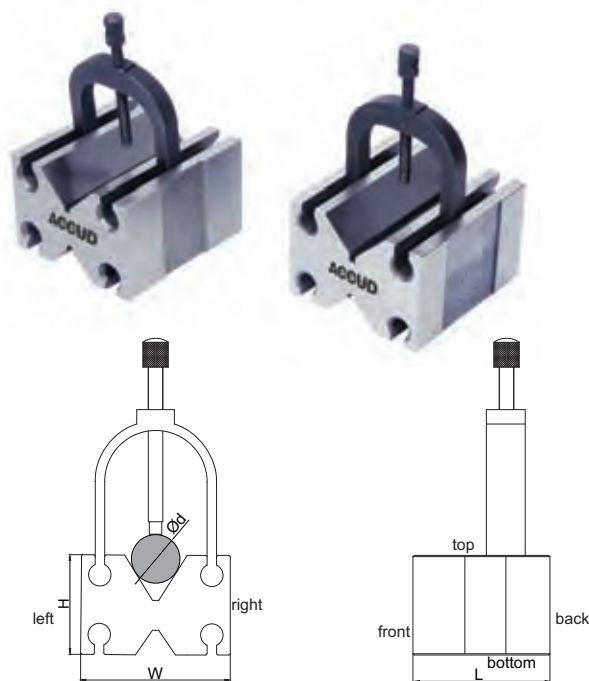


Code	Size (LxWxH)	Range of shafts (Ød1 and Ød2)	Parallelism of upper groove to bottom, left and right sides	Squareness of upper groove to back side	Parallelism of side groove to back side
639-090-01	90x48x48mm	5 - 33mm	5µm	5µm	5µm

640

V-BLOCK SET

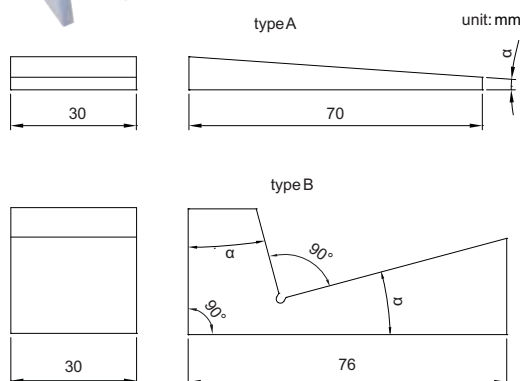
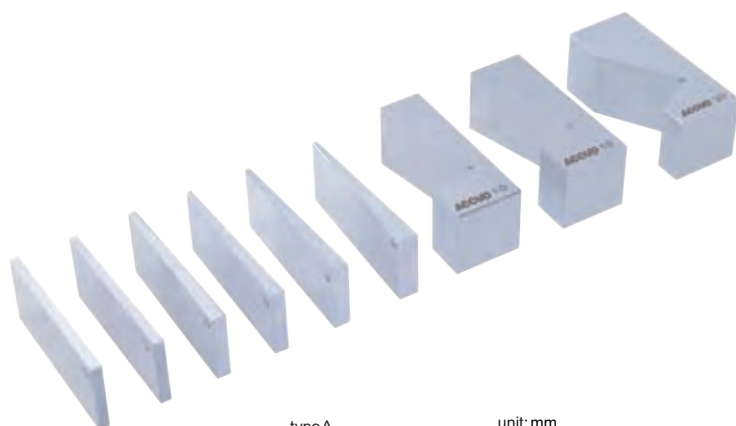
- ◆ Hold cylindrical workpieces for inspection and machining
- ◆ Two V-blocks per set
- ◆ Side lie-down use is possible
- ◆ Hardened to HRC60±2
- ◆ V groove on the top for large shafts
- ◆ V groove on the bottom for small shafts



Code	Size (LxWxH)	Range of shafts (Ød)	Parallelism of both V grooves to top, bottom, left, right sides	Squareness of both V grooves to front and back sides	Height difference of a matched pair
640-001-01	65x70x45mm	4 -35mm	5µm	5µm	5µm

UNIVERSAL ANGLE PLATE SET

646

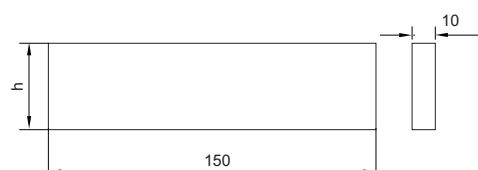


- ◆ For angle set-up in tooling, production and inspection
- ◆ Hardness HRC55

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	

PARALLEL SET

641



- ◆ Parallelism between top and bottom: $5\mu\text{m}$
- ◆ Height difference of a matched pair: $5\mu\text{m}$
- ◆ Hardened to HRC55-60



Code	Parallels per set	Length	Thickness	Height(h)
641-014-01	14 pairs	150	10	14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 35, 40, 45, 50

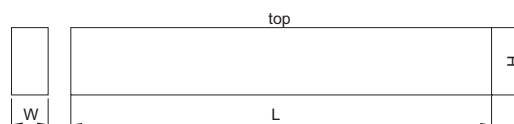
(mm)

SERIES 642

GRANITE STRAIGHT EDGE



642-020-01



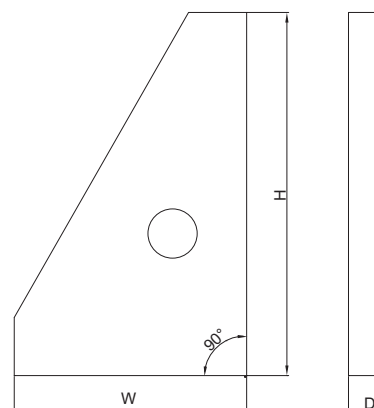
Code	Length(L)	Flatness of top side	W	H
642-020-01	500mm	2.8μm	55	100
642-040-01	1000mm	3.3μm	60	120

SERIES 643

GRANITE SQUARE



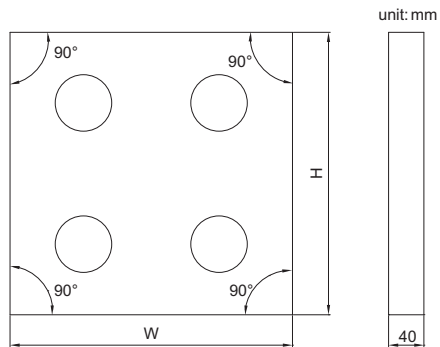
643-010-01



Code	Size(HxW)	Squareness	D
643-010-01	250x160mm	2.5μm	25mm
643-016-01	400x250mm	3.5μm	40mm
643-024-01	630x400mm	4.5μm	63mm

GRANITE SQUARE

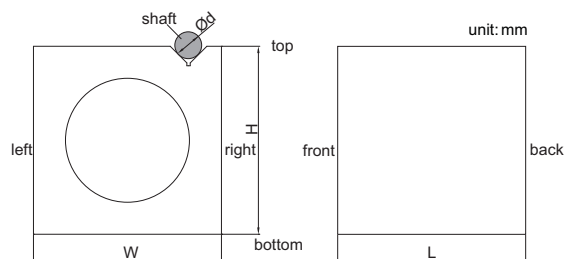
644



Code	Size(HxW)	Squareness
644-012-01	315x315mm	2.6μm

GRANITE SQUARE AND V-BLOCK

645



◆ Thread holes: M8



Code	Size(LxWxH)	Range of shafts (Ød)	Parallelism or squareness between top, bottom, left, right and back sides	Parallelism of V groove to left, right, top and bottom sides	Squareness of V groove to back side
645-006-01	160x160x160mm	6 - 42mm	8μm	8μm	8μm

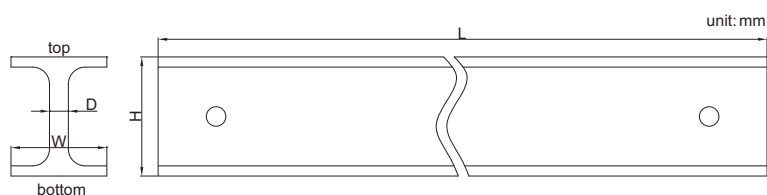
SERIES 647

MAGNALIUM STRAIGHT EDGES

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



647-020-01



Code	Length(L)	Flatness of top and bottom	Parallelism between top and bottom	H	W	D
647-020-01	500mm	3 μ m	4 μ m	60	30	5
647-040-01	1000mm	5 μ m	8 μ m	60	30	5
647-060-01	1500mm	15 μ m	22 μ m	100	40	7
647-080-01	2000mm	18 μ m	27 μ m	100	40	7

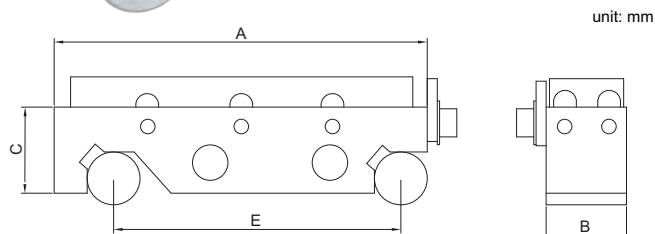
SERIES 651

SINE BAR

- ◆ Made of hardened alloy steel



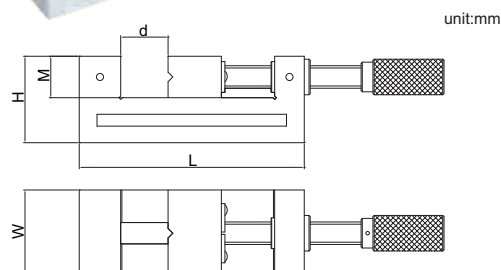
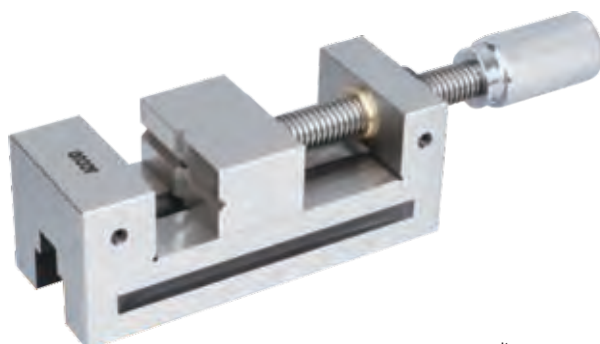
651-005-01



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

PRECISION VISE

SERIES 652

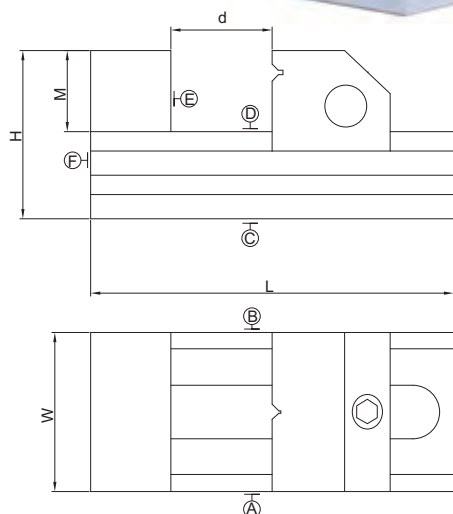
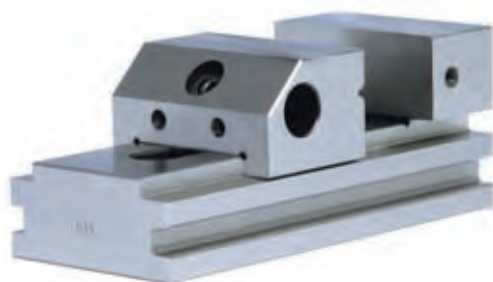


- ◆ Parallelism: 4μm/100mm
- ◆ Squareness: 6μm/100mm
- ◆ Made of alloy steel
- ◆ Hardness HRC56-58

Code	Jaw opening(d)	Jaw width(W)	Overall length(L)	H	M
652-073-01	73mm	63mm	176mm	63	30
652-076-01	76mm	73mm	190mm	73	35
652-120-01	120mm	98mm	255mm	82	40

PRECISION VISE

SERIES 653



653-003-01

- ◆ Made of hardened alloy steel
- ◆ Parallelism and squareness between A, B, C, D, E and F: 5μm/100mm
- ◆ Hardness HRC56-58

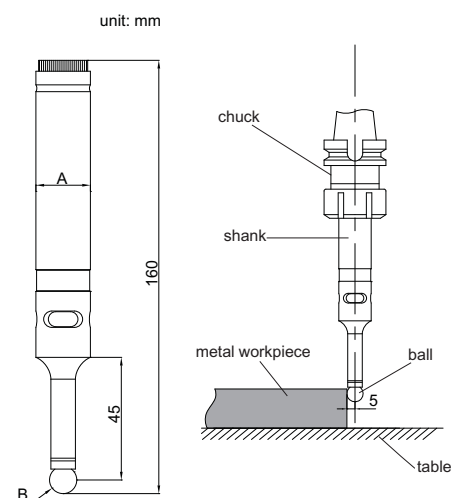
Code	Jaw opening(d)	Jaw width(W)	Overall length(L)	H	M
653-003-01	80mm	70mm	160mm	62	32
653-005-01	115mm	90mm	210mm	80	40



SERIES 692

ELECTRONIC EDGE FINDER

- ♦ The LED will be light when the ball contacts the workpiece
- ♦ Not suitable for rotating use

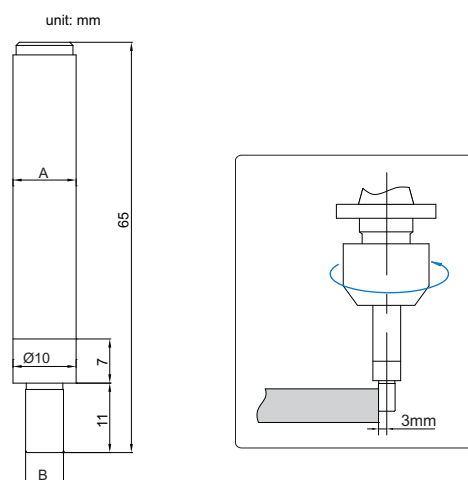


Code	Contact ball (B)	Shank(A)	Accuracy	Beeper
692-010-02	SØ10mm	Ø20mm	5µm	without
692-010-03	SØ10mm	Ø20mm	5µm	with

693

EDGE FINDER

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

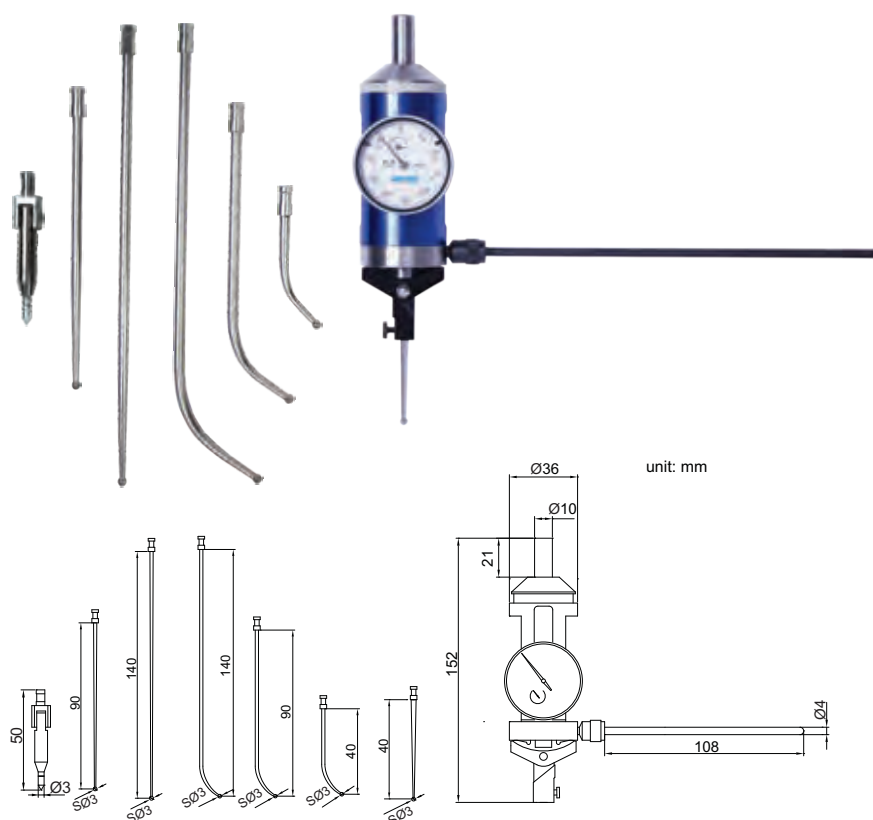


Code	Contact surface (B)	Shank(A)	Accuracy
693-010-01	Ø6mm	Ø10mm	8µm

CENTERING INDICATOR

297

- ◆ For quick and accurate centering in boring and milling set-up
- ◆ Jeweled bearing
- ◆ Supplied with 7 type feelers



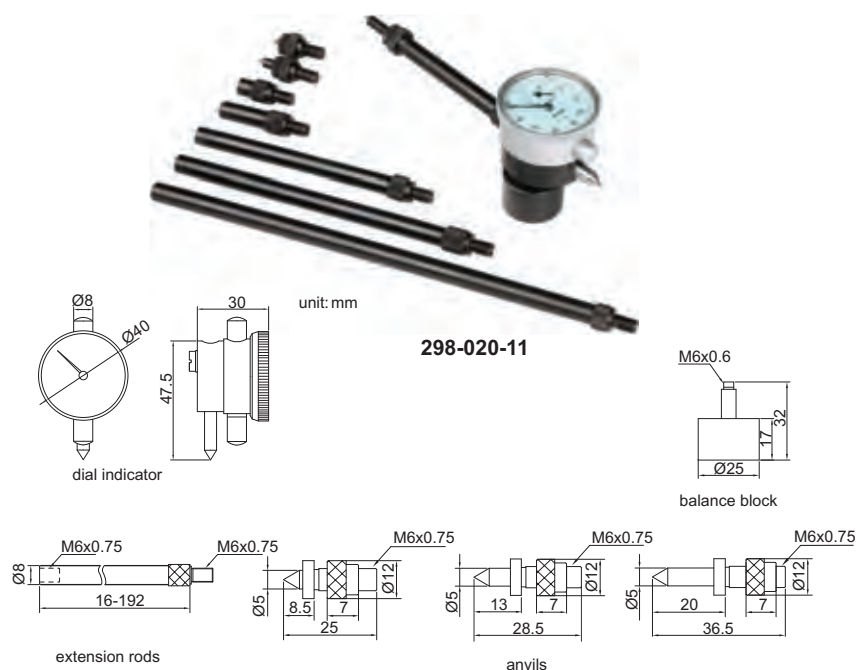
Code

297-003-11

CRANKSHAFT TESTER

SERIES 298

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

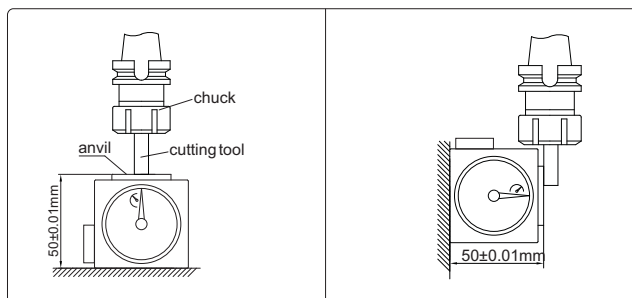
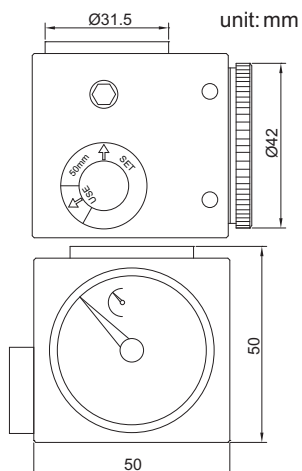


Code	Range	Dial indicator Range	Graduation	Accuracy	Extension rods
298-012-11	60-300mm	3mm	0.01mm	±0.016mm	16mm, 32mm, 64mm, 128mm
298-020-11	60-500mm	3mm	0.01mm	±0.016mm	16mm, 32mm, 64mm, 96mm, 128mm, 192mm

695

ZERO SET

◆ Magnetic base

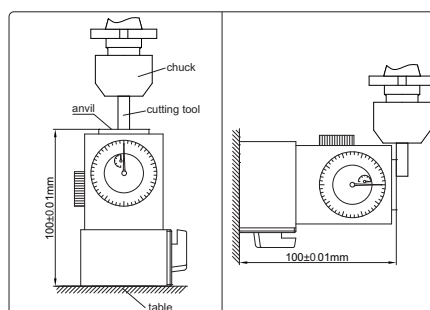
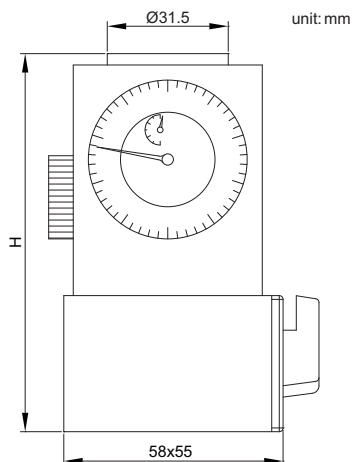


Code	Accuracy
695-050-01	±10μm

696

ZERO SET

◆ Magnetic base with on-off switch



Code	Height (H)	Accuracy	Force
696-100-01	100mm	±10μm	9N(at 50mm)

2-PIECE MEASURING TOOLS SET

SERIES 280



280-000-02



packed in aluminium box

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

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



5-PIECE MEASURING TOOL SET

280



◆ 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

5-PIECE MEASURING TOOL SET

280



◆ 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, range 0-180° (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, range 0-180° (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 attachment (code **179-000-00**)
- 12) Zero setting bar

Code

280-000-12



COATING THICKNESS GAUGE

CF1250



- ◆ Measure the thickness of non-magnetic coatings (zinc, copper, enamel, plastic and so on) on magnetic substrates (iron, steel)
- ◆ Integrated ferrous probe
- ◆ V-type probe to make the cylinder measurement easier
- ◆ Single and continuous working mode
- ◆ Low and high limits setting with judgement
- ◆ With average calculation function

SPECIFICATION

Range	0 ~ 1250μm
Accuracy	2μm(0 ~ 100μm)
	2%(100 ~ 1250μm)
Resolution	0.1μm (0 ~ 999μm)
	1μm (1000 ~ 1250μm)
Memory	500
Power supply	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



CN1500/CF1500/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



CN1500

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

ULTRASONIC THICKNESS GAUGE

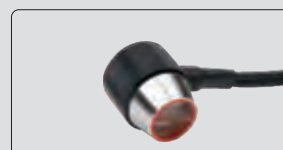
ST200



- ◆ Measure the thickness of tank, pipe and big workpiece
- ◆ LCD with backlight



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+L/1000)mm (10~100mm)
	±L/333mm (≥ 100mm)
	L 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
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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



DM200

DIGITAL MICROSCOPE



Magnification: 10X-200X



Pixel: 2M



Interface: USB2.0



Snap pictures and record videos



8 pcs adjustable LED lights



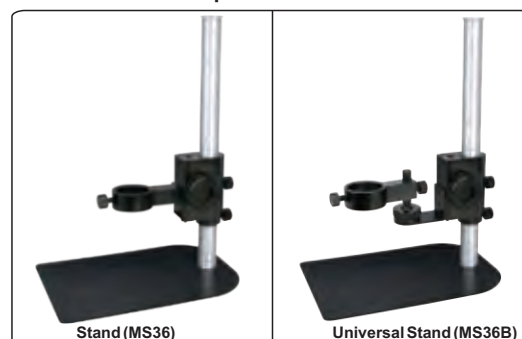
With measuring software and calibration rule

Magnification, View Filed and Focus Relationship

Magnification	Focus	View Filed
50X	21mm	9.5x7.1mm
100X	13mm	4.8x3.6mm
150X	16mm	3.2x2.4mm
200X	19mm	2.4x1.8mm



Optional Stand



Stand (MS36)

Universal Stand (MS36B)

DM600

DIGITAL HIGH MAGNIFICATION MICROSCOPE



Magnification: 450X-600X



Pixel: 2M



Interface: USB2.0



Snap pictures and record videos



8 pcs adjustable LED lights



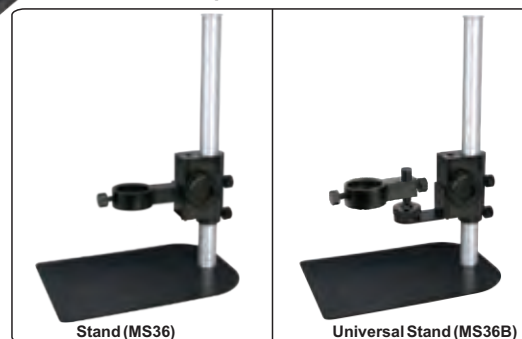
With measuring software and calibration rule

Magnification, View Filed and Focus Relationship

Magnification	Focus	View Filed
450X	1.4mm	1.05x0.79mm
500X	5.5mm	0.95x0.71mm
550X	8.6mm	0.86x0.64mm
600X	11.5mm	0.79x0.59mm



Optional Stand



Stand (MS36)

Universal Stand (MS36B)

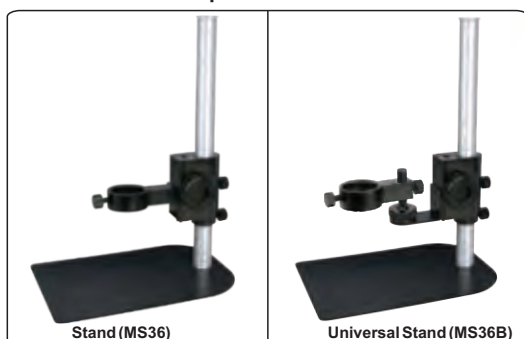
DIGITAL WIFI MICROSCOPE

WIFI200



-  Magnification: 10X-200X
-  Pixel: 2M
-  Interface: USB2.0 or WiFi
-  Snap pictures and record videos
-  8 pcs adjustable LED lights
-  With measuring software and calibration rule

Optional Stand



It can connected to smart phone ,
Ipad or computer via WIFI

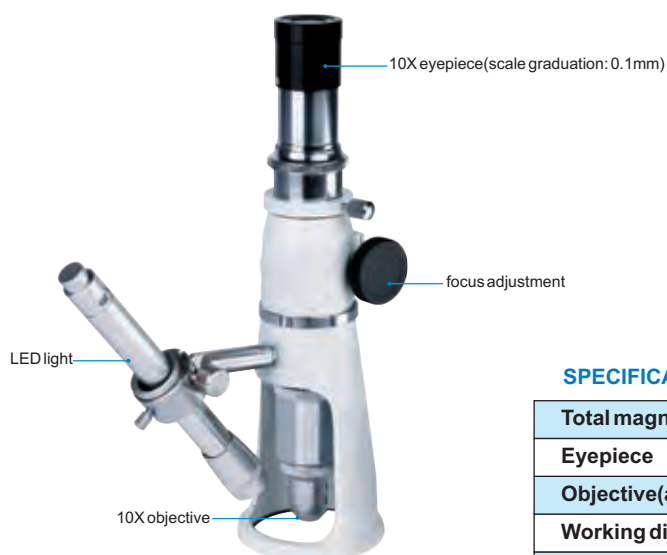


Magnification, View Filed and Focus Relationship

Magnification	Focus	View Filed
50X	21mm	9.5x7.1mm
100X	13mm	4.8x3.6mm
150X	16mm	3.2x2.4mm
200X	19mm	2.4x1.8mm

PORTABLE MEASURING MICROSCOPE

PM100



INCLUDED ACCESSORIES

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

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



SERIES ZS1045

ZOOM STEREO MICROSCOPE

◆ Trinocular head is used to connect to camera



ZS1045

SPECIFICATION

Code	ZS1045	ZS1045T
Optical	binocular	trinocular
Magnification	10X ~ 45X	
Eyeiece	10X (viwe 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
Eyeiece 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

STEREO MICROSCOPE

SM20/30/40



SM40

SPECIFICATION

Code	SM20	SM30	SM40
Total modification	10X/20X	10X/30X	20X/40X
Objective modification	1X/2X	1X/3X	2X/4X
Eyepiece	10X (view field : Ø20mm)		
Pupil distance	55 ~ 75mm		
Diopter adjustment	±5 diopter (only one eyepiece can be adjusted)		
Working distance	57mm		
Max. workpiece height	68mm		
Illumination	selectable incident and transmitted light		
Dimension(L×W×H)	120×200×300mm		
Weight	3kg		

INCLUDED ACCESSORIES

Main unit	1pc
10X eyepiece	1pc
Eyepiece patch	1pc
Ø95mm frosted glass plate	1pc
Ø95mm black/white plastic plate	1pc
Dustproof cover	1pc

OPTIONAL ACCESSORIES

5X eyepiece (view field: Ø20mm)	SM-05-E
15X eyepiece (view field: Ø15mm)	SM-15-E
20X eyepiece (view field: Ø10mm)	SM-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
Camera adapter(1X)	MM-ADAPTER
Digital camera	1300KPA
5X Objective	MM-OB5

40X Objective	MM-OB40
60X Objective	MM-OB60
80X Objective	MM-OB80

CAMERA

1300KPA

- ◆ Easy to connect computer by USB
- ◆ Supplied with measuring software



Connect with microscope



Connect with Vickers hardness tester

SPECIFICATION

Camera sensor	1/3" CMOS
Pixel	1.3 Mega
Interface	USB
Dimension (L×W×H)	65 × 48 × 43(mm)
Weight	400g

INCLUDED ACCESSORIES

Main unit	1pc
USB cable	1pc
Software	1pc

OPTIONAL ACCESSORIES

C-mount	1300KPA-CM
Calibration rule (graduation: 0.1mm)	RU01
Ø30mm eyepiece adaptor	AD30
Ø30.5mm eyepiece adaptor	AD305



SERIES PP

PROFILE PROJECTOR

- ◆ Large screen of the read out
- ◆ Supplied with printer



PP3015

OPTIONAL ACCESSORIES



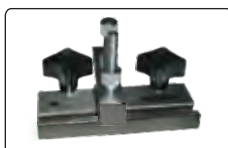
lens with half-reflection mirror



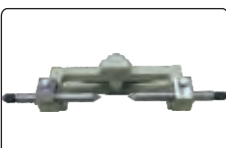
rotary table
(glass diameter 100mm, graduation 2°)



5X magnifier



holder with clamp



swivel center support



V-block with clamp

PROFILE PROJECTOR

SERIES PP

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 104)



SERIES VM

VISION MACHINE



(computer and operating table is optional)

SPECIFICATION

Code	VM2010	VM3020
Measuring range	200×100mm	300×200mm
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	
Camera	1/3" 700TVL HD	
Illumination	contour illumination: LED light brightness adjustment	
	surface illumination: LED light brightness adjustment	
Dimension (L×W×H)	580×680×880mm	680×750×1000mm
Weight	160kg	220kg



VISION MACHINE

SERIES VM

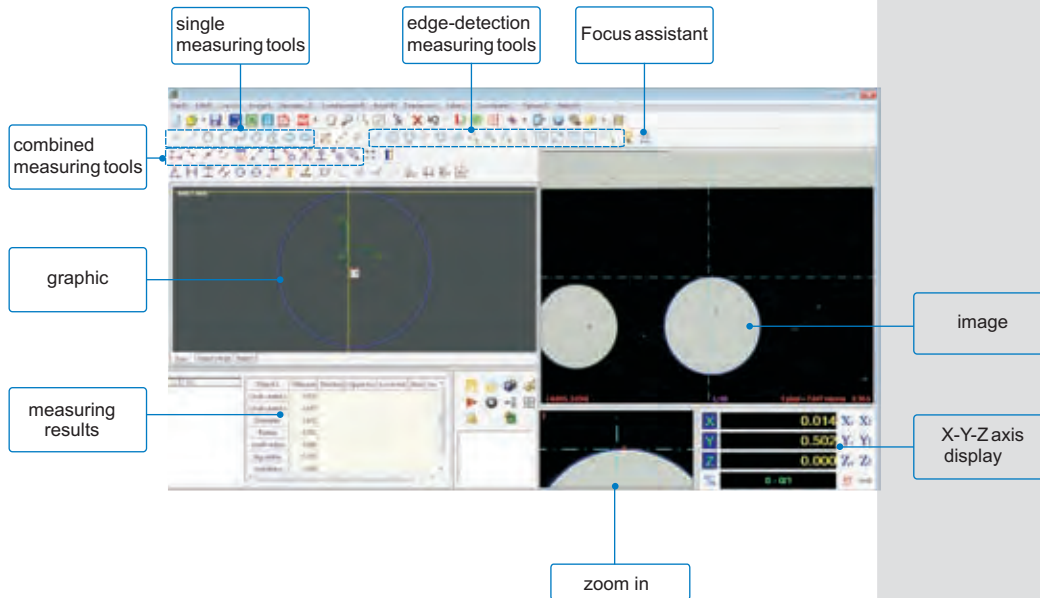
INCLUDED ACCESSORIES

Main unit	1pc
Calibration block	1pc
Software with USB dongle	1pc
Video card	1pc
Counting card	1pc

OPTIONAL ACCESSORIES

Computer	VM-PC
Operating table	VM-Table
Calibration scale	Series 552 (refer to page 104)

SOFTWARE FOR VISION MACHINE



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

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 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

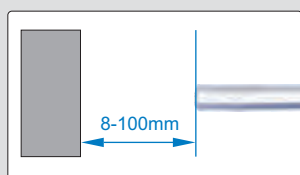
-  measure distance from point to line
-  create tangent lines between point and circle
-  create angular bisector between two lines
-  measure distance from circle to line
-  measure distance between two circles
-  find tangent lines between two circles



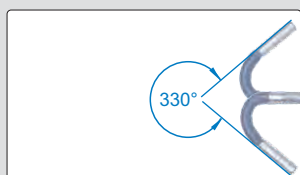
SERIES ES

ENDOSCOPE

- ◆ 2-way directions
- ◆ With adjustable LED light



focus distance: 8-100mm



Max. bend angle: 330°



Code	ES5515	ES5530	ES4015	ES5315
Probe diameter	5.5mm	5.5mm	4.0mm	5.3mm
Cable lenght	1.5m	3m	1.5mm	1.5mm
Cable type	woven		tungsten	
Dust/waterproof probe	IP65			
Camare	0.45MPixel			high resolution
Picture resolution	640x480			
Frame rate	30fps			
Illumination	8pcs LEDs		4pcs LEDs	8pcs high brightness LEDs
Video format	AVI or MPEG4			
Memory	8G SD card			
Power supply	rechargeable battery (for 4 hours working)			
Weight	550g	750g	500g	550g

INCLUDED ACCESSORIES

Main unit	1pc
Cable with probe	1pc
SD card 8G	1pc
AC/DC adapter	1pc
Video output cable	1pc
USB cable	1pc

DIGITAL ROCKWELL HARDNESS TESTER

HR150A



- ◆ Manual loading control
- ◆ The hardness scale can be converted to HV and HB
- ◆ With USB interface, for transferring data



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	manual
Resolution	0.1HR
Max. test height	170mm
Max. throat	150mm
Dimension	466×250×618mm
Weight	65kg

INCLUDED ACCESSORIES

Main unit	1pc
Ø1.5875mm ball carbide indenter	1pc
Diamond indenter	1pc
Flat anvil	2pcs
V-type anvil	1pc
Rockwell test block	3pcs
Dustproof cover	1pc

OPTIONAL ACCESSORIES

Wireless printer	PR100
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HR150C

DIGITAL ROCKWELL HARDNESS TESTER

- ◆ Motorized loading control
- ◆ The hardness scale can be converted to HV and HB
- ◆ With USB interface, for transferring data



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	255mm
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
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MICRO-VICKERS HARDNESS TESTER

HVS1000M



- ◆ For measuring the hardness of the thin, small workpiece or coating
- ◆ Automatic turret
- ◆ The hardness scale can be changed to Rockwell scales



Camera interface (optional)



Camera (optional)



Measuring software (optional)

SPECIFICATION

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	5~60s (step: 5s)
Objective	10X (observation), 40X (measurement)
Eyepiece	15X
Total magnification	150X (observation), 600X (measurement)
Max. test height	80mm
Max. throat	95mm
X-Y stage	size: 100×100mm
	travel range: 25×25mm
	graduation: 0.01mm
Dimension	405×290×480mm
Weight	25kg

INCLUDED ACCESSORIES

Main unit	1pc
10X, 40X objective	1pc each
Indenter	1pc
Test block	2pcs
Slice holder	1pc
Vice	1pc
Cylinder holder	1pc
Level	1pc
Dustproof cover	1pc

OPTIONAL ACCESSORIES

Camera	1300KPA
Camera interface	HVS-AD
Measuring software	HVS-SW



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



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



ROCKWELL/BRINELL/VICKERS HARDNESS TESTER

RBV150C



- ◆ 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



Small flat anvil



Large flat anvil



V-type anvil



Medium flat anvil

SPECIFICATION

Preload force for Rockwell	98N,
Total force for Rockwell	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 for Rockwell	175mm
Max. test height for Brinell	100mm
Max. test height for Vickers	115mm
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



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
Spare indenter	1pc
Hardness test block	1pc
Wrench	1pc



PORTABLE HARDNESS TESTER

HL100



- ◆ Large LCD display with backlight
- ◆ Based on HL scale, converted to other hardness scales (HV, HB, HRC, HRB, HS) and tensile strength MPa
- ◆ With wireless printer
- ◆ Can set impact direction
- ◆ With average value calculation function
- ◆ Automatic power off
- ◆ Conforms to the standard ASTM A956-02



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)
Min. workpiece weight	5kg (directly)
	2kg (on solid support)
	0.1kg (coupled on large plate)
Min. workpiece thickness	5mm
Min. workpiece diameter	22mm
Max. workpiece surface roughness	1.6μm (Ra)
Power	3 x AAA batteries
Dimension	150 × 80 × 24mm

INCLUDED ACCESSORIES

Main unit	1pc
Wireless printer	1pc
Test block	1pc
Small support ring	1pc
Brush	1pc
Charger for printer	1pc

OPTIONAL ACCESSORIES

Support ring (12pcs/set)	HL-SP
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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 ASTM A956-02



Wireless printer (included)



Support ring (12pcs/set, optional)



DC(optional)



C(optional)



D(included)



D+15(optional)



DL(optional)



G(optional)

SPECIFICATION

Resolution	1HLD, 1HV, 1HB, 0.1HRC, 0.1HRB, 1HS, 1MPa
Accuracy	±6HLD/0.6HRC(HLD=800)
Min. workpiece weight	5kg (directly)
	2kg (on solid support)
	0.1kg (coupled on large plate)
Min. workpiece thickness	5mm
Min. workpiece diameter	22mm
Max. workpiece surface roughness	1.6μm(Ra)
Power	Rechargeable battery
Dimension	135×83×24mm

INCLUDED ACCESSORIES

Main unit	1pc
Wireless printer	1pc
Test block	1pc
Small support ring and brush	1pc each
USB cable and software	1pc
Charger	2pcs

OPTIONAL ACCESSORIES

Impact device DC	HL200-DC
Impact device C	HL200-C
Impact device D+15	HL200-D15
Impact device DL	HL200-DL
Impact device G	HL200-G
Support ring (12pcs/set)	HL-SP



PORTABLE HARDNESS TESTER

HL400/HL400B



HL400

- ◆ Economic type
- ◆ Based on HL scale, converted to other hardness scales (HV, HB, HRC, HRB, HS) and tensile strength MPa
- ◆ Impact direction can be set
- ◆ With average value calculation function
- ◆ Automatic power off
- ◆ Conforms to the standard ASTM A956-02

SPECIFICATION

Code	HL400	HL400B
Printer	Without	With
Resolution	1HLD, 1HV, 1HB, 0.1HRC, 0.1HRB, 1HS, 1MPa	
Accuracy	±8HLD/0.8HRC (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	3 x AAA batteries	
Dimension	150×67×29mm	

INCLUDED ACCESSORIES

Main unit	1pc	Brush	1pc
Test block	1pc	USB cable	1pc
Small support ring	1pc	Batteries	3pcs

BARCO HARDNESS TESTER

HB937-1



- ◆ 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 (equal to 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



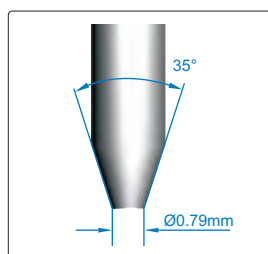
SERIES HSM

SHORE HARDNESS TESTER

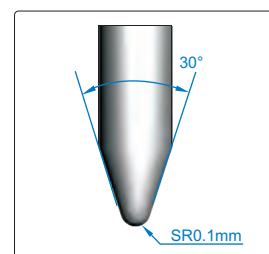
- ◆ Conforms to ISO868, ISO7619, ASTM D2240
- ◆ With peak value indicator



HSM1A



HSM1A indenter



HSM5D indenter

SPECIFICATION

Code	HSM1A	HSM5D
Scale	Shore A	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	

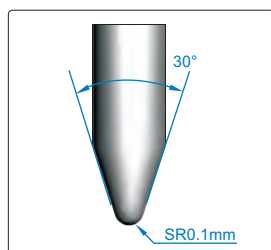
OPTIONAL ACCESSORIES

Stand for HSM1A	HSM-1A-ST
Stand for HSM5D	HSM-5D-ST

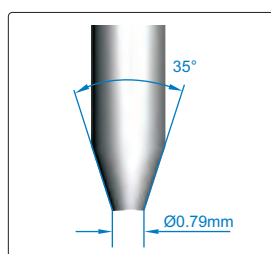


DIGITAL SHORE HARDNESS TESTER

SERIES HS



HS5D indenter



HS1A indenter



HS1A

- ◆ Conforms to ISO868, ISO7619, ASTM D 2240
- ◆ Testing time is adjustable
- ◆ With average calculation function



Standard block (included)



Stand (optional)

SPECIFICATION

Code	HS1A	HS5D
Scale	Shore A	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

OPTIONAL ACCESSORIES

Printer	PR100
Stand for HS1A	HS-1A-ST
Stand for HS5D	HS-5D-ST

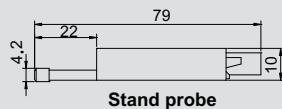


SR200

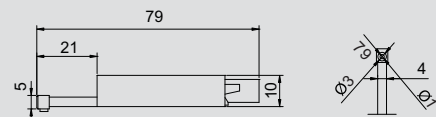
ROUGHNESS TESTER

- ◆ 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

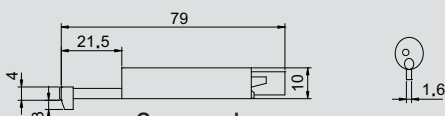
unit: mm



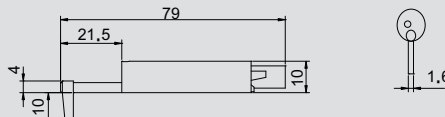
Standard probe



Curved surface probe



Groove probe



Deep groove probe



measuring software

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 to 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

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



SURFACE ROUGHNESS SPECIMEN

RC30



- ◆ For checking, identifying and specifying the roughness by symbol
- ◆ Accuracy: -17% ~ +12%

Machining Method	Quantity	Roughness (Ra)
Flatlapping	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

TEMPERATURE METER

HTC-1



- ◆ For quick measuring remote temperature
- ◆ Easy to operate

SPECIFICATION

Temperature range	-20℃-60℃
Temperature accuracy	1%
Temperature resolution	0.1℃
Humidity range	10%RH-99%RH
Humidity accuracy	5%
Humidity resolution	1%
Power supply	AAA battery
Weight	50g
Dimension	98×106×20 mm

INCLUDED ACCESSORIES

Main unit	1pc
Battery	1pc



IT700

INFRARED THERMOMETER

- ◆ For quick measuring remote temperature
- ◆ Easy to operate

SPECIFICATION

Measuring temperature range	-50℃-700℃
Accuracy	1.5% or 1.5 ℃
Repeatability	0.5 ℃ or 1%
Distance spot ratio	12:1
Response time	500ms
Resolution	0.1 ℃
Power supply	9V battery
Emissivity	0.1-1.00 adjustable
Weight	196g
Dimension	186×119×50 mm



INCLUDED ACCESSORIES

Main unit	1pc
Battery	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 backlight
- ◆ Power off automatically

SPECIFICATION

Measuring range	0.1m-100m
Accuracy (at the prefect reflection surface)	1.5mm
Resolution	1mm
Unit	m/inch/ft
Light spot	Φ8mm@40m
Memory	20
Power supply	2x1.5V AAA batteries
Laser	635nm<1mW
Weight	110g
Dimension	120×54×30 mm



INCLUDED ACCESSORIES

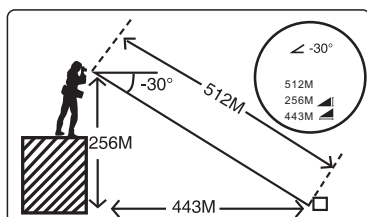
Main unit	1pc
Battery	1pc



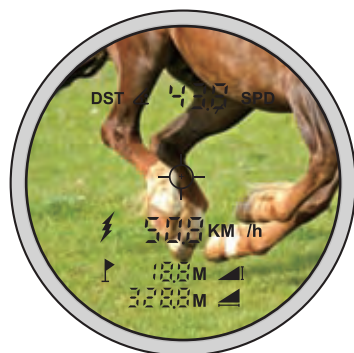
LASER DISTANCE METER

TM1200

Distance, angle measurement



Speed measurement



- ◆ IP54 protection
- ◆ Can measure distance, angle and speed
- ◆ Power off automatically

SPECIFICATION

Measuring range	3m-1200m
Magnification	8X
View field	7°
Distance measuring accuracy	±1m
Speed measuring accuracy	±5km/h
Power supply	Rechargeable battery(for 30000 times)
Memory	635nm<1mW
Weight	197g
Dimension	104×77×41 mm

LASER TACHOMETER

LT900



- ◆ With back light
- ◆ Real-time/ Max/Min/average measurement
- ◆ Can review the last measuring value

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		2x1.5VAAAbattery
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



SPECIFICATION

Measuring sound range	30-130db
Accuracy	1.5db
Resolution	0.1db
Power supply	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



SPECIFICATION

Measuring range	0.3-30m/s
Accuracy	±5%
Resolution	0.1m/s
Power supply	9V battery
Weight	154g
Dimension	155×56×35 mm



DIGITAL FORCE GAUGE

SERIES DF



DF200

- ◆ 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



Stand(Code: **FS1000**, Optional)

SPECIFICATION

Code	DF10	DF20	DF50	DF100	DF200	DF500	DF1000
Range	10N	20N	50N	100N	200N	500N	1000N
Resolution	0.001N	0.005N	0.005N	0.05N	0.05N	0.01N	0.1N
Accuracy	$\pm 0.2\% \times \text{FS (full scale)}$						
Power	rechargeable battery						
Dimension	153x73x34mm						
Weight	700g						

INCLUDED ACCESSORIES

Main unit	1pc
Charger	1pc
Software	1pc
Push/pull clamps	6pcs

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



Stand(Code: **FS1000**, Optional)



DF1000E

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				
OPTIONAL ACCESSORIES					
Wireless printer	PR100				
Stand	FS1000				

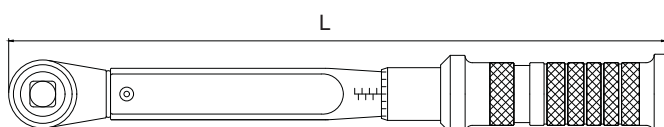


TORQUE WRENCH

SERIES TWM



TWM25



- ◆ Easy to set the torque value
- ◆ Accuracy: $\pm 4\%$
- ◆ According to ISO6789, ASMEB107. 14

SPECIFICATION

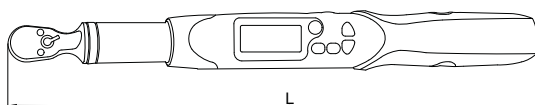
Code	TWM25	TWM50	TWM100	TWM200	TWM340
Range	5 ~ 25N.m	10 ~ 50N.m	20 ~ 100N.m	40 ~ 200N.m	70 ~ 340N.m
Size of square drive	3/8"	3/8"	3/8"	1/2"	1/2"
Lenght(L)	275mm	275mm	380mm	505mm	695mm
Weight	420g	420g	580g	1.3kg	1.9kg

DIGITAL TORQUE WRENCH

SERIES TW



TW30



- ◆ Clockwise or anti-clockwise operation
- ◆ Unti: N.m, in.lb, ft.lb, kg.cm
- ◆ Peak or real-time working mode
- ◆ Automatic power off
- ◆ With calibration certificate

SPECIFICATION

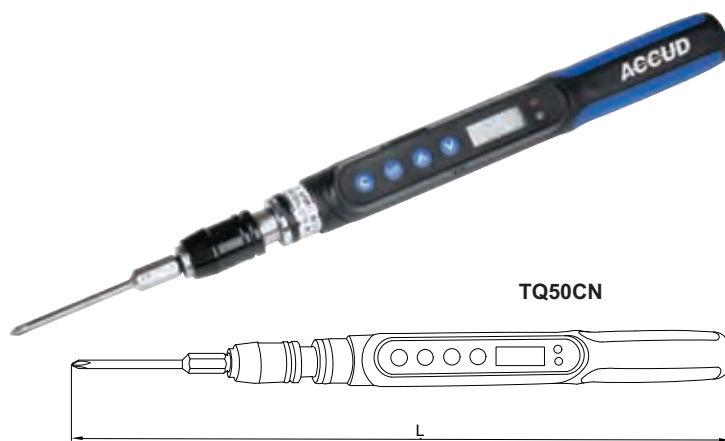
Code	TW12	TW20	TW30	TW135	TW200
Range	2.4 ~ 12N.m	4 ~ 20N.m	6 ~ 30N.m	27 ~ 135N.m	40 ~ 200N.m
Resolution	0.01N.m	0.01N.m	0.1N.m	0.1N.m	1N.m
Clockwise operation accuracy	$\pm 3\%$	$\pm 3\%$	$\pm 2\%$	$\pm 2\%$	$\pm 2\%$
Anti-clockwise operation accuracy	$\pm 4\%$	$\pm 4\%$	$\pm 3\%$	$\pm 3\%$	$\pm 3\%$
Size of square drive	1/4"	1/4"	1/4"	3/8"	1/2"
Lenght(L)	260mm	260mm	390mm	415mm	530mm
Weight	430g	430g	830g	950g	1400g
Power	1xAAA battery			2xAAA batteries	



SERIES TQ

DIGITAL TORQUE SCREWDRIVER

- ◆ Clockwise or anti-clockwise operation
- ◆ Peak and track working mode
- ◆ With audible and visible alarm when the value is closed to setting target
- ◆ 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	1xAAA battery		

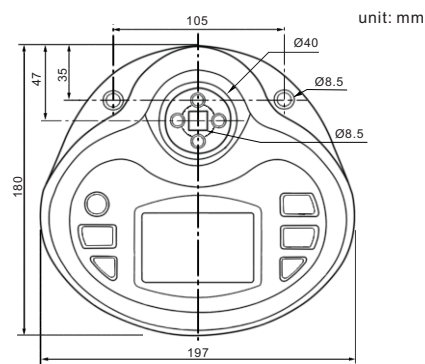
SERIES TTB

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: 1500
- ◆ Power off automatically
- ◆ With software, can show the torque graph



TTB10



SPECIFICATION

Code	TTB5	TTB10	TTB50	TTB100
Range	5N.m	10N.m	50N.m	100N.m
Accuracy	±0.3% FS(full scale)			
Resolution	0.001N.m	0.01N.m	0.01N.m	0.1N.m
Size of square drive	1/2"			
Output	USB and RS232			
Power	rechargeable battery			
Weight	1.5kg			

INCLUDED ACCESSORIES

Main unit	1pc
Charger	1pc
Software with cable	1pc
Converter	1pc
Buffer connector	1pc

OPTIONAL ACCESSORIES

Wireless printer	PR100
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